ZURN

Flush Valves and Sensor Products

AquaVantage AV® • AquaSense AV® • Aquaflush®
Metroflush® • RetroFlush® • E-Z Flush®

Table Of Contents

Subject	Page No.
Product Index	2
Zurn Markets	3
Warranty	4
AquaVantage® AV Flush Valves	
• Product Information	11-41
• Installation, Operation, and Maintenance Instructions	43-56
• Product Comparison Guide	57
• Fixture Selection Guides	58-66
AquaVantage® AV Hydraulic Flush Valves	
• Product Information	69-79
• Installation, Operation, and Maintenance Instructions	81-88
AquaVantage® AV Bedpan Washer, Trap Primer, and Foot Pedal Valves	
• Product Information	91-112
• Installation, Operation, and Maintenance Instructions	113-118
AquaVantage® AV Penal Flush Valves	
• Product Information	121-137
• Installation, Operation, and Maintenance Instructions	139-142
Water Conservation Products – EcoVantage® Series	
• Product Information	147-169
• Installation, Operation, and Maintenance Instructions	171-180
Metroflush® Piston-Operated Flush Valves	
• Product Information	183-193
• Installation, Operation, and Maintenance Instructions	195-198
Aquaflush® Flush Valves	
• Product Information	201-227
• Installation, Operation, and Maintenance Instructions	229-242
• Accessories and Product Comparison Guides	243-245
AquaSense® Battery-Powered Flush Valves and Kits	
• ZR Product Information	253-258
• ZRK Retrofit Kits	259-260
• AquaSense AV Retrofit Kits and Battery Flush Valves Comparison Guide	261
• ZR Installation, Operation, and Maintenance Instructions	263-270
• ZRK Installation, Operation, and Maintenance Instructions	271-278
• ZER Product Information	287-305
• AquaSense AV Retrofit Kits and Battery Flush Valves Comparison Guide	306
• ZER Installation, Operation, and Maintenance Instructions	307-312
• E-Z Flush Installation Instructions	313-316
AquaSense® Hardwired Flush Valves	
• ZEMS and ZEMS-IS Product Information	319-341
• Comparison Guide	342
• Installation, Operation, and Maintenance Instructions	343-366
AquaSense® Sensor Faucets	
• E-Z Sensor Faucets Product Information	370-389
• On Approach Sensor Hardwire Faucets Product Information	390-392
• Rigid Lavatory Enclosure	393
• Hydroelectric Power Generator	394
• Sensor Product Accessories	395-396
• AquaSense E-Z Faucets and Accessories	397-398
• Gooseneck Spouts	399
• Installation, Operation, and Maintenance Instructions	401-426
AquaSense® Sensor-Operated Hand Dryer and Soap Dispenser	
• Soap Dispenser Information	429-430
• Hand Dryer Information	431-432
• Installation, Operation, and Maintenance Instructions	433-438
Technical Information	439-448

Zurn Product Index

Product No.	Product Page No.	O&M Page No.
P6000-PC6	337	*
P6000-HW6	338	*
P6000-MJ	339	*
P6000-M-ADA-DF	168	*
P6000-TPE	109	*
P6000-TPO	108	*
P6900-GEN	160, 394	*
PEMS6000-CON-KIT-IS	336	*
PESS6000-BB	340	*
Z5615	161	*
Z5655	162	*
Z5665	163	*
Z5795	164	171-176
Z5796	165	*
Z5798	166	*
Z6000	201	229-236
Z6000-1	202	229-236
Z6000-2	203	229-236
Z6000-3	204	229-236
Z6000AV	11	43-50
Z6000AV-1	12	43-50
Z6000AV-2	13	43-50
Z6000AV-3	14	43-50
Z6000AV-BWN	91	113-118
Z6000AV-BWN1	92	113-118
Z6000AV-DF	15, 147	43-50
Z6000AV-TP	107	43-50
Z6000-DVN	103	113-118
Z6000-DVN1	104	113-118
Z6001	205	229-336
Z6001AV	16	43-50
Z6003	206	229-236
Z6003AV	17	43-50
Z6003AV-DF	18, 148	43-50
Z6003AV-EWS	19, 149	43-50
Z6010	207	229-236
Z6010-1	208	229-336
Z6010-2	209	229-336
Z6010AV	20	43-50
Z6010AV-1	21	43-50
Z6010AV-2	22	43-50
Z6010AV-BWN	93	113-118
Z6010-DVN	105	113-118
Z6011AV-BWN	94	113-118
Z6011-DVN	106	113-118
Z6014	210	229-236
Z6014AV	23	43-50
Z6017	211	229-236
Z6017AV	24	43-50
Z6020AV-BWN	95	113-118
Z6040AV-BWN	96	113-118
Z60842AV-H	101	*
Z60843-BWN	102	*
Z6096	212	229-236
Z6096AV	25	43-5
Z6099	214	229-236
Z6099AV	26	43-50
Z6140	214	237-242
Z6140AV	27	51-56
Z6142	215	237-242
Z6142AV	28	51-56
Z6143	216	237-242
Z6143AV	29	51-56
Z6144	217	237-242
Z6144AV	30	51-56

Product No.	Product Page No.	O&M Page No.
Z6150	218	237-242
Z6150AV	31	51-56
Z6152	219	237-242
Z6152AV	32	51-56
Z6153	220	237-242
Z6153AV	33	51-56
Z6154	221	237-242
Z6154AV	34	51-56
Z6155	222	237-242
Z6155AV	35	51-56
Z6190	223	237-242
Z6190AV	36	51-56
Z6195	224	237-242
Z6195AV	37	51-56
Z6196	225	237-242
Z6196AV	38	51-56
Z6197AV	39	51-56
Z6199	40-41	237-242
Z6199	136, 137	237-242
Z6199	226, 227	237-242
Z6200	184	195-198
Z6201	184	195-198
Z6203	152, 185	195-198
Z6210	186	139-142
Z6300AV	110	139-142
Z6310AV	111	139-142
Z6320AV	112	139-142
Z6601AV	126	139-142
Z6603AV	127	139-142
Z6606AV	128	139-142
Z6609AV	129	139-142
Z6610AV	130	139-142
Z6611AV	131	139-142
Z6613AV	132	139-142
Z6614AV	133	139-142
Z6621AV	134	139-142
Z6681AV	135	139-142
Z6703	431	433-438
Z6704	169, 432	*
Z6900-DMSD	429	*
Z6900-SSD-950	430	*
Z6900-ZAT	167	177-180
Z6900-VG	393	*
Z6903-75	390	421-426
Z6903-76	391	421-426
Z6903-77	392	421-426
Z6912	370	401-404
Z6912-GEN	155	*
Z6913	372	401-404
Z6913-GEN	156	*
Z6914	374	405-408
Z6915	376	401-404
Z6915-GEN	157	*
Z6916	378	409-412
Z6916-ADM	379	409-412
Z6917	380	405-408
Z6918	382	*
Z6920	384	413-416
Z6920-GEN	158	*
Z6922	386	417-420
Z6922-GEN	159	*
Z69_ _-BX-MV	388	*
Z69_ _-BX_-TMV	389	*
ZEMS6000AV	320	351-358
ZEMS6000AV-BWN	100	113-118

Product No.	Product Page No.	O&M Page No.
ZEMS6000AV-IS	319	343-350
ZEMS6001AV-IS	321	343-350
ZEMS6003AV	324	359-366
ZEMS6003AV-IS	322	343-350
ZEMS6003AV-IS-EWS	151, 323	343-350
ZEMS6140AV	325	351-358
ZEMS6152AV	326	351-358
ZEMS6153AV	327	351-358
ZEMS6190AV	328	359-366
ZEMS6195AV	329	359-366
ZEMS6197AV	330	359-366
ZEMS6199-BX17	331	351-358
ZEMS6200	333	351-358
ZEMS6200-IS	192, 332	343-350
ZEMS6203	335	351-358
ZEMS6203-IS	193, 334	343-350
ZER6000AV-1- CPM	288	307-312
ZER6000AV-2-CPM	289	307-312
ZER6000AV-3-CPM	290	307-312
ZER6000AV-BWN	99	113-118
ZER6000AV-CPM	287	307-312
ZER6001AV-CPM	291	307-312
ZER6003AV-CPM	292	307-312
ZER6003AV-EWS-CP	150, 293	307-312
ZER6003AV-EWS-CPM	294	307-312
ZER6152AV	295	307-312
ZER6190AV	296	307-312
ZER6195AV	297	307-312
ZER6200-CPM	187, 298	307-312
ZER6203-CPM	188, 299	307-312
ZER6252	189, 300	307-312
ZER6290	190, 301	307-312
ZER6295	191, 302	307-312
ZERK-CP	303	313-316
ZERK-CP-CON	305	313-316
ZERK-CPM	304	313-316
ZH6000AV	69	81-88
ZH6000AV-BWN	97	113-118
ZH6001AV	70	81-88
ZH6003AV	71	81-88
ZH6010AV	72	81-88
ZH6017AV	73	81-88
ZH6140AV	74	81-88
ZH6142AV	75	81-88
ZH6150AV	76	81-88
ZH6152AV	77	81-88
ZH6190AV	78	81-88
ZH6195AV	79	81-88
ZH6603AV-MBP	121	139-142
ZH6606AV-MBP	122	139-142
ZH6609AV-MBP	123	139-142
ZH6611AV-MBP	124	139-142
ZH6613AV-MBP	125	139-142
ZR6000AV	253	263-270
ZR6000AV-1	254	263-270
ZR6000AV-2	255	263-270
ZR6000AV-3	256	263-270
ZR6000AV-BWN	98	113-118
ZR6001AV	257	263-270
ZR6003AV	258	263-270
ZRK-C	259	271-278
ZRK-U	260	271-278

*Call Customer Service at 1-800-997-3876.

The Many Applications Of Zurn Flush Valve Products . . .

Commercial

Healthcare

Industrial

Education

Hospitality

Airports and Stadiums

Penal

Apartments and Assisted Living

Retrofit and Water Conservation

Zurn. Leading The Way In Flush Valve and Sensor Technology.

Water Conservation.
Superior Hygienic Restroom Environments.
ADA Conformity.
Product Integrity.

These intrinsic values will be found in every Zurn engineered product shipped to the marketplace.

And, a universal network distribution system of sales representatives and service centers is ever ready to meet immediate demand requests.

Whether you specify, install, or maintain water systems ... insist on working with a company that has over 100 years of experience engineering water and wastewater controls ... Zurn.

Product Warranty

Limited Warranty

All goods and services sold hereunder are warranted to be free from defects in material and factory workmanship for a period of five years for AquaVantage flush valves and three years for Aquaflush flush valves and products three years from the date of purchase (five years for hand dryers and one year for decorative finishes). We will replace at no cost goods that prove defective provided we are notified in writing of such defect and the goods are returned to us prepaid at Sanford, NC, with evidence that they have been properly maintained and used in accordance with instructions. **We shall not be responsible for any labor charges or any loss, injury or damages whatsoever, including incidental or consequential damages.** The sole and exclusive remedy shall be limited to the replacement of the defective goods. Before installation and use, the purchaser shall determine the suitability of the product for his intended use and the purchaser assumes all risk and liability whatever in connection therewith. Where permitted by law, **the implied warranty of merchantability is expressly excluded.** If the products sold hereunder are "consumer products," **the implied warranty of merchantability is limited to a period of five years for AquaVantage products and three years for Aquaflush and Sensor products and shall be limited solely to the replacement of the defective goods.** All weights stated in our catalogs and lists are approximate and are not guaranteed.

Zurn flush valves are designed to comply with the Army Corp of Engineers and Naval guide specifications, Military Specification MIL.V.29193 and Federal Specification WWP541.

In addition, Zurn flush valves comply with the Federal Acquisition Requirement FAR 52.225.5 Buy American Act Construction Materials where required.

Zurn flush valves comply with the following standards: ANSI A112.18.1, A112.19.5, A112.19.2, A112.19.6, ASSE 1037 and 1001, and are listed by the following agencies: Canadian Standards, IAPMO/UPC, and ETL Testing Labs. Zurn flush valves are manufactured from dezincification resistant alloys. For additional compliances, contact Zurn Industries, LLC, Commercial Brass Operation, or 1-800-997-3876.

Note: All product illustrations, specifications and published literature are based on authorized information. Although descriptions are believed correct at publication approval, accuracy cannot be guaranteed. Zurn reserves the right to make changes from time to time, without notice and to change or discontinue designs. Contact your sales representative for the latest information at time of purchase.

ZURN®

AquaVantage® AV
Manual Operated Flush Valves

AV Series

AquaVantage®

Handles Today's Toughest Installations

All Zurn AquaVantage AV Flush Valves are furnished complete with the AquaVantage diaphragm kit, and the following accessories as standard:

- ***ADA Handle***
- ***Sweat Solder Kit***
- ***Vandal-Resistant Stop Valve Cover***
- ***Cast Wall Flange With Setscrews***

Internal seals of the AV valves are chemical resistant.

AquaVantage Diaphragm

Zurn Z6000AV Model flush valves feature the revolutionary chemical and clog resistant AquaVantage Diaphragm Kit. The AquaVantage Kit is designed to eliminate the common problems that are associated with flush valve installations such as fixture evacuation, run-on, degradation of rubber components and sediment. The AquaVantage Kit now makes these problems a thing of the past. It provides for greater performance, ensures reliability, and greatly extends the operating life of the internal components.

AquaVantage® AV

Flush Valves

How The New Zurn Triple Filter Diaphragm Works

1 Water from the lower valve chamber is directed through a plurality of individual passageways and into one of the twenty-two filter cells found around the perimeter of the diaphragm. Each filter cell stops unwanted debris and allows only clean water to proceed toward the main orifice.

2 The filtered water then travels over a number of parabolic weirs. Each weir acts as a small dam causing the finest of sediment to settle from the water flow.

3 The filtered water is then filtered one more time through another set of filter holes strategically placed adjacent to the main orifice. Only filtered, clean water is allowed to pass through the main by-pass orifice.

Enhanced Performance

The design of the AquaVantage kit along with the flexibility of its TPE thermoplastic elastomer diaphragm allows for flow optimization. Optimizing the water volume of the flush cycle creates a more efficient flush, contributing to better fixture evacuation.

Chemical Resistant

The process of treating a water supply with chlorine and ammonia is known as chloramination. The increased levels of chloramines found in today's potable water break down EPDM, natural rubber, and nitrile rubber parts causing premature failure. The AquaVantage diaphragm kit is made of chloramine resistant thermoplastics and thermoplastic elastomers that are industry certified to be inert to chemicals found in municipal water supplies. The TPE elastomer used for the AquaVantage diaphragm has proven to withstand prolonged exposure to the same chemicals that cut short the life of other diaphragm kits.

Triple Filtered By-Pass

The integral clog-resistant triple-filtered by-pass prevents run-on due to debris and contributes to a more consistent volume of water for every flush.

Interchangeability

The Zurn AquaVantage kit is so named because it allows every flush valve the benefits of its features. The AquaVantage diaphragm and kit can be retrofitted into existing Zurn and Sloan® flush valves thus allowing the building owner to take advantage of its new technological components and design.

Dual Seal Technology

AquaVantage brings dual seal technology to the industry. A secondary seal along the internal diameter of the valve body bore ensures a consistent flush and positive seal during operation. AquaVantage is unique in the industry with this feature.

AquaVantage® AV

Flush Valves

Standard Features Now On All AquaVantage AV Flush Valves

Low-Force, No Leak, ADA-Compliant Handle Standard

The low-force, ADA-compliant handle allows for user-friendly activation for the young and old as well as ADA compliance for the physically challenged. The handle incorporates our unique double seal protection for longer life and no-leak operation. Handles are assembled to the valve and all valves are pre-tested before shipment.

Vandal-Resistant Control Stop Cover

Incorporates two integral setscrews for greater security.

High Pressure Vacuum Breaker

Has been designed to take the increased pressure caused by today's low consumption fixtures.

Cast Wall Flange With Setscrew

Puts an end to loose wall connections. A tight, firm fit and secure connection is guaranteed by the setscrew setting.

Chemical Resistant Gaskets and Seals

Chloramine resistant triple filtered diaphragm, along with chemical resistant gaskets and seals, extends the operating life of the AV flush valve beyond that of any other flush valve in the industry.

AquaVantage®

The Repair Kit That Makes Flush Valves Chloramine Proof and Clog Resistant!

Choose The AquaVantage Diaphragm Replacement Kit Or The AdVantage Rebuild Kit

Tired of changing flush valve diaphragm kits due to clogging and chemical deterioration? Try the new Zurn AquaVantage Diaphragm Kit and say good-bye to flush valve maintenance. Our revolutionary chemical and clog resistant triple filter AquaVantage diaphragm is designed to eliminate the common problems associated with flush valve installations. The AquaVantage Diaphragm Kit is made of chloramine resistant materials that are industry certified to be resistant to chemicals found in today's water supplies. The AquaVantage's triple filter by-pass virtually eliminates clogging and valve run-on due to debris in the water.

Choose from either the AquaVantage Diaphragm Kit or the AdVantage Rebuild Kit which includes the AquaVantage Kit along with our chemical resistant handle repair kit, vacuum breaker, and tailpiece O-ring.

*AquaVantage and AdVantage Rebuild Kits upgrade Zurn and Sloan® Royal® and Regal® flush valves.

Product Number	Description
P6000-ECA-FF	Closet Repair Kit Chemical and Clog Resistant - 4.5 gallon
P6000-ECA-FF-WS	Closet Repair Kit Chemical and Clog Resistant - 3.5 gallon
P6000-ECA-PWS	Closet Repair Kit Chemical and Clog Resistant - 2.4 gallon
P6000-ECA-FF-WS1	Closet Repair Kit Chemical and Clog Resistant - 1.6 gallon
P6000-EUA-FF	Urinal Repair Kit Chemical and Clog Resistant - 3.0 gallon
P6000-EUA-FF-WS	Urinal Repair Kit Chemical and Clog Resistant - 1.5 gallon
P6000-EUA-FF-WS1	Urinal Repair Kit Chemical and Clog Resistant - 1.0 gallon
P6000-EUA-EWS	Urinal Repair Kit Chemical and Clog Resistant - 0.5 gallon
P6000-ECA-RK	Closet Rebuild Kit - 4.5 gallon
P6000-ECA-WS-RK	Closet Rebuild Kit - 3.5 gallon
P6000-ECA-PWS-RK	Closet Rebuild Kit - 2.4 gallon
P6000-ECA-WS1-RK	Closet Rebuild Kit - 1.6 gallon
P6000-EUA-FF-RK	Urinal Rebuild Kit - 3.0 gallon
P6000-EUA-WS-RK	Urinal Rebuild Kit - 1.5 gallon
P6000-EUA-WS1-RK	Urinal Rebuild Kit - 1.0 gallon
P6000-EUA-EWS-RK	Urinal Rebuild Kit - 0.5 gallon

Contact your local Zurn distributor or factory representative or call 1-800-997-3876.

Specify and Use Zurn AquaVantage Products On Your Next Project

All Zurn Products With The AV Designation Come Standard With The Real AdVantage – Zurn AquaVantage.

Zurn Z6000AV Series

Exposed AquaVantage For Water Closets and Urinals

Zurn ZEMS6000AV Series

Hard-Wired Sensor Flush Valve With AquaVantage For Water Closets and Urinals

Zurn Z6100AV Series

Concealed AquaVantage For Water Closets and Urinals

Zurn ZR6000AV Series

Battery-Operated, Sensor-Operated Flush Valve With AquaVantage For Water Closets and Urinals

Zurn ZRK Retro Kit Series

RetroFit Sensor Kit With AquaVantage

Zurn ZER6000AV Series

Battery-Operated Sensor Flush Valve With AquaVantage For Water Closets and Urinals

In the U.S.A.:

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Zurn Industries, LLC Printed in U.S.A. Form No. FV239, Rev. 5/07

Exposed Z6000AV Model
For Water Closets

Flow Options

- ☐ **-WS1** 1.6 Gal. Low Consumption Flush
- ☐ **-FF** 4.5 Gal. Full Flush
- ☐ **Standard Flush** 3.5 Gallons Per Flush

Suffix Options (Check/Specify Appropriate Options)

- _____ **-BG** BioCare ADA Handle
- _____ **-H** Handle on Front of Flush Valve
- _____ **-L** 1" [25] Metal Push Button
- _____ **-L3** 3" [76] Metal Push Button
- _____ **-YJ** Split Ring Pipe Support
- _____ **-YK** Solid Ring Pipe Support
- _____ **-YO** Bumper on Angle Stop
- _____ Other

ENGINEERING SPECIFICATION: ZURN Z6000AV AquaVantage® 'AV' Exposed Closet Flush Valve – Exposed, quiet diaphragm-type, chrome-plated flushometer valve with a polished exterior. Complete with Zurn's AquaVantage TPE, chloramine resistant, dual seal diaphragm with a clog resistant, triple filtered by-pass. The valve is ADA compliant with a non-hold open and no leak handle feature, high back pressure vacuum breaker, one-piece hex coupling nut, adjustable tailpiece, spud coupling, and flange for top spud connection. Control stop has internal siphon-guard protection, vandal-resistant stop cap, sweat solder kit, and a cast wall flange with setscrew. Internal seals are made of chloramine resistant materials.

This space is for Architectural/Engineering Approval

ZURN INDUSTRIES, LLC *COMMERCIAL BRASS OPERATION, 5900 ELWIN BUCHANAN DRIVE, SANFORD, NC 27330*
PHONE: 1-800-997-3876, FAX: 919-775-3541, WEBSITE: www.zurn.com
IN CANADA: ***ZURN INDUSTRIES LIMITED*** *3544 NASHUA DRIVE, MISSISSAUGA, ONTARIO L4V1L2, PHONE: 905-405-8272, FAX: 905-405-1292*

AquaVantage® is a registered trademark of Zurn Industries, LLC

Rev. D
Dwg. No. 63276
Date: 4/28/03
Product No. Z6000AV

Exposed Z6000AV-1 Model
For Water Closets

Flow Options

- ☐ **-WS1** 1.6 Gal. Low Consumption Flush
- ☐ **-FF** 4.5 Gal. Full Flush
- ☐ **Standard Flush** 3.5 Gallons Per Flush

Suffix Options (Check/Specify Appropriate Options)

- _____ **-BG** BioCare ADA Handle
- _____ **-H** Handle on Front of Flush Valve
- _____ **-L** 1" [25] Metal Push Button
- _____ **-L3** 3" [76] Metal Push Button
- _____ **-YJ** Split Ring Pipe Support
- _____ **-YK** Solid Ring Pipe Support
- _____ **-YO** Bumper on Angle Stop
- _____ Other

ENGINEERING SPECIFICATION: ZURN Z6000AV-1 AquaVantage® 'AV' Exposed Closet Flush Valve – Exposed, quiet diaphragm-type, chrome-plated flushometer valve with a polished exterior. Complete with Zurn's AquaVantage TPE, chloramine resistant, dual seal diaphragm with a clog resistant, triple filtered by-pass. The valve is ADA compliant with a non-hold open and no leak handle feature, high back pressure vacuum breaker, one-piece hex coupling nut, adjustable tailpiece, spud coupling, and flange for top spud connection. Control stop has internal siphon-guard protection, vandal-resistant stop cap, sweat solder kit, and a cast wall flange with setscrew. Internal seals are made of chloramine resistant materials.

This space is for Architectural/Engineering Approval

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AquaVantage® is a registered trademark of Zurn Industries, LLC

Rev. B
Dwg. No. 65404
Date: 4/28/03
Product No. Z6000AV-1

Exposed Z6000AV-2 Model
For Water Closets

Flow Options

- ☐ **-WS1** 1.6 Gal. Low Consumption Flush
- ☐ **-FF** 4.5 Gal. Full Flush
- ☐ **Standard Flush** 3.5 Gallons Per Flush

Suffix Options (Check/Specify Appropriate Options)

- _____ **-BG** BioCare ADA Handle
- _____ **-H** Handle on Front of Flush Valve
- _____ **-L** 1" [25] Metal Push Button
- _____ **-L3** 3" [76] Metal Push Button
- _____ **-YH** One Wall Bumper
- _____ **-YJ** Split Ring Pipe Support
- _____ **-YK** Solid Ring Pipe Support
- _____ **-YL** Solid Ring Pipe Support with Bumper
- _____ Other

ENGINEERING SPECIFICATION: ZURN Z6000AV-2 AquaVantage® 'AV' Exposed Closet Flush Valve – Exposed, quiet diaphragm-type, chrome-plated flushometer valve with a polished exterior. Complete with Zurn's AquaVantage TPE, chloramine resistant, dual seal diaphragm with a clog resistant, triple filtered by-pass. The valve is ADA compliant with a non-hold open and no leak handle feature, high back pressure vacuum breaker, one-piece hex coupling nut, adjustable tailpiece, spud coupling, and flange for top spud connection. Control stop has internal siphon-guard protection, vandal-resistant stop cap, sweat solder kit, and a cast wall flange with setscrew. Internal seals are made of chloramine resistant materials.

This space is for Architectural/Engineering Approval

ZURN INDUSTRIES, LLC *COMMERCIAL BRASS OPERATION, 5900 ELWIN BUCHANAN DRIVE, SANFORD, NC 27330*
PHONE: 1-800-997-3876, FAX: 919-775-3541, WEBSITE: www.zurn.com
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AquaVantage® is a registered trademark of Zurn Industries, LLC

Rev. B
Dwg. No. 65405
Date: 4/28/03
Product No. Z6000AV-2

Exposed Z6000AV-3 Model
For Water Closets

Flow Options

- ☐ **-WS1** 1.6 Gal. Low Consumption Flush
- ☐ **-FF** 4.5 Gal. Full Flush
- ☐ **Standard Flush** 3.5 Gallons Per Flush

Suffix Options (Check/Specify Appropriate Options)

- _____ **-BG** BioCare ADA Handle
- _____ **-H** Handle on Front of Flush Valve
- _____ **-L** 1" [25] Metal Push Button
- _____ **-L3** 3" [76] Metal Push Button
- _____ **-YH** One Wall Bumper
- _____ **-YJ** Split Ring Pipe Support
- _____ **-YK** Solid Ring Pipe Support
- _____ **-YL** Solid Ring Pipe Support with Bumper
- _____ Other

ENGINEERING SPECIFICATION: ZURN Z6000AV-3 AquaVantage® 'AV' Exposed Closet Flush Valve – Exposed, quiet diaphragm-type, chrome-plated flushometer valve with a polished exterior. Complete with Zurn's AquaVantage TPE, chloramine resistant, dual seal diaphragm with a clog resistant, triple filtered by-pass. The valve is ADA compliant with a non-hold open and no leak handle feature, high back pressure vacuum breaker, one-piece hex coupling nut, adjustable tailpiece, spud coupling, and flange for top spud connection. Control stop has internal siphon-guard protection, vandal-resistant stop cap, sweat solder kit, and a cast wall flange with setscrew. Internal seals are made of chloramine resistant materials.

This space is for Architectural/Engineering Approval

ZURN INDUSTRIES, LLC *COMMERCIAL BRASS OPERATION, 5900 ELWIN BUCHANAN DRIVE, SANFORD, NC 27330*
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AquaVantage® is a registered trademark of Zurn Industries, LLC

Rev. B
Dwg. No. 65406
Date: 4/28/03
Product No. Z6000AV-3

Exposed Z6000AV-DF Dual Flush Model
For Water Closets

Flow Options

- ☐ **-WS1** 1.6 Gal. Low Consumption Flush
- ☐ **-FF** 4.5 Gal. Full Flush
- ☐ **Standard Flush** 3.5 Gallons Per Flush

Suffix Options (Check/Specify Appropriate Options)

- _____ **-BG** BioCare ADA Handle
- _____ **-H** Handle on Front of Flush Valve
- _____ **-YJ** Split Ring Pipe Support
- _____ **-YK** Solid Ring Pipe Support
- _____ **-YO** Bumper on Angle Stop
- _____ Other

This space is for Architectural/Engineering Approval

ENGINEERING SPECIFICATION: ZURN Z6000AV-DF Dual Flush AquaVantage® 'AV' Exposed Closet Flush Valve – Exposed, quiet diaphragm-type, chrome-plated, flushometer valve with a polished exterior. The valve is ADA compliant with a non-hold open and no leak dual flush handle feature. Lifting the handle up initiates a reduced flush of 30% for the evacuation of liquid waste. Pushing the handle down actuates a full flush for solid waste. A wall plate is furnished with graphics and instructions for user operation. The valve incorporates the AquaVantage TPE, chloramine resistant, dual seal diaphragm with a clog resistant, triple filtered by-pass. The valve also includes a high back pressure vacuum breaker, one-piece hex coupling nut, adjustable tailpiece, spud coupling, and flange for top spud connection. The control stop has internal siphon-guard protection, vandal-resistant stop cap, sweat solder kit, and a cast wall flange with setscrew. All seals and gaskets are made of chloramine resistant materials.

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Rev.
Dwg. No. 81204
Date: 11/30/05
Product No. Z6000AV-DF

Exposed Z6001AV Model
For 1-1/4" Urinals

Flow Options

☐	**-WS1**	1.0 Gal. Low Consumption Flush
☐	**-WS**	1.5 Gal. Water Saver
☐	**Standard Flush**	3.0 Gallons Per Flush

Suffix Options (Check/Specify Appropriate Options)

_____	**-BG**	BioCare ADA Handle
_____	**-H**	Handle on Front of Flush Valve
_____	**-L**	1" [25] Metal Push Button
_____	**-L3**	3" [76] Metal Push Button
_____	**-YJ**	Split Ring Pipe Support
_____	**-YK**	Solid Ring Pipe Support
_____		Other

ENGINEERING SPECIFICATION: ZURN Z6001AV AquaVantage® 'AV' Exposed Urinal Flush Valve – Exposed, quiet diaphragm-type, chrome-plated, flushometer valve with a polished exterior. Complete with Zurn's AquaVantage TPE, chloramine resistant, dual seal diaphragm with a clog resistant, triple filtered by-pass. The valve is ADA compliant with a non-hold open and no leak handle feature, high back pressure vacuum breaker, one-piece hex coupling nut, adjustable tailpiece, spud coupling, and flange for top spud connection. Control stop has internal siphon-guard protection, vandal-resistant stop cap, sweat solder kit, and a cast wall flange with setscrew. Internal seals are made of chloramine resistant materials.

This space is for Architectural/Engineering Approval

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Rev. D
Dwg. No. 65362
Date: 4/28/03
Product No. Z6001AV

Exposed Z6003AV Model
For 3/4" Urinals

Flow Options

- ☐ **-EWS** 0.5 Gallons Per Flush
- ☐ **-WS1** 1.0 Gal. Low Consumption Flush
- ☐ **Standard Flush** 1.5 Gallons Per Flush

Suffix Options (Check/Specify Appropriate Options)

- _____ **-BG** BioCare ADA Handle
- _____ **-H** Handle on Front of Flush Valve
- _____ **-L** 1" [25] Metal Push Button
- _____ **-L3** 3" [76] Metal Push Button
- _____ **-YJ** Split Ring Pipe Support
- _____ **-YK** Solid Ring Pipe Support
- _____ Other

ENGINEERING SPECIFICATION: ZURN Z6003AV AquaVantage® 'AV' Exposed Urinal Flush Valve – Exposed, quiet diaphragm-type, chrome-plated flushometer valve with a polished exterior. Complete with Zurn's AquaVantage TPE, chloramine resistant, dual seal diaphragm with a clog resistant, triple filtered by-pass. The valve is ADA compliant with a non-hold open and no leak handle feature, high back pressure vacuum breaker, one-piece hex coupling nut, adjustable tailpiece, spud coupling, and flange for top spud connection. Control stop has internal siphon-guard protection, vandal-resistant stop cap, sweat solder kit, and a cast wall flange with setscrew. Internal seals are made of chloramine resistant materials.

This space is for Architectural/Engineering Approval

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AquaVantage® is a registered trademark of Zurn Industries, LLC

Rev. E
Dwg. No. 65353
Date: 4/28/03
Product No. Z6003AV

Exposed Z6003AV-DF Dual Flush Model
For 3/4" Urinals

Flow Options

- ☐ **-EWS** 0.5 Gallons Per Flush
- ☐ **-WS1** 1.0 Gal. Low Consumption Flush
- ☐ **Standard Flush** 1.5 Gallons Per Flush

Suffix Options (Check/Specify Appropriate Options)

- _____ **-BG** BioCare ADA Handle
- _____ **-H** Handle on Front of Flush Valve
- _____ **-YJ** Split Ring Pipe Support
- _____ **-YK** Solid Ring Pipe Support
- _____ **-YO** Bumper on Angle Stop
- _____ Other

This space is for Architectural/Engineering Approval

ENGINEERING SPECIFICATION: ZURN Z6003AV-DF Dual Flush AquaVantage® 'AV' Exposed Urinal Flush Valve – Exposed, quiet diaphragm-type, chrome-plated flushometer valve with a polished exterior. The valve is ADA compliant with a non-hold open and no leak dual flush handle feature. Pushing the handle down actuates a full flush. Lifting the handle up initiates a reduced flush of 30% for further water conservation. A wall plate is furnished with graphics and instructions for user operation. The valve incorporates the AquaVantage TPE chloramine resistant, dual seal diaphragm with a clog resistant, triple filtered by-pass. The valve also includes a high back pressure vacuum breaker, one-piece hex coupling nut, adjustable tailpiece, spud coupling, and flange for top spud connection. The control stop has internal siphon-guard protection, vandal-resistant stop cap, sweat solder kit, and a cast wall flange with set-screw. All seals and gaskets are made of chloramine resistant materials.

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Rev.
Dwg. No. 81205
Date: 11/30/05
Product No. Z6003AV-DF

Exposed Z6003AV-EWS Model
For 3/4" Urinals

GreenSpec® LISTED

ADA DESIGNED

Flow Options

☐ **Standard Flush** .5 Gallons Per Flush

Suffix Options (Check/Specify Appropriate Options)

_____ **-VP** Vandal-Resistant Stop Screw
_____ **-YJ** Split Ring Pipe Support
_____ **-YK** Solid Ring Pipe Support
_____ Other

ENGINEERING SPECIFICATION: ZURN Z6003AV-EWS AquaVantage® 'AV' Exposed Urinal Flush Valve – Exposed, quiet diaphragm-type, chrome-plated flushometer valve with a polished exterior. Complete with Zurn's AquaVantage TPE, chloramine resistant, dual seal diaphragm with a clog resistant, triple filtered by-pass. The valve is ADA compliant with a non-hold open and no leak handle feature, high back pressure vacuum breaker, one-piece hex coupling nut, adjustable tailpiece, spud coupling, and flange for top spud connection. Control stop has internal siphon-guard protection, vandal-resistant stop cap, sweat solder kit, and a cast wall flange with setscrew. Internal seals are made of chloramine resistant materials.

This space is for Architectural/Engineering Approval

U.S. GREEN BUILDING COUNCIL MEMBER

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Rev.
Dwg. No. 81398
Date: 10/26/06
Product No. Z6003AV-EWS

Exposed Z6010AV Model
For Back Spud Water Closets

Flow Options

- ☐ **-WS1** 1.6 Gal. Low Consumption Flush
- ☐ **-FF** 4.5 Gal. Full Flush
- ☐ **Standard Flush** 3.5 Gallons Per Flush

Suffix Options (Check/Specify Appropriate Options)

- _____ **-BG** BioCare ADA Handle
- _____ **-H** Handle on Front of Flush Valve
- _____ **-L** 1" [25] Metal Push Button
- _____ **-L3** 3" [76] Metal Push Button
- _____ **-YJ** Split Ring Pipe Support
- _____ **-YK** Solid Ring Pipe Support
- _____ **-YO** Bumper on Angle Stop
- _____ Other

ENGINEERING SPECIFICATION: ZURN Z6010AV AquaVantage® 'AV' Exposed Closet Flush Valve – Exposed, quiet diaphragm-type, chrome-plated flushometer valve with a polished exterior. Complete with Zurn's AquaVantage TPE, chloramine resistant, dual seal diaphragm with a clog resistant, triple filtered by-pass. The valve is ADA compliant with a non-hold open and no leak handle feature, high back pressure vacuum breaker, one-piece hex coupling nut, adjustable tailpiece, spud coupling, and flange for back spud connection. Control stop has internal siphon-guard protection, vandal-resistant stop cap, sweat solder kit, and a cast wall flange with setscrew. Internal seals are made of chloramine resistant materials.

This space is for Architectural/Engineering Approval

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AquaVantage® is a registered trademark of Zurn Industries, LLC

Rev. D
Dwg. No. 65394
Date: 4/28/03
Product No. Z6010AV

Exposed Z6010AV-1 Model
For Back Spud Water Closets

Flow Options

- ☐ **-WS1** 1.6 Gal. Low Consumption Flush
- ☐ **-FF** 4.5 Gal. Full Flush
- ☐ **Standard Flush** 3.5 Gallons Per Flush

Suffix Options (Check/Specify Appropriate Options)

- _____ **-BG** BioCare ADA Handle
- _____ **-H** Handle on Front of Flush Valve
- _____ **-L** 1" [25] Metal Push Button
- _____ **-L3** 3" [76] Metal Push Button
- _____ **-YJ** Split Ring Pipe Support
- _____ **-YK** Solid Ring Pipe Support
- _____ **-YL** Solid Ring Pipe Support with Bumper
- _____ **-YO** Bumper on Angle Stop
- _____ Other

ENGINEERING SPECIFICATION: ZURN Z6010AV-1 AquaVantage® 'AV' Exposed Closet Flush Valve – Exposed, quiet diaphragm-type, chrome-plated flushometer valve with a polished exterior. Complete with Zurn's AquaVantage TPE, chloramine resistant, dual seal diaphragm with a clog resistant, triple filtered by-pass. The valve is ADA compliant with a non-hold open and no leak handle feature, high back pressure vacuum breaker, one-piece hex coupling nut, adjustable tailpiece, spud coupling, and flange for back spud connection. Control stop has internal siphon-guard protection, vandal-resistant stop cap, sweat solder kit, and a cast wall flange with setscrew. Internal seals are made of chloramine resistant materials.

This space is for Architectural/Engineering Approval

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AquaVantage® is a registered trademark of Zurn Industries, LLC

Rev. B
Dwg. No. 65407
Date: 4/28/03
Product No. Z6010AV-1

Exposed Z6010AV-2 Model
For Back Spud Water Closets

Flow Options

☐	**-WS1**	1.6 Gal. Low Consumption Flush
☐	**-FF**	4.5 Gal. Full Flush
☐	**Standard Flush**	3.5 Gallons Per Flush

Suffix Options (Check/Specify Appropriate Options)

_____	**-BG**	BioCare ADA Handle
_____	**-H**	Handle on Front of Flush Valve
_____	**-L**	1" [25] Metal Push Button
_____	**-L3**	3" [76] Metal Push Button
_____	**-YJ**	Split Ring Pipe Support
_____	**-YK**	Solid Ring Pipe Support
_____	**-YL**	Solid Ring Pipe Support with Bumper
_____	**-YN**	Bumper on Flush Pipe
_____		Other

ENGINEERING SPECIFICATION: ZURN Z6010AV-2 AquaVantage® 'AV' Exposed Closet Flush Valve – Exposed, quiet diaphragm-type, chrome-plated flushometer valve with a polished exterior. Complete with Zurn's AquaVantage TPE, chloramine resistant, dual seal diaphragm with a clog resistant, triple filtered by-pass. The valve is ADA compliant with a non-hold open and no leak handle feature, high back pressure vacuum breaker, one-piece hex coupling nut, adjustable tailpiece, spud coupling, and flange for back spud connection. Control stop has internal siphon-guard protection, vandal-resistant stop cap, sweat solder kit, and a cast wall flange with setscrew. Internal seals are made of chloramine resistant materials.

This space is for Architectural/Engineering Approval

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Rev. D
Dwg. No. 65408
Date: 4/28/03
Product No. Z6010AV-2

Exposed Z6014AV Model
For Water Closets

Flow Options

- ☐ **-WS1** 1.6 Gal. Low Consumption Flush
- ☐ **-FF** 4.5 Gal. Full Flush
- ☐ **Standard Flush** 3.5 Gallons Per Flush

Suffix Options (Check/Specify Appropriate Options)

- _____ **-BG** BioCare ADA Handle
- _____ **-H** Handle on Front of Flush Valve
- _____ **-L** 1" [25] Metal Push Button
- _____ **-L3** 3" [76] Metal Push Button
- _____ **-YH** One Wall Bumper
- _____ **-YJ** Split Ring Pipe Support
- _____ **-YK** Solid Ring Pipe Support
- _____ **-YL** Solid Ring Pipe Support with Bumper
- _____ **-YN** Bumper on Flush Pipe
- _____ Other

ENGINEERING SPECIFICATION: ZURN Z6014AV AquaVantage® 'AV' Exposed Closet Flush Valve – Exposed, quiet diaphragm-type, chrome-plated flushometer valve with a polished exterior. Complete with Zurn's AquaVantage TPE, chloramine resistant, dual seal diaphragm with a clog resistant, triple filtered by-pass. The valve is ADA compliant with a non-hold open and no leak handle feature, high back pressure vacuum breaker, one-piece hex coupling nut, adjustable tailpiece, spud coupling, and flange for top spud connection. Control stop has internal siphon-guard protection, vandal-resistant stop cap, sweat solder kit, and a cast wall flange with setscrew. Internal seals are made of chloramine resistant materials.

This space is for Architectural/Engineering Approval

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Rev. B
Dwg. No. 65409
Date: 4/28/03
Product No. Z6014AV

Exposed Z6017AV Model
For Clinic Service Sinks

Flow Options

☐ **Standard Flush** 6.5 Gallons Per Flush

Suffix Options (Check/Specify Appropriate Options)

_____	**-BG**	BioCare ADA Handle
_____	**-H**	Handle on Front of Flush Valve
_____	**-L**	1" [25] Metal Push Button
_____	**-L3**	3" [76] Metal Push Button
_____	**-O10**	1" [25] Offset Flush Connection
_____	**-O15**	1-1/2" [38] Offset Flush Connection
_____	**-O20**	2" [51] Offset Flush Connection
_____	**-YJ**	Split Ring Pipe Support
_____	**-YK**	Solid Ring Pipe Support
_____		Other

ENGINEERING SPECIFICATION: ZURN Z6017AV AquaVantage® 'AV' Exposed Clinic Service Sink Flush Valve – Exposed, quiet diaphragm-type, chrome-plated flushometer valve with a polished exterior. Complete with Zurn's AquaVantage TPE, chloramine resistant, dual seal diaphragm with a clog resistant, triple filtered by-pass. The valve is ADA compliant with a non-hold open and no leak handle feature, high back pressure vacuum breaker, one-piece hex coupling nut, adjustable tailpiece, spud coupling, and flange for top spud connection. Control stop has internal siphon-guard protection, vandal-resistant stop cap, sweat solder kit, and a cast wall flange with setscrew. Internal seals are made of chloramine resistant materials.

This space is for Architectural/Engineering Approval

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Rev. C
Dwg. No. 65395
Date: 4/28/03
Product No. Z6017AV

Exposed Z6096AV Model
For Eastern Style Water Closets

Flow Options

- ☐ **-WS1** 1.6 Gal. Low Consumption Flush
- ☐ **-FF** 4.5 Gal. Full Flush
- ☐ **Standard Flush** 3.5 Gallons Per Flush

Suffix Options (Check/Specify Appropriate Options)

- _____ **-BG** BioCare ADA Handle
- _____ **-H** Handle on Front of Flush Valve
- _____ **-L** 1" [25] Metal Push Button
- _____ **-L3** 3" [76] Metal Push Button
- _____ **-YJ** Split Ring Pipe Support
- _____ **-YK** Solid Ring Pipe Support
- _____ Other

ENGINEERING SPECIFICATION: ZURN Z6096AV AquaVantage® 'AV' Exposed Closet Flush Valve for Eastern Style Water Closet – Exposed, quiet diaphragm-type, chrome-plated flushometer valve with a polished exterior. Complete with Zurn's AquaVantage TPE, chloramine resistant, dual seal diaphragm with a clog resistant, triple filtered by-pass. The valve is ADA compliant with a non-hold open and no leak handle feature, high back pressure vacuum breaker, one-piece hex coupling nut, adjustable tailpiece, spud coupling, and flange for top spud connection. Control stop has internal siphon-guard protection, vandal-resistant stop cap, sweat solder kit, and a cast wall flange with setscrew. Internal seals are made of chloramine resistant materials.

This space is for Architectural/Engineering Approval

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AquaVantage® is a registered trademark of Zurn Industries, LLC

Rev. B
Dwg. No. 65410
Date: 4/28/03
Product No. Z6096AV

Exposed Z6099AV Model
For Flushing Rim Floor Drain

Flow Options

- ☐ **-WS1** 1.6 Gal. Low Consumption Flush
- ☐ **-FF** 4.5 Gal. Full Flush
- ☐ **Standard Flush** 3.5 Gallons Per Flush

Suffix Options (Check/Specify Appropriate Options)

- _____ **-BG** BioCare ADA Handle
- _____ **-H** Handle on Front of Flush Valve
- _____ **-L** 1" [25] Metal Push Button
- _____ **-L3** 3" [76] Metal Push Button
- _____ **-YJ** Split Ring Pipe Support
- _____ **-YK** Solid Ring Pipe Support
- _____ Other

ENGINEERING SPECIFICATION: ZURN Z6099AV AquaVantage® 'AV' Exposed Flush Valve for Flushing Rim Floor Drains – Exposed, quiet diaphragm-type, chrome-plated flushometer valve with a polished exterior. Complete with Zurn's AquaVantage TPE, chloramine resistant, dual seal diaphragm with a clog resistant, triple filtered by-pass. The valve is ADA compliant with a non-hold open and no leak handle feature, high back pressure vacuum breaker, one-piece hex coupling nut, and adjustable tailpiece. Control stop has internal siphon-guard protection, vandal-resistant stop cap, sweat solder kit, and a cast wall flange with setscrew. Internal seals are made of chloramine resistant materials.

This space is for Architectural/Engineering Approval

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AquaVantage® is a registered trademark of Zurn Industries, LLC

Rev. B
Dwg. No. 65411
Date: 4/28/03
Product No. Z6099AV

Concealed Z6140AV Model
With Exposed Back Spud Connection For Water Closets

Flow Options

- ☐ **-WS1** 1.6 Gal. Low Consumption Flush
- ☐ **-FF** 4.5 Gal. Full Flush
- ☐ **Standard Flush** 3.5 Gallons Per Flush

Suffix Options (Check/Specify Appropriate Options)

- _____ **-BG** BioCare ADA Handle
- _____ **-L** 1" [25] Metal Push Button
- _____ **-L3** 3" [76] Metal Push Button
- _____ Other

ENGINEERING SPECIFICATION: ZURN Z6140AV AquaVantage® 'AV' Concealed Closet Flush Valve – Concealed, quiet diaphragm-type, rough brass, flushometer valve with Zurn's AquaVantage TPE, chloramine resistant, dual seal diaphragm with a clog resistant, triple filtered by-pass. The valve is complete with a non-hold open and no leak handle feature, high back pressure vacuum breaker, one-piece hex coupling nut, adjustable tailpiece, spud coupling, and flange for back spud connection. Control stop has internal siphon-guard protection, and a sweat solder kit. Internal seals are made of chloramine resistant materials.

This space is for Architectural/Engineering Approval

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AquaVantage® is a registered trademark of Zurn Industries, LLC

Rev. B
Dwg. No. 65412
Date: 4/28/03
Product No. Z6140AV

Concealed Z6142AV Model
For Water Closets

Flow Options

- ☐ **-WS1** 1.6 Gal. Low Consumption Flush
- ☐ **-FF** 4.5 Gal. Full Flush
- ☐ **Standard Flush** 3.5 Gallons Per Flush

Suffix Options (Check/Specify Appropriate Options)

- _____ **-BG** BioCare ADA Handle
- _____ **-L** 1" [25] Metal Push Button
- _____ **-L3** 3" [76] Metal Push Button
- _____ Other

ENGINEERING SPECIFICATION: ZURN Z6142AV AquaVantage® 'AV' Concealed Closet Flush Valve – Concealed, quiet diaphragm-type, rough brass, flushometer valve with Zurn's AquaVantage TPE, chloramine resistant, dual seal diaphragm with a clog resistant, triple filtered by-pass. The valve is complete with a non-hold open and no leak handle feature, high back pressure vacuum breaker, one-piece hex coupling nut, adjustable tailpiece, spud coupling, and flange for top spud connection. Control stop has internal siphon-guard protection and a sweat solder kit. Internal seals are made of chloramine resistant materials.

This space is for Architectural/Engineering Approval

ZURN INDUSTRIES, LLC *COMMERCIAL BRASS OPERATION, 5900 ELWIN BUCHANAN DRIVE, SANFORD, NC 27330*
PHONE: 1-800-997-3876, FAX: 919-775-3541, WEBSITE: www.zurn.com
IN CANADA: ***ZURN INDUSTRIES LIMITED*** *3544 NASHUA DRIVE, MISSISSAUGA, ONTARIO L4V1L2, PHONE: 905-405-8272, FAX: 905-405-1292*

AquaVantage® is a registered trademark of Zurn Industries, LLC

Rev. B
Dwg. No. 65413
Date: 4/28/03
Product No. Z6142AV

Concealed Z6143AV Model
For Water Closets

Flow Options

- ☐ **-WS1** 1.6 Gal. Low Consumption Flush
- ☐ **-FF** 4.5 Gal. Full Flush
- ☐ **Standard Flush** 3.5 Gallons Per Flush

Suffix Options (Check/Specify Appropriate Options)

- _____ **-BG** BioCare ADA Handle
- _____ **-L** 1" [25] Metal Push Button
- _____ **-L3** 3" [76] Metal Push Button
- _____ Other

ENGINEERING SPECIFICATION: ZURN Z6143AV AquaVantage® 'AV' Concealed Closet Flush Valve – Concealed, quiet diaphragm-type, rough brass flushometer valve with Zurn's AquaVantage TPE, chloramine resistant, dual seal diaphragm with a clog resistant, triple filtered by-pass. The valve is complete with a non-hold open and no leak handle feature, high back pressure vacuum breaker, one-piece hex coupling nut, adjustable tailpiece, and spud coupling for back spud connection. Control stop has internal siphon-guard protection, and a sweat solder kit. Internal seals are made of chloramine resistant materials.

This space is for Architectural/Engineering Approval

ZURN INDUSTRIES, LLC *COMMERCIAL BRASS OPERATION, 5900 ELWIN BUCHANAN DRIVE, SANFORD, NC 27330*
PHONE: 1-800-997-3876, FAX: 919-775-3541, WEBSITE: www.zurn.com
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Rev. B
Dwg. No. 65414
Date: 4/28/03
Product No. Z6143AV

Concealed Z6144AV Model
For Water Closets

Flow Options

- ☐ **-WS1** 1.6 Gal. Low Consumption Flush
- ☐ **-FF** 4.5 Gal. Full Flush
- ☐ **Standard Flush** 3.5 Gallons Per Flush

Suffix Options (Check/Specify Appropriate Options)

- _____ **-BG** BioCare ADA Handle
- _____ **-L** 1" [25] Metal Push Button
- _____ **-L3** 3" [76] Metal Push Button
- _____ Other

ENGINEERING SPECIFICATION: ZURN Z6144AV AquaVantage® 'AV' Concealed Closet Flush Valve – Concealed, quiet diaphragm-type, rough brass flushometer valve with Zurn's AquaVantage TPE, chloramine resistant, dual seal diaphragm with a clog resistant, triple filtered by-pass. The valve is complete with a non-hold open and no leak handle feature, high back pressure vacuum breaker, one-piece hex coupling nut, adjustable tailpiece, and spud coupling for back spud connection. Control stop has internal siphon-guard protection, and a sweat solder kit. Internal seals are made of chloramine resistant materials.

This space is for Architectural/Engineering Approval

ZURN INDUSTRIES, LLC *COMMERCIAL BRASS OPERATION, 5900 ELWIN BUCHANAN DRIVE, SANFORD, NC 27330*
PHONE: 1-800-997-3876, FAX: 919-775-3541, WEBSITE: www.zurn.com
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AquaVantage® is a registered trademark of Zurn Industries, LLC

Rev. B
Dwg. No. 65415
Date: 4/28/03
Product No. Z6144AV

Concealed Z6150AV Model
For Flushing Rim Floor Drain

Flow Options

- ☐ **-WS1** 1.6 Gal. Low Consumption Flush
- ☐ **-FF** 4.5 Gal. Full Flush
- ☐ **Standard Flush** 3.5 Gallons Per Flush

Suffix Options (Check/Specify Appropriate Options)

- _____ **-BG** BioCare ADA Handle
- _____ **-J** Metal Oscillating ADA Handle
- _____ **-L3** 3" [76] Metal Push Button
- _____ Other

ENGINEERING SPECIFICATION: ZURN Z6150AV AquaVantage® 'AV' Concealed Flush Valve for Flushing Rim Floor Drain – Concealed, quiet diaphragm-type, rough brass, flushometer valve with Zurn's AquaVantage TPE, chloramine resistant, dual seal diaphragm with a clog resistant, triple filtered by-pass. The valve is complete with a non-hold open and no leak push button feature, high back pressure vacuum breaker, one-piece hex coupling nut, and adjustable tailpiece. Control stop has internal siphon-guard protection, and a sweat solder kit. Internal seals are made of chloramine resistant materials.

This space is for Architectural/Engineering Approval

ZURN INDUSTRIES, LLC *COMMERCIAL BRASS OPERATION, 5900 ELWIN BUCHANAN DRIVE, SANFORD, NC 27330*
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AquaVantage® is a registered trademark of Zurn Industries, LLC

Rev. B
Dwg. No. 65416
Date: 4/28/03
Product No. Z6150AV

Concealed Z6152AV Model
For Water Closets

Flow Options

- ☐ **-WS1** 1.6 Gal. Low Consumption Flush
- ☐ **-FF** 4.5 Gal. Full Flush
- ☐ **Standard Flush** 3.5 Gallons Per Flush

Suffix Options (Check/Specify Appropriate Options)

- _____ **-BG** BioCare ADA Handle
- _____ **-J** Metal Oscillating ADA Handle
- _____ **-L3** 3" [76] Metal Push Button
- _____ Other

ENGINEERING SPECIFICATION: ZURN Z6152AV AquaVantage® 'AV' Concealed Closet Flush Valve – Concealed, quiet diaphragm-type, rough brass, flushometer valve with Zurn's AquaVantage TPE, chloramine resistant, dual seal diaphragm with a clog resistant, triple filtered by-pass. The valve is complete with a non-hold open and no leak push button feature, high back pressure vacuum breaker, one-piece hex coupling nut, adjustable tailpiece, and spud coupling for back spud connection. Control stop has internal siphon-guard protection, and a sweat solder kit. Internal seals are made of chloramine resistant materials.

This space is for Architectural/Engineering Approval

ZURN INDUSTRIES, LLC *COMMERCIAL BRASS OPERATION, 5900 ELWIN BUCHANAN DRIVE, SANFORD, NC 27330*
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AquaVantage® is a registered trademark of Zurn Industries, LLC

Rev. C
Dwg. No. 65396
Date: 4/28/03
Product No. Z6152AV

Concealed Z6153AV Model
With Exposed Top Spud Connection For Water Closets

Flow Options

- ☐ **-WS1** 1.6 Gal. Low Consumption Flush
- ☐ **-FF** 4.5 Gal. Full Flush
- ☐ **Standard Flush** 3.5 Gallons Per Flush

Suffix Options (Check/Specify Appropriate Options)

- _____ **-BG** BioCare ADA Handle
- _____ **-L** 1" [25] Metal Push Button
- _____ **-L3** 3" [76] Metal Push Button
- _____ Other

ENGINEERING SPECIFICATION: ZURN Z6153AV AquaVantage® 'AV' Concealed Closet Flush Valve – Concealed, quiet diaphragm-type rough brass flushometer valve with Zurn's AquaVantage® TPE, chloramine resistant, dual seal diaphragm with a clog resistant, triple filtered by-pass. The valve is complete with a non-hold open and no leak handle feature, high back pressure vacuum breaker, one-piece hex coupling nut, adjustable tailpiece, spud coupling, and flange for top spud connection. Control stop has internal siphon-guard protection and a sweat solder kit. Internal seals are made of chloramine resistant materials.

This space is for Architectural/Engineering Approval

ZURN INDUSTRIES, LLC *COMMERCIAL BRASS OPERATION, 5900 ELWIN BUCHANAN DRIVE, SANFORD, NC 27330*
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AquaVantage® is a registered trademark of Zurn Industries, LLC

Rev.
Dwg. No. 80829
Date: 6/25/04
Product No. Z6153AV

Concealed Z6154AV Model
With Exposed Back Spud Connection For Water Closets

Flow Options

- ☐ **-WS1** 1.6 Gal. Low Consumption Flush
- ☐ **-FF** 4.5 Gal. Full Flush
- ☐ **Standard Flush** 3.5 Gallons Per Flush

Suffix Options (Check/Specify Appropriate Options)

- _____ **-BG** BioCare ADA Handle
- _____ **-J** Metal Oscillating ADA Handle
- _____ **-L3** 3" [76] Metal Push Button
- _____ Other

ENGINEERING SPECIFICATION: ZURN Z6154AV AquaVantage® 'AV' Concealed Closet Flush Valve – Concealed, quiet diaphragm-type, rough brass, flushometer valve with Zurn's AquaVantage TPE, chloramine resistant, dual seal diaphragm with a clog resistant, triple filtered by-pass. The valve is complete with a non-hold open and no leak push button feature, high back pressure vacuum breaker, one-piece hex coupling nut, adjustable tailpiece, spud coupling, and flange for back spud connection. Control stop has internal siphon-guard protection and a sweat solder kit. Internal seals are made of chloramine resistant materials.

This space is for Architectural/Engineering Approval

ZURN INDUSTRIES, LLC *COMMERCIAL BRASS OPERATION, 5900 ELWIN BUCHANAN DRIVE, SANFORD, NC 27330*
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AquaVantage® is a registered trademark of Zurn Industries, LLC

Rev. B
Dwg. No. 65417
Date: 4/28/03
Product No. Z6154AV

Concealed Z6155AV Model
With Exposed Top Spud Connection For Service Sinks

Flow Options

- ☐ **-WS1** 1.6 Gal. Low Consumption Flush
- ☐ **-FF** 4.5 Gal. Full Flush
- ☐ **Standard Flush** 3.5 Gallons Per Flush

Suffix Options (Check/Specify Appropriate Options)

- _____ **-BG** BioCare ADA Handle
- _____ **-L** 1" [25] Metal Push Button
- _____ **-L3** 3" [76] Metal Push Button
- _____ Other

ENGINEERING SPECIFICATION: ZURN Z6155AV AquaVantage® 'AV' Concealed Closet Flush Valve – Concealed, quiet diaphragm-type, rough brass, flushometer valve with Zurn's AquaVantage TPE, chloramine resistant, dual seal diaphragm with a clog resistant, triple filtered by-pass. The valve is complete with a non-hold open and no leak handle feature, high back pressure vacuum breaker, one-piece hex coupling nut, adjustable tailpiece, spud coupling, and flange for top spud connection. Control stop has internal siphon-guard protection and a sweat solder kit. Internal seals are made of chloramine resistant materials.

This space is for Architectural/Engineering Approval

ZURN INDUSTRIES, LLC *COMMERCIAL BRASS OPERATION, 5900 ELWIN BUCHANAN DRIVE, SANFORD, NC 27330*
PHONE: 1-800-997-3876, FAX: 919-775-3541, WEBSITE: www.zurn.com
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AquaVantage® is a registered trademark of Zurn Industries, LLC

Rev. B
Dwg. No. 65418
Date: 4/28/03
Product No. Z6155AV

Concealed Z6190AV Model
For 1-1/4" Urinals

Flow Options

- ☐ **-WS1** 1.0 Gal. Low Consumption Flush
- ☐ **-WS** 1.5 Gal. Water Saver
- ☐ **Standard Flush** 3.0 Gallons Per Flush

Suffix Options (Check/Specify Appropriate Options)

- _____ **-BG** BioCare ADA Handle
- _____ **-L** 1" [25] Metal Push Button
- _____ **-L3** 3" [76] Metal Push Button
- _____ Other

ENGINEERING SPECIFICATION: ZURN Z6190AV AquaVantage® 'AV' Concealed Urinal Flush Valve – Concealed, quiet diaphragm-type, rough brass, flushometer valve with Zurn's AquaVantage TPE, chloramine resistant, dual seal diaphragm with a clog resistant, triple filtered by-pass. The valve is complete with a non-hold open and no leak handle feature, high back pressure vacuum breaker, one-piece hex coupling nut, adjustable tailpiece, and spud coupling for back spud connection. Control stop has internal siphon-guard protection and a sweat solder kit. Internal seals are made of chloramine resistant materials.

This space is for Architectural/Engineering Approval

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AquaVantage® is a registered trademark of Zurn Industries, LLC

Rev. B
Dwg. No. 65419
Date: 4/28/03
Product No. Z6190AV

Concealed Z6195AV Model
For 3/4" Urinals

Flow Options

☐ **-WS1** 1.0 Gal. Low Consumption Flush
☐ **Standard Flush** 1.5 Gallons Per Flush

Suffix Options (Check/Specify Appropriate Options)

_____ **-BG** BioCare ADA Handle
_____ **-L** 1" [25] Metal Push Button
_____ **-L3** 3" [76] Metal Push Button
_____ Other

ENGINEERING SPECIFICATION: ZURN Z6195AV AquaVantage® 'AV' Concealed Urinal Flush Valve – Concealed, quiet diaphragm-type, rough brass, flushometer valve with Zurn's AquaVantage TPE, chloramine resistant, dual seal diaphragm with a clog resistant, triple filtered by-pass. The valve is complete with a non-hold open and no leak handle feature, high back pressure vacuum breaker, one-piece hex coupling nut, adjustable tailpiece, and spud coupling for back spud connection. Control stop has internal siphon-guard protection and a sweat solder kit. Internal seals are made of chloramine resistant materials.

This space is for Architectural/Engineering Approval

ZURN INDUSTRIES, LLC *COMMERCIAL BRASS OPERATION, 5900 ELWIN BUCHANAN DRIVE, SANFORD, NC 27330*
PHONE: 1-800-997-3876, FAX: 919-775-3541, WEBSITE: www.zurn.com
IN CANADA: ***ZURN INDUSTRIES LIMITED*** *3544 NASHUA DRIVE, MISSISSAUGA, ONTARIO L4V1L2, PHONE: 905-405-8272, FAX: 905-405-1292*

AquaVantage® is a registered trademark of Zurn Industries, LLC

Rev. C
Dwg. No. 65393
Date: 4/28/03
Product No. Z6195AV

Concealed Z6196AV Model
For Eastern Style Water Closets

Flow Options

☐ **-WS1** 1.6 Gal. Low Consumption Flush
☐ **Standard Flush** 3.5 Gallons Per Flush

Suffix Options (Check/Specify Appropriate Options)

_____ **-BG** BioCare ADA Handle
_____ **-J** Metal Oscillating ADA Handle
_____ **-L3** 3" [76] Metal Push Button
_____ Other

ENGINEERING SPECIFICATION: ZURN Z6196AV AquaVantage® 'AV' Concealed Flush Valve for Eastern Style Water Closet – Concealed, quiet diaphragm-type, rough brass, flushometer valve with Zurn's AquaVantage TPE, chloramine resistant, dual seal diaphragm with a clog resistant, triple filtered by-pass. The valve is complete with a non-hold open and no leak handle feature, high back pressure vacuum breaker, one-piece hex coupling nut, adjustable tailpiece, spud coupling, and flange for back spud connection. Control stop has internal siphon-guard protection and a sweat solder kit. Internal seals are made of chloramine resistant materials.

This space is for Architectural/Engineering Approval

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AquaVantage® is a registered trademark of Zurn Industries, LLC

Rev. B
Dwg. No. 65420
Date: 4/28/03
Product No. Z6196AV

Concealed Z6197AV Model
For 3/4" Urinals With Top Spud Connection

Flow Options

☐ **-WS1** 1.0 Gal. Low Consumption Flush
☐ **Standard Flush** 1.5 Gallons Per Flush

Suffix Options (Check/Specify Appropriate Options)

_____ **-BG** BioCare ADA Handle
_____ **-L** 1" [25] Metal Push Button
_____ **-L3** 3" [76] Metal Push Button
_____ Other

ENGINEERING SPECIFICATION: ZURN Z6197AV AquaVantage® 'AV' Concealed Urinal Flush Valve – Concealed, quiet diaphragm-type rough brass flushometer valve with Zurn's AquaVantage TPE, chloramine resistant, dual seal diaphragm with a clog resistant, triple filtered by-pass. The valve is complete with a non-hold open and no leak handle feature, high back pressure vacuum breaker, elbow flush connections, hex coupling nut, adjustable tailpiece, and spud coupling for top spud connection. Control stop has internal siphon-guard protection and a sweat solder kit. Internal seals are made of chloramine resistant materials.

This space is for Architectural/Engineering Approval

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PHONE: 1-800-997-3876, FAX: 919-775-3541, WEBSITE: www.zurn.com
IN CANADA: ***ZURN INDUSTRIES LIMITED*** *3544 NASHUA DRIVE, MISSISSAUGA, ONTARIO L4V1L2, PHONE: 905-405-8272, FAX: 905-405-1292*

AquaVantage® is a registered trademark of Zurn Industries, LLC

Rev.
Dwg. No. 80796
Date: 5/28/04
Product No. Z6197AV

Z6199
Aquaflush Access Panel and Frame

Product No.	Size	A	B	C	D	E	F
Z6199-BX12	12 x 12 [305 x 305]	12 [305]	12 [305]	13-1/2 [343]	13-1/2 [343]	5-1/2 [140]	5-1/2 [140]
Z6199-BX15	15 x 15 [381 x 381]	15 [381]	15 [381]	16-1/2 [419]	16-1/2 [419]	7 [178]	7 [178]
Z6199-BX17	13 x 17 [330 x 432]	17 [432]	13 [330]	14-1/2 [368]	18-1/2 [470]	6 [152]	8 [203]

Suffix Options (Check/Specify Appropriate Options)

_____ **-SC-2** 2" [51] Long Vandal-Proof Screws
_____ **-SP** Solid Panel
_____ Other

ENGINEERING SPECIFICATION: ZURN Z6199 Aquaflush® Access Panel and Frame – The access panel and frame provide quick and simple access to in-wall concealed flush valves when a mechanical chase of adequate size is not available. The panel and frame incorporate a #14 gage stainless steel satin finish cover, #18 gage stainless steel satin finish frame, and (4) 1" [25] long vandal-proof screws, (6) 1" [25] long vandal-proof screws on 13 x 17 [330 x 432] panel.

This space is for Architectural/Engineering Approval

ZURN INDUSTRIES, LLC *COMMERCIAL BRASS OPERATION, 5900 ELWIN BUCHANAN DRIVE, SANFORD, NC 27330*
PHONE: 1-800-997-3876, FAX: 919-775-3541, WEBSITE: www.zurn.com
IN CANADA: ***ZURN INDUSTRIES LIMITED*** *3544 NASHUA DRIVE, MISSISSAUGA, ONTARIO L4V1L2, PHONE: 905-405-8272, FAX: 905-405-1292*

Aquaflush® is a registered trademark of Zurn Industries, LLC

Rev. A
Dwg. No. 59015
Date: 4/21/04
Product No. Z6199

Specifying "L" Dimension for Concealed Manual-Operated Flush Valves

Step 1: **Determine the applicable column** by locating the valve's 4-digit model number.

Step 2: **Determine the applicable row** by locating the correct wall thickness.
NOTE: For wall thicknesses not listed, locate and use the next largest size.

Step 3: **Order the applicable suffix** shown at the intersection of the row and column.

Example: For closet valve model number Z6152AV and a wall thickness of 6", order: Z6152AV-L9.

	Closets		Urinals	Combination Fixtures
Wall Thickness "W"	6140AV 6142AV 6143AV 6144AV 6150AV 6152AV 6154AV 6155AV 6605AV 6611AV	6681AV	6190AV 6195AV 6602AV 6609AV 6613AV 6615AV	6601AV 6603AV 6616AV
1/4"	L4	L7	L4	L5
1"	L4	L7	L4	L5
2"	L5	L8	L5	L6
3"	L6	L9	L6	L7
4"	L7	L10	L7	L8
5"	L8	L11	L8	L9
6"	L9	L12	L9	L10
7"	L10	L13	L10	L11
8"	L11	L14	L11	L12
9"	L12	L15	L12	L13
10"	L13	L16	L13	L14

Z6199 Model Access Panel and Frame for Manual-Operated Concealed Flush Valves

Z6199-BX12

Z6199-BX15

Z6199-BX17

Z6199

Engineering Specification: Zurn Z6199 Access Panel and Frame for Manual-Operated Concealed Flush Valves –
The access panel and frame provide quick and simple access to in-wall concealed flush valves when a mechanical chase of adequate size is not available. The panel is #14 gage stainless steel and the frame is #18 gage stainless steel. Both have a satin finish. The assembly comes complete with (4) 1" [25mm] vandal-proof screws. Specify Z6199-BX12 for 12" x 12", Z6199-BX15 for 15" x 15", or Z6199-BX17 for 13" x 17".

Product No.	Size	A	B	C	D	E	F
Z6199-BX12	12x12 [305x305]	12 [305]	12 [305]	13-1/2 [343]	13-1/2 [343]	5-1/2 [140]	5-1/2 [140]
Z6199-BX15	15x15 [381x381]	15 [381]	15 [381]	16-1/2 [419]	16-1/2 [419]	7 [178]	7 [178]
Z6199-BX17	13x17 [330x432]	17 [432]	13 [330]	14-1/2 [368]	18-1/2 [470]	6 [152]	8 [203]

SUFFIX OPTIONS (Check/specify appropriate options.)	
-SP	Solid Panel
-SC-2	2" [51mm] Long Vandal-Proof Screws

ZURN INDUSTRIES, LLC *COMMERCIAL BRASS OPERATION, 5900 ELWIN BUCHANAN DRIVE, SANFORD, NC 27330*
PHONE: 1-800-997-3876, FAX: 919-775-3541, WEBSITE: www.zurn.com
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Notes

ZURN INDUSTRIES, LLC *COMMERCIAL BRASS OPERATION, 5900 ELWIN BUCHANAN DRIVE, SANFORD, NC 27330*
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AquaVantage® AV Z6000AV Series

AquaVantage Exposed Flushometer

Installation, Operation, Maintenance, and Parts Manual

Patented and Patents Pending

Z6000AV

Z6003AV

AquaVantage® Exposed Closet/Urinal Systems

Z6000AV
Z6001AV
Z6003AV
Z6010AV
Z6014AV
Z6017AV
Z6096AV
Z6099AV

LIMITED WARRANTY

All goods sold hereunder are warranted to be free from defects in material and factory workmanship for a period of three years from the date of purchase. Decorative finishes warranted for one year. We will replace at no cost goods that prove defective provided we are notified in writing of such defect and the goods are returned to us prepaid at Sanford, NC, with evidence that they have been properly maintained and used in accordance with instructions. We shall not be responsible for any labor charges or any loss, injury or damages whatsoever, including incidental or consequential damages. The sole and exclusive remedy shall be limited to the replacement of the defective goods. Before installation and use, the purchaser shall determine the suitability of the product for his intended use and the purchaser assumes all risk and liability whatever in connection therewith. Where permitted by law, the implied warranty of merchantability is expressly excluded. If the products sold hereunder are “consumer products,” the implied warranty of merchantability is limited to a period of three years and shall be limited solely to the replacement of the defective goods. All weights stated in our catalogs and lists are approximate and are not guaranteed.

AquaVantage® Rough-In, Product Specification, Models, and Options

ENGINEERING SPECIFICATION: ZURN AquaVantage® 'AV' Exposed Closet Flush Valve – Exposed, quiet diaphragm type, chrome-plated flushometer valve with a polished exterior. Complete with Zurn's AquaVantage TPE, chloramine resistant, dual seal diaphragm with a clog resistant, triple filtered by-pass. The valve is ADA compliant with a non-hold-open and no-leak handle feature, high back pressure vacuum breaker, one-piece hex coupling nut, adjustable tailpiece, spud coupling, and flange for spud connection. Control stop has internal siphon-guard protection, vandal-resistant stop cap, sweat solder kit, and a cast wall flange with setscrew. Internal seals are made of chloramine resistant materials.

MODELS

Z6000AV – 1-1/2" Water Closet valve with top spud connection

Z6010AV – 1-1/2" Water Closet valve with back spud connection

Z6001AV – 1-1/4" Urinal Valve with top spud connection

Z6003AV – 3/4" Urinal Valve with top spud connection

FLOWS

-WS1 Low Consumption
1.0 Gal. for Urinal, 1.6 Gal. for Water

-FF Full Flow
3.0 Gal. for Urinal, 4.5 Gal. for Water Closet

OPTIONS

_____ **-BG** BioCare ADA Handle
_____ **-H** Handle on Front of Flush Valve
_____ **-L** 1" [25] Metal Push Button
_____ **-L3** 3" [76] Metal Push Button
_____ **-YJ** Split Ring Pipe Support
_____ **-YK** Solid Ring Pipe Support
_____ **-YO** Bumper on Stop Valve
_____ **-1** 16" Rough-In
_____ **-2** 24" Rough-In
_____ Other

Models: Z6000AV, Z6000AV-1, Z6000AV-2, Z6000AV-3,
-WS1 (Water Saver) 1.6 Gal. Low Consumption

Models: Z6001AV (1-1/4" (Urinal Flush Valve)
Z6003AV (3/4" (Urinal Flush Valve)
-WS1 (Water Saver) 1.0 Gal. Low Consumption

Models: Z6010AV, Z6010AV-1, Z6010AV-2
-WS1 (Water Saver) 1.6 Gal. Low Consumption

Sweat Solder Adaptor Installation Instructions

Important:

- *All plumbing is to be installed according to state and local codes and regulations.*
- *Water supply lines need to allow proper water flow for each fixture.*
- *Flush all lines of any **debris** before making connections.*
- *Do not use pipe sealant or plumbing grease on any fitting other than the control stop inlet.*

The AquaVantage® valve is designed to operate under various water pressures with recommended range between 10 and 100 psi (69 to 689 kPa). Each Zurn valve is tested for proper performance at the factory before being shipped. Consult the product pages of the catalog for available flow options.

Most low consumption fixtures (1.6 gallon) require a minimum of 25 psi running pressure through the valve to obtain proper evacuation. When installing your quality Zurn valve it is recommended that to protect the polished finish you do not use a toothed wrench. This will cause gouges and scratches on your valve.

STEP NO. 1

Measure distance from finished wall to centerline of fixture spud; cut water supply pipe 1-1/4" shorter than this measurement. Chamfer O.D. and I.D.

STEP NO. 2

Slide threaded adapter onto supply pipe until shoulder stops on end of pipe. Then sweat-solder the adapter to water supply pipe.

STEP NO. 3

Measure from finished wall to first thread of adapter for length of chrome tube. Cut chrome tube this length 'x'.

STEP NO. 4

Slide wall escutcheon over chrome tube and slide both chrome tube and wall escutcheon over supply pipe pushing the wall escutcheon all the way to the wall.

STEP NO. 5

Screw control stop onto water supply water adaptor.

AquaVantage® Installation Instructions

1. Install stop valve assembly using proper size supply escutcheon and sweat solder adapter kit if applicable (see 1). Thread sealing compounds should be used on male NPT threads only.

2. Prior to inserting the flush valve tailpiece into the stop valve, be certain that the O-ring seal is located in O-ring seal groove at the end of the tailpiece and the locking nut and locking snap ring are located as shown below (see 2). Care should be taken not to damage the O-ring when inserting the tailpiece into the stop valve. If lubrication is needed, wetting the O-ring with water will be sufficient.

3. Insert the flush valve tailpiece into the stop valve and hand tighten the lock nut to the stop valve. Plumb the entire unit (see 3).

4. Determine the length of vacuum breaker tube required to join the flush valve and fixture spud. Cut the vacuum breaker tube, if required, to this length (see 4a). Assemble the vacuum breaker tube assembly and spud nut assembly to the flush valve and fixture spud.

5. Hand tighten spud nut and vacuum breaker tube nut to fixture and flush valve. Adjust the valve assembly for plumb. Tighten fixture spud nut, vacuum breaker tube nut, and lock nut with a wrench.

6. When all flush valves are connected to the fixtures and water pressure is available, it is recommended that the supply piping be flushed to remove dirt, pipe chips, etc., from system. Before the water is turned on, be sure all stop valves to the flush valves are closed off tight. The stop valves can be opened and closed by using the adjusting screw located at the center of the stop valve cap, behind the stop cap cover screw if already installed (see 6a). Stop valve adjustments can only be made by using the adjusting screw. **It is not necessary to remove the stop valve cap when making adjustments. If for any reason it becomes necessary to remove the stop valve cap, be certain the water is shut off at the main supply valve.**

6a

Use the following procedure to flush out the supply piping:

A. Remove the main valve body cover.

B. Remove the working parts from the flush valve (shown in 6b).

C. Replace the main valve body cover and plastic cover without reinstalling the working parts.

D. Open the stop valve by using the stop adjusting screw and flush out all debris from pipe and connections.

E. Shut stop, open cover, replace the working parts, replace and tighten the cover.

This procedure should also be followed when the system has been drained for some time, as occurs in athletic fields, recreation parks, etc.

6b

7. The AquaVantage® flush valves are preset for fixture volume as marked on the valve cartons. The valve does not require regulation for variation in water pressure within its operating range. To set the flush valve for proper operation, open the stop valve completely by using the adjusting screw and flush the AquaVantage several times. Gradually adjust the stop valve, using the adjusting screw, so that the rate of water flow into the fixture is not excessive, yet is sufficient enough to adequately evacuate the waste. The final setting for urinals should be such that the fixture will not overflow when the valve is actuated twenty times in succession. The stop cap cover screw should be secured after final adjustments have been made.

7

AquaVantage® Repair Kits

Part Identification

1. Handle Nut
2. Handle Sleeve and Insert
3. Low Force/ADA Compliant Handle
4. Actuator Rod
5. Handle O-Ring
6. Handle Spring
7. Handle Retainer
8. Handle Seal
9. Gasket
10. Valve Body Cover
11. Plastic Cover
12. Trip Mechanism
13. Diaphragm Repair Kit
14. Valve Body
15. Vacuum Breaker Friction Washer
16. Vacuum Breaker Insert
17. Vacuum Breaker Duckbill
18. Vacuum Breaker Tube
19. Vacuum Breaker Tube Nut
20. Spud Nut
21. Spud Friction Washer
22. Spud Sleeve
23. Spud Escutcheon
24. Tailpiece
25. Snap Ring
26. Tailpiece O-Ring
27. Locking Nut
28. Setscrew for Cast Wall Flange
29. Cast Wall Escutcheon
30. Supply Cover Tube
31. Sweat Solder Adapter
32. Stop Body
33. Piston Seal
34. Piston
35. Stop Spring
36. Guide O-Ring
37. Piston Guide
38. Guide Holder
39. Adjusting Screw
40. Stop Cap
41. Snap Cap Screw Cover
42. Vandal-Resistant Control Stop Cover
43. Setscrew for Control Stop Cover

Covers and Repair Kits	Product No.
Outside Cover - CP – Item 10	P6000-LL
Inside Cover – Item 11	P6000-L
Low Consumption Closet Kit – 1.6 gal. flush	P6000-ECA-WS1
Water Saving Closet Kit – 3.5 gal. flush	P6000-ECA-WS
Full Flow Closet Kit – 4.5 gal. flush	P6000-ECA-FF
Low Consumption Urinal Kit – 1.0 gal. flush	P6000-EUA-WS1
Water Saving Urinal Kit – 1.5 gal. flush	P6000-EUA-WS
Full Flow Urinal Kit – 3.0 gal. flush	P6000-EUA-FF

Repair Parts – Inside Parts	Product No.
Urinal Relief Valve – Item 12	P6000-EU13
Closet Relief Valve – Item 12	P6000-EC13

AquaVantage Rebuild Kits	Product No.
Closet and Urinal Rebuild Kits Include Items 12, 13, 15-17, 26	P6000-ECA-WS-RK P6000-ECA-WS1-RK P6000-EUA-WS-RK P6000-EUA-WS1-RK

Handle Assembly and Repair Kits	Product No.
ADA Handle Assembly (Side) Includes Items 2-9	P6000-M-ADA
Handle Repair Kit (Side) Includes Items 4-9	P6000-MK
Handle Seal Includes Item 8	P6000-M9
Handle Gasket Includes Item 9	P6000-M10
Repair Kit for Front Operation - Exposed Includes Items 4-9	P6000-MHK
Handle Assembly (Front) Includes Items 2-9	P6000-MH

Control Stop Repair Kit and Parts	Product No.
Control Stop Repair Kit for 1" and 3⁄4", Includes Items 33-39	P6000-D-SD
Seal Seat for 1" and 3⁄4", Includes Item 33	P6000-D42
VP Control Stop Repair Kit for 1" and 3⁄4", Includes Items 33-39	P6000-D-VP
Sweat Solder Connection with Cast Wall Flange Includes Items 29-31	P6000-YB

Adjustable Tailpieces	Product No.
Adjustable Tailpiece for Standard Flush Valve Includes Items 24-26	P6000-J1
Tailpiece Coupling Assembly Includes Items 25-27	P6000-K
Tailpiece Locking Ring Includes Item 25	P6000-C30
Tailpiece O-Ring Includes Item 26	P6000-C31
Coupling Nut Includes Item 27	P6000-C32

Flush Connections and Spud Coupling Kits	Product No.
Flush Tube Assembly for Flush Valves Includes Items 15-19. Specify diameter and length.	P6000-A
Vacuum Breaker Repair Kit Includes Items 15-17	P6000-B
Spud Coupling Assembly Includes Items 20-23. Specify size.	P6000-H

AquaVantage® Trouble Shooting Guide

Problem	Cause*	Corrective Action*
Valve will not operate.	1.) Stop valve is closed. 2.) Supply valve is closed.	1.) Open stop valve. 2.) Open supply valve.
Insufficient volume of water to adequately siphon fixture.	1.) Stop valve is not open enough. 2.) Urinal trip mechanism installed in wrong kit, urinal for closet. 3.) Insufficient volume or pressure at supply.	1.) Open stop valve for desired volume of water. 2.) Replace urinal part with proper closet valve part. 3.) If gauges are not available to measure supply pressure or volume of water at the valve, completely remove the working parts and open the stop valve to allow water to pass through the empty valve. If the supply is adequate to siphon the fixture, the guide ring (#17) may be removed from the guide assembly to provide additional flow. Should this prove unsatisfactory, steps should be taken to increase the pressure and/or supply.
Flush valve shuts off too quickly.	1.) Damaged or punctured diaphragm.	1.) Install new P6000-EUA or P6000-ECA replacement kit to remedy the problem (#12 and #13).
Valve is short flushing.	1.) Cylinder guide assembly and diaphragm assembly are not tight. 2.) Enlarged bypass orifice. 3.) Urinal trip mechanism (blue #13) in closet flush valves.	1.) Screw the two assemblies hand tight. 2.) Install the new P6000-ECA, P6000-EUA replacement kit to remedy the problem. 3.) Install closet trip mechanism (white #13).
Valve is flushing too long or not shutting off.	1.) Trip mechanism not seating properly due to foreign material between trip mechanism and retainer disc. 2.) By-pass orifice is plugged or partially plugged. 3.) Line pressure is not adequate to force trip mechanism to seal. 4.) Cracked cover.	1.) Disassemble parts and rinse thoroughly. 2.) Examine by-pass orifice and clean if necessary being certain not to enlarge orifice opening. 3.) Pressure is inadequate or has dropped below minimum operating range. Steps should be taken to increase the line pressure. 4.) Replace cover with new one (#11 - P6000-L).
Water splashes out of fixture.	1.) Supply volume is more than is necessary. 2.) Lime accumulation on vortex or spreader holes of fixture.	1.) Adjust downward on control stop. 2.) Remove the lime build up.
Flush is not considered quiet.	1.) Control stop may not be adjusted for quiet operation. 2.) Fixture may be contributing to noise. 3.) Piping system may be source of noise.	1.) Adjust the control stop for quiet operation keeping in mind the fixture evacuation requirements. 2.) Check noise created by fixture by placing a cover over the bowl opening to separate valve noise from bowl noise. If it is determined the fixture is too noisy, consult with fixture manufacturer. 3.) High pressure in the system can sometimes be controlled by the stop valve. Other sources of noise may be the absence of air chambers and shock arrestors, loose pipes, improper size pipes, etc. In these cases the building engineer should be consulted.
Handle assembly leaking.	1.) Handle assembly is not tight.	1.) Tighten handle assembly.
Water drips from chrome cap.	1.) P6000-L inside plastic cap is cracked.	1.) Replace P6000-L plastic cap.

Care of Chrome-Plated Surfaces

The suggested cleaning of chrome-plated surfaces is simply to clean them with soap and water then dry. Commercial cleaning compounds are never recommended.

Seasonal Use

Valves used in installations subject to shutdown because of cold and freezing conditions should be maintained in the following manner. After the main supply has been shut off and the water drained from the system, remove the stop valve cap and stop valve internals to allow the water to drain from the flush valve itself.

*See previous page for numerical references.

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Printed in the U.S.A.

Form No. FV211, 5/07

AquaVantage® AV Z6100AV Series

AquaVantage Concealed Flushometer

Installation, Operation, Maintenance, and Parts Manual

Patented and Patents Pending

Z6140AV

Z6195AV

AquaVantage® Concealed Closet/Urinal Systems

Z6140AV
Z6142AV
Z6143AV
Z6144AV
Z6150AV
Z6152AV
Z6154AV
Z6155AV
Z6190AV
Z6195AV
Z6196AV

LIMITED WARRANTY

All goods sold hereunder are warranted to be free from defects in material and factory workmanship for a period of three years from the date of purchase. Decorative finishes warranted for one year. We will replace at no cost goods that prove defective provided we are notified in writing of such defect and the goods are returned to us prepaid at Sanford, NC, with evidence that they have been properly maintained and used in accordance with instructions. We shall not be responsible for any labor charges or any loss, injury or damages whatsoever, including incidental or consequential damages. The sole and exclusive remedy shall be limited to the replacement of the defective goods. Before installation and use, the purchaser shall determine the suitability of the product for his intended use and the purchaser assumes all risk and liability whatever in connection therewith. Where permitted by law, the implied warranty of merchantability is expressly excluded. If the products sold hereunder are “consumer products,” the implied warranty of merchantability is limited to a period of three years and shall be limited solely to the replacement of the defective goods. All weights stated in our catalogs and lists are approximate and are not guaranteed.

AquaVantage® Rough-In, Product Specification, Models, and Options

ENGINEERING SPECIFICATION: ZURN AquaVantage® 'AV' Concealed Closet/Urinal Flush Valves – Concealed, quiet diaphragm-type, rough brass, flushometer valve with Zurn's AquaVantage TPE, chloramine resistant, dual seal diaphragm with a clog resistant, triple filtered by-pass. The valve is complete with a non-hold open and no leak handle feature, high back pressure vacuum breaker, one-piece hex coupling nut, adjustable tailpiece, spud coupling, and flange for back spud connection. Control stop has internal siphon-guard protection and a sweat solder kit. Internal seals are made of chloramine resistant materials.

MODELS

Z6140AV – 1-1/2" Water Closet valve with top spud connection

Z6152AV – 1-1/2" Water Closet valve with backspud connection

Z6190AV – 1-1/4" Urinal Valve with back spud connection

Z6195AV – 3/4" Urinal Valve with back spud connection

FLOWS

-WS1 Low Consumption
1.0 Gal. for Urinal, 1.6 Gal. for Water Closet

-WS Water Saver
1.5 Gal. for Urinal, 3.5 Gal. for Water Closet (Standard Flow)

-FF Full Flow
3.0 Gal. for Urinal, 4.5 Gal. for Water Closet

OPTIONS

_____ **-BG** BioCare ADA Handle
_____ **-J** Metal Oscillating ADA Handle
_____ **-L** 1" [25] Metal Push Button
_____ **-L3** 3" [76] Metal Push Button
_____ **-YBA** Sweat Solder Adaptor
_____ Other

Models: Z6152AV
-WS1 (Water Saver) 1.6 Gal. Low Consumption

Models: Z6140AV
-WS1 (Water Saver) 1.6 Gal Low Consumption

Models: Z6195AV (3/4" Urinal Flush Valve) shown, Z6190AV (1-1/4" Urinal Flush Valve) -WS1 (Water Saver) 1.0 Gal Low Consumption

AquaVantage® Installation Instructions

Important:

- All plumbing is to be installed according to state and local codes and regulations.
- Water supply lines need to allow proper water flow for each fixture.
- Flush all lines of any **debris** before making connections.
- Do not use pipe sealant or plumbing grease on any fitting other than the control stop inlet.

The AquaVantage valve is designed to operate under various water pressures with a recommended range between 10 and 100 psi (69 to 689 kPa). Each Zurn valve is tested for proper performance at the factory before being shipped. Consult the product pages of the catalog for available flow options.

Most low consumption valves (1.6 gallon) require a minimum of 25 psi running pressure through the valve to obtain proper evacuation.

When installing your quality Zurn valve, it is recommended that a smooth jawed wrench be used. This will prevent gouges and scratches on your valve.

Before starting the installation process, bore a 1-1/2" hole in wall for actuator, and a 2" hole for piping if required.

1. Install the Zurn Control Stop to the supply line with the water outlet positioned as needed. If using a sweat solder adaptor, sweat the adaptor to copper tubing before installing control stop.

1

2. Attach vacuum breaker tube and elbows to fixture with spud nut. *Note: When cutting scored pipe to fit, leave a minimum of 1-1/4" of scoring to ensure proper engagement with compression coupling.*

2

3. Remove the actuator end, coupling, and mounting nut from the actuator sleeve and insert the sleeve through the 1-1/2" hole from the fixture side. Reinstall the mounting nut (hand tight), coupling, and actuator end to the sleeve.

3

4. Insert the adjustable tail piece into the control stop while installing the valve. *Note: The adjustable tailpiece allows for +/- 1/2" from the standard 4-3/4" centerline to centerline rough in.* Lubricate O-ring on adjustable tailpiece with water if needed for installation. Secure the valve by hand tightening the actuation coupling nut and tailpiece coupling nut. Position valve over flush tube and secure with the flush tube coupling nut. After aligning the valve securely tighten the actuator assembly, control stop and the flush tube with a wrench. *A smooth jaw wrench is recommended to protect special finishes.*

4

5. Shut off the control stop, remove the valve cover, internal plastic cap and remove the internal diaphragm kit. Reinstall the internal plastic cap and valve cover and open control stop to flush lines of debris. After the lines are clear, remove the cover and reinstall the internal diaphragm kit. Tighten the cover back on and adjust flush flow using the control stop.

5

Specifying "L" Dimension for Concealed Manual-Operated Flush Valves

Step 1: **Determine the applicable column** by locating the valve's 4-digit model number.
Step 2: **Determine the applicable row** by locating the correct wall thickness.
NOTE: For wall thicknesses not listed, locate and use the next largest size.
Step 3: **Order the applicable suffix** shown at the intersection of the row and column.
Example: For closet valve model number Z6152AV and a wall thickness of 6", order: Z6152AV-L9.

	Closets		Urinals	Combination Fixtures
Wall Thickness "W"	6140AV 6142AV 6143AV 6144AV 6150AV 6152AV 6154AV 6155AV 6605AV 6611AV	6681AV	6190AV 6195AV 6602AV 6609AV 6613AV 6615AV	6601AV 6603AV 6616AV
1/4"	L4	L7	L4	L5
1"	L4	L7	L4	L5
2"	L5	L8	L5	L6
3"	L6	L9	L6	L7
4"	L7	L10	L7	L8
5"	L8	L11	L8	L9
6"	L9	L12	L9	L10
7"	L10	L13	L10	L11
8"	L11	L14	L11	L12
9"	L12	L15	L12	L13
10"	L13	L16	L13	L14

Z6199 Model Access Panel and Frame for Manual-Operated Concealed Flush Valves

Z6199-BX12

Z6199-BX15

Z6199-BX17

Z6199

Engineering Specification: Zurn Z6199 Access Panel and Frame for Manual-Operated Concealed Flush Valves –
The access panel and frame provide quick and simple access to in-wall concealed flush valves when a mechanical chase of adequate size is not available. The panel is #14 gage stainless steel and the frame is #18 gage stainless steel. Both have a satin finish. The assembly comes complete with (4) 1" [25mm] vandal-proof screws. Specify Z6199-BX12 for 12" x 12", Z6199-BX15 for 15" x 15", or Z6199-BX17 for 13" x 17".

Product No.	Size	A	B	C	D	E	F
Z6199-BX12	12x12 [305x305]	12 [305]	12 [305]	13-1/2 [343]	13-1/2 [343]	5-1/2 [140]	5-1/2 [140]
Z6199-BX15	15x15 [381x381]	15 [381]	15 [381]	16-1/2 [419]	16-1/2 [419]	7 [178]	7 [178]
Z6199-BX17	13x17 [330x432]	17 [432]	13 [330]	14-1/2 [368]	18-1/2 [470]	6 [152]	8 [203]

SUFFIX OPTIONS (Check/specify appropriate options.)	
-SP	Solid Panel
-SC-2	2" [51mm] Long Vandal-Proof Screws

AquaVantage® Repair Kits

Parts Identification

1. Optional 1" Metal Push Button
2. Optional 3" Metal Push Button
3. Handle
4. Actuator Rod
5. Handle O-Ring
6. Handle Spring
7. Handle Seal Retainer
8. Handle Seal
9. Gasket
10. Valve Body Cover
11. Plastic Cover
12. Trip Mechanism
13. Diaphragm Repair Kit
14. Valve Body
15. Vacuum Breaker Friction Washer
16. Vacuum Breaker Insert
17. Vacuum Breaker Duckbill
18. Vacuum Breaker Tube
19. Vacuum Breaker Tube Nut
20. Coupling Nut
21. Spud Friction Washer
22. Spud Rubber Gasket
23. 90° Elbow
24. Tailpiece
25. Snap Ring
26. Tailpiece O-Ring
27. Locking Nut
32. Stop Body
33. Piston Seal
34. Piston
35. Stop Spring
36. Guide O-Ring
37. Piston Guide
38. Guide Holder
39. Adjusting Screw
40. Stop Cap
41. Wheel Handle
42. Wheel Handle Screw
43. Solid Gasket
44. Solid Handle Nut
45. Flanged/Scored Horizontal Tube
46. P30 Flat Gasket
47. Wall Escutcheon
48. Sleeve/Socket
49. Adjusting Nut
50. Optional Bell Nut
51. Handle Nut
52. Push Rod/Filler Rod
53. Spud Nut
54. 3/4" 90° Elbow
55. 3/4" Horizontal Tube
56. 3/4" Spud Nut
57. Spud Friction Washer
58. Spud Rubber Gasket

Covers and Repair Kits	Product No.
Outside Cover - RB – Item 10	P6000-LL-RB
Inside Cover – Item 11	P6000-L
Low Consumption Closet Kit – 1.6 gal. flush	P6000-ECA-WS1
Water Saving Closet Kit – 3.5 gal. flush	P6000-ECA-WS
Full Flow Closet Kit – 4.5 gal. flush	P6000-ECA-FF
Low Consumption Urinal Kit – 1.0 gal. flush	P6000-EUA-WS1
Water Saving Urinal Kit – 1.5 gal. flush	P6000-EUA-WS
Full Flush Urinal Kit – 3.0 gal. flush	P6000-EUA-FF

Repair Parts – Inside Parts	Product No.
Urinal Relief Valve – Item 12	P6000-EU13
Closet Relief Valve – Item 12	P6000-EC13

Aquaflush Rebuild Kits	Product No.
Closet and Urinal Rebuild Kits – Includes Items 4-9, 12, 13, 15-17, 26	P6000-ECA-WS-RK
	P6000-ECA-WS1-RK
	P6000-EUA-WS-RK
	P6000-EUA-WS1-RK

Handle Assembly and Repair Kits	Product No.
Concealed Valve Actuator (Specify Type and 'L' Dim.)	P6000-N-
	P6000-NL-
	P6000-NL3-
Handle Repair Kit (Side) – Includes Items 4-9	P6000-NK
Handle Seal – Includes Item 8	P6000-M9
Handle Gasket – Includes Item 9	P6000-M10

Control Stop Repair Kit and Parts	Product No.
Control Stop Repair Kit for 1" and ¾" – Includes Items 33-39	P6000-D-SD
Seal Seat for 1" and ¾" – Includes Item 33	P6000-D42
Sweat Solder Connection	P6000-YBA

Adjustable Tailpieces	Product No.
Adjustable Tailpiece for Standard Flush Valve – Includes Items 24-26	P6000-J1-RB
Tailpiece Locking Ring – Includes Item 25	P6000-C30
Tailpiece O-Ring – Includes Item 26	P6000-C31
Coupling Nut – Includes Item 27	P6000-C32-RB

Flush Connections and Spud Coupling Kits	Product No.
Flush Tube Assembly for Concealed Flush Valves Refer to Section Q in Aquaparts Guide. Specify 'L' Dim. and valve used.	P6000-Q _ _-
Vacuum Breaker Repair Kit – Includes Items 15-17	P6000-B
Spud Coupling Assembly – Includes Items 56-58 Specify size.	P6000-HN

AquaVantage® Trouble Shooting Guide

Problem	Cause*	Corrective Action*
Valve will not operate.	1.) Stop valve is closed. 2.) Supply valve is closed.	1.) Open stop valve. 2.) Open supply valve.
Insufficient volume of water to adequately siphon fixture.	1.) Stop valve is not open enough. 2.) Urinal trip mechanism installed in wrong kit, urinal or closet. 3.) Insufficient volume or pressure at supply.	1.) Open stop valve for desired volume of water. 2.) Replace urinal part with proper closet valve part. 3.) If gauges are not available to measure supply pressure or volume of water at the valve, completely remove the working parts and open the stop valve to allow water to pass through the empty valve. If the supply is adequate to siphon the fixture, the guide ring may be removed from the guide assembly to provide additional flow. Should this prove unsatisfactory, steps should be taken to increase the pressure and/or supply.
Flush valve shuts off too quickly.	1.) Damaged or punctured diaphragm.	1.) Install new P6000-EUA or P6000-ECA replacement kit to remedy the problem. (#12 thru #13)
Valve is short flushing.	1.) Cylinder guide assembly and diaphragm assembly are not tight. 2.) Urinal trip mechanism (black #12) in closet flush valves.	1.) Screw the two assemblies hand tight. 2.) Install closet trip mechanism (white #12).
Valve is flushing too long or not shutting off.	1.) Trip mechanism not seating properly due to foreign material between trip mechanism and retainer disc. 2.) By-pass orifice is plugged or partially plugged. 3.) Line pressure is not adequate to force trip mechanism to seal. 4.) Cracked cover.	1.) Disassemble parts and rinse thoroughly. 2.) Examine by-pass orifice and clean if necessary being certain not to enlarge orifice opening. 3.) Pressure is inadequate or has dropped below minimum operating range. Steps should be taken to increase the line pressure. 4.) Replace cover with new one (#11 - P6000-L).
Water splashes out of fixture.	1.) Supply volume is more than is necessary. 2.) Lime accumulation on vortex or spreader holes of fixture.	1.) Adjust downward on control stop. 2.) Remove the lime build up.
Flush is not considered quiet.	1.) Control stop may not be adjusted for quiet operation. 2.) Fixture may be contributing to noise. 3.) Piping system may be source of noise.	1.) Adjust the control stop for quiet operation keeping in mind the fixture evacuation requirements. 2.) Check noise created by fixture by placing a cover over the bowl opening to separate valve noise from bowl noise. If it is determined the fixture is too noisy consult with fixture manufacturer. 3.) High pressure in the system can sometimes be controlled by the stop valve. Other sources of noise may be the absence of air chambers and shock arrestors, loose pipes, improper size pipes, etc. In these cases the building engineer should be consulted.
Chattering noise in flush valve.	1.) The inside cover has been distorted by freezing or abuse.	1.) Replace both inside plastic cover and outside brass cover.
Handle assembly leaking.	1.) Handle assembly is not tight.	1.) Tighten handle assembly.

Care of Chrome-Plated Surfaces
The suggested cleaning of chrome-plated surfaces is simply to clean them with mild soap and water, then dry. Commercial cleaning compounds are never recommended.

Seasonal Use
Valves used in installations subject to shut down because of cold and freezing conditions should be maintained in the following manner. After the main supply has been shut off and the water drained from the system, remove the stop valve cap and stop valve internals to allow the water to drain from the flush valve itself.

*See previous page for numerical references.

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Printed in the U.S.A.
Form No. FV212, Rev. 5/07

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AquaVantage® AV/Sloan® Royal Flush Valves Comparison Guide

Exposed Flush Valves For Water Closets

Zurn	Sloan
Z6000AV	Royal 110
Z6000AV-WS1	Royal 111
Z6000AV-1	Royal 113
Z6014AV	Royal 114
Z6000AV-2	Royal 115
Z6000AV-3	Royal 116
Z6017AV	Royal 117
Z6019AV	Royal 119
Z6010AV	Royal 120
Z6010AV-1	Royal 121
Z6010AV-2	Royal 122
Z6099AV	110-YC-RM14266

Exposed Flush Valves For Urinals

Zurn	Sloan
Z6001AV	Royal 180
Z6001AV-WS1	Royal 180-1
Z6081AV	Royal 181
Z6003AV	Royal 186
Z6003AV-WS1	Royal 186-1
Z6003AV-20	Royal 186-11
Z6087AV	Royal 187
Z6089AV	Royal 189

Flush Valves For Bedpan Washers

Zurn	Sloan
Z6000AV-BWN	Royal BPW-1000
Z6010AV-BWN	Royal BWP-1010
Z6020AV-BWN	Royal BWP-1020
Z6040AV-BWN	Royal BWP-1040

Flush Valves With Trap Primer

Zurn	Sloan
Z6000AV-TP	110-VBF-72-A1-9½
Z6000AV-1-TP	110-VPF-72-A1-13½
Z6000AV-2-TP	110-VPF-72-A1-21½
Z6000AV-3-TP	110-VPF-72-A1-24½

Concealed Flush Valves For Water Closets

Zurn	Sloan
Z6140AV	Royal 140
Z6142AV	Royal 142
Z6143AV	Royal 143
Z6144AV	Royal 144
Z6150AV	Royal 150
Z6152AV	Royal 152
Z6153AV	Royal 153
Z6154AV	Royal 154
Z6155AV	Royal 155

Access Panel For Concealed Flush Valves – 12" x 12"

Zurn	Sloan
Z6199-BX12	Royal B/P-24508

Concealed Flush Valves For Urinals

Zurn	Sloan
Z6190AV	Royal 190
Z6192AV	Royal 192
Z6192AV	Royal 6192
Z6195AV	Royal 195
Z6195AV-20	Royal 195-11
Z6197AV	Royal 197

Exposed Hydraulic Flush Valves For Water Closets

Zurn	Sloan
ZH6000AV	Royal 910
ZH6017AV	Royal 917
ZH6010AV	Royal 920
ZH6000AV-BWN	Royal BPW-9000

Exposed Hydraulic Flush Valves For Urinals

Zurn	Sloan
ZH6001AV	Royal 980
ZH6003AV	Royal 986
ZH6003AV-20	Royal 986-11

Concealed Hydraulic Flush Valves For Water Closets

Zurn	Sloan
ZH6140AV	Royal 940
ZH6142AV	Royal 942
ZH6150AV	Royal 950
ZH6152AV	Royal 952

Concealed Hydraulic Flush Valves For Urinals

Zurn	Sloan
ZH6190AV	Royal 990
ZH6195AV	Royal 995
ZH6195AV-11	Royal 995-11
ZH6197AV	Royal 997

Flush Valves For Penal Fixtures

Zurn	Sloan
Z6601AV	Royal 601
Z6602AV	Royal 602
Z6603AV	Royal 603
Z6605AV	Royal 605
Z6606AV	Royal 606
Z6609AV	Royal 609
Z6610AV	Royal 610
Z6611AV	Royal 611
Z6613AV	Royal 613
Z6614AV	Royal 614
Z6615AV	Royal 615
Z6616AV	Royal 616
Z6621AV	Royal 621
Z6681AV	Royal 681

Exposed Pedal-Operated Flush Valves For Water Closets

Zurn	Sloan
Z6310AV	Royal 310

Exposed Pedal-Operated Flush Valves For Urinals

Zurn	Sloan
Z6300AV	Royal 300
Z6320AV	Royal 320

Sensor-Operated Hardwire Flush Valves

Zurn	Sloan
ZEMS6000AV-IS	Royal 110ES-S
ZEMS6000AV-WS1-IS	Royal 111ES-S
ZEMS6001AV-IS	Royal 180ES-S
ZEMS6003AV-IS	Royal 186ES-S
ZEMS6003AV-WS1-IS	Royal 186-1ES-S
ZEMS6140AV	Royal 140ES-S
ZEMS6142AV	Royal 142ES-S
ZEMS6152AV	Royal 152ES-S
ZEMS6190AV	Royal 190ES-S
ZEMS6195AV	Royal 195ES-S

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AquaVantage® Selection Guide For Zurn One Systems Fixtures

WATER CLOSETS

Z5610

Z6000AV-WS1
Z6000AV-WS1-TP
Z6000AV-1-WS1
Z6000AV-2-WS1
Z6000AV-3-WS1
ZH6000AV-WS1
Z6155AV-WS1
ZER6000AV-WS1-CPM
ZER6000AV-WS1-CPM-TP
ZER6000AV-1-WS1-CPM
ZER6000AV-2-WS1-CPM
ZER6000AV-WS1-CP
ZR6000AV-WS1
ZR6000AV-1-WS1
ZR6000AV-2-WS1
ZEMS6000AV-WS1-IS
ZEMS6000AV-WS1-IS-BB
ZEMS6000AV-WS1
ZEMS6000AV-3-WS1
ZEMS6000AV-WS1-BB
ZEMS6155AV-WS1

Z5610-BL

Z6000AV-WS1-BWN
Z6000AV-WS1-BWN1
Z6010AV-BWN
Z6011AV-BWN
Z6020AV-BWN
Z6040AV-BWN
ZH6000AV-BWN
ZER6000AV-BWN
ZR6000AV-BWN
ZEMS6000AV-BWN

Z5620

Z6140AV-WS1
Z6142AV-WS1
Z6143AV-WS1
Z6144AV-WS1
Z6150AV-WS1
Z6152AV-WS1
Z6154AV-WS1
ZH6140AV-WS1
ZH6142AV-WS1
ZH6150AV-WS1
ZH6152AV-WS1

Z5630

Z6000AV-WS1
Z6000AV-WS1-BG
Z6000AV-WS1-TP
Z6000AV-1-WS1
Z6000AV-2-WS1
Z6000AV-3-WS1
ZH6000AV-WS1
Z6155AV-WS1
ZER6000AV-WS1-CPM
ZER6000AV-WS1-CPM-TP
ZER6000AV-1-WS1-CPM
ZER6000AV-2-WS1-CPM
ZER6000AV-WS1-CP
ZR6000AV-WS1
ZR6000AV-1-WS1
ZR6000AV-2-WS1
ZEMS6000AV-WS1-IS
ZEMS6000AV-WS1-IS-BB
ZEMS6000AV-WS1
ZEMS6000AV-3-WS1
ZEMS6000AV-WS1-BB
ZEMS6155AV-WS1

Z5640

Z6000AV-WS1
Z6000AV-WS1-BG
Z6000AV-WS1-TP
Z6000AV-1-WS1
Z6000AV-2-WS1
Z6000AV-3-WS1
ZH6000AV-WS1
Z6155AV-WS1
ZER6000AV-WS1-CPM
ZER6000AV-WS1-CPM-TP
ZER6000AV-1-WS1-CPM
ZER6000AV-2-WS1-CPM
ZER6000AV-WS1-CP
ZR6000AV-WS1
ZR6000AV-1-WS1
ZR6000AV-2-WS1
ZEMS6000AV-WS1-IS
ZEMS6000AV-WS1-IS-BB
ZEMS6000AV-WS1
ZEMS6000AV-3-WS1
ZEMS6000AV-WS1-BB
ZEMS6155AV-WS1

Z5650

Z6000AV-WS1
Z6000AV-WS1-BG
Z6000AV-WS1-TP
Z6000AV-1-WS1
Z6000AV-2-WS1
Z6000AV-3-WS1
ZH6000AV-WS1
ZER6000AV-WS1-CPM
ZER6000AV-WS1-CPM-TP
ZER6000AV-1-WS1-CPM
ZER6000AV-2-WS1-CPM
ZER6000AV-WS1-CP
ZR6000AV-WS1
ZR6000AV-1-WS1
ZR6000AV-2-WS1
ZEMS6000AV-WS1-IS
ZEMS6000AV-WS1-IS-BB
ZEMS6000AV-WS1
ZEMS6000AV-3-WS1
ZEMS6000AV-WS1-BB
Z6155AV-WS1
ZEMS6155AV-WS1

Z5650-BL

Z6000AV-WS1-BWN
Z6000AV-WS1-BWN1
Z6010AV-BWN
Z6011AV-BWN
Z6020AV-BWN
Z6040AV-BWN
ZH6000AV-BWN
ZER6000AV-BWN
ZR6000AV-BWN
ZEMS6000AV-BWN

Z5660

Z6000AV-WS1
Z6000AV-WS1-BG
Z6000AV-WS1-TP
Z6000AV-1-WS1
Z6000AV-2-WS1
Z6000AV-3-WS1
ZH6000AV-WS1
Z6155AV-WS1
ZER6000AV-WS1-CPM
ZER6000AV-WS1-CPM-TP
ZER6000AV-1-WS1-CPM

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AquaVantage® Selection Guide For Zurn One Systems Fixtures

WATER CLOSETS, continued

Z5660, continued

ZER6000AV-2-WS1-CPM
ZER6000AV-WS1-CP
ZR6000AV-WS1
ZR6000AV-1-WS1
ZR6000AV-2-WS1
ZEMS6000AV-WS1-IS
ZEMS6000AV-WS1-IS-BB
ZEMS6000AV-WS1
ZEMS6000AV-3-WS1
ZEMS6000AV-WS1-BB
ZEMS6155AV-WS1

Z5660-BL

Z6000AV-WS1-BWN
Z6000AV-WS1-BWN1
Z6010AV-BWN
Z6011AV-BWN
Z6020AV-BWN
Z6040AV-BWN
ZH6000AV-BWN
ZER6000AV-BWN
ZR6000AV-BWN
ZEMS6000AV-BWN

Z5410

Z6017AV
ZH6017AV

Z5420

Z6017AV
ZH6017AV

URINALS

Z5710

ZER6003AV-WS1-CPM
ZER6003AV-WS1-CP
ZR6003AV-WS1
ZR6003AV-WS1-OB
ZEMS6003AV-WS1-IS
ZEMS6003AV-WS1
ZEMS6003AV-WS1-BB
ZEMS6003AV-WS1-OB
ZEMS6197AV-WS1
Z6003AV-WS1
ZH6003AV-WS1
Z6197AV-WS1
ZH6195AV-WS1

Z5730

ZER6003AV-WS1-CPM
ZER6003AV-WS1-CP
ZR6003AV-WS1
ZR6003AV-WS1-OB
ZEMS6003AV-WS1-IS
ZEMS6003AV-WS1
ZEMS6003AV-WS1-BB
ZEMS6003AV-WS1-OB
ZEMS6197AV-WS1
Z6003AV-WS1
ZH6003AV-WS1
Z6197AV-WS1
ZH6195AV-WS1

Z5740

Z6195-WS1
Z6195-WS1-L3
ZER6195AV-WS1
ZEMS6195AV-WS1
Z6195AV-WS1
Z6195AV-WS1-L3
ZH6195AV-WS1

Z5750

ZER6003AV-WS1-CPM
ZER6003AV-WS1-CP
ZR6003AV-WS1
ZR6003AV-WS1-OB
ZEMS6003AV-WS1-IS
ZEMS6003AV-WS1
ZEMS6003AV-WS1-BB
ZEMS6003AV-WS1-OB
ZEMS6197AV-WS1
Z6003AV-WS1
ZH6003AV-WS1
Z6197AV-WS1
ZH6195AV-WS1

Z5760

ZER6195AV-WS1
ZEMS6195AV-WS1
Z6195AV-WS1
ZH6195AV-WS1

Z5770

ZR6001AV-WS1
ZEMS6001AV-WS1-IS
ZEMS6001AV-WS1
ZEMS6001AV-WS1-BB
ZEMS6001AV-WS1-OB
ZEMS6192AV-WS1
Z6001AV-WS1
Z6001AV-WS1-YK
ZH6001AV-WS1
Z6192AV-WS1
ZH6192AV-WS1

Z5780

ZER6190AV-WS1
ZEMS6190AV-WS1
Z6190AV-WS1
ZH6190AV-WS1

AquaVantage® Selection Guide For American Standard Fixtures

WATER CLOSETS

Fixture Number	Fixture Name	AquaVantage Number	Catalog Page
2234.015	Madera	Z6000AV-WS1	11
2234.137	Madera	Z6000AV-WS1	11
2254.127	Afwall	Z6144AV-WS1	27
2256.194	Afwall	Z6000AV-WS1	11
2257.103	Afwall	Z6000AV-WS1	11
2282.010	Devero	Z6000AV-WS1	11
2294.011	Afwall	Z6000AV-WS1	11
2296.019	Afwall	Z6000AV-WS1	11
2511.012	Instanto	Z6144AV	27
2512.010	Instanto	Z6000AV	11
3043.102	Madera	Z6000AV-WS1	11
3043.156	Madera	Z6000AV-WS1	11

URINALS

6400.014	Stallbrook	Z6003AV-WS1	16
6501.010	Washbrook	Z6003AV-WS1	16
6506.011	Washbrook	Z6195AV-WS1	34
6541.132	Allbrook	Z6003AV-WS1	16
6561.017	Trimbrook	Z6003AV-WS1	16
6581.015	Maybrook	Z6003AV-WS1	16

SERVICE SINKS

9504.010	Clinic Service Sink	Z6017AV-H-O10	21
9512.013	Clinic Service Sink	Z6017AV-H	21

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AquaVantage® Selection Guide For Crane Fixtures

WATER CLOSETS

Fixture Number	Fixture Name	AquaVantage Number	Catalog Page
3195	Civic	Z6010AV	20
3325	Whirlton	Z6000AV	11
3327	Whirlton	Z6000AV-WS1	11
3380	Baby Bowl	Z6000AV	11
3446	Placidus	Z6000AV	11
3449	Placidus	Z6143AV	29
3455	ADA Placidus	Z6000AV-WS1	11
3460	Rapidway	Z6000AV-WS1	11
3462/3464	Rapidway	Z6152AV	32
3480	San Walton	Z6000AV-WS1	11
3481/3484	San Walton	Z6143AV-WS1	29
3709	Flormont	Z6000AV-WS1	11
3816	Hymont Jr.	Z6000AV-WS1	11
3908/4332	Flormont	Z6000AV-WS1	11
3H455/3455	ADA Placidus	Z6000AV-WS1	11
3H701	Hymont	Z6000AV-WS1	11
3H702	Hymont	Z6000AV-WS1	11
3H704	Whirlton	Z6000AV-WS1	11
3H722	Placidus	Z6000AV-WS1	11

URINALS

4992	New Colburn	Z6003AV-WS1	17
740	Sanitor	Z6003AV	17
743	Sanitor	Z6195AV	37
7104	Expedio	Z6001AV-WS1	16
7160	Embassy	Z6003AV-WS1	17
7161	Embassy	Z6195AV-WS1	37
7167	Lansing	Z6003AV-WS1	17
7190	Del-Rio	Z6001AV-WS1	16
7192	Del-Rio	Z6190AV-WS1	36
7197	Cromwell	Z6003AV-WS1	17
7198	Cromwell	Z6195AV-WS1	37
7306	Manhattan	Z6190AV-WS1	36
7307	Manhattan	Z6195AV-WS1	37
7308	Manhattan	Z6001AV-WS1	16
7309	Manhattan	Z6003AV-WS1	17

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AquaVantage® Selection Guide For Eljer Fixtures

WATER CLOSETS

Fixture Number	Fixture Name	AquaVantage Number	Catalog Page
111-0335	Kindergarten	Z6000AV-WS1	11
111-1115	Sanus	Z6000AV	11
111-1123	Sanus	Z6000AV	11
111-1127	Sanus	Z6000AV	11
111-1135	Sanus	Z6152AV, Z6143AV	32, 29
111-1244	Hi-San	Z6000AV	11
111-1245	Hi-San	Z6000AV	11
111-1253	Hi-San	Z6000AV	11
111-1254	Hi-San	Z6000AV	11
111-1405	Auburn	Z6000AV	11
111-1413	Auburn	Z6000AV	11
111-1425	Auburn	Z6152AV, Z6143AV	32, 29
111-1505	Auburn	Z6000AV-WS1	11
111-1513	Auburn	Z6000AV-WS1	11
111-1515	Auburn	Z6152AV-WS1	32
111-2105	Signature	Z6000AV-WS1	11
111-2110	Signature	Z6000AV-WS1	11
111-2113	Signature	Z6000AV-WS1	11
111-2115	Signature	Z6000AV	11
111-2118	Signature	Z6000AV-WS1	11
111-2135	Signature	Z6000AV	11
111-2145	Signature	Z6000AV-WS1	11
111-2153	Signature	Z6000AV-WS1	11
111-2175	Signature	Z6000AV-WS1	11
111-2183	Signature	Z6000AV-WS1	11
111-2405	Signature	Z6000AV	11
111-2425	Signature	Z6144AV	30
111-2875	Sherwin	Z6000AV-WS1	11
111-3244	New HI-San	Z6000AV	11
111-4805	Preserver	Z6000AV-WS1	11
111-4815	Preserver	Z6000AV-WS1	11
111-4823	Preserver	Z6000AV-WS1	11
111-4905	Ultra	Z6000AV-WS1	11
111-4913	Ultra	Z6000AV-WS1	11

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AquaVantage® Selection Guide For Eljer Fixtures

URINALS

Fixture Number	Fixture Name	AquaVantage Number	Catalog Page
161-1000	Dale	Z6003AV-WS1	17
161-1015	Dale	Z6195AV-WS1	37
161-1030	Correcto	Z6003AV-WS1	17
161-1045	Correcto	Z6195AV-WS1	37
161-1060	Correcto	Z6001AV-WS1	16
161-1075	Correcto	Z6190AV-WS1	36
161-1090	Savon	Z6003AV-WS1	17
161-1095	Savon	Z6195AV-WS1	37
161-1100	Terminal	Z6001AV-WS1	16
161-1160	Dover	Z6001AV	16
161-1175	Dover	Z6190AV	36
161-1190	Bedfordshire	Z6003AV-WS1	17
161-2090	Signature	Z6003AV	17
161-2095	Signature	Z6195AV	37

SERVICE SINKS

241-0260	Judson	Z6017AV-H	24
241-0270	Mercer	Z6017AV-H-O20	24

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AquaVantage® Selection Guide For Gerber Fixtures

WATER CLOSETS

Fixture Number	Fixture Name	AquaVantage Number	Catalog Page
25-060	Ultra Flush	Z6000AV-WS1	11
25-450	Merrimac	Z6000AV	11
25-452	Jefferson	Z6010AV	20
25-454	Jefferson	Z6010AV	20
25-760	Stanton	Z6000AV	11
25-761	Stanton	Z6000AV	11
25-820	Ultra Flush	Z6000AV-WS1	11
25-850	Randolph	Z6000AV	11
25-860	Randolph	Z6000AV	11
25-870	Ultra Flush	Z6000AV-WS1	11
27-780	Monitor	Z6003AV-WS1	17

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AquaVantage® Selection Guide For Kohler Fixtures

WATER CLOSETS

Fixture Number	Fixture Name	AquaVantage Number	Catalog Page
K-4301	Highcrest	Z6000AV-WS1	11
K-4301-L	Highcrest	Z6000AV-WS1	11
K-4302	Highcrest	Z6000AV-WS1	11
K-4302-L	Highcrest	Z6000AV-WS1	11
K-4321	Primary	Z6000AV-WS1	11
K-4329	Kingston Lite	Z6142AV-WS1, Z6152-WS1	28, 32
K-4330	Kingston Lite	Z6000AV-WS1	11
K-4330-L	Kingston Lite	Z6000AV-WS1	11
K-4350	Wellcomme Lite	Z6000AV-WS1	11
K-4350-L	Wellcomme Lite	Z6000AV-WS1	11
K-4367-L	Highcliff	Z6000AV-WS1	11
K-4367-L	Highcliff	Z6000AV-WS1	11
K-4368	Highcliff	Z6000AV-WS1	11
K-4388	Anglesey	Z6000AV-WS1	11
K-4368-L	Highcliff	Z6000AV-WS1	11
K-4396	Anglesey	Z6000AV-WS1	11
K-4450-C	Stratton	Z6000AV	11
K-4460-C	Sifton	Z6144AV, Z6152AV	30, 32
K-4475-C	Suffield	Z6144AV, Z6152AV	30, 32
K-4486-C	Anglesey	Z6000AV-WS1	11
K-4498-C	Anglesey	Z6143AV, Z6152AV	29, 32

URINALS

K-4920-R	Branham Lite	Z6195AV-WS1	37
K-4920-T	Branham Lite	Z6003AV	17
K-4960-ER	Bardon Lite	Z6195AV	37
K-4960-ET	Bardon Lite	Z6003AV-WS1	17
K-4972-R	Stanwell Lite	Z6190AV-WS1	36
K-4972-T	Stanwell Lite	Z6001AV-WS1	16
K-4989-R	Freshman Lite	Z6195AV-WS1	37
K-4989-T	Freshman Lite	Z6003AV-WS1	17
K-5016-ET	Dexter Lite	Z6003AV-WS1	17
K-5016-ER	Dexter Lite	Z6195AV-WS1	37
K-5024-T	Darfield Lite	Z6003AV-WS1	17

SERVICE SINKS

K-6676	Tyrrell	Z6017AV-H	24
K-12867	Camerton	Z6017AV-H	24

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AquaVantage® Selection Guide For Universal-Rundle Fixtures

Fixture Number	Fixture Name	AquaVantage Number	Catalog Page
WATER CLOSETS			
4332	Carlton	Z6000AV-WS1	11
4345	Atlas	Z6000AV	11
4350	Atlas	Z6000AV	11
4360	Atlas	Z6000AV-WS1	11
4363	Trimont	Z6000AV-WS1	11
4365	Atlas	Z6000AV-WS1	11
4375	Atlas	Z6000AV-WS1	11
URINALS			
4980	Mini-Celtic	Z6003AV-WS1	17
4986	Celtic	Z6003AV-WS1	17
4992	New Colburn	Z6003AV-WS1	17
4993	Bali	Z6003AV-WS1	17

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ZURN INDUSTRIES LIMITED *3544 NASHUA DRIVE, MISSISSAUGA, ONTARIO L4V 1L2 PHONE: 905/405-8272 FAX: 905/405-1292*

AquaVantage® AV

Hydraulic Actuator Operated Flush Valves

ZH Series

AquaVantage®

ZH Series

Choose The Product That Is Right For Your Applications.

AquaVantage Exposed
ZH6000AV Model
With Hydraulic Actuation
For Water Closets

AquaVantage Exposed
ZH6001AV Model
With Hydraulic Actuation
For 1-1/4" Urinals

AquaVantage Exposed
ZH6003AV Model
With Hydraulic Actuation
For 3/4" Urinals

AquaVantage Exposed
ZH6010AV Model
With Hydraulic Actuation
For Back Spud Water Closets

AquaVantage Exposed
ZH6017AV Model
With Hydraulic Actuation
For Service Sinks

AquaVantage Exposed
ZH6140AV Model
With Hydraulic Actuation
For Back Spud Water Closets

AquaVantage Exposed
ZH6142AV Model
With Hydraulic Actuation
For Top Spud Water Closets

AquaVantage Exposed
ZH6150AV Model
With Hydraulic Actuation
Flushing Rim Floor Drains

AquaVantage Exposed
ZH6152AV Model
With Hydraulic Actuation
For Water Closets

AquaVantage Exposed
ZH6190AV Model
With Hydraulic Actuation
For 1-1/4" Urinals

AquaVantage Exposed
ZH6195AV Model
With Hydraulic Actuation
For 3/4" Urinals

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Zurn Industries, LLC Printed in U.S.A. Form No. FV240, Rev. 5/07

Exposed ZH6000AV Model
With Hydraulic Actuation
For Water Closets

Flow Options

- ☐ **-WS1** 1.6 Gal. Low Consumption Flush
- ☐ **-FF** 4.5 Gal. Full Flush
- ☐ **Standard Flush** 3.5 Gallons Per Flush

Suffix Options (Check/Specify Appropriate Options)

- _____ **-MB** 1" [25] Metal Push Button Hydraulic Actuator
- _____ **-SW** Side Wall Mounted Hydraulic Actuator
- _____ **-WP** Wall Plate for Push Button (ZP-50)
- _____ **-YJ** Split Ring Pipe Support
- _____ **-YK** Solid Ring Pipe Support
- _____ **-YO** Bumper on Angle Stop
- _____ Other

ENGINEERING SPECIFICATION: ZURN ZH6000AV AquaVantage® 'AV' Exposed Closet Flush Valve with Hydraulic Actuation – Exposed, quiet diaphragm-type, chrome-plated flushometer valve with a polished exterior and Zurn's AquaVantage TPE, chloramine resistant, dual seal diaphragm with a clog resistant, triple filtered by-pass. The valve is complete with a non-hold open type hydraulic push-button actuator that may be located up to 36" [914] (7' [2133] with -SW option) from the valve, high back pressure vacuum breaker, one-piece hex coupling nut, adjustable tailpiece, spud coupling, and flange for top spud connection. Control stop has internal siphon-guard protection, vandal-resistant stop cap, sweat solder kit, and a cast wall flange with setscrew. Internal seals are made of chloramine resistant materials. Electrical box supplied by others. (See installation instructions for size and type.)

This space is for Architectural/Engineering Approval

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Rev. C
Dwg. No. 65398
Date: 5/18/03
Product No. ZH6000AV

Exposed ZH6001AV Model
With Hydraulic Actuation
For 1-1/4" Urinal Valves

Flow Options

- ☐ **-WS1** 1.0 Gal. Low Consumption Flush
- ☐ **-WS** 1.5 Gal. Water Saver
- ☐ **Standard Flush** 3.0 Gallons Per Flush

Suffix Options (Check/Specify Appropriate Options)

- _____ **-MB** 1" [25] Metal Push Button Hydraulic Actuator
- _____ **-SW** Side Wall Mounted Hydraulic Actuator
- _____ **-WP** Wall Plate for Push Button (ZP-50)
- _____ **-YJ** Split Ring Pipe Support
- _____ **-YK** Solid Ring Pipe Support
- _____ Other

ENGINEERING SPECIFICATION: ZURN ZH6001AV AquaVantage® 'AV' Exposed Urinal Flush Valve with Hydraulic Actuation – Exposed, quiet diaphragm-type, chrome-plated flushometer valve with a polished exterior and Zurn's AquaVantage TPE, chloramine resistant, dual seal diaphragm with a clog resistant, triple filtered by-pass. The valve is complete with a non-hold open type hydraulic push-button actuator that may be located up to 36" [914] (7' [2133] with -SW option) from the valve, high back pressure vacuum breaker, one-piece hex coupling nut, adjustable tailpiece, spud coupling, and flange for top spud connection. Control stop has internal siphon-guard protection, vandal-resistant stop cap, sweat solder kit, and a cast wall flange with setscrew. Internal seals are made of chloramine resistant materials. Electrical box supplied by others. (See installation instructions for size and type.)

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Rev. B
Dwg. No. 65463
Date: 5/18/03
Product No. ZH6001AV

Exposed ZH6003AV Model
With Hydraulic Actuation
For 3/4" Urinal Valves

Flow Options

☐ **-WS1** 1.0 Gal. Low Consumption Flush
☐ **Standard Flush** 1.5 Gallons Per Flush

Suffix Options (Check/Specify Appropriate Options)

_____ **-MB** 1" [25] Metal Push Button Hydraulic Actuator
_____ **-SW** Side Wall Mounted Hydraulic Actuator
_____ **-WP** Wall Plate for Push Button (ZP-50)
_____ **-YJ** Split Ring Pipe Support
_____ **-YK** Solid Ring Pipe Support
_____ Other

ENGINEERING SPECIFICATION: ZURN ZH6003AV AquaVantage® 'AV' Exposed Urinal Flush Valve with Hydraulic Actuation – Exposed, quiet diaphragm-type, chrome-plated flushometer valve with a polished exterior and Zurn's AquaVantage TPE, chloramine resistant, dual seal diaphragm with a clog resistant, triple filtered by-pass. The valve is complete with a non-hold open type hydraulic push-button actuator that may be located up to 36" [914] (7' [2133] with -SW option) from the valve, high back pressure vacuum breaker, one-piece hex coupling nut, adjustable tailpiece, spud coupling, and flange for top spud connection. Control stop has internal siphon-guard protection, vandal-resistant stop cap, sweat solder kit, and a cast wall flange with setscrew. Internal seals are made of chloramine resistant materials. Electrical box supplied by others. (See installation instructions for size and type.)

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Rev. C
Dwg. No. 65399
Date: 5/18/03
Product No. ZH6003AV

Exposed ZH6010AV Model
With Hydraulic Actuation
For Water Closets

Flow Options

- ☐ **-WS1** 1.6 Gal. Low Consumption Flush
- ☐ **-FF** 4.5 Gal. Full Flush
- ☐ **Standard Flush** 3.5 Gallons Per Flush

Suffix Options (Check/Specify Appropriate Options)

- _____ **-MB** 1" [25] Metal Push Button Hydraulic Actuator
- _____ **-SW** Side Wall Mounted Hydraulic Actuator
- _____ **-WP** Wall Plate for Push Button (ZP-50)
- _____ **-YJ** Split Ring Pipe Support
- _____ **-YK** Solid Ring Pipe Support
- _____ **-YL** Solid Ring Pipe Support with Bumper
- _____ **-YO** Bumper on Angle Stop
- _____ Other

ENGINEERING SPECIFICATION: ZURN ZH6010AV AquaVantage® 'AV' Exposed Closet Flush Valve with Hydraulic Actuation – Exposed, quiet diaphragm-type, chrome-plated flushometer valve with a polished exterior and Zurn's AquaVantage TPE, chloramine resistant, dual seal diaphragm with a clog resistant, triple filtered by-pass. The valve is complete with a non-hold open type hydraulic push-button actuator that may be located up to 36" [914] (7' [2133] with -SW option) from the valve, high back pressure vacuum breaker, one-piece hex coupling nut, adjustable tailpiece, spud coupling, and flange for back spud connection. Control stop has internal siphon-guard protection, vandal-resistant stop cap, sweat solder kit, and a cast wall flange with setscrew. Internal seals are made of chloramine resistant materials. Electrical box supplied by others. (See installation instructions for size and type.)

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Rev. B
Dwg. No. 65464
Date: 5/18/03
Product No. ZH6010AV

Exposed ZH6017AV Model
With Hydraulic Actuation
For Water Closets

Flow Options

☐ **Standard Flush** 6.5 Gallons Per Flush

Suffix Options (Check/Specify Appropriate Options)

_____	**-MB**	1" [25] Metal Push Button Hydraulic Actuator
_____	**-SW**	Side Wall Mounted Hydraulic Actuator
_____	**-WP**	Wall Plate for Push Button (ZP-50)
_____	**-YJ**	Split Ring Pipe Support
_____	**-YK**	Solid Ring Pipe Support
_____		Other

ENGINEERING SPECIFICATION: ZURN ZH6017AV AquaVantage® 'AV' Exposed Closet Flush Valve with Hydraulic Actuation – Exposed, quiet diaphragm-type, chrome-plated flushometer valve with a polished exterior and Zurn's AquaVantage TPE, chloramine resistant, dual seal diaphragm with a clog resistant, triple filtered by-pass. The valve is complete with a non-hold open type hydraulic push-button actuator that may be located up to 36" [914] (7' [2133] with -SW option) from the valve, high back pressure vacuum breaker, one-piece hex coupling nut, adjustable tailpiece, spud coupling, and flange for top spud connection. Control stop has internal siphon-guard protection, vandal-resistant stop cap, sweat solder kit, and a cast wall flange with setscrew. Internal seals are made of chloramine resistant materials. Electrical box supplied by others. (See installation instructions for size and type.)

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Rev. B
Dwg. No. 65465
Date: 5/18/03
Product No. ZH6017AV

Concealed ZH6140AV Model
With Hydraulic Actuation
For Water Closets

Flow Options

- ☐ **-WS1** 1.6 Gal. Low Consumption Flush
- ☐ **-FF** 4.5 Gal. Full Flush
- ☐ **Standard Flush** 3.5 Gallons Per Flush

Suffix Options (Check/Specify Appropriate Options)

- _____ **-FW** Fixture Wall Mounted Hydraulic Actuator
- _____ **-MB** 1" [25] Metal Push Button Hydraulic Actuator
- _____ **-SW** Side Wall Mounted Hydraulic Actuator
- _____ **-WP** Wall Plate for Push Button (ZP-50)
- _____ Other

ENGINEERING SPECIFICATION: ZURN ZH6140AV AquaVantage® 'AV' Concealed Closet Flush Valve with Hydraulic Actuation – Concealed, quiet diaphragm-type, rough brass, flushometer valve with Zurn's AquaVantage TPE, chloramine resistant, dual seal diaphragm with a clog resistant, triple filtered by-pass. The valve is complete with a non-hold open type hydraulic push-button actuator that may be located up to 36" [914] (7' [2133] with -SW option) from the valve, high back pressure vacuum breaker, one-piece hex coupling nut, adjustable tailpiece, elbow flush connection, spud coupling, and flange for back spud connection. Control stop has internal siphon-guard protection and sweat solder kit. Internal seals are made of chloramine resistant materials.

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Rev. B
Dwg. No. 65466
Date: 5/18/03
Product No. ZH6140AV

Concealed ZH6142AV Model

With Hydraulic Actuation
For Top Spud Water Closets

Flow Options

- ☐ **-WS1** 1.6 Gal. Low Consumption Flush
- ☐ **-FF** 4.5 Gal. Full Flush
- ☐ **Standard Flush** 3.5 Gallons Per Flush

Suffix Options (Check/Specify Appropriate Options)

- _____ **-FW** Fixture Wall Mounted Hydraulic Actuator
- _____ **-MB** 1" [25] Metal Push Button Hydraulic Actuator
- _____ **-SW** Side Wall Mounted Hydraulic Actuator
- _____ **-WP** Wall Plate for Push Button (ZP-50)
- _____ Other

ENGINEERING SPECIFICATION: ZURN ZH6142AV AquaVantage® 'AV' Concealed Closet Flush Valve with Hydraulic Actuation – Concealed, quiet diaphragm-type, rough brass, flushometer valve with Zurn's AquaVantage TPE, chloramine resistant, dual seal diaphragm with a clog resistant, triple filtered by-pass. The valve is complete with a non-hold open type hydraulic push-button actuator that may be located up to 36" [914] (7' [2133] with -SW option) from the valve, high back pressure vacuum breaker, one-piece hex coupling nut, adjustable tailpiece, elbow flush connection, spud coupling, and flange for top spud connection. Control stop has internal siphon-guard protection and sweat solder kit. Internal seals are made of chloramine resistant materials.

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Rev. B
Dwg. No. 65467
Date: 5/18/03
Product No. ZH6142AV

Concealed ZH6150AV Model

With Hydraulic Actuation
For Flushing Rim Floor Drains

Flow Options

- ☐ **-WS1** 1.6 Gal. Low Consumption Flush
- ☐ **-FF** 4.5 Gal. Full Flush
- ☐ **Standard Flush** 3.5 Gallons Per Flush

Suffix Options (Check/Specify Appropriate Options)

- _____ **-FW** Fixture Wall Mounted Hydraulic Actuator
- _____ **-MB** 1" [25] Metal Push Button Hydraulic Actuator
- _____ **-SW** Side Wall Mounted Hydraulic Actuator
- _____ **-WP** Wall Plate for Push Button (ZP-50)
- _____ Other

ENGINEERING SPECIFICATION: ZURN ZH6150AV AquaVantage® 'AV' Concealed Closet Flush Valve for Flushing Rim Floor Drains with Hydraulic Actuation – Concealed, quiet diaphragm-type, rough brass, flushometer valve with Zurn's AquaVantage TPE, chloramine resistant, dual seal diaphragm with a clog resistant, triple filtered by-pass. The valve is complete with a non-hold open type hydraulic push-button actuator that may be located up to 36" [914] (7' [2133] with -SW option) from the valve, high back pressure vacuum breaker, one-piece hex coupling nut, and adjustable tailpiece. Control stop has internal siphon-guard protection and a sweat solder kit. Internal seals are made of chloramine resistant materials.

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Rev. C
Dwg. No. 65468
Date: 6/28/04
Product No. ZH6150AV

Concealed ZH6152AV Model
With Hydraulic Actuation
For Water Closets

Flow Options

- ☐ **-WS1** 1.6 Gal. Low Consumption Flush
- ☐ **-FF** 4.5 Gal. Full Flush
- ☐ **Standard Flush** 3.5 Gallons Per Flush

Suffix Options (Check/Specify Appropriate Options)

- _____ **-FW** Fixture Wall Mounted Hydraulic Actuator
- _____ **-MB** 1" [25] Metal Push Button Hydraulic Actuator
- _____ **-SW** Side Wall Mounted Hydraulic Actuator
- _____ **-WP** Wall Plate for Push Button (ZP-50)
- _____ Other

ENGINEERING SPECIFICATION: ZURN ZH6152AV AquaVantage® 'AV' Concealed Closet Flush Valve with Hydraulic Actuation – Concealed, quiet diaphragm-type, rough brass, flushometer valve with Zurn's AquaVantage TPE, chloramine resistant, dual seal diaphragm with a clog resistant, triple filtered by-pass. The valve is complete with a non-hold open type hydraulic push-button actuator that may be located up to 36" [914] (7' [2133] with -SW option) from the valve, high back pressure vacuum breaker, one-piece hex coupling nut, adjustable tailpiece, elbow flush connection, spud coupling, and flange for back spud connection. Control stop has internal siphon-guard protection and sweat solder kit. Internal seals are made of chloramine resistant materials.

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Rev. C
Dwg. No. 65400
Date: 5/18/03
Product No. ZH6152AV

Concealed ZH6190AV Model

With Hydraulic Actuation
For 1-1/4" Urinal Valves

Flow Options

- ☐ **-WS1** 1.0 Gal. Low Consumption Flush
- ☐ **-FF** 4.5 Gal. Full Flush
- ☐ **Standard Flush** 3.0 Gallons Per Flush

Suffix Options (Check/Specify Appropriate Options)

- _____ **-FW** Fixture Wall Mounted Hydraulic Actuator
- _____ **-MB** 1" [25] Metal Push Button Hydraulic Actuator
- _____ **-SW** Side Wall Mounted Hydraulic Actuator
- _____ **-WP** Wall Plate for Push Button (ZP-50)
- _____ Other

ENGINEERING SPECIFICATION: ZURN ZH6190AV AquaVantage® 'AV' Concealed Urinal Valve with Hydraulic Actuation – Concealed, quiet diaphragm-type, rough brass, flushometer valve with Zurn's AquaVantage TPE, chloramine resistant, dual seal diaphragm with a clog resistant, triple filtered by-pass. The valve is complete with a non-hold open type hydraulic push-button actuator that may be located up to 36" [914] (7' [2133] with -SW option) from the valve, high back pressure vacuum breaker, one-piece hex coupling nut, adjustable tailpiece, elbow flush connection, spud coupling, and flange for back spud connection. Control stop has internal siphon-guard protection and sweat solder kit. Internal seals are made of chloramine resistant materials.

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Rev. B
Dwg. No. 65469
Date: 5/18/03
Product No. ZH6190AV

Concealed ZH6195AV Model
With Hydraulic Actuation
For 3/4" Urinal Valves

Flow Options

☐ **-WS1** 1.0 Gal. Low Consumption Flush
☐ **Standard Flush** 1.5 Gallons Per Flush

Suffix Options (Check/Specify Appropriate Options)

_____ **-FW** Fixture Wall Mounted Hydraulic Actuator
_____ **-MB** 1" [25] Metal Push Button Hydraulic Actuator
_____ **-SW** Side Wall Mounted Hydraulic Actuator
_____ **-WP** Wall Plate for Push Button (ZP-50)
_____ Other

ENGINEERING SPECIFICATION: ZURN ZH6195AV AquaVantage® 'AV' Concealed Urinal Valve with Hydraulic Actuation – Concealed, quiet diaphragm-type, rough brass, flushometer valve with Zurn's AquaVantage TPE, chloramine resistant, dual seal diaphragm with a clog resistant, triple filtered by-pass. The valve is complete with a non-hold open type hydraulic push-button actuator that may be located up to 36" [914] (7' [2133] with -SW option) from the valve, high back pressure vacuum breaker, one-piece hex coupling nut, adjustable tailpiece, elbow flush connection, spud coupling, and flange for back spud connection. Control stop has internal siphon-guard protection and sweat solder kit. Internal seals are made of chloramine resistant materials.

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Rev. C
Dwg. No. 65401
Date: 5/18/03
Product No. ZH6195AV

Notes

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AquaVantage® AV ZH Series

Hydraulic-Operation Flush Valve

Installation, Operation, Maintenance, and Parts Manual

Patented and Patents Pending

ZH6003AV

ZH6152AV

Hydraulic-Operation Closet/Urinal Systems

ZH6000AV
ZH6001AV
ZH6003AV
ZH6010AV
ZH6017AV
ZH6140AV
ZH6142AV
ZH6150AV
ZH6152AV
ZH6190AV
ZH6195AV

LIMITED WARRANTY

All goods sold hereunder are warranted to be free from defects in material and factory workmanship for a period of three years from the date of purchase. Decorative finishes warranted for one year. We will replace at no cost goods that prove defective provided we are notified in writing of such defect and the goods are returned to us prepaid at Sanford, NC, with evidence that they have been properly maintained and used in accordance with instructions. We shall not be responsible for any labor charges or any loss, injury, or damages whatsoever, including incidental or consequential damages. The sole and exclusive remedy shall be limited to the replacement of the defective goods. Before installation and use, the purchaser shall determine the suitability of the product for his intended use and the purchaser assumes all risk and liability whatever in connection therewith. Where permitted by law, the implied warranty of merchantability is expressly excluded. If the products sold hereunder are “consumer products,” the implied warranty of merchantability is limited to a period of three years and shall be limited solely to the replacement of the defective goods. All weights stated in our catalogs and lists are approximate and are not guaranteed.

FV241

AquaVantage® Valve Rough-In, Product Specifications, Models, and Options

PRODUCT SPECIFICATIONS: ZURN AquaVantage® 'AV' ZH Series Exposed/Concealed Flush Valve – Exposed/concealed, quiet diaphragm-type, chrome plated/rough brass, flushometer valve with Zurn's AquaVantage TPE, chloramine resistant, dual seal diaphragm with surface optimization and clog resistant dynamic orifice. The valve is complete with a non-hold-open type feature with a hydraulic push-button actuator that may be located up to 36" [914] (7' [2133] with -SW option) from the valve, high back pressure vacuum breaker, hex coupling nut, and adjustable tailpiece. Spud coupling and flange for top spud connection for exposed valves. Elbow flush connection and spud coupling for back spud connection for concealed valves. Control stop has internal siphon-guard protection and sweat solder kit. Exposed valves are supplied with vandal-resistant cap and a cast wall flange with setscrew. Internal seals are made of chloramine resistant materials. Electrical box for exposed valves supplied by others.

MODELS

Exposed

ZH6000AV – 1-1/2" Water closet valve with top spud connection.
ZH6001AV – 1-1/4" Urinal valve with top spud connection.
ZH6003AV – 3/4" Urinal valve with top spud connection.
ZH6010AV – 1-1/2" Water closet valve with back spud connection.
ZH6017AV – 1-1/2" Water closet valve with top spud connection.

Concealed

ZH6140AV – 1-1/2" Water closet valve with back spud connection.
ZH6142AV – 1-1/2" Water closet valve with top spud connection.
ZH6150AV – 1-1/2" Water closet valve for flushing rim floor drains.
ZH6152AV – 1-1/2" Water closet valve with back spud connection.
ZH6190AV – 1-1/4" Water closet valve with back spud connection.
ZH6195AV – 3/4" Urinal valve with back spud connection.

FLOW OPTIONS

Closets

-WS1	1.6 Gal. Low Consumption Flush
-FF	4.5 Gal. Full Flush
Standard Flush	3.5 Gal. Per Flush

Urinals

-WS1	1.0 Gal. Low Consumption Flush
-WS	1.5 Gal. Per Flush
Standard Flush	3.0 Gal. Per Flush

SUFFIX OPTIONS

Exposed

-MB	1" [25 mm] Metal Push Button Hydraulic Actuator
-SW	Side Wall Mounted Hydraulic Actuator
-WP	Wall Plate for Push Button (ZP-50)
-YJ	Split Ring Pipe Support
-YK	Solid Ring Pipe Support
-YO	Bumper on Angle Stop (Closets Only)
____	Other

Concealed

-FW	Fixture Wall Mounting Hydraulic Actuator
-MB	1" [25 mm] Metal Push Button Hydraulic Actuator
-SW	Side Wall Mounted Hydraulic Actuator
-WP	Wall Plate for Push Button (ZP-50)
____	Other

ZH6000AV

ZH6152AV

Sweat Solder Adaptor Installation Instructions for Exposed Valves

Important:

- All plumbing is to be installed according to state and local codes and regulations.
- Water supply lines need to allow proper water flow for each fixture.
- Flush all lines of any debris before making connections.
- Do not use pipe sealant or plumbing grease on any fitting other than the control stop inlet.

The AquaVantage valve is designed to operate under several varieties of water pressure. The pressures fall between 10 and 100 psi (69 to 689 kPa). Each valve is tested at the lowest and highest pressures before being shipped. The minimum pressure is determined by the type of fixture purchased and the gallons per flush requested. Consult your catalog for flow options. Most low consumption valves (1.6 gallon) require a minimum of 25 psi flow pressure. Rough-in for plumbing and double gang box per specification sheet and Figure A. When installing your quality Zurn valve it is recommended that to protect the polished finish you do not use a toothed wrench. This will cause gouges and scratches on your valve.

STEP NO. 1

Measure distance from finished wall to centerline of fixture spud; cut supply pipe 1-1/4" shorter than this measurement. Chamfer O.D. and I.D. (See Figure B.)

STEP NO. 2

Slide threaded adaptor onto supply pipe until shoulder stops on end of pipe, then sweat-solder the adaptor to the water supply pipe. (See Figure C.)

STEP NO. 3

Measure from finished wall to first thread of adaptor for length of chrome tube. Cut chrome tube this length 'X'. (See Figure C.)

STEP NO. 4

Slide wall escutcheon over chrome tube and slide both chrome tube and wall escutcheon over supply pipe pushing wall escutcheon all the way to the wall. (See Figure D.)

STEP NO. 5

Screw control stop onto water supply adaptor. (See Figure E.)

Figure A

Figure B

Figure C

Figure D

Figure E

AquaVantage® Valve Installation Instructions for Exposed ZH Series

STEP 1

Control Stop Installation (Figure 1)

Install the Zurn control stop valve with "Siphon Guard" back check protection (and wall escutcheon on exposed flushometer installations) to the water supply line with outlet positioned as required.

Note: For sweat solder applications, see recommended instructions on Page 83 or refer to those included in the Zurn sweat solder kit.

Figure 1

STEP 2

Install Vacuum Breaker Flush Connection (Figure 2)

Top Spud – Slide the tube nut, spud nut, fiber washer, rubber gasket, and fixture escutcheon over the vacuum breaker tube and insert into fixture tube. Hand tighten spud nut into fixture spud.

Back Spud – Assemble pipe, elbow, coupling nuts, fiber washers, rubber gaskets, and fixture escutcheon as illustrated in Figure 2.

Figure 2

STEP 3

Installation of Main Valve Body

- Run the black inlet tube of the push button (Figure 4) through the small hole of the cover plate (Figure 3).
- Run the clear outlet tube of the push button (Figure 4) through the large bottom hole of the cover plate (Figure 3).
- Loosely mount the cover plate to the electrical box (Figure 3).
- Run the top black nylon tubing through the small cover tube and small cover tube ring (Figure 3).
- Run the top clear bottom nylon tubing through the large cover tube and large cover tube ring (Figure 3).
- Place the main valve body in position and connect the nylon tubing to the compression fittings on the back of the flushometer (Figure 4).
- Tighten the compression fittings but do not over tighten.
- Position valve body on control stop body and vacuum breaker tube. Valve body tailpiece compensates for mismatched rough-ins on the job. Maximum adjustment is 1/2" [13 mm] plus or minus the recommended 4-3/4" [121 mm] centerline of flush valve to centerline of control stop dimension (Figure 5).
- Align flush valve with centerline of fixture and tighten flush tube nut and tailpiece nut.
- Push the cover tubes flush against the valve body and tighten the setscrew on cover tube rings.
- Tighten the four screws on the wall plate using the hex wrench (Figure 3).
- Push the cover tube rings against the cover plate and tighten the setscrews (Figure 3).

STEP 4
Install push button actuator.

STEP 5
Flush out supply line (Figure 6). Make sure the control stop is closed. Remove flushometer cover. Lift out the diaphragm kit assembly. Install the flushometer cover, wrench tight and open stop. Turn on water supply to flush line of any debris or sediment.

After completion, shut off control stop, remove cover and reinstall the diaphragm kit assembly. Install flushometer cover wrench tight.

STEP 6
Adjust Control Stop
Adjust the control stop to meet the flow rate required for proper cleaning of the fixture. Open control stop counterclockwise 1/2 turn from closed position. Activate flushometer with pushbutton. Adjust the control stop after each flush until the rate of flow delivered properly cleanses the fixture. The final setting for urinals should be such that the fixture will not overflow when the valve is activated in succession. The stop cap screw cover should be replaced after final adjustments have been made.

STEP 7
Install vandal-resistant cap with setscrews provided (Figure 7).

Figure 3

Note: No Teflon tap or thread sealer is required for compression fitting retainers.

Figure 4

Figure 6

Figure 5

Figure 7

AquaVantage® Hydraulic-Operated Repair Kits

Parts Identification

1. Chrome Cover Plate
2. Return Cover Tube
3. Supply Cover Tube
4. Cover Tube Ring with Setscrew
5. Cover Tube Ring with Setscrew
6. Handle Nut
7. Hydraulic Plunger Assembly
8. 1/16" Compression Fitting
9. Gasket
10. Valve Body Cover
11. Plastic Cover
12. Trip Mechanism
13. Diaphragm Repair Kit
14. Valve Body
15. Vacuum Breaker Friction Washer
16. Vacuum Breaker Insert
17. Vacuum Breaker Duckbill
18. Vacuum Breaker Tube
19. Vacuum Breaker Tube Nut
20. Spud Nut
21. Spud Friction Washer
22. Spud Sleeve
23. Spud Escutcheon
24. Tailpiece
25. Snap Ring
26. Tailpiece O-Ring
27. Locking Nut
28. Setscrew for Cast Wall Flange
29. Cast Wall Escutcheon
30. Supply Cover Tube
31. Sweat Solder Adaptor
32. Stop Body
33. Piston Seal
34. Piston
35. Stop Spring
36. Guide O-Ring
37. Piston Guide
38. Guide Holder
39. Adjusting Screw
40. Stop Cap
41. Snap Cap Screw Cover
42. Vandal-Resistant Control Stop Cover
43. Setscrew for Control Stop Cover
44. 1/4" Return Tube
45. 1/4" Supply Tube
46. 1/8" Compression Fitting
47. Piston Assembly
48. Actuator Body
49. Mounting Plate
50. Securing Nut
51. Spring for Large Push Button
52. Spacer for Large Push Button
53. Large Push Button
54. Escutcheon Setscrew
55. Escutcheon for Large Push Button
56. Filter

Covers and Repair Kits	Product No.
Outside Cover - CP – Item 10	P6000-LL
Inside Cover – Item 11	P6000-L
Low Consumption Closet Kit – 1.6 gal. flush	P6000-ECA-WS1
Water Saving Closet Kit – 3.5 gal. flush	P6000-ECA-WS
Full Flow Closet Kit – 4.5 gal. flush	P6000-ECA-FF
Low Consumption Urinal Kit – 1.0 gal. flush	P6000-EUA-WS1
Water Saving Urinal Kit – 1.5 gal. flush	P6000-EUA-WS
Full Flush Urinal Kit – 3.0 gal. flush	P6000-EUA-FF

Repair Parts – Inside Parts	Product No.
Urinal Relief Valve – Item 12	P6000-EU13
Closet Relief Valve – Item 12	P6000-EC13

AquaVantage Rebuild Kits	Product No.
Closet and Urinal Rebuild Kits Include: Items 4-9, 12, 13, 15-17, 26	P6000-ECA-WS-RK P6000-ECA-WS1-RK P6000-EUA-WS-RK P6000-EUA-WS1-RK

Actuator Assembly and Repair Kits	Product No.
Hydraulic Large Push Button Assembly, Fixture Wall	PH6000-HYL3-FW
Hydraulic Large Push Button Assembly, Side Wall	PH6000-SHYL3-SW
Hydraulic Metal Push Button Assembly	PH6000-HYL-MB
Hydraulic Metal Push Button Assembly for Penal Use	PH6000-HYLP-MBP
Repair Kit for Hydraulic Actuator	PH6000-HYA11

Control Stop Repair Kit and Parts	Product No.
Control Stop Repair Kit for 1" and 3⁄4", Includes Items 33-39	P6000-D-SD
Seal Seat for 1" and 3⁄4", Includes Item 33	P6000-D42
VP Control Stop Repair Kit for 1" and 3⁄4", Includes Items 33-39	P6000-D-VP
Sweat Solder Connection with Cast Wall Flange, Includes Items 29-31	P6000-YB

Adjustable Tailpieces	Product No.
Adjustable Tailpiece for Standard Flush Valve, Includes Items 24-26	P6000-J1
Tailpiece Coupling Assembly, Includes Items 25-27	P6000-K
Tailpiece Locking Ring, Includes Item 25	P6000-C30
Tailpiece O-Ring, Includes Item 26	P6000-C31
Coupling Nut, Includes Item 27	P6000-C32

Flush Connections and Spud Coupling Kits	Product No.
Flush Tube Assembly for Flush Valves, Includes Items 15-19. Specify diameter and length.	P6000-A
Vacuum Breaker Repair Kit, Includes Items 15-17	P6000-B
Spud Coupling Assembly, Includes Items 20-23. Specify size.	P6000-H

AquaVantage® Hydraulic-Operated Service and Maintenance

PROBLEM	CAUSE	CORRECTIVE ACTION
Valve will not operate.	1. Water supply is shut off. 2. Internal valve filter is plugged. 3. Tubing is hooked up improperly. 4. Plunger orifice is clogged. 5. Damaged or worn seals in HYM Actuator.	1. Turn on water supply/stop valve. 2. Clean or replace filter. 3. Refer to instructions for proper connections. 4. Remove plunger and clear orifice. 5. Replace HYM Actuator.
Insufficient volume of water to adequately evacuate fixture.	1. Stop valve is not open enough. 2. Urinal trip mechanism installed in closet valve. 3. Inadequate supply running pressure. 4. Diaphragm kit is not matched to the fixture.	1. Open stop valve until desired flush. 2. Replace black urinal trip mechanism with a white closet trip mechanism. 3. To determine if the supply is adequate to evacuate the fixture, remove all working parts except for the diaphragm, then open the stop valve and evaluate flush. 4. Replace diaphragm kit with proper assembly.
Flush valve shuts off too quick or is short flushing.	1. Damaged or punctured diaphragm. 2. Enlarged orifice.	1. Replace diaphragm to remedy problem. 2. Replace diaphragm to remedy problem.
Flush valve will not shut off.	1. Trip mechanism is not seating properly. 2. By-pass orifice is plugged or partially plugged.	1. Disassemble parts and clean thoroughly. 2. Examine by-pass orifice and clean if necessary, being careful not to enlarge orifice opening.
Continuous trickle of water through valve.	1. Tubing is hooked up improperly. 2. Debris lodged between piston assembly and valve seat.	1. Refer to instructions for proper connections. 2. Remove the piston from the push button assembly and inspect and clean both the spool and the valve seat.
Actuator assembly leaking.	1. Actuator assembly handle nut is loose. 2. Actuator assembly gasket(s) are missing.	1. Tighten the actuator assembly nut. 2. Install gasket(s).
Push button assembly leaking.	1. Compression fitting or nuts are loose. 2. Piston O-Ring is damaged.	1. Tighten nuts or fittings. 2. Replace piston assembly.

CARE and CLEANING INSTRUCTIONS

The suggested cleaning of chrome-plated surfaces is to simply wash with mild soap and water, then dry. Commercial cleaning compounds are never recommended as they may dull the luster and the decorative finishes.

SEASONAL USE

Valves used in installations subject to shutdown during cold and/or freezing conditions should be maintained in the following manner: After the main supply has been shut off and the water has been drained from the system, remove the stop cap and the stop valve internals to allow the water to drain from the flush valve itself. The tubing must also be disconnected from the push button assembly and the actuator assembly to allow for drainage.

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Form No. FV241, 5/07

ZURN®

AquaVantage® AV

Bedpan Washer, Trap Primer & Foot Pedal Valves

Personal Hygiene Made A Little More Personal.

Healthcare and hospital hygiene is greatly enhanced when Zurn bedpan washers are part of a Zurn equipped installation.

AquaVantage Exposed
Z6000AV-BWN Model
With Bedpan Washer
For Water Closets

AquaVantage Exposed
Z6010AV-BWN Model
With Bedpan Washer
For Water Closets With
Low Rough-in Water Supply

AquaVantage Exposed
Z6011AV-BWN Model
With Bedpan Washer
For Water Closets For Handicap
Grab Bar Applications

AquaVantage Exposed
ZH6000AV-BWN Model
With Hydraulic Actuator and
Bedpan Washer For Water Closets

AquaVantage Exposed
ZR6000AV-BWN Model
Battery Powered Sensor
Operated With Bedpan Washer
For Water Closets

AquaVantage Exposed
ZER6000AV-BWN Model
Battery Powered Motor Operated
With Bedpan Washer
For Water Closets

AquaVantage Exposed
ZEMS6000AV-BWN Model
Hardwired Sensor Operated Flush
Valve With Bedpan Washer
For Water Closets

AquaVantage Exposed
Z6000AV-TP Model
With Trap Primers
For Water Closets

P6000-TPE
Concealed Trap Primer Elbow
For Floor Drains

Options and Accessories

Low Rough-In Water Diverter Valves Only

Exposed
Z6000-DVN Model
Bedpan Washer
For Water Closets

Exposed
Z6011-DVN Model
Bedpan Washer
For Water Closets

Options and Accessories

Foot Pedal Actuated

AquaVantage Exposed
Z6300AV Model
For Urinal Valves With
Foot Pedal Actuation

In the U.S.A.:
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Exposed Z6000AV-BWN Model
With Bedpan Washer For Water Closets

Flow Options

- ☐ **-WS1** 1.6 Gal. Low Consumption Flush
- ☐ **-FF** 4.5 Gal. Full Flush
- ☐ **Standard Flush** 3.5 Gallons Per Flush

Suffix Options (Check/Specify Appropriate Options)

- _____ **-BG** BioCare ADA Handle
- _____ **-H** Handle on Front of Flush Valve
- _____ **-L** 1" [25] Metal Push Button
- _____ **-L3** 3" [76] Metal Push Button
- _____ **-YJ** Split Ring Pipe Support
- _____ **-YK** Solid Ring Pipe Support
- _____ Other

ENGINEERING SPECIFICATION: ZURN Z6000AV-BWN AquaVantage® 'AV' Exposed Closet Flush Valve with Bedpan Washer – Exposed, quiet diaphragm-type, chrome-plated, flushometer valve with a polished exterior. Complete with Zurn's AquaVantage TPE, chloramine resistant, dual seal diaphragm with a clog resistant, triple filtered by-pass. Valve is ADA compliant with a non-hold open and no leak handle feature, high back pressure vacuum breaker, bedpan washer assembly, wall bracket and support rod, one-piece hex coupling nut, adjustable tailpiece, spud coupling and flange for top spud connection. Control stop has internal siphon-guard protection, vandal-resistant stop cap, sweat solder kit, and a cast wall flange with setscrew. Internal seals are made of chloramine resistant materials.

This space is for Architectural/Engineering Approval

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Rev. A
Dwg. No. 66891
Date: 8/8/03
Product No. Z6000AV-BWN

Exposed Z6000AV-BWN1 Model
With Bedpan Washer For Water Closets

Flow Options

- ☐ **-WS1** 1.6 Gal. Low Consumption Flush
- ☐ **-FF** 4.5 Gal. Full Flush
- ☐ **Standard Flush** 3.5 Gallons Per Flush

Suffix Options (Check/Specify Appropriate Options)

- _____ **-BG** BioCare ADA Handle
- _____ **-H** Handle on Front of Flush Valve
- _____ **-L** 1" [25] Metal Push Button
- _____ **-L3** 3" [76] Metal Push Button
- _____ **-YJ** Split Ring Pipe Support
- _____ **-YK** Solid Ring Pipe Support
- _____ Other

ENGINEERING SPECIFICATION: ZURN Z6000AV-BWN1 AquaVantage® 'AV' Exposed Closet Flush Valve with Bedpan Washer – Exposed, quiet diaphragm-type, chrome-plated, flushometer valve with a polished exterior. Complete with Zurn's AquaVantage TPE, chloramine resistant, dual seal diaphragm with a clog resistant, triple filtered by-pass. Valve is ADA compliant with a non-hold open and no leak handle feature, high back pressure vacuum breaker, bedpan washer assembly, wall bracket and support rod, one-piece hex coupling nut, adjustable tailpiece, spud coupling and flange for top spud connection. Control stop has internal siphon-guard protection, vandal-resistant stop cap, sweat solder kit, and a cast wall flange with setscrew. Internal seals are made of chloramine resistant materials.

This space is for Architectural/Engineering Approval

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Rev. A
Dwg. No. 66910
Date: 8/14/03
Product No. Z6000AV-BWN1

Exposed Z6010AV-BWN Model

With Bedpan Washer For Water Closets with Low Rough-In Water Supply

Flow Options

- ☐ **-WS1** 1.6 Gal. Low Consumption Flush
- ☐ **-FF** 4.5 Gal. Full Flush
- ☐ **Standard Flush** 3.5 Gallons Per Flush

Suffix Options (Check/Specify Appropriate Options)

- _____ **-BG** BioCare ADA Handle
- _____ **-H** Handle on Front of Flush Valve
- _____ **-L** 1" [25] Metal Push Button
- _____ **-L3** 3" [76] Metal Push Button
- _____ **-YJ** Split Ring Pipe Support
- _____ **-YK** Solid Ring Pipe Support
- _____ Other

ENGINEERING SPECIFICATION: ZURN Z6010AV-BWN AquaVantage® 'AV' Exposed Closet Flush Valve with Bedpan Washer – Exposed, quiet diaphragm-type, chrome-plated, flushometer valve with a polished exterior. Complete with Zurn's AquaVantage TPE, chloramine resistant, dual seal diaphragm with a clog resistant, triple filtered by-pass. The valve is ADA compliant with a non-hold open and no leak handle feature, high back pressure vacuum breaker, bedpan washer assembly, wall bracket and support rod, 1" x 1" [25 x 25] supply elbow, supply cover tube, one-piece hex coupling nut, adjustable tail-piece, spud coupling and flange for top spud connection. Control stop has internal siphon-guard protection, vandal-resistant stop cap, sweat solder kit, and a cast wall flange with setscrew. Internal seals are made of chloramine resistant materials.

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Rev. A
Dwg. No. 66949
Date: 8/11/03
Product No. Z6010AV-BWN

Exposed Z6011AV-BWN Model

With Bedpan Washer For Water Closets For Handicap Grab Bar Applications

Flow Options

- ☐ **-WS1** 1.6 Gal. Low Consumption Flush
- ☐ **-FF** 4.5 Gal. Full Flush
- ☐ **Standard Flush** 3.5 Gallons Per Flush

Suffix Options (Check/Specify Appropriate Options)

- _____ **-BG** BioCare ADA Handle
- _____ **-H** Handle on Front of Flush Valve
- _____ **-L** 1" [25] Metal Push Button
- _____ **-L3** 3" [76] Metal Push Button
- _____ **-YJ** Split Ring Pipe Support
- _____ **-YK** Solid Ring Pipe Support
- _____ Other

ENGINEERING SPECIFICATION: ZURN Z6011AV-BWN AquaVantage® 'AV' Exposed Closet Flush Valve with Bedpan Washer for Handicap Grab Bar Applications – Exposed, quiet diaphragm-type, chrome-plated, flushometer valve with a polished exterior. Complete with Zurn's AquaVantage TPE, chloramine resistant, dual seal diaphragm with a clog resistant, triple filtered by-pass. The valve is ADA compliant with a non-hold open and no leak handle feature, bedpan washer assembly with offset flush tube, wall bracket and support rod, high back pressure vacuum breaker, one-piece hex coupling nut, adjustable tailpiece, spud coupling and flange for top spud connection. Control stop has internal siphon-guard protection, vandal-resistant stop cap, sweat solder kit, and a cast wall flange with setscrew. Internal seals are made of chloramine resistant materials.

This space is for Architectural/Engineering Approval

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Rev.
Dwg. No. 66892
Date: 8/11/03
Product No. Z6011AV-BWN

Concealed Z6020AV-BWN Model
With Bedpan Washer For Water Closets

Flow Options

- ☐ **-WS1** 1.6 Gal. Low Consumption Flush
- ☐ **-FF** 4.5 Gal. Full Flush
- ☐ **Standard Flush** 3.5 Gallons Per Flush

Suffix Options (Check/Specify Appropriate Options)

- _____ **-BG** BioCare ADA Handle
- _____ **-L3** 3" [76] Metal Push Button
- _____ **-YH** One Wall Bumper
- _____ Other

ENGINEERING SPECIFICATION: ZURN Z6020AV-BWN AquaVantage® 'AV' Concealed Closet Flush Valve with Bedpan Washer – Concealed, quiet diaphragm-type, rough brass, flushometer valve with Zurn's AquaVantage TPE, chloramine resistant, dual seal diaphragm with a clog resistant, triple filtered by-pass. Valve is complete with a non-hold open and no leak push-button feature, bedpan washer assembly, wall bracket and support rod, high back pressure vacuum breaker, one-piece hex coupling nut, adjustable tailpiece, spud coupling and flange for top spud connection. Control stop has internal siphon-guard protection and a sweat solder kit. Internal seals are made of chloramine resistant materials.

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Rev. A
Dwg. No. 66950
Date: 8/11/03
Product No. Z6020AV-BWN

Exposed Z6040AV-BWN Model

Bedpan Washer with Foot Pedal Actuation For Water Closets

Flow Options

- ☐ **-WS1** 1.6 Gal. Low Consumption Flush
- ☐ **-FF** 4.5 Gal. Full Flush
- ☐ **Standard Flush** 3.5 Gallons Per Flush

Suffix Options (Check/Specify Appropriate Options)

- _____ **-YH** One Wall Bumper
- _____ **-YJ** Split Ring Pipe Support
- _____ **-YK** Solid Ring Pipe Support
- _____ Other

ENGINEERING SPECIFICATION: ZURN Z6040AV-BWN AquaVantage® 'AV' Exposed Closet Flush Valve with Bedpan Washer and Foot Pedal Actuation – Exposed, quiet diaphragm-type, chrome-plated, flushometer valve with a polished exterior. Complete with Zurn's AquaVantage TPE, chloramine resistant, dual seal diaphragm with a clog resistant, triple filtered by-pass. Valve is complete with a non-hold open and no leak foot pedal actuation feature, bedpan washer assembly, wall bracket and support rod, high back pressure vacuum breaker, one-piece hex coupling nut, adjustable tailpiece, spud coupling, and flange. Control stop has internal siphon-guard protection, vandal-resistant stop cap, sweat solder kit, and a cast wall flange with setscrew. Internal seals are made of chloramine resistant materials.

This space is for Architectural/Engineering Approval

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Rev.
Dwg. No. 66951
Date: 5/30/03
Product No. Z6040AV-BWN

Exposed ZH6000AV-BWN Model
With Hydraulic Actuator and Bedpan Washer For Water Closets

Flow Options

- ☐ **-WS1** 1.6 Gal. Low Consumption Flush
- ☐ **-FF** 4.5 Gal. Full Flush
- ☐ **Standard Flush** 3.5 Gallons Per Flush

Suffix Options (Check/Specify Appropriate Options)

- _____ **-SW** Side Wall Mounted Hydraulic Actuator
- _____ **-WP** Wall Plate for Push Button (ZP-50)
- _____ **-YH** One Wall Bumper
- _____ **-YJ** Split Ring Pipe Support
- _____ **-YK** Solid Ring Pipe Support
- _____ Other

ENGINEERING SPECIFICATION: ZURN ZH6000AV-BWN AquaVantage® 'AV' Exposed Closet Flush Valve with Hydraulic Actuator and Bedpan Washer – Exposed, quiet diaphragm-type, chrome-plated, flushometer valve with a polished exterior. Complete with Zurn's AquaVantage TPE, chloramine resistant, dual seal diaphragm with a clog resistant, triple filtered by-pass. Valve is complete with a non-hold open and no leak push-button actuation feature, bedpan washer assembly, wall bracket and support rod, high back pressure vacuum breaker, one-piece hex coupling nut, adjustable tailpiece, spud coupling and flange for top spud connection. Control stop has internal siphon-guard protection, vandal-resistant stop cap, sweat solder kit, and a cast wall flange with setscrew. Internal seals are made of chloramine resistant materials.

This space is for Architectural/Engineering Approval

ZURN INDUSTRIES, LLC *COMMERCIAL BRASS OPERATION, 5900 ELWIN BUCHANAN DRIVE, SANFORD, NC 27330*
PHONE: 1-800-997-3876, FAX: 919-775-3541, WEBSITE: www.zurn.com
IN CANADA: ***ZURN INDUSTRIES LIMITED*** *3544 NASHUA DRIVE, MISSISSAUGA, ONTARIO L4V 1L2, PHONE: 905-405-8272, FAX: 905-405-1292*

AquaVantage® is a registered trademark of Zurn Industries, LLC

Rev.
Dwg. No. 66952
Date: 5/30/03
Product No. ZH6000AV-BWN

Exposed ZR6000AV-BWN Model

Battery Powered, Sensor Operated with Bedpan Washer For Water Closets

Flow Options

- ☐ **-WS1** 1.6 Gal. Low Consumption Flush
- ☐ **-FF** 4.5 Gal. Full Flush
- ☐ **Standard Flush** 3.5 Gallons Per Flush

Suffix Options (Check/Specify Appropriate Options)

- _____ **-YH** One Wall Bumper
- _____ **-YJ** Split Ring Pipe Support
- _____ **-YK** Solid Ring Pipe Support
- _____ Other

ENGINEERING SPECIFICATION: ZURN ZR6000AV-BWN AquaSense® 'AV' Battery-Powered, Sensor-Operated Exposed Closet Flush Valve with Bedpan Washer – Exposed, quiet diaphragm-type, chrome-plated, flushometer valve with a polished exterior. Complete with Zurn's AquaVantage® TPE, chloramine resistant, dual seal diaphragm with a clog resistant by-pass. The valve is ADA compliant with a 6VDC solenoid valve actuation, a battery-powered automatic sensor with manual push button override, a brass electronics housing with polished chrome exterior, bedpan washer assembly, wall bracket and support rod, high back pressure vacuum breaker, one-piece hex coupling nut, adjustable tailpiece, spud coupling and flange for top spud connection. Control stop has internal siphon-guard protection, vandal resistant stop cap, sweat solder kit, and a cast wall flange with setscrew. Internal seals are made of chloramine resistant materials.

This space is for Architectural/Engineering Approval

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AquaVantage® is a registered trademark of Zurn Industries, LLC
AquaSense® is a registered trademark of Zurn Industries, LLC

Rev.
Dwg. No. 66953
Date: 5/30/03
Product No. ZR6000AV-BWN

Exposed ZER6000AV-BWN Model

Battery Powered, Motor Operated with Bedpan Washer For Water Closets

Flow Options

- ☐ **-WS1** 1.6 Gal. Low Consumption Flush
- ☐ **-FF** 4.5 Gal. Full Flush
- ☐ **Standard Flush** 3.5 Gallons Per Flush

Suffix Options (Check/Specify Appropriate Options)

- _____ **-YH** One Wall Bumper
- _____ **-YJ** Split Ring Pipe Support
- _____ **-YK** Solid Ring Pipe Support
- _____ Other

ENGINEERING SPECIFICATION: ZURN ZER6000AV-BWN AquaSense® 'AV' Battery-Powered, Motor-Operated Exposed Closet Flush Valve with Bedpan Washer – Exposed, quiet diaphragm-type, chrome-plated, flushometer valve with a polished exterior. Complete with Zurn's AquaVantage® TPE, chloramine resistant, dual seal diaphragm with a clog resistant, triple filtered by-pass. The valve is ADA compliant with a 6VDC motor actuator, a battery-powered automatic sensor with manual push button override, high impact resistant polycarbonate housing and chrome-plated metal cover, bedpan washer assembly, wall bracket and support rod, high back pressure vacuum breaker, one-piece hex coupling nut, adjustable tailpiece, spud coupling and flange for top spud connection. Control stop has internal siphon-guard protection, vandal-resistant stop cap, sweat solder kit, and a cast wall flange with setscrew. Internal seals are made of chloramine resistant materials.

This space is for Architectural/Engineering Approval

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Rev. A
Dwg. No. 66954
Date: 1/22/04
Product No. ZER6000AV-BWN

Exposed ZEMS6000AV-BWN Model

Hardwired Sensor-Operated Flush Valve with Bedpan Washer For Water Closets

Flow Options

- ☐ **-WS1** 1.6 Gal. Low Consumption Flush
- ☐ **-FF** 4.5 Gal. Full Flush
- ☐ **Standard Flush** 3.5 Gallons Per Flush

Suffix Options (Check/Specify Appropriate Options)

- _____ **-YH** One Wall Bumper
- _____ **-YJ** Split Ring Pipe Support
- _____ **-YK** Solid Ring Pipe Support
- _____ Other

ENGINEERING SPECIFICATION: ZURN ZEMS6000AV-BWN AquaSense® 'AV' Exposed Closet Flush Valve with Bedpan Washer – Exposed, quiet diaphragm-type, chrome-plated, flushometer valve with a polished exterior. Complete with Zurn's AquaVantage® TPE, chloramine resistant, dual seal diaphragm with a clog resistant, triple filtered by-pass. The valve is ADA compliant with a 6VDC motorized actuator, an automatic sensor with a manual push-button override, chrome-plated metal cover, bedpan washer assembly, wall bracket and support rod, high back pressure vacuum breaker, one-piece hex coupling nut, adjustable tailpiece, spud coupling and flange for top spud connection. Control stop has internal siphon-guard protection, vandal-resistant stop cap, sweat solder kit, and a cast wall flange with setscrew. Internal seals are made of chloramine resistant materials.

This space is for Architectural/Engineering Approval

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AquaVantage® is a registered trademark of Zurn Industries, LLC
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Rev. A
Dwg. No. 80578
Date: 6/25/04
Product No. ZEMS6000AV-BWN

Exposed Z60842AV-H Model
Flush Valve and Service Sink Faucet For Clinical Sinks

Flow Options

☐ **Standard Flush** 6.5 Gallons Per Flush

Suffix Options (Check/Specify Appropriate Options)

_____	**-BG**	BioCare Handle
_____	**-L**	1" [25] Metal Push Button
_____	**-L3**	3" [76] Metal Push Button
_____	**-YJ**	Split Ring Pipe Support
_____	**-YK**	Solid Ring Pipe Support
_____		Other

This space is for Architectural/Engineering Approval

ENGINEERING SPECIFICATION: ZURN Z60842AV-H AquaVantage® 'AV' Clinic Sink Flush Valve with Bedpan Washer and Service Sink Faucet – Quiet diaphragm-type, chrome-plated, flushometer valve with a polished exterior. Complete with Zurn's AquaVantage TPE, chloramine resistant, dual seal diaphragm with a clog resistant, triple filtered by-pass. Valve is complete with a non-hold open and no leak handle feature, high back pressure vacuum breaker, wall bracket and support rod, one-piece hex coupling nut, adjustable tailpiece, spud coupling and flange for top spud connection. Control stop has internal siphon-guard protection, vandal-resistant stop cap, sweat solder kit, and a cast wall flange with setscrew. The Zurn Z842M4-LS1-2XT Clinical Sink Faucet features a polished chrome-plated cast brass body, quarter-turn ceramic disc cartridges, 2-1/2" long swivel inlets (with integral stops) providing adjustable centers from 2-3/4" to 13", a 6" centerline cast brass vacuum breaker spout with top brace, and 4" vandal-resistant brass wrist blade color-coded handles.

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AquaVantage® is a registered trademark of Zurn Industries, LLC

Rev.
Dwg. No. 80712
Date: 2/13/04
Product No. Z60842AV-H

Exposed Z60843-BWN Model

Flush Valve with Bedpan Washer and Service Sink Faucet For Clinical Sinks

Flow Options

☐ **Standard Flush** 6.5 Gallons Per Flush

Suffix Options (Check/Specify Appropriate Options)

_____	**-BG**	BioCare Handle
_____	**-H**	Handle on Front of Flush Valve
_____	**-L**	1" [25] Metal Push Button
_____	**-L3**	3" [76] Metal Push Button
_____	**-YJ**	Split Ring Pipe Support
_____	**-YK**	Solid Ring Pipe Support
_____		Other

This space is for Architectural/Engineering Approval

ENGINEERING SPECIFICATION: ZURN Z60843-BWN AquaVantage® 'AV' Clinical Sink Flush Valve with Bedpan Washer and Service Sink Faucet – Quiet diaphragm-type, chrome-plated, flushometer valve with a polished exterior. Complete with Zurn's AquaVantage TPE, chloramine resistant, dual seal diaphragm with a clog resistant, triple filtered by-pass. Valve is complete with a non-hold open and no leak handle feature, high back pressure vacuum breaker, bedpan washer assembly, wall bracket and support rod, one-piece hex coupling nut, adjustable tailpiece, spud coupling and flange for top spud connection. Control stop has internal siphon-guard protection, vandal-resistant stop cap, sweat solder kit, and a cast wall flange with setscrew. The Zurn Z843D6-LVB-5XT Clinical Sink Faucet features a polished chrome-plated cast brass body, quarter-turn ceramic disc cartridges, inlets with integral stops on 8" centerline, a 6" centerline cast brass vacuum breaker spout with bottom brace, and 4" vandal-resistant brass wrist blade color-coded handles.

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Rev.
Dwg. No. 66999
Date: 12/17/03
Product No. Z60843-BWN

Exposed Z6000-DVN Model
Bedpan Washer For Water Closets

Suffix Options (Check/Specify Appropriate Options)

_____	**-YH**	One Wall Bumper
_____	**-YJ**	Split Ring Pipe Support
_____	**-YK**	Solid Ring Pipe Support
_____		Other

ENGINEERING SPECIFICATION: ZURN Z6000-DVN Aquaflush® Bedpan Washer for Water Closets –
The Bedpan Washer Assembly is furnished complete with bedpan washer, wall bracket and support rod, vacuum breaker, vacuum breaker tube nut, 1-1/2" [38] flush tubes, fixture spud escutcheon, and fixture spud securing nut.

This space is for Architectural/Engineering Approval

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Aquaflush® is a registered trademark of Zurn Industries, LLC

Rev.
Dwg. No. 66958
Date: 5/30/03
Product No. Z6000-DVN

Exposed Z6000-DVN1 Model
Bedpan Washer For Water Closets

Suffix Options (Check/Specify Appropriate Options)

_____	**-YH**	One Wall Bumper
_____	**-YJ**	Split Ring Pipe Support
_____	**-YK**	Solid Ring Pipe Support
_____		Other

ENGINEERING SPECIFICATION: ZURN Z6000-DVN1 Aquaflush® Bedpan Washer for Water Closets –
The Bedpan Washer Assembly is furnished complete with bedpan washer, wall bracket and support rod, vacuum breaker, vacuum breaker tube nut, 1-1/2" [38] flush tubes, fixture spud escutcheon, and fixture spud securing nut.

This space is for Architectural/Engineering Approval

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Aquaflush® is a registered trademark of Zurn Industries, LLC

Rev.
Dwg. No. 80583
Date: 8/14/03
Product No. Z6000-DVN1

Exposed Z6010-DVN Model

Bedpan Washer For Water Closets
Low Rough-In Water Supply

Suffix Options (Check/Specify Appropriate Options)

_____	**-YH**	One Wall Bumper
_____	**-YJ**	Split Ring Pipe Support
_____	**-YK**	Solid Ring Pipe Support
_____		Other

ENGINEERING SPECIFICATION: ZURN Z6010-DVN Aquaflush® Bedpan Washer for Water Closets with Low Rough-In Water Supply – The Bedpan Washer Assembly is furnished complete with 1" [25] female x 1" [25] female elbow, (2) 1" [25] solder adapters, 1" [25] chrome cover tubing 36" [914] long, bedpan washer, wall bracket and support rod, vacuum breaker, vacuum breaker tube nut, 1-1/2" [38] flush tube, fixture spud escutcheon, and fixture spud securing nut.

This space is for Architectural/Engineering Approval

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Aquaflush® is a registered trademark of Zurn Industries, LLC

Rev. A
Dwg. No. 66959
Date: 1/22/04
Product No. Z6010-DV

Exposed Z6011-DVN Model
Bedpan Washer For Water Closets

Suffix Options (Check/Specify Appropriate Options)

_____	**-YH**	One Wall Bumper
_____	**-YJ**	Split Ring Pipe Support
_____	**-YK**	Solid Ring Pipe Support
_____		Other

ENGINEERING SPECIFICATION: ZURN Z6011-DVN Aquaflush® Exposed Bedpan Washer for Handicap Rail Applications – The Bedpan Washer Assembly is furnished complete with bedpan washer with offset flush tube, wall bracket and support rod, vacuum breaker, vacuum breaker tube nut, 1-1/2" [38] flush tubes, fixture spud escutcheon, and fixture spud securing nut.

This space is for Architectural/Engineering Approval

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Aquaflush® is a registered trademark of Zurn Industries, LLC

Rev.
Dwg. No. 66960
Date: 5/30/03
Product No. Z6011-DVN

Exposed Z6000AV-TP Model
With Trap Primer For Water Closets

Flow Options

- ☐ **-WS1** 1.6 Gal. Low Consumption Flush
- ☐ **-FF** 4.5 Gal. Full Flush
- ☐ **Standard Flush** 3.5 Gallons Per Flush

Suffix Options (Check/Specify Appropriate Options)

- _____ **-BG** BioCare Handle
- _____ **-H** Handle on Front of Flush Valve
- _____ **-L** 1" [25] Metal Push Button
- _____ **-L3** 3" [76] Metal Push Button
- _____ **-YJ** Split Ring Pipe Support
- _____ **-YK** Solid Ring Pipe Support
- _____ **-YO** Bumper on Angle Stop
- _____ Other

	A		B	
Product No.	**In.**	**mm**	**In.**	**mm**
Z6000AV-TP	11-1/2	292	7-1/8	181
Z6000AV-1-TP	16	406	11-3/8	289
Z6000AV-2-TP	24	610		
Z6000AV-3-TP	27	686		
Longer lengths as specified				

ENGINEERING SPECIFICATION: ZURN Z6000AV-TP AquaVantage® 'AV' Exposed Closet Flush Valve with Trap Primer – Exposed, quiet diaphragm-type, chrome-plated, flushometer valve with a polished exterior. Complete with Zurn's AquaVantage TPE, chloramine resistant, dual seal diaphragm with a clog resistant, triple filtered by-pass. Valve is ADA compliant with a non-hold open and no leak handle feature, high back pressure vacuum breaker, trap primer assembly, one-piece hex coupling nut, adjustable tailpiece, spud coupling and flange for top spud connection. Control stop has internal siphon-guard protection, vandal-resistant stop cap, sweat solder kit, and a cast wall flange with setscrew. Internal seals are made of chloramine resistant materials. **Note:** Check local codes for minimum height requirements for trap primer assembly rough-in.

This space is for Architectural/Engineering Approval

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AquaVantage® is a registered trademark of Zurn Industries, LLC

Rev. C
Dwg. No. 59057
Date: 5/27/03
Product No. Z6000AV-TP

Exposed P6000-TPO Model
Trap Primer Assembly

Suffix Options (Check/Specify Appropriate Options)

_____ **-YH** One Wall Bumper
_____ **-YJ** Split Ring Pipe Support
_____ **-YK** Solid Ring Pipe Support
_____ **-YL** Solid Ring Pipe Support with Bumper
_____ **-YN** Bumper on Flush Pipe
_____ Other

	A		B	
Product No.	**In.**	**mm**	**In.**	**mm**
P6000-TPO	11-1/2	292	7-1/8	181
P6000-1-TPO	16	406	11-3/8	289
P6000-2-TPO	24	610		
P6000-3-TPO	27	686		
Longer lengths as specified				

ENGINEERING SPECIFICATION: ZURN P6000-TPO Aquaflush® Trap Primer Assembly – The Aquaflush trap primer elbow assembly provides a source of water to maintain a constant water seal in floor drains, preventing sewer gases from entering a specific area. During each flush valve actuation, a small amount of water is diverted to the floor drain to help maintain the water seal. The Trap Primer Assembly is furnished complete with 1-1/2" [38] flush tube with trap primer collar, 3/8" [10] x 12" [305] supply tube and fittings, vacuum breaker, vacuum breaker tube nut, and wall escutcheon.

This space is for Architectural/Engineering Approval

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Aquaflush® is a registered trademark of Zurn Industries, LLC

Rev. B
Dwg. No. 65449
Date: 5/27/03
Product No. P6000-TPO

P6000-TPE
Concealed Trap Primer Elbow For Floor Drains

Suffix Options (Check/Specify Appropriate Options)

_____ Other

ENGINEERING SPECIFICATION: ZURN P6000-TPE Aquaflush® Concealed Trap Primer Elbow for Floor Drains – The Aquaflush concealed trap primer elbow assembly provides a source of water to maintain a constant water seal in floor drains, preventing sewer gases from entering a specific area. During each flush valve actuation, a small amount of water is diverted to the floor drain to help maintain the water seal. Flexible tubing is supplied by others.

This space is for Architectural/Engineering Approval

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Aquaflush® is a registered trademark of Zurn Industries, LLC

Rev. A
Dwg. No. 65475
Date: 5/27/03
Product No. P6000-TPE

Exposed Z6300AV Model
For Urinal Valves with Foot Pedal Actuation

Flow Options

- ☐ **-WS1** 1.0 Gal. Low Consumption Flush
- ☐ **-WS** 1.5 Gal. Water Saver
- ☐ **Standard Flush** 3.0 Gallons Per Flush

Suffix Options (Check/Specify Appropriate Options)

- _____ **-YJ** Split Ring Pipe Support
- _____ **-YK** Solid Ring Pipe Support
- _____ Other

ENGINEERING SPECIFICATION: ZURN Z6300AV AquaVantage® 'AV' Exposed Urinal Valve with Foot Pedal Actuation – Exposed, quiet diaphragm-type, chrome-plated, flushometer valve with Zurn's AquaVantage TPE, chloramine resistant, dual seal diaphragm with surface optimization and a clog resistant, triple filtered by-pass. The valve is complete with a non-hold open foot pedal actuator assembly, high back pressure vacuum breaker, hex coupling nut and adjustable tailpiece, spud coupling and flange for top spud connection. Control stop has internal siphon-guard protection, vandal-resistant stop cap, sweat solder kit, and a cast wall flange with setscrew. Internal seals are made of chloramine resistant materials.

This space is for Architectural/Engineering Approval

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AquaVantage® is a registered trademark of Zurn Industries, LLC

Rev. B
Dwg. No. 65470
Date: 5/27/03
Product No. Z6300AV

Exposed Z6310AV Model
For Water Closet Valves with Foot Pedal Actuation

Flow Options

- ☐ **-WS1** 1.6 Gal. Low Consumption Flush
- ☐ **-FF** 4.5 Gal. Full Flush
- ☐ **Standard Flush** 3.5 Gallons Per Flush

Suffix Options (Check/Specify Appropriate Options)

- _____ **-YJ** Split Ring Pipe Support
- _____ **-YK** Solid Ring Pipe Support
- _____ Other

ENGINEERING SPECIFICATION: ZURN Z6310AV AquaVantage® 'AV' Exposed Urinal Valve with Foot Pedal Actuation – Exposed, quiet diaphragm-type, chrome-plated, flushometer valve with a polished exterior. Complete with Zurn's AquaVantage TPE, chloramine resistant, dual seal diaphragm with a clog resistant, triple filtered by-pass. The valve is complete with a non-hold open foot pedal actuator assembly, high back pressure vacuum breaker, one-piece hex coupling nut, adjustable tailpiece, spud coupling and flange for top spud connection. Control stop has internal siphon-guard protection, vandal-resistant stop cap, sweat solder kit, and a cast wall flange with setscrew. Internal seals are made of chloramine resistant materials.

This space is for Architectural/Engineering Approval

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Rev. C
Dwg. No. 65471
Date: 5/19/04
Product No. Z6310AV

Exposed Z6320AV Model

For 3/4" Urinal Valves with Foot Pedal Actuation

Flow Options

☐ **-WS1** 1.0 Gal. Low Consumption Flush
☐ **Standard Flush** 1.5 Gallons Per Flush

Suffix Options (Check/Specify Appropriate Options)

_____ **-YJ** Split Ring Pipe Support
_____ **-YK** Solid Ring Pipe Support
_____ Other

ENGINEERING SPECIFICATION: ZURN Z6320AV AquaVantage® 'AV' Exposed Urinal Valve with Foot Pedal Actuation – Exposed, quiet diaphragm-type, chrome-plated, flushometer valve with a polished exterior. Complete with Zurn's AquaVantage TPE, chloramine resistant, dual seal diaphragm with a clog resistant, triple filtered by-pass. The valve is complete with a non-hold open foot pedal actuator assembly, high back pressure vacuum breaker, one-piece hex coupling nut, adjustable tailpiece, spud coupling and flange for top spud connection. Control stop has internal siphon-guard protection, vandal-resistant stop cap, sweat solder kit, and a cast wall flange with setscrew. Internal seals are made of chloramine resistant materials.

This space is for Architectural/Engineering Approval

ZURN INDUSTRIES, LLC *COMMERCIAL BRASS OPERATION, 5900 ELWIN BUCHANAN DRIVE, SANFORD, NC 27330*
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Rev. B
Dwg. No. 65472
Date: 5/27/03
Product No. Z6320AV

AquaVantage® AV Aquaflush® Bedpan Washer Series

Installation, Operation, Maintenance, and Parts Manual

Patented and Patents Pending

Z6000AV-BWN

Z6011AV-BWN

AquaVantage/Aquaflush Bedpan Washer Systems

Z6000-DVN
Z6010-DVN
Z6011-DVN
Z6000AV-BWN
Z6010AV-BWN
Z6011AV-BWN
Z6020AV-BWN
Z6040AV-BWN
ZH6000AV-BWN
ZR6000AV-BWN
ZER6000AV-BWN
ZEMS6000AV-IS-BWN

Z6000-DVN

Z6011-DVN

LIMITED WARRANTY

All goods sold hereunder are warranted to be free from defects in material and factory workmanship for a period of three years from the date of purchase. Decorative finishes warranted for one year. We will replace at no cost goods that prove defective provided we are notified in writing of such defect and the goods are returned to us prepaid at Sanford, NC, with evidence that they have been properly maintained and used in accordance with instructions. We shall not be responsible for any labor charges or any loss, injury or damages whatsoever, including incidental or consequential damages. The sole and exclusive remedy shall be limited to the replacement of the defective goods. Before installation and use, the purchaser shall determine the suitability of the product for his intended use and the purchaser assumes all risk and liability whatever in connection therewith. Where permitted by law, the implied warranty of merchantability is expressly excluded. If the products sold hereunder are “consumer products,” the implied warranty of merchantability is limited to a period of three years and shall be limited solely to the replacement of the defective goods. All weights stated in our catalogs and lists are approximate and are not guaranteed.

FV335

PRODUCT SPECIFICATIONS

Zurn Bedpan Washer Only for Water Closets –
The Bedpan Washer Assembly is furnished complete with bedpan washer, wall bracket and support bracket, high pressure vacuum breaker, vacuum breaker tube nut, 1-1/2" [38 mm] flush tubes, fixture spud escutcheon, and fixture spud securing nut.

Note: **For specifications, flows, options, and installation instructions on valves, refer to specific installation manuals.**

MODELS

Bedpan Washers Only

Z6000-DVN – Exposed bedpan washer for water closets.

Z6010-DVN – Exposed bedpan washer for water closets with low rough-in water supply (Retrofit).

Z6011-DVN – Exposed bedpan washer for water closets with handicap grab bar applications.

OPTIONS

-YH One Wall Bumper
-YJ Split Ring Pipe Support
-YK Solid Ring Pipe Support
____ Other

Exposed Flush Valves with Bedpan Washer

Z6000AV-BWN – Exposed Z6000AV Model with bedpan washer for water closets.

Z6010AV-BWN – Exposed Z6010AV Model with bedpan washer for water closets with low rough-in water supply (Retrofit).

Z6011AV-BWN – Exposed Z6011AV Model with bedpan washer for water closets with handicap grab bar applications.

Z6040AV-BWN – Exposed Z6040AV Model with bedpan washer with foot pedal actuation for water closets.

Note: **See FV211 for specifications, flows, options, and installation instructions for flushometer.**

Concealed Flush Valves with Bedpan Washer

Z6020AV-BWN – Concealed Z6020AV Model with bedpan washer for water closets.

Note: **See FV212 for specifications, flows, options, and installation instructions for flushometer.**

Hydraulic Flush Valves with Bedpan Washer

ZH6000AV-BWN – Exposed ZH6000AV Model with hydraulic actuator and bedpan washer for water closets.

ZH6011AV-BWN – Exposed ZH6011AV Model with bedpan washer for water closets with handicap grab bar applications.

Note: **See FV241 for specifications, flows, options, and installation instructions for flushometer.**

Battery-Powered Flush Valves with Bedpan Washer

ZR6000AV-BWN – Exposed ZR6000AV Model battery-powered, sensor-operated with bedpan washer for water closets.

ZER6000AV-BWN – Exposed ZER6000AV Model battery-powered, sensor-operated with bedpan washer for water closets.

ZER6011AV-BWN – Exposed ZER6011AV Model with bedpan washer for water closets with handicap grab bar applications.

Note: **See FV62 and FV2001 for specifications, flows, options, and installation instructions for flushometer.**

Hardwired Flush Valves with Bedpan Washer

ZEMS6000AV-IS-BWN – Exposed ZEMS6000AV-IS Model hardwired sensor-operated with bedpan washer for water closets.

ZEMS6011AV-IS-BWN – Exposed ZEMS6011AV-IS Model with bedpan washer for water closets with handicap grab bar applications.

Note: **See FV38 for specifications, flows, options, and installation instructions for flushometer.**

Bedpan Washer Installation Instructions

Z6000AV-BWN

Z6011AV-BWN

Important:

- All plumbing is to be installed according to state and local codes and regulations.
- Water supply lines need to allow proper water flow for each fixture.
- Flush all lines of any debris before making connections.
- Do not use pipe sealant or plumbing grease on any fitting other than the control stop inlet.

The AquaVantage valve is designed to operate under various water pressures. The pressures fall between 10 and 100 psi (69 to 689 kPa). Each valve is tested at the lowest and highest pressures before being shipped. The minimum pressure is determined by the type of fixture purchased and the gallons per flush requested. Consult your catalog for flow options. Most low consumption valves (1.6 gallon) require a minimum of 25 psi flow pressure. When installing your quality Zurn valve, it is recommended that to protect the polished finished you do not use a toothed wrench. This will cause gouges and scratches on your valve.

STEP NO. 1

Install Sweat Adaptor and Control Stop

For detailed instructions on installing the sweat adaptor and control stop, refer to specific valve installation manuals in this catalogue.

STEP NO. 2

Install Outlet Tube (Figure 2)

Slide the diverter sleeve, diverter friction washer, diverter valve coupling nut, spud nut, spud friction washer, spud sleeve, and spud escutcheon over the diverter outlet tube. Insert outlet tube into fixture spud. Hand tighten spud nut onto fixture spud.

Figure 2

STEP NO. 3

Install Diverter Valve (Figure 3)

Insert top of diverter outlet tube into diverter valve and secure with diverter coupling nut. Hand tighten diverter coupling nut.

Figure 3

STEP NO. 4

Install Wall Support Flange (Figure 4A and 4B)

Determine required length of support rod by measuring distance between finished wall and back of diverter valve at support rod hole. Add 1/4" [6mm] to the length determined and cut the support rod to size. Refer to Figure 3.

Turn the diverter valve assembly to allow threading support rod into back of diverter valve body. Slide wall support flange onto support rod and turn the diverter valve assembly so that wall support flange is flush with wall. Use wall support flange as a template and mark off holes on finished wall for mounting screws. Refer to Figure 4A for details.

Remove diverter valve assembly and drill a 1/4" [6mm] hole at the three locations marked. Install an anchor in each 1/4" [6mm] hole.

Figure 4A

Insert top of diverter tube into diverter valve and secure diverter coupling nut. Hand tighten diverter coupling nut.

Rotate diverter valve so that support rod flange mounting holes are aligned with three mounting holes in finished wall. Secure using the three (3) screws provided.

Tighten setscrew in wall support flange. Refer to Figure 4B.

Figure 4B

STEP NO. 5

Install Vacuum Breaker Flush Connection (Figure 5)

Slide tube nut onto flush tube. Slide the diverter valve coupling nut, diverter friction washer, and diverter sleeve over vacuum breaker tube and secure tube to diverter valve. Hand tighten diverter valve coupling nut onto diverter valve assembly.

Length of vacuum breaker tube may be shortened to accommodate lower valve installation height.

Figure 5

STEP NO. 6

Install Flushometer

For detailed instructions on installing the flushometer, refer to specific valve installation manuals in this catalogue.

MAINTENANCE

Cleaning Nozzle Spray Disc and Screen (Figure 6)

With a Phillips head screwdriver, remove the Phillips head screw by turning counterclockwise. Remove spray disc and screen, and clean with water. Reinstall the screen, spray disk, and Phillips head screw and tighten.

Figure 6

CARE of CHROME-PLATED SURFACES

The suggested cleaning of chrome-plated surfaces is to simply clean them with mild soap and water, then dry. Commercial cleaning compounds are never recommended.

SEASONAL USE

Valves used in installations subject to shutdown because of cold and freezing conditions should be maintained in the following manner. After the main supply has been shut off and the water drained from the system, remove the stop valve and stop valve internals to allow the water to drain from the flush valve itself.

TROUBLESHOOTING GUIDE

For detailed instructions on trouble shooting the flushometer, refer to specific valve installation manuals in this catalogue.

REBUILD KITS

The P6000-PN22 Rebuild Kit is available with replacement seals. Access to the seals is as follows:

1. Pull diverter arm to downward position.
2. Remove setscrew with 3/32 Allen wrench.
3. Remove diverter arm from elbow.
4. Remove elbow from body to get access to O-rings and rubber grommet.

Parts Replacement Guide

Illus. No.	Description	Product No.
1	Diverter Body	P6000-PN21
2	Elbow Assembly (Elbow, Spring, Setscrew, (2) O-Rings, and Grommet)	P6000-PN20
3	Spray Disc and Screen	P6000-P3
4	Spray Disc Screw	P6000-P4
5	Wall Flange with Setscrew and Mounting Hardware	P6000-P8
6	Support Rod	P6000-P8-2
7	Spray Arm Assembly – 12"	P6000-PN18
8	Spray Arm Repair Kit (O-Ring, Spray Disk, Screen, and Screw)	P6000-PN19
9	Bottom Tube	P6000-P15
9A	Optional Offset Tube for Z6011 Assembly	P6000-P15-LO
10	Coupling Assembly – 1-1/2"	P6000-HN
11	Spud Coupling Assembly – 1-1/2"	P6000-H
12	Vacuum Breaker Tube	P6000-1-A-CP
13	Tube Nut	P6000-AA-CP
14	Vacuum Breaker Repair Kit	P6000-B
15	Bedpan Diverter Rebuild Kit (Items 8, 2 [Except Elbow], Tube Gasket)	P6000-PN22

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Form No. FV335, 5/07

ZURN®

AquaVantage® AV

Prison Series Flush Valves

AquaVantage®
PenalSeries

Choose The Product That Is Right For Your Applications.

AquaVantage Concealed
ZH6603AV-MBP Model
With Hydraulic Actuation For Combination Lavatory/Closet Penal Fixtures

AquaVantage Concealed
ZH6606AV-MBP Model
With Hydraulic Actuation For Penal Water Closet Fixtures

AquaVantage Concealed
ZH6609AV-MBP Model
With Hydraulic Actuation For Penal Urinal Fixtures

AquaVantage Concealed
ZH6611AV-MBP Model
With Hydraulic Actuation For Penal Water Closet Fixtures

AquaVantage Concealed
ZH6613AV-MBP Model
With Hydraulic Actuation For Penal Urinal Fixtures

AquaVantage Concealed
Z6601AV Model
For Combination Lavatory/Closet Penal Fixtures

AquaVantage Concealed
Z6603AV Model
For Combination Lavatory/Closet Penal Fixtures

AquaVantage Exposed
Z6606AV Model
For Penal Water Closet Fixtures

AquaVantage Concealed
Z6611AV Model
For Penal Water Closet Fixtures

AquaVantage Concealed
Z6614AV Model
For Penal Urinal Valves

AquaVantage Concealed
Z6621AV Model
For Detox Drain

AquaVantage Concealed
Z6681AV Model
For Penal Water Closet Systems

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Zurn Industries, LLC Printed in U.S.A. Form No. FV245, Rev. 5/07

Concealed ZH6603AV-MBP Model

With Hydraulic Actuation for Combination Lavatory/Closet Penal Fixtures

Flow Options

- ☐ **-WS1** 1.6 Gal. Low Consumption Flush
- ☐ **-FF** 4.5 Gal. Full Flush
- ☐ **Standard Flush** 3.5 Gallons Per Flush

Suffix Options (Check/Specify Appropriate Options)

_____ Other

ENGINEERING SPECIFICATION: ZURN ZH6603AV-MBP AquaVantage® 'AV' Concealed Combination Lavatory/Closet Penal Valve – Concealed, quiet diaphragm-type rough brass flushometer valve with Zurn's AquaVantage TPE, chloramine resistant, dual seal diaphragm with a clog resistant, triple filtered by-pass. The valve is complete with a non-hold open type hydraulic push button actuator that may be located up to 36" [914] (7' [2133] with -SW option) from the valve, high back pressure vacuum breaker, one-piece hex coupling nut, adjustable tailpiece, elbow flush connection and spud coupling for back spud connection. Control stop has internal siphon-guard protection and sweat solder kit. Internal seals are made of chloramine resistant materials.

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Rev. B
Dwg. No. 65450
Date: 5/20/03
Product No. ZH6603AV-MBP

Exposed ZH6606AV-MBP Model

With Hydraulic Actuation for Penal Water Closet Fixtures

Flow Options

- ☐ **-WS1** 1.6 Gal. Low Consumption Flush
- ☐ **-FF** 4.5 Gal. Full Flush
- ☐ **Standard Flush** 3.5 Gallons Per Flush

Suffix Options (Check/Specify Appropriate Options)

- _____ **-YJ** Split Ring Pipe Support
- _____ **-YK** Solid Ring Pipe Support
- _____ **-YO** Bumper on Angle Stop
- _____ Other

ENGINEERING SPECIFICATION: ZURN ZH6606AV-MBP AquaVantage® 'AV' Exposed Penal Valve – Exposed, quiet diaphragm-type, chrome-plated, flushometer valve with a polished exterior and Zurn's AquaVantage TPE, chloramine resistant, dual seal diaphragm with a clog resistant, triple filtered by-pass. The valve is complete with a non-hold open type hydraulic push button actuator that may be located up to 36" [914] (7' [2133] with -SW option) from the valve, high back pressure vacuum breaker, one-piece hex coupling nut, adjustable tailpiece, spud coupling and flange for top spud connection. Control stop has internal siphon-guard protection, vandal-resistant stop cap, sweat solder kit, and a cast wall flange with setscrew. Internal seals are made of chloramine resistant materials. Electrical box supplied by others (see installation instructions for size and type).

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Rev. B
Dwg. No. 65452
Date: 5/20/03
Product No. ZH6606AV-MBP

Concealed ZH6609AV-MBP Model

With Hydraulic Actuation for Penal Urinal Fixtures

Flow Options

- ☐ **-WS1** 1.0 Gal. Low Consumption Flush
- ☐ **-FF** 3.0 Gal. Full Flush
- ☐ **Standard Flush** 1.5 Gallons Per Flush

Suffix Options (Check/Specify Appropriate Options)

_____ Other

ENGINEERING SPECIFICATION: ZURN ZH6609AV-MBP AquaVantage® 'AV' Concealed, Hydraulic Urinal Valve – Concealed, quiet diaphragm-type rough brass flushometer valve with Zurn's AquaVantageTPE, chloramine resistant, dual seal diaphragm with a clog resistant, triple filtered by-pass. The valve is complete with a non-hold open type hydraulic push button actuator that may be located up to 36" [914] (7' [2133] with -SW option) from the valve, high back pressure vacuum breaker, one-piece hex coupling nut, adjustable tailpiece, elbow flush connection, and spud coupling for back spud connection. Control stop has internal siphon-guard protection and sweat solder kit. Internal seals are made of chloramine resistant materials.

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Rev. C
Dwg. No. 65451
Date: 5/20/03
Product No. ZH6609AV-MBP

Concealed ZH6611AV-MBP Model

With Hydraulic Actuation for Penal Water Closet Fixtures

Flow Options

- ☐ **-WS1** 1.6 Gal. Low Consumption Flush
- ☐ **-FF** 4.5 Gal. Full Flush
- ☐ **Standard Flush** 3.5 Gallons Per Flush

Suffix Options (Check/Specify Appropriate Options)

_____ Other

ENGINEERING SPECIFICATION: ZURN ZH6611AV-MBP AquaVantage® 'AV' Concealed Hydraulic Penal Valve – Concealed, quiet diaphragm-type rough brass flushometer valve with Zurn's AquaVantage TPE, chloramine resistant, dual seal diaphragm with a clog resistant, triple filtered by-pass. The valve is complete with a non-hold open type hydraulic push button actuator that may be located up to 36" [914] (7' [2133] with -SW option) from the valve, high back pressure vacuum breaker, one-piece hex coupling nut, adjustable tail-piece, elbow flush connection, and spud coupling for back spud connection. Control stop has internal siphon-guard protection and sweat solder kit. Internal seals are made of chloramine resistant materials.

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Rev. B
Dwg. No. 65453
Date: 5/20/03
Product No. ZH6611AV-MBP

Concealed ZH6613AV-MBP Model

With Hydraulic Actuation for Penal Urinal Fixtures

Flow Options

☐ **-WS1** 1.0 Gal. Low Consumption Flush
☐ **Standard Flush** 1.5 Gallons Per Flush

Suffix Options (Check/Specify Appropriate Options)

_____ Other

ENGINEERING SPECIFICATION: ZURN ZH6613AV-MBP AquaVantage® 'AV' Concealed Hydraulic Penal Valve – Concealed, quiet diaphragm-type rough brass flushometer valve with Zurn's AquaVantage TPE, chloramine resistant, dual seal diaphragm with a clog resistant, triple filtered by-pass. The valve is complete with a non-hold open type hydraulic push button actuator that may be located up to 36" [914] (7' [2133] with -SW option) from the valve, high back pressure vacuum breaker, one-piece hex coupling nut, adjustable tail-piece, elbow flush connection, and spud coupling for back spud connection. Control stop has internal siphon-guard protection and sweat solder kit. Internal seals are made of chloramine resistant materials.

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Rev. B
Dwg. No. 65454
Date: 5/20/03
Product No. ZH6613AV-MBP

Concealed Z6601AV Model

For Combination Lavatory/Closet Penal Fixtures

Flow Options

- ☐ **-WS1** 1.6 Gal. Low Consumption Flush
- ☐ **-FF** 4.5 Gal. Full Flush
- ☐ **Standard Flush** 3.5 Gallons Per Flush

Suffix Options (Check/Specify Appropriate Options)

_____ Other

ENGINEERING SPECIFICATION: ZURN Z6601AV AquaVantage® 'AV' Concealed Penal Valve – Concealed, quiet diaphragm-type, rough brass flushometer valve with Zurn's AquaVantage TPE, chloramine resistant, dual seal diaphragm with a clog resistant, triple filtered by-pass. The valve incorporates a non-hold open, no leak push button with a 1" [25] metal push button, high back pressure vacuum breaker, one-piece hex coupling nut, adjustable tailpiece and spud coupling for back spud connection. Control stop has internal siphon-guard protection and sweat solder kit. Internal seals are made of chloramine resistant materials.

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Rev. B
Dwg. No. 65455
Date: 5/20/03
Product No. Z6601AV

Concealed Z6603AV Model

For Combination Lavatory/Closet Penal Fixtures

Flow Options

- ☐ **-WS1** 1.6 Gal. Low Consumption Flush
- ☐ **-FF** 4.5 Gal. Full Flush
- ☐ **Standard Flush** 3.5 Gallons Per Flush

Suffix Options (Check/Specify Appropriate Options)

_____ Other

ENGINEERING SPECIFICATION: ZURN Z6603AV AquaVantage® 'AV' Concealed Penal Valve – Concealed, quiet diaphragm-type, rough brass flushometer valve with Zurn's AquaVantage TPE, chloramine resistant, dual seal diaphragm with a clog resistant, triple filtered by-pass. The valve incorporates a non-hold open, no leak push button with a 1" [25] metal push button, high back pressure vacuum breaker, one-piece hex coupling nut, adjustable tailpiece, and spud coupling for back spud connection. Control stop has internal siphon-guard protection and sweat solder kit. Internal seals are made of chloramine resistant materials.

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Rev. B
Dwg. No. 65456
Date: 5/20/03
Product No. Z6603AV

Exposed Z6606AV Model
For Penal Water Closet Fixtures

Flow Options

☐	**-WS1**	1.6 Gal. Low Consumption Flush
☐	**-FF**	4.5 Gal. Full Flush
☐	**Standard Flush**	3.5 Gallons Per Flush

Suffix Options (Check/Specify Appropriate Options)

_____	**-BG**	BioCare ADA Handle
_____	**-YJ**	Split Ring Pipe Support
_____	**-YK**	Solid Ring Pipe Support
_____	**-YO**	Bumper on Angle Stop
_____		Other

ENGINEERING SPECIFICATION: ZURN Z6606AV AquaVantage® 'AV' Exposed Closet Flush Valve – Exposed, quiet diaphragm-type, chrome-plated flushometer valve with a polished exterior. Complete with Zurn's AquaVantage TPE, chloramine resistant, dual seal diaphragm with a clog resistant, triple filtered by-pass. The valve is ADA compliant with a non-hold open and no leak handle feature, high back pressure vacuum breaker, one-piece hex coupling nut, adjustable tailpiece, spud coupling and flange for top spud connection. Control stop has internal siphon-guard protection, vandal-resistant stop cap, sweat solder kit, and a cast wall flange with setscrew. Internal seals are made of chloramine resistant materials.

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Rev. B
Dwg. No. 65458
Date: 5/20/03
Product No. Z6606AV

Concealed Z6609AV Model

For Penal Urinal Fixtures

Flow Options

- ☐ **-WS1** 1.0 Gal. Low Consumption Flush
- ☐ **-WS** 1.5 Gal. Water Saver
- ☐ **Standard Flush** 3.0 Gallons Per Flush

Suffix Options (Check/Specify Appropriate Options)

- _____ **-BG** BioCare ADA Handle
- _____ **-J** Oscillating ADA Handle
- _____ **-L3** 3" [76] Metal Push Button
- _____ Other

ENGINEERING SPECIFICATION: ZURN Z6609AV AquaVantage® 'AV' Concealed Urinal Valve – Concealed, quiet diaphragm-type, rough brass flushometer valve with Zurn's AquaVantage TPE, chloramine resistant, dual seal diaphragm with a clog resistant, triple filtered by-pass. The valve incorporates a non-hold open, no leak push button with a 1" [25] metal push button, high back pressure vacuum breaker, one-piece hex coupling nut, adjustable tailpiece, and spud coupling for back spud connection. Control stop has internal siphon-guard protection and sweat solder kit. Internal seals are made of chloramine resistant materials.

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Rev. C
Dwg. No. 65500
Date: 5/20/03
Product No. Z6609AV

Exposed Z6610AV Model
For Penal Urinal Fixtures

Flow Options

☐ **-WS1** 1.0 Gal. Low Consumption Flush
☐ **Standard Flush** 3.0 Gallons Per Flush

Suffix Options (Check/Specify Appropriate Options)

_____ **-BG** BioCare ADA Handle
_____ **-H** Handle on Front of Flush Valve
_____ **-L** 1" [25] Metal Push Button
_____ **-L3** 3" [76] Metal Push Button
_____ **-YJ** Split Ring Pipe Support
_____ **-YK** Solid Ring Pipe Support
_____ Other

ENGINEERING SPECIFICATION: ZURN Z6610AV AquaVantage® 'AV' Exposed Urinal Flush Valve – Exposed, quiet diaphragm-type, chrome-plated flushometer valve with a polished exterior. Complete with Zurn's AquaVantage TPE, chloramine resistant, dual seal diaphragm with a clog resistant, triple filtered by-pass. The valve is ADA compliant with a non-hold open and no leak handle feature, high back pressure vacuum breaker, one-piece hex coupling nut, adjustable tailpiece, spud coupling and flange for top spud connection. Control stop has internal siphon-guard protection, vandal-resistant stop cap, sweat solder kit, and a cast wall flange with setscrew. Internal seals are made of chloramine resistant materials.

This space is for Architectural/Engineering Approval

ZURN INDUSTRIES, LLC *COMMERCIAL BRASS OPERATION, 5900 ELWIN BUCHANAN DRIVE, SANFORD, NC 27330*
PHONE: 1-800-997-3876, FAX: 919-775-3541, WEBSITE: www.zurn.com
IN CANADA: ***ZURN INDUSTRIES LIMITED*** *3544 NASHUA DRIVE, MISSISSAUGA, ONTARIO L4V 1L2, PHONE: 905-405-8272, FAX: 905-405-1292*

AquaVantage® is a registered trademark of Zurn Industries, LLC

Rev. B
Dwg. No. 65509
Date: 5/20/03
Product No. Z6610AV

Concealed Z6611AV Model

For Penal Water Closet Fixtures

Flow Options

- ☐ **-WS1** 1.6 Gal. Low Consumption Flush
- ☐ **-FF** 4.5 Gal. Full Flush
- ☐ **Standard Flush** 3.5 Gallons Per Flush

Suffix Options (Check/Specify Appropriate Options)

_____ Other

ENGINEERING SPECIFICATION: ZURN Z6611AV AquaVantage® 'AV' Concealed Closet Flush Valve – Concealed, quiet diaphragm-type, rough brass flushometer valve with Zurn's AquaVantage TPE, chloramine resistant, dual seal diaphragm with a clog resistant, triple filtered by-pass. The valve incorporates a non-hold open, no leak push button with a 1" [25] metal push button, high back pressure vacuum breaker, one-piece hex coupling nut, adjustable tailpiece, and spud coupling for back spud connection. Control stop has internal siphon-guard protection and sweat solder kit. Internal seals are made of chloramine resistant materials.

This space is for Architectural/Engineering Approval

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Rev. B
Dwg. No. 65459
Date: 5/20/03
Product No. Z6611AV

Concealed Z6613AV Model

For Penal 3/4" Urinal Fixtures

Flow Options

☐ **-WS1** 1.0 Gal. Low Consumption Flush
☐ **Standard Flush** 1.5 Gallons Per Flush

Suffix Options (Check/Specify Appropriate Options)

_____ **-BG** BioCare ADA Handle
_____ **-J** Oscillating Metal ADA Handle
_____ **-L3** 3" [76] Metal Push Button
_____ Other

ENGINEERING SPECIFICATION: ZURN Z6613AV AquaVantage® 'AV' Concealed 3/4" Urinal Flush Valve – Concealed, quiet diaphragm-type, rough brass flushometer valve with Zurn's AquaVantage TPE, chloramine resistant, dual seal diaphragm with a clog resistant, triple filtered by-pass. The valve incorporates a non-hold open, no leak push button with a 1" [25] metal push button, high back pressure vacuum breaker, one-piece hex coupling nut, adjustable tailpiece, and spud coupling for back spud connection. Control stop has internal siphon-guard protection and sweat solder kit. Internal seals are made of chloramine resistant materials.

This space is for Architectural/Engineering Approval

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Rev. B
Dwg. No. 65510
Date: 5/20/03
Product No. Z6613AV

Exposed Z6614AV Model
For Penal Urinal Valves

Flow Options

☐ **-WS1** 1.0 Gal. Low Consumption Flush
☐ **Standard Flush** 1.5 Gallons Per Flush

Suffix Options (Check/Specify Appropriate Options)

_____ **-BG** BioCare ADA Handle
_____ **-YJ** Split Ring Pipe Support
_____ **-YK** Solid Ring Pipe Support
_____ Other

ENGINEERING SPECIFICATION: ZURN Z6614AV AquaVantage® 'AV' Exposed Urinal Flush Valve – Exposed, quiet diaphragm-type, rough brass flushometer valve with Zurn's AquaVantage TPE, chloramine resistant, dual seal diaphragm with a clog resistant, triple filtered by-pass. The valve ADA compliant with a non-hold open, no leak handle feature. High back pressure vacuum breaker, one-piece hex coupling nut, adjustable tailpiece, spud coupling and flange for top spud connection. Control stop has internal siphon-guard protection, vandal-resistant stop cap, sweat solder kit and cast wall flange with setscrew. Internal seals are made of chloramine resistant materials.

This space is for Architectural/Engineering Approval

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PHONE: 1-800-997-3876, FAX: 919-775-3541, WEBSITE: www.zurn.com
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Rev. B
Dwg. No. 65460
Date: 5/20/03
Product No. Z6614AV

Concealed Z6621AV Model
For Detox Drain

Flow Options

- ☐ **-WS1** 1.6 Gal. Low Consumption Flush
- ☐ **-FF** 4.5 Gal. Full Flush
- ☐ **Standard Flush** 3.5 Gallons Per Flush

Suffix Options (Check/Specify Appropriate Options)

_____ Other

ENGINEERING SPECIFICATION: ZURN Z6621AV AquaVantage® 'AV' Concealed Flush Valve For Detox Drain – Concealed, quiet diaphragm-type, rough brass flushometer valve with Zurn's AquaVantage TPE, chloramine resistant, dual seal diaphragm with a clog resistant, triple filtered by-pass. The valve incorporates a non-hold open, no leak push button with a 1" [25] metal push button, high back pressure vacuum breaker, one-piece hex coupling nut and adjustable tailpiece. Control stop has internal siphon-guard protection and sweat solder kit. Internal seals are made of chloramine resistant materials.

This space is for Architectural/Engineering Approval

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Rev. B
Dwg. No. 65461
Date: 5/20/03
Product No. Z6621AV

Concealed Z6681AV Model

For Penal Water Closet Fixtures

Flow Options

- ☐ **-WS1** 1.6 Gal. Low Consumption Flush
- ☐ **-FF** 4.5 Gal. Full Flush
- ☐ **Standard Flush** 3.5 Gallons Per Flush

Suffix Options (Check/Specify Appropriate Options)

_____ Other

ENGINEERING SPECIFICATION: ZURN Z6681AV AquaVantage® 'AV' Concealed Flush Valve For Water Closet – Concealed, quiet diaphragm-type, rough brass flushometer valve with Zurn's AquaVantage TPE, chloramine resistant, dual seal diaphragm with a clog resistant, triple filtered by-pass. The valve incorporates a non-hold open, no leak push button with a 1" [25] metal push button, high back pressure vacuum breaker, one-piece hex coupling nut, adjustable tailpiece, and spud coupling for back spud connection. Control stop has internal siphon-guard protection and sweat solder kit. Internal seals are made of chloramine resistant materials.

This space is for Architectural/Engineering Approval

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Rev. B
Dwg. No. 65462
Date: 5/20/03
Product No. Z6681AV

Z6199
Aquaflush Access Panel and Frame

Product No.	Size	A	B	C	D	E	F
Z6199-BX12	12 x 12 [305 x 305]	12 [305]	12 [305]	13-1/2 [343]	13-1/2 [343]	5-1/2 [140]	5-1/2 [140]
Z6199-BX15	15 x 15 [381 x 381]	15 [381]	15 [381]	16-1/2 [419]	16-1/2 [419]	7 [178]	7 [178]
Z6199-BX17	13 x 17 [330 x 432]	17 [432]	13 [330]	14-1/2 [368]	18-1/2 [470]	6 [152]	8 [203]

Suffix Options (Check/Specify Appropriate Options)

_____ **-SC-2** 2" [51] Long Vandal-Proof Screws
_____ **-SP** Solid Panel
_____ Other

ENGINEERING SPECIFICATION: ZURN Z6199 Aquaflush® Access Panel and Frame – The access panel and frame provide quick and simple access to in-wall concealed flush valves when a mechanical chase of adequate size is not available. The panel and frame incorporate a #14 gage stainless steel satin finish cover, #18 gage stainless steel satin finish frame, and (4) 1" [25] long vandal-proof screws, (6) 1" [25] long vandal-proof screws on 13 x 17 [330 x 432] panel.

This space is for Architectural/Engineering Approval

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Aquaflush® is a registered trademark of Zurn Industries, LLC

Rev. A
Dwg. No. 59015
Date: 4/21/04
Product No. Z6199

Specifying “L” Dimension for Concealed Manual-Operated Flush Valves

Step 1: **Determine the applicable column** by locating the valve’s 4-digit model number.

Step 2: **Determine the applicable row** by locating the correct wall thickness.
NOTE: For wall thicknesses not listed, locate and use the next largest size.

Step 3: **Order the applicable suffix** shown at the intersection of the row and column.

Example: For closet valve model number Z6152AV and a wall thickness of 6", order: Z6152AV-L9.

	Closets		Urinals	Combination Fixtures
Wall Thickness “W”	6140AV 6142AV 6143AV 6144AV 6150AV / 6152AV 6154AV 6155AV 6605AV 6611AV	6681AV	6190AV 6195AV / 6602AV 6609AV 6613AV 6615AV	6601AV 6603AV 6616AV
1/4"	L4	L7	L4	L5
1"	L4	L7	L4	L5
2"	L5	L8	L5	L6
3"	L6	L9	L6	L7
4"	L7	L10	L7	L8
5"	L8	L11	L8	L9
6"	L9	L12	L9	L10
7"	L10	L13	L10	L11
8"	L11	L14	L11	L12
9"	L12	L15	L12	L13
10"	L13	L16	L13	L14

Z6199 Model Access Panel and Frame for Manual-Operated Concealed Flush Valves

Z6199-BX12

Z6199-BX15

Z6199-BX17

Z6199

Engineering Specification: Zurn Z6199 Access Panel and Frame for Manual-Operated Concealed Flush Valves –
The access panel and frame provide quick and simple access to in-wall concealed flush valves when a mechanical chase of adequate size is not available. The panel is #14 gage stainless steel and the frame is #18 gage stainless steel. Both have a satin finish. The assembly comes complete with (4) 1" [25mm] vandal-proof screws. Specify Z6199-BX12 for 12" x 12", Z6199-BX15 for 15" x 15", or Z6199-BX17 for 13" x 17".

Product No.	Size	A	B	C	D	E	F
Z6199-BX12	12x12 [305x305]	12 [305]	12 [305]	13-1/2 [343]	13-1/2 [343]	5-1/2 [140]	5-1/2 [140]
Z6199-BX15	15x15 [381x381]	15 [381]	15 [381]	16-1/2 [419]	16-1/2 [419]	7 [178]	7 [178]
Z6199-BX17	13x17 [330x432]	17 [432]	13 [330]	14-1/2 [368]	18-1/2 [470]	6 [152]	8 [203]

SUFFIX OPTIONS (Check/specify appropriate options.)	
-SP	Solid Panel
-SC-2	2" [51mm] Long Vandal-Proof Screws

Notes

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AquaVantage® AV Penal Series

Hydraulic-Operated, Concealed and Exposed Flush Valve

Part Identification Guide

Patented and Patents Pending

Z6606AV

Hydraulic-Operated Penal Systems
ZH6603AV-MBP
ZH6606AV-MBP
ZH6609AV-MBP
ZH6611AV-MBP
ZH6613AV-MBP

ZH6611AV-MBP

Z6603AV

Concealed Penal Systems
Z6601AV
Z6603AV
Z6609AV
Z6611AV
Z6613AV
Z6621AV
Z6681AV

Exposed Penal Systems
Z6606AV
Z6610AV
Z6614AV

LIMITED WARRANTY

All goods sold hereunder are warranted to be free from defects in material and factory workmanship for a period of three years from the date of purchase. Decorative finishes warranted for one year. We will replace at no cost goods that prove defective provided we are notified in writing of such defect and the goods are returned to us prepaid at Sanford, NC, with evidence that they have been properly maintained and used in accordance with instructions. We shall not be responsible for any labor charges or any loss, injury or damages whatsoever, including incidental or consequential damages. The sole and exclusive remedy shall be limited to the replacement of the defective goods. Before installation and use, the purchaser shall determine the suitability of the product for his intended use and the purchaser assumes all risk and liability whatever in connection therewith. Where permitted by law, the implied warranty of merchantability is expressly excluded. If the products sold hereunder are “consumer products,” the implied warranty of merchantability is limited to a period of three years and shall be limited solely to the replacement of the defective goods. All weights stated in our catalogs and lists are approximate and are not guaranteed.

FV247

AquaVantage® Hydraulic-Operated Repair Kits

Parts Identification

1. Chrome Cover Plate
2. Return Cover Tube
3. Supply Cover Tube
4. Cover Tube Ring with Setscrew
5. Cover Tube Ring with Setscrew
6. Handle Nut
7. Hydraulic Plunger Assembly
8. 1/16" Compression Fitting
9. Gasket
10. Valve Body Cover
11. Plastic Cover
12. Trip Mechanism
13. Diaphragm Repair Kit
14. Valve Body
15. Vacuum Breaker Friction Washer
16. Vacuum Breaker Insert
17. Vacuum Breaker Duckbill
18. Vacuum Breaker Tube
19. Vacuum Breaker Tube Nut
20. Spud Nut
21. Spud Friction Washer
22. Spud Sleeve
23. Spud Escutcheon
24. Tailpiece
25. Snap Ring
26. Tailpiece O-Ring
27. Locking Nut
28. Setscrew for Cast Wall Flange
29. Cast Wall Escutcheon
30. Supply Cover Tube
31. Sweat Solder Adaptor
32. Stop Body
33. Piston Seal
34. Piston
35. Stop Spring
36. Guide O-Ring
37. Piston Guide
38. Guide Holder
39. Adjusting Screw
40. Stop Cap
41. Snap Cap Screw Cover
42. Vandal-Resistant Control Stop Cover
43. Setscrew for Control Stop Cover
44. 1/4" Return Tube
45. 1/4" Supply Tube
46. 1/8" Compression Fitting
47. Piston Assembly
48. Actuator Body
49. Mounting Plate
50. Securing Nut
51. Spring for Large Push Button
52. Spacer for Large Push Button
53. Large Push Button
54. Escutcheon Setscrew
55. Escutcheon for Large Push Button
56. Filter

Covers and Repair Kits	Product No.
Outside Cover – CP – Item 10	P6000-LL
Inside Cover – Item 11	P6000-L
Low Consumption Closet Kit – 1.6 gal. flush	P6000-ECA-WS1
Water Saving Closet Kit – 3.5 gal. flush	P6000-ECA-WS
Full Flow Closet Kit – 4.5 gal. flush	P6000-ECA-FF
Low Consumption Urinal Kit – 1.0 gal. flush	P6000-EUA-WS1
Water Saving Urinal Kit – 1.5 gal. flush	P6000-EUA-WS
Full Flush Urinal Kit – 3.0 gal. flush	P6000-EUA-FF

Repair Parts – Inside Parts	Product No.
Urinal Relief Valve – Item 12	P6000-EU13
Closet Relief Valve – Item 12	P6000-EC13

Handle Assembly and Repair Kits	Product No.
Hydraulic Large Push Button Assembly, Fixture Wall	PH6000-HYL3-FW
Hydraulic Large Push Button Assembly, Side Wall	PH6000-SHYL3-SW
Hydraulic Metal Push Button Assembly	PH6000-HYL-MBP
Hydraulic Metal Push Button Assembly for Penal Use	PH6000-HYLP-MBP
Repair Kit for Hydraulic Actuator	PH6000-HYA11

Control Stop Repair Kit and Parts	Product No.
Control Stop Repair Kit for 1" and 3⁄4", Includes Items 33-39	P6000-D-SD
Seal Seat for 1" and 3⁄4", Includes Item 33	P6000-D42
VP Control Stop Repair Kit for 1" and 3⁄4", Includes Items 33-39	P6000-D-VP
Sweat Solder Connection with Cast Wall Flange, Includes Items 29-31	P6000-YB

Adjustable Tailpieces	Product No.
Adjustable Tailpiece for Standard Flush Valve, Includes Items 24-26	P6000-J1
Tailpiece Coupling Assembly, Includes Items 25-27	P6000-K
Tailpiece Locking Ring, Includes Item 25	P6000-C30
Tailpiece O-Ring, Includes Item 26	P6000-C31
Coupling Nut, Includes Item 27	P6000-C32

Flush Connections and Spud Coupling Kits	Product No.
Flush Tube Assembly for Flush Valves, Includes Items 15-19. Specify diameter and length.	P6000-A
Vacuum Breaker Repair Kit, Includes Items 15-17	P6000-B
Spud Coupling Assembly, Includes Items 20-23. Specify size.	P6000-H

Note: **See AquaVantage Hydraulic Flush Valve Section for Installation Instructions, FV241.**

AquaVantage® Concealed Repair Kits

Parts Identification

1. Optional 1" Metal Push Button
2. Optional 3" Metal Push Button
3. Handle
4. Actuator Rod
5. Handle O-Ring
6. Handle Spring
7. Handle Seal Retainer
8. Handle Seal
9. Gasket
10. Valve Body Cover
11. Plastic Cover
12. Trip Mechanism
13. Diaphragm Repair Kit
14. Valve Body
15. Vacuum Breaker Friction Washer
16. Vacuum Breaker Insert
17. Vacuum Breaker Duckbill
18. Vacuum Breaker Tube
19. Vacuum Breaker Tube Nut
20. Coupling Nut
21. Spud Friction Washer
22. Spud Rubber Gasket
23. 90° Elbow
24. Tailpiece
25. Snap Ring
26. Tailpiece O-Ring
27. Locking Nut
32. Stop Body
33. Piston Seal
34. Piston
35. Stop Spring
36. Guide O-Ring
37. Piston Guide
38. Guide Holder
39. Adjusting Screw
40. Stop Cap
41. Wheel Handle
42. Wheel Handle Screw
43. Solid Gasket
44. Solid Handle Nut
45. Flanged/Scored Horizontal Tube
46. P30 Flat Gasket
47. Wall Escutcheon
48. Sleeve/Socket
49. Adjusting Nut
50. Optional Bell Nut
51. Handle Nut
52. Push Rod/Filler Rod
53. Spud Nut
54. 3/4" 90° Elbow
55. 3/4" Horizontal Tube
56. 3/4" Spud Nut
57. Spud Friction Washer
58. Spud Rubber Gasket

Covers and Repair Kits	Product No.
Outside Cover - RB – Item 10	P6000-LL-RB
Inside Cover – Item 11	P6000-L
Low Consumption Closet Kit – 1.6 gal. flush	P6000-ECA-WS1
Water Saving Closet Kit – 3.5 gal. flush	P6000-ECA-WS
Full Flow Closet Kit – 4.5 gal. flush	P6000-ECA-FF
Low Consumption Urinal Kit – 1.0 gal. flush	P6000-EUA-WS1
Water Saving Urinal Kit – 1.5 gal. flush	P6000-EUA-WS
Full Flush Urinal Kit – 3.0 gal. flush	P6000-EUA-FF

Repair Parts – Inside Parts	Product No.
Urinal Relief Valve – Item 12	P6000-EU13
Closet Relief Valve – Item 12	P6000-EC13

Handle Assembly and Repair Kits	Product No.
Concealed Valve Actuator (Specify Type and 'L' Dim.)	P6000-N- P6000-NL- P6000-NL3-
Handle Repair Kit, Includes Items 4-9	P6000-NK
Handle Seal, Includes Item 8	P6000-M9
Handle Gasket, Includes Item 9	P6000-M10

Control Stop Repair Kit and Parts	Product No.
Control Stop Repair Kit for 1" and 3⁄4", Includes Items 33-39	P6000-D-SD
Seal Seat for 1" and 3⁄4", Includes Item 33	P6000-D42
Sweat Solder Connection	P6000-YBA

Adjustable Tailpieces	Product No.
Adjustable Tailpiece for Standard Flush Valve, Includes Items 24-26	P6000-J1-RB
Tailpiece Locking Ring, Includes Item 25	P6000-C30
Tailpiece O-Ring, Includes Item 26	P6000-C31
Coupling Nut, Includes Item 27	P6000-C32-RB

Flush Connections and Spud Coupling Kits	Product No.
Flush Tube Assembly for Concealed Flush Valves. Refer to Section Q in Aquaparts Guide. Specify 'L' Dim. and Valve Used.	P6000-Q_ _
Vacuum Breaker Repair Kit, Includes Items 15-17	P6000-B
Spud Coupling Assembly. (Specify size.)	P6000-HN

Note: **See AquaVantage Manual Flush Valve Section for Installation Instructions, FV212.**

AquaVantage® Exposed Repair Kits

Parts Identification

1. Handle Nut
2. Handle Sleeve and Insert
3. Low Force/ADA Compliant Han
4. Actuator Rod
5. Handle O-Ring
6. Handle Spring
7. Handle Retainer
8. Handle Seal Retainer
9. Gasket
10. Valve Body Cover
11. Plastic Cover
12. Trip Mechanism
13. Diaphragm Repair Kit
14. Valve Body
15. Vacuum Breaker Friction Wash
16. Vacuum Breaker Insert
17. Vacuum Breaker Duckbill
18. Vacuum Breaker Tube
19. Vacuum Breaker Tube Nut
20. Spud Nut
21. Spud Friction Washer
22. Spud Sleeve
23. Spud Escutcheon
24. Tailpiece
25. Snap Ring
26. Tailpiece O-Ring
27. Locking Nut
28. Setscrew for Cast Wall Flange
29. Cast Wall Escutcheon
30. Supply Cover Tube
31. Sweat Solder Adapter
32. Stop Body
33. Piston Seal
34. Piston
35. Stop Spring
36. Guide O-Ring
37. Piston Guide
38. Guide Holder
39. Adjusting Screw
40. Stop Cap
41. Snap Cap Screw Cover
42. Vandal-Resistant Control Stop Cover
43. Setscrew for Control Stop Cover

Covers and Repair Kits	Product No.
Outside Cover - CP – Item 10	P6000-LL
Inside Cover – Item 11	P6000-L
Low Consumption Closet Kit – 1.6 gal. flush	P6000-ECA-WS1
Water Saving Closet Kit – 3.5 gal. flush	P6000-ECA-WS
Full Flow Closet Kit – 4.5 gal. flush	P6000-ECA-FF
Low Consumption Urinal Kit – 1.0 gal. flush	P6000-EUA-WS1
Water Saving Urinal Kit – 1.5 gal. flush	P6000-EUA-WS
Full Flush Urinal Kit – 3.0 gal. flush	P6000-EUA-FF

Repair Parts – Inside Parts	Product No.
Urinal Relief Valve – Item 12	P6000-EU13
Closet Relief Valve – Item 12	P6000-EC13

AquaVantage Rebuild Kits	Product No.
Closet and Urinal Rebuild Kits Include Items 4-9, 12, 13, 15-17, 26	P6000-ECA-WS-RK P6000-ECA-WS1-RK P6000-EUA-WS-RK P6000-EUA-WS1-RK

Handle Assembly and Repair Kits	Product No.
ADA Handle Assembly (Side), Includes Items 2-9	P6000-M-ADA
Handle Repair Kit (Side), Includes Items 4-9	P6000-MK
Handle Seal, Includes Item 8	P6000-M9
Handle Gasket, Includes Item 9	P6000-M10
Repair Kit for Front Operation - Exposed, Includes Items 4-9	P6000-MHK
Handle Assembly (Front), Includes Items 2-9	P6000-MH

Control Stop Repair Kit and Parts	Product No.
Control Stop Repair Kit for 1" and 3⁄4", Includes Items 33-39	P6000-D-SD
Seal Seat for 1" and 3⁄4", Includes Item 33	P6000-D42
VP Control Stop Repair Kit for 1" and 3⁄4", Includes Items 33-39	P6000-D-VP
Sweat Solder Connection with Cast Wall Flange, Includes Items 29-31	P6000-YB

Adjustable Tailpieces	Product No.
Adjustable Tailpiece for Standard Flush Valve, Includes Items 24-26	P6000-J1
Tailpiece Coupling Assembly, Includes Items 25-27	P6000-K
Tailpiece Locking Ring, Includes Item 25	P6000-C30
Tailpiece O-Ring, Includes Item 26	P6000-C31
Coupling Nut, Includes Item 27	P6000-C32

Flush Connections and Spud Coupling Kits	Product No.
Flush Tube Assembly for Flush Valves, Includes Items 15-19. Specify diameter and length.	P6000-A
Vacuum Breaker Repair Kit, Includes Items 15-17	P6000-B
Spud Coupling Assembly, Includes Items 20-23. Specify size.	P6000-H

Note: **See AquaVantage Manual Flush Valve Section for Installation Instructions, FV211.**

ZURN INDUSTRIES, LLC *COMMERCIAL BRASS OPERATION, 5900 ELWIN BUCHANAN DRIVE, SANFORD, NC, U.S.A. 27330*
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Form No. FV247, 5/07

ZURN®

Water Conservation Products

EcoVantage™ Series

The Zurn EcoVantage™ Difference

Today's building owners and facility managers face increasing cost challenges, one of which is reducing water consumption. Our EcoVantage series provides a mix of innovative LEED/Green listed products including water-free urinals, 1/8 gallon ultra low flow urinals, high efficiency (HET) pressure-assist toilets, and 1.28 ultra low flow flush valve fixtures. Lavatories can be installed with self-generating sensor faucets, metering faucets, and low flow pressure compensating aerators that deliver the same level of performance as traditional fittings with minimal water consumption. These products can be installed for new construction or retrofitted to existing installations to lower building costs and provide long-term savings.

Buildings can be updated to the latest Zurn sensor washroom technology that reduces bacteria transfer and increases restroom hygiene. Our AquaSense line of flush valves and sensor faucets provides battery or hardwire solutions. Zurn's sensor technology is reliable and provides building owners with a variety of application choices.

Zurn EcoVantage fixture systems can be easily configured. A custom designed, internet-based computer modeling program allows the user to quickly mix and match components depending on need and performance requirements. The user can register on line at *www.zurn.com* for access authorization. The program enables a user to configure the fixture and brass components to meet specific design applications. The program incorporates an internal mapping system that minimizes component pairing errors and assists in creating the perfect fixture system for your building.

Zurn provides peace of mind by standing behind the entire installation. Zurn adds value to the entire supply chain from product selection, quality, performance, and delivery. EcoVantage Systems can be custom packed and tagged to keep components and fixtures together, therefore eliminating installation errors and job sorting.

For assistance with your next LEED/water conservation project, look to Zurn for design assistance. We can help deliver innovative solutions outside of the standard LEED criteria.

Contact us at 1-800/997-3876 or e-mail us at ZurnOne@zurn.com.

Water Savings · High Performance · Reduced Costs

Qualification For LEED Credits

Zurn Commercial Brass Product
LEED Specification Qualification Guide

The Leadership in Energy and Environmental Design (LEED™) Green Building Rating System represents the U.S. Green Building Council's effort to provide a national standard for what constitutes a "green building." Through its use as a design guideline and third party certification tool, it aims to improve occupant well-being, environmental performance, and economic returns of buildings using established innovative practices, standards, and technologies.

Application for LEED credits starts with the architects and other building designers. Through the use of carefully calculated floor plans, environmentally friendly building materials, energy efficient products, and innovative system designs, buildings can obtain a high ranking LEED certification. This certification process produces buildings that are great environments and will save energy and resources every day.

Zurn Industries, LLC is striving to provide as many products as possible to enable architects to design as "green" as possible. The LEED rating system provides a set of performance standards to serve as a guideline for each of the phases of design and construction. The categories addressed are Sustainable Sites, Water Efficiency, Energy and Atmosphere, Materials and Resources, Indoor Environmental Quality, and Innovation in Design.

The products presented within this catalog can provide assistance in the Water Efficiency section of the LEED template. In the Water Efficiency section a total of five credits may be obtained: two credits for water efficient landscaping, one credit for innovative wastewater technologies, and two credits for water use reduction.

WE 3.1 and WE 3.2 Water Use Reduction

Credit 3.1 – Water Use Reduction: 20%
Using Zurn Commercial Brass products rated below the baseline fixture performance requirements as stated by the Energy Policy Act of 1992 would contribute to this credit as long as the building as a whole reduces water consumption below the baseline by 20%.

Credit 3.2 – Water Use Reduction: 30%
Using Zurn Commercial Brass products rated below the baseline fixture performance requirements as stated by the Energy Policy Act of 1992 would contribute to this credit as long as the building as a whole reduces water consumption below the baseline by 30%.

Typical Water Conservation

Zurn offers a value alternative to traditional fixture installations that utilize multiple manufacturers' components. Zurn EcoVantage fixture systems combine the strength of commercial brass fittings along with an innovative offering of sanitary fixtures. Zurn has a 100-year tradition of developing highly engineered water control products. The Zurn difference fills the void between a manufacturer that simply makes commercial plumbing products and one that is focused on commercial plumbing products solutions. The Zurn EcoVantage product offering brings value and performance together to deliver sustained savings for the building owner.

Typical Water Conservation – Industrial and Commercial Application

The table below provides an illustrative example of a typical office building setting with 100 occupants – 50 males and 50 females in a 260-day work year. The baseline calculation uses the EPA Act of 1992 for the gallons per flush/gallons per minute consumption.

		Flow Rate		Water Consumption (Total Gallons)		
					Zurn EcoVantage Low Flow System	
Fixture	**Frequency of Use[4]**	**EPA Act[2] (LEED Baseline[3])**	**Zurn EcoVantage Low Flow System**	**EPA Act[2] (LEED Baseline[3])**	**Use**	**Savings**
Water Closet - Male	1	1.6 gpf	1.28 gpf	80	64	16
Urinal - Male	2	1.0 gpf	0.125 gpf	100	12.5	87.5
Water Closet - Female	3	1.6 gpf	1.28 gpf	80	64	16
Lavatory Faucets	3 Minutes	2.2 gpm	0.5 gpm	660	150	510
Kitchen Faucets	1 Minute	2.2 gpm	1.5 gpm	220	150	70
Showers	5.3 Minutes	2.5 gpm	1.5 gpm	331.28	198.77	132.51
			Daily Total	1,471.28	639.27	832.01
			Yearly Total[1]	382,532.8	166,210.2	216,322.6
Zurn EcoVantage Water Savings (Total Savings Over Baseline Criteria)						**56.55%**

[1] Based on 100 occupants: 50 male, 50 female; estimating 25 persons showering daily with an annual 260 work days.
[2] EPA Act, 1992.
[3] LEED Baseline for Water Efficiency is the EPA Act or the local building code/criteria, whichever criteria is more stringent.
[4] Frequency of Use - Source, Water Use and Conservation, Waterplow Press 1992 by Amy Vickers.

Check our website – www.zurn.com – for an interactive water savings calculator.

For assistance with your next LEED/water conservation project, look to Zurn for design assistance.

We can help deliver innovative solutions outside of the standard LEED criteria.

Contact us at 1-800/997-3876 or e-mail us at ZurnOne@zurn.com.

EcoVantage™ Series

Choose The Product That Is Right For Your Applications.

AquaVantage AV Exposed Z6000AV-DF Model
Dual Flush
For Water Closets

AquaVantage AV Exposed Z6003AV-DF Model
Dual Flush
For 3/4" Urinals

AquaVantage AV Exposed Z6003AV-EWS Model
For 3/4" Urinals

AquaSense AV ZER6003AV-EWS-CP Model
Sensor-Operated,
Battery-Powered
For 3/4" Urinals

AquaSense AV Exposed ZEMS6003AV-IS-EWS Model
For 3/4" Urinals

Z6912-GEN Model Lavatory Faucet with Hydroelectric Generator

Z6913-GEN Model Lavatory Faucet with Hydroelectric Generator

Z6915-GEN Model Lavatory Faucet with Hydroelectric Generator

Z6920-GEN Model Lavatory Faucet with Hydroelectric Generator

Z6922-GEN Model Lavatory Faucet with Hydroelectric Generator

Z5615 Model EcoVantage Flush Valve Toilet System

Z5655 Model EcoVantage Flush Valve Toilet System

Z5665 Model EcoVantage Flush Valve Toilet System

Water Conserving Z5795 Model
Waterless Urinal

Water Conserving Z5796 Model
Quarter Stall Waterless Urinal

AquaSense Exposed Z5798 Model
High Efficiency
Urinal (HEU) System

AquaSense Z6900-ZAT Model
AquaTank Automatic
Sensor Operator
For Tank Type Toilets

AquaVantage AV Exposed P6000-M-ADA-DF Model
Dual Flush Handle

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Zurn Industries, LLC Printed in U.S.A.

Exposed Z6000AV-DF Dual Flush Model
For Water Closets

GreenSpec LISTED

ADA DESIGNED

Flow Options

- ☐ **-WS1** 1.6 Gal. Low Consumption Flush
- ☐ **-FF** 4.5 Gal. Full Flush
- ☐ **Standard Flush** 3.5 Gallons Per Flush

Suffix Options (Check/Specify Appropriate Options)

- _____ **-BG** BioCare ADA Handle
- _____ **-H** Handle on Front of Flush Valve
- _____ **-YJ** Split Ring Pipe Support
- _____ **-YK** Solid Ring Pipe Support
- _____ **-YO** Bumper on Angle Stop
- _____ Other

This space is for Architectural/Engineering Approval

ENGINEERING SPECIFICATION: ZURN Z6000AV-DF Dual Flush AquaVantage® 'AV' Exposed Closet Flush Valve – Exposed, quiet diaphragm-type, chrome-plated, flushometer valve with a polished exterior. The valve is ADA compliant with a non-hold open and no leak dual flush handle feature. Lifting the handle up initiates a reduced flush of 30% for the evacuation of liquid waste. Pushing the handle down actuates a full flush for solid waste. A wall plate is furnished with graphics and instructions for user operation. The valve incorporates the AquaVantage TPE, chloramine resistant, dual seal diaphragm with a clog resistant, triple filtered by-pass. The valve also includes a high back pressure vacuum breaker, one-piece hex coupling nut, adjustable tailpiece, spud coupling, and flange for top spud connection. The control stop has internal siphon-guard protection, vandal-resistant stop cap, sweat solder kit, and a cast wall flange with setscrew. All seals and gaskets are made of chloramine resistant materials.

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AquaVantage® is a registered trademark of Zurn Industries, LLC

Rev.
Dwg. No. 81204
Date: 11/30/05
Product No. Z6000AV-DF

Exposed Z6003AV-DF Dual Flush Model
For 3/4" Urinals

Flow Options

- ☐ **-EWS** 0.5 Gallons Per Flush
- ☐ **-WS1** 1.0 Gal. Low Consumption Flush
- ☐ **Standard Flush** 1.5 Gallons Per Flush

Suffix Options (Check/Specify Appropriate Options)

- _____ **-BG** BioCare ADA Handle
- _____ **-H** Handle on Front of Flush Valve
- _____ **-YJ** Split Ring Pipe Support
- _____ **-YK** Solid Ring Pipe Support
- _____ **-YO** Bumper on Angle Stop
- _____ Other

This space is for Architectural/Engineering Approval

ENGINEERING SPECIFICATION: ZURN Z6003AV-DF Dual Flush AquaVantage® 'AV' Exposed Urinal Flush Valve – Exposed, quiet diaphragm-type, chrome-plated flushometer valve with a polished exterior. The valve is ADA compliant with a non-hold open and no leak dual flush handle feature. Pushing the handle down actuates a full flush. Lifting the handle up initiates a reduced flush of 30% for further water conservation. A wall plate is furnished with graphics and instructions for user operation. The valve incorporates the AquaVantage TPE chloramine resistant, dual seal diaphragm with a clog resistant, triple filtered by-pass. The valve also includes a high back pressure vacuum breaker, one-piece hex coupling nut, adjustable tailpiece, spud coupling, and flange for top spud connection. The control stop has internal siphon-guard protection, vandal-resistant stop cap, sweat solder kit, and a cast wall flange with set-screw. All seals and gaskets are made of chloramine resistant materials.

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Rev.
Dwg. No. 81205
Date: 11/30/05
Product No. Z6003AV-DF

Exposed Z6003AV-EWS Model
For 3/4" Urinals

Flow Options

☐ **Standard Flush** .5 Gallons Per Flush

Suffix Options (Check/Specify Appropriate Options)

_____ **-VP** Vandal-Resistant Stop Screw
_____ **-YJ** Split Ring Pipe Support
_____ **-YK** Solid Ring Pipe Support
_____ Other

ENGINEERING SPECIFICATION: ZURN Z6003AV-EWS AquaVantage® 'AV' Exposed Urinal Flush Valve – Exposed, quiet diaphragm-type, chrome-plated flushometer valve with a polished exterior. Complete with Zurn's AquaVantage TPE, chloramine resistant, dual seal diaphragm with a clog resistant, triple filtered by-pass. The valve is ADA compliant with a non-hold open and no leak handle feature, high back pressure vacuum breaker, one-piece hex coupling nut, adjustable tailpiece, spud coupling, and flange for top spud connection. Control stop has internal siphon-guard protection, vandal-resistant stop cap, sweat solder kit, and a cast wall flange with setscrew. Internal seals are made of chloramine resistant materials.

This space is for Architectural/Engineering Approval

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AquaVantage® is a registered trademark of Zurn Industries, LLC

Rev.
Dwg. No. 81398
Date: 10/26/06
Product No. Z6003AV-EWS

Exposed ZER6003AV-EWS-CP Model

Sensor-Operated, Battery-Powered Flush Valve For 3/4" Urinals

GreenSpec® LISTED

ADA DESIGNED

Suffix Options (Check/Specify Appropriate Options)

_____	**-YJ**	Split Ring Pipe Support
_____	**-YK**	Solid Ring Pipe Support
_____		Other

ENGINEERING SPECIFICATION: ZURN ZER6003AV-EWS-CP AquaSense® 'AV' Exposed Urinal Flush Valve – Exposed, quiet diaphragm-type, chrome-plated flushometer with a polished exterior. Complete with Zurn's AquaVantage TPE, chloramine resistant, dual seal diaphragm with a clog resistant, triple filtered by-pass to deliver .5 gallons per flush. The valve incorporates a 6VDC motor actuator, a battery-powered automatic sensor, high impact resistant polycarbonate housing and chrome-plated ABS cover with manual override push button, high back pressure vacuum breaker, one-piece hex coupling nut, adjustable tailpiece, spud coupling and flange for top spud connection. Control stop has internal siphon-guard protection, vandal-resistant stop cap, sweat solder kit, and a cast wall flange with setscrew. Internal seals are made of chloramine resistant materials.

This space is for Architectural/Engineering Approval

U.S. GREEN BUILDING COUNCIL MEMBER

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AquaSense® is a registered trademark of Zurn Industries, LLC

Rev.
Dwg. No. 66903
Date: 12/12/02
Product No. ZER6003AV-EWS-CP

Exposed ZEMS6003AV-IS-EWS Model
For 3/4" Urinals

Flow Options

☐ **Standard Flush** .5 Gallons Per Flush

Suffix Options (Check/Specify Appropriate Options)

_____	**-VP**	Vandal-Resistant Stop Screw
_____	**-YJ**	Split Ring Pipe Support
_____	**-YK**	Solid Ring Pipe Support
_____		Other

Accessories (Order Separate as Specified)

PESS6000-BB	Battery Backup (Up to Eight Valves)
P6000-PC6	6 VDC Plug-in Power Converter (Up to Eight Valves)
P6000-MJ	Mini Junction Box
P6000-HW6	Hardwire Power Converter (Up to Eight Valves)

This space is for Architectural/Engineering Approval

ENGINEERING SPECIFICATION:
ZURN ZEMS6003AV-IS-EWS AquaSense® 'AV' Exposed Hardwired Automatic Sensor Flush Valve for 3/4" [19] Urinals – Exposed, quiet diaphragm-type, chrome-plated flushometer valve with a polished exterior. Complete with Zurn's AquaVantage TPE, chloramine resistant, dual seal diaphragm with a clog resistant, triple filtered by-pass. The valve incorporates a 6 VDC motorized actuator, an integral infrared convergence-type proximity sensor and a manual push-button override into an all-metal, polished chrome-plated housing. Sensor range automatically adjusts to its environment at power up and is powered by a 6 VDC power converter. Each power converter can accommodate up to eight flush valves. The valve is complete with high back pressure vacuum breaker, one-piece hex coupling nut, adjustable tailpiece, spud coupling and flange for top spud connection. Control stop has internal siphon-guard protection, vandal-resistant stop cap, sweat solder kit, and a cast wall flange with setscrew. Internal seals are made of chloramine resistant materials.

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AquaVantage® is a registered trademark of Zurn Industries, LLC
AquaSense® is a registered trademark of Zurn Industries, LLC

Rev.
Dwg. No. 80947
Date: 9/10/04
Product No. ZEMS6003AV-IS-EWS

Exposed Z6203 Model

Metroflush Piston-Operated Flush Valve For 3/4" Urinal Valves

Flow Options

☐	**-EWS**	0.5 Gallons Per Flush
☐	**-WS1**	1.0 Gal. Low Consumption Flush
☐	**-FF**	3.0 Gal. Full Flush
☐	**Standard Flush**	1.5 Gallons Per Flush

Suffix Options (Check/Specify Appropriate Options)

_____	**-L**	1" [25] Metal Push Button
_____	**-L3**	3" [76] Metal Push Button
_____	**-VC**	Vandal-Resistant Stop Cover
_____	**-XYV**	Less Vacuum Breaker
_____	**-YB**	Sweat Solder Kit
_____	**-YC**	Cast Wall Flange
_____	**-YJ**	Split Ring Pipe Support
_____	**-YK**	Solid Ring Pipe Support
_____		Other

ENGINEERING SPECIFICATION: ZURN Z6203 Metroflush® Piston-Operated Exposed Urinal Flush Valve – The Metroflush is an exposed, quiet piston type, chrome-plated flushometer valve with polished exterior. Complete with Zurn MetroVantage chloramine resistant piston with a clog resistant filtered by-pass. The valve is ADA compliant with a non-hold open and no-leak handle feature, high back pressure vacuum breaker, one-piece hex coupling nut, adjustable tailpiece, spud coupling and flange for top spud connection. Control stop has internal siphon-guard protection. Internal seals are made of chloramine resistant materials.

This space is for Architectural/Engineering Approval

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Metroflush® is a registered trademark of Zurn Industries, LLC

Rev. D
Dwg. No. 61397
Date: 1/31/07
Product No. Z6203

Zurn E-Z Sensor Faucets

Z6920 Z6912 Z6913 Z6922 Wall Mount Z6915

Features and Benefits

- Water Conserving
- ADA Compliant
- Power Supply Options
- Hands-Free Sanitary Operation
- Vandal-Resistant Aerator
- Automatic 30-Second Time Out
- Highly Polished, Chrome-Plated Cast Brass Bodies
- Low Battery Indicator Light
- In-Line Filter
- Factory Set Sensor Range
- Optional Accessories
- Three-Year Warranty

Innovations In Electronics

Zurn puts the EASY into sensor faucet installation with our line of automatic E-Z Sensor Faucets. Unlike other sensor faucet manufacturers that have different model faucets for alternative energy installations, Zurn has combined the technology of four into one. Our family of E-Z faucets utilizes 6 VDC power so the same model faucet can be installed in your choice of supplied power:

- EcoVantage Self-Generating Faucet – 10-year battery life
- Non-EcoVantage Standard Battery Faucet – three-year battery life
- Plug-In Faucet – comes standard with battery back-up feature
- Hardwire Faucet – comes standard with battery back-up feature

EcoVantage™ Series Hydro Generator Electronics

How The Hydro Generator Works

As the Zurn EcoVantage Faucet is used, water is routed through the hydro generator and past an internal turbine. While the turbine spins, electrical energy is stored in a rechargeable cell. The electricity generated by the hydro generator greatly reduces the need for cell replacement. The hydro generator virtually provides a self-sustaining system for approximately 10 years.

P6900-GEN

Features and Benefits

- Self-generating power
- Ten-year battery life
- Replaceable rechargeable battery
- Rechargeable battery will maintain its charge for up to 90 days without faucet activation
- Compact inline design
- Choice of spout designs
- Hydro generator retrofits to currently installed Zurn E-Z Faucets
- 0.5 gpm low consumption aerator
- All brass spouts
- LEED credit applicable
- Three-year warranty

GreenSpec® LISTED

Z6912-GEN Model

Lavatory Faucet
With Hydroelectric Generator

GreenSpec LISTED

ADA DESIGNED

Suffix Options (Check/Specify Appropriate Options)

_____	**-ADM**	Above Deck Mixer
_____	**-ADM-1**	Above Deck Mixer with 4" [102] Cover Plate
_____	**-ADM-2**	Above Deck Mixer with 8" [203] Cover Plate
_____	**-C**	1.5 GPM Laminar Flow Control
_____	**-CP4**	Cover Plate - 4" [102] Centers
_____	**-CP8**	Cover Plate - 8" [203] Centers
_____	**-F**	.5 GPM Vandal-Resistant Aerator
_____	**-IA3**	Inlet Adaptor (3/8" [10] Compression)
_____	**-MT**	Mixing Tee
_____	**-MV**	Temperature Mixing Valve
_____	**-SH**	Supply Hoses for Mixing Valve
_____	**-SSH**	Single Supply Hose
_____	**-TMV**	Thermostatic Mixing Valve for Multiple Faucets
_____	**-TMV-1**	Thermostatic Mixing Valve for Single Faucets
_____	**-WB**	Wrist Blade Handle for ADM
_____		Other

ENGINEERING SPECIFICATION: ZURN Z6912-GEN AquaSense® Hydroelectric Powered Faucet – The Z6912-GEN sensor faucet is a sensor faucet with an in-line hydro power generator that creates electrical energy and stores it in a rechargeable cell. The hydro generator provides a self-sustaining system for approximately 10 years. The faucet incorporates an infrared convergence-type proximity sensor into the chrome-plated cast brass spout. The Z6912-GEN is furnished complete with sensor module, spout module, in-line filter, a 1.5 GPM vandal-resistant aerator, and an inlet for a 1/2" [13] connection. The Z6912-GEN can be used for new construction or retrofit.

This space is for Architectural/Engineering Approval

U.S. GREEN BUILDING COUNCIL MEMBER

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AquaSense® is a registered trademark of Zurn Industries, LLC

Rev. A
Dwg. No. 81446
Date: 3/5/07
Product No. Z6912-GEN

Z6913-GEN Model

Lavatory Faucet
With Hydroelectric Generator

GreenSpec® LISTED

ADA DESIGNED

Suffix Options (Check/Specify Appropriate Options)

_____	**-ADM**	Above Deck Mixer
_____	**-ADM-1**	Above Deck Mixer with 4" [102] Cover Plate
_____	**-ADM-2**	Above Deck Mixer with 8" [203] Cover Plate
_____	**-C**	1.5 GPM Laminar Flow Control
_____	**-CP4**	Cover Plate - 4" [102] Centers
_____	**-CP8**	Cover Plate - 8" [203] Centers
_____	**-F**	.5 GPM Vandal-Resistant Aerator
_____	**-IA3**	Inlet Adaptor (3/8" [10] Compression)
_____	**-MT**	Mixing Tee
_____	**-MV**	Temperature Mixing Valve
_____	**-SH**	Supply Hoses for Mixing Valve
_____	**-SSH**	Single Supply Hose
_____	**-TMV**	Thermostatic Mixing Valve for Multiple Faucets
_____	**-TMV-1**	Thermostatic Mixing Valve for Single Faucets
_____	**-WB**	Wrist Blade Handle for ADM
_____		Other

ENGINEERING SPECIFICATION: ZURN Z6913-GEN AquaSense® Hydroelectric Powered Faucet – The Z6913-GEN sensor faucet is a sensor faucet with an in-line hydro power generator that creates electrical energy and stores it in a rechargeable cell. The hydro generator provides a self-sustaining system for approximately 10 years. The faucet incorporates an infrared convergence-type proximity sensor into the chrome-plated cast brass spout. The Z6913-GEN is furnished complete with sensor module, spout module, in-line filter, a 1.5 GPM vandal-resistant aerator, and an inlet for a 1/2" [13] connection. The Z6913-GEN can be used for new construction or retrofit.

This space is for Architectural/Engineering Approval

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IN CANADA: ***ZURN INDUSTRIES LIMITED*** *3544 NASHUA DRIVE, MISSISSAUGA, ONTARIO L4V 1L2, PHONE: 905-405-8272, FAX: 905-405-1292*

AquaSense® is a registered trademark of Zurn Industries, LLC

Rev. A
Dwg. No. 81447
Date: 3/5/07
Product No. Z6913-GEN

Z6915-GEN Model

Lavatory Faucet
With Hydroelectric Generator

GreenSpec® LISTED

ADA DESIGNED

Suffix Options (Check/Specify Appropriate Options)

_____	**-ADM**	Above Deck Mixer
_____	**-C**	1.5 GPM Laminar Flow Control
_____	**-F**	.5 GPM Vandal-Resistant Aerator
_____	**-IA3**	Inlet Adaptor (3/8" [10] Compression)
_____	**-MT**	Mixing Tee
_____	**-MV**	Temperature Mixing Valve
_____	**-SH**	Supply Hoses for Mixing Valve
_____	**-SSH**	Single Supply Hose
_____	**-TMV**	Thermostatic Mixing Valve for Multiple Faucets
_____	**-TMV-1**	Thermostatic Mixing Valve for Single Faucets
_____	**-WB**	Wrist Blade Handle for ADM
_____		Other

ENGINEERING SPECIFICATION: ZURN Z6915-GEN AquaSense® Hydroelectric Powered Faucet – The Z6915-GEN sensor faucet is a sensor faucet with an in-line hydro power generator that creates electrical energy and stores it in a rechargeable cell. The hydro generator provides a self-sustaining system for approximately 10 years. The faucet incorporates an integral 4" [102] cover plate, infrared convergence-type proximity sensor into the chrome-plated cast brass spout. The Z6915-GEN is furnished complete with sensor module, spout module, in-line filter, a 1.5 GPM vandal-resistant aerator, and an inlet for a 1/2" [13] connection. The Z6915-GEN can be used for new construction or retrofit.

This space is for Architectural/Engineering Approval

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Rev. A
Dwg. No. 81448
Date: 3/5/07
Product No. Z6915-GEN

Z6920-GEN Model

Lavatory Faucet
With Hydroelectric Generator

GreenSpec LISTED

ADA DESIGNED

Suffix Options (Check/Specify Appropriate Options)

_____	**-ADM**	Above Deck Mixer
_____	**-ADM-1**	Above Deck Mixer with 4" [102] Cover Plate
_____	**-ADM-2**	Above Deck Mixer with 8" [203] Cover Plate
_____	**-C**	1.5 GPM Laminar Flow Control
_____	**-CP4**	Cover Plate - 4" [102] Centers
_____	**-CP8**	Cover Plate - 8" [203] Centers
_____	**-F**	.5 GPM Vandal-Resistant Aerator
_____	**-GA**	3-1/2" [89] Gooseneck Spout
_____	**-GC**	8" [203] Gooseneck Spout
_____	**-IA3**	Inlet Adaptor (3/8" [10] Compression)
_____	**-MT**	Mixing Tee
_____	**-MV**	Temperature Mixing Valve
_____	**-SH**	Supply Hoses for Mixing Valve
_____	**-SSH**	Single Supply Hose
_____	**-SO**	Rosette Spray Aerator
_____	**-TMV**	Thermostatic Mixing Valve for Multiple Faucets
_____	**-TMV-1**	Thermostatic Mixing Valve for Single Faucets
_____	**-WB**	Wrist Blade Handle for ADM
_____		Other

ENGINEERING SPECIFICATION: ZURN Z6920-GEN AquaSense® Hydroelectric Powered Faucet – The Z6920-GEN sensor faucet is a sensor faucet with an in-line hydro power generator that creates electrical energy and stores it in a rechargeable cell. The hydro generator provides a self-sustaining system for approximately 10 years. The faucet incorporates an infrared convergence-type proximity sensor into the base of the gooseneck faucet. The Z6920-GEN is furnished complete with sensor module, spout module, in-line filter, a 1.5 GPM vandal-resistant aerator, and an inlet for a 1/2" [13] connection. The Z6920-GEN can be used for new construction or retrofit.

U.S. GREEN BUILDING COUNCIL MEMBER

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Rev. A
Dwg. No. 81449
Date: 3/5/07
Product No. Z6920-GEN

Z6922-GEN Model

Lavatory Faucet
With Hydroelectric Generator

GreenSpec® LISTED

ADA DESIGNED

Suffix Options (Check/Specify Appropriate Options)

_____	**-C**	1.5 GPM Laminar Flow Control
_____	**-F**	.5 GPM Vandal-Resistant Aerator
_____	**-GA**	3-1/2" [89] Gooseneck Spout
_____	**-GC**	8" [203] Gooseneck Spout
_____	**-IA3**	Inlet Adaptor (3/8" [10] Compression)
_____	**-MT**	Mixing Tee
_____	**-MV**	Temperature Mixing Valve
_____	**-SH**	Supply Hoses for Mixing Valve
_____	**-SSH**	Single Supply Hose
_____	**-SO**	Rosette Spray Aerator
_____	**-TMV**	Thermostatic Mixing Valve for Multiple Faucets
_____	**-TMV-1**	Thermostatic Mixing Valve for Single Faucets
_____		Other

ENGINEERING SPECIFICATION: ZURN Z6922-GEN AquaSense® Hydroelectric Powered Faucet – The Z6922-GEN sensor faucet is a back mounted sensor faucet with an in-line hydro power generator that creates electrical energy and stores it in a rechargeable cell. The hydro generator provides a self-sustaining system for approximately 10 years. The faucet incorporates an infrared convergence-type proximity sensor into the base of the gooseneck faucet. The Z6922-GEN is furnished complete with sensor module, spout module, in-line filter, a 1.5 GPM vandal-resistant aerator, and an inlet for a 1/2" [13] connection. The Z6922-GEN can be used for new construction or retrofit.

This space is for Architectural/Engineering Approval

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AquaSense® is a registered trademark of Zurn Industries, LLC

Rev. A
Dwg. No. 81450
Date: 3/5/07
Product No. Z6922-GEN

P6900-GEN

Hydroelectric Power Generator For Z6900 Series Sensor Faucets

GreenSpec® LISTED

P6900-GEN

- Self-generating power
- Ten-year battery life
- Replaceable rechargeable battery
- Choice of spout designs
- LEED credit applicable
- Three-year warranty

ENGINEERING SPECIFICATION: ZURN P6900-GEN AquaSense® Hydroelectric Power Generator for Faucet Solenoid – In-line power generator connects between faucet shank and solenoid box and generates power while faucet is in use. Connector replaces existing solenoid battery tray for simple installation.

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AquaVantage® is a registered trademark of Zurn Industries, LLC

Rev.
Dwg. No. 81307
Date: 1/26/07
Product No. P6900-GEN

Z5615

1.28 gpf Elongated, Wall Hung EcoVantage Flush Valve Toilet System

Z5615 HET Series

- Zurn One HET Toilet System designed for optimal performance between Zurn fixture and Zurn flush valve to save water and exceed industry performance standards
- 1.28 gpf (gallons per flush) [4.9 Lpf]
- 20% water savings over standard 1.6 gpf [6 Lpf] system
- Vitreous china
- Elongated front rim
- 2-1/8" fully glazed trapway
- High efficiency siphon jet flush action
- Shipping Weight: 40 lbs.

ENGINEERING SPECIFICATION: ZURN Z5615 AquaSense® EcoVantage™ High Efficiency Toilet System – System comes complete with exposed Z6000EV high efficiency 1.28 gallons per flush [4.9 Lpf] flushometer valve and vitreous china wall-hung toilet. Valve is operated by an infrared convergence-type proximity sensor with smart technology, powered by a single 9 volt battery, furnished with a vandal-resistant chrome-plated cast brass valve body, chloramine resistant internal seals, manual override button and reversible cover. Complete with high pressure vacuum breaker, one-piece hex coupling nut, adjustable tailpiece, spud coupling and flange for top spud connection. Control stop has internal siphon-guard protection, vandal-resistant stop cap, sweat solder kit and a cast wall flange with setscrew. Vitreous china toilet is 1-1/2" top spud with 2-1/8" fully glazed trapway and siphon jet action. Valve and toilet are an engineered system designed to provide optimal performance and 20 percent water savings over 1.6 gpf [6 Lpf] conventional toilets.

Suffix Options

☐ **-RF** Retrofit Nut Kit for extending carrier studs from existing wall.

Recommended Trim

☐ **Z5955SS-EL** Elongated, standard white, open front toilet seat less cover with stainless steel check hinge.

Note: To ensure system performance:
Minimum Static Water Pressure = 40 psi
Minimum Running Water Pressure = 30 psi

These dimensions and specifications are subject to change without notice.

Fixtures meet ASME A112.19.2 and CSA B45 standard requirements.

Meets the American Disabilities Guidelines and ANSI A117.1 requirements when installed according to these requirements.

This space is for Architectural/Engineering Approval

ZURN INDUSTRIES, LLC *COMMERCIAL BRASS and FIXTURES OPERATION*
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Rev. Date: 1/24/07 C.N. No. 96103
Dwg. No. 83069 Product No. Z5615

Z5655

1.28 gpf Elongated, Floor Mounted EcoVantage Flush Valve Toilet System

GreenSpec® LISTED

Z5655 HET Series

- Zurn One HET Toilet System designed for optimal performance between Zurn fixture and Zurn flush valve to save water and exceed industry standards.
- 1.28 gpf (gallons per flush) [4.9 Lpf]
- 20% water savings over standard 1.6 gpf [6 Lpf] system
- Vitreous china
- Elongated front rim
- 2" fully glazed trapway
- High efficiency siphon jet flush action
- Shipping Weight: 55 lbs.

ENGINEERING SPECIFICATION: ZURN Z5655 AquaSense® EcoVantage™ High Efficiency Toilet System – System comes complete with exposed Z6000EV high efficiency 1.28 gallons per flush [4.9 Lpf] flushometer valve and floor mounted vitreous china toilet. Valve is operated by an infrared convergence-type proximity sensor with smart technology, powered by a single 9 volt battery, furnished with a vandal-resistant chrome-plated cast brass valve body, chloramine resistant internal seals, manual override button and reversible cover. Complete with high pressure vacuum breaker, one-piece hex coupling nut, adjustable tailpiece, spud coupling and flange for top spud connection. Control stop has internal siphon-guard protection, vandal-resistant stop cap, sweat solder kit and a cast wall flange with setscrew. Vitreous china toilet is 1-1/2" top spud with 2" fully glazed trapway and siphon jet action. Valve and toilet are an engineered system designed to provide optimal performance and 20 percent water savings over 1.6 gpf [6 Lpf] conventional toilets.

Recommended Trim

☐ **Z5955SS-EL** Elongated, standard white, open front toilet seat less cover with stainless steel check hinge.

☐ **Z5972-COMB** Closet bolt/wax ring kit.

Note: To ensure system performance:
Minimum Static Water Pressure = 40 psi
Minimum Running Water Pressure = 30 psi

This space is for Architectural/Engineering Approval

These dimensions and specifications are subject to change without notice.

Fixtures meet ASME A112.19.2 and CSA B45 standard requirements.

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Rev. Date: 1/29/07 C.N. No. 96127
Dwg. No. 83072 Product No. Z5655

Z5665

1.28 gpf Elongated, Floor Mounted, ADA Height EcoVantage Flush Valve Toilet System

Z5665 HET Series

- Zurn One HET Toilet System designed for optimal performance between Zurn fixture and Zurn flush valve to save water and exceed industry standards.
- 1.28 gpf (gallons per flush) [4.9 Lpf]
- 20% water savings over standard 1.6 gpf [6 Lpf] system
- Vitreous china
- Elongated front rim
- 2" fully glazed trapway
- High efficiency siphon jet flush action
- Shipping Weight: 57 lbs.

ENGINEERING SPECIFICATION: ZURN Z5665 AquaSense® EcoVantage™ High Efficiency Toilet System – System comes complete with exposed Z6000EV high efficiency 1.28 gallons per flush [4.9 Lpf] flushometer valve and floor mounted vitreous china toilet. Valve is operated by an infrared convergence-type proximity sensor with smart technology, powered by a single 9 volt battery, furnished with a vandal-resistant chrome-plated cast brass valve body, chloramine resistant internal seals, manual override button and reversible cover. Complete with high pressure vacuum breaker, one-piece hex coupling nut, adjustable tailpiece, spud coupling and flange for top spud connection. Control stop has internal siphon-guard protection, vandal-resistant stop cap, sweat solder kit and a cast wall flange with setscrew. Vitreous china toilet is 1-1/2" top spud with 2" fully glazed trapway and siphon jet action. Valve and toilet are an engineered system designed to provide optimal performance and 20 percent water savings over 1.6 gpf [6 Lpf] conventional toilets.

Recommended Trim

☐ **Z5955SS-EL** Elongated, standard white, open front toilet seat less cover with stainless steel check hinge.

☐ **Z5972-COMB** Closet bolt/wax ring kit.

Note: To ensure system performance:
Minimum Static Water Pressure = 40 psi
Minimum Running Water Pressure = 30 psi

These dimensions and specifications are subject to change without notice.

Fixtures meet ASME A112.19.2 and CSA B45 standard requirements.

Meets the American Disabilities Guidelines and ANSI A117.1 requirements when installed according to these requirements.

This space is for Architectural/Engineering Approval

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Rev. Date: 1/29/07 C.N. No. 96126
Dwg. No. 83071 Product No. Z5665

Z5795
Waterless Urinal

GreenSpec LISTED

ADA DESIGNED

Z5795 Series

- Vitreous China
- 2" I.P.S. Outlet Flange and Rubber Gasket with Integral Trap
- 14" Extended Rim for Handicap Compliance When Installed at Proper Height
- Telescoping Flanged Drain Line Connection
- Shipping Weight: 66 Lbs.

Zurn Green Sealant Refill Options

☐ **ZGS-04OZ** 4 Oz. Bottle of Green Sealant
☐ **ZGS-32OZ** 1 Qt. Bottle of Green Sealant
☐ **ZGS-120OZ** 1 Gal. Bottle of Green Sealant

These dimensions and specifications are subject to change without notice.

Fixture meets: ANSI/ASME A112.19.2-2003
ANSI Z124.9
IGC 161-2004
CSA TIL MSE-43

Meets the American Disabilities Guidelines and ANSI A117.1 requirements when urinal is installed 17" [432mm] from finished floor.

ENGINEERING SPECIFICATION: ZURN Z5795 Waterless Urinal – Wall hung vitreous china urinal with integral trap and drain line connection. No special tools required to maintain the trap seal. Zurn green sealant maintains a sanitary, environmentally friendly and odor-free installation. Furnished complete with two wall hanger brackets, fasteners, telescoping flange drain line connection, premeasured green sealant bottles, and drain line gasket.

U.S. GREEN BUILDING COUNCIL MEMBER

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Rev. D Date: 7/25/06 C.N. No. 95364
Dwg. No. 81055 Product No. Z5795

Z5796
Quarter Stall Waterless Urinal

GreenSpec® LISTED

ADA DESIGNED

Z5796 Series

- Vitreous China
- 2" I.P.S. Outlet Flange
- Telescoping Flanged Drain Line Connection
- Shipping Weight: 34 lbs.

Zurn Green Sealant Refill Options

☐ **ZGS-04OZ**	4 Oz. Bottle of Green Sealant
☐ **ZGS-32OZ**	1 Qt. Bottle of Green Sealant
☐ **ZGS-120OZ**	1 Gal. Bottle of Green Sealant

ENGINEERING SPECIFICATION: ZURN Z5796 Waterless Urinal – Vitreous china, 20" x 14" wall hung waterless urinal with integral trap and drain line connection. Urinal is furnished with concealed wall hanger brackets, telescoping flanged PVC drain line connection, premeasured green sealant bottles, and drain line gasket. Zurn green sealant maintains a sanitary, environmentally friendly, and odor-free installation. No special tools are required to maintain the trap seal.

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Exposed Z5798 Model
High Efficiency Urinal (HEU) System

- 1/8 gallon of water per flush every time
- Sanitary washdown and trap water exchange
- High efficiency alternative to waterless urinals
- Sensor flush with smart technology
- Battery operated
- All metal chrome-plated housing
- Chloramine resistant internal seals
- Easy to retrofit
- Zurn One System warranty

Fixtures meet ASME A112.19.2 and CSA B45 standard requirements.

Meets the American Disabilities Guidelines and ANSI A117.1 requirements when urinal is installed 17" [432mm] from finished floor.

See Zurn One Systems for suggested packages.

This space is for Architectural/Engineering Approval

ENGINEERING SPECIFICATION: ZURN Z5798 AquaSense® EcoVantage™ High Efficiency Urinal (HEU) System – System comes complete with exposed ZEG6003AV high efficiency flushometer valve and vitreous china urinal that is designed to retrofit over most conventional urinals. The system is designed to perform to industry standards with as little as 1/8 gallon per flush. Valve is operated by an infrared convergence-type proximity sensor with smart technology, powered by 4 “AA” batteries, furnished with vandal-resistant chrome-plated metal housing, chloramine resistant internal seals, and reversible cover. Valve features an internal flow regulator to maintain constant flow rates independent of line pressures and an in-line filter to protect the valve from debris within the water. Complete with high pressure vacuum breaker, one-piece hex coupling nut, adjustable tailpiece, spud coupling and flange for top spud connection. Control stop has internal siphon-guard protection, vandal-resistant stop cap, sweat solder kit, and a cast wall flange with setscrew. Vitreous china urinal is supplied with 3/4" top spud, 2" outlet connection, and strainer assembly.

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Rev.
Dwg. No. 81300
Date: 3/8/06
Product No. Z5798

Z6900-ZAT

AquaTank Automatic Sensor Operator For Tank Type Toilets

Suffix Options (Check/Specify Appropriate Options)

_____	**-C**	Chrome Wall Sensor
_____	**-W**	White Wall Sensor
_____		Other

ENGINEERING SPECIFICATION: ZURN Z6900-ZAT – AquaTank is a hands-free automatic sensor operator for tank type toilets. AquaTank consists of a wall mounted infrared sensor and a motor/battery module to be located on the back inside wall of the toilet tank. Operation occurs once a user has been identified and remains in the detection zone for a minimum of 10 seconds then leaves the detection zone. A signal is then sent to the motor/battery module to activate and lift the flapper thus flushing the toilet. AquaTank is powered by 4 “C” batteries. Under normal operating conditions battery life is beyond three years. The AquaTank sensor module employs smart sensor technology to automatically set the detection range per a given environment. The motor/battery module is waterproof. Batteries are included with each AquaTank unit.

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Rev. A
Dwg. No. 81106
Date: 11/27/06
Product No. Z6900-ZAT

Exposed P6000-M-ADA-DF
Dual Flush Handle

GreenSpec LISTED

ADA DESIGNED

Suffix Options (Check/Specify Appropriate Options)

_____	**-BG**	BioCare ADA Handle
_____		Other

ENGINEERING SPECIFICATION:
ZURN P6000-M-ADA-DF Exposed Dual Flush Handle for Water Closets and Urinals – Exposed ADA compliant dual flush handle for water closets and urinals is a non-hold open handle with water conservation option. Handle can be actuated in two directions yielding two different gallons per flush depending on direction. Downward actuation provides a full flush. Upward actuation provides a 30% water saving flush. Handle assembly is complete with Zurn's AquaVantage TPE, chloramine resistant, triple seal design. Easily retrofits to existing valves.

This space is for Architectural/Engineering Approval

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AquaVantage® is a registered trademark of Zurn Industries, LLC

Rev. A
Dwg. No. 81110
Date: 8/19/05
Product No. P6000-M-ADA-DF

Z6704 AirMax
Automatic Surface Mount Hand Dryer

The Zurn Standard in Hand Drying Quality

- 15-second† dry time cuts normal dry time by 50%
- High warm air volume at 275 CFM
- Lowest noise level in same product class
- Offers a 90% to 95% cost savings over paper towels
- Polished stainless steel cover
- Leading technology with greater durability
- Warranty backed by convenient nationwide parts and service network

†User variables make this an approximation.

Recommended Mounting Height (Distance From Floor)

Men	46" [1168 mm]
Women	44" [1118 mm]
Children, ages 3-7	32" [812 mm]
Children, ages 8-10	36" [914 mm]
Children, ages 11-13	40" [1016 mm]
Children, ages 14-17	44" [1118 mm]
Disabled Mounting Height	40" [1016 mm]

HAND DRYER PLANNING GUIDE

Quantity Estimate

Average Traffic Washroom – 1 Dryer per 2 Washbasins
Heavy Traffic Washroom – 1 Dryer per Washbasin
54" Bradley Sink – 4 Dryers per Sink

Dryer Placement

Hand dryers should be placed at least 2 feet apart, near but not over the washbasin. In congested areas, dryer should be placed to create a traffic flow from washbasin to dryer to exit.

Dryer Installation

Hand dryers require a dedicated circuit and must be properly grounded. GFI circuit protection is recommended. One side of dryer should be mounted to stud. Consult local codes.

Mechanism

- Motor is universal type 1/6 HP, 12,000 RPM at rated load with resilient mountings and sealed, permanently lubricated ball bearings for durability and rapid drying.
- Dynamically balanced blower wheel for vibration-free running.
- Heating element mounted at air exit for maximum heating efficiency.
- Reflective infrared sensor detects hands, initiates and terminates drying.

Warranty

- 10-year limited parts warranty protects against defects in material and workmanship.
- 5-year warranty on motor and sensor.

ZURN INDUSTRIES, LLC *COMMERCIAL BRASS OPERATION, 5900 ELWIN BUCHANAN DRIVE, SANFORD, NC 27330*
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AquaSense® is a registered trademark of Zurn Industries, LLC

Rev. A
Dwg. No. 81139
Date: 10/4/05
Product No. Z6704

Notes

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Zurn Z5795

Waterless Urinal

Installation, Operation, Maintenance, and Parts Manual

Z5795
Waterless Urinal

GreenSpec® LISTED

LIMITED WARRANTY

All goods sold hereunder are warranted to be free from defects in material and factory workmanship for a period of three years from the date of purchase. Decorative finishes warranted for one year. We will replace at no cost goods that prove defective provided we are notified in writing of such defect and the goods are returned to us prepaid at Sanford, NC, with evidence that they have been properly maintained and used in accordance with instructions. We shall not be responsible for any labor charges or any loss, injury or damages whatsoever, including incidental or consequential damages. The sole and exclusive remedy shall be limited to the replacement of the defective goods. Before installation and use, the purchaser shall determine the suitability of the product for his intended use and the purchaser assumes all risk and liability whatever in connection therewith. Where permitted by law, the implied warranty of merchantability is expressly excluded. If the products sold hereunder are "consumer products," the implied warranty of merchantability is limited to a period of three years and shall be limited solely to the replacement of the defective goods. All weights stated in our catalogs and lists are approximate and are not guaranteed.

FV379

Z5795 Urinal Rough-In

Package Contents

1 Z5795 China Urinal
2 Strainer
3 Bell Trap and Bell Trap O-Ring
4 Hanging Hardware
5 AquaGreen™ Sealant (2)
6 Drain Line Yoke Assembly
7 Brass Drain Line Flange Assembly
8 Wall Anchors

Required Before Installation

Tools Recommended

- Safety Glasses
- Drill
- Screwdriver
- Tape Measure
- Adjustable Wrench

New Construction

- Drain line complete and leak free, roughed-in per urinal rough-in dimensions.
- Refer to Installation.

Replacing a Urinal

- Shut off water supply before removing supply stop.
- Verify there is enough room to mount the new fixture.
- Remove existing flush valve, fixture, and wall hanger brackets. Existing drain line flange can be reused if appropriate.
- Cap off or remove water supply line.
- Clean wall of any caulk, grout, or dirt remaining from the old urinal.
- Remove all traps or conventional siphons.
- Make sure drain line is complete and leak free.

Installation

- Mark and mount wall brackets at locations per rough-in drawing; a Zurn carrier system Z1222 is recommended. Make certain there is adequate structural support to withstand the weight of the urinal.
- Attach brass drain line flange (Item 7) to drain line.
- Install drain line yoke with supplied nut and ferrule (Item 6) to outlet tube of urinal.
- Hang urinal on wall brackets.
- Adjust and attach flanged drain line yoke assembly (Item 6) with foam gasket to the brass drain line flange fitting (Item 7) and tighten to studs.
- Tighten compression fitting nut and ferrule.
- Secure urinal to wall with wall anchors (Item 8).

Z5795 Waterless Urinal: Setup

1) Insert bell trap with O-Ring (Item 3) into urinal and turn clockwise to tighten. *Do not overtighten.*

2) Install strainer (Item 2) on to bell trap.

3) Fill trapway with approximately 1 quart of water. Check drain line connections for leaks.

4) Pour 4 ounces of Zurn AquaGreen™ urinal sealant into trapway.

5) **Important:** Do not remove the strainer once Zurn AquaGreen™ sealant is in the trapway. Removal of the strainer will result in the loss of the sealant and reduce the life of the sealant.

FV379

Z5795 Waterless Urinal: Maintenance Schedules

Recommended Daily Maintenance

Recommended daily maintenance of the Zurn Z5795 urinal suggests wiping the walls of the urinal with a mild soap and water. Avoid dumping aggressive cleaners and/or large amounts of liquids down the urinal drain. Doing so may deplete the AquaGreen™ sealant and allow sewer gases to back up into the restroom.

Recommended Periodic Maintenance (Every 3,000 Uses)

It is critical that a layer of Zurn AquaGreen™ urinal sealant be maintained at all times. To keep the Zurn Z5795 urinal functioning properly and odor free, add 3 to 4 ounces of Zurn AquaGreen™ sealant to the trap after every 3,000 uses.

Trap Cleaning Recommended Periodic Trap Cleaning (Every 9,000 Uses)

1) Remove strainer from urinal.

2) Unscrew and remove bell trap. If the bell trap will not loosen by hand, use a 3/8" ratchet and extension, turning counter-clockwise to remove.

Periodic Trap Cleaning continued on Page 176.

Z5795 Waterless Urinal: Maintenance Schedules

Recommended Periodic Trap Cleaning (Every 9,000 Uses), continued

3) Clean strainer, bell trap, and trapway with mild soap and water.

Important: Do not use heavy cleaners or detergents.

Pour 2 to 3 gallons of warm water down drain hole to flush urinal trapway and drain line.

4) Check O-Ring (A) on bell trap. Replace if needed. Reinstall bell trap with O-Ring. Tighten snug with 3/8" ratchet and extension turning clockwise. Be careful not to overtighten.

Install strainer and refill trapway with approximately 1 quart of water. Check assembly for leaks. Add 4 ounces of Zurn AquaGreen™ sealant to the trapway.

Z5795 Waterless Urinal Trouble Shooting Guide

Problem	Cause	Remedy
Strong odor is emanating from urinal.	1.) AquaGreen™ sealant is depleted.	1.) Add 3 to 4 ounces of Zurn AquaGreen™ sealant to trapway.
	2.) O-Ring seal is not adequate on bell trap or bell trap is not screwed in properly.	2.) Replace O-Ring and/or screw bell trap properly. Reassemble and refill trapway with approximately 1 quart of water and 4 ounces of sealant.
	4.) Urine pathway is blocked with sediment.	4.) Perform periodic trap cleaning procedure. See Trap Cleaning on pages 175-176.

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Form No. FV379, 7/06, Rev. B

AquaTank

Automatic Toilet
Sensor Operated Tank Toilet Kit

Installation Instructions

Zurn AquaTank
Automatic Toilet

LIMITED WARRANTY

All goods sold hereunder are warranted to be free from defects in material and factory workmanship for a period of three years from the date of purchase. Decorative finishes warranted for one year. We will replace at no cost goods that prove defective provided we are notified in writing of such defect and the goods are returned to us prepaid at Sanford, NC, with evidence that they have been properly maintained and used in accordance with instructions. We shall not be responsible for any labor charges or any loss, injury or damages whatsoever, including incidental or consequential damages. The sole and exclusive remedy shall be limited to the replacement of the defective goods. Before installation and use, the purchaser shall determine the suitability of the product for his intended use and the purchaser assumes all risk and liability whatever in connection therewith. Where permitted by law, the implied warranty of merchantability is expressly excluded. If the products sold hereunder are “consumer products,” the implied warranty of merchantability is limited to a period of three years and shall be limited solely to the replacement of the defective goods. All weights stated in our catalogs and lists are approximate and are not guaranteed.

FV382

AquaTank: Installation Instructions

Components

Remove all contents from the box and make sure you have all required parts.

1. Zurn AquaTank Motor Unit
2. Zurn AquaTank Sensor Unit
3. Four (4) “C” cell Alkaline Batteries
4. Sensor Unit Screws and Anchors (2 Each)
5. Link Chain and Clips
6. Zurn Magic Magnet

Prior To Installation

Optional – Drain Tank

Turn off water at shutoff valve and flush toilet fixture to drain as much water from tank as possible.

Note: If the tank has a ball float and is less than 7" deep (see diagram at right), a Fluidmaster® Fill Valve 400A or equivalent may need to be installed in place of the ball float.

Step 1: Sensor Location

Lift toilet seat cover. If the top of the seat comes above the tank cover, make a small pencil mark on the wall directly behind the top of the toilet seat cover (A). If seat is below the tank cover, make a pencil mark centered on the wall using the toilet tank as a guide. Measure up from Mark (A) 5" and mark wall (B). Close the seat cover to avoid dropping any components into the toilet.

Position top of Sensor Unit 5" above raised toilet seat.

Step 2: Sensor Mounting

2a: Double-back Tape Option

Peel off the tape backing and locate the top of the sensor on the wall 5" above tank lid or seat in raised position. Press the sensor to the wall to secure it.

2b: Screw/Anchor Option

Tools Needed:

Drill
1/4" Drill Bit
Phillips Head Screwdriver
Hammer

Remove sensor cover by turning cover counterclockwise. Position top of sensor housing at mark (B) per Step 1. Mark the screw locations with a pencil. Drill holes using a 1/4" drill bit and then insert anchors. Line up holes on sensor housing with the anchors and secure to wall with the screws provided. Replace the sensor cover by lining up the cover to sensor housing and turn clockwise.

FV382

AquaTank: Installation Instructions

Once you have the sensor unit mounted to the wall, remove the toilet tank cover and place it out of the way.

Step 3 Battery Installation
Loosen the thumbscrew on the Zurn AquaTank motor unit and remove cover to access the battery compartment. Slide the battery drawer out of the motor unit and install four (4) "C" cell alkaline batteries, making sure that the batteries are aligned correctly. Replace the battery drawer into the motor unit and tighten thumbscrew.

Step 4 Motor Unit Installation
Hang the motor unit on the back wall of the toilet tank. Locate it as close to center of the tank as possible.

Note: Motor arm rotates 360° during operation. Provide sufficient clearance for motor arm to rotate without interference.

Step 5 Chain Installation
Attach one end of the supplied link chain to the flapper. (**Do not remove existing chain.** Your flush handle can remain active and used when necessary.) Connect the other end of the chain to the motor arm on the motor unit with a minimal amount of slack. Any excess chain should be positioned at the motor arm hook to prevent interference with flapper operation.

Step 6 Motor/Sensor Connection
Connect the Zurn AquaTank sensor unit (1) power cord to the Zurn AquaTank motor unit (2) power cord and conceal behind the toilet tank.

Step 7 Testing Installed Unit
If you had drained your tank, turn the water on at the shut off valve and fill the tank. Once the tank is full, stand in front of the toilet. The sensor unit will blink three times slowly, then a quick double blink after the user has been in view for approximately 10 seconds. Step out of the sensor viewing range and your Zurn AquaTank will automatically flush the toilet. **Make sure the arm rotates without touching any other tank components.** Replace the tank lid and the Zurn AquaTank is ready for operation.

SPECIFICATIONS

Voltage: 6 VDC (4 “C” Batteries)

Sensor Range: 40" Approximately

Operation 3-Second Arm Rotation to Flush 1.6 Gallons

OPERATION

1. An infrared light beam is continually emitted from the sensor housing.
2. When the user comes into range of the sensor’s detection zone, the beam is reflected back to the sensor.
3. When the user leaves the sensor’s detection zone, the sensor sends a low voltage signal to activate the motor, lift the flapper and flush the toilet.
4. The unit requires 10 seconds between flushes.
5. If a user or object is in the sensor’s detection zone for more than 10 seconds, the sensor will blink once every 5 seconds until the user leaves or the object is removed from the detection zone.

CARE AND CLEANING INSTRUCTIONS

Do not use abrasive or highly concentrated chemical cleaners to clean the sensor. Use mild soap and water, then wipe dry with a soft clean cloth or towel.

CALIBRATION OF AQUATANK SENSOR

Each AquaTank sensor is set to a typical range at the factory. This range can be customized for a particular bathroom setting if needed.

1. Place the Magic Magnet on the sensor cover directly above the red lens and slightly to the left or right (at the 11:00 or 1:00 position).
2. Hold the Magic Magnet in that position. There will be 9 faint blinks and 1 bright blink (10 blinks total) from the Zurn AquaTank sensor.
3. Remove the magnet and stand in position in front of the toilet. Take one step back from the toilet (approximately 12"-15").
4. While standing at that position there will be 16 blinks from the AquaTank sensor and then the light will stay on for approximately 10 seconds.
5. After the steady light of 10 seconds, there will be a bright double blink.
6. The AquaTank Sensor Unit is now calibrated to the new distance.
7. Step to the side out of the viewing range.
8. Step up to the toilet for approximately 10 seconds or until there is a double blink from the sensor.
9. Step away from the toilet and the Zurn AquaTank will operate.

TROUBLESHOOTING GUIDE

Problem	Cause	Solution
AquaTank does not operate, but the sensor blinks every 5 seconds with nothing on the tank lid, the seat lid closed, and no one is in front of the toilet.	Sensor range is too long.	Recalibrate the sensor by following the calibration procedure above.
AquaTank does not operate, but the sensor blinks continually every 5 seconds.	Sensor detecting objects on the tank lid.	Remove all objects from the tank lid and move to the side out of sensor view. If the sensor continues to blink, then recalibrate the sensor by following the calibration procedures above.
	Sensor detecting the raised seat lid.	Relocate the sensor higher on the wall. (Step 1 of these instructions, see Page 178.)
AquaTank operates but will not fully flush.	Arm cannot rotate.	Check to make sure while the motor arm is rotating that it does not touch any of the tank components.
	Flapper chain is too long.	Check to make sure the link chain is adjusted properly.
AquaTank operates but not enough water for a good evacuation.	Flapper not adjusted properly.	Check to ensure the flapper float is located properly on the link chain.
Water is continually running.	Flapper chain is too short or excess chain falls under flapper.	Check to make sure the link chain is adjusted properly or trim off excess chain.
Low-intensity double blink every 10 seconds.	Battery is low.	Replace batteries.
AquaTank activates while user is still seated or AquaTank does not activate after user leaves.	Sensor range is too short.	Recalibrate the sensor by following the calibration procedure above.

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ZURN®

Metroflush®

Piston-Operated Flush Valves

METRO Series

AquaSense®
MetroSeries

Choose The Product That Is Right For Your Applications.

Exposed Z6200 Model
Metroflush Piston-Operated
Flush Valve For Water Closets

Exposed Z6201 Model
Metroflush Piston-Operated
Flush Valve For 1-1/4" Urinal Valves

Exposed Z6203 Model
Metroflush Piston-Operated
Flush Valve For 3/4" Urinal Valves

Exposed Z6210 Model
Metroflush Piston-Operated
Flush Valve For Water Closets

Exposed ZEMS6200-IS Model
Sensor Motorized Flush Valve
For Water Closets

Exposed ZEMS6203-IS Model
Sensor Motorized Flush Valve
For 3/4" Urinals

Exposed ZER6200 Model
EZ Flush For Water Closets

Exposed ZER6203 Model
EZ Flush For 3/4" Urinal Valves

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Zurn Industries, LLC Printed in U.S.A. Form No. FV264, Rev. 5/07

Exposed Z6200 Model

Metroflush Piston-Operated Flush Valve For Water Closets

Flow Options

☐ **-WS1** 1.6 Gal. Low Consumption Flush
☐ **Standard Flush** 3.5 Gallons Per Flush

Suffix Options (Check/Specify Appropriate Options)

_____ **-L** 1" [25] Metal Push Button
_____ **-L3** 3" [76] Metal Push Button
_____ **-VC** Vandal-Resistant Stop Cover
_____ **-XYV** Less Vacuum Breaker
_____ **-YB** Sweat Solder Kit
_____ **-YC** Cast Wall Flange
_____ **-YH** One Wall Bumper
_____ **-YJ** Split Ring Pipe Support
_____ **-YK** Solid Ring Pipe Support
_____ **-YL** Solid Ring Pipe Support with Bumper
_____ **-YO** Bumper on Angle Stop
_____ Other

ENGINEERING SPECIFICATION: ZURN Z6200 Metroflush® Piston-Operated Exposed Closet Flush Valve – The Metroflush is an exposed, quiet type, chrome-plated flushometer valve with polished exterior. Complete with Zurn MetroVantage chloramine resistant piston with a clog resistant filtered by-pass. The valve is ADA compliant with a non-hold open and no-leak handle feature, high back pressure vacuum breaker, one-piece hex coupling nut, adjustable tailpiece, spud coupling and flange for top spud connection. Control stop has internal siphon-guard protection. Internal seals are made of chloramine resistant materials.

This space is for Architectural/Engineering Approval

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Rev. D Date: 6/28/04
Dwg. No. 61396 Product No. Z6200

Exposed Z6201 Model

Metroflush Piston-Operated Flush Valve For 1-1/4" Urinal Valves

Flow Options

- ☐ **-WS1** 1.0 Gal. Low Consumption Flush
- ☐ **-FF** 3.0 Gal. Full Flush
- ☐ **Standard Flush** 1.5 Gallons Per Flush

Suffix Options (Check/Specify Appropriate Options)

- _____ **-L** 1" [25] Metal Push Button
- _____ **-L3** 3" [76] Metal Push Button
- _____ **-VC** Vandal-Resistant Stop Cover
- _____ **-XYV** Less Vacuum Breaker
- _____ **-YB** Sweat Solder Kit
- _____ **-YC** Cast Wall Flange
- _____ **-YJ** Split Ring Pipe Support
- _____ **-YK** Solid Ring Pipe Support
- _____ Other

ENGINEERING SPECIFICATION: ZURN Z6201 Metroflush® Piston-Operated Exposed Urinal Flush Valve – The Metroflush is an exposed, quiet piston type, chrome-plated flushometer valve with polished exterior. Complete with Zurn MetroVantage chloramine resistant piston with a clog resistant filtered by-pass. The valve is ADA compliant with a non-hold open and no-leak handle feature, high back pressure vacuum breaker, one-piece hex coupling nut, adjustable tailpiece, spud coupling and flange for top spud connection. Control stop has internal siphon-guard protection. Internal seals are made of chloramine resistant materials.

This space is for Architectural/Engineering Approval

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Rev. A
Dwg. No. 65476
Date: 6/28/04
Product No. Z6201

Exposed Z6203 Model

Metroflush Piston-Operated Flush Valve For 3/4" Urinal Valves

Flow Options

- ☐ **-EWS** 0.5 Gallons Per Flush
- ☐ **-WS1** 1.0 Gal. Low Consumption Flush
- ☐ **-FF** 3.0 Gal. Full Flush
- ☐ **Standard Flush** 1.5 Gallons Per Flush

Suffix Options (Check/Specify Appropriate Options)

- _____ **-L** 1" [25] Metal Push Button
- _____ **-L3** 3" [76] Metal Push Button
- _____ **-VC** Vandal-Resistant Stop Cover
- _____ **-XYV** Less Vacuum Breaker
- _____ **-YB** Sweat Solder Kit
- _____ **-YC** Cast Wall Flange
- _____ **-YJ** Split Ring Pipe Support
- _____ **-YK** Solid Ring Pipe Support
- _____ Other

ENGINEERING SPECIFICATION: ZURN Z6203 Metroflush® Piston-Operated Exposed Urinal Flush Valve – The Metroflush is an exposed, quiet piston type, chrome-plated flushometer valve with polished exterior. Complete with Zurn MetroVantage chloramine resistant piston with a clog resistant filtered by-pass. The valve is ADA compliant with a non-hold open and no-leak handle feature, high back pressure vacuum breaker, one-piece hex coupling nut, adjustable tailpiece, spud coupling and flange for top spud connection. Control stop has internal siphon-guard protection. Internal seals are made of chloramine resistant materials.

This space is for Architectural/Engineering Approval

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Rev. D
Dwg. No. 61397
Date: 1/31/07
Product No. Z6203

Exposed Z6210 Model
Metroflush Piston-Operated Flush Valve For Water Closets

Flow Options

☐ **-WS1** 1.6 Gal. Low Consumption Flush
☐ **Standard Flush** 3.5 Gallons Per Flush

Suffix Options (Check/Specify Appropriate Options)

_____ **-L** 1" [25] Metal Push Button
_____ **-L3** 3" [76] Metal Push Button
_____ **-VC** Vandal-Resistant Stop Cover
_____ **-XYV** Less Vacuum Breaker
_____ **-YB** Sweat Solder Kit
_____ **-YC** Cast Wall Flange
_____ **-YJ** Split Ring Pipe Support
_____ **-YK** Solid Ring Pipe Support
_____ **-YL** Solid Ring Pipe Support with Bumper
_____ **-YN** Bumper on Flush Pipe
_____ **-YO** Bumper on Angle Stop
_____ Other

ENGINEERING SPECIFICATION: ZURN Z6210 Metroflush® Piston-Operated Exposed Closet Flush Valve – The Metroflush is an exposed, quiet piston type, chrome-plated flushometer valve with polished exterior. Complete with Zurn MetroVantage chloramine resistant piston with a clog resistant filtered by-pass. The valve is ADA compliant with a non-hold open and no-leak handle feature, high back pressure vacuum breaker, one-piece hex coupling nut, adjustable tailpiece, spud coupling and flange for back spud connection. Control stop has internal siphon-guard protection. Internal seals are made of chloramine resistant materials.

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Rev. E
Dwg. No. 61592
Date: 6/28/04
Product No. Z6210

Exposed ZER6200-CPM Model

Sensor-Operated, Battery-Powered Metroflush Flush Valve For Water Closets

Flow Options

- ☐ **-WS1** 1.6 Gal. Low Consumption Flush
- ☐ **-FF** 4.5 Gal. Full Flush
- ☐ **Standard Flush** 3.5 Gallons Per Flush

Suffix Options (Check/Specify Appropriate Options)

- _____ **-VC** Vandal-Resistant Stop Cover
- _____ **-XYV** Less Vacuum Breaker
- _____ **-YB** Sweat Solder Kit
- _____ **-YC** Cast Wall Flange
- _____ **-YJ** Split Ring Pipe Support
- _____ **-YK** Solid Ring Pipe Support
- _____ **-YO** Bumper on Angle Stop
- _____ Other

ENGINEERING SPECIFICATION: ZURN ZER6200-CPM AquaSense® Metroflush® Exposed Closet Flush Valve – The Metroflush is an exposed, quiet piston type, chrome-plated flushometer valve with polished exterior. Complete with Zurn's MetroVantage chloramine resistant piston with a clog resistant filtered by-pass. The valve is ADA compliant and incorporates a 6VDC motor, a battery-powered automatic sensor, high impact resistant polycarbonate housing and chrome-plated metal cover with manual override push button and 10° angled sensor, high back pressure vacuum breaker, one-piece hex coupling nut, adjustable tailpiece, spud coupling and flange for top spud connection. Switchable sensor features include 24-hour auto flush and diagnostic indicator lights. Control stop has internal siphon-guard protection. Internal seals are made of chloramine resistant materials.

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Rev. C
Dwg. No. 65488
Date: 8/05/04
Product No. ZER6200-CPM

Exposed ZER6203-CPM Model

Sensor-Operated, Battery-Powered Metroflush Flush Valve For 3/4" Urinal Valves

Flow Options

- ☐ **-EWS** 0.5 Gallons Per Flush
- ☐ **-WS1** 1.0 Gal. Low Consumption Flush
- ☐ **Standard Flush** 1.5 Gallons Per Flush

Suffix Options (Check/Specify Appropriate Options)

- _____ **-VC** Vandal-Resistant Stop Cover
- _____ **-XYV** Less Vacuum Breaker
- _____ **-YB** Sweat Solder Kit
- _____ **-YC** Cast Wall Flange
- _____ **-YJ** Split Ring Pipe Support
- _____ **-YK** Solid Ring Pipe Support
- _____ **-YO** Bumper on Angle Stop
- _____ Other

ENGINEERING SPECIFICATION: ZURN ZER6203-CPM AquaSense® Sensor-Operated, Battery-Powered Metroflush® Valve for Urinals – The Metroflush is an exposed, quiet piston type, chrome-plated flushometer valve with polished exterior. Complete with Zurn MetroVantage chloramine resistant piston with a clog resistant filtered by-pass. The valve is ADA compliant and incorporates a 6VDC motor actuator, a battery-powered automatic sensor, high impact resistant poly-carbonate housing, chrome-plated metal cover with manual override push button, 10° angled sensor, high back pressure vacuum breaker, one-piece hex coupling nut, adjustable tailpiece, spud coupling and flange for back spud connection. Switchable sensor features include 24-hour auto flush and diagnostic indicator lights. Control stop has internal siphon-guard protection. Internal seals are made of chloramine resistant materials.

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Rev. C
Dwg. No. 65489
Date: 8/06/04
Product No. ZER6203-CPM

Exposed ZER6252 Model

Sensor-Operated, Battery-Powered Metroflush Valve For Water Closets

Flow Options

- ☐ **-WS1** 1.6 Gal. Low Consumption Flush
- ☐ **-FF** 4.5 Gal. Full Flush
- ☐ **Standard Flush** 3.5 Gallons Per Flush

Suffix Options (Check/Specify Appropriate Options)

- _____ **-YB** Sweat Solder Kit
- _____ Other

ENGINEERING SPECIFICATION: ZURN ZER6252 AquaSense® Concealed Sensor-Operated, Battery-Powered Metroflush® Valve for Water Closets – Concealed, quiet piston type brass flushometer valve. Complete with Zurn MetroVantage chloramine resistant piston with a clog resistant filtered by-pass. The valve is ADA compliant and incorporates a 6VDC motor actuator, a battery-powered automatic sensor with manual over-ride push button, high back pressure vacuum breaker, hex coupling nut, adjustable tailpiece, spud coupling and flange for back spud connection. Switchable sensor features include 24-hour auto flush and diagnostic indicator lights. Control stop has internal siphon-guard protection. Internal seals are made of chloramine resistant materials.

This space is for Architectural/Engineering Approval

ZURN INDUSTRIES, LLC *COMMERCIAL BRASS OPERATION, 5900 ELWIN BUCHANAN DRIVE, SANFORD, NC 27330*
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IN CANADA: ***ZURN INDUSTRIES LIMITED*** *3544 NASHUA DRIVE, MISSISSAUGA, ONTARIO L4V 1L2, PHONE: 905-405-8272, FAX: 905-405-1292*

AquaVantage® is a registered trademark of Zurn Industries, LLC
AquaSense® is a registered trademark of Zurn Industries, LLC
Metroflush® is a registered trademark of Zurn Industries, LLC

Rev. B
Dwg. No. 80505
Date: 8/05/04
Product No. ZER6252

Concealed ZER6290 Model

Sensor-Operated, Battery-Powered Metroflush Valve For Urinals

Flow Options

- ☐ **-WS1** 1.0 Gal. Low Consumption Flush
- ☐ **-FF** 3.0 Gal. Full Flush
- ☐ **Standard Flush** 1.5 Gallons Per Flush

Suffix Options (Check/Specify Appropriate Options)

- _____ **-YB** Sweat Solder Kit
- _____ Other

ENGINEERING SPECIFICATION: ZURN ZER6290 AquaSense® Concealed Sensor-Operated, Battery-Powered Metroflush® Valve for Urinals – Concealed, quiet piston type brass flushometer valve. Complete with Zurn MetroVantage chloramine resistant piston with a clog resistant filtered by-pass. The valve is ADA compliant and incorporates a 6VDC motor actuator, a battery-powered automatic sensor with manual over-ride push button, high back pressure vacuum breaker, one-piece hex coupling nut, adjustable tailpiece, spud coupling and flange for back spud connection. Switch-able sensor features include 24-hour auto flush and diagnostic indicator lights. Control stop has internal siphon-guard protection. Internal seals are made of chloramine resistant materials.

This space is for Architectural/Engineering Approval

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Metroflush® is a registered trademark of Zurn Industries, LLC

Rev. B
Dwg. No. 80506
Date: 8/05/04
Product No. ZER6290

Concealed ZER6295 Model

Sensor-Operated, Battery-Powered Metroflush Valve For Urinals

Flow Options

- ☐ **-EWS** 0.5 Gallons Per Flush
- ☐ **-WS1** 1.0 Gal. Low Consumption Flush
- ☐ **-FF** 3.0 Gal. Full Flush
- ☐ **Standard Flush** 1.5 Gallons Per Flush

Suffix Options (Check/Specify Appropriate Options)

_____ **-YB** Sweat Solder Kit
_____ Other

ENGINEERING SPECIFICATION: ZURN ZER6295 AquaSense® Concealed Sensor-Operated, Battery-Powered Metroflush® Valve for Urinals – Concealed, quiet piston type brass flushometer valve. Complete with Zurn MetroVantage chloramine resistant piston with a clog resistant filtered by-pass. The valve is ADA compliant and incorporates a 6VDC motorized actuator, a battery-powered automatic sensor with manual override push button, high back pressure vacuum breaker, hex coupling nut, adjustable tailpiece, spud coupling and flange for back spud connection. Switchable sensor features include 24-hour auto flush and diagnostic indicator lights. Control stop has internal siphon-guard protection. Internal seals are made of chloramine resistant materials.

This space is for Architectural/Engineering Approval

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Rev. B
Dwg. No. 80569
Date: 8/05/09
Product No. ZER6295

Exposed ZEMS6200-IS Model

Hardwired, Automatic Sensor Metroflush Valve For Water Closets

Flow Options

☐ **-WS1** 1.6 Gal. Low Consumption Flush
☐ **Standard Flush** 3.5 Gallons Per Flush

Suffix Options (Check/Specify Appropriate Options)

_____ **-YJ** Split Ring Pipe Support
_____ **-YK** Solid Ring Pipe Support
_____ **-YO** Bumper on Angle Stop
_____ Other

Accessories (Order Separate As Specified)

PESS6000-BB Battery Back-Up (Up to 8 Valves)
P6000-PC6 6VDC Plug-In Power Converter (Up to 8 Valves)
P6000-MJ Mini Junction Box
P6000-HW6 Hardwire Power Converter (Up to 8 Valves)

ENGINEERING SPECIFICATION: ZURN ZEMS6200-IS Metroflush® Exposed Hardwired AquaSense® Flush Valve for Water Closets – The Metroflush valve is a piston-operated brass flush valve with a polished chrome exterior. The valve is ADA compliant and incorporates a 6VDC motorized actuator, an integral infrared convergence-type proximity sensor and a manual push-button override into an all-metal, polished chrome-plated housing. Sensor range automatically adjusts to its environment at power up and is powered by a 6VDC power converter. Complete with Zurn's MetroVantage chloramine resistant piston with a clog resistant filtered by-pass, high back pressure vacuum breaker, one-piece hex coupling nut, adjustable tailpiece, spud coupling and flange for top spud connection. Control stop has internal siphon-guard protection and a wall flange with setscrew. Internal seals are made of chloramine resistant materials.

This space is for Architectural/Engineering Approval

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Rev. A
Dwg. No. 80627
Date: 8/06/04
Product No. ZEMS6200-IS

Exposed ZEMS6203-IS Model

Hardwired, Automatic Sensor Metroflush Valve For 3/4" Urinal Valves

Flow Options

- ☐ **-EWS** 0.5 Gallons Per Flush
- ☐ **-WS1** 1.0 Gal. Low Consumption Flush
- ☐ **Standard Flush** 1.5 Gallons Per Flush

Suffix Options (Check/Specify Appropriate Options)

- _____ **-YJ** Split Ring Pipe Support
- _____ **-YK** Solid Ring Pipe Support
- _____ **-YO** Bumper on Angle Stop
- _____ Other

Accessories (Order Separate As Specified)

PESS6000-BB	Battery Back-Up (Up to 8 Valves)
P6000-PC6	6VDC Plug-In Power Converter (Up to 8 Valves)
P6000-MJ	Mini Junction Box
P6000-HW6	Hardwire Power Converter (Up to 8 Valves)

ENGINEERING SPECIFICATION: ZURN ZEMS6203-IS Metroflush® Exposed Hardwired AquaSense® Flush Valve for Urinals – The Metroflush valve is a piston-operated brass flush valve with a polished chrome exterior. The valve is ADA compliant and incorporates a 6VDC motorized actuator, an integral infrared convergence-type proximity sensor, and a manual push-button override into an all-metal, polished chrome-plated housing. Sensor range automatically adjusts to its environment at power up and is powered by a 6VDC power converter. Complete with Zurn's MetroVantage chloramine resistant piston with a clog resistant filtered by-pass, high back pressure vacuum breaker, one-piece hex coupling nut, adjustable tailpiece, spud coupling and flange for top spud connection. Control stop has internal siphon-guard protection and a wall flange with setscrew. Internal seals are made of chloramine resistant materials.

This space is for Architectural/Engineering Approval

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Rev. A
Dwg. No. 80628
Date: 8/06/04
Product No. ZEMS6203-IS

Notes

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Metroflush® Z6200 Series

Metroflush Piston-Operated Flush Valve

Installation, Operation, Maintenance, and Parts Manual

Patented and Patents Pending

Z6203

Z6210

Metroflush
Piston-Operated Flush Valve
Z6200
Z6201
Z6203
Z6210

LIMITED WARRANTY

All goods sold hereunder are warranted to be free from defects in material and factory workmanship for a period of three years from the date of purchase. Decorative finishes warranted for one year. We will replace at no cost goods that prove defective provided we are notified in writing of such defect and the goods are returned to us prepaid at Sanford, NC, with evidence that they have been properly maintained and used in accordance with instructions. We shall not be responsible for any labor charges or any loss, injury or damages whatsoever, including incidental or consequential damages. The sole and exclusive remedy shall be limited to the replacement of the defective goods. Before installation and use, the purchaser shall determine the suitability of the product for his intended use and the purchaser assumes all risk and liability whatever in connection therewith. Where permitted by law, the implied warranty of merchantability is expressly excluded. If the products sold hereunder are “consumer products,” the implied warranty of merchantability is limited to a period of three years and shall be limited solely to the replacement of the defective goods. All weights stated in our catalogs and lists are approximate and are not guaranteed.

FV1116

1 Install stop valve using proper supply escutcheon and sweat solder kit if applicable.

2 Insert flush valve tailpiece into stop valve, being certain O-ring seal is in place. Wet seal with water to lubricate. Hand tighten locknut. Determine length of vacuum breaker tube required and cut as necessary. Assemble vacuum breaker tube assembly between flush valve and fixture spud.

3 Flushing of supply lines by using the following procedure is recommended, after installation of all valves.

A. Close stop valves by using adjusting screw behind adjusting screw cover. Do not remove stop valve cap.

B. Remove main valve body cover and working part from flush valve.

C. Replace only main valve body cover. Tighten main valve body cover.

D. Open the stop valve, by using the adjusting screw, until debris is purged.

E. Shut the stop valve, replace working part and retighten cover.

4 Set flush valve for proper operation by adjusting stop valve. Stop valve adjustments can only be made by using the adjusting screw located behind the adjusting screw cover. (Water must be shut off at main supply valve if stop cap is to be removed.) Final setting should provide enough water flow to evacuate a closet fixture and should be such that a urinal fixture will not overflow when continually flushed. Secure adjusting screw cover.

FV1116

Metroflush® Parts Replacement and Repair Guide

Z6200 Series

Parts Identification

1. Handle Nut
2. Handle Sleeve
3. Handle Insert
4. Low Force/ ADA Compliant Handle
5. Actuator Rod
6. Handle O-Ring
7. Handle Spring
8. Handle Seal Retainer
9. Handle Seal
10. Gasket
11. Valve Body Cover
12. Valve Body Cover Gasket
13. Internal Kit
14. Main Seat
15. Valve Body
16. Vacuum Breaker Friction Washer
17. Vacuum Breaker Insert
18. Vacuum Breaker Duckbill
19. Vacuum Breaker Tube
20. Vacuum Breaker Tube Nut
21. Spud Nut
22. Spud Friction Washer
23. Spud Sleeve
24. Spud Escutcheon
25. Tailpiece
26. Snap Ring
27. Tailpiece O-Ring
28. Locking Nut
29. Vandal-Resistant Control Stop Cover
30. Stop Cap
31. Adjusting Screw
32. Guide Holder
33. Piston Guide
34. Guide O-Ring
35. Stop Spring
36. Piston
37. Piston Seal
38. Stop Body
39. Sweat Solder Adaptor
40. Supply Cover Tube
41. Cast Wall Escutcheon

Covers and Repair Kits	Product No.
Outside Cover - CP – Item 11	P6200-LL
Outside Cover O-Ring – Item 12	P6200-L12
Closet Repair Kit – Item 13	P6200-EC
Urinal Repair Kit – Item 13	P6200-EU
Low Consumption Closet Kit – Item 13	P6200-EC-WS1
Low Consumption Urinal Kit – Item 13	P6200-EU-WS1
Main Seat – Item 14	P6200-E14

Handle Assembly and Repair Kits	Product No.
ADA Handle Assembly (Side), Includes Items 2-10	P6000-M
Handle Repair Kit (Side), Includes Items 5-10	P6000-MK
Handle Seal, Includes Item 9	P6000-M9
Handle Gasket, Includes Item 10	P6000-M10
Control Stop Repair Kit and Parts	**Product No.**
Control Stop Repair Kit for 1" and 3/4", Includes Items 31-37	P6000-D-SD
Seal Seat for 1" and 3/4", Includes Item 37	P6000-D42
VP Control Stop Repair Kit for 1" and 3/4", Includes Items 31-37	P6000-D-VP
Vandal-Resistant Cover, Includes Item 29	P6000-VC

Adjustable Tailpieces	Product No.
Adjustable Tailpiece for Standard Flush Valve, Includes Items 25-27	P6000-J1
Tailpiece Coupling Assembly, Includes Items 26-28	P6000-K
Tailpiece Locking Ring, Includes Item 26	P6000-C30
Tailpiece O-Ring, Includes Item 26	P6000-C31
Coupling Nut, Includes Item 28	P6000-C32
Flush Connections and Spud Coupling Kits	**Product No.**
Flush Tube Assembly for Flush Valves, Includes Items 16-20 Specify diameter and length: 1-1/2", 1-1/4", 3/4"	P6000-A
Vacuum Breaker Repair Kit, Includes Items 16-18	P6000-B
Spud Coupling Assembly, Includes Items 21-24 Specify size: 1-1/2", 1-1/4", 3/4"	P6000-H

FV1116

Metroflush® Service Instructions

PROBLEM	CAUSE*	CORRECTIVE ACTION
Valve will not operate.	1.) Stop valve is closed. 2.) Supply valve is closed.	1.) Open stop valve. 2.) Open supply valve.
Insufficient volume of water to adequately siphon fixture.	1.) Stop valve is not open enough. 2.) Urinal piston installed in closet valve. 3.) Insufficient volume or pressure at supply.	1.) Open stop valve for desired volume of water. 2.) Replace urinal piston with proper closet piston. 3.) Consult fixture guide for minimum gallons per minute flow and running pressure for satisfactory fixture performance.
Flush valve shuts off too quick.	1.) Damaged piston. 2.) Enlarged by-pass orifice.	1.) Install new P6200-EC, P6200-EU replacement kit to remedy the problem. 2.) Install new P6200-EC, P6200-EU replacement kit to remedy the problem.
Valve is short flushing.	1.) Enlarged by-pass orifice. 2.) Urinal piston in closet flush valves.	1.) Install new P6200-EC, P6200-EU replacement kit to remedy the problem. 2.) Install closet piston (Item #13).
Valve is flushing too long or not shutting off.	1.) Trip mechanism not seating properly due to foreign material between trip mechanism and seat. 2.) By-pass orifice is plugged or partially plugged. 3.) Line pressure is not adequate to force trip mechanism to seal.	1.) Disassemble parts and rinse thoroughly. 2.) Examine by-pass orifice and clean if necessary being certain not to enlarge orifice opening. 3.) Pressure is inadequate or has dropped below minimum operating range. Steps should be taken to increase the line pressure.
Water splashes out of fixture.	1.) Supply volume is more than is necessary. 2.) Lime accumulation on vortex or spreader holes of fixture.	1.) Adjust downward on control stop. 2.) Remove the lime build up.
Flush is not considered quiet.	1.) Control stop may not be adjusted for quiet operation. 2.) Fixture may be contributing to noise. 3.) Piping system may be source of noise.	1.) Adjust the control stop for quiet operation keeping in mind the fixture evacuation requirements. 2.) Check noise created by fixture by placing a cover over the bowl opening to separate valve noise from bowl noise. If it is determined the fixture is too noisy consult with fixture manufacturer. 3.) High pressure in the system can sometimes be controlled by the stop valve. Other sources of noise may be the absence of air chambers and shock arrestors, loose pipes, improper size pipes, etc. In these cases the building engineer should be consulted.
Handle assembly leaking.	1.) Handle assembly is not tight.	1.) Tighten handle assembly.

Care of Chrome-Plated Surfaces

The suggested cleaning of chrome-plated surfaces is simply to clean them with mild soap and water, then dry. Commercial cleaning compounds are never recommended.

Seasonal Use

Valves used in installations subject to shut down because of cold and freezing conditions should be maintained in the following manner. After the main supply has been shut off and the water drained from the system, remove the stop valve cap and stop valve internals to allow the water to drain from the flush valve itself.

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ZURN®

Aquaflush®

Manual Operated Flush Valves

Aquaflush Series

Exposed
Z6000 Model
For Water Closets

Exposed
Z6000-2 Model
For Water Closets

Exposed
Z6001 Model
For 1-1/4" Urinals

Exposed
Z6003 Model
For 3/4" Urinals

Exposed
Z6010 Model
For Water Closets

Exposed
Z6017 Model
For Service Sinks

Exposed
Z6099 Model
For Flushing Rim Floor Drain

Concealed
Z6142 Model
For Water Closets

Concealed
Z6143 Model
For Water Closets

Concealed
Z6150 Model
For Flushing Rim Floor Drain

Concealed
Z6152 Model
For Water Closets

Concealed
Z6154 Model
For Water Closets

Concealed
Z6155 Model
For Water Closets

Concealed
Z6190 Model
For 1-1/4" Urinals

Concealed
Z6195 Model
For 3/4" Urinals

In the U.S.A.:
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Zurn Industries, LLC Printed in U.S.A. Form No. FV249, Rev. 5/07

Exposed Z6000 Model
For Water Closets

Flow Options

- ☐ **-WS1** 1.6 Gal. Low Consumption Flush
- ☐ **-FF** 4.5 Gal. Full Flush
- ☐ **Standard Flush** 3.5 Gallons Per Flush

Suffix Options (Check/Specify Appropriate Options)

- _____ **-BG** BioCare ADA Handle
- _____ **-H** Handle on Front of Flush Valve
- _____ **-L** 1" [25] Metal Push Button
- _____ **-L3** 3" [76] Metal Push Button
- _____ **-VC** Vandal-Resistant Stop Cover
- _____ **-YB** Sweat Solder Kit
- _____ **-YC** Cast Wall Flange
- _____ **-YJ** Split Ring Pipe Support
- _____ **-YK** Solid Ring Pipe Support
- _____ **-YO** Bumper on Angle Stop
- _____ Other

ENGINEERING SPECIFICATION: ZURN Z6000 Aquaflush® Exposed Closet Flush Valve – Exposed, quiet diaphragm-type, chrome-plated, flushometer valve with a polished exterior. Complete with a chloramine resistant, dual seal diaphragm with a clog resistant by-pass. The valve is ADA compliant with a non-hold open and no leak handle feature, high back pressure vacuum breaker, one-piece hex coupling nut, adjustable tailpiece, spud coupling, and flange for top spud connection. Control stop has internal siphon-guard protection. Internal seals are made of chloramine resistant materials.

☐ **Z6000PL Aquaflush Plus** is furnished as specified above and includes sweat solder kit, vandal-resistant stop cap, and cast wall flange with setscrew.

This space is for Architectural/Engineering Approval

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Rev. I
Dwg. No. 55936
Date: 7/10/03
Product No. Z6000

Exposed Z6000-1 Model
For Water Closets

Flow Options

- ☐ **-WS1** 1.6 Gal. Low Consumption Flush
- ☐ **-FF** 4.5 Gal. Full Flush
- ☐ **Standard Flush** 3.5 Gallons Per Flush

Suffix Options (Check/Specify Appropriate Options)

- _____ **-BG** BioCare ADA Handle
- _____ **-H** Handle on Front of Flush Valve
- _____ **-L** 1" [25] Metal Push Button
- _____ **-L3** 3" [76] Metal Push Button
- _____ **-VC** Vandal-Resistant Stop Cover
- _____ **-YB** Sweat Solder Kit
- _____ **-YC** Cast Wall Flange
- _____ **-YJ** Split Ring Pipe Support
- _____ **-YK** Solid Ring Pipe Support
- _____ **-YO** Bumper on Angle Stop
- _____ Other

ENGINEERING SPECIFICATION: ZURN Z6000-1 Aquaflush® Exposed Closet Flush Valve – Exposed, quiet diaphragm-type, chrome-plated flushometer valve with a polished exterior. Complete with a chloramine resistant, dual seal diaphragm with a clog resistant by-pass. The valve is ADA compliant with a non-hold-open and no leak handle feature, high back pressure vacuum breaker, one-piece hex coupling nut, adjustable tailpiece, spud coupling and flange for top spud connection. Control stop has internal siphon-guard protection. Internal seals are made of chloramine resistant materials.

☐ **Z6000PL-1 Aquaflush Plus** is furnished as specified above and includes sweat solder kit, vandal-resistant stop cap, and cast wall flange.

This space is for Architectural/Engineering Approval

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Rev. B
Dwg. No. 65477
Date: 5/22/03
Product No. Z6000-1

Exposed Z6000-2 Model

For Water Closets

Flow Options

- ☐ **-WS1** 1.6 Gal. Low Consumption Flush
- ☐ **-FF** 4.5 Gal. Full Flush
- ☐ **Standard Flush** 3.5 Gallons Per Flush

Suffix Options (Check/Specify Appropriate Options)

- _____ **-BG** BioCare ADA Handle
- _____ **-H** Handle on Front of Flush Valve
- _____ **-L** 1" [25] Metal Push Button
- _____ **-L3** 3" [76] Metal Push Button
- _____ **-VC** Vandal-Resistant Stop Cover
- _____ **-YB** Sweat Solder Kit
- _____ **-YC** Cast Wall Flange
- _____ **-YJ** Split Ring Pipe Support
- _____ **-YK** Solid Ring Pipe Support
- _____ Other

ENGINEERING SPECIFICATION: ZURN Z6000-2 Aquaflush® Exposed Closet Flush Valve – The Aquaflush valve is a quiet diaphragm-type, chrome-plated, flushometer valve with a chemical resistant, dual seal diaphragm with a clog resistant by-pass. The valve is ADA compliant with a non-hold-open and no leak handle feature, high back pressure vacuum breaker, hex coupling nut and adjustable tailpiece, spud coupling and flange for top spud connection. Control stop has internal siphon-guard protection.

☐ **Z6000PL-2 Aquaflush Plus** is furnished complete with sweat solder kit, vandal-resistant stop cap, and cast wall flange.

This space is for Architectural/Engineering Approval

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Rev. B
Dwg. No. 65484
Date: 5/22/03
Product No. Z6000-2

Exposed Z6000-3 Model

For Water Closets

Flow Options

- ☐ **-WS1** 1.6 Gal. Low Consumption Flush
- ☐ **-FF** 4.5 Gal. Full Flush
- ☐ **Standard Flush** 3.5 Gallons Per Flush

Suffix Options (Check/Specify Appropriate Options)

- _____ **-BG** BioCare ADA Handle
- _____ **-H** Handle on Front of Flush Valve
- _____ **-L** 1" [25] Metal Push Button
- _____ **-L3** 3" [76] Metal Push Button
- _____ **-VC** Vandal-Resistant Stop Cover
- _____ **-YB** Sweat Solder Kit
- _____ **-YC** Cast Wall Flange
- _____ **-YJ** Split Ring Pipe Support
- _____ **-YK** Solid Ring Pipe Support
- _____ Other

ENGINEERING SPECIFICATION: ZURN Z6000-3 Aquaflush® Exposed Closet Flush Valve – The Aquaflush valve is a quiet diaphragm-type, chrome-plated, flushometer valve with a chemical resistant, dual seal diaphragm with a clog resistant by-pass. The valve is ADA compliant with a non-hold-open and no leak handle feature, high back pressure vacuum breaker, hex coupling nut and adjustable tailpiece, spud coupling and flange for top spud connection. Control stop has internal siphon-guard protection.

☐ **Z6000PL-3 Aquaflush Plus** is furnished complete with sweat solder kit, vandal-resistant stop cap, and cast wall flange.

This space is for Architectural/Engineering Approval

ZURN INDUSTRIES, LLC *COMMERCIAL BRASS OPERATION, 5900 ELWIN BUCHANAN DRIVE, SANFORD, NC 27330*
PHONE: 1-800-997-3876, FAX: 919-775-3541, WEBSITE: www.zurn.com
IN CANADA: ***ZURN INDUSTRIES LIMITED*** *3544 NASHUA DRIVE, MISSISSAUGA, ONTARIO L4V 1L2, PHONE: 905-405-8272, FAX: 905-405-1292*

Aquaflush® is a registered trademark of Zurn Industries, LLC

Rev. B
Dwg. No. 65485
Date: 5/22/03
Product No. Z6000-3

Exposed Z6001 Model

For 1-1/4" Urinals

Flow Options

- ☐ **-WS1** 1.0 Gal. Low Consumption Flush
- ☐ **-WS** 1.5 Gal. Water Saver
- ☐ **Standard Flush** 3.0 Gallons Per Flush

Suffix Options (Check/Specify Appropriate Options)

- _____ **-BG** BioCare ADA Handle
- _____ **-H** Handle on Front of Flush Valve
- _____ **-L** 1" [25] Metal Push Button
- _____ **-L3** 3" [76] Metal Push Button
- _____ **-VC** Vandal-Resistant Cover
- _____ **-YB** Sweat Solder Kit
- _____ **-YC** Cast Wall Flange
- _____ **-YJ** Split Ring Pipe Support
- _____ **-YK** Solid Ring Pipe Support
- _____ Other

ENGINEERING SPECIFICATION: ZURN Z6001 Aquaflush® Exposed Urinal Flush Valve – Exposed, quiet diaphragm-type, chrome-plated flushometer valve with a polished exterior. Complete with a chloramine resistant, dual seal diaphragm with a clog resistant by-pass. The valve is ADA compliant with a non-hold-open and no leak handle feature, high back pressure vacuum breaker, hex coupling nut and adjustable tail-piece, spud coupling and flange for top spud connection. Control stop has internal siphon-guard protection. Internal seals are made of chloramine resistant materials.

☐ **Z6001PL Aquaflush Plus** is furnished as specified above and includes sweat solder kit, vandal-resistant stop cap, and cast wall flange.

This space is for Architectural/Engineering Approval

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Aquaflush® is a registered trademark of Zurn Industries, LLC

Rev. I
Dwg. No. 55937
Date: 5/27/03
Product No. Z6001

Exposed Z6003 Model

For 3/4" Urinals

Flow Options

- ☐ **-EWS** 0.5 Gal. Per Flush
- ☐ **-WS1** 1.0 Gal. Low Consumption Flush
- ☐ **Standard Flush** 1.5 Gallons Per Flush

Suffix Options (Check/Specify Appropriate Options)

- _____ **-BG** BioCare ADA Handle
- _____ **-H** Handle on Front of Flush Valve
- _____ **-L** 1" [25] Metal Push Button
- _____ **-L3** 3" [76] Metal Push Button
- _____ **-VC** Vandal-Resistant Stop Cover
- _____ **-YB** Sweat Solder Kit
- _____ **-YC** Cast Wall Flange
- _____ **-YJ** Split Ring Pipe Support
- _____ **-YK** Solid Ring Pipe Support
- _____ Other

ENGINEERING SPECIFICATION: ZURN Z6003 Aquaflush® Exposed Urinal Flush Valve – Exposed, quiet diaphragm-type, chrome-plated, flushometer valve with a polished exterior. Complete with a chloramine resistant, dual seal diaphragm with a clog resistant by-pass. The valve is ADA compliant with a non-hold open and no leak handle feature, high back pressure vacuum breaker, one-piece hex coupling nut, adjustable tailpiece, spud coupling, and flange for top spud connection. Control stop has internal siphon-guard protection. Internal seals are made of chloramine resistant materials.

☐ **Z6003PL Aquaflush Plus** is furnished as specified above and includes sweat solder kit, vandal-resistant stop cap, and cast wall flange.

This space is for Architectural/Engineering Approval

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Aquaflush® is a registered trademark of Zurn Industries, LLC

Rev. K
Dwg. No. 55938
Date: 7/10/03
Product No. Z6003

Exposed Z6010 Model
For Water Closets

Flow Options

- ☐ **-WS1** 1.6 Gal. Low Consumption Flush
- ☐ **-FF** 4.5 Gal. Full Flush
- ☐ **Standard Flush** 3.5 Gallons Per Flush

Suffix Options (Check/Specify Appropriate Options)

- _____ **-BG** BioCare ADA Handle
- _____ **-H** Handle on Front of Flush Valve
- _____ **-L** 1" [25] Metal Push Button
- _____ **-L3** 3" [76] Metal Push Button
- _____ **-VC** Vandal-Resistant Stop Cover
- _____ **-YB** Sweat Solder Kit
- _____ **-YC** Cast Wall Flange
- _____ **-YH** One Wall Bumper
- _____ **-YJ** Split Ring Pipe Support
- _____ **-YK** Solid Ring Pipe Support
- _____ **-YL** Solid Ring Pipe Support with Bumper
- _____ **-YN** Bumper on Flush Pipe
- _____ **-YO** Bumper on Angle Stop
- _____ Other

ENGINEERING SPECIFICATION: ZURN Z6010 Aquaflush® Exposed Closet Flush Valve – Exposed, quiet diaphragm-type, chrome-plated flushometer valve with a polished exterior. Complete with a chloramine resistant, dual seal diaphragm with a clog resistant by-pass. The valve is ADA compliant with a non-hold open and no leak handle feature, high back pressure vacuum breaker, one-piece hex coupling nut, adjustable tailpiece, spud coupling and flange for back spud connection. Control stop has internal siphon-guard protection. Internal seals are made of chloramine resistant materials.

☐ **Z6010PL Aquaflush Plus** is furnished as specified above and includes sweat solder kit, vandal-resistant stop cap, and cast wall flange.

This space is for Architectural/Engineering Approval

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Aquaflush® is a registered trademark of Zurn Industries, LLC

Rev. I
Dwg. No. 55935
Date: 5/27/03
Product No. Z6010

Exposed Z6010-1 Model

For Water Closets

Flow Options

- ☐ **-WS1** 1.6 Gal. Low Consumption Flush
- ☐ **-FF** 4.5 Gal. Full Flush
- ☐ **Standard Flush** 3.5 Gallons Per Flush

Suffix Options (Check/Specify Appropriate Options)

- _____ **-BG** BioCare ADA Handle
- _____ **-H** Handle on Front of Flush Valve
- _____ **-L** 1" [25] Metal Push Button
- _____ **-L3** 3" [76] Metal Push Button
- _____ **-VC** Vandal-Resistant Stop Cover
- _____ **-YB** Sweat Solder Kit
- _____ **-YC** Cast Wall Flange
- _____ **-YH** One Wall Bumper
- _____ **-YJ** Split Ring Pipe Support
- _____ **-YK** Solid Ring Pipe Support
- _____ **-YL** Solid Ring Pipe Support with Bumper
- _____ **-YN** Bumper on Flush Pipe
- _____ **-YO** Bumper on Angle Stop
- _____ Other

ENGINEERING SPECIFICATION: ZURN Z6010-1 Aquaflush® Exposed Closet Flush Valve – Exposed, quiet diaphragm-type, chrome-plated flushometer valve with a polished exterior. Complete with a chloramine resistant, dual seal diaphragm with a clog resistant by-pass. The valve is ADA compliant with a non-hold-open and no leak handle feature, high back pressure vacuum breaker, hex coupling nut and adjustable tailpiece, spud coupling and flange for back spud connection. Control stop has internal siphon-guard protection. Internal seals are made of chloramine resistant materials.

☐ **Z6010PL-1 Aquaflush Plus** is furnished as specified above and includes sweat solder kit, vandal-resistant stop cap, and cast wall flange.

This space is for Architectural/Engineering Approval

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Aquaflush® is a registered trademark of Zurn Industries, LLC

Rev. D
Dwg. No. 65486
Date: 5/27/03
Product No. Z6010-1

Exposed Z6010-2 Model

For Water Closets

Flow Options

- ☐ **-WS1** 1.6 Gal. Low Consumption Flush
- ☐ **-FF** 4.5 Gal. Full Flush
- ☐ **Standard Flush** 3.5 Gallons Per Flush

Suffix Options (Check/Specify Appropriate Options)

- _____ **-BG** BioCare ADA Handle
- _____ **-H** Handle on Front of Flush Valve
- _____ **-L** 1" [25] Metal Push Button
- _____ **-L3** 3" [76] Metal Push Button
- _____ **-VC** Vandal-Resistant Stop Cover
- _____ **-YB** Sweat Solder Kit
- _____ **-YC** Cast Wall Flange
- _____ **-YH** One Wall Bumper
- _____ **-YJ** Split Ring Pipe Support
- _____ **-YK** Solid Ring Pipe Support
- _____ **-YL** Solid Ring Pipe Support with Bumper
- _____ **-YN** Bumper on Flush Pipe
- _____ Other

ENGINEERING SPECIFICATION: ZURN Z6010-2 Aquaflush® Exposed Closet Flush Valve – Exposed, quiet diaphragm-type, chrome-plated flushometer valve with a polished exterior. Complete with a chloramine resistant, dual seal diaphragm with a clog resistant by-pass. The valve is ADA compliant with a non-hold-open and no leak handle feature, high back pressure vacuum breaker, hex coupling nut and adjustable tailpiece, spud coupling and flange for back spud connection. Control stop has internal siphon-guard protection. Internal seals are made of chloramine resistant materials.

☐ **Z6010PL-2 Aquaflush Plus** is furnished as specified above and includes sweat solder kit, vandal-resistant stop cap, and cast wall flange.

This space is for Architectural/Engineering Approval

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Aquaflush® is a registered trademark of Zurn Industries, LLC

Rev. C
Dwg. No. 65487
Date: 5/27/03
Product No. Z6010-2

Exposed Z6014 Model

For Water Closets

Flow Options

- ☐ **-WS1** 1.6 Gal. Low Consumption Flush
- ☐ **-FF** 4.5 Gal. Full Flush
- ☐ **Standard Flush** 3.5 Gallons Per Flush

Suffix Options (Check/Specify Appropriate Options)

- _____ **-BG** BioCare ADA Handle
- _____ **-H** Handle on Front of Flush Valve
- _____ **-L** 1" [25] Metal Push Button
- _____ **-L3** 3" [76] Metal Push Button
- _____ **-VC** Vandal-Resistant Stop Cover
- _____ **-YB** Sweat Solder Kit
- _____ **-YC** Cast Wall Flange
- _____ **-YH** One Wall Bumper
- _____ **-YJ** Split Ring Pipe Support
- _____ **-YK** Solid Ring Pipe Support
- _____ **-YL** Solid Ring Pipe Support with Bumper
- _____ **-YN** Bumper on Flush Pipe
- _____ Other

ENGINEERING SPECIFICATION: ZURN Z6014 Aquaflush® Exposed Closet Flush Valve – Exposed, quiet diaphragm-type, chrome-plated flushometer valve with a polished exterior. Complete with a chloramine resistant, dual seal diaphragm with a clog resistant by-pass. The valve is ADA compliant with a non-hold-open and no leak handle feature, high back pressure vacuum breaker, one-piece hex coupling nut, adjustable tailpiece, spud coupling and flange for top spud connection. Control stop has internal siphon-guard protection. Internal seals are made of chloramine resistant materials.

☐ **Z6014PL Aquaflush Plus** is furnished as specified above and includes sweat solder kit, vandal-resistant stop cap, and cast wall flange.

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Aquaflush® is a registered trademark of Zurn Industries, LLC

Rev. F
Dwg. No. 56721
Date: 5/27/03
Product No. Z6014

Exposed Z6017 Model
For Service Sinks

Flow Options

☐ **Standard Flush** 6.5 Gallons Per Flush

Suffix Options (Check/Specify Appropriate Options)

_____	**-BG**	BioCare ADA Handle
_____	**-H**	Handle on Front of Flush Valve
_____	**-L**	1" [25] Metal Push Button
_____	**-L3**	3" [76] Metal Push Button
_____	**-VC**	Vandal-Resistant Stop Cover
_____	**-YB**	Sweat Solder Kit
_____	**-YC**	Cast Wall Flange
_____	**-YH**	One Wall Bumper
_____	**-YJ**	Split Ring Pipe Support
_____	**-YK**	Solid Ring Pipe Support
_____		Other

ENGINEERING SPECIFICATION: ZURN Z6017 Aquaflush® Exposed Clinic Service Sink Flush Valve – Exposed, quiet diaphragm-type, chrome-plated flushometer valve with a polished exterior. Complete with a chloramine resistant, dual seal diaphragm with a clog resistant by-pass. The valve is ADA compliant with a non-hold-open and no leak handle feature, high back pressure vacuum breaker, one-piece hex coupling nut, adjustable tailpiece, spud coupling and flange for top spud connection. Control stop has internal siphon-guard protection. Internal seals are made of chloramine resistant materials.

☐ **Z6017PL Aquaflush Plus** is furnished as specified above and includes sweat solder kit, vandal-resistant stop cap, and cast wall flange.

This space is for Architectural/Engineering Approval

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Aquaflush® is a registered trademark of Zurn Industries, LLC

Rev. H
Dwg. No. 56638
Date: 5/27/03
Product No. Z6017

Exposed Z6096 Model
For Eastern Style Water Closets

Flow Options

☐ **-WS1** 1.6 Gal. Low Consumption Flush
☐ **Standard Flush** 3.5 Gallons Per Flush

Suffix Options (Check/Specify Appropriate Options)

_____ **-BG** BioCare ADA Handle
_____ **-H** Handle on Front of Flush Valve
_____ **-L** 1" [25] Metal Push Button
_____ **-L3** 3" [76] Metal Push Button
_____ **-VC** Vandal-Resistant Stop Cover
_____ **-YB** Sweat Solder Kit
_____ **-YC** Cast Wall Flange
_____ **-YH** One Wall Bumper
_____ **-YJ** Split Ring Pipe Support
_____ **-YK** Solid Ring Pipe Support
_____ **-YL** Solid Ring Pipe Support with Bumper
_____ **-YN** Bumper on Flush Pipe
_____ Other

ENGINEERING SPECIFICATION: ZURN Z6096 Aquaflush® Exposed Urinal Flush Valve for Eastern Style Water Closet – Exposed, quiet diaphragm-type, chrome-plated flushometer valve with a polished exterior. Complete with a chloramine resistant, dual seal diaphragm with a clog resistant by-pass. The valve is ADA compliant with a non-hold-open and no leak handle feature, high back pressure vacuum breaker, hex coupling nut and adjustable tailpiece, spud coupling and flange for top spud connection. Control stop has internal siphon-guard protection. Internal seals are made of chloramine resistant materials.

☐ **Z6096PL Aquaflush Plus** is furnished as specified above and includes sweat solder kit, vandal-resistant stop cap, and cast wall flange.

This space is for Architectural/Engineering Approval

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Aquaflush® is a registered trademark of Zurn Industries, LLC

Rev. H
Dwg. No. 56754
Date: 5/27/03
Product No. Z6096

Exposed Z6099 Model
For Flushing Rim Floor Drain

Flow Options

- ☐ **-WS1** 1.6 Gal. Low Consumption Flush
- ☐ **-FF** 4.5 Gal. Full Flush
- ☐ **Standard Flush** 3.5 Gallons Per Flush

Suffix Options (Check/Specify Appropriate Options)

- _____ **-BG** BioCare ADA Handle
- _____ **-H** Handle on Front of Flush Valve
- _____ **-L** 1" [25] Metal Push Button
- _____ **-L3** 3" [76] Metal Push Button
- _____ **-VC** Vandal-Resistant Stop Cover
- _____ **-YB** Sweat Solder Kit
- _____ **-YC** Cast Wall Flange
- _____ Other

ENGINEERING SPECIFICATION: ZURN Z6099 Aquaflush® Exposed Flush Valve for Flushing Rim Floor Drain – Exposed, quiet diaphragm-type, chrome-plated, flushometer valve with a polished exterior. Complete with a chloramine resistant, dual seal diaphragm with a clog resistant by-pass. The valve is ADA compliant with a non-hold open and no leak handle feature, high back pressure vacuum breaker, hex coupling nut, and adjustable tailpiece. Control stop has internal siphon-guard protection. Internal seals are made of chloramine resistant materials.

☐ **Z6099PL Aquaflush Plus** is furnished as specified above and includes sweat solder kit, vandal-resistant stop cap, and cast wall flange.

This space is for Architectural/Engineering Approval

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Aquaflush® is a registered trademark of Zurn Industries, LLC

Rev. E
Dwg. No. 55893
Date: 5/27/03
Product No. Z6099

Concealed Z6140 Model
For Water Closets

Flow Options

- ☐ **-WS1** 1.6 Gal. Low Consumption Flush
- ☐ **-FF** 4.5 Gal. Full Flush
- ☐ **Standard Flush** 3.5 Gallons Per Flush

Suffix Options (Check/Specify Appropriate Options)

- _____ **-BG** BioCare ADA Handle
- _____ **-L** 1" [25] Metal Push Button
- _____ **-L3** 3" [76] Metal Push Button
- _____ **-YB** Sweat Solder Kit
- _____ Other

ENGINEERING SPECIFICATION: ZURN Z6140 Aquaflush® Concealed Closet Flush Valve – Concealed, quiet diaphragm-type, rough brass flushometer valve with chloramine resistant, dual seal diaphragm with a clog resistant by-pass. Complete with a non-hold open and no leak handle feature, high back pressure vacuum breaker, flush tube, elbow flush connections, wall escutcheon, fixture spud escutcheon, and fixture spud securing nut for back spud connection. Control stop has internal siphon-guard protection. Internal seals are made of chloramine resistant materials.

This space is for Architectural/Engineering Approval

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Aquaflush® is a registered trademark of Zurn Industries, LLC

Rev. F
Dwg. No. 55990
Date: 5/27/03
Product No. Z6140

Concealed Z6142 Model
For Water Closets

Flow Options

- ☐ **-WS1** 1.6 Gal. Low Consumption Flush
- ☐ **-FF** 4.5 Gal. Full Flush
- ☐ **Standard Flush** 3.5 Gallons Per Flush

Suffix Options (Check/Specify Appropriate Options)

- _____ **-BG** BioCare ADA Handle
- _____ **-L** 1" [25] Metal Push Button
- _____ **-L3** 3" [76] Metal Push Button
- _____ **-YB** Sweat Solder Kit
- _____ Other

ENGINEERING SPECIFICATION: ZURN Z6142 Aquaflush® Concealed Closet Flush Valve – Concealed, quiet diaphragm-type rough brass flushometer valve with chloramine resistant, dual seal diaphragm with a clog resistant by-pass. Complete with a non-hold open and no leak handle feature, high back pressure vacuum breaker, flush tube, elbow flush connections, wall escutcheon, fixture spud escutcheon, and fixture spud securing nut for top spud connection. Control stop has internal siphon-guard protection. Internal seals are made of chloramine resistant materials.

This space is for Architectural/Engineering Approval

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Aquaflush® is a registered trademark of Zurn Industries, LLC

Rev. G
Dwg. No. 55992
Date: 5/27/03
Product No. Z6142

Concealed Z6143 Model
For Water Closets

Flow Options

- ☐ **-WS1** 1.6 Gal. Low Consumption Flush
- ☐ **-FF** 4.5 Gal. Full Flush
- ☐ **Standard Flush** 3.5 Gallons Per Flush

Suffix Options (Check/Specify Appropriate Options)

- _____ **-BG** BioCare ADA Handle
- _____ **-L** 1" [25] Metal Push Button
- _____ **-L3** 3" [76] Metal Push Button
- _____ **-YB** Sweat Solder Kit
- _____ Other

ENGINEERING SPECIFICATION: ZURN Z6143 Aquaflush® Concealed Closet Flush Valve – Concealed, quiet diaphragm-type rough brass flushometer valve with chloramine resistant, dual seal diaphragm with a clog resistant by-pass. Complete with a non-hold open and no leak handle feature, high back pressure vacuum breaker, flush tube, elbow flush connections and fixture spud securing nut for back spud connection. Control stop has internal siphon-guard protection. Internal seals are made of chloramine resistant materials.

This space is for Architectural/Engineering Approval

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Aquaflush® is a registered trademark of Zurn Industries, LLC

Rev. G
Dwg. No. 55993
Date: 5/27/03
Product No. Z6143

Concealed Z6144 Model
For Water Closets

Flow Options

- ☐ **-WS1** 1.6 Gal. Low Consumption Flush
- ☐ **-FF** 4.5 Gal. Full Flush
- ☐ **Standard Flush** 3.5 Gallons Per Flush

Suffix Options (Check/Specify Appropriate Options)

- _____ **-BG** BioCare ADA Handle
- _____ **-L** 1" [25] Metal Push Button
- _____ **-L3** 3" [76] Metal Push Button
- _____ **-YB** Sweat Solder Kit
- _____ Other

ENGINEERING SPECIFICATION: ZURN Z6144 Aquaflush® Concealed Closet Flush Valve – Concealed, quiet diaphragm-type rough brass flushometer valve with chloramine resistant, dual seal diaphragm with a clog resistant by-pass. Complete with a non-hold open and no leak handle feature, high back pressure vacuum breaker, flush tube, elbow flush connections for back spud connection and fixture spud securing nut. Control stop has internal siphon-guard protection. Internal seals are made of chloramine resistant materials.

This space is for Architectural/Engineering Approval

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Aquaflush® is a registered trademark of Zurn Industries, LLC

Rev. G
Dwg. No. 56143
Date: 5/27/03
Product No. Z6144

Concealed Z6150 Model
For Flushing Rim Floor Drain

Flow Options

- ☐ **-WS1** 1.6 Gal. Low Consumption Flush
- ☐ **-FF** 4.5 Gal. Full Flush
- ☐ **Standard Flush** 3.5 Gallons Per Flush

Suffix Options (Check/Specify Appropriate Options)

- _____ **-BG** BioCare ADA Handle
- _____ **-J** Metal Oscillating ADA Handle
- _____ **-L3** 3" [76] Metal Push Button
- _____ **-YB** Sweat Solder Kit
- _____ Other

ENGINEERING SPECIFICATION: ZURN Z6150 Aquaflush® Concealed Flush Valve for Flushing Rim Floor Drain – Concealed, quiet diaphragm-type rough brass flushometer valve with chloramine resistant, dual seal diaphragm with a clog resistant by-pass. Complete with a non-hold open and no leak push button feature, high back pressure vacuum breaker, one-piece hex coupling nut and adjustable tailpiece. Control stop has internal siphon-guard protection. Internal seals are made of chloramine resistant materials.

This space is for Architectural/Engineering Approval

ZURN INDUSTRIES, LLC *COMMERCIAL BRASS OPERATION, 5900 ELWIN BUCHANAN DRIVE, SANFORD, NC 27330*
PHONE: 1-800-997-3876, FAX: 919-775-3541, WEBSITE: www.zurn.com
IN CANADA: ***ZURN INDUSTRIES LIMITED*** *3544 NASHUA DRIVE, MISSISSAUGA, ONTARIO L4V 1L2, PHONE: 905-405-8272, FAX: 905-405-1292*

Aquaflush® is a registered trademark of Zurn Industries, LLC

Rev. H
Dwg. No. 55994
Date: 5/27/03
Product No. Z6150

Concealed Z6152 Model
For Water Closets

Flow Options

- ☐ **-WS1** 1.6 Gal. Low Consumption Flush
- ☐ **-FF** 4.5 Gal. Full Flush
- ☐ **Standard Flush** 3.5 Gallons Per Flush

Suffix Options (Check/Specify Appropriate Options)

- _____ **-BG** BioCare ADA Handle
- _____ **-J** Metal Oscillating ADA Handle
- _____ **-L3** 3" [76] Metal Push Button
- _____ **-YB** Sweat Solder Kit
- _____ Other

ENGINEERING SPECIFICATION: ZURN Z6152 Aquaflush® Concealed Closet Flush Valve – Concealed, quiet diaphragm-type rough brass flushometer valve with chloramine resistant, dual seal diaphragm with a clog resistant by-pass. Complete with a non-hold open and no leak push button feature, high back pressure vacuum breaker, one-piece hex coupling nut, adjustable tailpiece, flush tube, elbow flush connection and spud coupling for back spud connection. Control stop has internal siphon-guard protection. Internal seals are made of chloramine resistant materials.

This space is for Architectural/Engineering Approval

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Rev. H
Dwg. No. 55995
Date: 5/27/03
Product No. Z6152

Concealed Z6153 Model
With Exposed Top Spud Connection For Water Closets

Flow Options

- ☐ **-WS1** 1.6 Gal. Low Consumption Flush
- ☐ **-FF** 4.5 Gal. Full Flush
- ☐ **Standard Flush** 3.5 Gallons Per Flush

Suffix Options (Check/Specify Appropriate Options)

- _____ **-ADA** Low Force/ADA Compliant Handle
- _____ **-BG** BioCare Handle
- _____ **-J** Oscillating Handle
- _____ **-L3** 3" [76] Metal Push Button
- _____ **-YB** Sweat Solder Kit
- _____ Other

ENGINEERING SPECIFICATION: ZURN Z6153 Aquaflush® Concealed Closet Flush Valve – Concealed, quiet diaphragm-type rough brass flushometer valve with chloramine resistant, dual seal diaphragm with a clog resistant by-pass. Complete with a non-hold open and no leak handle feature, high back pressure vacuum breaker, flush tube, elbow flush connections, and fixture spud securing nut for top spud connection. Control stop has internal siphon-guard protection. Internal seals are made of chloramine resistant materials.

This space is for Architectural/Engineering Approval

ZURN INDUSTRIES, LLC *COMMERCIAL BRASS OPERATION, 5900 ELWIN BUCHANAN DRIVE, SANFORD, NC 27330*
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Rev. C
Dwg. No. 58035
Date: 6/29/04
Product No. Z6153

Concealed Z6154 Model
For Water Closets

Flow Options

- ☐ **-WS1** 1.6 Gal. Low Consumption Flush
- ☐ **-FF** 4.5 Gal. Full Flush
- ☐ **Standard Flush** 3.5 Gallons Per Flush

Suffix Options (Check/Specify Appropriate Options)

- _____ **-BG** BioCare ADA Handle
- _____ **-J** Metal Oscillating ADA Handle
- _____ **-L3** 3" [76] Metal Push Button
- _____ **-YB** Sweat Solder Kit
- _____ Other

ENGINEERING SPECIFICATION: ZURN Z6154 Aquaflush® Concealed Closet Flush Valve – Concealed, quiet diaphragm-type rough brass flushometer valve with chloramine resistant, dual seal diaphragm with a clog resistant by-pass. Complete with a non-hold open and no leak push button feature, high back pressure vacuum breaker, flush tube, elbow flush connections, wall escutcheon, fixture spud escutcheon, and fixture spud securing nut for back spud connection. Control stop has internal siphon-guard protection. Internal seals are made of chloramine resistant materials.

This space is for Architectural/Engineering Approval

ZURN INDUSTRIES, LLC *COMMERCIAL BRASS OPERATION, 5900 ELWIN BUCHANAN DRIVE, SANFORD, NC 27330*
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Rev. F
Dwg. No. 55997
Date: 5/27/03
Product No. Z6154

Concealed Z6155 Model
For Water Closets

Flow Options

- ☐ **-WS1** 1.6 Gal. Low Consumption Flush
- ☐ **-FF** 4.5 Gal. Full Flush
- ☐ **Standard Flush** 3.5 Gallons Per Flush

Suffix Options (Check/Specify Appropriate Options)

- _____ **-BG** BioCare ADA Handle
- _____ **-L** 1" [25] Metal Push Button
- _____ **-L3** 3" [76] Metal Push Button
- _____ **-YB** Sweat Solder Kit
- _____ Other

ENGINEERING SPECIFICATION: ZURN Z6155 Aquaflush® Concealed Closet Flush Valve – Concealed, quiet diaphragm-type rough brass flushometer valve with chloramine resistant, dual seal diaphragm with a clog resistant by-pass. Complete with a non-hold open and no leak handle feature, high back pressure vacuum breaker, flush tube, elbow flush connections, wall escutcheon, fixture spud escutcheon, and fixture spud securing nut for top spud connection. Control stop has internal siphon-guard protection. Internal seals are made of chloramine resistant materials.

This space is for Architectural/Engineering Approval

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Rev. G
Dwg. No. 56019
Date: 6/29/04
Product No. Z6155

Concealed Z6190 Model

For 1-1/4" Urinals

Flow Options

- ☐ **-WS1** 1.0 Gal. Low Consumption Flush
- ☐ **-WS** 1.5 Gal. Water Saver
- ☐ **Standard Flush** 3.0 Gallons Per Flush

Suffix Options (Check/Specify Appropriate Options)

- _____ **-BG** BioCare ADA Handle
- _____ **-L** 1" [25] Metal Push Button
- _____ **-L3** 3" [76] Metal Push Button
- _____ **-YB** Sweat Solder Kit
- _____ Other

ENGINEERING SPECIFICATION: ZURN Z6190 Aquaflush® Concealed Urinal Flush Valve – Concealed, quiet diaphragm-type rough brass flushometer valve with chloramine resistant, dual seal diaphragm with a clog resistant by-pass. Complete with a non-hold open and no leak handle feature, high back pressure vacuum breaker, one-piece hex coupling nut, adjustable tailpiece and spud coupling for back spud connection. Control stop has internal siphon-guard protection. Internal seals are made of chloramine resistant materials.

This space is for Architectural/Engineering Approval

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Aquaflush® is a registered trademark of Zurn Industries, LLC

Rev. H
Dwg. No. 55998
Date: 5/27/03
Product No. Z6190

Concealed Z6195 Model

For 3/4" Urinals

Flow Options

☐ **-WS1** 1.0 Gal. Low Consumption Flush
☐ **Standard Flush** 1.5 Gallons Per Flush

Suffix Options (Check/Specify Appropriate Options)

_____ **-BG** BioCare ADA Handle
_____ **-L** 1" [25] Metal Push Button
_____ **-L3** 3" [76] Metal Push Button
_____ **-YB** Sweat Solder Kit
_____ Other

ENGINEERING SPECIFICATION: ZURN Z6195 Aquaflush® Concealed Urinal Flush Valve – Concealed, quiet diaphragm-type rough brass flushometer valve with chloramine resistant, dual seal diaphragm with a clog resistant by-pass. Complete with a non-hold open and no leak handle feature, high back pressure vacuum breaker, one-piece hex coupling nut, adjustable tailpiece and spud coupling for back spud connection. Control stop has internal siphon-guard protection. Internal seals are made of chloramine resistant materials.

This space is for Architectural/Engineering Approval

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Rev. G
Dwg. No. 55999
Date: 5/27/03
Product No. Z6195

Concealed Z6196 Model
For Eastern Style Water Closets

Flow Options

☐ **-WS1** 1.6 Gal. Low Consumption Flush
☐ **Standard Flush** 3.5 Gallons Per Flush

Suffix Options (Check/Specify Appropriate Options)

_____ **-BG** BioCare ADA Handle
_____ **-J** Metal Oscillating ADA Handle
_____ **-L3** 3" [76] Metal Push Button
_____ **-YB** Sweat Solder Kit
_____ Other

ENGINEERING SPECIFICATION: ZURN Z6196 Aquaflush® Concealed Flush Valve for Eastern Style Water Closet – Concealed, quiet diaphragm-type rough brass flushometer valve with chloramine resistant, dual seal diaphragm with a clog resistant by-pass. Complete with a non-hold open and no leak push button feature, high back pressure vacuum breaker, one piece hex coupling nut, adjustable tail-piece, flush tube, elbow flush connections, and spud coupling for back spud connection. Control stop has internal siphon-guard protection. Internal seals are made of chloramine resistant materials.

This space is for Architectural/Engineering Approval

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Rev. G
Dwg. No. 56753
Date: 5/27/03
Product No. Z6196

Z6199
Aquaflush Access Panel and Frame

Product No.	Size	A	B	C	D	E	F
Z6199-BX12	12 x 12 [305 x 305]	12 [305]	12 [305]	13-1/2 [343]	13-1/2 [343]	5-1/2 [140]	5-1/2 [140]
Z6199-BX15	15 x 15 [381 x 381]	15 [381]	15 [381]	16-1/2 [419]	16-1/2 [419]	7 [178]	7 [178]
Z6199-BX17	13 x 17 [330 x 432]	17 [432]	13 [330]	14-1/2 [368]	18-1/2 [470]	6 [152]	8 [203]

Suffix Options (Check/Specify Appropriate Options)

_____ **-SC-2** 2" [51] Long Vandal-Proof Screws
_____ **-SP** Solid Panel
_____ Other

ENGINEERING SPECIFICATION: ZURN Z6199 Aquaflush® Access Panel and Frame – The access panel and frame provide quick and simple access to in-wall concealed flush valves when a mechanical chase of adequate size is not available. The panel and frame incorporate a #14 gage stainless steel satin finish cover, #18 gage stainless steel satin finish frame, and (4) 1" [25] long vandal-proof screws, (6) 1" [25] long vandal-proof screws on 13 x 17 [330 x 432] panel.

This space is for Architectural/Engineering Approval

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Aquaflush® is a registered trademark of Zurn Industries, LLC

Rev. A
Dwg. No. 59015
Date: 4/21/04
Product No. Z6199

Specifying "L" Dimension for Concealed Manual-Operated Flush Valves

Step 1: **Determine the applicable column** by locating the valve's 4-digit model number.

Step 2: **Determine the applicable row** by locating the correct wall thickness.
NOTE: For wall thicknesses not listed, locate and use the next largest size.

Step 3: **Order the applicable suffix** shown at the intersection of the row and column.

Example: For closet valve model number Z6152AV and a wall thickness of 6", order: Z6152AV-L9.

	Closets		Urinals	Combination Fixtures
Wall Thickness "W"	6140AV 6142AV 6143AV 6144AV 6150AV / 6152AV 6154AV 6155AV 6605AV 6611AV	6681AV	6190AV 6195AV / 6602AV 6609AV 6613AV 6615AV	6601AV 6603AV 6616AV
1/4"	L4	L7	L4	L5
1"	L4	L7	L4	L5
2"	L5	L8	L5	L6
3"	L6	L9	L6	L7
4"	L7	L10	L7	L8
5"	L8	L11	L8	L9
6"	L9	L12	L9	L10
7"	L10	L13	L10	L11
8"	L11	L14	L11	L12
9"	L12	L15	L12	L13
10"	L13	L16	L13	L14

Z6199 Model Access Panel and Frame for Manual-Operated Concealed Flush Valves

Z6199-BX12

Z6199-BX15

Z6199-BX17

Z6199

Engineering Specification: Zurn Z6199 Access Panel and Frame for Manual-Operated Concealed Flush Valves –
The access panel and frame provide quick and simple access to in-wall concealed flush valves when a mechanical chase of adequate size is not available. The panel is #14 gage stainless steel and the frame is #18 gage stainless steel. Both have a satin finish. The assembly comes complete with (4) 1" [25mm] vandal-proof screws. Specify Z6199-BX12 for 12" x 12", Z6199-BX15 for 15" x 15", or Z6199-BX17 for 13" x 17".

Product No.	Size	A	B	C	D	E	F
Z6199-BX12	12x12 [305x305]	12 [305]	12 [305]	13-1/2 [343]	13-1/2 [343]	5-1/2 [140]	5-1/2 [140]
Z6199-BX15	15x15 [381x381]	15 [381]	15 [381]	16-1/2 [419]	16-1/2 [419]	7 [178]	7 [178]
Z6199-BX17	13x17 [330x432]	17 [432]	13 [330]	14-1/2 [368]	18-1/2 [470]	6 [152]	8 [203]

SUFFIX OPTIONS (Check/specify appropriate options.)	
-SP	Solid Panel
-SC-2	2" [51mm] Long Vandal-Proof Screws

Notes

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Aquaflush Z6000 Series

Aquaflush Exposed Flushometer

Installation, Operation, Maintenance, and Parts Manual

Patented and Patents Pending

Z6000

Z6003

Aquaflush Exposed Closet/Urinal Systems
Z6000
Z6001
Z6003
Z6010
Z6014
Z6017
Z6096
Z6099

LIMITED WARRANTY

All goods sold hereunder are warranted to be free from defects in material and factory workmanship for a period of three years from the date of purchase. Decorative finishes warranted for one year. We will replace at no cost goods that prove defective provided we are notified in writing of such defect and the goods are returned to us prepaid at Sanford, NC, with evidence that they have been properly maintained and used in accordance with instructions. We shall not be responsible for any labor charges or any loss, injury or damages whatsoever, including incidental or consequential damages. The sole and exclusive remedy shall be limited to the replacement of the defective goods. Before installation and use, the purchaser shall determine the suitability of the product for his intended use and the purchaser assumes all risk and liability whatever in connection therewith. Where permitted by law, the implied warranty of merchantability is expressly excluded. If the products sold hereunder are “consumer products,” the implied warranty of merchantability is limited to a period of three years and shall be limited solely to the replacement of the defective goods. All weights stated in our catalogs and lists are approximate and are not guaranteed.

Aquaflush Rough-In, Product Specification, Models and Options

ENGINEERING SPECIFICATION: ZURN Aquaflush Exposed Closet Flush Valve – Exposed, quiet diaphragm-type, chrome-plated flushometer valve with a polished exterior. Complete with a chloramine resistant, dual seal diaphragm with a clog resistant by-pass. The valve is ADA compliant with a non-hold open and no leak handle feature, high back pressure vacuum breaker, one-piece hex coupling nut, adjustable tailpiece, spud coupling, and flange for top spud connection. Control stop has internal siphon-guard protection. Internal seals are made of chloramine resistant materials.

Z6000PL Aquaflush Plus is furnished as specified above and includes sweat solder kit, vandal-resistant stop cap, and cast wall flange with setscrew.

MODELS

Z6000 – 1-1/2" Water Closet valve with top spud connection.
Z6010 – 1-1/2" Water Closet valve with back spud connection.
Z6001 – 1-1/4" Urinal Valve with top spud connection.
Z6003 – 3/4" Urinal Valve with top spud connection.

FLOWS

-WS1 Low Consumption
1.0 Gal. for Urinal, 1.6 Gal. for Water Closet

-WS 1.5 Gal. for Urinal, 3.5 Gal. for Water Closet

-FF Full Flow
3.0 Gal. for Urinal, 4.5 Gal. for Water Closet

OPTIONS

____ **-BG** BioCare Handle
____ **-H** Handle on Front of Flush Valve
____ **-L** 1" [25] Metal Push Button
____ **-L3** 3" [76] Metal Push Button
____ **-VC** Vandal-Resistant Stop Cover
____ **-YB** Sweat Solder Kit
____ **-YC** Cast Wall Flange
____ **-YJ** Split Ring Pipe Support
____ **-YK** Solid Ring Pipe Support
____ **-YO** Bumper on Stop Valve

Models: Z6000, Z6000-1, Z6000-2, Z6000-3,
-WS1 (water saver) 1.6 Gal. Low Consumption

Models: Z6001 (1-1/4" urinal flush valve)
Z6003 (3/4" urinal flush valve)
-WS1 (water saver) 1.0 Gal. Low Consumption

Models: Z6010, Z6010-1, Z6010-2,
-WS1 (water saver) 1.6 Gal. Low Consumption

Sweat Solder Adaptor Installation Instructions

Important:

- *All plumbing is to be installed according to state and local codes and regulations.*
- *Water supply lines need to allow proper water flow for each fixture.*
- *Flush all lines of any **debris** before making connections.*
- *Do not use pipe sealant or plumbing grease on any fitting other then the control stop inlet.*

The Aquaflush valve is designed to operate under various water pressures with a recommended range between 10 and 100 psi (69 to 689 kPa). Each Zurn valve is tested for proper performance at the factory before being shipped. Consult the product pages of the catalog for available flow options.

Most low consumption fixtures (1.6 gallon) require a minimum of 25 psi running pressure through the valve to obtain proper evacuation.

When installing your quality Zurn valve it is recommended that to protect the polished finish you do not use a toothed wrench. This will cause gouges and scratches on your valve.

STEP NO. 1

Measure distance from finished wall to center line of fixture spud; cut water supply pipe 1-1/4" shorter than this measurement. Chamfer O.D. and I.D.

STEP NO. 2

Slide threaded adapter onto supply pipe until shoulder stops on end of pipe. Then sweat-solder the adapter to water supply pipe.

STEP NO. 3

Measure from finished wall to first thread of adapter for length of chrome tube. Cut chrome tube this length 'x'.

STEP NO. 4

Slide wall escutcheon over chrome tube and slide both chrome tube and wall escutcheon over supply pipe pushing the wall escutcheon all the way to the wall.

STEP NO. 5

Screw control stop onto water supply water adaptor.

Aquaflush Installation Instructions

1. Install stop valve assembly using proper size supply escutcheon and sweat solder adapter kit if applicable (see 1). Thread sealing compounds should be used on male NPT threads only.

2. Prior to inserting the flush valve tailpiece into stop valve, be certain that the O-ring seal is located in O-ring seal groove at the end of the tailpiece and the locking nut and locking snap ring are located as shown below (see 2). Care should be taken not to damage the O-ring when inserting the tailpiece into the stop valve. If lubrication is needed, wetting the O-ring with water will be sufficient.

3. Insert the flush valve tailpiece into the stop valve and hand tighten the lock nut to the stop valve. Plumb the entire unit (see 3).

4. Determine the length of vacuum breaker tube required to join the flush valve and fixture spud. Cut the vacuum breaker tube, if required, to this length (see 4a). Assemble the vacuum breaker tube assembly and spud nut assembly to the flush valve and fixture spud (see 4b).

5. Hand tighten spud nut and vacuum breaker tube nut to fixture and flush valve. Adjust the valve assembly for plumb. Tighten fixture spud nut, vacuum breaker tube nut and lock nut with a wrench.

Typical Flush Tube Assemblies

5

6. When all flush valves are connected to the fixtures and water pressure is available, it is recommended that the supply piping be flushed to remove dirt, pipe chips, etc. from system. Before the water is turned on, be sure all stop valves to the flush valves are closed off tight. The stop valves can be opened and closed by using the adjusting screw located at the center of the stop valve cap, behind the stop snap cap screw cover if already installed (see 6a). Stop valve adjustments can only be made by using the adjusting screw. **It is not necessary to remove the stop valve cap when making adjustments. If for any reason it becomes necessary to remove the stop valve cap, be certain the water is shut off at the main supply valve.**

6a

Use the following procedure to flush out the supply piping:

A. Remove the main valve body cover.

B. Remove the working parts from the flush valve (shown in 6b).

C. Replace the main valve body cover and plastic cover without reinstalling the working parts.

D. Open the stop valve by using the stop adjusting screw, and flush out all debris from pipe and connections.

E. Shut stop, open cover, replace the working parts, replace plastic cover and main valve body cover and tighten.

6b

This procedure should also be followed when the system has been drained for some time, as occurs in athletic fields, recreation parks, etc.

7. The Aquaflush flush valves are preset for fixture volume as marked on the valve cartons. The valve does not require regulation for variation in water pressure within its operating range. To set the flush valve for proper operation, gradually adjust the stop valve open, using the adjusting screw, while actuating the valve until the rate of water flow into the fixture is not excessive, yet is sufficient enough to adequately evacuate the waste. The final setting for urinals should be such that the fixture will not overflow when the valve is actuated in succession. The stop snap cap screw cover should be secured after final adjustments have been made.

7

Aquaflush Exposed Repair Kits

Parts Identification

1. Handle Nut
2. Handle Sleeve and Insert
3. Low Force/ADA Compliant Handle
4. Actuator Rod
5. Handle O-Ring
6. Handle Spring
7. Handle Seal Retainer
8. Handle Seal
9. Gasket
10. Valve Body Cover
11. Plastic Cover
12. Trip Mechanism
13. Retainer Disc
14. Diaphragm
15. Flow Ring
16. Guide Ring
17. Cylinder Slide
18. Valve Body
19. Vacuum Breaker Friction Washer
20. Vacuum Breaker Insert
21. Vacuum Breaker Duckbill
22. Vacuum Breaker Tube
23. Vacuum Breaker Tube Nut
24. Spud Nut
25. Spud Friction Washer
26. Spud Sleeve
27. Spud Escutcheon
28. Tailpiece
29. Snap Ring
30. Tailpiece O-Ring
31. Locking Nut
32. Setscrew for Cast Wall Flange
33. Stop Body
34. Piston Seal
35. Piston
36. Stop Spring
37. Guide O-Ring
38. Piston Guide
39. Guide Holder
40. Adjusting Screw
41. Stop Cap
42. Snap Cap Screw Cover

Covers and Repair Kits	Product No.
Outside Cover - CP – Item 10	P6000-LL
Inside Cover – Item 11	P6000-L
Low Consumption Closet Kit – 1.6 gal. flush	P6000-ECR-WS1
Water Saving Closet Kit – 3.5 gal. flush	P6000-ECR-WS
Full Flow Closet Kit – 4.5 gal. flush	P6000-ECR-FF
Low Consumption Urinal Kit – 1.0 gal. flush	P6000-EUR-WS1
Water Saving Urinal Kit – 1.5 gal. flush	P6000-EUR-WS
Full Flow Urinal Kit – 3.0 gal. flush	P6000-EUR-FF

Repair Parts – Inside Parts	Product No.
Urinal Relief Valve – Item 12	P6000-EU13
Closet Relief Valve – Item 12	P6000-EC13

Aquaflush Rebuild Kits	Product No.
Closet and Urinal Rebuild Kits Include Items 4-9, 12, 13, 15-17, 26	P6000-ECR-WS-RK P6000-ECR-WS1-RK P6000-EUR-WS-RK P6000-EUR-WS1-RK

Handle Assembly and Repair Kits	Product No.
ADA Handle Assembly (Side) Includes Items 2-9	P6000-M-ADA
Handle Repair Kit (Side) Includes Items 4-9	P6000-MK
Handle Seal Includes Item 8	P6000-M9
Handle Gasket Includes Item 9	P6000-M10
Repair Kit for Front Operation - Exposed Includes Items 4-9	P6000-MHK
Handle Assembly (Front) Includes Items 2-9	P6000-MH

Control Stop Repair Kit and Parts	Product No.
Control Stop Repair Kit for 1" and 3⁄4" Includes Items 30-36	P6000-D-SD
Seal Seat for 1" and 3⁄4", Includes Item 30	P6000-D42
VP Control Stop Repair Kit for 1" and 3⁄4"	P6000-D-VP
Sweat Solder Connection with Cast Wall Flange	P6000-YB

Adjustable Tailpieces	Product No.
Adjustable Tailpiece for Standard Flush Valve Includes Items 24-26	P6000-J1
Tailpiece Coupling Assembly Includes Items 25-27	P6000-K
Tailpiece Locking Ring Includes Item 25	P6000-C30
Tailpiece O-Ring Includes Item 26	P6000-C31
Coupling Nut Includes Item 27	P6000-C32

Flush Connections and Spud Coupling Kits	Product No.
Flush Tube Assembly for Flush Valves Includes Items 15-19. Specify diameter and length.	P6000-A
Vacuum Breaker Repair Kit Includes Items 15-17	P6000-B
Spud Coupling Assembly Includes Items 20-23. Specify size.	P6000-H

Aquaflush Trouble Shooting Guide

Problem	Cause*	Corrective Action*
Valve will not operate.	1.) Stop valve is closed. 2.) Supply valve is closed.	1.) Open stop valve. 2.) Open supply valve.
Insufficient volume of water to adequately siphon fixture.	1.) Stop valve is not open enough. 2.) Urinal trip mechanism installed in wrong kit, urinal for closet. 3.) Insufficient volume or pressure at supply.	1.) Open stop valve for desired volume of water. 2.) Replace urinal part with proper closet valve part. 3.) If gauges are not available to measure supply pressure or volume of water at the valve, completely remove the working parts and open the stop valve to allow water to pass through the empty valve. If the supply is adequate to siphon the fixture, the guide ring (#16) may be removed from the guide assembly to provide additional flow (see page 233). Should this prove unsatisfactory, steps should be taken to increase the pressure and/or supply.
Flush valve shuts off too quickly.	1.) Damaged or punctured diaphragm. 2.) Enlarged by-pass orifice.	1.) Install new P6000-EUR or P6000-ECR replacement kit to remedy the problem. (#12 thru #17) 2.) Install new P6000-EUR or P6000-ECR replacement kit to remedy the problem. (#12 thru #17)
Valve is short flushing.	1.) Diaphragm kit is not matched to the fixture. 2.) Urinal trip mechanism (black #12) is in the closet flush valve.	1.) Install the proper P6000-EUR or P6000-ECR replacement kit to remedy the problem. (#12 thru #17) 2.) Install closet trip mechanism (white #12).
Valve is flushing too long or not shutting off.	1.) Trip mechanism not seating properly due to foreign material between trip mechanism and retainer disc. 2.) By-pass orifice is plugged or partially plugged. 3.) Line pressure is not adequate to force trip mechanism to seal. 4.) Cracked cover. (#11)	1.) Disassemble parts and rinse thoroughly. 2.) Examine by-pass orifice and clean if necessary being certain not to enlarge orifice opening. 3.) Pressure is inadequate or has dropped below minimum operating range. Steps should be taken to increase the line pressure. 4.) Replace cover with new one.
Water splashes out of fixture.	1.) Supply volume is more than is necessary. 2.) Lime accumulation on vortex or spreader holes of fixture.	1.) Adjust downward on control stop. 2.) Remove the lime build up.
Flush is not considered quiet.	1.) Control stop may not be adjusted for quiet operation. 2.) Fixture may be contributing to noise. 3.) Piping system may be source of noise.	1.) Adjust the control stop for quiet operation keeping in mind the fixture evacuation requirements. 2.) Check noise created by fixture by placing a cover over the bowl opening to separate valve noise from bowl noise. If it is determined the fixture is too noisy consult with fixture manufacturer. 3.) High pressure in the system can sometimes be controlled by the stop valve. Other sources of noise may be the absence of air chambers and shock arrestors, loose pipes, improper size pipes, etc. In these cases the building engineer should be consulted.
Handle assembly leaking.	1.) Handle assembly is not tight.	1.) Tighten handle assembly.

Care of Chrome-Plated Surfaces
The suggested cleaning of chrome-plated surfaces is simply to clean them with mild soap and water, then dry. Commercial cleaning compounds are never recommended.

Seasonal Use
Valves used in installations subject to shut down because of cold and freezing conditions should be maintained in the following manner. After the main supply has been shut off and the water drained from the system, remove the stop valve cap and stop valve internals to allow the water to drain from the flush valve itself.

*See previous page for numerical references.

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Printed in the U.S.A.

Form No. FV250, 5/07

Aquaflush® Z6100 Series

Aquaflush Concealed Flushometer

Installation, Operation, Maintenance, and Parts Manual

Patented and Patents Pending

Z6140

Z6195

Aquaflush Concealed Closet/Urinal Systems

Z6140
Z6142
Z6143
Z6144
Z6150
Z6152
Z6154
Z6155
Z6190
Z6195
Z6196

LIMITED WARRANTY

All goods sold hereunder are warranted to be free from defects in material and factory workmanship for a period of three years from the date of purchase. Decorative finishes warranted for one year. We will replace at no cost goods that prove defective provided we are notified in writing of such defect and the goods are returned to us prepaid at Sanford, NC, with evidence that they have been properly maintained and used in accordance with instructions. We shall not be responsible for any labor charges or any loss, injury or damages whatsoever, including incidental or consequential damages. The sole and exclusive remedy shall be limited to the replacement of the defective goods. Before installation and use, the purchaser shall determine the suitability of the product for his intended use and the purchaser assumes all risk and liability whatever in connection therewith. Where permitted by law, the implied warranty of merchantability is expressly excluded. If the products sold hereunder are “consumer products,” the implied warranty of merchantability is limited to a period of three years and shall be limited solely to the replacement of the defective goods. All weights stated in our catalogs and lists are approximate and are not guaranteed.

FV251

Aquaflush Rough-In, Product Specification, Models and Options

ENGINEERING SPECIFICATION: ZURN Aquaflush Concealed Closet Flush Valve – Concealed, quiet diaphragm-type, rough brass flushometer valve with chloramine resistant, dual seal diaphragm with a clog resistant by-pass. Complete with a non-hold-open and no leak handle feature, high back pressure vacuum breaker, flush tube, elbow flush connections, wall escutcheon, fixture spud escutcheon, and fixture spud securing nut. Control stop has internal siphon-guard protection. Internal seals are made of chloramine resistant materials.

MODELS

Z6140 – 1-1/2" Water Closet valve with top spud connection
Z6152 – 1-1/2" Water Closet valve with back spud connection
Z6190 – 1-1/4" Urinal Valve with top spud connection
Z6195 – 3/4" Urinal Valve with top spud connection

FLOWS

-WS1 Low Consumption
1.0 Gal. for Urinal, 1.6 Gal. for Water Closet

-WS Water Saver
1.5 Gal. for Urinal, 3.5 Gal. for Water Closet
(Standard Flow)

-FF Full Flow
3.0 Gal. for Urinal, 4.5 Gal. for Water Closet

OPTIONS

____ **-BG** BioCare ADA Handle
____ **-J** Metal Oscillating ADA Handle
____ **-L** 1" [25] Metal Push Button
____ **-L3** 3" [76] Metal Push Button
____ **-YB** Sweat Solder Kit
____ Other

Models: Z6140
-WS1 (water saver) 1.6 Gal. Low Consumption

Models: Z6152
-WS1 (water saver) 1.6 Gal. Low Consumption

Models: Z6195 (3/4" urinal flush valve) shown,
Z6190 (1-1/4" urinal flush valve)
-WS1 (water saver) 1.0 Gal. Low Consumption

Aquaflush Installation Instructions

Important:

- All plumbing is to be installed according to state and local codes and regulations.
- Water supply lines need to allow proper water flow for each fixture.
- Flush all lines of any **debris** before making connections.
- Do not use pipe sealant or plumbing grease on any fitting other than the control stop inlet.

The Aquaflush valve is designed to operate under various water pressures with a recommended range between 10 and 100 psi (69 to 689 kPa). Each Zurn valve is tested for proper performance at the factory before being shipped. Consult the product pages of the catalog for available flow options.

Most low consumption valves (1.6 gallon) require a minimum of 25 psi running pressure through the valve to obtain proper evacuation.

When installing your quality Zurn valve, it is recommended that a smooth jawed wrench be used. This will prevent gouges and scratches on your valve.

Before starting the installation process, bore a 1-1/2" hole in wall for actuator, and a 2" hole for piping if required.

1. Install the Zurn Control Stop to the supply line with the water outlet positioned as needed. If using a sweat solder adaptor, sweat the adaptor to copper tubing before installing control stop.

1

2. Attach vacuum breaker tube and elbows to fixture with spud nut. *Note: When cutting scored pipe to fit, leave a minimum of 1-1/4" of scoring to ensure proper engagement with compression coupling.*

2

3. Remove the actuator end, coupling and mounting nut from the actuator sleeve and insert the sleeve through the 1-1/2" hole from the fixture side. Reinstall the mounting nut (hand tight), coupling and actuator end to the sleeve.

3

4. Insert the adjustable tail piece into the control stop while installing the valve. *Note: The adjustable tail piece allows for +/- 1/2" from the standard 4-3/4" centerline to centerline rough in.* Lubricate O-ring on adjustable tail piece with water if needed for installation. Secure the valve by hand tightening the actuation coupling nut and tail piece coupling nut. Position valve over flush tube and secure with the flush tube coupling nut. After aligning the valve securely tighten the actuator assembly, control stop and the flush tube with a wrench. *A smooth jaw wrench is recommended to protect special finishes.*

4

5. Shut off the control stop, remove the valve cover and remove the internal diaphragm kit. Reinstall the valve cover and open control stop to flush lines of debris. After the lines are clear, remove the cover and reinstall the diaphragm kit. Tighten the cover back on and adjust flush flow using the control stop. The stop cap screw cover should be replaced after final adjustments have been made.

5

Specifying "L" Dimension for Concealed Manual-Operated Flush Valves

Step 1: **Determine the applicable column** by locating the valve's 4-digit model number.

Step 2: **Determine the applicable row** by locating the correct wall thickness.
NOTE: For wall thicknesses not listed, locate and use the next largest size.

Step 3: **Order the applicable suffix** shown at the intersection of the row and column.

Example: For closet valve model number Z6152 and a wall thickness of 6", order: Z6152-LDIM9.

	Closets		Urinals	Combination Fixtures
Wall Thickness "W"	6140 6142 6143 6144 6150 6152 6154 6155 6605 6611	6681	6190 6195 6602 6602 6609 6613 6615	6601 6603 6616
1/4"	LDIM4	LDIM7	LDIM4	LDIM5
1"	LDIM4	LDIM7	LDIM4	LDIM5
2"	LDIM5	LDIM8	LDIM5	LDIM6
3"	LDIM6	LDIM9	LDIM6	LDIM7
4"	LDIM7	LDIM10	LDIM7	LDIM8
5"	LDIM8	LDIM11	LDIM8	LDIM9
6"	LDIM9	LDIM12	LDIM9	LDIM10
7"	LDIM10	LDIM13	LDIM10	LDIM11
8"	LDIM11	LDIM14	LDIM11	LDIM12
9"	LDIM12	LDIM15	LDIM12	LDIM13
10"	LDIM13	LDIM16	LDIM13	LDIM14

Z6199 Model Access Panel and Frame for Manual-Operated Concealed Flush Valves

Z6199-BX12

Z6199-BX15

Z6199-BX17

Z6199

Engineering Specification: Zurn Z6199 Access Panel and Frame for Manual-Operated Concealed Flush Valves –
The access panel and frame provide quick and simple access to in-wall concealed flush valves when a mechanical chase of adequate size is not available. The panel is #14 gage stainless steel and the frame is #18 gage stainless steel. Both have a satin finish. The assembly comes complete with (4) 1" [25 mm] vandal-proof screws. Specify Z6199-BX12 for 12" x 12", Z6199-BX15 for 15" x 15", or Z6199-BX17 for 13" x 17".

Product No.	Size	A	B	C	D	E	F
Z6199-BX12	12 x 12 [305x305]	12 [305]	12 [305]	13-1/2 [343]	13-1/2 [343]	5-1/2 [140]	5-1/2 [140]
Z6199-BX15	15 x 15 [381x381]	15 [381]	15 [381]	16-1/2 [419]	16-1/2 [419]	7 [178]	7 [178]
Z6199-BX17	13 x 17 [330x432]	17 [432]	13 [330]	14-1/2 [368]	18-1/2 [470]	6 [152]	8 [203]

SUFFIX OPTIONS (Check/specify appropriate options.)	
-SP	Solid Panel
-2VPS	2" [51mm] Long Vandal-Proof Screws

Aquaflush Repair Kits

Parts Identification

1. Optional 1" Metal Push Button
2. Optional 3" Metal Push Button
3. Handle
4. Actuator Rod
5. Handle O-Ring
6. Handle Spring
7. Handle Seal Retainer
8. Handle Seal
9. Gasket
10. Valve Body Cover
11. Plastic Cover
12. Trip Mechanism
13. Retainer Disk
14. Diaphragm
15. Flow Ring
16. Guide Ring
17. Cylinder Slide
18. Valve Body
19. Vacuum Breaker Friction Washer
20. Vacuum Breaker Insert
21. Vacuum Breaker Duckbill
22. Vacuum Breaker Tube
23. Vacuum Breaker Tube Nut
24. Coupling Nut
25. Spud Friction Washer
26. Spud Rubber Gasket
27. 90° Elbow
28. Tailpiece
29. Snap Ring
30. Tailpiece O-Ring
31. Locking Nut
32. Stop Body
33. Piston Seal
34. Piston
35. Stop Spring
36. Guide O-Ring
37. Piston Guide
38. Guide Holder
39. Adjusting Screw
40. Stop Cap
41. Wheel Handle
42. Wheel Handle Screw
43. Solid Gasket
44. Solid Handle Nut
45. Flanged/Scored Horizontal Tube
46. P30 Flat Gasket
47. Wall Escutcheon
48. Sleeve/Socket
49. Adjusting Nut
50. Optional Bell Nut
51. Handle Nut
52. Push Rod/Filler Rod
53. Spud Nut
54. 3/4" 90° Elbow
55. 3/4" Horizontal Tube
56. 3/4" Spud Nut
57. Spud Friction Washer
58. Spud Rubber Gasket

Covers and Repair Kits	Product No.
Outside Cover - RB – Item 10	P6000-LL-RB
Inside Cover – Item 11	P6000-L
Low Consumption Closet Kit – 1.6 gal. flush	P6000-ECR-WS1
Water Saving Closet Kit – 3.5 gal. flush	P6000-ECR-WS
Full Flow Closet Kit – 4.5 gal. flush	P6000-ECR-FF
Low Consumption Urinal Kit – 1.0 gal. flush	P6000-EUR-WS1
Water Saving Urinal Kit – 1.5 gal. flush	P6000-EUR-WS
Full Flush Urinal Kit – 3.0 gal. flush	P6000-EUR-FF

Repair Parts – Inside Parts	Product No.
Urinal Relief Valve – Item 12	P6000-EU13
Closet Relief Valve – Item 12	P6000-EC13

Aquaflush Rebuild Kits	Product No.
Closet and Urinal Rebuild Kits, Includes Items 4-9, 12-17, 19-21, 30	P6000-ECR-WS-RK
	P6000-ECR-WS1-RK
	P6000-EUR-WS-RK
	P6000-EUR-WS1-RK

Handle Assembly and Repair Kits	Product No.
Concealed Valve Actuator (Spec. Type and 'L' Dim.)	P6000-N-
	P6000-NL-
	P6000-NL3-
Handle Repair Kit (Side), Includes Items 4-9	P6000-NK
Handle Seal, Includes Item 8	P6000-M9
Handle Gasket, Includes Item 9	P6000-M10

Control Stop Repair Kit and Parts	Product No.
Control Stop Repair Kit for 1" and ¾", Includes Items 33-39	P6000-D-SD
Seal Seat for 1" and ¾", Includes Item 33	P6000-D42
Sweat Solder Connection	P6000-YBA

Adjustable Tailpieces	Product No.
Adjustable Tailpiece for Standard Flush Valve, Includes Items 28-31	P6000-J1-RB
Tailpiece Locking Ring, Includes Item 29	P6000-C30
Tailpiece O-Ring, Includes Item 30	P6000-C31
Coupling Nut, Includes Item 31	P6000-C32-RB

Flush Connections and Spud Coupling Kits	Product No.
Flush Tube Assembly for Concealed Flush Valves Refer to Section Q in Aquaparts Guide. Specify 'L' Dim. and valve used.	P6000-Q _ _-
Vacuum Breaker Repair Kit, Includes Items 19-21	P6000-B
Spud Coupling Assembly, Includes Items 56-58 Specify size.	P6000-HN

Aquaflush Trouble Shooting Guide

Problem	Cause*	Corrective Action*
Valve will not operate.	1.) Stop valve is closed. 2.) Supply valve is closed.	1.) Open stop valve. 2.) Open supply valve.
Insufficient volume of water to adequately siphon fixture.	1.) Stop valve is not open enough. 2.) Urinal trip mechanism installed in wrong kit, urinal or closet. 3.) Insufficient volume or pressure at supply.	1.) Open stop valve for desired volume of water. 2.) Replace urinal part with proper closet valve part. 3.) If gauges are not available to measure supply pressure or volume of water at the valve, completely remove the working parts and open the stop valve to allow water to pass through the empty valve. If the supply is adequate to siphon the fixture, the guide ring (#16) may be removed from the guide assembly to provide additional flow. Should this prove unsatisfactory, steps should be taken to increase the pressure and/or supply.
Flush valve shuts off too quickly.	1.) Damaged or punctured diaphragm. 2.) Enlarged by-pass orifice.	1.) Install new P6000-EUR replacement kit to remedy the problem. (#12 thru #17) 2.) Install new P6000-ECR, P6000-EUR replacement kit to remedy the problem. (#12 thru #17)
Valve is short flushing.	1.) Cylinder guide assembly and diaphragm assembly are not tight. 2.) Enlarged by-pass orifice. 3.) Urinal trip mechanism (black #12) in closet flush valves.	1.) Screw the two assemblies hand tight. 2.) Install new P6000-ECR, P6000-EUR replacement kit to remedy the problem. (#12 thru #17) 3.) Install closet trip mechanism (white #12).
Valve is flushing too long or not shutting off.	1.) Trip mechanism not seating properly due to foreign material between trip mechanism and retainer disc. 2.) By-pass orifice is plugged or partially plugged. 3.) Line pressure is not adequate to force trip mechanism to seal. 4.) Cracked cover.	1.) Disassemble parts and rinse thoroughly. 2.) Examine by-pass orifice and clean if necessary being certain not to enlarge orifice opening. 3.) Pressure is inadequate or has dropped below minimum operating range. Steps should be taken to increase the line pressure. 3.) Replace cover with new one (#11).
Water splashes out of fixture.	1.) Supply volume is more than is necessary. 2.) Lime accumulation on vortex or spreader holes of fixture.	1.) Adjust downward on control stop. 2.) Remove the lime build up.
Flush is not considered quiet.	1.) Control stop may not be adjusted for quiet operation. 2.) Fixture may be contributing to noise. 3.) Piping system may be source of noise.	1.) Adjust the control stop for quiet operation keeping in mind the fixture evacuation requirements. 2.) Check noise created by fixture by placing a cover over the bowl opening to separate valve noise from bowl noise. If it is determined the fixture is too noisy consult with fixture manufacturer. 3.) High pressure in the system can sometimes be controlled by the stop valve. Other sources of noise may be the absence of air chambers and shock arrestors, loose pipes, improper size pipes, etc. In these cases the building engineer should be consulted.
Chattering noise in flush valve.	1.) Segment diaphragm (#14) has been installed upside down. 2.) The inside cover has been distorted by freezing or abuse.	1.) Reposition segment diaphragm as instructed by the markings on the diaphragm (”this side down”). 2.) Replace both inside plastic cover and outside brass cover.
Handle assembly leaking.	1.) Handle assembly is not tight.	1.) Tighten handle assembly.

Care of Chrome-Plated Surfaces
The suggested cleaning of chrome-plated surfaces is simply to clean them with mild soap and water, then dry. Commercial cleaning compounds are never recommended.

Seasonal Use
Valves used in installations subject to shut down because of cold and freezing conditions should be maintained in the following manner. After the main supply has been shut off and the water drained from the system, remove the stop valve cap and stop valve internals to allow the water to drain from the flush valve itself.

*See previous page for numerical references.

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Aquaflush/Sloan Regal® Flush Valves Comparison Guide

Exposed Flush Valves For Water Closets

Zurn	Sloan
Z6000	Regal 110
Z6000PL	Regal 110PRO
Z6000-WS1	Regal 111
Z6000PL-WS1	Regal 111PRO
Z6014	Regal 114
Z6000-2	Regal 115
Z6000PL-2	Regal 115PRO
Z6000-3	Regal 116
Z6000PL-3	Regal 116PRO
Z6017	Regal 117
Z6010	Regal 120
Z6010PL	Regal 120PRO
Z6010-1	Regal 121
Z6010PL-1	Regal 121PRO
Z6010-2	Regal 122
Z6010PL-2	Regal 122PRO

Exposed Flush Valves For Urinals

Zurn	Sloan
Z6001	Regal 180
Z6001PL	Regal 180PRO
Z6001-WS1	Regal 180-1
Z6001PL-WS1	Regal 180-1PRO
Z6081	Regal 181
Z6003	Regal 186
Z6003PL	Regal 186PRO
Z6003-WS1	Regal 186-1
Z6003-WS1-YB-YC	Regal 187
Z6087	Regal 187
Z6089	Regal 189

Flush Valves For Service Sinks

Zurn	Sloan
Z6017	Regal 117
Z6155	Regal 155

Flush Valves With Bedpan Washers

Zurn	Sloan
Z6000-BWN	BPW 1000
Z6000PL-BWN	BPW 1000PRO
Z6010-BWN	BPW 1010
Z6011-BWN	BPW 1150
Z6020-BWN	BPW 1020
Z6030-BWN	BPW 1030
Z6040-BWN	BPW 1040
ZH6000-BWN-FW	BPW 9000

Concealed Flush Valves For Water Closets

Zurn	Sloan
Z6140	Regal 140
Z6140-YB	Regal 140
Z6142	Regal 142
Z6142-YB	Regal 142
Z6143	Regal 143
Z6143-YB	Regal 143
Z6144	Regal 144
Z6144-YB	Regal 144
Z6150	Regal 150
Z6150-YB	Regal 150
Z6152	Regal 152
Z6152-YB	Regal 152
Z6154	Regal 154
Z6154-YB	Regal 154
Z6155	Regal 155
Z6155-YB	Regal 155

Concealed Flush Valves For Urinals

Zurn	Sloan
Z6190	Regal 190
Z6190-YB	Regal 190
Z6192	Regal 192
Z6195	Regal 195
Z6195-YB	Regal 195
Z6197	Regal 197

Prison Flush Valves

Zurn	Sloan
Z6601	Regal 601
Z6601-YB	Regal 601
Z6603	Regal 603
Z6603-YB	Regal 603
Z6606	Regal 606
Z6606-YB-YC	Regal 606
Z6609	Regal 609
Z6609-YB	Regal 609
Z6610	Regal 610
Z6610-YB-YC	Regal 610
Z6611	Regal 611
Z6611-YB	Regal 611
Z6613	Regal 613
Z6613	Regal 613
Z6614	Regal 614
Z6614-YB-YC	Regal 614
Z6615	Regal 615
Z6615-YB	Regal 615
Z6616	Regal 616
Z6616-YB	Regal 616
Z6681	Regal 681

Hydraulic Flush Valves For China Fixtures

Zurn	Sloan
ZH6000	Regal 910
ZH6017	Regal 917
ZH6010	Regal 920
ZH6000-BWN	Regal BPW-9000
ZH6001	Regal 980
ZH6003	Regal 986
ZH6140	Regal 940
ZH6142	Regal 942
ZH6150	Regal 950
ZH6152	Regal 952
ZH6190	Regal 990
ZH6195	Regal 995

Hydraulic Flush Valves For Prison Fixtures

Zurn	Sloan
ZH6603	Regal 9603
ZH6000	Regal 910
ZH6609	Regal 9609
ZH6613	Regal 9613
ZH6614	Regal 986

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AquaVantage and Aquaflush Variations and Accessories

Suffix	Description	Suffix	Description	Suffix	Description
-A	Inlet on right side of flush valve	-L3	3" [76mm] Push button	-X	Valve body only with internals (Ex.: Z6003-X)
-ADA	Low force/ADA compliant handle	-M	Casing kit for supply pipe – specify length		
-B	Inlet on back of flush valve			-YB	Sweat solder kit
-C	Inlet on left hand side of flush valve	-N	Top spud connection for concealed flush valve	-YC	Cast wall flange
-D1	1" Angle stop			-YH	One wall bumper
-D3	3/4" Angle stop	-O10	1" Offset flush connection	-YI	Two wall bumpers
-E	1" Straight stop	-O15	1-1/2" Offset flush connection	-YJ	Split ring pipe support
-F	Screwdriver stop	-O20	2" Offset flush connection	-YK	Solid ring pipe support
-FF	Full flow flush 4.5 gallon for water closet 3.0 gallon for urinals	-P	Elbow flush connection for back spud closet	-YO	Bumper on angle stop
		-R	1-1/4" Female I.P. union outlet	-WS	Water saving flush 3.5 gallon for water closet 1.5 gallon for urinals
-G	Handle on left side of flush valve	-S	2" x 1-1/2" Spud reducer		
-H	Handle on front of flush valve	-T	1-1/2" Flush connection	-WS1	Low consumption flush – 1.6 gallon for water closets 1.0 gallon for urinals
-I	Handle on right side of flush valve	-U	1-1/4" Flush connection		
-J	Metal oscillating handle	-V	1" O.D. flush connection		
-K	Wheelhandle stop	-VC	Vandal-resistant control stop cover	-VP	Vandal-resistant control stop screw
-L	1" [25mm] Push button	-W	3/4" O.D. flush connection		

-ADA

-L

-L3

-O

-VC

-VP

-YC

-YH

-YI

-YK

-YJ

-YO

-YBYC

-YBA

-YE

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Comparison Suffix List

Zurn	Sloan	Zurn Description
A	A	Inlet on right side of flush valve (standard)
ADA		Low force handicap handle
B	B	Inlet on back of flush valve
BB		Battery backup
BG	BG	BioCare coating
BW		Bedpan washer with flush valve
C	C	Inlet on left hand side of flush valve
CP		Chrome plastic E-Z Flush
CPM		Chrome metal E-Z Flush
D1		1" Angle stop
D3		3/4" Angle stop
DV		Bedpan diverter valve only
E	E	1" Straight stop
F	F	Screwdriver stop
FW	FW	Hydraulic actuation on fixture wall
G	G	Handle on left side of flush valve
H	H	Handle on front of flush valve
HP6		6VDC hard wire power converter
I	I	Handle on right side of flush valve
J	J	Metal oscillating handle
K	K	Wheel handle stop
L	L	1" Push button
L3	L3	3" Push button
M	M	Casing kit for supply pipe – specify length, 7" std.
MB	MBFW	Hydraulic actuation metal button fixture wall
MBP		Hydraulic actuation metal button for penal application
MJ		Mini junction box
N		Top spud connection for concealed flush valves
O	O	Offset flush connection (specify 1", 1-1/2", 2" offset)
OB		Override button
P	P	Elbow flush connection for back spud closet
PB		Decorative brass finish
PC6		6VDC plug in power converter
R	R	1-1/4" Female I.P. union outlet
S	S	2" x 1-1/2" Spud reducer
SW	SW	Hydraulic actuation on side wall
T	T	1-1/2" Flush connection
TP		Trap primer connection (-TPE Trap Primer Elbow for Concealed Valve)
U	U	1-1/4" Flush connection
V	V	1" O.D. Flush connection
VC		Vandal-resistant control stop cover
VP		Vandal-resistant control stop screw
W	W	3/4" O.D. flush connection
WS	-3	3 Gallon closet flush valve
WS1	-1	1 Gallon urinal flush valve for low consumption urinals
WS1		1.6 Gallon closet flush valve for low consumption water closet
X		Valve body only with internals (Ex. Z6003-X)
Y		Flush valve less control stop
YA	YA	Nickel silver handle
YB	YB	Sweat solder kit
YC	YC	Cast wall flange
YG	YG	Extended bumper on control stop
YH	YH	One wall bumper
YI	YI	Two wall bumpers
YJ	YJ	Split ring pipe support
YK	YK	Solid ring pipe support
YL	YL	Solid ring pipe support with bumper
YO	YO	Bumper on angle stop
Z		Flush valve less flush connection
-20	-11	Extended flush for washdown urinal

Notes

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ZURN®

AquaSense® AV

RetroFlush Battery Powered Sensor Flush Valves

ZR Series
ZRK Series

RetroFlush®

Building owners and maintenance staff alike have constantly faced the problems public restrooms present: user abuse, odor, unflushed fixtures, excessive water consumption and the increasing cost of chemicals and cleansers.

These problems can now be controlled by the use of the Zurn RetroFlush . . . a sensor-operated, battery-powered retrofit kit.

RetroFlush upgrades hand-operated flush valves to hands-free automatic operation in minutes.

Shut off the water of your present hand-operated flush valve. Remove the handle assembly and diaphragm kit. Replace them with the RetroFlush Kit, and you have just converted your hand-operated flush valve into a sanitary, hands-free, sensor-operated unit.

The general public's desire for increased sanitation in public restrooms, such as those of restaurants, government buildings, movie theaters, shopping malls, and amusement parks, made Zurn engineers aware of the need for sensor retrofit kits for those flush valves already in use. Because of the installation and renovation cost to retrofit restrooms with conventional sensor flush valves, many restrooms needing automatic flushing would never be converted. But now all that has changed. Within a matter of a few minutes, any building owner can have a manual flush valve changed to a fully automatic, hands-free sensor flushometer with the use of the Zurn RetroFlush Kit.

The Zurn RetroFlush Kit answers the problems of automatic flushing and no-touch sanitary operation. It also addresses the issues of water conservation, ADA legislation, maintenance cost due to abuse, a safer environment for health care and food service industries, and the need for building owners to provide hygienic and odor-free restrooms.

The ease of changeover is amazing. The Zurn RetroFlush Kit is pre-assembled, eliminating the need of complicated instructions. The RetroFlush Kit is powered by four AA alkaline batteries, and together with the sensor unit, is designed to give thousands of automatic sensor-ready flushes. And, once your RetroFlush Kit is installed, the battery case is designed so you will never have to shut off the water to change the batteries. Don't wait a minute longer – call your nearest Zurn representative today for more information or a demonstration of the Zurn RetroFlush Kit. You have to see it.

Upgrades Manual Flush Valves To Sensor Operation

RetroFlush Kit Features

- Converts handle-operated valve to sensor operation in less than five minutes.
- Will operate at all room light levels.
- Operates on four AA alkaline batteries with a battery life expectancy up to three years under normal use.
- Sensor and battery case completely water-resistant.
- Batteries serviced without the need to shut off the water.
- Range adjustment light with renew operation reset switch.
- Replaceable tempered glass lens, scratch and chemical resistant.
- Attractive, tamper-resistant metal, chrome-plated sensor housing and battery pack.
- No need for special tools to change over retrofit kit.
- Adjustable sensor angle for special user applications.
- Low battery indication light.
- Function notice light indicating an object is interfering with the sensor's operation.
- Servicing of flush valve is standard without the need to remove the sensor and battery pack.
- Sensor fully operational from minimum to maximum settings.
- Replaceable internal battery case.
- Special features include:
  Magnet override
  - Switchable automatic 24-hour flush.
  - Switchable courtesy flush
  - Switchable special water saver urinal features
- Filtered solenoid operation.
- Retrofit onto Zurn and Sloan diaphragm-operated flush valves.
- Zurn quality and dependability.
- Chloramine resistant filtered solenoid operation.
- Angled sensor to eliminate toilet seat interference.

All metal construction makes RetroFlush the most popular retrofit in the industry today. Unlike plastic housing kits, our all-metal polished chrome design offers years of vandal-resistant operation while complementing a good looking installation.

Choose The Product That Is Right For Your Applications. Either A Complete Valve Or Kits To Upgrade Your Existing Flush Valve.

All RetroFlush Valves Feature The Following:

- Enhanced Performance
- Chemical Resistant
- Clog-Resistant By-Pass
- Interchangeability

Zurn Z6000AV Model flush valves feature the chemical and clog resistant revolutionary by-pass diaphragm kit. The diaphragm kit is designed to eliminate the common problems that are associated with flush valve installations such as fixture evacuation, run-on, degradation of rubber components, and sediment. The chemical and clog resistant by-pass kit now makes these problems a thing of the past. It provides for greater performance, ensures reliability, and greatly extends the operating life of the internal components.

Zurn ZR RetroFlush Series Flush Valves

ZR6000AV	Sensor Flush Valve With Override Button For Water Closet (3.5 gallon)
ZR6000AV-WS1	Sensor Flush Valve With Override Button For Water Closet (1.6 gallon)
ZR6000AV-2	Sensor Flush Valve With Override Button For Water Closet (3.5 gallon)
ZR6000AV-3	Sensor Flush Valve With Override Button For Water Closet (3.5 gallon)
ZR6000AV-BW	Sensor Flush Valve With Override Button For Water Closet (3.5 gallon)

Zurn ZRK Retroflush Kits

with chrome metal housing retrofits to Zurn and Sloan Royal® and Regal® flush valves

ZRK-C-1.6	Sensor Kit For Water Closet (1.6 gallon)
ZRK-C-3.5	Sensor Kit For Water Closet (3.5 gallon)
ZRK-C-4.5	Sensor Kit For Water Closet (4.5 gallon)
ZRK-U-1.0	Sensor Kit For Urinal (1.0 gallon)
ZRK-U-1.5	Sensor Kit For Urinal (1.5 gallon)
ZRK-U-3.0	Sensor Kit For Urinal (3.0 gallon)

ZR6001AV	Sensor Flush Valve With Override Button For Urinal (3.0 gallon)
ZR6001AV-WS	Sensor Flush Valve With Override Button For Urinal (1.5 gallon)
ZR6001AV-WS1	Sensor Flush Valve With Override Button For Urinal (1.0 gallon)
ZR6003AV	Sensor Flush Valve With Override Button For Urinal (1.5 gallon)
ZR6003AV-WS1	Sensor Flush Valve With Override Button For Urinal (1.0 gallon)

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Zurn Industries, LLC Printed in U.S.A. Form No. FV225, Rev. 5/07

RetroFlush® Retrofit Kits and Features

Fixture Type	Gallons Per Flush	Retrofit Model Number
Full Flow Water Closet	4.5	ZRK-C-4.5
Water Saving Closet	3.5	ZRK-C-3.5
Low Consumption Closet	1.6	ZRK-C-1.6
Full Flow Urinal	3.0	ZRK-U-3.0
Water Saving Urinal	1.5	ZRK-U-1.5
Low Consumption Urinal	1.0	ZRK-U-1.0

Zurn RetroFlush Kit for Closet Application with Override Button Illustrated

Engineering Specification: Zurn ZRK Series Exposed Aquaflush Sensor Retrofit Kits are equipped with an infrared sensor, a 6VDC solenoid, and integral battery holder for four AA alkaline batteries. The unit comes complete with tempered glass replaceable lens, four AA batteries, switchable courtesy flush, switchable automatic 24-hour flush, maintenance override, range adjustment light, low battery indicator, abnormal reflection indicator, chrome-plated metal housing, field adjustable range, and infrared beam tilt adjustment. Specify proper kit from table above.

Courtesy Flush: The sensor will provide a courtesy flush two seconds after a person is first detected. The courtesy flush freshens the bowl and removes any residue from the fixture. The main flush will occur when the user steps away from the fixture. The courtesy flush feature can be manually switched on or off in the field, depending on owner preference.

Automatic 24-Hour Flush: The sensor will provide an automatic flush 24 hours after the last user. The automatic flush feature can be manually switched on or off in the field, depending on owner preference.

Maintenance Override: An on-demand magnetic override system enables the initiation or prevention of flushing during maintenance or cleaning.

Indicator Light: The sensor unit includes a red indicator light having three functions: 1) Range Adjustment: For the first ten minutes of operation, the red light will flash when an object is detected. 2) Low Battery Indication: When the batteries have reached the caution level, the red light will flash when an object is detected. 3) Abnormal Reflection Indicator: When a reflective surface is present for longer than 30 minutes, the red light will flash indicating that an object is being continuously detected.

Adjustable Range: The detection distance is field adjustable from 12 inches to 60 inches. Range distance is easily set by the use of the red indicator light.

To Change The Sensor Setting: Remove the side cover of the RetroFlush sensor housing by use of the vandal-resistant hex wrench. Review the setting of switch number three on the side of the sensor case (see table). If the switch is not already in the appropriate setting, move the switch into the proper setting. Once the switch setting is completed, press the reset button and replace the RetroFlush sensor housing cover.

Note: The retrofit kit reuses the existing stop valve, main valve body, and flush tube. For a new main valve body with the sensor factory assembled, specify the ZR6000-X model flush valve. For a complete new valve, including stop valve and flush tube, specify the ZR6000AV model flush valve.

Instructions for RetroFlush® Changeable Volume Control

The Zurn RetroFlush® changeable volume control allows altering the flush volume of the RetroFlush Kit to one of six engineered flush volumes designed to satisfy evacuation requirements of new or existing china fixtures, both water closet and urinal.

Volume control is achieved with various combinations of three items: volume control, flow ring and sensor setting (see photograph at right).

	Water Closet			Urinal		
	1.6	3.5	4.5	1.0	1.5	3.0
Flow Ring						
Volume Control	Yellow	White	Black	Blue	Green	Orange
Sensor Switch #3	On	Off		On		Off

To Change The Volume Control

Turn off the water at the control stop and remove the main valve cap and internal blue plastic cap. Locate the volume control in the center of the RetroFlush Diaphragm Kit. Remove the volume control by holding the diaphragm kit in place and pulling up on the volume control. Select the new volume control (see table) and insert it into the RetroFlush Diaphragm Kit by pressing it into position. Reassemble internal plastic cap.

To Change The Sensor Setting

Remove the side cover of the RetroFlush sensor housing by use of the vandal-resistant hex wrench. Review the setting of switch number three on the side of the sensor case (see table). If the switch is not already in the appropriate setting, move the switch into the proper setting. Once the switch setting is completed, press the reset button and replace the RetroFlush sensor housing cover.

To Change The Flow Ring

Turn off the water at control stop and remove the main valve cap, internal blue plastic cap, and diaphragm kit. Locate the flow ring under the diaphragm. Remove the flow ring by holding the blue plastic cylinder slide securely and rotating the brass diaphragm disc counterclockwise. Remove the existing flow ring from the cylinder slide, and replace with one from the new configuration (see table).

For additional information on the operation and installation of the Zurn RetroFlush Kit, see RetroFlush Installation Instructions, Form No. FV51; AquaSense "A" Installation Instructions, Form No. FV62; or RetroFlush Parts Identification and Maintenance Guide, Form No. FV68.

Form No. FV224, 8/01

Exposed ZR6000AV Model

Sensor-Operated, Battery-Powered Flush Valves For Water Closets

Flow Options

- ☐ **-WS1** 1.6 Gal. Low Consumption Flush
- ☐ **-FF** 4.5 Gal. Full Flush
- ☐ **Standard Flush** 3.5 Gallons Per Flush

Suffix Options (Check/Specify Appropriate Options)

- _____ **-YJ** Split Ring Pipe Support
- _____ **-YK** Solid Ring Pipe Support
- _____ **-YO** Bumper On Angle Stop
- _____ Other

ENGINEERING SPECIFICATION: ZURN ZR6000AV AquaSense® 'AV' Exposed Closet Flush Valve – Exposed, quiet diaphragm-type, chrome-plated, flushometer valve with a polished exterior. Complete with Zurn's TPE chloramine resistant diaphragm with a clog resistant by-pass. The valve incorporates a 6VDC solenoid valve, a battery-powered automatic sensor with manual override push button, a brass electronics housing with polished chrome-plated exterior, high back pressure vacuum breaker, one-piece hex coupling nut, adjustable tailpiece, spud coupling and flange for top spud connection. Control stop has internal siphon-guard protection, vandal-resistant stop cap, sweat solder kit, and a cast wall flange with setscrew. Internal seals are made of chloramine resistant materials.

This space is for Architectural/Engineering Approval

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Rev. D
Dwg. No. 65380
Date: 1/26/04
Product No. ZR6000AV

ZURN®

Exposed ZR6000AV-1 Model

Sensor-Operated, Battery-Powered Flush Valve For Water Closets

Flow Options

- ☐ **-WS1** 1.6 Gal. Low Consumption Flush
- ☐ **-FF** 4.5 Gal. Full Flush
- ☐ **Standard Flush** 3.5 Gallons Per Flush

Suffix Options (Check/Specify Appropriate Options)

- _____ **-YJ** Split Ring Pipe Support
- _____ **-YK** Solid Ring Pipe Support
- _____ **-YO** Bumper On Angle Stop
- _____ Other

ENGINEERING SPECIFICATION: ZURN ZR6000AV-1 AquaSense® 'AV' Exposed Closet Flush Valve – Exposed, quiet diaphragm-type, chrome-plated, flushometer valve with a polished exterior. Complete with Zurn's TPE chloramine resistant diaphragm with a clog resistant by-pass. The valve incorporates a 6VDC solenoid valve, a battery-powered automatic sensor with manual override push button, a brass electronics housing with polished chrome-plated exterior, high back pressure vacuum breaker, one-piece hex coupling nut, adjustable tailpiece, spud coupling and flange for top spud connection. Control stop has internal siphon-guard protection, vandal-resistant stop cap, sweat solder kit, and a cast wall flange with setscrew. Internal seals are made of chloramine resistant materials.

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Rev. C
Dwg. No. 65427
Date: 1/26/04
Product No. ZR6000AV-1

Exposed ZR6000AV-2 Model

Sensor-Operated, Battery-Powered Flush Valve For Water Closets

Flow Options

- ☐ **-WS1** 1.6 Gal. Low Consumption Flush
- ☐ **-FF** 4.5 Gal. Full Flush
- ☐ **Standard Flush** 3.5 Gallons Per Flush

Suffix Options (Check/Specify Appropriate Options)

- _____ **-YJ** Split Ring Pipe Support
- _____ **-YK** Solid Ring Pipe Support
- _____ Other

ENGINEERING SPECIFICATION: ZURN ZR6000AV-2 AquaSense® 'AV' Exposed Closet Flush Valve – Exposed, quiet diaphragm-type, chrome-plated, flushometer valve with a polished exterior. Complete with Zurn's TPE chloramine resistant diaphragm with a clog resistant by-pass. The valve incorporates a 6VDC solenoid valve, a battery-powered automatic sensor with manual override push button, a brass electronics housing with polished chrome-plated exterior, high back pressure vacuum breaker, one-piece hex coupling nut, adjustable tailpiece, spud coupling and flange for top spud connection. Control stop has internal siphon-guard protection, vandal-resistant stop cap, sweat solder kit, and a cast wall flange with setscrew. Internal seals are made of chloramine resistant materials.

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Rev. C
Dwg. No. 65428
Date: 1/26/04
Product No. ZR6000AV-2

ZURN®

Exposed ZR6000AV-3 Model

Sensor-Operated, Battery-Powered Flush Valve For Water Closets

Flow Options

- ☐ **-WS1** 1.6 Gal. Low Consumption Flush
- ☐ **-FF** 4.5 Gal. Full Flush
- ☐ **Standard Flush** 3.5 Gallons Per Flush

Suffix Options (Check/Specify Appropriate Options)

- _____ **-YJ** Split Ring Pipe Support
- _____ **-YK** Solid Ring Pipe Support
- _____ Other

ENGINEERING SPECIFICATION: ZURN ZR6000AV-3 AquaSense® 'AV' Exposed Closet Flush Valve – Exposed, quiet diaphragm-type, chrome-plated, flushometer valve with a polished exterior. Complete with Zurn's TPE chloramine resistant diaphragm with a clog resistant by-pass. The valve incorporates a 6VDC solenoid valve, a battery-powered automatic sensor with manual override push button, a brass electronics housing with polished chrome-plated exterior, high back pressure vacuum breaker, one-piece hex coupling nut, adjustable tailpiece, spud coupling and flange for top spud connection. Control stop has internal siphon-guard protection, vandal-resistant stop cap, sweat solder kit, and a cast wall flange with setscrew. Internal seals are made of chloramine resistant materials.

This space is for Architectural/Engineering Approval

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Rev. C
Dwg. No. 65429
Date: 1/28/04
Product No. ZR6000AV-3

Exposed ZR6001AV Model

Sensor-Operated, Battery-Powered Flush Valve For 1-1/4" Urinals

Flow Options

- ☐ **-WS1** 1.0 Gal. Low Consumption Flush
- ☐ **-WS** 1.5 Gal. Water Saver
- ☐ **Standard Flush** 3.0 Gallons Per Flush

Suffix Options (Check/Specify Appropriate Options)

- _____ **-YJ** Split Ring Pipe Support
- _____ **-YK** Solid Ring Pipe Support
- _____ Other

ENGINEERING SPECIFICATION: ZURN ZR6001AV AquaSense® 'AV' Exposed 1-1/4" [32] Urinal Flush Valve – Exposed, quiet diaphragm-type, chrome-plated, flushometer valve with Zurn's TPE, chloramine resistant diaphragm with a clog resistant by-pass. The valve incorporates a 6VDC solenoid valve, a battery-powered automatic sensor, a brass electronics housing with polished chrome-plated exterior, high back pressure vacuum breaker, hex coupling nut and adjustable tail-piece, spud coupling and flange for top spud connection. Control stop has internal siphon-guard protection, vandal-resistant cap, sweat solder kit, and a cast wall flange with setscrew. Internal seals are made of chloramine resistant materials.

This space is for Architectural/Engineering Approval

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Rev. E
Dwg. No. 65425
Date: 2/5/04
Product No. ZR6001AV

Exposed ZR6003AV Model

Sensor-Operated, Battery-Powered Flush Valve For 3/4" Urinals

Flow Options

☐ **-WS1** 1.0 Gal. Low Consumption Flush
☐ **Standard Flush** 1.5 Gallons Per Flush

Suffix Options (Check/Specify Appropriate Options)

_____ **-YJ** Split Ring Pipe Support
_____ **-YK** Solid Ring Pipe Support
_____ Other

ENGINEERING SPECIFICATION: ZURN ZR6003AV AquaSense® 'AV' Exposed 3/4" [19] Urinal Flush Valve – Exposed, quiet diaphragm-type, chrome-plated, flushometer valve with a polished exterior. Complete with Zurn's TPE chloramine resistant diaphragm with a clog resistant by-pass. The valve incorporates a 6VDC solenoid valve, a battery-powered automatic sensor, a brass electronics housing with polished chrome-plated exterior, high back pressure vacuum breaker, one-piece hex coupling nut, adjustable tailpiece, spud coupling and flange for top spud connection. Control stop has internal siphon-guard protection, vandal-resistant stop cap, sweat solder kit, and a cast wall flange with setscrew. Internal seals are made of chloramine resistant materials.

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Rev. E
Dwg. No. 65426
Date: 1/29/04
Product No. ZR6003AV

ZRK-C
RetroFlush Retrofit Kit For Closet Valves

Suffix Options (Check/Specify Appropriate Options)

_____	**-1.6**	1.6 Gallons Per Flush
_____	**-3.5**	3.5 Gallons Per Flush
_____	**-4.5**	4.5 Gallons Per Flush
_____		Other

ENGINEERING SPECIFICATION: ZURN ZRK-C RetroFlush AquaSense® 'AV' Retrofit Kit – The AquaSense RetroFlush Kit is equipped with an infrared sensor, a DC solenoid, and integral battery holder for four AA alkaline batteries. The unit comes complete with tempered glass replaceable lens, a manual override push button, four AA batteries, switchable courtesy flush, switchable automatic 24-hour flush, maintenance override, range adjustment light, low battery indicator, abnormal reflection indicator, chrome-plated metal housing, field adjustable range, and infrared beam tilt adjustment. The kit also includes a filtered riser tube and a TPE chemical and clog resistant diaphragm kit.

This space is for Architectural/Engineering Approval

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Rev. B
Dwg. No. 65524
Date: 1/26/04
Product No. ZRK-C

ZURN®

AquaSense® AV Model

ZRK-U
RetroFlush Retrofit Kit
For Urinal Valves

Suffix Options (Check/Specify Appropriate Options)

_____	**-1.0**	1.0 Gallons Per Flush
_____	**-1.5**	1.5 Gallons Per Flush
_____	**-3.0**	3.0 Gallons Per Flush
_____		Other

ENGINEERING SPECIFICATION: ZURN ZRK-U RetroFlush AquaSense® 'AV' Retrofit Kit – The AquaSense RetroFlush Kit is equipped with an infrared sensor, a DC solenoid, and integral battery holder for four AA alkaline batteries. The unit comes complete with tempered glass replaceable lens, four AA batteries, maintenance override, switchable courtesy flush, switchable automatic 24-hour flush, range adjustment light, low battery indicator, abnormal reflection indicator, chrome-plated metal housing, field adjustable range, and infrared beam tilt adjustment. The kit also includes a filtered riser tube and a TPE chemical and clog resistant diaphragm kit.

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Rev. B
Dwg. No. 65525
Date: 1/26/04
Product No. ZRK-U

AquaSense AV Retrofit Kits and Battery Flush Valves Comparison Guide

RetroFlush Retrofit Kits

Zurn	Sloan*
ZRK-C-4.5	RESS-CF-4.5C-MC
ZRK-C-3.5	RESS-CF-3.5C-MC
ZRK-C-1.6	RESS-CF-1.6C-MC
ZRK-U-3.0	RESS-3.0U-MC
ZRK-U-1.5	RESS-1.5U-MC
ZRK-U-1.0	RESS-1.0U-MC

*Sloan suffix -MC – metal cover.

E-Z Flush Retrofit Kit – Chrome Metal

Zurn	Sloan*
ZERK-C-CPM	RESS-CF-4.5C-MC
ZERK-C-CPM	RESS-CF-3.5C-MC
ZERK-C-CPM	RESS-CF-1.6C-MC
ZERK-C-CPM	RESS-3.0U-MC
ZERK-C-CPM	RESS-1.5U-MC
ZERK-C-CPM	RESS-1.0U-MC

*Sloan suffix -MC – metal cover.

E-Z Flush Retrofit Kits – Chrome Plastic

Zurn	Sloan**
ZERK-C-CP	RESS-CF-4.5C RESS-CF-3.5C RESS-CF-1.6C
ZERK-C-CP	RESS-3.0U RESS-1.5U RESS-1.0U

**Sloan plastic cover.

RetroFlush Complete Flush Valves For Water Closets

Zurn	Sloan*
ZR6000AV	Royal 8110-MC
ZR6000AV-WS1	Royal 8111-MC
ZR6000AV-2	Royal 8115-MC
ZR6000AV-3	Royal 8116-MC
ZR6000AV-BWN	Royal BPW-8000-MC

*Sloan suffix -MC – metal cover.

RetroFlush Complete Flush Valves For Urinals

Zurn	Sloan*
ZR6001AV	Royal 8180-MC
ZR6001AV-WS1	Royal 8180-1.0-MC
ZR6003AV	Royal 8186-MC
ZR6003AV-WS1	Royal 8186-1-MC

*Sloan suffix -MC – metal cover.

E-Z Flush Complete Flush Valves For Water Closets – Chrome Metal

Zurn	Sloan*
ZER6000AV-CPM	Royal 8110-MC
ZER6000AV-WS1-CPM	Royal 8111-MC
ZER6000AV-2-CPM	Royal 8115-MC
ZER6000AV-3-CPM	Royal 8116-MC
ZER6000AV-BWN-CPM	Royal BPW-8000-MC

*Sloan suffix -MC – metal cover.

E-Z Flush Complete Flush Valves For Water Closets – Chrome Plastic

Zurn	Sloan**
ZER6000AV-CP	Royal 8110
ZER6000AV-WS1-CP	Royal 8111
ZER6000AV-2-CP	Royal 8115
ZER6000AV-3-CP	Royal 8116
ZER6000AV-BWN-CP	Royal-BPW-8000

**Sloan plastic cover.

ZURN INDUSTRIES, LLC *COMMERCIAL BRASS OPERATION, 5900 ELWIN BUCHANAN DRIVE, SANFORD, NC 27330*
PHONE: 1-800-997-3876, FAX: 919-775-3541, WEBSITE: www.zurn.com
IN CANADA: ***ZURN INDUSTRIES LIMITED*** *3544 NASHUA DRIVE, MISSISSAUGA, ONTARIO L4V 1L2, PHONE: 905-405-8272, FAX: 905-405-1292*

Notes

ZURN INDUSTRIES, LLC *COMMERCIAL BRASS OPERATION, 5900 ELWIN BUCHANAN DRIVE, SANFORD, NC 27330*
PHONE: 1-800-997-3876, FAX: 919-775-3541, WEBSITE: www.zurn.com
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AquaSense® AV ZR Series

Sensor-Operated, Battery-Powered Flushometer

Installation, Operation, Maintenance, and Parts Manual

Patented and Patents Pending

ZR6000AV

ZR6003AV

Sensor-Operated, Battery-Powered Closet/Urinal Systems

ZR6000AV
ZR6000AV-WS
ZR6000AV-WS1
ZR6001AV
ZR6001AV-WS
ZR6001AV-WS1
ZR6003AV-WS
ZR6003AV-WS1

LIMITED WARRANTY

All goods sold hereunder are warranted to be free from defects in material and factory workmanship for a period of three years from the date of purchase. Decorative finishes warranted for one year. We will replace at no cost goods that prove defective provided we are notified in writing of such defect and the goods are returned to us prepaid at Sanford, NC, with evidence that they have been properly maintained and used in accordance with instructions. We shall not be responsible for any labor charges or any loss, injury or damages whatsoever, including incidental or consequential damages. The sole and exclusive remedy shall be limited to the replacement of the defective goods. Before installation and use, the purchaser shall determine the suitability of the product for his intended use and the purchaser assumes all risk and liability whatever in connection therewith. Where permitted by law, the implied warranty of merchantability is expressly excluded. If the products sold hereunder are “consumer products,” the implied warranty of merchantability is limited to a period of three years and shall be limited solely to the replacement of the defective goods. All weights stated in our catalogs and lists are approximate and are not guaranteed.

U.S. Patents 5,313,673; 5,431,181; D351,219; and Canada Patent 72,017.

PRIOR TO INSTALLATION

Prior to installing the AquaSense "AV" Flushometer, install the items listed below:

- Closet or urinal fixture
- Drain line
- Water supply line

IMPORTANT:

- ALL PLUMBING IS TO BE INSTALLED IN ACCORDANCE WITH APPLICABLE CODES AND REGULATIONS.
- WATER SUPPLY LINES MUST BE SIZED TO PROVIDE AN ADEQUATE VOLUME OF WATER FOR EACH FIXTURE.
- FLUSH ALL WATER LINES PRIOR TO OPERATION (See Step 9). DIRT AND DEBRIS CAN CAUSE FLUSH VALVE TO RUN CONTINUOUSLY.

The AquaSense "AV" is designed to operate with 20 to 80 psi (138 to 552 kPa) of water pressure. THE MINIMUM PRESSURE REQUIRED TO THE VALVE IS DETERMINED BY THE TYPE OF FIXTURE SELECTED. Consult fixture manufacturer for pressure requirements.

Protect the chrome or special finish of this flushometer. DO NOT USE TOOTHED TOOLS TO INSTALL OR SERVICE THE VALVE.

1 Install stop valve assembly A using proper size supply escutcheon and sweat solder adapter kit. Thread sealing compounds should be used on male NPT threads only. Sensor units should not be located across from each other or in close proximity to highly reflective surfaces.

2 Prior to inserting the flush valve tailpiece B into stop valve, be certain that the O-ring seal C is located in O-ring seal groove at the end of the tailpiece and the locking nut D and locking snap ring E are located as shown. Care should be taken not to damage the O-ring when inserting the tailpiece into the stop valve. If lubrication is needed, wetting the O-ring with water will be sufficient.

3 Insert the flush valve tailpiece B into the stop valve A and hand tighten the lock nut D to the stop valve. Plumb the entire unit.

4 Determine the length of vacuum breaker tube F required to join the flush valve and fixture spud. Cut the vacuum breaker tube, if required, to this length. Assemble the vacuum breaker tube assembly and spud nut assembly to the flush valve and fixture spud.

5 Hand tighten spud nut and vacuum breaker tube nut to fixture and flush valve. Adjust the valve assembly for plumb. Tighten fixture spud nut, vacuum breaker tube nut and lock nut with a wrench. ***Do not turn water on until batteries are inserted – see 7.***

6 Loosen handle nut, aim sensor G at desired tilt angle (horizontal, tilt up, or tilt down), hold in place and tighten handle nut I.

7 Remove electronics access cover M with vandal-resistant hex wrench N provided. Insert preassembled battery holder O into electronics compartment. Connect battery cable connector to electronics cable connector. **(Important: Insert non-connector end of battery holder first, as shown.)**

8 Adjust feature settings as desired. The sensor range is factory set. If adjustment is necessary, use a Phillips head screwdriver and turn ***gently.*** **SEE SENSOR RANGE ADJUSTMENT.** Replace electronics access cover (M) and tighten securely with vandal-resistant hex wrench (N).

Before the supply water is turned on, be sure all stop valves to the flush valves are closed off tight. The stop valves can be opened and closed by using the adjusting screw located at the center of the stop valve cap (T) (shown in 9a), behind the adjusting screw cover if already installed. Stop valve adjustments can only be made by using the adjusting screw. **It is not necessary to remove the stop valve cap when making adjustments. If for any reason it becomes necessary to remove the stop valve cap, be certain the water is shut off at the main supply valve.**

9 When all flush valves are connected to the fixtures and water pressure is available, it is recommended that the supply piping be flushed to remove dirt, pipe chips, etc., from system.

Use the following procedure to flush out the supply piping:

A. Remove the main valve body cover (O).

B. Remove the working parts from the flush valve (U) and (Q) (shown in 9b).

C. Place tube cap (R) over riser tube (S). Replace the plastic cover (U) and main body cover (O) without reinstalling the working parts (Q).

D. Open the stop valve by using the stop adjusting screw and flush out all debris from pipe and connections.

E. Shut off stop, open cover, remove tube cap, replace the working parts, replace and tighten both covers.

This procedure should also be repeated when the system is drained for seasonal use, as occurs in athletic fields, recreation parks, etc.

10 The AquaSense "A" flush valves are preset for fixture volume as marked on the valve cartons. The valve does not require regulation for variation in water pressure within its operating range. To set the flush valve for proper operation, gradually adjust the stop valve open, using the adjusting screw, while actuating the valve until the rate of water flow into the fixture is not excessive, yet is sufficient to adequately evacuate the waste. The final setting for urinals should be such that the fixture will not overflow when the valve is actuated in succession. The stop cap screw cover should be replaced after final adjustments have been made.

Sensor Range Adjustment

The range is factory set for urinal or closet applications. If necessary, the sensor range can be adjusted. Pressing the reset button will initiate a ten minute set-up period. During these ten minutes a red light will flash through the sensor lens (P) when an object is in view of the sensor. Use this feature to properly set the sensor range. Slowly rotate the range adjustment clockwise to increase range and counterclockwise to decrease range. The range adjustment will stop at minimum and maximum settings. Do not turn beyond these stops. For an additional ten minutes of blinking, push reset button. Stand in front of sensor (minimum 10 seconds) and move forward and backward to determine range.

Option Setting

Switch 1 - Automatic Flush – The unit will automatically flush 24 hours after the last user. On position = activate, Off position = deactivate.

Switch 2 - Courtesy Flush – When an object has been detected for two seconds, the unit flushes then goes into normal mode. On position = activate, Off position = deactivate. (Always press reset button after changing switches.)

Switch 3 - Flush Time – Factory setting.

Switch 4 - Urinal Water Saver – Reduces flush volume by 40% during periods of continuous use. (Note: Always press reset button after changing switches.)

Zurn RetroFlush System Features

- **Main Flush**
  The sensor will provide a main flush after a user is in range for eight or more seconds. The eight-second delay prevents actuation of the flush valve by a person walking past the sensor.

- **Automatic 24-Hour Flush**
  The sensor will provide an automatic flush 24 hours after the last flush. The automatic flush feature can be manually switched on or off in the field, depending on owner preference. The option is controlled by switch number one.

- **Courtesy Flush**
  The sensor will provide a courtesy flush within two seconds after a person is first detected. The courtesy flush freshens the bowl and removes any residue from the fixture. The main flush will occur when the user steps away from the fixture. The courtesy flush feature can be manually switched on or off in the field, depending on owner preference. The option is controlled by switch number two.

- **Maintenance Override**
  One may initiate an immediate flush by placing a magnet in front of the sensor window for one-half to three seconds. This feature is typically used by the cleaning staff who do not wish to stand in front of the sensor to cause actuation.

  One may prevent operation of the flush valve by placing a magnet in front of the sensor window for longer than three seconds. This feature is typically used by maintenance or cleaning staff who wish to prevent automatic actuation of the valve. This feature is automatically defeated after ten minutes.

  If one wishes to defeat the feature prior to the ten-minute time out, simply place a magnet in front of the sensor window for one-half to three seconds.

Maintenance Override Feature

- **Indicator Light**
  The sensor unit includes a red indicator light having three functions:

  1. *Range Adjustment:* For the first ten minutes of operation, the red light will flash when an object is detected.
  2. *Low Battery Indication:* When the batteries have reached the caution level, the red light will flash when an object is detected.
  3. *Abnormal Reflection Indicator:* When a reflective surface is present for longer than 30 minutes, the red light will flash indicating that an object is being continuously detected.

- **Adjustable Range**
  The detection distance is field adjustable from 12 to 60 inches. Slowly rotate the range adjustment clockwise to increase range and counterclockwise to decrease range. The range adjustment will stop at minimum and maximum settings. Do not turn beyond these stops. For ten minutes after battery installation, a blinking red light in the sensor window will appear when an object is in view. For an additional ten minutes of blinking, push the reset button. Stand in front of the sensor and move forward and backward to determine range.

Sensor Control Panel

- **Urinal Water Saver**
  This feature is intended for a high-use application, such as a stadium or civic arena, where a continuous line of users wait to use a urinal. When a sensor-operated urinal is used continuously, water consumption can be significantly reduced. Water is conserved by flushing a partial volume of water after two consecutive users have been sensed and a new user enters the range of the sensor within five seconds of the previous user leaving. This partial flush clears the urinal and allows for the next repetitive flush to continue to move the wastewater through the drain line. This feature is automatically defeated if a user does not enter the sensor range within five seconds of the previous user leaving. The urinal water saver feature can also be manually switched on or off in the field, depending on owner preference. The option is controlled by switch number four.

ZR Flush Valve/ZRK Retrofit Kit Solenoid Replacement Instructions

Removing The Old Solenoid

1. Turn off water supply to flush valve at shut off (S.O.).
2. Cycle the valve once – flush it to relieve pressure holding the valve closed.
3. Remove the main valve body cap (Item #1) from the flush valve (Item #6) using a wrench.
4. Remove the plastic diaphragm cover (Item #2) from the top of the diaphragm assembly.
5. Remove the diaphragm assembly (Item #3) from the flush valve (Item #6).
6. Using a screwdriver, remove the riser tube (Item #5) from the solenoid (Item #7).
7. Remove the RetroFlush sensor assembly (Item #9) from the flush valve handle port using a wrench on the handle nut (Item #11).
8. Remove the solenoid retaining clip (Item #8) and gently pull the solenoid (Item #7) out of the housing. ***Note:*** **Pay special attention to the position of the retaining clip ends to ensure proper reassembly into the proper slots.**
9. Disconnect the sensor cable connector from the solenoid. ***Note:*** **If the white connector is not fully accessible, then see the special instructions on page 268.**

Installing The New Solenoid

1. Connect the cable connector on the solenoid (Item #7) to the sensor cable connector.
2. Lightly lubricate the solenoid O-ring seal with silicone grease provided to prevent damage while reassembling the unit. Insert the solenoid (Item #7) into the housing and install the solenoid retaining clip (Item #8). When installed properly, the end of the solenoid housing is free to rotate. ***Note:*** **Be careful not to crimp the battery wires while inserting the solenoid into the housing.**
3. Reinstall the RetroFlush sensor assembly (Item #9) onto the flush valve using a wrench. Be sure the solenoid inlet (threaded hole) is facing upward when installed in the flush valve. If not, remove Item #9 and rotate the solenoid for proper position.
4. Remove old O-ring (Item #4) from the upper part of the riser tube (Item #5). Install new quad ring (Item #4) onto the riser tube (Item #5) making sure the quad ring is not twisted. Lightly lubricate the quad ring with the silicone grease provided.
5. Reinstall the riser tube (Item #5) onto the solenoid (Item #7). Tighten snug with screwdriver, do not overtighten.
6. Reinstall the original diaphragm assembly (Item #3) onto the flush valve (Item #6).
7. Reinstall the original plastic diaphragm cover (Item #2) on top of the diaphragm assembly (Item #3).
8. Reinstall the main valve body cap (Item #1) onto the flush valve (Item #6) using a wrench. Tighten properly.
9. Remove battery cover (Item #10) from RetroFlush sensor assembly (Item #9) with the hex key wrench provided and press reset button located on the sensor module case. Reinstall cover (Item #10).
10. Turn on water supply and cycle flush valve for normal operation. Adjust stop valve for optimal flow to the fixture.

ZR Flush Valve/ZRK Retrofit Kit Solenoid Replacement Instructions

Special Note On #9 – Removing Old Solenoid Valve

1. If the white connector is not fully accessible then the sensor module must be removed from the case in order to reassemble the solenoid connector to the sensor connector.
2. Remove the battery cover (Item #10) from the RetroFlush sensor assembly (Item #9).
3. Remove the battery case (Item #15) and disconnect from the sensor.
4. Remove the sensor module (Item #12) held in place by two screws (Item #13) and rubber plug (Item #14).
5. To install new solenoid, lightly lubricate the solenoid O-ring seal with silicone grease provided to prevent damage while reassembling the unit. Insert the solenoid (Item #7) into the housing and install the solenoid retaining clip (Item #8). When installed properly, the end of the solenoid is free to rotate. ***Notes:*** **Be careful not to crimp the battery wires while inserting the solenoid into the housing. Also, be sure the blue and gray wires of the solenoid valve extend into the sensor module cavity of the housing (Item #9).**
6. Connect the sensor module blue and gray wires to the solenoid valve blue and gray wires and reinstall the sensor module. ***Note:*** **Be very careful not to crimp the wires when reinstalling the sensor module. Replace the two screws (do not overtighten) and rubber plug holding the sensor module in place.**
7. Replace the battery pack and reconnect to the sensor.
8. Continue with Step 3 and beyond under “Installing The New Solenoid” on page 267.

Parts Replacement Guide

Covers	Product No.
Outside Cover – Chrome Plated (11)	P6000-LL
Inside Cover (12)	P6000-L

Replacement Kits	Product No.
Closet Replacement Kit (14-18, 25, 26, 27)	PR6000-EC
Water-Saving Closet Replacement Kit (14-18, 25, 26, 27)	PR6000-EC-WS
Low-Consumption Closet Replacement Kit (14-18, 25, 26, 27)	PR6000-EC-WS1
Urinal Replacement Kit (14-18, 25, 26, 27)	PR6000-EU
Water-Saving Urinal Replacement Kit (14-18, 25, 26, 27)	PR6000-EU-WS
Low-Consumption Urinal Replacement Kit (14-18, 25, 26, 27)	PR6000-EU-WS1

Replacement Parts – Inside Components	Product No.
Riser Tube (13)	PR6000-E13F
Closet Volume Control - 4.5 GpF (25)	PR6000-EC25
Water-Saving Closet Volume Control - 3.5 GpF (25)	PR6000-EC25-WS
Low-Consumption Closet Volume Control - 1.6 GpF (25)	PR6000-EC25-WS1
Urinal Volume Control - 3.0 GpF (25)	PR6000-EU25
Water-Saving Urinal Volume Control - 1.5 GpF (25)	PR6000-EU25-WS
Low-Consumption Urinal Volume Control - 1.0 GpF (25)	PR6000-EU25-WS1
Diaphragm (15)	PR6000-E15A

Sensor Module Replacement Kits	Product No.
Solenoid Valve Replacement Kit (8, 9, 10)	PR6000-M
Sensor Lens Kit (6)	PR6000-SC
High Volume Sensor (3, 4, 5, 6)	PR6000-SH
Low Volume Sensor (3, 4, 5, 6)	PR6000-SL
Battery Holder with Connecting Cable (1)	PR6000-MB
Metal Housing (7)	PR6000-MH
Metal Cover with Screw and Seals (20, 21, 22, 23)	PR6000-MC
Vandal-Resistant Cover Wrench (24)	PR6000-W

1 Battery Holder and Battery Connecting Cable
3 Sensor Screws - 2
4 Sensor Electronics
5 Sensor Lens Screws - 2
6 Sensor Lens
7 Metal Housing
8 Solenoid Valve Retainer Clip
9 Solenoid Valve
10 Gasket
11 Main Valve Body Cover
12 Plastic Cover
13 Riser Tube
14 Diaphragm Disc
15 Diaphragm
16 Flow Ring
17 Guide Ring
18 Cylinder Slide
19 Main Valve Body (with Tailpiece)
20 O-Ring
21 Metal Housing Cover
22 O-Ring
23 Cover Screw
24 Cover Screw Wrench
25 Volume Control

FV62-ZR

SPECIFICATIONS

Sensor Range:	12" to 60" (adjustable)
Battery Type :	AA Alkaline Batteries
Battery Life:	Three years at 4,000 flushes per month
Flush Volume:	ZR6000 – 4.5 gallons per flush ZR6000-WS – 3.5 gallons per flush ZR6000-WS1 – 1.6 gallons per flush ZR6001 – 3.0 gallons per flush ZR6003-WS – 1.5 gallons per flush ZR6003-WS1 – 1.0 gallons per flush
Voltage:	6VDC
Operating Water Pressure:	20-80 psi
Courtesy Flush:	Flush at the beginning of the detection cycle (switchable)
Automatic Flush:	Flush 24 hours after the last use (switchable)
Maintenance Override:	Magnetic flush triggering or inhibiting switch
Indicator Light:	Range Adjustment (first ten minutes) Low Battery Indication Reflective surface in view for greater than 30 minutes
Reset Switch:	To restart ten-minute range adjustment cycle To enter option changes in the electronics after repositioning switches
Operating Temperature:	35°F to 104°F (2°C to 40°C)
Outside Case and Cover:	Chrome-Plated Die Casting

OPERATION

1. Invisible light rays are continually emitted from the RetroFlush sensor.
2. When the user comes into range of the sensor's detection zone (range 12 to 60 inches), the beam is reflected back to the sensor's receiver and changed into a low voltage electrical signal that activates an eight-second time delay circuit. This time delay prevents the unit from activating from a passerby in the restroom. Once this circuit is completed, the output circuit is signaled and continues in a "hold" mode for as long as the user remains within range of the sensor. User must be in sensor range for at least 10 seconds.
3. After the user moves away from the sensor, the absence of reflected light starts an electrical "one-time" signal that operates the solenoid operator (6VDC) and activates the flushing cycle to flush the fixture. The circuit then automatically resets for the next user.

IMPORTANT NOTE: The Zurn AquaVantage is engineered for quiet operation. Excessive water flow creates noise, while too little water flow may not satisfy the needs of the fixture. Proper adjustment of stop valve is made when:

1. The plumbing fixture is cleansed after each flush without splashing water out from the lip.
2. A quiet flushing cycle is achieved.

After adjustment of the stop adjusting screw, replace the Zurn stop cap screw cover.

CARE AND CLEANING INSTRUCTIONS

Do not use abrasive or chemical cleaners to clean flushometers as they may dull the luster and attack the chrome or special decorative finishes. Use only mild soap and water, then wipe dry with a clean cloth or towel. While cleaning the bathroom tile, the flushometer should be protected from splattering of cleaner. Acids and cleaning fluids can discolor or remove chrome plating.

TROUBLE SHOOTING GUIDE

PROBLEM	CAUSE	SOLUTION
Valve will not operate.	Water supply shut off	Turn on water supply, check control stop and supply
	Sensor range adjustment set too short	Increase sensor range adjustment
	Expired batteries	Replace batteries
	Difficulty with electronic control module	Check batteries. If problem continues, consult factory.
	Solenoid problem	Replace solenoid
Red light flashes when user is not present.	Obstruction in front of the sensor	Remove the obstruction
	Sensor range set too long Sensor is detecting opposite wall	Shorten sensor range
Red light flashes when user comes into view.	Batteries about to expire	Replace batteries
	Unit is in start-up mode	Light will stop in 10 minutes
	Range adjustment reset button was pressed	Light will stop in 10 minutes
Valve does not shut off.	Dirt in diaphragm bypass hole	Clean bypass hole
	Dirt or debris at valve seat or sealing area	Clean valve seat and clean diaphragm kit
	Solenoid problem	Replace solenoid
Not enough water to fixture.	Wrong RetroFlush unit installed	Check fixture requirements. Install proper RetroFlush unit.
	Control stop improperly adjusted	Adjust control stop
	Riser tube filter plugged	Clean filtered riser tube Ⓢ
	Diaphragm damaged	Replace diaphragm
	Solenoid problem	Replace solenoid
Too much water for fixture.	Wrong RetroFlush unit installed	Install proper RetroFlush unit. Check fixture requirements.
	Control stop improperly adjusted	Adjust control stop
	Dirt in diaphragm bypass hole	Clean or replace diaphragm
Water drips from chrome cap.	The plastic cover has been cracked by freezing or abuse	Replace plastic cover
	The chrome cap is not tight	Tighten chrome cap

Note: For more detailed trouble-shooting, refer to FV1138 or call customer service at 1-800-997-3876.

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AquaSense® AV ZRK Series

Sensor-Operated, Battery-Powered Retrofit Flushometer Kit

Installation, Operation, Maintenance, and Parts Manual

Patented and Patents Pending

Sensor-Operated Retrofit Closet/Urinal Systems

ZRK-C-4.5
ZRK-C-3.5
ZRK-C-1.6
ZRK-U-3.0
ZRK-U-1.5
ZRK-U-1.0

ZRK-C

ADA

This product is designed to be used in existing restrooms upgrading to sensor operation. Manual flush valves of the Zurn Aquaflush and Sloan Royal/Regal design can be converted into a sensor-activated automatic flush valve in a matter of minutes.

ZRK-U

ADA

LIMITED WARRANTY

All goods sold hereunder are warranted to be free from defects in material and factory workmanship for a period of three years from the date of purchase. Decorative finishes warranted for one year. We will replace at no cost goods that prove defective provided we are notified in writing of such defect and the goods are returned to us prepaid at Sanford, NC, with evidence that they have been properly maintained and used in accordance with instructions. We shall not be responsible for any labor charges or any loss, injury or damages whatsoever, including incidental or consequential damages. The sole and exclusive remedy shall be limited to the replacement of the defective goods. Before installation and use, the purchaser shall determine the suitability of the product for his intended use and the purchaser assumes all risk and liability whatever in connection therewith. Where permitted by law, the implied warranty of merchantability is expressly excluded. If the products sold hereunder are “consumer products,” the implied warranty of merchantability is limited to a period of three years and shall be limited solely to the replacement of the defective goods. All weights stated in our catalogs and lists are approximate and are not guaranteed.

U.S. Patents 5,313,673; 5,431,181; D351,219; and Canada Patent 72,017.

1 Remove control stop cover button A or cover A and use a slotted screwdriver to close water supply control screw (clockwise rotation). Push handle to relieve pressure in the flushometer's upper chamber and to assure water is completely shut off. Water supply control screw **must be** turned tight to shut off water.

2 Remove existing manual flushometer chrome cover B and plastic cap C and remove the internal parts assembly D. Remove manual flushometer handle nut E and handle assembly F. Be sure gasket is removed with handle assembly.

3 Remove blue solenoid valve cap. Attach Zurn RetroFlush sensor assembly G with gasket H to the handle port of the flushometer. Hand tighten new handle nut I – positioning hole J to top. Remove blue filtered riser tube cover. Insert Zurn RetroFlush filtered riser tube K from the top of the flushometer and screw into solenoid valve – snug with screwdriver. **Do not overtighten.**

4 Assure riser tube K is vertical. Insert new Zurn RetroFlush internal diaphragm kit L. Diaphragm kit will slide over riser tube and seat in valve. Replace original plastic cap C and fully tighten original brass cover B.

5 Aim sensor G at desired tilt angle (horizontal, tilt up or tilt down), hold in place and tighten handle nut I.

7 Adjust feature settings as desired. The sensor range is factory set. If adjustment is necessary, use a Phillips head screwdriver and turn ***gently*. SEE SENSOR RANGE ADJUSTMENT.** Replace electronics access cover M and tighten securely with vandal-resistant hex wrench N. Turn water supply on and adjust for proper fixture evacuations. The final setting for urinals should be such that the fixture will not overflow when the valve is actuated in succession. Reinsert stop cover button A. Check to assure cover B is leak free.

6 Remove electronics access cover M with vandal-resistant hex wrench N provided. Insert preassembled battery holder O into electronics compartment. Connect battery cable connector to electronics cable connector. **(Important: Insert non-connector end of battery holder first, as shown.)**

Sensor Range Adjustment

The range is factory set for urinal or closet applications. If necessary, the sensor range can be adjusted. Slowly rotate range adjustment clockwise to increase range and counterclockwise to decrease range. The range adjustment will stop at minimum and maximum settings. Do not turn beyond these stops. For ten minutes after battery installation, a blinking red light in sensor window P will appear when an object is in view. For an additional ten minutes of blinking, push reset button. Stand in front of sensor and move forward and backward to determine range.

Option Setting

Switch 1 - Automatic Flush – The unit will automatically flush 24 hours after the last user. On position = activate; Off position = deactivate.

Switch 2 - Courtesy Flush – When an object has been detected for two seconds, the unit flushes then goes into normal mode. On position = activate; Off position = deactivate. (Always press reset button after changing switches.)

Switch 3 - Flush Time – Factory setting

Switch 4 - Urinal Water Saver – reduces flush volume by 40% during periods of continuous usage.

Note: Always press reset button after changing switches.

ZR Flush Valve/ZRK Retrofit Kit
Solenoid Replacement Instructions

Removing The Old Solenoid

1. Turn off water supply to flush valve at shut off (S.O.).
2. Cycle the valve once – flush it to relieve pressure holding the valve closed. If the sound of running water is present, tighten shut off.
3. Remove the main valve body cap (Item #1) from the flush valve (Item #6) using a wrench.
4. Remove the plastic diaphragm cover (Item #2) from the top of the diaphragm assembly.
5. Remove the diaphragm assembly (Item #3) from the flush valve (Item #6).
6. Using a screwdriver, remove the riser tube (Item #5) from the solenoid (Item #7).
7. Remove the RetroFlush sensor assembly (Item #9) from the flush valve handle port using a wrench on the handle nut (Item #11).
8. Remove the solenoid retaining clip (Item #8) and gently pull the solenoid (Item #7) out of the housing. ***Note:*** **Pay special attention to the position of the retaining clip ends to ensure proper reassembly into the proper slots.**
9. Disconnect the sensor cable connector from the solenoid. ***Note:*** **If the white connector is not fully accessible, then see the special instructions on page 275.**

Installing The New Solenoid

1. Connect the cable connector on the solenoid (Item #7) to the sensor cable connector.
2. Lightly lubricate the solenoid O-ring seal with silicone grease provided to prevent damage while reassembling the unit. Insert the solenoid (Item #7) into the housing and install the solenoid retaining clip (Item #8). When installed properly, the end of the solenoid housing is free to rotate. ***Note:*** **Be careful not to crimp the battery wires while inserting the solenoid into the housing.**
3. Reinstall the RetroFlush sensor assembly (Item #9) onto the flush valve using a wrench. Be sure the solenoid inlet (threaded hole) is facing upward when installed in the flush valve. If not, remove Item #9 and rotate the solenoid for proper position.
4. Remove old O-ring (Item #4) from the upper part of the riser tube (Item #5). Install new quad ring (Item #4) onto the riser tube (Item #5) making sure the quad ring is not twisted. Lightly lubricate the quad ring with the silicone grease provided.
5. Reinstall the riser tube (Item #5) onto the solenoid (Item #7). Tighten snug with screwdriver, do not overtighten.
6. Reinstall the original diaphragm assembly (Item #3) onto the flush valve (Item #6).
7. Reinstall the original plastic diaphragm cover (Item #2) on top of the diaphragm assembly (Item #3).
8. Reinstall the main valve body cap (Item #1) onto the flush valve (Item #6) using a wrench. Tighten properly.
9. Remove battery cover (Item #10) from RetroFlush sensor assembly (Item #9) with the hex key wrench provided and press reset button located on the sensor module case. Reinstall cover (Item #10).
10. Turn on water supply and cycle flush valve for normal operation. Adjust stop valve for optimal flow to the fixture.

ZR Flush Valve/ZRK Retrofit Kit
Solenoid Replacement Instructions

Special Note On #9 – Removing Old Solenoid Valve

1. If the white connector is not fully accessible then the sensor module must be removed from the case in order to reassemble the solenoid connector to the sensor connector.

2. Remove the battery cover (Item #10) from the RetroFlush sensor assembly (Item #9).

3. Remove the battery case (Item #15) and disconnect from the sensor.

4. Remove the sensor module (Item #12) held in place by two screws (Item #13) and rubber plug (Item #14).

5. To install new solenoid, lightly lubricate the solenoid O-ring seal with silicone grease provided to prevent damage while reassembling the unit. Insert the solenoid (Item #7) into the housing and install the solenoid retaining clip (Item #8). When installed properly, the end of the solenoid is free to rotate. ***Notes:*** **Be careful not to crimp the battery wires while inserting the solenoid into the housing. Also, be sure the blue and gray wires of the solenoid valve extend into the sensor module cavity of the housing (Item #9).**

6. Connect the sensor module blue and gray wires to the solenoid valve blue and gray wires and reinstall the sensor module. ***Note:*** **Be very careful not to crimp the wires when reinstalling the sensor module. Replace the two screws (do not overtighten) and rubber plug holding the sensor module in place.**

7. Replace the battery pack and reconnect to the sensor.

8. Continue with Step 3 and beyond under “Installing The New Solenoid” on page 274.

Parts Replacement Guide

Covers	Product No.
Outside Cover – Chrome Plated (11)	P6000-LL
Inside Cover (12)	P6000-L

Replacement Kits	Product No.
Closet Replacement Kit (14-18, 25, 26, 27)	PR6000-EC
Water-Saving Closet Replacement Kit (14-18, 25, 26, 27)	PR6000-EC-WS
Low-Consumption Closet Replacement Kit (14-18, 25, 26, 27)	PR6000-EC-WS1
Urinal Replacement Kit (14-18, 25, 26, 27)	PR6000-EU
Water-Saving Urinal Replacement Kit (14-18, 25, 26, 27)	PR6000-EU-WS
Low-Consumption Urinal Replacement Kit (14-18, 25, 26, 27)	PR6000-EU-WS1

Replacement Parts – Inside Components	Product No.
Riser Tube (13)	PR6000-E13F
Closet Volume Control - 4.5 GpF (25)	PR6000-EC25
Water-Saving Closet Volume Control - 3.5 GpF (25)	PR6000-EC25-WS
Low-Consumption Closet Volume Control - 1.6 GpF (25)	PR6000-EC25-WS1
Urinal Volume Control - 3.0 GpF (25)	PR6000-EU25
Water-Saving Urinal Volume Control - 1.5 GpF (25)	PR6000-EU25-WS
Low-Consumption Urinal Volume Control - 1.0 GpF (25)	PR6000-EU25-WS1
Diaphragm (15)	PR6000-E15A

Sensor Module Replacement Kits	Product No.
Solenoid Valve Replacement Kit (8, 9, 10)	PR6000-M
Sensor Lens Kit (6)	PR6000-SC
High Volume Sensor (3, 4, 5, 6)	PR6000-SH
Low Volume Sensor (3, 4, 5, 6)	PR6000-SL
Battery Holder with Connecting Cable (1)	PR6000-MB
Metal Housing (7)	PR6000-MH
Metal Cover with Screw and Seals (20, 21, 22, 23)	PR6000-MC
Vandal-Resistant Cover Wrench (24)	PR6000-W

1 Battery Holder and Battery Connecting Cable
3 Sensor Screws - 2
4 Sensor Electronics
5 Sensor Lens Screws - 2
6 Sensor Lens
7 Metal Housing
8 Solenoid Valve Retainer Clip
9 Solenoid Valve
10 Gasket
11 Main Valve Body Cover
12 Plastic Cover
13 Riser Tube
14 Diaphragm Disc
15 Diaphragm
16 Flow Ring
17 Guide Ring
18 Cylinder Slide
19 Main Valve Body (with Tailpiece)
20 O-Ring
21 Metal Housing Cover
22 O-Ring
23 Cover Screw
24 Cover Screw Wrench
25 Volume Control

FV51-ZRK

SPECIFICATIONS

Sensor Range:	12" to 60" (adjustable)
Battery Type :	AA Alkaline Batteries
Battery Life:	Three years at 4,000 flushes per month
Flush Volume:	ZRK-C-1.6 – 1.6 gallons per flush ZRK-C-3.5 – 3.5 gallons per flush ZRK-C-4.5 – 4.5 gallons per flush ZRK-U-1.0 – 1.0 gallons per flush ZRK-U-1.5 – 1.5 gallons per flush ZRK-U-3.0 – 3.0 gallons per flush
Voltage:	6VDC
Operating Water Pressure:	20-80 psi
Courtesy Flush:	Flush at the beginning of the detection cycle (switchable)
Automatic Flush:	Flush 24 hours after the last use (switchable)
Maintenance Override:	Magnetic flush triggering or inhibiting switch
Indicator Light:	Range Adjustment (first ten minutes) Low Battery Indication Reflective surface in view for greater than 30 minutes
Reset Switch:	To restart ten-minute range adjustment cycle To enter option changes in the electronics after repositioning switches
Operating Temperature:	35°F to 104°F (2°C to 40°C)
Outside Case and Cover:	Chrome-Plated Die Casting

OPERATION

1. Invisible light rays are continually emitted from the RetroFlush sensor.
2. When the user comes into range of the sensor's detection zone (range 12 to 60 inches), the beam is reflected back to the sensor's receiver and changed into a low voltage electrical signal that activates an eight-second time delay circuit. This time delay prevents the unit from activating from a passerby in the restroom. Once this circuit is completed, the output circuit is signaled and continues in a "hold" mode for as long as the user remains within range of the sensor. User must be in sensor's range for at least 10 seconds.
3. After the user moves away from the sensor, the absence of reflected light starts an electrical "one-time" signal that operates the solenoid operator (6VDC) and activates the flushing cycle to flush the fixture. The circuit then automatically resets for the next user.

IMPORTANT NOTE: The Zurn AquaVantage is engineered for quiet operation. Excessive water flow creates noise, while too little water flow may not satisfy the needs of the fixture. Proper adjustment of stop valve is made when:

1. The plumbing fixture is cleansed after each flush without splashing water out from the lip.
2. A quiet flushing cycle is achieved.
3. Sensor units should not be located across from each other or in close proximity to highly reflective surfaces.

After adjustment of the stop adjusting screw, replace the Zurn stop cap screw cover.

CARE AND CLEANING INSTRUCTIONS

Do not use abrasive or chemical cleaners to clean flushometers as they may dull the luster and attack the chrome or special decorative finishes. Use only mild soap and water, then wipe dry with a clean cloth or towel. While cleaning the bathroom tile, the flushometer should be protected from splattering of cleaner. Acids and cleaning fluids can discolor or remove chrome plating.

TROUBLE SHOOTING GUIDE

PROBLEM	CAUSE	SOLUTION
Valve will not operate.	Water supply shut off	Turn on water supply, check control stop and supply.
	Sensor range adjustment set too short	Increase sensor range adjustment
	Expired batteries	Replace batteries
	Difficulty with electronic control module	Check batteries. If problem continues, consult factory.
	Solenoid problem	Replace solenoid
Red light flashes when user is not present.	Obstruction in front of the sensor	Remove the obstruction
	Sensor range set too long Sensor is detecting opposite wall	Shorten sensor range
Red light flashes when user comes into view.	Batteries about to expire	Replace batteries
	Unit is in start-up mode	Light will stop in 10 minutes
	Range adjustment reset button was pressed	Light will stop in 10 minutes
Valve does not shut off.	Dirt in diaphragm bypass hole	Clean bypass hole
	Dirt or debris at valve seat or sealing area	Clean valve seat and clean diaphragm kit
	Solenoid problem	Replace solenoid
Not enough water to fixture.	Wrong RetroFlush unit installed	Install proper RetroFlush unit. Check fixture requirements.
	Control stop improperly adjusted	Adjust control stop
	Diaphragm damaged	Replace diaphragm
	Solenoid problem	Replace solenoid
Too much water for fixture.	Wrong RetroFlush unit installed	Install proper RetroFlush unit. Check fixture requirements.
	Control stop improperly adjusted	Adjust control stop
	Dirt in diaphragm bypass hole	Clean or replace diaphragm
Water drips from chrome cap.	The plastic cover has been cracked by by freezing or abuse	Replace plastic cover
	The chrome cap is not tight	Tighten chrome cap.
RetroFlush kit does not fit handle port.	Sloan A-29 copper ring used as handle port gasket	Remove copper ring.

Note: For more detailed trouble shooting, refer to FV1138 or call Customer Service at 1-800-997-3876.

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ZURN®

AquaSense® AV

E-Z Flush
Battery Powered Sensor Flush Valves

ZERseries
ZERKseries

E-Z Flush™

RetroFit Kits and Flush Valves

The Zurn AquaSense® E-Z Flush is the most installer-friendly flush valve retrofit kit on the market today. Not only does E-Z Flush allow you the fastest and easiest changeover, but E-Z Flush gives you the tools, batteries, and adapters to start and complete the job. Unlike other kits that limit themselves to the number of manufacturers and models they can retrofit, the unique handle port mounting feature of the E-Z Flush makes it the most versatile flush valve retrofit available today. Once installed, E-Z Flush provides trouble-free automatic flushing for both the building owner and the user.

E-Z Flush RetroFit Kits And Valves

Keeping a sanitary presence in a commercial restroom is paramount when retrofitting or in new construction. Zurn E-Z Flush now makes its greater presence known with the E-Z Flush CP and CPM. The chrome-plated E-Z Flush CP and CPM not only address the clean, sanitary look required of a sensor retrofit kit, but also complement the aesthetics of the flush valves and other chrome-plated fittings in the restroom.

Unlike other blue or black retrofit kits, the E-Z CP and CPM create a clean and sanitary, well-kept appearance making for a more user-friendly atmosphere.

Our E-Z CP and CPM make updating your existing handle-operated flush valves a breeze. By simply removing the handle assembly and replacing it with the E-Z Flush retrofit kit (batteries included) you can bring your restroom up to the latest technology and automatic sensor operation.

Automatic sensor flushing allows for greater sanitation, better water conservation, ADA compliance, user-friendly operation and the elimination of odors caused by unflushed fixtures.

E-Z Flush Retrofit Kit for All Flush Valves

Unlike other kits that limit themselves to the number of manufacturers and models they can retrofit, E-Z Flush's unique handle port mounting feature makes E-Z Flush the most versatile flush valve available today. Once installed, E-Z Flush provides trouble-free automatic flushing for both the building owner and the user.

E-Z Flush Retrofit Kits Fit The Following Flush Valves

- Zurn AquaVantage
- Zurn Aquaflush Plus
- Zurn Aquaflush
- Zurn Metroflush
- Sloan Royal®
- Sloan Regal®
- Sloan Crown®
- Sloan Gem® Spec -GM
- Delany Flush Boy® Spec -LY
- Waltec® Spec -CB
- Crane Spec -PLY
- Tempus Spec -TP

E-Z Flush Unit Is Easy To Retrofit

E-Z Flush is easy to install. Simply loosen the existing handle nut and remove handle. With collar gasket in place, slide E-Z Flush onto flush valve and tighten handle nut. Install the supplied "C" batteries and you are done. From manual to sensor in less than 3 minutes.

Special Features Available With ZER Series Flush Valves

E-Z Flush Features

- Best Working Battery Sensor Retrofit Unit on the Market for Harsh Water Conditions
- Adjustable Infrared Sensing
- Sensor and Motor Components Do Not Contact Water
- User-In-View L.E.D.
- Ease of Installation
- Low Battery Light
- Impact-Resistant Covers with Angled Face
- Replaceable Glass Lens
- Courtesy Flush Button Standard
- High Mount Adapter for Tall Rough-Ins
- Standard “C” Batteries
- Choice of Two Units – Chrome-Plated Metal or Impact Resistant Polycarbonate
- Three+ Years Battery Life
- Retrofit to Zurn, Sloan, and Delany (order suffix -LY)
- Twenty-four Hour Auto Flush Option

E-Z Flush Benefits

- Increased Sanitation
- User Friendly
- Water Savings
- Hands-Free Operation
- Eliminates Odors and Unflushed Fixtures
- Reduced Flush Valve Maintenance
- Improves Building Presentation
- Modern Appearance

Adjustable Sensor Range and Features

E-Z Flush is adjustable and flexible. Our sensor range is adjustable for various installation applications and with the use of our high mount adapter kit, tall flush valve rough-ins can be angled to fit the user's requirements. E-Z Flush is also supplied with a courtesy flush button for manual operation when desired.

Typical Uses:

Office Buildings
Schools and Universities
Airports
Sports Arenas
Hospitals and Health Care Facilities
Restaurants
Food Preparation Facilities
Malls and Department Stores
Doctors Offices
Theaters and Entertainment Facilities
ADA Applications
Bus and Train Terminals
Highway Rest Areas
Hotels and Motels
Public Restroom Facilities

AquaVantage® AV

The Repair Kit That Makes Flush Valves Chloramine-Proof and Clog Resistant!

E-Z Flush Valves Features Zurn AquaVantage Diaphragm

Zurn Z6000AV Model flush valves feature the chemical and clog resistant revolutionary AquaVantage Diaphragm Kit. The AquaVantage Kit is designed to eliminate the common problems that are associated with flush valve installations such as fixture evacuation, run-on, degradation of rubber components and sediment. The AquaVantage Kit now makes these problems a thing of the past. It provides for greater performance, ensures reliability, and greatly extends the operating life of the internal components.

- *Enhanced Performance*
- *Chemical Resistant*
- *Triple Filtered By-Pass*
- *Interchangeability*

Comes Completely Packaged

E-Z Flush furnishes everything you need for a quick, no-hassle retrofit. The exterior carton is self-explanatory as to unit model and features. The inside packaging contains your E-Z Flush unit, four “C” cell batteries, battery compartment wrench, handle nut gasket, and handle nut wrench. Enclosed instruction booklet contains installation instructions in both English and Spanish.

E-Z Flush Valves With Chrome Metal and Motorized Actuation

Exposed Flush Valves For Water Closets

ZER6000AV-CPM
ZER6000AV-WS1-CPM
ZER6000AV-1-CPM
ZER6000AV-1-WS1-CPM
ZER6000AV-2-CPM with HMK
ZER6000AV-2-WS1-CPM with HMK
ZER6000AV-3-CPM with HMK
ZER6000AV-3-WS1-CPM with HMK
ZER6000AV-BWN-CPM with HMK

Exposed Flush Valves For Urinals

ZER6001AV-CPM
ZER6001AV-WS1-CPM
ZER6003AV-CPM
ZER6003AV-WS1-CPM

Metroflush Equipped With Automatic Sensor E-Z Flush

Metroflush With E-Z Flush Chrome Metal Cover

ZER6200-WS1-CPM (Closet)
ZER6200AV-2-WS1-CPM
ZER6203-WS1-CPM (Urinal)

Metroflush With E-Z Flush Chrome-Plated, High Impact-Resistant Polycarbonate Cover

ZER6200-WS1-CP (Closet)
ZER6200AV-2-WS1-CP
ZER6203WS1-CP (Urinal)

Also Available In 3.5 Closet and 1.5 Urinal

E-Z Flush Valves With Chrome-Plated, High Impact-Resistant Polycarbonate and Motorized Actuation

Exposed Flush Valves For Water Closets

ZER6000AV-CP
ZER6000AV-WS1-CP
ZER6000AV-1-CP
ZER6000AV-1-WS1-CP
ZER6000AV-2-CP with HMK
ZER6000AV-2-WS1-CP with HMK
ZER6000AV-3-CP with HMK
ZER6000AV-3-WS1-CP with HMK
ZER6000AV-BWN-CP with HMK

Exposed Flush Valves For Urinals

ZER6001AV-CP
ZER6001AV-WS1-CP
ZER6003AV-CP
ZER6003AV-WS1-CP

E-Z Flush Retrofit With Chrome Metal Cover and Motorized Actuation for Zurn, Sloan or Delany Closet or Urinal Flush Valves

ZERK-CPM
ZERK-CPM-LY (For Delany)

E-Z Flush Valves With Chrome-Plated High Impact-Resistant Polycarbonate and Motorized Actuation for Zurn, Sloan, or Delany Closet or Urinal Flush Valves

ZERK-CP
ZERK-CP-LY (For Delany)

E-Z Flush -HMK High Mount Adapter Kit

Adapter kit allows for the downward angle of the E-Z Flush Kit in the rough-in installations.

ZERK-HMK

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Zurn Industries, LLC Printed in U.S.A. Form No. FV230, Rev. 5/07

E-Z Flush™ Automatic Retrofit Flushing For Urinals and Water Closets

Shut Off Water.

Remove Existing Handle Assembly.

Replace Handle With The Zurn E-Z Flush Kit.

The Zurn AquaSense® E-Z Flush is the most installer-friendly flush valve retrofit kit on the market today. Not only does E-Z Flush allow you the fastest and easiest changeover, but E-Z Flush gives you the tools and batteries to start and complete the job. Once installed, E-Z Flush provides trouble-free automatic flushing for both the building owner and the user. The E-Z Flush combination of features and benefits make Zurn E-Z Flush the right choice in flush valve retrofits.

ADA DESIGNED

Installation
Zurn AquaSense® E-Z Flush upgrades hand-operated flush valves to hands-free automatic operation in minutes. E-Z Flush is easy to install. Simply loosen the existing handle nut and remove handle. With collar gasket in place, slide E-Z Flush onto flush valve and tighten handle nut. Install the supplied "C" batteries and you are done. From manual to sensor in less than 3 minutes.

Urinal or Closet-Mounted Operation
The Zurn AquaSense® E-Z Flush is factory pre-set for urinal or water closet applications. When the unit detects the user's presence, the user-in-view L.E.D. lets one know they are in the sensor's viewing range (minimum 8 seconds). Once the user leaves, the E-Z Flush flushes the fixture automatically.

Adjustable Sensor Range And Features
Zurn AquaSense® E-Z Flush is adjustable, flexible and courteous. Our sensor range is adjustable for various installation applications. And our units are courteous with a manual courtesy override flush button.

Typical Uses
Office buildings, schools and universities, airports, sports arenas, hospitals and health care facilities, restaurants, food preparation facilities, malls and department stores, doctors offices, theaters and entertainment facilities, ADA applications, bus and train terminals, highway rest areas, hotels and motels, public restroom facilities.

RetroFlush Kit Features:

- ***Adjustable Infrared Sensing***
- ***Angled Face***
- ***Switchable 24-Hour Flush***
- ***Three-Second Detection Delay***
- ***User-In-View L.E.D.***
- ***Low Battery Light***
- ***Courtesy Flush Button***
- ***Standard "C" Batteries – 3 Year Life***
- ***Chrome Metal Cover***
- ***Chrome Plastic Cover***
- ***Tempered Glass Lens***

RetroFlush Kit Benefits:

- ***Increased Sanitation***
- ***User Friendly***
- ***Water Savings***
- ***Hands-Free Operation***
- ***Eliminates Odors and Unflushed Fixtures***
- ***Reduced Flush Valve Maintenance***
- ***Enhances Building Presentation***

Form No. FV223, 9/01

Notes

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Exposed ZER6000AV-CPM Model

Sensor-Operated, Battery-Powered Flush Valve For Water Closets

Flow Options

- ☐ **-WS1** 1.6 Gal. Low Consumption Flush
- ☐ **-FF** 4.5 Gal. Full Flush
- ☐ **Standard Flush** 3.5 Gallons Per Flush

Suffix Options (Check/Specify Appropriate Options)

- _____ **-YJ** Split Ring Pipe Support
- _____ **-YK** Solid Ring Pipe Support
- _____ **-YO** Bumper On Angle Stop
- _____ Other

ENGINEERING SPECIFICATION: ZURN ZER6000AV-CPM AquaSense® 'AV' Exposed Closet Flush Valve – Exposed, quiet diaphragm-type, chrome-plated flushometer valve with a polished exterior. Complete with Zurn's Aqua-Vantage TPE, chloramine resistant, dual seal diaphragm with a clog resistant, triple filtered by-pass. The unit features a 6VDC motor actuator with automatic infrared sensor, user-in view L.E.D., low battery indicator light, switchable 24-hour auto-flush and three-second delay flush to deter false flushing, 10° angled sensor for optimum user detection, courtesy flush button, high impact resistant polycarbonate housing, impact resistant glass lens and chrome-plated metal cover. The unit comes complete with 4 "C" size batteries, wrench for installation and Allen key for the battery compartment. The E-Z Flush electronics are ultra energy efficient for optimal battery life. This unit incorporates a high back pressure vacuum breaker, one-piece hex coupling nut, adjustable tailpiece, spud coupling and flange for top spud connection. Control stop has internal siphon-guard protection, vandal-resistant stop cap, sweat solder kit, and a cast wall flange with setscrew. Internal seals are made of chloramine resistant materials.

This space is for Architectural/Engineering Approval

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AquaSense® is a registered trademark of Zurn Industries, LLC

Rev.
Dwg. No. 66970
Date: 2/24/03
Product No. ZER6000AV-CPM

ZURN®

Exposed ZER6000AV-1-CPM Model

Sensor-Operated, Battery-Powered Flush Valve For Water Closets

Flow Options

- ☐ **-WS1** 1.6 Gal. Low Consumption Flush
- ☐ **-FF** 4.5 Gal. Full Flush
- ☐ **Standard Flush** 3.5 Gallons Per Flush

Suffix Options (Check/Specify Appropriate Options)

- _____ **-YJ** Split Ring Pipe Support
- _____ **-YK** Solid Ring Pipe Support
- _____ **-YO** Bumper On Angle Stop
- _____ Other

ENGINEERING SPECIFICATION: ZURN ZER6000AV-1-CPM AquaSense® 'AV' Exposed Closet Flush Valve – Exposed, quiet diaphragm-type, chrome-plated flushometer valve with a polished exterior. Complete with Zurn's AquaVantage TPE, chloramine resistant, dual seal diaphragm with a clog resistant, triple filtered by-pass. The valve incorporates a 6VDC motor actuator, a battery-powered automatic sensor, high impact resistant polycarbonate housing, and chrome-plated metal cover with manual override push button and 10° angled sensor, high back pressure vacuum breaker, one-piece hex coupling nut, adjustable tailpiece, spud coupling and flange for top spud connection. Control stop has internal siphon-guard protection, vandal-resistant stop cap, sweat solder kit, and a cast wall flange with setscrew. Internal seals are made of chloramine resistant materials.

This space is for Architectural/Engineering Approval

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Rev. B
Dwg. No. 65434
Date: 8/13/02
Product No. ZER6000AV-1-CPM

Exposed ZER6000AV-2-CPM Model

Sensor-Operated, Battery-Powered Flush Valve For Water Closets

Flow Options

- ☐ **-WS1** 1.6 Gal. Low Consumption Flush
- ☐ **-FF** 4.5 Gal. Full Flush
- ☐ **Standard Flush** 3.5 Gallons Per Flush

Suffix Options (Check/Specify Appropriate Options)

- _____ **-YJ** Split Ring Pipe Support
- _____ **-YK** Solid Ring Pipe Support
- _____ Other

ENGINEERING SPECIFICATION: ZURN ZER6000AV-2-CPM AquaSense® 'AV' Exposed Closet Flush Valve – Exposed, quiet diaphragm-type, chrome-plated flushometer valve with a polished exterior. Complete with Zurn's AquaVantage TPE, chloramine resistant, dual seal diaphragm with a clog resistant, triple filtered by-pass. The valve incorporates a 6VDC motor actuator, a battery-powered automatic sensor, high impact resistant polycarbonate housing, and chrome-plated metal cover with manual override push button and 10° angled sensor, high mount adapter kit, high back pressure vacuum breaker, one-piece hex coupling nut, adjustable tailpiece, spud coupling and flange for top spud connection. Control stop has internal siphon-guard protection, vandal-resistant stop cap, sweat solder kit, and a cast wall flange with set screw. Internal seals are made of chloramine resistant materials.

This space is for Architectural/Engineering Approval

ZURN INDUSTRIES, LLC *COMMERCIAL BRASS OPERATION, 5900 ELWIN BUCHANAN DRIVE, SANFORD, NC 27330*
PHONE: 1-800-997-3876, FAX: 919-775-3541, WEBSITE: www.zurn.com
IN CANADA: ***ZURN INDUSTRIES LIMITED*** *3544 NASHUA DRIVE, MISSISSAUGA, ONTARIO L4V 1L2, PHONE: 905-405-8272, FAX: 905-405-1292*

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Rev. C
Dwg. No. 65435
Date: 8/8/03
Product No. ZER6000AV-2-CPM

ZURN®

Exposed ZER6000AV-3-CPM Model

Sensor-Operated, Battery-Powered Flush Valve For Water Closets

Flow Options

- ☐ **-WS1** 1.6 Gal. Low Consumption Flush
- ☐ **-FF** 4.5 Gal. Full Flush
- ☐ **Standard Flush** 3.5 Gallons Per Flush

Suffix Options (Check/Specify Appropriate Options)

- _____ **-YH** One Wall Bumper
- _____ **-YJ** Split Ring Pipe Support
- _____ **-YK** Solid Ring Pipe Support
- _____ **-YO** Bumper On Angle Stop
- _____ Other

ENGINEERING SPECIFICATION: ZURN ZER6000AV-3-CPM AquaSense® 'AV' Exposed Closet Flush Valve – Exposed, quiet diaphragm-type, chrome-plated flushometer valve with a polished exterior. Complete with Zurn's AquaVantage TPE, chloramine resistant, dual seal diaphragm with a clog resistant, triple filtered by-pass. The valve incorporates a 6VDC motor actuator, a battery-powered automatic sensor, high impact resistant polycarbonate housing, and chrome-plated metal cover with manual override push button and 10° angled sensor, high mount adapter kit, high back pressure vacuum breaker, one-piece hex coupling nut, adjustable tailpiece, spud coupling and flange for top spud connection. Control stop has internal siphon-guard protection, vandal-resistant stop cap, sweat solder kit, and a cast wall flange with setscrew. Internal seals are made of chloramine resistant materials.

This space is for Architectural/Engineering Approval

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Rev. B
Dwg. No. 65436
Date: 8/11/03
Product No. ZER6000AV-3-CPM

Exposed ZER6001AV-CPM Model

Sensor-Operated, Battery-Powered Flush Valve For 1-1/4" Urinals

Flow Options

- ☐ **-WS1** 1.0 Gal. Low Consumption Flush
- ☐ **-WS** 1.5 Gal. Water Saver
- ☐ **Standard Flush** 3.0 Gallons Per Flush

Suffix Options (Check/Specify Appropriate Options)

- _____ **-YJ** Split Ring Pipe Support
- _____ **-YK** Solid Ring Pipe Support
- _____ **-YO** Bumper On Angle Stop
- _____ Other

ENGINEERING SPECIFICATION: ZURN ZER6001AV-CPM AquaSense® 'AV' Exposed Urinal Flush Valve – Exposed, quiet diaphragm-type, chrome-plated flushometer valve with a polished exterior. Complete with Zurn's AquaVantage TPE, chloramine resistant, dual seal diaphragm with a clog resistant, triple filtered by-pass. The valve incorporates a 6VDC motor actuator, a battery-powered automatic sensor, high impact resistant polycarbonate housing, and chrome-plated metal cover with manual override push button and 10° angled sensor, high back pressure vacuum breaker, one-piece hex coupling nut, adjustable tailpiece, spud coupling and flange for top spud connection. Control stop has internal siphon-guard protection, vandal-resistant stop cap, sweat solder kit, and a cast wall flange with setscrew. Internal seals are made of chloramine resistant materials.

This space is for Architectural/Engineering Approval

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Rev. B
Dwg. No. 65433
Date: 8/13/02
Product No. ZER6001AV-CPM

Exposed ZER6003AV-CPM Model

Sensor-Operated, Battery-Powered Flush Valve For 3/4" Urinals

Flow Options

☐ **-WS1** 1.0 Gal. Low Consumption Flush
☐ **-Standard Flush** 1.5 Gal. Water Saver

Suffix Options (Check/Specify Appropriate Options)

_____ **-YJ** Split Ring Pipe Support
_____ **-YK** Solid Ring Pipe Support
_____ Other

ENGINEERING SPECIFICATION: ZURN ZER6003AV-CPM AquaSense® 'AV' Exposed Urinal Flush Valve – Exposed, quiet diaphragm-type, chrome-plated flushometer with a polished exterior. Complete with Zurn's AquaVantage TPE, chloramine resistant, dual seal diaphragm with a clog resistant, triple filtered by-pass. The valve incorporates a 6VDC motor actuator, a battery-powered automatic sensor, high impact resistant poly-carbonate housing and chrome-plated metal cover with manual override push button and 10° angled sensor, high back pressure vacuum breaker, one-piece hex coupling nut, adjustable tailpiece, spud coupling and flange for top spud connection. Control stop has internal siphon-guard protection, vandal-resistant stop cap, sweat solder kit, and a cast wall flange with setscrew. Internal seals are made of chloramine resistant materials.

This space is for Architectural/Engineering Approval

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Rev. D
Dwg. No. 65384
Date: 8/13/02
Product No. ZER6003AV-CPM

Exposed ZER6003AV-EWS-CP Model

Sensor-Operated, Battery-Powered Flush Valve For 3/4" Urinals

Suffix Options (Check/Specify Appropriate Options)

_____	**-YJ**	Split Ring Pipe Support
_____	**-YK**	Solid Ring Pipe Support
_____		Other

ENGINEERING SPECIFICATION: ZURN ZER6003AV-EWS-CP AquaSense® 'AV' Exposed Urinal Flush Valve – Exposed, quiet diaphragm-type, chrome-plated flushometer with a polished exterior. Complete with Zurn's AquaVantage TPE, chloramine resistant, dual seal diaphragm with a clog resistant, triple filtered by-pass to deliver .5 gallons per flush. The valve incorporates a 6VDC motor actuator, a battery-powered automatic sensor, high impact resistant polycarbonate housing and chrome-plated ABS cover with manual override push button, high back pressure vacuum breaker, one-piece hex coupling nut, adjustable tailpiece, spud coupling and flange for top spud connection. Control stop has internal siphon-guard protection, vandal-resistant stop cap, sweat solder kit, and a cast wall flange with setscrew. Internal seals are made of chloramine resistant materials.

This space is for Architectural/Engineering Approval

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Rev.
Dwg. No. 66903
Date: 12/12/02
Product No. ZER6003AV-EWS-CP

ZURN®

Exposed ZER6003AV-EWS-CPM Model

Sensor-Operated, Battery-Powered Flush Valve For 3/4" Urinals

Suffix Options (Check/Specify Appropriate Options)

_____ **-YJ** Split Ring Pipe Support
_____ **-YK** Solid Ring Pipe Support
_____ Other

ENGINEERING SPECIFICATION: ZURN ZER6003AV-EWS-CPM AquaSense® 'AV' Exposed Urinal Flush Valve – Exposed, quiet diaphragm-type, chrome-plated flushometer with a polished exterior. Complete with Zurn's AquaVantage TPE, chloramine resistant, dual seal diaphragm with a clog resistant, triple filtered by-pass to deliver .5 gallons per flush. The valve incorporates a 6VDC motor actuator, a battery-powered automatic sensor, high impact resistant polycarbonate housing, impact resistant glass lens, and chrome-plated metal cover with manual override push button, high back pressure vacuum breaker, one-piece hex coupling nut, adjustable tailpiece, spud coupling and flange for top spud connection. Control stop has internal siphon-guard protection, vandal-resistant stop cap, sweat solder kit, and a cast wall flange with setscrew. Internal seals are made of chloramine resistant materials.

This space is for Architectural/Engineering Approval

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Rev.
Dwg. No. 81076
Date: 5/03/05
Product No. ZER6003AV-EWS-CPM

Concealed ZER6152AV Model

Battery-Powered Automatic Sensor Flush Valve For Water Closets

Flow Options

- ☐ **-WS1** 1.6 Gal. Low Consumption Flush
- ☐ **-FF** 4.5 Gal. Full Flush
- ☐ **Standard Flush** 3.5 Gallons Per Flush

ENGINEERING SPECIFICATION: ZURN ZER6152AV AquaSense® 'AV' Concealed Battery-Powered Automatic Sensor Flush Valve for Water Closets – Concealed, quiet diaphragm-type,rough brass, flush-ometer valve with Zurn's AquaVantage TPE, chloramine resistant, dual seal diaphragm with a clog resistant triple filtered by-pass. The valve incorporates a 6VDC motorized actuator, a battery-powered automatic sensor with a manual push-button override, high back pressure vacuum breaker, one-piece hex coupling nut and adjust-able tailpiece, spud coupling and flange for back spud connection. Switchable sensor features include 24-hour auto flush and diagnostic indicator lights. Control stop has internal siphon-guard protection and a sweat solder kit. Internal seals are made of chloramine resistant materials.

This space is for Architectural/Engineering Approval

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Rev.
Dwg. No. 66965
Date: 4/17/03
Product No. ZER6152AV

Concealed ZER6190AV Model

Battery-Powered Automatic Sensor Flush Valve For Urinals

Flow Options

- ☐ **-WS1** 1.0 Gal. Low Consumption Flush
- ☐ **-WS** 1.5 Gal. Full Flush
- ☐ **Standard Flush** 1.5 Gallons Per Flush

ENGINEERING SPECIFICATION: ZURN ZER6190AV AquaSense® 'AV' Concealed Battery-Powered Automatic Sensor Flush Valve for Urinals – Concealed, quiet diaphragm-type,rough brass, flushometer valve with Zurn's AquaVantage® TPE, chloramine resistant, dual seal diaphragm with a clog resistant triple filtered by-pass. The valve incorporates a 6VDC motorized actuator, a battery-powered automatic sensor with a manual push-button override, high back pressure vacuum breaker, one-piece hex coupling nut and adjustable tailpiece, spud coupling and flange for back spud connection. Switchable sensor features include 24-hour auto flush and diagnostic indicator lights. Control stop has internal siphon-guard protection and a sweat solder kit. Internal seals are made of chloramine resistant materials.

This space is for Architectural/Engineering Approval

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Rev. A
Dwg. No. 80504
Date: 8/5/03
Product No. ZER6190AV

Concealed ZER6195AV Model

Battery-Powered Automatic Sensor Flush Valve For Urinals

Flow Options

- ☐ **-WS1** 1.0 Gal. Low Consumption Flush
- ☐ **-WS** 1.5 Gal. Full Flush
- ☐ **Standard Flush** 1.5 Gallons Per Flush

ENGINEERING SPECIFICATION: ZURN ZER6195AV AquaSense® 'AV' Concealed Battery-Powered Automatic Sensor Flush Valve for Urinals – Concealed, quiet diaphragm-type,rough brass, flushometer valve with Zurn's AquaVantage® TPE, chloramine resistant, dual seal diaphragm with a clog resistant triple filtered by-pass. The valve incorporates a 6VDC motorized actuator, a battery-powered automatic sensor with a manual push-button override, high back pressure vacuum breaker, one-piece hex coupling nut and adjustable tail-piece, spud coupling and flange for back spud connection. Switchable sensor features include 24-hour auto flush and diagnostic indicator lights. Control stop has internal siphon-guard protection and a sweat solder kit. Internal seals are made of chloramine resistant materials.

This space is for Architectural/Engineering Approval

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Rev.
Dwg. No. 80568
Date: 8/4/03
Product No. ZER6195AV

ZURN®

AquaSense® Metroflush® Model

Exposed ZER6200-CPM Model

Sensor-Operated, Battery-Powered Flush Valve Metroflush For Water Closets

Flow Options

- ☐ **-WS1** 1.6 Gal. Low Consumption Flush
- ☐ **-FF** 4.5 Gal. Full Flush
- ☐ **Standard Flush** 3.5 Gallons Per Flush

Suffix Options (Check/Specify Appropriate Options)

- _____ **-VC** Vandal-Resistant Stop Cover
- _____ **-XYV** Less Vacuum Breaker
- _____ **-YB** Sweat Solder Kit
- _____ **-YC** Cast Wall Flange
- _____ **-YJ** Split Ring Pipe Support
- _____ **-YK** Solid Ring Pipe Support
- _____ **-YO** Bumper On Angle Stop
- _____ Other

ENGINEERING SPECIFICATION: ZURN ZER6200-CPM AquaSense® Metroflush® Exposed Closet Flush Valve – The MetroFlush is an exposed, quiet piston type, chrome-plated flushometer valve with polished exterior. Complete with Zurn's MetroVantage chloramine resistant piston with a clog resistant filtered by-pass. The valve is ADA compliant and incorporates a 6VDC motor, a battery-powered automatic sensor, high impact resistant poly-carbonate housing and chrome-plated metal cover with manual override push button and 10° angled sensor, high back pressure vacuum breaker, one-piece hex coupling nut, adjustable tailpiece, spud coupling and flange for top spud connection. Switchable sensor features include 24-hour auto flush and diagnostic indicator lights. Control stop has internal siphon-guard protection. Internal seals are made of chloramine resistant materials.

This space is for Architectural/Engineering Approval

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Rev. C
Dwg. No. 65488
Date: 8/05/04
Product No. ZER6200-CPM

Exposed ZER6203-CPM Model

Sensor-Operated, Battery-Powered Flush Valve Metroflush For 3/4" Urinal Valves

Flow Options

- ☐ **-EWS** 0.5 Gallons Per Flush
- ☐ **-WS1** 1.0 Gal. Low Consumption Flush
- ☐ **-Standard Flush** 1.5 Gallons Per Flush

Suffix Options (Check/Specify Appropriate Options)

- _____ **-VC** Vandal-Resistant Stop Cover
- _____ **-XYV** Less Vacuum Breaker
- _____ **-YB** Sweat Solder Kit
- _____ **-YC** Cast Wall Flange
- _____ **-YJ** Split Ring Pipe Support
- _____ **-YK** Solid Ring Pipe Support
- _____ **-YO** Bumper On Angle Stop
- _____ Other

ENGINEERING SPECIFICATION: ZURN ZER6203-CPM AquaSense® Sensor-Operated, Battery-Powered Metroflush® Valve for Urinals – The Metroflush is an exposed quiet piston type chrome-plated flushometer valve with polished exterior. Complete with Zurn MetroVantage chloramine resistant piston with a clog resistant filtered by-pass. The valve is ADA compliant and incorporates a 6VDC motor actuator, a battery-powered automatic sensor, high impact resistant polycarbonate housing, chrome-plated metal cover with manual override push button, 10° angled sensor, high back pressure vacuum breaker, hex coupling nut, adjustable tailpiece, spud coupling and flange for back spud connection. Switchable sensor features include 24-hour auto flush and diagnostic indicator lights. Control stop has internal siphon-guard protection. Internal seals are made of chloramine resistant materials.

This space is for Architectural/Engineering Approval

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Rev. C
Dwg. No. 65489
Date: 8/06/04
Product No. ZER6203-CPM

ZURN®

AquaSense® AV Model

Concealed ZER6252 Model
Sensor-Operated, Battery-Powered Metroflush Valve For Water Closets

Flow Options

- ☐ **-WS1** 1.6 Gal. Low Consumption Flush
- ☐ **-FF** 4.5 Gal. Full Flush
- ☐ **Standard Flush** 3.5 Gallons Per Flush

Suffix Options (Check/Specify Appropriate Options)

- _____ **-YB** Sweat Solder Kit
- _____ Other

ENGINEERING SPECIFICATION: ZURN ZER6252 AquaSense® Concealed Sensor-Operated, Battery-Powered Metroflush® Valve for Water Closets – Concealed, quiet piston type brass flushometer valve. Complete with Zurn MetroVantage chloramine resistant piston with a clog resistant filtered by-pass. The valve is ADA compliant and incorporates a 6VDC motor actuator, a battery-powered automatic sensor with manual over-ride push button, high back pressure vacuum breaker, hex coupling nut, adjustable tailpiece, spud coupling and flange for back spud connection. Switchable sensor features include 24-hour auto flush and diagnostic indicator lights. Control stop has internal siphon-guard protection. Internal seals are made of chloramine resistant materials.

This space is for Architectural/Engineering Approval

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Rev. B
Dwg. No. 80505
Date: 8/05/04
Product No. ZER6252

Concealed ZER6290 Model

Sensor-Operated, Battery-Powered Metroflush Valve For Urinals

Flow Options

- ☐ **-WS1** 1.0 Gal. Low Consumption Flush
- ☐ **-FF** 3.0 Gal. Full Flush
- ☐ **Standard Flush** 1.5 Gallons Per Flush

Suffix Options (Check/Specify Appropriate Options)

- _____ **-YB** Sweat Solder Kit
- _____ Other

ENGINEERING SPECIFICATION: ZURN ZER6290 AquaSense® Concealed Sensor-Operated, Battery-Powered Metroflush® Valve for Urinals – Concealed quiet piston type brass flushometer valve. Complete with Zurn MetroVantage chloramine resistant piston with a clog resistant filtered by-pass. The valve is ADA compliant and incorporates a 6VDC motor actuator, a battery-powered automatic sensor with manual over-ride push button, high back pressure vacuum breaker, one-piece hex coupling nut, adjustable tailpiece, spud coupling and flange for back spud connection. Switch-able sensor features include 24-hour auto flush and diagnostic indicator lights. Control stop has internal siphon-guard protection. Internal seals are made of chloramine resistant materials.

This space is for Architectural/Engineering Approval

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Rev. B
Dwg. No. 80506
Date: 8/05/04
Product No. ZER6290

ZURN®

Concealed ZER6295 Model

Sensor-Operated, Battery-Powered Metroflush Valve For Urinals

Flow Options

- ☐ **-EWS** 0.5 Gallons Per Flush
- ☐ **-WS1** 1.0 Gal. Low Consumption Flush
- ☐ **-FF** 3.0 Gal. Full Flush
- ☐ **Standard Flush** 1.5 Gallons Per Flush

Suffix Options (Check/Specify Appropriate Options)

- _____ **-YB** Sweat Solder Kit
- _____ Other

ENGINEERING SPECIFICATION: ZURN ZER6295 AquaSense® Concealed Sensor-Operated, Battery-Powered Metroflush® Valve for Urinals – Concealed, quiet piston type brass flushometer valve. Complete with Zurn MetroVantage chloramine resistant piston with a clog resistant filtered by-pass. The valve is ADA compliant and incorporates a 6VDC motorized actuator, a battery-powered automatic sensor with manual override push button, high back pressure vacuum breaker, hex coupling nut, adjustable tailpiece, spud coupling and flange for back spud connection. Switchable sensor features include 24-hour auto flush and diagnostic indicator lights. Control stop has internal siphon-guard protection. Internal seals are made of chloramine resistant materials.

This space is for Architectural/Engineering Approval

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Rev. B
Dwg. No. 80569
Date: 8/05/04
Product No. ZER6295

ZERK-CP

E-Z Flush Automatic Retrofit Kit For Closet and Urinal Valves

Suffix Options (Check/Specify Appropriate Options)

_____	**-CB**	Cambridge Brass Retrofit
_____	**-GM**	Sloan/Gem Valve Retrofit
_____	**-HMK**	Highmount Adapter
_____	**-LY**	Delany Valve Retrofit
_____	**-MT**	Metroflush/Crown Valve Retrofit
_____		Other

ENGINEERING SPECIFICATION: ZURN ZERK-CP E-Z Flush AquaSense® Retrofit Kit – The AquaSense 'A' E-Z Flush Unit is designed to provide automatic flushing for urinal and/or water closet flush valves. The unit features an adjustable automatic infrared sensor, user-in-view L.E.D., low battery indicator light, switchable 24-hour auto-flush, 10° angled sensor, courtesy flush button, and high impact-resistant chrome-plated plastic cover with replaceable tempered glass lens. The unit comes complete with 4 "C" size batteries, wrench for installation, and an Allen key for the battery compartment.

This space is for Architectural/Engineering Approval

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Rev. C
Dwg. No. 63598
Date: 8/22/02
Product No. ZERK-CP

ZURN®

AquaSense® Model

ZERK-CPM

E-Z Flush Automatic Retrofit Kit For Closet and Urinal Valves

Suffix Options (Check/Specify Appropriate Options)

_____	**-CB**	Cambridge Brass Retrofit
_____	**-GM**	Sloan/Gem Valve Retrofit
_____	**-HMK**	Highmount Adapter
_____	**-LY**	Delany Valve Retrofit
_____	**-MT**	Metroflush/Crown Valve Retrofit
_____		Other

ENGINEERING SPECIFICATION: ZURN ZERK-CPM E-Z Flush AquaSense® Retrofit Kit – The AquaSense 'A' E-Z Flush Unit is designed to provide automatic flushing for urinal and/or water closet flush valves. The unit features an adjustable automatic infrared sensor, user-in-view L.E.D., low battery indicator light, switchable 24-hour auto-flush, 10° angled sensor, and courtesy flush button and chrome-plated metal cover with replaceable tempered glass lens. The unit comes complete with 4 "C" size batteries, wrench for installation, and an Allen key for the battery compartment.

This space is for Architectural/Engineering Approval

ZURN INDUSTRIES, LLC *COMMERCIAL BRASS OPERATION, 5900 ELWIN BUCHANAN DRIVE, SANFORD, NC 27330*
PHONE: 1-800-997-3876, FAX: 919-775-3541, WEBSITE: www.zurn.com
IN CANADA: ***ZURN INDUSTRIES LIMITED*** *3544 NASHUA DRIVE, MISSISSAUGA, ONTARIO L4V 1L2, PHONE: 905-405-8272, FAX: 905-405-1292*

AquaSense® is a registered trademark of Zurn Industries, LLC

Rev. C
Dwg. No. 63484
Date: 8/22/02
Product No. ZERK-CPM

ZERK-CP-CON

Battery-Powered Automatic Sensor Retrofit For Concealed Flush Valves

ENGINEERING SPECIFICATION: ZURN ZERK-CP-CON AquaSense® Concealed Battery-Powered Automatic Sensor Retrofit for Concealed Flush Valves – The unit incorporates a 6VDC motorized actuator, a battery-powered automatic sensor with a manual push-button override. Sensor features include switchable 24-hour auto flush, delay flush and diagnostic indicator lights. Unit comes complete with concealed motor actuator, wall mount sensor, chrome wall plate, 4 x 4 electrical box and 4 “C” cell batteries. Retrofits both concealed closet and urinal flush valves.

ADA DESIGNED

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ZURN INDUSTRIES, LLC *COMMERCIAL BRASS OPERATION, 5900 ELWIN BUCHANAN DRIVE, SANFORD, NC 27330*
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AquaVantage® is a registered trademark of Zurn Industries, LLC
AquaSense® is a registered trademark of Zurn Industries, LLC

Rev.
Dwg. No. 80570

Date: 8/5/03
Product No. ZERK-CP-CON

AquaSense AV Retrofit Kits and Battery Flush Valves Comparison Guide

RetroFlush Retrofit Kits

Zurn	Sloan*
ZRK-C-4.5	RESS-CF-4.5C-MC
ZRK-C-3.5	RESS-CF-3.5C-MC
ZRK-C-1.6	RESS-CF-1.6C-MC
ZRK-U-3.0	RESS-3.0U-MC
ZRK-U-1.5	RESS-1.5U-MC
ZRK-U-1.0	RESS-1.0U-MC

*Sloan suffix -MC – metal cover.

E-Z Flush Retrofit Kit – Chrome Metal

Zurn	Sloan*
ZERK-C-CPM	RESS-CF-4.5C-MC
ZERK-C-CPM	RESS-CF-3.5C-MC
ZERK-C-CPM	RESS-CF-1.6C-MC
ZERK-C-CPM	RESS-3.0U-MC
ZERK-C-CPM	RESS-1.5U-MC
ZERK-C-CPM	RESS-1.0U-MC

*Sloan suffix -MC – metal cover.

E-Z Flush Retrofit Kits – Chrome Plastic

Zurn	Sloan**
ZERK-C-CP	RESS-CF-4.5C RESS-CF-3.5C RESS-CF-1.6C
ZERK-C-CP	RESS-3.0U RESS-1.5U RESS-1.0U

**Sloan plastic cover.

RetroFlush Complete Flush Valves For Water Closets

Zurn	Sloan*
ZR6000AV	Royal 8110-MC
ZR6000AV-WS1	Royal 8111-MC
ZR6000AV-2	Royal 8115-MC
ZR6000AV-3	Royal 8116-MC
ZR6000AV-BWN	Royal BPW-8000-MC

*Sloan suffix -MC – metal cover.

RetroFlush Complete Flush Valves For Urinals

Zurn	Sloan*
ZR6001AV	Royal 8180-MC
ZR6001AV-WS1	Royal 8180-1.0-MC
ZR6003AV	Royal 8186-MC
ZR6003AV-WS1	Royal 8186-1-MC

*Sloan suffix -MC – metal cover.

E-Z Flush Complete Flush Valves For Water Closets – Chrome Metal

Zurn	Sloan*
ZER6000AV-CPM	Royal 8110-MC
ZER6000AV-WS1-CPM	Royal 8111-MC
ZER6000AV-2-CPM	Royal 8115-MC
ZER6000AV-3-CPM	Royal 8116-MC
ZER6000AV-BWN-CPM	Royal BPW-8000-MC

*Sloan suffix -MC – metal cover.

E-Z Flush Complete Flush Valves For Water Closets – Chrome Plastic

Zurn	Sloan**
ZER6000AV-CP	Royal 8110
ZER6000AV-WS1-CP	Royal 8111
ZER6000AV-2-CP	Royal 8115
ZER6000AV-3-CP	Royal 8116
ZER6000AV-BWN-CP	Royal-BPW-8000

**Sloan plastic cover.

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AquaSense® AV ZER Series

Automatic, Sensor-Operated Battery-Powered Flushometer

Installation, Operation, Maintenance, and Parts Manual

Patented and Patents Pending

ZER6000AV-CP
ZER6000AV-CPM

ZER6003AV-CP
ZER6003AV-CPM

Sensor-Operated, Battery-Powered Closet/Urinal Systems

Note: This manual covers all ZER Sensor, Battery Closet/Urinal Systems with -CPM (Chrome-Plated Metal Cover) and -CP (Chrome Plastic Cover) Units.

LIMITED WARRANTY

All goods sold hereunder are warranted to be free from defects in material and factory workmanship for a period of three years from the date of purchase. Decorative finishes warranted for one year. We will replace at no cost goods that prove defective provided we are notified in writing of such defect and the goods are returned to us prepaid at Sanford, NC, with evidence that they have been properly maintained and used in accordance with instructions. We shall not be responsible for any labor charges or any loss, injury or damages whatsoever, including incidental or consequential damages. The sole and exclusive remedy shall be limited to the replacement of the defective goods. Before installation and use, the purchaser shall determine the suitability of the product for his intended use and the purchaser assumes all risk and liability whatever in connection therewith. Where permitted by law, the implied warranty of merchantability is expressly excluded. If the products sold hereunder are “consumer products,” the implied warranty of merchantability is limited to a period of three years and shall be limited solely to the replacement of the defective goods. All weights stated in our catalogs and lists are approximate and are not guaranteed.

FV237

PRIOR TO INSTALLATION

Prior to installing the ZER Flushometer, install the items listed below:

- Closet or urinal fixture
- Drain line
- Water supply line

IMPORTANT:

- ALL PLUMBING IS TO BE INSTALLED IN ACCORDANCE WITH APPLICABLE CODES AND REGULATIONS.
- WATER SUPPLY LINES MUST BE SIZED TO PROVIDE AN ADEQUATE VOLUME OF WATER FOR EACH FIXTURE.
- FLUSH ALL WATER LINES PRIOR TO OPERATION (SEE STEP 9).
- DIRT AND DEBRIS CAN CAUSE FLUSH VALVE TO RUN CONTINUOUSLY.

The ZER is designed to operate with 20 to 80 psi (138 to 552 kPa) of water pressure. THE MINIMUM PRESSURE REQUIRED TO THE VALVE IS DETERMINED BY THE TYPE OF FIXTURE SELECTED. Consult fixture manufacturer for pressure requirements.

Protect the chrome or special finish of this flushometer. DO NOT USE TOOTHED TOOLS TO INSTALL OR SERVICE THE VALVE.

1 Install stop valve assembly (A) using proper size supply escutcheon and sweat solder adapter kit if applicable. Thread sealing compounds should be used on male NPT threads only.

3 Insert the flush valve tailpiece (B) into the stop valve (A) and hand tighten the lock nut (D) to the stop valve. Plumb the entire unit.

2 Prior to inserting the flush valve tailpiece (B) into stop valve, be certain that the O-ring seal (C) is located in O-ring seal groove at the end of the tailpiece, and the locking nut (D) and locking snap ring (E) are located as shown. Care should be taken not to damage the O-ring when inserting the tailpiece into the stop valve. If lubrication is needed, wetting the O-ring with water will be sufficient.

4 Determine the length of vacuum breaker tube (F) required to join the flush valve and fixture spud. Cut the vacuum breaker tube, if required, to this length. Assemble the vacuum breaker tube assembly and spud nut assembly to the flush valve and fixture spud.

5 Hand tighten spud nut and vacuum breaker tube nut to fixture and flush valve. Adjust the valve assembly for plumb. Tighten fixture spud nut, vacuum breaker tube nut and lock nut with a wrench. **Do not turn water on until batteries are inserted – see 6.**

6 ACTIVATION

Using supplied battery compartment wrench, remove battery compartment from the E-Z Flush™ unit.

Load batteries into compartment tray (note position of batteries in tray), and reinstall battery tray into the E-Z Flush unit.

Secure tray with battery compartment wrench. The last three turns of the wrench will activate the E-Z Flush unit. The E-Z Flush System is now operational.

Your E-Z Flush unit comes preset from the factory. If special circumstances require adjustment of the activation distance, see Item 11 – "Adjusting Your E-Z Flush."

The E-Z Flush unit has a 10-minute start-up sequence in which the sensor will flash the User-In-View yellow L.E.D. continuously as long as a user is in view. After the start-up sequence is completed and when the sensor has a user in view, the User-In-View yellow L.E.D. will flash only 3 times after a 5-second delay. This delay prevents needless flushes when someone walks by.

Sensor units should not be located across from each other or in close proximity to highly reflective surfaces.

6

7 VISUAL INDICATOR GUIDE

USER-IN-VIEW L.E.D. Yellow light flashes 3 times – after 5-second delay – when a user is in view. The yellow light flashes constantly when a user is in view during the 10-minute start-up sequence.

SENSOR

BATTERY L.E.D. Red light flashes indicating it is time to replace batteries with 4 new "C" batteries.

COURTESY MANUAL FLUSH BUTTON Allows manual activation of flush when needed.

7

8 Before the supply water is turned on, be sure all stop valves to the flush valves are closed off tight. The stop valves can be opened and closed by using the adjusting screw located at the center of the stop valve cap (T), behind the adjusting screw cover if already installed. Stop valve adjustments can only be made by using the adjusting screw. **It is not necessary to remove the stop valve cap when making adjustments. If for any reason it becomes necessary to remove the stop valve cap, be certain the water is shut off at the main supply valve.**

8

9 When all flush valves are connected to the fixtures and water pressure is available, it is recommended that the supply piping be flushed to remove dirt, pipe chips, etc., from system.

Use the following procedure to flush out the supply piping:

A. Remove the main valve body cover O and internal plastic cap P.

B. Remove the trip mechanism Q from the flush valve and set aside (shown in 9).

C. Replace the plastic cover P and main body cover O without reinstalling the trip mechanism Q.

D. Open the stop valve by using the stop adjusting screw and flush out all debris from pipe and connections.

E. Once pipe and connection are flushed, shut off stop, open cover, reinstall the trip mechanism Q, replace both covers (O and P) and tighten.

This procedure should also be repeated when the system is drained for seasonal use, as occurs in athletic fields, recreation parks, etc.

10 The ZER flush valves are preset for fixture volume as marked on the valve cartons. The valve does not require regulation for variation in water pressure within its operating range. To set the flush valve for proper operation, gradually adjust the stop valve open, using the adjusting screw, while actuating the valve until the rate of water flow into the fixture is not excessive, yet is sufficient to adequately evacuate the waste. The final setting for urinals should be such that the fixture will not overflow when the valve is actuated in succession. The stop cap screw cover should be replaced after final adjustments have been made.

TROUBLESHOOTING GUIDE

PROBLEM	CAUSE	SOLUTION
Yellow L.E.D. light flashes 3 times when there are no users.	Front of sensor is covered or sensor is set too far out, registering the opposite wall or door as a user.	Remove item covering sensor or adjust sensor activation distance. (See 11 – "Adjusting the E-Z Flush.")
Yellow L.E.D. light flashes continuously when sensor is activated by a user.	E-Z Flush unit is in 10-minute start-up mode (when first activated).	Yellow L.E.D. light will flash only 3 times, acknowledging a user is in view after the 10-minute start-up mode.
Red L.E.D. light flashes.	Batteries need replacing.	Replace batteries.
Not enough water to fixture or too much water to fixture.	Diaphragm damaged or valve control stop improperly adjusted.	Replace diaphragm and/or adjust valve control stop.
Valve will not operate.	Sensor range set too close to E-Z Flush, batteries are dead, or water supply is turned off.	Adjust sensor, replace batteries, or turn water on. If the E-Z Flush does not begin to function, call Customer Service at 1-800-997-3876.
Valve does not shut off.	Dirt or debris preventing diaphragm from functioning properly.	Remove dirt or debris, check by-pass hole in diaphragm.
Valve does not flush even after sensor has been adjusted.	Batteries are dead.	Replace batteries. If the E-Z Flush does not begin to function, call Customer Service at 1-800-997-3876.

11 ADJUSTING YOUR E-Z FLUSH

STEP A Use battery compartment wrench to remove battery compartment tray.

STEP B Pull cover off by rotating battery side forward and out.

STEP C Sensor Adjustor Tool comes in a built-in storage pocket. Replace after use.

WIRING DIAGRAM

TO CHANGE ACTIVATION DISTANCE FOR THE SENSOR

1. Remove battery compartment tray as shown in Step 11.
2. Remove cover and sensor adjustor tool as shown in Step 11.
3. Replace battery compartment without cover in E-Z Flush to activate unit (the yellow L.E.D. will flash continuously when it has an object in view for the 10-minute reset period). See Step 6, “Activation.”
4. Have an individual stand at desired activation distance.
5. Use sensor adjustor tool and turn **Sensor Range Adjustment Screw** all the way down and then turn slowly up until **yellow L.E.D.** begins to flash.
6. Ensure sensor is not detecting stall door or wall by closing door, stepping out of sensor path and making sure **yellow L.E.D.** is not flashing. If sensor locks onto door or wall, unit will not flush properly. Shorten activation distance.
7. Remove battery compartment, replace sensor adjustor tool and cover. Replace battery compartment tray to reactivate E-Z Flush unit.
8. After 10-minute start-up sequence, the **yellow L.E.D.** will flash only 3 times when a user is in view (after a 5-second delay).

AquaVantage® Exposed E-Z Flush Repair Kits

Parts Identification

1.* Seal
2.* Collar Gasket
3. Sensor Module
4.* Manual Override Push Button
5. Replacement Sensor Lens
6. Chrome Plastic Cover
7. Chrome Metal Cover
8. Battery Drawer
9.* O-Ring
10. Valve Body Cover
11. Plastic Cover
12. Trip Mechanism
13. Diaphragm Repair Kit
14. Valve Body
15. Vacuum Breaker Friction Washer
16. Vacuum Breaker Insert
17. Vacuum Breaker Duckbill
18. Vacuum Breaker Tube
19. Vacuum Breaker Tube Nut
20. Spud Nut
21. Spud Friction Washer
22. Spud Sleeve
23. Spud Escutcheon
24. Tailpiece
25. Snap Ring
26. Tailpiece O-Ring
27. Locking Nut
28. Setscrew for Cast Wall Flange
29. Cast Wall Escutcheon
30. Supply Cover Tube
31. Sweat Solder Adaptor
32. Stop Body
33. Piston Seal
34. Piston
35. Stop Spring
36. Guide O-Ring
37. Piston Guide
38. Guide Holder
39. Adjusting Screw
40. Stop Cap
41. Snap Cap Screw Cover
42. Vandal-Resistant Control Stop Cover
43. Setscrew for Control Stop Cover
44. Handle Nut Wrench
45. Allen Wrench

Covers and Repair Kits	Product No.
Outside Cover - CP – Item 10	P6000-LL-CP
Inside Cover – Item 11	P6000-L
Low Consumption Closet Kit – 1.6 gal. flush	P6000-ECA-WS1
Water Saving Closet Kit – 3.5 gal. flush	P6000-ECA-WS
Full Flow Closet Kit – 4.5 gal. flush	P6000-ECA-FF
Low Consumption Urinal Kit – 1.0 gal. flush	P6000-EUA-WS1
Water Saving Urinal Kit – 1.5 gal. flush	P6000-EUA-WS
Full Flush Urinal Kit – 3.0 gal. flush	P6000-EUA-FF

Repair Parts – Inside Parts	Product No.
Urinal Relief Valve – Item 12	P6000-EU13
Closet Relief Valve – Item 12	P6000-EC13

AquaVantage Rebuild Kits	Product No.
Closet and Urinal Rebuild Kits Include Items 12, 13, 15-17, 26	P6000-ECA-WS-RK P6000-ECA-WS1-RK P6000-EUA-WS-RK P6000-EUA-WS1-RK

Handle Assembly and Repair Kits	Product No.
Chrome Plastic Cover – Item 6	PERK6000-L-CPCR
Chrome Metal Cover – Item 7	PERK6000-L-CPMCR
Replacement Sensor Lens – Item 5	PERK6000-SCR
Battery Drawer – Item 8	PERK6000-BD
*Repair Kit Includes Item 1, Item 2, Item 4 and Item 9	PERK6000-RK
Sensor Module	PERK6000-SR

Control Stop Repair Kit and Parts	Product No.
Control Stop Repair Kit for 1" and 3⁄4", Includes Items 33-39	P6000-D-SD
Seal Seat for 1" and 3⁄4", Includes Item 33	P6000-D42
VP Control Stop Repair Kit for 1" and 3⁄4", Includes Items 33-39	P6000-D-VP
Sweat Solder Connection with Cast Wall Flange, Includes Items 29-31	P6000-YBYC

Adjustable Tailpieces	Product No.
Adjustable Tailpiece for Standard Flush Valve, Includes Items 24-26	P6000-J1
Tailpiece Coupling Assembly, Includes Items 25-27	P6000-K
Tailpiece Locking Ring, Includes Item 25	P6000-C30
Tailpiece O-Ring, Includes Item 26	P6000-C31
Coupling Nut, Includes Item 27	P6000-C32

Flush Connections and Spud Coupling Kits	Product No.
Flush Tube Assembly for Flush Valves, Includes Items 15-19. Specify diameter and length.	P6000-A
Vacuum Breaker Repair Kit, Includes Items 15-17	P6000-B
Spud Coupling Assembly, Includes Items 20-23. Specify size.	P6000-H

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ZURN

E-Z Flush

Automatic Sensor Retrofit Kit For Urinals and Toilets

ZERK-CP Chrome-Plated Cover
ZERK-CPM Chrome-Plated Metal Cover

INSTALLATION INSTRUCTIONS

1 DESCRIPTION

The E-Z Flush™ sends out a continuous infrared beam that is reflected back by the presence of a person in front of the urinal or toilet. The technology differentiates between someone walking past the unit or actually using the fixture. E-Z Flush models ZERK-CP and ZERK-CPM retrofit Zurn and Sloan valves. For Delaney valves, order model ZERK-CP-LY or ZERK-CPM-LY.

2 E-Z FLUSH COMPONENTS

3 INSTALLATION

Shut off water supply at stop.

A – Using the supplied wrench, loosen handle nut.

B – Remove handle from flush valve.

Note: A small amount of water may drip from the port.

C – Place gasket into nut and attach the E-Z Flush unit where the handle was removed.

D – Tighten nut with supplied wrench.

Note: Save handle in the event you wish to reuse for service of E-Z Flush.

4 ACTIVATION

Using supplied battery compartment wrench, remove battery compartment from the E-Z Flush™ unit.

Load batteries into compartment tray (note position of batteries in tray), and reinstall battery tray into the E-Z Flush unit.

Secure tray with battery compartment wrench. The last three turns of the wrench will activate the E-Z Flush unit. The E-Z Flush System is now operational.

Your E-Z Flush unit comes preset from the factory. If special circumstances require adjustment of the activation distance, see Step 7 – "To Change Sensor Activation Distance."

The E-Z Flush unit has a 10-minute start-up sequence in which the sensor will flash the User-In-View **yellow L.E.D.** continuously as long as a user is in view. After the start-up sequence is completed and when the sensor has a user in view, the User-In-View **yellow L.E.D.** will flash only 3 times after a 5-second delay. This delay prevents needless flushes when someone walks by.

Remove Battery Compartment

Install Battery Compartment

5 VISUAL INDICATOR GUIDE

USER-IN-VIEW L.E.D. Yellow light flashes 3 times – after 5-second delay – when a user is in view. The yellow light flashes constantly when a user is in view during the 10-minute start-up sequence.

SENSOR

BATTERY L.E.D. Red light flashes indicating it is time to replace batteries with 4 new "C" batteries.

COURTESY MANUAL FLUSH BUTTON Allows manual activation of flush when needed.

6 ADJUSTING YOUR E-Z FLUSH

STEP A

Use battery compartment wrench to remove battery compartment tray.

STEP B

Pull cover off by rotating battery side forward and out.

STEP C

Sensor Adjustor Tool comes in a built-in storage pocket. Replace after use.

7 TO CHANGE SENSOR ACTIVATION DISTANCE

1. Remove battery compartment tray as shown in Step 6.
2. Remove cover and sensor adjustor tool as shown in Step 6.
3. Replace battery compartment in E-Z Flush to activate unit (the yellow L.E.D. will flash continuously when it has an object in view for the 10-minute reset period). See Step 4 – "Activation."
4. Have an individual stand at desired activation distance.
5. Use sensor adjustor tool and turn the **Sensor Range Adjustment Screw** all the way down and then turn slowly up until **yellow L.E.D.** begins to flash.
6. Ensure sensor is not detecting stall door or wall by closing door, stepping out of sensor path and making sure **yellow L.E.D.** is not flashing. If sensor locks onto door or wall, unit will not flush properly. Shorten activation distance.
7. Remove battery compartment, replace sensor adjustor tool and cover. Replace battery compartment tray to reactivate E-Z Flush unit.
8. After 10-minute start-up sequence, the **yellow L.E.D.** will flash only 3 times when a user is in view (after a 5-second delay).

8 WIRING DIAGRAM

9 TROUBLESHOOTING GUIDE

PROBLEM	CAUSE	SOLUTION TO PROBLEM
Yellow L.E.D. light flashes 3 times when there are no users.	Front of sensor is covered or sensor is set too far out, registering the opposite wall or door as a user.	Remove item covering sensor or adjust sensor activation distance. (See Step 7 – "To Change Sensor Activation Distance.")
Yellow L.E.D. light flashes continuously when sensor is activated by a user.	E-Z Flush unit is in 10-minute start-up mode (when first activated).	Yellow L.E.D. light will flash only 3 times, acknowledging a user is in view after the 10-minute start-up mode.
Red L.E.D. light flashes.	Batteries need replacing.	Replace batteries.
Not enough water to fixture or too much water to fixture.	Diaphragm damaged or valve control stop improperly adjusted.	Replace diaphragm and/or adjust valve control stop.
Valve will not operate.	Sensor range set too close to E-Z Flush, batteries are dead, or water supply is turned off.	Adjust sensor, replace batteries, or turn water on. If the E-Z Flush does not begin to function, call Customer Service at 1-800-997-3876.
Valve does not shut off.	Dirt or debris preventing diaphragm from functioning properly.	Remove dirt or debris, consult valve manufacturer's directions.
Valve does not flush even after sensor has been adjusted.	Batteries are dead.	Replace batteries. If the E-Z Flush does not begin to function, call Customer Service at 1-800-997-3876.

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ZURN®

AquaSense® AV

Hardwired Motor Actuator Sensor Flush Valves

ZEMS Series
ZEMS-IS Series

ZEMS Offers Easy Installation

Easy Installation -	Single electrical box rough-in and modular design.
Simple Maintenance -	Actuator is located on the handle port with easy access.
Gear/Motor Operation -	Resists chemicals and debris in water.
Override Button -	Standard on water closet units, allows for flush upon demand.
Retrofittable -	Can retrofit existing flush valves.
Adjustable Range -	Factory pre-set range, adjustable 2"- 60" range.
24-Hour Autoflush -	Flushes every 24 hours when not in use, switchable.
Red/Green L.E.D. Indicators -	Light when in range and upon acquisition, switchable.
Courtesy Flush -	Flushes upon user entering the range, switchable.
Optional Battery Backup -	Powers units in the event of a power outage.
Multiple Power Supply -	One plug-in power converter powers up to 8 flush valves.
All Metal Housing -	Vandal-resistant metal actuator housing.
AquaVantage -	Flush valve comes standard with AquaVantage features including an extended life chemical resistant diaphragm kit.

Zurn AquaVantage AV Diaphragm Kit

- Enhanced Performance
- Chemical Resistant
- Clog-Resistant Triple Filtered By-Pass
- Interchangeability

Zurn Z6000AV Model flush valves feature the chemical and clog resistant revolutionary AquaVantage Diaphragm Kit. The AquaVantage Kit is designed to eliminate the common problems that are associated with flush valve installations such as fixture evacuation, run-on, degradation of rubber components and sediment. The AquaVantage Kit now makes these problems a thing of the past. It provides for greater performance, ensures reliability, and greatly extends the operating life of the internal components.

Zurn AquaSense Hardwired Sensor-Operated Flush Valves

Note: For Low Consumption Flush Valves, Use Suffix -WS1

Exposed AV Series includes chemical-resistant and clog-resistant diaphragm kit, ADA compliance sensor activation cast wall flange with setscrew, vandal-resistant chrome control stop cover and sweat solder kit. Concealed valves include 4 ADA sensor activation and sweat solder adapter.

ZEMS and ZEMS-IS Automatic Sensor Motorized Flush Valve

Exposed Sensor Flush Valves For Water Closets

ZEMS6000AV-WS1 With Override Button

ZEMS6000AV-WS1-IS With Override Button

ZEMS and ZEMS-IS Automatic Sensor Motorized Flush Valve

Exposed Sensor Flush Valves For Urinals

ZEMS6001AV-WS1 (1-1/4")

ZEMS6001AV-WS1-IS

ZEMS6003AV-WS1 (3/4")

ZEMS6003AV-WS1-IS

ZEMS Series Automatic Sensor Motorized Flush Valve

Concealed Sensor Flush Valves For Water Closets

ZEMS6140AV

ZEMS6152AV

ZEMS6153AV

ZEMS Series Automatic Sensor Motorized Flush Valve

Concealed Sensor Flush Valves For Urinals

ZEMS6190AV (1-1/4")

ZEMS6190AV-N

ZEMS6195AV (3/4")

ZEMS6195AV-N

For 13" x 17" Access Panel, Order ZESS6199BX17 Power Converter P6000-PC6

In the U.S.A.:

ZURN INDUSTRIES, LLC COMMERCIAL BRASS OPERATION
5900 ELWIN BUCHANAN DRIVE • SANFORD, NC, U.S.A. 27330
PHONE: 1-800-997-3876 • FAX: 919/775-3541
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In Canada:

ZURN INDUSTRIES LIMITED
3544 NASHUA DRIVE • MISSISSAUGA, ONTARIO L4V 1L2
PHONE: 905/405-8272 • FAX: 905/405-1292

Zurn Industries, LLC Printed in U.S.A. Form No. FV238, Rev. 5/07

Exposed ZEMS6000AV-IS Model

Hardwired Automatic Sensor Flush Valve For Water Closets

Flow Options

- ☐ **-WS1** 1.6 Gal. Low Consumption Flush
- ☐ **-FF** 4.5 Gal. Full Flush
- ☐ **Standard Flush** 3.5 Gallons Per Flush

Suffix Options (Check/Specify Appropriate Options)

- _____ **-YJ** Split Ring Pipe Support
- _____ **-YK** Solid Ring Pipe Support
- _____ **-YO** Bumper On Angle Stop
- _____ Other

Accessories (Order Separate as Specified)

PESS6000-BB	Battery Backup (Up to Eight Valves)
P6000-PC6	6 VDC Plug-in Power Converter (Up to Eight Valves)
P6000-MJ	Mini Junction Box
P6000-HW6	Hardwire Power Converter (Up to Eight Valves)

This space is for Architectural/Engineering Approval

ENGINEERING SPECIFICATION:
ZURN ZEMS6000AV-IS AquaSense® 'AV' Exposed Hardwired Automatic Sensor Flush Valve for Water Closets – Exposed, quiet diaphragm-type, chrome-plated, flushometer valve with a polished exterior. Complete with Zurn's AquaVantage TPE, chloramine resistant, dual seal diaphragm with a clog resistant, triple filtered by-pass. The valve incorporates a 6 VDC motorized actuator, an integral infrared convergence-type proximity sensor and a manual push-button override into an all-metal, polished chrome-plated housing. Sensor range automatically adjusts to its environment at power up and is powered by a 6 VDC power converter. Each power converter can accommodate up to eight flush valves. The valve is complete with high back pressure vacuum breaker, one-piece hex coupling nut, adjustable tailpiece, spud coupling and flange for top spud connection. Control stop has internal siphon-guard protection, vandal resistant stop cap, sweat solder kit, and a cast wall flange with setscrew. Internal seals are made of chloramine resistant materials.

Note: Must use either Zurn P6000-HW6 hardwire power converter or Zurn P6000-PC6 plug-in power converter to ensure proper operation. Using a power converter other than Zurn may result in operation malfunction or unit failure.

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Rev. A
Dwg. No. 66822
Date: 8/04/04
Product No. ZEMS6000AV-IS

Exposed ZEMS6000AV Model
Hardwired Automatic Sensor Flush Valve For Water Closets

ADA DESIGNED

Flow Options

- ☐ **-WS1** 1.6 Gal. Low Consumption Flush
- ☐ **-FF** 4.5 Gal. Full Flush
- ☐ **Standard Flush** 3.5 Gallons Per Flush

Suffix Options (Check/Specify Appropriate Options)

- _____ **-YJ** Split Ring Pipe Support
- _____ **-YK** Solid Ring Pipe Support
- _____ **-YO** Bumper On Angle Stop
- _____ Other

Accessories (Order Separate as Specified)

PESS6000-BB	Battery Backup (Up to Eight Valves)
P6000-PC6	6 VDC Plug-in Power Converter (Up to Eight Valves)
P6000-MJ	Mini Junction Box
P6000-HW6	Hardwire Power Converter (Up to Eight Valves)

This space is for Architectural/Engineering Approval

ENGINEERING SPECIFICATION: ZURN ZEMS6000AV AquaSense® 'AV' Exposed Hardwired Automatic Sensor Flush Valve For Water Closets – Exposed, quiet diaphragm-type, chrome-plated, flushometer valve with a polished exterior. Complete with Zurn's AquaVantage TPE, chloramine resistant, dual seal diaphragm with a clog resistant, triple filtered by-pass. The valve incorporates a 6 VDC motorized actuator, an automatic sensor with a manual push-button override, high back pressure vacuum breaker, one-piece hex coupling nut, adjustable tailpiece, spud coupling and flange for top spud connection. Switchable sensor features include: courtesy flush, automatic 24-hour flush, and diagnostic indicator lights. Control stop has internal siphon-guard protection, vandal-resistant stop cap, sweat solder kit, and a cast wall flange with setscrew. Internal seals are made of chloramine resistant materials. Electrical box by others (see installation instructions for type and size). **Note:** Order power converter separate, one power converter operates up to eight valves.

Note: Must use either Zurn P6000-HW6 hardwire power converter or Zurn P6000-PC6 plug-in power converter to ensure proper operation. Using a power converter other than Zurn may result in operation malfunction or unit failure.

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Rev. F
Dwg. No. 65365
Date: 6/15/04
Product No. ZEMS6000AV

Exposed ZEMS6001AV-IS Model

Hardwired Automatic Sensor Flush Valve For 1-1/4" Urinals

Flow Options

- ☐ **-WS1** 1.0 Gal. Low Consumption Flush
- ☐ **-WS** 1.5 Gal. Water Saver
- ☐ **Standard Flush** 3.0 Gallons Per Flush

Suffix Options (Check/Specify Appropriate Options)

- _____ **-YJ** Split Ring Pipe Support
- _____ **-YK** Solid Ring Pipe Support
- _____ Other

Accessories (Order Separate as Specified)

PESS6000-BB	Battery Backup (Up to Eight Valves)
P6000-PC6	6 VDC Plug-in Power Converter (Up to Eight Valves)
P6000-MJ	Mini Junction Box
P6000-HW6	Hardwire Power Converter (Up to Eight Valves)

This space is for Architectural/Engineering Approval

ENGINEERING SPECIFICATION:
ZURN ZEMS6001AV-IS AquaSense® 'AV' Exposed Hardwired Automatic Sensor Flush Valve for Urinals – Exposed, quiet diaphragm-type, chrome-plated, flushometer valve with a polished exterior. Complete with Zurn's AquaVantage TPE, chloramine resistant, dual seal diaphragm with a clog resistant, triple filtered by-pass. The valve incorporates a 6 VDC motorized actuator, an integral infrared convergence-type proximity sensor and a manual push-button override into an all-metal, polished chrome-plated housing. Sensor range automatically adjusts to its environment at power up and is powered by a 6 VDC power converter. Each power converter can accommodate up to eight flush valves. The valve is complete with high back pressure vacuum breaker, one-piece hex coupling nut, adjustable tailpiece, spud coupling and flange for top spud connection. Control stop has internal siphon-guard protection, vandal-resistant stop cap, sweat solder kit, and a cast wall flange with setscrew. Internal seals are made of chloramine resistant materials.

Note: Must use either Zurn P6000-HW6 hardwire power converter or Zurn P6000-PC6 plug-in power converter to ensure proper operation. Using a power converter other than Zurn may result in operation malfunction or unit failure.

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Rev. A
Dwg. No. 80624
Date: 8/04/04
Product No. ZEMS6001AV-IS

Exposed ZEMS6003AV-IS Model
For 3/4" Urinals

Flow Options

☐ **-WS1** 1.0 Gal. Low Consumption Flush
☐ **Standard Flush** 1.5 Gallons Per Flush

Suffix Options (Check/Specify Appropriate Options)

_____ **-VP** Vandal-Resistant Stop Screw
_____ **-YJ** Split Ring Pipe Support
_____ **-YK** Solid Ring Pipe Support
_____ Other

Accessories (Order Separate as Specified)

PESS6000-BB Battery Backup (Up to Eight Valves)
P6000-PC6 6 VDC Plug-in Power Converter (Up to Eight Valves)
P6000-MJ Mini Junction Box
P6000-HW6 Hardwire Power Converter (Up to Eight Valves)

This space is for Architectural/Engineering Approval

ENGINEERING SPECIFICATION:
ZURN ZEMS6003AV-IS AquaSense® 'AV' Exposed Hardwired Automatic Sensor Flush Valve for 3/4" [19] Urinals – Exposed, quiet diaphragm-type, chrome-plated flushometer valve with a polished exterior. Complete with Zurn's AquaVantage TPE, chloramine resistant, dual seal diaphragm with a clog resistant, triple filtered by-pass. The valve incorporates a 6 VDC motorized actuator, an integral infrared convergence-type proximity sensor and a manual push-button override into an all-metal, polished chrome-plated housing. Sensor range automatically adjusts to its environment at power up and is powered by a 6 VDC power converter. Each power converter can accommodate up to eight flush valves. The valve is complete with high back pressure vacuum breaker, one-piece hex coupling nut, adjustable tailpiece, spud coupling and flange for top spud connection. Control stop has internal siphon-guard protection, vandal-resistant stop cap, sweat solder kit, and a cast wall flange with setscrew. Internal seals are made of chloramine resistant materials.

Note: Must use either Zurn P6000-HW6 hardwire power converter or Zurn P6000-PC6 plug-in power converter to ensure proper operation. Using a power converter other than Zurn may result in operation malfunction or unit failure.

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Rev. C
Dwg. No. 66823
Date: 6/24/04
Product No. ZEMS6003AV-IS

Exposed ZEMS6003AV-IS-EWS Model
For 3/4" Urinals

Flow Options

☐ **Standard Flush** .5 Gallons Per Flush

Suffix Options (Check/Specify Appropriate Options)

_____	**-VP**	Vandal-Resistant Stop Screw
_____	**-YJ**	Split Ring Pipe Support
_____	**-YK**	Solid Ring Pipe Support
_____		Other

Accessories (Order Separate as Specified)

PESS6000-BB	Battery Backup (Up to Eight Valves)
P6000-PC6	6 VDC Plug-in Power Converter (Up to Eight Valves)
P6000-MJ	Mini Junction Box
P6000-HW6	Hardwire Power Converter (Up to Eight Valves)

This space is for Architectural/Engineering Approval

ENGINEERING SPECIFICATION:
ZURN ZEMS6003AV-IS-EWS AquaSense® 'AV' Exposed Hardwired Automatic Sensor Flush Valve for 3/4" [19] Urinals – Exposed, quiet diaphragm-type, chrome-plated flushometer valve with a polished exterior. Complete with Zurn's AquaVantage TPE, chloramine resistant, dual seal diaphragm with a clog resistant, triple filtered by-pass. The valve incorporates a 6 VDC motorized actuator, an integral infrared convergence-type proximity sensor and a manual push-button override into an all-metal, polished chrome-plated housing. Sensor range automatically adjusts to its environment at power up and is powered by a 6 VDC power converter. Each power converter can accommodate up to eight flush valves. The valve is complete with high back pressure vacuum breaker, one-piece hex coupling nut, adjustable tailpiece, spud coupling and flange for top spud connection. Control stop has internal siphon-guard protection, vandal-resistant stop cap, sweat solder kit, and a cast wall flange with setscrew. Internal seals are made of chloramine resistant materials.

Note: Must use either Zurn P6000-HW6 hardwire power converter or Zurn P6000-PC6 plug-in power converter to ensure proper operation. Using a power converter other than Zurn may result in operation malfunction or unit failure.

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Rev.
Dwg. No. 80947
Date: 9/10/04
Product No. ZEMS6003AV-IS-EWS

Exposed ZEMS6003AV Model
For 3/4" Urinals

Flow Options

☐ **-WS1** 1.0 Gal. Low Consumption Flush
☐ **Standard Flush** 1.5 Gallons Per Flush

Suffix Options (Check/Specify Appropriate Options)

_____ **-VP** Vandal-Resistant Stop Screw
_____ **-YJ** Split Ring Pipe Support
_____ **-YK** Solid Ring Pipe Support
_____ Other

Accessories (Order Separate as Specified)

PESS6000-BB Battery Backup (Up to Eight Valves)
P6000-PC6 6 VDC Plug-in Power Converter (Up to Eight Valves)
P6000-MJ Mini Junction Box
P6000-HW6 Hardwire Power Converter (Up to Eight Valves)

This space is for Architectural/Engineering Approval

ENGINEERING SPECIFICATION: ZURN ZEMS6003AV AquaSense® 'AV' Exposed Hardwired Automatic Sensor Flush Valve for 3/4" [19] Urinals – Exposed, quiet diaphragm-type, chrome-plated flushometer valve with a polished exterior. Complete with Zurn's AquaVantage TPE, chloramine resistant, dual seal diaphragm with a clog resistant, triple filtered by-pass. The valve incorporates a 6 VDC motorized actuator, an automatic sensor with a high back pressure vacuum breaker, one-piece hex coupling nut, adjustable tailpiece, spud coupling and flange for top spud connection. Switchable sensor features include: courtesy flush, automatic 24-hour flush, and diagnostic indicator lights. Control stop has internal siphon-guard protection, vandal-resistant stop cap, sweat solder kit, and a cast wall flange with setscrew. Internal seals are made of chloramine resistant materials. Electrical box by others (see installation instructions for type and size). **Note:** Order power converter separate; one power converter operates up to eight valves.

Note: Must use either Zurn P6000-HW6 hardwire power converter or Zurn P6000-PC6 plug-in power converter to ensure proper operation. Using a power converter other than Zurn may result in operation malfunction or unit failure.

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Rev. G
Dwg. No. 65366
Date: 6/22/04
Product No. ZEMS6003AV

Concealed ZEMS6140AV Model

Hardwired Sensor Flush Valve For Water Closets

Flow Options

- ☐ **-WS1** 1.6 Gal. Low Consumption Flush
- ☐ **-FF** 4.5 Gal. Full Flush
- ☐ **Standard Flush** 3.5 Gallons Per Flush

Accessories (Order Separate as Specified)

- _____ **-BB** Battery Back-up
- _____ **-HP6** 120 VAC/6 VDC Hardwired Power Converter
- _____ **-MJ** Mini Junction Box
- _____ **-PC6** 120 VAC/6 VDC Plug-In Power Converter
- _____ Other

This space is for Architectural/Engineering Approval

ENGINEERING SPECIFICATION: ZURN ZEMS6140AV AquaSense® 'AV' Concealed Hardwired Automatic Sensor Flush Valve for Water Closets – Concealed, quiet diaphragm-type, rough brass flushometer valve with Zurn's AquaVantage TPE, chloramine resistant, dual seal diaphragm with a clog resistant triple filtered by-pass. The valve incorporates a 6 VDC motorized actuator, an automatic sensor with a manual push-button override, high back pressure vacuum breaker, one-piece hex coupling nut and adjustable tailpiece, spud coupling and flange for back spud connection. Switchable sensor features include: courtesy flush, automatic 24-hour flush, and diagnostic indicator lights. Control stop has internal siphon-guard protection and a sweat solder kit. Internal seals are made of chloramine resistant materials. Electrical box by others (see installation instructions for type and style). **Note:** Order power converter separate; one power converter operates up to eight valves.

Note: Must use either Zurn P6000-HW6 hardwire power converter or Zurn P6000-PC6 plug-in power converter to ensure proper operation. Using a power converter other than Zurn may result in operation malfunction or unit failure.

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Rev. C
Dwg. No. 65422
Date: 4/21/04
Product No. ZEMS6140AV

Concealed ZEMS6152AV Model

Hardwired Automatic Sensor Flush Valve For Water Closets

Flow Options

- ☐ **-WS1** 1.6 Gal. Low Consumption Flush
- ☐ **-FF** 4.5 Gal. Full Flush
- ☐ **Standard Flush** 3.5 Gallons Per Flush

Suffix Options (Check/Specify Appropriate Options)

- _____ **-BB** Battery Back-up
- _____ **-HW6** 120 VAC/6 VDC Hardwired Power Converter
- _____ **-MJ** Mini Junction Box
- _____ **-PC6** 120 VAC/6 VDC Plug-In Power Converter
- _____ Other

This space is for Architectural/Engineering Approval

ENGINEERING SPECIFICATION: ZURN ZEMS6152AV AquaSense® 'AV' Concealed Hardwired Automatic Sensor Flush Valve for Water Closets – Concealed, quiet diaphragm-type, rough brass flushometer valve with Zurn's AquaVantage TPE, chloramine resistant, dual seal diaphragm with a clog resistant triple filtered by-pass. The valve incorporates a 6 VDC motorized actuator, an automatic sensor with a manual push-button override, high back pressure vacuum breaker, one-piece hex coupling nut and adjustable tailpiece, spud coupling and flange for back spud connection. Switchable sensor features include: courtesy flush, automatic 24-hour flush, and diagnostic indicator lights. Control stop has internal siphon-guard protection and a sweat solder kit. Internal seals are made of chloramine resistant materials. Electrical box by others (see installation instructions for type and style). **Note:** Order power converter separate; one power converter operates up to eight valves.

Note: Must use either Zurn P6000-HW6 hardwire power converter or Zurn P6000-PC6 plug-in power converter to ensure proper operation. Using a power converter other than Zurn may result in operation malfunction or unit failure.

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Rev. C
Dwg. No. 65368
Date: 6/15/04
Product No. ZEMS6152AV

Concealed ZEMS6153AV Model

Hardwired Sensor Flush Valve For Water Closets

Flow Options

- ☐ **-WS1** 1.6 Gal. Low Consumption Flush
- ☐ **-FF** 4.5 Gal. Full Flush
- ☐ **Standard Flush** 3.5 Gallons Per Flush

Suffix Options (Check/Specify Appropriate Options)

- _____ **-BB** Battery Back-up
- _____ **-HP6** 120 VAC/6 VDC Hardwired Power Converter
- _____ **-MJ** Mini Junction Box
- _____ **-PC6** 120 VAC/6 VDC Plug-In Power Converter
- _____ Other

This space is for Architectural/Engineering Approval

ENGINEERING SPECIFICATION: ZURN ZEMS6153AV AquaSense® Concealed Hardwired Automatic Sensor Flush Valve for Water Closets – Concealed, quiet diaphragm-type, rough brass flushometer valve with Zurn's AquaVantage TPE, chloramine resistant, dual seal diaphragm with surface optimization and a clog resistant dynamic orifice. The valve incorporates a 6 VDC motorized actuator, an automatic sensor with a manual push-button override, high back pressure vacuum breaker, hex coupling nut and adjustable tailpiece, spud coupling and flange for back spud connection. Switchable sensor features include: courtesy flush, automatic 24-hour flush, and diagnostic indicator lights. Control stop has internal siphon-guard protection and a sweat solder kit. Internal seals are made of chloramine resistant materials. Electrical box by others (see installation instructions for type and style). **Note:** Order power converter separate; one power converter operates up to eight valves.

Note: Must use either Zurn P6000-HW6 hardwire power converter or Zurn P6000-PC6 plug-in power converter to ensure proper operation. Using a power converter other than Zurn may result in operation malfunction or unit failure.

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Rev. A
Dwg. No. 65529
Date: 9/8/04
Product No. ZEMS6153AV

Concealed ZEMS6190AV Model

Hardwired Automatic Sensor Flush Valve For 1-1/4" Urinals

Flow Options

- ☐ **-WS1** 1.0 Gal. Low Consumption Flush
- ☐ **-WS** 1.5 Gal. Water Saver
- ☐ **Standard Flush** 3.0 Gallons Per Flush

Suffix Options (Check/Specify Appropriate Options)

- _____ **-BB** Battery Back-up
- _____ **-HW6** 120 VAC/6 VDC Hardwired Power Converter
- _____ **-MJ** Mini Junction Box
- _____ **-OB** Override Button
- _____ **-PC6** 120 VAC/6 VDC Plug-In Power Converter
- _____ Other

This space is for Architectural/Engineering Approval

ENGINEERING SPECIFICATION: ZURN ZEMS6190AV AquaSense® Concealed Hardwired Automatic Sensor Flush Valve for 1-1/4" [32] Urinals – Concealed, quiet diaphragm-type, rough brass flushometer valve with Zurn's AquaVantage TPE, chloramine resistant, dual seal diaphragm with surface optimization and a clog resistant dynamic orifice. The valve incorporates a 6 VDC motorized actuator, an automatic sensor with a manual push-button override, high back pressure vacuum breaker, hex coupling nut and adjustable tailpiece and spud coupling for back spud connection. Switchable sensor features include: courtesy flush, automatic 24-hour flush, and diagnostic indicator lights. Control stop has internal siphon-guard protection and sweat solder kit. Internal seals are made of chloramine resistant materials. Electrical box by others (see installation instructions for type and size). **Note:** Order power converter separate; one power converter operates up to eight valves.

Note: Must use either Zurn P6000-HW6 hardwire power converter or Zurn P6000-PC6 plug-in power converter to ensure proper operation. Using a power converter other than Zurn may result in operation malfunction or unit failure.

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Rev. C
Dwg. No. 65424
Date: 4/22/04
Product No. ZEMS6190AV

Concealed ZEMS6195AV Model
Hardwired Automatic Sensor Flush Valve For 3/4" Urinals

Flow Options

☐ **-WS1** 1.0 Gal. Low Consumption Flush
☐ **Standard Flush** 1.5 Gallons Per Flush

Suffix Options (Check/Specify Appropriate Options)

_____ **-BB** Battery Back-up
_____ **-HW6** 120 VAC/6 VDC Hardwired Power Converter
_____ **-MJ** Mini Junction Box
_____ **-PC6** 120 VAC/6 VDC Plug-In Power Converter
_____ Other

This space is for Architectural/Engineering Approval

ENGINEERING SPECIFICATION: ZURN ZEMS6195AV AquaSense® 'AV' Concealed Hardwired Automatic Sensor Flush Valve for 3/4" [19] Urinals – Concealed, quiet diaphragm-type, rough brass flushometer valve with Zurn's AquaVantage TPE, chloramine resistant, dual seal diaphragm with a clog resistant triple filtered by-pass. The valve incorporates a 6 VDC motorized actuator, an automatic sensor, high back pressure vacuum breaker, one-piece hex coupling nut and adjustable tailpiece, spud coupling and flange for back spud connection. Switchable sensor features include: courtesy flush, automatic 24-hour flush, and diagnostic indicator lights. Control stop has internal siphon-guard protection and a sweat solder kit. Internal seals are made of chloramine resistant materials. Electrical box by others (see installation instructions for type and style). **Note:** Order power converter separate; one power converter operates up to eight valves.

Note: Must use either Zurn P6000-HW6 hardwire power converter or Zurn P6000-PC6 plug-in power converter to ensure proper operation. Using a power converter other than Zurn may result in operation malfunction or unit failure.

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Rev. E
Dwg. No. 65367
Date: 4/22/04
Product No. ZEMS6195AV

Concealed ZEMS6197AV Model

Hardwired Automatic Sensor Flush Valve For 3/4" Urinals With Top Spud Connection

Flow Options

☐ **-WS1** 1.0 Gal. Low Consumption Flush
☐ **Standard Flush** 1.5 Gallons Per Flush

Suffix Options (Check/Specify Appropriate Options)

_____ **-BB** Battery Back-up
_____ **-HW6** 120 VAC/6 VDC Hardwired Power Converter
_____ **-MJ** Mini Junction Box
_____ **-PC6** 120 VAC/6 VDC Plug-In Power Converter
_____ Other

This space is for Architectural/Engineering Approval

ENGINEERING SPECIFICATION: ZURN ZEMS6197AV AquaSense® Concealed Hardwired Automatic Sensor Flush Valve for 3/4" [19] Urinals – Concealed, quiet diaphragm-type, rough brass flushometer valve with Zurn's AquaVantage TPE, chloramine resistant, dual seal diaphragm with a clog resistant triple filtered by-pass orifice. The valve incorporates a 6 VDC motorized actuator, an automatic sensor with a manual push-button override, high back pressure vacuum breaker, hex coupling nut and adjustable tailpiece, spud coupling for top spud connection. Switchable sensor features include: courtesy flush, automatic 24-hour flush, and diagnostic indicator lights. Control stop has internal siphon-guard protection and sweat solder kit. Internal seals are made of chloramine resistant materials. Electrical box by others (see installation instructions for type and size). **Note:** Order power converter separate; one power converter operates up to eight valves.

Note: Must use either Zurn P6000-HW6 hardwire power converter or Zurn P6000-PC6 plug-in power converter to ensure proper operation. Using a power converter other than Zurn may result in operation malfunction or unit failure.

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Rev. A
Dwg. No. 65558
Date: 4/27/04
Product No. ZEMS6197AV

ZEMS6199-BX17

Access Panel and Frame For Concealed Sensor Flush Valves

Sensor Location Optional

Suffix Options (Check/Specify Appropriate Options)

_____	**-OB**	Panel for Push Button Override
_____	**-SC-2**	2" [51 mm] Long Vandal-Resistant Screws
_____	**-SP**	Solid Panel
_____		Other

ENGINEERING SPECIFICATION:
Zurn ZEMS6199-BX17 Aquaflush® Sensor Access Panel and Frame – The access panel and frame provide a quick and simple access to in-wall concealed flush valves when a mechanical chase of adequate size is not available. The panel and frame incorporate a #18 gage stainless steel wall box frame, #14 gage stainless steel satin finish wall box cover, six 1" [25] long vandal resistant screws, and a frame mounted electrical sensor box. **Note:** Front of frame must be installed flush with finish wall.

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Rev. A
Dwg. No. 65592
Date: 4/21/04
Product No. ZEMS6199-BX17

Exposed ZEMS6200-IS Metroflush Model

Hardwired Automatic Sensor Flush Valve For Water Closets

Flow Options

☐ **-WS1** 1.6 Gal. Low Consumption Flush
☐ **Standard Flush** 3.5 Gallons Per Flush

Suffix Options (Check/Specify Appropriate Options)

_____ **-YJ** Split Ring Pipe Support
_____ **-YK** Solid Ring Pipe Support
_____ **-YO** Bumper On Angle Stop
_____ Other

Accessories (Order Separate as Specified)

PESS6000-BB Battery Backup (Up to Eight Valves)
P6000-PC6 6 VDC Plug-In Power Converter (Up to Eight Valves)
P6000-MJ Mini Junction Box
P6000-HW6 Hardwire Power Converter (Up to Eight Valves)

This space is for Architectural/Engineering Approval

ENGINEERING SPECIFICATION: ZURN ZEMS6200-IS Metroflush® Exposed Hardwired AquaSense® Flush Valve for Water Closets – The Metroflush valve is a piston operated brass flush valve with a polished chrome exterior. The valve is ADA compliant and incorporates a 6 VDC motorized actuator, an integral infrared convergence-type proximity sensor and a manual push-button override into an all-metal, polished chrome-plated housing. Sensor range automatically adjusts to its environment at power up and is powered by a 6 VDC power converter. Complete with Zurn's MetroVantage chloramine resistant piston with a clog resistant filtered by-pass, high back pressure vacuum breaker, one-piece hex coupling nut, adjustable tailpiece, spud coupling and flange for top spud connection. Control stop has internal siphon-guard protection and a wall flange with setscrew. Internal seals are made of chloramine resistant materials.

Note: Must use either Zurn P6000-HW6 hardwire power converter or Zurn P6000-PC6 plug-in power converter to ensure proper operation. Using a power converter other than Zurn may result in operation malfunction or unit failure.

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Rev. A
Dwg. No. 80627
Date: 8/6/04
Product No. ZEMS6200-IS

Exposed ZEMS6200 Metroflush Model

Hardwired Automatic Sensor Flush Valve For Water Closets

Flow Options

- ☐ **-WS1** 1.6 Gal. Low Consumption Flush
- ☐ **Standard Flush** 3.5 Gallons Per Flush

Suffix Options (Check/Specify Appropriate Options)

- _____ **-VC** Vandal-Resistant Stop Cover
- _____ **-XYV** Less Vacuum Breaker
- _____ **-YB** Sweat Solder Kit
- _____ **-YC** Cast Wall Flange
- _____ **-YJ** Split Ring Pipe Support
- _____ **-YK** Solid Ring Pipe Support
- _____ **-YO** Bumper On Angle Stop
- _____ Other

This space is for Architectural/Engineering Approval

ENGINEERING SPECIFICATION: ZURN ZEMS6200 AquaSense® Exposed Sensor-Operated Metroflush® Flush Valve for Water Closets – Exposed, quiet piston type chrome-plated flushometer valve with polished exterior. Complete with Zurn MetroVantage chloramine resistant piston with a clog resistant filtered by-pass, high back pressure vacuum breaker, hex coupling nut, adjustable tailpiece, spud coupling and flange for top spud connection. The valve is ADA compliant with a 6 VDC motor actuator, an automatic sensor with manual push-button override and chrome-plated metal cover plate. Electrical box for sensor is by others (see installation instructions for type and size). Control stop has internal siphon-guard protection. Internal seals are made of chloramine resistant materials. **Note:** Order power converter separate; one power converter operates up to eight valves.

Note: Must use either Zurn P6000-HW6 hardwire power converter or Zurn P6000-PC6 plug-in power converter to ensure proper operation. Using a power converter other than Zurn may result in operation malfunction or unit failure.

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Rev. C
Dwg. No. 65490
Date: 8/05/04
Product No. ZEMS6200

Exposed ZEMS6203-IS Metroflush Model

Hardwired Automatic Sensor Flush Valve For 3/4" Urinal Valves

Flow Options

- ☐ **-EWS** 0.5 Gallons Per Flush
- ☐ **-WS1** 1.0 Gal. Low Consumption Flush
- ☐ **Standard Flush** 1.5 Gallons Per Flush

Suffix Options (Check/Specify Appropriate Options)

- _____ **-YJ** Split Ring Pipe Support
- _____ **-YK** Solid Ring Pipe Support
- _____ **-YO** Bumper On Angle Stop
- _____ Other

Accessories (Order Separate as Specified)

PESS6000-BB	Battery Backup (Up to Eight Valves)
P6000-PC6	6 VDC Plug-In Power Converter (Up to Eight Valves)
P6000-MJ	Mini Junction Box
P6000-HW6	Hardwire Power Converter (Up to Eight Valves)

This space is for Architectural/Engineering Approval

ENGINEERING SPECIFICATION: ZURN ZEMS6203-IS Metroflush® Exposed Hardwired AquaSense® Flush Valve for 3/4" [19] Urinals – The Metroflush valve is a piston operated brass flush valve with a polished chrome exterior. The valve is ADA compliant and incorporates a 6 VDC motorized actuator, an integral infrared convergence-type proximity sensor and a manual push-button override into an all-metal, polished chrome-plated housing. Sensor range automatically adjusts to its environment at power up and is powered by a 6 VDC power converter. Complete with Zurn's MetroVantage chloramine resistant piston with a clog resistant filtered by-pass high back pressure vacuum breaker, one-piece hex coupling nut, adjustable tailpiece, spud coupling and flange for top spud connection. Control stop has internal siphon-guard protection and a wall flange with setscrew. Internal seals are made of chloramine resistant materials.

Note: Must use either Zurn P6000-HW6 hardwire power converter or Zurn P6000-PC6 plug-in power converter to ensure proper operation. Using a power converter other than Zurn may result in operation malfunction or unit failure.

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Rev. A
Dwg. No. 80628
Date: 8/6/04
Product No. ZEMS6203-IS

Exposed ZEMS6203 Metroflush Model

Hardwired Automatic Sensor Flush Valve For 3/4" Urinal Valves

Flow Options

- ☐ **-EWS** 0.5 Gallons Per Flush
- ☐ **-WS1** 1.0 Gal. Low Consumption Flush
- ☐ **Standard Flush** 1.5 Gallons Per Flush

Suffix Options (Check/Specify Appropriate Options)

- _____ **-VC** Vandal-Resistant Stop Cover
- _____ **-XYV** Less Vacuum Breaker
- _____ **-YB** Sweat Solder Kit
- _____ **-YC** Cast Wall Flange
- _____ **-YJ** Split Ring Pipe Support
- _____ **-YK** Solid Ring Pipe Support
- _____ **-YO** Bumper On Angle Stop
- _____ Other

This space is for Architectural/Engineering Approval

ENGINEERING SPECIFICATION: ZURN ZEMS6203 AquaSense® Exposed Sensor-Operated Metroflush® Valve for 3/4" [19] Urinals – Exposed, quiet piston type chrome-plated flushometer valve with polished exterior. Complete with Zurn MetroVantage chloramine resistant piston with a clog resistant filtered by-pass, high back pressure vacuum breaker, hex coupling nut, adjustable tailpiece, spud coupling and flange for top spud connection. The valve is ADA compliant with a 6 VDC motor actuator, an automatic sensor with manual push-button override and chrome-plated metal cover plate. Electrical box for sensor is by others (see installation instructions for type and size). Control stop has internal siphon-guard protection. Internal seals are made of chloramine resistant materials. **Note:** Order power converter separate; one power converter operates up to eight valves.

Note: Must use either Zurn P6000-HW6 hardwire power converter or Zurn P6000-PC6 plug-in power converter to ensure proper operation. Using a power converter other than Zurn may result in operation malfunction or unit failure.

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Rev. B
Dwg. No. 65491
Date: 8/05/04
Product No. ZEMS6203

PEMS6000-CON-KIT-IS

Hardwired Automatic Sensor Retrofit Kit For Manual Flush Valves

Accessories (Order Separate as Specified)

PESS6000-BB	Battery Backup (Up to Eight Valves)
P6000-PC6	6 VDC Plug-In Power Converter (Up to Eight Valves)
P6000-MJ	Mini Junction Box
P6000-HW6	Hardwire Power Converter (Up to Eight Valves)

ENGINEERING SPECIFICATION:
ZURN PEMS6000-CON-KIT-IS AquaSense® Exposed Hardwired Sensor Retrofit Kit for Flush Valves –
The unit incorporates a 6 VDC motorized actuator, an integral infrared convergence-type proximity sensor, and a manual push-button override into an all-metal, polished chrome-plated housing. Sensor range automatically adjusts to its environment at power up and is powered by a 6 VDC power converter. Kit includes motor actuator, wall escutcheon, and power cord. Order power converter separate. Each power converter can accommodate up to eight flush valves.

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Rev.
Dwg. No. 80946
Date: 9/9/04
Product No. PEMS6000-CON-KIT-IS

P6000-PC6
120 VAC/6 VDC Power Converter
Plug-In Style

ENGINEERING SPECIFICATION: ZURN P6000-PC6 AquaSense® Multi-Unit Power Converter – The AquaSense Multi-Unit Power Converter is designed to provide 6 VDC power for up to eight Zurn 6 VDC sensor flush valves. The unit is a 120 VAC plug-in style power converter with a 9-foot [273cm] 6 VDC output cord.

Note: This Multi-Unit Power Converter is UL Listed and CSA Approved

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Rev. A
Dwg. No. 63393
Date: 8/06/04
Product No. P6000-PC6

P6000-HW6

Hardwired Power Converter
For 6 VDC Flush Valves and Faucets

ENGINEERING SPECIFICATION: ZURN P6000-HW6 Power Converter – The Hardwired Power Converter is a 6.0 Volt, 1.5 Amp power supply that will operate up to eight ZEMS Sensors/Actuators, 13 ZESS Sensors/Solenoids, or six 6 VDC sensor faucets. The P6000-HW6 is provided mounted on a 4-11/16" x 4-11/16" cover plate that mounts to a standard 4-11/16" x 4-11/16" electrical box (supplied by others). Both the the 120 VAC input terminations and the 6.0 VDC output terminations are completely contained within the 4-11/16" square electrical box.

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Rev. C
Dwg. No. 80774
Date: 5/13/04
Product No. P6000-HW6

P6000-MJ
Mini Junction Box

Power Converters Used with P6000-MJ

P6000-PC6	120 VAC/6 VDC Plug-In Power Converter
P6900-PCF12	12 VDC Power Converter
P6000-HW6	6 Volt Hardwired Power Supply
P6000-HW12	12 VDC Hardwired Power Converter

ENGINEERING SPECIFICATION: ZURN P6000-MJ – The Mini Junction Box is a 4-1/4" x 5" x 1-3/4" [108 mm x 127 mm x 44 mm] electrical enclosure designed to connect up to eight Zurn sensor urinals/ closets. The unit includes a high impact plastic enclosure with polarity marked terminal board, high impact plastic cover panel, wall mounting tabs, integral strain relief, and illustrative wiring diagram. Specify type of 6 VDC power converter; 120 VAC supply line by others.

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Rev. B
Dwg. No. 57535
Date: 6/29/04
Product No. P6000-MJ

PESS6000-BB
Battery Backup

Suffix Options (Check/Specify Appropriate Options)

_____ **-RD** Red Lens
_____ **-YW** Yellow Lens

ENGINEERING SPECIFICATION: ZURN PESS6000-BB AquaSense® Battery Backup – The battery backup module is designed to supply power for up to 10 ZEMS sensor flush valves in the event of main power failure. The battery backup is furnished complete with battery pack, mounting plate for battery pack, low battery indicator light, mounting plate for indicator light, and 4 "D" cell alkaline batteries. Specify optional power converter.

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Rev.
Dwg. No. 59365
Date: 5/18/95
Product No. PESS6000-BB

Sensor Product Accessories
For ZEMS-IS and ZEMS Hardwire Sensor Flush Valves

PESS6000-BB

ENGINEERING SPECIFICATION: ZURN PESS6000-BB AquaSense® Battery Backup – The battery backup module is designed to supply power for up to 10 ZEMS sensor flush valves in the event of main power failure. The battery backup is furnished complete with battery pack, mounting plate for battery pack, low battery indicator light, mounting plate for indicator light, and 4 “D” cell alkaline batteries. Specify optional power converter.

P6000-MJ

ENGINEERING SPECIFICATION: ZURN P6000-MJ – The Mini Junction Box is a 4-1/4" x 5" x 1-3/4" [108 mm x 127 mm x 44 mm] electrical enclosure designed to connect up to 8 Zurn sensor urinals/closets. The unit includes a high impact plastic enclosure with polarity marked terminal board, high impact plastic cover panel, wall mounting tabs, integral strain relief, and illustrative wiring diagram.

P6000-HW6

ENGINEERING SPECIFICATION: Zurn P6000-HW6 Hardwire Power Converter – Hardwire power converter to power up to 10 Zurn sensor urinal/closet flush valves or up to eight hardwired Zurn sensor faucets. The P6000-HW6 is mounted on a 4-11/16" x 4-11/16" cover plate that mounts to a standard 4-11/16" x 4-11/16" electrical box (supplied by others).

P6000-PC6

ENGINEERING SPECIFICATION: Z6000-PC6 Plug-In Power Converter – Plug-in Power Converter is designed to provide 6 VDC power for 1-10 Zurn 6 VDC sensor flush valves. Power converter plugs into 120 VAC outlet (supplied by others) located conveniently to flush valves. Electrical characteristics: Input: 120 VAC, 60Hz, 35w; Output: 6 VDC, 1.5A

PEMS6000-CW-IS

ENGINEERING SPECIFICATION: Zurn PEMS6000-CW-IS Connecting Wire – Connecting wire for ZEMS-IS to connect power to sensor operator. Comes with molex connector and is 10 feet in length. Wire is 24 gage.

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AquaVantage® AV/Sloan® Royal Flush Valves Comparison Guide

Sensor-Operated Hardwire Flush Valves

Zurn	Sloan
ZEMS6000AV-IS or ZEMS6000AV	Royal 110ES-S
ZEMS6000AV-WS1-IS or ZEMS6000AV-WS1	Royal 111ES-S
ZEMS6001AV-IS or ZEMS6001AV	Royal 180ES-S
ZEMS6003AV-IS or ZEMS6003AV	Royal 186ES-S
ZEMS6003AV-WS1-IS or ZEMS6003AV-WS1	Royal 186-1ES-S
ZEMS6140AV	Royal 140ES-S
ZEMS6142AV	Royal 142ES-S
ZEMS6152AV	Royal 152ES-S
ZEMS6190AV	Royal 190ES-S
ZEMS6195AV	Royal 195ES-S

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AquaSense® AV ZEMS-IS Series

Automatic Sensor-Operated Exposed Flushometer

Installation, Operation, Maintenance, and Parts Manual

Patented and Patents Pending

ZEMS6000AV-IS

ZEMS6003AV-IS

Sensor-Operated Exposed Flushometer
ZEMS6000AV-IS Closet
ZEMS6003AV-IS Urinal

LIMITED WARRANTY

All goods sold hereunder are warranted to be free from defects in material and factory workmanship for a period of three years from the date of purchase. Decorative finishes warranted for one year. We will replace at no cost goods that prove defective provided we are notified in writing of such defect and the goods are returned to us prepaid at Sanford, NC, with evidence that they have been properly maintained and used in accordance with instructions. We shall not be responsible for any labor charges or any loss, injury or damages whatsoever, including incidental or consequential damages. The sole and exclusive remedy shall be limited to the replacement of the defective goods. Before installation and use, the purchaser shall determine the suitability of the product for his intended use and the purchaser assumes all risk and liability whatever in connection therewith. Where permitted by law, the implied warranty of merchantability is expressly excluded. If the products sold hereunder are “consumer products,” the implied warranty of merchantability is limited to a period of three years and shall be limited solely to the replacement of the defective goods. All weights stated in our catalogs and lists are approximate and are not guaranteed.

FV343

PRIOR TO INSTALLATION

Prior to installing the Zurn Automatic Sensor-equipped Flushometer, install the items listed below.

- Single-gang electrical outlet for plug-in power converter.
- Electrical wiring to the power converter outlet (120 VAC, 35 watts service required for each power converter used).

IMPORTANT:

- All electrical wiring is to be installed in accordance with National/Local codes and regulations.
- All plumbing is to be installed in accordance with applicable codes and regulations.
- Water supply lines must be sized to supply an adequate volume of water for each fixture.
- Flush all water lines prior to making connections.
- Sensor Units should not be located across from each other or in close proximity to highly reflective surfaces.

The Zurn AquaVantage® valve is designed to operate over the entire pressure range recommended by plumbing fixture manufacturers and will produce a metered flush when activated.

Protect the chrome or special finish of this AquaVantage® valve. ***Do not use toothed tools to install or service the valve.*** Also, see "Care and Cleaning" section of this manual.

ZEMS6000AV-IS Closet

ZEMS6000AV-IS Urinal

FV343

INSTALLATION

STEP 1 – Install Receptacle (Figure 1)
Install receptacle for the Zurn Power Converter in a convenient location near the flush valve. If optional power converter (P6000-HW6) is used, install 4 x 4 electrical box in accordance with local electrical codes. An optional mini junction box (P6000-MJ) is recommended to distribute power to each sensor location.

NOTE: One Power Converter can operate up to eight Automatic Sensor-equipped Flushometers. The Power Converter is supplied with a six-foot cord. If additional wire is needed from the Power Converter to the Flushometer(s), use #18 AWG (by others). ***Do not supply power*** to the Power Converter until installation of actuator, sensor and Flushometer is completed and checked.

Proper polarity must be observed or damage to one or all components will result.

Figure 1

STEP 2 – Electrical Hook-up (Figure 2)
Be certain power is off to prevent damage to electrical components. Connect wires per schematic. Black wire is negative and black wire w/white stripe is positive. ***Do not reverse polarity.*** Multiple actuator wiring shown.

Figure 2

STEP 3 – Optional Mini Junction Box (Figure 3)
When using optional mini junction box, be certain power is off while making wire connections to prevent damage to electrical components. The maximum number of actuators per converter is 8.

Figure 3

STEP 4 – Verify Plumbing Location (Figure 4)
Confirm the ZEMS-IS sensor hole is located properly per template. The 6 VDC power chord (Part #PEMS6000-CW) should already be in place.

Figure 4

STEP 5 – Control Stop Installation (Figure 5)
Install the Zurn control stop valve and wall escutcheon to the water supply line with the outlet positioned as required.

NOTE: For sweat solder applications, see recommended instructions included in the Zurn sweat solder kit.

Figure 5

STEP 6 – Vacuum Breaker Flush Connection (Figure 6)
Slide the tube nut, slip washer, rubber gasket and spud escutcheon over the vacuum breaker tube and insert tube into fixture spud. Hand tighten spud coupling into fixture spud.

Figure 6

STEP 7 – Valve Installation (Figure 7)
Install valve to control stop with the bottom of the valve tilted slightly up toward you and leave the valve nut loose. Make sure not to damage O-ring on valve. Install vacuum breaker into vacuum tube and place slip gasket between vacuum breaker and valve. Then rotate valve down over vacuum breaker tube and tighten tube nut to valve. After tube nut is tight, tighten valve nut to control stop.

Figure 7

STEP 8 – Actuator Installation (Figure 8)
Run wires and rod through hole in wall. Install handle gasket into actuator nut and tighten actuator to valve. Push wall flange against wall and tighten setscrew.

Figure 8

STEP 9 – Flush Out Supply Line (Figure 9)
Close control stop. Remove valve body cover and lift out trip mechanism. Reinstall internal cap and valve body cover. Turn on water supply to flush line of any debris or sediment.

After completion, shut off control stop, remove cover and reinstall the trip mechanism. Install the internal cap and valve body cover wrench tight.

STEP 10 – SENSOR CALIBRATION

Factory Setting

The Zurn ZEMS-IS sensor module is factory set to accommodate closet and urinal installations. Wiring the unit per the enclosed wiring diagram (Figure 2) with 6 VDC power recalls the factory setting. The ZEMS-IS unit is ready for operation. **Note:** During the first 30 minutes of power up, a red flashing light (Figure 10) will illuminate to indicate an optional customized sensor range setting is available if desired.

Customized Sensor Range Setting

To customize the sensor range for a particular installation, simply set a dummy target (stall door or light colored piece of cardboard) at the desired sensor range distance as illustrated in Figure 11. Disrupt the 6 VDC power source for two minutes then restore power. PRESS and HOLD the manual override button for ten seconds anytime during the first 30 minutes of power up (red light blinks during the first 30 minutes of power up to help identify this time period). Pressing the override button activates the motor actuator. Continue to HOLD the override button until the flashing red light stops. This indicates that a ten second HOLD was achieved. Step back away from the valve so as not to be in the view of the sensor. The ZEMS-IS unit will self-calibrate to the given target over the next 45 seconds. A series of lights will follow (3 flashes, 16 flashes, 1 flash, a solid 16-second red light followed by 2 more flashes). This pattern of flashing lights indicates the sensor has self-adjusted to the given environment and is now calibrated to the new target.

STEP 11 – Activating the Motor Actuator with the Sensor

To activate the motor actuator with the sensor, simply place a target in front of the sensor. A single red light will flash indicating the sensor has recognized the target. If the target stays in view for eight seconds, two flashing red lights will occur. This indicates that the target has been in view for the required time and upon leaving the view, a signal will be sent to the motor actuator to flush the flush valve. **Note:** If the target does not stay in view for the required eight seconds, a flush will not occur.

Figure 9

Figure 10

Figure 11

AquaVantage® ZEMS-IS Parts Breakdown

Part Identification

1. Cast Wall Escutcheon
2. Setscrew for Cast Wall Escutcheon
3. Supply Cover Tube
4. Sweat Solder Adapter
5. Stop Body
6. Piston Seal
7. Piston
8. Stop Spring
9. Guide O-Ring
10. Piston Guide
11. Guide Holder
12. Adjusting Screw
13. Stop Cap
14. Snap Cap Screw Cover
15. Vandal-Resistant Control Stop Cover
16. Setscrew for Control Stop Cover
17. Locking Nut
18. Tailpiece O-Ring
19. Snap Ring
20. Tailpiece
21. Valve Body Cover
22. Plastic Cover
23. Trip Mechanism
24. Diaphragm Repair Kit
25. Valve Body
26. Gasket
27. ZEMS-IS Actuator Assembly
28. Vacuum Breaker Friction Washer
29. Vacuum Breaker Insert
30. Vacuum Breaker Duckbill
31. Vacuum Breaker Tube
32. Vacuum Breaker Tube Nut
33. 1-1/2" Spud Nut
34. 1-1/2" Spud Friction Washer
35. 1-1/2" Spud Sleeve
36. Spud Escutcheon
37. 3/4" Spud Nut
38. 3/4" Spud Friction Washer
39. 3/4" Spud Sleeve
40. 3/4" Spud Escutcheon
41. 10' Power Cord
42. 120 VAC/6 VDC Plug-in Power Converter

Covers and Repair Kits	Product No.
Outside Cover – Item 21	P6000-LL
Inside Cover – Item 22	P6000-L
Low Consumption Closet Kit - 1.6 gal. flush	P6000-ECA-WS1
Water Saving Closet Kit - 3.5 gal. flush	P6000-ECA-WS
Full Flow Closet Kit - 4.5 gal. flush	P6000-ECA-FF
Low Consumption Urinal Kit - 1.0 gal. flush	P6000-EUA-WS1
Water Saving Urinal Kit - 1.5 gal flush	P6000-EUA-WS
Full Flush Urinal Kit - 3.0 gal. flush	P6000-EUA-FF

Repair Parts – Inside Parts	Product No.
Urinal Trip Mechanism – Item 23	P6000-EUA13
Closet Trip Mechanism – Item 23	P6000-ECA13

AquaVantage Rebuild Kits	Product No.
Closet and Urinal Rebuild Kits Include Items 18, 23, 24, 26, 28-30	P6000-ECA-WS-RK P6000-ECA-WS1-RK P6000-EUA-WS-RK P6000-EUA-WS1-RK

Actuator Assembly and Repair Kits	Product No.
Motor Actuator/Sensor – Item 27	PEMS6000-HYM-IS
10-Foot Length of Power Cord – Item 41	PEMS6000-CW
120 VAC/6 VDC Plug-in Power Converter – Item 42	P6000-PC6
Handle Gasket Includes – Item 26	P6000-M10

Control Stop Repair Kit and Parts	Product No.
Control Stop Repair Kit for 1" and 3⁄4", Includes Items 6-12	P6000-D-SD
Seal Seat for 1" and 3⁄4", Includes Item 6	P6000-D42
Sweat Solder Adapter	P6000-YBA

Adjustable Tailpieces	Product No.
Adjustable Tailpiece for Standard Flush Valve, Includes Items 18-20	P6000-J1
Tailpiece Locking Ring, Include Item 19	P6000-C30
Tailpiece O-Ring, Includes Item 18	P6000-C31
Coupling Nut, Includes Item 17	P6000-C32

Flush Connections and Spud Coupling Kits	Product No.
1-1/2" Flush Connection and Spud Coupling	P6000-H
3/4" Flush Connection and Spud Coupling	P6003-H
Vacuum Breaker Repair Kit, Includes Items 28-30	P6000-B
Spud Coupling Assembly (Specify Size)	P6000-HN

FV343

AquaVantage® ZEMS-IS Trouble-Shooting Guide

Problem	Cause*	Corrective Action*
Valve will not operate.	1.) Stop valve is closed. 2.) Supply valve is closed.	1.) Open stop valve. 2.) Open supply valve.
Insufficient volume of water to adequately flush fixture.	1.) Stop valve is not open enough. 2.) Urinal trip mechanism installed in closet kit. Urinal kit installed in closet valve, or 1.0 gal. urinal kit installed in place of 1.5 gal. urinal kit. 3.) Insufficient volume or pressure at supply.	1.) Open stop valve for desired volume of water. 2.) Install appropriate parts or kit. 3.) If gauges are not available to measure supply pressure or volume of water at the valve, completely remove the working parts and open the stop valve to allow water to pass through the empty valve. If the water supply proves unsatisfactory, steps should be taken to increase the pressure and/or supply.
Flush valve does not activate after user leaves.	1.) Sensor does not recognize a user. 2.) Power supply may be disrupted.	1.) Shut off the 6 VDC power supply for 2 minutes and recalibrate sensor per step 10. 2.) Check available voltage where escutcheon is attached to wall. 6-9VDC is required.
Flush valve shuts off too quickly.	1.) Damaged or punctured diaphragm. 2.) Enlarged by-pass orifice. 3.) Cylinder guide assembly and diaphragm assembly are not tight. 4.) Enlarged by-pass orifice. 5.) Urinal trip mechanism (black) in closet flush valves.	1.) Install new replacement kit to remedy the problem. 2.) Install new replacement kit to remedy the problem. 3.) Screw the two assemblies hand tight. 4.) Install new Z6000-ECA, Z6000-EUA replacement kit to remedy the problem. 5.) Install closet trip mechanism (white).
Valve is flushing too long or not shutting off.	1.) Trip mechanism not seating properly due to foreign material between trip mechanism and retainer disc. 2.) By-pass orifice is plugged or partially plugged. 3.) Line pressure is not adequate to force trip mechanism to seal. 4.) Cracked cover.	1.) Disassemble parts and rinse thoroughly. 2.) Examine by-pass orifice and clean if necessary being certain not to enlarge orifice opening. 3.) Pressure is inadequate or has dropped below minimum operating range. Steps should be taken to increase the line pressure. 4.) Replace cover with new one.
Water splashes out of fixture.	1.) Supply volume is more than is necessary. 2.) Lime accumulation on vortex or spreader holes of fixture.	1.) Adjust downward on control stop. 2.) Remove the lime buildup within the fixture.
Flush is not considered quiet.	1.) Control stop may not be adjusted for quiet operation. 2.) Fixture may be contributing to noise. 3.) Piping system may be source of noise.	1.) Adjust the control stop for quiet operation keeping in mind the fixture evacuation requirements. 2.) Check noise created by fixture by placing a cover over the bowl opening to separate valve noise from bowl noise. If it is determined the fixture is too noisy, consult with fixture manufacturer. 3.) High pressure in the system can sometimes be controlled by the stop valve. Other sources of noise may be the absence of air chambers and shock arrestors, loose pipes, improper size pipes, etc. In these cases the building engineer should be consulted.
Chattering noise in flush valve.	1.) Diaphragm has been installed upside down. 2.) The inside cover has been distorted by freezing	1.) Reposition diaphragm as instructed by the markings on the diaphragm (this side up) 2.) Replace both inside plastic cover and outside chrome-plated brass cover.
Sensor assembly leaking.	1.) Sensor assembly is not tight.	1.) Tighten sensor assembly.

Care of Chrome-Plated Surfaces

The suggested cleaning of chrome-plated surfaces is simply to clean them with soap and water then dry. Commercial cleaning compounds are never recommended.

Seasonal Use

Valves used in installations subject to shutdown because of cold and freezing conditions should be maintained in the following manner. After the main supply has been shut off and the water drained from the system, remove the stop valve cap and stop valve internals to allow the water to drain from the flush valve itself.

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Printed in the U.S.A.

Form No. FV343, 9/04

AquaSense® AV Closet ZEMS Series

Automatic Systems Sensor-Operated AquaVantage Flushometer

Installation, Operation, Maintenance and Parts Manual

Patented and Patents Pending

Sensor-Operated Concealed Systems
ZEMS6140AV
ZEMS6142AV
ZEMS6152AV

ZEMS6000AV

ZEMS6142AV

Sensor-Operated Exposed Systems
ZEMS6000AV
ZEMS6000AV-2
ZEMS6000AV-3
ZEMS6200

LIMITED WARRANTY

All goods sold hereunder are warranted to be free from defects in material and factory workmanship for a period of three years from the date of purchase. Decorative finishes warranted for one year. We will replace at no cost goods that prove defective provided we are notified in writing of such defect and the goods are returned to us prepaid at Sanford, NC, with evidence that they have been properly maintained and used in accordance with instructions. We shall not be responsible for any labor charges or any loss, injury or damages whatsoever, including incidental or consequential damages. The sole and exclusive remedy shall be limited to the replacement of the defective goods. Before installation and use, the purchaser shall determine the suitability of the product for his intended use and the purchaser assumes all risk and liability whatever in connection therewith. Where permitted by law, the implied warranty of merchantability is expressly excluded. If the products sold hereunder are “consumer products,” the implied warranty of merchantability is limited to a period of three years and shall be limited solely to the replacement of the defective goods. All weights stated in our catalogs and lists are approximate and are not guaranteed.

FV38-WCS

PRIOR TO INSTALLATION

Prior to installing the Zurn Automatic Sensor-equipped Flushometer, install the items listed below as illustrated in Figures 1 through 4.

- 2-gang electrical box (4 x 4 x 21⁄8 use Steel City #52171-N box and #52-C-18 device cover or equivalent for sensor); see paragraph entitled “Sensor Location.”
- Single-gang electrical outlet for plug-in power converter.
- Electrical wiring to the power converter outlet (120 VAC, 35 watts service required for each power converter used).
- Closet fixture.
- Zurn carrier system, Z1200 series or equal.
- Single-gang box for Low Battery Indicator Light (optional).

IMPORTANT:

- All electrical wiring is to be installed in accordance with National/Local codes and regulations.
- All plumbing is to be installed in accordance with applicable codes and regulations.
- Water supply lines must be sized to provide an adequate volume of water for each fixture.
- Flush all water lines prior to making connections.
- Sensor units should not be located across from each other or in close proximity to highly reflective surfaces.

The Zurn AquaVantage is designed to operate over the entire pressure range recommended by plumbing fixture manufacturers and will produce a metered flush when activated.

Protect the chrome or special finish of this AquaVantage. ***Do not use toothed tools to install or service the valve.*** Also, see “Care and Cleaning” section of this manual.

SENSOR LOCATION (Figures 1 and 2)

Models ZEMS6000, ZEMS6140, ZEMS6142 and ZEMS6152

Locate the 2-gang electrical box on the centerline of the Flushometer and 21" above the top of the closet fixture (use Steel City #52171-N box and #52-C-18 device cover or equivalent).

Models ZEMS6000-2 and ZEMS6000-3

Locate the centerline of the 2-gang electrical box 3-1/4" to the left of the centerline of the Flushometer and 15" (Model ZEMS6000-2) or 17" (Model ZEMS6000-3) above the top of the closet fixture. (Use Steel City #52171-N box and #52-C-18 device cover or equivalent).

All Models

NOTE: Install plaster ring so screw holes are on left and right side of box. Trim tiles to allow screw holes in plaster ring to show.

MODEL	A	B
ZEMS–6000–2	24 [610]	15 [381]
ZEMS–6000–3	27 [686]	17 [432]

Figure 1

Figure 2

ELECTRICAL BOX INSTALLATION
*BOX AND DEVICE COVER BY CONTRACTOR

OPTIONAL BATTERY BACKUP and LOW BATTERY INDICATOR LOCATION (Figure 3)

All Models

Install the single-gang electrical box in an area that is convenient for visibility of the Low Battery Indicator Light. This can be located either close to the fixture or in a remote area such as the maintenance area or engineering room.

- The battery backup will supply power to a maximum of eight flush valves for an approximate three-day period during a power failure.
- The Low Battery indicator will come on when the batteries have reached a "caution level." The Flushometers will function when the light is illuminated until the batteries are completely discharged.
- The Low Battery light will illuminate even if the main power has not failed but the batteries have dropped to the "caution level."

INSTALLATION

STEP 1 – Install Receptacle (Figure 4)

Install Receptacle for the Zurn Power Converter in a convenient location. An optional mini junction box (P6000-MJ) is recommended to distribute power to each sensor location. It is also recommended that brown wire be used for the positive (+) of the supply and blue wire be used for the negative (-) of the supply. This matches the sensor and actuator wire colors.

NOTE: One Zurn Power Converter can operate as many as eight Automatic Sensor equipped Flushometers. The Power Converter is supplied with a six-foot cord. If additional wire is needed from the Power Converter to the Flushometer(s), use #18 AWG for this (by others). ***Do not supply power*** to the Power Converter until installation of actuator, sensor and Flushometer is completed and checked. ***Proper polarity must be observed or damage to one or all components will result.***

Figure 3

Figure 4

STEP 2 – Optional Battery Backup and Low Battery Indicator Light Installation

- If the battery backup option is being utilized, it is necessary to install the battery pack mounting plate and the battery pack close to the power converter in a convenient location for battery replacement when needed.
- Mount the battery pack mounting bracket.
- Clip the battery pack into location and secure the battery pack to the bracket with the securing screw.

NOTE: **Do not install** the batteries until the Flushometers are completely installed and operating. The batteries do not have to be installed for the system to function.

STEP 3 – Control Stop Installation (Figure 6)
Install the Zurn control stop valve with "Siphon Gard" back check protection (and wall escutcheon on exposed Flushometer installations) to the water supply line with the outlet positioned as required.

NOTE: For sweat solder applications, see recommended instructions included in the Zurn sweat solder kit.

STEP 4 – Install Vacuum Breaker Flush Connection
Models ZEMS6000, ZEMS6000-2 and ZEMS6000-3 (Figure 7)
Slide the tube nut, slip washer, rubber gasket and spud escutcheon over the vacuum breaker tube and insert tube into fixture spud. Hand tighten spud coupling into fixture spud.

Models ZEMS6140, ZEMS6142 and ZEMS6152 (Figure 8)
NOTE: When cutting scoriated pipe, leave a minimum of 1-1/4" of scoriation to ensure engagement with compression coupling.

Assemble pipe, elbows, couplings, slip washers, rubber gaskets and flanges as illustrated in Figure 8. Hand tighten all couplings. Once installation is completed, tighten all connections.

STEP 5 – Actuator Cable Installation (Figures 9 and 10)

1. Drill 1-3/4" diameter hole per Figure 9.
2. Run "fish tape" from electrical box to 1-3/4" hole.
3. Install actuator escutcheon to the actuator pipe with setscrew toward actuator. Do not tighten setscrew at this time.
4. Pull actuator cable through hole with fish tape and back to electrical box. Secure armored cable to box with box clamp.
5. With escutcheon loose and handle port washer installed, push cable into wall. The actuator must be angled away from the valve body at this time until the actuator push rod clears the handle port flange. The actuator can now be mounted to the flush valve and tightened.
6. Push escutcheon back to wall and tighten setscrew.
7. The actuator back cover has vent holes top and bottom. After assembly, the top hole should be sealed with a small dab of clear silicone sealant.

NOTE: See Figure 10 for typical installation including optional mini junction box.

Figure 5

Figure 6

Figure 7

Figure 8

STEP 6 – Electrical Hook-up (Figures 11A and 11B)
Be certain power is off to prevent damage to electrical components. Connect the sensor to the actuator and power converter exactly as shown in Figure 11A, Figure 11B if battery backup is being used. Also, the wiring diagram on the battery backup may be used. ***Double check that power converter polarity is correct.***

STEP 7 – Mount Automatic Sensor (Figure 2)
Install the Zurn Automatic Sensor into the 2-gang electrical box using two (2) long screws provided. Ensure that wires from sensor case point up. The rubber push caps will be on the left side of the sensor. The sensor lens faces outward from the finished wall.

STEP 8 – Mount Yoke and Override Button (Figure 5)
Install inner nut, bracket and outer nut on threaded shaft of override button. Mount bracket to yoke. Adjust the distance so that the override button will protrude through the wall plate using the nuts on each side of bracket. The threaded shaft end of the override button should be flush with wall plate. Connect the override button as per Figure 11A or 11B. Mount the assembled yoke to the electrical box.

STEP 9 – Flush Out Supply Line (Figure 12)
Make sure the control stop is closed by activating the handle. Remove valve body cover. Lift out the trip mechanism. Install the internal plastic cover and valve body cover wrench tight and open control stop. Turn on water supply to flush line of any debris or sediment.

After completion, shut off control stop, remove covers and reinstall the trip. Install internal plastic cover and valve body cover, wrench tight.

MODEL	A-DIM.
ZEMS6000	10-1/8
ZEMS6000-2	22-5/8
ZEMS6000-3	25-5/8

Figure 9 (Exposed Systems)

Figure 10

NOTES:
1. FAILURE TO OBSERVE PROPER POLARITY WILL RESULT IN FAILURE OF THE SENSOR AND/OR POWER CONVERTER.
2. USE #18 AWG FOR INTERCONNECTIONS.

Figure 11A (Without Battery Backup)

SEE FIGURE 11A FOR WIRING OF MULTIPLE ACTUATORS

Figure 11B (With Battery Backup)

STEP 10 – Test and Adjustment (Figure 13)
(Also see "Sensor Features" on Page 357.)
Zurn Automatic Sensors are preset at the factory and provide the user with selectable options as follows:

Switch 1 – Automatic Flush (Factory setting is on.)

Switch 2 – Red/Green LED (Factory setting is on.)

Switch 3 – Courtesy Flush (Factory setting is on.)

- **Red/Green LED –** With power applied the red light will illuminate when an object is detected. The green light will illuminate after the object has been detected for a minimum of 8 seconds then leaves. The green light indicates the flushing sequence.
- **Range Adjustments –** The Zurn Automatic Sensors are factory set to operate at a range of 50". This range should be satisfactory for most installations. If the range is too short (i.e., not detecting the user) or too long, adjust the range.
- **To Make A Range Adjustment –** Remove the rubber push caps. The range adjustment is shown in Figure 13. Using a small screwdriver, turn the range adjustment clockwise to increase range (maximum range is 60") or counterclockwise to decrease range (minimum range is 12").

CAUTION: Range adjustment rotates only 1/2 turn total from min. to max. Do not exceed this or sensor will be damaged.

Stand in front of the Zurn Automatic Sensor at the desired distance; the red light will illuminate when you are within range.

Repeat adjustment procedure until the desired range is obtained.

- **Switch Settings** (Figure 13)
  The three switches control the following options. They can be activated or deactivated by means of the switches (down is on, up is off).

  Switch 1 – Automatic Flush – The unit will automatically flush 24 hours after last user.

  Switch 2 – Red/Green LED – When an object is detected the Red LED illuminates. The Green LED illuminates while flushing.

  Switch 3 – Courtesy Flush – When an object has been detected for two seconds, the unit flushes and goes into the normal mode. This is repeatable after 90 seconds.

  NOTE: After the options have been selected the reset button ***must*** be pushed for sensor to accept selections. Make sure rubber push caps are securely installed after making adjustments to protect sensor from moisture.

STEP 11 – Adjust Control Stop (Figures 6 and 12)
Adjust the control stop to meet the flow rate required for proper cleaning of the fixture. Open control stop counterclockwise one-half turn from closed position. Activate Flushometer simulating a user. Adjust the control stop after each flush until the rate of flow delivered properly cleanses the fixture.

Figure 12

Figure 13

IMPORTANT NOTE: Excessive water flow creates noise, while too little flow will not satisfy the needs of the fixture. Proper adjustment is made when:

1. The plumbing fixture is cleansed after each flush without splashing water out from the lip.
2. A quiet flushing cycle is achieved.

After adjustment: Replace the Zurn stop cap screw cover.

CARE AND CLEANING INSTRUCTIONS

Do not use abrasive or chemical cleaners to clean Flushometers and actuators as they may dull the luster and attack the chrome or special decorative finishes. Use only mild soap and water, then wipe dry with a clean cloth or towel.

While cleaning the bathroom tile, the Flushometer and actuator should be protected from splattering of cleaner. Acids and cleaning fluids can discolor or remove chrome plating.

SENSOR FEATURES (See Step 10 for instructions.)

Courtesy Flush: The Sensor will provide a courtesy flush two seconds after a person is first detected. The courtesy flush removes any residue from the fixture. The main flush will occur when the user steps away from the fixture. The courtesy flush can be manually activated/deactivated at any time.

Automatic 24-Hour Flush: The sensor will provide an automatic flush 24 hours after the last user. The automatic flush can be manually activated/deactivated at any time.

Indicator Lights: The sensor unit has two operation lights, red and green. The red light is lit when an object is detected. The green is lit when the unit is flushing. The indicator lights can be manually activated/deactivated at any time.

Maintenance Override (For Maintenance Purposes):
The sensor may be disabled for 10 minutes by placing a magnet on the sensor lens for 3 to 5 seconds. After 10 minutes the sensor will automatically resume functioning. Placing a magnet on the sensor for one second will restore normal operation and also provide a flush. These features are often desired for cleaning purposes.

Adjustable Range: The viewing distance is adjustable from 12" to 60".

Function Light: If an object is in the viewing range for more than 30 minutes the red LED will blink. Range readjustment may be required.

TROUBLE SHOOTING

PROBLEM	CAUSE	SOLUTION
No water comes from the flush valve.	The water supply line or the angle stop is shut off.	Open the water supply or the angle stop.
	The electric wire(s) is not connected.	Connect the wires.
	The surface of the infrared cover is stained.	Clean the surface of the sensor cover.
	There is a reflective surface in front of the sensor.	Remove the reflective surface from in front of the sensor.
	The detection range is not adjusted properly.	Adjust the detection range.
	The infrared sensor or the actuator is out of order.	Contact distributor for replacement.
Water does not stop flowing.	The by-pass hole in the diaphragm is clogged.	Clean the by-pass hole in the diaphragm.
	The sealing area of the diaphragm is dirty.	Clean the sealing area of the diaphragm.

Item	Part No.	Description
1A	P6000-A-AA-CP	1½" x 9" Vacuum Breaker Assembly CP (Model ZEMS6000)
	P6000-2-A-AA-CP	1½" x 21" Vacuum Breaker Assembly CP (Model ZEMS6000-2)
	P6000-3-A-AA-CP	1½" x 24" Vacuum Breaker Assembly CP (Model ZEMS6000-3)
1B	P6000-1-A-AA-RB	1½" x 11½" Vacuum Breaker Assembly RB (Model ZEMS6140 and ZEMS6152)
1C	P6000-A-AA-RB	1½" x 6" Vacuum Breaker Assembly RB (Model ZEMS6142)
2	P6000-H	1½" Spud Coupling Assembly CP
3	P6000-HN-RB	1½" Slip Joint Coupling (set of two)
4	P6000-QE3-RB	1½" Double Slip Elbow RB
4A	P6000-QE3-CP	1½" Double Slip Elbow CP
5	P6000-QE1-("L")-CP	1½" Outlet Tube CP (specify 'L' dim.)
5A	P6000-QT1-4-CP	1½" x 4" Outlet Tube CP
6	P6000-G-TUBE	Flange
7	P6000-HN-CP	1½" Slip Joint Coupling CP
8	P6000-QT4	1½" Coupling S-30 Gasket
9	P6000-QT3-("L")-RB	1½" Outlet Tube RB (specify 'L' dim.)
10	Specify Series	Valve Body CP (specify valve type)

Item	Part No.	Description
11	PESS6000-22	Sensor Cover Plate
12	PESS6000-23	Bracket
13	PESS6000-24	Push Button
14	PESS6000-25	Yoke
15	PEMS6000-26	Sensor
16	PESS6000-27	Bracket Screws (set of two)
17	PESS6000-28	Yoke Screws (set of two)
18	PESS6000-29	Battery Back-Up (optional)
19	PESS6000-30	Wall Bracket (optional)
20	PESS6000-31	Indicator Light Cover Plate (optional)
21	PESS6000-32	Indicator Light (optional)
22	PH6000-HY35	Screws (two required) (optional)
23	P6000-PC6	Power Converter
24	P6000-MJ	Mini Junction Box (optional)
25	PEMS6000-HYM	ZEMS Actuator
26	PH6000-HY35	Screws (four required)
27	PH6000-HY35	Screws (two required)
28	P6000-M10	Washer (supplied with Item 25)

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AquaSense® AV Urinal ZEMS Series

Automatic Systems Sensor-Operated AquaVantage Flushometer

Installation, Operation, Maintenance, and Parts Manual

Patented and Patents Pending

Sensor-Operated Concealed Systems
ZEMS6190AV
ZEMS6195AV

ZEMS6003AV

ZEMS6195AV

Sensor-Operated Exposed Systems
ZEMS6001AV
ZEMS6003AV
ZEMS6203AV

LIMITED WARRANTY

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- Electrical wiring to the power converter outlet (120 VAC, 35 watts service required for each power converter used).
- Urinal fixture.
- Zurn carrier system, Z1200 series or equal.
- Single-gang box for Low Battery Indicator Light (optional).

IMPORTANT:

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- Sensor units should not be located across from each other or in close proximity to highly reflective surfaces.

The Zurn AquaVantage is designed to operate over the entire pressure range recommended by plumbing fixture manufacturers and will produce a metered flush when activated.

Protect the chrome or special finish of this AquaVantage. ***Do not use toothed tools to install or service the valve.*** Also, see “Care and Cleaning” section of this manual.

SENSOR LOCATION (Figures 1 and 2)

(Use Steel City #52171-N box and #52-C-14 reducing cover or equivalent.)

Models ZEMS6001 and ZEMS6003

Locate the centerline of the 2-gang electrical box 3-1/4"" to the left of the Flushometer centerline and 4" above the top of the fixture.

Models ZEMS6190 and ZEMS6195

Locate the centerline of the electrical box on the centerline of the Flushometer and 4" above the top of the fixture.

NOTE: Install reducing cover so screw holes are on top and bottom of box. Trim tiles to allow screw holes in plaster ring to show.

Figure 1

Electrical Box Installation

ELECTRICAL BOX INSTALLATION
*BOX AND DEVICE COVER BY CONTRACTOR

Figure 2

OPTIONAL BATTERY BACKUP and LOW BATTERY INDICATOR LOCATION (Figure 3)

All Models

Install the single-gang electrical box in an area that is convenient for visibility of the Low Battery Indicator Light. This can be located either close to the fixture or in a remote area such as the maintenance area or engineering room.

- The battery backup will supply power to a maximum of eight flush valves for an approximate three-day period during a power failure.
- The Low Battery indicator will come on when the batteries have reached a "caution level." The Flushometers will function when the light is illuminated until the batteries are completely discharged.
- The Low Battery light will illuminate even if the main power has not failed but the batteries have dropped to the "caution level."

INSTALLATION

STEP 1 – Install Receptacle (Figure 4)

Install Receptacle for the Zurn Power Converter in a convenient location. An optional mini junction box (P 6000-MJ) is recommended to distribute power to each sensor location. It is also recommended that brown wire be used for the positive (+) of the supply and blue wire be used for the negative (-) of the supply. This matches the sensor and actuator wire colors.

NOTE: One Zurn Power Converter can operate as many as eight Automatic Sensor-equipped Flushometers. The Power Converter is supplied with a six-foot cord. If additional wire is needed from the Power Converter to the Flushometer(s), use #18 AWG for this (by others). ***Do not supply power*** to the Power Converter until installation of actuator, sensor and Flushometer is completed and checked. ***Proper polarity must be observed or damage to one or all components will result.***

Figure 3

Figure 4

STEP 2 – Optional Battery Backup and Low Battery Indicator Light Installation

- If the battery backup option is being utilized, it is necessary to install the battery pack mounting plate and the battery pack close to the power converter in a convenient location for battery replacement when needed.
- Mount the battery pack mounting bracket.
- Clip the battery pack into location and secure the battery pack to the bracket with the securing screw.

NOTE: **Do not install** the batteries until the Flushometers are completely installed and operating. The batteries do not have to be installed for the system to function.

STEP 3 – Control Stop Installation (Figure 5)
Install the Zurn control stop valve with "Siphon Gard" back check protection (and wall escutcheon on exposed Flushometer installations) to the water supply line with the outlet positioned as required.

NOTE: For sweat solder applications, see recommended instructions included in the Zurn sweat solder kit.

STEP 4 – Install Vacuum Breaker Flush Connection
Models ZEMS6001 and ZEMS6003 (Figure 6)
Slide the tube nut, slip washer, rubber gasket and spud escutcheon over the vacuum breaker tube and insert tube into fixture spud. Hand tighten spud coupling into fixture spud.

Models ZEMS6190 and ZEMS6195 (Figure 7)
NOTE: When cutting scoriated pipe, leave a minimum of 1-1/4" of scoriation to ensure engagement with compression coupling.

Assemble pipe, elbows, couplings, slip washers, rubber gaskets and flanges as illustrated in Figure 7. Hand tighten all couplings. Once installation is completed, tighten all connections.

Figure 5

Figure 6

Figure 7

STEP 5 – Actuator Cable Installation (Figures 8 and 9)

1. Drill 1-3/4" diameter hole per Figure 8.
2. Run “fish tape” from electrical box to 1-3/4" hole.
3. Install actuator escutcheon to the actuator pipe with setscrew toward actuator. Do not tighten setscrew at this time.
4. Pull actuator cable through hole with fish tape and back to electrical box. Secure armored cable to box with box clamp.
5. With escutcheon loose and handle port washer installed, push cable into wall. The actuator must be angled away from the valve body at this time until the actuator push rod clears the handle port flange. The actuator can now be mounted to the flush valve and tightened.
6. Push escutcheon back to wall and tighten setscrew.
7. The actuator back cover has vent holes top and bottom. After assembly, the top hole should be sealed with a small dab of clear silicone sealant.

NOTE: See Figure 9 for typical installation including optional mini junction box.

STEP 6 – Electrical Hook-up (Figures 10A and 10B)

Be certain power is off to prevent damage to electrical components. Connect the sensor to the actuator and power converter exactly as shown in Figure 10A, Figure 10B if battery backup is being used. Also, the wiring diagram on the battery backup may be used. ***Double check that power converter polarity is correct.***

STEP 7 – Mount Automatic Sensor (Figure 2)

Install the Zurn Automatic Sensor into the reducing device cover using two (2) long screws provided. Ensure that wires from sensor case point to the right. The rubber push caps will be at the top. The sensor lens faces outward from the finished wall.

STEP 8 – Flush Out Supply Line (Figure 11)

Make sure the control stop is closed. Remove Flushometer cover. Lift out the trip mechanism. Install the Flushometer cover wrench tight and open control stop. Turn on water supply to flush line of any debris or sediment.

After completion, shut off control stop, remove cover and reinstall the trip. Install Flushometer cover wrench tight.

Figure 8 (Exposed Systems)

Figure 9

Figure 10A (Without Battery Backup)

Figure 10B (With Battery Backup)

STEP 9 – Test and Adjustment (Figure 12)
(Also see "Sensor Features" on Page 365.)
Zurn Automatic Sensors are preset at the factory and provide the user with selectable options as follows:

Switch 1 – Automatic Flush (Factory setting is on.)

Switch 2 – Red/Green LED (Factory setting is on.)

Switch 3 – Courtesy Flush (Factory setting is off.)

- **Red/Green LED –** With power applied the red light will illuminate when an object is detected. The green light will illuminate after the object has been detected for a minimum of 8 seconds then leaves. The green light indicates the flushing sequence.
- **Range Adjustments –** The Zurn Automatic Sensors are factory set to operate at a range of 30". This range should be satisfactory for most installations. If the range is too short (i.e., not detecting the user) or too long, adjust the range.
- **To Make A Range Adjustment –** Remove the rubber push caps. The range adjustment is shown in Figure 12. Using a small screwdriver, turn the range adjustment clockwise to increase range (maximum range is 60") or counterclockwise to decrease range (minimum range is 12").

CAUTION: Range adjustment rotates only 1/2 turn total from min. to max. Do not exceed this or sensor will be damaged.

Stand in front of the Zurn Automatic Sensor at the desired distance; the red light will illuminate when you are within range.

Repeat adjustment procedure until the desired range is obtained.

- **Switch Settings** (Figure 12)
  The three switches control the following options. They can be activated or deactivated by means of the switches (left is on, right is off).

  Switch 1 – Automatic Flush – The unit will automatically flush 24 hours after last user.

  Switch 2 – Red/Green LED – When an object is detected the Red LED illuminates. The Green LED illuminates while flushing.

  Switch 3 – Courtesy Flush – When an object has been detected for two seconds, the unit flushes and goes into the normal mode. This is repeatable after 90 seconds.

  NOTE: After the options have been selected the reset button ***must*** be pushed for sensor to accept selections. Make sure rubber push caps are securely installed after making adjustments to protect sensor from moisture.

STEP 10 – Adjust Control Stop (Figures 5 and 11)
Adjust the control stop to meet the flow rate required for proper cleaning of the fixture. Open control stop counterclockwise one-half turn from closed position. Activate Flushometer simulating a user. Adjust the control stop after each flush until the rate of flow delivered properly cleanses the fixture.

Figure 11

Figure 12

IMPORTANT NOTE: Excessive water flow creates noise, while too little flow will not satisfy the needs of the fixture. Proper adjustment is made when:

1. The plumbing fixture is cleansed after each flush without splashing water out from the lip.
2. A quiet flushing cycle is achieved.

After adjusting, replace the Zurn stop cap screw cover.

NOTE: The final setting for urinals should be such so that the fixture will not overflow with continuous flushing.

CARE AND CLEANING INSTRUCTIONS

Do not use abrasive or chemical cleaners to clean Flushometers and actuators as they may dull the luster and attack the chrome or special decorative finishes. Use only mild soap and water, then wipe dry with a clean cloth or towel.

While cleaning the bathroom tile, the Flushometer and actuator should be protected from splattering of cleaner. Acids and cleaning fluids can discolor or remove chrome plating.

SENSOR FEATURES (See Step 9 for instructions.)

Courtesy Flush: The Sensor will provide a courtesy flush two seconds after a person is first detected. The courtesy flush removes any residue from the fixture. The main flush will occur when the user steps away from the fixture. The courtesy flush can be manually activated/deactivated at any time.

Automatic 24-Hour Flush: The sensor will provide an automatic flush 24 hours after the last user. The automatic flush can be manually activated/deactivated at any time.

Indicator Lights: The sensor unit has two operation lights, red and green. The red light is lit when an object is detected. The green is lit when the unit is flushing. The indicator lights can be manually activated/deactivated at any time.

Maintenance Override (For Maintenance Purposes):
The sensor may be disabled for 10 minutes by placing a magnet on the sensor lens for 3 to 5 seconds. After 10 minutes the sensor will automatically resume functioning. Placing a magnet on the sensor for one second will restore normal operation and also provide a flush. These features are often desired for cleaning purposes.

Adjustable Range: The viewing distance is adjustable from 12" to 60".

Function Light: If an object is in the viewing range for more than 30 minutes the red LED will blink. Range readjustment may be required.

TROUBLE SHOOTING

Problem	Cause*	Corrective Action*
Valve will not operate.	1.) Stop valve is closed. 2.) Supply valve is closed.	1.) Open stop valve. 2.) Open supply valve.
Insufficient volume of water to adequately siphon fixture.	1.) Stop valve is not open enough. 2.) Urinal trip mechanism installed in wrong kit, urinal for closet. 3.) Insufficient volume or pressure at supply.	1.) Open stop valve for desired volume of water. 2.) Replace urinal part with proper closet valve part. 3.) If gauges are not available to measure supply pressure or volume of water at the valve, completely remove the working parts and open the stop valve to allow water to pass through the empty valve. If the supply is adequate to siphon the fixture, the guide ring may be removed from the guide assembly to provide additional flow. Should this prove unsatisfactory, steps should be taken to increase the pressure and/or supply.
Flush valve shuts off too quickly.	1.) Damaged or punctured diaphragm. 2.) Enlarged by-pass orifice.	1.) Install new P6000-EUA or P6000-ECA replacement kit to remedy the problem. 2.) Install new P6000-EUA or P6000-ECA replacement kit to remedy the problem.
Valve is short flushing.	1.) Diaphragm kit is not matched to the fixture. 2.) Urinal trip mechanism (black) is in the closet flush valve.	1.) Install the proper P6000-EUA or P6000-ECA replacement kit to remedy the problem. 2.) Install closet trip mechanism (white).
Valve is flushing too long or not shutting off.	1.) Trip mechanism not seating properly due to foreign material between trip mechanism and retainer disc. 2.) By-pass orifice is plugged or partially plugged. 3.) Line pressure is not adequate to force trip mechanism to seal. 4.) Cracked cover.	1.) Disassemble parts and rinse thoroughly. 2.) Examine by-pass orifice and clean if necessary being certain not to enlarge orifice opening. 3.) Pressure is inadequate or has dropped below minimum operating range. Steps should be taken to increase the line pressure. 4.) Replace cover with new one.
Water splashes out of fixture.	1.) Supply volume is more than is necessary. 2.) Lime accumulation on vortex or spreader holes of fixture.	1.) Adjust downward on control stop. 2.) Remove the lime build up.
Flush is not considered quiet.	1.) Control stop may not be adjusted for quiet operation. 2.) Fixture may be contributing to noise. 3.) Piping system may be source of noise.	1.) Adjust the control stop for quiet operation keeping in mind the fixture evacuation requirements. 2.) Check noise created by fixture by placing a cover over the bowl opening to separate valve noise from bowl noise. If it is determined the fixture is too noisy consult with fixture manufacturer. 3.) High pressure in the system can sometimes be controlled by the stop valve. Other sources of noise may be the absence of air chambers and shock arrestors, loose pipes, improper size pipes, etc. In these cases the building engineer should be consulted.
Handle assembly leaking.	1.) Handle assembly is not tight.	1.) Tighten handle assembly.

Item	Part No.	Description
1A	P6001-A-AA-CP	1¹/₄" x 9" Vacuum Breaker Assembly CP (Model ZEMS6001)
	P6003-A-AA-CP	³/₄" x 9" Vacuum Breaker Assembly CP (Model ZEMS6003)
1B	P6001-10-A-AA-RB	1¹/₄" x 10" Vacuum Breaker Assembly RB (Model ZEMS6190)
	P6003-10-A-AA-RB	³/₄" x 10" Vacuum Breaker Assembly RB (Model ZEMS6195)
2	P6001-H	1¹/₄" Spud Coupling Assembly CP (Model ZEMS6001)
	P6003-H	³/₄" Spud Coupling CP (Model ZEMS6003)
3	P6000-QE5-RB	1¹/₄" Elbow Connector RB
4	P6001-HN-RB	1¹/₄" Slip Joint Coupling Set
5	P6000-QE6-("L")-RB	³/₄" Elbow Connector RB (specify 'L' dim.)
6	P6000-QT5-("L")-RB	³/₄" Tube (specify 'L' dim.)

Item	Part No.	Description
7	P6003-HN-RB	³/₄" Slip Joint Coupling Set
8	Specify Series	Valve Body CP (specify valve type)
9	PESS6000-28	Sensor Screws (set of two)
10	PESS6000-22A	Sensor Cover Plate
11	PH6000-HY35	Screws (two required)
12	PESS6000-29	Battery Back-Up (optional)
13	PESS6000-30	Wall Bracket (optional)
14	PESS6000-31	Indicator Light Cover Plate (optional)
15	PESS6000-32	Indicator Light (optional)
16	PH6000-HY35	Screws (two required) (optional)
17	P6000-PC6	Power Converter
18	P6000-MJ	Mini Junction Box (optional)
19	PEMS6000-HYM	ZEMS Actuator
20	PEMS6000-26A	ZEMS Sensor
21	P6000-M10	Washer (supplied with Item 19)

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Zurn E-Z Sensor Faucets Feature:

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Z6920 Z6912 Z6913 Z6922 Wall Mount Z6915

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Zurn puts the EASY into sensor faucet installation with our line of automatic E-Z Sensor Faucets. Unlike other sensor faucet manufacturers that have different model faucets for battery, plug-in, and hardwire installation, Zurn has combined the technology of three into one. Our family of E-Z faucets utilizes 6 VDC power so the same model faucet can be installed in your choice of supplied power. From standard lavatory to gooseneck design, you have the flexibility to choose either battery (three-year life) or unlimited power supplied by plug-in or hardwire. And, our plug-in and hardwire models come standard with a battery back-up feature.

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Zurn E-Z Flush Faucets Give You The Power To Choose The Right Installation For You.

Plug-In Power

Battery Power

Hardwired Power

Z6913 INSTALLATION
W/P6900-HW6 Multi Unit Power Supply
(P6900-HW6 supplies 6VDC power for up to eight (8) Z6913 sensor faucets).

For information on ordering, contact your Zurn Representative or call 1-800-997-3876.

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Form No. FV336, 5/07

Z6912 Model
AquaSense Sensor Faucet

Shown with optional -CP4 Cover Plate.

Suffix Options (Check/Specify Appropriate Options)

Suffix	Description
____ **-A**	2.0 GPM Vandal-Resistant Aerator
____ **-ADM**	Above Deck Mixer
____ **-ADM-1**	Above Deck Mixer with 4" [102mm] Cover Plate
____ **-ADM-2**	Above Deck Mixer with 8" [203mm] Cover Plate
____ **-C**	2.2 GPM Laminar Flow Control
____ **-CP4**	Cover Plate 4" [102mm] Centers
____ **-CP8**	Cover Plate 8" [203mm] Centers
____ **-F**	.5 GPM Vandal-Resistant Aerator
____ **-IA3**	Inlet Adaptor (3/8" [10mm] Compression)
____ **-MJ**	Mini Junction Box
____ **-MT**	Mixing Tee
____ **-MV**	Temperature Mixing Valve
____ **-SH**	Supply Hoses for Mixing Valve
____ **-SSH**	Single Supply Hose
____ **-TMV**	Thermostatic Mixing Valve for Multiple Faucets
____ **-TMV-1**	Thermostatic Mixing Valve for Single Faucets
____ **-WB**	Wrist Blade Handle for ADM
____	Other

Z6912 AquaSense Battery Powered Faucet

Engineering Specification: The Z6912 sensor faucet is a battery-powered sensor faucet for retrofit and new construction. The faucet incorporates an infrared convergence-type proximity sensor into the chrome-plated cast brass spout. The faucet is furnished complete with sensor module, spout module and in-line filter, 4 “AA” batteries, a 1.5 GPM vandal-resistant aerator, and an inlet for a 1/2" [13mm] ball riser supply hose. Sensor range is factory set for optimum performance.

Z6912-ACA AquaSense Plug-In Powered Faucet

Engineering Specification: The Z6912-ACA sensor faucet is a plug-in powered electronic sensor faucet for retrofit and new construction. The faucet incorporates an infrared convergence-type proximity sensor into the chrome-plated cast brass spout. The faucet is furnished complete with sensor module, spout module, in-line filter, a 1.5 GPM vandal-resistant aerator, 6 VDC plug-in power converter, and an inlet for a 1/2" [13mm] ball riser or supply hose. Also included are 4 “AA” batteries that provide battery backup power to the faucet during power outages. Sensor range is factory set for optimum performance.

Z6912-CWB AquaSense Hardwire Powered Faucet

Engineering Specification: The Z6912-CWB sensor faucet is a hardwired electronic sensor faucet for retrofit and new construction. The faucet incorporates an infrared convergence-type proximity sensor into the chrome-plated cast brass spout. The faucet is furnished complete with sensor module, spout module, in-line filter, a 1.5 GPM vandal-resistant aerator, connecting wire to power converter, and an inlet for a 1/2" [13mm] ball riser or supply hose. Also included are 4 “AA” batteries that provide battery backup power to the faucet during power outages. Sensor range is factory set for optimum performance.

Note: For hardwire applications, furnish P6000-HW6 power converter. The P6000-HW6 will power up to eight sensor faucets. Order P6000-HW6 power converter separately.

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Rev.
Dwg. No. 80688
Date: 6/9/04
Product No. Z6912

Typical Z6912 AquaSense Battery-Powered Faucet

Optional Mixing Valves

P6900-MT Mixing Tee

P6900-MV Temperature Mixing Valve

Typical Z6912-ACA AquaSense Plug-In Powered Faucet

Typical Z6912-CWB AquaSense Hardwire Powered Faucet

*Optional -MJ Mini Junction Box for connecting up to eight faucets.

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Z6913 Model
AquaSense Sensor Faucet

Shown with optional -CP4 Cover Plate.

Suffix Options (Check/Specify Appropriate Options)

Suffix	Description
____ **-A**	2.0 GPM Vandal-Resistant Aerator
____ **-ADM**	Above Deck Mixer
____ **-ADM-1**	Above Deck Mixer with 4" [102mm] Cover Plate
____ **-ADM-2**	Above Deck Mixer with 8" [203mm] Cover Plate
____ **-C**	2.2 GPM Laminar Flow Control
____ **-CP4**	Cover Plate 4" [102mm] Centers
____ **-CP8**	Cover Plate 8" [203mm] Centers
____ **-F**	.5 GPM Vandal-Resistant Aerator
____ **-IA3**	Inlet Adaptor (3/8" [10mm] Compression)
____ **-MJ**	Mini Junction Box
____ **-MT**	Mixing Tee
____ **-MV**	Temperature Mixing Valve
____ **-SH**	Supply Hoses for Mixing Valve
____ **-SSH**	Single Supply Hose
____ **-TMV**	Thermostatic Mixing Valve for Multiple Faucets
____ **-TMV-1**	Thermostatic Mixing Valve for Single Faucets
____ **-WB**	Wrist Blade Handle for ADM
____	Other

Z6913 AquaSense Battery Powered Faucet

Engineering Specification: The Z6913 sensor faucet is a battery-powered sensor faucet for retrofit and new construction. The faucet incorporates an infrared convergence-type proximity sensor into the chrome-plated cast brass spout. The faucet is furnished complete with sensor module, spout module, in-line filter, 4 “AA” batteries, a 1.5 GPM vandal-resistant aerator, and an inlet for a 1/2" [13mm] ball riser or supply hose. Sensor range is factory set for optimum performance.

Z6913-ACA AquaSense Plug-In Powered Faucet

Engineering Specification: The Z6913-ACA sensor faucet is a plug-in powered electronic sensor faucet for retrofit and new construction. The faucet incorporates an infrared convergence-type proximity sensor into the chrome-plated cast brass spout. The faucet is furnished complete with sensor module, spout module, in-line filter, a 1.5 GPM vandal-resistant aerator, 6 VDC plug-in power converter, and an inlet for a 1/2" [13mm] ball riser or supply hose. Also included are 4 “AA” batteries that provide battery backup power to the faucet during power outages. Sensor range is factory set for optimum performance.

Z6913-CWB AquaSense Hardwire Powered Faucet

Engineering Specification: The Z6913-CWB sensor faucet is a hardwired electronic sensor faucet for retrofit and new construction. The faucet incorporates an infrared convergence-type proximity sensor into the chrome-plated cast brass spout. The faucet is furnished complete with sensor module, spout module, in-line filter, a 1.5 GPM vandal-resistant aerator, connecting wire to power converter, and an inlet for a 1/2" [13mm] ball riser or supply hose. Also included are 4 “AA” batteries that provide battery backup power to the faucet during power outages. Sensor range is factory set for optimum performance.

Note: For hardwire applications, furnish P6000-HW6 power converter. The P6000-HW6 will power up to eight sensor faucets. Order P6000-HW6 power converter separately.

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Rev.
Dwg. No. 80667
Date: 6/9/04
Product No. Z6913

Typical Z6913 AquaSense Battery-Powered Faucet

Optional Mixing Valves

P6900-MT Mixing Tee

P6900-MV Temperature Mixing Valve

Typical Z6913-ACA AquaSense Plug-In Powered Faucet

Typical Z6913-CWB AquaSense Hardwire Powered Faucet

*Optional -MJ Mini Junction Box for connecting up to eight faucets.

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Z6914 Model
AquaSense Sensor Faucet

ADA DESIGNED

Suffix Options (Check/Specify Appropriate Options)

Suffix	Description
____ **-ADM**	Above Deck Mixer
____ **-ADM-1**	Above Deck Mixer with 4" [102mm] Cover Plate
____ **-ADM-2**	Above Deck Mixer with 8" [203mm] Cover Plate
____ **-C**	1.5 GPM Laminar Flow Control
____ **-CP4**	Cover Plate 4" [102mm] Centers
____ **-CP8**	Cover Plate 8" [203mm] Centers
____ **-F**	.5 GPM Vandal-Resistant Aerator
____ **-IA3**	Inlet Adaptor (3/8" [10mm] Compression)
____ **-MJ**	Mini Junction Box
____ **-MT**	Mixing Tee
____ **-MV**	Temperature Mixing Valve
____ **-PB**	Polished Brass (PVD) Finish
____ **-SH**	Supply Hoses for Mixing Valve
____ **-SSH**	Single Supply Hose
____ **-TMV**	Thermostatic Mixing Valve for Multiple Faucets
____ **-TMV-1**	Thermostatic Mixing Valve for Single Faucets
____ **-WB**	Wrist Blade Handle for ADM
____	Other

Z6914 AquaSense Battery Powered Faucet

Engineering Specification: The Z6914 sensor faucet is a battery-powered sensor faucet for retrofit and new construction. The faucet incorporates an infrared convergence-type proximity sensor into the chrome-plated cast brass spout. The faucet is furnished complete with sensor module, spout module, in-line filter, 4 “AA” batteries, a 1.5 GPM vandal-resistant aerator, and an inlet for a 1/2" [13mm] ball riser or supply hose. Sensor range is factory set for optimum performance.

Z6914-ACA AquaSense Plug-In Powered Faucet

Engineering Specification: The Z6914-ACA sensor faucet is a plug-in powered electronic sensor faucet for retrofit and new construction. The faucet incorporates an infrared convergence-type proximity sensor into the chrome-plated cast brass spout. The faucet is furnished complete with sensor module, spout module, in-line filter, a 1.5 GPM vandal-resistant aerator, 6 VDC plug-in power converter, and an inlet for a 1/2" [13mm] ball riser or supply hose. Also included are 4 “AA” batteries that provide battery backup power to the faucet during power outages. Sensor range is factory set for optimum performance.

Z6914-CWB AquaSense Hardwire Powered Faucet

Engineering Specification: The Z6914-CWB sensor faucet is a hardwired electronic sensor faucet for retrofit and new construction. The faucet incorporates an infrared convergence-type proximity sensor into the chrome-plated cast brass spout. The faucet is furnished complete with sensor module, spout module, in-line filter, a 1.5 GPM vandal-resistant aerator, connecting wire to power converter, and an inlet for a 1/2" [13mm] ball riser or supply hose. Also included are 4 “AA” batteries that provide battery backup power to the faucet during power outages. Sensor range is factory set for optimum performance.

Notes: For hardwire applications, furnish P6000-HW6 power converter. The P6000-HW6 will power up to eight sensor faucets. Order P6000-HW6 power converter separately.

All polished brass (PVD) products come with a limited lifetime warranty on the finish.

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Rev.
Dwg. No. 81327
Date: 4/19/06
Product No. Z6914

Typical Z6914 AquaSense Battery-Powered Faucet

Optional Mixing Valves

P6900-MT Mixing Tee

P6900-MV Temperature Mixing Valve

Typical Z6914-ACA AquaSense Plug-In Powered Faucet

Typical Z6914-CWB AquaSense Hardwire Powered Faucet

*Optional -MJ Mini Junction Box for connecting up to eight faucets.

NOTE: Must use either Zurn P6000-HW6 hardwire power converter or Zurn P6000-PC6 plug-in power converter to ensure proper operation. Using a power converter other than Zurn may result in operation malfunction or unit failure.

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Z6915 Model
AquaSense Sensor Faucet

Suffix Options (Check/Specify Appropriate Options)

Suffix	Description
____ **-A**	2.0 GPM Vandal-Resistant Aerator
____ **-C**	2.2 GPM Laminar Flow Control
____ **-F**	.5 GPM Vandal-Resistant Aerator
____ **-IA3**	Inlet Adaptor (3/8" [10mm] Compression)
____ **-MJ**	Mini Junction Box
____ **-MT**	Mixing Tee
____ **-MV**	Temperature Mixing Valve
____ **-SH**	Supply Hoses for Mixing Valve
____ **-SSH**	Single Supply Hose
____ **-TMV**	Thermostatic Mixing Valve for Multiple Faucets
____ **-TMV-1**	Thermostatic Mixing Valve for Single Faucets
____	Other

Z6915 AquaSense Battery-Powered Faucet

Engineering Specification: The Z6915 sensor faucet is a battery-powered sensor faucet with an integral 4" [102mm] cover plate for retrofit and new construction. The faucet incorporates an infrared convergence-type proximity sensor into the chrome-plated cast brass spout. The faucet is furnished complete with sensor module, spout module, in-line filter, 4 “AA” batteries, a 1.5 GPM vandal-resistant aerator, and an inlet for a 1/2" [13mm] ball riser supply hose. Sensor range is factory set for optimum performance.

Z6915-ACA AquaSense Plug-In Powered Faucet

Engineering Specification: The Z6915-ACA sensor faucet is a plug-in powered electronic sensor faucet with an integral 4" [102mm] cover plate for retrofit and new construction. The faucet incorporates an infrared convergence-type proximity sensor into the chrome-plated cast brass spout. The faucet is furnished complete with sensor module, spout module, in-line filter, a 1.5 GPM vandal-resistant aerator, 6 VDC plug-in power converter, and an inlet for a 1/2" [13mm] ball riser or supply hose. Also included are 4 “AA” batteries that provide battery backup power to the faucet during power outages. Sensor range is factory set for optimum performance.

Z6915-CWB AquaSense Hardwire Powered Faucet

Engineering Specification: The Z6915-CWB sensor faucet is a hardwired electronic sensor faucet with an integral 4" [102mm] cover plate for retrofit and new construction. The faucet incorporates an infrared convergence-type proximity sensor into the chrome-plated cast brass spout. The faucet is furnished complete with sensor module, spout module, in-line filter, a 1.5 GPM vandal-resistant aerator, connecting wire to power converter, and an inlet for a 1/2" [13mm] ball riser or supply hose. Also included are 4 “AA” batteries that provide battery backup power to the faucet during power outages. Sensor range is factory set for optimum performance.

Note: For hardwire applications, furnish P6000-HW6 power converter. The P6000-HW6 will power up to eight sensor faucets. Order P6000-HW6 power converter separately.

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Typical Z6915 AquaSense Battery-Powered Faucet

Optional Mixing Valves

P6900-MT Mixing Tee

P6900-MV Temperature Mixing Valve

Typical Z6915-ACA AquaSense Plug-In Powered Faucet

Typical Z6915-CWB AquaSense Hardwire Powered Faucet

*Optional -MJ Mini Junction Box for connecting up to eight faucets.

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Z6916 Model
AquaSense Battery-Powered Lavatory Faucet

Shown with optional -CP4 Cover Plate.

Suffix Options (Check/Specify Appropriate Options)

_____	**-CP4**	Cover Plate 4" [102mm] Centers
_____	**-CP8**	Cover Plate 8" [203mm] Centers
_____	**-IA3**	Inlet Adaptor (3/8" [10mm] Compression)
_____	**-MT**	Mixing Tee
_____	**-MV**	Temperature Mixing Valve
_____	**-SH**	Supply Hoses for Mixing Valve
_____	**-SSH**	Single Supply Hose
_____	**-TMV**	Thermostatic Mixing Valve
_____	**-TMV-1**	Thermostatic Mixing Valve for Single Faucet
_____	**-WB**	Wrist Blade Handle for ADM
_____		Other

ENGINEERING SPECIFICATION: ZURN Z6916 AquaSense Battery-Powered Lavatory Faucet – The AquaSense sensor faucet is a battery-powered sensor faucet for retrofit and new construction. The faucet incorporates an infrared convergence-type proximity sensor battery compartment and electronics into the chrome-plated spout. Standard equipment consists of one 6 volt lithium battery, a 1.5 GPM vandal-resistant aerator, and an inlet for a 1/2" [13] ball riser supply hose (furnished by others). Sensor range adjusts automatically for its environment when battery is installed.

This space is for Architectural/Engineering Approval

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Rev. B
Dwg. No. 66586
Date: 8/15/03
Product No. Z6916

Z6916-ADM Model

AquaSense Battery-Powered Lavatory Faucet with Above Deck Mixer

Shown with optional -CP4 Cover Plate.

Suffix Options (Check/Specify Appropriate Options)

_____ **-CP4** Cover Plate 4" [102mm] Centers
_____ **-CP8** Cover Plate 8" [203mm] Centers

ENGINEERING SPECIFICATION: ZURN Z6916-ADM AquaSense Battery-Powered Lavatory Faucet with Above Deck Mixing Valve – The AquaSense sensor faucet is a battery-powered sensor faucet for retrofit and new construction. The faucet incorporates a smart sensor infrared convergence-type proximity sensor battery compartment and electronics into the chrome-plated spout. The faucet incorporates an integral mixing valve in the base of the spout. Standard equipment consists of one 6 volt lithium battery, a 1.5 GPM vandal-resistant aerator, two stop filter housings, and two stainless steel flex hose supplies. Sensor range adjusts automatically for the environment when batteries are installed.

This space is for Architectural/Engineering Approval

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Rev.
Dwg. No. 80566
Date: 8/20/03
Product No. Z6916-ADM

Z6917 Model
AquaSense Sensor Faucet

ADA DESIGNED

Suffix Options (Check/Specify Appropriate Options)

Suffix	Description
____ **-C**	1.5 GPM Laminar Flow Control
____ **-F**	.5 GPM Vandal-Resistant Aerator
____ **-IA3**	Inlet Adaptor (3/8" [10mm] Compression)
____ **-MJ**	Mini Junction Box
____ **-MT**	Mixing Tee
____ **-MV**	Temperature Mixing Valve
____ **-PB**	Polished Brass (PVD) Finish
____ **-SH**	Supply Hoses for Mixing Valve
____ **-SSH**	Single Supply Hose
____ **-TMV**	Thermostatic Mixing Valve for Multiple Faucets
____ **-TMV-1**	Thermostatic Mixing Valve for Single Faucets
____	Other

Z6917 AquaSense Battery-Powered Faucet

Engineering Specification: The Z6917 sensor faucet is a battery-powered sensor faucet with an integral 4" [102mm] cover plate for retrofit and new construction. The faucet incorporates an infrared convergence-type proximity sensor into the chrome-plated cast brass spout. The faucet is furnished complete with sensor module, spout module, in-line filter, 4 “AA” batteries, a 1.5 GPM vandal-resistant aerator, and an inlet for a 1/2" [13mm] ball riser supply hose. Sensor range is factory set for optimum performance.

Z6917-ACA AquaSense Plug-In Powered Faucet

Engineering Specification: The Z6917-ACA sensor faucet is a plug-in powered electronic sensor faucet with an integral 4" [102mm] cover plate for retrofit and new construction. The faucet incorporates an infrared convergence-type proximity sensor into the chrome-plated cast brass spout. The faucet is furnished complete with sensor module, spout module, in-line filter, a 1.5 GPM vandal-resistant aerator, 6 VDC plug-in power converter, and an inlet for a 1/2" [13mm] ball riser or supply hose. Also included are 4 “AA” batteries that provide battery backup power to the faucet during power outages. Sensor range is factory set for optimum performance.

Z6917-CWB AquaSense Hardwire Powered Faucet

Engineering Specification: The Z6917-CWB sensor faucet is a hardwired electronic sensor faucet with an integral 4" [102mm] cover plate for retrofit and new construction. The faucet incorporates an infrared convergence-type proximity sensor into the chrome-plated cast brass spout. The faucet is furnished complete with sensor module, spout module, in-line filter, a 1.5 GPM vandal-resistant aerator, connecting wire to power converter, and an inlet for a 1/2" [13mm] ball riser or supply hose. Also included are 4 “AA” batteries that provide battery backup power to the faucet during power outages. Sensor range is factory set for optimum performance.

Notes: For hardwire applications, furnish P6000-HW6 power converter. The P6000-HW6 will power up to eight sensor faucets. Order P6000-HW6 power converter separately.

All polished brass (PVD) products come with a limited lifetime warranty on the finish.

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Rev.
Dwg. No. 81328
Date: 4/19/06
Product No. Z6917

Typical Z6917 AquaSense Battery-Powered Faucet

Optional Mixing Valves

P6900-MT Mixing Tee

P6900-MV Temperature Mixing Valve

Typical Z6917-ACA AquaSense Plug-In Powered Faucet

Typical Z6917-CWB AquaSense Hardwire Powered Faucet

*Optional -MJ Mini Junction Box for connecting up to eight faucets.

NOTE:
Must use either Zurn P6000-HW6 hardwire power converter or Zurn P6000-PC6 plug-in power converter to ensure proper operation. Using a power converter other than Zurn may result in operation malfunction or unit failure.

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Z6918 Model
AquaSense Sensor Faucet

Z6918-ADM Shown

ADA DESIGNED

Suffix Options (Check/Specify Appropriate Options)

Suffix	Description
____ **-A**	2.0 GPM Vandal-Resistant Aerator
____ **-ADM**	Above Deck Mixer
____ **-C**	2.2 GPM Laminar Flow Control
____ **-CP4**	Cover Plate 4" [102mm] Centers
____ **-CP8**	Cover Plate 8" [203mm] Centers
____ **-EB**	External 9 Volt Battery Pack
____ **-F**	.5 GPM Vandal-Resistant Aerator
____ **-MT**	Mixing Tee
____ **-MV**	Temperature Mixing Valve
____ **-SH**	Supply Hoses for Mixing Valve
____ **-TMV**	Thermostatic Mixing Valve for Multiple Faucets
____ **-TMV-1**	Thermostatic Mixing Valve for Single Faucets
____	Other

Z6918 AquaSense DC Battery Powered Faucet

Engineering Specification: The Z6918 sensor faucet is a battery powered sensor faucet for retrofit and new construction. The faucet incorporates an infrared convergence-type proximity sensor into the chrome-plated cast brass spout. The faucet is furnished complete with all electronics and sensor mounted within the spout (above deck), in-line filter, 9 volt alkaline battery, a 1.5 GPM aerator and a stainless steel braided supply hose. Sensor range is factory set for optimum performance but can be adjusted in the field to suit specific applications.

Z6918E AquaSense AC Electronic Faucet

Engineering Specification: The Z6918E sensor faucet is an electronic sensor faucet powered by an AC/DC power converter for retrofit and new construction. The faucet incorporates an infrared convergence-type proximity sensor into the chrome-plated cast brass spout. The faucet is furnished complete with all electronics and sensor mounted within the spout (above deck), in-line filter, a 1.5 GPM aerator, 9 VDC power converter (Specify P6918-ACA for plug-in adaptor or P6918-HW9 for hardwire transformer) and a stainless steel braided hose supply. Sensor range is factory set for optimum performance but can be adjusted in the field to suit specific applications.

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Typical Z6918 AquaSense Battery-Powered Faucet

Optional Mixing Valves

P6900-MT Mixing Tee

P6900-MV Temperature Mixing Valve

Typical Z6918E-ACA AquaSense Plug-In Powered Faucet

Typical Z6918E-HW9 AquaSense Hardwire Powered Faucet

Note: Must use either Zurn P6918-HW9 hardwire power converter or Zurn P6918-ACA plug-in power converter to ensure proper operation. Using a power converter other than Zurn may result in operation malfunction or unit failure.

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Z6920 Model
AquaSense Sensor Faucet

Shown with optional -CP4 Cover Plate.

Suffix Options (Check/Specify Appropriate Options)

____	**-ADM**	Above Deck Mixer
____	**-ADM-1**	Above Deck Mixer with 4" [102mm] Cover Plate
____	**-ADM-2**	Above Deck Mixer with 8" [203mm] Cover Plate
____	**-C**	2.2 GPM Vandal-Resistant Laminar Aerator
____	**-CP4**	Cover Plate 4" [102mm] Centers
____	**-CP8**	Cover Plate 8" [203mm] Centers
____	**-F**	0.5 GPM Vandal-Resistant Aerator
____	**-GA**	3-1/2" [89mm] Gooseneck Spout
____	**-GC**	8" [203mm] Gooseneck Spout
____	**-IA3**	Inlet Adaptor (3/8" [10mm] compression)
____	**-MJ**	Mini Junction Box
____	**-MT**	Mixing Tee
____	**-MV**	Temperature Mixing Valve
____	**-SH**	Supply Hoses for Mixing Valve
____	**-SSH**	Single Supply Hose
____	**-SO**	Rosette Spray Aerator
____	**-TMV**	Thermostatic Mixing Valve for Multiple Faucets
____	**-TMV-1**	Thermostatic Mixing Valve for Single Faucets
____	**-WB**	Wrist Blade Handle for ADM
____		Other

Z6920 AquaSense Battery-Powered Faucet

Engineering Specification: The Z6920 sensor faucet is a battery-powered sensor faucet for retrofit and new construction. The faucet incorporates an infrared convergence-type proximity sensor into the base of the gooseneck faucet. The faucet is furnished complete with sensor module, spout module, in-line filter, 4 “AA” batteries, a 2.0 GPM vandal-resistant aerator, and an inlet for a 1/2" [13mm] ball riser supply hose. Sensor range is factory set for optimum performance.

Z6920-ACA AquaSense Plug-In Powered Faucet

Engineering Specification: The Z6920-ACA sensor faucet is a plug-in powered electronic sensor faucet for retrofit and new construction. The faucet incorporates an infrared convergence-type proximity sensor into the base of the gooseneck faucet. The faucet is furnished complete with sensor module, spout module, in-line filter, a 2.0 GPM vandal-resistant aerator, 6VDC plug-in power converter and an inlet for a 1/2" [13mm] ball riser or supply hose. Also included are 4 “AA” batteries that provide battery backup power to the faucet during power outages. Sensor range is factory set for optimum performance.

Z6920-CWB AquaSense Hardwire Powered Faucet

Engineering Specification: The Z6920-CWB sensor faucet is a hardwired electronic sensor faucet for retrofit and new construction. The faucet incorporates an infrared convergence-type proximity sensor into the base of the gooseneck faucet. The faucet is furnished complete with sensor module, spout module, in-line filter, a 2.0 GPM vandal-resistant aerator, connecting wire to power converter, and an inlet for a 1/2" [13mm] ball riser or supply hose. Also included are 4 “AA” batteries that provide battery backup power to the faucet during power outages. Sensor range is factory set for optimum performance.

Note: For hardwire applications, furnish P6000-HW6 power converter. The P6000-HW6 will power up to eight sensor faucets. Order P6000-HW6 power converter separately.

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Typical Z6920 AquaSense Battery-Powered Faucet

Optional Mixing Valves

P6900-MT Mixing Tee

P6900-MV Temperature Mixing Valve

Typical Z6920-ACA AquaSense Plug-In Powered Faucet

Typical Z6920-CWB AquaSense Hardwire Powered Faucet

*Optional -MJ Mini Junction Box for connecting up to eight faucets.

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Z6922 Model
AquaSense Back Mount Sensor Faucet

Suffix Options (Check/Specify Appropriate Options)

____	**-C**	2.2 GPM Vandal-Resistant Laminar Aerator
____	**-F**	0.5 GPM Vandal-Resistant Aerator
____	**-GA**	3-1/2" [89mm] Gooseneck Spout
____	**-GC**	8" [203mm] Gooseneck Spout
____	**-IA3**	Inlet Adaptor (3/8" [10mm] Compression)
____	**-MJ**	Mini Junction Box
____	**-MT**	Mixing Tee
____	**-MV**	Temperature Mixing Valve
____	**-SH**	Supply Hoses for Mixing Valve
____	**-SSH**	Single Supply Hose
____	**-SO**	Rosette Spray Aerator
____	**-TMV**	Thermostatic Mixing Valve for Multiple Faucets
____	**-TMV-1**	Thermostatic Mixing Valve for Single Faucets
____		Other

Z6922 AquaSense Back Mount Battery-Powered Faucet

Engineering Specification: The Z6922 back mount sensor faucet is a battery-powered sensor faucet for retrofit and new construction. The faucet incorporates an infrared convergence type proximity sensor into the base of the gooseneck faucet. The faucet is furnished complete with sensor module, spout module and in-line filter, 4 “AA” batteries, a 2.0 GPM vandal-resistant aerator, and an inlet for a 1/2" [13mm] ball riser supply hose. Sensor range is factory set for optimum performance.

Z6922-ACA AquaSense Back Mount Plug-In Powered Faucet

Engineering Specification: The Z6922-ACA back mount sensor faucet is a plug-in powered electronic sensor faucet for retrofit and new construction. The faucet incorporates an infrared convergence type proximity sensor into the base of the gooseneck faucet. The faucet is furnished complete with sensor module, spout module, in-line filter, a 2.0 GPM vandal-resistant aerator, 6VDC plug-in power converter, and an inlet for a 1/2" [13mm] ball riser or supply hose. Also included are 4 “AA” batteries that provide battery backup power to the faucet during power outages. Sensor range is factory set for optimum performance.

Z6922-CWB AquaSense Back Mount Hardwire Powered Faucet

Engineering Specification: The Z6922-CWB back mount sensor faucet is a hardwired electronic sensor faucet for retrofit and new construction. The faucet incorporates an infrared convergence type proximity sensor into the base of the gooseneck faucet. The faucet is furnished complete with sensor module, spout module, in-line filter, a 2.0 GPM vandal-resistant aerator, connecting wire to power converter, and an inlet for a 1/2" [13mm] ball riser or supply hose. Also included are 4 “AA” batteries that provide battery backup power to the faucet during power outages. Sensor range is factory set for optimum performance.

Note: For hardwire applications, furnish P6000-HW6 power converter. The P6000-HW6 will power up to 8 sensor faucets. Order P6000-HW6 power converter separately.

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Rev. A
Dwg. No. 80691
Date: 9/8/04
Product No. Z6922

Typical Z6922 AquaSense Back Mount Battery-Powered Faucet

Typical Z6922-ACA AquaSense Back Mount Plug-In Powered Faucet

Optional Mixing Valves

P6900-MT Mixing Tee

P6900-MV Temperature Mixing Valve

Typical Z6922-CWB AquaSense Back Mount Hardwire Powered Faucet

*Optional -MJ Mini Junction Box for connecting up to eight faucets.

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AquaSense® is a registered trademark of Zurn Industries, LLC

Z69_ _-BX-MV Model

AquaSense Battery Sensor Lavatory Faucet With Vandal-Resistant Enclosure

Choose Spout Style

- ☐ **Z6912** Low Profile Spout with 4" Cover Plate
- ☐ **Z6913** High Profile Spout with 4" Cover Plate
- ☐ **Z6920** Gooseneck Deck Mount Spout with 4" Cover Plate

Hardwire Application

- ☐ **-CWB** Connecting Wire for P6000-HW6 Power Converter

Note: Order Power Converter P6000-HW6 separately. One converter will accommodate up to eight sensor faucets.

ENGINEERING SPECIFICATION: ZURN Z69_ _-BX-MV AquaSense Battery Sensor Lavatory Faucet with Vandal-Resistant Enclosure – The AquaSense sensor faucet is a battery sensor faucet for retrofit and new construction. The faucet incorporates an infrared convergence-type proximity sensor into the chrome-plated cast brass spout. The faucet is furnished complete with sensor module, spout module, mixing valve, and in-line filter for easy installation. Standard equipment includes a 4" brass cover plate, a 1.5 GPM vandal-resistant aerator, and 1/2" copper inlets for hot and cold supply. Sensor range is factory set and nonadjustable. Plastic vandal-resistant box with gasketed cover and stainless steel cover to house the electronics and solenoid is standard.

This space is for Architectural/Engineering Approval

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Rev.
Dwg. No. 80904
Date: 8/9/04
Product No. Z69_ _-BX-MV

Z69_ _-BX_-TMV Model

Enclosure Panel for Multiple Z6900 Series Hardwired Sensor Faucets

Suffix Options (Check/Specify Appropriate Options)

Z69_ _-BX2-TMV Two-Unit Assembly
Z69_ _-BX3-TMV Three-Unit Assembly
Z69_ _-BX4-TMV Four-Unit Assembly
Z69_ _-BX5-TMV Five-Unit Assembly

For use with sensor faucet models Z6912, Z6913, Z6915, and Z6920.

Notes:
When ordering, specify the style and quantity of spout desired (Example: Z6915-BX3-TMV).

Order Power Converter P6000-HW6 separately. One converter will accommodate up to eight sensor faucets.

ENGINEERING SPECIFICATION: ZURN Z69_ _-BX_-TMV AquaSense Stainless Steel Sensor Faucet Enclosure Panel – Recessed stainless steel access box for multiple installation of the Z6900 Series AquaSense hardwired sensor faucets. Box is complete with the specified number of 6VDC solenoids (specify quantity 2, 3, 4, or 5), a thermostatic mixing valve with backcheck valves, control stops on the hot and cold inlets, filter for each faucet, terminal strip for DC power source, and 14-gauge stainless steel cover with vandal-proof screws. Access box is fabricated from 16-gauge stainless steel and is 12" high x 15" wide x 8" deep. Provided with 1/2" copper tube hot and cold inlets.

This space is for Architectural/Engineering Approval

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Rev. B
Dwg. No. 67000
Date: 9/8/04
Product No. Z69_ _-BX_-TMV

Z6903-75 Model

AquaSense Hardwired Sensor-Operated Lavatory Faucet

Suffix Options (Check/Specify Appropriate Options)

_____	**-A**	2.0 GPM Aerator
_____	**-C**	2.2 GPM Laminar Flow Control
_____	**-GA**	3-1/2" [89mm] Gooseneck Spout
_____	**-GC**	8" [203mm] Gooseneck Spout
_____	**-HW12**	Hardwired Power Converter (120VAC)
_____	**-LT**	Less 30 Second Timer
_____	**-MT**	Mixing Tee
_____	**-MV**	Temperature Mixing Valve
_____	**-SO**	Spray Outlet
_____	**-TMV**	Thermostatic Mixing Valve
_____	**-TMV-1**	Thermostatic Mixing Valve for Single Faucet
_____	**-220**	Hardwired Power Converter (220VAC)
_____		Other

ENGINEERING SPECIFICATION: ZURN Z6903-75 AquaSense Hardwired Sensor-Operated Lavatory Faucet – The AquaSense faucet is a sensor-operated brass faucet with a polished chrome exterior. The faucet incorporates a 12VDC solenoid valve, an adjustable range on-approach wall mounted sensor, and a splash mounted gooseneck faucet with 1.5 gpm vandal-resistant aerator. The faucet is furnished complete with a 120VAC/ 12VDC plug-in power converter, solenoid valve, in-line filter, and electrical box cover plate with attachment screws. Electrical box by others.

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Rev. F
Dwg. No. 59092
Date: 6/21/04
Product No. Z6903-75

Z6903-76 Model

AquaSense Hardwired Sensor-Operated Lavatory Faucet

Suffix Options (Check/Specify Appropriate Options)

_____	**-A**	2.0 GPM Aerator
_____	**-C**	2.2 GPM Laminar Flow Control
_____	**-GA**	3-1/2" [89mm] Gooseneck Spout
_____	**-GC**	8" [203mm] Gooseneck Spout
_____	**-HW12**	Hardwired Power Converter (120VAC)
_____	**-LT**	Less 30 Second Timer
_____	**-MT**	Mixing Tee
_____	**-MV**	Temperature Mixing Valve
_____	**-SO**	Spray Outlet
_____	**-TMV**	Thermostatic Mixing Valve
_____	**-TMV-1**	Thermostatic Mixing Valve for Single Faucet
_____	**-220**	Hardwired Power Converter (220VAC)
_____		Other

ENGINEERING SPECIFICATION: ZURN Z6903-76 AquaSense Hardwired Sensor-Operated Lavatory Faucet – The AquaSense faucet is a sensor-operated brass faucet with a polished chrome exterior. The faucet incorporates a 12VDC solenoid valve, an adjustable range on-approach wall mounted sensor, and a deck mounted gooseneck faucet with 1.5 gpm vandal-resistant aerator. The faucet is furnished complete with a 120VAC/ 12VDC plug-in power converter, solenoid valve, in-line filter, and electrical box cover plate with attachment screws. Electrical box by others.

This space is for Architectural/Engineering Approval

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Rev. F
Dwg. No. 59090
Date: 6/21/04
Product No. Z6903-76

Z6903-77 Model

AquaSense Hardwired Sensor-Operated Lavatory Faucet

Suffix Options (Check/Specify Appropriate Options)

_____	**-A**	2.0 GPM Aerator
_____	**-C**	2.2 GPM Laminar Flow Control
_____	**-CP4**	Cover Plate (4" [102mm] Centers)
_____	**-CP8**	Cover Plate (8" [203mm] Centers)
_____	**-HW12**	Hardwired Power Converter (120VAC)
_____	**-LT**	Less 30 Second Timer
_____	**-MT**	Mixing Tee
_____	**-MV**	Temperature Mixing Valve
_____	**-TMV**	Thermostatic Mixing Valve
_____	**-TMV-1**	Thermostatic Mixing Valve for Single Faucet
_____	**-220**	Hardwired Power Converter (220VAC)
_____		Other

ENGINEERING SPECIFICATION: ZURN Z6903-77 AquaSense Hardwired Sensor-Operated Lavatory Faucet – The AquaSense faucet is a sensor-operated brass faucet with a polished chrome exterior. The faucet incorporates a 12VDC solenoid valve, an adjustable range 6" to 36" on-approach wall mounted sensor, and a deck mounted cast faucet with 1.5 gpm vandal-resistant aerator. The faucet is furnished complete with a 120VAC/ 12VDC plug-in power converter, solenoid valve, in-line filter, and electrical box cover plate with attachment screws. Electrical box by others.

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Rev. F
Dwg. No. 59091
Date: 6/21/04
Product No. Z6903-77

Z6900-VG Model
Rigid Lavatory Enclosure
Vandal Gard

ENGINEERING SPECIFICATION: ZURN Z6900-VG – Rigid plastic lavatory enclosure for 20" [508mm] x 18" [457mm] lavatory. Conceals all lavatory piping, electronic faucet connection mixing valves, trap primers, and instantaneous hot water heaters.

This space is for Architectural/Engineering Approval

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Rev. A
Dwg. No. 80184
Date: 7/2/04
Product No. Z6900-VG

P6900-GEN

Hydroelectric Power Generator For Z6900 Series Sensor Faucets

GreenSpec® LISTED

ENGINEERING SPECIFICATION: ZURN P6900-GEN AquaSense® Hydroelectric Power Generator for Faucet Solenoid – In-line power generator connects between faucet shank and solenoid box and generates power while faucet is in use. Connector replaces existing solenoid battery tray for simple installation.

This space is for Architectural/Engineering Approval

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Rev.
Dwg. No. 81307
Date: 1/26/07
Product No. P6900-GEN

Sensor Product Accessories
For Sensor-Operated Faucets

P6000-MJ

ENGINEERING SPECIFICATION: ZURN P6000-MJ – The Mini Junction Box is a 4-1/4" x 5" x 1-3/4" [108 mm x 127 mm x 44 mm] electrical enclosure designed to connect up to eight Zurn sensor urinals/closets. The unit includes a high impact plastic enclosure with polarity marked terminal board, high impact plastic cover panel, wall mounting tabs, integral strain relief, and illustrative wiring diagram.

P6000-HW6

ENGINEERING SPECIFICATION: Zurn P6000-HW6 Hardwire Power Converter – Hardwire power converter to power up to 10 Zurn sensor urinal/closet flush valves or up to eight hardwired Zurn sensor faucets. The P6000-HW6 is mounted on a 4-11/16" x 4-11/16" cover plate that mounts to a standard 4-11/16" x 4-11/16" electrical box (supplied by others).

P6900-ACA

ENGINEERING SPECIFICATION: Z6900-ACA Plug-In Power Converter – Plug-in Power Converter is designed to provide 6VDC power for eight Zurn 6VDC sensor faucets. Power converter plugs into 120VAC outlet (supplied by others) located conveniently to faucets. Electrical characteristics: Input: 120VAC, 60Hz, 35w; Output: 6VDC, 1.5A

P6900-CWB

ENGINEERING SPECIFICATION: Zurn P6900-CWB Connecting Wire – Connecting wire to convert/connect battery-operated sensor faucet to P6000-HW6 power converter. The connecting wire is 84" long with one end bare to connect to power converter and the opposite end has an RCA connector to plug into electronics module of the faucet.

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Sensor Product Accessories

For Sensor-Operated Faucets

P6900-HW12

ENGINEERING SPECIFICATION: Zurn P6900-HW12 Power Converter – The hardwired power converter is a 12.0 VDC, 2.0 Amp power supply that will operate up to seven Z6903 Series faucets. The P6900-HW12 is mounted on a 4-11/16" x 4-11/16" cover plate that installs into a standard 4-11/16" x 4-11/16" electrical box (supplied by others). Both the 120VAC input terminations and the 12.0 VDC output terminations are completely contained within the 4-11/16" square electrical box.

P6900-PCF12

ENGINEERING SPECIFICATION: P6900-PCF12 Plug-In Power Converter – Plug-in Power Converter is designed to provide 12VDC power for three Zurn 12VDC sensor faucets. Power converter plugs into 120VAC outlet (supplied by others) located conveniently to faucets. Electrical characteristics: Input: 120VAC, 60Hz, 25w; Output: 12VDC, 800mA

For Z6903 Series faucets.

P6900-CWE

ENGINEERING SPECIFICATION: Zurn P6900-CWE Connecting Wire – Connecting wire to convert/connect sensor faucet to P6000-HW12 power converter. The connecting wire is 84" long with one end bare to connect to power converter and the opposite end has an RCA connector to plug into electronics module of the faucet.

For Z6903 Series faucets.

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AquaSense E-Z Faucets and Accessories

For Sensor-Operated Faucets

Z6912

Z6913

Z6914

Z6915

Z6916

Z6916-ADM

Z6917

Z6920

Z6922

Aerators

-A
2.0 GPM

-A-GN
2.0 GPM

-C
2.2 GPM Laminar

-C-GN
2.2 GPM Laminar

-E
Std. 1.5 GPM

-F
0.5 GPM

-F-GN
0.5 GPM

-SO
Rose Spray

Product No.	Description
P6900-20A	2.0 GPM Vandal-Resistant Aerator
P6900-20A-GN	2.0 GPM Vandal-Resistant Gooseneck Aerator
P6900-20C	2.2 GPM Vandal-Resistant Laminar Flow Aerator
P6900-20C-GN	2.2 GPM Vandal-Resistant Laminar Flow Gooseneck Aerator
P6900-20E	1.5 GPM Standard Vandal-Resistant Aerator
P6900-20F	0.5 GPM Vandal-Resistant Aerator
P6900-20F-GN	0.5 GPM Vandal-Resistant Gooseneck Aerator
P6900-SO	Spray Outlet (Rose Spray)

Mixing Tee and Mixing Valves

-MT

-MV

-TMV

-TMV-1

Product No.	Description
P6900-MT	Mixing Tee Assembly with Back Checks
P6900-MV	Manual Mixing Valve
P6900-TMV	Thermostatic Mixing Valve for Multiple Faucets – 8 GPM Flow
P6900-TMV-1	Thermostatic Mixing Valve for Single Faucet

AquaSense E-Z Faucets and Accessories

For Sensor-Operated Faucets

Goosenecks

-GA

-GB

-GC/-SB

Product No.	Description
P6900-GA	3-1/2" Centerline Gooseneck Spout (With 1.5 GPM Vandal-Proof Aerator)
P6900-GB	5-3/8" Centerline Gooseneck Spout (With 1.5 GPM Vandal-Proof Aerator)
P6900-GC	8" Centerline Gooseneck Spout (With 1.5 GPM Vandal-Proof Aerator)

Power Supplies

-ACA

-CWB

-HW6

Product No.	Description
P6900-ACA	6 VDC A/C Plug-In Adapter
P6900-CWB	Connecting Wire for Power Converter
P6000-HW6	6 VDC A/C Hardwire Power Converter
P6900-PCF12	12 VDC Plug-In Adapter
P6900-HW12	12 VDC Hardwire Power Converter

Cover Plates, Above Deck Mixing Valve and Adapter

-CP4 and -CP8

-ADM

-IA3

Product No.	Description
P6900-CP4	4" Cover Plate for Z6912, Z6913, Z6915, and Z6920
P6900-CP8	8" Cover Plate for Z6912, Z6913, Z6915, and Z6920
P6916-CP4	4" Cover Plate for Z6916
P6916-CP8	8" Cover Plate for Z6916
P6900-ADM	Above Deck Mixing Valve
P6900-IA3	1/2" x 3/8" Faucet Shank Adapter

Hoses

-SH (Three-Piece)

-SSH (Single Supply)

Product No.	Description	
P6900-SH	Three-Piece Supply Hose Assembly	
P6900-SSH	Single Supply Hose	

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Gooseneck Spouts

Suffix	Description	Dimensions X	Dimensions Y	Dimensions Z
-GA	**3-1/2" Gooseneck Spout –** Polished chrome-plated brass tubular spout with interchangeable swing or rigid connection. 3/4-27 male threaded outlet with -1F standard aerator.	8-1/4"	3-1/2"	5-3/8"
-GB	**5-3/8" Gooseneck Spout –** Polished chrome-plated brass tubular spout with interchangeable swing or rigid connection. 3/4-27 male threaded outlet with -1F standard aerator.	9-3/4"	5-3/8"	5-5/8"
-GC	**8" Gooseneck Spout –** Polished chrome-plated brass tubular spout with interchangeable swing or rigid connection. 3/4-27 male threaded outlet with -1F standard aerator.	11-1/4"	8"	5-5/8"

Notes

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AquaSense® Z6912, Z6913 and Z6915 Series

Sensor-Operated Lavatory Faucets for Battery or Plug-In Installations

Installation, Operation, Maintenance, and Parts Manual

Patented and Patents Pending

LIMITED WARRANTY

All goods sold hereunder are warranted to be free from defects in material and factory workmanship for a period of three years from the date of purchase. Decorative finishes warranted for one year. We will replace at no cost goods that prove defective provided we are notified in writing of such defect and the goods are returned to us prepaid at Sanford, NC, with evidence that they have been properly maintained and used in accordance with instructions. We shall not be responsible for any labor charges or any loss, injury or damages whatsoever, including incidental or consequential damages. The sole and exclusive remedy shall be limited to the replacement of the defective goods. Before installation and use, the purchaser shall determine the suitability of the product for his intended use and the purchaser assumes all risk and liability whatever in connection therewith. Where permitted by law, the implied warranty of merchantability is expressly excluded. If the products sold hereunder are "consumer products," the implied warranty of merchantability is limited to a period of three years and shall be limited solely to the replacement of the defective goods. All weights stated in our catalogs and lists are approximate and are not guaranteed.

FV254

IMPORTANT:

- ALL PLUMBING IS TO BE INSTALLED IN ACCORDANCE WITH APPLICABLE CODES AND REGULATIONS.
- FLUSH ALL WATER LINES PRIOR TO INSTALLATION.
- SENSOR UNITS SHOULD NOT BE LOCATED ACROSS FROM EACH OTHER OR IN CLOSE PROXIMITY TO HIGHLY REFLECTIVE SURFACES.

1 Cover Plate Installation

(For faucets with -CP4 or -CP8 suffix)
Remove adhesive backing from gasket and then pass sensor connector wire and shank through gasket. Align gasket with faucet bottom and press firmly together. Pass sensor connector and shank through cover plate and fasten to the faucet with the provided screws.

2 Spout Installation

If there is an existing faucet, turn off water supply and remove the old faucet. Assure supply lines are completely flushed and free of debris. Clean lavatory rim around the mounting area for the new sensor faucet.

Place the sensor connector wire and shank through cover plate gasket and hole in the lavatory. Orient black plastic mounting washer with the slot facing up. Place mounting washer and star washer over shank and secure the entire assembly to the lavatory with the mounting nut. **The sensor wires must pass through slot in plastic mounting washer.** ***Do not pinch sensor wires.***

3 Electronics Module Installation

Attach sensor connector wire from the faucet to the mating sensor connector wire from the electronics module. Orient connectors so that the pins are properly aligned before pressing connectors together. **Do not force together; damage to pins may occur.** Secure the cable connectors with the locking ring provided. **Be certain that the cable connection is made before the batteries are installed.**

Attach electronics module to the shank using the hex nut and gasket provided. Orient the electronics in a convenient location and tighten hex nut. **DO NOT USE THREAD SEALANT.**

4a Battery Installation

Loosen the battery cover screw with the supplied Allen wrench. Remove the cover and install the batteries as indicated on the battery case. Replace the battery cover and secure.

4b ACA Plug-In Adapter Installation

When using the -ACA plug-in power supply, remove sticker at location **(A)** and plug in adapter.

5 Filter or Mixing Tee or Mixing Valve Installation

The supplied inlet filter must be used with every faucet, unless a mixing tee or mixing valve is ordered. The inlet filter is attached directly to the electronic module's water inlet. Tempered water is then supplied to the filter using a standard 3/8" x 1/2" ball riser (supplied by others.)

The optional mixing tee assembly (-MT) or mixing valve (-MV) have integral filters and backchecks. These take the place of the standard inlet filter when ordered. The mixing tee or mixing valve outlet attaches to the electronics module with a 3/8" x 1/2" ball riser (supplied by others). Hot and cold water is then supplied to the appropriate 3/8" compression inlets.

Z6912, Z6913, and Z6915 Repair Kits

Description	Product No.
1. Z6912 Spout Assembly with Sensor	P6912-1
2. Z6913 Spout Assembly with Sensor	P6913-1
3. Z6915 Spout Assembly with Sensor	P6915-1
4. Electronics Box with Solenoid	P6900-B-L
5. Solenoid Rebuild Kit (Diaphragm, Plunger, and Plunger Spring)	P6900-SRK
6. Filter Kit	P6900-120
7. Z6912 Base Plate Gasket	P6912-42
8. Z6913 Base Plate Gasket	P6913-42
9. Z6915 Base Plate Gasket	P6915-42
10. Mounting Kit	P6900-43
11. Filter Screen	P6900-MV-7
12. Optional Plug-in Power Converter	P6900-ACA
13. Shank Connection Gasket	P6900-SG
14. 4" Cast Cover Plate with Gasket	P6913-12CP4
15. 8" Cast Cover Plate with Gasket	P6913-12CP8
16. Mixing Tee with Filters and Backchecks	P6900-MT
17. Mixing Valve with Filter	P6900-MV

SPECIFICATIONS

Voltage:	6 VDC (4 "AA" Alkaline)
Sensor Range:	7.5" Approximate
Operating Water Pressure:	20-80 psi
Ambient Temperature:	32°F to 122°F (0°C to 50°C)
Operational Water Temperature:	35°F to 140°F (2°C to 60°C)
Aerator:	2.0 GPM Vandal-Resistant (Standard)

CARE AND CLEANING INSTRUCTIONS

DO NOT use abrasive or chemical cleaners to clean faucets as they will dull the luster and attack the chrome or special decorative finishes. Use only mild soap and water, then wipe dry with a clean cloth or towel. While cleaning the bathroom tile and floor, the faucet and electronics should be protected from splattering of water, cleaner, acids, and cleaning fluids that can damage the sensor faucet.

OPERATION

1. Invisible light rays are continually emitted from the faucet sensor.
2. When the user's hands come into range of the sensor's detection zone (8" approximate), the beam is reflected back to the sensor's receiver and converted to a low voltage electrical signal activating a solenoid valve.
3. After the user removes their hands, the absence of reflected light stops the low voltage electrical signal, closing the valve. The circuit automatically resets for the next user.
4. If an object is in view continuously for thirty seconds, the faucet will automatically shut off. The faucet will remain off until the object is removed. After the object is removed, the faucet functions normally.

TROUBLESHOOTING GUIDE

PROBLEM	POSSIBLE CAUSE	TO DIAGNOSE	REMEDY
FAUCET WILL NOT FLOW WATER	Water supply not turned on.	Check supply stops.	Turn on water.
	Batteries not connected.	Check connections.	Reconnect batteries.
	Cable connection is not fully engaged.	Check cable connection.	Remove battery and disengage the cable connection. Check cable connection for broken pins and reconnect cable. Check battery for voltage level and reinstall.
	Low battery.	Flashing red light in sensor eye indicates low battery.	Remove batteries and replace with four (4) new alkaline batteries.
	Solenoid valve inoperative.	Move hand in front of faucet to see if solenoid valve is clicking.	If clicking, open solenoid valve and clean it.
			If not clicking, replace solenoid valve.
	Sensor/electronics are inoperative.	Move hand in front of faucet to see if solenoid valve is clicking. See note in Step 4.	Remove the battery and short circuit the battery terminals with Allen wrench. This will reset the electronics. Replace battery.
	Filter is plugged.	Shut off water supply. Remove cleanout cap.	Clean the filter and reassemble.
FAUCET CONTINUES TO RUN FOR MORE THAN 30 SECONDS OR DRIPS	Solenoid valve is dirty.	Open the solenoid valve and check for debris. Carefully observe the way valve goes together for reassembly.	Shut off water supply. Disassemble solenoid and remove debris from diaphragm and/or plunger tip. Reassemble solenoid.

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AquaSense®
Z6914 and Z6917 Series

Sensor-Operated Lavatory Faucets for Battery or Plug-In Installations

Installation, Operation, Maintenance, and Parts Manual

Patented and Patents Pending

Sensor-Operated Battery-Powered Lavatory Faucets
Z6914
Z6917

Z6917

Z6914

LIMITED WARRANTY

All goods sold hereunder are warranted to be free from defects in material and factory workmanship for a period of three years from the date of purchase. Decorative finishes warranted for one year. We will replace at no cost goods that prove defective provided we are notified in writing of such defect and the goods are returned to us prepaid at Sanford, NC, with evidence that they have been properly maintained and used in accordance with instructions. We shall not be responsible for any labor charges or any loss, injury or damages whatsoever, including incidental or consequential damages. The sole and exclusive remedy shall be limited to the replacement of the defective goods. Before installation and use, the purchaser shall determine the suitability of the product for his intended use and the purchaser assumes all risk and liability whatever in connection therewith. Where permitted by law, the implied warranty of merchantability is expressly excluded. If the products sold hereunder are "consumer products," the implied warranty of merchantability is limited to a period of three years and shall be limited solely to the replacement of the defective goods. All weights stated in our catalogs and lists are approximate and are not guaranteed.

FV413

IMPORTANT:

- ALL PLUMBING IS TO BE INSTALLED IN ACCORDANCE WITH APPLICABLE CODES AND REGULATIONS.
- FLUSH ALL WATER LINES PRIOR TO INSTALLATION.
- SENSOR UNITS SHOULD NOT BE LOCATED ACROSS FROM EACH OTHER OR IN CLOSE PROXIMITY TO HIGHLY REFLECTIVE SURFACES.

1 Cover Plate Installation

(For faucets with -CP4 or -CP8 suffix)
Remove adhesive backing from gasket and then pass sensor connector wire and shank through gasket. Align gasket with faucet bottom and press firmly together. Pass sensor connector and shank through cover plate and fasten to the faucet with the provided screws.

2 Spout Installation

If there is an existing faucet, turn off water supply and remove the old faucet. Assure supply lines are completely flushed and free of debris. Clean lavatory rim around the mounting area for the new sensor faucet.

Place the sensor connector wire and shank through cover plate gasket and hole in the lavatory. Orient black plastic mounting washer with the slot facing up. Place mounting washer and star washer over shank and secure the entire assembly to the lavatory with the mounting nut. **The sensor wires must pass through slot in plastic mounting washer.** ***Do not pinch sensor wires.***

3 Electronics Module Installation

Attach sensor connector wire from the faucet to the mating sensor connector wire from the electronics module. Orient connectors so that the pins are properly aligned before pressing connectors together. **Do not force together; damage to pins may occur.** Secure the cable connectors with the locking ring provided. **Be certain that the cable connection is made before the batteries are installed.**

Attach electronics module to the shank using the hex nut and gasket provided. Orient the electronics in a convenient location and tighten hex nut. **DO NOT USE THREAD SEALANT.**

4a Battery Installation

Loosen the battery cover screw with the supplied Allen wrench. Remove the cover and install the batteries as indicated on the battery case. Replace the battery cover and secure.

4b ACA Plug-In Adapter Installation

When using the -ACA plug-in power supply, remove sticker at location **(A)** and plug in adapter.

5 Filter or Mixing Tee or Mixing Valve Installation

The supplied inlet filter must be used with every faucet, unless a mixing tee or mixing valve is ordered. The inlet filter is attached directly to the electronic module's water inlet. Tempered water is then supplied to the filter using a standard 3/8" x 1/2" ball riser (supplied by others.)

The optional mixing tee assembly (-MT) or mixing valve (-MV) have integral filters and backchecks. These take the place of the standard inlet filter when ordered. The mixing tee or mixing valve outlet attaches to the electronics module with a 3/8" x 1/2" ball riser (supplied by others). Hot and cold water is then supplied to the appropriate 3/8" compression inlets.

Z6914 and Z6917 Repair Kits

Description	Product No.
1. Z6914 Spout Assembly with Sensor	P6914-1
2. Z6917 Spout Assembly with Sensor	P6917-1
3. Mounting Kit	P6900-43
4. Shank Connection Gasket	P6900-SG
5. Electronics Box with Solenoid	P6900-B-L
6. Solenoid Rebuild Kit (Diaphragm, Plunger, and Plunger Spring)	P6900-SRK
7. Filter Kit	P6900-120
8. Filter Screen	P6900-MV-7
9. Mixing Valve with Filter	P6900-MV
10. Optional Plug-in Power Converter	P6900-ACA
11. 4" Cast Cover Plate with Gasket	P6913-12CP4
12. 8" Cast Cover Plate with Gasket	P6913-12CP8
13. Mixing Tee with Filters and Backchecks	P6900-MT

SPECIFICATIONS

Voltage:	6 VDC (4 "AA" Alkaline)
Sensor Range:	7.5" Approximate
Operating Water Pressure:	20-80 psi
Ambient Temperature:	32°F to 122°F (0°C to 50°C)
Operational Water Temperature:	35°F to 140°F (2°C to 60°C)
Aerator:	2.0 GPM Vandal-Resistant (Standard)

CARE AND CLEANING INSTRUCTIONS

DO NOT use abrasive or chemical cleaners to clean faucets as they will dull the luster and attack the chrome or special decorative finishes. Use only mild soap and water, then wipe dry with a clean cloth or towel. While cleaning the bathroom tile and floor, the faucet and electronics should be protected from splattering of water, cleaner, acids, and cleaning fluids that can damage the sensor faucet.

OPERATION

1. Invisible light rays are continually emitted from the faucet sensor.
2. When the user's hands come into range of the sensor's detection zone (8" approximate), the beam is reflected back to the sensor's receiver and converted to a low voltage electrical signal activating a solenoid valve.
3. After the user removes their hands, the absence of reflected light stops the low voltage electrical signal, closing the valve. The circuit automatically resets for the next user.
4. If an object is in view continuously for thirty seconds, the faucet will automatically shut off. The faucet will remain off until the object is removed. After the object is removed, the faucet functions normally.

TROUBLESHOOTING GUIDE

PROBLEM	POSSIBLE CAUSE	TO DIAGNOSE	REMEDY
FAUCET WILL NOT FLOW WATER	Water supply not turned on.	Check supply stops.	Turn on water.
	Batteries not connected.	Check connections.	Reconnect batteries.
	Cable connection is not fully engaged.	Check cable connection.	Remove battery and disengage the cable connection. Check cable connection for broken pins and reconnect cable. Check battery for voltage level and reinstall.
	Low battery.	Flashing red light in sensor eye indicates low battery.	Remove batteries and replace with four (4) new alkaline batteries.
	Solenoid valve inoperative.	Move hand in front of faucet to see if solenoid valve is clicking.	If clicking, open solenoid valve and clean it.
			If not clicking, replace solenoid valve.
	Sensor/electronics are inoperative.	Move hand in front of faucet to see if solenoid valve is clicking. See note in Step 4.	Remove the battery and short circuit the battery terminals with Allen wrench. This will reset the electronics. Replace battery.
	Filter is plugged.	Shut off water supply. Remove cleanout cap.	Clean the filter and reassemble.
FAUCET CONTINUES TO RUN FOR MORE THAN 30 SECONDS OR DRIPS	Solenoid valve is dirty.	Open the solenoid valve and check for debris. Carefully observe the way valve goes together for reassembly.	Shut off water supply. Disassemble solenoid and remove debris from diaphragm and/or plunger tip. Reassemble solenoid.

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Form No. FV413, 5/07

AquaSense® Z6916 Series

Sensor-Operated Lavatory Faucet for Battery Installations

Installation, Operation, Maintenance, and Parts Manual

Patented and Patents Pending

Sensor-Operated, Battery-Powered Lavatory Faucet Z6916

LIMITED WARRANTY

All goods sold hereunder are warranted to be free from defects in material and factory workmanship for a period of three years from the date of purchase. Decorative finishes warranted for one year. We will replace at no cost goods that prove defective provided we are notified in writing of such defect and the goods are returned to us prepaid at Sanford, NC, with evidence that they have been properly maintained and used in accordance with instructions. We shall not be responsible for any labor charges or any loss, injury or damages whatsoever, including incidental or consequential damages. The sole and exclusive remedy shall be limited to the replacement of the defective goods. Before installation and use, the purchaser shall determine the suitability of the product for his intended use and the purchaser assumes all risk and liability whatever in connection therewith. Where permitted by law, the implied warranty of merchantability is expressly excluded. If the products sold hereunder are "consumer products," the implied warranty of merchantability is limited to a period of three years and shall be limited solely to the replacement of the defective goods. All weights stated in our catalogs and lists are approximate and are not guaranteed.

FV328

IMPORTANT:

- ALL PLUMBING IS TO BE INSTALLED IN ACCORDANCE WITH APPLICABLE CODES AND REGULATIONS.
- FLUSH ALL WATER LINES PRIOR TO INSTALLATION.
- SENSOR UNITS SHOULD NOT BE LOCATED ACROSS FROM EACH OTHER OR IN CLOSE PROXIMITY TO HIGHLY REFLECTIVE SURFACES.

1 Cover Plate Installation

(For faucets with -CP4 or -CP8 suffix)

Place gasket on faucet shank. Align gasket with faucet bottom and pass shank through cover plate. Fasten to the faucet with the provided screws.

2 Spout Installation

If there is an existing faucet, turn off water supply and remove the old faucet. Assure supply lines are completely flushed and free of debris. Clean lavatory rim around the mounting area for the new sensor faucet.

Place the shank through cover plate gasket and hole in the lavatory. Place mounting washer over shank and secure the entire assembly to the lavatory with the mounting nut.

3 Filter, Mixing Tee or Mixing Valve Installation

The supplied inlet filter must be used with every faucet, unless a mixing tee or mixing valve is ordered. The inlet filter is attached directly to the faucet shank. Tempered water is then supplied to the filter using a standard 3/8" x 1/2" ball riser (supplied by others.)

The optional mixing tee assembly (-MT) or mixing valve (-MV) have integral filters and back checks. These take the place of the standard inlet filter when ordered. The mixing tee or mixing valve outlet attaches to the faucet shank with a 3/8" x 1/2" ball riser (supplied by others). Hot and cold water is then supplied to the appropriate 3/8" compression inlets.

4 Battery Installation

- DO NOT INSERT BATTERY BEFORE FAUCET INSTALLATION IS COMPLETE.
- DO NOT PLACE HAND IN FRONT OF SENSOR WINDOW WHILE INSTALLING BATTERY OR FOR THE FIRST ONE MINUTE AFTER THE BATTERY IS INSTALLED.

Remove faucet spout cover from spout by loosening the screw near the faucet aerator and sliding the cover upward. Next, locate the battery case and remove the cover. Insert the provided lithium battery into the battery case making sure to orient the groove in the battery with the battery case and that the metal contact points of the battery are inserted first. Place cover back on to the battery case and position the case in its nesting area. Replace spout cover and secure with screw.

5 Faucet Set-Up Procedure

The faucet is now in auto set-up routine and is adjusting for the environment. This will take approximately one minute from the time the battery is installed. It is important not to place anything in the sensor's range for the one-minute set-up. After one minute, place your hands under the sensor and the faucet will turn on.

FAUCET RESET PROCEDURE

If faucet does not activate, remove the battery from the holder, wait a minimum of one minute and then replace the battery. At this point the auto sensing range set up is taking place. Wait one additional minute before placing hands under faucet sensor.

Technical Help: 1-800-997-3876

Z6916 Parts Breakdown

Description	Product No.
1. Cover for Body of Z6916	P6916-CVR
2. Z6916 Base Plate Gasket	P6916-42
3. Mounting Kit	P6900-43
4. Filter Kit	P6900-120
5. Filter Screen	P6900-MV-7
6. 4" Cast Cover Plate with Gasket	P6916-12CP4
7. 8" Cast Cover Plate with Gasket	P6916-12CP8
8. Mixing Tee with Filters and Backchecks	P6900-MT
9. Mixing Valve with Filter	P6900-MV
10. Screw for the Body Cover	P6916-SCREW

SPECIFICATIONS

Voltage:	6 VDC (CR-P2 Lithium Battery)
Sensor Range:	6"-8" Approximate
Operating Water Pressure:	20-80 psi
Ambient Temperature:	32°F to 122°F (0°C to 50°C)
Operational Water Temperature:	35°F to 140°F (2°C to 60°C)
Aerator:	2.0 GPM Vandal-Resistant (Standard)

CARE AND CLEANING INSTRUCTIONS

DO NOT use abrasive or chemical cleaners to clean faucets as they will dull the luster and attack the chrome or special decorative finishes. Use only mild soap and water, then wipe dry with a clean cloth or towel. While cleaning the bathroom tile and floor, the faucet and electronics should be protected from splattering of water, cleaner, acids, and cleaning fluids that can damage the sensor faucet.

OPERATION

1.) Invisible light rays are continually emitted from the faucet sensor.

2.) When the user's hands come into range of the sensor's detection zone (approximately 6"-8"), the beam is reflected back to the sensor's receiver and converted to a low voltage electrical signal activating a solenoid valve.

3.) After the user removes their hands, the absence of reflected light stops the low voltage electrical signal, closing the valve. The circuit automatically resets for the next user.

4.) If an object is in view continuously for thirty seconds, the faucet will automatically shut off. The faucet will remain off until the object is removed. After the object is removed, the faucet functions normally.

TROUBLESHOOTING GUIDE

PROBLEM	POSSIBLE CAUSE	TO DIAGNOSE	REMEDY
FAUCET WILL NOT FLOW WATER	Water supply not turned on.	Check supply stops.	Turn on water.
	Battery not installed.	Check battery case.	Install battery.
	Low battery.	Flashing red light in sensor eye indicates low battery.	Remove battery and replace with lithium battery CR-P2 6V.
	Solenoid valve inoperative.	Move hand in front of faucet to see if solenoid valve is clicking.	Open solenoid valve and clean it.
	Sensor/electronics are inoperative.	Move hand in front of faucet to see if solenoid valve is clicking.	Refer to Steps 4 and 5 of Installation Instructions.
	Filter is plugged.	Shut off water supply. Remove clean out cap.	Clean the filter and reassemble.
FAUCET CONTINUES TO RUN FOR MORE THAN 30 SECONDS OR DRIPS	Solenoid valve is dirty.	Open the solenoid valve and check for debris. Carefully observe the way valve goes together for reassembly.	Shut off water supply. Disassemble solenoid and remove debris from diaphragm and/or plunger tip. Reassemble solenoid.

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AquaSense® Z6920 Series

Sensor-Operated Lavatory Faucets for Battery or Plug-In Installations

Installation, Operation, Maintenance, and Parts Manual

Patented and Patents Pending

Sensor-Operated, Battery-Powered Lavatory Faucets
Z6920

LIMITED WARRANTY

All goods sold hereunder are warranted to be free from defects in material and factory workmanship for a period of three years from the date of purchase. Decorative finishes warranted for one year. We will replace at no cost goods that prove defective provided we are notified in writing of such defect and the goods are returned to us prepaid at Sanford, NC, with evidence that they have been properly maintained and used in accordance with instructions. We shall not be responsible for any labor charges or any loss, injury or damages whatsoever, including incidental or consequential damages. The sole and exclusive remedy shall be limited to the replacement of the defective goods. Before installation and use, the purchaser shall determine the suitability of the product for his intended use and the purchaser assumes all risk and liability whatever in connection therewith. Where permitted by law, the implied warranty of merchantability is expressly excluded. If the products sold hereunder are "consumer products," the implied warranty of merchantability is limited to a period of three years and shall be limited solely to the replacement of the defective goods. All weights stated in our catalogs and lists are approximate and are not guaranteed.

FV321

IMPORTANT:

- ALL PLUMBING IS TO BE INSTALLED IN ACCORDANCE WITH APPLICABLE CODES AND REGULATIONS.
- FLUSH ALL WATER LINES PRIOR TO INSTALLATION.
- SENSOR UNITS SHOULD NOT BE LOCATED ACROSS FROM EACH OTHER OR IN CLOSE PROXIMITY TO HIGHLY REFLECTIVE SURFACES.

1 Cover Plate Installation

(For faucets with –CP4 or -CP8 suffix)
Remove adhesive backing from gasket and then pass sensor connector wire and shank through gasket. Align gasket with faucet bottom and press firmly together. Pass sensor connector and shank through cover plate and fasten to the faucet with the provided screws.

2 Spout Installation

If there is an existing faucet, turn off water supply and remove the old faucet. Assure supply lines are completely flushed and free of debris. Clean lavatory rim around the mounting area for the new sensor faucet.

Place the sensor connector wire and shank through cover plate gasket and hole in the lavatory. Orient black plastic mounting washer with the slot facing up. Place mounting washer and star washer over shank and secure the entire assembly to the lavatory with the mounting nut. **The sensor wires must pass through slot in plastic mounting washer.** ***Do not pinch sensor wires.***

3 Electronics Module Installation

Attach sensor connector wire from the faucet to the mating sensor connector wire from the electronics module. Orient connectors so that the pins are properly aligned before pressing connectors together. **Do not force together; damage to pins may occur.** Secure the cable connectors with the locking ring provided. **Be certain that the cable connection is made before the batteries are installed.**

Attach electronics module to the shank using the hex nut and gasket provided. Orient the electronics in a convenient location and tighten hex nut. **DO NOT USE THREAD SEALANT.**

4a Battery Installation

Loosen the battery cover screw with the supplied Allen wrench. Remove the cover and install the batteries as indicated on the battery case. Replace the battery cover and secure.

4b ACA Plug-In Adapter Installation

When using the -ACA plug-in power supply, remove sticker at location **(A)** and plug in adapter.

5 Filter or Mixing Tee or Mixing Valve Installation

The supplied inlet filter must be used with every faucet, unless a mixing tee or mixing valve is ordered. The inlet filter is attached directly to the electronics module's water inlet. Tempered water is then supplied to the filter using a standard 3/8" x 1/2" ball riser (supplied by others.)

The optional mixing tee assembly (-MT) or mixing valve (-MV) have integral filters and backchecks. These take the place of the standard inlet filter when ordered. The mixing tee or mixing valve outlet attaches to the electronics module with a 3/8" x 1/2" ball riser (supplied by others). Hot and cold water is then supplied to the appropriate 3/8" compression inlets.

Z6920 Repair Kits

Description	Product No.
1. Spout Base with Sensor Assembly	P6920-1
2. Electronics Box with Solenoid	P6920-B-L
3. Solenoid Rebuild Kit (Diaphragm, Plunger, and Plunger Spring)	P6900-SRK
4. Filter Kit	P6900-120
5. Base Plate Gasket	P6920-42
6. Mounting Kit	P6920-43
7. Filter Screen	P6900-MV-7
8. Optional Plug-in Power Converter	P6900-ACA
9. 5-3/8" Gooseneck Spout with Nut	P6900-GB
10. 2.0 GPM Vandal-Resistant Aerator	P6900-20A-GN
11. Shank Gasket	P6900-SG
12. 4" Cast Cover Plate with Gasket	P6920-CP4
13. 8" Cast Cover Plate with Gasket	P6920-CP8
14. Mixing Tee with Filters and Backchecks	P6900-MT
15. Mixing Valve with Filter	P6900-MV

FV321

SPECIFICATIONS

Voltage:	6 VDC (4 "AA" Alkaline)
Sensor Range:	7.5" Approximate
Operating Water Pressure:	20-80 psi
Ambient Temperature:	32°F to 122°F (0°C to 50°C)
Operational Water Temperature:	35°F to 140°F (2°C to 60°C)
Aerator:	2.0 GPM Vandal-Resistant (Standard)

CARE AND CLEANING INSTRUCTIONS

DO NOT use abrasive or chemical cleaners to clean faucets as they will dull the luster and attack the chrome or special decorative finishes. Use only mild soap and water, then wipe dry with a clean cloth or towel. While cleaning the bathroom tile and floor, the faucet and electronics should be protected from splattering of water, cleaner, acids, and cleaning fluids that can damage the sensor faucet.

OPERATION

1.) Invisible light rays are continually emitted from the faucet sensor.

2.) When the user's hands come into range of the sensor's detection zone (8" approximate), the beam is reflected back to the sensor's receiver and converted to a low voltage electrical signal activating a solenoid valve.

3.) After the user removes their hands, the absence of reflected light stops the low voltage electrical signal, closing the valve. The circuit automatically resets for the next user.

4.) If an object is in view continuously for thirty seconds, the faucet will automatically shut off. The faucet will remain off until the object is removed. After the object is removed, the faucet functions normally.

TROUBLESHOOTING GUIDE

PROBLEM	POSSIBLE CAUSE	TO DIAGNOSE	REMEDY
FAUCET WILL NOT FLOW WATER	Water supply not turned on.	Check supply stops.	Turn on water.
	Batteries not connected.	Check connections.	Reconnect batteries.
	Cable connection is not fully engaged.	Check cable connection.	Remove battery, and disengage the cable connection. Check cable connection for broken pins and reconnect cable. Check battery for voltage level and reinstall.
	Low battery.	Flashing red light in sensor eye indicates low battery.	Remove batteries and replace with four (4) new alkaline batteries.
	Solenoid valve inoperative.	Move hand in front of faucet to see if solenoid valve is clicking.	If clicking, open solenoid valve and clean it.
			If not clicking, replace solenoid valve.
	Sensor/electronics are inoperative.	Move hand in front of faucet to see if solenoid valve is clicking. See note in Step 4.	Remove the battery and short circuit the battery terminals with Allen wrench. This will reset the electronics. Replace battery.
	Filter is plugged.	Shut off water supply. Remove clean out cap.	Clean the filter and reassemble.
FAUCET CONTINUES TO RUN FOR MORE THAN 30 SECONDS OR DRIPS	Solenoid valve is dirty.	Open the solenoid valve and check for debris. Carefully observe the way valve goes together for reassembly.	Shut off water supply. Disassemble solenoid and remove debris from diaphragm and/or plunger tip. Reassemble solenoid.

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AquaSense® Z6922 Series

Sensor-Operated Lavatory Faucets for Battery or Plug-In Installations

Installation, Operation, Maintenance, and Parts Manual

Patented and Patents Pending

Sensor-Operated, Battery-Powered Lavatory Faucets Z6922

LIMITED WARRANTY

All goods sold hereunder are warranted to be free from defects in material and factory workmanship for a period of three years from the date of purchase. Decorative finishes warranted for one year. We will replace at no cost goods that prove defective provided we are notified in writing of such defect and the goods are returned to us prepaid at Sanford, NC, with evidence that they have been properly maintained and used in accordance with instructions. We shall not be responsible for any labor charges or any loss, injury or damages whatsoever, including incidental or consequential damages. The sole and exclusive remedy shall be limited to the replacement of the defective goods. Before installation and use, the purchaser shall determine the suitability of the product for his intended use and the purchaser assumes all risk and liability whatever in connection therewith. Where permitted by law, the implied warranty of merchantability is expressly excluded. If the products sold hereunder are "consumer products," the implied warranty of merchantability is limited to a period of three years and shall be limited solely to the replacement of the defective goods. All weights stated in our catalogs and lists are approximate and are not guaranteed.

FV351

IMPORTANT:

- ALL PLUMBING IS TO BE INSTALLED IN ACCORDANCE WITH APPLICABLE CODES AND REGULATIONS.
- FLUSH ALL WATER LINES PRIOR TO INSTALLATION.
- SENSOR UNITS SHOULD NOT BE LOCATED ACROSS FROM EACH OTHER OR IN CLOSE PROXIMITY TO HIGHLY REFLECTIVE SURFACES.

1 Spout Installation

If there is an existing faucet, turn off water supply and remove the old faucet. Assure supply lines are completely flushed and free of debris. Clean lavatory surface around the mounting area for the new sensor faucet.

Place the sensor connector wire and shank through the rubber O-ring and hole in the lavatory. Place moon-shaped washer over shank from the back of the lavatory and secure the entire assembly to the lavatory with the mounting nut. ***Be careful not to pinch sensor wires.***

Once the spout is in place and tightened, attach the 90° elbow and nipple provided. Teflon tape is preferred at this connection to ensure a watertight connection. Be sure to tighten so that the nipple is straight down.

2 Electronics Module Installation

Attach electronics module to the shank using the hex nut and gasket provided. Orient the electronics in a convenient location and tighten hex nut. **DO NOT USE THREAD SEALANT.**

Attach sensor connector wire from the faucet to the mating sensor connector wire from the electronics module. Orient connectors so that the pins are properly aligned before pressing connectors together. ***Do not force together, damage to pins may occur.*** Secure the cable connectors with the locking ring provided. **Be certain that the cable connection is made before the batteries are installed**.

3a Battery Installation

Loosen the battery cover screw with the supplied Allen wrench. Remove the cover and install the batteries as indicated on the battery case. Replace the battery cover and secure.

3b ACA Plug-In Adapter Installation

When using the -ACA plug-in power supply, remove sticker at location **(A)** and plug in adapter.

4 Filter or Mixing Tee or Mixing Valve Installation

The supplied inlet filter, (Item 4) must be used with every faucet unless a mixing tee or mixing valve is ordered. The inlet filter is attached directly to the electronics module's water inlet. Tempered water is then supplied to the filter using a standard 3/8" x 1/2" ball riser (supplied by others).

The optional mixing tee assembly (-MT) or mixing valve (-MV) have integral filters and back checks. These take the place of the standard inlet filter when ordered. The mixing tee or mixing valve outlet attaches to the electronics module with a 3/8" x 1/2" ball riser (supplied by others). Hot and cold water is then supplied to the appropriate 3/8" compression inlets.

Z6922 Repair Kits

Description	Product No.
1. Spout Base with Sensor Assembly	P6922-1
2. Electronics Box with Solenoid	P6900-B-L-EXT
3. Solenoid Rebuild Kit (Diaphragm, Plunger, and Plunger Spring)	P6900-SRK
4. Filter Kit	P6900-120
5. Filter Screen	P6900-MV-7
6. Mounting Kit	P6922-43
7. Optional Plug-in Power Converter	P6900-ACA
8. 5-3/8" Gooseneck Spout with Nut	P6900-GB
9. 2.0 GPM Vandal-Resistant Aerator	P6900-20A-GN
10. Shank Gasket	P6900-SG
11. Mixing Tee with Filters and Backchecks	P6900-MT
12. Mixing Valve with Filter	P6900-MV

SPECIFICATIONS

Voltage:	6VDC (4 "AA" Alkaline)
Sensor Range:	7.5" Approximate
Operating Water Pressure:	20-80 psi
Ambient Temperature:	32°F to 122°F (0°C to 50°C)
Operational Water Temperature:	35°F to 140°F (2°C to 60°C)
Aerator:	2.0 GPM Vandal-Resistant (Standard)

CARE AND CLEANING INSTRUCTIONS

DO NOT use abrasive or chemical cleaners to clean faucets as they will dull the luster and attack the chrome or special decorative finishes. Use only mild soap and water, then wipe dry with a clean cloth or towel. While cleaning the bathroom tile and floor, the faucet and electronics should be protected from splattering of water, cleaner, acids, and cleaning fluids that can damage the sensor faucet.

OPERATION

1.) Invisible light rays are continually emitted from the faucet sensor.

2.) When the user's hands come into range of the sensor's detection zone (7.5" approximate), the beam is reflected back to the sensor's receiver and converted to a low voltage electrical signal activating a solenoid valve.

3.) After the user removes their hands, the absence of reflected light stops the low voltage electrical signal, closing the valve. The circuit automatically resets for the next user.

4.) If an object is in view continuously for 30 seconds, the faucet will automatically shut off. The faucet will remain off until the object is removed. After the object is removed, the faucet functions normally.

TROUBLESHOOTING GUIDE

PROBLEM	POSSIBLE CAUSE	TO DIAGNOSE	REMEDY
FAUCET WILL NOT FLOW WATER	Water supply not turned on.	Check supply stops.	Turn on water.
	Batteries not connected.	Check connections.	Reconnect batteries.
	Cable connection is not fully engaged.	Check cable connection.	Remove battery and disengage the cable connection. Check cable connection for broken pins and reconnect cable. Check battery for voltage level and reinstall.
	Low battery.	Flashing red light in sensor eye indicates low battery.	Remove batteries and replace with four (4) new "AA" alkaline batteries.
	Solenoid valve inoperative.	Move hand in front of faucet to see if solenoid valve is clicking.	If clicking, open solenoid valve and clean it.
			If not clicking, replace solenoid valve.
	Sensor/electronics are inoperative.	Move hand in front of faucet to see if solenoid valve is clicking. See note in Step 4.	Remove the battery and short circuit the battery terminals with Allen wrench. This will reset the electronics. Replace battery.
	Filter is plugged.	Shut off water supply. Remove clean out cap.	Clean the filter and reassemble.
FAUCET CONTINUES TO RUN FOR MORE THAN 30 SECONDS OR DRIPS	Solenoid valve is dirty.	Open the solenoid valve and check for debris. Carefully observe the way valve goes together for reassembly.	Shut off water supply. Disassemble solenoid and remove debris from diaphragm and/or plunger tip. Reassemble solenoid.

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AquaSense® Z6903 Series

Sensor-Operated, On-Approach Faucets

Installation, Operation, Maintenance, and Parts Manual

Patented and Patents Pending

LIMITED WARRANTY

All goods sold hereunder are warranted to be free from defects in material and factory workmanship for a period of three years from the date of purchase. Decorative finishes warranted for one year. We will replace at no cost goods that prove defective provided we are notified in writing of such defect and the goods are returned to us prepaid at Sanford, NC, with evidence that they have been properly maintained and used in accordance with instructions. We shall not be responsible for any labor charges or any loss, injury or damages whatsoever, including incidental or consequential damages. The sole and exclusive remedy shall be limited to the replacement of the defective goods. Before installation and use, the purchaser shall determine the suitability of the product for his intended use and the purchaser assumes all risk and liability whatever in connection therewith. Where permitted by law, the implied warranty of merchantability is expressly excluded. If the products sold hereunder are "consumer products," the implied warranty of merchantability is limited to a period of three years and shall be limited solely to the replacement of the defective goods. All weights stated in our catalogs and lists are approximate and are not guaranteed.

FV66

REQUIRED EQUIPMENT and SUPPLIES

- Wall plate/sensor/electronic assembly (included).
- 5-11/16" x 4-11/16" double-gang wall box for sensor (by others).
- 12VDC transformer (included)
- 120 volts/60 Hertz single phase duplex outlet within six feet of electronics (by others).
- Two wire nuts (included).
- Small flat blade screwdriver for range adjustment (by others).
- Medium Phillips screwdriver for mounting wall plate (by others).
- Teflon tape and faucet installation tools (by others).

IMPORTANT:

- All plumbing is to be installed in accordance with applicable codes and regulations.
- Flush all water lines prior to INSTALLATION.
- SENSOR UNITS SHOULD NOT BE LOCATED ACROSS FROM EACH OTHER OR IN CLOSE PROXIMITY TO HIGHLY REFLECTIVE SURFACES.

INSTALLATION INSTRUCTIONS

1. **Install Faucet**
   Install faucet spout to deck or backsplash, depending on job requirements.

2. **Install Solenoid Valve**
   Connect preassembled in-line filter/solenoid valve combination to tempered water supply and faucet. Install valve with water flow direction as indicated by arrow on solenoid valve body.

3. **Install 12VDC Transformer**
   Mount 12VDC transformer in appropriate location. Run output wires into sensor junction box. Do not plug in transformer at this time.

4. **Install Sensor**
   Connect 12VDC transformer outlet wires to sensor electronics. Observe polarity as marked on wires.

   Connect low voltage solenoid wires to sensor electronics. Non-polarized electronic output wires are interchangeable.

   Mount wall plate to sensor wall box with screws provided. See Figure 2.

   Plug in transformer.

   Range Adjustment
   Adjust range (36" maximum) by turning adjustment screw found on the back side of the sensor electronics and cover plate shown in Figure 2.

   GENTLY turn clockwise to increase range; counterclockwise to decrease range.

Figure 1 Electrical Box Installation

Figure 2 Sensor Installation

Typical Installation
Z6903-75 Model
Zurn AquaSense® Sensor-Operated, On-Approach Splash Mounted Gooseneck Faucet

Typical Installation
Z6903-76 Model
Zurn AquaSense® Sensor-Operated, On-Approach Deck Mounted Gooseneck Faucet

Typical Installation
Z6903-77 Model
Zurn AquaSense® Sensor-Operated, On-Approach Deck Mounted Lavatory Faucet

Z6903 Series Repair Kits

Parts Identification

1. Vandal-Resistant Aerator Wrench
2. Aerator
3. Cast Spout
4. Base Plate Gasket
5. O-Ring
6. Shank
7. Mounting Washer
8. Shank Nut
9. Filter Cap
10. O-Ring
11. Filter Screen
12. Nut
13. Filter Body
14. Solenoid
15. Gooseneck Aerator
16. Gooseneck Spout
17. Washer
18. Rigid Washer
19. Spout Nut
20. Gasket
21. Elbow
22. Wall Mount
23. Deck Mount Shank
24. Gasket
25. Mounting Nut
26. Shank Nut
27. Sensor and Electronics with Cover Plate
28. Power Converter

Description		Product No.
Vandal-Resistant Aerator Wrench		P6900-21
Aerator	1.5 GPM 2.2 GPM 2.2 GPM Lam.	P6900-20E P6900-20B P6900-20C
Gooseneck Aerator	2.2 GPM 2.2 GPM Lam.	P6900-20B-GN P6900-20C-GN
Cast Spout Assembly		P6903-77-1
Filter Assembly		P6900-120

Description	Product No.
Solenoid Valve	P6900-100
3-1/2" Gooseneck Spout	P6900-GA
5-3/8" Gooseneck Spout	P6900-GB
8" Gooseneck Spout	P6900-GC
Wall Mounted Base Assembly	P6903-75-1
Deck Mounted Base Assembly	P6903-76-1
Sensor and Electronics with Cover Plate	P6903-6080-WP
Power Converter	P6900-PCF12

SPECIFICATIONS

Sensor Range:	36" Maximum (adjustable)
Voltage:	12 VDC
Operating Water Pressure:	20-80 psi
Operating Temperature:	35°F to 104°F (2°C to 40°C)
Wall Plate:	Chrome-Plated Steel

OPERATION

1.) Invisible light rays are continually emitted from the faucet sensor.

2.) When the user comes into range of the sensor's detection zone (36-inch maximum), the beam is reflected back to the sensor's receiver and converted to a low voltage electrical signal activating a solenoid valve and water flow.

3.) After the user moves away from the sensor, the absence of reflected light stops the low voltage electrical signal, closing the valve and stopping the water flow. The circuit then automatically resets for the next user.

CARE AND CLEANING INSTRUCTIONS

Do not use abrasive or chemical cleaners to clean faucets as they may dull the luster and attack the chrome or special decorative finishes. Use only mild soap and water, then wipe dry with a clean cloth or towel. While cleaning the bathroom tile and floor, the faucet should be protected from splattering of cleaner. Acids and cleaning fluids can discolor and/or remove plating.

TROUBLE SHOOTING GUIDE

PROBLEM	POSSIBLE CAUSE	TO DIAGNOSE	REMEDY
FAUCET WILL NOT TURN ON	AC adaptor is not plugged in.	Check connections.	Plug in the AC adaptor.
	In-line strainer is plugged.	Open the cleanout connector and check for debris.	Clean the filter.
	No electricity from outlet.	Check power outlet or breaker switch.	Turn on power or reset breaker switch.
	Sensor distance too short.	Move hand all the way to sensor.	Adjust sensor distance out. See instructions.
	AC adapter is faulty.	Check voltage output with meter.	Replace the adaptor.
	DC wires improperly connected to solenoid.	Check connections and polarity.	Reconnect all DC wires. See instructions.
	Solenoid is faulty.	Move hand in front of faucet to see if solenoid is clicking.	If not clicking, replace solenoid.
	Solenoid is plugged.	Same as above.	If clicking, open solenoid and clean it.
	Sensor/electronics is faulty.	Activate faucet to test voltage output of DC wires.	If output voltage is lower than 12V, replace sensor/electronic.
FAUCET WILL NOT SHUT OFF, OR DRIPS	Solenoid valve is dirty.	Open the solenoid valve and check for debris.	Clean the solenoid diaphragm and internal disc.
	Sensor distance too long.	Stand in front of sensor and move backward to test the distance. range of the sensor.	Decrease range by turning range adjustment counterclockwise.

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Form No. FV66, Rev. 5/07

ZURN®

AquaSense®

Sensor Operated Hand Dryer and Soap Dispenser

Hand Dryer Soap Dispenser Series

AquaSense®

Soap Dispenser and Dryer Series

Choose The Product That Is Right For Your Applications.

Z6900-DMSD
Deck Mounted
Sensor Soap Dispenser

Z6900-SSD-950
Infrared Sensor-Operated
Liquid Soap Dispenser

Z6703
Hardwired Sensor-Operated
Hand Dryer

Z6704 AirMax
Automatic Surface Mount
Hand Dryer

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Z6900-DMSD
Deck Mounted Sensor Soap Dispenser

ENGINEERING SPECIFICATION:
ZURN Z6900-DMSD Deck Mounted Sensor Soap Dispenser – Deck mounted sensor soap dispenser is designed to automatically deliver hand soap when the user presents their hands to the sensor spout. The spout is made of impact resistant chrome-plated ABS material. The unit is battery-powered and incorporates an infrared convergence-type proximity sensor to sense the user. A long life motorized gear train operates the internal pump to deliver approximately 1.0 ml of liquid soap with each actuation. The unit is complete with an easy access, 900 ml soap container and designed to operate with common viscosity liquid hand soap. Four “AA” cell batteries included. Order P6900-DMSD-ACA for the optional 6 VDC plug-in power converter. Recommended mounting through hole is 1" +/- 1/8".

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Rev.
Dwg. No. 81239
Date: 1/4/06
Product No. Z6900-DMSD

Z6900-SSD-950
Infrared Sensor-Operated Liquid Soap Dispenser

ENGINEERING SPECIFICATION: ZURN Z6900-SSD-950 Infrared Sensor-Operated, Battery-Powered Soap Dispenser – The soap dispenser is powered by three "C" cell batteries and is capable of dispensing liquid soap or sanitizing liquid of a viscosity value of 2000 to 5000 C.P.S. The outer case is made of high impact resistant ABS plastic. Each actuation of the dispenser delivers one drop of liquid approximately 1-1.5cc. Container capacity is 950cc of soap. Indicator for lights include green for dispensing and red for low batteries. All key components are independently located for easy maintenance and free from liquid damage. The battery life is approximately one year or 10,000 drop cycles.

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Rev. B
Dwg. No. 80670
Date: 12/9/03
Product No. Z6900-SSD-950

Z6703
Hardwired Sensor-Operated Hand Dryer

ADA DESIGNED

Suffix Options (Check/Specify Appropriate Options)

_____ **-220** 220VAC 60 Hertz Supply
_____ **-220-50** 220VAC 50 Hertz Supply

ENGINEERING SPECIFICATION: ZURN Z6703 AquaSense® Hardwired Sensor-Operated Hand Dryer – The Aquaflush hand dryer is a sensor-operated hot air hand dryer. The hand dryer incorporates an internally mounted infrared sensor and electric heating element. The hand dryer is furnished complete with internal 120VAC screw terminals (hot, neutral, and ground), metal case with epoxy coating, and vandal-resistant wrench for internal access. The hand dryer uses 120VAC 60 Hertz single phase and 15 amps (1800 watts).

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Rev.
Dwg. No. 60386
Date: 11/20/00
Product No. Z6703

Z6704 AirMax
Automatic Surface Mount Hand Dryer

ADA DESIGNED

The Zurn Standard in Hand Drying Quality

- 15-second† dry time cuts normal dry time by 50%
- High warm air volume at 275 CFM
- Lowest noise level in same product class
- Offers a 90% to 95% cost savings over paper towels
- Polished stainless steel cover
- Leading technology with greater durability
- Warranty backed by convenient nationwide parts and service network

†User variables make this an approximation.

GreenSpec® LISTED

Recommended Mounting Height (Distance From Floor)

Men	46" [1168 mm]
Women	44" [1118 mm]
Children, ages 3-7	32" [812 mm]
Children, ages 8-10	36" [914 mm]
Children, ages 11-13	40" [1016 mm]
Children, ages 14-17	44" [1118 mm]
Disabled Mounting Height	40" [1016 mm]

HAND DRYER PLANNING GUIDE

Quantity Estimate

Average Traffic Washroom – 1 Dryer per 2 Washbasins
Heavy Traffic Washroom – 1 Dryer per Washbasin
54" Bradley Sink – 4 Dryers per Sink

Dryer Placement

Hand dryers should be placed at least 2 feet apart, near but not over the washbasin. In congested areas, dryer should be placed to create a traffic flow from washbasin to dryer to exit.

Dryer Installation

Hand dryers require a dedicated circuit and must be properly grounded. GFI circuit protection is recommended. One side of dryer should be mounted to stud. Consult local codes.

Mechanism

- Motor is universal type 1/6 HP, 12,000 RPM at rated load with resilient mountings and sealed, permanently lubricated ball bearings for durability and rapid drying.
- Dynamically balanced blower wheel for vibration-free running.
- Heating element mounted at air exit for maximum heating efficiency.
- Reflective infrared sensor detects hands, initiates and terminates drying.

Warranty

- Ten-year limited parts warranty protects against defects in material and workmanship.
- Five-year warranty on motor and sensor.

U.S. GREEN BUILDING COUNCIL MEMBER

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Rev. A
Dwg. No. 81139
Date: 10/4/05
Product No. Z6704

AquaSense® Z6703 Series

Sensor-Operated Hand Dryer

Installation, Operation, Maintenance, and Parts Manual

Patented and Patents Pending

Z6703

Sensor-Operated Hand Dryers
Z6703
Z6703-220
Z6703-220-50

LIMITED WARRANTY

All goods sold hereunder are warranted to be free from defects in material and factory workmanship for a period of five years from the date of purchase. Decorative finishes warranted for one year. We will replace at no cost goods that prove defective provided we are notified in writing of such defect and the goods are returned to us prepaid at Sanford, NC, with evidence that they have been properly maintained and used in accordance with instructions. We shall not be responsible for any labor charges or any loss, injury or damages whatsoever, including incidental or consequential damages. The sole and exclusive remedy shall be limited to the replacement of the defective goods. Before installation and use, the purchaser shall determine the suitability of the product for his intended use and the purchaser assumes all risk and liability whatever in connection therewith. Where permitted by law, the implied warranty of merchantability is expressly excluded. If the products sold hereunder are “consumer products,” the implied warranty of merchantability is limited to a period of three years and shall be limited solely to the replacement of the defective goods. All weights stated in our catalogs and lists are approximate and are not guaranteed.

FV120

INFORMATION FOR THE OWNER

The installation and connection of the Zurn automatic hot air hand dryer should be implemented by a qualified installer who closely follows these instructions. Only then can the fault-free operation of the hand dryer be guaranteed.

These instructions should be kept in a visible and accessible place by the owner of the appliance, so that they can be used by the service technician if necessary. They should also be transferred to a new owner if the appliance is reacquired.

OPERATION

The Zurn hand dryer operates automatically. There are neither buttons nor switches to activate. The infrared sensor automatically switches on the heating element and fan when hands are held under the warm air outlet. When the hands are taken away, the hand dryer switches itself off automatically after a short while. Hold your wet hands under the hot air grille at a distance of between 4 to 6 inches and rub them together in the hot air stream until they are dry.

CARE OF THE CASING

A suitable cleaning fluid or a damp cloth with a mild soap should be used occasionally to preserve the dryer's attractive appearance. Under no circumstances should furniture polish, scouring or other chemical cleaning fluids be used. Water should never be splashed onto the appliance.

MAINTENANCE

No special maintenance is required. Should the appliance not work, please check that the power supply is on before calling a service technician.

Important! The installed hand dryer may only be opened by a qualified service person after the power has been switched off.

INFORMATION FOR THE INSTALLER

PLACE OF INSTALLATION

The advantages of the infrared sensor will only be gained if the appliance is mounted in an appropriate position. The following tips should be carefully noted.

The distance from the floor and the minimum distance from the possible side wall are shown in Figure 1.

Figure 1

THE FOLLOWING INSTALLATION EXAMPLES MUST BE OBSERVED

1. **The Zurn hand dryer in a narrow gangway or passage.** (Figure 2)

   The hand dryer might be switched on inadvertently by passersby, especially near a doorway. It should be installed at least 60 inches from the doorway.

2. **The Zurn hand dryer behind a door.** (Figure 3)

   The hand dryer could become switched on unintentionally if the door is opened wide. The appliance should therefore be installed at least 24 inches from the door.

3. **The Zurn hand dryer near a hand basin.** (Figure 4)

   The hand dryer might be switched on accidentally by someone washing his hands. It should therefore be at least 27 inches from the center of the nearest sink.

4. **The Zurn hand dryer near water pipes or high load electrical cables.** (Figure 5)

   If there are metal pipes or cables anywhere in the immediate vicinity of the dryer, they could affect the sensitivity of the proximity switch. They should be at least 16 inches to the side or 20 inches below the dryer.

MOUNTING

Before mounting, the front housing must be removed. The housing of the Zurn hand dryer is secured to the backplate by screws. Remove the two (2) securing screws.

Use drilling template (pages 436 and 437). Holding the drilling template against the wall, mark the positions for the four (4) attachment screws. Be sure that the appliance will be positioned according to the minimum distances shown in Figure 1.

The following materials are recommended when attaching the dryer to masonry walls:

4 wood screws, 3/16" x 1-1/2"

4 plastic expansion plugs for the above screws

Note: When mounting the hand dryer to plaster board, four (4) toggle bolts must be used. Before screwing the appliance to the wall, pull wire leads through the hole in the rear of the backplate of the appliance.

ELECTRICAL CONNECTION

This Appliance Is For Use With An AC Power Source Only

All wiring and electrical connections should be done according to the requirements of applicable electrical regulations (codes) and/or the local electrical authority (electrical utility).

The voltage and frequency of the electric source (power supply) must be shown on the rating (data) plate on the underside of the hand dryer near the air inlet.

The diameter (gauge) of the conductors of the power cable must be correct for the load (amperage) of the appliance. This power cable must be protected by fuses or a circuit breaker.

Contractors, earth-leakage-relays (ground-fault circuit breakers), etc., may be used or required.

WARNING

Be sure electrical supply is de-energized and locked out prior to installing hand dryer.

INSTALLATION INSTRUCTIONS

1. Using template, lay out mounting holes around electrical connection hole.
2. Drill four mounting holes in the wall of the correct diameter for fasteners appropriate for the wall construction. Hand dryer is furnished with expanding plastic anchors and screws. Other types of fasteners are furnished by others.
3. Remove white cover from hand dryer by removing two vandal-resistant screws as shown on page 432. Save the screws and star locking washers. Use furnished vandal-resistant hex key.
4. Feed de-energized electrical supply cable through 1/2" conduit hole in hand dryer chassis. Mount hand dryer chassis to wall with four mounting screws.
5. Connect de-energized electrical supply cable to hand dryer screw terminal strip. Observe correct polarity. Energize the electrical supply cable. Test the operation of the hand dryer. Adjust range as necessary. Adjust drying cycle delay time as needed. See section on range and cycle time adjustment.
6. Reattach white cover to hand dryer chassis. Use two vandal-resistant screws and star locking washers saved from Step 3.

RANGE AND DRYING CYCLE ADJUSTMENT

Using a small screwdriver, turn the adjustment dial clockwise to increase range or time; counterclockwise to decrease range or time. See illustration.

SPECIFICATIONS

Outside Dimensions:	12.2" [310mm] x 8.3" [210mm] x 6.7" [171mm]
Adjustable Range:	18" +/- 2" [200mm +/- 50mm]
Air Temperature:	104°F to 113°F [40°C to 45°C]
Drying Cycle Time:	30 seconds to 4 minutes
Motor Type and Speed:	Brushless Induction Type, 3360 rpm, 1/8 hp

AC SUPPLY REQUIREMENTS

MODEL	VOLTAGE	FREQUENCY	AMPS REQUIRED
Z6703	120VAC	60 Hz.	15 Amps
Z6703-220	220VAC	60 Hz.	8.2 Amps
Z6703-220-50	220VAC	50 Hz.	8.2 Amps

Figure 2

Figure 3

Figure 4

Figure 5

ZURN Z6703 SENSOR HAND DRY

INSTALLATION TEMPLA

FV120

ER

TE

10-7/8"
E INDICATES SHAPE
ER MOUNTING PLATE ONLY.
NOT A CUTOUT IN THE WALL.
DRILL .25 DIAMETER HOLE
6-7/8"
DRILL .875 DIAMETER HOLE
3-1/16"
RILL .25 DIAMETER HOLE
DRILL .25 DIAMETER HOLE
6-1/2"

FV120

REPLACEMENT PARTS

Pos.	Order No.	Description
1	P6703-1	Hand Dryer Chassis (120/160VAC)
1	P6703-1-220	Hand Dryer Chassis (220/60VAC)
1	P6703-1-220-50	Hand Dryer Chassis (220/50VAC)
2	P6703-2	Hand Dryer Cover
3	P6703-3	Grounding Wire
4	P6703-4	AC Supply Cord (120/60VAC)
5	P6703-5	Vandal-Resistant Wrench
6	P6703-6	Cover Securing Screw (2 Required)

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Technical Data and Piping Size Manual

Proper pipe size within a building is important for proper waste evacuation. It is the responsibility of the engineer and architect to ensure proper fixtures are specified so that the facilities meet the requirements of the local plumbing codes.

Directions For Installing

Before the water in the supply pipes is turned on, the control stop to the flush valve should be closed off tight. Then turn on each valve separately as follows:

Remove working parts from the flush valve.

Open control stop to flush the lines of all debris and then replace internal parts. (This procedure should also be followed when the piping has been drained for some time, as occurs in schools, stadiums, etc.)

Regulating For Quietness

Open the control stop fully and operate flush valve. Gradually adjust the control stop so that the rate of water flow into the fixture is not excessive but sufficient to evacuate the fixture. The evacuation should be tested with 30 sheets of toilet paper. Check the stop setting to ensure the fixture will not over flow in the event of repeated or continuous flushing.

Regulating Quantity

The Zurn Flush Valve does not require regulation for any variation in pressure between 10 and 100 pounds. The Zurn Valve has no outside adjustment. It is preset at the factory to deliver sufficient water for the various types of fixtures regardless of the pressure fluctuation. If ample flush is not obtained with the control stop open, the supply is insufficient, there is an obstruction in the piping, or a supply valve somewhere is not fully open.

Water Pressure

The minimum pressure while flushing on a typical fixture should not be less than 20 psi for proper evacuation. Consult the fixture manufacturer for recommended running pressure. Static pressure must be in excess of these values, sufficient to overcome friction losses in piping. Pressures in excess of 100 pounds are not suitable for flushing any plumbing fixture.

Piping

Thread sealing compounds should be used on male threads only. All burrs should be removed from the ends of all pipes and nipples. Fittings should be avoided wherever possible, particularly 90 degree fittings.

The size of supply pipe depends on a number of factors which are listed and explained on Pages 440 and 441.

Air Chambers

Air chambers provide a cushion for the water and act to prevent water hammer in the piping.

Each plumbing fixture should be protected by an air chamber, regardless of the height of building or whether risers are up-feed or down-feed, direct supply or tank supply.

Air chambers should be the same size pipe as the branch to the fixture and not less than 24 inches high. They should be located in the partition or pipe shaft as near to the fixture as possible.

How To Size Piping

For the average installation, pipe sizes may be calculated from the tables and data which follow. A sample worksheet is provided on Page 442 to help guide you through a hypothetical installation. To illustrate the procedure in pipe sizing we shall use as an example a three-story office building with six bathrooms, each containing three flush valves. All this on direct supply from the street main. The step by step procedure is as follows:

1. We know that it is an office building, and by referring to Table No. 1, find that an office building having eighteen water closets requires a 90 G.P.M. rate of flow to satisfy the simultaneous use of fixtures. The figure “18” is then entered in the third column under the heading “Gallons per Minute.”
2. We must know the pressure in the street main at low pressure periods. This we will assume is 60 pounds and this figure is entered at the top of the right-hand column following “Pressure Available.”
3. We know the minimum recommended running pressure for proper evacuation is 20 psi. This figure of 20 pounds is then entered on line 2, following “Pressure at Valve.”
4. The height above grade of the flush valve on the third floor would be 27 feet, assuming that the floors are 8 feet apart. This figure is entered on the third line following “Static Loss” and multiplied by .433. The result is the pressure necessary to carry or lift the water up 27 feet to the third floor, the figure 11.69 is entered in the right-hand column.
5. The meter selected must be sufficient size to deliver the 90 G.P.M. with a minimum of loss. In this case we decide that the 2 inch meter is ample and in referring to Table No. 6 find that in delivering the necessary 90 G.P.M. a loss of 5.2 pounds is incurred. This figure is then entered in the right-hand column following “Loss Through Meter.”
6. A tap must be inserted in the street main, and it must deliver 90 G.P.M. with relatively little loss. By referring to Table No. 7, we find that the 1-1/2-inch tap will deliver 90 G.P.M. with a loss of only 2.94 pounds, and this figure is entered in the right-hand column opposite “Loss Through Tap.”

We will have arrived at a loss figure of the basic component parts of the layout. The total loss for the fixture, static, meter, and tap total 39.83 pounds. Therefore, the remaining 20.17 pounds of our available 60 pounds pressure in the street main can be used in friction loss through the piping.

On the diagram you will note that the water supply system is divided into five sections: A, B, C, D, and E. Section A is the distance from the street main to the building line and is 30 feet long. Section B covers the 8 feet from the service line level to the first floor, plus the 30 feet back through the building to the point where it splits two ways, for a total of 40 feet. Section C is the 20 feet of horizontal run and 3 feet of vertical to the first floor valve, for a total of 23 feet. Section D is the 8 feet of pipe from the first floor to the section. Section E is the 8 feet of pipe from the second floor to the third.

Section A piping must be of sufficient size to provide water for eighteen flush valves. Section B must provide water for the same. At the point where the service splits two ways, the 20 feet of horizontal run and riser pipe will be identical for both sides of the building and each horizontal section will carry water for the same number of valves.

In column 1 of the worksheet, list the section letters; next list the number of valves each section must provide water for in column 2. Third, by referring to Table No. 1, list the G.P.M. required in each section in column 3. Following this, skip to column 5 and enter the lengths for each section of piping.

We know we have 20.17 pounds remaining to be used in friction loss in the pipe. By referring to Table No. 3, we arbitrarily enter 2 inches under “Size of Pipe” on the worksheet. Since 90 G.P.M. is required, we find there is a loss of 7.85 psi through 100 feet of 2-inch clean iron galvanized pipe. Enter the figure 7.85 in column 6. We do this arbitrarily as this might prove to be too small and the loss too great.

Since Section A is only 30 feet long, we multiply 7.85 x .30, and our loss is 2.355 pounds, which is entered into the last column. Section B, C, D, and E are copper pipe, refer to Table No. 5 Pressure Loss. For Section B we use 2-inch pipe and as it is 40 feet long, we multiply 6.72 x .40 and our loss is 2.68, which is entered as above. Section C carries 70 G.P.M. for nine valves. The loss figure for the 70 G.P.M. through 1-1/4-inch pipe is 40.1 pounds. As Section C is 23 feet long, we multiply 40.1 x .23, and our loss is 9.22 pounds, which is entered in the sixth column.

Section D should supply 60 G.P.M. for six flush valves and is 8 feet long. We continue with 1-1/4-inch pipe, as the loss through 1-inch pipe would be more than we could afford to lose. Therefore, 60 G.P.M. through 100 feet of 1-1/4-inch pipe is 30.3 pounds of loss, and we multiply 30.3 x .08 which equals 2.42 pounds. This figure is entered in the last column.

Section E furnishes water for three flush valves at 50 G.P.M. This rate of flow through 100 feet of 1-1/4-inch pipe produces a loss of 21.6 pounds; therefore, we multiply 21.6 x .08 with the resulting loss of 1.72 pounds, enter this figure in the last column.

The total loss of all figures in column 6 equals 58.23 pounds, which is slightly less than the available pressure in the street main. This should result in ample supply of water to all fixtures.

SAMPLE WORKSHEET

Piping Diagram
For use with calculation form below.

Pressure Available						Lbs. Per Sq. In.	
						60	
Required Pressure at Valve (depends on type of bowl used)							20.00
Static Loss 27 feet at .433 P.S.I.							11.69
Loss through Filter – no filter							–
Loss through Meter – 2" 90 G.P.M.							5.2
Loss through Tap – 1-1/2" 90 G.P.M.							2.94
Section Column 1	**No. of Flush Valves** Column 2	**Gal. Per Min.** Column 3	**Size of Pipe & Fittings** Column 4	**Length of Pipe & Fittings** Column 5	**Loss of Pressure Per 100 Feet** Column 6		
A	18	90	2"	30'	7.85		2.355
B	18	90	2"	40'	6.72		2.68
C	9	70	1-1/4"	23'	40.1		9.22
D	6	60	1-1/4"	8'	30.3		2.42
E	3	50	1-1/4"	8'	21.6		1.72
Total required pressure at main							58.23

TABLE NO. 1 Rate of Flow in G.P.M. Required for Flush Valves

Total Number of Valves on line	Apartment Buildings Hotel Guest Rooms	Office Buildings Hotels Motels	Municipal Buildings Department Stores Shopping Centers	Industrial Plants Hospitals Clubs Restaurants	Transportation Terminals University Buildings Theaters Highway Rest Areas	Public Schools	Stadiums
1	30	30	30	30	30	30	Because of the peak period demand on this type of installation, please call upon request. Zurn will furnish complete piping data.
2	50	50	50	50	50	50	
3	50	50	50	50	60	60	
4	50	50	50	60	60	60	
5	50	60	60	70	70	90	
6	50	60	60	70	80	90	
7	50	60	70	80	90	120	
8	60	70	70	90	100	120	
9	60	70	80	100	120	150	
10	60	70	80	100	120	150	
11	70	80	90	110	120	180	
12	70	80	90	120	140	180	
14	70	90	100	120	150	200	
16	70	90	100	140	160	200	
18	70	90	120	140	180	220	
20	80	100	120	150	180	240	
22	80	100	120	160	180	240	
24	80	100	120	160	200	240	
26	80	100	140	160	200	240	
28	90	120	140	160	200	240	
30	90	120	140	180	225	240	
35	90	120	140	180	225	270	
40	90	120	140	180	225	270	
45	90	120	150	180	225	270	
50	90	130	150	180	225	270	
60	90	130	150	180	225	300	
70	90	130	150	180	225	330	
80	100	140	150	200	225	330	
90	100	140	160	200	225	330	
100	100	140	160	200	225	330	
200	140	160	180	225	250	400	

Note: Typical pressure required at inlet of flush valve while flushing is 20 psi.

TABLE NO. 2 Fittings and Valves

Friction Loss Expressed in Equivalent Feet of Pipe

Part	90 Deg. Elbow	45 Deg. Elbow	Tee-Side Outlet	Gate Valve
Size of Pipe	**Equivalent Length in Feet of Pipe**			
1"	3	1.5	6	1.5
1-1/4"	3	1.5	6	1.5
1-1/2"	3.5	1.8	7	1.8
2"	5	2.5	10	2.5
2-1/2"	6	3	12	3
3"	7	3.5	14	3.5
3-1/2"	8	4	16	4
4"	10	5	20	5

TABLE NO. 3 Clean Iron Pipe Loss of Pressure in Pounds Per Square Inch Per 100 Feet of Pipe

	Size of Pipe												
G.P.M.	**3/4"**	**1"**	**1-1/4"**	**1-1/2"**	**2"**	**2-1/2"**	**3"**	**3-1/2"**	**4"**	**5"**	**6"**	**7"**	**8"**
10	13.0	3.16	1.10	0.47	0.12	0.04							
20	50.4	12.4	3.75	1.66	0.42	0.14	0.06						
30	110.0	27.5	7.70	3.75	0.91	0.30	0.13	0.06					
40		48.0	14.2	6.62	1.60	0.53	0.23	0.11	0.06				
50		75.0	22.0	10.0	2.44	0.81	0.35	0.17	0.09	0.04			
60		110.0	31.3	14.0	3.50	1.17	0.50	0.24	0.13	0.05			
70			42.3	20.0	4.80	1.50	0.68	0.38	0.19	0.07			
80			55.0	25.0	6.30	2.00	0.88	0.41	0.23	0.08			
90			69.4	31.5	7.85	2.59	1.06	0.52	0.28	0.10	0.04		
100			85.0	39.0	9.46	3.20	1.31	0.64	0.35	0.12	0.05		
120				56.0	13.8	4.55	1.85	0.90	0.46	0.16	0.07		
140				80.0	18.7	6.16	2.51	1.19	0.61	0.22	0.09	0.04	
150				88.0	21.1	7.03	2.86	1.36	0.70	0.25	0.10	0.04	
160				100.0	24.0	7.98	3.25	1.54	0.79	0.29	0.11	0.04	
180					30.0	10.1	4.08	1.93	0.99	0.36	0.14	0.05	
200					37.5	12.5	5.02	2.38	1.22	0.42	0.17	0.07	
225					47.5	16.1	6.39	3.04	1.55	0.54	0.23	0.10	0.06
250					58.5	19.7	7.76	3.70	1.89	0.65	0.26	0.12	0.07
275					71.0	23.9	9.48	4.37	2.27	0.79	0.32	0.15	0.08
300					85.1	28.1	11.2	5.04	2.66	0.93	0.37	0.17	0.09
350					115.0	38.2	15.2	7.10	3.65	1.26	0.50	0.23	0.12
400						49.9	19.5	9.25	4.73	1.61	0.65	0.30	0.16
450						63.1	25.0	11.7	6.01	2.00	0.81	0.37	0.20
500						77.9	30.8	14.5	7.43	2.40	0.96	0.45	0.25

TABLE NO. 4 Brass Pipe

Loss of Pressure in Pounds Per Sq. In. Per 100 Feet of Pipe

	Size of Pipe								
G.P.M.	3/4"	1"	1-1/4"	1-1/2"	2"	2-1/2"	3"	3-1/2"	4"
10	8.88	2.3	0.72	0.33	0.16	0.05			
20	31.6	9.79	2.60	1.20	0.38	0.13	0.05	0.03	
30		20.8	5.46	2.56	0.80	0.27	0.12	0.06	
40		35.5	9.26	4.33	1.36	0.43	0.20	0.10	0.05
50		55.0	14.1	6.59	2.06	0.71	0.30	0.15	0.06
60			19.5	9.18	2.87	0.99	0.41	0.21	0.11
70			26.4	12.2	3.84	1.32	0.55	0.26	0.14
80			33.8	15.6	4.92	1.69	0.70	0.35	0.18
90			41.6	19.5	6.11	2.10	0.88	0.45	0.23
100				23.8	7.43	2.55	1.07	0.55	0.28
120				33.3	10.5	3.58	1.47	0.75	0.39
140				44.2	14.0	4.77	1.98	0.97	0.52
150				50.0	15.7	5.49	2.27	1.08	0.59
160					17.8	6.21	2.56	1.20	0.67
180					22.3	7.62	3.16	1.50	0.82
200					26.6	9.25	3.84	1.80	1.00
225					33.6	11.6	4.76	2.25	1.24
250					40.9	14.1	5.80	2.75	1.51
275					49.0	16.7	6.92	3.27	1.80
300					58.0	19.7	8.16	3.90	2.12
350						26.2	10.9	5.15	2.81
400						33.4	13.9	6.60	3.60
450						42.1	17.3	8.30	4.53

TABLE NO. 5 Copper Pipe

Loss of Pressure in Pounds Per Sq. In. Per 100 Feet of Pipe

	Size of Pipe						
G.P.M.	3/4"	1"	1-1/4"	1-1/12"	2"	2-1/2"	3"
10	13.0	3.48	1.26	0.54	0.14	0.05	
20	45.0	11.8	4.19	1.78	0.47	0.16	0.07
30	90.5	24.6	8.62	3.65	0.95	0.33	0.13
40	162.0	41.2	14.5	6.10	1.57	0.54	0.22
50		62.3	21.6	9.15	2.33	0.80	0.33
60		87.0	30.3	12.6	3.22	1.10	0.45
70			40.1	16.9	4.26	1.46	0.60
80			51.2	21.5	5.39	1.86	0.75
90			63.4	26.6	6.72	2.28	0.94
100			77.7	32.6	8.16	2.76	1.13
120				45.2	11.4	3.85	1.57
140				60.6	15.1	5.10	2.08
150				68.7	17.2	5.80	2.36
160				77.7	19.3	6.56	2.66
180				91.7	24.0	8.10	3.30
200					29.3	9.88	4.02
225					36.4	12.3	5.00
250					44.4	14.9	6.52
275					53.0	17.8	7.26
300					62.6	21.0	8.54
350					83.6	28.1	11.4
400						36.2	14.6
450						45.3	18.3
500						54.8	22.2
550						66.0	26.6
600						78.1	31.6
700							42.2
800							54.7
900							68.3

TABLE NO. 6

Loss of Pressure in Pounds Per Square Inch Through Meters

	Size of Pipe							
G.P.M.	5/8"	3/4"	1"	1-1/2"	2"	3"	4"	6"
10	4.55	1.95	0.80	0.24	0.09			
20	17.6	7.56	3.08	0.83	0.32	0.08		
30	38.5	16.5	6.88	1.88	0.68	0.16		
40	70.4	30.2	12.0	3.26	1.20	0.29	0.12	
50	110.0	47.2	18.8	5.00	1.83	0.44	0.18	
60		66.0	27.5	7.00	2.63	0.63	0.26	
70		92.5	36.7	10.0	3.60	0.85	0.38	
80		121.0	48.0	12.5	4.73	1.10	0.46	
90			60.9	15.8	5.21	1.33	0.56	0.20
100			75.2	19.5	7.10	1.64	0.66	0.25
120			110.0	28.0	10.4	2.31	0.92	0.35
140				40.0	14.0	3.14	1.22	0.45
150				44.0	15.8	3.58	1.40	0.50
160				50.0	18.0	4.06	1.58	0.55
180				63.2	22.5	5.10	1.98	0.70
200				78.0	28.1	6.28	2.44	0.85
225				98.6	35.6	7.99	3.10	1.15
250				122.0	43.9	9.70	3.78	1.30
275					53.3	11.9	4.54	1.60
300					63.8	14.0	5.32	1.85
350					86.3	19.0	7.30	2.50
400					112.0	24.4	9.46	3.25
450						31.3	12.0	4.05
500						38.5	14.9	4.80

TABLE NO. 7

Loss of Pressure in Pounds Per Square Inch Through Tap or Tee in Main

	Size of Pipe						
G.P.M.	5/8"	3/4"	1"	1-1/4"	1-1/2"	2"	3"
10	1.35	0.64	0.18	0.08			
20	5.38	2.54	0.77	0.31	0.14		
30	12.1	5.72	1.62	0.69	0.33	0.10	
40	21.5	10.2	3.07	1.23	0.58	0.18	
50	33.6	15.9	4.49	1.92	0.91	0.28	
60	48.4	22.9	6.46	2.76	1.31	0.40	
70	65.9	31.1	8.79	3.76	1.78	0.55	0.10
80	86.1	40.7	11.5	4.90	2.32	0.72	0.13
90		51.4	14.5	6.21	2.94	0.91	0.16
100		63.5	17.9	7.67	3.63	1.12	0.21
120		91.4	25.8	11.0	5.23	1.61	0.30
140			35.2	15.0	7.12	2.20	0.41
150			40.4	17.2	8.16	2.52	0.47
160			45.9	19.6	9.30	2.92	0.54
180			58.1	24.8	11.8	3.62	0.68
200			71.8	30.7	14.5	4.48	0.84
225				38.8	18.4	5.67	1.06
250				47.9	22.7	7.00	1.31
275					27.4	7.70	1.59
300					32.6	10.1	1.88
350					44.5	13.7	2.56
400					58.1	17.9	3.34
450					73.5	22.7	4.23
500						28.0	5.22
550						33.9	6.31
600						40.3	7.52
700						54.9	10.2
800						71.7	13.4
900							16.9
1000							20.9
1200							30.1
1400							40.9
1600							53.4
1800							67.6
2000							83.5

Notes Relating To Tables

Quantities given in Table No. 1 on Page 443 will ordinarily prove adequate for the fixtures usually installed in connection with Zurn Flush Valves, but they do not provide for the large demands of special apparatus such as shower baths, laundry machinery, and the like. Liberal increases should be made whenever such demands exist. On the other hand, it may be permissible to reduce the quantities somewhat, especially in groups for which larger demands are provided.

Fittings cause a considerable amount of resistance. When it is necessary to work closely, the values given in Table No. 2 may be used.

Water meters are somewhat of a problem owing to the great variation of resistance offered by them to the flow of water. It is always best, when possible, to get information from the maker of the meter which is to be used. Values given in Table No. 6 are usually sufficiently accurate for rough estimates.

If a filter is used on direct supply, 5 pounds should be entered in column 7 of the sample piping calculation table, Page 442. Manufacturers of filters usually give this as the limit drop since channeling of the filter bed, with resulting unsatisfactory operation, occurs when the drop through the filter exceeds this amount.

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June 2007

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