



Product manual

Regulation dampers

RD, RD-A

Air distribution

Version 1.0.3
Date: 03.03.2022

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, $D \geq 250$ mm, a metal control mechanism is installed



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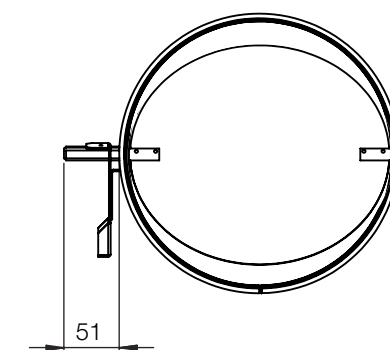
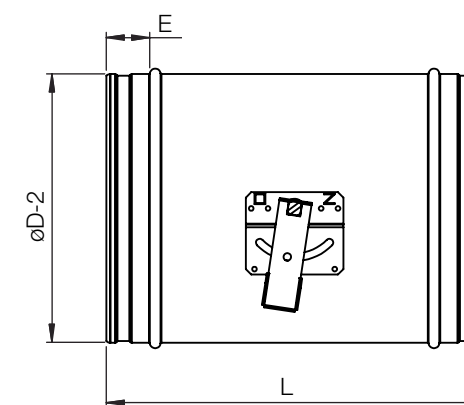


RD

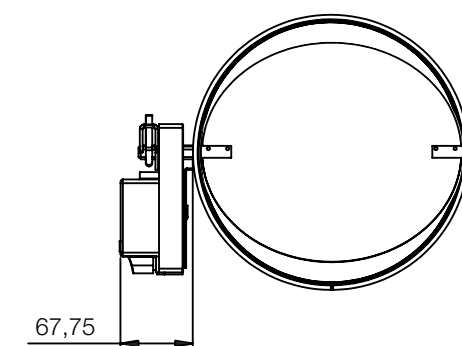
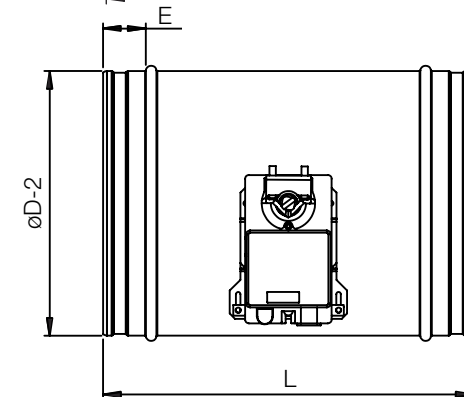
AIRFLOW REGULATION

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



Manual drive



Motor drive

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

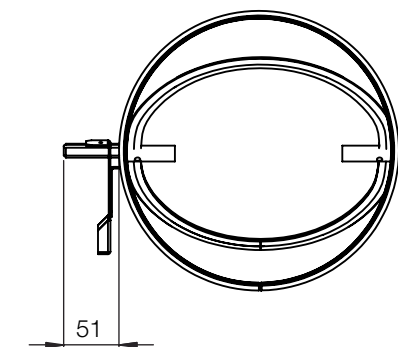
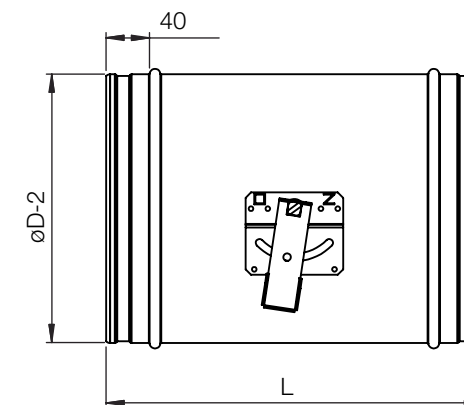


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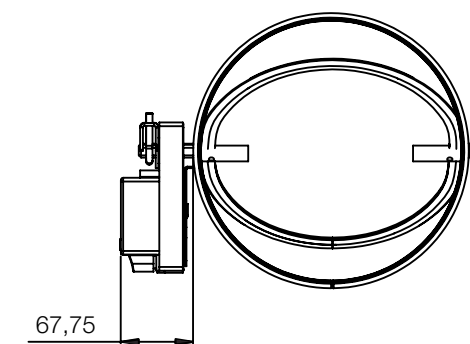
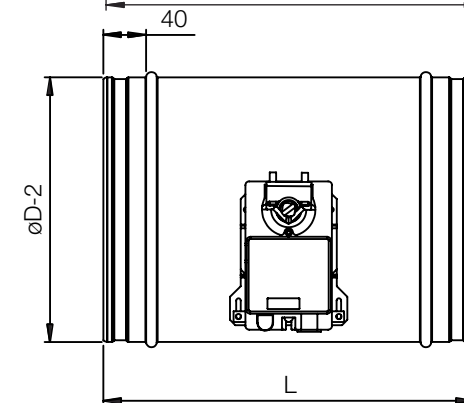


DIMENSIONS

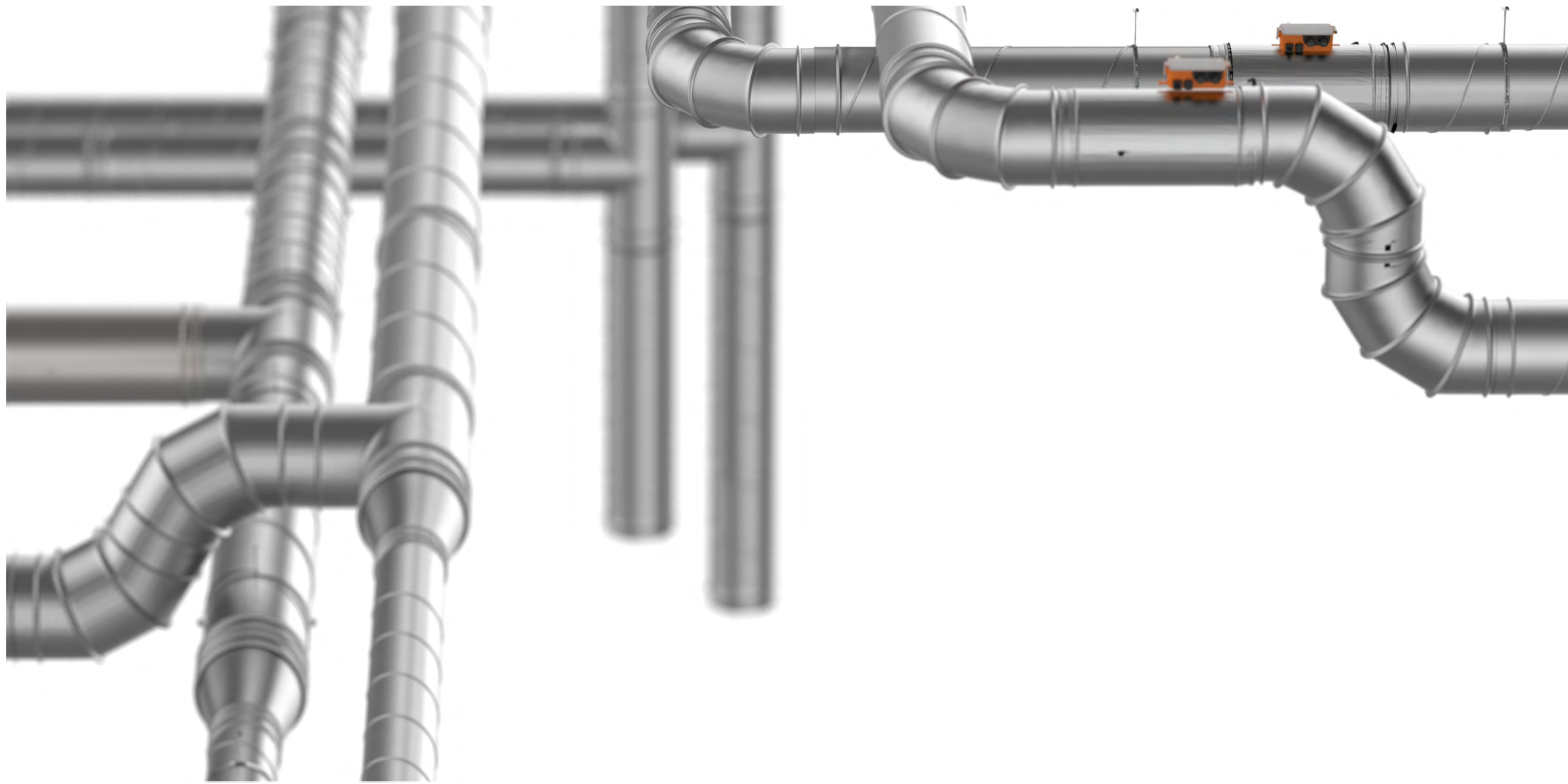
ØD	100	125	160	200	250	315	400
E	40	40	40	40	40	50	50
L	220	220	220	220	350	350	350



Manual drive



Motor drive



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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) Diameter 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

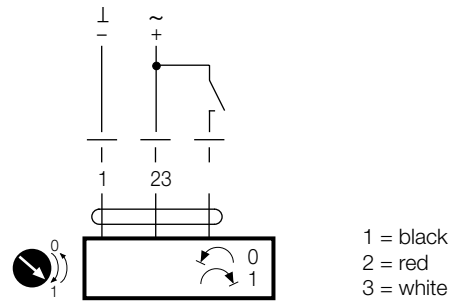
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ACTUATORS

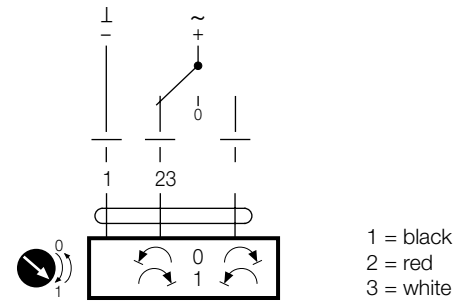
Wiring diagram

OZ -open/close

AC/DC 24 V, open/close

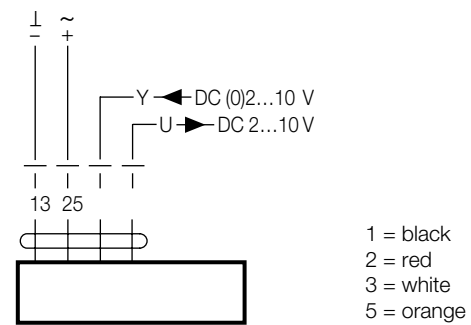


AC/DC 24 V, 3-point



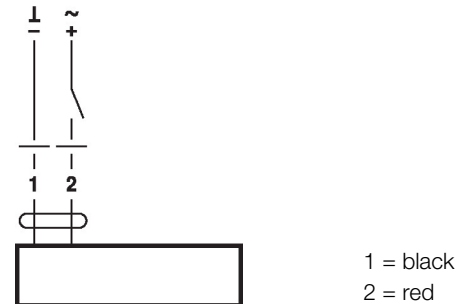
K -continuous

AC/DC 24 V, modulating



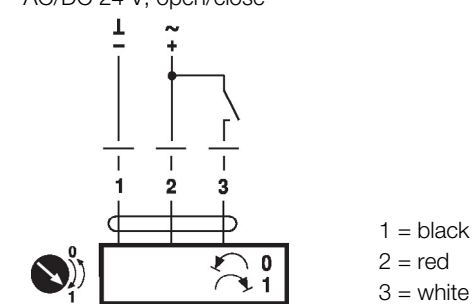
F -spring return

AC/DC 24 V, open/close



Q -fast-acting

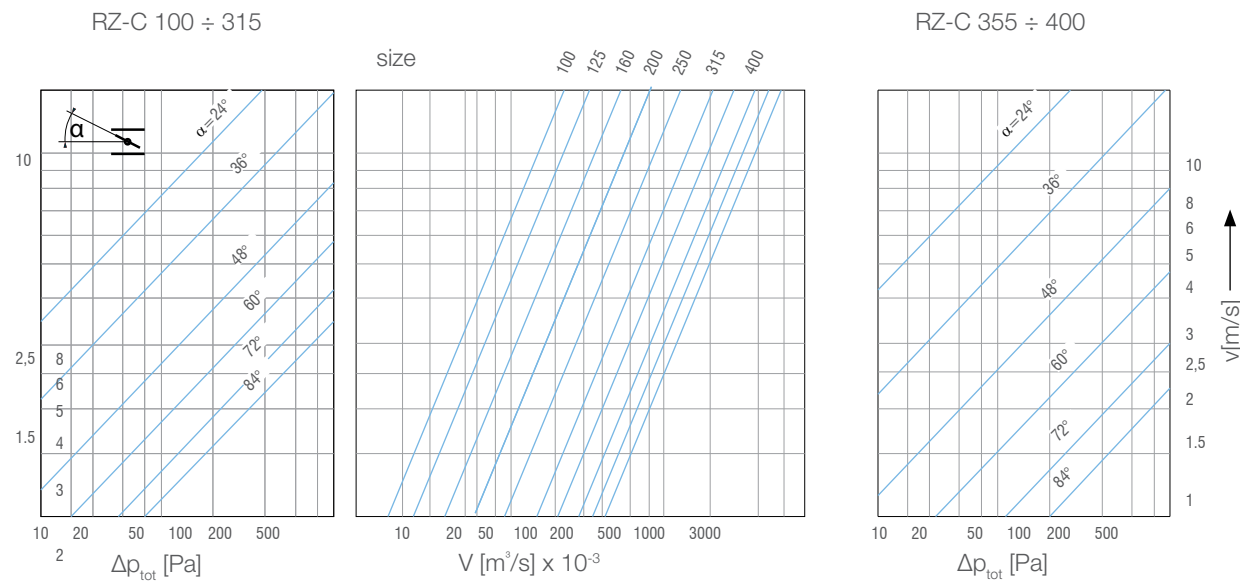
AC/DC 24 V, open/close



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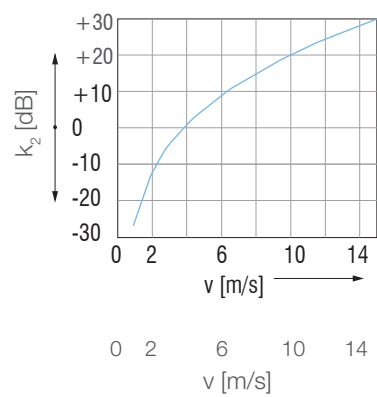
Selection diagram RD



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

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Sound power levels RD



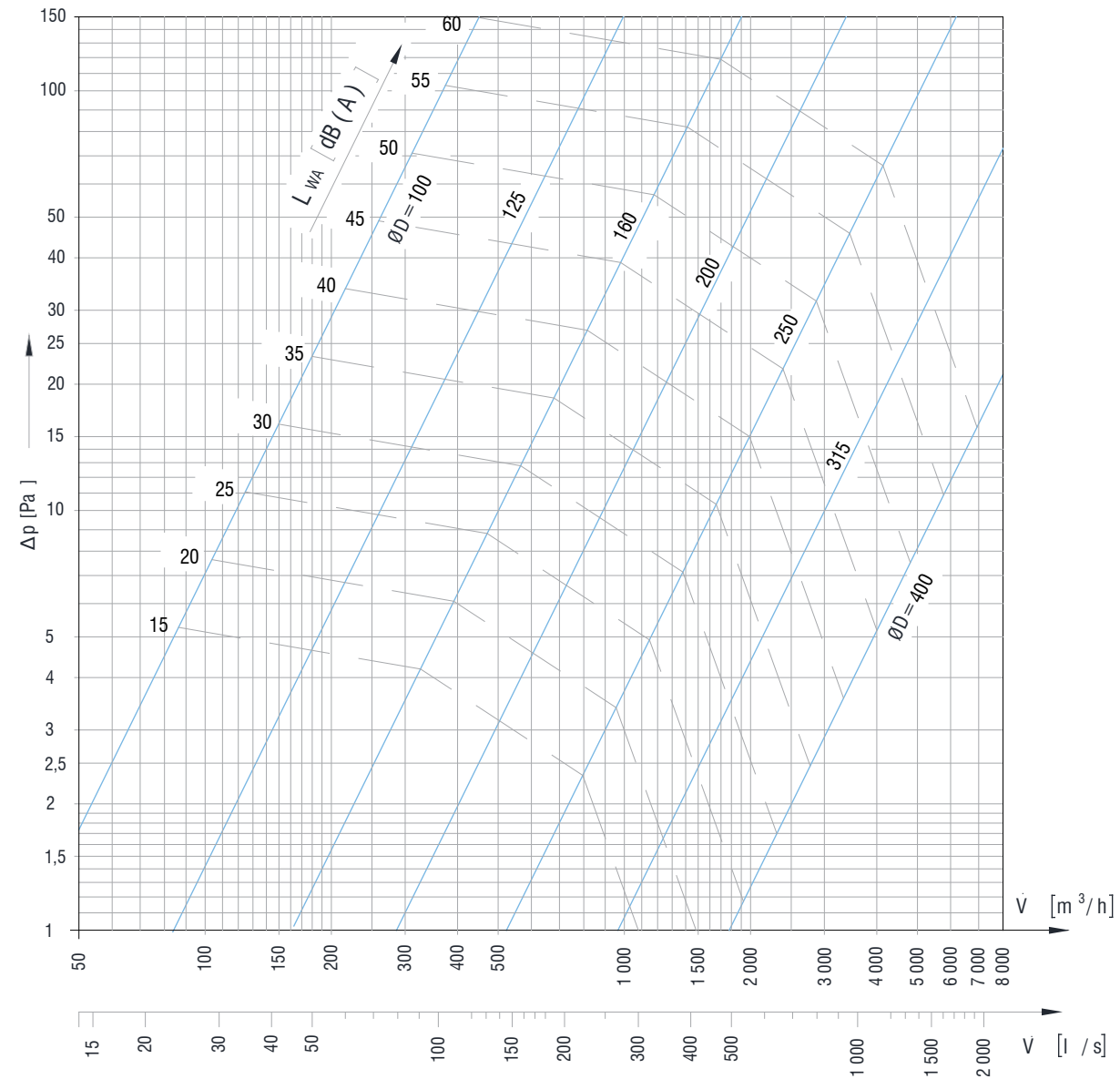
Total sound power level :

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



RD DIAGRAMS

Pressure drop and sound power level diagram RD-A



Example:

Given:

$V=850 \text{ m}^3/\text{h}$

$v=5 \text{ m/s}$

Duct pressure = 2000 Pa

Dg.1: $D=250\text{mm}$

$\Delta p = 2,7 \text{ Pa}$, $L_w = 17\text{dB(A)}$

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TRANSPORT

After arrival, check the VAV 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 VAV damper from dust and contamination.
- Do not expose the VAV 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 VAV 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 especially the solenoid 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 (disinfectant 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 volume flow damper for damage
- Installation of the volume flow 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



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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