



PHOENIX

NATURAL SMOKE AND HEAT
EXHAUST VENTILATOR



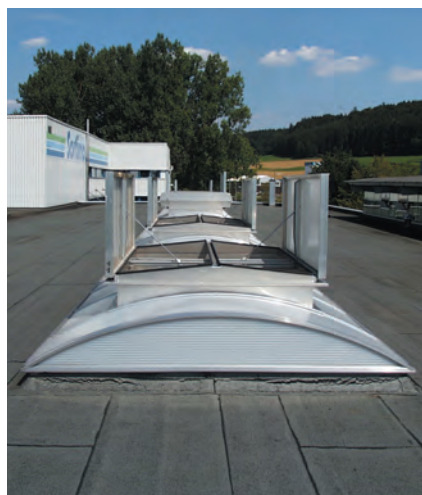
Natural smoke and heat exhaust ventilation systems are an essential part of safety-systems for preventive fire precautions. Their task is to provide a smoke-free zone at ground level and thus saving human and animal life. At the same time, by drawing off the smoke as soon as the fire starts, valuables are protected and fire-fighters have easy access to the fire.

PHOENIX benefits:

- ↪ Flexible sizes suitable for every roof opening up to 6.25m² ✓
- ↪ Ideal for flat roofs ✓
- ↪ Individual adaptable to all types of building ✓
- ↪ Natural, energy-saving daylight illumination ✓
- ↪ Easy installation by providing pre-constructed units ✓
- ↪ Usable for day-to-day ventilation ✓
- ↪ Individual paint colour ✓
- ↪ Minimal leakage ✓
- ↪ General construction supervision verification (ABP) ✓
- ↪ Recyclable without any noxious parts ✓
- ↪ Hail-proof and high-impact protected in accordance with the manufacturer's specifications ✓
- ↪ Also available as dark top flaps ✓

PHOENIX

THE GREAT SOLUTION FOR FLAT ROOFS



Like no other system smoke and heat extractors help fire fighting by:

- ↪ Keeping emergency exits and access ways free
- ↪ Making fire-fighting easier by providing a smoke-free zone
- ↪ Preventing the „flash-over“ and thus a full scale fire
- ↪ Protecting values
- ↪ Keeping the damage low due to fire gases and the products of thermal decomposition
- ↪ Avoiding fire stress to essential building parts

The PHOENIX system is available in a one and two-winged version. The system applies to the demands of DIN 18232 and VdS 2159.



PHOENIX PX2 on upstand and in glazing



PHOENIX PX2 double flap in northlight glazing



PHOENIX single wing smokevent with 24V electricmotor and automatic fire venting-box



PHOENIX PX2 double flap on upstand
PHOENIX PX1 single flap in glazing

Due to changes in the climate and increasing amounts of rain the normal natural smoke and heat exhaust ventilation systems, especially on flat roofs, have come to their limits of performance. Quite apart from the annoying pollution arising from weather and environmental influences. This is why we took the task of developing a system that provides optimal protection even during extreme periods of bad weather. So ventilation, fire protection and the extraction of smoke and heat, work together in a most efficient way.

PHOENIX requires less maintenance. Variable sizes and the minimal weight allow an easy installation on all types of roof constructions up to an angle of 90°.

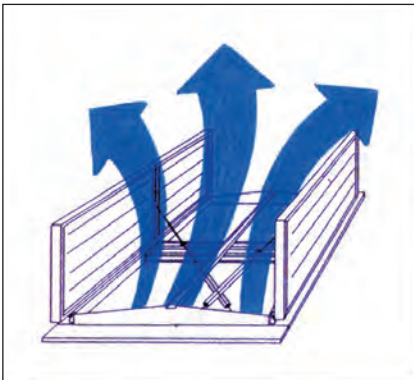


PHOENIX PX2 double flap in northlight glazing



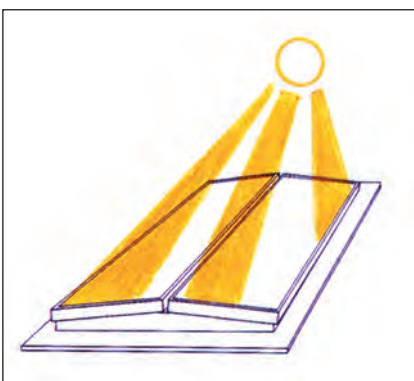
SMOKE AND HEAT EXTRACTION

- ↪ Automatic opening in the event of fire by CO₂ priority valve
- ↪ Network-independent opening by CO₂ alarm boxes
- ↪ Controlled by on-site pneumatic supply
- ↪ Control via smoke detectors and CO₂ priority valve
- ↪ Electrical activation (24V) with automatic smoke control box
- ↪ Effective aerodynamic free area (A_{WV} -value)



NATURAL VENTILATION

- ↪ Controlled by on-site pneumatic supply (6 bar)
- ↪ Rain safe by automatic rain detector
- ↪ Special controls possible, e.g. ZLT
- ↪ Clear opening ventilation

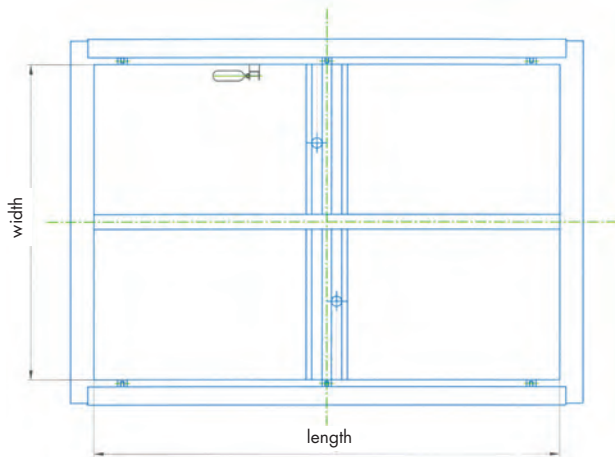


NATURAL DAYLIGHTING

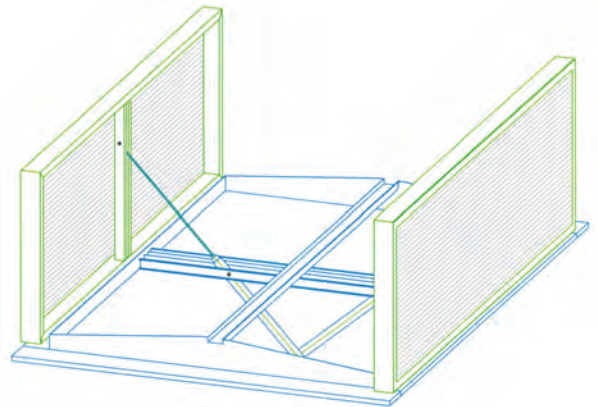
- ↪ Large surface for natural daylighting (light from above is six times more effective than light from side windows)
- ↪ Good U-value
- ↪ Glare-free illumination through opal polycarbonate panels

PHOENIX

TECHNICAL DESIGN



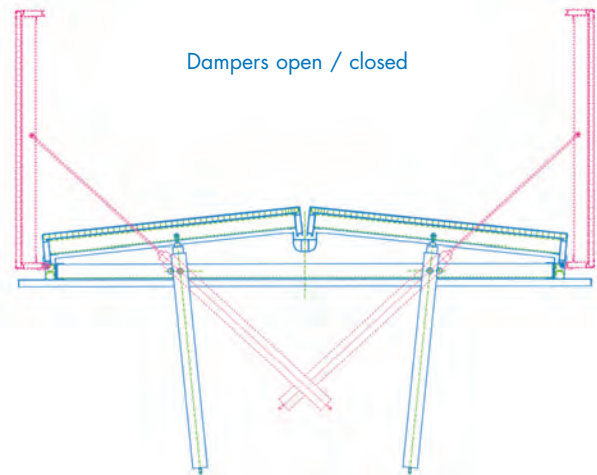
Stabil cross beam construction to keep on pneumatic cylinders + electric motors, middle rain – drainage – channel, welded.



Base insulated or non-insulated and flap construction from Aluminium profiles with Polycarbonate top flaps inserts hinges from aluminium cast metal – with stainless-steel-bearing bolts.



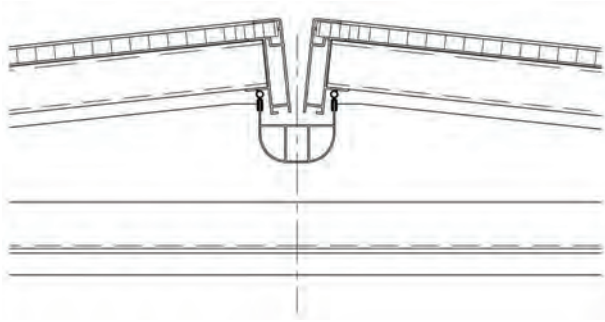
Smoke control box for electrical operated smoke-ventilator with NiCa accumulators for temperature or smoke control in case of fire.



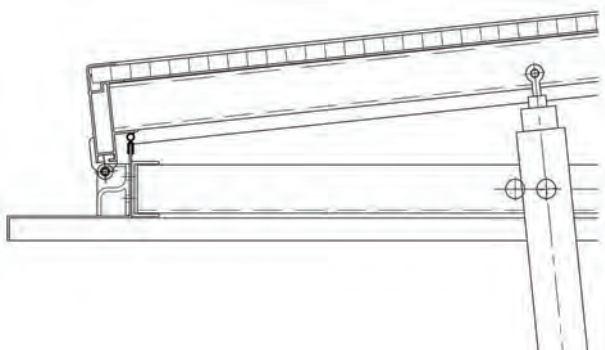
Pneumatic cylinders with locking in open and closed position adjustable – depending on size of unit

TECHNICAL SPECIFICATIONS

Unit Type	length (mm)	width (mm)
1) PHÖNIX PX1	500 - 2500	500 - 1250
PHÖNIX PX2	500 - 2500	1000 - 2500



Water drainage via rain channel and 15° sloped top flaps



3 hinges per flap from aluminium cast metal – with stainless steel – bearing bolts

PHOENIX

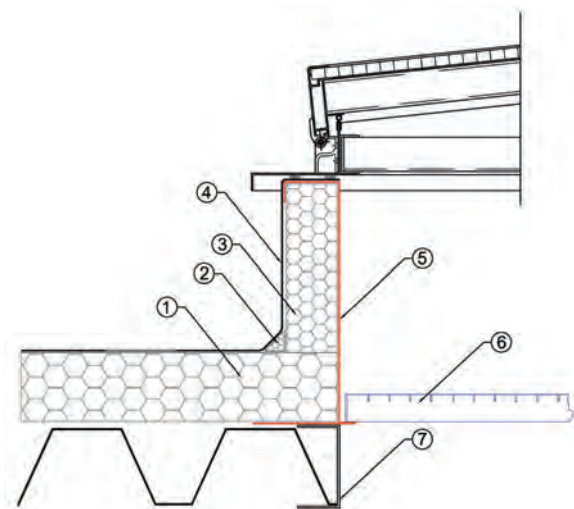


Maintenance grill – also for sun reflection.

The PHOENIX can be equipped with double skin aluminium base and top flaps, single skin base and top flaps or double skin polycarbonate top flaps with either single or double skin base-frame.

The specially profiled unit top frames are made of corrosion resistant aluminium. The unit top flaps can be either manufactured from 16 mm PC-panels or from aluminium sandwich panels. They are operated by pneumatic cylinders and can lock in the opened or closed position. The hinges are provided as rigid cast-metal parts. Weatherproofing is achieved by profiled sealing. The units are pre-assembled ready for installation and tested. End locking provides stability in windy conditions, when the system is open.

TECHNIQUES IN DESIGN



1. roof insulation
2. insulation wedge
3. upstand insulation
4. roof-foil
5. upstand – metal-sheet
6. maintenance grill
7. metal sheet frame

Quality-control



PHOENIX PX2 double unit on upstand with insulated double skin top flaps (dark-version)

PHOENIX



PHOENIX PX2 on upstand for ventilation, daylighting and smoke ventilation

The natural smoke and heat exhaust ventilation system PHOENIX, in the single winged and double winged version, has been tested and approved according to the regulations DIN 18232 and VdS 2159.

The base frame and the top flap construction are manufactured from welded aluminium profiles. The top flaps inserts are delivered on choice as 16mm polycarbonate double skinned panels or as sloped aluminium sandwich panels. The units are provided with a rain drainage system.

The units are controlled by maintenance-free pneumatic cylinders with locking at open and closed position. The automatic release operates via thermal priority valves and CO₂ ampules.

The system meets the requirements regarding wind forces, snow loads, sound insulation and energy conservation.

The units are preassembled ready for installation and are checked by the manufacturer on the following points:

- stability
- functional security
- aerodynamic free area
- corrosion resistance
- fire-release
- duration tests

SPECIFICATION

Roof opening width: _____ mm

Roof opening length: _____ mm

Flange version: _____

Flange width: _____ mm

Flange length: _____ mm

Aerody. free area: _____

Weigth: _____ kg

Unit-top inserts: _____



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VdS

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