Jalousie damper JSM

Description

JSM is a manually operated jalousie damper for the closing off or regulation of ventilation systems.

The damper is built on a frame made from galvanized steel sheet. The damper blades are made from smooth, extruded aluminium profiles with silicon sealing strips on one side, and on the other the side grips to a rubber seal when the damper is closed. The damper blades are in the end sealed with a gasket made from synthetic material.

On the outside of the frame, the damper blades are individually fitted with fine-tooth ratchets, which ensure a very low torque.

Axle shaft 15 x 15 mm is mounted directly to the external ratchet. The external ratchet is supplied with a face plate.

The frame can be made using stainless steel, depending on preference.

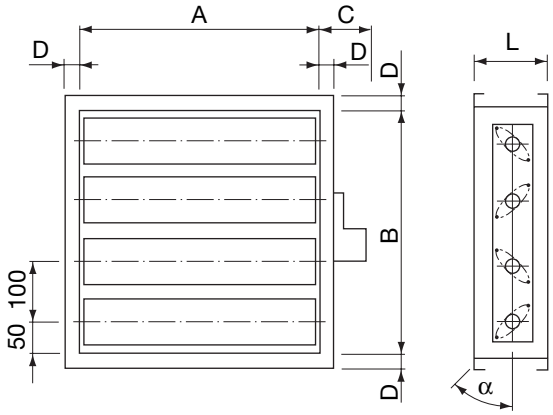
Temperature range from -20°C to +80°C.

JSM is supplied with an RJFP 20 connection system as standard. For alternative connection systems, please see table.

Ordering example

JSM	500	500	RJFP 20
Product			
A in mm			
B in mm			
Joint system			

Dimensions



α	Opening angle	
C	Manual regulation:	80 mm
D	LS-rail:	20 mm
	RJFP-20 flanges:	20 mm
	RJFP-30 flanges:	30 mm
	RJFP-40 flanges:	40 mm
L	LS-rail:	115 mm
	RJFP-20: flanges:	150 mm
	RJFP-30: flanges:	170 mm
	RJFP-40: flanges:	170 mm

Design advice

- Select damper size based on air velocity and pressure exposure for when the damper is closed.
- Remember the connection type - LS rail or RJFP flanges.
- Remember the necessary accessories for operation.
- Remember to leave space for unimpeded damper operation at duct crossings for dampers.
- Remember damper blades, horizontal installation.

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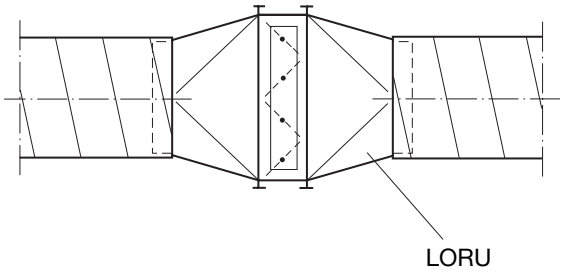
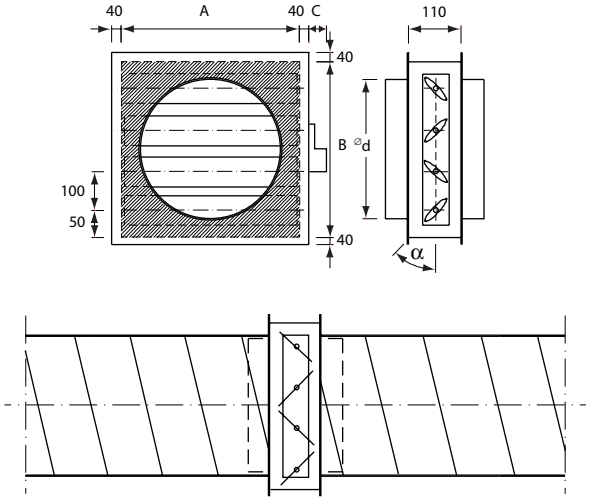
Dimensions

Installed in round duct:

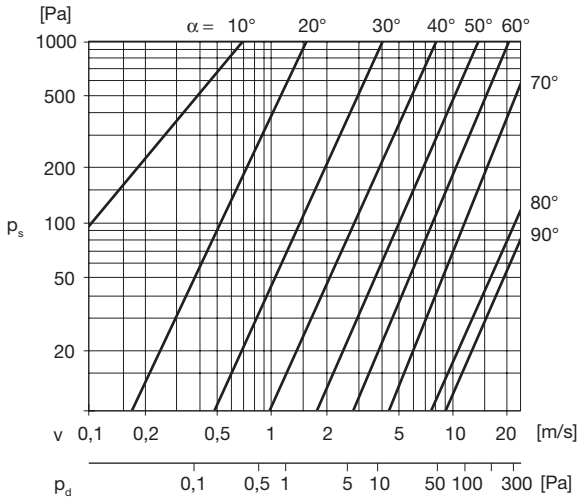


Alternatively installed in round duct:
JSM fitted with plate and ILU.
Product name: JSMILU.



Technical data

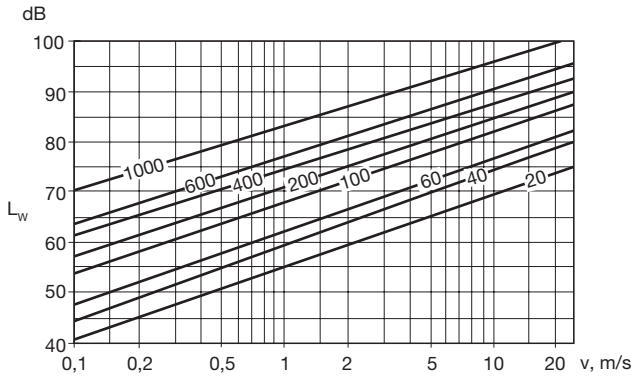
Pressure drop
The values are applicable for dampers installed in ducting systems. When they are free flowing, the loss of speed (p_d = dynamic pressure) corresponding to the frontal area should be added. The angle of aperturea refers to the dimension sheet on the previous page.



v = air velocity, m/s
p_d = dynamic pressure, Pa
P_s = static presure, Pa

Sound data
Sound level L_W (ref. 10^{-12} W) is applicable for dampers with an area of A=1 m². For other damper sizes (x) m², the following applies:
$L_{Wx} = L_{W\,1,0} + 10 \cdot \log x$

Adjustment values for the individual octave bands are added to the sound levels recorded and are set out in the below table.



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Adjustment values for L_W in octave bands

	Octave band, Hz							
	63	**125**	**250**	**500**	**1k**	**2k**	**4k**	**8k**
Correction	-7	-7	-10	-11	-12	-15	-17	-20
Tolerance: ± 5 dB								
Example values	78	78	75	74	73	70	68	65

Example:
The air velocity in a JSM 800 800 damper (0,64m²) is 8 m/s. The curves show a pressure loss of 400 Pa at the aperture (a) 48°, and a sound level of 87 dB (1m²).
The present sound levels become:

$L_{W\ 0,64}$ = $L_{W\ 1,0}$ + 10 x Log 0,64
= 87 dB - 2 dB
= 85 dB

The adjusted sound spectrum divided by the individual octave bands is shown by the values in the table for adjusted values.

Tightness class

Blade area m²	Tightness class
– 0,6	2
0,6 –	3

Maximum pressure difference

Damper width	Pa
1400	2500
1600	2350

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Technical data

Damper overview
The dampers are supplied in combinations of heights and widths as indicated in the table below. The top figures in the table specify weight (kg) of the individual dampers. The lower figures specify the dampers' torque (Nm) for the selection of a damper motor.

Torque Nm	Motor type
5	LM
10	NM
20	SM
30	GM

B		A 200	300	400	500	600	800	1000	1200	1400	1600
100	kg	2,3	2,7								
	Nm	2,0	2,0	2,0							
200	kg	2,7	3,0	3,3	3,6	5,4	7,1				
	Nm	2,0	2,0	2,0	2,0	2,0	4,0				
300	kg	3,0	3,3	3,6	5,4	6,3	7,9	10,6	13,7		
	Nm	2,0	3,0	3,0	4,0	4,0	4,0	5,0	8,0		
400	kg	3,3	3,6	5,4	6,3	7,1	8,6	11,7	14,7	17,7	20,7
	Nm	3,0	3,0	4,0	4,0	4,0	4,0	5,0	8,0	8,0	8,0
500	kg	3,6	5,4	6,3	7,1	7,9	10,6	13,7	16,2	18,5	22,1
	Nm	3,0	4,0	4,0	4,0	5,0	5,0	7,0	8,0	8,0	8,0
600	kg	3,9	6,3	7,1	7,9	8,6	12,7	14,7	17,7	20,7	23,6
	Nm	4,0	4,0	4,0	5,0	5,0	5,0	8,0	8,0	8,0	8,0
800	kg	7,1	7,9	8,6	10,6	11,7	14,7	17,7	20,7	23,6	26,6
	Nm	4,0	4,0	5,0	5,0	5,0	7,0	8,0	8,0	8,0	8,0
1000	kg	8,6	10,6	11,7	13,7	14,7	17,7	20,7	23,6	26,6	29,6
	Nm	5,0	5,0	5,0	7,0	7,0	8,0	8,0	8,0	8,0	10,0
1200	kg	12,7	13,7	14,7	16,2	17,7	20,7	23,6	26,6	29,6	32,5
	Nm	5,0	5,0	7,0	8,0	8,0	8,0	8,0	8,0	10,0	10,0
1400	kg	14,7	16,2	17,7	18,5	20,7	23,6	26,6	29,6	32,5	35,5
	Nm	7,0	7,0	8,0	8,0	8,0	8,0	8,0	10,0	10,0	13,0
1600	kg	16,2	18,5	20,7	22,1	23,6	26,6	29,6	32,5	35,5	38,4
	Nm	8,0	8,0	8,0	8,0	8,0	8,0	8,0	10,0	13,0	15,0

The height B is always a multiple of 100 mm (the width of the damper blades). The dampers can be supplied deviant from this, but the free area will always be the number of slats times 100 mm (minus the damper blade's thickness) with the rest exposed.
E.g. if a damper with A > 500 and B = 275 mm is chosen, then the free area in this damper will be same as a damper with the measurements A = 500 and B > 200 mm.
(* minus the thickness of the damper blade)