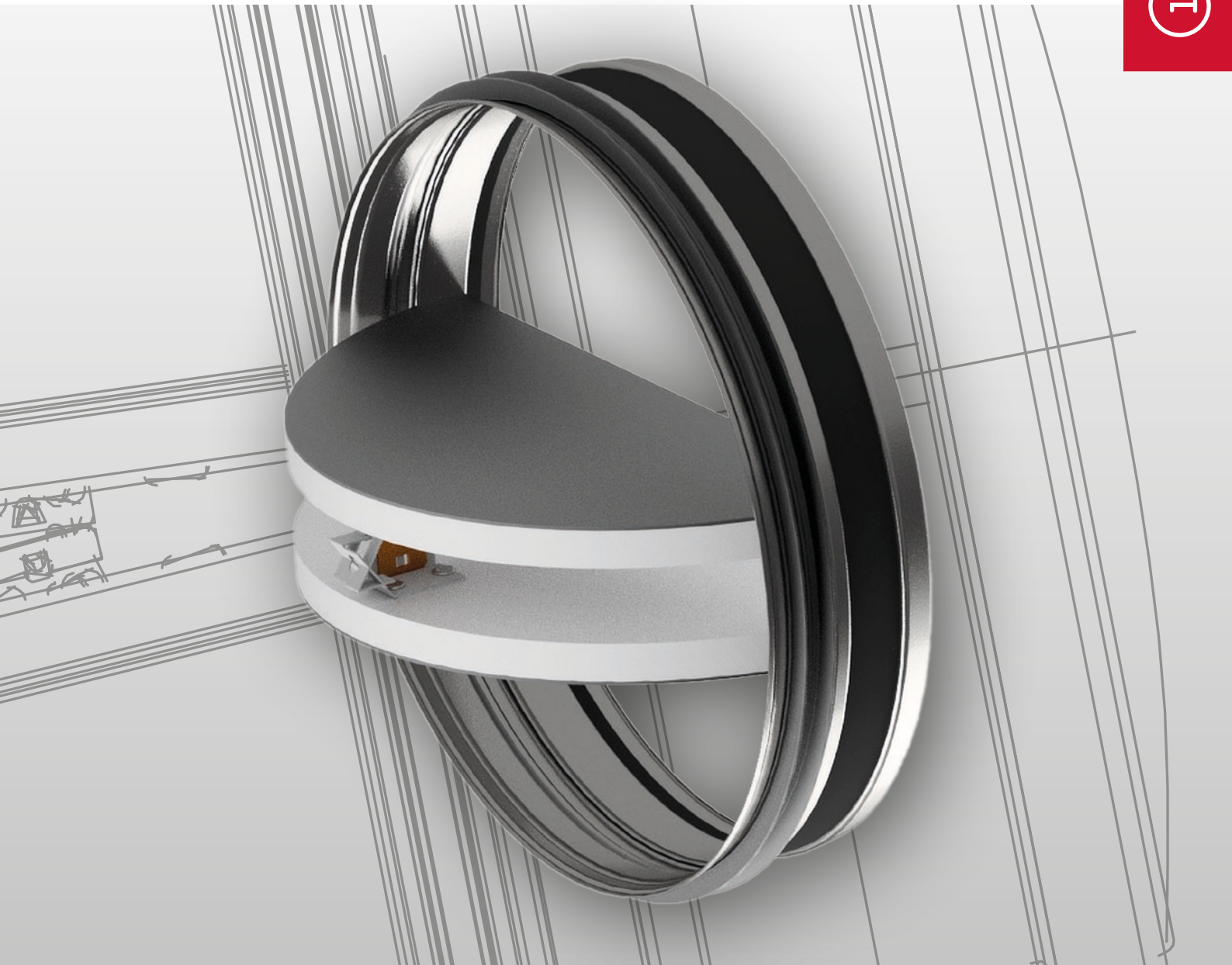




1 NEW IN OFFER



mcr FID WING

fire dampers for comfort
ventilation systems



download models
on the website
in the designer zone section



Efectis



ATEST HIGIENICZNY

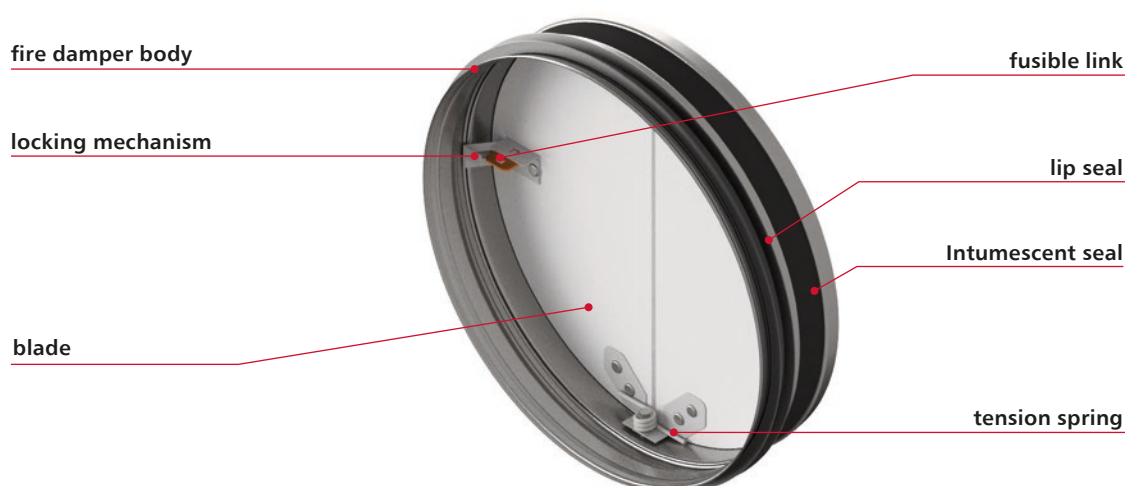
- ▶ EIS120, EIS60
- ▶ Certificates of Constancy of Performance No. 1812-CPR-1916, 1812-CPR-1917, 1812-CPR-1918, 1812-CPR-1919.
- ▶ Dampers certified for compliance with EN 15650.
- ▶ Dampers classified according to EN 13501-3 and tested according to EN 1366-2.
- ▶ Fire dampers with fire resistance independent of air flow direction and side of installation.
- ▶ Certified installation in ductwork or with diffuser at system termination.

1.1. application

Our mcr FID WING fire dampers are designed for installation at penetrations comfort ventilation ductwork through the building walls and horizontal assemblies. Their purpose is to maintain the fire-resistance rating of a building component at a point where it is penetrated by ventilation or air-conditioning ducts. They also prevent spread of flame, smoke and combustion gasses to the parts of the building which are not on fire. During normal operation of the system, the damper blade remains in the open position. In the event of a fire, the damper blade moves to the closed position.

The dampers must not work in systems exposed to dust, unless they are covered by a special, individually developed servicing and technical inspections program.

1.2. design



The mcr FID WING fire dampers consist of a casing with a circular cross-section, a movable blade and an actuation and control mechanism that is activated after the thermal trigger has tripped. The casing is made of galvanised steel sheet. There is an intumescent gasket and ventilation gasket on its outer part. The fire damper blade is manufactured of a fireproof material.

The mcr FID WING fire dampers remain open during normal operation. The damper switches over to the safety state (its closure) automatically when the thermal trigger (actuation and control device of RST type) trips.

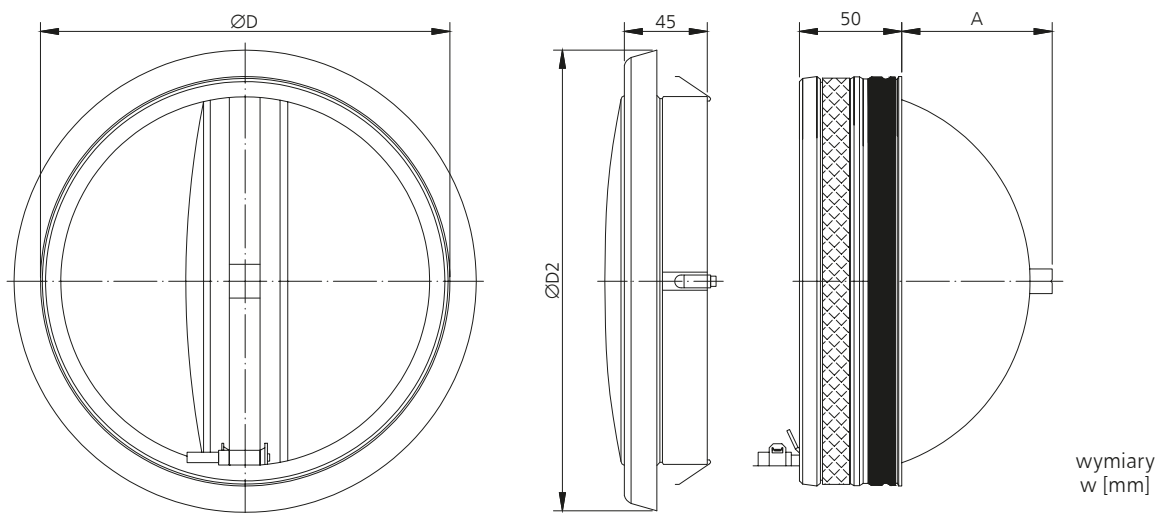
The fire damper can be equipped with an adjustable air diffuser. The diffuser's performance (active surface area) is adjusted by turning its disc. Diffusers are supplied in RAL 9010.

1.3. material options

During normal operation the damper blade remains in the open position. In the case of a fire, damper blade closes automatically. The mcr FID WING fire dampers are equipped with an actuation and control mechanism of RST type with a 74°C thermal trigger (it is possible to use a thermal trigger with the nominal tripping temperature of 95°C as an option) and driving spring. When the set temperature is exceeded, the thermal trigger is severed and the damper blade is closed. It is possible to equip the valves with a WK1 limit switch to signal the status of the blade position.

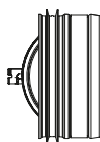
1.4. dimensions

Circular dampers:

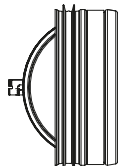


nominal diameter ØD [mm]	outside diameter of diffuser ØD2 [mm]	length A [mm]	weight [kg]
100	149	21	0,2
125	169	34	0,3
160	195	51	0,4
200	240	72	0,6

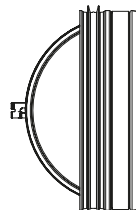
mcr FID WING
Ø100



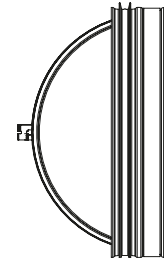
mcr FID WING
Ø125



mcr FID WING
Ø160



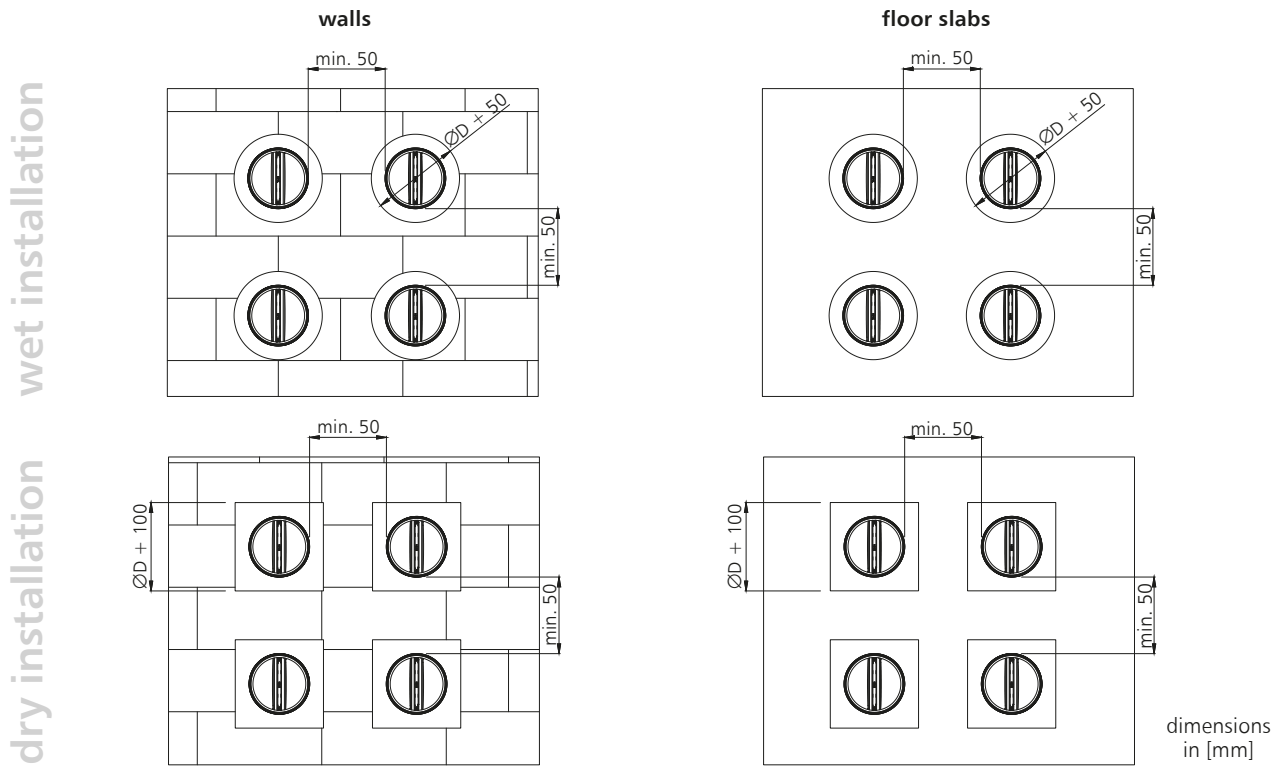
mcr FID WING
Ø200



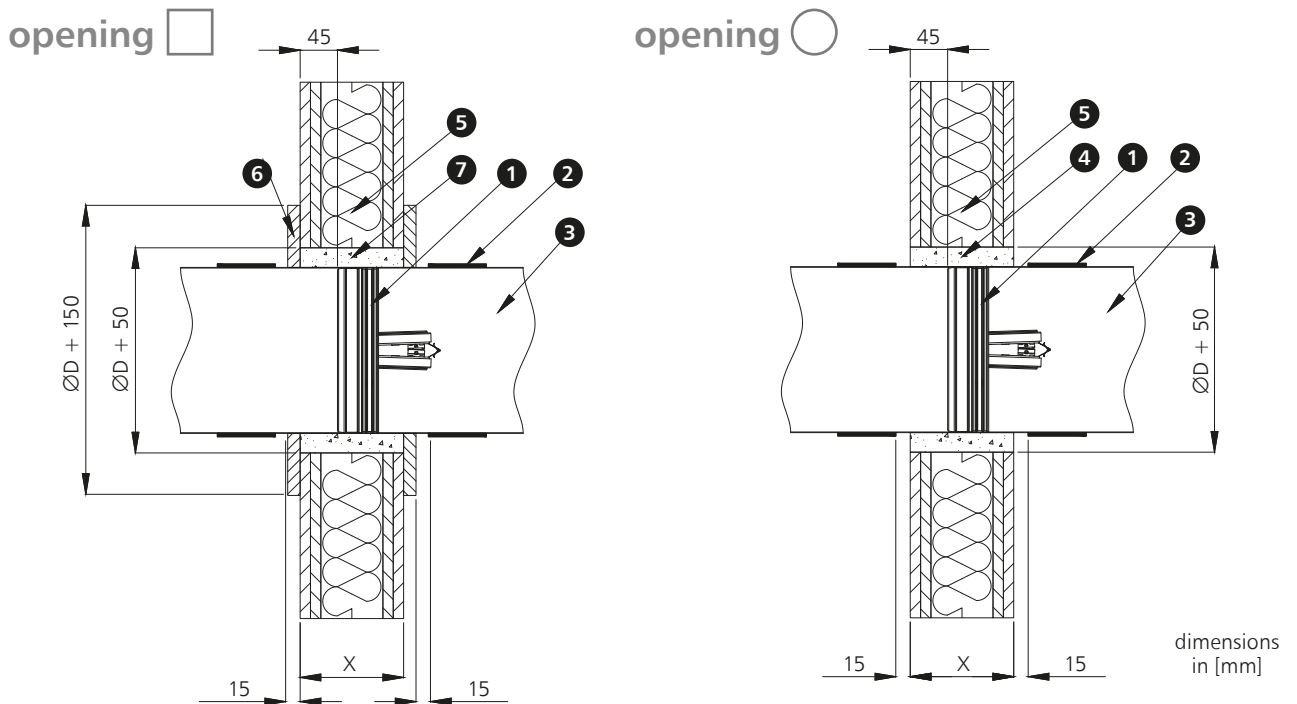
1.5. installation

The mcr FID WING circular dampers fulfil the fire resistance class EI 120 ($v_e h_o i \leftrightarrow o$) S or EI 60 ($v_e h_o i \leftrightarrow o$) S requirements for installation in min. 100 mm thick concrete, solid brickwork or aerated concrete blockwork walls, in min. 100 mm thick steel stud and plasterboard partitions of fire resistance equal to the expected fire resistance of the fire damper in question and in concrete floor slabs with a min. thickness of 100 mm for EIS60 and 150 mm for EIS120.

1.5.1. preparation of installation openings



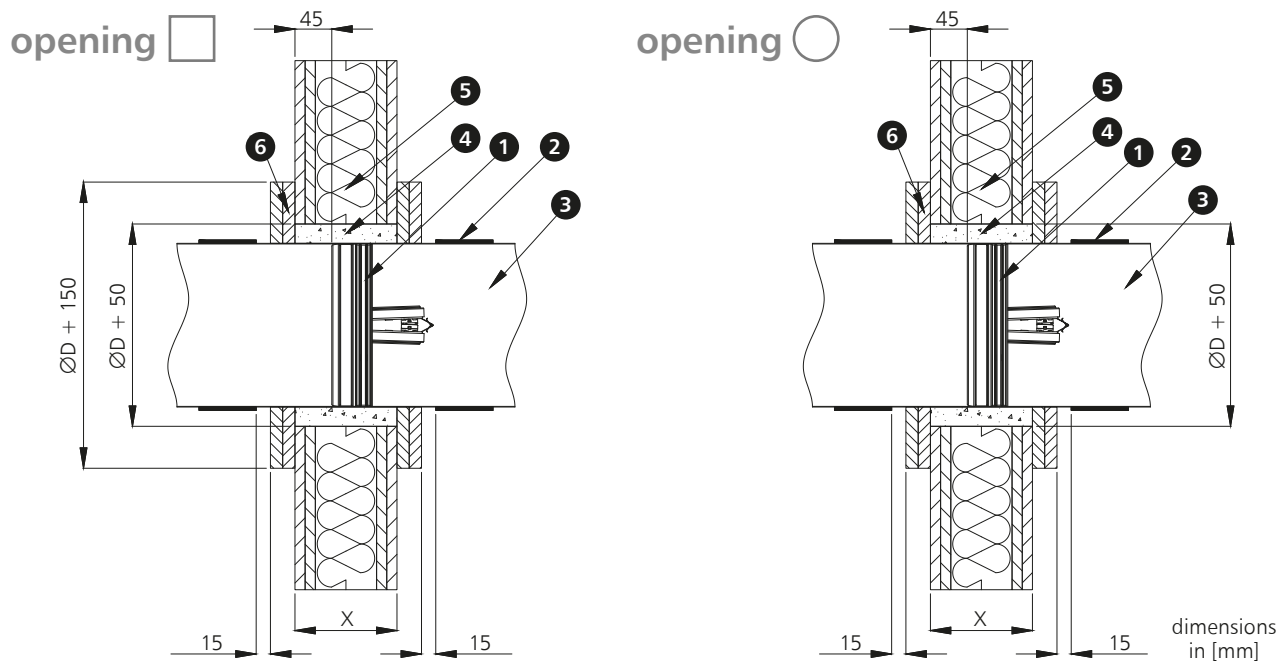
1.5.2. installation of mcr FID WING fire dampers in plasterboard walls for EIS60



- 1. mcr FID WING fire damper
 - 2. insulating wrap
 - 3. ventilation duct
 - 4. masonry mortar*
 - 5. plasterboard wall
 - 6. plasterboard rim 12,5 mm
 - 7. masonry mortar or mineral wool *
- X wall thickness

* The recommended dry installation of the fire damper is based on A1 (non-flammable) mineral wool with a minimum density of 40 kg/m³. The recommended wet installation of the fire damper is based on gypsum or cement mortar. The manufacturer allows the use of other materials with parameters that confirm and ensure the appropriate fire resistance class for the applied method of installation.

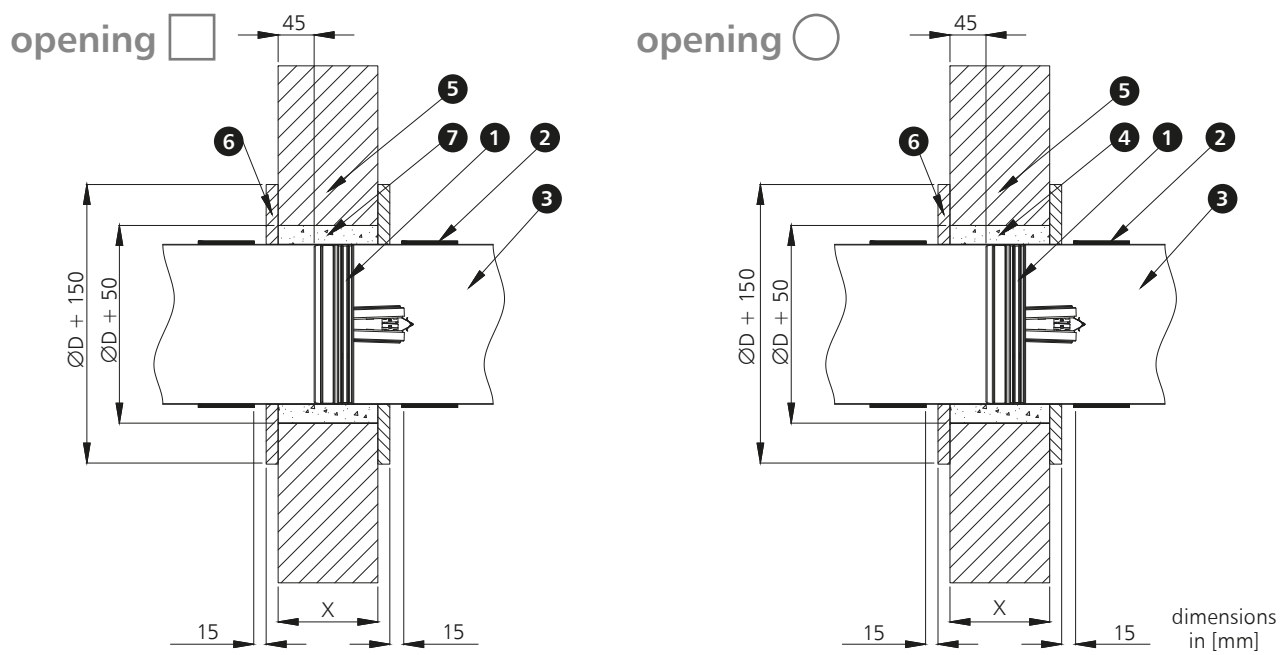
1.5.3. installation of mcr FID WING fire dampers in plasterboard walls for EIS120



- 1. mcr FID WING fire damper
- 2. insulating wrap
- 3. ventilation duct
- 4. masonry mortar*
- 5. plasterboard wall
- 6. plasterboard rim 12,5 mm*
- X wall thickness

* The recommended dry installation of the fire damper is based on A1 (non-flammable) mineral wool with a minimum density of 100 kg/m³. The recommended wet installation of the fire damper is based on gypsum or cement based mortar. The manufacturer allows the use of other materials with parameters that confirm and ensure the appropriate fire resistance class for the applied method of installation.

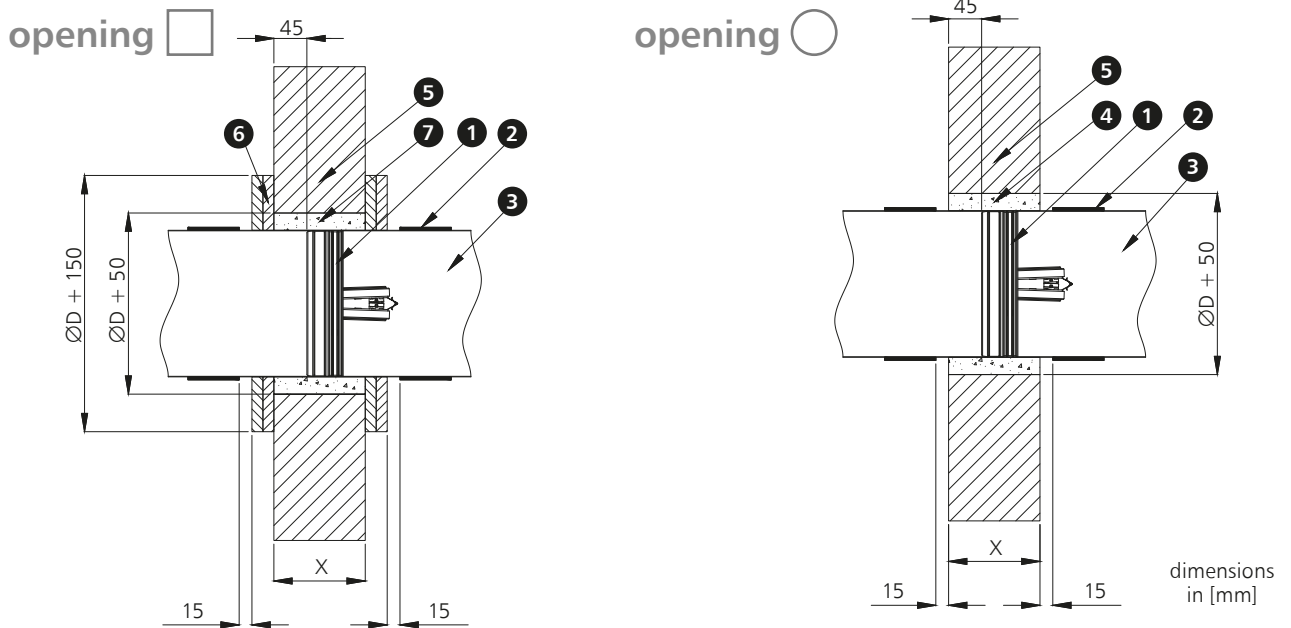
1.5.4. installation of mcr FID WING fire dampers in rigid walls for EIS60



- 1. mcr FID WING fire damper
- 2. insulating wrap
- 3. ventilation duct
- 4. masonry mortar*
- 5. rigid wall
- 6. plasterboard rim 12,5 mm
- 7. masonry mortar or mineral wool *
- X wall thickness

* The recommended dry installation of the fire damper is based on A1 (non-flammable) mineral wool with a minimum density of 100 kg/m³. The recommended wet installation of the fire damper is based on gypsum or cement based mortar. The manufacturer allows the use of other materials with parameters that confirm and ensure the appropriate fire resistance class for the applied method of installation.

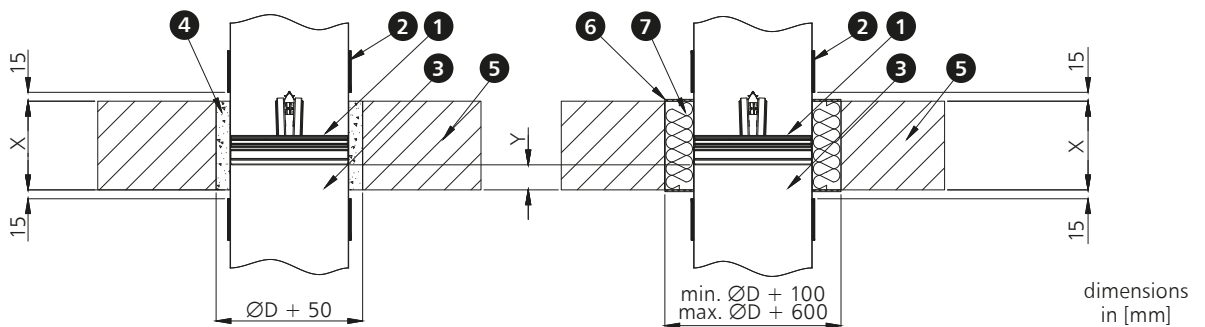
1.5.5. installation of mcr FID WING fire dampers in rigid walls for EIS120



- | | | |
|-----------------------------|-----------------------------|-------------------------------------|
| 1. mcr FID WING fire damper | 4. masonry mortar* | 7. masonry mortar or mineral wool * |
| 2. insulating wrap | 5. rigid wall | X wall thickness |
| 3. ventilation duct | 6. plasterboard rim 12,5 mm | |

* The recommended dry installation of the fire damper is based on A1 (non-inflammable) mineral wool with a minimum density of 100 kg/m³. The recommended wet installation of the fire damper is based on gypsum or cement based mortar. The manufacturer allows the use of other materials with parameters that confirm and ensure the appropriate fire resistance class for the applied method of installation.

1.5.6. installation of mcr FID WING fire dampers in floor slabs

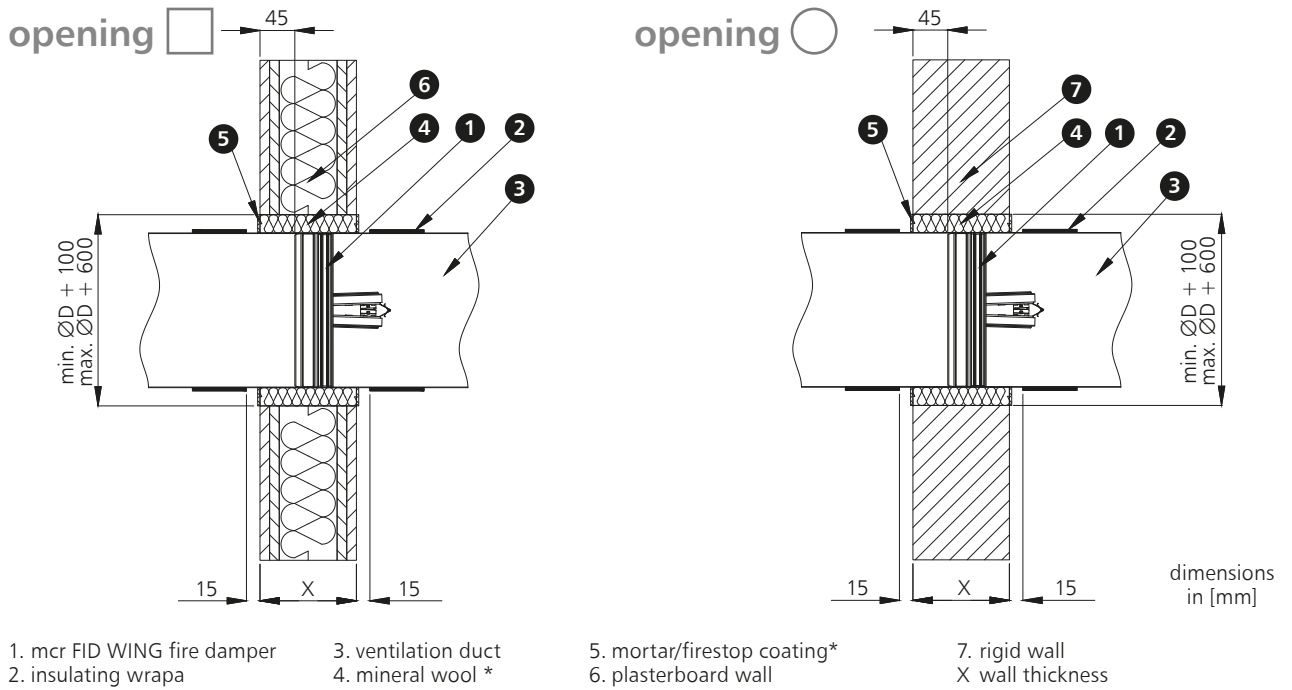


- | | | |
|-----------------------------|----------------------------|-----------------------------------|
| 1. mcr FID WING fire damper | 4. masonry mortar* | 7. mineral wool * |
| 2. insulating wrap | 5. floor slab | X floor slab thickness |
| 3. ventilation duct | 6. mortar/firestop coating | Y 75mm for EIS120, 45mm for EIS60 |

* The recommended dry installation of the fire damper is based on A1 (non-inflammable) mineral wool with a minimum density of 140 kg/m³ and minimum thickness of 50mm and includes protecting the joint between the wool and the wall with firestop sealant PROMASTOP E PASTE or HILTI CFS-CT and protecting the wool with firestop sealant PROMASTOP E PASTE or HILTI CFS-S ACR, as shown in the drawing above. The recommended wet installation of the fire damper is based on gypsum or cement based mortar.

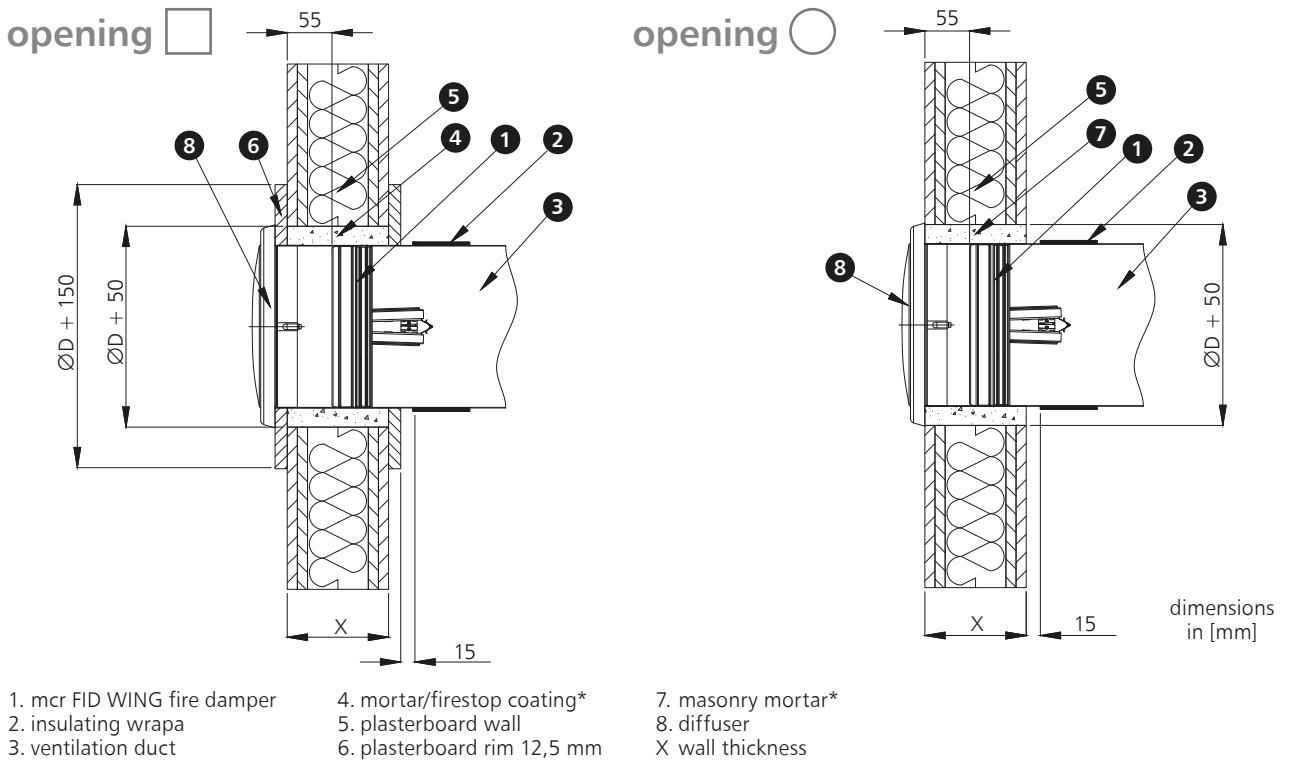
The manufacturer allows the use of other materials with parameters that confirm and ensure the appropriate fire resistance class for the applied method of installation.

1.5.7. dry installation of mcr FID WING fire dampers



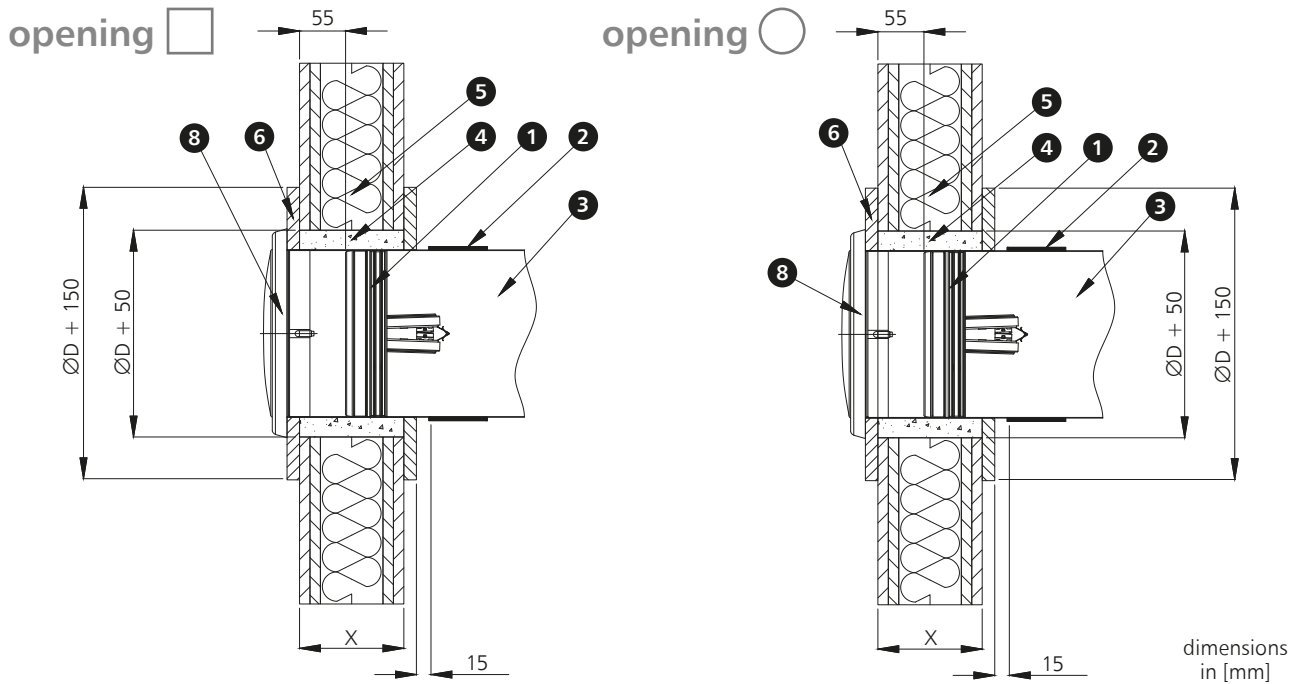
* The recommended dry installation of the fire damper is based on A1 (non-inflammable) mineral wool with a minimum density of 140 kg/m³ and minimum thickness of 50mm and includes protecting the joint between the wool and the wall with firestop sealant PROMASTOP E PASTE or HILTI CFS-CT and protecting the wool with firestop sealant PROMASTOP E PASTE or HILTI CFS-S ACR, as shown in the drawing above. The recommended wet installation of the fire damper is based on gypsum or cement based mortar.
The manufacturer allows the use of other materials with parameters that confirm and ensure the appropriate fire resistance class for the applied method of installation.

1.5.8. installation of mcr FID WING fire dampers in plasterboard walls for EIS60



* The recommended dry installation of the fire damper is based on A1 (non-inflammable) mineral wool with a minimum density of 40 kg/m³ and includes protecting the damper's joint area. The recommended wet installation of the fire damper is based on gypsum or cement based mortar. The manufacturer allows the use of other materials with parameters that confirm and ensure the appropriate fire resistance class for the applied method of installation.

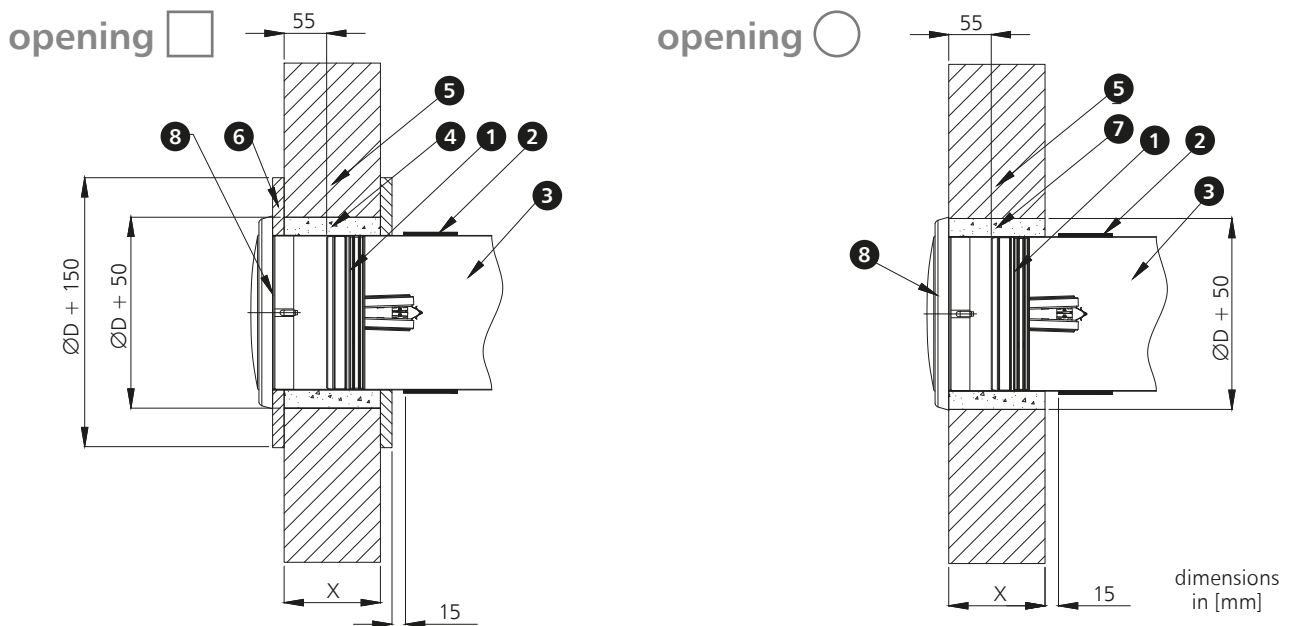
1.5.9. installation of mcr FID WING fire dampers in plasterboard walls for EIS120



- 1. mcr FID WING fire damper
- 2. insulating wrapa
- 3. ventilation duct
- 4. mortar/firestop coating*
- 5. plasterboard wall
- 6. plasterboard rim 12,5 mm
- 7. masonry mortar*
- 8. diffuser
- X wall thickness

* The recommended dry installation of the fire damper is based on A1 (non-flammable) mineral wool with a minimum density of 40 kg/m³ and includes sealing the damper's joint area. The recommended wet installation of the fire damper is based on gypsum or cement based mortar. The manufacturer allows the use of other materials with parameters that confirm and ensure the appropriate fire resistance class for the applied method of installation.

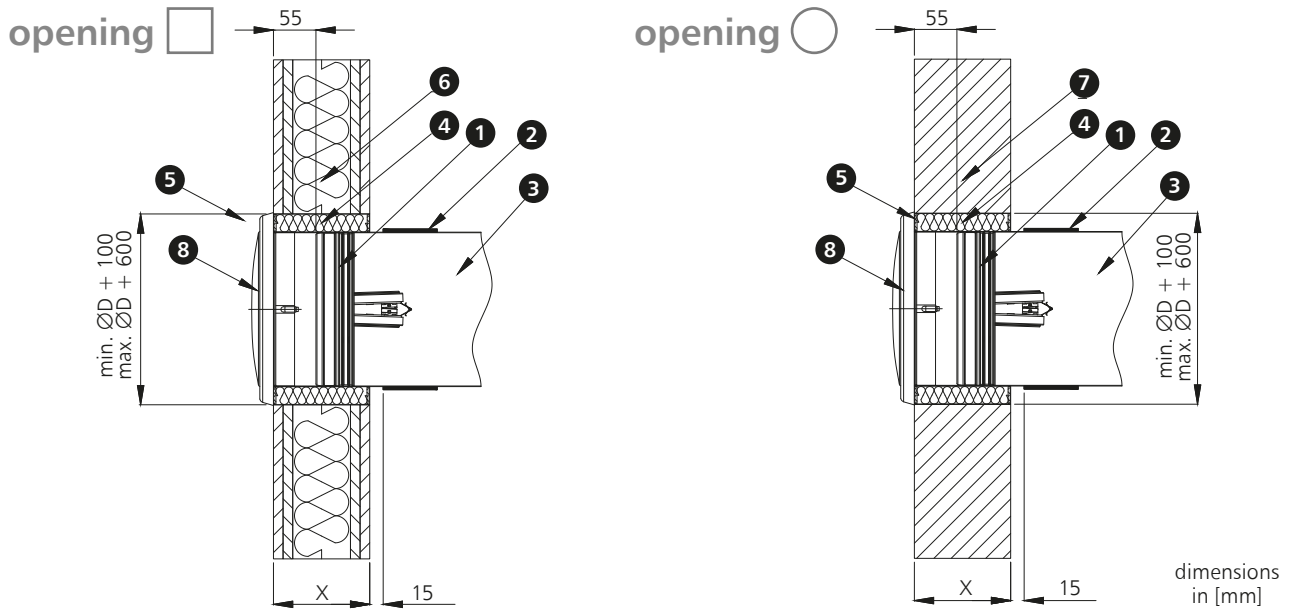
1.5.10. installation of mcr FID WING fire dampers in rigid walls for EIS120 and EIS60



- 1. mcr FID WING fire damper
- 2. insulating wrapa
- 3. ventilation duct
- 4. mortar/firestop coating*
- 5. rigid wall
- 6. plasterboard rim 12,5 mm
- 7. masonry mortar*
- 8. diffuser
- X wall thickness

* The recommended dry installation of the fire damper is based on A1 (non-flammable) mineral wool with a minimum density of 40 kg/m³ and includes sealing the damper's joint area. The recommended wet installation of the fire damper is based on gypsum or cement based mortar. The manufacturer allows the use of other materials with parameters that confirm and ensure the appropriate fire resistance class for the applied method of installation.

1.5.11. dry installation of mcr FID WING fire dampers

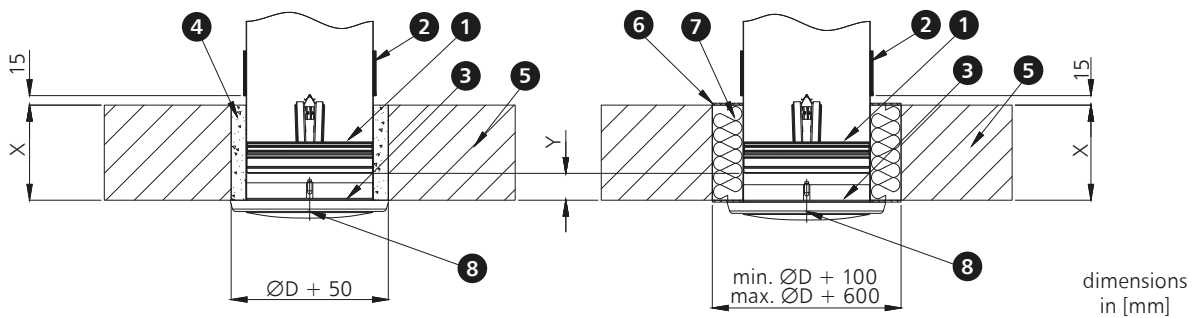


- | | | |
|-----------------------------|-----------------------------|------------------|
| 1. mcr FID WING fire damper | 4. mineral wool * | 7. rigid wall |
| 2. insulating wrapa | 5. mortar/firestop coating* | 8. diffuser |
| 3. ventilation duct | 6. plasterboard wall | X wall thickness |

* The recommended dry installation of the fire damper is based on A1 (non-inflammable) mineral wool with a minimum density of 140 kg/m³ and minimum thickness of 50mm and includes protecting the joint between the wool and the wall with firestop sealant PROMASTOP E PASTE or HILTI CFS-CT and protecting the wool with firestop sealant PROMASTOP E PASTE or HILTI CFS-S ACR, as shown in the drawing above. The recommended wet installation of the fire damper is based on gypsum or cement based mortar.

The manufacturer allows the use of other materials with parameters that confirm and ensure the appropriate fire resistance class for the applied method of installation.

1.5.12. installation of mcr FID WING fire dampers in floor slabs

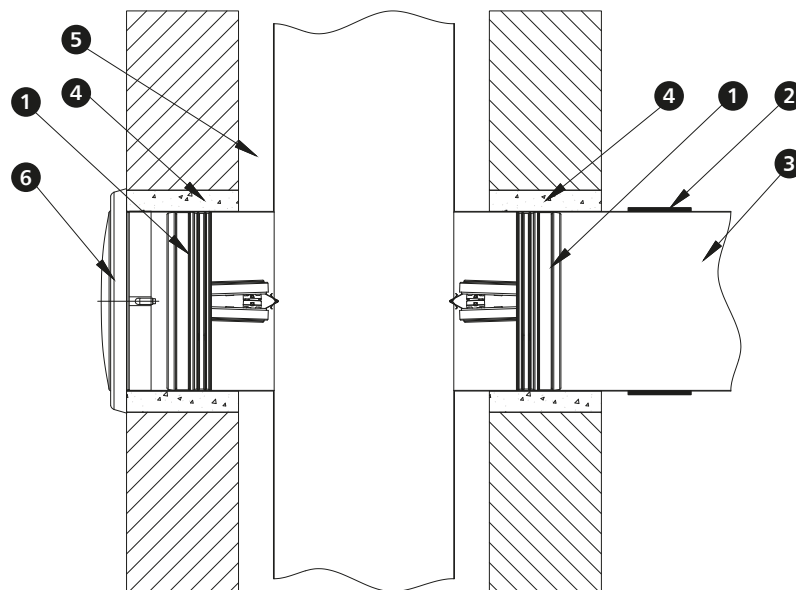


- | | | | |
|-----------------------------|-----------------------------|-------------------|-------------------|
| 1. mcr FID WING fire damper | 4. masonry mortar* | 7. mineral wool * | Y 70mm for EIS120 |
| 2. insulating wrapa | 5. floor slab | 8. diffuser | 55mm for EIS60 |
| 3. ventilation duct | 6. mortar/firestop coating* | X slab thickness | |

* The recommended dry installation of the fire damper is based on A1 (non-inflammable) mineral wool with a minimum density of 140 kg/m³ and minimum thickness of 50mm and includes protecting the joint between the wool and the wall with firestop sealant PROMASTOP E PASTE or HILTI CFS-CT and protecting the wool with firestop sealant PROMASTOP E PASTE or HILTI CFS-S ACR, as shown in the drawing above. The recommended wet installation of the fire damper is based on gypsum or cement based mortar.

The manufacturer allows the use of other materials with parameters that confirm and ensure the appropriate fire resistance class for the applied method of installation.

1.5.13. installation of mcr FID WING fire dampers in service shaft openings for EIS120 and EIS60



dimensions
in [mm]

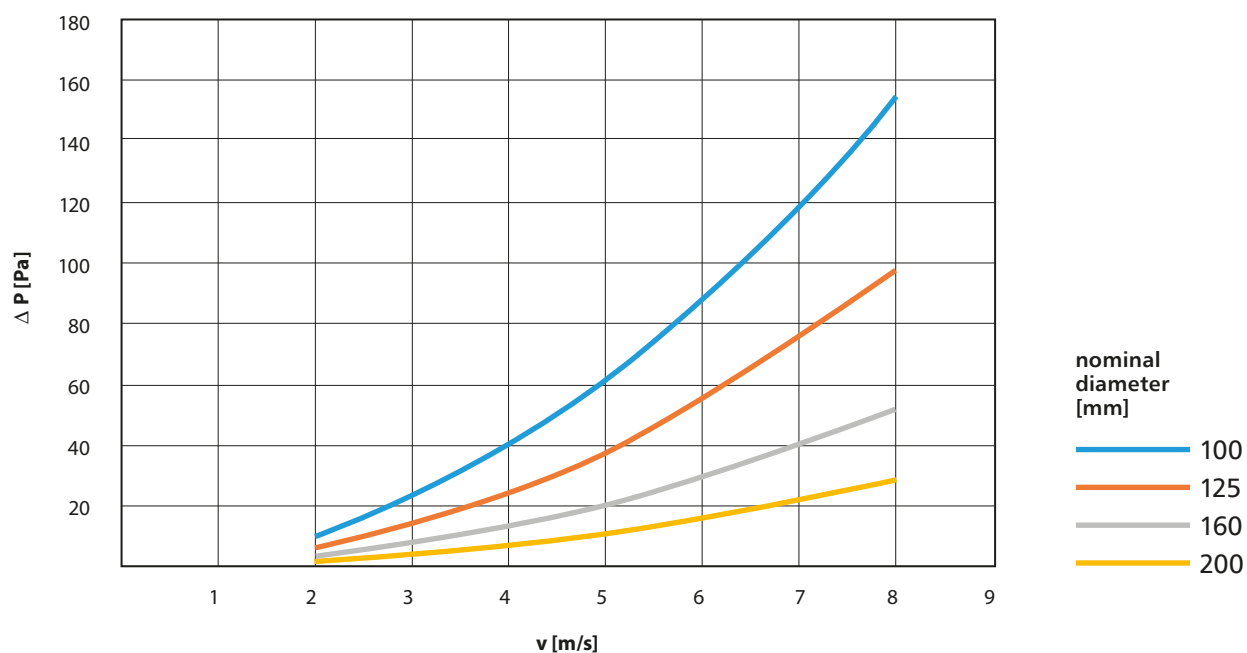
- 1. mcr FID WING fire damper
- 2. insulating wrap
- 3. ventilation duct
- 4. filling of installation clearance
- 5. service shaft

* The method of filling the assembly gap is based on the fire resistance rating of the solution and the assembly method as shown in the drawings above. When the damper is installed in the shaft opening (in technical shafts which are not designed for continuous presence or stay of people), it is not necessary to use the insulating wrap supplied with the damper. The fire damper should be placed at the duct side inside the shaft. Fire resistance rating of the shaft walls should be equal to or higher than that of the fire damper.

1.6. technical parameters of mcr FID WING circular fire dampers

product	D [mm]	S_k [m ²]	S_e [m ²]	V [m/s]	Q [m ³ /h]	dp [Pa]	L_{WA} [dB]
mcr FID WING	100	0,008	0,002	2	58	11	27
				4	29	40	44
				6	43	88	54
				8	58	154	61
	125	0,012	0,004	2	29	6	24
				4	58	25	40
				6	86	55	49
				8	115	98	55
	160	0,02	0,01	2	72	3	17
				4	144	13	34
				6	216	30	44
				8	288	53	52
	200	0,031	0,017	2	122	2	16
				4	245	7	32
				6	367	16	41
				8	490	29	48

Pressure difference across mcr FID WING



1.7. estimated weight of mcr FID WING circular fire dampers

nominal diameter ØD [mm]	weight [kg]
100	0,3
125	0,4
160	0,5
200	0,9

1.8. auxiliary equipment

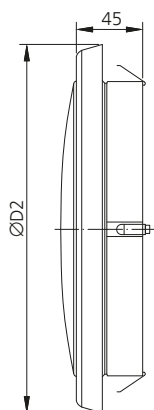
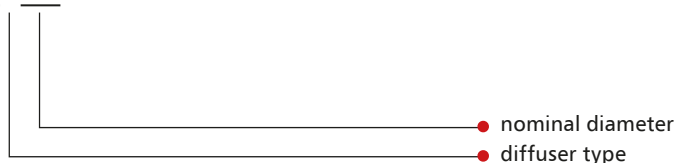
diffuser



Commercial diffusers AN are designed to suit either supply or exhaust applications. They are made of plastic. They are used for the aesthetic termination of the ductwork. Disc diffusers are equipped with a movable disc allowing adjustment of the airflow rate. The body of the diffuser is attached to the ventilation duct with a connection collar supplied in the kit. The diffuser is fixed in the connection collar using strutting elements on the diffuser's perimeter. Owing to the aesthetics of this solution the product is suitable even for most demanding applications. Diffusers are supplied in RAL 9010 as standard.

Designation:

AN / ØD

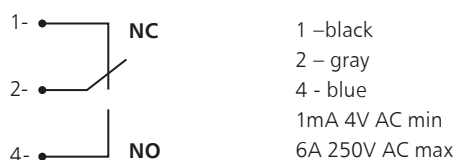


nominal diameter ØD [mm]	outside diameter ØD2 [mm]
100	149
125	169
160	195
200	240

Actuation and control mechanisms –technical data and diagram of connections

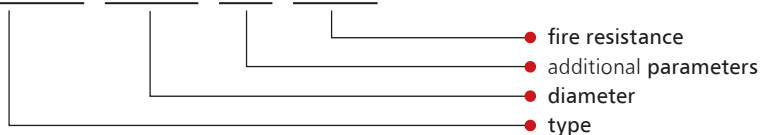
type	RST	RST + WK1
thermal trigger	+	+
limit switch	-	250 V AC / 6A

Diagram of electrical connections of mcr FID WING +WK1 damper



1.9. designation system

mcr FID WING / DIA 200 / WK1 / EIS 120



additional parameters:

WK1 – limit switch – signals that the blade has been closed
AN – diffuser

Note: the additional parameters should be entered using separation with a slash „/“.

an example of designation:

mcr FID WING / DIA 200 / AN / EIS120

fire damper EIS120 with a 74°C thermal trigger equipped with a diffuser.

FIRE PROTECTION SYSTEMS

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



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