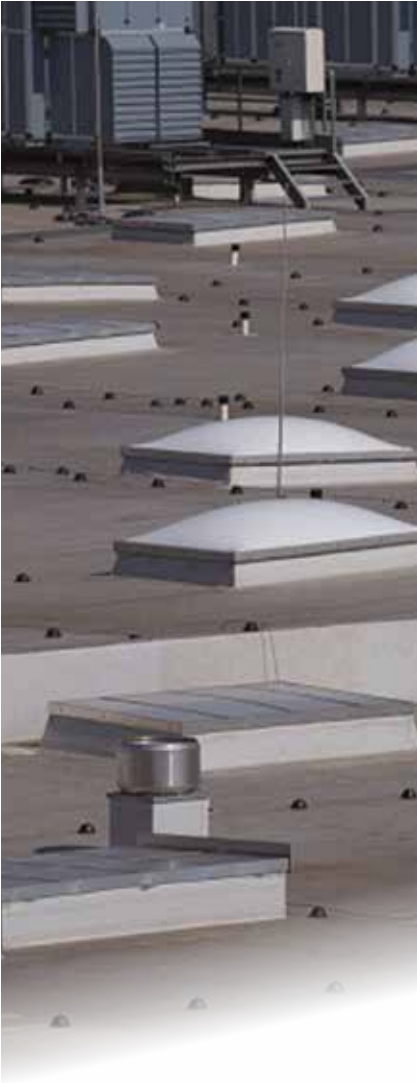




mcr PROLIGHT, mcr PROLIGHT PLUS
smoke exhaust vents, skylights, roof access hatches



The fire causes the release of large amounts of smoke and hot gases in the building that can be dangerous for people inside. The priority in such a case is to evacuate people as soon as possible and to start fighting the fire in order to reduce losses of properties. In order to achieve this, it is important to remove smoke from evacuation routes and to lower the smoke temperature, which also mitigates the risk of the building structure damage. In order to achieve the above goals, natural smoke exhaust systems are designed with their basic elements, which include mcr PROLIGHT smoke exhaust ventilators and control devices.

Mercor offers comprehensive solutions within the area of fire safety for various types of premises, starting from large format halls to staircase smoke exhaust systems.

In order to meet the various requirements of our customers, we have elaborated a whole range of smoke exhaust vents that additionally may have the function of ventilation flaps, spot skylights or regular roof access hatches.





ADVANTAGES OF SPOT SMOKE EXHAUST VENTS

Variety of shapes

Many types of smoke vents available in many shapes and optional fittings

A wide range of dimensions

Manufacturing of custom-made sizes to meet the customer demands is our standard service.

Non-standard solutions

The preparation of non-standard variants of vents according to an architect's vision is also possible on request.

Choice of active surface

Adjusting active area of the smoke vent by optional fitting elements that enhance its parameters (wind deflectors, inlet deflectors)

Multifunctionality

Spot smoke vent may provide several functions at the same time, e.g.: smoke and heat exhaust, daily ventilation, supply of daylight and roof access

Operational reliability

Excellent technical parameters of smoke exhaust vents ensure their operational reliability

Certificates

- product classification according to the Certificate of Constancy of Performance no. 1396-CPR-040 pursuant to EN 12101-2
- production management process according to ISO 9001:2008





MCR PROLIGHT SMOKE EXHAUST VENTS – TYPE C AND E

Single leaf vents with upright base

▶ AERODYNAMICAL ACTIVE AREA

With the application of optional elements increasing the active smoke exhaust surface (wind and inlet deflectors), it is possible to reach the max. value of 3.24 m² (type C) or 4.05 m² (type E)

▶ CONSTRUCTION OPTIONS

A whole range of smoke exhaust vents types and a wide portfolio of optional elements can be applied in order to implement the most demanding customer requests

▶ LEAF FILLING

Leaf filling that affects heat transfer coefficient **U**:

- polycarbonate structured sheets
- acrylic dome
- solid polycarbonate dome
- layered sheets / insulated solid cover
- glazing compliant with B_{ROOF} (t1) classification

▶ DIMENSIONS

- size range for C type vents (square)
100 x 100 cm ÷ 200 x 200 cm
- size range for E type vents (rectangular)
100 x 120 cm ÷ 200 x 250 cm

▶ CONTROL

- The choice of control types depending on the project requirements:
- smoke exhaust: pneumatic, electric (24V-)
 - ventilation: electric 230V~

Also available as smoke vents with daily ventilation and as only ventilation flaps, skylights or roof access hatches

mcr PROLIGHT single leaf smoke vents of C type with roof access feature

▶ DIMENSIONS

available dimensions: C 100 x 100 cm

▶ LEAF FILLING

A wide range of leaf fillings:

- polycarbonate structured sheets
- acrylic dome
- solid polycarbonate dome
- insulated solid cover
- glazing compliant with B_{ROOF} (t1) classification

▶ CONTROL

Electric system of smoke exhaust and ventilation control (24V-)





MCR PROLIGHT SMOKE EXHAUST VENTS – TYPE DVP

Double leaf vents with upright base

► DIMENSIONS

Size range (roof opening)
120 x 250 cm ÷ 300 x 300 cm

► AERODYNAMICAL ACTIVE AREA

DVP type smoke vents can reach the max. aerodynamical active area of 6.6 m² with the application of elements increasing the active area (such as wind and inlet deflectors)

► LEAF FILLING

Leaf filling that affects the heat transfer coefficient **U**:

- polycarbonate structured sheets
- insulated solid cover
- glazing compliant with B_{ROOF} (t1) classification

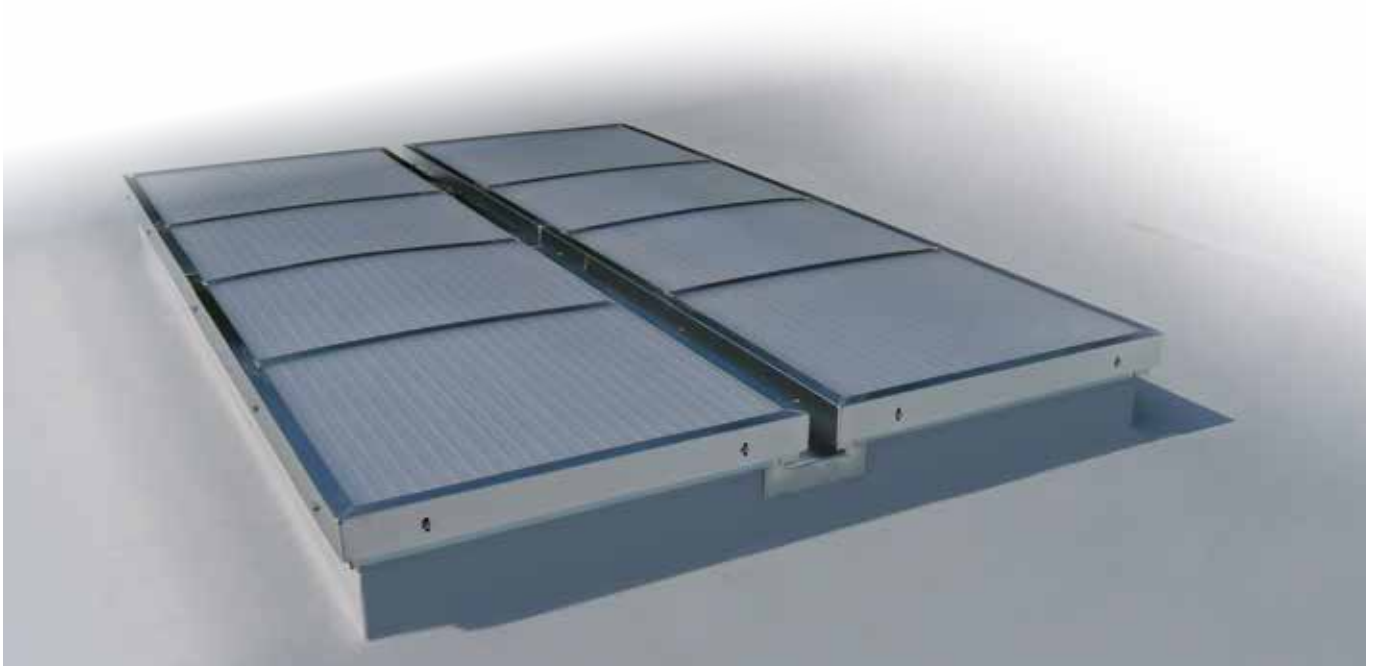
► CONTROL

- smoke exhausting: pneumatic, electric (24V-)
- ventilation: electric 230V~

► CONSTRUCTION OPTIONS

A whole range of smoke exhaust vents types and optional elements to match the offer to the customer requirements

Also available as smoke exhaust ventilation or daily ventilation flaps



MCR PROLIGHT SMOKE EXHAUST VENTS – TYPE NG-A

Single leaf vents with slanting base

► DIMENSIONS

Size range

110 x 110 cm ÷ 200 x 300 cm

► AERODYNAMICAL ACTIVE AREA

Max. active surface that can be reached is 4.53 m²

► LEAF FILLING

A wide range of leaf fillings that affect heat transfer coefficient **U**:

- polycarbonate structured sheets
- acrylic dome
- solid polycarbonate dome
- insulated solid cover
- glazing compliant with B_{ROOF} (t1) classification

► CONTROL

- smoke exhaust: pneumatic, electric (24V-)
- ventilation: electric 230V~

► CONSTRUCTION OPTIONS

A whole range of possible options of vent constructions pursuant to custom-made philosophy to meet the customer demands

Also available as smoke vents with daily ventilation, or only ventilation flaps, skylights or roof access hatches

MCR PROLIGHT VENTILATION VENTS AND SKYLIGHTS – TYPE R

Single leaf round ventilation flaps and skylights with upright base

► DIMENSIONS

Available sizes Ø100 cm ÷ Ø180 cm

► LEAF FILLING

Leaf filling that affects heat transfer coefficient **U**:

- polycarbonate structured sheets
- acrylic dome
- solid polycarbonate dome
- insulated solid cover
- glazing compliant with B_{ROOF} (t1) classification

► CONTROL

- ventilation: electric 230V~

► CONSTRUCTION OPTIONS

A whole range of possible options of skylights pursuant to the idea of custom-made philosophy in order to meet the customer demands

CONTROL SYSTEM FOR SMOKE AND HEAT VENTILATION

The proper operation of smoke and heat ventilators in natural systems of smoke exhausting is possible due to devices controlling their opening and closing. The devices are the smoke exhaust and/or ventilation control systems.

Types of control systems:

- ▶ electric (24V-)
- ▶ pneumatic
- ▶ electric (230V~) – for daily ventilation function in pneumatic systems

TYPICAL CONFIGURATION OF ELECTRIC CONTROL SYSTEMS

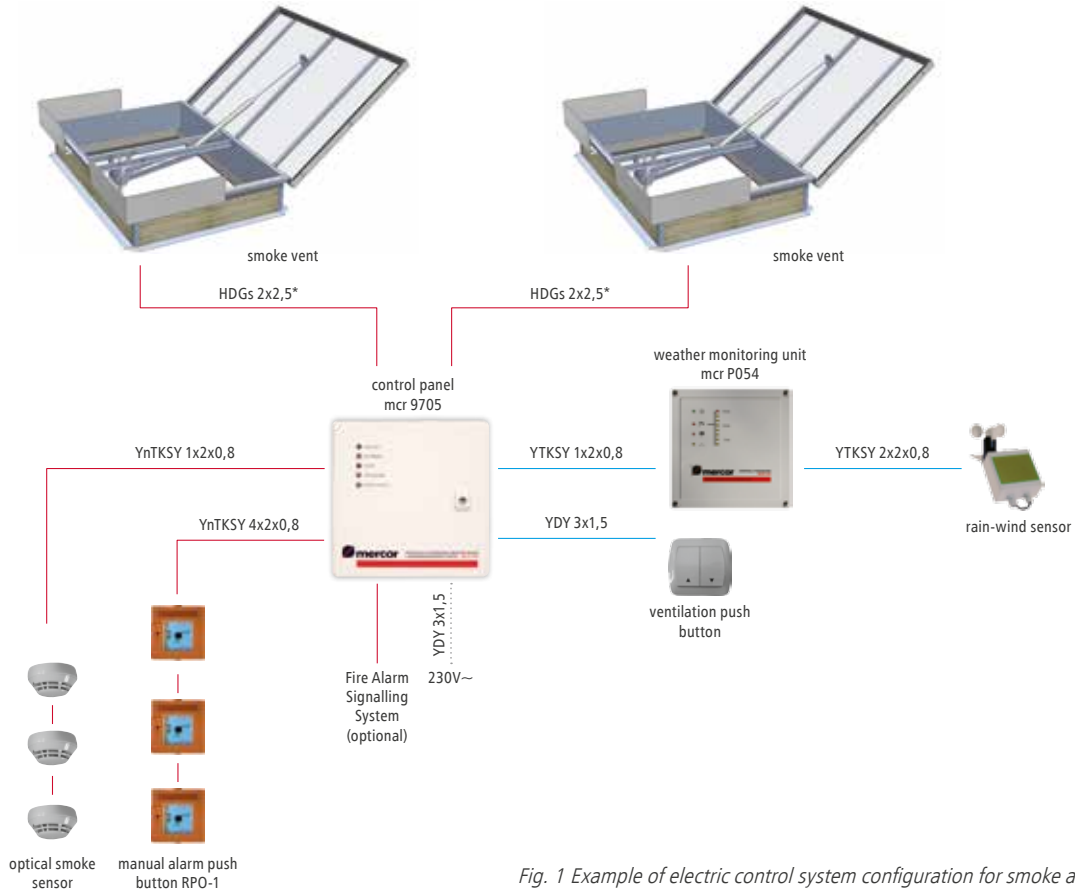


Fig. 1 Example of electric control system configuration for smoke and heat ventilators

TYPICAL CONFIGURATION OF PNEUMATIC-ELECTRIC CONTROL SYSTEMS

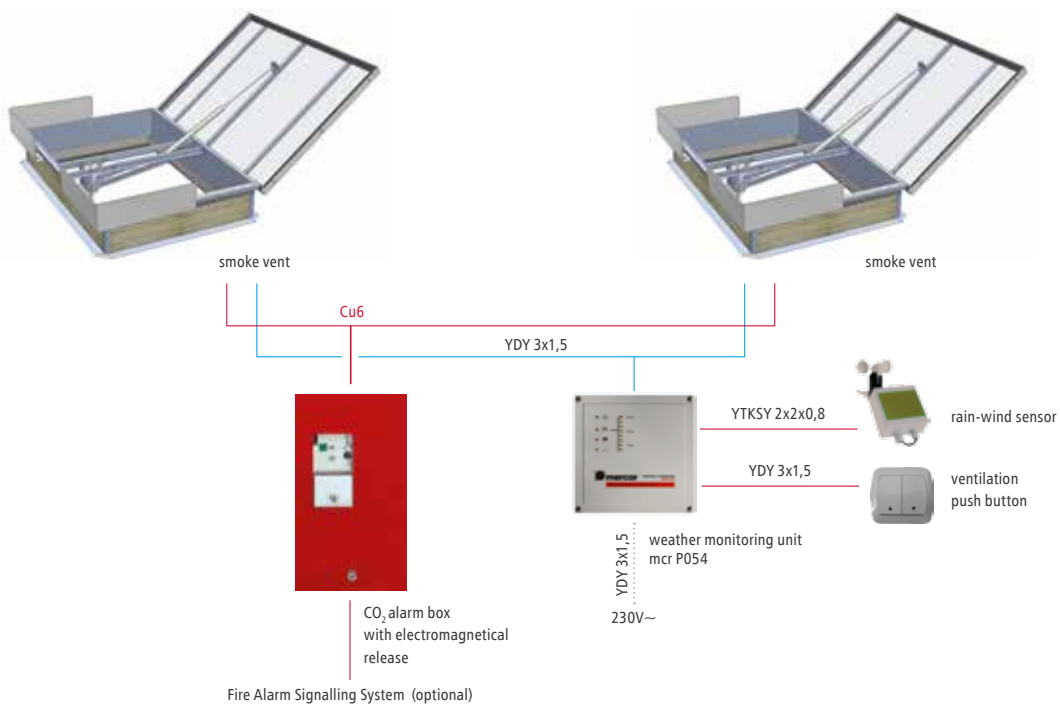


Fig. 2 Example of pneumatic control system configuration for smoke and heat ventilators with daily ventilation function 230V~

FIRE PROTECTION SYSTEMS

- ▶ smoke and heat exhaust systems
- ▶ fire ventilation systems
- ▶ fire protection of building structures

NATURAL SMOKE AND HEAT EXHAUST SYSTEMS

- ▶ comprehensive solutions for smoke and heat exhausting
- ▶ protection of escape routes against smoke
- ▶ reduction of material losses caused by fire and smoke
- ▶ supply of light and fresh air to building interiors

**WE PROVIDE
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