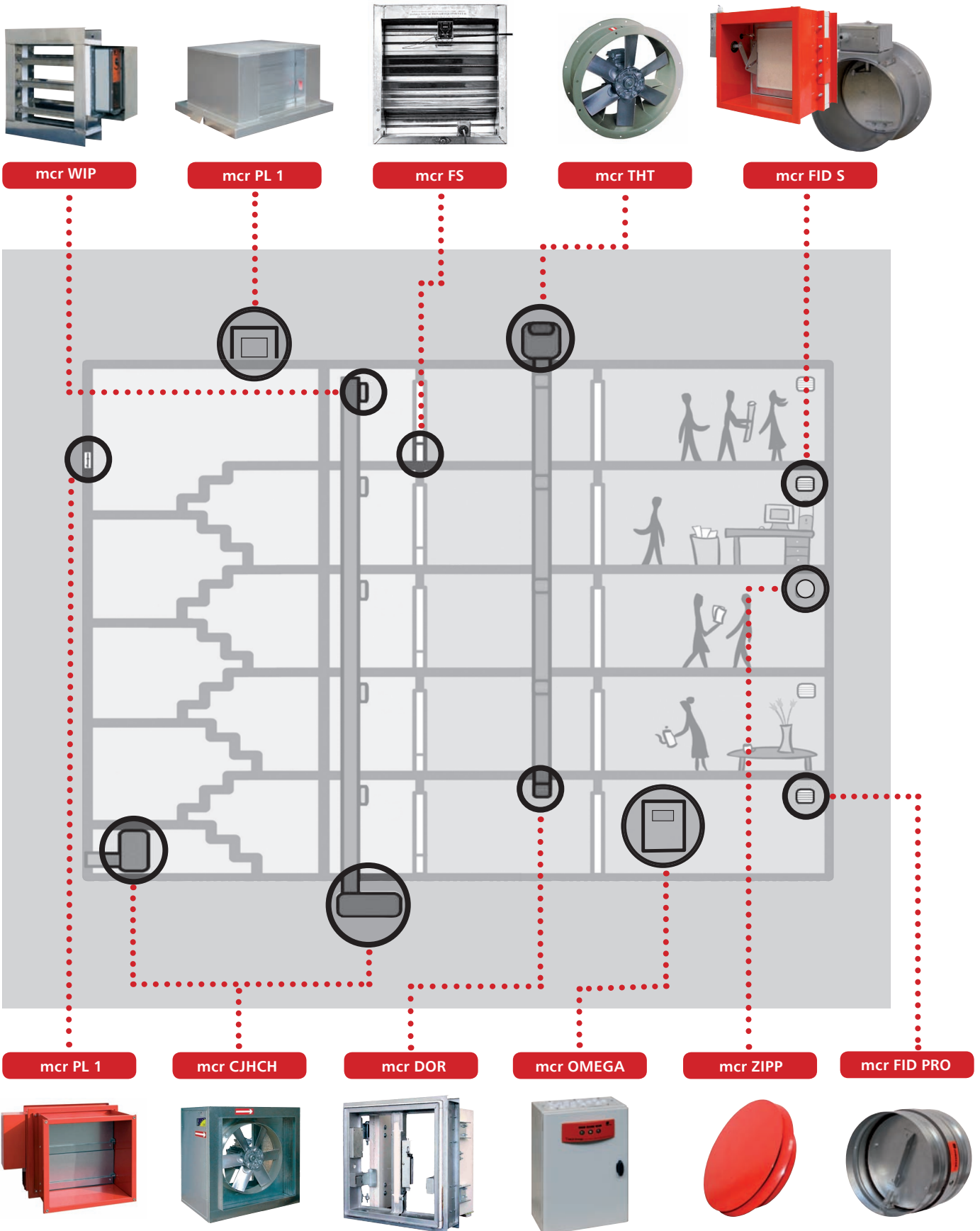


# fire ventilation systems

**FIRE DAMPERS  
FANS  
CONTROL SYSTEMS  
OVERPRESSURE SYSTEMS**

# fire protection appliances

## examples of application





## mcr FID PRO

single-flap cut-off fire damper and fire ventilation damper

### Fire resistance

EIS 120, EIS 120 AA – depending on system of manufacturing and method and place of installation.

### Versions

S – cut-off fire damper  
V – for fire ventilation systems (smoke exhaust)  
M – for double-function ducts (mixed systems)

### Range of application

The damper has been designed for separating fire-hazardous zones from safe parts of the building (S version) and assuring appropriate evacuation conditions through fire gas ventilation (V version) – inlet and outlet damper. Damper can be also used in so-called mixed systems (M version).

### Control – release

*RST mechanism* – activated by a return spring with fusible link rated at 72°C, manual reset by means of a lever.

*Electric servo-motor* – activated by a thermal link rated at 72°C or remotely by lack of supplying power (power break), remote reset by supplying power (pulse Uz= 24V AC/DC or 230V AC).

*Electric servo-motor* – activated remotely by supplying power (pulse), remote reset by resupply of power (Uz= 24V AC/DC or 230V AC).

*KW1 mechanism* – activated by a return spring with fusible link rated at 72°C or remotely by an electromagnet (pulse and power break), reset by means of a lever or additional servo-motor (Uz= 24V DC or 230V AC).

### Dimensions (to the exactness of 1 mm):

– circular damper: diameter 100-315 mm,  
– male, female or type of execution with flange.

## mcr FID S

single-flap cut-off fire damper and fire ventilation damper

### Fire resistance

EIS 90, EIS 90 AA, EIS 120, EIS 120 AA – depending on system of manufacturing, method and place of installation.

### Versions

S – cut-off fire damper  
V – for fire ventilation systems (smoke exhaust)  
M – for double-function ducts (mixed systems)

### Range of application

The damper has been designed for separating fire-hazardous zones from safe parts of the building (S version) and assuring appropriate evacuation conditions through fire gas ventilation (V version) – inlet and outlet damper. Damper can be also used in so-called mixed systems (M version).

### Control – release

*RST mechanism* – activated by a return spring with fusible link rated at 72°C, manual reset by means of a lever.

*Electric servo-motor* – activated by a thermal link rated at 72°C or remotely by lack of supplying power (power break), remote reset by supplying power (pulse Uz= 24V AC/DC or 230V AC).

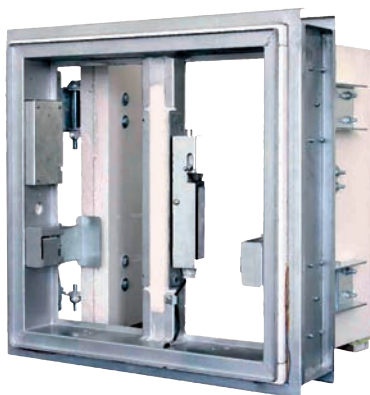
*Electric servo-motor* – activated remotely by supplying power (pulse), remote reset by resupply of power (Uz= 24V AC/DC or 230V AC).

*KW1 mechanism* – activated by a return spring with fusible link rated at 72°C or remotely by an electromagnet (pulse and power break), reset by means of a lever or additional servo-motor (Uz= 24V DC or 230V AC).

### Dimensions (to the exactness of 1 mm):

– rectangular damper without insulating separator:  
width 200 – 1200 mm; height 200 – 1200 mm;  
casing length 296 mm,  
– circular damper without insulating separator:  
diameter 200-1000 mm; casing length 296 mm,  
– rectangular damper with insulating separator:  
width 200 – 1500 mm; height 200 – 1500 mm;  
casing length 296 mm,  
– circular damper with insulating separator:  
diameter 125-1000 mm; casing length 296 mm.

# fire dampers and smoke control dampers



## mcr WIP

louver type cut-off, fire ventilation and transfer fire damper

### Fire resistance

EIS 60, EIS 60 AA, E 120, ES 120 – depending on system of manufacturing and method and place of installation.

### Versions

S – cut-off fire damper,  
V – for fire ventilation systems (smoke exhaust),  
M – damper for mixed systems,  
T – transfer damper.

### Range of application

The flap has been designed for separating fire-hazardous zones from safe parts of the building (S version) and ensuring proper conditions of evacuation through fire ventilation system (V version)- inlet and outlet damper. It can be also used in so-called mixed systems (M version), as a transfer damper (T version) as well as at the end of ventilation ducts.

### Control – release

*RST mechanism* – activated by a return spring with fusible link rated at e.g. 72°C, manual reset by means of a lever.

*Electric servo-motor* – activated by a thermal link rated at e.g. 72°C or remotely by lack of supplying power (power break), remote reset by resupply of power.

*KW1 mechanism* – activated by a return spring with fusible link rated at e.g. 72°C or remotely by an electromagnet (pulse and power break), reset by means of a lever or additional servo-motor.

## mcr DOR

door-type smoke exhaust and air-inlet damper

### Fire resistance

EIS 120 AA

### Versions

V – for fire ventilation systems (smoke exhaust)  
D1 – single-flap damper  
D2 – double-flap damper

### Range of application

The flap has been designed for use in fire ventilation ducts and outlet damper (smoke removal) and as inlet damper for evacuation needs (intake of fresh air).

### Control – release

*EM 24 D mechanism* – remotely activated by an electromagnet (pulse supply  $U_z = 24V$  AC/DC), manual reset. By implementing a intermediary module MP 230/24 damper can be released by 230 AC/DC voltage.

## mcr FS

curtain type transfer fire damper

### Fire resistance

E 120

### Versions

101 – curtain partially in air stream,  
201 – curtain outside of air stream,  
301 – curtain outside of air stream (round damper).

### Range of application

The damper has been designed for mounting in partitions as a transfer damper for transmission of air between rooms.

### Control – release

*Spring mechanism* – activated by a return spring with fusible link rated at e.g. 72°C, manual reset.

*Electromagnetic release* – activated by a thermo element (e.g. 72°C) or remotely, by lack of supplying power (power break  $U_z = 24V$  AC/DC or 230V AC), manual reset.



## mcr THT

duct mounted axial smoke exhaust fan  
CE according to EN 12101-3

**Fire resistance**  
F400 – 400°C during 120 min

**Versions**  
Long (LC) and short (CC) casing.  
Single or double speed motors.

**Range of application**  
The fan has been designed for removing smoke and heat from rooms during fire and for comfort ventilation. It facilitates evacuation of people and protects against fire spreading to adjacent fire zones.

**Technical data**  
Available in 10 sizes: from dia. 400 mm to dia. 1 250 mm.  
Standard capacity up to 120 000 m<sup>3</sup>/h.  
Compression up to 1 250 Pa.

**Accessories**  
PS mounting feet, ACE flexible connections, BTUB counter-flanges, RI or RT protecting nets, spring shock absorbers.

## mcr CJTHT

axial smoke exhaust fan with casing insulated acoustically  
CE according to EN 12101-3

**Fire resistance**  
F400 – 400°C during 120 min

**Versions**  
Long casing (LC).  
Single or double speed motors.

**Range of application**  
The fan has been designed for removing smoke and heat from rooms during fire and for comfort ventilation. It facilitates evacuation of people and protects against fire spreading to adjacent fire zones.

**Technical data**  
Available in 10 sizes: from dia. 400 mm to dia. 1 250 mm.  
Standard capacity up to 120 000 m<sup>3</sup>/h.  
Compression up to 1 250 Pa.

**Accessories**  
PS mounting feet, ACE flexible connections, BTUB counter-flanges, RI or RT protecting nets, spring shock absorbers.

## mcr ZIPP

cut-off fire valve

**Fire resistance**  
EIS 120

**Versions**  
– vertically mounted,  
– horizontally mounted.

**Range of application**  
The valve has been designed for assembly at the end of ventilation ducts and is used for separating fire-hazardous zones from safe parts of the building as well as for transferring air through building partitions.

**Technical data**  
Available in 4 sizes:  
dia 100 mm, 125 mm, 160 mm, 200 mm.

**Control – release**  
*RST mechanism* – activated by a return spring with fusible link rated at e.g. 72°C, manual reset.  
*EMz mechanism* – activated by a return spring with fusible link rated at e.g. 72°C or remotely by an electromagnet (pulse and power break Uz= 24V DC or 230V AC), manual reset.

# overpressure systems for vertical evacuation paths



## mcr PL1

overpressure-bleed damper

**Fire resistance**  
Conforms with EN-12101-6 standard.

**Versions**  
S – wall-mounted,  
K – duct-mounted,  
D – roof-mounted.

**Range of application**  
The overpressure bleed damper has been designed for maintaining pressure differences before and behind its partition and is implemented as a pressure relieve damper in overpressure systems of stairways. It can also be used in any room protected against smoke by establishing overpressure.

**Technical data**  
Dampers mcr PL1.../S and mcr PL1.../K – standard dimensions: 450x450 mm, 550x550 mm, 650x650 mm, 800x800 mm. There is a possibility to combine dampers in multiple assemblies.  
Dampers mcr PL1.../D – dimensions: 600x600 mm, 800x800 mm, 1000x1000 mm, 1300x1300 mm.  
Standard pressure threshold for activation: 50 Pa.

**Accessories**  
Wall mounted air intakes, protective grilles, cut-off air dampers, assembly elements.

## mcr CJHCH

axial air-inlet and air-extract fan with casing insulated acoustically

**Fire resistance**  
Not required.

**Versions**  
Long casing (LC).  
Single or double speed motors.

**Range of application**  
The fan has been designed for air intake in overpressure systems of vertical evacuation paths (stairways), it can be implemented in systems designed for comfort ventilation as well.

**Technical data**  
Available in 10 sizes: from dia. 400 mm to dia. 1 250 mm.  
Standard capacity up to 120 000 m<sup>3</sup>/h.  
Compression up to 1 250 Pa.

**Accessories**  
PS mounting feet, ACE flexible connections, BTUB counter-flanges, RI or RT protecting nets, absorbers.

## mcr OMEGA

central supply-control unit for fire ventilation and overpressure systems

Cooperates with other control units and alarm systems. Specialised, modular design enables it to perform unlimited fire scenarios within the controlled and supplied system.

**Versions**  
mcr Omega 2300 – fire ventilation systems.  
mcr Omega 2100 – vertical evacuation paths systems.

**Range of application**  
*mcr Omega 2300* – controls and supplies appliances operating in such fire ventilation systems as: cut-off fire dampers, fire ventilation dampers or transfer dampers. Central control unit also controls operation of smoke exhaust fans and other system appliances.  
*mcr Omega 2100* – controls and supplies overpressure systems for vertical evacuation paths including air intake fans, airflow regulating dampers, actuators and overpressure damper sets.

**Benefits arising from implementing central control units mcr OMEGA:**

- safety
- reliability
- simplicity
- flexibility
- comprehensiveness
- cost optimization

**Accessories**  
Smoke detection modules, smoke evacuation buttons, optical smoke sensors.

# table of initial choice of appliances

		type of appliance					
		mcr FID PRO	mcr FID S	mcr WIP	mcr DOR	mcr FS	mcr ZIPP
application	cut-off fire dampers for ventilation and air conditioning ducts	X	X	X	–	–	X
	smoke control dampers for fire ventilation	X	X	X	–	–	–
	transfer dampers	–	–	X	X	X	X
fire resistance	EIS 60 / EIS 60 AA	X/X	X/X	X/X	–/X	–	X/–
	EIS 90	X	X	–	–	–	X
	E 120	X	X	X	X	X	X
	ES 120	X	X	X	–	–	X
	EIS 120	X	X	–	–	–	X
	EIS 120 AA	X	X	–	X	–	–
place of installation	ventilation and air conditioning ducts in transitions through fire protection partitions	X	X	X	–	–	X
	evacuation path	X	X	X	X	X	X
	vestibule	X	X	X	X	X	X
	garage	X	X	X	X	X	X
	as a duct end	–	–	X	X	X	X
minimal wall thickness with built-in damper	concrete	110 mm	110 mm	110 mm	110 mm	110 mm	110 mm
	brickwork	120 mm	120 mm	120 mm	120 mm	120 mm	120 mm
	made of cellular concrete blocks	115 mm	115 mm	115 mm	115 mm	115 mm	115 mm
	made of gypsum-cardboard panels on a steel grid	125 mm	125 mm	–	110 mm	125 mm	125 mm
	made of fireproof boards	–	–	–	50 mm	–	–
dimensions	width from – to [mm]	–	200–1500	160–1000	200–1150	100–1250	–
	height from – to [mm]	–	200–1500	120–1020	300–1250	100–1016	–
	diameter from – to [mm]	100–315	125–1000	100–1000	–	100–1016	100–200
	length from – to [mm]	140–310	296–390	135	125	154–202	130



## FIRE PROTECTION SYSTEMS

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



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