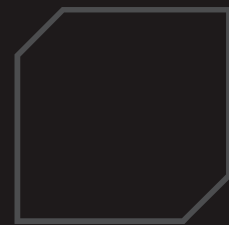


WS

RECTANGULAR WALL EXHAUST VENTILATOR AND ANTI-RETURN DAMPER



Description:

Rectangular WS exhaust ventilators with self-closing louvers provide protection against reverse airflow in the case of exhaust flow failure. The WS-K duct version acts as a self-closing flap providing protection against reverse airflow.

Intended use:

Used at the ends of low- and medium-pressure ventilation systems in the form of an air extractor with reverse airflow shut-off.

Design

- Standard:
 - Movable aluminium louvers
 - Galvanised steel frame/body
 - Upon special request:
 - painted in RAL colour
 - Stainless steel

If the dimension $C \geq 650$ of the WS air ventilator, additional reinforcement is fitted to the cross-section.

Dimensions

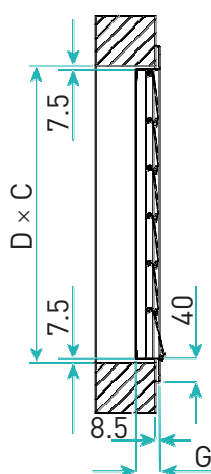


Figure 1. Wall version of the WS.

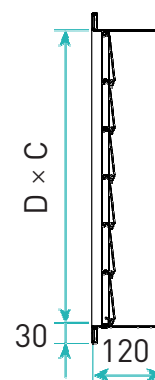


Figure 2. Duct version of the WS-K.

W – number of WS reinforcements:

W = 0 for $200 \leq C < 665$
 W = 1 for $665 \leq C < 1215$
 W = 2 for $1215 \leq C < 1765$
 W = 3 for $1765 \leq C < 2315$
 W = 4 for $2315 \leq C < 2715$

W – number of WS-K reinforcements:

W = 0 for $200 \leq C < 650$
 W = 1 for $650 \leq C < 1200$
 W = 2 for $1200 \leq C < 1750$
 W = 3 for $1750 \leq C < 2300$
 W = 4 for $2300 \leq C < 2700$

Please see below for the possible range of dimensions for standard WS/WS-K units:

- Width C = 200–1400 mm
- Height D = 200–1400 mm
- Depth G = 40 mm when $C \times D \leq 1 \text{ m}^2$
 G = 60 mm when $C \times D > 1 \text{ m}^2$

Non-standard dimensions max.:

- WS – 2715 x 2415
- WS-K – 2700 x 2400

Effective area

Table 1. WS effective area, [m²].

		C – Mounting hole width						
D – Mounting hole height		200	400	600	800	1000	1200	1400
	200	0.03	0.06	0.10	0.13	0.16	0.19	0.23
	400	0.06	0.13	0.20	0.26	0.34	0.40	0.47
	600	0.09	0.20	0.31	0.40	0.52	0.61	0.72
	800	0.12	0.26	0.41	0.54	0.69	0.82	0.96
	1000	0.15	0.33	0.52	0.68	0.87	1.03	1.21
	1200	0.17	0.40	0.62	0.82	1.04	1.23	1.46
	1400	0.20	0.47	0.73	0.95	1.22	1.44	1.71

Weight

Table 2. WS weight, m [kg].

		C – Mounting hole width					
D – Mounting hole height		400	600	800	1000	1200	1400
	400	2.3	2.9	3.8	4.4	5.0	5.6
	600	3.1	3.8	5.0	5.7	6.5	7.2
	800	3.8	4.7	6.0	6.9	7.7	9.3
	1000	4.6	5.6	7.2	8.2	9.9	10.9
	1200	5.4	6.5	8.4	10.2	11.4	12.6
	1400	6.0	7.1	10.1	11.4	12.7	14.0

SL

SL

SN

RAL

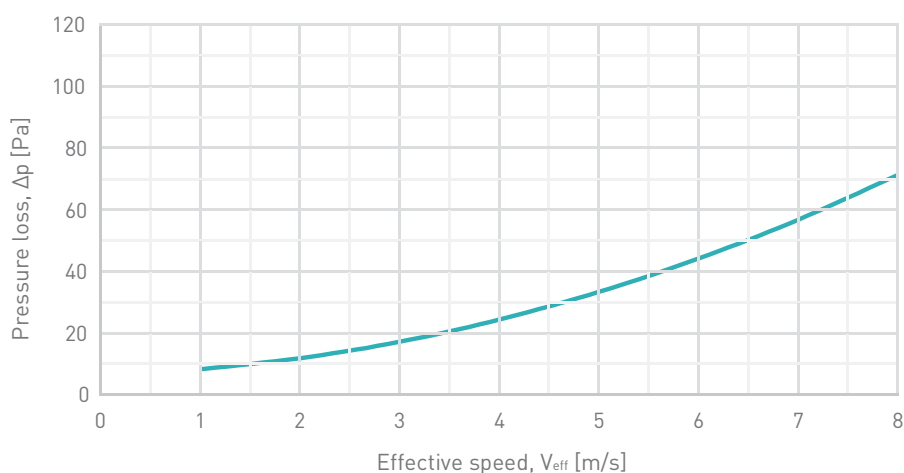


Diagram 1. Pressure loss for the WS exhaust ventilator.

WS – Rectangular wall exhaust ventilator and anti-return damper

When ordering, please provide information according to the following pattern:

WS <X> - <C> x <D> - W<W> - <P><RAL>

Where:

X	Manufacturing version*
	none – Wall version
	K – Duct version
C	Width in mm
D	Height in mm
W	Number of stiffening crossbars for C ≥ 650 [mm] dimension
P	Finish*
	SL – Frame or body: painted steel, aluminium blades
	SO – Frame or body, galvanised steel, aluminium blades
	NA – Frame or body: stainless steel, grade 1.4301 (304 acc. to AISI, 0H18N9 acc. to PN), aluminium blades
	SN – frame or body: stainless steel 1.4301 (304 acc. to AISI, 0H18N9 acc. to PN) **
RAL	Colour as per RAL code (for SL finish)

* Optional sizes – if none, default values will be used

** For the SN version, $V_{eff}/\Delta p$ diagram 1 does not apply

Example product marking: **WS-800x600 – W1 – SL9010**