

CU2/B

Battery assembly of max. 4 individual dampers



CE
0749






Table of content

Declaration of performance	3
Product presentation CU2/B	4
Range and dimensions CU2/B	5
Variant CU2/B-L500	5
Range and dimensions CU2/B-L500	5
Evolution - kits	6
Options - at the time of order	9
Flange types - at the time of order	9
Storage and handling	10
Installation	10
Installation at a minimal distance from another damper or from an adjacent supporting construction	10
Installation in a rigid wall	11
Operation and mechanisms	13
Electrical connection	18
Weights	20
Sample order	24
Approvals and certificates	24

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	

	battery assembly tested in rigid wall		suitable for built-in installation
	intermediate dimensions on request		

DECLARATION OF PERFORMANCE

CE_DoP_Rf-t_C31_EN-F-05/2018

1. Unique identification code of the product-type:	CU2/B
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. Harmonised standard / European Assessment Document/notified body / European Technical Assessment, Technical Assessment Body, notified body, certificate of constancy of performance:	EN 15650:2010, BCCA with identification number 0749; BCCA-0749-CPR-BC1-606-0464-15650.03-0464; BCCA-0749-CPR-BC1-606-0464-15650.13-0464;
6. Declared performance according to EN 15650:2010	(Fire resistance according to EN 1366-2 and classifications according to EN 13501-3)

Essential characteristics	Wall		Sealing	Installation	Performance	
	Wall type	Wall			Classification	Class
CU2/B ≤ 4 x CU2 (200x200 mm ≤ CU2 ≤ 1200x800 mm)	Rigid wall	Reinforced concrete ≥ 110 mm	Mortar	1	EI 120 (ve i ↔ o) S - (500 Pa)	
CU2/B ≤ 4 x CU2 (200x200 mm ≤ CU2 ≤ 1500x800 mm)	Rigid wall	Reinforced concrete ≥ 110 mm	Mortar	1	EI 120 (ve i ↔ o) S - (300 Pa) EI 60 (ve i ↔ o) S - (500 Pa)	


1 Type of installation: built-in 0/180° (B22, B21, B12)



<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
		B22		B21			B12

Essential characteristics	Performance
Nominal activation conditions/sensitivity:	Pass
Response delay (response time); closure time	Pass
Operational reliability; cycling	CFTH - 50 cycles; MANO - 300 cycles; B(L)F(T) - 10000 cycles; BFL(T) - 10000 cycles; BFN(T) - 10000 cycles; UNIQ - 10000 cycles
Durability of response delay:	Pass
Durability of operational reliability:	Pass
Protection against corrosion according to EN 60068-2-52:	Pass
Damper casing leakage according to EN 1751:	Pass
	≥ class B

The performance of the product, identified above is in conformity with the set of declared performance/s. This declaration of performance is issued, in accordance with Regulation (EU) No 305/2011, under the sole responsibility of the manufacturer identified above.

Signed for and on behalf of the manufacturer by:
Frank Verlinden, Product Manager

 Oosterzele, 05/2018



Product presentation CU2/B

Product presentation CU2/B

The CU2/B damper is a battery assembly of several CU2 dampers with maximum 4 individual dampers (B12, B21 or B22) and with a fire resistance up to 120 minutes. The CU2/B battery assembly is the ideal solution for installations with large dimensions.

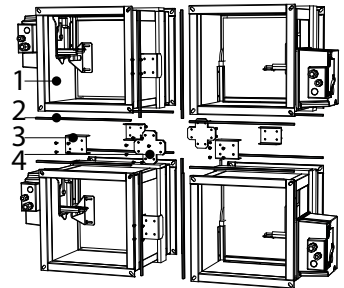
Fire dampers are installed where air ducts penetrate fire-resistant compartment walls. Their role is to restore the fire resistance grade of the penetrated wall and to prevent smoke propagation. Fire dampers are distinguished by their degree of fire resistance, by their aerulic properties as well as 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
- ☑ battery assembly tested in rigid wall



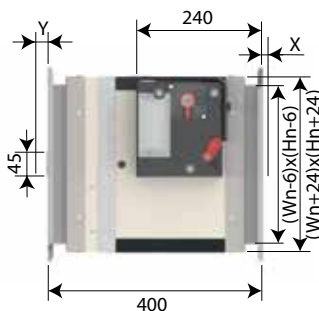
- tested according to EN 1366-2 up to 500 Pa
- suitable for installation in rigid wall
- maintenance-free
- for indoor use
- suitable for built-in installation
- intermediate dimensions on request

1. individual damper with PG25 flange and connection pieces in Promatect
2. EPDM foam
3. connection piece
4. central plate (B22)



Range and dimensions CU2/B

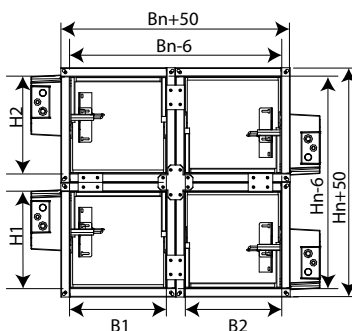
Exceeding blade: X = on the mechanism side, Y = on the wall side



Hn (mm)	300	350	400	450	500	550	600	650	700	750	800
x	-	-	-	-	-	1	26	51	76	101	126
y	2	27	52	77	102	127	152	177	202	227	252

	≥	≤
(W x H) mm	200x200	1500x800

Possibilities: B12, B21, B22 (number of dampers in width / number of dampers in height)



Width:

B multiple of 100: $B1 = (Bn-100)/2$, $B2 = Bn/2$;
 B ending with 50: $B1 = B2 = (Bn-50)/2$.

Height:

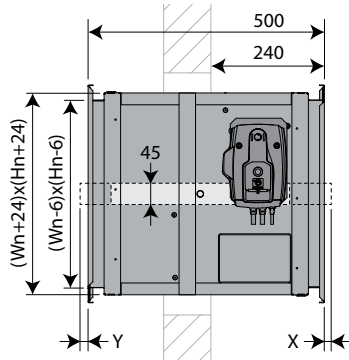
H multiple of 100: $H1 = (Hn-100)/2$, $H2 = Hn/2$;
 H ending with 50: $H1 = H2 = (Hn-50)/2$.

Variant CU2/B-L500

The CU2/B-L500 damper is a battery assembly of several CU2-L500 dampers with maximum 4 individual dampers (B12, B21 or B22). This version ensures that the damper blade doesn't exceed the casing at the wall side (up to a height of 500 mm).

Range and dimensions CU2/B-L500

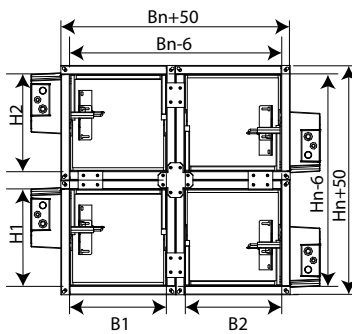
Wn/Hn in steps of 50 mm; intermediate dimensions are subject to extra cost (heights between ≥ 275 and ≤ 299 mm are not possible). Exceeding blade: X = on the mechanism side, Y = on the wall side



Hn (mm)	500	550	600	650	700	750	800
x	-	1	26	51	76	101	126
y	2	7	52	77	102	127	152

	\geq	\leq
(W x H) mm	200x200	1500x800

Possibilities: B12, B21, B22 (number of dampers in width / number of dampers in height)



Width:

B multiple of 100: $B1 = (Bn-100)/2$, $B2 = Bn/2$;

B ending with 50: $B1 = B2 = (Bn-50)/2$.

Height:

H multiple of 100: $H1 = (Hn-100)/2$, $H2 = Hn/2$;

H ending with 50: $H1 = H2 = (Hn-50)/2$.

Evolution - kits

	KITS ONE T 24 FDCB	Spring return actuator ONE 24V (with fusible link T) + bipolar beginning- and end-of-range switch
	KITS ONE T 24 FDCU	Spring return actuator ONE 24V (with fusible link T) + unipolar beginning- and end-of-range switch
	KITS ONE T 230 FDCU	Spring return actuator ONE 230V (with fusible link T) + unipolar beginning- and end-of-range switch
	KITS ONE T 230 FDCB	Spring return actuator ONE 230V (with fusible link T) + bipolar beginning- and end-of-range switch
	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)
	KITS CFTH	Automatic unlocking mechanism CFTH with FCU and without FTH 72
	KITS BFL24	Spring return actuator BFL 24V
	KITS BFL230	Spring return actuator BFL 230V

	KITS BFL24-ST	Spring return actuator BFL 24V with plug (ST)
	KITS BFLT24	Spring return actuator BFL 24V with thermo-electric fuse (T)
	KITS BFLT230	Spring return actuator BFL 230V with thermo-electric fuse (T)
	KITS BFLT24-ST	Spring return actuator BFL 24V with thermo-electric fuse (T) and plug (ST)
	KITS BFN24	Spring return actuator BFN 24V
	KITS BFN24	Spring return actuator BFN 24V (BFN kits must be used instead of BFL kits for fire dampers produced before 1/7/2015)
	KITS BFN230	Spring return actuator BFN 230V
	KITS BFN24-ST	Spring return actuator BFN 24V with plug (ST)
	KITS BFNT24	Spring return actuator BFN 24V with thermo-electric fuse (T)


KITS BFNT230

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


KITS BFNT24-ST

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


KITS BFNT24 CRE

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


KITS BFNT230 CRE

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


KITS BFNT24-ST CRE

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


KITS BF24

Spring return actuator BF 24V (BF kits must be used instead of BFN kits for fire dampers produced before 1/7/2015)


KITS FDC CFTH





1 limit switch (FCU/DCU/FCB/DCB)


KITS SN2 BFL/BFN



Auxiliary limit switch 'open/closed'


KITS FTH72

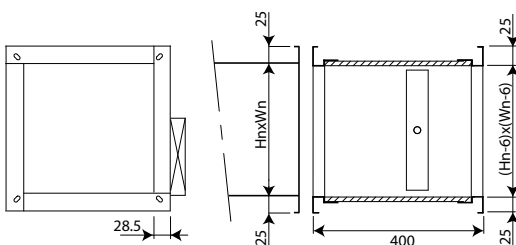
Fusible link FTH 72°C (for CFTH)

	KITS 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

	EQ	Equipotential connection
	ONE-X CN	Connectors for the bus cables and the power cable.

Flange types - at the time of order

**PG25**

Connection to ducts with 20 and 30 mm flanges (with bolts).
Elliptical holes $\varnothing 8,5 \times 16$ mm.

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:

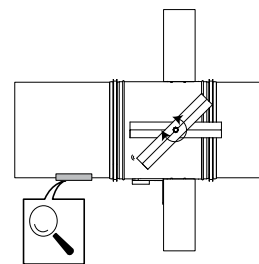
- to unload in a dry area
- not to flip or roll the product to move it
- not to use the damper as a scaffold, working table, etc.
- not to store smaller dampers inside larger ones

Installation

General points

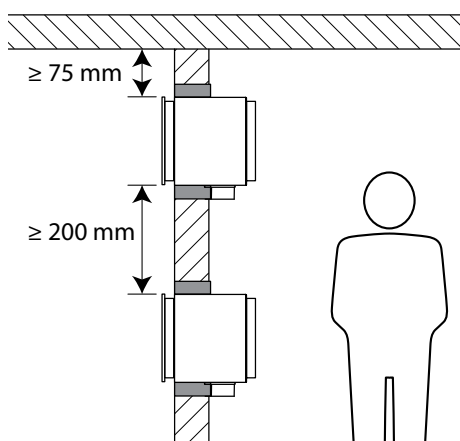
- The installation must comply with the installation manual and the classification report.
- Axis orientation: see the declaration of performance.
- Avoid obstruction of adjoining ducts.
- Product installation: always with closed damper blade.
- Verify if the blade can move freely.
- Please observe safety 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.
- The damper must remain accessible for inspection and maintenance.
- Schedule at least 2 visual checks each year.

	TEST	
2017	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
2018	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
2019	<input checked="" type="checkbox"/>	<input type="checkbox"/>
2020	<input type="checkbox"/>	<input type="checkbox"/>
2021	<input type="checkbox"/>	<input type="checkbox"/>



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

1



1. Principle

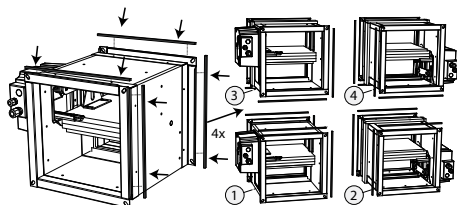
According to the European test standard, a fire damper must be installed at a minimum distance of 75 mm from an adjacent wall and 200 mm from another damper, unless the solution was tested at a shorter distance.

Installation in a rigid wall

The product was tested and approved in:

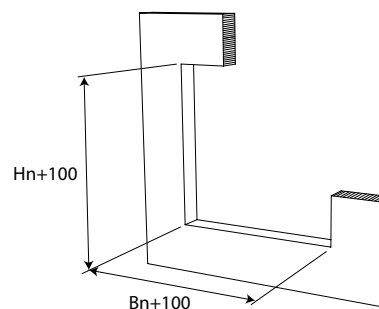
Range	Wall type	Sealing	Classification
CU2/B ≤ 4 x CU2 (200x200 mm ≤ CU2 ≤ 1200x800 mm)	Rigid wall	Reinforced concrete ≥ 110 mm	Mortar
CU2/B ≤ 4 x CU2 (200x200 mm ≤ CU2 ≤ 1500x800 mm)	Rigid wall	Reinforced concrete ≥ 110 mm	Mortar
CU2/B ≤ 4 x CU2 (200x200 mm ≤ CU2 ≤ 1500x800 mm)	Rigid wall	Reinforced concrete ≥ 110 mm	Mortar

1



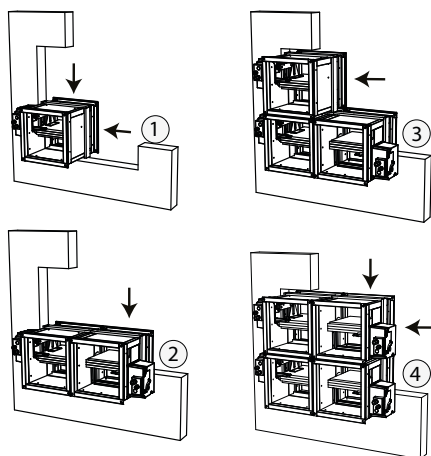
1. Cut the delivered EPDM foam to the correct sizes. Stick it on the edges of the individual dampers' flanges as illustrated (i.e. the sides that connect with other individual dampers).

2



2. Provide in the wall an installation opening of minimum (Xn+100) mm x (Yn+100) mm

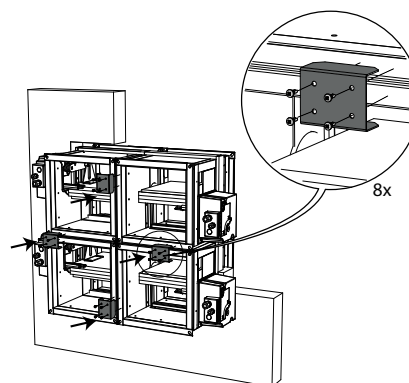
3



3. Mount the first individual damper in the opening. Mount the following dampers in the opening. Every individual damper needs to exceed the wall by 240 mm on the side of the mechanism.

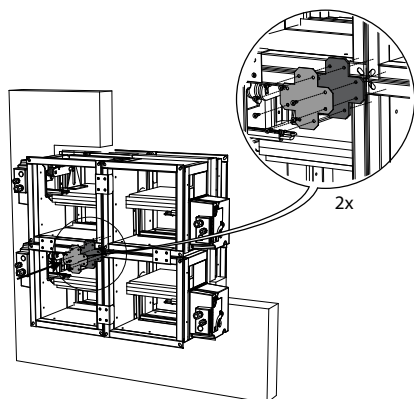
As the mechanism needs to be accessible at all times, you need to provide a free working space of min. 200 mm. If the mechanism is not accessible you need to provide an inspection shutter (e.g. false ceiling).

4



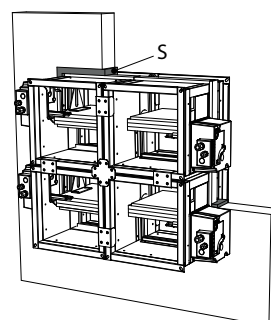
4. Fix the connection pieces with 4 self drilling screws on the front and back side of the individual dampers.

5



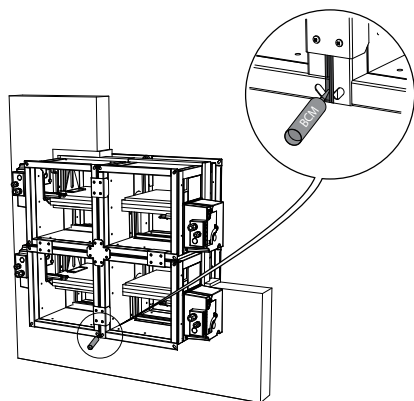
5. For a battery assembly B22: fix the center plate with 8 self drilling screws at the front and back sides of the battery assembly.

6



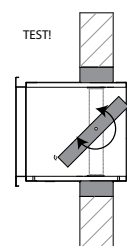
6. The joint S between the damper and the wall needs to be filled along the whole width of the wall with a standard concrete mortar.

7



7. Support the body and block the damper blade in its closed position to prevent deformation of the body during the drying process of the sealing. Check for openings in between the individual dampers. Seal the openings with adhesive BCM. Run a test on the mechanisms of the fire dampers.

8



8. Check the functioning of the damper blades.

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.be/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).

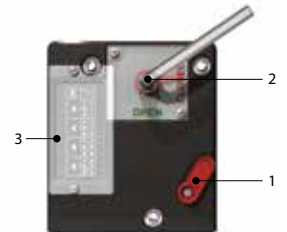
Operation and mechanisms



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:

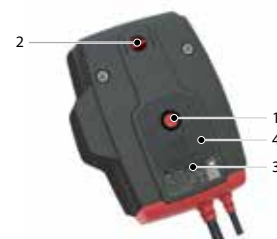
- ⚠ The mechanism may never be tested on its own, without being attached to the damper. Such a test might damage the mechanism or the operator might be injured.



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. Five models are available, 24 or 230 volt, with FDCU or FDCB position switches; and 24 volt with plug (ST).

1. unlocking button
2. blade position indicator
3. LED
4. battery compartment to reset motor
5. plug (ST)



Options - at the time of order

IXI-R1	Universal field module (Modbus, BACnet or analog connection), pre-mounted on the damper.
IXI-R2-24	Universal field controller (Modbus, BACnet), pre-mounted on the damper and with a connection for a second damper.
IXI-R2-230	Universal field controller (Modbus, BACnet), pre-mounted on the damper and with a connection for a second damper.

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.

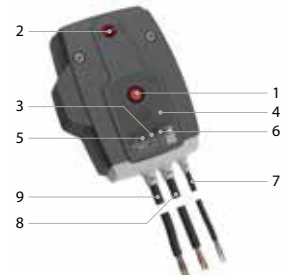
	prod. < 1/7/2015				prod. ≥ 1/7/2015			
	CR60(1s) CR120	CU-LT CU-LT-1s	CR2≤400 CU2≤1200	CR2>400 CU2>1200	CR60(1s) CR120(1s)	CU-LT CU-LT-1s	CR2≤400 CU2≤1200	CR2>400 CU2>1200
Kit ONE	●	●	●		●	●	●	●



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



Options - at the time of order

ONE-X CN Connectors for the bus cables and the power 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:

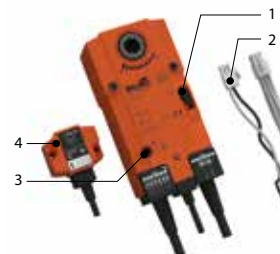
- ⚠ Do not use the ONE-X for any application other than the specified applications, in particular not in aircraft or other airborne vehicles.
- ⚠ The company that purchases and/or installs the ONE-X is fully responsible for the correct operation of the entire system. Only authorised specialists may perform 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 specially designed to remotely control fire dampers. The BFL(T) model is intended for fire dampers with smaller dimensions ($\varnothing \leq 400$ mm or $W+H \leq 1200$ mm/1400 mm for CU-LT, CU-LT-1s).

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'
IXI-R1	Universal field module (Modbus, BACnet or analog connection), pre-mounted on the damper.
IXI-R2-24	Universal field controller (Modbus, BACnet), pre-mounted on the damper and with a connection for a second damper.
IXI-R2-230	Universal field controller (Modbus, BACnet), pre-mounted on the damper and with a connection for a second damper.

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 specially designed to remotely control fire dampers. The BFN(T) model is intended for fire dampers with large dimensions ($\varnothing > 400$ mm (CR2) or W+H > 1200 mm (CU2, CA2, CU2-15, CU4)) or for dampers CU-LT(-1s), CR60, CR120 with a production date before 1 July 2015.

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'
IXI-R1	Universal field module (Modbus, BACnet or analog connection), pre-mounted on the damper.
IXI-R2-24	Universal field controller (Modbus, BACnet), pre-mounted on the damper and with a connection for a second damper.
IXI-R2-230	Universal field controller (Modbus, BACnet), pre-mounted on the damper and with a connection for a second damper.

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 BFNT).
- **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:

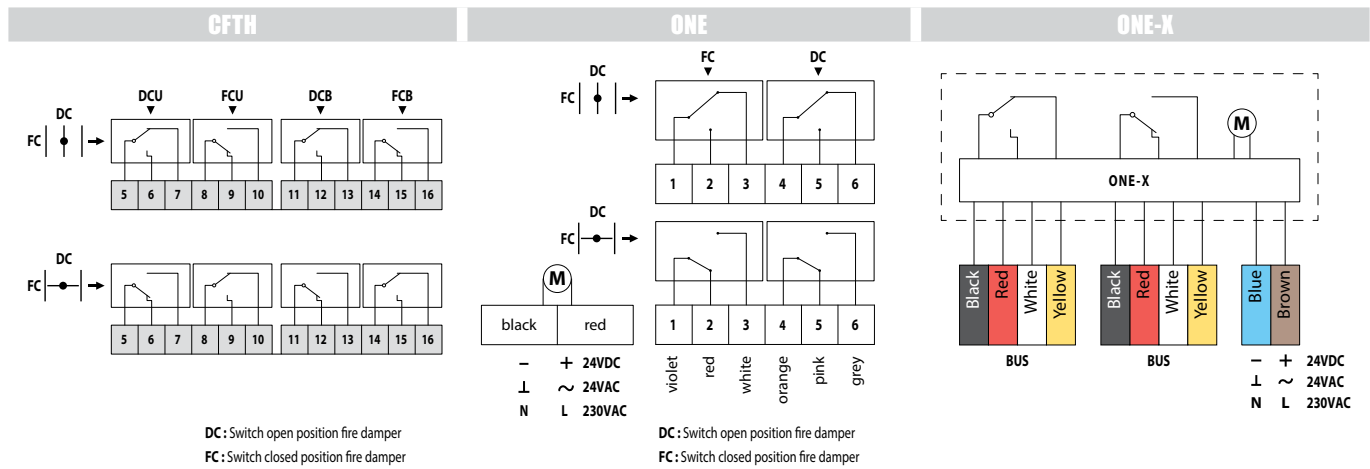
- ▲ Do not use a drill or powered screwdriver.
- ▲ Stop as soon as the motor is completely rearmed (end of range).

Caution:

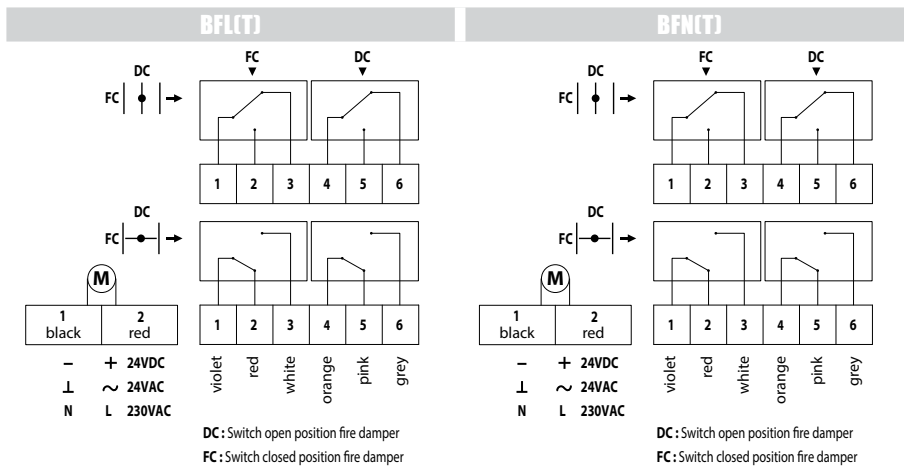
- ▲ The mechanism may never be tested on its own, without being attached to the damper. Such a test might damage the mechanism or the operator might be injured.

	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				●				

Electrical connection



MEC	Nominal voltage motor	Nominal voltage magnet	Power consumption (stand-by)	Power consumption (operating)	Standard switches
CFTH	N/A	N/A	N/A	N/A	1mA...6A, DC 5V...AC 250V
ONET 24 FDCU	24 V AC/DC (-10/+20%)	N/A	0,28W	4,2W	1mA...1A 60V
ONET 230 FDCU	230 V AC (-15/+15%)	N/A	0,57W	4,2W	1mA...1A 60V
ONET 24 FDCU ST	24 V AC/DC (-10/+20%)	N/A	0,28W	4,2W	1mA...1A 60V
ONET 24 FDCB	24 V AC/DC (-10/+20%)	N/A	0,28W	4,2W	1mA...1A 60V
ONET 230 FDCB	230 V AC (-15/+15%)	N/A	0,57W	4,2W	1mA...1A 60V
ONE-X 24	24 V AC/DC (-10/+20%)	N/A	0,28W	4,2W	
ONE-X 230	230 V AC (-15/+15%)	N/A	0,57W	4,2W	
BFL24	24 V AC/DC	N/A	0,7W	2,5W	1mA...3A, AC 250V
BFL230	230 V AC	N/A	1,1W	3,5W	1mA...3A, AC 250V
BFL24-ST	24 V AC/DC	N/A	0,7W	2,5W	1mA...3A, AC 250V
BFLT24	24 V AC/DC	N/A	0,8W	2,5W	1mA...3A, AC 250V
BFLT230	230 V AC	N/A	1,4W	4W	1mA...3A, AC 250V
BFLT24-ST	24 V AC/DC	N/A	0,8W	2,5W	1mA...3A, AC 250V
BFN24	24 V AC/DC	N/A	1W	4W	1mA...3A, AC 250V
BFN230	230 V AC	N/A	1,5W	5W	1mA...3A, AC 250V
BFN24-ST	24 V AC/DC	N/A	1W	4W	1mA...3A, AC 250V
BFNT24	24 V AC/DC	N/A	1,1W	4W	1mA...3A, AC 250V
BFNT230	230 V AC	N/A	1,8W	5,5W	1mA...3A, AC 250V
BFNT24-ST	24 V AC/DC	N/A	1,1W	4W	1mA...3A, AC 250V



MEC	Resetting time motor	Running time spring	Noise level motor	Noise level spring	Cable supply / control	Cable auxiliary switch	Protection class
CFTH	N/A	1 s	N/A	N/A			IP 42
ONET 24 FDCU	< 75 s (cabled) / < 85 s (battery)	< 30 s	< 64 dB (A)	< 67 dB (A)	1 m, 2 x 0.75 mm ²	1 m, 6 x 0.75 mm ²	IP 54
ONET 230 FDCU	< 75 s (cabled) / < 85 s (battery)	< 30 s	< 64 dB (A)	< 67 dB (A)	1 m, 2 x 0.75 mm ²	1 m, 6 x 0.75 mm ²	IP 54
ONET 24 FDCU ST	< 75 s (cabled) / < 85 s (battery)	< 30 s	< 64 dB (A)	< 67 dB (A)	1 m, 2 x 0.75 mm ²	1 m, 6 x 0.75 mm ²	IP 54
ONET 24 FDCB	< 75 s (cabled) / < 85 s (battery)	< 30 s	< 64 dB (A)	< 67 dB (A)	1 m, 2 x 0.75 mm ²	(2x) 1 m, 6 x 0,75 mm ²	IP 54
ONET 230 FDCB	< 75 s (cabled) / < 85 s (battery)	< 30 s	< 64 dB (A)	< 67 dB (A)	1 m, 2 x 0.75 mm ²	(2x) 1 m, 6 x 0,75 mm ²	IP 54
ONE-X 24	< 75 s (cabled) / < 85 s (battery)	< 30 s	< 64 dB (A)	< 67 dB (A)			IP 54
ONE-X 230	< 75 s (cabled) / < 85 s (battery)	< 30 s	< 64 dB (A)	< 67 dB (A)			IP 54
BFL24	< 60 s	20 s	< 43 dB (A)	< 62 dB (A)	1 m, 2 x 0.34 mm ² (halogen-free)	1 m, 6 x 0.75 mm ² (halogen-free)	IP 54
BFL230	< 60 s	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	< 60 s	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	< 60 s	20 s	< 43 dB (A)	< 62 dB (A)	1 m, 2 x 0.34 mm ² (halogen-free)	1 m, 6 x 0.75 mm ² (halogen-free)	IP 54
BFLT230	< 60 s	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	< 60 s	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	< 60 s	20 s	≤ 55 dB (A)	ca. 70 dB (A)	1 m, 2 x 0.34 mm ² (halogen-free)	1 m, 6 x 0.75 mm ² (halogen-free)	IP 54
BFN230	< 60 s	20 s	≤ 55 dB (A)	ca. 70 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	< 60 s	20 s	≤ 55 dB (A)	ca. 70 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	< 60 s	20 s	≤ 55 dB (A)	ca. 70 dB (A)	1 m, 2 x 0.34 mm ² (halogen-free)	1 m, 6 x 0.75 mm ² (halogen-free)	IP 54
BFNT230	< 60 s	20 s	≤ 55 dB (A)	ca. 70 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	< 60 s	20 s	≤ 55 dB (A)	ca. 70 dB (A)	1 m, 2 x 0.75 mm ² (halogen-free)	1 m, 6 x 0.75 mm ² (halogen-free)	IP 54

CU2/B + BFLT

Hn\Wn (mm)		200	250	300	350	400	450	500	550	600	650	700	750	800	850	900	950	1000
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	26,8	27,9
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	28,8	-
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	-	-	-	-	-	-	-	-	-	-	-	-

CU2/B + BFN

Hn\Wn (mm)		450	500	550	600	650	700	750	800	850	900	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	-	-	-	-	-	-	-	-	30,1	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	-	-	-	-	-	-	-	30,7	32,0	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	-	-	-	-	-	-	31,2	32,6	33,9	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	-	-	-	-	-	31,5	33,0	34,4	35,9	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	-	-	-	-	31,7	33,2	34,8	36,3	37,8	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	-	-	-	31,8	33,4	35,0	36,5	38,1	39,7	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	-	-	31,8	33,4	35,0	36,7	38,3	40,0	41,6	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	-	31,6	33,3	35,0	36,7	38,4	40,1	41,8	43,5	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	-	31,3	33,0	34,8	36,6	38,4	40,1	41,9	43,7	45,5	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	30,8	32,7	34,5	36,3	38,2	40,0	41,9	43,7	45,5	47,4	49,2	51,1	52,9	54,7	56,6	58,4	60,3	62,1	63,9	65,8	67,6	69,5

CU2/B + BFNT

Hn\Wn (mm)		500	550	600	650	700	750	800	850	900	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	-	-	-	-	-	-	-	30,2	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	-	-	-	-	-	-	30,8	32,1	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	-	-	-	-	-	31,3	32,7	34,0	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	-	-	-	-	31,6	33,1	34,5	36,0	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	-	-	-	31,8	33,3	34,9	36,4	37,9	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	-	-	31,9	33,5	35,1	36,6	38,2	39,8	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	-	31,9	33,5	35,1	36,8	38,4	40,1	41,7	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	-	31,7	33,4	35,1	36,8	38,5	40,2	41,9	43,6	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	31,4	33,1	34,9	36,7	38,5	40,2	42,0	43,8	45,6	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	32,8	34,6	36,4	38,3	40,1	42,0	43,8	45,6	47,5	49,3	51,2	53,0	54,8	56,7	58,5	60,4	62,2	64,0	65,9	67,7	69,6

CU2/B-L500 + BFLT

Hn\Wn (mm)		200	250	300	350	400	450	500	550	600	650	700	750	800	850	900	950	1000
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	29,1	30,3
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	31,3	-
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	-	-	-	-	-	-	-	-	-	-	-	-

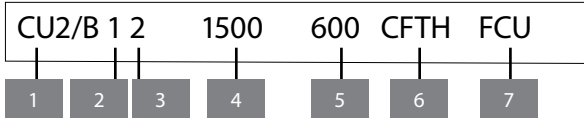
CU2/B-L500 + BFN

Hn\Wn (mm)		450	500	550	600	650	700	750	800	850	900	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	-	-	-	-	-	-	-	-	-	32,7	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	-	-	-	-	-	-	-	-	33,3	34,8	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	-	-	-	-	-	-	-	33,9	35,4	36,9	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	-	-	-	-	-	-	34,2	35,8	37,4	39,0	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	-	-	-	-	-	34,5	36,1	37,8	39,4	41,1	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	-	-	-	-	34,5	36,3	38,0	39,7	41,5	43,2	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	-	-	-	34,5	36,3	38,1	39,9	41,7	43,5	45,3	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	-	-	34,3	36,2	38,0	39,9	41,8	43,6	45,5	47,4	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	-	33,9	35,9	37,8	39,8	41,7	43,6	45,6	47,5	49,5	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	33,5	35,5	37,5	39,5	41,5	43,5	45,5	47,5	49,5	51,6	53,6	55,6	57,6	59,6	61,6	63,6	65,6	67,6	69,6	71,7	73,7	75,7

CU2/B-L500 + BFNT

Hn\Wn (mm)		450	500	550	600	650	700	750	800	850	900	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	-	-	-	-	-	-	-	-	-	32,8	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	-	-	-	-	-	-	-	-	33,4	34,9	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	-	-	-	-	-	-	-	34,0	35,5	37,0	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	-	-	-	-	-	-	34,3	35,9	37,5	39,1	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	-	-	-	-	-	34,6	36,2	37,9	39,5	41,2	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	-	-	-	-	34,6	36,4	38,1	39,8	41,6	43,3	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	-	-	-	34,6	36,4	38,2	40,0	41,8	43,6	45,4	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	-	-	34,4	36,3	38,1	40,0	41,9	43,7	45,6	47,5	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	-	34,0	36,0	37,9	39,9	41,8	43,7	45,7	47,6	49,6	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	33,6	35,6	37,6	39,6	41,6	43,6	45,6	47,6	49,6	51,7	53,7	55,7	57,7	59,7	61,7	63,7	65,7	67,7	69,7	71,8	73,8	75,8

Sample order



1. product
2. number of individual dampers in width
3. number of individual dampers in height
4. total width of the battery
5. total height of the battery
6. mechanism type
7. option: uni/bipolar switches

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



NF 537
CLAPETS RÉSISTANT AU FEU
VOLETS RÉSISTANT AU FEU
www.marque-nf.com

18.12



SC0652-15

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> <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