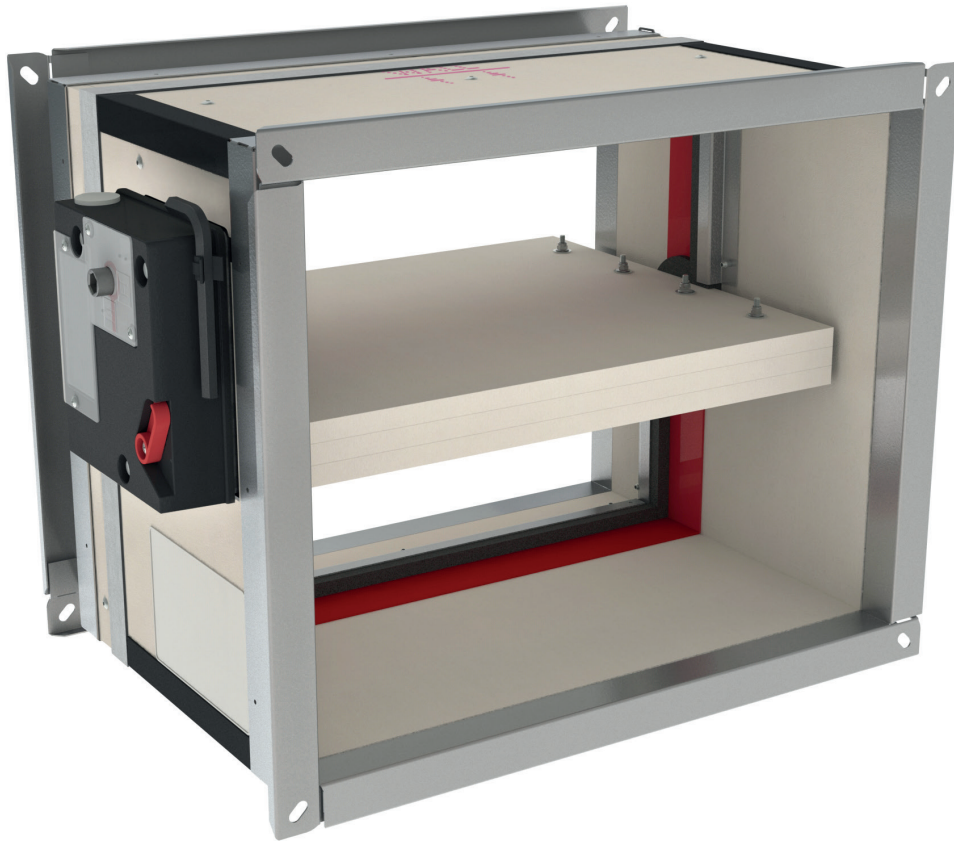


CU2

Wide-ranging rectangular fire damper up to 120'



CE
0749



UK
CA












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Explanation of the abbreviations and pictograms

Wn = nominal width	E.TELE = power supply magnet	Sn = free air passage
Hn = nominal height	E.ALIM = power supply motor	ζ [-] = pressure loss coefficient
Dn = nominal diameter	V = volt	Q = airflow
E = integrity	W = watt	ΔP = static pressure drop
I = thermal insulation	Auto = automatic	v = air speed in the duct
S = smoke leakage	Tele = remote controlled	Lwa = A-weighted sound power level
Pa = pascal	Pnom = nominal capacity	Lw oct = sound power level per octave midband
ve = vertical wall penetration	Pmax = maximum capacity	dB(A) = A-weighted decibel value
ho = horizontal floor penetration	GKB (type A) / GKF (type F): "GKB"	ΔL = correction factor
o -> i = meets the criteria from the outside (o) to the inside (i)	stands for standard plasterboards (type A according to EN 520) while "GKF" plasterboards offer a higher fire resistance for a similar plate thickness (type F according to EN 520)	
i <-> o = fire side not important	Cal-Sil = calcium silicate	
V AC = Volt alternating current	OP = option (delivered with the product)	
V DC = Volt direct current	KIT = kit (delivered separately for repair or upgrade)	
	PG = connection flange to the duct	

	large dimensions		battery assembly tested in rigid wall
	air tightness in accordance with EN 1751: class B (class C in option)		Hygiene certificate (www.HYG.de)
	suitable for built-in installation		intermediate dimensions on request
	minimal distance allowed		sealing with fire resistant stone wool boards allowed, also for asymmetric opening
	ATEX certificate TÜV 14 ATEX 7540 X		

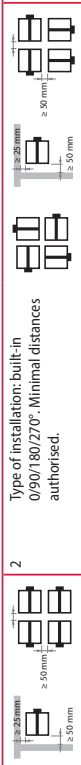
DECLARATION OF PERFORMANCE

UKCA_DoP_Rf-t_C2_EN - I-01/07/2023



1. Unique identification code of the product-type:	CU2
2. Intended use/s:	Rectangular fire damper to be used in conjunction with partitions to maintain fire compartments in heating, ventilating and air conditioning installations.
3. Manufacturer:	Rf-Technologies NV, Lange Ambachtstraat 40, B-9860 Oosterzele
4. System/s of AVCP:	System 1
5. Designated standard / Approved body, certificate of constancy of performance:	BS EN 15650:2010, BCCA with identification number: 0749; BCCA-0749-CPR-BC1-606-0464-15650.03-0464-2822-UKCA-CPR-0057
6. Declared performance according to BS EN 15650:2010	(Fire resistance according to BS EN 1366-2 and classifications according to BS EN 13501-3)

Essential characteristics		Performance		Designated standard EN 15650:2010
Range	Wall	Sealing	Installation	
200x200 mm ≤ CU2 ≤ 1500x1000 mm	Rigid wall	Aerated concrete ≥ 100 mm	Gypsum	EI 120 (V _e , I ↔ o) S - (500 Pa)
	Flexible wall	Metal studs gypsum plasterboard Type F (EN 520) ≥ 100 mm	Mortar	EI 90 (V _e , I ↔ o) S - (300 Pa)
200x200 mm ≤ CU2 ≤ 1200x800 mm	Rigid floor	Paroc-System Panel Sandwich panel type Paroc AST S ≥ 100 mm	Gypsum	EI 120 (V _e , I ↔ o) S - (500 Pa)
	Rigid wall	Gypsum blocks ≥ 100 mm	Hilti CFS-CT B 15	EI 90 (V _e , I ↔ o) S - (300 Pa)
200x200 mm ≤ CU2 ≤ 1200x800 mm	Rigid wall	Aerated concrete ≥ 150 mm	Mortar	EI 120 (f _h , I ↔ o) S - (500 Pa)
	Flexible wall	Aerated concrete ≥ 100 mm	Gypsum	EI 120 (V _e , I ↔ o) S - (500 Pa)
1200x800 mm < CU2 ≤ 1500x1000 mm	Rigid floor	Metal studs gypsum plasterboard Type A (EN 520) ≥ 100 mm	Stone wool + coating ≥ 140 kg/m ³	EI 90 (V _e , I ↔ o) S - (300 Pa)
	Rigid wall	Metal studs gypsum plasterboard Type F (EN 520) ≥ 100 mm	Stone wool ≥ 40 kg/m ³ + cover plates	EI 60 (V _e , I ↔ o) S - (500 Pa)
1200x800 mm < CU2 ≤ 1500x800 mm	Rigid floor	Gypsum blocks ≥ 70 mm	Gypsum	EI 60 (V _e , I ↔ o) S - (500 Pa)
	Rigid wall	Aerated concrete ≥ 150 mm	Stone wool + coating ≥ 140 kg/m ³	EI 90 (V _e , I ↔ o) S - (300 Pa)
1500x800 mm	Rigid wall	Aerated concrete ≥ 100 mm	Stone wool + coating ≥ 140 kg/m ³	EI 120 (V _e , I ↔ o) S - (500 Pa)
	Flexible wall	Aerated concrete ≥ 100 mm	Block glue	EI 90 (f _h , I ↔ o) S - (300 Pa)
200x200 mm ≤ CU2 ≤ 1500x800 mm	Asymmetrical flexible wall (shaft wall)	Metal studs gypsum plasterboard Type F (EN 520) ≥ 82.5 mm	Mortar / Gypsum	EI 60 (V _e , I ↔ o) S - (500 Pa)
	Rigid floor	Aerated concrete ≥ 125 mm	Mortar	EI 120 (f _h , I ↔ o) S - (300 Pa)



1	Type of installation: built-in 0°/180°: Minimal distances authorised.	3	Type of installation: built-in 0°/180°
Nominal activation conditions/sensitivity: Pass			
Response delay (response time): closure time Pass			
Operational reliability: cycling CFTH - 50 cycles; MAND - 300 cycles; B(L)F(T) - 10000 cycles; BFL(T) - 10000 cycles; BFN(T) - 10000 cycles; ONE - 10000 cycles; ONE-X - 10000 cycles; UNIQ - 10000 cycles			
Durability of operational reliability: Pass			
Protection against corrosion according to EN 60068-2-52: Pass			
Damper casing leakage according to EN 1751: ≥ class B			
Integrity (EI):		60, 90 and 120 minutes	
Insulation (EI):		60, 90 and 120 minutes	
Smoke leakage (ES):		60, 90 and 120 minutes	
Mechanical stability (under E):		Pass	
Maintenance of cross section (under EI):		Pass	

The performance of the product, identified above is in conformity with the set of declared performance/s. This declaration of performance is issued, in compliance with Regulation 2020 N° 359 of The Construction Products (EU exit) Regulation 2020, under the sole responsibility of the manufacturer, identified above.

Signed for and on behalf of the manufacturer by:



Mathieu Steenland, Technical Manager

Mathieu Steenland

Oosterzele, 01/07/2023

Product presentation CU2

Rectangular fire damper available in the largest dimensions, with battery conform to the European norm up to 3050x1650 mm. Fire resistance up to 120 minutes. The refractory casing is made of asbestos-free panels, which are resistant to humidity. Its many options make the CU2 damper a universal reference on the market.

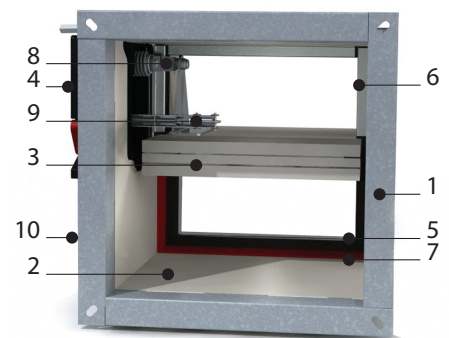
Fire dampers are installed where air ducts penetrate fire-resistant compartment walls. Their role is to restore the fire resistance grade of the penetrated wall and to prevent smoke propagation. Fire dampers are distinguished by their degree of fire resistance, by their aerualic properties as well as by their installation ease. Rf-Technologies' fire dampers are all CE marked. They can be equipped with various types of mechanisms depending on the specific needs linked to the project or to the local regulations.

- ✓ large dimensions
- ✓ many options and variants
- ✓ battery assembly tested in rigid wall
- ✓ model available for use in potentially explosive atmospheres



- suitable for built-in installation
- minimal distance allowed
- suitable for rigid wall, rigid floor and light wall (metal stud gypsum plasterboard wall), gypsum blocks and sandwich panel wall
- sealing with fire resistant stone wool boards allowed, also for asymmetric opening
- air tightness in accordance with EN 1751: class B (class C in option)
- tested according to EN 1366-2 up to 500 Pa
- operating mechanism outside the wall
- maintenance-free
- for indoor use
- operating temperature: max. 50°C
- intermediate dimensions on request
- Hygiene certificate for CU2: H > 600 or W > 800 (option when ordering)

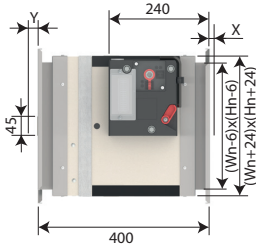
1. connection flange PG30
2. casing made of refractory material
3. damper blade
4. operating mechanism
5. sealing cold smoke
6. blade bumper
7. intumescent strip
8. transmission with locking (open/closed)
9. fusible link
10. product identification



Range and dimensions CU2

Range and dimensions CU2

Wn/Hn in steps of 50 mm; intermediate dimensions are subject to extra cost (heights between ≥ 275 and ≤ 299 mm are not possible).
Exceeding blade: X = on the mechanism side, Y = on the wall side



Hn (mm)	300	350	400	450	500	550	600	650	700	750	800	850	900	950	1000
x	-	-	-	-	-	1	26	51	76	101	126	151	176	201	226
y	2	27	52	77	102	127	152	177	202	227	252	277	302	327	352

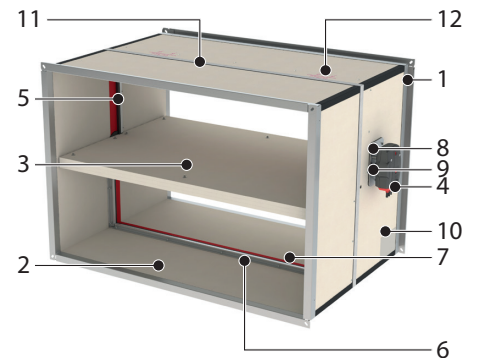
(W x H) mm	IV	V
200x200		
1500x1000		

Variant CU2L

Damper with a tunnel casing extension at one or both sides so that the damper blade does not exceed the tunnel. This version allows to connect a grill or a bend directly on the damper flange or to use a circular connection.

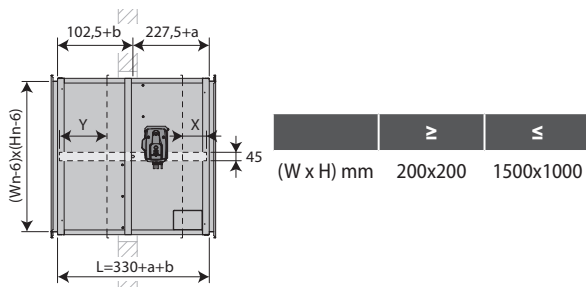
- extension: a = $H_n/2 - 230$ mm (on the side of the mechanism); b = $H_n/2 - 100$ mm (on the wall side)

1. connection flange PG30
2. casing made of refractory material
3. damper blade
4. operating mechanism
5. sealing cold smoke
6. blade bumper
7. intumescent strip
8. transmission with locking (open/closed)
9. fusible link
10. product identification
11. graphite strip
12. wall limit



Range and dimensions CU2L

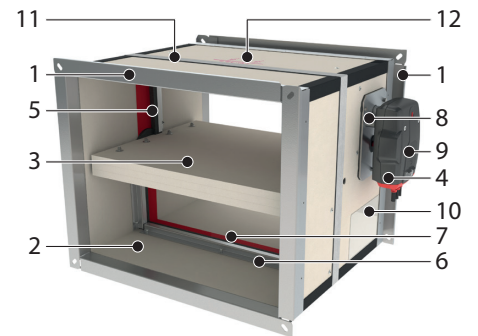
extension: a = $H_n/2 - 230$ mm (on the side of the mechanism); b = $H_n/2 - 100$ mm (on the wall side)



Variant CU2-L500

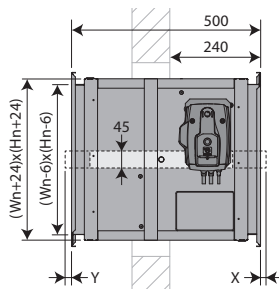
CU2 damper with a tunnel casing extension at the wall side to facilitate the connection to the duct when the supporting construction is thicker than 100 mm. This version also ensures that the damper blade doesn't exceed the casing at the wall side (up to a height of 500 mm), which allows to connect a grill or a bend directly on the damper flange or to use a circular connection.

1. connection flange PG30
2. casing made of refractory material
3. damper blade
4. operating mechanism
5. sealing cold smoke
6. blade bumper
7. intumescent strip
8. transmission with locking (open/closed)
9. fusible link
10. product identification
11. graphite strip
12. wall limit



Range and dimensions CU2-L500

Wn/Hn in steps of 50 mm; intermediate dimensions are subject to extra cost (heights between ≥ 275 and ≤ 299 mm are not possible).



Hn (mm)	500	550	600	650	700	750	800	850	900	950	1000
x	-	1	26	51	76	101	126	151	176	201	226
y	2	27	52	77	102	127	152	177	202	227	252



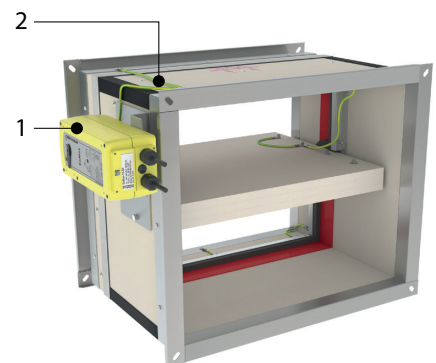
Variant CU2 ATEX

Explosion protected fire damper for use in zone 1,2 (gas) and zone 21,22 (combustible dust). The option is available on all dimensions of the CU2.

- ATEX certificate TÜV 14 ATEX 7540 X



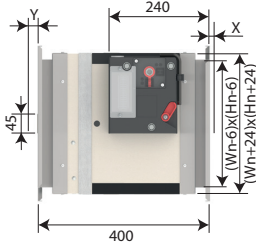
1. explosion proof mechanism
2. equipotential connection



Variant CU2L ATEX

Range and dimensions CU2 ATEX

Wn/Hn in steps of 50 mm; intermediate dimensions are subject to extra cost (heights between ≥ 275 and ≤ 299 mm are not possible).
Exceeding blade: X = on the mechanism side, Y = on the wall side



Hn (mm)	300	350	400	450	500	550	600	650	700	750	800	850	900	950	1000
x	-	-	-	-	-	1	26	51	76	101	126	151	176	201	226
y	2	27	52	77	102	127	152	177	202	227	252	277	302	327	352

(W x H) mm	IV	IA
200x200		
1500x1000		

Variant CU2L ATEX

Explosion protected fire damper for use in zone 1,2 (gas) and zone 21,22 (combustible dust) with a tunnel casing extension at one or both sides so that the damper blade does not exceed the tunnel. This extension makes it possible to use a circular connection (PRJ flange).

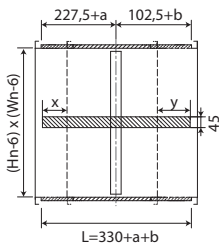
☑ ATEX certificate TÜV 14 ATEX 7540 X

- extension: a = $H_n/2 - 230$ mm (on the side of the mechanism);
b = $H_n/2 - 100$ mm (on the wall side)



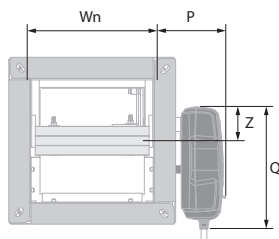
Range and dimensions CU2L ATEX

Wn/Hn in steps of 50 mm; intermediate dimensions are subject to extra cost (heights between ≥ 275 and ≤ 299 mm are not possible).
Exceeding blade: X = on the mechanism side, Y = on the wall side

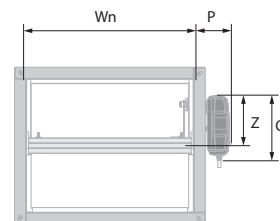


(W x H) mm	IV	IA
200x200		
1500x1000		

Hn < 300 mm




Hn ≥ 300 mm



	CFTH	ONE(X)	BFL(T)	E/RMEX(T)		CFTH	ONE(X)	BFL(T)	BFN(T)	E/RMEX(T)
P	78	104	96	118	P	78	104	96	100	118
Q	180	191	110	95	Q	180	191	110	110	95
Z	62	47	74	72,5	Z	157	147	180	180	167,5

Evolution - kits

	KIT ONE T 24 FDCB	Spring return actuator ONE 24V (with fusible link T) + bipolar beginning- and end-of-range switch
	KIT ONE T 24 FDCU	Spring return actuator ONE 24V (with fusible link T) + unipolar beginning- and end-of-range switch
	KIT ONE T 24 FDCU ST	Spring return actuator ONE 24V (with fusible link T) + unipolar beginning- and end-of-range switch + plug (ST)
	KIT ONE T 230 FDCB	Spring return actuator ONE 230V (with fusible link T) + bipolar beginning- and end-of-range switch
	KIT ONE T 230 FDCU	Spring return actuator ONE 230V (with fusible link T) + unipolar beginning- and end-of-range switch
	KIT ONE T 230 FDCU ST	Spring return actuator ONE 230V (with fusible link T) + unipolar beginning- and end-of-range switch + plug (ST)
	KIT ONE-X 24	Spring return actuator ONE-X 24V (with fusible link T)
	KIT ONE-X 230	Spring return actuator ONE-X 230V (with fusible link T)
	KIT CFTH	Automatic unlocking mechanism CFTH with FCU and without FTH 72



KIT BFL24

Spring return actuator BFL 24V



KIT BFL24-ST

Spring return actuator BFL 24V with plug (ST)



KIT BFL230

Spring return actuator BFL 230V



KIT BFLT24

Spring return actuator BFL 24V with thermo-electric fuse (T)



KIT BFLT24-ST

Spring return actuator BFL 24V with thermo-electric fuse (T) and plug (ST)



KIT BFLT230

Spring return actuator BFL 230V with thermo-electric fuse (T)



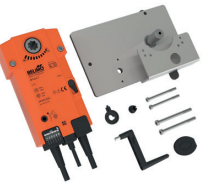
KIT BFLT230-ST

Spring return actuator BFL 230V with thermo-electric fuse (T)










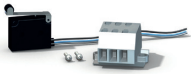

KIT BFN24

Spring return actuator BFN 24V



KIT BFN24-ST

Spring return actuator BFN 24V with plug (ST)

	KIT BFN24	Spring return actuator BFN 24V (BFN kits must be used instead of BFL kits for fire dampers produced before 1/7/2015)
	KIT BFN230	Spring return actuator BFN 230V
	KIT BFNT24	Spring return actuator BFN 24V with thermo-electric fuse (T)
	KIT BFNT24-ST	Spring return actuator BFN 24V with thermo-electric fuse (T) and plug (ST)
	KIT BFNT230	Spring return actuator BFN 230V with thermo-electric fuse (T)
	KIT BFNT230-ST	Spring return actuator BFN 230V with thermo-electric fuse (T)
	KIT BF24	Spring return actuator BF 24V (BF kits must be used instead of BFN kits for fire dampers produced before 1/7/2015)
	KIT FDC CFTH	1 limit switch (FCU/DCU/FCB/DCB)
	KIT SN2 BFL/BFN	Auxiliary limit switch 'open/closed'



KIT FTH72

Fusible link FTH 72°C (for CFTH)



KIT ZBAT 72

Black spare part for thermo-electric fuse for BFLT/BFNT



FUS72 ONE

Fusible link 72°C



MECT

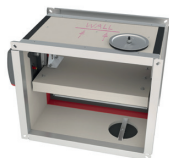
Testbox for mechanisms 24/48 V (magnet, motor, beginning and end of range switches)



KITS EQ

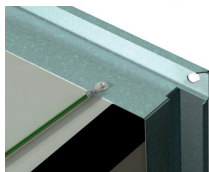
Kit equipotential connection (per set of 5 pieces)

Options - at the time of order



UL

Inspection shutter (set of 2)



EQ

Equipotential connection



EN1751_C

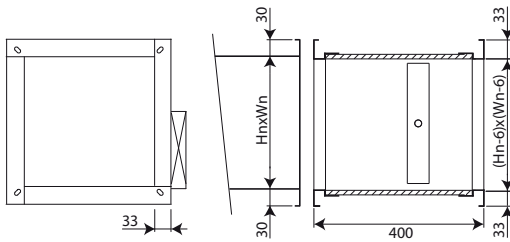
Air-tightness class C (note: for CU2 H > 600 mm or W > 800 mm).



HY

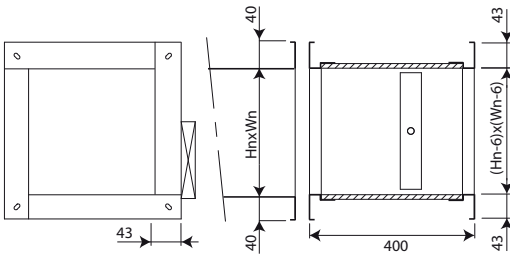
Hygiene certificate according to VDI 6022-1 (note: for CU2 H > 600 mm or W > 800 mm)

Flange types - at the time of order



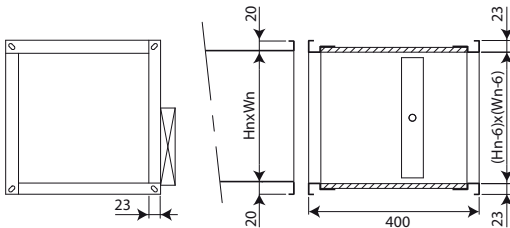
PG30

Connection to ducts with 30 mm flanges (either by sliding profile, or with bolts, or with clamps). Elliptical holes $\varnothing 8,5 \times 16$ mm.



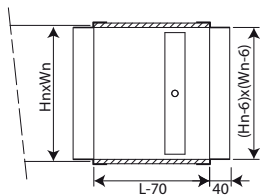
PG40

Connection to ducts with 40 mm flanges (either by sliding profile, or with bolts, or with clamps). Elliptical holes $\varnothing 8,5 \times 16$ mm.



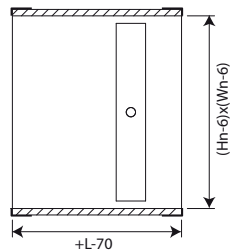
PG20

Connection to ducts with 20 mm flanges (either by sliding profile, or with bolts, or with clamps). Elliptical holes $\varnothing 6,5 \times 16$ mm.



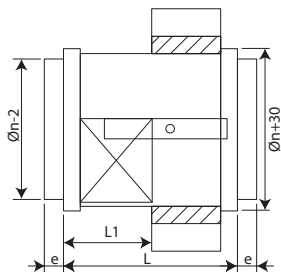
PM

Connection to ducts by insertion. This type of frame is used in case of lack of space for a standard PG30 frame.



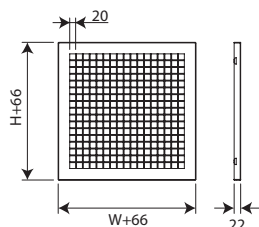
PP

No connection. This type of frame is used on one side of a damper that ends into a room.



PRJ

Circular connection with rubber sealing ring.



PPT

Grill. Very well suited as protection grill on the end piece of a duct system.

Storage and handling

As this product is a safety element, it should be stored and handled with care.

Avoid:

- any kind of impact or damage
- contact with water
- deformation of the casing


It is recommended:

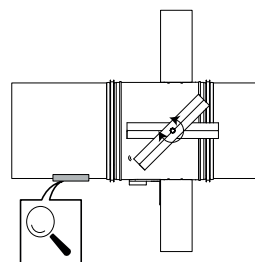
- to unload in a dry area
- not to flip or roll the product to move it
- not to use the damper as a scaffold, working table, etc.
- not to store smaller dampers inside larger ones

Installation

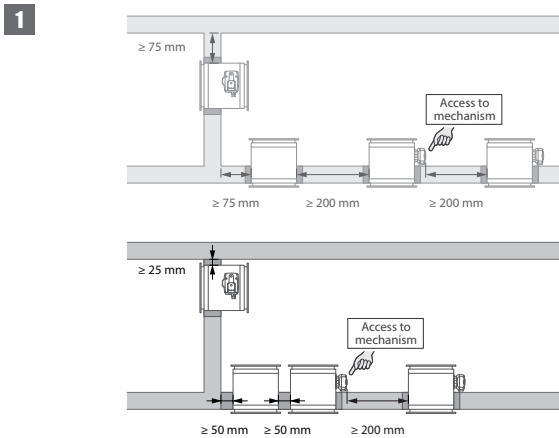
General points

- The installation must comply with the installation manual and the classification report.
- Axis orientation: see the declaration of performance.
- Avoid obstruction of adjoining ducts.
- Product installation: always with closed damper blade.
- Verify if the blade can move freely.
- Please observe safety distances with respect to other construction elements. The operating mechanism must also remain accessible: allow for a clearance of 200 mm around the housing.
- The air tightness class will be maintained if the damper is installed according to the installation manual.
- Rf-t fire dampers are always tested in standardised constructions according to EN 1366-2. The achieved results are valid for similar supporting constructions with a fire resistance, thickness and density equal or superior to the supporting construction used during the test.
- If the wall thickness exceeds the minimum thickness specified in our installation instructions, the following conditions apply to the sealing depth:
 - For flexible walls and sandwich panel system walls, the seal must always be applied over the full depth of the wall.
 - With rigid walls, rigid floors and plaster block walls, the minimum sealing depth as indicated in our installation instructions (often equal to the minimum wall thickness) is sufficient. Apply the seal at the height of the damper blade (from the wall limit indication).
- When installing a fire damper in a flexible metal stud wall, some installation methods do not require reinforcing profiles around the wall opening from a fire protection point of view (see below). Always follow the general instructions of the manufacturer of these wall systems when building this type of wall.
- The damper must remain accessible for inspection and maintenance.
- Schedule at least 2 visual checks each year.

		TEST
2021	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
2022	<input checked="" type="checkbox"/>	<input type="checkbox"/>
2023	<input type="checkbox"/>	<input type="checkbox"/>
2024	<input type="checkbox"/>	<input type="checkbox"/>
2025	<input type="checkbox"/>	<input type="checkbox"/>



Installation at a minimal distance from another damper or from an adjacent supporting construction



1. Principle

According to the European test standard, a fire damper must be installed at a minimum distance of 75 mm from an adjacent wall and 200 mm from another damper, unless the solution was tested at a shorter distance.

This range of Rf-t fire dampers has been successfully tested and can be installed in a vertical or horizontal supporting construction, at a distance below the minimum set by the standard.

For rectangular dampers, the minimal distance is set to 50 mm between 2 dampers or between a damper and a vertical wall, and to 25 mm between a damper and a floor/ceiling.

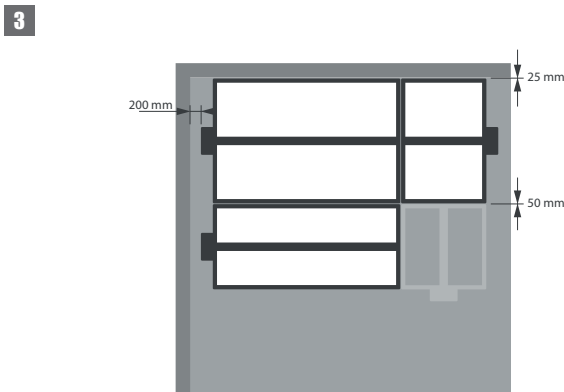
2. Certified solution

For the Rf-t fire dampers, the solution consists of the following elements: A: Universal sealing for minimal distance; B: Sealing compliant with existing classifications (Declaration of Performance).

A. Sealing of the opening at the side with minimal distances between damper and wall/ceiling or another fire damper: rigid stone wool panels (150 kg/m^3) are applied to a depth of min. 400 mm, of which 150 mm on the mechanism side of the wall. On the non-mechanism side of the wall, the stone wool panels must be at least flush with the wall. This sealing is applied over the whole width/height of the damper(s).

When the damper is installed at a distance of 25 mm from a floor/ceiling, the rigid high-density stone wool panels (A) may be replaced with standard 40 kg/m^3 stone wool, compressed by at least 40%.

B. Sealing of the rest of the opening according to the existing classifications for the fire damper (Declaration of Performance). Detailed information for each wall/sealing combination can be found in the respective installation methods.



3. Restrictions

The installer may choose the direction of the blade axis freely: horizontal or vertical axis.

A maximum of 2 rectangular dampers can be installed at a minimum distance from one another, both vertically and horizontally (maximum cluster of 4 dampers).

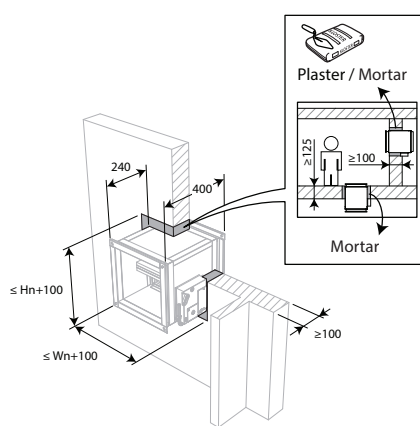
Note: when sealing the opening with panels of fire resistant stone wool, the maximum number of dampers also depends on the maximum "blank seal" allowed for the selected sealing material. Please refer to the manufacturer's instructions for this information.

Installation in rigid wall and floor

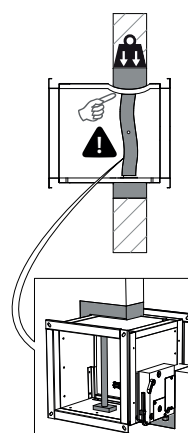
The product was tested and approved in:

Range	Wall type	Sealing	Classification	
$200 \times 200 \text{ mm} \leq \text{CU2} \leq 1500 \times 1000 \text{ mm}$	Rigid wall	Aerated concrete $\geq 100 \text{ mm}$	Gypsum	El 120 ($v_e i \leftrightarrow o$) S - (500 Pa)
$200 \times 200 \text{ mm} \leq \text{CU2} \leq 1500 \times 1000 \text{ mm}$	Rigid wall	Aerated concrete $\geq 100 \text{ mm}$	Mortar	El 90 ($v_e i \leftrightarrow o$) S - (300 Pa)
$200 \times 200 \text{ mm} \leq \text{CU2} \leq 1500 \times 1000 \text{ mm}$	Rigid floor	Aerated concrete $\geq 150 \text{ mm}$	Mortar	El 120 ($h_o i \leftrightarrow o$) S - (500 Pa)
$200 \times 200 \text{ mm} \leq \text{CU2} \leq 1200 \times 800 \text{ mm}$	Rigid wall	Aerated concrete $\geq 100 \text{ mm}$	Mortar	El 120 ($v_e i \leftrightarrow o$) S - (500 Pa)
$200 \times 200 \text{ mm} \leq \text{CU2} \leq 1200 \times 800 \text{ mm}$	Rigid wall	Aerated concrete $\geq 100 \text{ mm}$	Gypsum	El 90 ($v_e i \leftrightarrow o$) S - (500 Pa)
$1200 \times 800 \text{ mm} < \text{CU2} \leq 1500 \times 1000 \text{ mm}$	Rigid wall	Aerated concrete $\geq 100 \text{ mm}$	Mortar / Gypsum	El 60 ($v_e i \leftrightarrow o$) S - (500 Pa)
$1200 \times 800 \text{ mm} < \text{CU2} \leq 1500 \times 1000 \text{ mm}$	Rigid wall	Aerated concrete $\geq 100 \text{ mm}$	Mortar / Gypsum	E 120 ($v_e i \leftrightarrow o$) S - (500 Pa)
$1200 \times 800 \text{ mm} < \text{CU2} \leq 1500 \times 800 \text{ mm}$	Rigid wall	Aerated concrete $\geq 100 \text{ mm}$	Mortar	El 90 ($v_e i \leftrightarrow o$) S - (300 Pa)
$200 \times 200 \text{ mm} \leq \text{CU2} \leq 1500 \times 800 \text{ mm}$	Rigid floor	Aerated concrete $\geq 125 \text{ mm}$	Mortar	El 120 ($h_o i \leftrightarrow o$) S - (300 Pa)

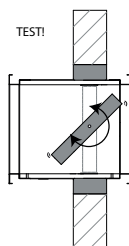
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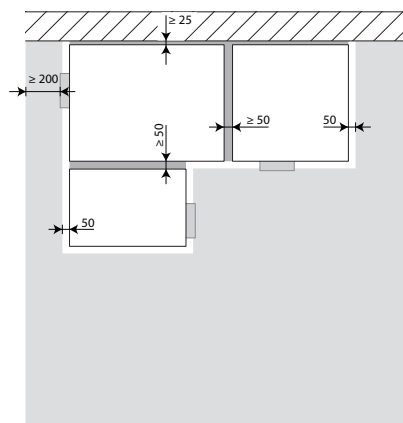
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3

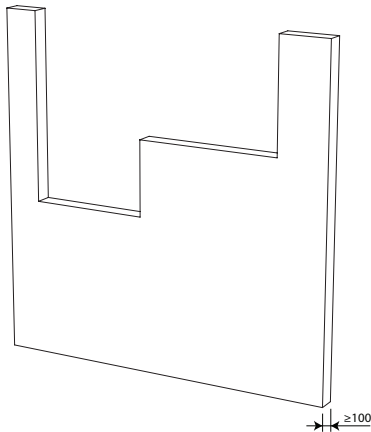


4



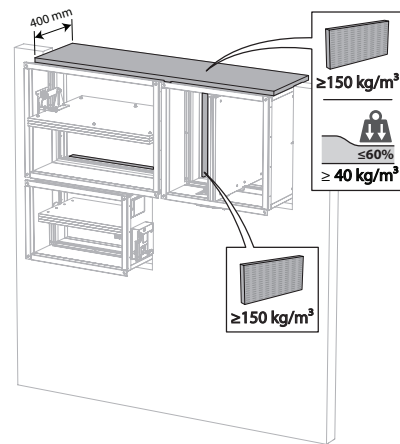
4. The dampers can be installed at a minimum distance from an adjacent floor/ceiling ($\geq 25 \text{ mm}$), from an adjacent wall or from another damper ($\geq 50 \text{ mm}$).

5



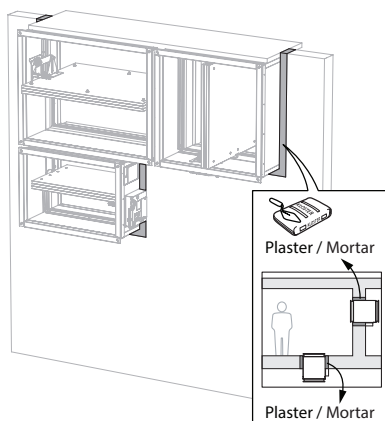
5. Make the necessary openings ($W_n + 100 \text{ mm}$) x ($H_n + 100 \text{ mm}$) in the wall.

6



6. Mount the dampers in the opening.
Apply rigid stone wool panels ($\geq 150 \text{ kg/m}^3$) to a depth of 400 mm (150 mm on the mechanism side of the wall) to seal the opening at the side with minimal distances. This sealing is applied over the whole width/height of the damper(s).
When the damper is installed at a distance of 25 mm from a floor/ceiling, the rigid high-density stone wool panels may be replaced with standard $\geq 40 \text{ kg/m}^3$ stone wool (e.g. Rockfit 431), compressed by at least 40%.

7



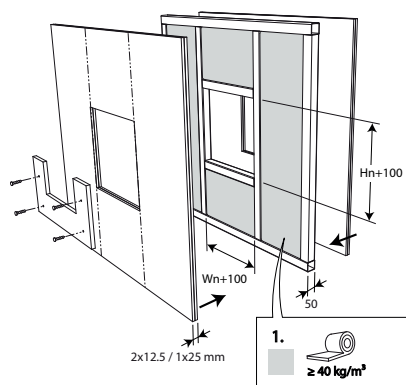
7. Seal the rest of the opening with standard mortar or gypsum (only for vertical walls).

Installation in flexible wall (metal stud gypsum plasterboard wall)

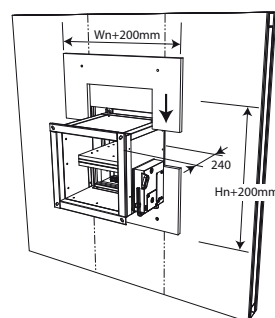
The product was tested and approved in:

Range	Wall type	Sealing	Classification
$200 \times 200 \text{ mm} \leq \text{CU2} \leq 1200 \times 800 \text{ mm}$	Flexible wall Metal studs gypsum plasterboard Type A (EN 520) $\geq 100 \text{ mm}$	Stone wool $\geq 40 \text{ kg/m}^3$ + cover plates	EI 60 ($v_e i \leftrightarrow o$) S - (500 Pa)
$200 \times 200 \text{ mm} \leq \text{CU2} \leq 1200 \times 800 \text{ mm}$	Flexible wall Metal studs gypsum plasterboard Type F (EN 520) $\geq 100 \text{ mm}$	Stone wool $\geq 40 \text{ kg/m}^3$ + cover plates	EI 90 ($v_e i \leftrightarrow o$) S - (500 Pa)
$1200 \times 800 \text{ mm} < \text{CU2} \leq 1500 \times 800 \text{ mm}$	Flexible wall Metal studs gypsum plasterboard Type F (EN 520) $\geq 100 \text{ mm}$	Stone wool $\geq 40 \text{ kg/m}^3$ + cover plates	EI 90 ($v_e i \leftrightarrow o$) S - (300 Pa)
$1200 \times 800 \text{ mm} < \text{CU2} \leq 1500 \times 800 \text{ mm}$	Flexible wall Metal studs gypsum plasterboard Type F (EN 520) $\geq 100 \text{ mm}$	Stone wool $\geq 40 \text{ kg/m}^3$ + cover plates	E 120 ($v_e i \leftrightarrow o$) S - (300 Pa)

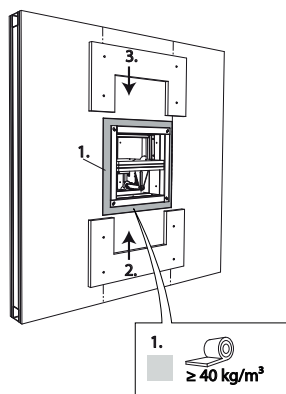
1



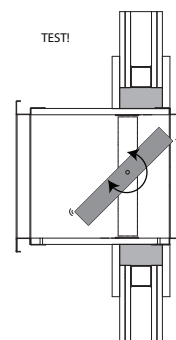
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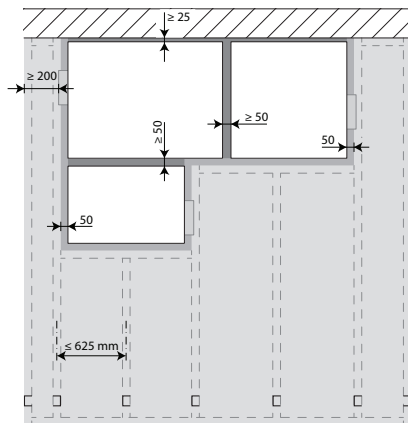
3



4

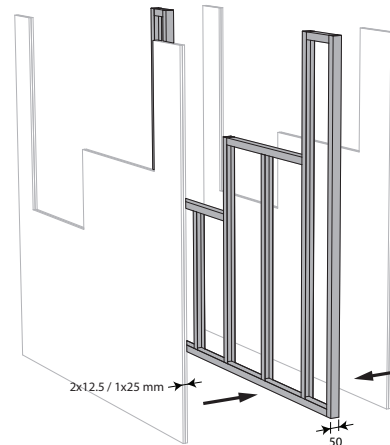


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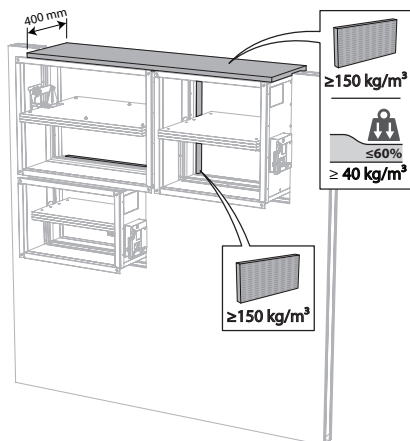
5. The dampers can be installed at a minimum distance from an adjacent floor/ceiling (≥ 25 mm), from an adjacent wall or from another damper (≥ 50 mm).

6



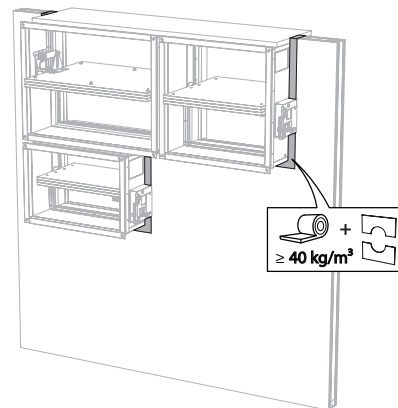
6. Build the drywall and foresee horizontal and vertical studs around the opening.

7



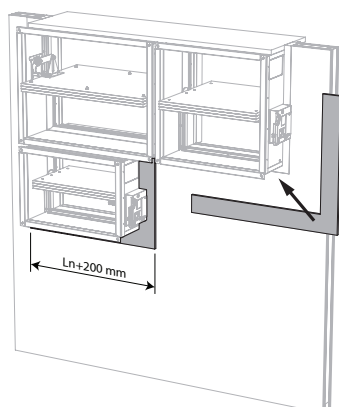
7. Mount the dampers in the opening.
Apply rigid stone wool panels (≥ 150 kg/m³) to a depth of 400 mm (150 mm on the mechanism side of the wall) to seal the opening at the side with minimal distances. This sealing is applied over the whole width/height of the damper(s).
When the damper is installed at a distance of 25 mm from a floor/ceiling, the rigid high-density stone wool panels may be replaced with standard ≥ 40 kg/m³ stone wool (e.g. Rockfit 431), compressed by at least 40%.

8



8. Seal the rest of the opening with standard stone wool 40 kg/m³ across the entire wall thickness.

9

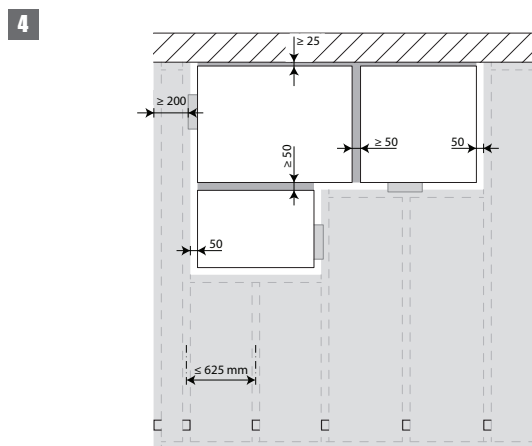
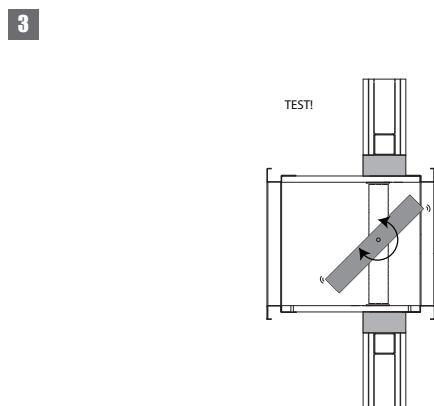
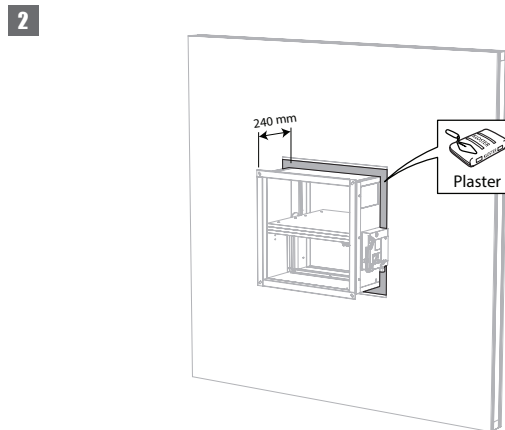
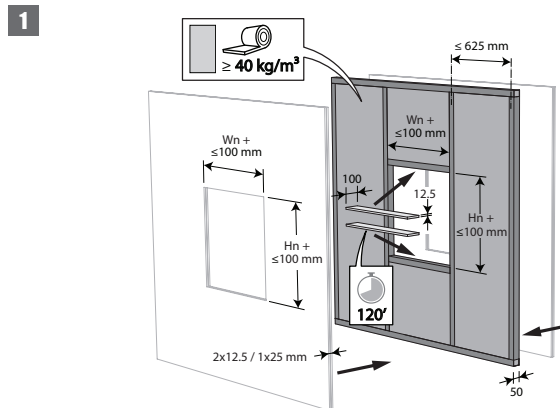


9. Apply cover plates (gypsum plasterboards) to finish the surface at both sides.
Seal off the space between the plasterboards with jointfiller.

Installation in flexible wall (metal stud gypsum plasterboard wall), sealing with gypsum

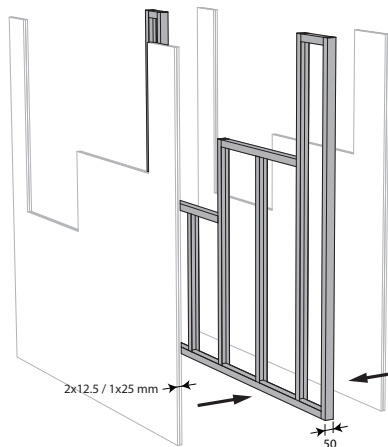
The product was tested and approved in:

Range	Wall type	Sealing	Classification
$200 \times 200 \text{ mm} \leq \text{CU2} \leq 1500 \times 1000 \text{ mm}$	Flexible wall	Gypsum	EI 120 ($v_e i \leftrightarrow o$) S - (500 Pa)
$200 \times 200 \text{ mm} \leq \text{CU2} \leq 1200 \times 800 \text{ mm}$	Flexible wall	Gypsum	EI 60 ($v_e i \leftrightarrow o$) S - (500 Pa)



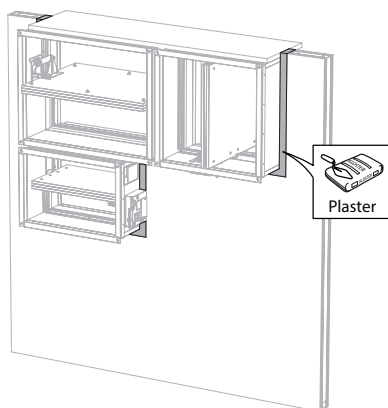
4. The dampers can be installed at a minimum distance from an adjacent floor/ceiling ($\geq 25 \text{ mm}$), from an adjacent wall or from another damper ($\geq 50 \text{ mm}$).

5



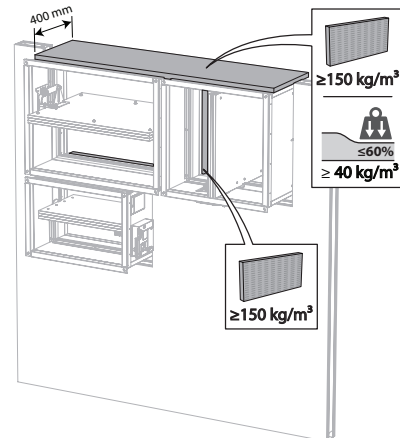
5. Build the drywall and foresee horizontal and vertical studs around the opening.

7



7. Seal the rest of the opening (50 mm) with standard gypsum across the entire wall thickness.

6

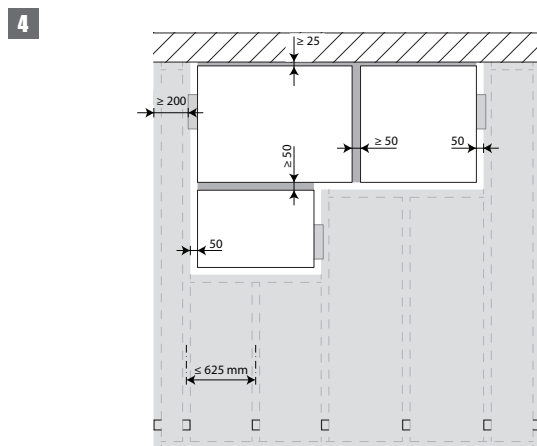
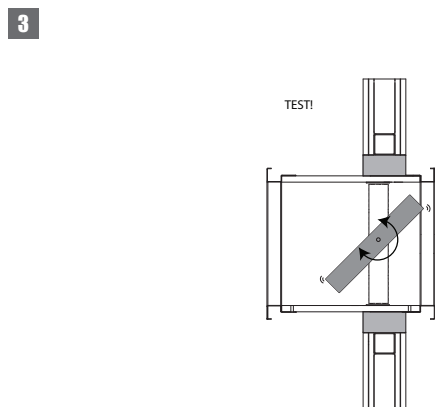
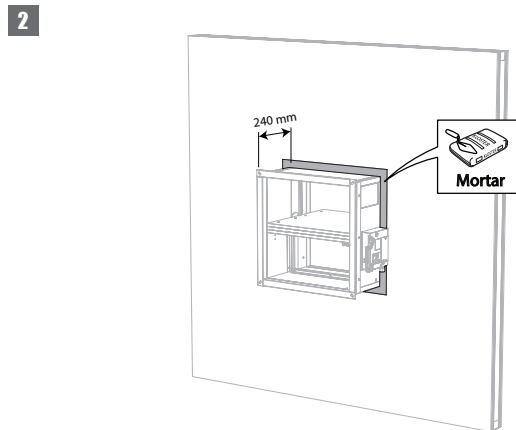
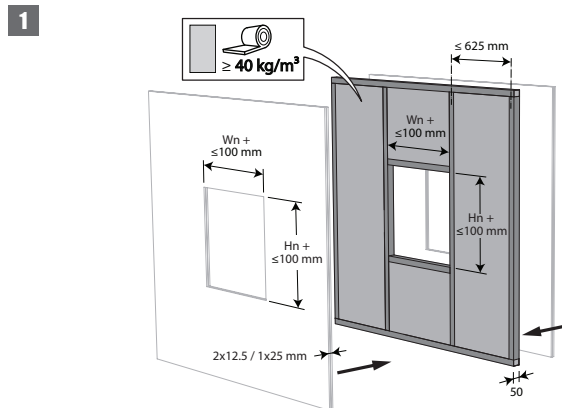


6. Mount the dampers in the opening.
Apply rigid stone wool panels ($\geq 150 \text{ kg/m}^3$) to a depth of 400 mm (150 mm on the mechanism side of the wall) to seal the opening at the side with minimal distances. This sealing is applied over the whole width/height of the damper(s).
When the damper is installed at a distance of 25 mm from a floor/ceiling, the rigid high-density stone wool panels may be replaced with standard $\geq 40 \text{ kg/m}^3$ stone wool (e.g. Rockfit 431), compressed by at least 40%.

Installation in flexible wall (metal stud gypsum plasterboard wall), sealing with mortar

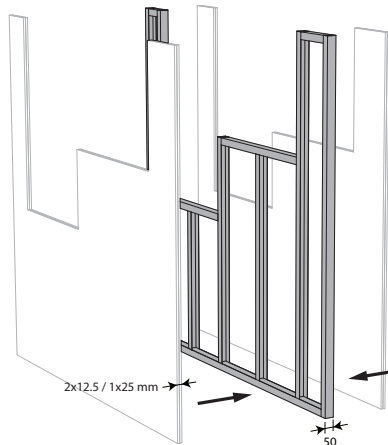
The product was tested and approved in:

Range	Wall type	Sealing	Classification
$200 \times 200 \text{ mm} \leq \text{CU2} \leq 1500 \times 1000 \text{ mm}$	Flexible wall	Mortar	El 90 ($v_e i \leftrightarrow o$) S - (300 Pa)



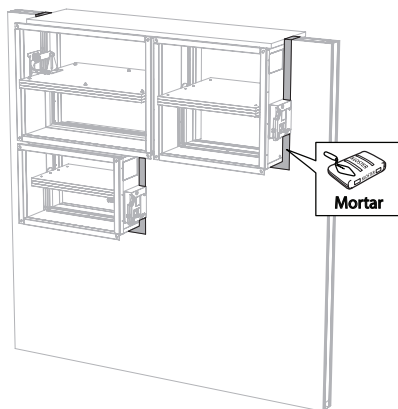
4. The dampers can be installed at a minimum distance from an adjacent floor/ceiling ($\geq 25 \text{ mm}$), from an adjacent wall or from another damper ($\geq 50 \text{ mm}$).

5



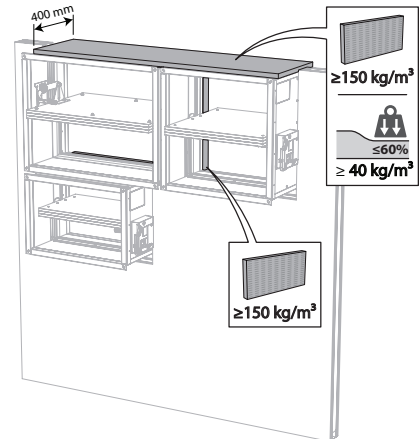
5. Build the drywall and foresee horizontal and vertical studs around the opening.

7



7. Seal the rest of the opening (50 mm) with standard mortar across the entire wall thickness.

6



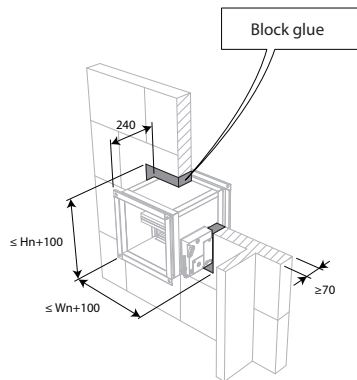
6. Mount the dampers in the opening. Apply rigid stone wool panels ($\geq 150 \text{ kg/m}^3$) to a depth of 400 mm (150 mm on the mechanism side of the wall) to seal the opening at the side with minimal distances. This sealing is applied over the whole width/height of the damper(s). When the damper is installed at a distance of 25 mm from a floor/ceiling, the rigid high-density stone wool panels may be replaced with standard $\geq 40 \text{ kg/m}^3$ stone wool (e.g. Rockfit 431), compressed by at least 40%.

Installation in gypsum block wall

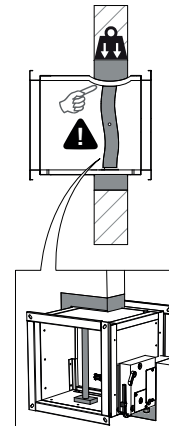
The product was tested and approved in:

Range	Wall type	Sealing	Classification
$200 \times 200 \text{ mm} \leq \text{CU2} \leq 1500 \times 1000 \text{ mm}$	Flexible wall	Gypsum blocks $\geq 100 \text{ mm}$	EI 120 ($v_e i \leftrightarrow o$) S - (500 Pa)
$200 \times 200 \text{ mm} \leq \text{CU2} \leq 1200 \times 800 \text{ mm}$	Flexible wall	Gypsum blocks $\geq 70 \text{ mm}$	EI 120 ($v_e i \leftrightarrow o$) S - (500 Pa)

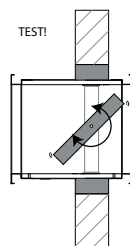
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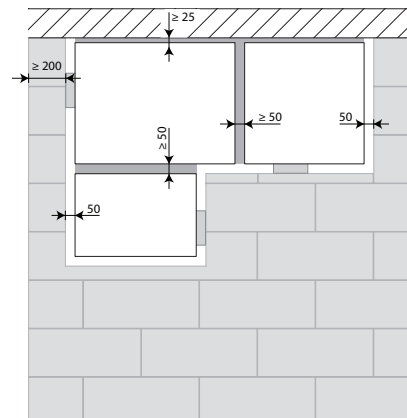
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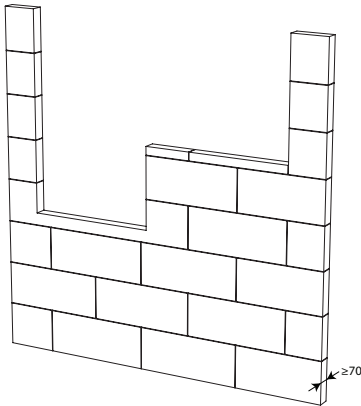


4



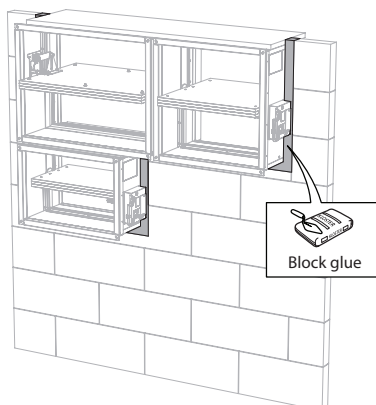
4. The dampers can be installed at a minimum distance from an adjacent floor/ceiling ($\geq 25 \text{ mm}$), from an adjacent wall or from another damper ($\geq 50 \text{ mm}$).

5



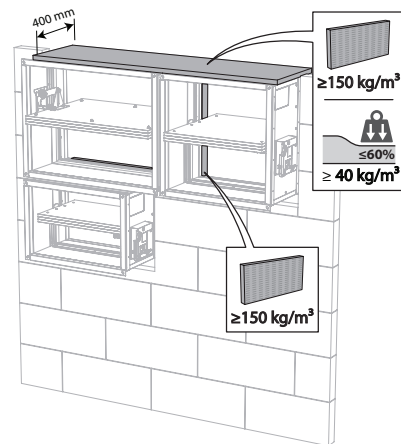
5. Make the necessary openings ($W_n + 100 \text{ mm}$) x ($H_n + 100 \text{ mm}$) in the wall.

7



7. Seal the rest of the opening (50 mm) with block glue across the entire wall thickness.

6

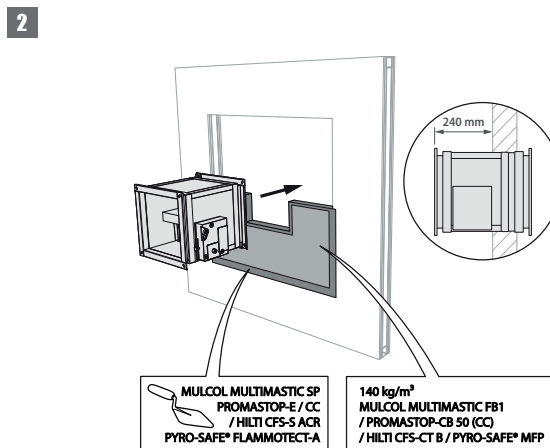
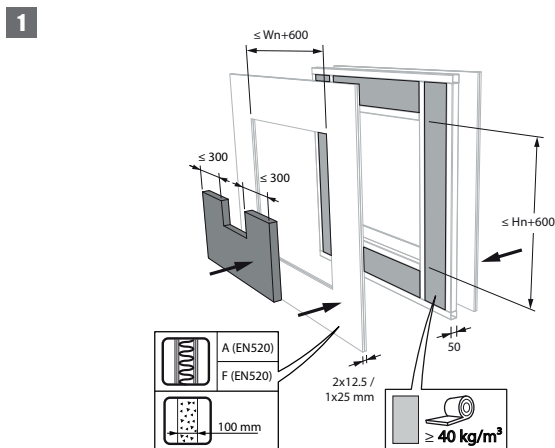


6. Mount the dampers in the opening.
Apply rigid stone wool panels ($\geq 150 \text{ kg/m}^3$) to a depth of 400 mm (150 mm on the mechanism side of the wall) to seal the opening at the side with minimal distances. This sealing is applied over the whole width/height of the damper(s).
When the damper is installed at a distance of 25 mm from a floor/ceiling, the rigid high-density stone wool panels may be replaced with standard $\geq 40 \text{ kg/m}^3$ stone wool (e.g. Rockfit 431), compressed by at least 40%.

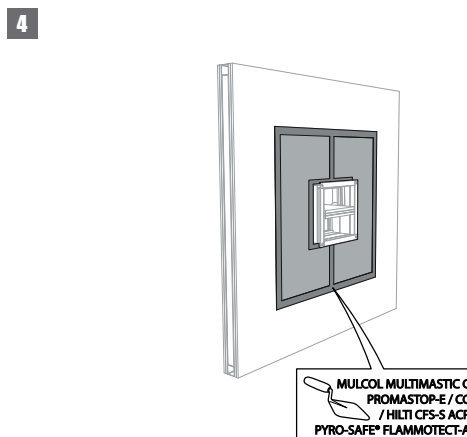
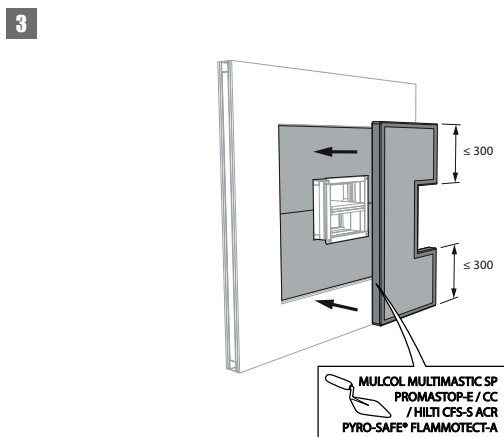
Installation in flexible and rigid wall, sealing with rigid rock wool boards with coating

The product was tested and approved in:

Range	Wall type	Sealing	Classification
$200 \times 200 \text{ mm} \leq \text{CU2} \leq 1200 \times 800 \text{ mm}$	Rigid wall	Aerated concrete $\geq 100 \text{ mm}$	El 90 (v_e i \leftrightarrow o) S - (300 Pa)
$200 \times 200 \text{ mm} \leq \text{CU2} \leq 1200 \times 800 \text{ mm}$	Flexible wall	Metal studs gypsum plasterboard Type A (EN 520) $\geq 100 \text{ mm}$	El 60 (v_e i \leftrightarrow o) S - (300 Pa)
$200 \times 200 \text{ mm} \leq \text{CU2} \leq 1200 \times 800 \text{ mm}$	Flexible wall	Metal studs gypsum plasterboard Type F (EN 520) $\geq 100 \text{ mm}$	El 90 (v_e i \leftrightarrow o) S - (300 Pa)

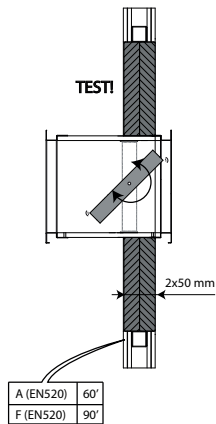


1. The opening around the damper is sealed with 2 layers of 50 mm-thick mineral wool panels with fire resistant coating on one side (type PROMASTOP-CB 50 / PROMASTOP-CB/CC 50 / HILTI CFS-CT B / Mulcol Multimastic FB1 / PYRO-SAFE® MFP).

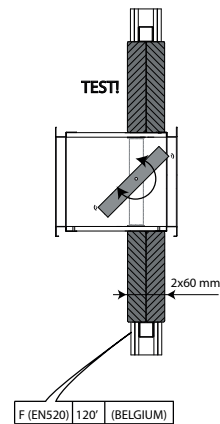


4. The joints on these 2 layers must be installed staggered and covered all around the edge with coating (type PROMASTOP-E / PROMASTOP-CC / HILTI CFS-S-ACR / Mulcol Multimastic SP / PYRO-SAFE® FLAMMOTECT-A).

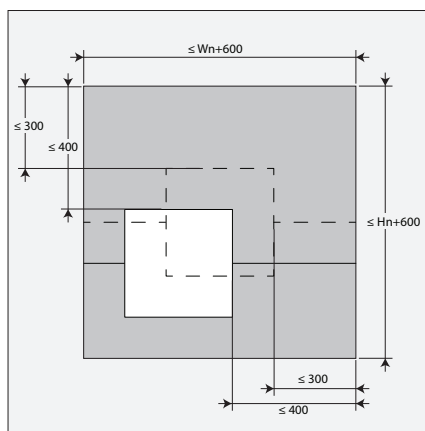
5



6

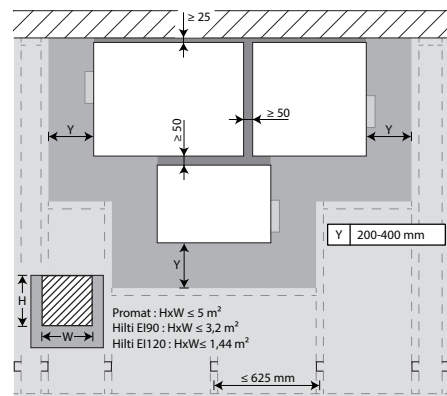


7



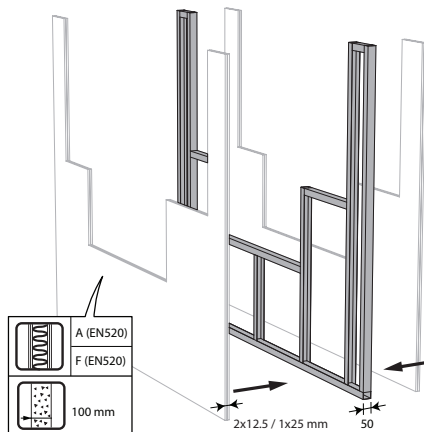
7. The damper does not need to be centered in the opening (with max dimensions fire damper + 600 mm). The maximal distance between the damper and the edge of the opening is 400 mm.

8



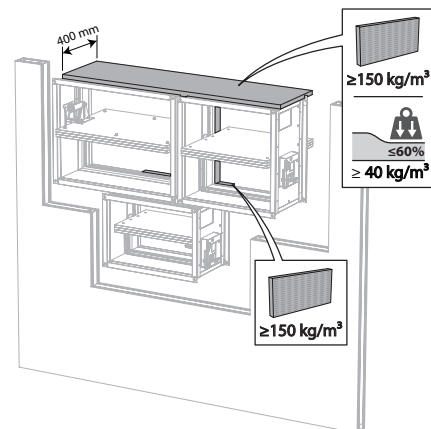
8. The dampers can be installed at a minimum distance from an adjacent floor/ceiling (≥ 25 mm), from an adjacent wall or from another damper (≥ 50 mm).

9



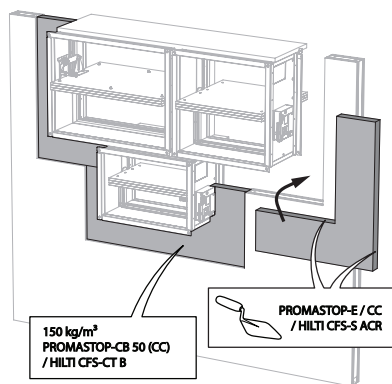
9. Make the necessary opening in the wall.

10



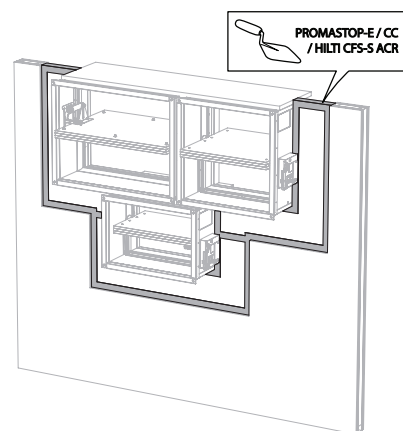
10. Mount the dampers in the opening.
 Apply rigid stone wool panels ($\geq 150 \text{ kg/m}^3$) to a depth of 400 mm (150 mm on the mechanism side of the wall) to seal the opening at the side with minimal distances. This sealing is applied over the whole width/height of the damper(s).
 When the damper is installed at a distance of 25 mm from a floor/ceiling, the rigid high-density stone wool panels may be replaced with standard $\geq 40 \text{ kg/m}^3$ stone wool (e.g. Rockfit 431), compressed by at least 40%.

11



11. Seal the rest of the opening with 2 layers of 50 mm-thick coated rigid mineral wool panels (see above).

12

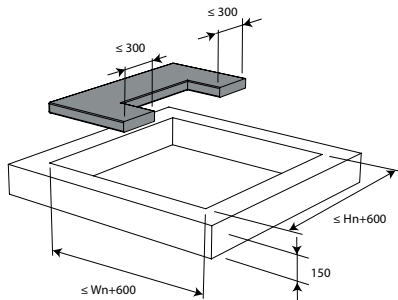


Installation in rigid floor, sealing with rigid rock wool boards with coating

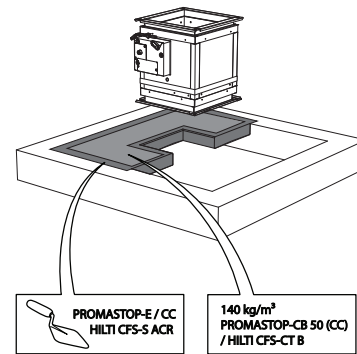
The product was tested and approved in:

Range	Wall type	Sealing	Classification
$200 \times 200 \text{ mm} \leq \text{CU2} \leq 1200 \times 800 \text{ mm}$	Rigid floor	Aerated concrete $\geq 150 \text{ mm}$	Stone wool + coating $\geq 140 \text{ kg/m}^3$
			El 90 (h_o i \leftrightarrow o) S - (300 Pa)

1

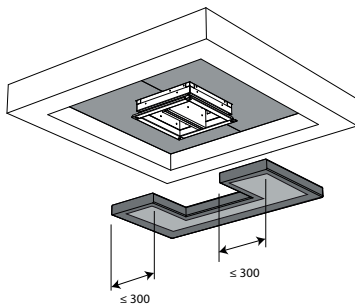


2

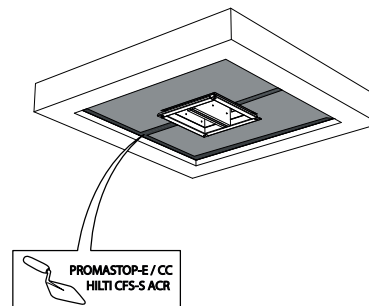


1. The opening around the damper is sealed with 2 layers of 50 mm-thick mineral wool panels with fire resistant coating on one side (type PROMASTOP-CB 50 / PROMASTOP-CB/CC 50 / HILTI CFS-CT B).

3

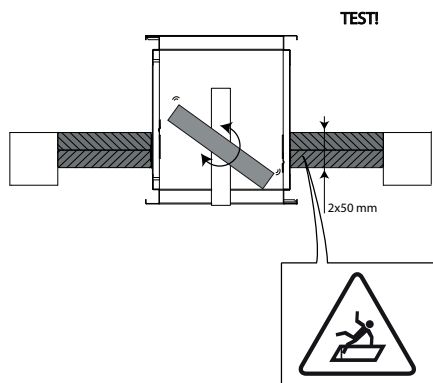


4

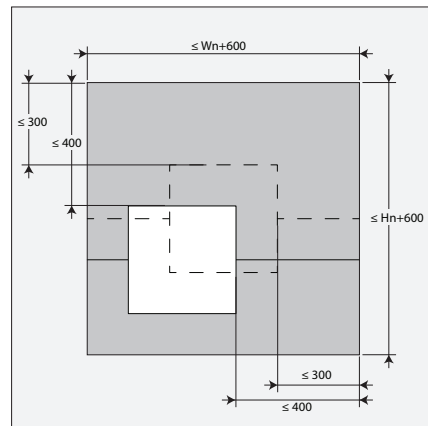


3. The joints on these 2 layers must be installed staggered and covered all around the edge with coating (type PROMASTOP-E / PROMASTOP-CC / HILTI CFS-S ACR).

5

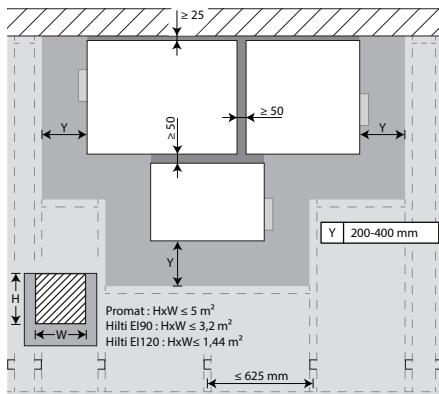


6



6. The damper does not need to be centered in the opening (with max dimensions fire damper + 600 mm). The maximal distance between the damper and the edge of the opening is 400 mm.

7



7. The dampers can be installed at a minimum distance from an adjacent floor/ceiling (≥ 25 mm), from an adjacent wall or from another damper (≥ 50 mm).

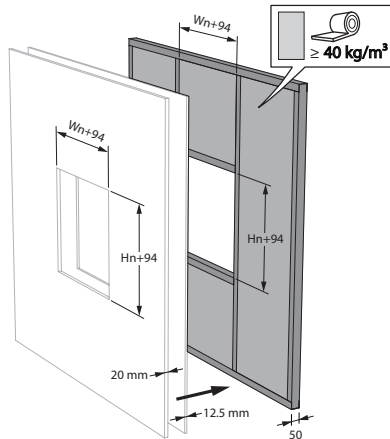
For details, please refer to 'Installation in flexible and rigid wall, sealing with rigid rock wool boards with coating'

Installation in shaft wall

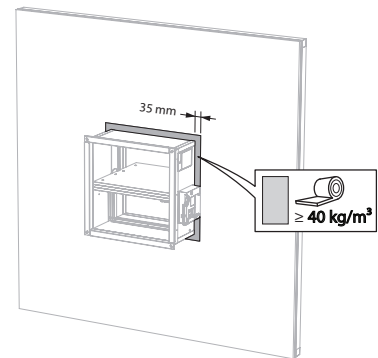
The product was tested and approved in:

Range	Wall type	Sealing	Classification
$200 \times 200 \text{ mm} \leq \text{CU2} \leq 1500 \times 800 \text{ mm}$	Asymmetrical flexible wall (shaft wall) Metal studs gypsum plasterboard Type F (EN 520) $\geq 82.5 \text{ mm}$	Stone wool $\geq 40 \text{ kg/m}^3$ + cover plates	El 60 ($v_e i \leftrightarrow o$) S - (300 Pa)

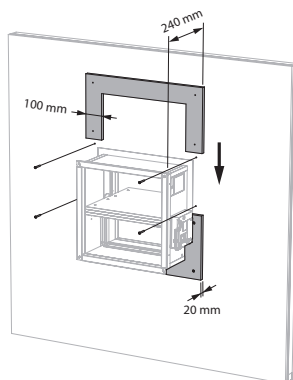
1



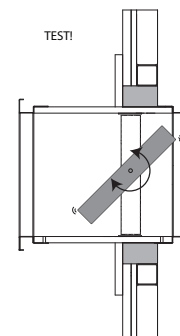
2



3



4

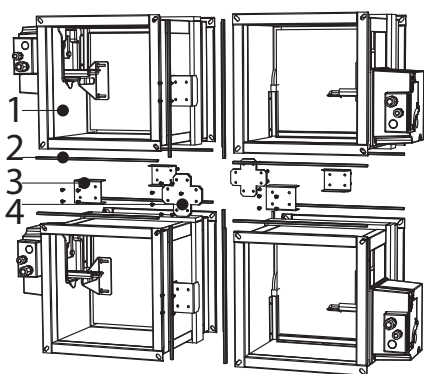


Battery assembly

The product was tested and approved in:

Range	Wall type		Sealing	Classification
CU2/B ≤ 4 x CU2 (200x200 mm ≤ CU2 ≤ 1200x800 mm)	Rigid wall	Reinforced concrete ≥ 110 mm	Mortar	El 120 (v _e i ↔ o) S - (500 Pa)
CU2/B ≤ 4 x CU2 (200x200 mm ≤ CU2 ≤ 1500x800 mm)	Rigid wall	Reinforced concrete ≥ 110 mm	Mortar	El 60 (v _e i ↔ o) S - (500 Pa)

1



1. Individual damper CU2;
2. EPDM foam;
3. Connection piece;
4. Center plate - B22 (see technical note C31)

Maintenance

- No specific maintenance required.
- Schedule at least 2 visual checks each year.
- Remove dust and all other particles before use.
- Follow local maintenance regulations (i.e. BS9999 Annex V; NF S 61-933) and EN13306.
- Read the maintenance instructions on our website:
https://www.rft.eu/assets//PIM/DOCUMENTS/BROCHURE%20KITS/BRO_K139_MAINTENANCE_C.pdf
- Use the damper at up to 95% humidity, non-condensing.
- The fire damper can be cleaned with a dry or slightly damp cloth. It is forbidden to use abrasive cleaners or mechanical cleaning techniques (brush).

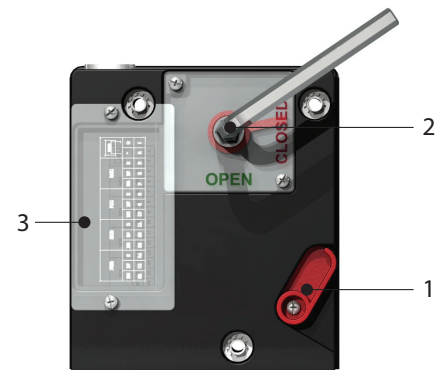
Operation and mechanisms



CFTH Mechanism with fusible link

The unlocking mechanism CFTH automatically unlatches the damper blade when the temperature in the duct rises above 72°C. The damper can also be unlocked and reset manually.

1. unlocking button
2. resetting handle
3. cable entrance



Options - at the time of order

FCU	Limit switch 'closed'
FDCU	Unipolar limit switch 'open/closed'
FDCB	Bipolar auxiliary limit switch 'open/closed'

Unlocking

- **manual unlocking:** use the unlocking button (1).
- **automatic unlocking:** when the fusible link melts at 72° C.
- **remote unlocking:** n/a

Resetting

- **manual resetting:** use the enclosed Hex key and turn clockwise(2).
- **motorised resetting:** n/a

Caution:

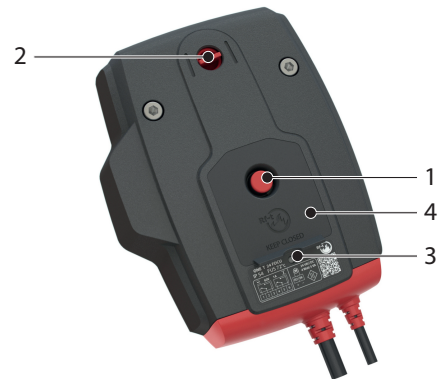
- ▲ The mechanism may never be tested on its own, without being attached to the damper. Such a test might damage the mechanism or the operator might be injured.



ONE Spring return actuator for remote control

The spring-return actuator ONE is designed to easily operate Rf-t fire dampers of all sizes, automatically or remotely. Six models are available, 24 or 230 volt, with FDCU or FDCB position switches; and optionally with plug (ST).

1. unlocking button
2. blade position indicator
3. LED
4. battery compartment to reset motor



Unlocking

- **manual unlocking:** shortly press the unlocking button (1) once.
- **automatic unlocking:** the fusible link reacts as soon as the temperature in the duct reaches 72°C.
- **remote unlocking:** by interrupting the power supply.

Resetting

- **manual resetting:** open the battery compartment (4) and press a 9V battery against the contact springs. Hold this position until the LED (3) emits a continuous light.
Check whether the indicator (2) shows that the damper blade is in the open position.
Remove the battery, the LED fades away.
Close the battery compartment.
- **motorised resetting:** switch off the power supply for at least 5 sec. Power the actuator (respect the prescribed voltage) for at least 75 sec. The resetting stops automatically when the end of range is reached (damper open).

Caution:

- ⚠ If the LED (3) flickers fast (3x/sec.), the battery is discharged: use a new battery.
- ⚠ If the LED (3) flickers slowly (1x/sec), the resetting is in progress.
- ⚠ If the LED (3) is continuously on, the resetting is complete and the motor is powered.
- ⚠ If the actuator detects voltage on the power cable, a brief contact of the battery is enough to start the resetting process.
- ⚠ The power supply of this actuator cannot be individually replaced. If the cable is damaged, the whole unit must be discarded and replaced.
- ⚠ The housing of the mechanism contains a temperature sensor. When the temperature in the housing exceeds 72°C, the mechanism unlocks. The LED flashes twice per second. When the temperature drops below 72°C, the mechanism can only be reset in a motorised manner after a manual reset (with a battery).
- ⚠ The end of range switches need 1 second after operation to adopt a stable position.
- ⚠ Make sure the thermal trigger device is present in the actuator. The actuator might not function properly if this is not the case.

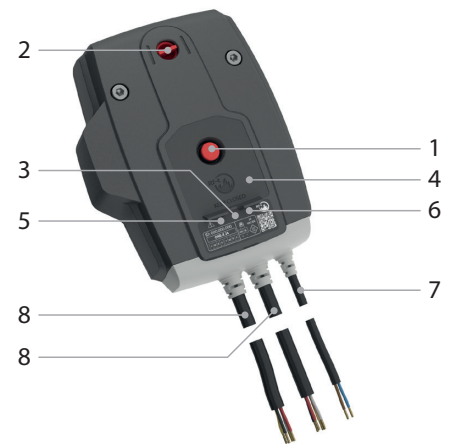
	prod. < 1/7/2015				prod. ≥ 1/7/2015			
	CR60(1s) CR120	CU-LT CU-LT-1s	CR2≤400 CU2≤1200	CR2>400 CU2>1200	CR60(1s) CR120(1s)	CU-LT CU-LT-1s	CR2≤400 CU2≤1200	CR2>400 CU2>1200
Kit ONE	●	●	●		●	●	●	●



ONE-X Spring return actuator with integrated communication module.

The ONE-X is a spring return actuator with integrated communication module designed to simply operate Rf-t fire dampers of all sizes, automatically or remotely. The ONE-X is available in two versions: 24 V and 230 V.

1. unlocking button
2. blade position indicator
3. LED red: status
4. battery compartment
5. LED blue: communication
6. LED orange: error message
7. supply
8. bus cable



Unlocking

- **manual unlocking:** shortly press the unlocking button (1) once.
- **automatic unlocking:** the fusible link reacts as soon as the temperature in the duct reaches 72°C.
- **remote unlocking:** via ZENiX controller

Resetting

- **manual resetting:** Open the battery compartment (4) and press a 9V battery against the contact springs. Hold this position until the red LED (3) emits a continuous light. Control whether the indicator (2) indicates that the damper blade is open. Remove the battery. Close the battery compartment.
- **motorised resetting:** via ZENiX controller. By applying voltage during first use.

Caution:

- ⚠ If the ONE-X detects voltage on the power cable, a brief contact of the battery is enough to start the resetting process, provided the ZENiX controller has sent the damper to open position or the ONE-X is being operated for the first time.
- ⚠ The power supply of this actuator cannot be individually replaced. If the cable is damaged, the whole unit must be discarded and replaced.
- ⚠ The housing of the mechanism contains a temperature sensor. When the temperature in the housing exceeds 72°C, the mechanism unlocks. The LED flashes twice per second. When the temperature drops below 72°C, the mechanism can only be reset in a motorised manner after a manual reset (with a battery).
- ⚠ The end of range switches need 1 second after operation to adopt a stable position.

Safety regulations:

- ⚠ Do not use the ONE-X for any application other than the specified applications, in particular not in aircraft or other airborne vehicles.
- ⚠ The company that purchases and/or installs the ONE-X is fully responsible for the correct operation of the entire system. Only authorised specialists may perform the installation. All rules and regulations, including statutory regulations, must be observed during installation.
- ⚠ This device contains electrical or electronic components and must not be disposed of as household waste. All locally applicable regulations and requirements must be strictly observed.



BFL(T) Remotely controlled spring return actuator

The spring return actuator BFL(T) is especially designed to operate fire dampers remotely. The BFL(T) variant is intended for fire dampers with smaller dimensions (CR60, CR120, CR2 with $\varnothing \leq 400$ mm, CRS60 with $\varnothing \leq 315$ mm, CU2 / CU2-15 / CU4 with B+H ≤ 1200 mm or for CU-LT and CU-LT-1s). For Markage FD with H = 200 mm or H = 2200 mm (in combination with BFT motor).

1. locking button
2. plug (ST)
3. access for manual resetting
4. thermo-electric tripping device (T)



Options - at the time of order

SN2 BFL/BFN Auxiliary limit switch 'open/closed'

Unlocking

- **manual unlocking:** place the locking button on "unlock". (In case of BFLT: the damper can alternatively be unlocked by pushing the "test" button on the thermo-electric fuse)
- **automatic unlocking:** the thermo-electric fuse reacts as soon as the temperature reaches 72°C (type BFLT).
- **remote unlocking:** by interrupting the power supply.

Caution:

⚠ The thermo-electric fuse will not move the damper into its safety position (when the temperature reaches 72°C) if the motor is not powered.

Resetting

- **manual resetting:** turn the enclosed handle anti-clockwise. To block the motor, place the locking button on "lock"
- **motorised resetting:** switch off the power supply for at least 10 seconds. Supply the actuator (respect the prescribed voltage) for at least 75 seconds. The resetting stops automatically when the end of range is reached (damper open) - it takes about 60 seconds to reset the damper - or when the power supply is interrupted.

Caution:

- ⚠ Do not use a drill or powered screwdriver.
- ⚠ Stop as soon as the motor is completely rearmed (end of range).

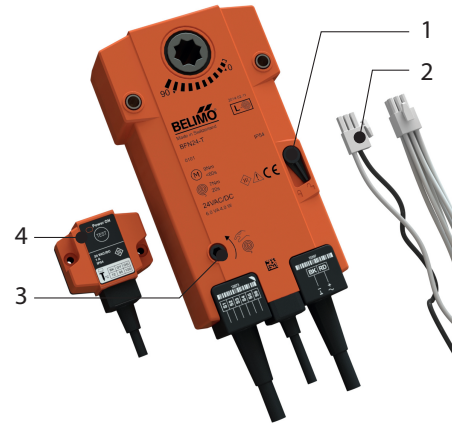
	prod. < 1/7/2015				prod. ≥ 1/7/2015			
	CR60(1s) CR120	CU-LT CU-LT-1s	CR2≤400 CU2≤1200	CR2>400 CU2>1200	CR60(1s) CR120 (1s)	CU-LT CU-LT-1s	CR2≤400 CU2≤1200	CR2>400 CU2>1200
Kit BFL					●	●	●	
Kit BFN	●	●	●					●
Kit BF				●				



BFN(T) Remotely controlled spring return actuator

The spring return actuator BFN(T) is especially designed to operate fire dampers remotely. The BFN(T) variant is intended for fire dampers with large dimensions (CRE60, CR2 with $\varnothing > 400$ mm, CRS60 with $\varnothing > 315$ mm or CU2, CU2-15, CU4 with B+H > 1200 mm. For Markage FD with H of 400 and 600 mm or with H = 1200 mm (2 pcs) and with H = 2400 mm (in combination with BFT motor).

1. locking button
2. plug (ST)
3. access for manual resetting
4. thermo-electric tripping device (T)



Options - at the time of order

SN2 BFL/BFN Auxiliary limit switch 'open/closed'

Unlocking

- **manual unlocking:** place the locking button on "unlock". (In case of BFNT: the damper can alternatively be unlocked by pushing the "test" button on the thermo-electric fuse)
- **automatic unlocking:** the thermo-electric fuse reacts as soon as the temperature reaches 72°C (type BFN(T)).
- **remote unlocking:** by interrupting the power supply.

Caution:

- ⚠ The thermo-electric fuse will not move the damper into its safety position (when the temperature reaches 72°C) if the motor is not powered.

Resetting

- **manual resetting:** turn the enclosed handle anti-clockwise. To block the motor, place the locking button on "lock"
- **motorised resetting:** switch off the power supply for at least 10 seconds. Supply the actuator (respect the prescribed voltage) for at least 75 seconds. The resetting stops automatically when the end of range is reached (damper open) - it takes about 60 seconds to reset the damper - or when the power supply is interrupted.

Caution:

- ⚠ Do not use a drill or powered screwdriver.
- ⚠ Stop as soon as the motor is completely rearmed (end of range).

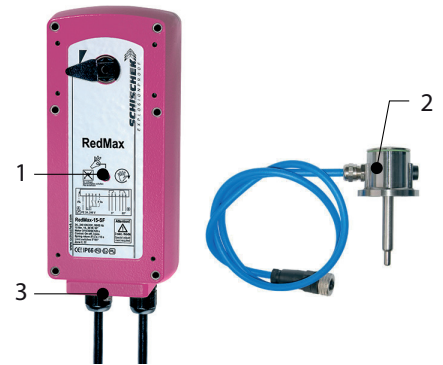
	prod. < 1/7/2015				prod. ≥ 1/7/2015			
	CR60(1s) CR120	CU-LT CU-LT-1s	CR2≤400 CU2≤1200	CR2>400 CU2>1200	CR60(1s) CR120 (1s)	CU-LT CU-LT-1s	CR2≤400 CU2≤1200	CR2>400 CU2>1200
Kit BFL					●	●	●	
Kit BFN	●	●	●					●
Kit BF				●				



Ex (ROTORK-SCHISCHEK) Explosion proof (ATEX) motor

Explosion proof (ATEX) motor for different risk areas:• Zone 1/21: average risk of explosion >100h/year explosive environment• Zone 2/22: low risk of explosion <10h/year of explosive environment

1. access for manual resetting
2. thermo-electric tripping device (T)
3. switch S (selection of the running time)



Unlocking

- **manual unlocking:** n.a.
- **automatic unlocking:** as soon as the reaction temperature (72°C) of the thermo-electric tripping device is reached (Types EMEXT/ RMEXT).
- **remote unlocking:** by interrupting the power supply.

Caution:

- ▲ Selection of running time spring return: the running time of 3 or 10 sec. spring return is selected by wiring (see electrical connection).

Resetting

- **manual resetting:** use the delivered socket wrench, turn in slow motion and apply enough torque/force.
- **motorised resetting:** supply the actuator (respect the prescribed voltage) for at least 60 sec. The resetting stops automatically.

Caution:

- ▲ Selection of running time (resetting): place the switch (S) into the correct/selected position in accordance to the details below. The selected parameter will work at next operation of the actuator. Adjustment can be done even without supply voltage.
- ▲ 3 sec./90°: S=00; 15 sec./90°: S=01; 30 sec./90°: S=02; 60 sec./90°: S=03; 120 sec./90°: S=04
- ▲ If the motor is powered, turn the switch only if the actuator is not running !

Caution:

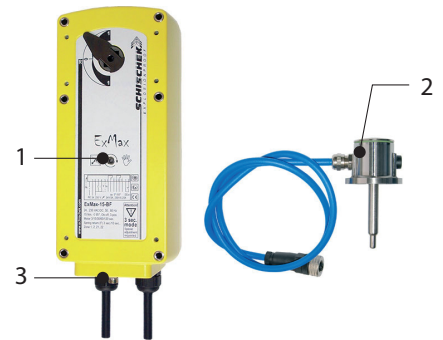
- ▲ The mechanism may never be tested on its own, without being attached to the damper. Such a test might damage the mechanism or the operator might be injured.



Ex (ROTORK-SCHISCHEK) Explosion proof (ATEX) motor

Explosion proof (ATEX) motor for different risk areas:• Zone 1/21: average risk of explosion >100h/year explosive environment• Zone 2/22: low risk of explosion <10h/year of explosive environment

1. access for manual resetting
2. thermo-electric tripping device (T)
3. switch S (selection of the running time)



Unlocking

- **manual unlocking:** n.a.
- **automatic unlocking:** as soon as the reaction temperature (72°C) of the thermo-electric tripping device is reached (Types EMEXT/RMEXT).
- **remote unlocking:** by interrupting the power supply.

Caution:

- ▲ Selection of running time spring return: the running time of 3 or 10 sec. spring return is selected by wiring (see electrical connection).

Resetting

- **manual resetting:** use the delivered socket wrench, turn in slow motion and apply enough torque/force.
- **motorised resetting:** supply the actuator (respect the prescribed voltage) for at least 60 sec. The resetting stops automatically.

Caution:

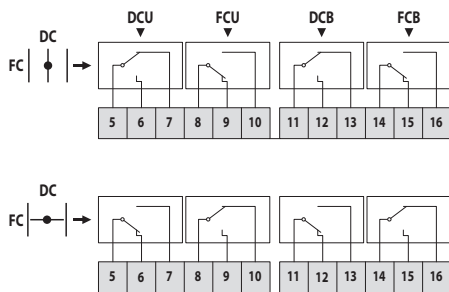
- ▲ Selection of running time (resetting): place the switch (S) into the correct/selected position in accordance to the details below. The selected parameter will work at next operation of the actuator. Adjustment can be done even without supply voltage.
- ▲ 3 sec./90°: S=00; 15 sec./90°: S=01; 30 sec./90°: S=02; 60 sec./90°: S=03; 120 sec./90°: S=04
- ▲ If the motor is powered, turn the switch only if the actuator is not running !

Caution:

- ▲ The mechanism may never be tested on its own, without being attached to the damper. Such a test might damage the mechanism or the operator might be injured.

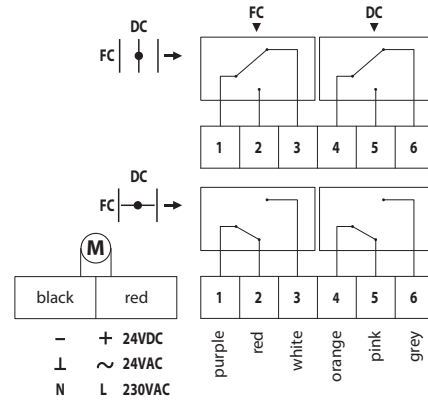
Electrical connection

CFTH



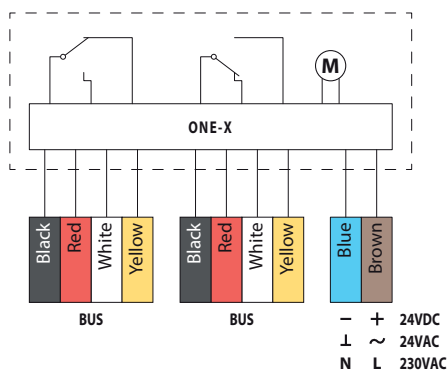
DC: Switch open position fire damper
FC: Switch closed position fire damper

ONE



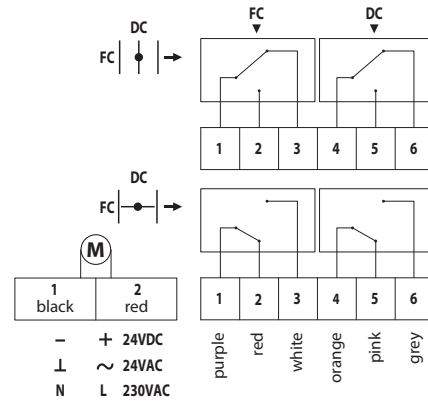
DC: Switch open position fire damper
FC: Switch closed position fire damper

ONE-X



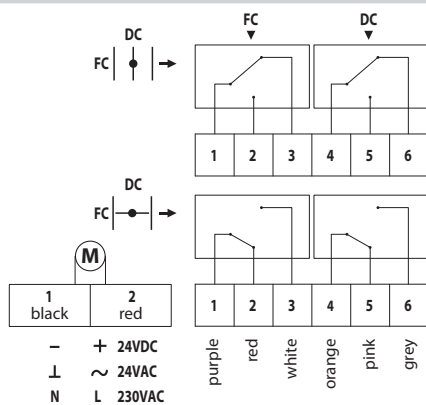
DC: Switch open position fire damper
FC: Switch closed position fire damper

BFL(T)



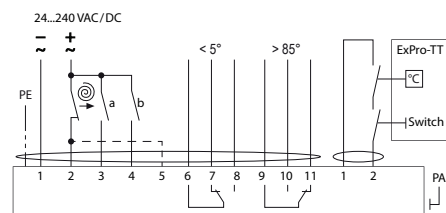
DC: Switch open position fire damper
FC: Switch closed position fire damper

BFN(T)



DC: Switch open position fire damper
FC: Switch closed position fire damper

Ex (ROTORK-SCHISCHEK)



DC: Switch open position fire damper
FC: Switch closed position fire damper

MEC	Nominal voltage motor	Nominal voltage magnet	Power consumption (stand-by)	Power consumption (operating)	Standard switches	Resetting time motor
CFTH	N/A	N/A	N/A	N/A	1mA...6A, DC 5V...AC 250V	N/A
ONET 24 FDCU	24 V AC/DC (-10/+20%)	N/A	0,28 W	4,2 W	1mA...1A 60V	< 75 s (cabled) / <85 s (battery)
ONET 24 FDCU ST	24 V AC/DC (-10/+20%)	N/A	0,28 W	4,2 W	1mA...1A 60V	< 75 s (cabled) / <85 s (battery)
ONET 230 FDCU	230 V AC (-15/+15%)	N/A	0,57 W	4,2 W	1mA...100mA 230V	< 75 s (cabled) / <85 s (battery)
ONET 230 FDCU ST	230 V AC (-15/+15%)	N/A	0,57 W	4,2 W	1mA...100mA 230V	< 75 s (cabled) / <85 s (battery)
ONET 24 FDCB	24 V AC/DC (-10/+20%)	N/A	0,28 W	4,2 W	1mA...1A 60V	< 75 s (cabled) / <85 s (battery)
ONET 230 FDCB	230 V AC (-15/+15%)	N/A	0,57 W	4,2 W	1mA...1A 60V	< 75 s (cabled) / <85 s (battery)
ONE-X 24	24 V AC/DC (-10/+20%)	N/A	0,28 W	4,2 W		< 75 s (cabled) / <85 s (battery)
ONE-X 230	230 V AC (-15/+15%)	N/A	0,57 W	4,2 W		< 75 s (cabled) / <85 s (battery)
BFL24	24 V AC/DC	N/A	0,7 W	2,5 W	1mA...3A, AC 250V	< 60 s
BFL24-ST	24 V AC/DC	N/A	0,7 W	2,5 W	1mA...3A, AC 250V	< 60 s
BFL230	230 V AC	N/A	0,9 W	3 W	1mA...3A, AC 250V	< 60 s
BFLT24	24 V AC/DC	N/A	0,8 W	2,5 W	1mA...3A, AC 250V	< 60 s
BFLT24-ST	24 V AC/DC	N/A	0,8 W	2,5 W	1mA...3A, AC 250V	< 60 s
BFLT230	230 V AC	N/A	1,1 W	3,5 W	1mA...3A, AC 250V	< 60 s
BFLT230-ST	230 V AC	N/A	1,1 W	3,5 W	1mA...3A, AC 250V	< 60 s
BFN24	24 V AC/DC	N/A	1,4 W	4 W	1mA...3A, AC 250V	< 60 s
BFN24-ST	24 V AC/DC	N/A	1,4 W	4 W	1mA...3A, AC 250V	< 60 s
BFN230	230 V AC	N/A	2 W	4,5 W	1mA...3A, AC 250V	< 60 s
BFNT24	24 V AC/DC	N/A	1,4 W	4 W	1mA...3A, AC 250V	< 60 s
BFNT24-ST	24 V AC/DC	N/A	1,4 W	4 W	1mA...3A, AC 250V	< 60 s
BFNT230	230 V AC	N/A	2,1 W	5 W	1mA...3A, AC 250V	< 60 s
BFNT230-ST	230 V AC	N/A	2,1 W	5 W	1mA...3A, AC 250V	< 60 s
RME X	24...230 V AC / DC	N/A	5 W	20 W	max. 24V/3A, 230V/0,25A	3/15/30/60/120s
RME XT	24...230 V AC / DC	N/A	5 W	20 W	max. 24V/3A, 230V/0,25A	3/15/30/60/120s
EME X	24...230 V AC / DC	N/A	5 W	20 W	max. 24V/3A, 230V/0,25A	3/15/30/60/120s
EME XT	24...230 V AC / DC	N/A	5 W	20 W	max. 24V/3A, 230V/0,25A	3/15/30/60/120s

MEC	Running time spring	Noise level motor	Noise level spring	Cable supply / control	Cable auxiliary switch	Protection class
CFTH	1 s	N/A	N/A			IP 42
ONET 24 FDCU	< 30 s	< 64 dB (A)	< 67 dB (A)	1 m, 2 x 0.75 mm ² (halogen-free)	1 m, 6 x 0.75 mm ² (halogen-free)	IP 54
ONET 24 FDCU ST	< 30 s	< 64 dB (A)	< 67 dB (A)	1 m, 2 x 0.75 mm ² (halogen-free)	1 m, 6 x 0.75 mm ² (halogen-free)	IP 54
ONET 230 FDCU	< 30 s	< 64 dB (A)	< 67 dB (A)	1 m, 2 x 0.75 mm ² (halogen-free)	1 m, 6 x 0.75 mm ² (halogen-free)	IP 54
ONET 230 FDCU ST	< 30 s	< 64 dB (A)	< 67 dB (A)	1 m, 2 x 0.75 mm ² (halogen-free)	1 m, 6 x 0.75 mm ² (halogen-free)	IP 54
ONET 24 FDCB	< 30 s	< 64 dB (A)	< 67 dB (A)	1 m, 2 x 0.75 mm ² (halogen-free)	(2x) 1 m, 6 x 0,75 mm ² (halogen-free)	IP 54
ONET 230 FDCB	< 30 s	< 64 dB (A)	< 67 dB (A)	1 m, 2 x 0.75 mm ² (halogen-free)	(2x) 1 m, 6 x 0,75 mm ² (halogen-free)	IP 54
ONE-X 24	< 30 s	< 64 dB (A)	< 67 dB (A)	1 m, 2 x 0.75 mm ² (halogen-free)	bus cable: (2x) 1 m, 4 x 0,75 mm ² (halogen-free)	IP 54
ONE-X 230	< 30 s	< 64 dB (A)	< 67 dB (A)	1 m, 2 x 0.75 mm ² (halogen-free)	bus cable: (2x) 1 m, 4 x 0,75 mm ² (halogen-free)	IP 54
BFL24	20 s	< 43 dB (A)	< 62 dB (A)	1 m, 2 x 0.75 mm ² (halogen-free)	1 m, 6 x 0.75 mm ² (halogen-free)	IP 54
BFL24-ST	20 s	< 43 dB (A)	< 62 dB (A)	1 m, 2 x 0.75 mm ² (halogen-free)	1 m, 6 x 0.75 mm ² (halogen-free)	IP 54
BFL230	20 s	< 43 dB (A)	< 62 dB (A)	1 m, 2 x 0.75 mm ² (halogen-free)	1 m, 6 x 0.75 mm ² (halogen-free)	IP 54
BFLT24	20 s	< 43 dB (A)	< 62 dB (A)	1 m, 2 x 0.75 mm ² (halogen-free)	1 m, 6 x 0.75 mm ² (halogen-free)	IP 54
BFLT24-ST	20 s	< 43 dB (A)	< 62 dB (A)	1 m, 2 x 0.75 mm ² (halogen-free)	1 m, 6 x 0.75 mm ² (halogen-free)	IP 54
BFLT230	20 s	< 43 dB (A)	< 62 dB (A)	1 m, 2 x 0.75 mm ² (halogen-free)	1 m, 6 x 0.75 mm ² (halogen-free)	IP 54
BFLT230-ST	20 s	< 43 dB (A)	< 62 dB (A)	1 m, 2 x 0.75 mm ² (halogen-free)	1 m, 6 x 0.75 mm ² (halogen-free)	IP 54
BFN24	20 s	≤ 55 dB (A)	ca. 67 dB (A)	1 m, 2 x 0.75 mm ² (halogen-free)	1 m, 6 x 0.75 mm ² (halogen-free)	IP 54
BFN24-ST	20 s	≤ 55 dB (A)	ca. 67 dB (A)	1 m, 2 x 0.75 mm ² (halogen-free)	1 m, 6 x 0.75 mm ² (halogen-free)	IP 54
BFN230	20 s	≤ 55 dB (A)	ca. 67 dB (A)	1 m, 2 x 0.75 mm ² (halogen-free)	1 m, 6 x 0.75 mm ² (halogen-free)	IP 54
BFNT24	20 s	≤ 55 dB (A)	ca. 67 dB (A)	1 m, 2 x 0.75 mm ² (halogen-free)	1 m, 6 x 0.75 mm ² (halogen-free)	IP 54
BFNT24-ST	20 s	≤ 55 dB (A)	ca. 67 dB (A)	1 m, 2 x 0.75 mm ² (halogen-free)	1 m, 6 x 0.75 mm ² (halogen-free)	IP 54
BFNT230	20 s	≤ 55 dB (A)	ca. 67 dB (A)	1 m, 2 x 0.75 mm ² (halogen-free)	1 m, 6 x 0.75 mm ² (halogen-free)	IP 54
BFNT230-ST	20 s	≤ 55 dB (A)	ca. 67 dB (A)	1 m, 2 x 0.75 mm ² (halogen-free)	1 m, 6 x 0.75 mm ² (halogen-free)	IP 54
RME X	3/10 s					IP 66
RME XT	3/10 s					IP 66
EME X	3/10 s					IP 66
EME XT	3/10 s					IP 66

Weights

CU2 + CFTH

Hn\Wn [mm]		200	250	300	350	400	450	500	550	600	650	700	750	800	850	900
200	kg	10,8	11,9	12,9	14,0	15,0	16,1	17,1	18,2	19,3	20,3	21,4	22,4	23,5	24,5	25,6
250	kg	11,8	12,9	14,0	15,2	16,3	17,4	18,5	19,7	20,8	21,9	23,0	24,2	25,3	26,4	27,5
300	kg	12,8	14,0	15,2	16,4	17,6	18,7	19,9	21,1	22,3	23,5	24,7	25,9	27,1	28,3	29,4
350	kg	13,8	15,1	16,3	17,6	18,8	20,1	21,3	22,6	23,8	25,1	26,3	27,6	28,9	30,1	29,8
400	kg	14,8	16,1	17,5	18,8	20,1	21,4	22,7	24,0	25,4	26,7	28,0	29,3	30,6	30,4	31,7
450	kg	15,8	17,2	18,6	20,0	21,4	22,7	24,1	25,5	26,9	28,3	29,7	31,0	30,8	32,2	33,6
500	kg	16,8	18,3	19,7	21,2	22,6	24,1	25,5	27,0	28,4	29,9	31,3	31,2	32,6	34,1	35,5
550	kg	17,8	19,3	20,9	22,4	23,9	25,4	26,9	28,4	29,9	31,5	31,4	32,9	34,4	35,9	37,4
600	kg	18,8	20,4	22,0	23,6	25,2	26,7	28,3	29,9	31,5	31,5	33,0	34,6	36,2	37,8	39,3
650	kg	19,8	21,5	23,1	24,8	26,4	28,1	29,7	31,4	31,4	33,0	34,7	36,3	38,0	39,6	41,3
700	kg	20,8	22,6	24,3	26,0	27,7	29,4	31,1	31,2	32,9	34,6	36,3	38,1	39,8	41,5	43,2
750	kg	21,9	23,6	25,4	27,2	29,0	30,7	30,9	32,7	34,5	36,2	38,0	39,8	41,6	43,3	45,1
800	kg	22,9	24,7	26,5	28,4	30,2	30,5	32,3	34,1	36,0	37,8	39,7	41,5	43,3	45,2	47,0
850	kg	23,9	25,8	27,7	29,6	29,9	31,8	33,7	35,6	37,5	39,4	41,3	43,2	45,1	47,0	48,9
900	kg	24,9	26,8	28,8	29,2	31,2	33,1	35,1	37,1	39,0	41,0	43,0	44,9	46,9	48,9	50,9
950	kg	25,9	27,9	28,3	30,4	32,4	34,5	36,5	38,5	40,6	42,6	44,6	46,7	48,7	50,7	52,8
1000	kg	26,9	27,4	29,5	31,6	33,7	35,8	37,9	40,0	42,1	44,2	46,3	48,4	50,5	52,6	54,7

Hn\Wn [mm]		950	1000	1050	1100	1150	1200	1250	1300	1350	1400	1450	1500			
200	kg	26,7	27,7	27,2	28,2	29,3	30,3	31,4	32,5	33,5	34,6	35,6	36,7			
250	kg	28,6	28,2	29,3	30,4	31,5	32,7	33,8	34,9	36,0	37,1	38,3	39,4			
300	kg	29,0	30,2	31,4	32,6	33,8	35,0	36,2	37,3	38,5	39,7	40,9	42,1			
350	kg	31,0	32,3	33,5	34,8	36,0	37,3	38,5	39,8	41,0	42,3	43,5	44,8			
400	kg	33,0	34,3	35,6	36,9	38,3	39,6	40,9	42,2	43,5	44,9	46,2	47,5			
450	kg	35,0	36,4	37,7	39,1	40,5	41,9	43,3	44,7	46,0	47,4	48,8	50,2			
500	kg	37,0	38,4	39,9	41,3	42,8	44,2	45,7	47,1	48,6	50,0	51,4	52,9			
550	kg	38,9	40,5	42,0	43,5	45,0	46,5	48,0	49,5	51,1	52,6	54,1	-			
600	kg	40,9	42,5	44,1	45,7	47,2	48,8	50,4	52,0	53,6	55,1	-	-			
650	kg	42,9	44,6	46,2	47,8	49,5	51,1	52,8	54,4	56,1	-	-	-			
700	kg	44,9	46,6	48,3	50,0	51,7	53,4	55,2	56,9	-	-	-	-			
750	kg	46,9	48,7	50,4	52,2	54,0	55,8	57,5	-	-	-	-	-			
800	kg	48,9	50,7	52,5	54,4	56,2	58,1	-	-	-	-	-	-			
850	kg	50,8	52,8	54,7	56,6	58,5	-	-	-	-	-	-	-			
900	kg	52,8	54,8	56,8	58,7	-	-	-	-	-	-	-	-			
950	kg	54,8	56,9	58,9	-	-	-	-	-	-	-	-	-			
1000	kg	56,8	58,9	-	-	-	-	-	-	-	-	-	-			

CU2 + ONE

Hn\Wn (mm)		200	250	300	350	400	450	500	550	600	650	700	750	800	850	900
200	kg	11,6	12,7	13,7	14,8	15,8	16,9	17,9	19,0	20,1	21,1	22,2	23,2	24,3	25,3	26,4
250	kg	12,6	13,7	14,8	16,0	17,1	18,2	19,3	20,5	21,6	22,7	23,8	25,0	26,1	27,2	28,3
300	kg	13,6	14,8	16,0	17,2	18,4	19,5	20,7	21,9	23,1	24,3	25,5	26,7	27,9	29,1	30,2
350	kg	14,6	15,9	17,1	18,4	19,6	20,9	22,1	23,4	24,6	25,9	27,1	28,4	29,7	30,9	30,6
400	kg	15,6	16,9	18,3	19,6	20,9	22,2	23,5	24,8	26,2	27,5	28,8	30,1	31,4	31,2	32,5
450	kg	16,6	18,0	19,4	20,8	22,2	23,5	24,9	26,3	27,7	29,1	30,5	31,8	31,6	33,0	34,4
500	kg	17,6	19,1	20,5	22,0	23,4	24,9	26,3	27,8	29,2	30,7	32,1	32,0	33,4	34,9	36,3
550	kg	18,6	20,1	21,7	23,2	24,7	26,2	27,7	29,2	30,7	32,3	32,2	33,7	35,2	36,7	38,2
600	kg	19,6	21,2	22,8	24,4	26,0	27,5	29,1	30,7	32,3	32,3	33,8	35,4	37,0	38,6	40,1
650	kg	20,6	22,3	23,9	25,6	27,2	28,9	30,5	32,2	32,2	33,8	35,5	37,1	38,8	40,4	42,1
700	kg	21,6	23,4	25,1	26,8	28,5	30,2	31,9	32,0	33,7	35,4	37,1	38,9	40,6	42,3	44,0
750	kg	22,7	24,4	26,2	28,0	29,8	31,5	31,7	33,5	35,3	37,0	38,8	40,6	42,4	44,1	45,9
800	kg	23,7	25,5	27,3	29,2	31,0	31,3	33,1	34,9	36,8	38,6	40,5	42,3	44,1	46,0	47,8
850	kg	24,7	26,6	28,5	30,4	30,7	32,6	34,5	36,4	38,3	40,2	42,1	44,0	45,9	47,8	49,7
900	kg	25,7	27,6	29,6	30,0	32,0	33,9	35,9	37,9	39,8	41,8	43,8	45,7	47,7	49,7	51,7
950	kg	26,7	28,7	29,1	31,2	33,2	35,3	37,3	39,3	41,4	43,4	45,4	47,5	49,5	51,5	53,6
1000	kg	27,7	28,2	30,3	32,4	34,5	36,6	38,7	40,8	42,9	45,0	47,1	49,2	51,3	53,4	55,5

Hn\Wn (mm)		950	1000	1050	1100	1150	1200	1250	1300	1350	1400	1450	1500			
200	kg	27,5	28,5	28,0	29,0	30,1	31,1	32,2	33,3	34,3	35,4	36,4	37,5			
250	kg	29,4	29,0	30,1	31,2	32,3	33,5	34,6	35,7	36,8	37,9	39,1	40,2			
300	kg	29,8	31,0	32,2	33,4	34,6	35,8	37,0	38,1	39,3	40,5	41,7	42,9			
350	kg	31,8	33,1	34,3	35,6	36,8	38,1	39,3	40,6	41,8	43,1	44,3	45,6			
400	kg	33,8	35,1	36,4	37,7	39,1	40,4	41,7	43,0	44,3	45,7	47,0	48,3			
450	kg	35,8	37,2	38,5	39,9	41,3	42,7	44,1	45,5	46,8	48,2	49,6	51,0			
500	kg	37,8	39,2	40,7	42,1	43,6	45,0	46,5	47,9	49,4	50,8	52,2	53,7			
550	kg	39,7	41,3	42,8	44,3	45,8	47,3	48,8	50,3	51,9	53,4	54,9	56,4			
600	kg	41,7	43,3	44,9	46,5	48,0	49,6	51,2	52,8	54,4	55,9	57,5	59,1			
650	kg	43,7	45,4	47,0	48,6	50,3	51,9	53,6	55,2	56,9	58,5	60,2	61,8			
700	kg	45,7	47,4	49,1	50,8	52,5	54,2	56,0	57,7	59,4	61,1	62,8	64,5			
750	kg	47,7	49,5	51,2	53,0	54,8	56,6	58,3	60,1	61,9	63,7	65,4	67,2			
800	kg	49,7	51,5	53,3	55,2	57,0	58,9	60,7	62,5	64,4	66,2	68,1	69,9			
850	kg	51,6	53,6	55,5	57,4	59,3	61,2	63,1	65,0	66,9	68,8	70,7	72,6			
900	kg	53,6	55,6	57,6	59,5	61,5	63,5	65,5	67,4	69,4	71,4	73,3	75,3			
950	kg	55,6	57,7	59,7	61,7	63,8	65,8	67,8	69,9	71,9	73,9	76,0	78,0			
1000	kg	57,6	59,7	61,8	63,9	66,0	68,1	70,2	72,3	74,4	76,5	78,6	80,7			

CU2 + BFL

Hn\Wn [mm]		200	250	300	350	400	450	500	550	600	650	700	750	800	850	900
200	kg	10,8	11,9	13,0	14,0	15,1	16,1	17,2	18,2	19,3	20,4	21,4	22,5	23,5	24,6	25,7
250	kg	11,9	13,0	14,1	15,2	16,3	17,5	18,6	19,7	20,8	22,0	23,1	24,2	25,3	26,4	27,6
300	kg	12,9	14,0	15,2	16,4	17,6	18,8	20,0	21,2	22,4	23,5	24,7	25,9	27,1	28,3	29,5
350	kg	13,9	15,1	16,4	17,6	18,9	20,1	21,4	22,6	23,9	25,1	26,4	27,6	28,9	30,2	-
400	kg	14,9	16,2	17,5	18,8	20,1	21,5	22,8	24,1	25,4	26,7	28,1	29,4	30,7	-	-
450	kg	15,9	17,3	18,6	20,0	21,4	22,8	24,2	25,6	26,9	28,3	29,7	31,1	-	-	-
500	kg	16,9	18,3	19,8	21,2	22,7	24,1	25,6	27,0	28,5	29,9	31,4	-	-	-	-
550	kg	17,9	19,4	20,9	22,4	23,9	25,5	27,0	28,5	30,0	31,5	-	-	-	-	-
600	kg	18,9	20,5	22,0	23,6	25,2	26,8	28,4	29,9	31,5	-	-	-	-	-	-
650	kg	19,9	21,5	23,2	24,8	26,5	28,1	29,8	31,4	-	-	-	-	-	-	-
700	kg	20,9	22,6	24,3	26,0	27,7	29,4	31,2	-	-	-	-	-	-	-	-
750	kg	21,9	23,7	25,5	27,2	29,0	30,8	-	-	-	-	-	-	-	-	-
800	kg	22,9	24,7	26,6	28,4	30,3	-	-	-	-	-	-	-	-	-	-
850	kg	23,9	25,8	27,7	29,6	-	-	-	-	-	-	-	-	-	-	-
900	kg	24,9	26,9	28,9	-	-	-	-	-	-	-	-	-	-	-	-
950	kg	25,9	28,0	-	-	-	-	-	-	-	-	-	-	-	-	-
1000	kg	26,9	-	-	-	-	-	-	-	-	-	-	-	-	-	-

Hn\Wn [mm]		950	1000	1050	1100	1150	1200	1250	1300	1350	1400	1450	1500			
200	kg	26,7	27,8	-	-	-	-	-	-	-	-	-	-			
250	kg	28,7	-	-	-	-	-	-	-	-	-	-	-			
300	kg	-	-	-	-	-	-	-	-	-	-	-	-			
350	kg	-	-	-	-	-	-	-	-	-	-	-	-			
400	kg	-	-	-	-	-	-	-	-	-	-	-	-			
450	kg	-	-	-	-	-	-	-	-	-	-	-	-			
500	kg	-	-	-	-	-	-	-	-	-	-	-	-			
550	kg	-	-	-	-	-	-	-	-	-	-	-	-			
600	kg	-	-	-	-	-	-	-	-	-	-	-	-			
650	kg	-	-	-	-	-	-	-	-	-	-	-	-			
700	kg	-	-	-	-	-	-	-	-	-	-	-	-			
750	kg	-	-	-	-	-	-	-	-	-	-	-	-			
800	kg	-	-	-	-	-	-	-	-	-	-	-	-			
850	kg	-	-	-	-	-	-	-	-	-	-	-	-			
900	kg	-	-	-	-	-	-	-	-	-	-	-	-			
950	kg	-	-	-	-	-	-	-	-	-	-	-	-			
1000	kg	-	-	-	-	-	-	-	-	-	-	-	-			

CU2 + BFLT

Hn\Wn [mm]		200	250	300	350	400	450	500	550	600	650	700	750	800	850	900
200	kg	10,9	12,0	13,1	14,1	15,2	16,2	17,3	18,3	19,4	20,5	21,5	22,6	23,6	24,7	25,8
250	kg	12,0	13,1	14,2	15,3	16,4	17,6	18,7	19,8	20,9	22,1	23,2	24,3	25,4	26,5	27,7
300	kg	13,0	14,1	15,3	16,5	17,7	18,9	20,1	21,3	22,5	23,6	24,8	26,0	27,2	28,4	29,6
350	kg	14,0	15,2	16,5	17,7	19,0	20,2	21,5	22,7	24,0	25,2	26,5	27,7	29,0	30,3	-
400	kg	15,0	16,3	17,6	18,9	20,2	21,6	22,9	24,2	25,5	26,8	28,2	29,5	30,8	-	-
450	kg	16,0	17,4	18,7	20,1	21,5	22,9	24,3	25,7	27,0	28,4	29,8	31,2	-	-	-
500	kg	17,0	18,4	19,9	21,3	22,8	24,2	25,7	27,1	28,6	30,0	31,5	-	-	-	-
550	kg	18,0	19,5	21,0	22,5	24,0	25,6	27,1	28,6	30,1	31,6	-	-	-	-	-
600	kg	19,0	20,6	22,1	23,7	25,3	26,9	28,5	30,0	31,6	-	-	-	-	-	-
650	kg	20,0	21,6	23,3	24,9	26,6	28,2	29,9	31,5	-	-	-	-	-	-	-
700	kg	21,0	22,7	24,4	26,1	27,8	29,5	31,3	-	-	-	-	-	-	-	-
750	kg	22,0	23,8	25,6	27,3	29,1	30,9	-	-	-	-	-	-	-	-	-
800	kg	23,0	24,8	26,7	28,5	30,4	-	-	-	-	-	-	-	-	-	-
850	kg	24,0	25,9	27,8	29,7	-	-	-	-	-	-	-	-	-	-	-
900	kg	25,0	27,0	29,0	-	-	-	-	-	-	-	-	-	-	-	-
950	kg	26,0	28,1	-	-	-	-	-	-	-	-	-	-	-	-	-
1000	kg	27,0	-	-	-	-	-	-	-	-	-	-	-	-	-	-

Hn\Wn [mm]		950	1000	1050	1100	1150	1200	1250	1300	1350	1400	1450	1500			
200	kg	26,8	27,9	-	-	-	-	-	-	-	-	-	-			
250	kg	28,8	-	-	-	-	-	-	-	-	-	-	-			
300	kg	-	-	-	-	-	-	-	-	-	-	-	-			
350	kg	-	-	-	-	-	-	-	-	-	-	-	-			
400	kg	-	-	-	-	-	-	-	-	-	-	-	-			
450	kg	-	-	-	-	-	-	-	-	-	-	-	-			
500	kg	-	-	-	-	-	-	-	-	-	-	-	-			
550	kg	-	-	-	-	-	-	-	-	-	-	-	-			
600	kg	-	-	-	-	-	-	-	-	-	-	-	-			
650	kg	-	-	-	-	-	-	-	-	-	-	-	-			
700	kg	-	-	-	-	-	-	-	-	-	-	-	-			
750	kg	-	-	-	-	-	-	-	-	-	-	-	-			
800	kg	-	-	-	-	-	-	-	-	-	-	-	-			
850	kg	-	-	-	-	-	-	-	-	-	-	-	-			
900	kg	-	-	-	-	-	-	-	-	-	-	-	-			
950	kg	-	-	-	-	-	-	-	-	-	-	-	-			
1000	kg	-	-	-	-	-	-	-	-	-	-	-	-			

CU2 + BFN

Hn\Wn [mm]		200	250	300	350	400	450	500	550	600	650	700	750	800	850	900
200	kg	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
250	kg	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
300	kg	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
350	kg	-	-	-	-	-	-	-	-	-	-	-	-	-	-	30,1
400	kg	-	-	-	-	-	-	-	-	-	-	-	-	-	30,7	32,0
450	kg	-	-	-	-	-	-	-	-	-	-	-	-	31,2	32,6	33,9
500	kg	-	-	-	-	-	-	-	-	-	-	-	31,5	33,0	34,4	35,9
550	kg	-	-	-	-	-	-	-	-	-	-	31,7	33,2	34,8	36,3	37,8
600	kg	-	-	-	-	-	-	-	-	-	31,8	33,4	35,0	36,5	38,1	39,7
650	kg	-	-	-	-	-	-	-	-	31,8	33,4	35,0	36,7	38,3	40,0	41,6
700	kg	-	-	-	-	-	-	-	31,6	33,3	35,0	36,7	38,4	40,1	41,8	43,5
750	kg	-	-	-	-	-	-	31,3	33,0	34,8	36,6	38,4	40,1	41,9	43,7	45,5
800	kg	-	-	-	-	-	30,8	32,7	34,5	36,3	38,2	40,0	41,9	43,7	45,5	47,4
850	kg	-	-	-	-	30,2	32,1	34,0	36,0	37,9	39,8	41,7	43,6	45,5	47,4	49,3
900	kg	-	-	-	29,5	31,5	33,5	35,4	37,4	39,4	41,4	43,3	45,3	47,3	49,2	51,2
950	kg	-	-	28,7	30,7	32,8	34,8	36,8	38,9	40,9	42,9	45,0	47,0	49,1	51,1	53,1
1000	kg	-	27,7	29,8	31,9	34,0	36,1	38,2	40,3	42,4	44,5	46,6	48,7	50,8	52,9	55,0

Hn\Wn [mm]		950	1000	1050	1100	1150	1200	1250	1300	1350	1400	1450	1500			
200	kg	-	-	27,5	28,6	29,6	30,7	31,8	32,8	33,9	34,9	36,0	37,0			
250	kg	-	28,5	29,6	30,8	31,9	33,0	34,1	35,2	36,4	37,5	38,6	39,7			
300	kg	29,4	30,6	31,8	32,9	34,1	35,3	36,5	37,7	38,9	40,1	41,3	42,4			
350	kg	31,4	32,6	33,9	35,1	36,4	37,6	38,9	40,1	41,4	42,6	43,9	45,1			
400	kg	33,3	34,7	36,0	37,3	38,6	39,9	41,3	42,6	43,9	45,2	46,5	47,8			
450	kg	35,3	36,7	38,1	39,5	40,9	42,2	43,6	45,0	46,4	47,8	49,2	50,5			
500	kg	37,3	38,8	40,2	41,7	43,1	44,6	46,0	47,5	48,9	50,4	51,8	53,2			
550	kg	39,3	40,8	42,3	43,8	45,4	46,9	48,4	49,9	51,4	52,9	54,4	55,9			
600	kg	41,3	42,9	44,4	46,0	47,6	49,2	50,8	52,3	53,9	55,5	57,1	58,7			
650	kg	43,3	44,9	46,6	48,2	49,8	51,5	53,1	54,8	56,4	58,1	59,7	61,4			
700	kg	45,2	47,0	48,7	50,4	52,1	53,8	55,5	57,2	58,9	60,6	62,3	64,1			
750	kg	47,2	49,0	50,8	52,6	54,3	56,1	57,9	59,7	61,4	63,2	65,0	66,8			
800	kg	49,2	51,1	52,9	54,7	56,6	58,4	60,3	62,1	63,9	65,8	67,6	69,5			
850	kg	51,2	53,1	55,0	56,9	58,8	60,7	62,6	64,5	66,4	68,3	70,3	72,2			
900	kg	53,2	55,2	57,1	59,1	61,1	63,0	65,0	67,0	68,9	70,9	72,9	74,9			
950	kg	55,2	57,2	59,2	61,3	63,3	65,3	67,4	69,4	71,5	73,5	75,5	77,6			
1000	kg	57,1	59,3	61,4	63,5	65,6	67,7	69,8	71,9	74,0	76,1	78,2	80,3			

CU2 + BFNT

Hn\Wn [mm]		200	250	300	350	400	450	500	550	600	650	700	750	800	850	900
200	kg	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
250	kg	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
300	kg	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
350	kg	-	-	-	-	-	-	-	-	-	-	-	-	-	-	30,2
400	kg	-	-	-	-	-	-	-	-	-	-	-	-	-	30,8	32,1
450	kg	-	-	-	-	-	-	-	-	-	-	-	-	31,3	32,7	34,0
500	kg	-	-	-	-	-	-	-	-	-	-	-	31,6	33,1	34,5	36,0
550	kg	-	-	-	-	-	-	-	-	-	-	31,8	33,3	34,9	36,4	37,9
600	kg	-	-	-	-	-	-	-	-	-	31,9	33,5	35,1	36,6	38,2	39,8
650	kg	-	-	-	-	-	-	-	-	31,9	33,5	35,1	36,8	38,4	40,1	41,7
700	kg	-	-	-	-	-	-	-	31,7	33,4	35,1	36,8	38,5	40,2	41,9	43,6
750	kg	-	-	-	-	-	-	31,4	33,1	34,9	36,7	38,5	40,2	42,0	43,8	45,6
800	kg	-	-	-	-	-	30,9	32,8	34,6	36,4	38,3	40,1	42,0	43,8	45,6	47,5
850	kg	-	-	-	-	30,3	32,2	34,1	36,1	38,0	39,9	41,8	43,7	45,6	47,5	49,4
900	kg	-	-	-	29,6	31,6	33,6	35,5	37,5	39,5	41,5	43,4	45,4	47,4	49,3	51,3
950	kg	-	-	28,8	30,8	32,9	34,9	36,9	39,0	41,0	43,0	45,1	47,1	49,2	51,2	53,2
1000	kg	-	27,8	29,9	32,0	34,1	36,2	38,3	40,4	42,5	44,6	46,7	48,8	50,9	53,0	55,1

Hn\Wn [mm]		950	1000	1050	1100	1150	1200	1250	1300	1350	1400	1450	1500			
200	kg	-	-	27,6	28,7	29,7	30,8	31,9	32,9	34,0	35,0	36,1	37,1			
250	kg	-	28,6	29,7	30,9	32,0	33,1	34,2	35,3	36,5	37,6	38,7	39,8			
300	kg	29,5	30,7	31,9	33,0	34,2	35,4	36,6	37,8	39,0	40,2	41,4	42,5			
350	kg	31,5	32,7	34,0	35,2	36,5	37,7	39,0	40,2	41,5	42,7	44,0	45,2			
400	kg	33,4	34,8	36,1	37,4	38,7	40,0	41,4	42,7	44,0	45,3	46,6	47,9			
450	kg	35,4	36,8	38,2	39,6	41,0	42,3	43,7	45,1	46,5	47,9	49,3	50,6			
500	kg	37,4	38,9	40,3	41,8	43,2	44,7	46,1	47,6	49,0	50,5	51,9	53,3			
550	kg	39,4	40,9	42,4	43,9	45,5	47,0	48,5	50,0	51,5	53,0	54,5	56,0			
600	kg	41,4	43,0	44,5	46,1	47,7	49,3	50,9	52,4	54,0	55,6	57,2	58,8			
650	kg	43,4	45,0	46,7	48,3	49,9	51,6	53,2	54,9	56,5	58,2	59,8	61,5			
700	kg	45,3	47,1	48,8	50,5	52,2	53,9	55,6	57,3	59,0	60,7	62,4	64,2			
750	kg	47,3	49,1	50,9	52,7	54,4	56,2	58,0	59,8	61,5	63,3	65,1	66,9			
800	kg	49,3	51,2	53,0	54,8	56,7	58,5	60,4	62,2	64,0	65,9	67,7	69,6			
850	kg	51,3	53,2	55,1	57,0	58,9	60,8	62,7	64,6	66,5	68,4	70,4	72,3			
900	kg	53,3	55,3	57,2	59,2	61,2	63,1	65,1	67,1	69,0	71,0	73,0	75,0			
950	kg	55,3	57,3	59,3	61,4	63,4	65,4	67,5	69,5	71,6	73,6	75,6	77,7			
1000	kg	57,2	59,4	61,5	63,6	65,7	67,8	69,9	72,0	74,1	76,2	78,3	80,4			

CU2-L500 + CFTH

Hn\Wn (mm)		200	250	300	350	400	450	500	550	600	650	700	750	800	850	900
200	kg	11,6	12,8	13,9	15,1	16,2	17,4	18,6	19,7	20,9	22,0	23,2	24,3	25,5	26,6	27,8
250	kg	12,7	14,0	15,2	16,4	17,6	18,9	20,1	21,3	22,5	23,8	25,0	26,2	27,4	28,7	29,9
300	kg	13,8	15,1	16,4	17,7	19,0	20,3	21,6	22,9	24,2	25,5	26,8	28,1	29,4	30,7	32,0
350	kg	14,9	16,3	17,7	19,0	20,4	21,8	23,1	24,5	25,9	27,2	28,6	30,0	31,4	32,7	32,3
400	kg	16,0	17,5	18,9	20,3	21,8	23,2	24,7	26,1	27,5	29,0	30,4	31,9	33,3	33,0	34,4
450	kg	17,1	18,6	20,1	21,7	23,2	24,7	26,2	27,7	29,2	30,7	32,2	33,7	33,5	35,0	36,5
500	kg	18,2	19,8	21,4	23,0	24,6	26,1	27,7	29,3	30,9	32,5	34,0	33,9	35,5	37,0	38,6
550	kg	19,3	21,0	22,6	24,3	25,9	27,6	29,2	30,9	32,5	34,2	34,1	35,8	37,4	39,1	40,7
600	kg	20,4	22,1	23,9	25,6	27,3	29,0	30,8	32,5	34,2	34,2	35,9	37,6	39,4	41,1	42,8
650	kg	21,5	23,3	25,1	26,9	28,7	30,5	32,3	34,1	34,1	35,9	37,7	39,5	41,3	43,1	44,9
700	kg	22,6	24,5	26,3	28,2	30,1	31,9	33,8	33,9	35,8	37,7	39,5	41,4	43,3	45,1	47,0
750	kg	23,7	25,6	27,6	29,5	31,5	33,4	33,6	35,5	37,5	39,4	41,4	43,3	45,2	47,2	49,1
800	kg	24,8	26,8	28,8	30,8	32,9	33,1	35,1	37,1	39,1	41,2	43,2	45,2	47,2	49,2	51,2
850	kg	25,9	28,0	30,1	32,2	32,5	34,6	36,6	38,7	40,8	42,9	45,0	47,1	49,1	51,2	53,3
900	kg	27,0	29,2	31,3	31,7	33,9	36,0	38,2	40,3	42,5	44,6	46,8	48,9	51,1	53,3	55,4
950	kg	28,1	30,3	30,8	33,0	35,2	37,5	39,7	41,9	44,2	46,4	48,6	50,8	53,0	55,3	57,5
1000	kg	29,2	29,8	32,0	34,3	36,6	38,9	41,2	43,5	45,8	48,1	50,4	52,7	55,0	57,3	59,6

Hn\Wn (mm)		950	1000	1050	1100	1150	1200	1250	1300	1350	1400	1450	1500			
200	kg	29,0	30,1	29,5	30,7	31,8	33,0	34,1	35,3	36,4	37,6	38,8	39,9			
250	kg	31,1	30,6	31,8	33,1	34,3	35,5	36,7	38,0	39,2	40,4	41,6	42,9			
300	kg	31,5	32,8	34,1	35,4	36,7	38,0	39,3	40,6	41,9	43,2	44,5	45,8			
350	kg	33,7	35,1	36,4	37,8	39,2	40,6	41,9	43,3	44,7	46,0	47,4	48,8			
400	kg	35,9	37,3	38,8	40,2	41,6	43,1	44,5	46,0	47,4	48,8	50,3	51,7			
450	kg	38,0	39,6	41,1	42,6	44,1	45,6	47,1	48,6	50,1	51,6	53,2	54,7			
500	kg	40,2	41,8	43,4	45,0	46,5	48,1	49,7	51,3	52,9	54,5	56,0	57,6			
550	kg	42,4	44,0	45,7	47,3	49,0	50,7	52,3	54,0	55,6	57,3	58,9	-			
600	kg	44,5	46,3	48,0	49,7	51,4	53,2	54,9	56,6	58,4	60,1	-	-			
650	kg	46,7	48,5	50,3	52,1	53,9	55,7	57,5	59,3	61,1	-	-	-			
700	kg	48,9	50,7	52,6	54,5	56,4	58,2	60,1	62,0	-	-	-	-			
750	kg	51,1	53,0	54,9	56,9	58,8	60,7	62,7	-	-	-	-	-			
800	kg	53,2	55,2	57,2	59,2	61,3	63,3	-	-	-	-	-	-			
850	kg	55,4	57,5	59,5	61,6	63,7	-	-	-	-	-	-	-			
900	kg	57,6	59,7	61,9	64,0	-	-	-	-	-	-	-	-			
950	kg	59,7	61,9	64,2	-	-	-	-	-	-	-	-	-			
1000	kg	61,9	64,2	-	-	-	-	-	-	-	-	-	-			

CU2-L500 + ONE

Hn\Wn (mm)		200	250	300	350	400	450	500	550	600	650	700	750	800	850	900
200	kg	12,4	13,6	14,7	15,9	17,0	18,2	19,4	20,5	21,7	22,8	24,0	25,1	26,3	27,4	28,6
250	kg	13,5	14,8	16,0	17,2	18,4	19,7	20,9	22,1	23,3	24,6	25,8	27,0	28,2	29,5	30,7
300	kg	14,6	15,9	17,2	18,5	19,8	21,1	22,4	23,7	25,0	26,3	27,6	28,9	30,2	31,5	32,8
350	kg	15,7	17,1	18,5	19,8	21,2	22,6	23,9	25,3	26,7	28,0	29,4	30,8	32,2	33,5	33,1
400	kg	16,8	18,3	19,7	21,1	22,6	24,0	25,5	26,9	28,3	29,8	31,2	32,7	34,1	33,8	35,2
450	kg	17,9	19,4	20,9	22,5	24,0	25,5	27,0	28,5	30,0	31,5	33,0	34,5	34,3	35,8	37,3
500	kg	19,0	20,6	22,2	23,8	25,4	26,9	28,5	30,1	31,7	33,3	34,8	34,7	36,3	37,8	39,4
550	kg	20,1	21,8	23,4	25,1	26,7	28,4	30,0	31,7	33,3	35,0	34,9	36,6	38,2	39,9	41,5
600	kg	21,2	22,9	24,7	26,4	28,1	29,8	31,6	33,3	35,0	35,0	36,7	38,4	40,2	41,9	43,6
650	kg	22,3	24,1	25,9	27,7	29,5	31,3	33,1	34,9	34,9	36,7	38,5	40,3	42,1	43,9	45,7
700	kg	23,4	25,3	27,1	29,0	30,9	32,7	34,6	34,7	36,6	38,5	40,3	42,2	44,1	45,9	47,8
750	kg	24,5	26,4	28,4	30,3	32,3	34,2	34,4	36,3	38,3	40,2	42,2	44,1	46,0	48,0	49,9
800	kg	25,6	27,6	29,6	31,6	33,7	33,9	35,9	37,9	39,9	42,0	44,0	46,0	48,0	50,0	52,0
850	kg	26,7	28,8	30,9	33,0	33,3	35,4	37,4	39,5	41,6	43,7	45,8	47,9	49,9	52,0	54,1
900	kg	27,8	30,0	32,1	32,5	34,7	36,8	39,0	41,1	43,3	45,4	47,6	49,7	51,9	54,1	56,2
950	kg	28,9	31,1	31,6	33,8	36,0	38,3	40,5	42,7	45,0	47,2	49,4	51,6	53,8	56,1	58,3
1000	kg	30,0	30,6	32,8	35,1	37,4	39,7	42,0	44,3	46,6	48,9	51,2	53,5	55,8	58,1	60,4

Hn\Wn (mm)		950	1000	1050	1100	1150	1200	1250	1300	1350	1400	1450	1500			
200	kg	29,8	30,9	30,3	31,5	32,6	33,8	34,9	36,1	37,2	38,4	39,6	40,7			
250	kg	31,9	31,4	32,6	33,9	35,1	36,3	37,5	38,8	40,0	41,2	42,4	43,7			
300	kg	32,3	33,6	34,9	36,2	37,5	38,8	40,1	41,4	42,7	44,0	45,3	46,6			
350	kg	34,5	35,9	37,2	38,6	40,0	41,4	42,7	44,1	45,5	46,8	48,2	49,6			
400	kg	36,7	38,1	39,6	41,0	42,4	43,9	45,3	46,8	48,2	49,6	51,1	52,5			
450	kg	38,8	40,4	41,9	43,4	44,9	46,4	47,9	49,4	50,9	52,4	54,0	55,5			
500	kg	41,0	42,6	44,2	45,8	47,3	48,9	50,5	52,1	53,7	55,3	56,8	58,4			
550	kg	43,2	44,8	46,5	48,1	49,8	51,5	53,1	54,8	56,4	58,1	59,7	61,4			
600	kg	45,3	47,1	48,8	50,5	52,2	54,0	55,7	57,4	59,2	60,9	62,6	64,3			
650	kg	47,5	49,3	51,1	52,9	54,7	56,5	58,3	60,1	61,9	63,7	65,5	67,3			
700	kg	49,7	51,5	53,4	55,3	57,2	59,0	60,9	62,8	64,6	66,5	68,4	70,2			
750	kg	51,9	53,8	55,7	57,7	59,6	61,5	63,5	65,4	67,4	69,3	71,2	73,2			
800	kg	54,0	56,0	58,0	60,0	62,1	64,1	66,1	68,1	70,1	72,1	74,1	76,1			
850	kg	56,2	58,3	60,3	62,4	64,5	66,6	68,7	70,8	72,8	74,9	77,0	79,1			
900	kg	58,4	60,5	62,7	64,8	67,0	69,1	71,3	73,4	75,6	77,7	79,9	82,0			
950	kg	60,5	62,7	65,0	67,2	69,4	71,6	73,9	76,1	78,3	80,5	82,8	85,0			
1000	kg	62,7	65,0	67,3	69,6	71,9	74,2	76,5	78,8	81,1	83,4	85,6	87,9			

CU2-L500 + BFL

Hn\Wn [mm]		200	250	300	350	400	450	500	550	600	650	700	750	800	850	900
200	kg	11,7	12,8	14,0	15,2	16,3	17,5	18,6	19,8	20,9	22,1	23,2	24,4	25,5	26,7	27,9
250	kg	12,8	14,0	15,2	16,5	17,7	18,9	20,1	21,4	22,6	23,8	25,0	26,3	27,5	28,7	29,9
300	kg	13,9	15,2	16,5	17,8	19,1	20,4	21,7	23,0	24,3	25,6	26,9	28,2	29,5	30,8	32,0
350	kg	15,0	16,3	17,7	19,1	20,4	21,8	23,2	24,6	25,9	27,3	28,7	30,0	31,4	32,8	-
400	kg	16,1	17,5	19,0	20,4	21,8	23,3	24,7	26,2	27,6	29,0	30,5	31,9	33,4	-	-
450	kg	17,2	18,7	20,2	21,7	23,2	24,7	26,2	27,7	29,3	30,8	32,3	33,8	-	-	-
500	kg	18,3	19,8	21,4	23,0	24,6	26,2	27,8	29,4	30,9	32,5	34,1	-	-	-	-
550	kg	19,4	21,0	22,7	24,3	26,0	27,6	29,3	30,9	32,6	34,3	-	-	-	-	-
600	kg	20,5	22,2	23,9	25,6	27,4	29,1	30,8	32,5	34,3	-	-	-	-	-	-
650	kg	21,6	23,4	25,2	26,9	28,8	30,5	32,3	34,1	-	-	-	-	-	-	-
700	kg	22,7	24,5	26,4	28,3	30,1	32,0	33,9	-	-	-	-	-	-	-	-
750	kg	23,8	25,7	27,6	29,6	31,5	33,5	-	-	-	-	-	-	-	-	-
800	kg	24,9	26,9	28,9	30,9	32,9	-	-	-	-	-	-	-	-	-	-
850	kg	26,0	28,0	30,1	32,2	-	-	-	-	-	-	-	-	-	-	-
900	kg	27,0	29,2	31,4	-	-	-	-	-	-	-	-	-	-	-	-
950	kg	28,2	30,4	-	-	-	-	-	-	-	-	-	-	-	-	-
1000	kg	29,3	-	-	-	-	-	-	-	-	-	-	-	-	-	-

Hn\Wn [mm]		950	1000	1050	1100	1150	1200	1250	1300	1350	1400	1450	1500			
200	kg	29,0	30,2	-	-	-	-	-	-	-	-	-	-			
250	kg	31,2	-	-	-	-	-	-	-	-	-	-	-			
300	kg	-	-	-	-	-	-	-	-	-	-	-	-			
350	kg	-	-	-	-	-	-	-	-	-	-	-	-			
400	kg	-	-	-	-	-	-	-	-	-	-	-	-			
450	kg	-	-	-	-	-	-	-	-	-	-	-	-			
500	kg	-	-	-	-	-	-	-	-	-	-	-	-			
550	kg	-	-	-	-	-	-	-	-	-	-	-	-			
600	kg	-	-	-	-	-	-	-	-	-	-	-	-			
650	kg	-	-	-	-	-	-	-	-	-	-	-	-			
700	kg	-	-	-	-	-	-	-	-	-	-	-	-			
750	kg	-	-	-	-	-	-	-	-	-	-	-	-			
800	kg	-	-	-	-	-	-	-	-	-	-	-	-			
850	kg	-	-	-	-	-	-	-	-	-	-	-	-			
900	kg	-	-	-	-	-	-	-	-	-	-	-	-			
950	kg	-	-	-	-	-	-	-	-	-	-	-	-			
1000	kg	-	-	-	-	-	-	-	-	-	-	-	-			

CU2-L500 + BFLT

Hn\Wn [mm]		200	250	300	350	400	450	500	550	600	650	700	750	800	850	900
200	kg	11,8	12,9	14,1	15,3	16,4	17,6	18,7	19,9	21,0	22,2	23,3	24,5	25,6	26,8	28,0
250	kg	12,9	14,1	15,3	16,6	17,8	19,0	20,2	21,5	22,7	23,9	25,1	26,4	27,6	28,8	30,0
300	kg	14,0	15,3	16,6	17,9	19,2	20,5	21,8	23,1	24,4	25,7	27,0	28,3	29,6	30,9	32,1
350	kg	15,1	16,4	17,8	19,2	20,5	21,9	23,3	24,7	26,0	27,4	28,8	30,1	31,5	32,9	-
400	kg	16,2	17,6	19,1	20,5	21,9	23,4	24,8	26,3	27,7	29,1	30,6	32,0	33,5	-	-
450	kg	17,3	18,8	20,3	21,8	23,3	24,8	26,3	27,8	29,4	30,9	32,4	33,9	-	-	-
500	kg	18,4	19,9	21,5	23,1	24,7	26,3	27,9	29,5	31,0	32,6	34,2	-	-	-	-
550	kg	19,5	21,1	22,8	24,4	26,1	27,7	29,4	31,0	32,7	34,4	-	-	-	-	-
600	kg	20,6	22,3	24,0	25,7	27,5	29,2	30,9	32,6	34,4	-	-	-	-	-	-
650	kg	21,7	23,5	25,3	27,0	28,9	30,6	32,4	34,2	-	-	-	-	-	-	-
700	kg	22,8	24,6	26,5	28,4	30,2	32,1	34,0	-	-	-	-	-	-	-	-
750	kg	23,9	25,8	27,7	29,7	31,6	33,6	-	-	-	-	-	-	-	-	-
800	kg	25,0	27,0	29,0	31,0	33,0	-	-	-	-	-	-	-	-	-	-
850	kg	26,1	28,1	30,2	32,3	-	-	-	-	-	-	-	-	-	-	-
900	kg	27,1	29,3	31,5	-	-	-	-	-	-	-	-	-	-	-	-
950	kg	28,3	30,5	-	-	-	-	-	-	-	-	-	-	-	-	-
1000	kg	29,4	-	-	-	-	-	-	-	-	-	-	-	-	-	-

Hn\Wn [mm]		950	1000	1050	1100	1150	1200	1250	1300	1350	1400	1450	1500			
200	kg	29,1	30,3	-	-	-	-	-	-	-	-	-	-			
250	kg	31,3	-	-	-	-	-	-	-	-	-	-	-			
300	kg	-	-	-	-	-	-	-	-	-	-	-	-			
350	kg	-	-	-	-	-	-	-	-	-	-	-	-			
400	kg	-	-	-	-	-	-	-	-	-	-	-	-			
450	kg	-	-	-	-	-	-	-	-	-	-	-	-			
500	kg	-	-	-	-	-	-	-	-	-	-	-	-			
550	kg	-	-	-	-	-	-	-	-	-	-	-	-			
600	kg	-	-	-	-	-	-	-	-	-	-	-	-			
650	kg	-	-	-	-	-	-	-	-	-	-	-	-			
700	kg	-	-	-	-	-	-	-	-	-	-	-	-			
750	kg	-	-	-	-	-	-	-	-	-	-	-	-			
800	kg	-	-	-	-	-	-	-	-	-	-	-	-			
850	kg	-	-	-	-	-	-	-	-	-	-	-	-			
900	kg	-	-	-	-	-	-	-	-	-	-	-	-			
950	kg	-	-	-	-	-	-	-	-	-	-	-	-			
1000	kg	-	-	-	-	-	-	-	-	-	-	-	-			

CU2-L500 + BFN

Hn\Wn [mm]		200	250	300	350	400	450	500	550	600	650	700	750	800	850	900
200	kg	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
250	kg	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
300	kg	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
350	kg	-	-	-	-	-	-	-	-	-	-	-	-	-	-	32,7
400	kg	-	-	-	-	-	-	-	-	-	-	-	-	-	33,3	34,8
450	kg	-	-	-	-	-	-	-	-	-	-	-	-	33,9	35,4	36,9
500	kg	-	-	-	-	-	-	-	-	-	-	-	34,2	35,8	37,4	39,0
550	kg	-	-	-	-	-	-	-	-	-	-	34,5	36,1	37,8	39,4	41,1
600	kg	-	-	-	-	-	-	-	-	-	34,5	36,3	38,0	39,7	41,5	43,2
650	kg	-	-	-	-	-	-	-	-	34,5	36,3	38,1	39,9	41,7	43,5	45,3
700	kg	-	-	-	-	-	-	-	34,3	36,2	38,0	39,9	41,8	43,6	45,5	47,4
750	kg	-	-	-	-	-	-	33,9	35,9	37,8	39,8	41,7	43,6	45,6	47,5	49,5
800	kg	-	-	-	-	-	33,5	35,5	37,5	39,5	41,5	43,5	45,5	47,5	49,5	51,6
850	kg	-	-	-	-	32,8	34,9	37,0	39,1	41,2	43,2	45,3	47,4	49,5	51,6	53,7
900	kg	-	-	-	32,1	34,2	36,4	38,5	40,7	42,8	45,0	47,1	49,3	51,4	53,6	55,8
950	kg	-	-	31,1	33,4	35,6	37,8	40,1	42,3	44,5	46,7	48,9	51,2	53,4	55,6	57,8
1000	kg	-	30,1	32,4	34,7	37,0	39,3	41,6	43,9	46,2	48,5	50,8	53,1	55,3	57,6	59,9

Hn\Wn [mm]		950	1000	1050	1100	1150	1200	1250	1300	1350	1400	1450	1500			
200	kg	-	-	29,9	31,0	32,2	33,3	34,5	35,6	36,8	38,0	39,1	40,3			
250	kg	-	31,0	32,2	33,4	34,6	35,9	37,1	38,3	39,5	40,8	42,0	43,2			
300	kg	31,9	33,2	34,5	35,8	37,1	38,4	39,7	41,0	42,3	43,6	44,9	46,2			
350	kg	34,1	35,4	36,8	38,2	39,5	40,9	42,3	43,6	45,0	46,4	47,8	49,1			
400	kg	36,2	37,7	39,1	40,5	42,0	43,4	44,9	46,3	47,8	49,2	50,6	52,1			
450	kg	38,4	39,9	41,4	42,9	44,4	46,0	47,5	49,0	50,5	52,0	53,5	55,0			
500	kg	40,6	42,2	43,7	45,3	46,9	48,5	50,1	51,6	53,2	54,8	56,4	58,0			
550	kg	42,7	44,4	46,0	47,7	49,4	51,0	52,7	54,3	56,0	57,6	59,3	60,9			
600	kg	44,9	46,6	48,3	50,1	51,8	53,5	55,3	57,0	58,7	60,4	62,2	63,9			
650	kg	47,1	48,9	50,7	52,5	54,3	56,0	57,9	59,6	61,4	63,2	65,0	66,8			
700	kg	49,2	51,1	53,0	54,8	56,7	58,6	60,4	62,3	64,2	66,0	67,9	69,8			
750	kg	51,4	53,3	55,3	57,2	59,2	61,1	63,0	65,0	66,9	68,9	70,8	72,7			
800	kg	53,6	55,6	57,6	59,6	61,6	63,6	65,6	67,6	69,6	71,7	73,7	75,7			
850	kg	55,7	57,8	59,9	62,0	64,1	66,1	68,2	70,3	72,4	74,5	76,6	78,6			
900	kg	57,9	60,1	62,2	64,4	66,5	68,7	70,8	73,0	75,1	77,3	79,4	81,6			
950	kg	60,1	62,3	64,5	66,7	69,0	71,2	73,4	75,6	77,9	80,1	82,3	84,5			
1000	kg	62,2	64,5	66,8	69,1	71,4	73,7	76,0	78,3	80,6	82,9	85,2	87,5			

CU2-L500 + BFNT

Hn\Wn [mm]		200	250	300	350	400	450	500	550	600	650	700	750	800	850	900
200	kg	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
250	kg	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
300	kg	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
350	kg	-	-	-	-	-	-	-	-	-	-	-	-	-	-	32,8
400	kg	-	-	-	-	-	-	-	-	-	-	-	-	-	33,4	34,9
450	kg	-	-	-	-	-	-	-	-	-	-	-	-	34,0	35,5	37,0
500	kg	-	-	-	-	-	-	-	-	-	-	34,3	35,9	37,5	39,1	
550	kg	-	-	-	-	-	-	-	-	-	34,6	36,2	37,9	39,5	41,2	
600	kg	-	-	-	-	-	-	-	-	-	34,6	36,4	38,1	39,8	41,6	43,3
650	kg	-	-	-	-	-	-	-	-	34,6	36,4	38,2	40,0	41,8	43,6	45,4
700	kg	-	-	-	-	-	-	-	34,4	36,3	38,1	40,0	41,9	43,7	45,6	47,5
750	kg	-	-	-	-	-	-	34,0	36,0	37,9	39,9	41,8	43,7	45,7	47,6	49,6
800	kg	-	-	-	-	-	33,6	35,6	37,6	39,6	41,6	43,6	45,6	47,6	49,6	51,7
850	kg	-	-	-	-	32,9	35,0	37,1	39,2	41,3	43,3	45,4	47,5	49,6	51,7	53,8
900	kg	-	-	-	32,2	34,3	36,5	38,6	40,8	42,9	45,1	47,2	49,4	51,5	53,7	55,9
950	kg	-	-	31,2	33,5	35,7	37,9	40,2	42,4	44,6	46,8	49,0	51,3	53,5	55,7	57,9
1000	kg	-	30,2	32,5	34,8	37,1	39,4	41,7	44,0	46,3	48,6	50,9	53,2	55,4	57,7	60,0

Hn\Wn [mm]		950	1000	1050	1100	1150	1200	1250	1300	1350	1400	1450	1500			
200	kg	-	-	30,0	31,1	32,3	33,4	34,6	35,7	36,9	38,1	39,2	40,4			
250	kg	-	31,1	32,3	33,5	34,7	36,0	37,2	38,4	39,6	40,9	42,1	43,3			
300	kg	32,0	33,3	34,6	35,9	37,2	38,5	39,8	41,1	42,4	43,7	45,0	46,3			
350	kg	34,2	35,5	36,9	38,3	39,6	41,0	42,4	43,7	45,1	46,5	47,9	49,2			
400	kg	36,3	37,8	39,2	40,6	42,1	43,5	45,0	46,4	47,9	49,3	50,7	52,2			
450	kg	38,5	40,0	41,5	43,0	44,5	46,1	47,6	49,1	50,6	52,1	53,6	55,1			
500	kg	40,7	42,3	43,8	45,4	47,0	48,6	50,2	51,7	53,3	54,9	56,5	58,1			
550	kg	42,8	44,5	46,1	47,8	49,5	51,1	52,8	54,4	56,1	57,7	59,4	61,0			
600	kg	45,0	46,7	48,4	50,2	51,9	53,6	55,4	57,1	58,8	60,5	62,3	64,0			
650	kg	47,2	49,0	50,8	52,6	54,4	56,1	58,0	59,7	61,5	63,3	65,1	66,9			
700	kg	49,3	51,2	53,1	54,9	56,8	58,7	60,5	62,4	64,3	66,1	68,0	69,9			
750	kg	51,5	53,4	55,4	57,3	59,3	61,2	63,1	65,1	67,0	69,0	70,9	72,8			
800	kg	53,7	55,7	57,7	59,7	61,7	63,7	65,7	67,7	69,7	71,8	73,8	75,8			
850	kg	55,8	57,9	60,0	62,1	64,2	66,2	68,3	70,4	72,5	74,6	76,7	78,7			
900	kg	58,0	60,2	62,3	64,5	66,6	68,8	70,9	73,1	75,2	77,4	79,5	81,7			
950	kg	60,2	62,4	64,6	66,8	69,1	71,3	73,5	75,7	78,0	80,2	82,4	84,6			
1000	kg	62,3	64,6	66,9	69,2	71,5	73,8	76,1	78,4	80,7	83,0	85,3	87,6			

CU2 ATEX + RMEX

Hn\Wn [mm]		200	250	300	350	400	450	500	550	600	650	700	750	800	850	900
200	kg	14,8	15,8	16,9	18,0	19,0	20,1	21,1	22,2	23,2	24,3	25,4	26,4	27,5	28,5	29,6
250	kg	15,8	16,9	18,0	19,2	20,3	21,4	22,5	23,7	24,8	25,9	27,0	28,1	29,3	30,4	31,5
300	kg	16,8	18,0	19,2	20,4	21,5	22,7	23,9	25,1	26,3	27,5	28,7	29,9	31,1	32,2	33,4
350	kg	17,8	19,1	20,3	21,6	22,8	24,1	25,3	26,6	27,8	29,1	30,3	31,6	32,8	34,1	33,7
400	kg	18,8	20,1	21,4	22,8	24,1	25,4	26,7	28,0	29,4	30,7	32,0	33,3	34,6	34,3	35,7
450	kg	19,8	21,2	22,6	24,0	25,3	26,7	28,1	29,5	30,9	32,3	33,6	35,0	34,8	36,2	37,6
500	kg	20,8	22,3	23,7	25,2	26,6	28,1	29,5	31,0	32,4	33,9	35,3	35,2	36,6	38,1	39,5
550	kg	21,8	23,3	24,9	26,4	27,9	29,4	30,9	32,4	33,9	35,5	35,4	36,9	38,4	39,9	41,4
600	kg	22,8	24,4	26,0	27,6	29,1	30,7	32,3	33,9	35,5	35,4	37,0	38,6	40,2	41,8	43,3
650	kg	23,8	25,5	27,1	28,8	30,4	32,1	33,7	35,3	35,4	37,0	38,7	40,3	42,0	43,6	45,3
700	kg	24,8	26,5	28,3	30,0	31,7	33,4	35,1	35,2	36,9	38,6	40,3	42,0	43,8	45,5	47,2
750	kg	25,8	27,6	29,4	31,2	32,9	34,7	34,9	36,7	38,4	40,2	42,0	43,8	45,5	47,3	49,1
800	kg	26,8	28,7	30,5	32,4	34,2	34,5	36,3	38,1	40,0	41,8	43,7	45,5	47,3	49,2	51,0
850	kg	27,9	29,8	31,7	33,6	33,9	35,8	37,7	39,6	41,5	43,4	45,3	47,2	49,1	51,0	52,9
900	kg	28,9	30,8	32,8	33,2	35,1	37,1	39,1	41,1	43,0	45,0	47,0	48,9	50,9	52,9	54,9
950	kg	29,9	31,9	32,3	34,4	36,4	38,4	40,5	42,5	44,6	46,6	48,6	50,7	52,7	54,7	56,8
1000	kg	30,9	31,4	33,5	35,6	37,7	39,8	41,9	44,0	46,1	48,2	50,3	52,4	54,5	56,6	58,7

Hn\Wn [mm]		950	1000	1050	1100	1150	1200	1250	1300	1350	1400	1450	1500			
200	kg	30,6	31,7	31,2	32,2	33,3	34,3	35,4	36,4	37,5	38,6	39,6	40,7			
250	kg	32,6	32,2	33,3	34,4	35,5	36,6	37,8	38,9	40,0	41,1	42,3	43,4			
300	kg	33,0	34,2	35,4	36,6	37,8	39,0	40,1	41,3	42,5	43,7	44,9	46,1			
350	kg	35,0	36,3	37,5	38,8	40,0	41,3	42,5	43,8	45,0	46,3	47,5	48,8			
400	kg	37,0	38,3	39,6	40,9	42,3	43,6	44,9	46,2	47,5	48,8	50,2	51,5			
450	kg	39,0	40,4	41,7	43,1	44,5	45,9	47,3	48,7	50,0	51,4	52,8	54,2			
500	kg	41,0	42,4	43,8	45,3	46,7	48,2	49,6	51,1	52,5	54,0	55,4	56,9			
550	kg	42,9	44,4	46,0	47,5	49,0	50,5	52,0	53,5	55,0	56,6	58,1	59,6			
600	kg	44,9	46,5	48,1	49,7	51,2	52,8	54,4	56,0	57,6	59,1	60,7	62,3			
650	kg	46,9	48,5	50,2	51,8	53,5	55,1	56,8	58,4	60,1	61,7	63,3	65,0			
700	kg	48,9	50,6	52,3	54,0	55,7	57,4	59,1	60,9	62,6	64,3	66,0	67,7			
750	kg	50,9	52,6	54,4	56,2	58,0	59,7	61,5	63,3	65,1	66,8	68,6	70,4			
800	kg	52,9	54,7	56,5	58,4	60,2	62,1	63,9	65,7	67,6	69,4	71,3	73,1			
850	kg	54,8	56,7	58,6	60,6	62,5	64,4	66,3	68,2	70,1	72,0	73,9	75,8			
900	kg	56,8	58,8	60,8	62,7	64,7	66,7	68,6	70,6	72,6	74,6	76,5	78,5			
950	kg	58,8	60,8	62,9	64,9	67,0	69,0	71,0	73,1	75,1	77,1	79,2	81,2			
1000	kg	60,8	62,9	65,0	67,1	69,2	71,3	73,4	75,5	77,6	79,7	81,8	83,9			

CU2 ATEX + RMEXT

Hn\Wn [mm]		200	250	300	350	400	450	500	550	600	650	700	750	800	850	900
200	kg	14,9	15,9	17,0	18,1	19,1	20,2	21,2	22,3	23,3	24,4	25,5	26,5	27,6	28,6	29,7
250	kg	15,9	17,0	18,1	19,3	20,4	21,5	22,6	23,8	24,9	26,0	27,1	28,2	29,4	30,5	31,6
300	kg	16,9	18,1	19,3	20,5	21,6	22,8	24,0	25,2	26,4	27,6	28,8	30,0	31,2	32,3	33,5
350	kg	17,9	19,2	20,4	21,7	22,9	24,2	25,4	26,7	27,9	29,2	30,4	31,7	32,9	34,2	33,8
400	kg	18,9	20,2	21,5	22,9	24,2	25,5	26,8	28,1	29,5	30,8	32,1	33,4	34,7	34,4	35,8
450	kg	19,9	21,3	22,7	24,1	25,4	26,8	28,2	29,6	31,0	32,4	33,7	35,1	34,9	36,3	37,7
500	kg	20,9	22,4	23,8	25,3	26,7	28,2	29,6	31,1	32,5	34,0	35,4	35,3	36,7	38,2	39,6
550	kg	21,9	23,4	25,0	26,5	28,0	29,5	31,0	32,5	34,0	35,6	35,5	37,0	38,5	40,0	41,5
600	kg	22,9	24,5	26,1	27,7	29,2	30,8	32,4	34,0	35,6	35,5	37,1	38,7	40,3	41,9	43,4
650	kg	23,9	25,6	27,2	28,9	30,5	32,2	33,8	35,4	35,5	37,1	38,8	40,4	42,1	43,7	45,4
700	kg	24,9	26,6	28,4	30,1	31,8	33,5	35,2	35,3	37,0	38,7	40,4	42,1	43,9	45,6	47,3
750	kg	25,9	27,7	29,5	31,3	33,0	34,8	35,0	36,8	38,5	40,3	42,1	43,9	45,6	47,4	49,2
800	kg	26,9	28,8	30,6	32,5	34,3	34,6	36,4	38,2	40,1	41,9	43,8	45,6	47,4	49,3	51,1
850	kg	28,0	29,9	31,8	33,7	34,0	35,9	37,8	39,7	41,6	43,5	45,4	47,3	49,2	51,1	53,0
900	kg	29,0	30,9	32,9	33,3	35,2	37,2	39,2	41,2	43,1	45,1	47,1	49,0	51,0	53,0	55,0
950	kg	30,0	32,0	32,4	34,5	36,5	38,5	40,6	42,6	44,7	46,7	48,7	50,8	52,8	54,8	56,9
1000	kg	31,0	31,5	33,6	35,7	37,8	39,9	42,0	44,1	46,2	48,3	50,4	52,5	54,6	56,7	58,8

Hn\Wn [mm]		950	1000	1050	1100	1150	1200	1250	1300	1350	1400	1450	1500			
200	kg	30,7	31,8	31,3	32,3	33,4	34,4	35,5	36,5	37,6	38,7	39,7	40,8			
250	kg	32,7	32,3	33,4	34,5	35,6	36,7	37,9	39,0	40,1	41,2	42,4	43,5			
300	kg	33,1	34,3	35,5	36,7	37,9	39,1	40,2	41,4	42,6	43,8	45,0	46,2			
350	kg	35,1	36,4	37,6	38,9	40,1	41,4	42,6	43,9	45,1	46,4	47,6	48,9			
400	kg	37,1	38,4	39,7	41,0	42,4	43,7	45,0	46,3	47,6	48,9	50,3	51,6			
450	kg	39,1	40,5	41,8	43,2	44,6	46,0	47,4	48,8	50,1	51,5	52,9	54,3			
500	kg	41,1	42,5	43,9	45,4	46,8	48,3	49,7	51,2	52,6	54,1	55,5	57,0			
550	kg	43,0	44,5	46,1	47,6	49,1	50,6	52,1	53,6	55,1	56,7	58,2	59,7			
600	kg	45,0	46,6	48,2	49,8	51,3	52,9	54,5	56,1	57,7	59,2	60,8	62,4			
650	kg	47,0	48,6	50,3	51,9	53,6	55,2	56,9	58,5	60,2	61,8	63,4	65,1			
700	kg	49,0	50,7	52,4	54,1	55,8	57,5	59,2	61,0	62,7	64,4	66,1	67,8			
750	kg	51,0	52,7	54,5	56,3	58,1	59,8	61,6	63,4	65,2	66,9	68,7	70,5			
800	kg	53,0	54,8	56,6	58,5	60,3	62,2	64,0	65,8	67,7	69,5	71,4	73,2			
850	kg	54,9	56,8	58,7	60,7	62,6	64,5	66,4	68,3	70,2	72,1	74,0	75,9			
900	kg	56,9	58,9	60,9	62,8	64,8	66,8	68,7	70,7	72,7	74,7	76,6	78,6			
950	kg	58,9	60,9	63,0	65,0	67,1	69,1	71,1	73,2	75,2	77,2	79,3	81,3			
1000	kg	60,9	63,0	65,1	67,2	69,3	71,4	73,5	75,6	77,7	79,8	81,9	84,0			

CU2 ATEX + EMEX

Hn\Wn (mm)		200	250	300	350	400	450	500	550	600	650	700	750	800	850	900
200	kg	14,8	15,8	16,9	18,0	19,0	20,1	21,1	22,2	23,2	24,3	25,4	26,4	27,5	28,5	29,6
250	kg	15,8	16,9	18,0	19,2	20,3	21,4	22,5	23,7	24,8	25,9	27,0	28,1	29,3	30,4	31,5
300	kg	16,8	18,0	19,2	20,4	21,5	22,7	23,9	25,1	26,3	27,5	28,7	29,9	31,1	32,2	33,4
350	kg	17,8	19,1	20,3	21,6	22,8	24,1	25,3	26,6	27,8	29,1	30,3	31,6	32,8	34,1	33,7
400	kg	18,8	20,1	21,4	22,8	24,1	25,4	26,7	28,0	29,4	30,7	32,0	33,3	34,6	34,3	35,7
450	kg	19,8	21,2	22,6	24,0	25,3	26,7	28,1	29,5	30,9	32,3	33,6	35,0	34,8	36,2	37,6
500	kg	20,8	22,3	23,7	25,2	26,6	28,1	29,5	31,0	32,4	33,9	35,3	35,2	36,6	38,1	39,5
550	kg	21,8	23,3	24,9	26,4	27,9	29,4	30,9	32,4	33,9	35,5	35,4	36,9	38,4	39,9	41,4
600	kg	22,8	24,4	26,0	27,6	29,1	30,7	32,3	33,9	35,5	35,4	37,0	38,6	40,2	41,8	43,3
650	kg	23,8	25,5	27,1	28,8	30,4	32,1	33,7	35,3	35,4	37,0	38,7	40,3	42,0	43,6	45,3
700	kg	24,8	26,5	28,3	30,0	31,7	33,4	35,1	35,2	36,9	38,6	40,3	42,0	43,8	45,5	47,2
750	kg	25,8	27,6	29,4	31,2	32,9	34,7	34,9	36,7	38,4	40,2	42,0	43,8	45,5	47,3	49,1
800	kg	26,8	28,7	30,5	32,4	34,2	34,5	36,3	38,1	40,0	41,8	43,7	45,5	47,3	49,2	51,0
850	kg	27,9	29,8	31,7	33,6	33,9	35,8	37,7	39,6	41,5	43,4	45,3	47,2	49,1	51,0	52,9
900	kg	28,9	30,8	32,8	33,2	35,1	37,1	39,1	41,1	43,0	45,0	47,0	48,9	50,9	52,9	54,9
950	kg	29,9	31,9	32,3	34,4	36,4	38,4	40,5	42,5	44,6	46,6	48,6	50,7	52,7	54,7	56,8
1000	kg	30,9	31,4	33,5	35,6	37,7	39,8	41,9	44,0	46,1	48,2	50,3	52,4	54,5	56,6	58,7

Hn\Wn (mm)		950	1000	1050	1100	1150	1200	1250	1300	1350	1400	1450	1500			
200	kg	30,6	31,7	31,2	32,2	33,3	34,3	35,4	36,4	37,5	38,6	39,6	40,7			
250	kg	32,6	32,2	33,3	34,4	35,5	36,6	37,8	38,9	40,0	41,1	42,3	43,4			
300	kg	33,0	34,2	35,4	36,6	37,8	39,0	40,1	41,3	42,5	43,7	44,9	46,1			
350	kg	35,0	36,3	37,5	38,8	40,0	41,3	42,5	43,8	45,0	46,3	47,5	48,8			
400	kg	37,0	38,3	39,6	40,9	42,3	43,6	44,9	46,2	47,5	48,8	50,2	51,5			
450	kg	39,0	40,4	41,7	43,1	44,5	45,9	47,3	48,7	50,0	51,4	52,8	54,2			
500	kg	41,0	42,4	43,8	45,3	46,7	48,2	49,6	51,1	52,5	54,0	55,4	56,9			
550	kg	42,9	44,4	46,0	47,5	49,0	50,5	52,0	53,5	55,0	56,6	58,1	59,6			
600	kg	44,9	46,5	48,1	49,7	51,2	52,8	54,4	56,0	57,6	59,1	60,7	62,3			
650	kg	46,9	48,5	50,2	51,8	53,5	55,1	56,8	58,4	60,1	61,7	63,3	65,0			
700	kg	48,9	50,6	52,3	54,0	55,7	57,4	59,1	60,9	62,6	64,3	66,0	67,7			
750	kg	50,9	52,6	54,4	56,2	58,0	59,7	61,5	63,3	65,1	66,8	68,6	70,4			
800	kg	52,9	54,7	56,5	58,4	60,2	62,1	63,9	65,7	67,6	69,4	71,3	73,1			
850	kg	54,8	56,7	58,6	60,6	62,5	64,4	66,3	68,2	70,1	72,0	73,9	75,8			
900	kg	56,8	58,8	60,8	62,7	64,7	66,7	68,6	70,6	72,6	74,6	76,5	78,5			
950	kg	58,8	60,8	62,9	64,9	67,0	69,0	71,0	73,1	75,1	77,1	79,2	81,2			
1000	kg	60,8	62,9	65,0	67,1	69,2	71,3	73,4	75,5	77,6	79,7	81,8	83,9			

CU2 ATEX + EMEXT

Hn\Wn [mm]		200	250	300	350	400	450	500	550	600	650	700	750	800	850	900
200	kg	14,9	15,9	17,0	18,1	19,1	20,2	21,2	22,3	23,3	24,4	25,5	26,5	27,6	28,6	29,7
250	kg	15,9	17,0	18,1	19,3	20,4	21,5	22,6	23,8	24,9	26,0	27,1	28,2	29,4	30,5	31,6
300	kg	16,9	18,1	19,3	20,5	21,6	22,8	24,0	25,2	26,4	27,6	28,8	30,0	31,2	32,3	33,5
350	kg	17,9	19,2	20,4	21,7	22,9	24,2	25,4	26,7	27,9	29,2	30,4	31,7	32,9	34,2	33,8
400	kg	18,9	20,2	21,5	22,9	24,2	25,5	26,8	28,1	29,5	30,8	32,1	33,4	34,7	34,4	35,8
450	kg	19,9	21,3	22,7	24,1	25,4	26,8	28,2	29,6	31,0	32,4	33,7	35,1	34,9	36,3	37,7
500	kg	20,9	22,4	23,8	25,3	26,7	28,2	29,6	31,1	32,5	34,0	35,4	35,3	36,7	38,2	39,6
550	kg	21,9	23,4	25,0	26,5	28,0	29,5	31,0	32,5	34,0	35,6	35,5	37,0	38,5	40,0	41,5
600	kg	22,9	24,5	26,1	27,7	29,2	30,8	32,4	34,0	35,6	35,5	37,1	38,7	40,3	41,9	43,4
650	kg	23,9	25,6	27,2	28,9	30,5	32,2	33,8	35,4	35,5	37,1	38,8	40,4	42,1	43,7	45,4
700	kg	24,9	26,6	28,4	30,1	31,8	33,5	35,2	35,3	37,0	38,7	40,4	42,1	43,9	45,6	47,3
750	kg	25,9	27,7	29,5	31,3	33,0	34,8	35,0	36,8	38,5	40,3	42,1	43,9	45,6	47,4	49,2
800	kg	26,9	28,8	30,6	32,5	34,3	34,6	36,4	38,2	40,1	41,9	43,8	45,6	47,4	49,3	51,1
850	kg	28,0	29,9	31,8	33,7	34,0	35,9	37,8	39,7	41,6	43,5	45,4	47,3	49,2	51,1	53,0
900	kg	29,0	30,9	32,9	33,3	35,2	37,2	39,2	41,2	43,1	45,1	47,1	49,0	51,0	53,0	55,0
950	kg	30,0	32,0	32,4	34,5	36,5	38,5	40,6	42,6	44,7	46,7	48,7	50,8	52,8	54,8	56,9
1000	kg	31,0	31,5	33,6	35,7	37,8	39,9	42,0	44,1	46,2	48,3	50,4	52,5	54,6	56,7	58,8

Hn\Wn [mm]		950	1000	1050	1100	1150	1200	1250	1300	1350	1400	1450	1500			
200	kg	30,7	31,8	31,3	32,3	33,4	34,4	35,5	36,5	37,6	38,7	39,7	40,8			
250	kg	32,7	32,3	33,4	34,5	35,6	36,7	37,9	39,0	40,1	41,2	42,4	43,5			
300	kg	33,1	34,3	35,5	36,7	37,9	39,1	40,2	41,4	42,6	43,8	45,0	46,2			
350	kg	35,1	36,4	37,6	38,9	40,1	41,4	42,6	43,9	45,1	46,4	47,6	48,9			
400	kg	37,1	38,4	39,7	41,0	42,4	43,7	45,0	46,3	47,6	48,9	50,3	51,6			
450	kg	39,1	40,5	41,8	43,2	44,6	46,0	47,4	48,8	50,1	51,5	52,9	54,3			
500	kg	41,1	42,5	43,9	45,4	46,8	48,3	49,7	51,2	52,6	54,1	55,5	57,0			
550	kg	43,0	44,5	46,1	47,6	49,1	50,6	52,1	53,6	55,1	56,7	58,2	59,7			
600	kg	45,0	46,6	48,2	49,8	51,3	52,9	54,5	56,1	57,7	59,2	60,8	62,4			
650	kg	47,0	48,6	50,3	51,9	53,6	55,2	56,9	58,5	60,2	61,8	63,4	65,1			
700	kg	49,0	50,7	52,4	54,1	55,8	57,5	59,2	61,0	62,7	64,4	66,1	67,8			
750	kg	51,0	52,7	54,5	56,3	58,1	59,8	61,6	63,4	65,2	66,9	68,7	70,5			
800	kg	53,0	54,8	56,6	58,5	60,3	62,2	64,0	65,8	67,7	69,5	71,4	73,2			
850	kg	54,9	56,8	58,7	60,7	62,6	64,5	66,4	68,3	70,2	72,1	74,0	75,9			
900	kg	56,9	58,9	60,9	62,8	64,8	66,8	68,7	70,7	72,7	74,7	76,6	78,6			
950	kg	58,9	60,9	63,0	65,0	67,1	69,1	71,1	73,2	75,2	77,2	79,3	81,3			
1000	kg	60,9	63,0	65,1	67,2	69,3	71,4	73,5	75,6	77,7	79,8	81,9	84,0			

Selection data

$$\Delta p \text{ [Pa]} = \zeta^* v^2 * 0,6$$

Hn\Wn [mm]		200	250	300	350	400	450	500	550	600	650	700	750	800	850	900
200	ζ [-]	3,42	2,92	2,64	2,46	2,34	2,25	2,18	2,12	2,07	2,04	2,01	1,98	1,96	1,94	1,92
250	ζ [-]	1,91	1,58	1,39	1,27	1,19	1,13	1,08	1,05	1,02	0,99	0,97	0,96	0,94	0,93	0,92
300	ζ [-]	1,31	1,05	0,91	0,82	0,75	0,71	0,67	0,65	0,62	0,61	0,59	0,58	0,57	0,56	0,55
350	ζ [-]	1,01	0,79	0,66	0,59	0,54	0,5	0,47	0,45	0,43	0,42	0,41	0,4	0,39	0,38	0,37
400	ζ [-]	0,82	0,63	0,52	0,46	0,41	0,38	0,36	0,34	0,32	0,31	0,3	0,29	0,29	0,28	0,27
450	ζ [-]	0,7	0,53	0,43	0,37	0,33	0,31	0,28	0,27	0,26	0,24	0,24	0,23	0,22	0,22	0,21
500	ζ [-]	0,62	0,46	0,37	0,32	0,28	0,25	0,24	0,22	0,21	0,2	0,19	0,18	0,18	0,17	0,17
550	ζ [-]	0,56	0,41	0,32	0,27	0,24	0,22	0,2	0,19	0,18	0,17	0,16	0,15	0,15	0,14	0,14
600	ζ [-]	0,51	0,37	0,29	0,24	0,21	0,19	0,17	0,16	0,15	0,14	0,14	0,13	0,13	0,12	0,12
650	ζ [-]	0,47	0,34	0,26	0,22	0,19	0,17	0,15	0,14	0,13	0,13	0,12	0,11	0,11	0,11	0,1
700	ζ [-]	0,44	0,31	0,24	0,2	0,17	0,15	0,14	0,13	0,12	0,11	0,11	0,1	0,1	0,09	0,09
750	ζ [-]	0,42	0,29	0,23	0,18	0,16	0,14	0,13	0,12	0,11	0,1	0,1	0,09	0,09	0,08	0,08
800	ζ [-]	0,4	0,28	0,21	0,17	0,15	0,13	0,12	0,11	0,1	0,09	0,09	0,08	0,08	0,08	0,07
850	ζ [-]	0,38	0,26	0,2	0,16	0,14	0,12	0,11	0,1	0,09	0,08	0,08	0,08	0,07	0,07	0,07
900	ζ [-]	0,37	0,25	0,19	0,15	0,13	0,11	0,1	0,09	0,08	0,08	0,07	0,07	0,07	0,06	0,06
950	ζ [-]	0,36	0,24	0,18	0,14	0,12	0,11	0,09	0,08	0,08	0,07	0,07	0,06	0,06	0,06	0,06
1000	ζ [-]	0,34	0,23	0,17	0,14	0,12	0,1	0,09	0,08	0,07	0,07	0,06	0,06	0,06	0,05	0,05

Hn\Wn [mm]		950	1000	1050	1100	1150	1200	1250	1300	1350	1400	1450	1500			
200	ζ [-]	1,9	1,89	1,88	1,86	1,85	1,84	1,84	1,83	1,82	1,81	1,81	1,8			
250	ζ [-]	0,91	0,9	0,89	0,88	0,88	0,87	0,87	0,86	0,86	0,85	0,85	0,85			
300	ζ [-]	0,54	0,54	0,53	0,53	0,52	0,52	0,51	0,51	0,51	0,5	0,5	0,5			
350	ζ [-]	0,37	0,36	0,36	0,35	0,35	0,35	0,34	0,34	0,34	0,33	0,33	0,33			
400	ζ [-]	0,27	0,26	0,26	0,26	0,25	0,25	0,25	0,25	0,24	0,24	0,24	0,24			
450	ζ [-]	0,21	0,2	0,2	0,2	0,19	0,19	0,19	0,19	0,19	0,18	0,18	0,18			
500	ζ [-]	0,17	0,16	0,16	0,16	0,15	0,15	0,15	0,15	0,15	0,15	0,14	0,14			
550	ζ [-]	0,14	0,13	0,13	0,13	0,13	0,13	0,12	0,12	0,12	0,12	0,12	0,12			
600	ζ [-]	0,12	0,11	0,11	0,11	0,11	0,11	0,1	0,1	0,1	0,1	0,1	0,1			
650	ζ [-]	0,1	0,1	0,1	0,09	0,09	0,09	0,09	0,09	0,09	0,08	0,08	0,08			
700	ζ [-]	0,09	0,09	0,08	0,08	0,08	0,08	0,08	0,08	0,07	0,07	0,07	0,07			
750	ζ [-]	0,08	0,08	0,07	0,07	0,07	0,07	0,07	0,07	0,07	0,06	0,06	0,06			
800	ζ [-]	0,07	0,07	0,07	0,06	0,06	0,06	0,06	0,06	0,06	0,06	0,06	0,06			
850	ζ [-]	0,06	0,06	0,06	0,06	0,06	0,06	0,05	0,05	0,05	0,05	0,05	0,05			
900	ζ [-]	0,06	0,06	0,06	0,05	0,05	0,05	0,05	0,05	0,05	0,05	0,05	0,05			
950	ζ [-]	0,05	0,05	0,05	0,05	0,05	0,05	0,05	0,04	0,04	0,04	0,04	0,04			
1000	ζ [-]	0,05	0,05	0,05	0,04	0,04	0,04	0,04	0,04	0,04	0,04	0,04	0,04			

Example

Data

Hn = 550 mm, Bn = 500 mm, v = 9 m/s

Calculation

$$\Delta p = 0.2 * (9 \text{ m/s})^2 * 0.6 = 9.72 \text{ Pa}$$

CU2 - CU2L - CU2-L500 - CU2 ATEX - CU2L ATEX - A-weighted sound power level L_{wa} in the duct

Hn\Wn [mm]	200	250	300	350	400	450	500	550	600	650	700	750	800	850		
200	Sn [m ²]	0,0195	0,0255	0,0314	0,0374	0,0433	0,0493	0,0552	0,0612	0,0671	0,0731	0,0790	0,0850	0,0909	0,0969	
	Sn [%]	51,85	53,80	55,08	55,99	56,67	57,20	57,62	57,96	58,24	58,48	58,69	58,87	59,02	59,16	
	Q [m ³ /h]	940	1.170	1.390	1.610	1.830	2.060	2.280	2.500	2.730	2.950	3.170	3.400	3.620	3.840	45 dB
	Δp [Pa]	87,32	74,13	65,70	60,35	56,65	54,48	52,35	50,68	49,70	48,55	47,60	47,06	46,34	45,71	
	Q [m ³ /h]	790	970	1.160	1.340	1.530	1.710	1.900	2.080	2.270	2.450	2.640	2.830	3.010	3.200	40 dB
	Δp [Pa]	61,67	50,95	45,76	41,80	39,60	37,54	36,36	35,08	34,36	33,49	33,01	32,60	32,04	31,74	
	Q [m ³ /h]	650	810	960	1.120	1.270	1.430	1.580	1.730	1.890	2.040	2.200	2.350	2.510	2.660	35 dB
	Δp [Pa]	41,75	35,53	31,34	29,20	27,29	26,25	25,14	24,27	23,82	23,22	22,92	22,48	22,28	21,93	
	Q [m ³ /h]	540	670	800	930	1.060	1.190	1.310	1.440	1.570	1.700	1.830	1.960	2.090	2.210	30 dB
	Δp [Pa]	28,82	24,31	21,76	20,14	19,01	18,18	17,28	16,82	16,44	16,12	15,86	15,64	15,45	15,14	
	Q [m ³ /h]	450	560	670	770	880	990	1.090	1.200	1.310	1.420	1.520	1.630	1.740	1.840	25 dB
	Δp [Pa]	20,01	16,98	15,27	13,80	13,10	12,58	11,97	11,68	11,44	11,25	10,94	10,82	10,71	10,50	
250	Sn [m ²]	0,0277	0,0362	0,0446	0,0531	0,0615	0,0700	0,0784	0,0869	0,0953	0,1038	0,1122	0,1207	0,1291	0,1376	
	Sn [%]	58,55	60,75	62,19	63,22	63,99	64,58	65,06	65,44	65,76	66,04	66,27	66,47	66,65	66,80	
	Q [m ³ /h]	1.130	1.400	1.660	1.920	2.190	2.450	2.710	2.980	3.240	3.510	3.770	4.030	4.300	4.560	45 dB
	Δp [Pa]	45,15	36,64	31,54	28,35	26,41	24,80	23,58	22,78	22,00	21,48	20,93	20,47	20,17	19,82	
	Q [m ³ /h]	940	1.160	1.380	1.600	1.820	2.040	2.260	2.480	2.700	2.920	3.140	3.360	3.570	3.790	40 dB
	Δp [Pa]	31,24	25,15	21,80	19,69	18,24	17,19	16,40	15,78	15,28	14,86	14,52	14,23	13,90	13,69	
	Q [m ³ /h]	790	970	1.150	1.330	1.510	1.700	1.880	2.060	2.240	2.430	2.610	2.790	2.970	3.160	35 dB
	Δp [Pa]	22,07	17,59	15,14	13,60	12,56	11,94	11,35	10,88	10,51	10,29	10,03	9,81	9,62	9,52	
	Q [m ³ /h]	650	810	960	1.110	1.260	1.410	1.560	1.720	1.870	2.020	2.170	2.320	2.480	2.630	30 dB
	Δp [Pa]	14,94	12,26	10,55	9,47	8,74	8,21	7,81	7,59	7,33	7,11	6,94	6,78	6,71	6,59	
	Q [m ³ /h]	540	670	800	920	1.050	1.180	1.300	1.430	1.550	1.680	1.810	1.930	2.060	2.190	25 dB
	Δp [Pa]	10,31	8,39	7,32	6,51	6,07	5,75	5,43	5,25	5,03	4,92	4,83	4,70	4,63	4,57	
300	Sn [m ²]	0,0359	0,0469	0,0578	0,0688	0,0797	0,0907	0,1016	0,1126	0,1235	0,1345	0,1454	0,1564	0,1673	0,1783	
	Sn [%]	62,97	65,33	66,89	67,99	68,82	69,46	69,97	70,38	70,73	71,02	71,27	71,49	71,68	71,84	
	Q [m ³ /h]	1.320	1.630	1.930	2.230	2.540	2.840	3.150	3.450	3.750	4.060	4.360	4.660	4.970	5.270	45 dB
	Δp [Pa]	29,41	23,00	19,32	17,04	15,63	14,50	13,75	13,08	12,55	12,17	11,80	11,49	11,27	11,04	
	Q [m ³ /h]	1.100	1.350	1.610	1.860	2.110	2.370	2.620	2.870	3.120	3.380	3.630	3.880	4.130	4.390	40 dB
	Δp [Pa]	20,42	15,78	13,44	11,85	10,78	10,10	9,51	9,05	8,69	8,44	8,18	7,97	7,79	7,66	
	Q [m ³ /h]	920	1.130	1.340	1.550	1.760	1.970	2.180	2.390	2.600	2.810	3.020	3.230	3.440	3.650	35 dB
	Δp [Pa]	14,29	11,05	9,31	8,23	7,50	6,98	6,58	6,28	6,03	5,83	5,66	5,52	5,40	5,30	
	Q [m ³ /h]	760	940	1.110	1.290	1.460	1.640	1.810	1.990	2.160	2.340	2.510	2.690	2.860	3.040	30 dB
	Δp [Pa]	9,75	7,65	6,39	5,70	5,16	4,84	4,54	4,35	4,16	4,04	3,91	3,83	3,73	3,67	
	Q [m ³ /h]	640	780	930	1.070	1.220	1.360	1.510	1.650	1.800	1.950	2.090	2.240	2.380	2.530	25 dB
	Δp [Pa]	6,91	5,27	4,48	3,92	3,61	3,33	3,16	2,99	2,89	2,81	2,71	2,66	2,59	2,54	

Hn\Wn [mm]	200	250	300	350	400	450	500	550	600	650	700	750	800	850		
350	Sn [m ²]	0,0441	0,0576	0,0710	0,0845	0,0979	0,1114	0,1248	0,1383	0,1517	0,1652	0,1786	0,1921	0,2055	0,2190	
	Sn [%]	66,11	68,58	70,22	71,38	72,24	72,91	73,45	73,89	74,25	74,55	74,82	75,04	75,24	75,42	
	Q [m ³ /h]	1.510	1.860	2.200	2.550	2.890	3.230	3.580	3.920	4.260	4.600	4.950	5.290	5.630	5.980	45 dB
	Δp [Pa]	21,67	16,44	13,51	11,82	10,61	9,74	9,15	8,64	8,24	7,91	7,67	7,44	7,24	7,10	
	Q [m ³ /h]	1.260	1.550	1.830	2.120	2.400	2.690	2.980	3.260	3.550	3.830	4.120	4.400	4.690	4.970	40 dB
	Δp [Pa]	15,09	11,41	9,35	8,17	7,32	6,76	6,34	5,98	5,72	5,49	5,32	5,15	5,03	4,90	
	Q [m ³ /h]	1.050	1.290	1.530	1.760	2.000	2.240	2.480	2.710	2.950	3.190	3.430	3.660	3.900	4.140	35 dB
	Δp [Pa]	10,48	7,91	6,54	5,63	5,08	4,69	4,39	4,13	3,95	3,81	3,68	3,56	3,48	3,40	
	Q [m ³ /h]	870	1.070	1.270	1.470	1.670	1.860	2.060	2.260	2.460	2.650	2.850	3.050	3.250	3.440	30 dB
	Δp [Pa]	7,19	5,44	4,50	3,93	3,54	3,23	3,03	2,87	2,75	2,63	2,54	2,47	2,41	2,35	
	Q [m ³ /h]	730	890	1.060	1.220	1.390	1.550	1.710	1.880	2.040	2.210	2.370	2.540	2.700	2.860	25 dB
	Δp [Pa]	5,06	3,76	3,14	2,71	2,45	2,24	2,09	1,99	1,89	1,83	1,76	1,72	1,67	1,62	
400	Sn [m ²]	0,0523	0,0683	0,0842	0,1002	0,1161	0,1321	0,1480	0,1640	0,1799	0,1959	0,2118	0,2278	0,2437	0,2597	
	Sn [%]	68,44	71,01	72,70	73,90	74,80	75,49	76,05	76,50	76,88	77,19	77,46	77,70	77,91	78,09	
	Q [m ³ /h]	1.700	2.090	2.470	2.850	3.240	3.620	4.000	4.380	4.770	5.150	5.530	5.910	6.290	6.670	45 dB
	Δp [Pa]	17,21	12,72	10,27	8,79	7,85	7,14	6,62	6,21	5,92	5,66	5,44	5,26	5,10	4,97	
	Q [m ³ /h]	1.420	1.740	2.060	2.380	2.690	3.010	3.330	3.650	3.970	4.280	4.600	4.920	5.240	5.550	40 dB
	Δp [Pa]	12,01	8,82	7,14	6,13	5,41	4,94	4,59	4,32	4,10	3,91	3,76	3,64	3,54	3,44	
	Q [m ³ /h]	1.180	1.450	1.710	1.980	2.240	2.510	2.770	3.040	3.300	3.560	3.830	4.090	4.360	4.620	35 dB
	Δp [Pa]	8,29	6,12	4,92	4,24	3,75	3,43	3,17	2,99	2,83	2,70	2,61	2,52	2,45	2,38	
	Q [m ³ /h]	980	1.200	1.430	1.650	1.870	2.090	2.310	2.530	2.750	2.970	3.190	3.400	3.620	3.840	30 dB
	Δp [Pa]	5,72	4,19	3,44	2,94	2,61	2,38	2,21	2,07	1,97	1,88	1,81	1,74	1,69	1,65	
	Q [m ³ /h]	820	1.000	1.190	1.370	1.550	1.740	1.920	2.100	2.280	2.470	2.650	2.830	3.020	3.200	25 dB
	Δp [Pa]	4,00	2,91	2,38	2,03	1,80	1,65	1,52	1,43	1,35	1,30	1,25	1,21	1,18	1,14	
450	Sn [m ²]	0,0605	0,0790	0,0974	0,1159	0,1343	0,1528	0,1712	0,1897	0,2081	0,2266	0,2450	0,2635	0,2819	0,3004	
	Sn [%]	70,26	72,89	74,63	75,86	76,78	77,49	78,06	78,52	78,91	79,24	79,52	79,76	79,97	80,15	
	Q [m ³ /h]	1.900	2.320	2.740	3.160	3.580	4.010	4.430	4.850	5.270	5.690	6.110	6.530	6.950	7.360	45 dB
	Δp [Pa]	14,52	10,39	8,25	6,97	6,13	5,56	5,11	4,77	4,50	4,28	4,10	3,95	3,83	3,71	
	Q [m ³ /h]	1.580	1.930	2.280	2.630	2.980	3.330	3.680	4.030	4.380	4.730	5.080	5.430	5.780	6.130	40 dB
	Δp [Pa]	10,04	7,19	5,71	4,83	4,24	3,83	3,53	3,29	3,11	2,96	2,84	2,73	2,65	2,57	
	Q [m ³ /h]	1.310	1.610	1.900	2.190	2.480	2.770	3.060	3.350	3.650	3.940	4.230	4.520	4.810	5.100	35 dB
	Δp [Pa]	6,90	5,00	3,97	3,35	2,94	2,65	2,44	2,28	2,16	2,05	1,97	1,89	1,83	1,78	
	Q [m ³ /h]	1.090	1.340	1.580	1.820	2.070	2.310	2.550	2.790	3.030	3.280	3.520	3.760	4.000	4.240	30 dB
	Δp [Pa]	4,78	3,46	2,74	2,31	2,05	1,84	1,69	1,58	1,49	1,42	1,36	1,31	1,27	1,23	
	Q [m ³ /h]	910	1.110	1.320	1.520	1.720	1.920	2.120	2.320	2.520	2.730	2.930	3.130	3.330	3.530	25 dB
	Δp [Pa]	3,33	2,38	1,91	1,61	1,41	1,27	1,17	1,09	1,03	0,99	0,94	0,91	0,88	0,85	

Hn\Wn [mm]	200	250	300	350	400	450	500	550	600	650	700	750	800	850		
500	Sn [m ²]	0,0687	0,0897	0,1106	0,1316	0,1525	0,1735	0,1944	0,2154	0,2363	0,2573	0,2782	0,2992	0,3201	0,3411	
	Sn [%]	71,70	74,39	76,16	77,42	78,36	79,09	79,67	80,14	80,53	80,87	81,15	81,40	81,61	81,80	
	Q [m ³ /h]	2.090	2.550	3.010	3.470	3.930	4.390	4.850	5.310	5.760	6.220	6.680	7.140	7.590	8.050	45
	Δp [Pa]	12,54	8,81	6,90	5,76	5,02	4,49	4,11	3,81	3,57	3,38	3,23	3,10	2,99	2,89	dB
	Q [m ³ /h]	1.740	2.120	2.510	2.890	3.270	3.650	4.030	4.410	4.800	5.180	5.560	5.940	6.320	6.700	40
	Δp [Pa]	8,69	6,09	4,80	4,00	3,47	3,11	2,84	2,63	2,48	2,35	2,24	2,15	2,07	2,01	dB
	Q [m ³ /h]	1.450	1.770	2.080	2.400	2.720	3.040	3.360	3.670	3.990	4.310	4.620	4.940	5.260	5.570	35
	Δp [Pa]	6,04	4,24	3,29	2,76	2,40	2,15	1,97	1,82	1,71	1,63	1,55	1,49	1,43	1,39	dB
	Q [m ³ /h]	1.200	1.470	1.740	2.000	2.260	2.530	2.790	3.060	3.320	3.580	3.850	4.110	4.370	4.640	30
	Δp [Pa]	4,13	2,93	2,30	1,91	1,66	1,49	1,36	1,27	1,19	1,12	1,07	1,03	0,99	0,96	dB
	Q [m ³ /h]	1.000	1.220	1.440	1.660	1.880	2.100	2.320	2.540	2.760	2.980	3.200	3.420	3.640	3.860	25
	Δp [Pa]	2,87	2,02	1,58	1,32	1,15	1,03	0,94	0,87	0,82	0,78	0,74	0,71	0,69	0,67	dB
550	Sn [m ²]	0,0769	0,1004	0,1238	0,1473	0,1707	0,1942	0,2176	0,2411	0,2645	0,2880	0,3114	0,3349	0,3583	0,3818	
	Sn [%]	72,88	75,61	77,42	78,69	79,65	80,39	80,98	81,46	81,86	82,20	82,49	82,74	82,96	83,15	
	Q [m ³ /h]	2.280	2.780	3.280	3.780	4.270	4.770	5.270	5.760	6.260	6.750	7.250	7.740	8.240	8.730	45
	Δp [Pa]	11,11	7,68	5,94	4,91	4,22	3,75	3,41	3,14	2,94	2,77	2,64	2,52	2,42	2,34	dB
	Q [m ³ /h]	1.900	2.310	2.730	3.140	3.560	3.970	4.380	4.790	5.210	5.620	6.030	6.440	6.850	7.260	40
	Δp [Pa]	7,71	5,30	4,11	3,39	2,93	2,60	2,36	2,17	2,04	1,92	1,82	1,74	1,67	1,62	dB
	Q [m ³ /h]	1.580	1.920	2.270	2.620	2.960	3.300	3.650	3.990	4.330	4.670	5.020	5.360	5.700	6.040	35
	Δp [Pa]	5,33	3,66	2,84	2,36	2,03	1,80	1,64	1,51	1,41	1,33	1,26	1,21	1,16	1,12	dB
	Q [m ³ /h]	1.310	1.600	1.890	2.180	2.460	2.750	3.030	3.320	3.600	3.890	4.170	4.460	4.740	5.030	30
	Δp [Pa]	3,67	2,54	1,97	1,63	1,40	1,25	1,13	1,04	0,97	0,92	0,87	0,84	0,80	0,78	dB
	Q [m ³ /h]	1.090	1.330	1.570	1.810	2.050	2.290	2.520	2.760	3.000	3.240	3.470	3.710	3.950	4.180	25
	Δp [Pa]	2,54	1,76	1,36	1,13	0,97	0,87	0,78	0,72	0,68	0,64	0,60	0,58	0,56	0,54	dB
600	Sn [m ²]	0,0851	0,1111	0,1370	0,1630	0,1889	0,2149	0,2408	0,2668	0,2927	0,3187	0,3446	0,3706	0,3965	0,4225	
	Sn [%]	73,86	76,63	78,46	79,75	80,72	81,47	82,07	82,56	82,96	83,30	83,60	83,85	84,07	84,27	
	Q [m ³ /h]	2.470	3.010	3.550	4.080	4.620	5.150	5.680	6.220	6.750	7.280	7.810	8.340	8.870	9.410	45
	Δp [Pa]	10,03	6,84	5,23	4,26	3,65	3,22	2,90	2,67	2,48	2,33	2,20	2,10	2,01	1,94	dB
	Q [m ³ /h]	2.050	2.500	2.950	3.400	3.840	4.290	4.730	5.170	5.620	6.060	6.500	6.940	7.380	7.830	40
	Δp [Pa]	6,91	4,72	3,61	2,96	2,52	2,23	2,01	1,84	1,72	1,61	1,53	1,45	1,39	1,34	dB
	Q [m ³ /h]	1.710	2.080	2.460	2.830	3.200	3.570	3.940	4.300	4.670	5.040	5.410	5.780	6.140	6.510	35
	Δp [Pa]	4,81	3,26	2,51	2,05	1,75	1,55	1,40	1,27	1,19	1,11	1,06	1,01	0,96	0,93	dB
	Q [m ³ /h]	1.420	1.730	2.040	2.350	2.660	2.970	3.270	3.580	3.890	4.190	4.500	4.810	5.110	5.420	30
	Δp [Pa]	3,32	2,26	1,73	1,41	1,21	1,07	0,96	0,88	0,82	0,77	0,73	0,70	0,67	0,64	dB
	Q [m ³ /h]	1.180	1.440	1.700	1.960	2.210	2.470	2.720	2.980	3.230	3.490	3.740	4.000	4.250	4.510	25
	Δp [Pa]	2,29	1,56	1,20	0,98	0,84	0,74	0,66	0,61	0,57	0,53	0,50	0,48	0,46	0,45	dB

Hn\Wn [mm]	200	250	300	350	400	450	500	550	600	650	700	750	800	850		
650	Sn [m ²]	0,0933	0,1218	0,1502	0,1787	0,2071	0,2356	0,2640	0,2925	0,3209	0,3494	0,3778	0,4063	0,4347	0,4632	
	Sn [%]	74,69	77,49	79,34	80,65	81,63	82,38	82,99	83,48	83,89	84,24	84,53	84,79	85,02	85,21	
	Q [m ³ /h]	2.660	3.240	3.810	4.390	4.960	5.530	6.100	6.670	7.240	7.810	8.380	8.940	9.510	10.080	45 dB
	Δp [Pa]	9,20	6,19	4,66	3,79	3,21	2,81	2,52	2,30	2,13	2,00	1,89	1,79	1,71	1,64	
	Q [m ³ /h]	2.210	2.690	3.170	3.650	4.130	4.600	5.080	5.550	6.020	6.500	6.970	7.440	7.910	8.380	40 dB
	Δp [Pa]	6,35	4,27	3,23	2,62	2,23	1,95	1,75	1,60	1,48	1,38	1,30	1,24	1,18	1,14	
	Q [m ³ /h]	1.840	2.240	2.640	3.040	3.430	3.830	4.220	4.620	5.010	5.400	5.800	6.190	6.580	6.980	35 dB
	Δp [Pa]	4,40	2,96	2,24	1,82	1,54	1,35	1,21	1,11	1,02	0,95	0,90	0,86	0,82	0,79	
	Q [m ³ /h]	1.530	1.870	2.200	2.530	2.860	3.190	3.510	3.840	4.170	4.500	4.820	5.150	5.480	5.800	30 dB
	Δp [Pa]	3,04	2,06	1,55	1,26	1,07	0,94	0,84	0,76	0,71	0,66	0,62	0,59	0,57	0,54	
	Q [m ³ /h]	1.280	1.550	1.830	2.100	2.380	2.650	2.920	3.200	3.470	3.740	4.010	4.290	4.560	4.830	25 dB
	Δp [Pa]	2,13	1,42	1,07	0,87	0,74	0,65	0,58	0,53	0,49	0,46	0,43	0,41	0,39	0,38	
700	Sn [m ²]	0,1015	0,1325	0,1634	0,1944	0,2253	0,2563	0,2872	0,3182	0,3491	0,3801	0,4110	0,4420	0,4729	0,5039	
	Sn [%]	75,40	78,23	80,09	81,41	82,40	83,17	83,78	84,27	84,69	85,04	85,34	85,60	85,82	86,02	
	Q [m ³ /h]	2.850	3.470	4.080	4.690	5.300	5.910	6.520	7.120	7.730	8.330	8.940	9.540	10.140	10.750	45 dB
	Δp [Pa]	8,54	5,68	4,24	3,40	2,87	2,50	2,23	2,03	1,87	1,74	1,64	1,55	1,48	1,42	
	Q [m ³ /h]	2.370	2.880	3.400	3.900	4.410	4.920	5.420	5.930	6.430	6.930	7.430	7.940	8.440	8.940	40 dB
	Δp [Pa]	5,90	3,91	2,94	2,35	1,99	1,73	1,54	1,41	1,29	1,20	1,13	1,07	1,02	0,98	
	Q [m ³ /h]	1.970	2.400	2.830	3.250	3.670	4.090	4.510	4.930	5.350	5.770	6.190	6.600	7.020	7.440	35 dB
	Δp [Pa]	4,08	2,72	2,04	1,63	1,37	1,20	1,07	0,97	0,90	0,84	0,79	0,74	0,71	0,68	
	Q [m ³ /h]	1.640	2.000	2.350	2.700	3.050	3.400	3.750	4.100	4.450	4.800	5.150	5.490	5.840	6.190	30 dB
	Δp [Pa]	2,83	1,89	1,41	1,13	0,95	0,83	0,74	0,67	0,62	0,58	0,54	0,51	0,49	0,47	
	Q [m ³ /h]	1.370	1.660	1.960	2.250	2.540	2.830	3.120	3.410	3.700	3.990	4.280	4.570	4.860	5.150	25 dB
	Δp [Pa]	1,97	1,30	0,98	0,78	0,66	0,57	0,51	0,46	0,43	0,40	0,38	0,36	0,34	0,33	
750	Sn [m ²]	0,1097	0,1432	0,1766	0,2101	0,2435	0,2770	0,3104	0,3439	0,3773	0,4108	0,4442	0,4777	0,5111	0,5446	
	Sn [%]	76,01	78,86	80,74	82,08	83,07	83,84	84,46	84,96	85,38	85,73	86,03	86,29	86,52	86,72	
	Q [m ³ /h]	3.040	3.700	4.350	5.000	5.640	6.290	6.930	7.570	8.210	8.850	9.490	10.130	10.770	11.410	45 dB
	Δp [Pa]	8,00	5,26	3,90	3,11	2,59	2,25	2,00	1,81	1,66	1,54	1,44	1,36	1,30	1,24	
	Q [m ³ /h]	2.530	3.080	3.620	4.160	4.700	5.230	5.770	6.300	6.830	7.370	7.900	8.430	8.960	9.490	40 dB
	Δp [Pa]	5,54	3,65	2,70	2,15	1,80	1,56	1,38	1,25	1,15	1,07	1,00	0,94	0,90	0,86	
	Q [m ³ /h]	2.100	2.560	3.010	3.460	3.910	4.350	4.800	5.240	5.690	6.130	6.570	7.010	7.460	7.900	35 dB
	Δp [Pa]	3,82	2,52	1,86	1,49	1,25	1,08	0,96	0,87	0,80	0,74	0,69	0,65	0,62	0,59	
	Q [m ³ /h]	1.750	2.130	2.500	2.880	3.250	3.620	3.990	4.360	4.730	5.100	5.470	5.840	6.200	6.570	30 dB
	Δp [Pa]	2,65	1,74	1,29	1,03	0,86	0,75	0,66	0,60	0,55	0,51	0,48	0,45	0,43	0,41	
	Q [m ³ /h]	1.460	1.770	2.080	2.400	2.700	3.010	3.320	3.630	3.940	4.240	4.550	4.860	5.160	5.470	25 dB
	Δp [Pa]	1,84	1,20	0,89	0,72	0,59	0,52	0,46	0,42	0,38	0,35	0,33	0,31	0,30	0,29	

Hn\Wn [mm]	200	250	300	350	400	450	500	550	600	650	700	750	800	850		
800	Sn [m ²]	0,1179	0,1539	0,1898	0,2258	0,2617	0,2977	0,3336	0,3696	0,4055	0,4415	0,4774	0,5134	0,5493	0,5853	
	Sn [%]	76,55	79,42	81,31	82,66	83,66	84,44	85,05	85,56	85,98	86,34	86,64	86,90	87,13	87,34	
	Q [m ³ /h]	3.230	3.920	4.610	5.300	5.980	6.660	7.340	8.020	8.700	9.380	10.050	10.730	11.400	12.070	45
	Δp [Pa]	7,55	4,90	3,60	2,86	2,37	2,04	1,81	1,63	1,49	1,38	1,29	1,22	1,15	1,10	dB
	Q [m ³ /h]	2.690	3.270	3.840	4.410	4.980	5.540	6.110	6.670	7.240	7.800	8.360	8.920	9.480	10.040	40
	Δp [Pa]	5,23	3,41	2,50	1,98	1,65	1,41	1,25	1,13	1,03	0,96	0,89	0,84	0,80	0,76	dB
	Q [m ³ /h]	2.240	2.720	3.190	3.670	4.140	4.610	5.080	5.550	6.020	6.490	6.960	7.420	7.890	8.360	35
	Δp [Pa]	3,63	2,36	1,72	1,37	1,14	0,98	0,87	0,78	0,71	0,66	0,62	0,58	0,55	0,53	dB
	Q [m ³ /h]	1.860	2.260	2.660	3.050	3.450	3.840	4.230	4.620	5.010	5.400	5.790	6.180	6.560	6.950	30
	Δp [Pa]	2,50	1,63	1,20	0,95	0,79	0,68	0,60	0,54	0,49	0,46	0,43	0,40	0,38	0,36	dB
	Q [m ³ /h]	1.550	1.880	2.210	2.540	2.870	3.190	3.520	3.840	4.170	4.490	4.820	5.140	5.460	5.780	25
	Δp [Pa]	1,74	1,13	0,83	0,66	0,55	0,47	0,42	0,37	0,34	0,32	0,30	0,28	0,26	0,25	dB
850	Sn [m ²]	0,1261	0,1646	0,2030	0,2415	0,2799	0,3184	0,3568	0,3953	0,4337	0,4722	0,5106	0,5491	0,5875	0,6260	
	Sn [%]	77,02	79,91	81,82	83,17	84,18	84,96	85,58	86,09	86,51	86,87	87,18	87,44	87,67	87,88	
	Q [m ³ /h]	3.420	4.150	4.880	5.600	6.320	7.040	7.760	8.470	9.180	9.890	10.600	11.310	12.020	12.730	45
	Δp [Pa]	7,17	4,62	3,37	2,65	2,19	1,88	1,66	1,48	1,35	1,25	1,16	1,09	1,03	0,98	dB
	Q [m ³ /h]	2.850	3.460	4.060	4.660	5.260	5.860	6.450	7.050	7.640	8.230	8.820	9.410	10.000	10.590	40
	Δp [Pa]	4,98	3,21	2,33	1,83	1,52	1,30	1,14	1,03	0,94	0,86	0,81	0,76	0,72	0,68	dB
	Q [m ³ /h]	2.370	2.880	3.380	3.880	4.380	4.870	5.370	5.860	6.360	6.850	7.340	7.830	8.320	8.810	35
	Δp [Pa]	3,44	2,22	1,62	1,27	1,05	0,90	0,79	0,71	0,65	0,60	0,56	0,52	0,50	0,47	dB
	Q [m ³ /h]	1.970	2.390	2.810	3.230	3.640	4.060	4.470	4.880	5.290	5.700	6.110	6.520	6.920	7.330	30
	Δp [Pa]	2,38	1,53	1,12	0,88	0,73	0,62	0,55	0,49	0,45	0,41	0,39	0,36	0,34	0,33	dB
	Q [m ³ /h]	1.640	1.990	2.340	2.690	3.030	3.370	3.720	4.060	4.400	4.740	5.080	5.420	5.760	6.100	25
	Δp [Pa]	1,65	1,06	0,77	0,61	0,50	0,43	0,38	0,34	0,31	0,29	0,27	0,25	0,24	0,23	dB
900	Sn [m ²]	0,1343	0,1753	0,2162	0,2572	0,2981	0,3391	0,3800	0,4210	0,4619	0,5029	0,5438	0,5848	0,6257	0,6667	
	Sn [%]	77,44	80,35	82,26	83,62	84,64	85,42	86,05	86,56	86,98	87,34	87,65	87,92	88,15	88,35	
	Q [m ³ /h]	3.610	4.380	5.150	5.910	6.660	7.420	8.170	8.920	9.670	10.410	11.160	11.900	12.650	13.390	45
	Δp [Pa]	6,85	4,38	3,17	2,48	2,04	1,74	1,53	1,36	1,24	1,14	1,06	0,99	0,94	0,89	dB
	Q [m ³ /h]	3.000	3.650	4.280	4.910	5.540	6.170	6.800	7.420	8.040	8.660	9.280	9.900	10.520	11.140	40
	Δp [Pa]	4,73	3,04	2,19	1,71	1,41	1,20	1,06	0,94	0,86	0,79	0,73	0,69	0,65	0,62	dB
	Q [m ³ /h]	2.500	3.030	3.560	4.090	4.610	5.130	5.650	6.170	6.690	7.210	7.720	8.240	8.750	9.270	35
	Δp [Pa]	3,29	2,09	1,52	1,19	0,98	0,83	0,73	0,65	0,59	0,55	0,51	0,48	0,45	0,43	dB
	Q [m ³ /h]	2.080	2.520	2.960	3.400	3.840	4.270	4.700	5.140	5.570	6.000	6.430	6.850	7.280	7.710	30
	Δp [Pa]	2,27	1,45	1,05	0,82	0,68	0,58	0,50	0,45	0,41	0,38	0,35	0,33	0,31	0,30	dB
	Q [m ³ /h]	1.730	2.100	2.470	2.830	3.190	3.550	3.910	4.270	4.630	4.990	5.350	5.700	6.060	6.420	25
	Δp [Pa]	1,57	1,01	0,73	0,57	0,47	0,40	0,35	0,31	0,28	0,26	0,24	0,23	0,22	0,20	dB

Hn\Wn [mm]		200	250	300	350	400	450	500	550	600	650	700	750	800	850	
950	Sn [m ²]	0,1425	0,1860	0,2294	0,2729	0,3163	0,3598	0,4032	0,4467	0,4901	0,5336	0,5770	0,6205	0,6639	0,7074	
	Sn [%]	77,82	80,74	82,66	84,03	85,05	85,84	86,46	86,98	87,41	87,77	88,08	88,34	88,58	88,78	
	Q [m ³ /h]	3.800	4.610	5.410	6.210	7.000	7.790	8.580	9.360	10.150	10.930	11.710	12.490	13.270	14.050	45
	Δp [Pa]	6,58	4,17	3,00	2,33	1,91	1,62	1,42	1,26	1,14	1,05	0,97	0,91	0,86	0,81	dB
	Q [m ³ /h]	3.160	3.840	4.500	5.170	5.830	6.480	7.140	7.790	8.440	9.090	9.740	10.390	11.040	11.690	40
	Δp [Pa]	4,55	2,89	2,07	1,62	1,32	1,12	0,98	0,87	0,79	0,73	0,67	0,63	0,59	0,56	dB
	Q [m ³ /h]	2.630	3.190	3.750	4.300	4.850	5.390	5.940	6.480	7.020	7.560	8.100	8.640	9.180	9.720	35
	Δp [Pa]	3,15	2,00	1,44	1,12	0,92	0,78	0,68	0,60	0,55	0,50	0,47	0,43	0,41	0,39	dB
	Q [m ³ /h]	2.190	2.660	3.120	3.580	4.030	4.490	4.940	5.390	5.840	6.290	6.740	7.190	7.640	8.090	30
	Δp [Pa]	2,18	1,39	1,00	0,78	0,63	0,54	0,47	0,42	0,38	0,35	0,32	0,30	0,28	0,27	dB
	Q [m ³ /h]	1.820	2.210	2.590	2.980	3.360	3.730	4.110	4.490	4.860	5.240	5.610	5.980	6.360	6.730	25
	Δp [Pa]	1,51	0,96	0,69	0,54	0,44	0,37	0,32	0,29	0,26	0,24	0,22	0,21	0,20	0,19	dB
1000	Sn [m ²]	0,1507	0,1967	0,2426	0,2886	0,3345	0,3805	0,4264	0,4724	0,5183	0,5643	0,6102	0,6562	0,7021	0,7481	
	Sn [%]	78,16	81,09	83,02	84,39	85,42	86,21	86,84	87,36	87,79	88,15	88,46	88,73	88,96	89,17	
	Q [m ³ /h]	3.990	4.840	5.680	6.510	7.340	8.170	8.990	9.810	10.630	11.440	12.260	13.070	13.890	14.700	45
	Δp [Pa]	6,34	3,99	2,85	2,20	1,80	1,52	1,32	1,17	1,06	0,97	0,90	0,84	0,79	0,74	dB
	Q [m ³ /h]	3.320	4.030	4.720	5.420	6.110	6.790	7.480	8.160	8.840	9.520	10.200	10.880	11.550	12.230	40
	Δp [Pa]	4,39	2,77	1,97	1,53	1,25	1,05	0,92	0,81	0,73	0,67	0,62	0,58	0,54	0,52	dB
	Q [m ³ /h]	2.760	3.350	3.930	4.510	5.080	5.650	6.220	6.790	7.360	7.920	8.490	9.050	9.610	10.170	35
	Δp [Pa]	3,03	1,91	1,37	1,06	0,86	0,73	0,63	0,56	0,51	0,46	0,43	0,40	0,38	0,36	dB
	Q [m ³ /h]	2.300	2.790	3.270	3.750	4.230	4.700	5.180	5.650	6.120	6.590	7.060	7.530	8.000	8.460	30
	Δp [Pa]	2,11	1,33	0,95	0,73	0,60	0,50	0,44	0,39	0,35	0,32	0,30	0,28	0,26	0,25	dB
	Q [m ³ /h]	1.910	2.320	2.720	3.120	3.520	3.910	4.310	4.700	5.090	5.480	5.870	6.260	6.650	7.040	25
	Δp [Pa]	1,45	0,92	0,65	0,51	0,41	0,35	0,30	0,27	0,24	0,22	0,21	0,19	0,18	0,17	dB

Hn\Wn [mm]		900	950	1000	1050	1100	1150	1200	1250	1300	1350	1400	1450	1500	
200	Sn [m ²]	0,1028	0,1088	0,1147	0,1207	0,1266	0,1326	0,1385	0,1445	0,1504	0,1564	0,1623	0,1683	0,1742	
	Sn [%]	59,28	59,39	59,49	59,58	59,66	59,73	59,80	59,86	59,92	59,97	60,02	60,07	60,11	
	Q [m ³ /h]	4.070	4.290	4.510	4.730	4.960	5.180	5.400	5.630	5.850	6.070	6.300	6.520	6.740	45
	Δp [Pa]	45,38	44,89	44,44	44,04	43,86	43,53	43,23	43,10	42,84	42,60	42,52	42,31	42,11	dB
	Q [m ³ /h]	3.380	3.570	3.750	3.940	4.120	4.310	4.500	4.680	4.870	5.050	5.240	5.420	5.610	40
	Δp [Pa]	31,30	31,08	30,73	30,56	30,26	30,14	30,02	29,78	29,69	29,49	29,41	29,23	29,17	dB
	Q [m ³ /h]	2.810	2.970	3.120	3.280	3.430	3.590	3.740	3.900	4.050	4.200	4.360	4.510	4.670	35
	Δp [Pa]	21,63	21,51	21,27	21,18	20,98	20,91	20,73	20,68	20,53	20,40	20,36	20,24	20,22	dB
	Q [m ³ /h]	2.340	2.470	2.600	2.730	2.860	2.980	3.110	3.240	3.370	3.500	3.630	3.760	3.880	30
	Δp [Pa]	15,00	14,88	14,77	14,67	14,58	14,41	14,34	14,27	14,22	14,16	14,11	14,07	13,95	dB
	Q [m ³ /h]	1.950	2.060	2.160	2.270	2.380	2.480	2.590	2.700	2.800	2.910	3.020	3.120	3.230	25
	Δp [Pa]	10,42	10,35	10,19	10,14	10,10	9,98	9,94	9,91	9,81	9,79	9,77	9,69	9,67	dB

Hn\Wn [mm]	900	950	1000	1050	1100	1150	1200	1250	1300	1350	1400	1450	1500		
250	Sn [m ²]	0,1460	0,1545	0,1629	0,1714	0,1798	0,1883	0,1967	0,2052	0,2136	0,2221	0,2305	0,2390	0,2474	
	Sn [%]	66,94	67,06	67,17	67,27	67,36	67,45	67,52	67,59	67,66	67,72	67,77	67,82	67,87	
	Q [m ³ /h]	4.820	5.090	5.350	5.620	5.880	6.140	6.410	6.670	6.930	7.200	7.460	7.720	7.990	45
	Δp [Pa]	19,51	19,32	19,07	18,92	18,72	18,54	18,44	18,28	18,14	18,06	17,94	17,83	17,77	dB
	Q [m ³ /h]	4.010	4.230	4.450	4.670	4.890	5.110	5.330	5.550	5.770	5.990	6.210	6.430	6.650	40
	Δp [Pa]	13,51	13,34	13,20	13,07	12,95	12,84	12,75	12,66	12,58	12,50	12,43	12,37	12,31	dB
	Q [m ³ /h]	3.340	3.520	3.700	3.890	4.070	4.250	4.430	4.620	4.800	4.980	5.160	5.350	5.530	35
	Δp [Pa]	9,37	9,24	9,12	9,07	8,97	8,88	8,81	8,77	8,70	8,64	8,58	8,56	8,51	dB
	Q [m ³ /h]	2.780	2.930	3.080	3.230	3.390	3.540	3.690	3.840	3.990	4.150	4.300	4.450	4.600	30
	Δp [Pa]	6,49	6,40	6,32	6,25	6,22	6,16	6,11	6,06	6,01	6,00	5,96	5,93	5,89	dB
	Q [m ³ /h]	2.310	2.440	2.570	2.690	2.820	2.940	3.070	3.200	3.320	3.450	3.580	3.700	3.830	25
	Δp [Pa]	4,48	4,44	4,40	4,34	4,31	4,25	4,23	4,21	4,16	4,15	4,13	4,10	4,08	dB
300	Sn [m ²]	0,1892	0,2002	0,2111	0,2221	0,2330	0,2440	0,2549	0,2659	0,2768	0,2878	0,2987	0,3097	0,3206	
	Sn [%]	71,99	72,12	72,24	72,35	72,45	72,54	72,62	72,69	72,76	72,83	72,89	72,94	72,99	
	Q [m ³ /h]	5.580	5.880	6.180	6.490	6.790	7.090	7.400	7.700	8.010	8.310	8.610	8.920	9.220	45
	Δp [Pa]	10,88	10,70	10,54	10,42	10,29	10,18	10,10	10,00	9,93	9,85	9,77	9,72	9,65	dB
	Q [m ³ /h]	4.640	4.890	5.140	5.400	5.650	5.900	6.160	6.410	6.660	6.910	7.170	7.420	7.670	40
	Δp [Pa]	7,52	7,40	7,29	7,22	7,13	7,05	7,00	6,93	6,87	6,81	6,77	6,72	6,68	dB
	Q [m ³ /h]	3.860	4.070	4.280	4.490	4.700	4.910	5.120	5.330	5.540	5.750	5.960	6.170	6.380	35
	Δp [Pa]	5,21	5,12	5,05	4,99	4,93	4,88	4,83	4,79	4,75	4,71	4,68	4,65	4,62	dB
	Q [m ³ /h]	3.210	3.390	3.560	3.740	3.910	4.090	4.260	4.440	4.610	4.790	4.960	5.140	5.310	30
	Δp [Pa]	3,60	3,56	3,50	3,46	3,41	3,39	3,35	3,32	3,29	3,27	3,24	3,23	3,20	dB
	Q [m ³ /h]	2.670	2.820	2.960	3.110	3.250	3.400	3.550	3.690	3.840	3.980	4.130	4.270	4.420	25
	Δp [Pa]	2,49	2,46	2,42	2,39	2,36	2,34	2,32	2,30	2,28	2,26	2,25	2,23	2,22	dB
350	Sn [m ²]	0,2324	0,2459	0,2593	0,2728	0,2862	0,2997	0,3131	0,3266	0,3400	0,3535	0,3669	0,3804	0,3938	
	Sn [%]	75,57	75,71	75,84	75,95	76,05	76,15	76,23	76,31	76,38	76,45	76,51	76,57	76,63	
	Q [m ³ /h]	6.320	6.660	7.010	7.350	7.690	8.030	8.380	8.720	9.060	9.410	9.750	10.090	10.430	45
	Δp [Pa]	6,95	6,82	6,72	6,61	6,52	6,43	6,37	6,30	6,23	6,19	6,13	6,08	6,03	dB
	Q [m ³ /h]	5.260	5.540	5.830	6.110	6.400	6.680	6.970	7.250	7.540	7.830	8.110	8.400	8.680	40
	Δp [Pa]	4,81	4,72	4,65	4,57	4,51	4,45	4,41	4,35	4,32	4,28	4,24	4,21	4,18	dB
	Q [m ³ /h]	4.370	4.610	4.850	5.090	5.320	5.560	5.800	6.040	6.270	6.510	6.750	6.990	7.220	35
	Δp [Pa]	3,32	3,27	3,22	3,17	3,12	3,08	3,05	3,02	2,99	2,96	2,94	2,92	2,89	dB
	Q [m ³ /h]	3.640	3.840	4.040	4.230	4.430	4.630	4.820	5.020	5.220	5.420	5.610	5.810	6.010	30
	Δp [Pa]	2,30	2,27	2,23	2,19	2,16	2,14	2,11	2,09	2,07	2,05	2,03	2,02	2,00	dB
	Q [m ³ /h]	3.030	3.190	3.360	3.520	3.690	3.850	4.010	4.180	4.340	4.510	4.670	4.840	5.000	25
	Δp [Pa]	1,60	1,56	1,54	1,52	1,50	1,48	1,46	1,45	1,43	1,42	1,41	1,40	1,39	dB

Hn\Wn [mm]	900	950	1000	1050	1100	1150	1200	1250	1300	1350	1400	1450	1500		
400	Sn [m ²]	0,2756	0,2916	0,3075	0,3235	0,3394	0,3554	0,3713	0,3873	0,4032	0,4192	0,4351	0,4511	0,4670	
	Sn [%]	78,25	78,39	78,52	78,64	78,74	78,84	78,93	79,01	79,09	79,16	79,22	79,28	79,34	
	Q [m ³ /h]	7.060	7.440	7.820	8.200	8.580	8.960	9.340	9.730	10.110	10.490	10.870	11.250	11.630	45
	Δp [Pa]	4,86	4,76	4,67	4,59	4,52	4,45	4,39	4,35	4,30	4,25	4,21	4,17	4,13	dB
	Q [m ³ /h]	5.870	6.190	6.500	6.820	7.140	7.460	7.770	8.090	8.410	8.730	9.040	9.360	9.680	40
	Δp [Pa]	3,36	3,30	3,23	3,17	3,13	3,08	3,04	3,00	2,97	2,94	2,91	2,89	2,86	dB
	Q [m ³ /h]	4.880	5.150	5.410	5.680	5.940	6.200	6.470	6.730	7.000	7.260	7.520	7.790	8.050	35
	Δp [Pa]	2,32	2,28	2,24	2,20	2,16	2,13	2,11	2,08	2,06	2,04	2,01	2,00	1,98	dB
	Q [m ³ /h]	4.060	4.280	4.500	4.720	4.940	5.160	5.380	5.600	5.820	6.040	6.260	6.480	6.700	30
	Δp [Pa]	1,61	1,58	1,55	1,52	1,50	1,48	1,46	1,44	1,42	1,41	1,40	1,38	1,37	dB
	Q [m ³ /h]	3.380	3.560	3.750	3.930	4.110	4.290	4.480	4.660	4.840	5.030	5.210	5.390	5.570	25
	Δp [Pa]	1,12	1,09	1,07	1,05	1,04	1,02	1,01	1,00	0,98	0,98	0,97	0,96	0,95	dB
450	Sn [m ²]	0,3188	0,3373	0,3557	0,3742	0,3926	0,4111	0,4295	0,4480	0,4664	0,4849	0,5033	0,5218	0,5402	
	Sn [%]	80,32	80,47	80,60	80,72	80,83	80,93	81,02	81,10	81,18	81,25	81,32	81,38	81,44	
	Q [m ³ /h]	7.780	8.200	8.620	9.040	9.460	9.880	10.300	10.720	11.140	11.560	11.980	12.400	12.820	45
	Δp [Pa]	3,61	3,53	3,45	3,39	3,33	3,28	3,23	3,18	3,14	3,11	3,07	3,04	3,01	dB
	Q [m ³ /h]	6.480	6.830	7.170	7.520	7.870	8.220	8.570	8.920	9.270	9.620	9.970	10.310	10.660	40
	Δp [Pa]	2,50	2,45	2,39	2,34	2,30	2,27	2,23	2,20	2,18	2,15	2,13	2,10	2,08	dB
	Q [m ³ /h]	5.390	5.680	5.970	6.260	6.550	6.840	7.130	7.420	7.710	8.000	8.290	8.580	8.870	35
	Δp [Pa]	1,73	1,69	1,66	1,62	1,60	1,57	1,55	1,53	1,51	1,49	1,47	1,46	1,44	dB
	Q [m ³ /h]	4.480	4.720	4.970	5.210	5.450	5.690	5.930	6.170	6.410	6.660	6.900	7.140	7.380	30
	Δp [Pa]	1,20	1,17	1,15	1,13	1,10	1,09	1,07	1,05	1,04	1,03	1,02	1,01	1,00	dB
	Q [m ³ /h]	3.730	3.930	4.130	4.330	4.530	4.730	4.940	5.140	5.340	5.540	5.740	5.940	6.140	25
	Δp [Pa]	0,83	0,81	0,79	0,78	0,76	0,75	0,74	0,73	0,72	0,71	0,71	0,70	0,69	dB
500	Sn [m ²]	0,3620	0,3830	0,4039	0,4249	0,4458	0,4668	0,4877	0,5087	0,5296	0,5506	0,5715	0,5925	0,6134	
	Sn [%]	81,97	82,12	82,26	82,38	82,49	82,59	82,69	82,77	82,85	82,92	82,99	83,06	83,11	
	Q [m ³ /h]	8.510	8.960	9.420	9.880	10.330	10.790	11.250	11.700	12.160	12.620	13.070	13.530	13.990	45
	Δp [Pa]	2,81	2,74	2,68	2,62	2,57	2,52	2,48	2,44	2,41	2,38	2,35	2,32	2,30	dB
	Q [m ³ /h]	7.080	7.460	7.840	8.220	8.600	8.980	9.360	9.740	10.120	10.500	10.880	11.260	11.640	40
	Δp [Pa]	1,95	1,90	1,85	1,81	1,78	1,75	1,72	1,69	1,67	1,65	1,63	1,61	1,59	dB
	Q [m ³ /h]	5.890	6.200	6.520	6.840	7.150	7.470	7.790	8.100	8.420	8.730	9.050	9.370	9.680	35
	Δp [Pa]	1,35	1,31	1,28	1,26	1,23	1,21	1,19	1,17	1,16	1,14	1,13	1,11	1,10	dB
	Q [m ³ /h]	4.900	5.160	5.430	5.690	5.950	6.210	6.480	6.740	7.000	7.270	7.530	7.790	8.050	30
	Δp [Pa]	0,93	0,91	0,89	0,87	0,85	0,84	0,82	0,81	0,80	0,79	0,78	0,77	0,76	dB
	Q [m ³ /h]	4.080	4.300	4.510	4.730	4.950	5.170	5.390	5.610	5.830	6.040	6.260	6.480	6.700	25
	Δp [Pa]	0,65	0,63	0,61	0,60	0,59	0,58	0,57	0,56	0,55	0,55	0,54	0,53	0,53	dB

Hn\Wn [mm]	900	950	1000	1050	1100	1150	1200	1250	1300	1350	1400	1450	1500		
550	Sn [m ²]	0,4052	0,4287	0,4521	0,4756	0,4990	0,5225	0,5459	0,5694	0,5928	0,6163	0,6397	0,6632	0,6866	
	Sn [%]	83,32	83,47	83,61	83,74	83,85	83,95	84,05	84,13	84,21	84,29	84,36	84,42	84,48	
	Q [m ³ /h]	9.220	9.720	10.210	10.710	11.200	11.690	12.190	12.680	13.170	13.670	14.160	14.650	15.150	45
	Δp [Pa]	2,26	2,20	2,15	2,10	2,05	2,01	1,98	1,94	1,91	1,89	1,86	1,84	1,82	dB
	Q [m ³ /h]	7.670	8.080	8.500	8.910	9.320	9.730	10.140	10.550	10.960	11.370	11.780	12.190	12.600	40
	Δp [Pa]	1,57	1,52	1,49	1,45	1,42	1,39	1,37	1,35	1,32	1,31	1,29	1,27	1,26	dB
	Q [m ³ /h]	6.380	6.730	7.070	7.410	7.750	8.090	8.430	8.780	9.120	9.460	9.800	10.140	10.480	35
	Δp [Pa]	1,08	1,06	1,03	1,00	0,98	0,96	0,95	0,93	0,92	0,90	0,89	0,88	0,87	dB
	Q [m ³ /h]	5.310	5.600	5.880	6.160	6.450	6.730	7.020	7.300	7.590	7.870	8.150	8.440	8.720	30
	Δp [Pa]	0,75	0,73	0,71	0,69	0,68	0,67	0,66	0,64	0,64	0,63	0,62	0,61	0,60	dB
	Q [m ³ /h]	4.420	4.660	4.890	5.130	5.370	5.600	5.840	6.070	6.310	6.550	6.780	7.020	7.260	25
	Δp [Pa]	0,52	0,51	0,49	0,48	0,47	0,46	0,45	0,45	0,44	0,43	0,43	0,42	0,42	dB
600	Sn [m ²]	0,4484	0,4744	0,5003	0,5263	0,5522	0,5782	0,6041	0,6301	0,6560	0,6820	0,7079	0,7339	0,7598	
	Sn [%]	84,44	84,60	84,74	84,86	84,98	85,08	85,18	85,27	85,35	85,42	85,49	85,56	85,62	
	Q [m ³ /h]	9.940	10.470	11.000	11.530	12.060	12.590	13.120	13.650	14.180	14.710	15.240	15.770	16.300	45
	Δp [Pa]	1,88	1,82	1,77	1,72	1,69	1,65	1,62	1,59	1,56	1,54	1,52	1,50	1,48	dB
	Q [m ³ /h]	8.270	8.710	9.150	9.590	10.030	10.470	10.910	11.350	11.790	12.230	12.680	13.120	13.560	40
	Δp [Pa]	1,30	1,26	1,22	1,19	1,17	1,14	1,12	1,10	1,08	1,06	1,05	1,04	1,02	dB
	Q [m ³ /h]	6.880	7.240	7.610	7.980	8.350	8.710	9.080	9.450	9.810	10.180	10.550	10.910	11.280	35
	Δp [Pa]	0,90	0,87	0,85	0,83	0,81	0,79	0,77	0,76	0,75	0,74	0,73	0,72	0,71	dB
	Q [m ³ /h]	5.720	6.030	6.330	6.640	6.940	7.250	7.550	7.860	8.160	8.470	8.770	9.080	9.380	30
	Δp [Pa]	0,62	0,60	0,59	0,57	0,56	0,55	0,54	0,53	0,52	0,51	0,50	0,50	0,49	dB
	Q [m ³ /h]	4.760	5.010	5.270	5.520	5.780	6.030	6.280	6.540	6.790	7.050	7.300	7.550	7.810	25
	Δp [Pa]	0,43	0,42	0,41	0,40	0,39	0,38	0,37	0,36	0,36	0,35	0,35	0,34	0,34	dB
650	Sn [m ²]	0,4916	0,5201	0,5485	0,5770	0,6054	0,6339	0,6623	0,6908	0,7192	0,7477	0,7761	0,8046	0,8330	
	Sn [%]	85,39	85,55	85,69	85,82	85,93	86,04	86,13	86,22	86,31	86,38	86,45	86,52	86,58	
	Q [m ³ /h]	10.640	11.210	11.780	12.340	12.910	13.480	14.040	14.610	15.170	15.740	16.300	16.870	17.440	45
	Δp [Pa]	1,58	1,53	1,49	1,45	1,41	1,38	1,35	1,33	1,30	1,28	1,26	1,24	1,23	dB
	Q [m ³ /h]	8.860	9.330	9.800	10.270	10.740	11.210	11.680	12.150	12.620	13.090	13.560	14.030	14.510	40
	Δp [Pa]	1,10	1,06	1,03	1,00	0,98	0,96	0,94	0,92	0,90	0,89	0,87	0,86	0,85	dB
	Q [m ³ /h]	7.370	7.760	8.150	8.540	8.940	9.330	9.720	10.110	10.500	10.890	11.280	11.680	12.070	35
	Δp [Pa]	0,76	0,73	0,71	0,69	0,68	0,66	0,65	0,64	0,62	0,61	0,60	0,60	0,59	dB
	Q [m ³ /h]	6.130	6.460	6.780	7.110	7.430	7.760	8.090	8.410	8.740	9.060	9.390	9.710	10.040	30
	Δp [Pa]	0,53	0,51	0,49	0,48	0,47	0,46	0,45	0,44	0,43	0,42	0,42	0,41	0,41	dB
	Q [m ³ /h]	5.100	5.370	5.640	5.910	6.180	6.460	6.730	7.000	7.270	7.540	7.810	8.080	8.350	25
	Δp [Pa]	0,36	0,35	0,34	0,33	0,32	0,32	0,31	0,30	0,30	0,29	0,29	0,29	0,28	dB

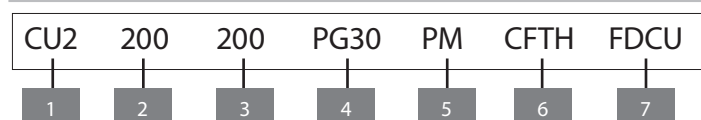
Hn\Wn [mm]		900	950	1000	1050	1100	1150	1200	1250	1300	1350	1400	1450	1500	
700	Sn [m ²]	0,5348	0,5658	0,5967	0,6277	0,6586	0,6896	0,7205	0,7515	0,7824	0,8134	0,8443	0,8753	0,9062	
	Sn [%]	86,20	86,36	86,50	86,63	86,75	86,85	86,95	87,04	87,13	87,20	87,27	87,34	87,40	
	Q [m ³ /h]	11.350	11.950	12.550	13.150	13.760	14.360	14.960	15.560	16.160	16.760	17.370	17.970	18.570	45
	Δp [Pa]	1,36	1,32	1,28	1,24	1,21	1,18	1,15	1,13	1,11	1,09	1,07	1,05	1,04	dB
	Q [m ³ /h]	9.440	9.940	10.440	10.940	11.440	11.950	12.450	12.950	13.450	13.950	14.450	14.950	15.450	40
	Δp [Pa]	0,94	0,91	0,88	0,86	0,84	0,82	0,80	0,78	0,77	0,75	0,74	0,73	0,72	dB
	Q [m ³ /h]	7.850	8.270	8.690	9.100	9.520	9.940	10.350	10.770	11.190	11.600	12.020	12.430	12.850	35
	Δp [Pa]	0,65	0,63	0,61	0,59	0,58	0,56	0,55	0,54	0,53	0,52	0,51	0,50	0,50	dB
	Q [m ³ /h]	6.530	6.880	7.230	7.570	7.920	8.270	8.610	8.960	9.310	9.650	10.000	10.340	10.690	30
	Δp [Pa]	0,45	0,44	0,42	0,41	0,40	0,39	0,38	0,37	0,37	0,36	0,35	0,35	0,34	dB
	Q [m ³ /h]	5.440	5.730	6.010	6.300	6.590	6.880	7.170	7.450	7.740	8.030	8.320	8.610	8.890	25
	Δp [Pa]	0,31	0,30	0,29	0,28	0,28	0,27	0,26	0,26	0,25	0,25	0,25	0,24	0,24	dB
750	Sn [m ²]	0,5780	0,6115	0,6449	0,6784	0,7118	0,7453	0,7787	0,8122	0,8456	0,8791	0,9125	0,9460	0,9794	
	Sn [%]	86,90	87,06	87,21	87,34	87,45	87,56	87,66	87,75	87,83	87,91	87,98	88,05	88,11	
	Q [m ³ /h]	12.050	12.690	13.320	13.960	14.600	15.240	15.870	16.510	17.150	17.780	18.420	19.060	19.690	45
	Δp [Pa]	1,19	1,15	1,11	1,08	1,05	1,02	1,00	0,98	0,96	0,94	0,92	0,91	0,89	dB
	Q [m ³ /h]	10.020	10.550	11.090	11.620	12.150	12.680	13.210	13.730	14.260	14.790	15.320	15.850	16.380	40
	Δp [Pa]	0,82	0,79	0,77	0,75	0,73	0,71	0,69	0,67	0,66	0,65	0,64	0,63	0,62	dB
	Q [m ³ /h]	8.340	8.780	9.220	9.660	10.100	10.550	10.990	11.430	11.870	12.310	12.750	13.190	13.630	35
	Δp [Pa]	0,57	0,55	0,53	0,52	0,50	0,49	0,48	0,47	0,46	0,45	0,44	0,43	0,43	dB
	Q [m ³ /h]	6.940	7.310	7.670	8.040	8.410	8.770	9.140	9.510	9.870	10.240	10.610	10.970	11.340	30
	Δp [Pa]	0,40	0,38	0,37	0,36	0,35	0,34	0,33	0,32	0,32	0,31	0,31	0,30	0,30	dB
	Q [m ³ /h]	5.770	6.080	6.380	6.690	6.990	7.300	7.600	7.910	8.210	8.520	8.820	9.130	9.430	25
	Δp [Pa]	0,27	0,26	0,25	0,25	0,24	0,23	0,23	0,22	0,22	0,22	0,21	0,21	0,20	dB
800	Sn [m ²]	0,6212	0,6572	0,6931	0,7291	0,7650	0,8010	0,8369	0,8729	0,9088	0,9448	0,9807	1,0167	1,0526	
	Sn [%]	87,52	87,68	87,82	87,95	88,07	88,18	88,28	88,37	88,45	88,53	88,61	88,67	88,74	
	Q [m ³ /h]	12.750	13.420	14.090	14.760	15.440	16.110	16.780	17.450	18.120	18.800	19.470	20.140	20.810	45
	Δp [Pa]	1,05	1,01	0,98	0,95	0,92	0,90	0,87	0,85	0,83	0,82	0,80	0,79	0,78	dB
	Q [m ³ /h]	10.600	11.160	11.720	12.280	12.840	13.400	13.960	14.520	15.080	15.640	16.200	16.750	17.310	40
	Δp [Pa]	0,73	0,70	0,68	0,66	0,64	0,62	0,60	0,59	0,58	0,57	0,56	0,55	0,54	dB
	Q [m ³ /h]	8.820	9.290	9.750	10.220	10.680	11.150	11.610	12.080	12.540	13.010	13.470	13.940	14.400	35
	Δp [Pa]	0,50	0,49	0,47	0,45	0,44	0,43	0,42	0,41	0,40	0,39	0,38	0,38	0,37	dB
	Q [m ³ /h]	7.340	7.730	8.110	8.500	8.890	9.280	9.660	10.050	10.440	10.820	11.210	11.600	11.980	30
	Δp [Pa]	0,35	0,34	0,32	0,31	0,31	0,30	0,29	0,28	0,28	0,27	0,27	0,26	0,26	dB
	Q [m ³ /h]	6.110	6.430	6.750	7.070	7.400	7.720	8.040	8.360	8.680	9.000	9.330	9.650	9.970	25
	Δp [Pa]	0,24	0,23	0,22	0,22	0,21	0,21	0,20	0,20	0,19	0,19	0,18	0,18	0,18	dB

Hn\Wn [mm]	900	950	1000	1050	1100	1150	1200	1250	1300	1350	1400	1450	1500		
850	Sn [m ²]	0,6644	0,7029	0,7413	0,7798	0,8182	0,8567	0,8951	0,9336	0,9720	1,0105	1,0489	1,0874	1,1258	
	Sn [%]	88,06	88,22	88,36	88,50	88,62	88,72	88,82	88,92	89,00	89,08	89,15	89,22	89,28	
	Q [m ³ /h]	13.440	14.150	14.860	15.560	16.270	16.980	17.690	18.390	19.100	19.800	20.510	21.220	21.920	45 dB
	Δp [Pa]	0,94	0,90	0,87	0,84	0,82	0,79	0,77	0,75	0,74	0,72	0,71	0,70	0,68	
	Q [m ³ /h]	11.180	11.770	12.360	12.950	13.540	14.120	14.710	15.300	15.890	16.480	17.060	17.650	18.240	40 dB
	Δp [Pa]	0,65	0,63	0,60	0,58	0,57	0,55	0,54	0,52	0,51	0,50	0,49	0,48	0,47	
	Q [m ³ /h]	9.300	9.790	10.280	10.770	11.260	11.750	12.240	12.730	13.220	13.710	14.190	14.680	15.170	35 dB
	Δp [Pa]	0,45	0,43	0,42	0,40	0,39	0,38	0,37	0,36	0,35	0,35	0,34	0,33	0,33	
	Q [m ³ /h]	7.740	8.150	8.550	8.960	9.370	9.780	10.180	10.590	11.000	11.400	11.810	12.220	12.620	30 dB
	Δp [Pa]	0,31	0,30	0,29	0,28	0,27	0,26	0,26	0,25	0,24	0,24	0,23	0,23	0,23	
	Q [m ³ /h]	6.440	6.780	7.120	7.460	7.790	8.130	8.470	8.810	9.150	9.490	9.820	10.160	10.500	25 dB
	Δp [Pa]	0,22	0,21	0,20	0,19	0,19	0,18	0,18	0,17	0,17	0,17	0,16	0,16	0,16	
900	Sn [m ²]	0,7076	0,7486	0,7895	0,8305	0,8714	0,9124	0,9533	0,9943	1,0352	1,0762	1,1171	1,1581	1,1990	
	Sn [%]	88,54	88,70	88,85	88,98	89,10	89,21	89,31	89,40	89,49	89,57	89,64	89,71	89,77	
	Q [m ³ /h]	14.130	14.880	15.620	16.360	17.100	17.840	18.590	19.330	20.070	20.810	21.550	22.290	23.030	45 dB
	Δp [Pa]	0,85	0,82	0,78	0,76	0,73	0,71	0,69	0,67	0,66	0,64	0,63	0,62	0,61	
	Q [m ³ /h]	11.760	12.380	12.990	13.610	14.230	14.840	15.460	16.080	16.690	17.310	17.930	18.540	19.160	40 dB
	Δp [Pa]	0,59	0,56	0,54	0,52	0,51	0,49	0,48	0,47	0,46	0,45	0,44	0,43	0,42	
	Q [m ³ /h]	9.780	10.300	10.810	11.320	11.840	12.350	12.860	13.380	13.890	14.400	14.910	15.420	15.940	35 dB
	Δp [Pa]	0,41	0,39	0,38	0,36	0,35	0,34	0,33	0,32	0,32	0,31	0,30	0,30	0,29	
	Q [m ³ /h]	8.140	8.570	8.990	9.420	9.850	10.270	10.700	11.130	11.550	11.980	12.410	12.830	13.260	30 dB
	Δp [Pa]	0,28	0,27	0,26	0,25	0,24	0,24	0,23	0,22	0,22	0,21	0,21	0,21	0,20	
	Q [m ³ /h]	6.770	7.130	7.480	7.840	8.190	8.550	8.900	9.260	9.610	9.970	10.320	10.680	11.030	25 dB
	Δp [Pa]	0,20	0,19	0,18	0,17	0,17	0,16	0,16	0,15	0,15	0,15	0,14	0,14	0,14	
950	Sn [m ²]	0,7508	0,7943	0,8377	0,8812	0,9246	0,9681	1,0115	1,0550	1,0984	1,1419	1,1853	1,2288	1,2722	
	Sn [%]	88,97	89,13	89,28	89,41	89,53	89,64	89,74	89,84	89,92	90,00	90,07	90,14	90,21	
	Q [m ³ /h]	14.820	15.600	16.380	17.150	17.930	18.710	19.480	20.260	21.030	21.810	22.580	23.350	24.130	45 dB
	Δp [Pa]	0,77	0,74	0,71	0,69	0,66	0,64	0,62	0,61	0,59	0,58	0,57	0,56	0,54	
	Q [m ³ /h]	12.330	12.980	13.630	14.270	14.920	15.560	16.210	16.850	17.500	18.140	18.780	19.430	20.070	40 dB
	Δp [Pa]	0,53	0,51	0,49	0,47	0,46	0,44	0,43	0,42	0,41	0,40	0,39	0,38	0,38	
	Q [m ³ /h]	10.260	10.800	11.340	11.870	12.410	12.950	13.480	14.020	14.560	15.090	15.630	16.160	16.700	35 dB
	Δp [Pa]	0,37	0,35	0,34	0,33	0,32	0,31	0,30	0,29	0,28	0,28	0,27	0,27	0,26	
	Q [m ³ /h]	8.540	8.980	9.430	9.880	10.320	10.770	11.220	11.660	12.110	12.560	13.000	13.450	13.890	30 dB
	Δp [Pa]	0,26	0,25	0,24	0,23	0,22	0,21	0,21	0,20	0,20	0,19	0,19	0,18	0,18	
	Q [m ³ /h]	7.100	7.470	7.850	8.220	8.590	8.960	9.330	9.700	10.070	10.450	10.820	11.190	11.560	25 dB
	Δp [Pa]	0,18	0,17	0,16	0,16	0,15	0,15	0,14	0,14	0,14	0,13	0,13	0,13	0,13	

Hn\Wn [mm]	900	950	1000	1050	1100	1150	1200	1250	1300	1350	1400	1450	1500		
1000	Sn [m ²]	0,7940	0,8400	0,8859	0,9319	0,9778	1,0238	1,0697	1,1157	1,1616	1,2076	1,2535	1,2995	1,3454	
	Sn [%]	89,35	89,52	89,66	89,80	89,92	90,03	90,13	90,23	90,31	90,39	90,47	90,53	90,60	
	Q [m ³ /h]	15.510	16.320	17.140	17.950	18.760	19.570	20.370	21.180	21.990	22.800	23.610	24.420	25.220	45
	Δp [Pa]	0,71	0,68	0,65	0,63	0,60	0,58	0,57	0,55	0,54	0,52	0,51	0,50	0,49	dB
	Q [m ³ /h]	12.910	13.580	14.260	14.930	15.600	16.280	16.950	17.620	18.300	18.970	19.640	20.310	20.980	40
	Δp [Pa]	0,49	0,47	0,45	0,43	0,42	0,40	0,39	0,38	0,37	0,36	0,36	0,35	0,34	dB
	Q [m ³ /h]	10.740	11.300	11.860	12.420	12.980	13.540	14.100	14.660	15.220	15.780	16.340	16.900	17.460	35
	Δp [Pa]	0,34	0,32	0,31	0,30	0,29	0,28	0,27	0,26	0,26	0,25	0,25	0,24	0,24	dB
	Q [m ³ /h]	8.930	9.400	9.870	10.330	10.800	11.270	11.730	12.200	12.660	13.130	13.590	14.060	14.520	30
	Δp [Pa]	0,23	0,22	0,22	0,21	0,20	0,19	0,19	0,18	0,18	0,17	0,17	0,17	0,16	dB
	Q [m ³ /h]	7.430	7.820	8.210	8.600	8.980	9.370	9.760	10.150	10.530	10.920	11.310	11.700	12.080	25
	Δp [Pa]	0,16	0,16	0,15	0,14	0,14	0,13	0,13	0,13	0,12	0,12	0,12	0,12	0,11	dB

Every air flow lower than the above mentioned maximum value, will meet the listed A-weighted sound power level for the respective dimension.

Sample order



1. product
2. width
3. height
4. frame on the side of the mechanism
5. frame on the side of the wall
6. mechanism type
7. option: unipolar end of range switch

Approvals and certificates

All our dampers are submitted to a number of tests by official test institutes. Reports of these tests form the basis for the approvals of our dampers.



BCCA-0749-CPR-BC1-606-0464-15650.03-0464



18.12

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2822-UKCA-CPR-0057

The NF-label guarantees: conformity with the standard NF S 61-937 Parts 1 and 5: "Systèmes de Sécurité Incendie Dispositifs Actionnés de Sécurité"; conformity with the national decree of March 22, 2004, changed on 14 March 2011 for the classification of fire resistance; the values of the characteristics mentioned in this document. Organisme Certificateur: AFNOR Certification, 11 Rue Francis de Pressensé, F93571 La Plaine Saint-Denis Cedex; Website: <http://www.afnor.org> and <http://www.marque-nf.com>; Phone: +33 (0)1.41.62.80.00, Fax: +33 (0)1.49.17.90.00, Email: certification@afnor.org