



CERTIFIED FIRE DAMPER REI 120 (R.P. REI 151 RE 180)

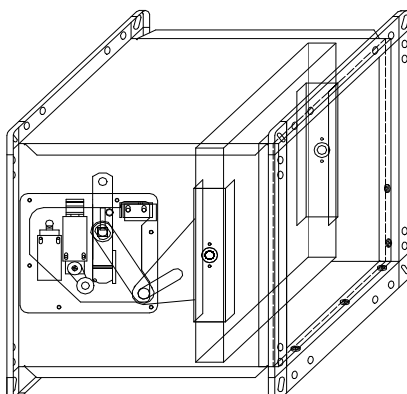
WWE
SERIES

OVERVIEW TECHNICAL SPECIFICATIONS

OVERVIEW :

The new WWE fire damper certified according to Italian regulations (circular no. 91 dated 14/09/1961 and no. 52 dated 20/11/1982) as results from the Fireproof Test Certification no. CSI 1010RF dated 06/05/2002 and CSI 1308FR dated 29/01/2007 issued by CSI S.p.A. The aim of the test is to assess the capacity of the fire damper to prevent the spread of fire, smoke and gas at high temperature from one compartment to another through the system of ducts that can cross walls and floors separating the fire areas. Due to the uniqueness of the assembly and materials used, the integrated interchangeable control systems and modular system assembly, it represents one of the most advanced tools on the market.

WWE General figure



SPECIFICATIONS :

Fire damper: mobile closing system inside a duct, designed to prevent the passage of fire.

Fire damper, fire test sample dimension: fire dampers with dimension 800 x 800 mm and 1200x800 mm was used.

Maximum thickness of walls, floors and structures housing the fire dampers with fixed flanges (standard): maximum thickness up to 120 mm.

Walls, floors and structures housing the fire dampers with fixed flanges with thickness over 120 mm: See figure (no. 2).

Fixed flanges: produced in height 30 mm and served by pressed angle bars with rounded corners complete with self-adjusting slots for quick simple installation.

Blade: sandwich of materials with reinforced silicate base with total thickness 30 mm, perimeter completely insulated by heat-expansion gasket. The limited depth is characteristic of a lightweight product with minimum pressure losses and low noise level but high resistance to fire, resistant in the long term to humidity in the air and to thermal shock in the case of fire.



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**OVERVIEW
TECHNICAL SPECIFICATIONS**

Isolating and sealing blade: gasket expands with heat to 12 times its thickness, applied on the perimeter of the blade to stop fire, gases at high temperature and fumes.

Blade, fixing to axis: symmetrical with respect to the support, no electrical welding.

Blade, position with respect to the masonry up to 120 mm thick with fire damper installed inside a wall of floor: symmetrical to the wall.

Blade, position with respect to the masonry with fire damper installed on the face of a wall or floor: flush, with shutter connection without flange, or protruding from the wall with shutter with fixed flange.

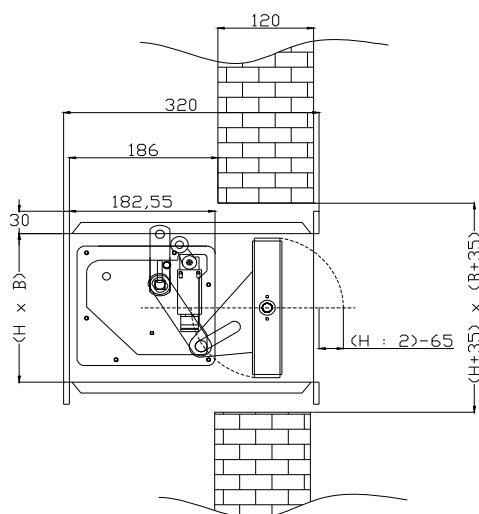
Duct: self-supporting, made of galvanised sheet metal, thickness 15/10, assembled by mechanical fixing system without any welding.

ASSEMBLY SYSTEM :

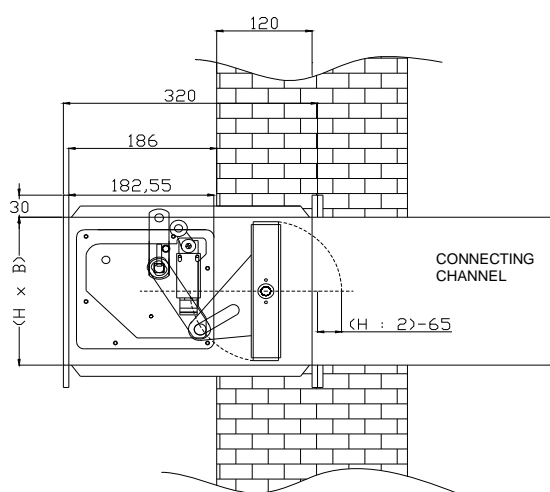
Duct, assembly and sealing method:

a) With fixed flange fire damper installed inside a wall (figure no. 1 and no. 2) or a floor, a hole is made with dimensions $(B+35) \times (H+35)$ mm, and the sheet metal duct is inserted until the flange comes out of the opposite side of the masonry, if the thickness is up to max. 120 mm. If the wall is thicker than 120 mm, the sheet metal duct is inserted to an equivalent depth, remembering to keep the flanges clean of cement to guarantee coupling to the connection duct. By adding new mortar between masonry and fire damper, a final block is obtained. .

WWE Figure no. 1



WWE Figure no. 2





**CERTIFIED FIRE DAMPER
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ASSEMBLY SYSTEM

ASSEMBLY CHECKS :

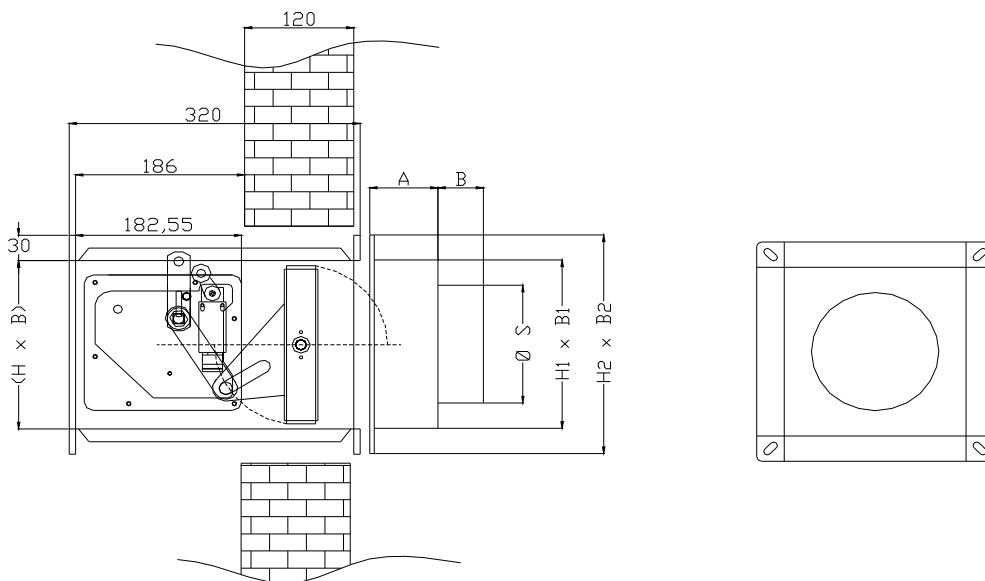
After fitting the fire damper, it is important to thoroughly test correct operation of the control mechanism (**manual - magnetic manual- servoassisted**) and the shutter mobil closing system (**isolating blade**), ensuring that there are no obstacles to its rotation in the parts outside the self-supporting duct.

Particularly thorough checks must be performed in the situation shown in the drawing (**no. 2**), as inaccurate positioning of the duct flanges in the wall associated with incorrect hole drilling will prevent the mobile closing system from rotating in the event of fire.

It is also important to carefully seal the self-supporting duct in the walls since in the event of fire, any air gaps will nullify the isolating effect, causing the fire to spread to the adjacent area.

Duct, circular duct connector: made of galvanised sheet metal, thickness 10/10 (**figure no. 3**) complete with 30 mm connection flange, served by pressed angle bars with rounded corners complete with self-adjusting slots for quick simple connection.

WWI Figure no. 3 Circular connector for fire damper



H	x	B	H1	B1	H2	B2	Ø S	A	B
170		170	170	170	230	230	150	50	80
200		200	200	200	260	260	200	50	80
250		250	250	250	310	310	250	70	80
300		300	300	300	360	360	300	100	80
350		350	350	350	410	410	350	120	80
400		400	400	400	460	460	400	150	80
450		450	450	450	510	510	450	200	80
500		500	500	500	560	560	500	200	80
600		600	600	600	660	660	600	250	80
700		700	700	700	760	760	700	300	80
800		800	800	800	860	860	800	350	80



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**TECHNICAL SPECIFICATIONS AND CIRCULAR
CONNECTOR ASSEMBLY SYSTEM**

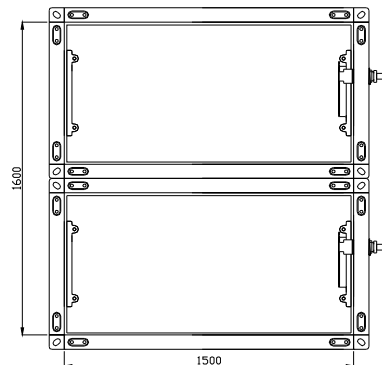
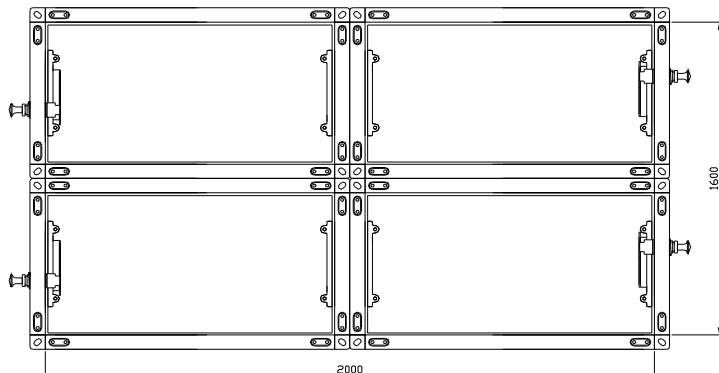
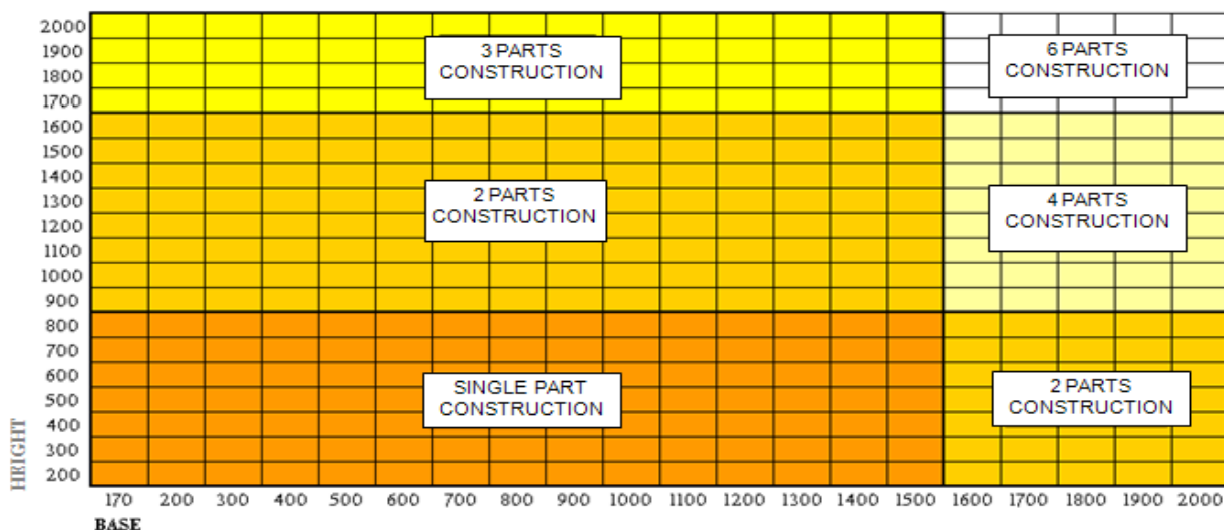
Mechanism, composition: kit assembled on pressed plate incorporating the mechanical or electrical thermal release mechanism, the drive mechanism, the reset lever, the control lever, the stroke start and end microswitches, the retaining coils, the servomotors, the thermomechanical fuses and the thermoelectrical fuses.

Mechanism, interchangeability: possibility of transforming the control system, once installed, from manual to magnetic or motorised and vice versa.

Production sizes :

	Minima	Massima
WWE	170 x 200	1.500 x 800
WWS	170 x 200	800 x 600

Produced in succession (only for WWE model) :





ELECTRO MAGNET MECHANISM COMMAND

WWE
WWS
SERIES

TECHNICAL CHARACTERISTICS

The electromagnet command kit is one of the control mechanisms offered and used for the releasing of the fire dampers WWE and WWS.

The complete kit responds to the independent characteristics between the thermo mechanic and electric mechanisms offered for the security measures on the fire dampers.

The devise is fixed on a removable plate, is easily changeable and completely interchangeable with other types of mechanisms available for the WWE and WWS series dampers.

The assembly of these products has the advantage of allowing their substitution even after they have been installed.

The items used in the assembly are:

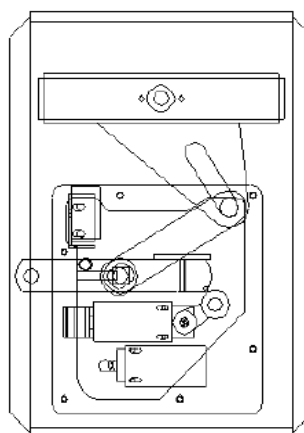
- thermo mechanic cut off switch
- thermo fuse at 72°C on cut off switch
- spare thermo fuse at 72°C
- repositioning lever
- command lever
- closing spring
- micro switch for the releasing of the magnet and the start of the mechanism.
- retention electromagnet and anchor.

The retention electromagnet is supplied by a 24 V (DC) and is able of developing a retention strength equal to 360N. The power absorption is 4.5W. The weight of the kit is 3,5Kg circa. To protect the magnet a simple fuse can be placed (not supplied).

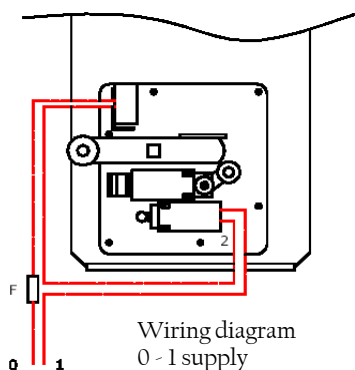
Electromagnet kit fixed to plate



Releasing diagram with electro magnet switch



WWS Fire damper with removable flange and electromagnet mechanism already installed.



Wiring diagram
 0 - 1 supply
 2 - internal wiring
 F protection fuse (recommended)





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TECHNICAL SPECIFICATIONS OF COIL AND ELECTRIC CONTROL SYSTEM

Electrical connections: 2 single-pole wires made of tin-plated copper coated in PTFE with sheath (length 200 mm).

Rated winding voltage: 24 d.c.

Rated voltage tolerance: +10% (minimum value according to use).

Protection rating: IP 40

Test conditions: ambient temperature (20 °C). Stationary thermal regime. Power supply voltage 90% of rated voltage.

Overall dimensions: diameter 40 mm x 22 mm.

Insulation: in class F (155 °C) with wire in class (180 °C).

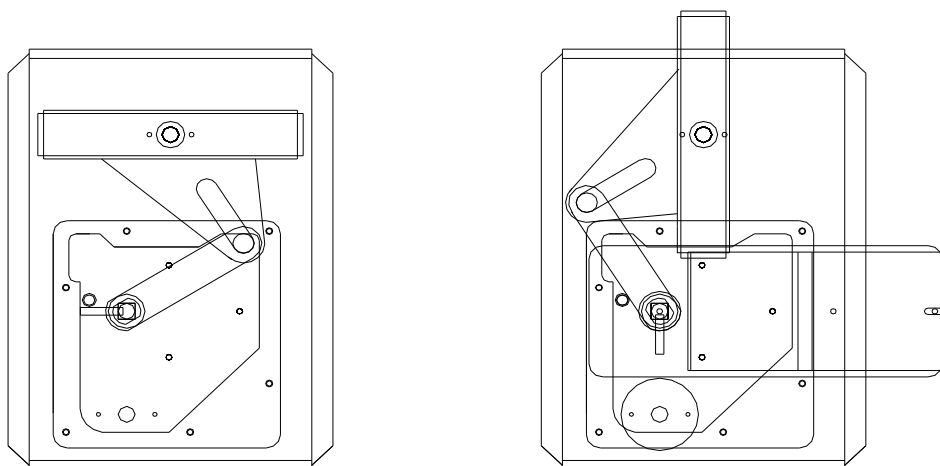
Retaining force: 360 N

Power absorbed: 4,5 W.

The descriptions and values below must be considered subject to possible technical modifications.
The company may therefore vary the specifications declared without notice.

Mechanism, servoassisted control: the complete kit (figure no. 7) consists of the control lever, 1 electrical servomotor powered at 24 or 220 V, 1 thermoelectrical fuse complete with 2 probes for recording the temperature inside and outside the duct, and 1 local operation test key.

Figure no. 7





**CERTIFIED FIRE DAMPER
REI 120 (R.P. REI 151 REI 180) FOR ISOLATING
LIGHTWEIGHT STRUCTURE PREMISES
(PLASTER BOARD)**

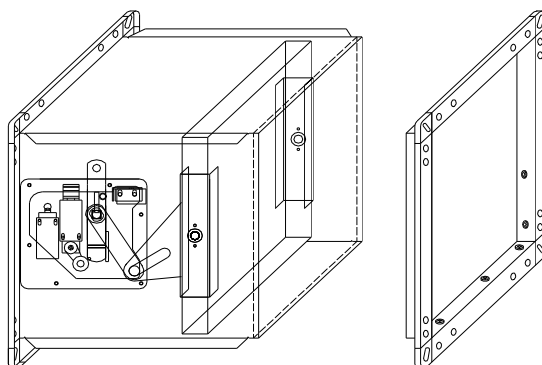
**WWE
SERIES**

**OVERVIEW
TECHNICAL SPECIFICATIONS**

OVERVIEW:

The new WWS fire damper certified according to Italian regulations (circular no. 91 dated 14/09/1961 and no. 52 dated 20/11/1982) as results from the Fireproof Test Certification no. CSI I010RF dated 06/05/2002 issue by CSI S.p.A. The aim of the test is to assess the capacity of the fire damper to prevent the spread of fire, smoke and gas at high temperature from one compartment to another through the system of ducts that can cross walls and floors separating the fire areas. Due to the uniqueness of the assembly and materials used, the integrated interchangeable control systems and modular system assembly,

WWS General figure



TECHNICAL SPECIFICATIONS :

Fire damper: mobile closing system inside a duct, designed to prevent the passage of fire.

Fire damper, fire test sample dimension: a fire damper with dimensions 650 x 650 mm was used.

Maximum thickness of lightweight structures housing the fire dampers with mobile flange: maximum thickness up to 190 mm.

Removable flange: for installations inside a flexible plaster board structure, it is produced as one single module fitted but mobile, ready for subsequent connection to the duct after installation of the fire damper.

Flanges: height 30 mm and served by pressed angle bars with rounded corners complete with self adjusting slots for quick simple installation.

Blade: sandwich of materials with reinforced silicate base with total thickness 30 mm, perimeter completely insulated by heat-expansion gasket. The limited depth is characteristic of a lightweight product with minimum pressure losses and low noise level but high resistance to fire, resistant in the long term to humidity in the air and to thermal shock in the case of fire.



**CERTIFIED FIRE DAMPER
REI 120 (R.P. REI 151 REI 180) FOR ISOLATING
LIGHTWEIGHT STRUCTURE PREMISES
(PLASTER BOARD)
TECHNICAL SPECIFICATIONS
ASSEMBLY SYSTEM**

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Blade, position with respect to a standard lightweight structure up to 127 mm thick with fire damper installed inside the sandwich wall: symmetrical to the wall.

Isolation and sealing blade: gasket expands with heat to 12 times its thickness, applied on the perimeter of the blade to stop fire, gases at high temperature and fumes.

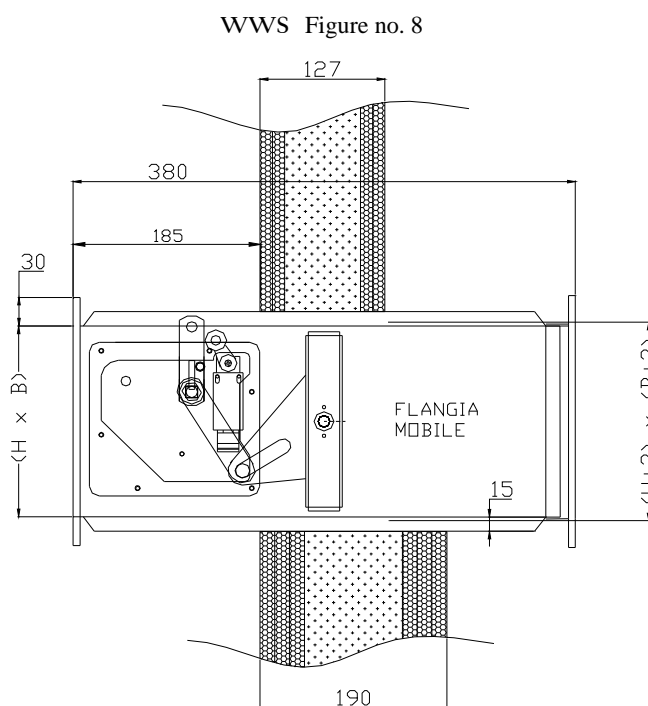
Blade, fixing to axis: symmetrical with respect to the support, no electrical welding.

Duct: self-supporting, made of galvanised sheet metal, thickness 15/10, assembled by mechanical fixing system without any welding.

ASSEMBLY SYSTEM :

Duct, method of assembly and sealing:

a) With fire damper connection by mobile flange installed inside a lightweight sandwich structure (figure no. 8), a hole is made with dimensions $(B+2) \times (H+2)$ mm and, removing the mobile flange, the sheet metal duct is inserted in the hole, thus positioning the blade symmetrical to the wall if the thickness is up to 127 mm. Subsequently the mobile flange is re-inserted from the opposite side of the structure, fixing it to the duct. The remaining air gaps in the structure must be sealed with the addition of hygroscopic material.





CERTIFIED FIRE DAMPER
REI 120 (R.P. REI 151 REI 180) FOR ISOLATING
LIGHTWEIGHT STRUCTURE PREMISES
(PLASTER BOARD)
PERFORMANCE

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Height H in mm		Width B in mm													
		200	300	400	500	600	700	800	900	1000	1100	1200	1300	1400	1500
200	Q= m ³ /h	720	1080	1440	1800	2160	2520	2880	3240	3600	3960	4320	4680	5040	5400
	Δpt= Pa	7,4	6,7	6,4	6,2	6,1	6,0	5,9	5,9	5,8	5,8	5,8	5,7	5,7	5,7
	LwA = dB(A)	43	44	46	47	47	48	49	49	50	50	50	51	51	51
250	Q= m ³ /h	900	1350	1800	2250	2700	3150	3600	4050	4500	4950	5400	5850	6300	6750
	Δpt= Pa	6,2	5,6	5,2	5,1	4,9	4,8	4,8	4,7	4,7	4,6	4,6	4,6	4,5	4,5
	LwA = dB(A)	39	41	42	43	44	45	45	46	46	47	47	47	48	48
300	Q= m ³ /h	1080	1620	2160	2700	3240	3780	4320	4860	5400	5940	6480	7020	7560	8100
	Δpt= Pa	5,5	4,9	4,5	4,3	4,2	4,1	4,0	4,0	3,9	3,9	3,9	3,8	3,8	3,8
	LwA = dB(A)	36	38	39	40	41	41	42	42	43	43	44	44	44	45
350	Q= m ³ /h	1260	1890	2520	3150	3780	4410	5040	5670	6300	6930	7560	8190	8820	9450
	Δpt= Pa	5,0	4,4	4,0	3,8	3,7	3,6	3,5	3,5	3,4	3,4	3,3	3,3	3,3	3,3
	LwA = dB(A)	35	36	38	39	39	40	41	41	42	42	42	43	43	43
400	Q= m ³ /h	1440	2160	2880	3600	4320	5040	5760	6480	7200	7920	8640	9360	10080	10800
	Δpt= Pa	4,7	4,0	3,7	3,5	3,3	3,2	3,1	3,1	3,0	3,0	3,0	3,0	3,0	3,0
	LwA = dB(A)	35	37	38	39	40	41	41	42	42	43	43	43	44	44
500	Q= m ³ /h	1800	2700	3600	4500	5400	6300	7200	8100	9000	9900	10800	11700	12600	13500
	Δpt= Pa	4,2	3,5	3,2	3,0	3,0	3,0	3,0	3,0	3,0	3,0	3,0	3,0	3,0	3,0
	LwA = dB(A)	37	39	40	41	42	42	43	43	44	44	45	45	45	46
600	Q= m ³ /h	2160	3240	4320	5400	6480	7560	8640	9720	10800	11880	12960	14040	15120	16200
	Δpt= Pa	3,9	3,2	3,0	3,0	3,0	3,0	3,0	3,0	3,0	3,0	3,0	3,0	3,0	3,0
	LwA = dB(A)	38	40	41	42	43	44	45	45	45	46	46	47	47	47
700	Q= m ³ /h	2520	3780	5040	6300	7560	8820	10080	11340	12600	13860	15120	16380	17640	18900
	Δpt= Pa	3,7	3,0	3,0	3,0	3,0	3,0	3,0	3,0	3,0	3,0	3,0	3,0	3,0	3,0
	LwA = dB(A)	40	42	43	44	45	46	46	47	47	48	48	48	49	49
800	Q= m ³ /h	2880	4320	5760	7200	8640	10080	11520	12960	14400	15840	17280	18720	20160	21600
	Δpt= Pa	3,5	3,0	3,0	3,0	3,0	3,0	3,0	3,0	3,0	3,0	3,0	3,0	3,0	3,0
	LwA = dB(A)	42	44	45	46	47	48	48	49	49	50	50	50	51	51

The pressure values; pressure loss and noise level are measured at a front air speed of 5m/s for other speeds see correction factors

Front velocity	2	3	4	5	6	7	8	9	10	11	12
Pressure loss in Pa multiplied by x	0,2	0,4	0,6	1,0	1,4	2,0	2,6	3,2	4,0	4,8	5,8
Noise level to add	-25	-14	-6	0	5	9	13	16	19	21	23

Example: given damper with dimensions B=600 mm ;H=300 mm. Air pressure Q= 3888 m³/h determine :
 Front velocity in m/s, pressure loss and noise level
 Front velocity in m/s = Q/3600/A = 3888/3600/(600/1000*300/1000) = 6m/s
 Pressure loss from table Δpt is 4.2 Pa the correction factor at 6m/s is 1.4 =Pressure loss is 3.8*1.4= -5.5 Pa
 Pressure loss from table in Lwa is di 41 dB(A) correction factor is 5dB(A) = 41+5 = 46 dB(A)





SERVOMOTORS FOR FIRE-PROOF DAMPERS

TECHNICAL SPECIFICATIONS

WWE
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Photo	Voltage	Micro - State	Th.fuse	Force	Kg	Code
	(AC/DC 24V)	On Off - 2		6 Nm 0,35 Mq.	1,63	BLF 24
	(AC/DC 24V)	On Off - 2	1 int + 1 est	6 Nm 0,35 Mq.	1,63	BLF 24T
	(AC/DC 24V)	On Off - 2	1 int + 1 est	6 Nm 0,35 Mq.	2,80	BLF 24TST
	(AC/DC 24V)	On Off - 2		18 Nm	2,80	BF 24
	(AC/DC 24V)	On Off - 2	1 int + 1 est	18 Nm	2,80	BF 24T
	(AC/DC 24V)	On Off - 2	1 int + 1 est	18 Nm	2,80	BF 24TST
	(AC 230V)	On Off - 2		6 Nm 0,35 Mq.	1,73	BLF 230
	(AC 230V)	On Off - 2	1 int + 1 est	6 Nm 0,35 Mq.	1,73	BLF 230T
	(AC 230V)	On Off - 2		18 Nm	3,10	BF 230
	(AC 230V)	On Off - 2	1 int + 1 est	18 Nm	3,10	BF 230T

Photo	Voltage	Micro - State	Th.fuse	Force	Kg	Code
	(AC 230/24V)	Power supply and comm. units N° 1 to 9			0,55	BKN 23024
	(AC 24+-20%)	Control and communication units max N°9			0,16	BKS 249A
	(AC 230/24V)	Power supply and comm. unit x N° 1			0,55	BKN 23024IMP
	(AC 24+-20%)	Control and communication unit-max N° 1			0,55	BKS 24IB
	(AC 24V)	Thermoelectric disconnection unit at 72°			0,85	BAE 72
	(AC 24V)	Disconnection device at 72° + test control			0,85	BAE 72S
	(AC 24V)	Only thermofuse at 72° for device			0,80	ZBA E72

Photo	Voltage	Micro - State	Th.fuse	Force	Kg	Code
	(AC 24V)	On Off - 2		7 Nm 1,0 mq.	1,20	GMA 126.1E12
	(AC 24V)	On Off - 2	1 int + 1 est	7 Nm 1,0 mq.	1,20	GNA 126.1E/T12
	(AC 24V)	On Off - 2		16 Nm 3,0 mq.	2,00	GCA 126.1E12
	(AC 24V)	On Off - 2	1 int + 1 est	16 Nm 3,0 mq.	2,00	GGA 126.1E/T12
	(AC 230V)	On Off - 2		7 Nm 1,0 mq.	1,30	GMA 326.1E12
	(AC 230V)	On Off - 2	1 int + 1 est	7 Nm 1,0 mq.	1,30	GNA 326.1E/T12
	(AC 230V)	On Off - 2		16 Nm 3,0 mq.	2,10	GCA 326.1E12
	(AC 230V)	On Off - 2	1 int + 1 est	16 Nm 3,0 mq.	2,10	GGA 326.1E/T12

Photo	Voltage	Micro - State	Th.fuse	Force	Kg	Code
	(AC 24V)	On Off - 2		6 Nm		
	(AC 24V)	On Off - 2	1 int + 1 est	6 Nm		
	(AC 24V)	On Off - 2		16 Nm	2,70	SFR 1.90T12
	(AC 24V)	On Off - 2	1 int + 1 est	16 Nm	2,70	SFR 1.90T12ST
	(AC 230V)	On Off - 2		6 Nm		
	(AC 230V)	On Off - 2	1 int + 1 est	6 Nm		
	(AC 230V)	On Off - 2		16 Nm	2,70	SFR 2.90T12
	(AC 230V)	On Off - 2	1 int + 1 est	16 Nm	2,70	SFR 2.90T12ST

Photo	Voltage	Micro - State	Th.fuse	Force	Kg	Code
	(AC 24V)	Thermoelectric disconnection unit at 72°			0,85	ST 1.72N
	(AC 24V)	Thermoelectric disconnection unit at 90°			0,80	ST 1.90N



ACCESSORIES AND KITS FOR FIRE-PROOF DAMPERS

TECHNICAL CHARACTERISTICS

WWE
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Photo	Description	Kg	Code
	Copper mechanical thermofuse at 72°	0,05	72
	Copper mechanical thermofuse at 96°	0,05	96
	Copper mechanical thermofuse at 124°	0,05	124
	Copper mechanical thermofuse at 220°	0,05	220
	Start microswitch	0,89	MI 1
	Microswitch for magnets	0,63	MI 3

Photo	Description	Kg	Code
	Magnetic kit [AC 24 V (360 N)] for current input with base plate + limit microswitch + magnet service micro + reset lever + drive transmission lever + 2 thermofuses in an alloy melting at 72° + brake magnet + joining anchor	3,50	WWE5 (*)
	Magnetic kit [AC W4,7 230 V (Kg. 35)] with base plate + micro switch for end run + micro service + release lever + drive transmission lever + 2 thermofuse with melting alloy at 72° + brake magnet + joining anchor	3,50	WWE5-I230 (*)
	Motorised servomotor support plate kit (AC 230/24V) with base plate + drive transmission lever	2,50	WWE-7 (*)

On request magnet kit for other voltages can be supplied.

(*) The purchase price of the manual controls are included in the price of the fire dampers. As a result, the sales prices of the magnetic and motorised controls do not include the cost of the manual control which in the event of a off site replacement, will have to be returned to MP3, without refund as non conforming goods.



CIRCULAR FIRE DAMPER CERTIFIED REI 120

WWC-P
SERIES

OVERVIEW TECHNICAL DATA

OVERVIEW AND CHARACTERISTICS:

The new WWC-P fire damper certified according to Italian regulations (circular 91), complies with the European test standards for "fire safety in buildings" drawn up and approved by the Technical Committee for standardisation of the EN UNI 1366-2 : 2001 norms. The aim of the test is to assess the capacity of the fire damper to prevent the spread of fire, smoke and gas at high temperature from one compartment to another through the system of ducts that can cross walls and floors separating the fire areas. Due to the uniqueness of the assembly and materials used, the integrated interchangeable control systems and modular system assembly, it represents one of the most advanced tools on the market.

Fire damper: mobile closing system inside a duct, designed to prevent the passage of fire.

Fire damper, fire test sample dimensions: fire damper with dimensions 500 mm was used.

Maximum thickness of lightweight structures housing the fire dampers with mobile flange: maximum thickness up to 140 mm

Maximum thickness of walls, floors and structures housing the fire dampers with fixed flanges (standard): maximum thickness up to 140 mm.

Couplings: made in galvanized steel and used to joint the circular fire damper (WWC-PI) with the duct (figure no. 1 and no. 3).

Fixed or removable flange: made in galvanized steel and available both mounted and fixed on notches (figure no. 5) and removable for installation on lightweight wall (false-ceiling).

Blade: Sandwich of materials with reinforced silicate base with total thickness 33 mm, perimeter completely insulated by heat-expansion gasket. The limited depth is characteristic of a lightweight product with maximum pressure losses and low noise level but high resistance to fire, resistant in the long term humidity in the air and to thermal shock in the case of fire.

Isolating and fixing blade: gasket expands with heat to 12 times its thickness, applied on the perimeter of the blade to stop fire, gases and fumes at high temperature.

Blade, fixing to axis: symmetrical with respect to the support, no electrical welding.

Blade, position with respect to the masonry (thickness up to 140 mm) with fire damper installed on the face of a wall or floor: not symmetric to the wall.

Duct: self-supporting, made of galvanised sheet metal, thickness 15/10, assembled with TIG welding.

ASSEMBLY AND SEALING SYSTEM OF DAMPERS IN CONCRETE:

Duct, assembly and sealing method:

a) with fixed flange fire damper installed inside a wall (figure no.4) or a floor, a hole is made with dimensions ($\text{Ø} + \text{B} + \text{B} + 5$) mm, and the sheet metal duct is inserted until the flange comes out of the opposite side of the masonry, if the thickness is up to max. 140 mm. If the wall is thicker than 140 mm, the sheet metal duct is inserted to an equivalent depth, remembering to keep the flanges clean of cement to guarantee coupling to the connection duct. By adding new mortar between masonry and fire damper, a final block is obtained.

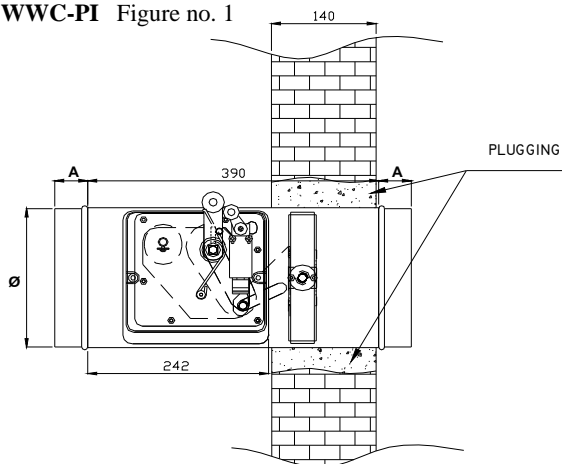


CIRCULAR FIRE DAMPER CERTIFIED REI 120

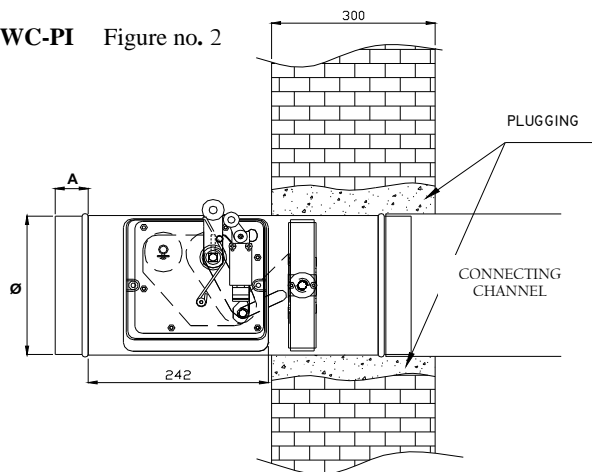
WWC-P
SERIES

TECHNICAL CHARACTERISTICS ASSEMBLY SYSTEM

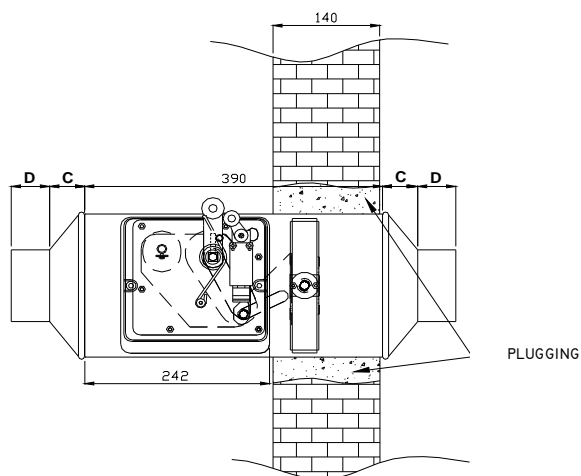
WWC-PI Figure no. 1



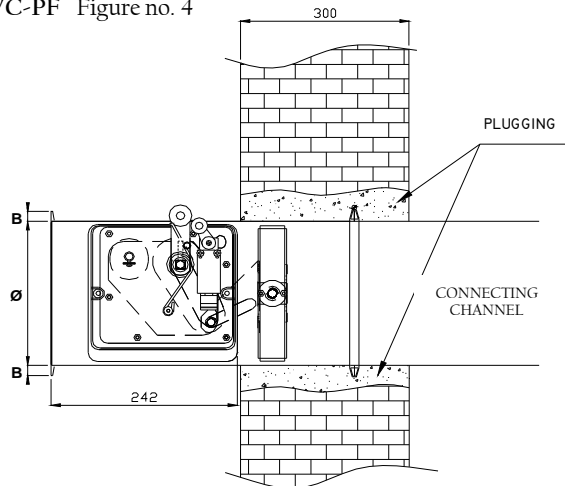
WWC-PI Figure no. 2



WWC-PI Figure no. 3



WWC-PF Figure no. 4



Ø	100	125	160	200	250	300	315	355	400	450	500	550	600	630	710	800
A	*	*	*	40	60	60	60	60	50	50	50	*	*	*	*	*
B	*	*	*	12	12	12	12	12	12	12	20	20	20	20	20	20
C	58	46	26	*	*	*	*	*	*	*	*	*	*	*	*	*
D	40	40	40	*	*	*	*	*	*	*	*	*	*	*	*	*
WWC-PI Blade protrusion [mm]	0	0	0	0	0	0	0	12	44	69	94	*	*	*	*	*
WWC-PF Blade protrusion [mm]	0	0	0	0	19	44	52	72	94	119	144	169	194	209	249	294

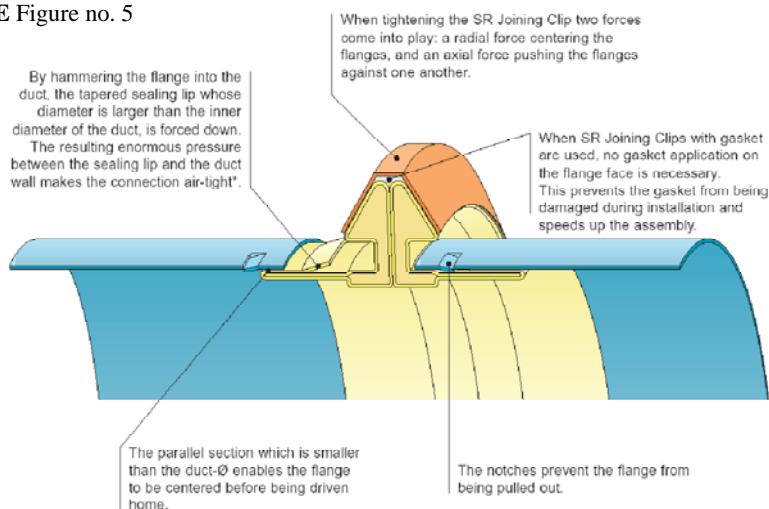


CIRCULAR FIRE DAMPER CERTIFIED REI 120 (R.P. REI 151 RE 180)

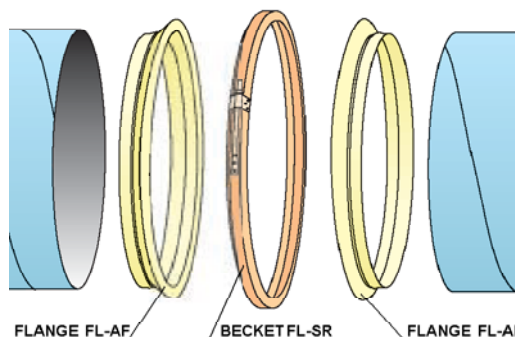
WWC-P
SERIES

OVERVIEW TECHNICAL SPECIFICATIONS

FIXING FLANGE Figure no. 5



FLANGE COMPONENTS Figure no. 6



ASSEMBLY CHECKS :

After fitting the fire damper, it is important to thoroughly test the correct operation of the control mechanism (**manual-magnetic manual-servoassisted**) and the shutter mobil closing systems (**isolating blade**), ensuring that there are no obstacles to its rotation in the parts outside the self-supporting duct.

Particularly thorough checks must be performed in the situation shown in the drawing (no. 2 and 4), as inaccurate positioning of the duct flanges in the wall associated with incorrect hole drilling will prevent the mobile closing system from rotating in the event of fire.

It is also important to carefully seal the self-supporting duct in the walls since in the event of fire, any air gaps will nullify the isolating effect, causing the fire to spread to adjacent area.

Mechanism, composition: kit assembled on pressed plate incorporating the mechanical or electrical thermal release mechanism, the drive mechanism, the reset lever, the control lever, the stroke start and end microswitches, the retaining coils, the servomotors, the thermomechanical fuses and the thermoelectrical fuses.

Mechanism, interchangeability: possibility of transforming the control system, once installed, from manual to magnetic or motorised and vice versa. For the details concerning the several types of control, please see pages referred to the series WWC and WWS.

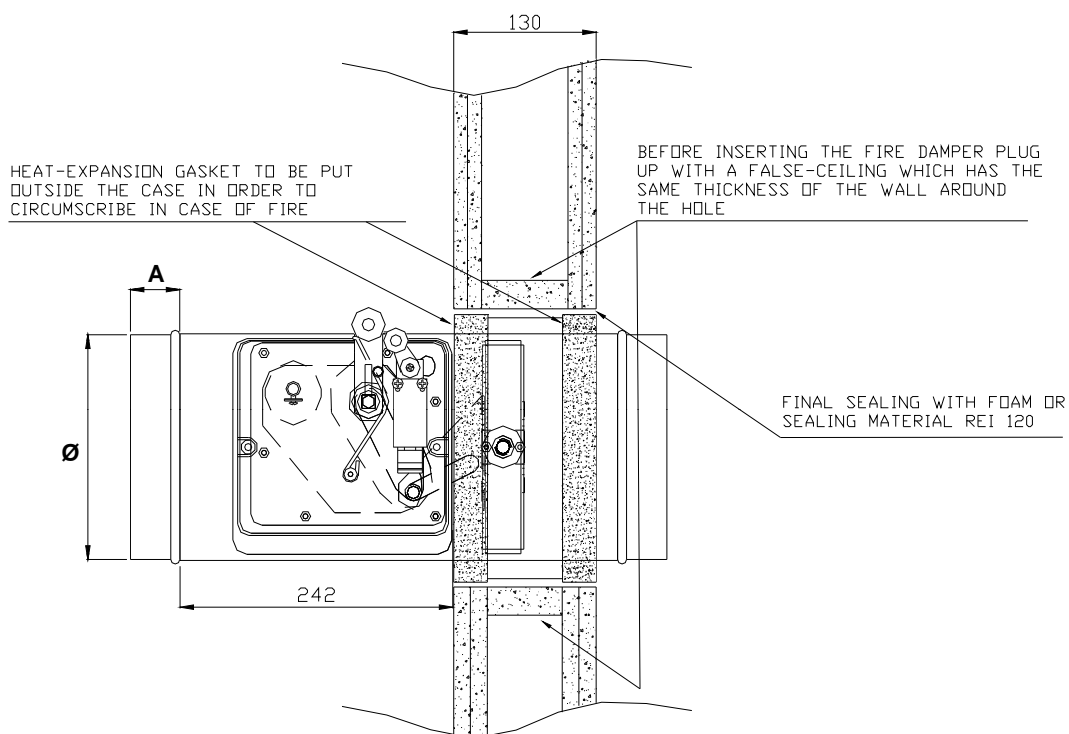


CIRCULAR FIRE DAMPER CERTIFIED REI 120

WWC-P
SERIES

SPECIFICATIONS

SEALING SYSTEM FOR FALSE-CEILING LIGHT STRUCTURES Figure n 7



SPECIFICATIONS :

Circular fire damper model WWC-PI and WWC-PF made MP3 is composed by:

- 1) compartmenting blade, thickness 33 mm, with a sandwich multi-ply structure and a patented **thermal barrier** made by two aluminium laminas with a gel between. Perimeter completely insulated by heat-expansion gasket.
- 2) damper blade without thermal bridge.
- 3) galvanized steel tunnel 15/10 with no protrusion fixing element inside or rests of blade.
- 4) air capacity inside the tunnel is substantially higher. Pressure drops and noise level are limited.
- 5) the actuators for safety dampers are **misaligned respect to the blade rotary axis and placed outside the masonry**.
- 6) the actuators for safety dampers are **removable and interchangeable** also after the installation.
- 7) the actuators for safety dampers are made in three versions: manual - magnetic manual - servoassisted
- 8) fixed or removable flanges for easy and rapid false-ceiling installation.



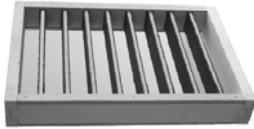
CIRCULAR FIRE DAMPER CERTIFIED REI 120

WWC-P
SERIES

PERFORMANCE

Model Ø nom. mm.		Supplied air speed in m/s								
		3	4	5	6	7	8	9	10	12
100	m ³ /h	80	107	134	160	187	213	240	267	320
100	Δps Pa	4,4	7,7	12	17,3	23,6	30,8	38,9	48	69,2
100	Lw=dB(a)	--	--	--	--	--	22	26	30	35
125	m ³ /h	127	169	211	253	295	337	379	421	506
125	Δps Pa	4,4	7,7	12	17,3	23,6	30,8	38,9	48	69,2
125	Lw=dB(a)	--	--	21	27	31	35	39	43	48
160	m ³ /h	210	279	349	419	488	558	628	697	837
160	Δps Pa	2,1	3,7	5,7	8,3	11,2	14,6	18,5	22,8	32,9
160	Lw=dB(a)	21	28	35	41	45	50	54	58	63
200	m ³ /h	330	439	549	659	769	878	988	1098	1317
200	Δps Pa	3,4	6	9,4	13,5	18,4	24	30,3	37,4	53,9
200	Lw=dB(a)	28	36	42	48	53	58	62	66	71
250	m ³ /h	518	690	863	1035	1208	1380	1553	1725	2070
250	Δps Pa	3	5,2	8,1	11,7	15,9	20,7	26,2	32,4	46,6
250	Lw=dB(a)	27	35	41	47	52	57	61	65	70
300	m ³ /h	749	998	1248	1497	1746	1996	2245	2495	2993
300	Δps Pa	2,6	4,6	7,2	10,4	14,1	18,4	23,3	28,8	41,4
300	Lw=dB(a)	26	34	40	46	51	56	60	64	69
315	m ³ /h	826	1101	1377	1652	1927	2202	2478	2753	3303
315	Δps Pa	2,6	4,5	7	10,1	13,7	17,9	22,6	27,9	40,1
315	Lw=dB(a)	26	34	41	46	51	56	60	64	70
355	m ³ /h	1051	1402	1752	2102	2453	2803	3153	3504	4204
355	Δps Pa	2,4	4,2	6,5	9,3	12,7	16,5	20,9	25,8	37,1
355	Lw=dB(a)	28	35	42	48	53	58	62	66	71
400	m ³ /h	1337	1783	2229	2674	3120	3566	4011	4457	5348
400	Δps Pa	2,2	3,9	6	8,6	11,7	15,3	19,3	23,9	34,3
400	Lw=dB(a)	26	34	40	46	51	56	60	64	69
450	m ³ /h	1695	2260	2825	3390	3955	4520	5085	5650	6780
450	Δps Pa	2	3,6	5,6	8	10,9	14,2	17,9	22,1	31,8
450	Lw=dB(a)	27	35	41	47	52	57	61	65	70
500	m ³ /h	2096	2794	3493	4191	4889	5588	6286	6985	8381
500	Δps Pa	1,9	3,3	5,2	7,5	10,1	13,2	16,7	20,6	29,7
500	Lw=dB(a)	28	36	43	48	54	58	63	67	72
560	m ³ /h	2632	3509	4387	5264	6141	7018	7895	8773	10527
560	Δps Pa	1,8	3,1	4,8	6,9	9,4	12,3	15,6	19,2	27,6
560	Lw=dB(a)	30	38	44	50	55	60	64	68	73
630	m ³ /h	3335	4447	5558	6670	7781	8893	10004	11116	13339
630	Δps Pa	1,6	2,9	4,5	6,4	8,7	11,4	14,4	17,8	25,6
630	Lw=dB(a)	28	36	42	48	53	58	62	66	71
710	m ³ /h	4240	5654	7067	8480	9894	11307	12720	14133	16960
710	Δps Pa	1,5	2,7	4,2	6	8,1	10,5	13,3	16,5	23,7
710	Lw=dB(a)	30	38	44	50	55	60	64	68	73
800	m ³ /h	5389	7185	8981	10777	12573	14369	16165	17961	21553
800	Δps Pa	1,5	2,7	4,2	6	8,1	10,5	13,3	16,5	23,7
800	Lw=dB(a)	32	40	46	52	57	62	66	70	75





FIRE BARRIER GRILLES

WF
WFC
SERIES

OVERVIEW TECHNICAL CHARACTERISTICS

OVERVIEW :

The fire barrier grilles WF, WFC series are a you category that can be used as an alternative to traditional fire barrier grilles, both on wall dividers and on plaster board walls (WFC model). They can also be used in all those applications of air flow where there is a need for air exchange between two areas, still with a fire protection necessity.

CHARACTERISTICS :

Construction : The WF and WG fire-barrier grilles are made up of a silicate fibre frame with a series of fixed fins that have heat-expanding material on both sides. In case of fire, the heat expanding material expands, and shuts off any openings through the grille.

The thermo expanding material is able to block all passages in case of fire.

Application : These grilles are installed in walls using inserts or are mortared in. Any gaps between the grille and its support must be filled using silicone or a REI 180 heat-expanding mastic.

TECHNICAL DATA :

Dimensions : 200x100 - 400x200 - 300x300 - 400x300 - 400x400 - 500x400 - other sizes up on request.

Depth:

WFC : 100 mm (external measures) REI 120 on plaster board

WF : 60 mm (external measures) REI 120 wall mounting

Reaction temperature : 100 °C circa.

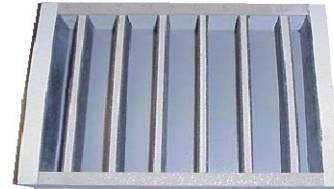
Fire resistance :

WFC : I.G. 161516/2396 RF REI 120 ON PLASTER BOARD

WF : I.G. 137997/2105 RF REI 120 WALL MOUNTING

SUMMARY DESCRIPTION :

Fire protection for air ways and with fire resistance certified REI 120 by inserting a fire barrier with thermo expanding fins, series WF. Any gaps between the grille and its support must be filled using silicone or a REI 120 heat-expanding mastic.



WF - fire barrier grille REI 120

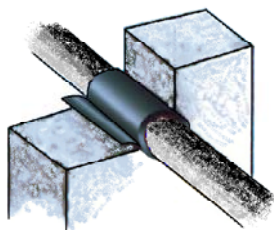


BARRIER GRILLES

WF
WFC
SERIES



Dimensions	WF - REI 120	WFC - REI 120
200 x 100	X	X
400 x 200	X	X
300 x 300	X	X
400 x 300	X	X
400 x 400	X	X
500 x 400	X	X



HEAT-EXPANDING TAPES

NT
SERIES

OVERVIEW CHARACTERISTICS TECHNICAL SCHEDULE

OVERVIEW :

The new NT series of heat-expanding tapes constitutes a new category of intumescent tapes for internal sealing of ducts in combustible material (PVC, PE, etc.). The presence of these combustible conduits passing through fire walls and fire barriers is a serious threat to the effective separation of spaces in case of fire.

When the NT series of heat-expanding tapes is used, the hole left clear by the conduit that has just been burnt is immediately filled by insulating material in just a few minutes, thereby preventing any propagation of the flames.

CHARACTERISTICS :

Operation : The NT series of heat-expanding tapes work exclusively on the basis of chemical phenomena, based on the intumescence characteristics of the materials the tape is made of. In case of fire, these tapes produce a heat-insulating foam that is able to expand and close any space left by a combustible conduit (even before the pipe melts altogether).

Application : The NT series of heat-expanding tapes is wrapped around the pipe where it passes through the fire wall of barrier to allow it to close inside the wall. The outer part can be left free or sealed, using normal cement on both sides. The REI 180 protection is guaranteed, irrespective of which side the flames come from.

TECHNICAL SCHEDULE

Fire-resistance : REI 180 (CSI 0780 RF)

Reaction temperature : About 150 °C.

Operation : Chemical

Width : 100 mm

Pipe diameters : Ø 40, Ø 50, Ø 63, Ø 75, Ø 90, Ø 100, Ø 110, Ø 125, Ø 140, Ø 160, Ø 200, Ø 250, Ø 300.

Pipe diameter (mm)	Tape width (mm)	Outside diameter (mm)	Code
40	150	53	NT-040
50	180	63	NT-050
63	235	80	NT-063
75	270	93	NT-075
90	330	112	NT-090
100	360	122	NT-100
110	405	136	NT-110
125	465	155	NT-124
140	525	174	NT-140
160	600	198	NT-160
200	750	246	NT-200
250	930	304	NT-250
300			NT-300

NT Heat-expanding tape

??? Pipe diameter

Example: WF 400x200 - REI 120 certified fire-barrier grille - dimensions 400x200 (overall)

