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Product manual

Regulation dampers

RD, RD-A

Air distribution

Version 1.0.3
Date: 22.01.2025.

Regulation dampers RD

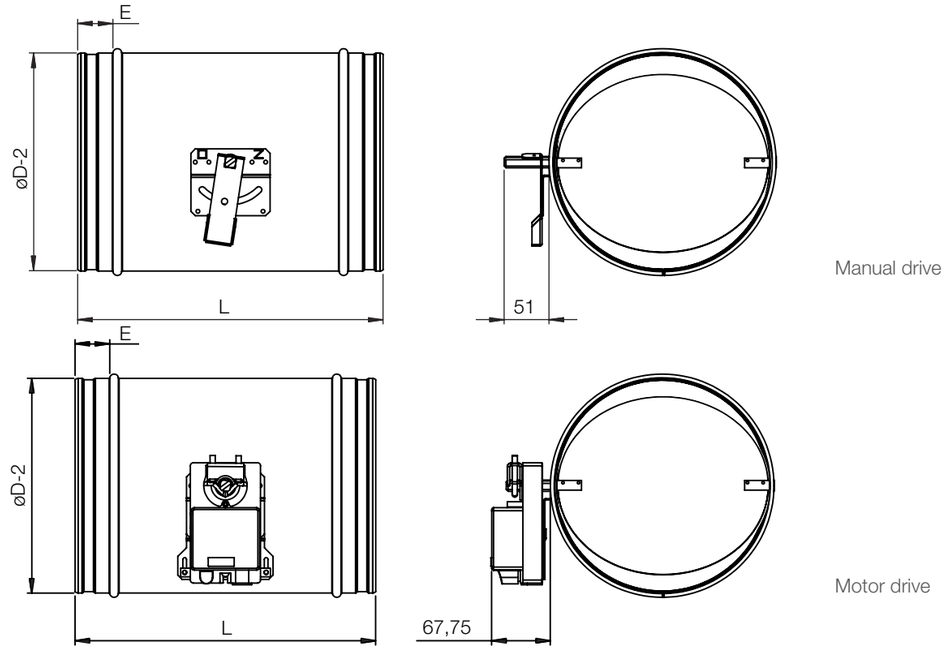
- Manual regulation / control of airflow in round ventilation ducts
- Made of galvanized steel sheet
- Self-locking control mechanism made of plastic is installed in dampers of diameter ≤ 250 mm and for operating temperatures up to 70°C
- For larger diameters, D ≥ 250 mm, a metal control mechanism is installed

DIMENSIONS

ØD	100	125	160	200	250	315	355	400
E	40	40	40	40	40	50	50	60
L	220	220	220	220	350	350	350	350

Motor drives

☐ LM 5 Nm



Airtight regulation dampers RD-A

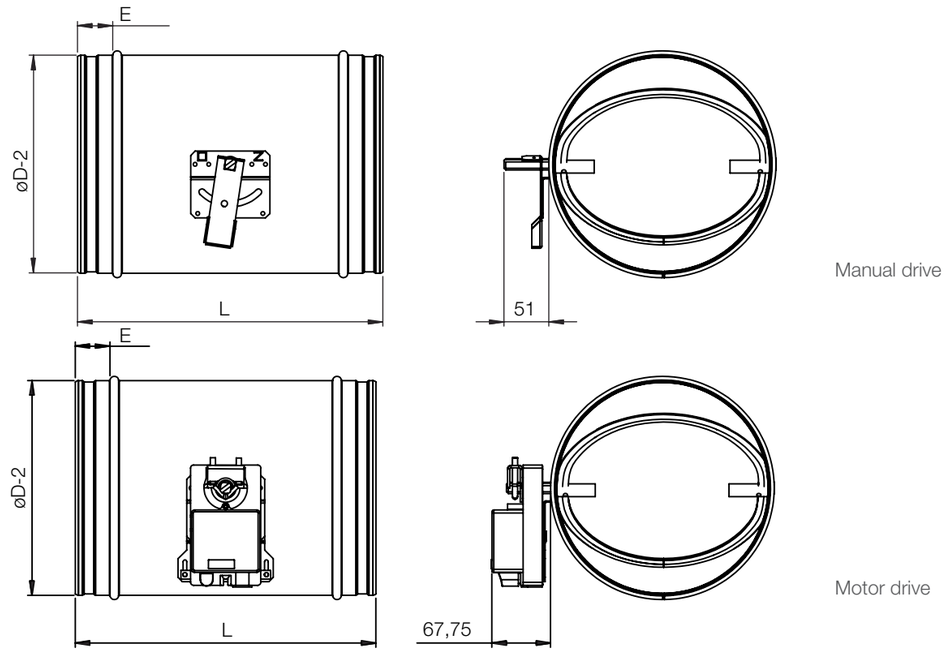
- Manual regulation / control of airflow in round ventilation ducts
- Made of galvanized steel sheet
- Self-locking control mechanism made of plastic is installed in dampers of diameter ≤ 250 mm and for operating temperatures up to 70°C
- Motor drive
- Class C airtightness of the casing and class 3 on the damper blade

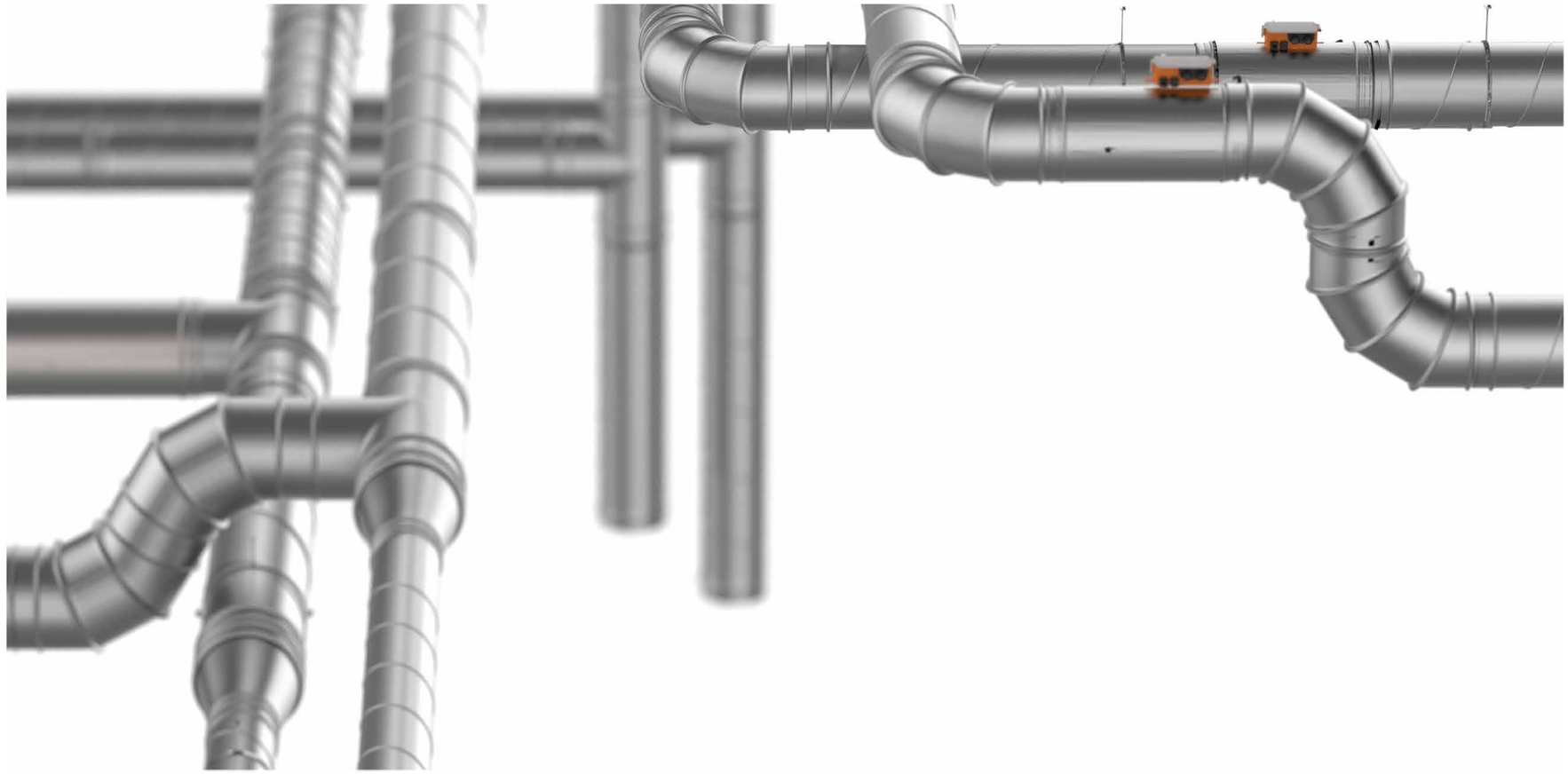
DIMENSIONS

ØD	100	125	160	200	250	315	400
E	40	40	40	40	40	50	50
L	220	220	220	220	350	350	350

Motor drives

☐ LM 5 Nm





ORDERING KEY RD/RD-A

(1) Volume control damper	(2) Diameter [mm]	(3) Actuator	(4) Regulation
RD	- Ød	- M230	- OZ

(1) Volume control damper type: **RD**
RD-A

(2) Diametre **Ød**

(3) Drive
R - manual
M - preparation for a motor drive
M24 - motor drive 24V
M230 - motor drive 230V

(4) Regulation
OZ - two positions
K - continuous
F - returning spring
Q - fast acting

Belimo motor drive

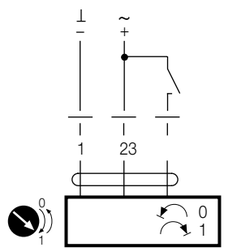
- motor drives - Belimo (open/close, continuous, fast-acting, spring return)
- power supply - AC 24V, 50/60 Hz
  - DC 24V
- IP54 degree of protection

Voltage AC/DC	Type	Control	Torque	Energy consumption	Wire sizing	Weight [kg] approx.	Dimension (F x E)
DC24V	LM24A	3-point	5 Nm	1 W	1.5 VA	0.46	160 x 90
	NM24A	3-point	10 Nm	1,5 W	3.5 VA	0.75	180 x 90
	SM24A	3-point	20 Nm	2 W	4VA	0.94	180 x 90
	LM24A-SR	continuous	5 Nm	1 W	2VA	0.40	160 x 90
	NM24A-SR	continuous	10 Nm	2 W	4VA	0.74	180 x 90
	SM24A-SR	continuous	20 Nm	2 W	4VA	0.93	180 x 90
	LMQ24A	fast-acting	4 Nm	13 W	Imax 20 A @ 5 ms	0.87	190 x 100
	NMQ24A	fast-acting	8 Nm	13 W	Imax 20 A @ 5 ms	1	205 x 110
	SMQ24A	fast-acting	16 Nm	15 W	Imax 20 A @ 5 ms	1.7	180 x 110
	LF24	spring return	4 Nm	5 W	Imax 5.8 A @ 5 ms	1.4	220 x 110
AC/DC 24/230V	NFA	spring return	10 Nm	6 W	9,5 VA	3.1	240 x 120
AC 230V	LM230A	3-point	5 Nm	1,5 W	3,5 VA	0.46	160 x 90
	NM230A	3-point	10 Nm	2.5 W	5,5 VA	0.72	180 x 90
	SM230A	3-point	20 Nm	2.5 W	6 VA	1.1	180 x 90
	LM230A-SR	continuous	5 Nm	2 W	4 VA	0.50	180 x 90
	NM230A-SR	continuous	10 Nm	3,5 W	6,5 VA	0.84	190 x 90
	SM230A-SR	continuous	20 Nm	3.5 W	6,5 VA	1.1	205 x 90
	LF230	spring return	4 Nm	5 W	7 VA	1.6	220 x 110

Wiring diagram

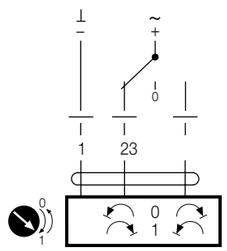
OZ -open/close

AC/DC 24 V, open/close



1 = black
2 = red
3 = white

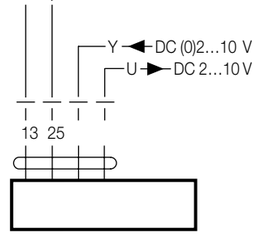
AC/DC 24 V, 3-point



1 = black
2 = red
3 = white

K -continuous

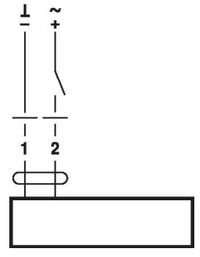
AC/DC 24 V, modulating



1 = black
2 = red
3 = white
5 = orange

F -spring return

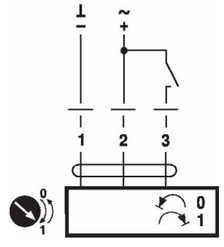
AC/DC 24 V, open/close



1 = black
2 = red

Q -fast-acting

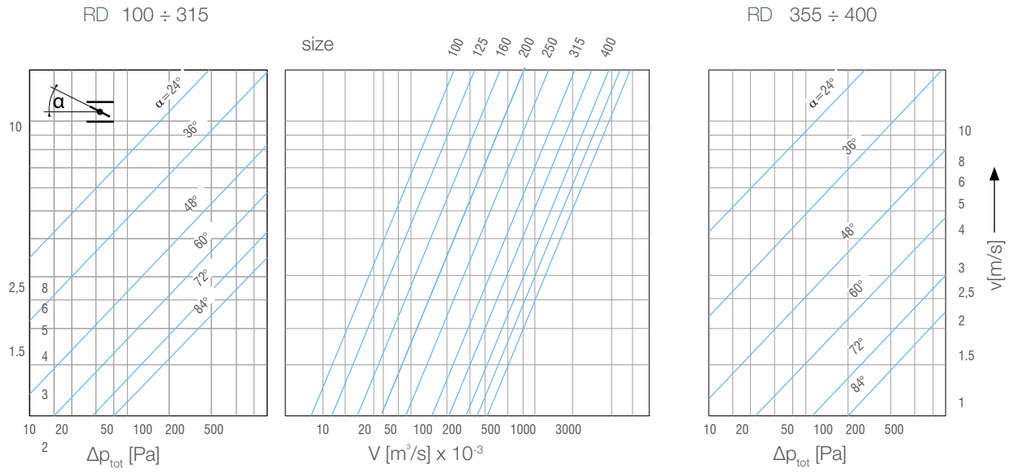
AC/DC 24 V, open/close



1 = black
2 = red
3 = white

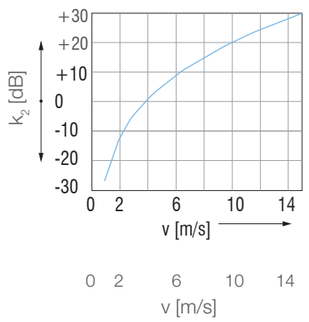
RD Product overview
RD-A Product overview
Ordering key
Actuators
RD Diagrams
RD-A Diagrams

Selection diagram RD



ØD	100	125	160	200	250	315	355	400
k_1 [dB]	-2	-1	0	+1	+2	+3	+3	+4

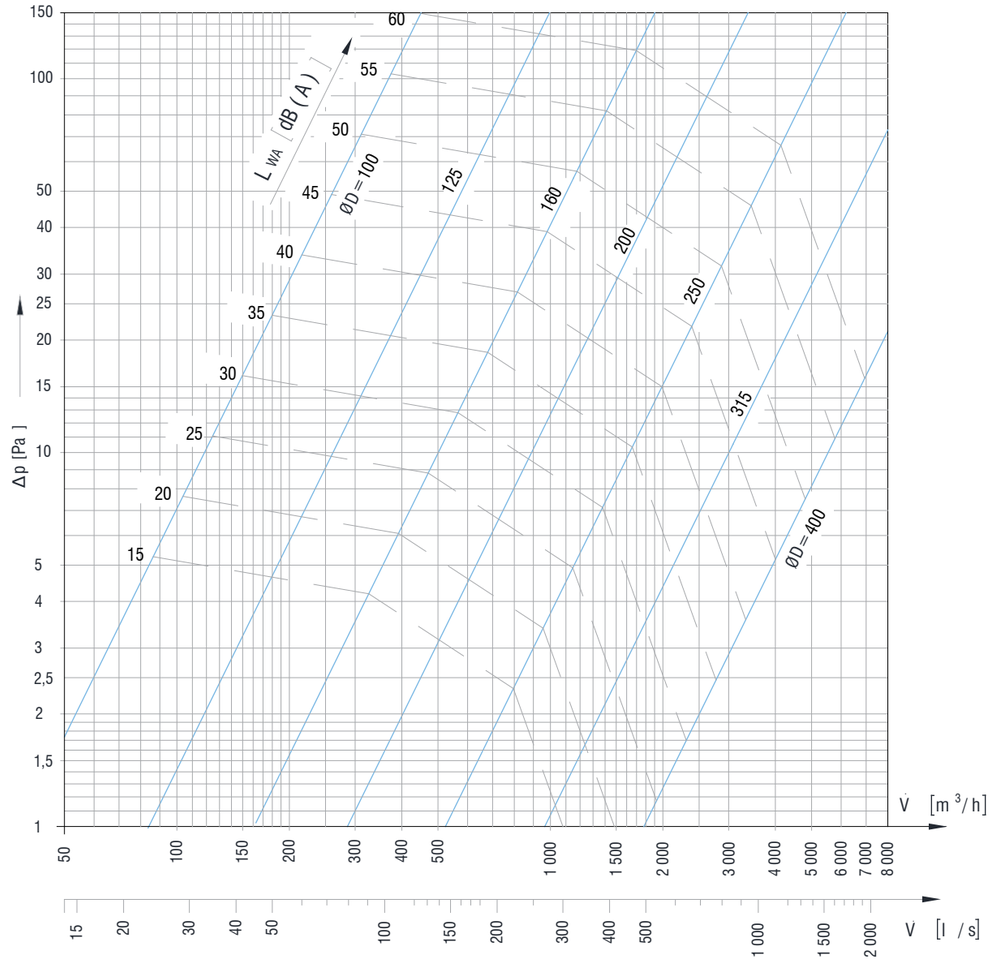
Sound power levels RD



Total sound power level :

$L_w = L_{wnom} + k_1 + k_2$

Pressure drop and sound power level diagram RD-A

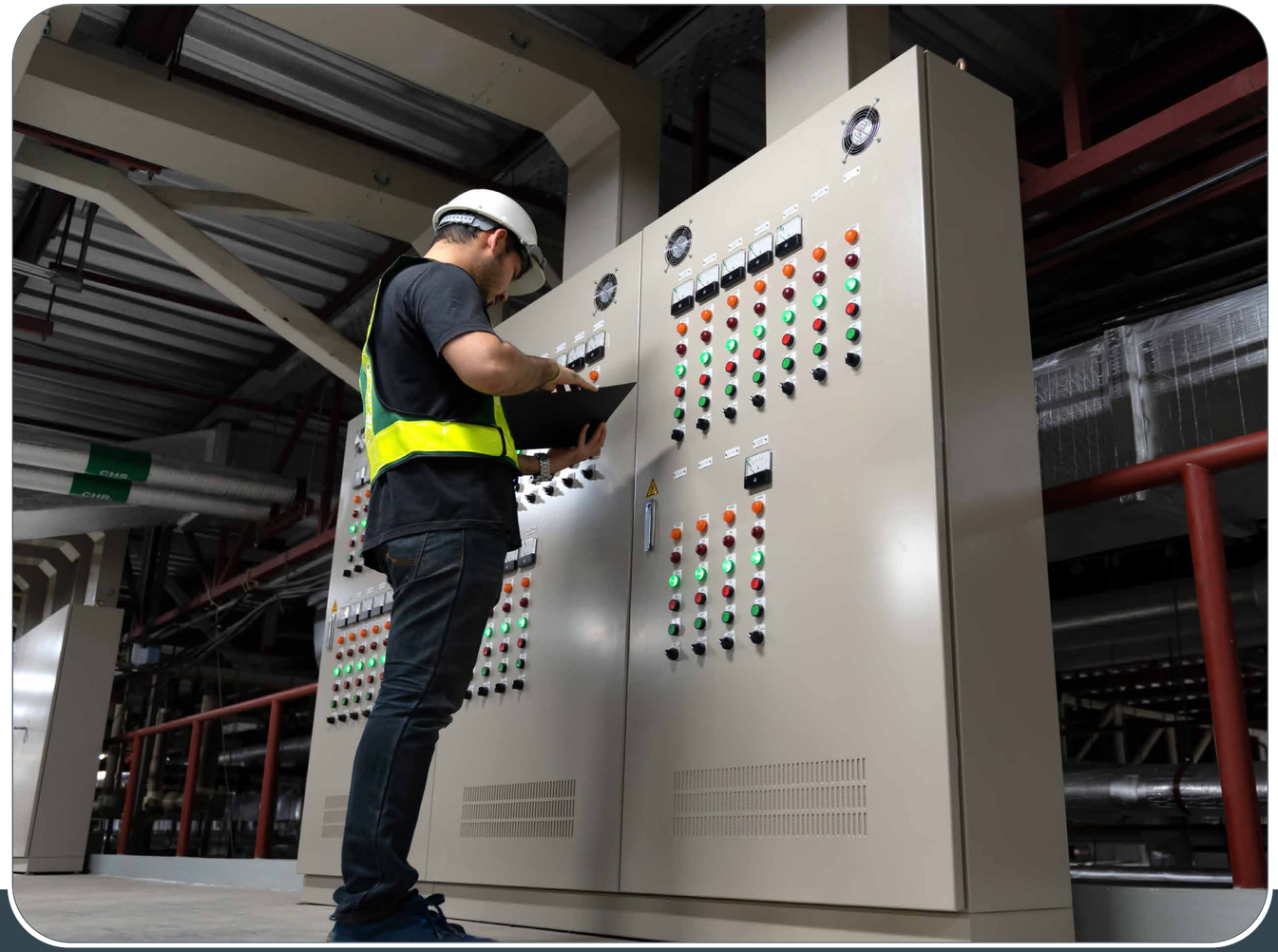


Example:

Given:

V=850 m³/h
v=5 m/s
Duct pressure = 2000 Pa

Dg.1: D=250mm
Δp = 2,7 Pa, L_w= 17dB(A)



TRANSPORT

After arrival, check the damper for transport damage and shortcomings. In case of any damage or shortcomings, immediately contact your supplier.

STORAGE

If the damper is not installed immediately:

- Remove any wrapping.
- Protect product from dust and contamination.
- Do not expose the damper to the effects of weather - store the damper in a dry place.
- Do not store the unit below -20 °C or above 50 °C.

Please properly dispose of packaging material!

MAINTENANCE AND OPERATION

Klimaoprema regulation dampers are designed with fully enclosed drive mechanism outside of the duct and as such do not require cleaning and regular maintenance.
However, activation mechanism should be inspected for proper operation on regular basis.

- Provide at least one annual check of the damper
- After each intervention, provide a systematic cleaning of dust and its movable plate
- Check the if the electrical terminals are tightened
- Cleaning instruction: clean with a sponge, with water or a mild detergent
- Disinfection instruction: spray disinfectant (desinfectant may contain alcohol which is flammable, take precaution to avoid ignition)

It is not permitted to alter the products in any way nor perform any changes to their structure (except for the service procedures described in this manual) without the manufacturer's consent.
Provide at least one annual check of product. The functional test must be carried out in compliance with the basic maintenance principles of the European norms.

COMMISSIONING

- Carefully unpack product- be careful of sharp edges and do not use excessive force for unpacking
- Inspect the product - check the regulation damper for damage
- Installation of the regulation damper - according to the installation instructions
- Before commissioning: check the product functions

FUNCTIONS

Release mechanism:

- Damper blade can be closed and opened manually

Electric actuator:

- Signal testing - the damper blade must close/open

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AIRFLOW REGULATION

Projektiranje, proizvodnja i održavanje opreme za klimatizaciju, ventilaciju i čiste prostore.
Design, production and service of Ventilation, Air-Conditioning and Cleanroom equipment.

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