Multi-leaf damper PWR

Description and application:

Multi-leaf dampers are used to control the air flow in ventilation ducts and often behind external intake louvres. The dampers are made of: frame made of profiled galvanized sheet and aluminum blades embedded in plastic bearings. The drive is by gear wheels are made of plastic. Blades open oppositely. Type of drives :
- manual (PWR)
- with actuator (PWE)

Damper due to the used plastic components work safely to the temperature max 70°C.

Damper has Hygienic Certificate HK/K/0522/03/2016

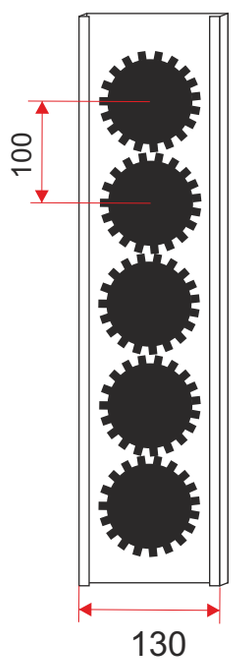
Material and workmanship

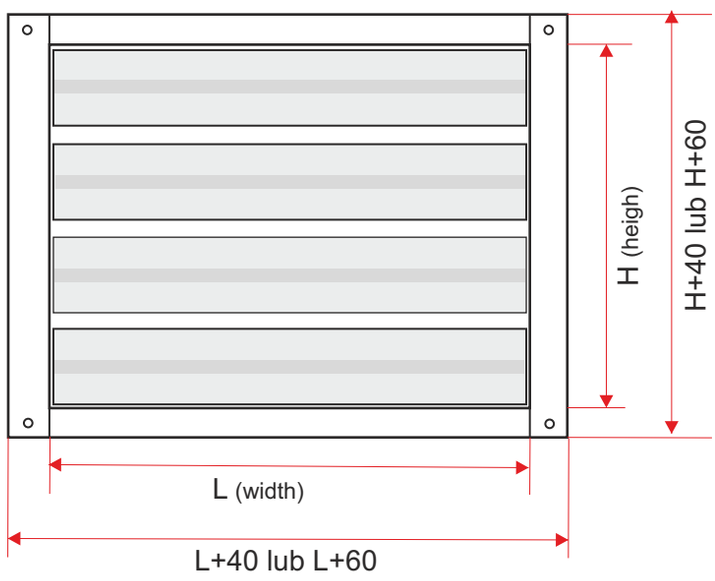
Dampers are made of frame made of profiled galvanized sheet and aluminum blades embedded in plastic bearings. On request it is possible to make damper frame from aluminum or stainless steel (type 1.4301 or 1.4404).

Size

Dampers are produced to order. The dimensions of dampers are selected according to the size of the elements, on which they are mounted.

detail- vertical beam



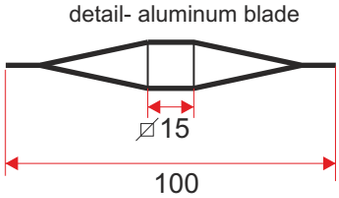


The width of the damper frame depends on the size of duct:
(L;H)<800 => L+40 i H+40
(L;H) > 800 => L+60 i H+60

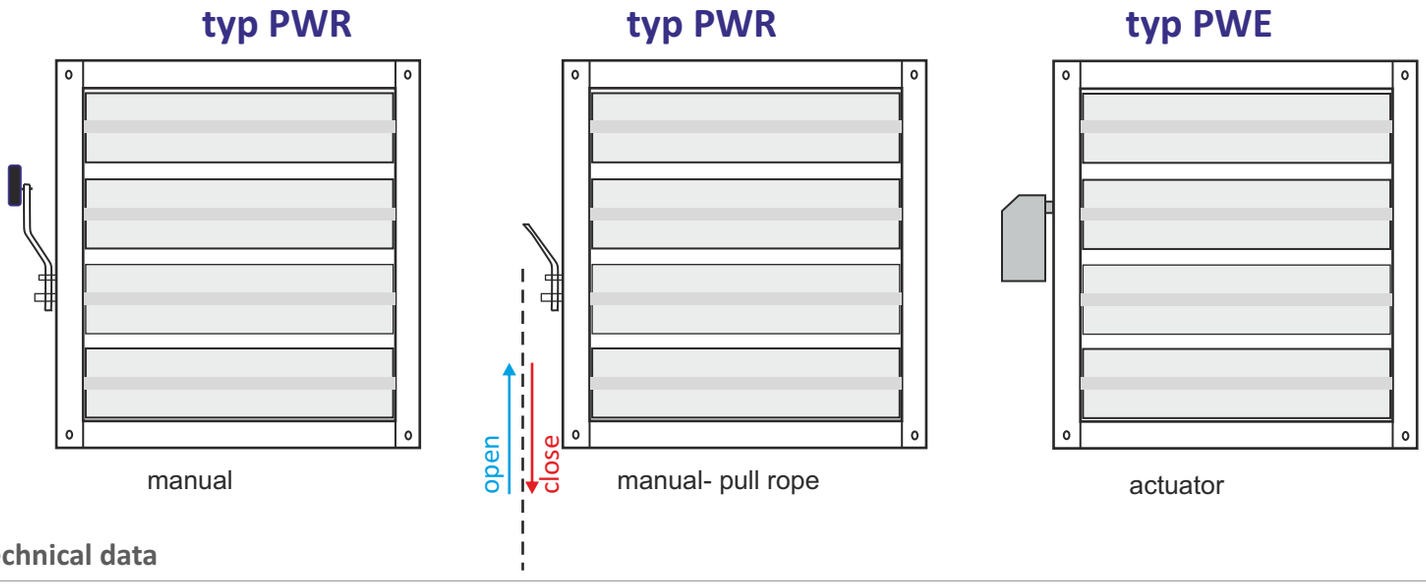
Damper diamension L>1400 is divided
Damper diamension H>1000 is divided
Damper of another dimension than the multiple 100mm has so- called shelf.

Dimension max: L<2500 mm and H<2500 mm

detail- aluminum blade

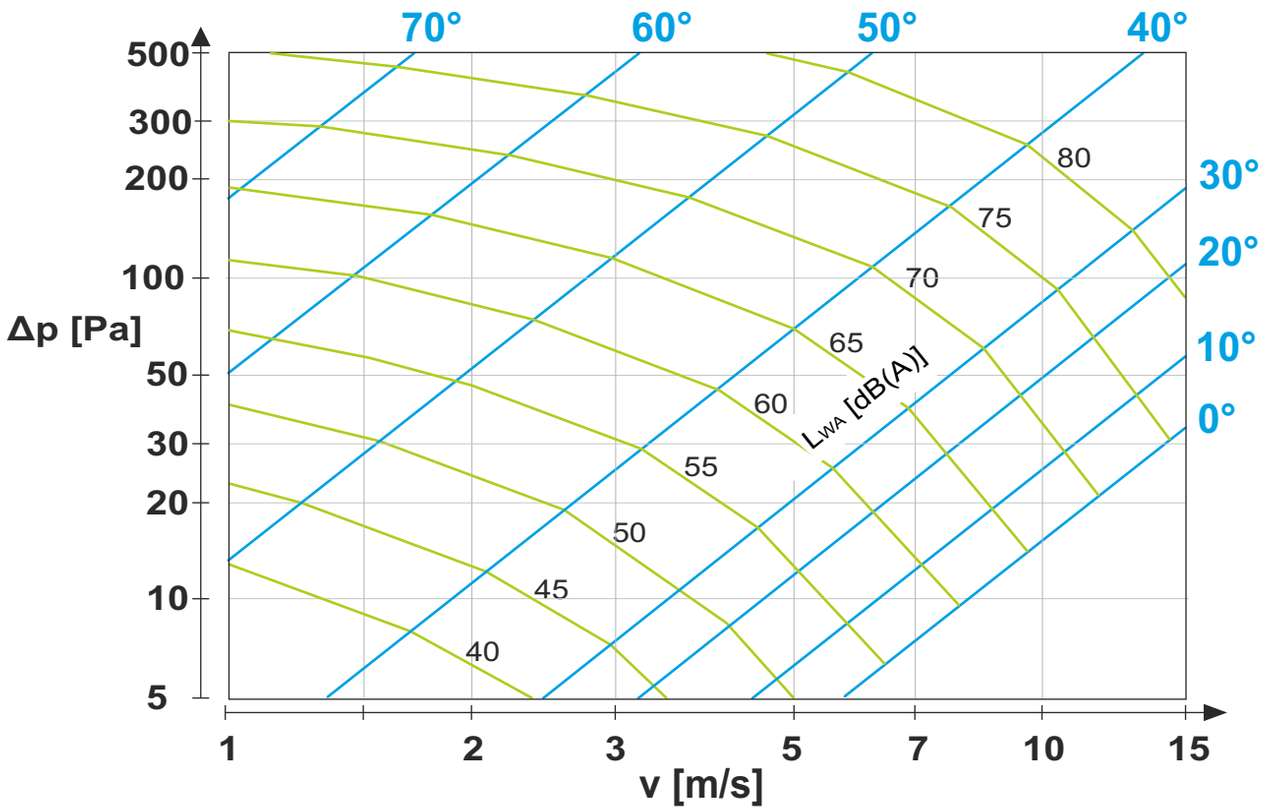


Method of regulating PWR



Technical data

Pressure drop and acoustic power depending on the efficiency and the angle of the damper PWR



Symbol:

v [m/s]- air speed in the duct

L_{WA} [dB(A)]- acoustic power level

ΔP [Pa]- pressure drop

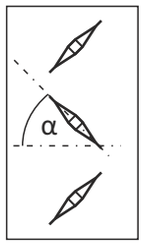
A [m^2]- effective area LxH

Correction factor for the sound power level LWA depending on the surface of the damper

Effective area A[m^2]	A <0,1	0,1<A <0,3	0,3<A<1,0	A>1,0
LWA by correction [dB]	LWA-15	LWA-10	LWA-5	LWA

α=0° damper in the open position

α=90° damper in the closed position



EXAMPLE

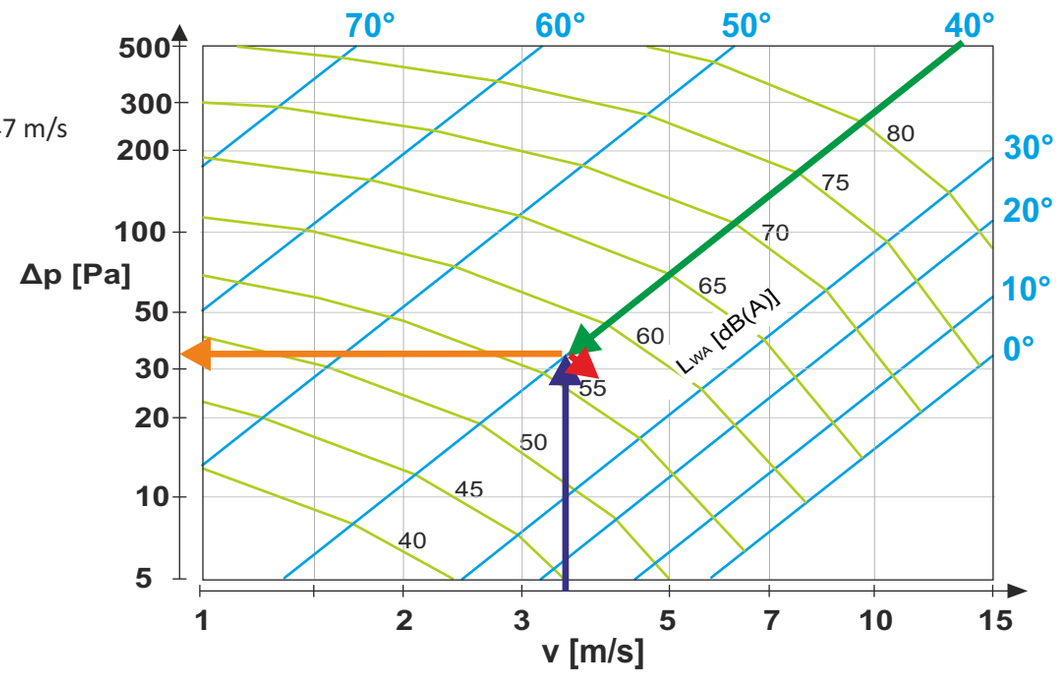
- size of damper PWR (800x400)
- air volume flow Q=4000 m^3/h
- the angle of the damper 40˚

A=0,8x0,4=0,32 m^2

v=Q/(Ax3600)=4000/(0,32x3600)=3,47 m/s

Reading from the graph:

- air speed in the duct v=3,47 m/s
- pressure drop Δp=35 Pa
- acoustic power L_{WA}=57-5=52 dB



Effective area A[m^2]	A <0,1	0,1<A <0,3	0,3<A<1,0	A>1,0
L_{WA} by correction [dB]	L_{WA}-15	L_{WA}-10	L_{WA}-5	L_{WA}

The method of placing an order

Please make orders according to the following formula:

Damper with manual control **PWR / 'LxH' / 'RAL' / 'M'**

Damper with actuator control **PWE / 'LxH' / 'RAL' / 'M'**

'LxH' - mounting hole size (width x height) in mm
'RAL' - damper color according to RAL palette (standard **no color***)
'M' - material of frame:
OC - galvanized steel*
AL - aluminum
KO - stainless steel / acid proof steel (type 1.4301 or 1.4404)

* - If you don't give the information will be used standard parameters.