

staircases with
mcr ULTRA THERM

**mcr THERM
SYSTEMS**



We provide safety

NATURAL SMOKE EXHAUST SYSTEM

Ensuring the safety of users is one of the key requirements affecting the design of each building. Staircases are the main way of safe evacuation of people, that is why it is so important to equip them with an efficient smoke exhaust system. It is used to remove smoke, fire gases and heat energy generated during a fire from the building.

In the **mcr THERM SYSTEM** natural smoke exhaust system for staircases, which can be found in the „**MERCOR**” S.A. offer, we have used a number of innovative devices. These solutions are the result of

our many years of research, improvements and industry experience. They contribute to the protection of life and property, while meeting current and future requirements for the thermal insulation of buildings. Their aesthetics and handling can meet the expectations of even the most demanding users and fit perfectly into the context of modern architecture.

The complete stairwell smoke extraction system proposed by „**MERCOR**” S.A. consists of devices for smoke extraction, aeration and ventilation as well as control devices.



Mercor Group's mission is to deliver safety to building users by providing them with comprehensive fire protection. For over 35 years, we have been offering our business partners, at every stage of the investment process, products and services they can always trust. As a leader of modern technologies in the fire protection industry, we introduce new solutions that are ahead of the norm, and are additionally characterized by high quality and aesthetic workmanship.

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SYSTEM'S ADVANTAGES

FUNCTION

The system ensures safe evacuation through the staircase, while offering additional natural ventilation and enabling access to the roof (vent with hatch function).



AESTHETICS

Simplicity and modern design make the devices easy to integrate into interior design, adapting them to buildings of various character and purpose.



INTUITIVE SERVICE

One control panel is used for configuration and diagnostics of all devices in the system, the advantage is also the possibility of continuous monitoring of the system operation from the front panel of the control panel.



The **mcr ULTRA THERM** smoke vents (part of mcr THERM SYSTEMS) have obtained a declaration showing the environmental impact of the product – from sourcing of raw materials to transport and final assembly.



QUALITY

It is the result of combining the unique features of the mcr THERM SYSTEM: functionality, aesthetics and advanced technology, and the system is made of materials with high quality parameters.



WARMTH

The use of innovative products (smoke vents and windows) with high insulation, without thermal bridges guarantees no heat loss.



RELIABILITY

Devices included in the system (vents and windows) have been tested in 10 000 cycles to the position of ventilation.



FRIENDLY SERVICE

Notifications from the system control panel make it possible to quickly determine the causes of errors, and the design of the control panel mainboard allows the system to be expanded with additional functions or devices.

**COMPLETE SYSTEM
FOR STAIRCASES**

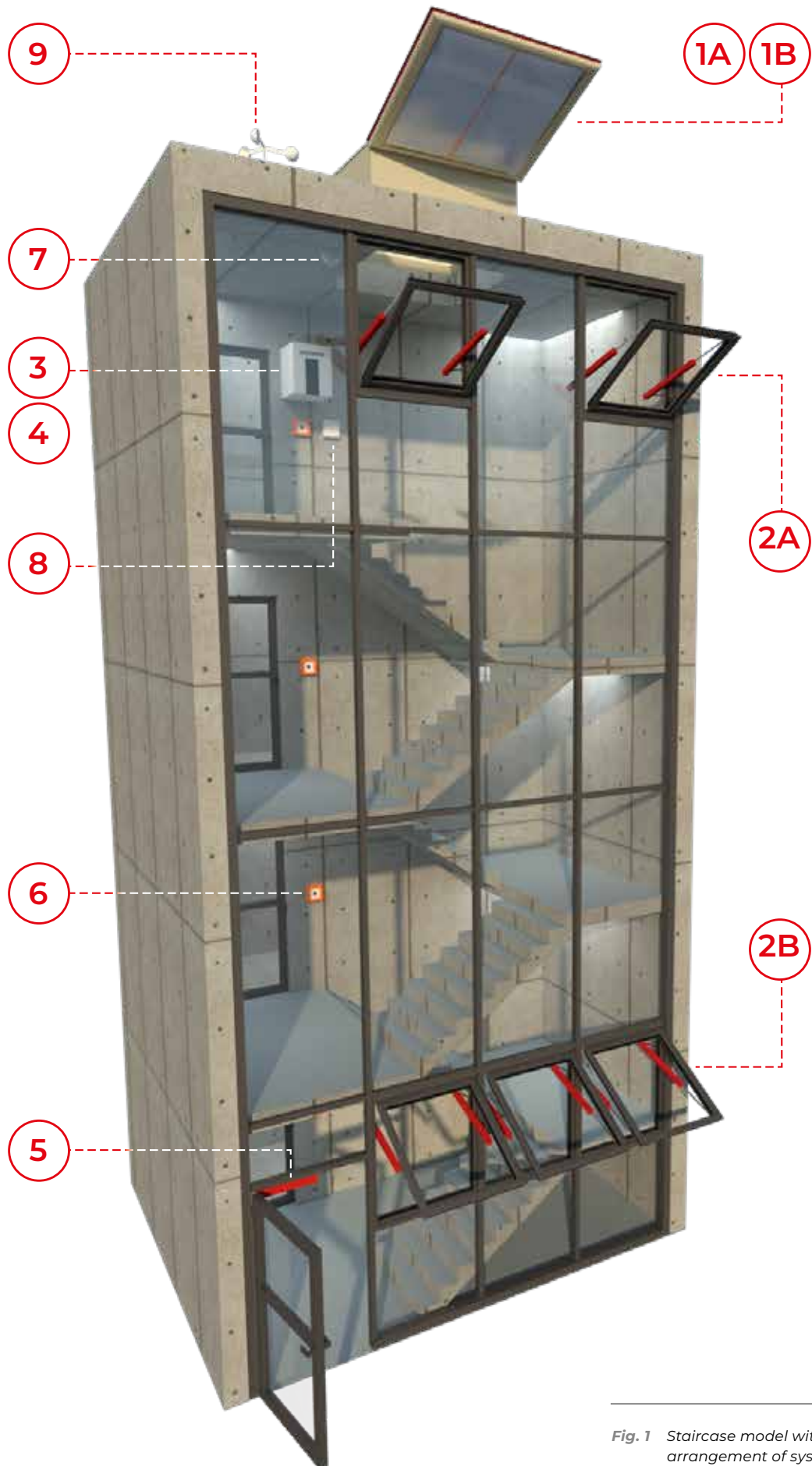


Fig. 1 Staircase model with an example arrangement of system devices natural smoke exhaust

DEVICES FOR SMOKE EXHAUST AND VENTILATION

Smoke exhaust vent mcr ULTRA THERM

Function: smoke exhaust, daily ventilation
Dimensions min.: 100 x 100 cm or 80 x 120 cm
Dimensions max.: 200 x 300 cm

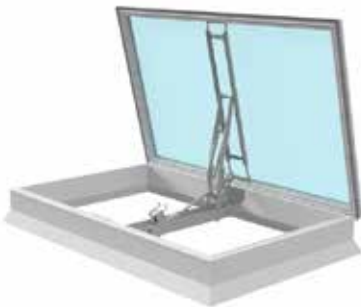
Design: modular PVC base or folded steel base
Glazing: multi-chamber polycarbonate plates, acrylic or solid polycarbonate domes, mixed glazing
Control: electric 24 V-/48 V-/230 V~

Smoke exhaust vent mcr ULTRA THERM (with roof access function)

Function: smoke exhaust, daily ventilation, roof access
Dimensions min.: 100 x 100 cm or 90 x 120 cm
Dimensions max.: 160 x 220 cm (1 actuator) or 200 x 250 cm (2 actuators)

Design: modular PVC base or folded steel base
Glazing: multi-chamber polycarbonate plates, acrylic or solid polycarbonate domes, mixed glazing
Control: electric 24 V-/48 V-/230 V~

1A



1B



$U_{rc} = 0.8$
W/m²K



2A

$U_{rc} = 0.9$
W/m²K



2B

Smoke exhaust windows mcr OSO THERM 75

Function: smoke exhaust and daily ventilation
Dimensions min.: 80 x 80 cm
Dimensions max.: 270 x 130 cm or 160 x 220 cm
Design: thermally broken multi-chamber aluminium profiles
Glazing: glazing unit or sandwich panel
Control: electric 24 V-/48 V-/230 V~

Aeration window mcr OSO THERM 75

Function: aeration and daily ventilation
Dimensions min.: 80 x 80 cm
Dimensions max.: 270 x 130 cm or 160 x 220 cm
Design: thermally broken multi-chamber aluminium profiles
Glazing: glazing unit or sandwich panel
Control: electric 24 V-/48 V-/230 V~

ELECTRIC CONTROL SYSTEM DEVICES



Control unit mcr SVM

mcr SVM 24V- 5 A / mcr SVM 24- 8 A
In accordance with EN12101
– class A (double power supply)

Power supply voltage: 230 V~ (1.2 A/1.7 A)

Output voltage: 24 V-

No. of outputs: 1 (1 fire zone / 1 comfort ventilation group)

Max. total load: 5 A / 8 A

Operation time without main voltage source: 72 h

Dimensions: 238 x 113 x 286 mm

Control unit mcr SV-ds

mcr SV 24V-xx-ds / mcr SV 48V-xx-ds
In accordance with EN12101
– class A (double power supply)

Power supply voltage: 230 V~ (5 A/10 A)

Output voltage: 24 V- or 48 V-

No. of outputs: 2 (2 fire zones / 2 comfort ventilation groups)

Max. total load: 8 A / 24 A / 30 A / 32 A

Operation time without main voltage source: 72 h

Dimensions: 343 x 178 x 450 mm



5

Door actuator mcr HCV 500/600 Door Drive



6

Emergency pushbutton mcr BVT

7



Optical smoke sensor

8



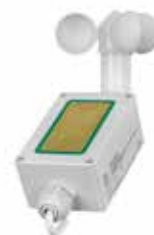
Ventilation pushbutton LT

+



Remote control FLEX

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Rain-wind sensor AR|AWR



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 Smart Growth

European Union
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The product was developed within the framework of an innovative project entitled:
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 subsidized with European funds.



Read more about our mcr THERM SYSTEMS for staircases

www.mercor.com.pl/en



CONTINUOUS ROOFLIGHT WITH SMOKE VENTS



SMOKE AND VENTILATION VENTS



LOUVERED VENTS



SMOKE CURTAINS



SMOKE EXHAUST WINDOWS



ROOF HATCHES



FIXED SKYLIGHTS



CONTROL SYSTEMS



STAIRCASE SMOKE EXHAUST SYSTEMS

