

# Swirl diffuser

# RCWB



## Description

RCWB is a rotation diffuser (RCW) with integral box, particularly suitable for rooms with a high ceiling.

The diffuser is equipped with adjustable blades, so the supply air pattern can be changed from vertical to horizontal. The blade settings can be adjusted manually, or the function can be automated using various types of motor.

RCWB with manual blade adjustment is supplied as standard with a blade setting of 30°.

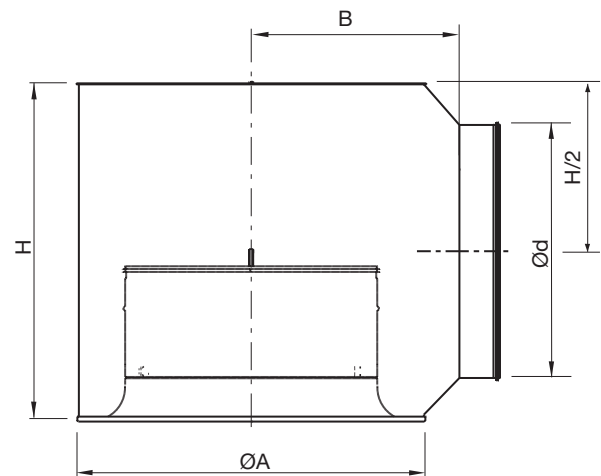
The motorized models are supplied as standard with a blade setting from 30° to 75°. In the motorized versions, RCWB can be supplied with an electric on/off motor, a modulating motor or a thermal actuator, where the supply air pattern is changed in step with the supply air temperature.

- Suitable for both cooling and heating
- Horizontal and vertical dispersal patterns
- High induction
- Can be supplied with an electric motor
- Can be supplied with a thermal actuator

## Order code

| Product Type           | RCWB | a | bbb | c | A |
|------------------------|------|---|-----|---|---|
| Manual                 | 0    |   |     |   |   |
| Motorized - modulating | 1    |   |     |   |   |
| Motorized- on/off      | 2    |   |     |   |   |
| Thermal actuator       | 3    |   |     |   |   |
| Galvanised box         | 0    |   |     |   |   |
| Box RAL 9010           | 1    |   |     |   |   |
| Size                   |      |   |     |   |   |
| Version                |      |   |     |   |   |

## Dimensions



| Ød Size | ØA mm | H mm | B mm | Weight * kg |
|---------|-------|------|------|-------------|
| 250     | 360   | 415  | 250  | 5.70        |
| 315     | 460   | 480  | 300  | 8.20        |
| 400     | 560   | 570  | 350  | 11.8        |
| 500     | 670   | 670  | 412  | 17.2        |
| 630     | 870   | 800  | 500  | 25.7        |

\* Motorized models weigh approx. 1 kg more than the weight stated in the table above.

## Motor type

| RCWB-1 Ød | Motor      |
|-----------|------------|
| 315-400   | NM24A-MF-F |
| 500-630   | LH24A-MF60 |

| RCWB-2 Ød | Motor   |
|-----------|---------|
| 250-400   | NM24A-F |
| 500-630   | LH24A60 |

## Maintenance

The visible parts of the diffuser can be wiped with a damp cloth. For other maintenance, see installation instructions.

## Materials and finish

|                  |                      |
|------------------|----------------------|
| Material:        | Aluminium & steel    |
| Standard finish: | Powder-coated        |
| Standard colour: | RAL 9010 Gloss 30    |
| Box:             | Hot-galvanised steel |

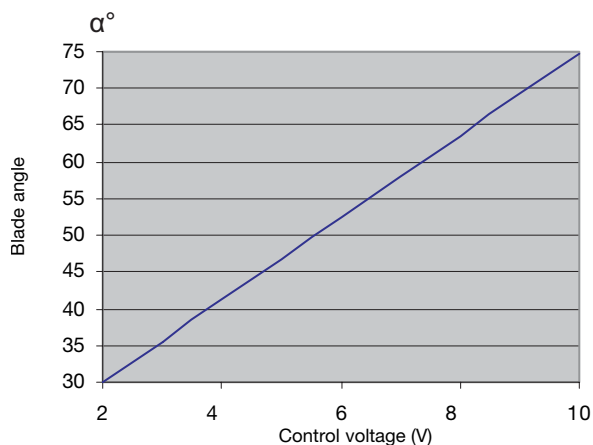
Available in other colours. Please contact Lindab's sales department for further information.

# Swirl diffuser

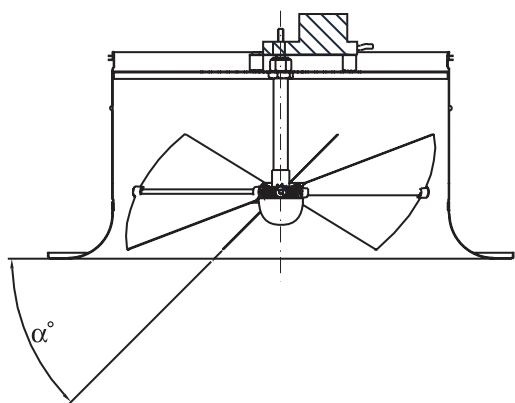
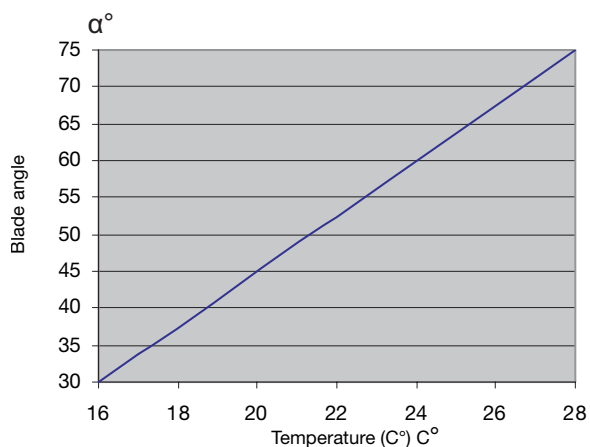
RCWB

## Technical data

### RCWB with electric modulating motor



### RCWB with thermal actuator



## Capacity

Volume flow  $q_v$  [l/s] and [m<sup>3</sup>/h], total pressure  $\Delta p_t$  [Pa], throw  $l_{0,2}$  [m] and sound power level  $L_{WA}$  [dB(A)] can be seen in the diagrams.

## Throw $l_{0,2}$ / turning point $l_{0,0}$

Throw  $l_{0,2}$  [m] can be seen in the diagrams for isothermal air at a speed of 0.2 m/s. Turning point  $l_{0,0}$  [m] can be seen in the diagrams for heated air, +5 K, +10 K and +15 K respectively.

## Frequency-related sound effect level

The sound effect level in the frequency band is defined as  $L_{WA} + K_{ok}$ .  $K_{ok}$  values are specified in charts beneath the diagrams on the following pages.

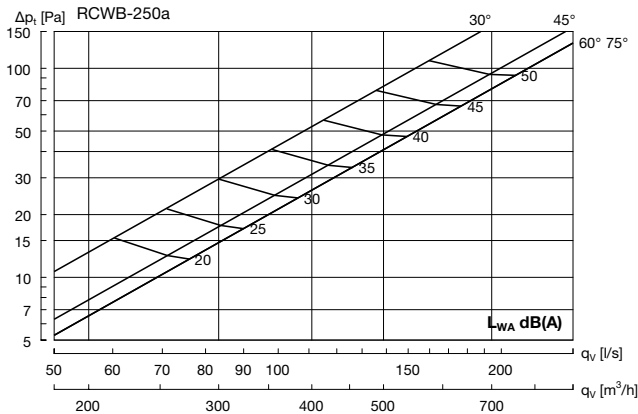
## Quick selection

| Size | Angle | $q_v$<br>[l/s] | $q_v$<br>[m <sup>3</sup> /h] | $P_t$<br>[Pa] | $l_{0,2}$<br>isotherm<br>[m] | $l_{0,0}$<br>+10K<br>[m] |
|------|-------|----------------|------------------------------|---------------|------------------------------|--------------------------|
|      |       | $L_{WA} = 40$  |                              |               |                              |                          |
| 250  | 30°   | 115            | 415                          | 57            | 8                            |                          |
| 250  | 75°   | 115            | 415                          | 28            |                              | 5                        |
| 315  | 30°   | 187            | 672                          | 53            | 5                            |                          |
| 315  | 75°   | 187            | 672                          | 29            |                              | 5                        |
| 400  | 30°   | 290            | 1043                         | 49            | 4                            |                          |
| 400  | 75°   | 290            | 1043                         | 27            |                              | 5                        |
| 500  | 30°   | 403            | 1451                         | 47            | 4                            |                          |
| 500  | 75°   | 403            | 1451                         | 22            |                              | 4                        |
| 630  | 30°   | 605            | 2178                         | 39            | 5                            |                          |
| 630  | 75°   | 605            | 2178                         | 19            |                              | 5                        |
|      |       | $L_{WA} = 50$  |                              |               |                              |                          |
| 250  | 30°   | 160            | 575                          | 108           | 11                           |                          |
| 250  | 75°   | 160            | 575                          | 54            |                              | 6                        |
| 315  | 30°   | 257            | 924                          | 101           | 6                            |                          |
| 315  | 75°   | 257            | 924                          | 54            |                              | 7                        |
| 400  | 30°   | 397            | 1428                         | 91            | 6                            |                          |
| 400  | 75°   | 397            | 1428                         | 50            |                              | 7                        |
| 500  | 30°   | 565            | 2034                         | 91            | 6                            |                          |
| 500  | 75°   | 565            | 2034                         | 43            |                              | 6                        |
| 630  | 30°   | 861            | 3098                         | 80            | 7                            |                          |
| 630  | 75°   | 861            | 3098                         | 39            |                              | 7                        |
|      |       | $L_{WA} = 60$  |                              |               |                              |                          |
| 250  | 30°   | 221            | 796                          | 208           | 15                           |                          |
| 250  | 75°   | 221            | 796                          | 103           |                              | 8                        |
| 315  | 30°   | 353            | 1271                         | 190           | 8                            |                          |
| 315  | 75°   | 353            | 1271                         | 103           |                              | 9                        |
| 400  | 30°   | 543            | 1954                         | 170           | 8                            |                          |
| 400  | 75°   | 543            | 1954                         | 93            |                              | 9                        |
| 500  | 30°   | 792            | 2851                         | 180           | 8                            |                          |
| 500  | 75°   | 792            | 2851                         | 85            |                              | 8                        |
| 630  | 30°   | 1224           | 4407                         | 161           | 9                            |                          |
| 630  | 75°   | 1224           | 4407                         | 78            |                              | 10                       |

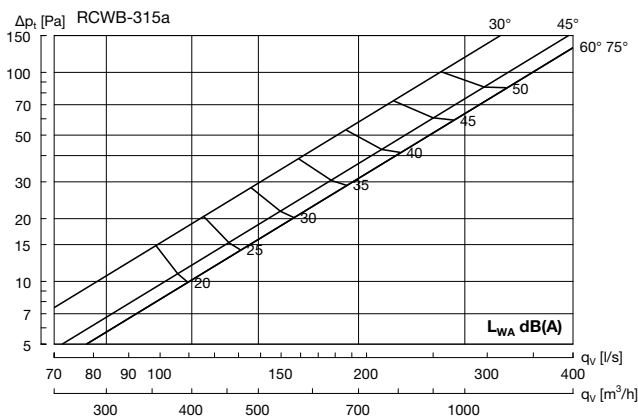
## Swirl diffuser

## RCWB

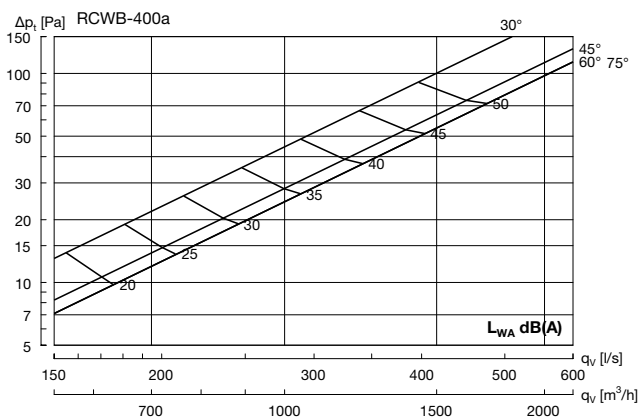
## Technical data



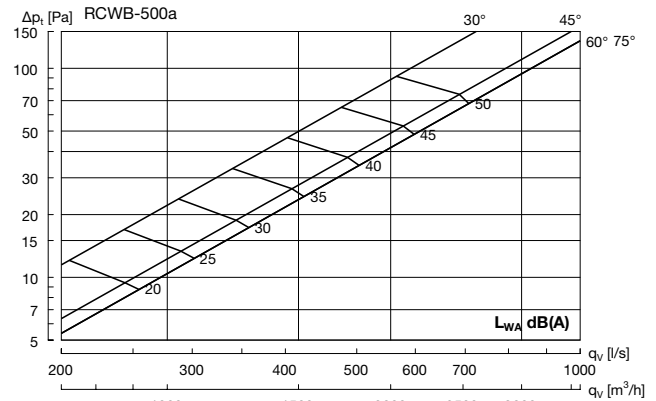
| Hz       | 63 | 125 | 250 | 500 | 1K | 2K | 4K  | 8K  |
|----------|----|-----|-----|-----|----|----|-----|-----|
| $K_{ek}$ | 5  | 0   | -5  | -4  | -3 | -9 | -17 | -26 |



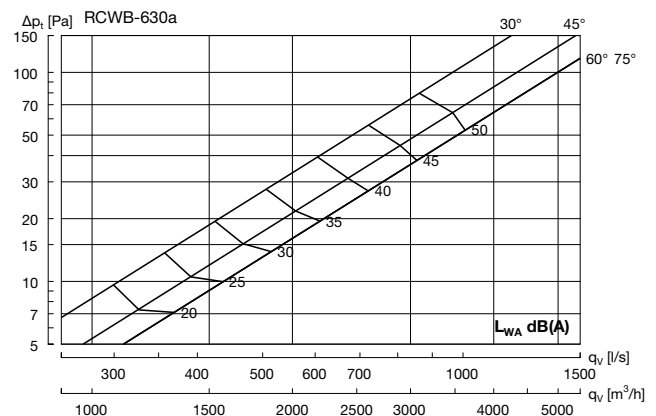
| Hz       | 63 | 125 | 250 | 500 | 1K | 2K  | 4K  | 8K  |
|----------|----|-----|-----|-----|----|-----|-----|-----|
| $K_{ek}$ | 7  | -1  | -4  | -3  | -3 | -10 | -19 | -27 |



| Hz       | 63 | 125 | 250 | 500 | 1K | 2K  | 4K  | 8K  |
|----------|----|-----|-----|-----|----|-----|-----|-----|
| $K_{ek}$ | 8  | 0   | -5  | -2  | -3 | -11 | -20 | -28 |



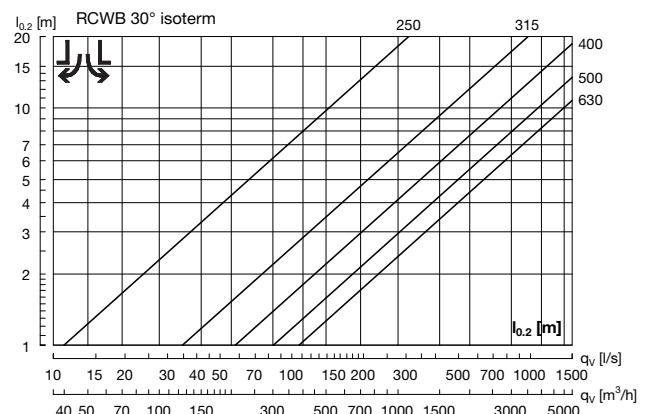
| Hz       | 63 | 125 | 250 | 500 | 1K | 2K  | 4K  | 8K  |
|----------|----|-----|-----|-----|----|-----|-----|-----|
| $K_{ek}$ | 8  | 2   | -3  | -2  | -4 | -11 | -21 | -30 |



| Hz       | 63 | 125 | 250 | 500 | 1K | 2K  | 4K  | 8K  |
|----------|----|-----|-----|-----|----|-----|-----|-----|
| $K_{ek}$ | 7  | -1  | -3  | -1  | -4 | -13 | -24 | -33 |

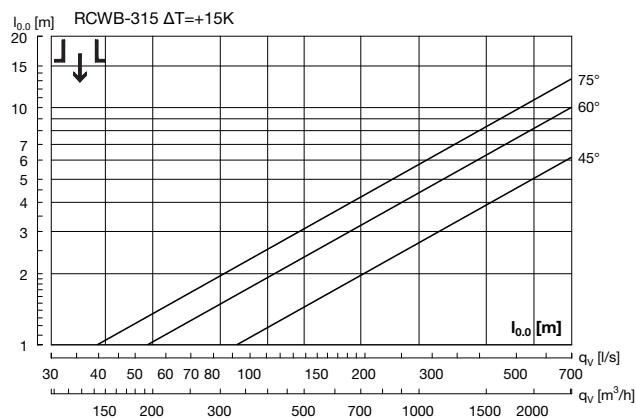
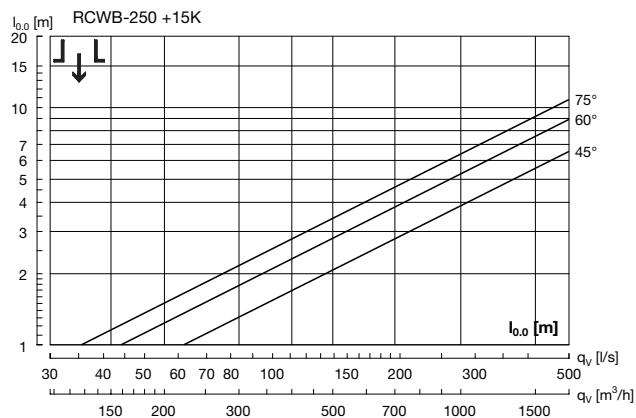
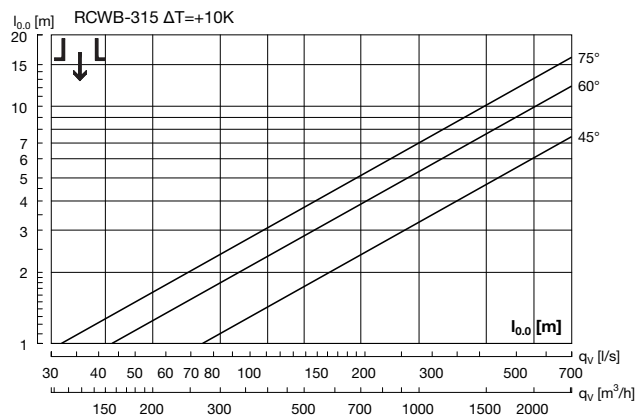
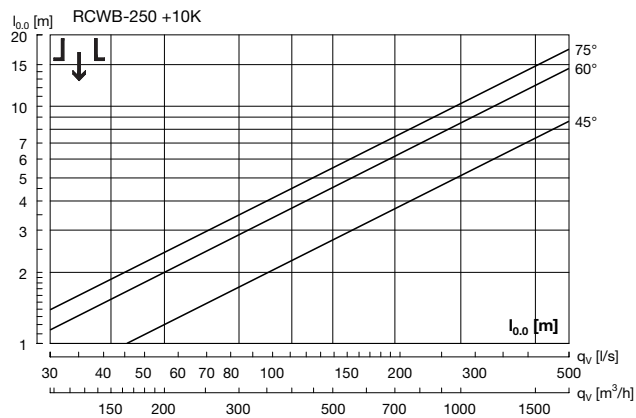
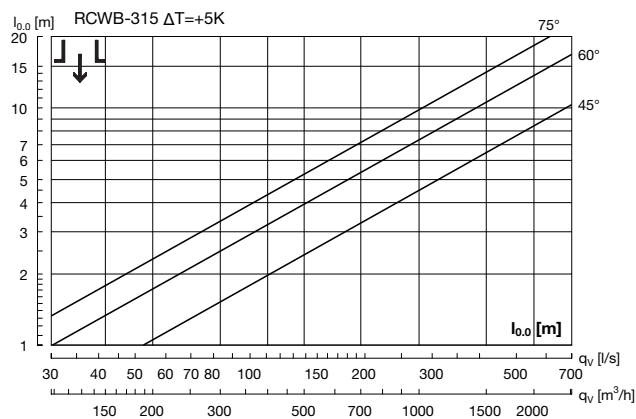
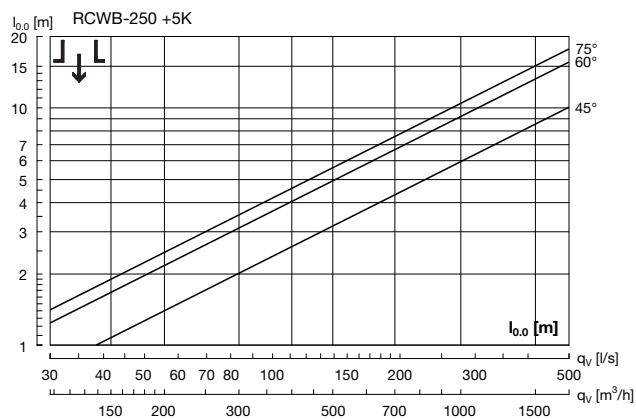
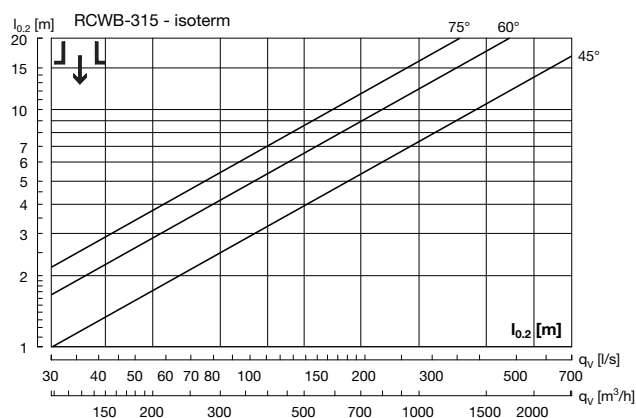
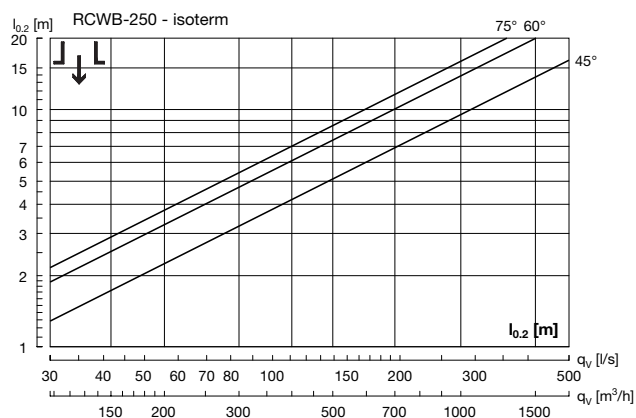
Throw  $l_{0.2}$  horizontal

Horizontal throw  $l_{0.2}$  is specified for free suspension. If the diffuser is installed < 300 mm from the ceiling, the value must be multiplied by 1.4.



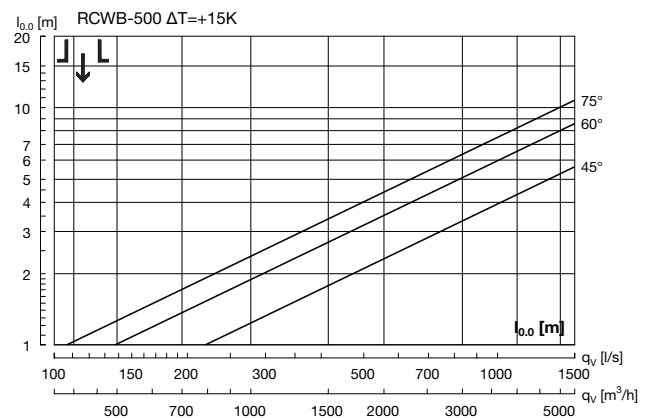
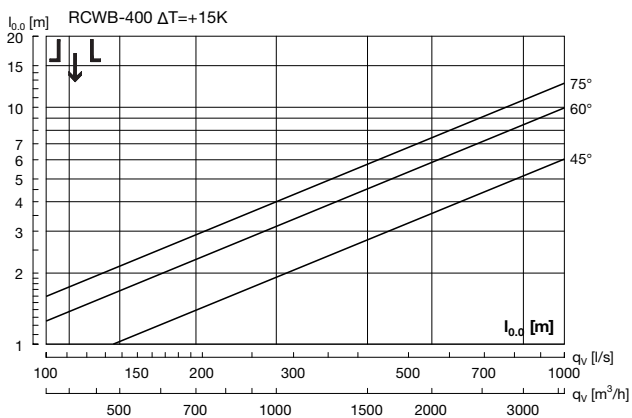
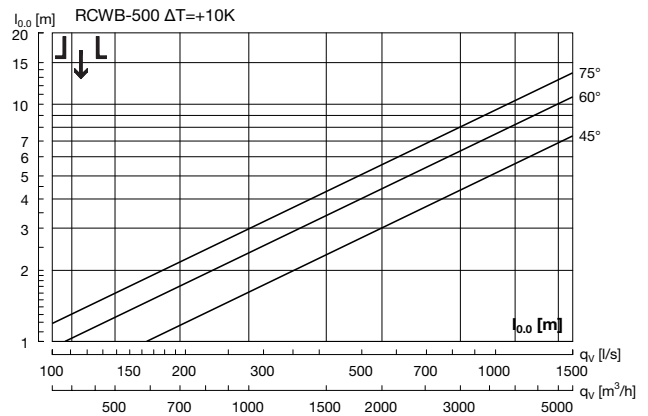
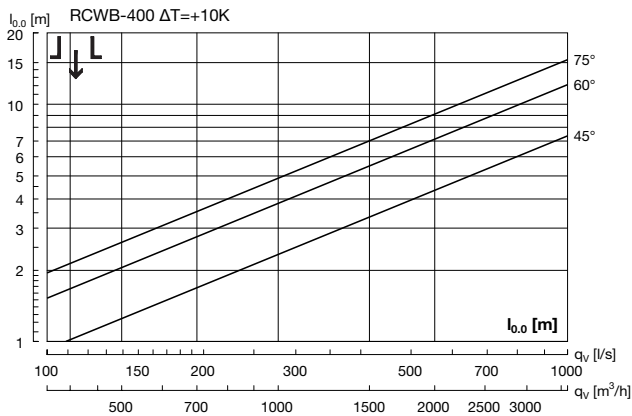
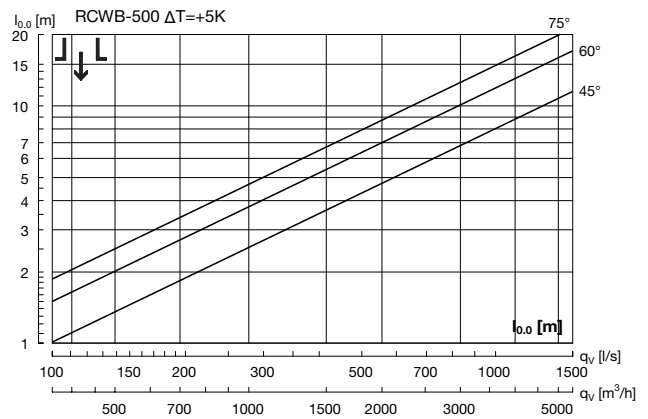
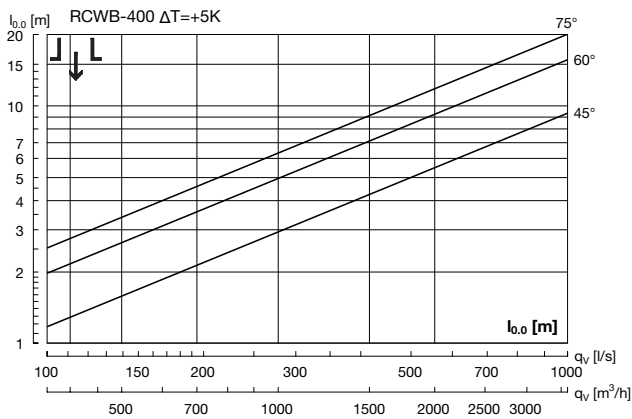
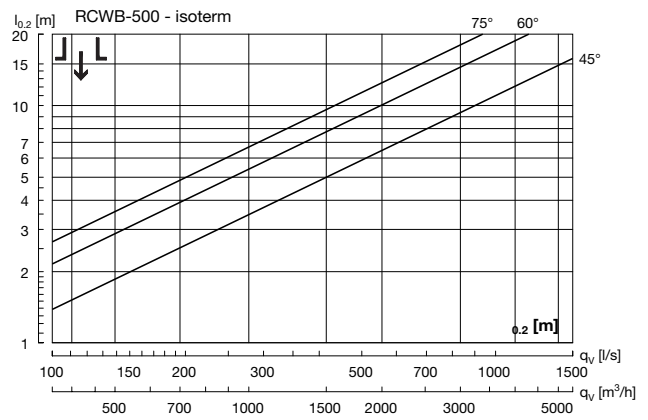
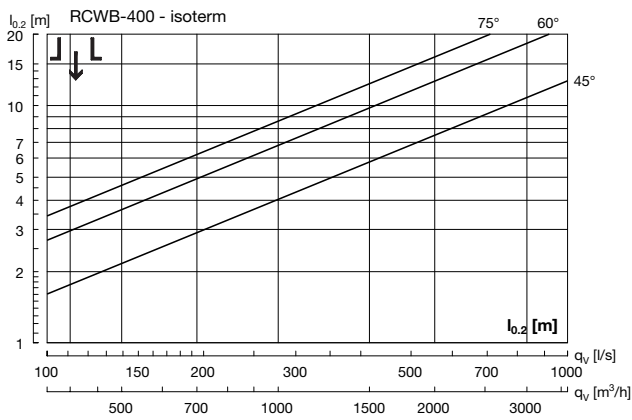
# Swirl diffuser

# RCWB



# Swirl diffuser

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# Swirl diffuser

RCWB

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- 2
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- 18

