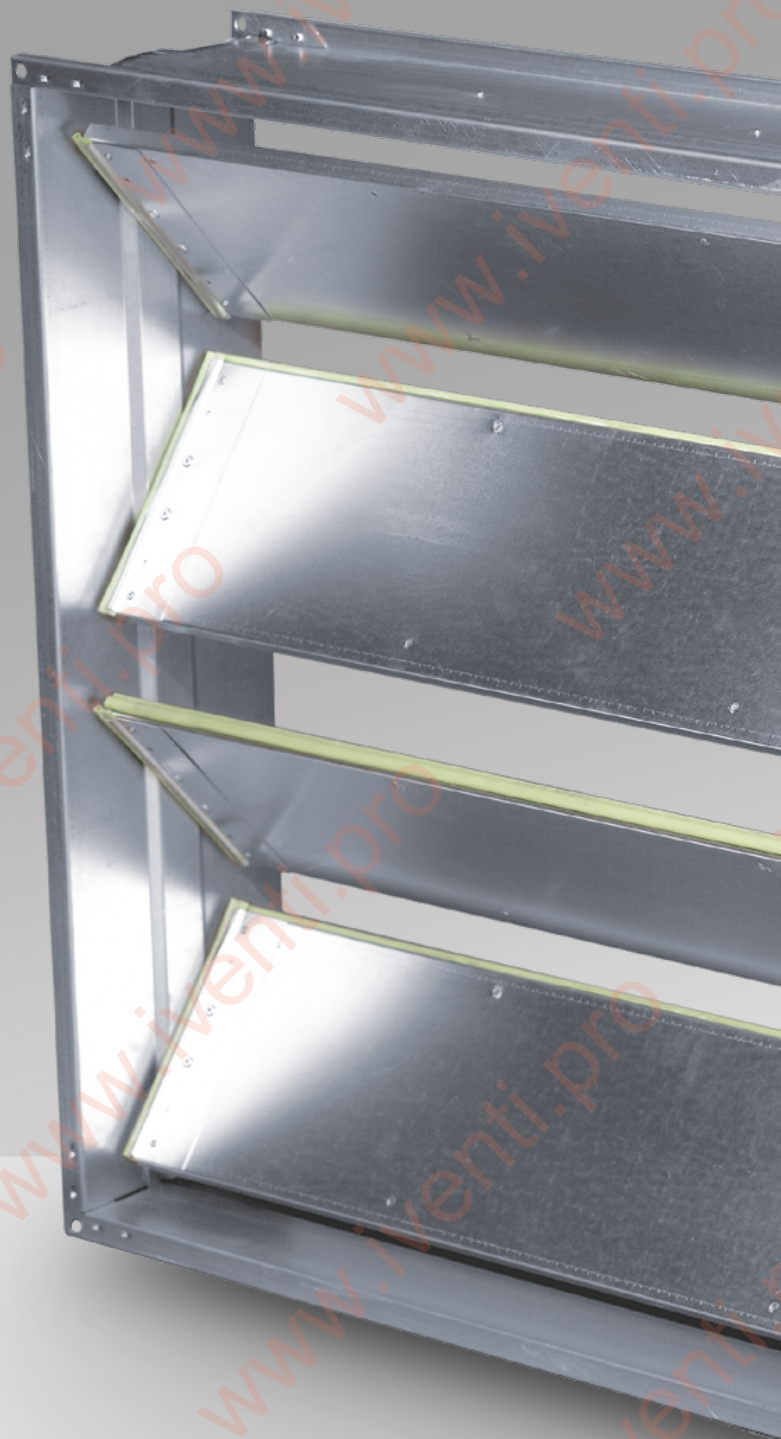


**EKO**VENT®

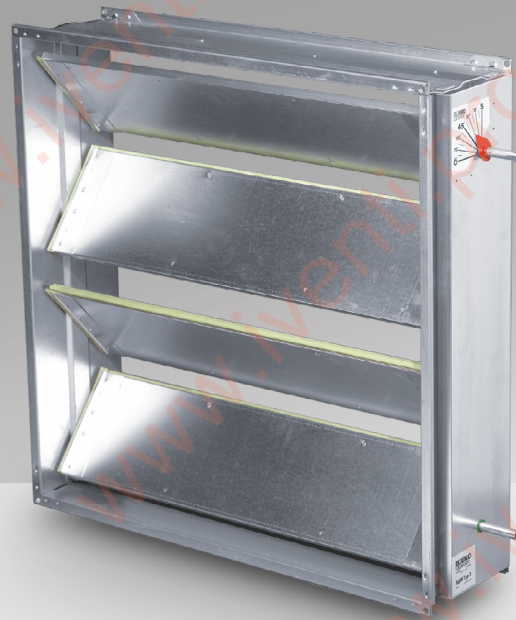


**EKO-J**

Control & Shut-off Damper

# CONTROL & SHUT-OFF DAMPER

EKO-J



## Quick facts

- Air tightness classes 1-4
- Pressure classes B-C (B as standard)
- Available with insulated damper blades and casing
- Standard sizes 200x200 – 2000x2000
- Different dimensions or body widths are available upon request.
- Slip joint or flange connection
- Max. air temperature for standard dampers 100°C. Dampers for higher temperatures can be delivered.
- Complete with bracket intended for actuator
- Available in MagiCad

## Description

Multi-leaf damper EKO-J is used for regulating, adjusting, or closing airflows in ventilation systems. The EKO-J has opposing blades with solid axles and nylon bearings. The blades are connected by a linkage system on the outside of the frame, protected by a steel cover.

The damper blades are manufactured as standard with a height of 200 mm. For dampers with a height of 300 mm, the blades are 150 mm high. Depending on the damper height, some dampers will have different free areas relative to the connection area.

## How to order EKO-J

Multi-leaf damper EKO-J-A-B-C-D-E-F

### A – Size

According to table

### B – Air tightness classes

- 1 = Class 1
- 2 = Class 3
- 3 = Class 4\* (See section "Air Tightness Classes")

### C – Pressure classes

- 1 = Pressure class B - Standard
- 2 = Pressure class C (Max air tightness class 3)

### D – Material

- 1 = Zinc Magnesium ZM120 (C4) - Standard
- 4 = Stainless EN 1.4404 (C5)
- 5 = Zinc Magnesium ZM310 (C5)
- 7 = Zinc Magnesium ZM310 (C5) RRP
- 9 = Zinc Magnesium ZM120 (C4) \*)

### E – Connection

- 1 = Slip joint
- 2 = Flange

### F – Accessories

- 0 = Without accessories
- 1 = Manual regulator
- 2 = Damper control rod
- 3 = Factory-installed actuator (Actuators are specified separately)
- 4 = Insulated blades (max tightness class 3 and pressure class B)
- 5 = Insulated blades and casing (max tightness class 3 and pressure class B)
- 6 = Counter flange
- 7 = Wall frame

Example: Multi-leaf damper EKO-J-600x600-1-1-1-1-1

\*) See material specification

## EKO RRP

### EKO-J RRP

EKO-J RRP (Recycled and Renewably Produced) represents a series of louvres manufactured using CO2 reduced and recycled steel for a much lower climate impact.

#### Features

- The steel is based on a minimum of 75% recycled steel and iron ore pellets melted in electric arc furnaces (EAF).
- 100% renewable energy is used.

The dampers are manufactured in Zinc Magnesium ZM310 (C5) for a optimum corrosion protection and a long product life.

#### Material

The standard EKO-J is made of Zinc Magnesium ZM120 (C4) with mounting components in C2. Alternative options include Zinc Magnesium ZM310 (C5), Zinc Magnesium ZM120 (C4), or stainless steel EN 1.4404 (C5), all with mounting components in C4.

#### Air tightness classes

Class 1 - Regulation damper for balancing air flows  
 Class 3 - Regulation and shut-off damper  
 Class 4\* - Dampers in tightness class 4 are available in dimensions  $A \geq 600$  mm,  $B \geq 500$  mm.

Tightness class casing (Duct): C

#### Air pressure classes

B - 2500 Pa, standard.  
 C - 5000 Pa (max tightness class 3) according to customer requirements, offered separately.

#### Note

The damper is intended to be mounted with the blades in a horizontal position. If the damper needs to be fitted with vertical blades, this must be specified in the order. All dampers are equipped with a position indicator showing the degree to which the blades are open.

#### Temperature

The maximum air temperature for standard dampers is 100°C. Dampers designed for higher temperatures are available and are equipped with metal bushings, allowing for a maximum temperature of 160°C. For more information, please contact EKOVENT.

#### Thermal Density

The thermal resistance from surface to surface across the damper is measured as:  $R_{\text{surface-surface}} = 0.14$  m<sup>2</sup>K/W, and from air to air:  $R_{\text{air-air}} = 0.37$  m<sup>2</sup>K/W, resulting in a thermal transmittance (U-value) of  $U = 2.7$  W/m<sup>2</sup>K.

The thermal resistance (R) and thermal transmittance (U-value) have been determined using the "Hot-box" method according to EN ISO 8990 and refer to an average value for the frame and blades. All measurements were conducted at the Swedish Research Institute (SP).

#### Actuator torque EKO-J

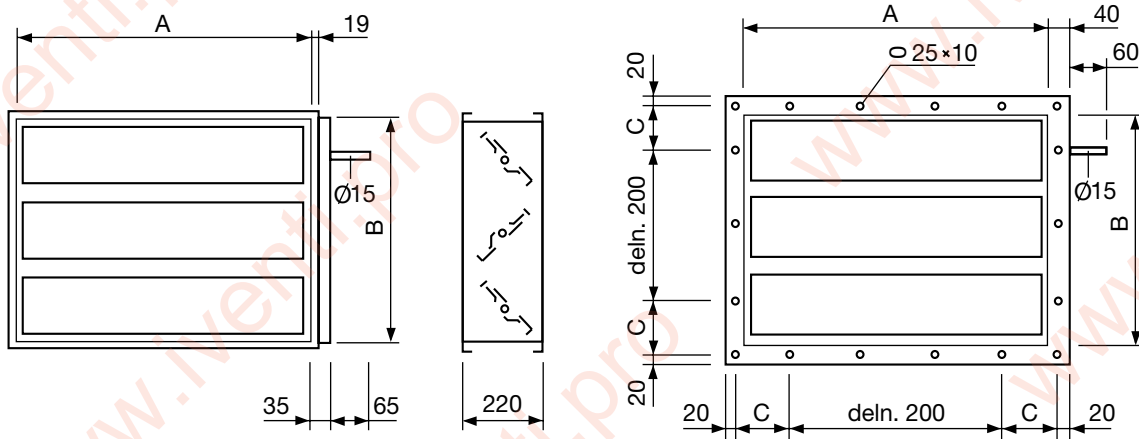
The torque used depends e.g. on the type, width and length of the multi-leaf damper, the total length of the sealing surfaces and the mounting method. The actuator torque required for the shut-off function of EKO-J are shown in the table below.

#### Maintenance

We recommend preventive maintenance of the damper twice a year for optimum performance. If the damper gets dirty the blades should be cleaned. The gasket sealing should be checked and the blades axles lubricated as necessary.

## Technical Data

### Dimensions



C = 120 for even 100s

C = 170 for odd 100s

### Number of solid shafts

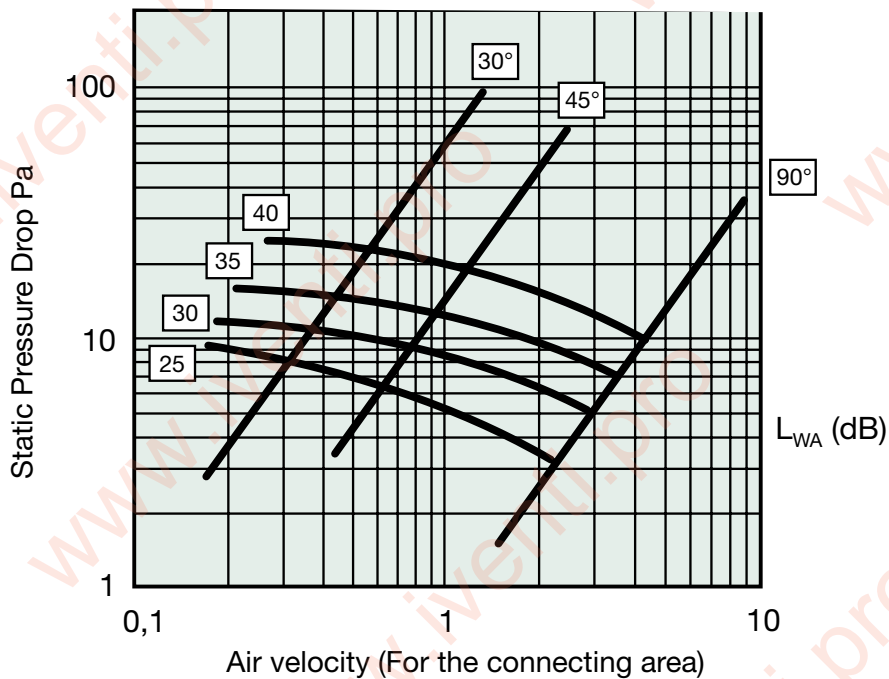
Damper height	Solid shafts
200-500	1
550-1300	2
1350-2000	3

All dampers are delivered with solid shafts.

### Actuator torque in Nm for control shaft

Height	Width												
	200	300	400	500	600	700	800	1000	1200	1400	1600	1800	2000
200	2	2	2	2	5	5	5	7	7	10	10	10	10
300	2	5	5	5	5	7	7	7	7	10	10	10	10
400	2	5	5	5	5	7	7	7	10	10	10	10	10
500	2	5	5	7	7	7	10	10	10	10	10	15	15
600	5	5	5	7	7	7	10	10	10	10	10	15	15
700	5	7	7	7	7	10	10	10	10	15	15	15	20
800	5	7	7	7	10	10	15	15	15	15	15	15	20
1000	7	7	7	10	10	10	15	15	15	15	15	20	20
1200	7	7	10	10	10	10	15	15	15	15	20	20	20
1400	10	10	10	10	10	15	15	15	15	20	20	20	20
1600	10	10	10	10	15	15	15	15	15	20	20	20	20
1800	10	10	10	15	15	15	15	15	20	20	20	20	25
2000	10	10	15	15	15	15	15	20	20	20	20	25	25

## Dimension diagram



Correction of sound power level  $L_{WAKORR}$  for different sizes.  $L_{WAKORR} = L_{WA} + K_1$

Damper area	0,04	0,09	0,2	0,6	1,2	2,0	3,0	4,0
$K_1$	-3	0	+3	+8	+11	+13	+15	+16

Correction of sound power level  $L_{WAOK}$  in octave bands.  $L_{WAOK} = L_{WAKORR} + K_{OK}$

Opening angle / Octave band	125	250	500	1K	2K	4K	8K
$K_{OK}$ 90°	+1	-2	0	-7	-14	-20	-24
$K_{OK}$ 45°	+1	-2	-1	-6	-13	-21	-24
$K_{OK}$ 30°	+1	0	-1	-7	-13	-20	-23

**T** Sound power level measured in accordance with ISO 3741 and ISO 5135 by the Swedish National Testing and Research Institute.