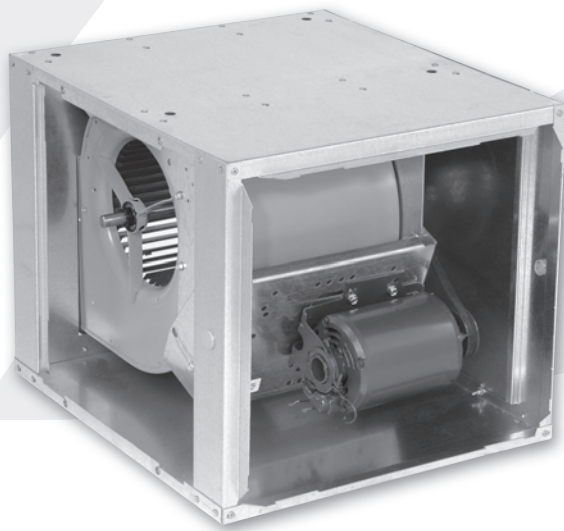




ZC08



ZEPHYR CABINET FANS

Models: ZC, ZCC
Single and Twin Unit
Belt Drive Cabinet Fans

MOVING YOUR WAY

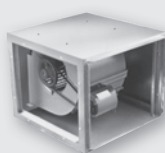
› Zephyr Cabinet Fans

Model: ZC

- Static pressure up to 1.5 in. wg.
- Belt Drive - Flow capacity up to 6,350 CFM

Model: ZCC

- Static pressure up to 1.5 in. wg.
- Belt Drive - Flow capacity up to 12,700 CFM



| | |
|--|-----|
| Introduction..... | 2 |
| Dimensional Information & Performance Data | 4 |
| Engineering Specifications | 8 |
| Limited Warranty | IBC |

› Zephyr Cabinet Fans

PennBarry certifies that the Zephyr ZC and ZCC models shown herein are licensed to bear the AMCA Seal. The ratings shown are based on tests and procedures performed in accordance with AMCA Standard 211 and comply with the requirements of the AMCA Certified Ratings Program.



PennBarry reserves the right to make changes at any time, without notice, to models, construction, specifications, options, availability, etc. This bulletin illustrates the appearance of PennBarry products at the time of publication. To view the latest updates, visit PennBarry at www.pennbarry.com.

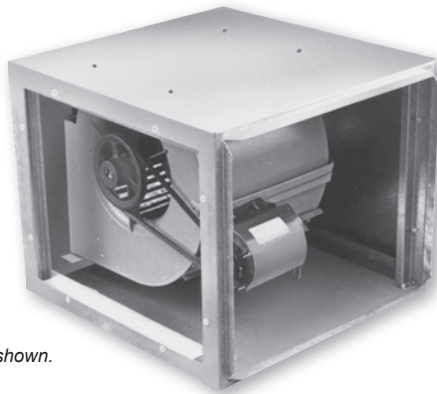
Introduction

Zephyr Cabinet Fans



Introduction

Cabinet Fans



ZC shown.

› Domex Axial Supply & Exhaust Fans

PennBarry Zephyr series ZC belt drive cabinet fans are general purpose duct blowers. These versatile, quiet operating air movers provide economical, convenient and effective ventilation in ducted systems. They are also used extensively in heating and cooling systems. Four sizes cover an air capacity range up to 6350 CFM. ZC units are sized with space saving in mind and furnished with inlet and outlet connecting flanges and side access panels as standard. Optional accessories include a duct mounted filter assembly.

› Zephyr Cabinets

Model: ZC

- Static pressure up to 1.5 in. wg.
- Belt Drive - Flow capacity up to 6,350 CFM

Model: ZCC

- Static pressure up to 1.5 in. wg.
- Belt Drive - Flow capacity up to 12,700 CFM

Features & Benefits

› Internal Motor and Drive Assembly

The motor and drive assembly are located inside of the unit for safety. This design also cools the motor so the unit will run more efficiently.

› Ball Bearing Motor

Zephyr Cabinet fans utilize ball bearing motors for durability and long life.

› Blower Shaft Ball Bearings

The blower shaft rides on ball bearings for quiet operation.

› Easy Access Side Panels

Zephyr Cabinet fans come with dual side panels. These panels are easily removable which allows for installation flexibility.

› Application Versatility

Zephyr Cabinet fans can be used for supply or exhaust.

› Model ZCC Twin Unit

The twin assembly doubles the capacity of a single unit for the same static pressure with identical RPM. Two similar motors are used which enables the flexibility of independent operation when desired.

Options & Accessories

› Acoustically Insulated Housing

Optional insulation to line housing for acoustic sensitive applications.

› Guards

Zephyr Cabinet fans can be supplied with inlet and outlet guards for safety.

› Vibration Isolation

Zephyr Cabinets fans can be supplied with vibration hangers. Vibration hangers allow the fan to be isolated from the building structure which prevents any building resonance from being transmitted to the fan housing.

› Safety Disconnect Switch

Safety disconnect switches are available to allow positive electrical shut-off and safety. Switches are factory mounted when factory wiring is requested. Wiring is only run from the motor to the junction box. (Factory wiring of explosion proof applications is not available.) A wide range of Nema rated enclosures with disconnect switches are available for indoor, outdoor, and explosion proof installations. Disconnects are to be field wired by a licensed electrician.

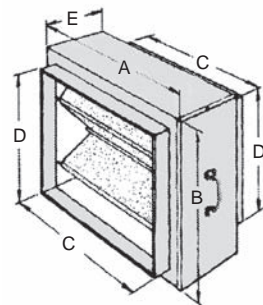


› Internal Wiring

Nema 3R wiring is available.

› ZF Filter

Series ZF filters are designed for compatibility with Zephyr series ZC cabinet fans. ZF filters can be close-coupled to ZC unit inlets or installed remote to the ZC in the system ductwork. The compact design and ease of maintenance also make ZF filters an ideal choice as a standard duct filter. The filter media can be easily cleaned and is washable with plain soap and water. The pull-out drawer action provides quick and easy access. One filter is required for Model ZC and two filters for Model ZCC.



› ZF Filter Dimensional Data

| Size | A | B | C | D | E |
|------|--------|----|--------|--------|-------|
| ZF1 | 22 1/4 | 20 | 20 1/8 | 17 7/8 | 5 3/4 |
| ZF2 | 27 | 23 | 24 7/8 | 20 7/8 | 5 3/4 |
| ZF3 | 33 1/2 | 28 | 30 1/4 | 24 3/4 | 5 3/4 |
| ZF4 | 42 | 34 | 38 5/8 | 30 5/8 | 5 3/4 |

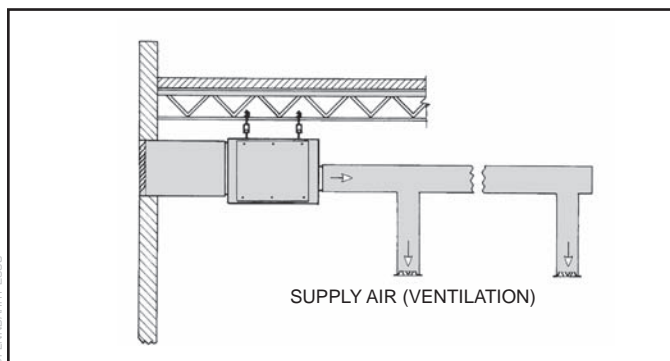
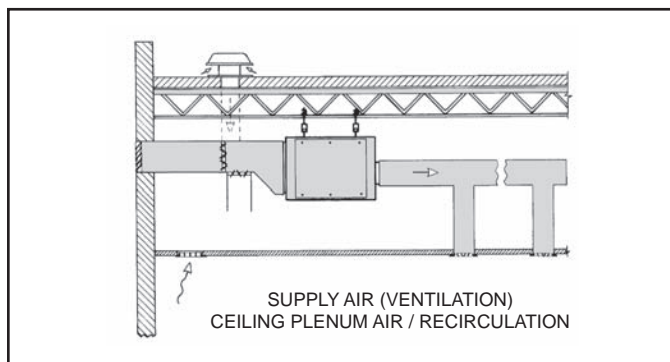
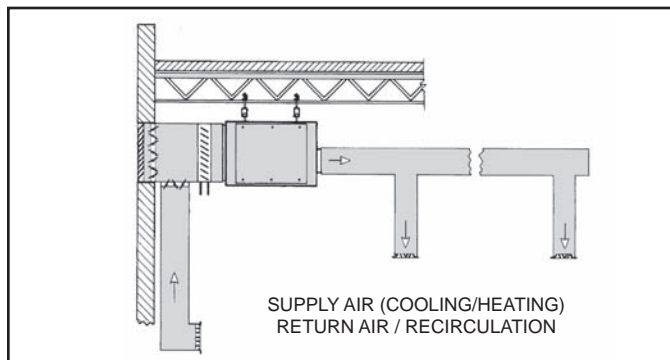
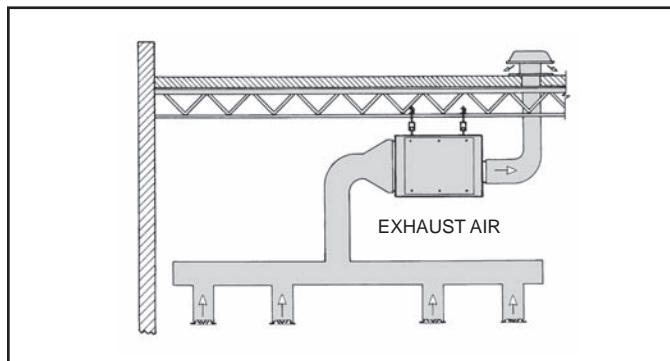
All dimensions in inches.

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Typical Applications & Belt Drive Losses

Typical Applications

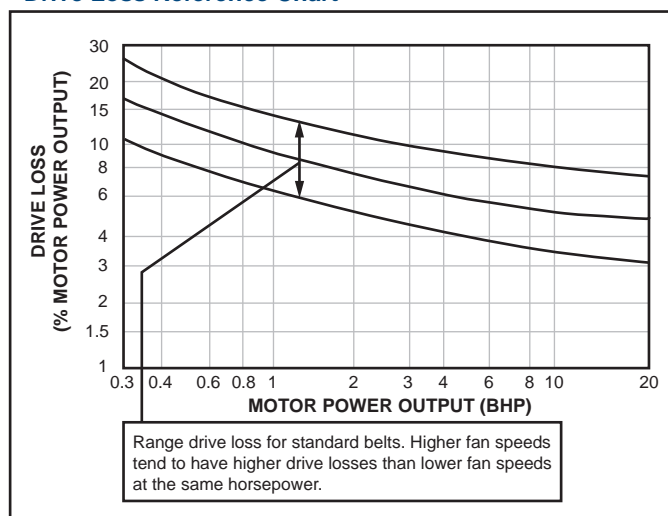
Zephyr ZC and ZCC Cabinet fan units are versatile in application. They may be used in ventilation, recirculation, and air conditioning systems as typified by the illustrations below. Dampers, inlet/outlet air diffusers/grilles, cooking appliances, air conditioning coils and ducting shown are typically furnished by others but in part may be available from PennBarry.



Belt Drive Losses

The AMCA Review Committee has developed the chart shown below for the purpose of estimating belt drive losses. To calculate total BHP (including drive losses): Find the BHP of your operating point on the x-axis on the graph below. Follow the vertical line to the curves indicating the range of drive losses. Look at the y-axis on the left and find the drive loss percentage. Calculate the total BHP by adding the drive loss to the operating point BHP. For BHP's below 0.3, use 30%.

Drive Loss Reference Chart



! For totally enclosed, explosion proof, multi-speed and all 1.0 Service Factor motors, fan BHP plus drive losses should not exceed motor rated HP.

Graph reprinted from AMCA publication 203, with the express written permission from the Air Movement and Control Association, Inc., 30 West University Drive, Arlington Heights, IL 60004-1983.

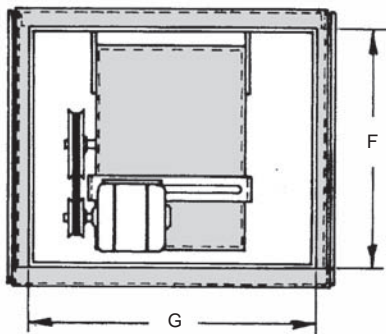
Dimensional Information

Zephyr Cabinet Fans

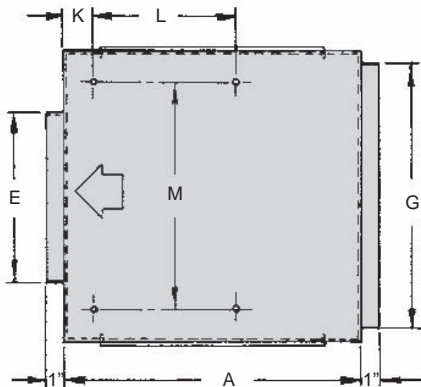


ZC

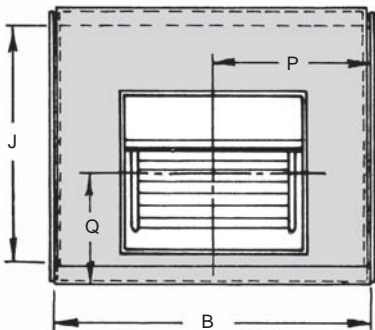
Cabinet Fans



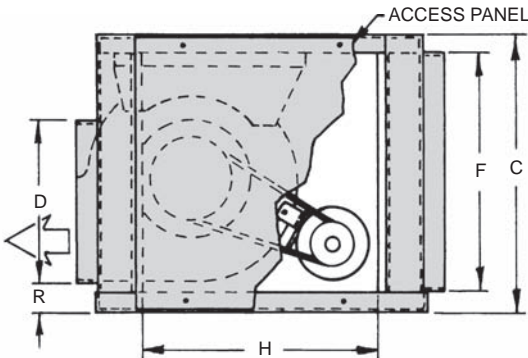
INLET END



TOP



OUTLET END



SIDE

› ZC Belt Drive Unit Dimensional Data

| MODEL | OUTLET | | | INLET | | | ACCESS OPENING | | | K | L | M | P | Q | R |
|-------|--------|--------|----|--------|--------|--------|----------------|--------|----|-------|--------|--------|--------|--------|-------|
| | A | B | C | D | E | F | G | H | J | | | | | | |
| ZC10 | 24 3/4 | 22 1/4 | 20 | 11 3/8 | 13 3/8 | 18 1/8 | 20 3/8 | 17 1/4 | 18 | 1 5/8 | 13 3/8 | 17 1/2 | 11 1/8 | 7 3/8 | 1 5/8 |
| ZC12 | 27 1/2 | 27 | 23 | 13 1/2 | 15 5/8 | 21 1/8 | 25 1/8 | 20 | 21 | 1 5/8 | 16 1/8 | 21 | 13 1/2 | 8 1/8 | 1 3/8 |
| ZC15 | 32 | 33 1/2 | 28 | 15 7/8 | 18 5/8 | 25 | 30 1/2 | 24 1/2 | 26 | 1 1/2 | 19 1/2 | 23 | 16 3/4 | 10 5/8 | 2 5/8 |
| ZC18 | 43 | 42 | 34 | 18 7/8 | 21 7/8 | 31 | 39 | 35 1/2 | 30 | 1 7/8 | 24 | 37 | 21 | 13 | 3 5/8 |

All dimensions in inches.

› ZC10 Fan Performance Data

Inlet Area (FT²)=2.56 | Outlet Area (FT²)=1.04 | Outlet Velocity (FPM)=CFM/1.04 | Tip Speed (FPM)=2.78xRPM | Wheel Dia.=10 5/8"

| CFM | 0.125" S.P. | | 0.250" S.P. | | 0.375" S.P. | | 0.500" S.P. | | 0.625" S.P. | | 0.750" S.P. | | 1.000" S.P. | | 1.250" S.P. | | 1.500" S.P. | |
|------|-------------|------|-------------|------|-------------|------|-------------|------|-------------|------|-------------|------|-------------|------|-------------|------|-------------|------|
| | RPM | BHP | RPM | BHP | RPM | BHP | RPM | BHP | RPM | BHP | RPM | BHP | RPM | BHP | RPM | BHP | RPM | BHP |
| 750 | 422 | 0.06 | 535 | 0.09 | 637 | 0.12 | - | - | - | - | - | - | - | - | - | - | - | - |
| 950 | 475 | 0.10 | 570 | 0.13 | 660 | 0.17 | 741 | 0.21 | 821 | 0.25 | 893 | 0.30 | - | - | - | - | - | - |
| 1150 | 535 | 0.15 | 618 | 0.19 | 696 | 0.23 | 770 | 0.28 | 840 | 0.33 | 907 | 0.38 | 1035 | 0.48 | - | - | - | - |
| 1350 | 599 | 0.23 | 674 | 0.28 | 743 | 0.32 | 808 | 0.37 | 872 | 0.42 | 934 | 0.48 | 1049 | 0.59 | 1161 | 0.72 | 1264 | 0.85 |
| 1550 | 664 | 0.33 | 733 | 0.38 | 797 | 0.44 | 856 | 0.49 | 913 | 0.55 | 966 | 0.60 | 1078 | 0.73 | 1177 | 0.86 | 1277 | 1.00 |
| 1750 | 731 | 0.46 | 796 | 0.52 | 854 | 0.58 | 909 | 0.64 | 961 | 0.70 | 1013 | 0.77 | 1109 | 0.89 | 1208 | 1.04 | 1297 | 1.18 |
| 1950 | 801 | 0.62 | 860 | 0.69 | 914 | 0.75 | 966 | 0.82 | 1014 | 0.89 | 1061 | 0.95 | 1153 | 1.10 | 1239 | 1.24 | 1328 | 1.41 |

› ZC12 Fan Performance Data

Inlet Area (FT²)=3.69 | Outlet Area (FT²)=1.47 | Outlet Velocity (FPM)=CFM/1.47 | Tip Speed (FPM)=3.31xRPM | Wheel Dia.=12 5/8"

| CFM | 0.125" S.P. | | 0.250" S.P. | | 0.375" S.P. | | 0.500" S.P. | | 0.625" S.P. | | 0.750" S.P. | | 1.000" S.P. | | 1.250" S.P. | | 1.500" S.P. | |
|------|-------------|------|-------------|------|-------------|------|-------------|------|-------------|------|-------------|------|-------------|------|-------------|------|-------------|------|
| | RPM | BHP | RPM | BHP | RPM | BHP | RPM | BHP | RPM | BHP | RPM | BHP | RPM | BHP | RPM | BHP | RPM | BHP |
| 1150 | 339 | 0.08 | 443 | 0.13 | 529 | 0.19 | - | - | - | - | - | - | - | - | - | - | - | - |
| 1350 | 359 | 0.10 | 456 | 0.16 | 538 | 0.22 | 612 | 0.30 | 680 | 0.38 | - | - | - | - | - | - | - | - |
| 1550 | 381 | 0.13 | 472 | 0.20 | 552 | 0.27 | 621 | 0.34 | 685 | 0.42 | 747 | 0.52 | - | - | - | - | - | - |
| 1750 | 406 | 0.18 | 492 | 0.25 | 565 | 0.32 | 634 | 0.40 | 695 | 0.49 | 752 | 0.57 | 853 | 0.75 | - | - | - | - |
| 1950 | 432 | 0.23 | 511 | 0.30 | 583 | 0.38 | 648 | 0.47 | 709 | 0.56 | 764 | 0.65 | 866 | 0.86 | 954 | 1.01 | - | - |
| 2150 | 459 | 0.28 | 533 | 0.36 | 603 | 0.46 | 664 | 0.54 | 722 | 0.64 | 777 | 0.74 | 876 | 0.95 | 964 | 1.16 | 1045 | 1.38 |
| 2350 | 486 | 0.35 | 559 | 0.45 | 623 | 0.54 | 683 | 0.63 | 737 | 0.73 | 791 | 0.84 | 889 | 1.07 | 975 | 1.29 | 1056 | 1.52 |
| 2550 | 516 | 0.43 | 584 | 0.54 | 643 | 0.62 | 703 | 0.74 | 756 | 0.84 | 806 | 0.95 | 902 | 1.19 | 989 | 1.43 | 1067 | 1.67 |
| 2750 | 547 | 0.52 | 611 | 0.64 | 668 | 0.74 | 723 | 0.85 | 776 | 0.96 | 825 | 1.08 | 916 | 1.32 | 1002 | 1.58 | 1080 | 1.84 |

› ZC15 Fan Performance Data

Inlet Area (FT²)=5.30 | Outlet Area (FT²)=2.05 | Outlet Velocity (FPM)=CFM/2.05 | Tip Speed (FPM)=3.93xRPM | Wheel Dia.=15"

| CFM | 0.125" S.P. | | 0.250" S.P. | | 0.375" S.P. | | 0.500" S.P. | | 0.625" S.P. | | 0.750" S.P. | | 1.000" S.P. | | 1.250" S.P. | | 1.500" S.P. | |
|------|-------------|------|-------------|------|-------------|------|-------------|------|-------------|------|-------------|------|-------------|------|-------------|------|-------------|------|
| | RPM | BHP | RPM | BHP | RPM | BHP | RPM | BHP | RPM | BHP | RPM | BHP | RPM | BHP | RPM | BHP | RPM | BHP |
| 1950 | 303 | 0.13 | 385 | 0.19 | 452 | 0.26 | 512 | 0.34 | - | - | - | - | - | - | - | - | - | - |
| 2350 | 331 | 0.19 | 406 | 0.27 | 470 | 0.35 | 526 | 0.43 | 575 | 0.51 | 622 | 0.59 | - | - | - | - | - | - |
| 2750 | 361 | 0.26 | 428 | 0.35 | 490 | 0.45 | 544 | 0.55 | 594 | 0.64 | 639 | 0.74 | 724 | 0.96 | - | - | - | - |
| 3150 | 393 | 0.37 | 455 | 0.47 | 512 | 0.57 | 565 | 0.69 | 612 | 0.79 | 657 | 0.91 | 736 | 1.12 | 810 | 1.36 | - | - |
| 3550 | 425 | 0.51 | 485 | 0.61 | 536 | 0.72 | 587 | 0.85 | 633 | 0.97 | 675 | 1.09 | 754 | 1.34 | 824 | 1.59 | 888 | 1.83 |
| 3950 | 465 | 0.68 | 515 | 0.77 | 565 | 0.91 | 610 | 1.04 | 655 | 1.18 | 697 | 1.31 | 773 | 1.59 | 843 | 1.87 | 906 | 2.14 |
| 4350 | 505 | 0.89 | 547 | 0.99 | 594 | 1.12 | 637 | 1.26 | 678 | 1.41 | 719 | 1.56 | 793 | 1.86 | 861 | 2.16 | 924 | 2.47 |
| 4750 | 547 | 1.14 | 580 | 1.25 | 625 | 1.37 | 666 | 1.52 | 704 | 1.68 | 742 | 1.84 | 815 | 2.17 | 881 | 2.50 | 943 | 2.83 |

› ZC18 Fan Performance Data

Inlet Area (FT²)=8.40 | Outlet Area (FT²)=2.87 | Outlet Velocity (FPM)=CFM/2.87 | Tip Speed (FPM)=4.75xRPM | Wheel Dia.=18 1/8"

| CFM | 0.125" S.P. | | 0.250" S.P. | | 0.375" S.P. | | 0.500" S.P. | | 0.625" S.P. | | 0.750" S.P. | | 1.000" S.P. | | 1.250" S.P. | | 1.500" S.P. | |
|------|-------------|------|-------------|------|-------------|------|-------------|------|-------------|------|-------------|------|-------------|------|-------------|------|-------------|------|
| | RPM | BHP | RPM | BHP | RPM | BHP | RPM | BHP | RPM | BHP | RPM | BHP | RPM | BHP | RPM | BHP | RPM | BHP |
| 3150 | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - |
| 3550 | - | - | - | - | - | - | 462 | 0.66 | 503 | 0.79 | - | - | - | - | - | - | - | - |
| 3950 | - | - | - | - | 436 | 0.65 | 478 | 0.78 | 516 | 0.92 | 552 | 1.05 | - | - | - | - | - | - |
| 4350 | - | - | 402 | 0.65 | 452 | 0.79 | 495 | 0.92 | 532 | 1.07 | 567 | 1.22 | 629 | 1.51 | - | - | - | - |
| 4750 | 369 | 0.63 | 420 | 0.79 | 468 | 0.94 | 511 | 1.09 | 549 | 1.24 | 583 | 1.40 | 643 | 1.71 | 700 | 2.05 | - | - |
| 5150 | 391 | 0.77 | 439 | 0.95 | 484 | 1.11 | 527 | 1.28 | 565 | 1.43 | 599 | 1.60 | 659 | 1.95 | 713 | 2.29 | 765 | 2.65 |
| 5550 | 415 | 0.94 | 458 | 1.12 | 502 | 1.30 | 543 | 1.49 | 581 | 1.66 | 616 | 1.83 | 675 | 2.19 | 729 | 2.57 | 778 | 2.94 |
| 5950 | 440 | 1.14 | 479 | 1.32 | 521 | 1.53 | 559 | 1.71 | 597 | 1.91 | 631 | 2.09 | 692 | 2.47 | 745 | 2.87 | 793 | 3.26 |
| 6350 | 466 | 1.37 | 501 | 1.55 | 540 | 1.77 | 577 | 1.97 | 613 | 2.18 | 647 | 2.38 | 708 | 2.75 | 761 | 3.19 | 809 | 3.61 |

Performance shown is for installation Type B free inlet ducted outlet. Performance ratings do not include the effects of appurtenances in the airstream. Power rating (BHP) includes drive losses. Legend for colors is shown below.



Class I



Class II



Class III



Class IV

Dimensional Information

Zephyr Cabinet Fans

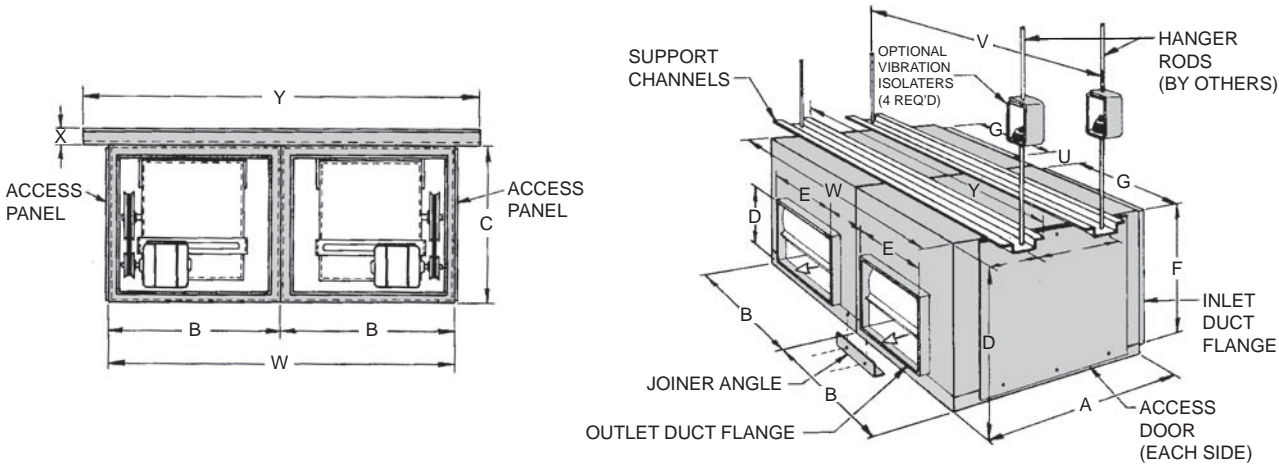


ZCC

› ZCC Belt Drive Twin Assembly

Models ZCC are dual units. The twin assembly doubles the capacity of a single unit for the same static pressure with identical RPM. Two similar motors are used which enables the flexibility of independent operation when desired.

Cabinet Fans



› ZCC Belt Drive Twin Assembly Dimensional Data

| Model | A | B | C | W | OUTLET | | Z | INLET | | U | Y | V | S | T | X |
|-------|--------|--------|----|--------|--------|--------|--------|--------|--------|-------|--------|--------|-------|--------|---|
| | | | | | D | E | | F | G | | | | | | |
| ZCC10 | 24 3/4 | 22 1/4 | 20 | 45 | 11 3/8 | 13 1/8 | 9 5/8 | 18 1/8 | 20 1/8 | 2 3/8 | 50 1/2 | 48 1/2 | 1 5/8 | 13 3/8 | 1 |
| ZCC12 | 27 1/2 | 27 | 23 | 54 1/2 | 13 1/2 | 15 5/8 | 11 7/8 | 21 1/8 | 25 1/8 | 2 3/8 | 60 | 58 | 1 5/8 | 16 1/8 | 1 |
| ZCC15 | 32 | 33 1/2 | 28 | 67 1/2 | 15 7/8 | 18 5/8 | 15 3/8 | 25 | 30 1/2 | 3 1/2 | 73 | 71 | 1 1/2 | 19 1/2 | 1 |
| ZCC18 | 43 | 42 | 34 | 84 1/2 | 18 7/8 | 21 7/8 | 20 5/8 | 31 | 39 | 3 1/2 | 90 | 88 | 1 7/8 | 24 | 1 |

All dimensions in inches.

Z
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› ZCC10 Fan Performance Data

Inlet Area (FT²)=5.12 | Outlet Area (FT²)=2.08 | Outlet Velocity (FPM)=CFM/2.08 | Tip Speed (FPM)=2.78xRPM | Wheel Dia.=10 5/8"

| CFM | 0.125" S.P. | | 0.250" S.P. | | 0.375" S.P. | | 0.500" S.P. | | 0.625" S.P. | | 0.750" S.P. | | 1.000" S.P. | | 1.250" S.P. | | 1.500" S.P. | |
|------|-------------|------|-------------|------|-------------|------|-------------|------|-------------|------|-------------|------|-------------|------|-------------|------|-------------|------|
| | RPM | BHP | RPM | BHP | RPM | BHP | RPM | BHP | RPM | BHP | RPM | BHP | RPM | BHP | RPM | BHP | RPM | BHP |
| 1500 | 396 | 0.11 | 523 | 0.17 | 627 | 0.24 | - | - | - | - | - | - | - | - | - | - | - | - |
| 1900 | 431 | 0.19 | 545 | 0.26 | 643 | 0.34 | 731 | 0.41 | 796 | 0.51 | 863 | 0.59 | - | - | - | - | - | - |
| 2300 | 473 | 0.30 | 573 | 0.38 | 665 | 0.47 | 747 | 0.56 | 824 | 0.65 | 882 | 0.75 | 1002 | 0.97 | - | - | - | - |
| 2700 | 519 | 0.46 | 611 | 0.55 | 694 | 0.64 | 772 | 0.74 | 841 | 0.85 | 905 | 0.96 | 1021 | 1.18 | 1126 | 1.44 | 1221 | 1.69 |
| 3100 | 568 | 0.66 | 652 | 0.76 | 728 | 0.87 | 800 | 0.98 | 868 | 1.09 | 931 | 1.20 | 1044 | 1.47 | 1146 | 1.71 | 1240 | 2.00 |
| 3500 | 620 | 0.91 | 697 | 1.04 | 768 | 1.16 | 833 | 1.28 | 897 | 1.40 | 959 | 1.53 | 1069 | 1.78 | 1176 | 2.08 | 1262 | 2.36 |
| 3900 | 677 | 1.23 | 743 | 1.37 | 810 | 1.50 | 873 | 1.64 | 930 | 1.77 | 987 | 1.91 | 1097 | 2.19 | 1195 | 2.48 | 1291 | 2.81 |

› ZCC12 Fan Performance Data

Inlet Area (FT²)=7.38 | Outlet Area (FT²)=2.94 | Outlet Velocity (FPM)=CFM/2.94 | Tip Speed (FPM)=3.31xRPM | Wheel Dia.=12 5/8"

| CFM | 0.125" S.P. | | 0.250" S.P. | | 0.375" S.P. | | 0.500" S.P. | | 0.625" S.P. | | 0.750" S.P. | | 1.000" S.P. | | 1.250" S.P. | | 1.500" S.P. | |
|------|-------------|------|-------------|------|-------------|------|-------------|------|-------------|------|-------------|------|-------------|------|-------------|------|-------------|------|
| | RPM | BHP | RPM | BHP | RPM | BHP | RPM | BHP | RPM | BHP | RPM | BHP | RPM | BHP | RPM | BHP | RPM | BHP |
| 2300 | 339 | 0.15 | 443 | 0.26 | 529 | 0.38 | - | - | - | - | - | - | - | - | - | - | - | - |
| 2700 | 359 | 0.20 | 456 | 0.32 | 538 | 0.45 | 612 | 0.60 | 680 | 0.76 | - | - | - | - | - | - | - | - |
| 3100 | 381 | 0.27 | 472 | 0.40 | 552 | 0.54 | 621 | 0.69 | 685 | 0.85 | 747 | 1.04 | - | - | - | - | - | - |
| 3500 | 406 | 0.35 | 492 | 0.49 | 565 | 0.64 | 634 | 0.81 | 696 | 0.98 | 752 | 1.15 | 854 | 1.51 | - | - | - | - |
| 3900 | 432 | 0.45 | 512 | 0.60 | 584 | 0.77 | 648 | 0.94 | 709 | 1.12 | 764 | 1.31 | 866 | 1.71 | 954 | 2.10 | - | - |
| 4300 | 459 | 0.57 | 533 | 0.73 | 603 | 0.91 | 664 | 1.09 | 723 | 1.29 | 778 | 1.49 | 876 | 1.90 | 964 | 2.33 | 1046 | 2.78 |
| 4700 | 486 | 0.70 | 559 | 0.89 | 623 | 1.07 | 683 | 1.27 | 738 | 1.47 | 791 | 1.68 | 889 | 2.13 | 976 | 2.58 | 1056 | 3.05 |
| 5100 | 516 | 0.86 | 585 | 1.08 | 643 | 1.25 | 703 | 1.47 | 757 | 1.69 | 806 | 1.89 | 903 | 2.38 | 989 | 2.87 | 1067 | 3.35 |
| 5500 | 547 | 1.05 | 611 | 1.28 | 668 | 1.48 | 723 | 1.69 | 776 | 1.93 | 825 | 2.16 | 916 | 2.64 | 1002 | 3.17 | 1081 | 3.70 |

› ZCC15 Fan Performance Data

Inlet Area (FT²)=10.60 | Outlet Area (FT²)=4.10 | Outlet Velocity (FPM)=CFM/4.10 | Tip Speed (FPM)=3.93xRPM | Wheel Dia.=15"

| CFM | 0.125" S.P. | | 0.250" S.P. | | 0.375" S.P. | | 0.500" S.P. | | 0.625" S.P. | | 0.750" S.P. | | 1.000" S.P. | | 1.250" S.P. | | 1.500" S.P. | |
|------|-------------|------|-------------|------|-------------|------|-------------|------|-------------|------|-------------|------|-------------|------|-------------|------|-------------|------|
| | RPM | BHP | RPM | BHP | RPM | BHP | RPM | BHP | RPM | BHP | RPM | BHP | RPM | BHP | RPM | BHP | RPM | BHP |
| 3900 | 303 | 0.44 | 385 | 0.39 | 452 | 0.52 | 512 | 0.68 | 562 | 0.81 | - | - | - | - | - | - | - | - |
| 4700 | 331 | 0.52 | 406 | 0.74 | 470 | 0.70 | 526 | 0.86 | 575 | 1.01 | 623 | 1.19 | - | - | - | - | - | - |
| 5500 | 361 | 0.54 | 429 | 1.26 | 490 | 1.13 | 544 | 1.09 | 594 | 1.29 | 639 | 1.48 | 724 | 1.91 | 795 | 2.27 | - | - |
| 6300 | 393 | 0.75 | 456 | 1.46 | 513 | 1.86 | 565 | 1.69 | 612 | 1.59 | 657 | 1.81 | 736 | 2.24 | 810 | 2.72 | 875 | 3.15 |
| 7100 | 425 | 1.01 | 485 | 1.49 | 536 | 2.64 | 587 | 2.64 | 633 | 2.44 | 675 | 2.18 | 754 | 2.69 | 824 | 3.17 | 888 | 3.65 |
| 7900 | 465 | 1.36 | 516 | 1.56 | 565 | 2.70 | 610 | 3.72 | 655 | 3.62 | 697 | 3.42 | 773 | 3.17 | 843 | 3.74 | 906 | 4.28 |
| 8700 | 505 | 1.77 | 547 | 1.98 | 594 | 2.74 | 637 | 4.12 | 678 | 4.96 | 719 | 4.85 | 793 | 4.32 | 861 | 4.33 | 924 | 4.94 |
| 9500 | 547 | 2.28 | 580 | 2.50 | 625 | 2.79 | 666 | 4.19 | 704 | 5.72 | 742 | 6.46 | 815 | 6.13 | 881 | 5.44 | 943 | 5.67 |

› ZCC18 Fan Performance Data

Inlet Area (FT²)=16.80 | Outlet Area (FT²)=5.74 | Outlet Velocity (FPM)=CFM/5.74 | Tip Speed (FPM)=4.75xRPM | Wheel Dia.=18 1/8"

| CFM | 0.125" S.P. | | 0.250" S.P. | | 0.375" S.P. | | 0.500" S.P. | | 0.625" S.P. | | 0.750" S.P. | | 1.000" S.P. | | 1.250" S.P. | | 1.500" S.P. | |
|-------|-------------|------|-------------|------|-------------|------|-------------|------|-------------|------|-------------|------|-------------|------|-------------|------|-------------|------|
| | RPM | BHP | RPM | BHP | RPM | BHP | RPM | BHP | RPM | BHP | RPM | BHP | RPM | BHP | RPM | BHP | RPM | BHP |
| 6300 | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - |
| 7100 | - | - | - | - | - | - | 462 | 1.32 | 503 | 1.58 | - | - | - | - | - | - | - | - |
| 7900 | - | - | - | - | 436 | 1.30 | 479 | 1.58 | 516 | 1.83 | 552 | 2.11 | - | - | - | - | - | - |
| 8700 | - | - | 402 | 1.31 | 452 | 1.58 | 495 | 1.85 | 532 | 2.14 | 567 | 2.44 | 629 | 3.02 | - | - | - | - |
| 9550 | 370 | 1.28 | 421 | 1.60 | 469 | 1.91 | 512 | 2.20 | 550 | 2.51 | 584 | 2.83 | 644 | 3.45 | 701 | 4.12 | - | - |
| 10300 | 391 | 1.55 | 439 | 1.89 | 484 | 2.23 | 527 | 2.56 | 565 | 2.86 | 599 | 3.21 | 659 | 3.89 | 713 | 4.57 | 765 | 5.30 |
| 11100 | 415 | 1.88 | 458 | 2.24 | 502 | 2.62 | 543 | 2.98 | 581 | 3.33 | 616 | 3.65 | 675 | 4.39 | 729 | 5.14 | 778 | 5.87 |
| 11900 | 440 | 2.28 | 479 | 2.64 | 521 | 3.06 | 559 | 3.44 | 597 | 3.83 | 631 | 4.18 | 692 | 4.94 | 745 | 5.74 | 793 | 6.52 |
| 12700 | 466 | 2.74 | 501 | 3.11 | 540 | 3.54 | 577 | 3.95 | 613 | 4.37 | 647 | 4.77 | 709 | 5.53 | 761 | 6.39 | 809 | 7.23 |

Performance shown is for installation Type B free inlet ducted outlet. Performance ratings do not include the effects of appurtenances in the airstream. Power rating (BHP) includes drive losses. Legend for colors is shown below.



Class I



Class II



Class III



Class IV



Class V

Engineering Specifications

Zephyr Cabinet Fans



Product Configuration & Engineering Specifications

Cabinet Fans

› Model

ZC = Single Unit
ZCC = Dual Unit

› Unit Size

10 12 15 18

› Motor Speed

1 = Single Speed
2 = 2S2W Single & Three Phase
3 = 2S1W Three Phase

› Horse Power

1/4 1/2 1/2 3/4
1 1 1/2 2 3

› Enclosure

O = Open Drip Proof
T = Totally Enclosed

› Voltage

| | | |
|----------|----------|----------|
| A = 110V | G = 230V | N = 440V |
| B = 115V | H = 240V | P = 460V |
| C = 120V | J = 277V | Q = 480V |
| D = 200V | K = 380V | R = 575V |
| E = 208V | L = 400V | S = 600V |
| F = 220V | M = 415V | |

› Phase

1 = Single
3 = Three

› Cycle

5 = 50 Hz
6 = 60 Hz

› Paint / Coating

0 = None
F = Epoxy Powder Coat*
G = Epoxy Powder Coat with UV*
H = Hi-Temp Powder Coat*
J = Non-Stick Powder Coat*
K = Phenolic Powder Coat*
L = Phenolic Powder Coat with UV*
N = Polyester Powder Coat
X = Special
* Not available with choice of color.

› Color

| | |
|----------------------|--------------------|
| 0 = None | 00 = Standard Gray |
| 50 = Chrome Green | 53 = Will. Blue |
| 55 = Pale Green | 56 = Dove Gray |
| 61 = White | 63 = Oxford Beige |
| 65 = Dover White | 66 = Desert Tan |
| 70 = Black | 73 = Smoke Gray |
| 77 = Brick Red | 79 = Peppercorn |
| 81 = Pale Brown | 83 = Choc. Brown |
| 85 = Timeless Bronze | |
| 94 = Charcoal | X = Special |

› Damper

0 = None
D = Damper

› Vibration Isolation

0 = None
RH = Rubber Hanger
SH = Spring Hanger
RF = Rubber Floor
SF = Spring Floor
SC = Support Channels with Rubber Floor

› Insulation

0 = None
A = Insulation

› Guard

0 = None
N = Inlet
U = Outlet
B = Both

› Dust Filter

0 = None
F = Dust Filter

› Filter Replacement Quantity

0 to 99

› Disconnect Switch

0 = None
1 = Nema 1 Disconnect Switch
3R = Nema 3R Disconnect Switch
4 = Nema 4 Disconnect Switch

› Internal Wiring

0 = None
1 = Nema 1 Internal Wiring
3R = Nema 3R Internal Wiring

› Thermal Overload Protection

0 = None
P = Thermal Protection

› ZC

Belt drive cabinet inline duct fan shall be Zephyr ZC, manufactured by PennBarry, Richardson, TX 75081.

Fan housing shall be galvanized steel, shall enclose the motor/fan assembly, & include removable side panels to allow access to the motor/fan assembly. Fans shall have a forward curved centrifugal wheel. Fan motors shall be continuous duty, ball bearing design, permanently lubricated, positively cooled, & furnished at the specified voltage, phase, & enclosure.

Each fan shall bear the AMCA Licensed Ratings Seal for Air Performance.

› ZCC

Belt drive dual cabinet inline duct fan shall be Zephyr ZCC, manufactured by PennBarry, Richardson, TX 75081.

Fan housing shall be galvanized steel, shall enclose two motor/fan assemblies, & include removable side panels to allow access to the motor/fan assemblies. Fans shall have a forward curved centrifugal wheels. Fan motors shall be continuous duty, ball bearing design, permanently lubricated, positively cooled, & furnished at the specified voltage, phase, & enclosure.

Each fan shall bear the AMCA Licensed Ratings Seal for Air Performance.

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1-Year Limited Manufacturer Warranty

› Products Covered

PennBarry Fans and Ventilators (each, a "PennBarry Product")

› One Year Limited Warranty For PennBarry Products

PennBarry warrants to the original commercial purchaser that the PennBarry Products will be free from defects in material and workmanship for a period of one (1) year from the date of shipment.

› Exclusive Remedy

PennBarry will, at its option, repair or replace (without removal or installation) the affected components of any defective PennBarry Product; repair or replace (without removal or installation) the entire defective PennBarry Product; or refund the invoice price of the PennBarry Product. In all cases, a reasonable time period must be allowed for warranty repairs to be completed.

› What You Must Do

In order to make a claim under these warranties:

- You must be the original commercial purchaser of the PennBarry Product.
- You must promptly notify us, within the warranty period, of any defect and provide us with any substantiation that we may reasonably request.
- The PennBarry Product must have been installed and maintained in accordance with good industry practice and any specific PennBarry recommendations.

› Exclusions

These warranties do not cover defects caused by:

- Improper design or operation of the system into which the PennBarry Product is incorporated.
- Improper installation.
- Accident, abuse or misuse.
- Unreasonable use (including any use for non-commercial purposes, failure to provide reasonable and necessary maintenance as specified by PennBarry, misapplication and operation in excess of stated performance characteristics).
- Components not manufactured by PennBarry.

› Limitations

- In all cases, PennBarry reserves the right to fully satisfy its obligations under the Limited Warranties by refunding the invoice price of the defective PennBarry Product (or, if the PennBarry Product has been discontinued, of the most nearly comparable current product).
- PennBarry reserves the right to furnish a substitute or replacement component or product in the event a PennBarry Product or any component of the product is discontinued or otherwise unavailable.
- PennBarry's only obligation with respect to components not manufactured by PennBarry shall be to pass through the warranty made by the manufacturer of the defective component.

› General

The foregoing warranties are exclusive and in lieu of all other warranties except that of title, whether written, oral or implied, in fact or in law (including any warranty of merchantability or fitness for a particular purpose).

PennBarry hereby disclaims any liability for special, punitive, indirect, incidental or consequential damages, including without limitation lost profits or revenues, loss of use of equipment, cost of capital, cost of substitute products, facilities or services, downtime, shutdown or slowdown costs.

The remedies of the original commercial purchaser set forth herein are exclusive and the liability of PennBarry with respect to the PennBarry Products, whether in contract, tort, warranty, strict liability or other legal theory shall not exceed the invoice price charged by PennBarry to its customer for the affected PennBarry Product at the time the claim is made.

Inquiries regarding these warranties should be sent to: PennBarry, 1401 North Plano Road, Richardson, TX 75081

Other PennBarry Products

Centrifugal Products



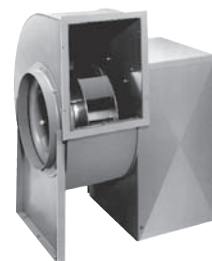
› **Domex**
Centrifugal
Roof Exhausters



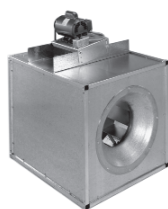
› **Fumex Fatrap**
Kitchen Hood Centrifugal
Roof Exhausters



› **Zephyr**
Ceiling and Inline Fans



› **Dynamo**
Centrifugal Blowers



› **Centrex Inliner**
Centrifugal Inline Fan



› **LC Dynafan**
Low Contour Centrifugal
Roof Exhausters

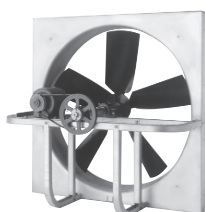


› **ESI**
Efficient Silent
Inline Fan



› **Fume Exhaust**
Curb Mounted
Centrifugal Fans

Axial / Gravity Products



› **Breezeway**
Propeller Wall Fan



› **Hi-Ex**
Power Roof Ventilator



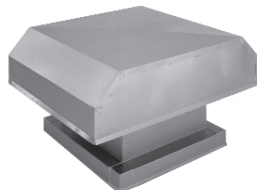
› **Tubeaxial**
Inline Fans



› **Vaneaxial**
Inline Fans



› **Powered Airette**
Axial Roof Ventilators



› **Airette**
Gravity Intake/Relief Hood



› **Domex Axial**
Axial Roof Ventilators



› **Axcentrix**
Bifurcator Fan



PENN BARRY™

For more information, contact your local PennBarry Sales
Manufacturer Representative or visit us at www.PennBarry.com.

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