

FIRE VENTILATION SYSTEMS

Fire and smoke dampers, fire valves,
smoke and air intake fans,
power and control units



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“Mercor” S.A. specializes in designing, manufacturing and delivering state-of-the-art fire ventilation system solutions. Our products are of the highest quality, approved by specialized institutions and gained the trust of hundred of customers. Mercor S.A. fire ventilation systems are the guarantee of the most effective safety and fire protection. They reduce fire-related risks while limiting the spread of fire.

A wide range of products based on fire dampers and fire valves, smoke extraction, air supply and jet fans, power and control units, overpressure systems and jet ventilation systems allow to create a comprehensive and accurate fire system which works according to the plan formulated in the fire scenario.

CUT-OFF FIRE DAMPERS



mcr **FID PRO** single-blade, low-resistance cut-off damper

- » **CE** – according to EN 15650
- » **Fire resistance rating:**
 - EI 60 ($v_e h_o i \leftrightarrow o$)S
 - EI 120 ($v_e h_o i \leftrightarrow o$)S
 - EI 180 ($h_o i \leftrightarrow o$)S

The damper is intended to separate a fire hazard zone from the safe section of the building. It can be installed at a distance from a construction partition. Available in ATEX version.



mcr **FID S/S c/P** single-blade, low-resistance cut-off damper

- » **CE** – according to EN 15650
- » **Fire resistance rating:**
 - EI 120 ($v_e h_o i \leftrightarrow o$)S

The damper is dedicated to work with general ventilation systems (air supply and exhaust) at penetration sites through construction partitions – walls and ceilings. Available in ATEX version.



mcr **FID S/S p/P** single-blade cut-off fire damper

- » **CE** – according to EN 15650
- » **Fire resistance rating:**
 - EI 120 ($v_e h_o i \leftrightarrow o$)S

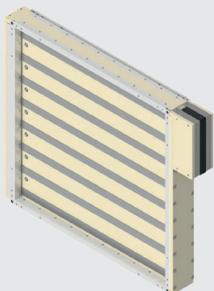
The damper is intended to separate a fire hazard zone from the safe section of the building. Damper installation solutions beyond the construction partition in walls and ceiling are covered by the certificate. Possibility of modular installation of dampers. Available in ATEX version.



mcr **WIP/S** multi-blade transfer cut-off damper

- » **CE** – according to EN 15650
- » **Fire resistance rating:**
 - EI 60 ($v_e i \leftrightarrow o$)S
 - E 120 ($v_e i \leftrightarrow o$)S
 - EI 120 ($v_e i \leftrightarrow o$) - for the mcr WIP transfer damper

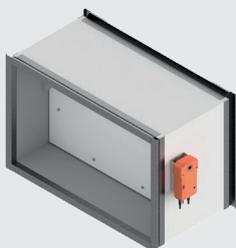
The damper is designed to separate the fire zone from the safe part of the building. The damper can also be used as a transfer damper (T version). Certified for installation with masking grilles.



mcr **WIP PRO/S** multi-blade cut-off damper or transfer damper

- » **CE** – according to EN 15650
- » **Fire resistance rating:**
 - EI 120 ($v_e i \leftrightarrow o$)S
 - EI 90 ($h_o i \leftrightarrow o$)S
 - EI 180 ($v_e i \leftrightarrow o$) - for the mcr WIP PRO/T transfer damper

The damper is designed to separate the fire zone from the safe part of the building. It is possible to produce the damper in ATEX version. A transfer damper is also available (T version). Certified installation with grilles.



mcr **FID 240** single-blade cut-off damper

- » **CE** – according to EN 15650
- » **Fire resistance rating:**
 - EI 240 ($v_e i \leftrightarrow o$)S

The damper is dedicated to work with general ventilation systems (air supply and exhaust) at the passage through building partitions – for dry installation systems.

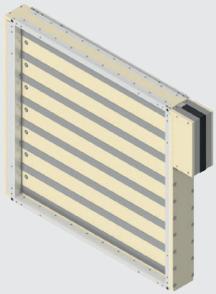
SMOKE DAMPERS



mcr **FID S/V p/P** single-blade smoke damper for fire ventilation systems

- » **CE** – according to EN 12101-8
- » **Fire resistance rating:**
 - EI 120 (v_{ed} h_{od} i↔o)S1000C₁₀₀₀₀AAmulti
 - EI 120 (v_{ew} i↔o)S1500C₁₀₀₀₀AAmulti
 - EI 120 (v_{edw} i↔o)S1000C₁₀₀₀₀AAmulti

The damper ensures proper evacuation conditions thanks to its use as an element of fire ventilation. The certification covers the assembly of the damper into batteries (modules), damper assembly on a duct and with masking grilles.



mcr **WIP PRO/V** multi-blade smoke damper for fire ventilation systems

- » **CE** – according to EN 12101-8
- » **Fire resistance rating:**
 - EI 120 (v_{ew} i↔o)S1000C₁₀₀₀₀AAmulti
 - EI 120 (v_{ed} h_{od} i↔o)S1000C₁₀₀₀₀AAmulti
 - EI 120 (v_{edw} i↔o)S1000C₁₀₀₀₀AAmulti

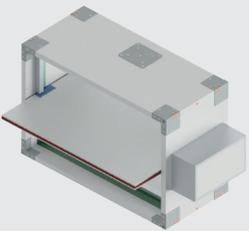
The damper ensures proper evacuation conditions thanks to its use as an element of fire ventilation - supply and exhaust damper. Certified assembly on a duct, ductwork and in batteries (modules).



mcr **WIP LD** multi-blade smoke damper for fire ventilation systems

- » **CE** – according to EN 12101-8
- » **Fire resistance rating:**
 - EI 120 (v_{ew} i→o)S1000C₁₀₀₀₀AAmulti

The damper ensures proper evacuation conditions thanks to its use as an element of fire ventilation. Certified for installation with a masking system grille. The damper has large effective smoke extraction areas.



mcr **FID B** single-blade smoke damper for fire ventilation systems

- » **CE** – according to EN 12101-8
- » **Fire resistance rating:**
 - EI 120 (v_{ed} h_{od} i↔o)S1500C₁₀₀₀₀MAmulti

The damper is dedicated for fire ventilation systems or mixed systems. **MA** feature – the damper blade can change its position during a fire. Duct installation is covered by the certificate.



mcr **DOR** door-type air supply-extraction damper for fire ventilation systems

- » **CE** – according to EN 12101-8
- » **Fire resistance rating:**
 - EI 180 (v_{ed} i↔o)S1500C₃₀₀AAmulti

The damper is designed for installation in supply or smoke extraction ventilation systems. Certified mounting on a duct and with masking grilles.



mcr **WIP/V** multi-blade smoke damper for fire ventilation systems

- » **CE** – according to EN 12101-8
- » **Fire resistance rating:**
 - EI 120 (v_{ew} i↔o)1000C₁₀₀₀₀AAmulti
 - E₆₀₀ 120 (v_e i↔o)1000C₁₀₀₀₀AAsingle

The damper can be used in single-zone or multi-zone fire ventilation systems - as supply and exhaust damper. The damper can also be used as a relieving damper, e.g. in gas extinguishing systems.

DAMPERS



mcr **WIP PROV/V** multi-blade smoke damper for fire ventilation systems

- » CE – wg EN 12101-8
- » **Fire resistance rating:**
 - EI 120 (V_{ed} i↔o)S1000C₁₀₀₀₀AAmulti

The damper ensures proper evacuation conditions by being used as a component of fire ventilation. The damper provides large effective smoke extraction areas. It can be installed in modules (damper next to damper, damper above damper), on ducts, or in shafts. Certified installation with cover grilles.



mcr **FID S/S p/O** single-blade cut-off fire damper

- » CE – according to EN 15650
- » **Fire resistance rating:**
 - EI 120 (v_e h_o i↔o)S

The damper is intended to separate a fire hazard zone from the safe section of the building. Damper installation solutions in walls and ceiling are covered by the certificate. Available in ATEX version.

DAMPERS AND CUT-OFF VALVES



mcr **FID WING** butterfly fire cut-off damper

- » CE – according to EN 15650
- » **Fire resistance rating:**
 - EI 60 (v_e h_o i↔o)S
 - EI 120 (v_e h_o i↔o)S

The damper is intended to separate a fire hazard zone from the safe section of the building.



mcr **ZIPP** fire cut-off valve

- » CE – according to EN 15650
- » **Fire resistance rating:**
 - EI 120 (v_e h_o o→i)S
 - EI 180 (v_e o→i)S
 - EI 120 (v_e h_o i→o)

The valve is intended to be installed at the terminations of the ventilation system, to separate a fire hazard zone from other parts of building and to transfer air through construction partitions.



mcr **Monsun T** axial smoke exhaust / air supply fan

- » **CE** – according to EN 12101-3
- » **Fire resistance rating:**
 - F400 – 400°C for 120 minutes
 - F300 – 300°C for 60 minutes
 - No fire resistance – F version

The fan is dedicated to remove the heat and smoke from rooms during a fire. In the REV version, it can operate in systems requiring up to 90% reverse cycle operation. The fan is designed to operate in a smoke reservoir.



mcr **Monsun T-L** axial smoke exhaust fan in an acoustic insulated casing

- » **CE** – according to EN 12101-3
- » **Fire resistance rating:**
 - F400 – 400°C for 120 minutes

The mcr Monsun T-L axial fan is used in fire ventilation systems for smoke extraction or air supply where thermal-acoustic insulation of the casing or vertical installation is required.



mcr **Monsun R** axial smoke exhaust / air supply fan

- » **CE** – according to EN 12101-3
- » **Fire resistance rating:**
 - F400 – 400°C for 120 minutes
 - F300 – 300°C for 60 minutes

The mcr Monsun R axial fan is used in fire ventilation systems for smoke extraction and air supply where high efficiency or operation in explosion risk zones is required. It may also be used in comfort ventilation systems as an air supply or extraction fan. In the REV version, it can operate in systems that require reverse cycle operation of up to 100%.



mcr **Pasat** roof smoke exhaust fan

- » **CE** – according to EN 12101-3
- » **Fire resistance rating:**
 - F400 – 400°C for 120 minutes
 - F600 – 600°C for 60 minutes

The mcr Pasat roof smoke exhaust fan with centrifugal rotor is intended to evacuate the smoke and hot air from rooms during a fire and for comfort ventilation.



mcr **Bora** unidirectional / reversible jet fan

- » **CE** – according to EN 12101-3
- » **Fire resistance rating:**
 - F400 – 400°C for 120 minutes
 - F300 – 300°C for 60 minutes
 - No fire resistance – BO version

The mcr Bora jet fan is used in fire ventilation or comfort ventilation systems. It is intended to extract (propel) hot air, smoke and fumes generated during a fire. Its design ensures that the air or smoke is transferred in a particular direction with the appropriate velocity.



mcr **FEN** smoke exhaust induction fan

- » **CE** – according to EN 12101-3
- » **Fire resistance rating:**
 - F400 – 400°C for 120 minutes
 - F300 – 300°C for 60 minutes
 - No fire resistance – BO version

The mcr FEN fan is used in fire ventilation or comfort ventilation systems. It is intended to extract (propel) hot air, smoke and fumes generated during a fire. Thanks to its design, it ensures an effective smoke transfer in hard-to-reach locations and limited height underground car parks.



mcr HEX natural smoke extraction system for vertical emergency evacuation routes and staircases with mechanical support

To ensure the safety of building users, there is the smoke extraction system installed in the stairwells mcr HEX.

This system is made up of 'certified' supply sets and smoke dampers that - working together - prevent smoke from remaining in the protected zone. A certified mcr Omega pro control unit manages the system operation.



mcr EXi-F hybrid overpressure smoke protection system for the vertical emergency evacuation routes (electronic)

- » National Technical Assessment ITB-KOT
- » National certificate of constancy of performance ITB
- » Compliant with EN 12101-6
- » Compliant with EN 12101-13
- » Compliant with NFPA 92

The mcr EXi-F system is a set of devices - compliant with NFPA 92 - used to prevent smoke in evacuation routes by creating an overpressure in the protected zone.

The mcr EXi-F system consists of:

- air supply units
- automation with adaptive controllers and frequency converters
- pressure converters
- ventilation equipment



mcr Jet - FLO comprehensive garage jet ventilation system

A jet ventilation system is used for extracting smoke from underground garages as an alternative solution to traditional duct systems.

The operation of jet ventilation devices is based on the piston effect, where smoke and fire gases are appropriately propelled through the entire cross section of the garage, from the air supply towards the extraction openings (smoke extraction).

Jet ventilation systems may also be used as comfort ventilation for garages, they cooperate with CO and LPG detection systems, dilute and extract potentially harmful gases. The comprehensive mcr Jet-FLO garage jet ventilation system consists of:

- main supply and extract fans (e.g. mcr Pasat, mcr Monsun T and mcr Monsun R) with fire resistance of F300, F400 (unidirectional or reversible)
- mcr Bora jet fans of fire resistance F300, F400 (unidirectional or reversible) and fans mcr FEN
- mcr Omega Pro air handling units that supply power to and control the operation of the system
- components of CO, LPG and smoke detection system

POWER AND CONTROL UNITS



mcr **Omega Pro** power and control unit for smoke and heat spread control systems

- » National Technical Assessment CNBOP-PIB-KOT
- » Certificate of constancy of performance - CE
- » Acceptance Certificate CNBOP

The mcr Omega Pro unit is designed to be a power and control unit for devices included in heat and smoke spread control systems. The device can be configured according to design requirements. The unit can perform any necessary logic functions necessary, depending on the fire scenario.

The device can be equipped with any protections for fan motors, such as frequency inverters, direct start-up, Star-delta or soft start systems.



mcr **Omega ProF** power supply for fire protection equipment

- » Acceptance Certificate CNBOP
- » Certificate of constancy of performance - CE

The mcr Omega Pro power supply is dedicated to reliably supply and sustain the operation of 230V or 24V devices with a specified power for a given time.

The unit is intended to supply a guaranteed voltage from the electrical network or, in the event of power failure, from the battery which is an integral part of the device.

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