

PJA

RECTANGULAR SINGLE-BLADE DAMPER



Description:

A rectangular single-blade damper used for airflow control or closing. Controlled manually or by an electric actuator.

Intended Use

PJA single-blade dampers are used in rectangular ventilation ducts for airflow control. Where it is necessary to temporarily close the duct tightly, the baffle can be optionally fitted with a gasket to ensure the airtightness of the damper within the range of class 2 in accordance with EN-1751. Operating temperature: -20 °C to +90 °C, (+50 °C for the actuator version).

The device holds hygiene certificate no. HK/B/1514/01/2012.

Design

- Damper:** SO galvanised sheet steel or sheet stainless steel (1.4301) SN
- Mechanism elements:** moulded from galvanised steel or stainless steel
- Axles:** aluminium or steel
- Gaskets:** rubber

The dampers are normally fitted with a 30 mm wide (SO version) or a 20 mm wide (SN version) flange with corners.

Upon special request, we can manufacture the following dampers:

- Adjusted to other types of connection
- In a version including external insulation

Manufacturing Versions

Type:

- **PJA** – Control damper (a baffle without a gasket)
- **PJA-U** – Shut-off damper (a baffle with a gasket)

Drive:

- **T1** – Damper with an actuator
- **T2** – Damper with a manual mechanism
- **T3** – Damper with an extended axle (for the actuator installation)

Dimensions

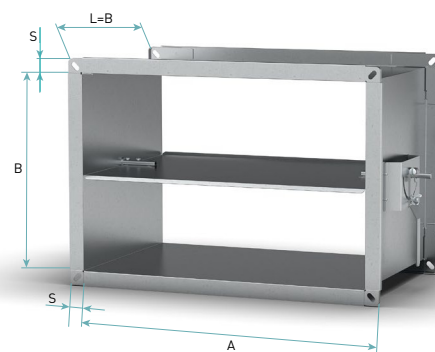


Figure 1. PJA damper dimensions.

Standard dimensions of PJA dampers:

- Width **A = 100 – 500 mm** (1 mm interval)
- Height **B = 100 – 400 mm** (1 mm interval).

Table 1. Net surface area for PJA damper in a fully open position.

Height B, [mm]	Width A, [mm]					
	100	160	200	250	400	500
100	0.008	0.013	0.017	0.021	0.033	0.041
160	0.014	0.023	0.029	0.036	0.057	0.071
200	0.018	0.029	0.037	0.046	0.073	0.091
250	0.023	0.037	0.047	0.058	0.093	0.116
300	0.028	0.045	0.057	0.071	0.113	0.141
350	0.033	0.053	0.067	0.083	0.133	0.166
400	0.038	0.061	0.077	0.096	0.153	0.191

Actuator minimum: **4 Nm**, e.g. Belimo LM24A (without a spring) or LF24 (with a spring)

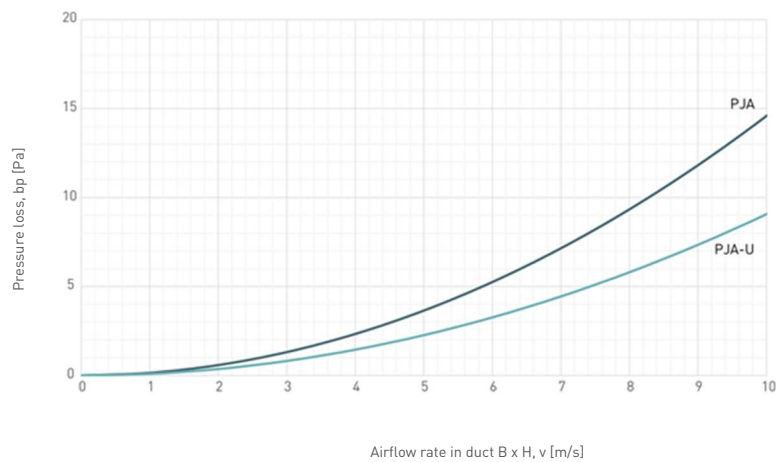


Chart 1. Pressure loss for the PJA damper in a fully open position.

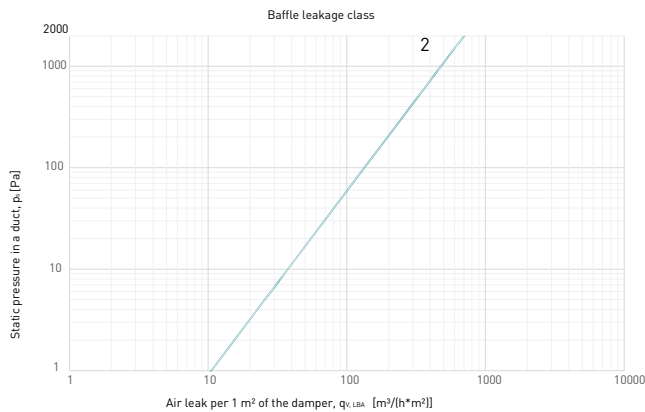


Chart 2. Air leaks through the PJA-U damper baffle (in a fully closed position).

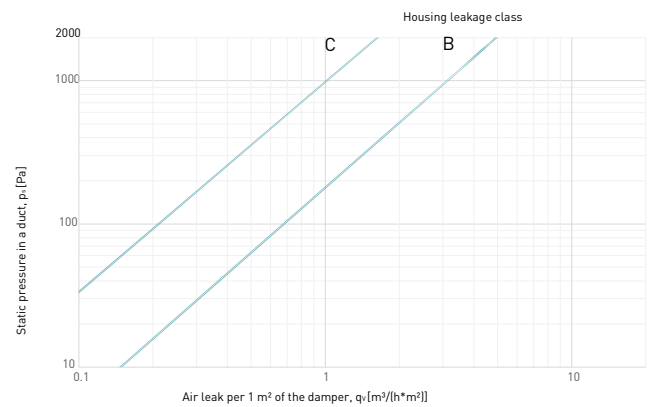


Chart 3. Air leaks through the PJA-U damper housing (in a fully closed position).

Table 2. Approximate weight of PJA dampers.

Height A	Width A, [mm]					
	100	160	200	250	400	500
100	1.2	1.4	1.5	1.7	2.1	3.1
160	1.6	1.8	2.0	2.2	2.9	4.3
200	1.9	2.2	2.4	2.6	3.4	5.2
250	2.3	2.6	2.9	3.2	4.2	6.3
300	2.7	3.2	3.5	3.8	5.0	7.5
350	3.2	3.7	4.1	4.5	5.8	8.8
400	3.8	4.4	4.8	5.2	6.7	10.1

Note: the parameters given in the table apply to dampers without actuators.

PJA – Rectangular single-blade damper

When ordering, please provide information as follows:

PJA - <S> - <A> x - T<N> - <P> - <KL>

Where:

S	Seal*
	None – A baffle without a gasket U – A baffle with a gasket
A	Clear width [mm]
B	Clear height [mm]
N	Drive type*
	1 – With an actuator 2 – Manual mechanism 3 – For an actuator
P	Material*
	S0 – Galvanised steel SN – Stainless steel
KL	EN 1751 leakage class*
	BX – Housing: B, baffle: none (a baffle without a gasket, surface area $A \times B < 0.15 \text{ m}^2$) CX – Housing: C, baffle: none (a baffle without a gasket, surface area $A \times B \geq 0.15 \text{ m}^2$) B2 – Housing: B, baffle: 2 (a baffle with a gasket, surface area $A \times B < 0,15 \text{ m}^2$) C2 – Housing: C, baffle: 2 (a baffle with a gasket, surface area $A \times B \geq 0,15 \text{ m}^2$)

* Optional values – if not specified, the default values will be used

Example of product marking: **PJA-200x200-T2-BX**