# Termodin/air\

## PHOENIX
### NATURAL VENTILATION AND SMOKE EXTRACTION



Large illustration: PHOENIX NSHEV fitted at the end of a EUROLIGHT skylight.



Thermally separated PHOENIX K33



Single-flap PHOENIX in a DELTALIGHT



PHOENIX on a flat roof

## Information about PHOENIX

In addition to its function as a natural heat and smoke extractor, the PHOENIX can be used for everyday ventilation; even coping with extreme weather conditions. On customers request the PHÖNIX is available in insulated or non-insulated versions, or in the 33 version as a thermally separated system. The top flaps can be fitted with a choice of either 16 mm multiwall polycarbonate panels or an aluminium sandwich structure. Depending on the top flap infill, sound absorption levels of up to 33 dB RW are possible.

Depending on the design, the top flaps open via compressed air cylinders with end-position locking at both ends or via electric servomotors. Weathertightness is achieved by means of EPDM profile seals. On request, the PHOENIX can be supplied with fall-through-safety grids, thus helping to guarantee the required fall-through protection. The system modules are pre-assembled and tested ready for operation.

### Advantages:

- Flexible sizing makes the system ideal for use on flat roofs for all roof openings up to 2.5 x 3 m²
- Suitable for everyday ventilation (full ventilation at 90° vent position)
- Endurance tests with 10,000 opening cycles have confirmed the robust, functional design and the high quality of the materials used
- the thermally separated version reduces condensation problems
- Good aerodynamic efficiency
- Good U-value and low joint leakage
- Available with opaque flaps
- Efficient drainage of rainwater via central drainage channels
- Energy-saving natural lighting, which is glare-free when using opal polycarbonate or Lumira™-filled panels (light incidence from above is five times more effective than through side windows)
- Hail-and fall-through-proof depending on the specification
- Powder coating allows for individual choice of colours
- Plinth mounting using tension locks – no drill holes needed
- Fire-resistance rating A1 (depending on the specification)
- Maintenance-free hinges are aluminium castings with Teflon-coated bronze bushes and stainless steel shafts
- Easy mounting in all roof and wall constructions up to a 90° angle

The PHOENIX comply with DIN EN 12101-2 and VdS 2159 (depending on the specification).

CE
MPA - Geprüft nach:
DIN EN 12101 - 2
Bauproduktengesetz
89 / 106 / EWG

In addition, the pneumatically controlled PX1 and PX2 units have been tested for explosion protection (ATEX) according to the EU Directive 94/9/EC with reference to EN 1127-1, EN13463-1 and EN 13463-5 (depending on system size and model). The EC declaration of conformity for the product and the explosion proofing are delivered with the product.

### Field of application:

- Flat roofs
- Northlight roofs
- Skylight systems
- Gable roof skylight systems

# PHOENIX

### The PHOENIX is tested and certified for:

- Functional reliability up to Re 1000 (VdS approval min. Re 50)
- Functional reliability at wind loads up to WL 3000* (VdS approval min. 1500 N/m²)
- Functional reliability at snow loads up to SL 1500* (VdS approval min. 500 N/m²)
- Functional reliability at low ambient temperatures down to T(-15)* (VdS approval min. -5°C)
- Sound insulation levels according to our specifications
- Functional reliability up to heat-exposure rating of B 300-E (300 °C / fire-resistance rating E)
- Tested by the Material Testing Authorities of North Rhine-Westphalia*
- Tested by other independent testing institutes*
- Approved by VdS*

\* depending on system size and model

### The PHOENIX is also tested for:

- Correct operation during fatigue testing (10,000 opening cycles)
- Aerodynamically efficient opening surface
- Corrosion and aging resistance

### In the event of fire, the PHOENIX with pneumatic drives open:

- Automatically via a thermal priority valve connected to a $CO_2$ cartridge
- Via an emergency fire control unit with a $CO_2$ cartridge
- Via a fire alarm control unit triggered by smoke detectors or actuator buttons (optional)

### In the event of fire a smoke-and-heat-extraction-system control cabinet with backup batteries actuates the 24 V versions with servomotors:

- Via smoke detectors or actuator buttons
- Via an intermediate fire alarm control unit
  (both systems optional)



thermal priority valve connected to a $CO_2$ cartridge

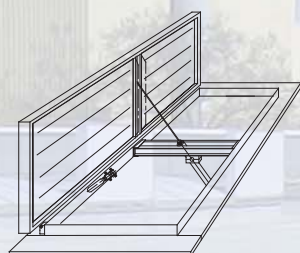### Triggering for everyday ventilation
via the building's compressed-air network, a ventilation control cabinet (pneumatic control),
or a smoke-and-heat-extraction-system control cabinet (24 V servomotors):

- Ventilation control cabinet
- Actuator buttons
- Timer for night cooling (optional)
- Wind and rain sensors for protection against bad weather (optional)

MPA NRW.
Materialprüfungsamt Nordrhein-Westfalen
geprüft + überwacht
Nr.: 210004512

VdS
•ISO 9001
•anerkannte Produkte
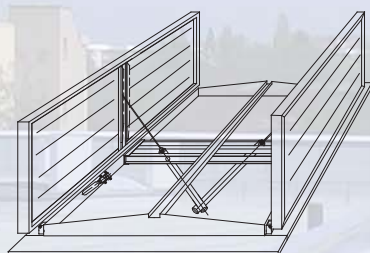•anerkannte Systeme
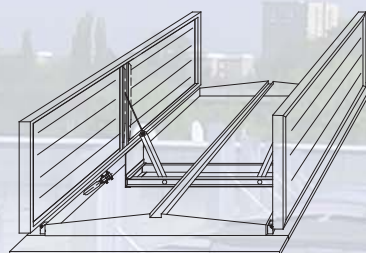
# PHOENIX

Versions:



PHOENIX PX1          PHOENIX PX2          PHOENIX PX2 MKII

PX1G   – Single-flap in an opening or a non-opening version (only for skylights/Northlight roofs)

PX2D   – Double flap in opening or non-opening versions

PX2MKII – Double-flap version with short cylinders

## Design characteristics:

The unit is made of AlMg3 aluminium alloy with single- or double-skin insulation. In the 33 version the thermal separation is achieved by using rolled-in polyamide bars for both the top flaps and the base. The heat loss is reduced to a minimum by EPDM seals. The maintenance-free pivot points on the cylinders or servomotors are made up of Teflon-coated bronze bushings with stainless-steel pins. Mounting on the plinth is by means of tension locks or screw connections with sealing washers.

## Top flap versions:

- PC – Clear or opal 16 mm polycarbonate panels (on request with LumiraTM insulation)
- A1 – Single-skin aluminium version
- A2 – Double-skin aluminium version (insulated)

The top-flap frames are made of aluminium alloy (AlMgSi05). They are inclined at 6° to the horizontal. The top flaps are attached using three hinges with carriage bolts. All versions are available up to the maximum frame size.

## Sizes:

The systems are made to order and can be produced in all lengths and widths up to 2,500 x 3,000 mm.

Termodin/air\ **business partner of**    E.M.B

Tel. +34 981 73 28 44 | Fax. +34 981 70 43 31 | termodinair@termodinair.com | www. termodinair.com