

RK & RKT
Control Damper
Handbook



Table of Contents

| | |
|--|-----|
| Description | .3 |
| Dimensions & Weights | .4 |
| Ordering Codes | .7 |
| Technical Parameters | .8 |
| Installation | .10 |
| Transport, Storage and Operation | .11 |
| Supplement | .12 |



Description

RK and RKT are control dampers for rectangular ducts. They are available with blade tightness class 1 (RK) or 2 (RKT), tested according to EN 1751. They can be used as control dampers for air flow adjustment. RKT is also foreseen as a shut-off damper in case of lower tightness requirements.

The dampers can be supplied in a manual version with adjustment handle or with preparation for attachment of an actuator.

The maximum recommended duct pressure for operation is 1000 Pa.

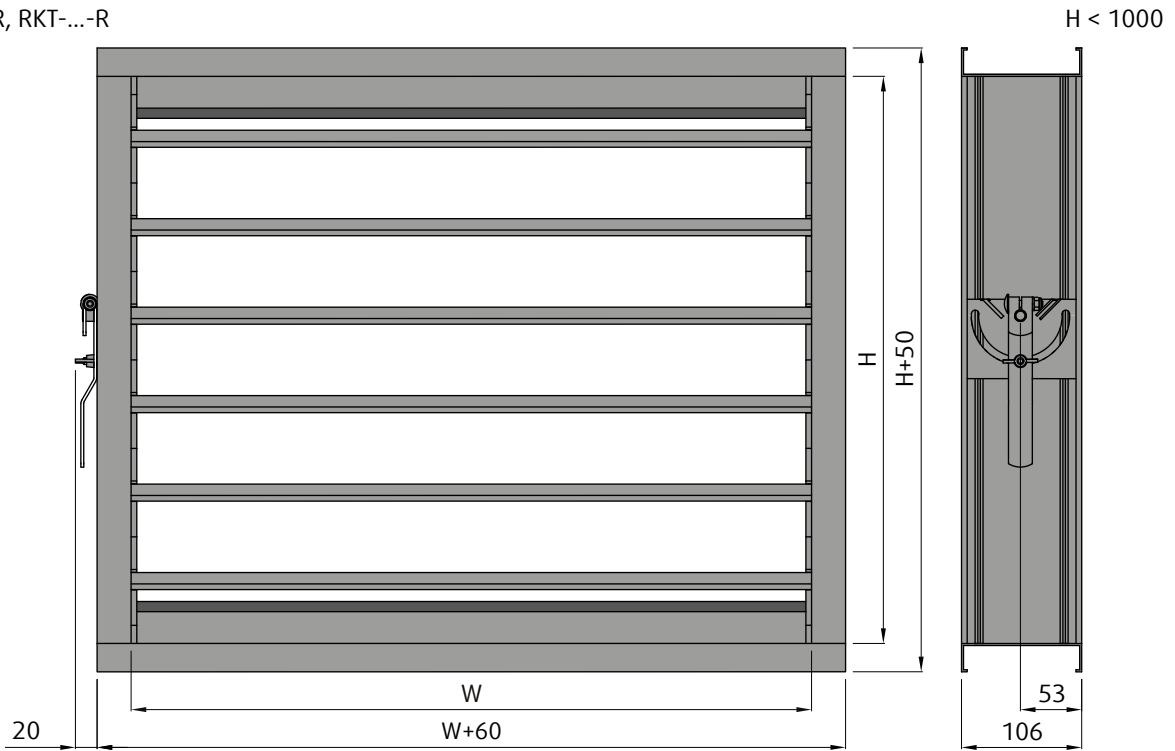
Design

RK, RKT units are made with aluminium profile frame and multiple aluminium profile blades. The frame has 30 mm wide flanges for tight connection to the duct. The blades are from extruded aluminium. On RKT the blades are equipped by rubber gaskets reducing leakage in closed position. The blade axe are sitting in self lubricating bearings which are connected together by a cog gearing

(for smaller sizes) or rod gearing (for larger sizes) for counter action positioning of the blades. The manual version has an adjustment handle with position arresting bolt. The version with actuator preparation has a shaft 12 mm × 12 mm.

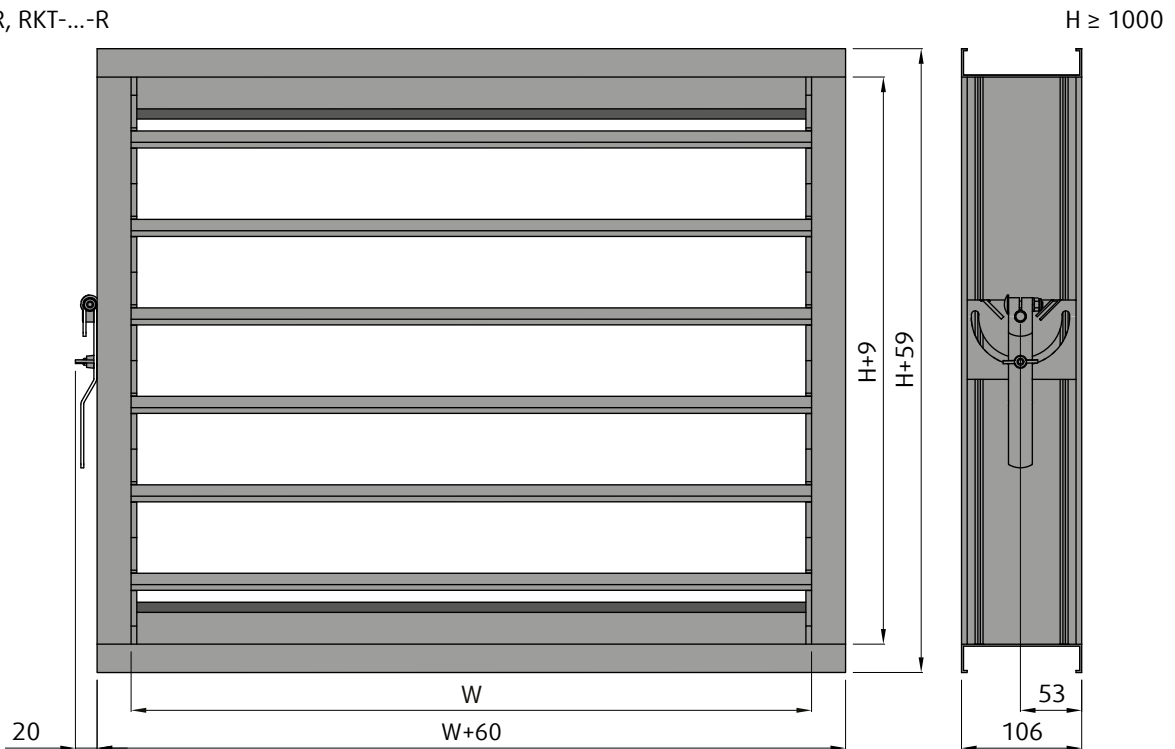
Dimensions & Weights

RK-...-R, RKT-...-R



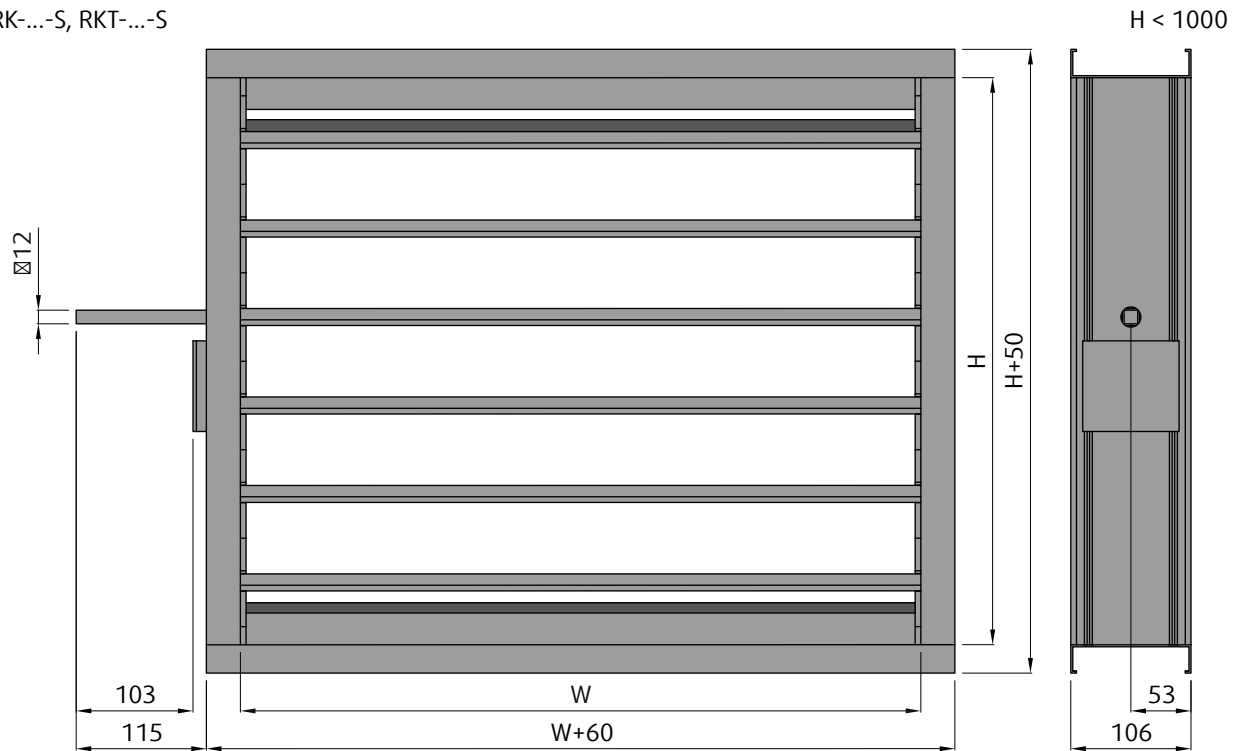
Dimensions of RK-WxH-R and RKT-WxH-R - manual version
 For sizes where $W \leq 1000$ mm and $H \leq 900$ mm

RK-...-R, RKT-...-R



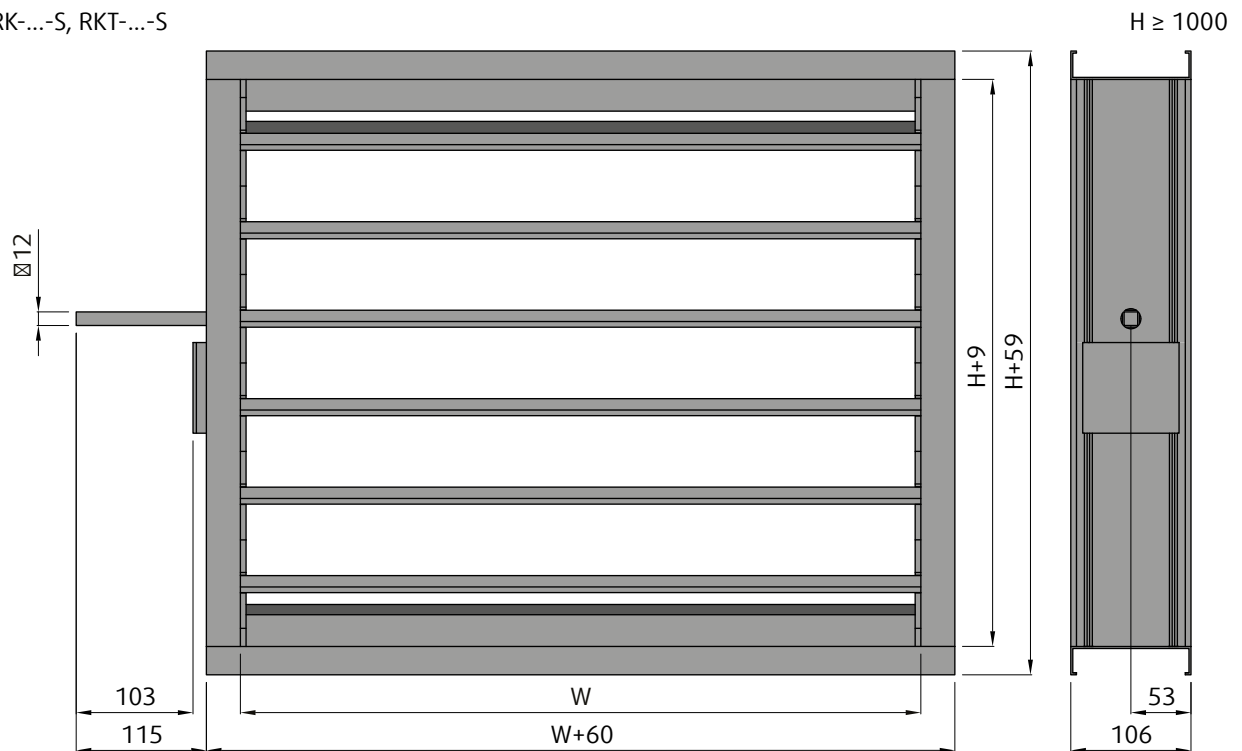
Dimensions of RK-WxH-R and RKT-WxH-R - manual version
 For sizes where $W > 1000$ mm and $H > 900$ mm

RK-...-S, RKT-...-S



Dimensions of RK-WxH-S and RKT-WxH-S - version with actuator preparation
For sizes where $W \leq 1000$ mm and $H \leq 900$ mm

RK-...-S, RKT-...-S



Dimensions of RK-WxH-S and RKT-WxH-S - version with actuator preparation
For sizes where $W > 1000$ mm and $H > 900$ mm

Weights of the dampers

| H (mm) | W (mm) | | | | | | | | | | | | | | | | | | | | |
|-----------|--------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|
| | 200 | 225 | 250 | 280 | 315 | 355 | 400 | 450 | 500 | 560 | 630 | 710 | 800 | 900 | 1000 | 1120 | 1250 | 1400 | 1600 | 1800 | 2000 |
| 200 | 1,9 | 2,0 | 2,6 | 2,4 | 2,3 | 2,4 | 3,2 | 3,4 | 3,0 | 4,2 | 3,5 | 4,9 | 5,6 | 4,2 | 4,8 | 5,4 | 6,0 | 6,5 | 7,2 | 8,0 | 8,8 |
| 225 | 2,0 | 2,1 | 2,2 | 2,3 | 2,4 | 2,6 | 2,7 | 2,9 | 3,1 | 3,2 | 3,6 | 3,9 | 4,3 | 4,3 | 5,0 | 5,6 | 6,5 | 7,0 | 8,0 | 8,9 | 9,7 |
| 250 | 2,1 | 2,3 | 2,5 | 2,6 | 2,7 | 2,9 | 3,1 | 3,7 | 6,1 | 4,6 | 4,9 | 4,5 | 6,2 | 6,5 | 7,4 | 6,1 | 7,8 | 8,4 | 9,0 | 9,8 | 10,8 |
| 280 | 2,2 | 2,5 | 2,6 | 2,7 | 2,9 | 3,3 | 3,7 | 3,9 | 4,3 | 4,8 | 5,1 | 5,7 | 6,5 | 6,8 | 7,8 | 7,5 | 8,0 | 9,0 | 9,6 | 10,6 | 11,8 |
| 315 | 2,5 | 2,6 | 2,7 | 2,9 | 3,1 | 3,2 | 3,5 | 3,7 | 3,9 | 5,1 | 4,5 | 4,9 | 6,9 | 5,8 | 6,3 | 7,8 | 8,4 | 9,6 | 10,2 | 11,6 | 12,9 |
| 355 | 2,4 | 3,0 | 2,9 | 3,1 | 3,5 | 3,7 | 3,9 | 4,4 | 4,5 | 5,4 | 5,2 | 5,6 | 7,3 | 8,0 | 8,7 | 8,9 | 9,7 | 10,5 | 11,8 | 13,0 | 14,2 |
| 400 | 3,2 | 3,3 | 3,1 | 3,7 | 3,5 | 3,9 | 4,4 | 4,7 | 5,0 | 5,7 | 6,1 | 6,3 | 6,9 | 8,5 | 9,3 | 10,1 | 11,0 | 11,9 | 13,2 | 14,0 | 15,4 |
| 450 | 3,4 | 3,5 | 3,4 | 3,9 | 3,7 | 4,2 | 4,7 | 5,0 | 5,5 | 6,1 | 6,5 | 6,8 | 8,3 | 9,1 | 9,9 | 10,6 | 11,5 | 12,5 | 13,8 | 15,1 | 16,7 |
| 500 | 3,8 | 3,9 | 4,1 | 4,3 | 4,6 | 4,9 | 5,2 | 5,3 | 5,9 | 6,5 | 6,8 | 7,4 | 8,8 | 8,7 | 10,5 | 11,9 | 12,8 | 13,9 | 15,4 | 16,8 | 18,3 |
| 560 | 4,2 | 4,4 | 4,6 | 4,8 | 5,1 | 5,4 | 5,7 | 6,1 | 6,3 | 7,0 | 7,4 | 8,2 | 9,5 | 10,4 | 11,3 | 13,2 | 14,3 | 15,5 | 17,1 | 18,8 | 20,4 |
| 630 | 4,5 | 4,7 | 4,9 | 5,1 | 5,4 | 5,7 | 6,1 | 6,5 | 6,9 | 7,4 | 8,0 | 8,9 | 9,4 | 10,2 | 11,0 | 13,9 | 15,0 | 16,2 | 17,9 | 19,6 | 21,3 |
| 710 | 4,9 | 5,2 | 5,4 | 5,7 | 6,0 | 6,0 | 6,8 | 7,2 | 5,9 | 8,2 | 8,9 | 9,6 | 11,0 | 12,1 | 12,2 | 15,4 | 16,6 | 18,0 | 19,9 | 21,8 | 23,6 |
| 800 | 5,6 | 5,9 | 6,2 | 6,5 | 6,9 | 7,3 | 7,8 | 8,3 | 8,8 | 9,5 | 10,2 | 11,0 | 12,0 | 13,1 | 14,3 | 17,9 | 19,3 | 20,9 | 23,1 | 25,3 | 27,5 |
| 900 | 6,0 | 6,5 | 6,8 | 7,1 | 7,5 | 8,0 | 8,5 | 9,1 | 9,7 | 10,4 | 11,2 | 12,1 | 13,2 | 14,3 | 15,6 | 19,6 | 21,2 | 22,9 | 25,3 | 27,7 | 30,1 |
| 1000 | 6,5 | 7,1 | 7,4 | 7,8 | 8,2 | 8,7 | 9,3 | 9,9 | 10,5 | 11,3 | 12,2 | 13,2 | 14,3 | 15,6 | 16,8 | 21,3 | 23,0 | 24,9 | 25,8 | 30,1 | 32,7 |
| 1120 | 6,8 | 7,8 | 8,1 | 9,9 | 10,4 | 11 | 11,6 | 12,3 | 13,0 | 13,9 | 14,9 | 16,0 | 17,3 | 18,7 | 20,1 | 25,4 | 27,3 | 29,5 | 32,4 | 35,3 | 38,2 |
| 1250 | 7,1 | 8,5 | 9,0 | 11,0 | 11,5 | 12,1 | 12,8 | 13,6 | 14,4 | 15,3 | 16,4 | 17,7 | 19,1 | 20,7 | 22,3 | 28,2 | 30,3 | 32,8 | 36,0 | 39,2 | 42,5 |
| 1400 | 7,5 | 9,2 | 9,9 | 12,5 | 12,7 | 13,4 | 14,1 | 15,0 | 15,8 | 16,8 | 18,0 | 19,4 | 20,9 | 22,7 | 24,3 | 30,7 | 30,3 | 35,6 | 39,1 | 42,6 | 46,0 |
| 1600 | 7,9 | 9,9 | 11 | 14,9 | 15,0 | 15,3 | 15,9 | 16,9 | 17,9 | 19,0 | 20,4 | 21,9 | 23,7 | 25,6 | 27,6 | 34,9 | 33,0 | 40,5 | 44,5 | 48,5 | 52,5 |
| 1800 | 8,1 | 10,5 | 12,1 | 18,1 | 18,3 | 18,6 | 18,9 | 19,1 | 20,2 | 21,5 | 23,1 | 24,8 | 26,8 | 29,0 | 31,1 | 39,5 | 37,5 | 45,8 | 50,3 | 54,8 | 59,3 |
| 2000 | 8,5 | 11,1 | 13 | 20,4 | 20,6 | 20,9 | 21,3 | 21,6 | 21,9 | 23,4 | 25,0 | 26,9 | 29,1 | 31,4 | 33,8 | 42,9 | 42,4 | 49,8 | 54,7 | 59,6 | 64,5 |

Ordering Codes

Product type

RK - Non-Tight Regulating Damper (tightness class 1)

RKT - Tight Regulating Damper (tightness class 2)

Nominal dimensions

WxH - Width x Height

Positioning

R - Manual

S - Actuator preparation

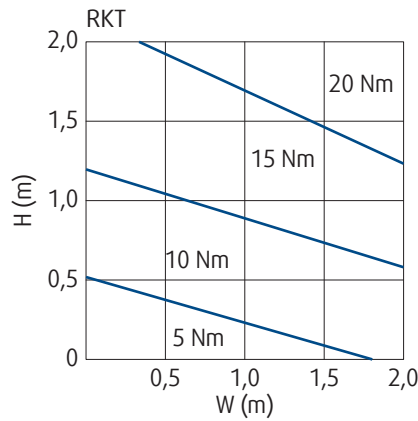
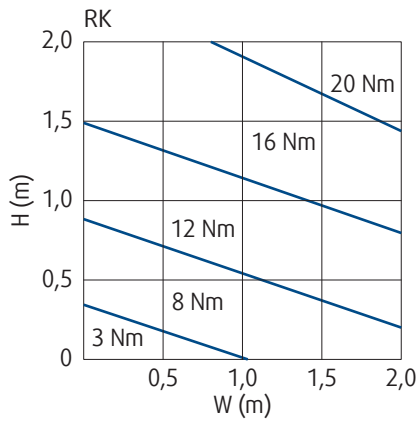
Note: For positioning version "S" the actuator is not part of the delivery

Example of the Ordering Code

RKT-600x300-S

Tight damper type, nominal dimensions 600 mm x 300 mm, with preparation for actuator.

Technical Parameters



Damper positioning torque

Legend

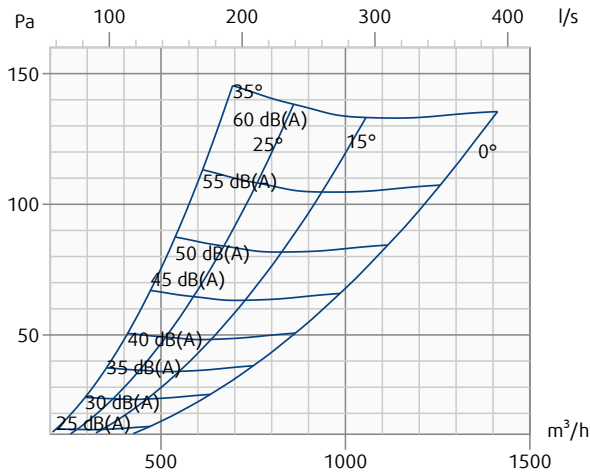
25% ... 100%

The position of the damper blades is represented in angular degrees. 0° is fully open position, 90° is fully closed position.

The diagrams describe the damper positioning only between 0° and 35° !

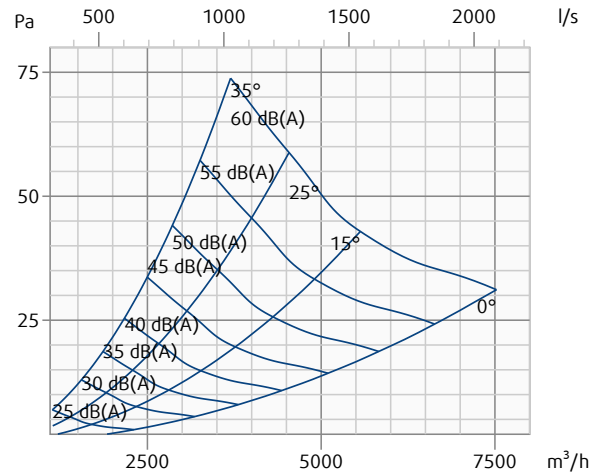
RK-200x200-R

Pressure drop & A-weighted sound power level in dB(A)



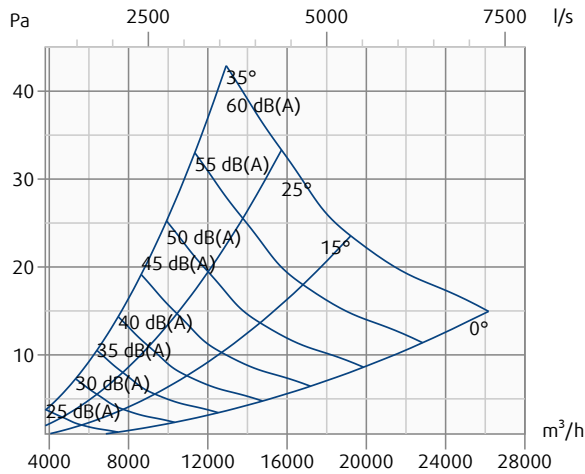
RK-500x500-R

Pressure drop & A-weighted sound power level in dB(A)



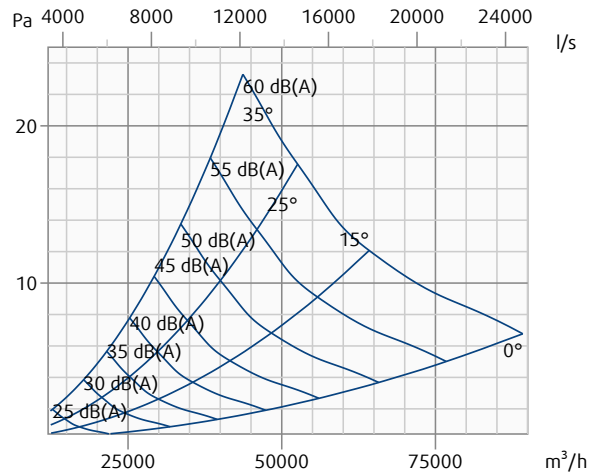
RK-1000x1000-R

Pressure drop & A-weighted sound power level in dB(A)



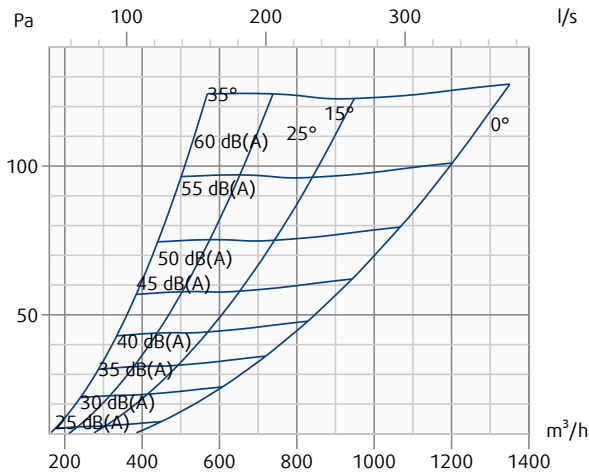
RK-2000x2000-R

Pressure drop & A-weighted sound power level in dB(A)



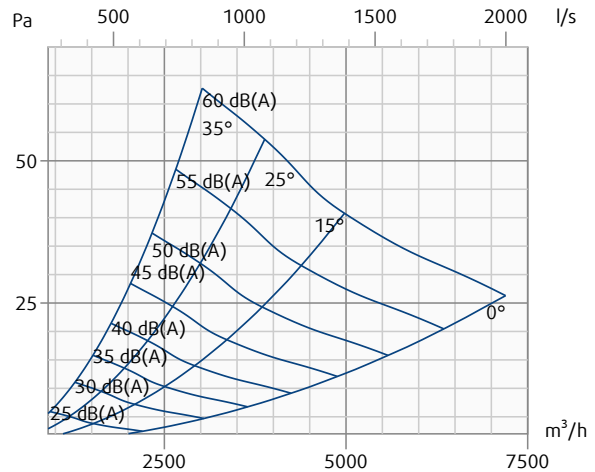
RKT-200x200-R

Pressure drop & A-weighted sound power level in dB(A)



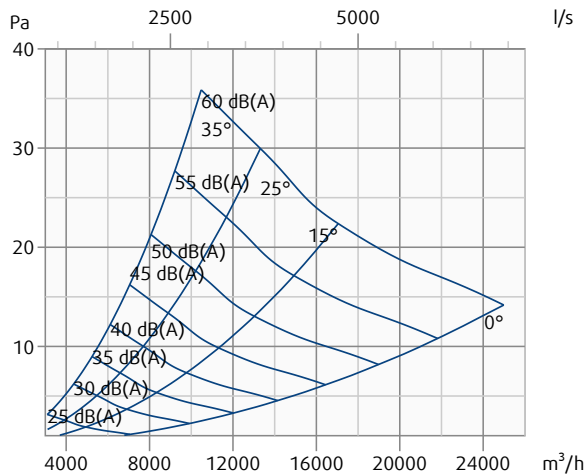
RKT-500x500-R

Pressure drop & A-weighted sound power level in dB(A)



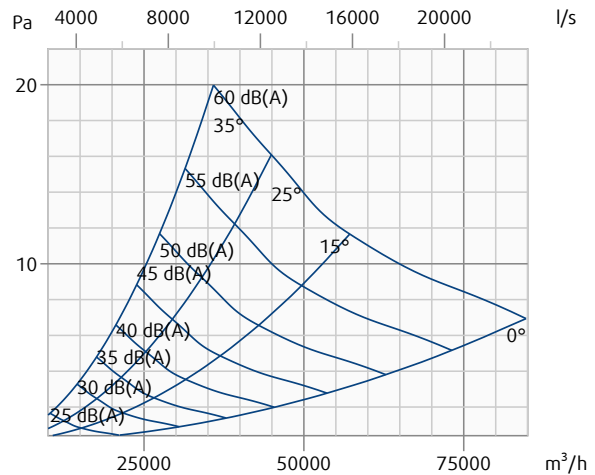
RKT-1000x1000-R

Pressure drop & A-weighted sound power level in dB(A)



RKT-2000x2000-R

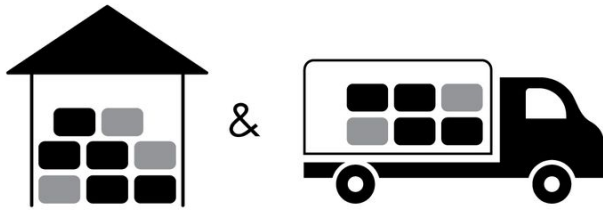
Pressure drop & A-weighted sound power level in dB(A)




Installation

RK, RKT is mounted into the ductwork by a standard flange. The fixing bolts, nuts, clips and gaskets shall be delivered by the installer. The damper cannot be installed carrying any mechanical loads from other structures.


Transport, Storage and Operation




 °C -40°C ... +50°C

 % ≤ 95%



 °C -20°C ... +50°C

 % ≤ 95%

Supplement

Any deviations from the technical specifications contained on our website and the terms should be discussed with the manufacturer. We reserve the right to make any changes to the product without prior notice, provided that these changes do not affect the quality of the product and the required parameters. Current information on all products is available on design.systemair.com.

