

Pressure controller EMPA, EMPD



Key features

- Constant pressure
- Sound attenuation
- Real-time pressure monitoring with FW compact controller
- Can be connected to Modbus



EMPA and EMPD are compact pressure controllers for the OPTIVENT system. EMPD is insulated, EMPA is without insulation. These round controllers are designed for use in ducting systems where constant pressure is required. EMSA is a separate device for measuring static pressure.

Specifications

- Pressure controller for supply/exhaust air
- EMPA without insulation
- EMPD with acoustic insulation
- Unenclosed control equipment
- FW compact controller as standard
- Pressure adjustment (max, min) without special tools
- Real-time pressure monitoring
- Operating range: static pressure less than 300 Pa
- CEN3 blade seal
- Nine sizes, 100-630 mm

Product code example

- Pressure controller for supply or exhaust air EMPA-125
- Measuring device EMSA-125

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EMP(A,D) pressure controller

The controller can be used in both pressure-dependent and VAV systems for ensuring correct pressure and, if appropriate, for forced shut-off of supply or exhaust air.

The controller consists of a measuring point, a damper blade and an insulated (EMPD) or uninsulated (EMPA) casing.

The damper has stable bearings made of nylon that are maintenance-free.

The damper is equipped with an EPDM rubber blade seal and conforms to air tightness class 3 in accordance with EN 1751:1998.

The casing of EMPD has double walls and intermediate glass wool insulation with a thickness of 50 mm and therefore gives low acoustic radiation.

Connection dimensions 100–630 mm.

Components in contact with the ventilation air conform to corrosivity classes C3 or C4 in accordance with EN-ISO 12944-2.

Air tightness class B in accordance with EN1751:1998.

The actuator is mounted on the device body.

The display on the actuator provides a real-time reading of static pressure.

All duct connections have spigot dimensions and are equipped with sealing rings made of rubber.

A separate pressure measuring device EMSA is used when the static pressure needs to be measured further out in the system.

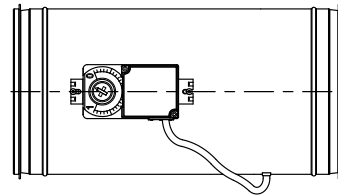
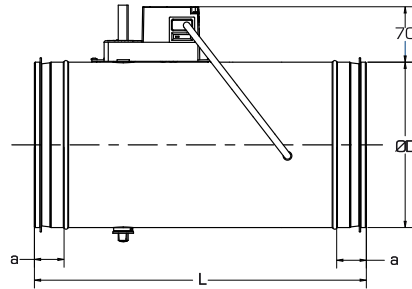
A 50m PVC hose (EMSZ-1) is also available if required.

Safety distances

Type of disturbance	The required safety distance L $m^2 = \pm 10\%$
T-piece	2 x $\varnothing D$
Bend	1 x $\varnothing D$

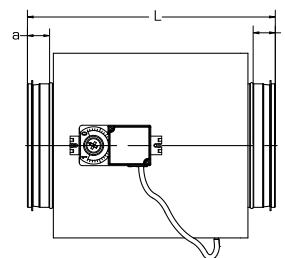
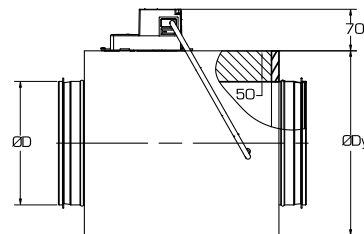
Dimensions and weights

EMPA



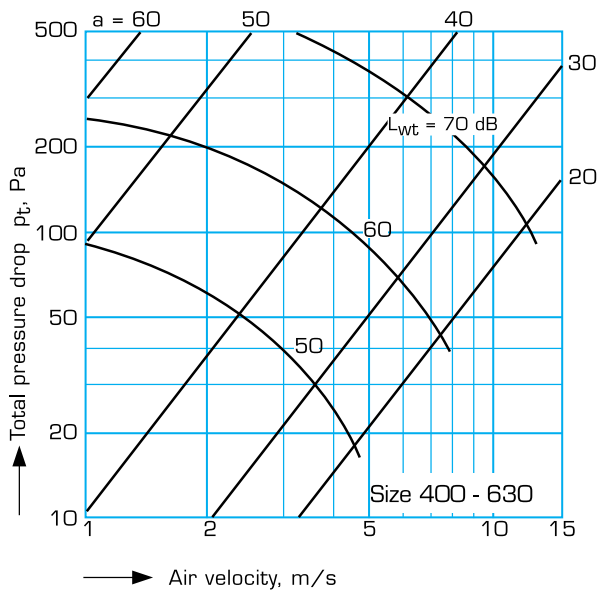
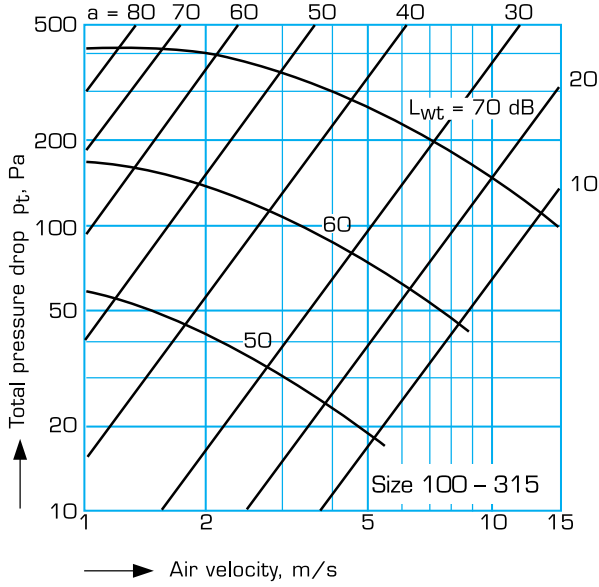
Size	$\varnothing D$	a	L, mm	Weight, kg
100	99	35	400	1.4
125	124	35	400	1.7
160	159	35	400	2.2
200	199	35	400	2.7
250	249	40	580	4.1
315	314	40	580	5.4
400	399	60	650	9.3
500	499	60	850	14.2
630	629	60	850	19.5

EMPD



Size	a	$\varnothing D$	$\varnothing D_y$	L, mm	Weight, kg
100	35	99	200	400	2.8
125	35	124	225	400	4.0
160	35	159	260	400	3.3
200	35	199	300	400	4.1
250	40	249	350	580	5.8
315	40	314	415	580	10.2
400	60	399	500	650	17.5
500	60	499	600	850	27.4
630	60	529	730	850	35.7

Sound characteristics



Blade angle correction K2

Size	Blade angle a°	K ₂ , dB						
		Medium frequency by octave band, Hz						
		125	250	500	1000	2000	4000	8000
100-315	10	0	-12	-15	-22	-27	-32	-37
	20	0	-9	-14	-20	-26	-30	-36
	30	-2	-7	-12	-17	-20	-23	-29
	40	-4	-7	-12	-15	-12	-8	-8
	50	-4	-6	-8	-12	-14	-17	-22
	60	-6	-4	-10	-16	-18	-22	-25
	70	-7	-2	-13	-23	-27	-35	-42
	80	-13	-1	-16	-24	-28	-36	-45
400-630	20	0	-16	-18	-24	-27	-31	-33
	30	0	-13	-16	-20	-21	-26	-29
	40	-1	-10	-13	-17	-16	-20	-24
	50	-5	-11	-12	-13	-11	-15	-19
	60	-12	-13	-13	-9	-6	-11	-13

Product code

Pressure controller, round EMP(A, D)-aaa

A = without insulation

D = with insulation

Size (aaa)

100, 125, 160, 200, 250, 315, 400, 500, 630

Actuator

compact controller 227PM

Material

corrosivity class C3, galvanised sheet steel

Tightness

CEN3, blade with a seal

Pressure controller with Modbus, round

EMP(A, D)-aaa-b

A = without insulation

D = with insulation

Size (aaa)

100, 125, 160, 200, 250, 315, 400, 500, 630

Actuator (b)

5 = Compact controller for Modbus 227PM-MB

6 = Compact controller for Modbus, IPSUM-version 227PM-MB-ST

Material

corrosivity class C3, galvanised sheet steel

Tightness

CEN3, blade with a seal

Accessories

Pressure gauge

EMSA-aaa

Size (aaa)

100, 125, 160, 200, 250, 315, 400, 500, 630

Pressure hose

EMSZ-1

PVC hose 5/8.2 clear 50m coil

Accessories are supplied loose, not installed.