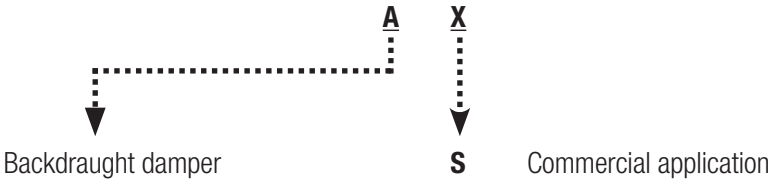
BACKDRAUGHT DAMPER

LOW PRESSURE - AS

The backdraught damper AS is designed to allow airflow in one-way direction. The blades prevent reverse flow in the ductworks. It is suitable for commercial HVAC applications.

CODIFICATION



CONSTRUCTION

		Characteristics	Option
Construction	Frame	Galvanized steel sheet: 1.5mm Width: 125mm Flanges: 36mm	Stainless steel 304L or 316L Aluminium Painted steel
	Drilling	Ø10mm in each angle	Standard F2A drilling with a pitch of 165mm (see FT.2.4.5.1) or special drilling
	Blades	Aluminium	Stainless steel 304L or 316L
	Bearings	Nylon	Bronze
	Shafts	Zinc-coated steel	Stainless steel 304L or 316L
Acceptable pressure		150 Pa for a length of 1m	
Operating temperature		From - 20°C to + 80°C	
Recommended air velocity		From 2 to 5 m/s	
Miscalleneous			Sub-frame Can be coupled with louvre Circular transformation up to Ø1250

Information and data can not be considered as contractual. Design and data changes may occur without notice during F2A's continuous product development.

ISO 9001 14001 Certified

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F2A Manufacturer Air handling components

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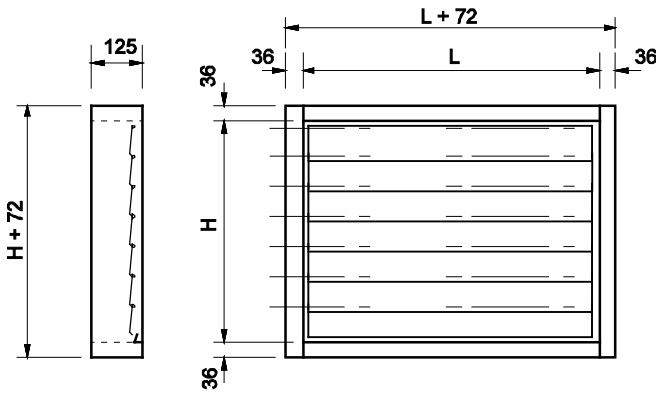
DIMENSIONS

Height (H) :
From 180 to 1995 mm
With a pitch of 165 mm

Length (L) :
From 200 to 2000 mm
With a pitch of 100 mm



WEIGHT (kg)

The following weights are given for a galvanized steel backdraught damper equipped with aluminium blades.

H \ L	200	500	1000	1500	2000
180	3	5	8	11	13
345	5	7	10	14	17
510	7	9	13	17	21
675	8	11	15	21	25
840	10	13	18	24	29
1005	12	15	20	28	33
1170	13	17	23	31	37
1335	15	19	25	34	41
1500	17	21	28	38	45
1665	18	23	30	41	49
1830	20	25	33	45	52
1995	22	27	35	48	56

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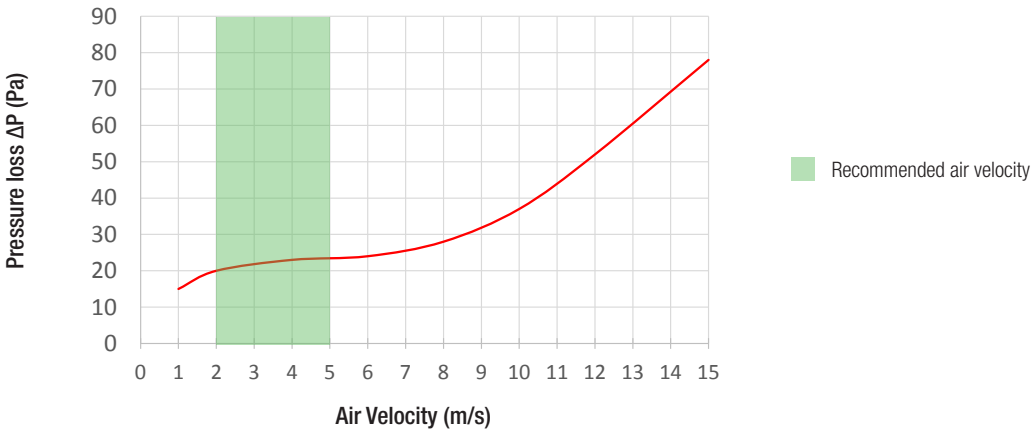
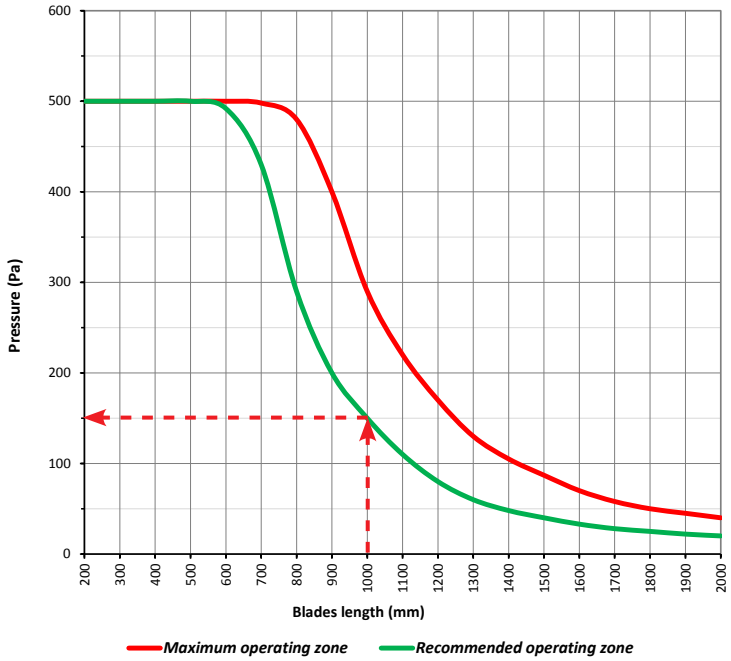
PRESSURE LOSS

The following pressure losses (Pa) are given according to the air velocity (m/s).



USE LIMITS

They correspond to the maximal counter-pressure that AS backdraught dampers can withstand in closed position (reverse flow). Use limits are given according to the blades length.



We recommend that the counter-pressure does not exceed 150Pa for a 1000-mm long AS damper.

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REGENERATED NOISE

The acoustic performances of our backdraught dampers have been tested in an independent laboratory (CTTM) according to ISO 7235:2009 standard.

Air flow noise Lw in dB

Air velocity (m/s)	Frequency (Hz)								
	63	125	250	500	1000	2000	4000	8000	Overall
2	40.8	39.5	36.2	33.9	31.3	27.2	31	23.6	44.9
4	41	40.6	38.7	36.8	36.7	34.3	32.2	25.1	46.6
6	46.4	43.8	42	42.5	41.8	42.1	42.4	38.9	52

Data are given for a damper 500 x 500 mm.

From these data, you can calculate the regenerated noise of a damper of different dimensions by applying the formula below for every frequency band:

$$Lw_{63} = x_{63} + 10 \log \left(\frac{S}{0.25} \right)$$

X_{63} = Air flow noise for a damper 500 x 500 mm at 63 Hz (in dB) for a given air velocity => read the data in the table
S = Damper section (in m²).
Lw_{63} = Air flow noise required at 63 Hz (in dB) for a given air velocity.

Example – Calculation of regenerated noise for a damper AS 840 x 800 mm (HxL)

- Damper section : S = 0.84 x 0.8 = **0.672 m²**

Calculation of the regenerated noise at 63Hz for an **air velocity of 4 m/s**:

$$Lw_{63} = 41 + 10 \log \left(\frac{0.672}{0.25} \right) = 45.3 \text{ dB}$$

Value in the table at a frequency of 63Hz and for an air velocity of 4 m/s.

Repeat this calculation rules to get the regenerated noise for all frequencies (63Hz - 8kHz).

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