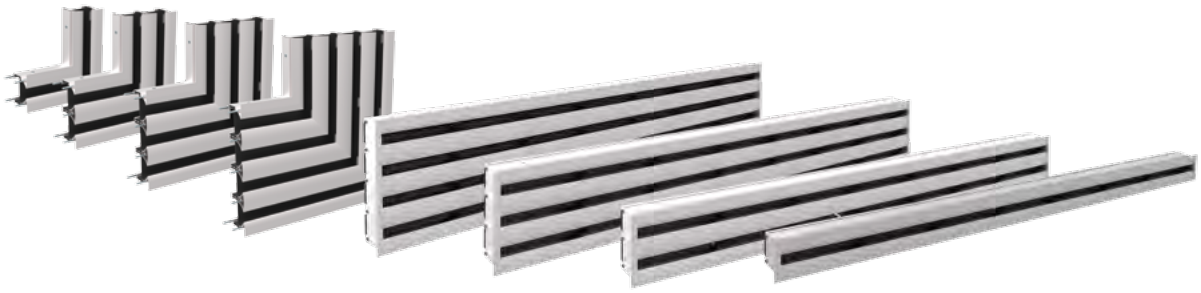
KSV

Slot diffusers



Ordering code

KSV - □ □ □ □ □ □

Number of slots		1 ... 4
Diffuser Length (mm)		600 - 1950
Color of deflectors	Black	B
	White	W
Diffuser construction	Complete unit incl. side frame at both ends	0
	End unit for linear assembly	E
	Middle unit for linear assembly	M
	Corner unit [1]	C
Surface finish [2]	Anodized aluminium finish	AN
	RAL9010 white	W
	Other RAL coded color	RALxxxx

NOTES:

1. For corner decorative pieces it is not neccessary to indicate slot length in the Ordering code.
2. If surface finish with other RAL color is chosen (option „RAL" in orderimg code), in the order note the ral color code shall be written

Example of the ordering code:

KSV - 2 - 900 - B - 0 - AN

Diffuser with 2 slots, 900 mm length, black deflectors, mounting bridge, complete unit incl. side frame at both ends, anodized aluminium finish.

Description

KSV is an air terminal element primarily designated for air supply. It is suitable for installation into ceilings or into walls. The installation of this slot diffuser is possible with plenum box or without it, using a mounting bridge.

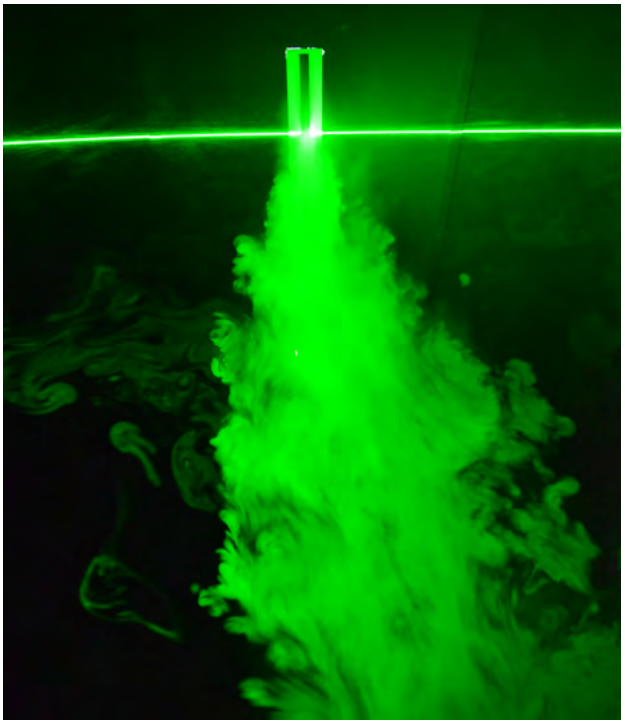
Highlights:

- long impact
- high induction
- direction set up by adjustable deflectors
- narrow construction
- comfort design
- modularity
- 1 to 4 slots on diffuse available

The way of air direction is set up by changing the inner deflector position. This deflector has 5 alternative positions for different air flow patterns (horizontal left/ right, diagonal left/right and vertical) see Fig. 2.
Besides these basic positions it is possible to set the deflector into 2 mounting positions, which are used for mounting KSV to the plenum box or mounting bridge or for adjustment of the plenum box regulating damper.

Information about accessories for KSV is available on page 14.

- KSV-MB - Mounting bridge
- PB-KSV - Plenum box



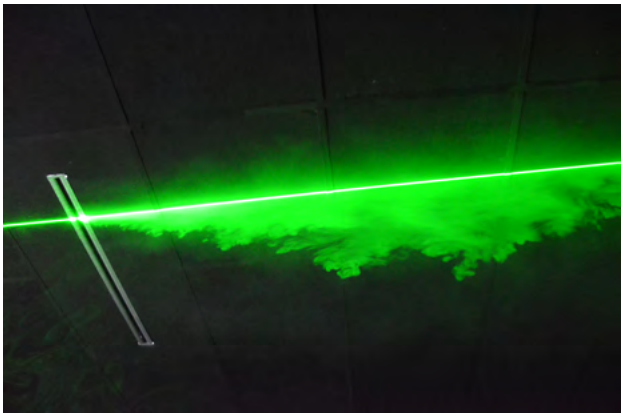


Fig. 1: Air flow visualisation

Design

KSV is made of extruded aluminium profile with elox surface and the inner part of the slot is plastic.
Plenum box of the slot with both socket and regulating damper are made of galvanized steel sheet. Plenum box can be supplied with sound attenuating material from the inner side (code 1) or thermal insulating material from outer side (code J).

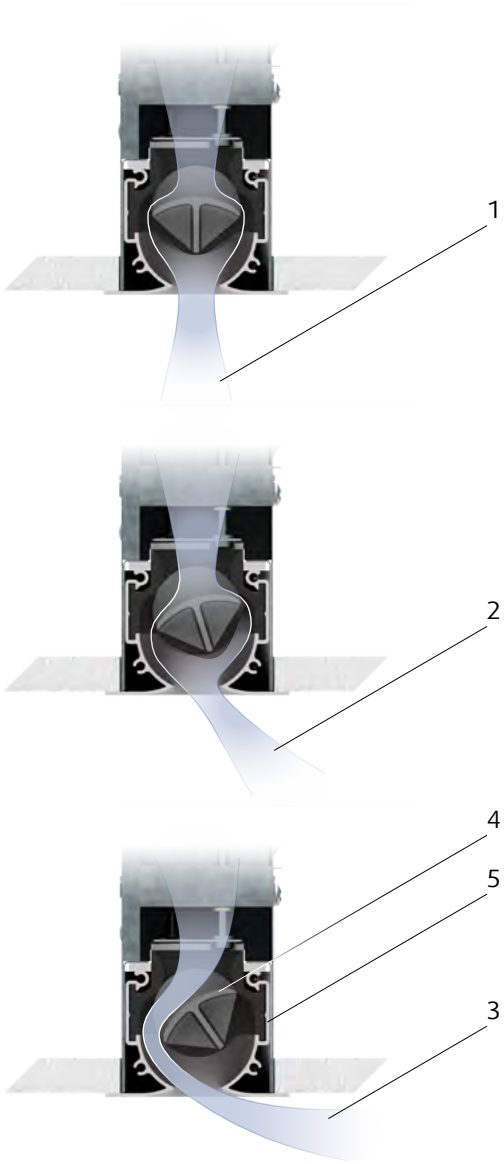


Fig. 2: Different deflectors setup and resulting air flow patterns

Product parts & setup possibilities:

1. Vertical distribution; 1 position (0)
2. Diagonal distribution; 2 positions (1, 1')
3. Horizontal distribution; 2 positions (2, 2')
4. Deflector
5. Diffuser

KSV-2-0

KSV-2-E

KSV-2-M

KSV-2-C

Fig. 3: Product types and shapes (diffuser construction)

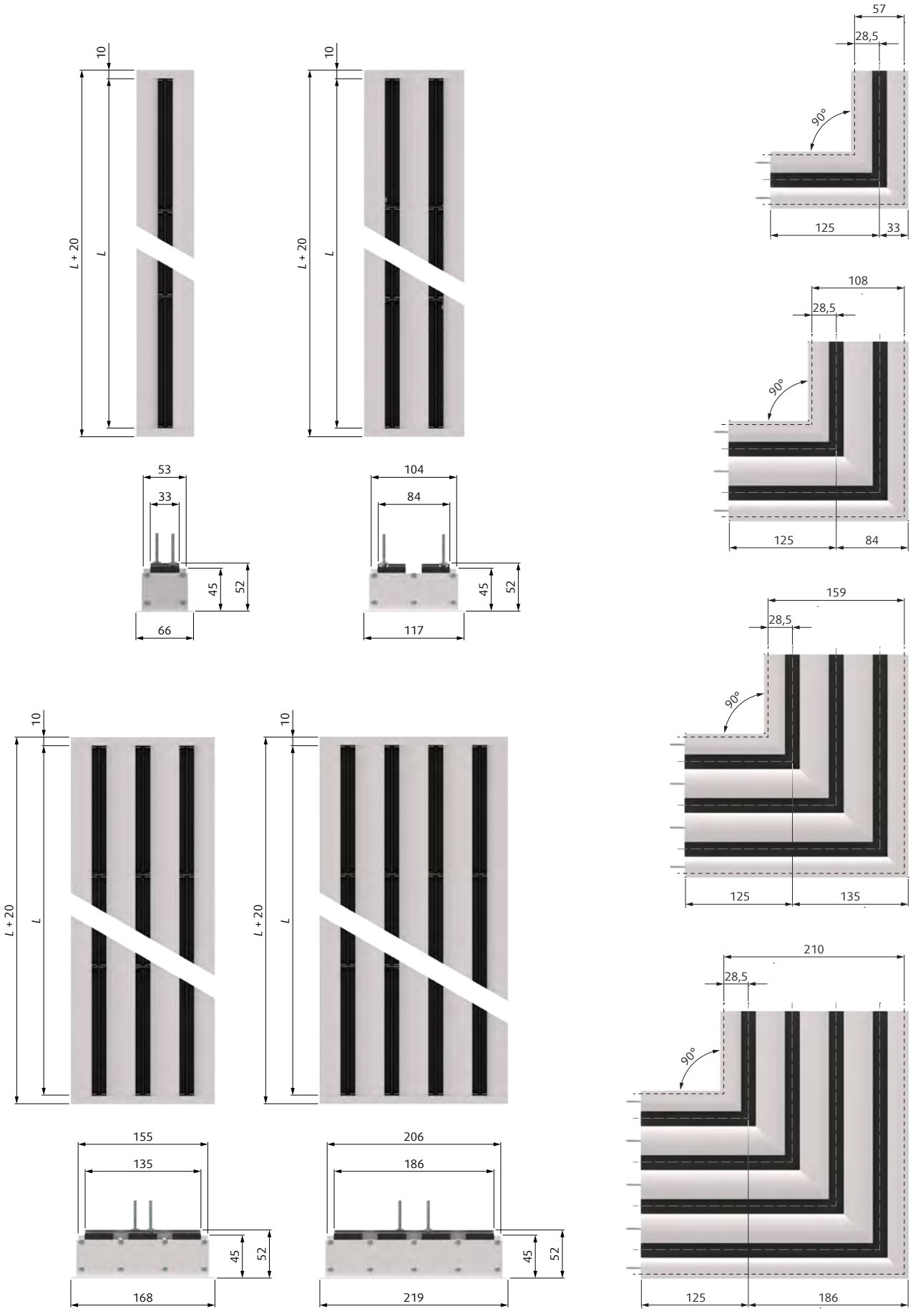


Fig. 4: Dimensions of the KSV

Dimensions

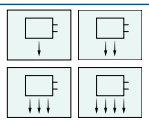
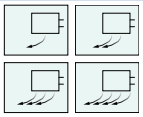
L (mm)	*m* (kg)			
	KSV-1	KSV-2	KSV-3	KSV-4
600	0,85	1,52	2,19	2,87
750	1,04	1,88	2,72	3,57
900	1,22	2,23	3,24	4,26
1050	1,41	2,59	3,77	4,96
1200	1,60	2,95	4,30	5,66
1350	1,78	3,30	4,82	6,35
1500	1,97	3,66	5,35	7,05
1650	2,15	4,01	5,87	7,74
1800	2,34	4,37	6,40	8,44
1950	2,52	4,72	6,93	9,14

Tab. 1: Dimension and weights of KSV

Technical parameters

Legend

p_S (Pa)	Pressure drop
q_v (m³/h), (l/s)	Air flow volume
L_{WA} (dB)	A-weighted sound power level
ΔT (K)	Temperature difference Supply air - Room air
$L_{0,2}$ (m)	Air throw length with terminal velocity 0,2 m/s
	Damper closed
	Damper open

	Vertical flow pattern
	Horizontal flow pattern

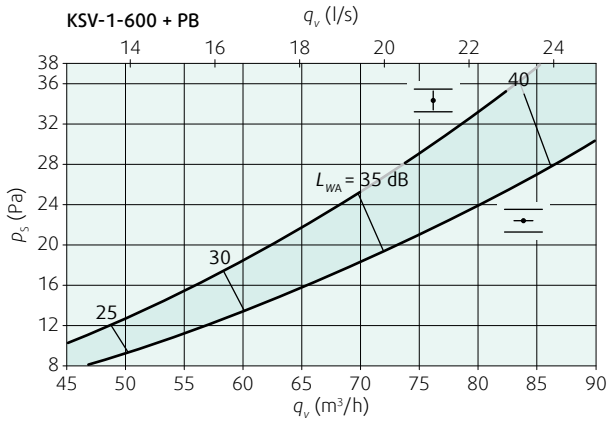


Diagram 1: Pressure drop & sound power level

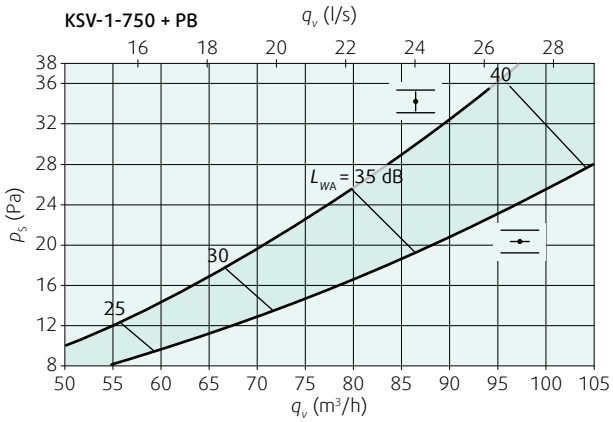


Diagram 2: Pressure drop & sound power level

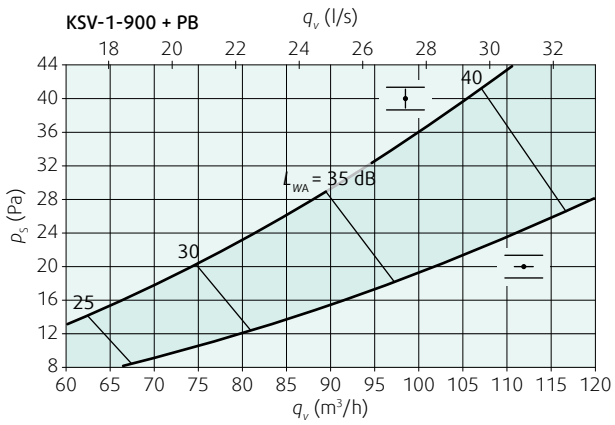


Diagram 3: Pressure drop & sound power level

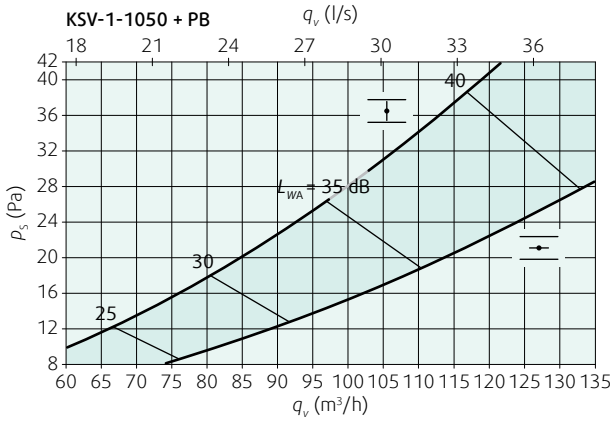


Diagram 4: Pressure drop & sound power level

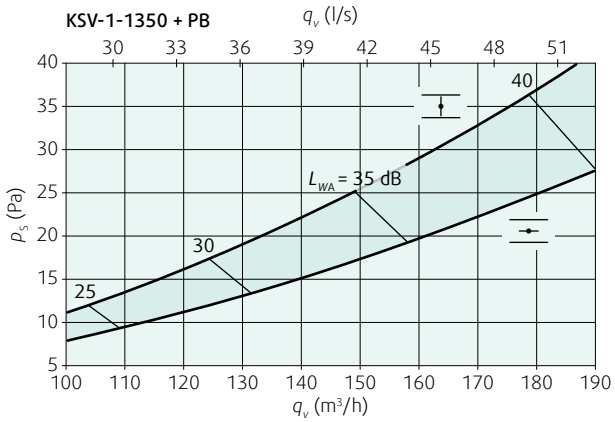


Diagram 5: Pressure drop & sound power level

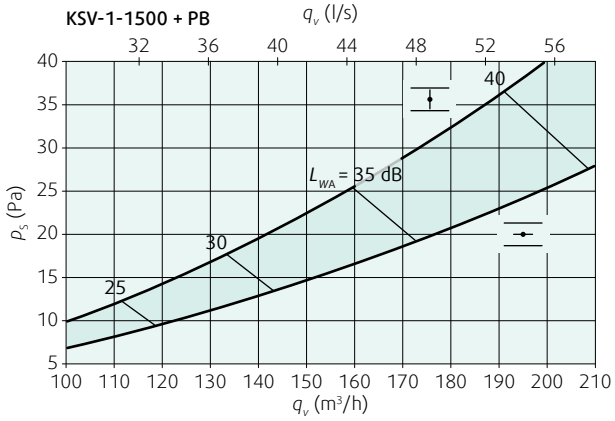


Diagram 6: Pressure drop & sound power level

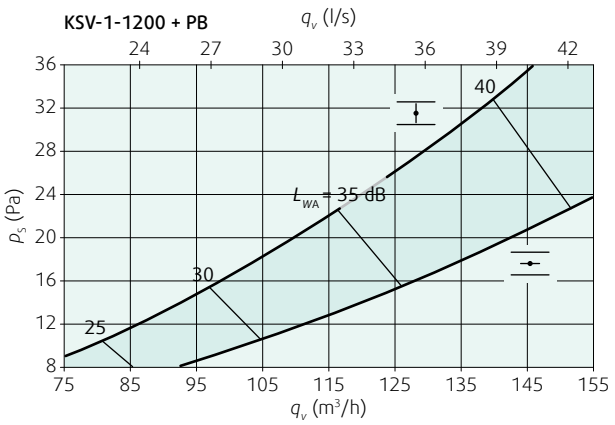


Diagram 7: Pressure drop & sound power level

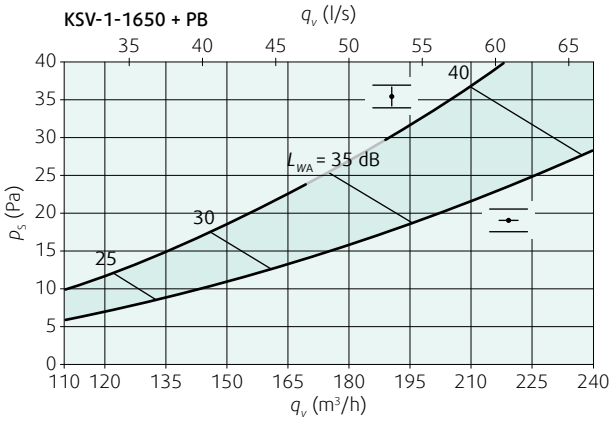


Diagram 8: Pressure drop & sound power level

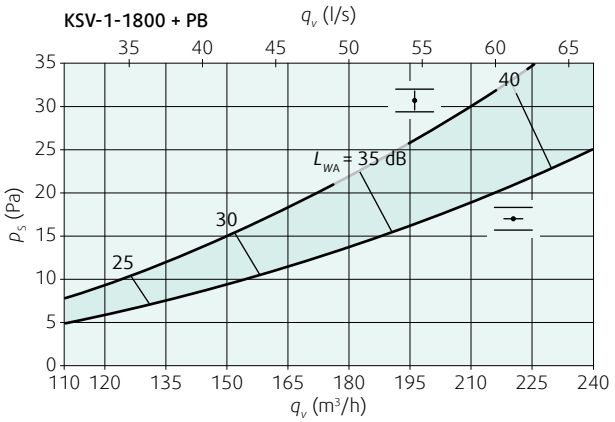


Diagram 9: Pressure drop & sound power level

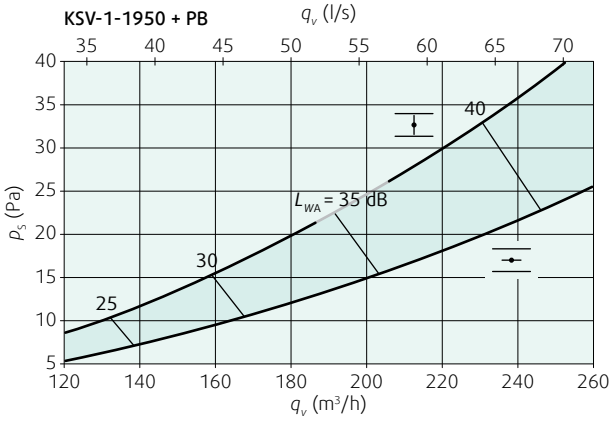


Diagram 10: Pressure drop & sound power level

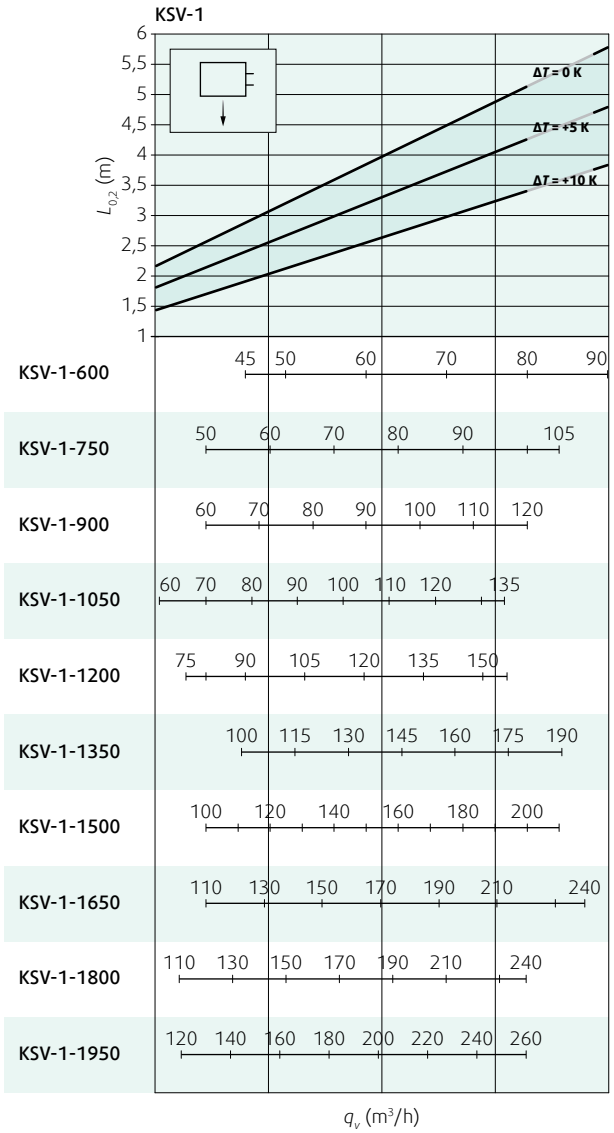


Diagram 11: Air throw length (vertical flow pattern)

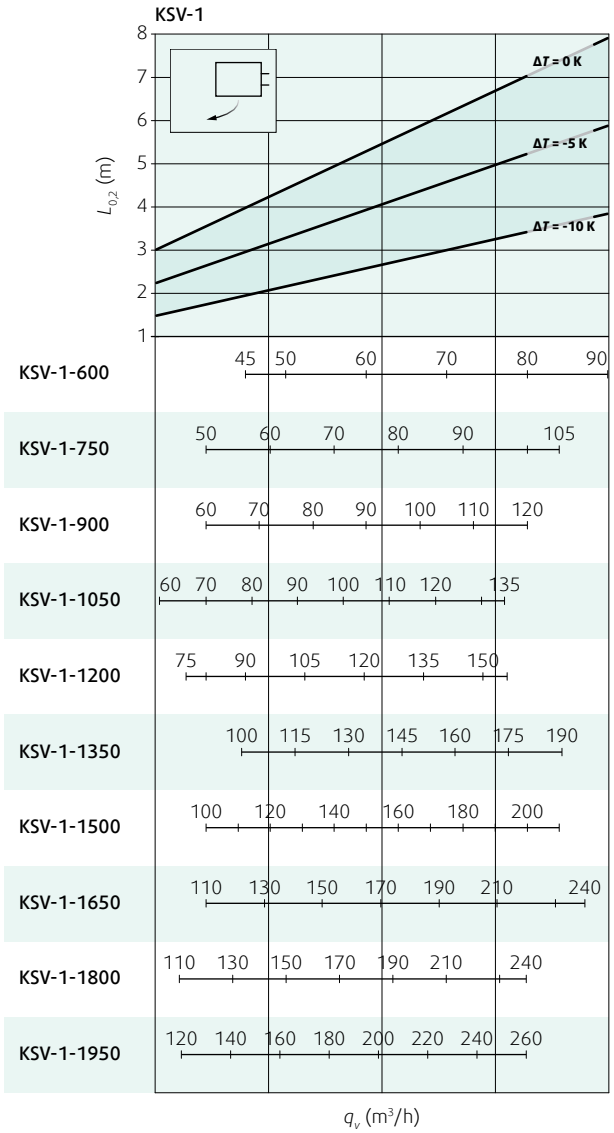


Diagram 12: Air throw length (horizontal flow pattern)

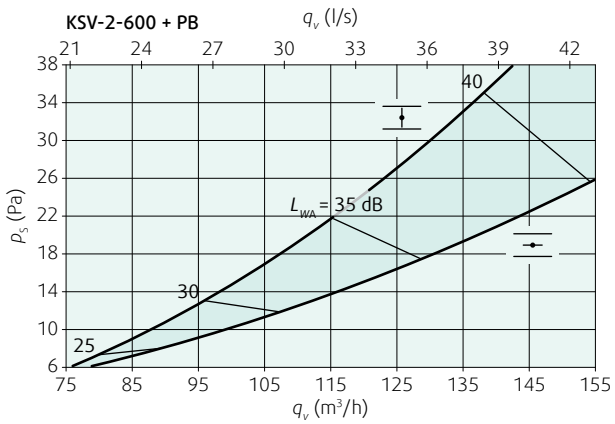


Diagram 13: Pressure drop & sound power level

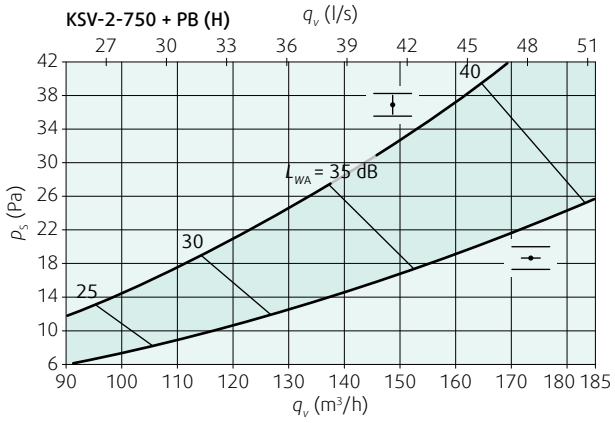


Diagram 14: Pressure drop & sound power level

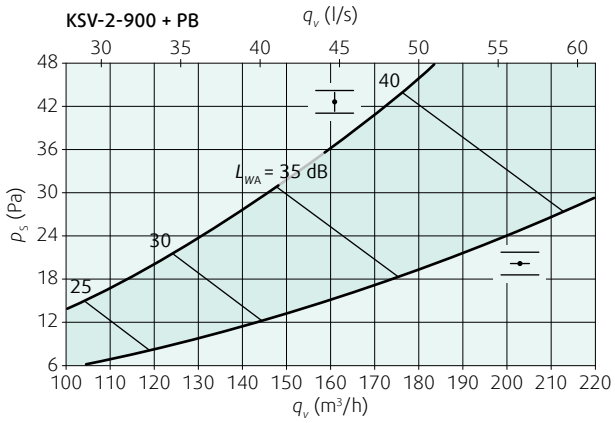


Diagram 15: Pressure drop & sound power level

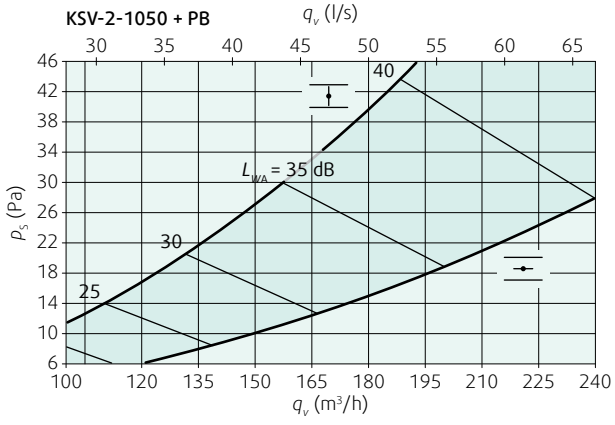


Diagram 16: Pressure drop & sound power level

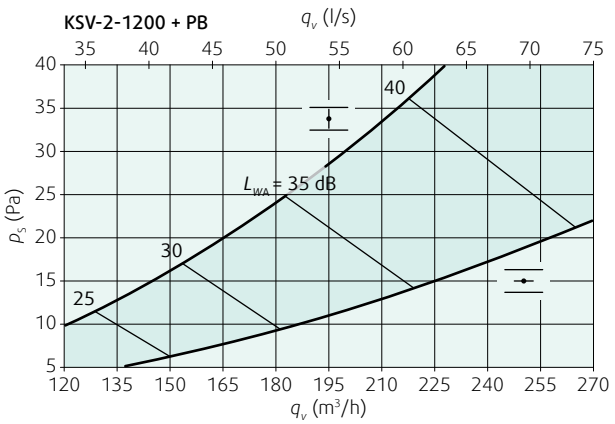


Diagram 17: Pressure drop & sound power level

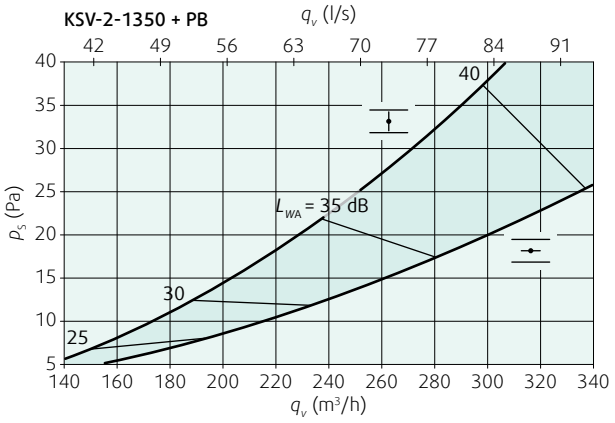


Diagram 18: Pressure drop & sound power level

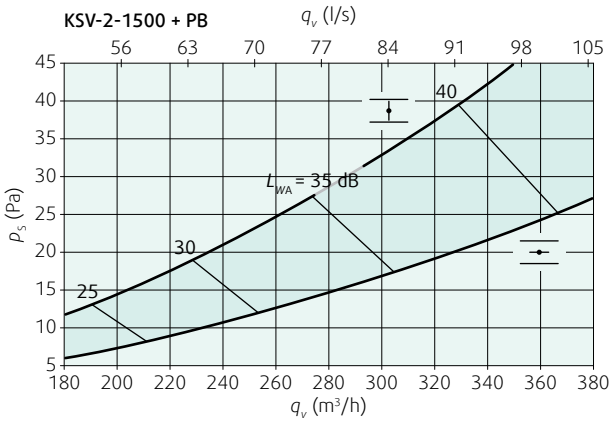


Diagram 19: Pressure drop & sound power level

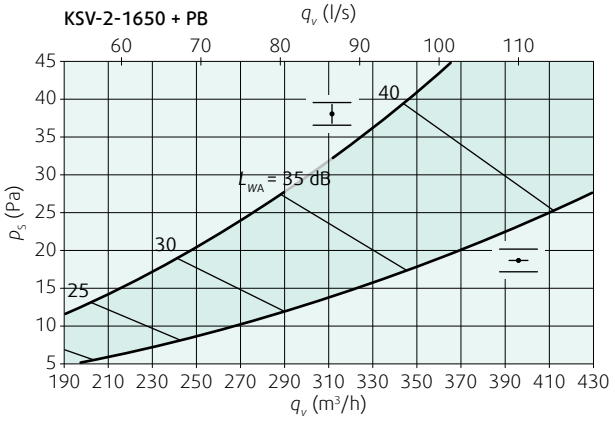


Diagram 20: Pressure drop & sound power level

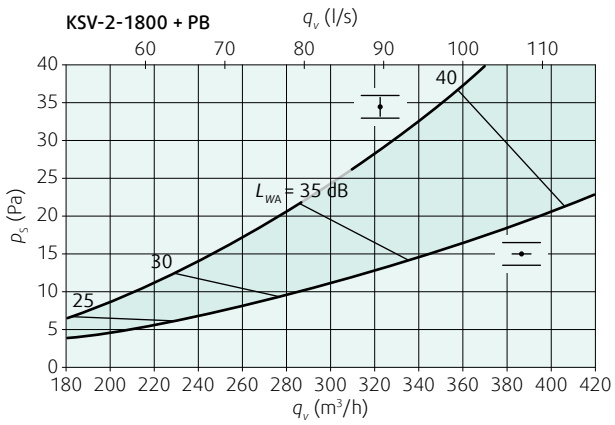


Diagram 21: Pressure drop & sound power level

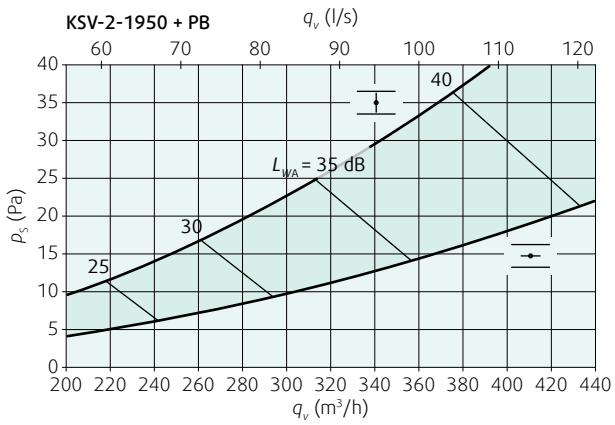


Diagram 22: Pressure drop & sound power level

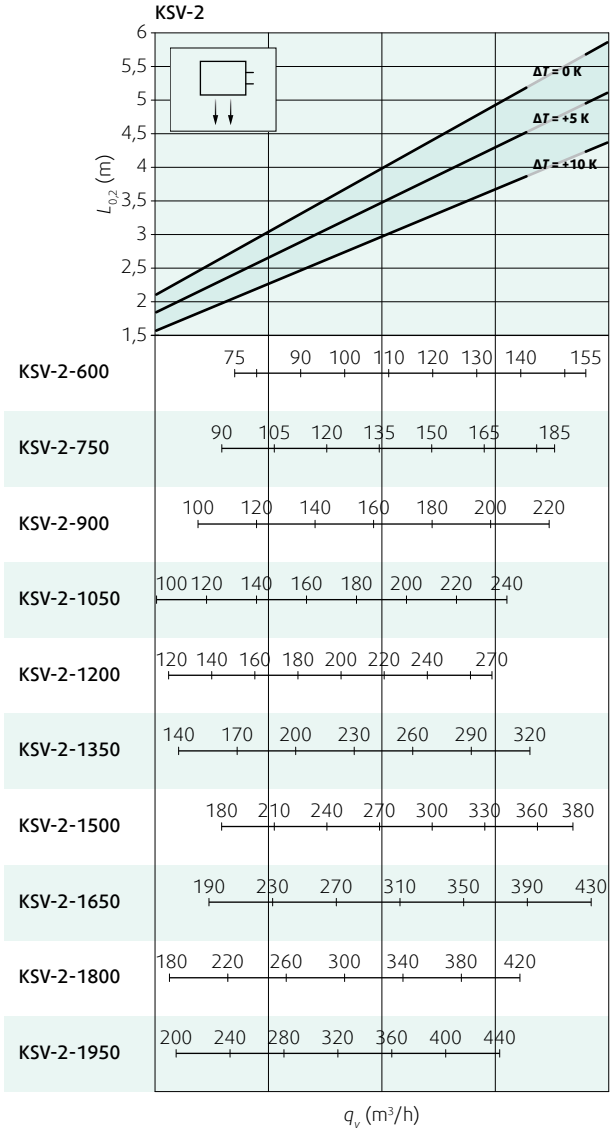


Diagram 23: Air throw length (vertical flow pattern)

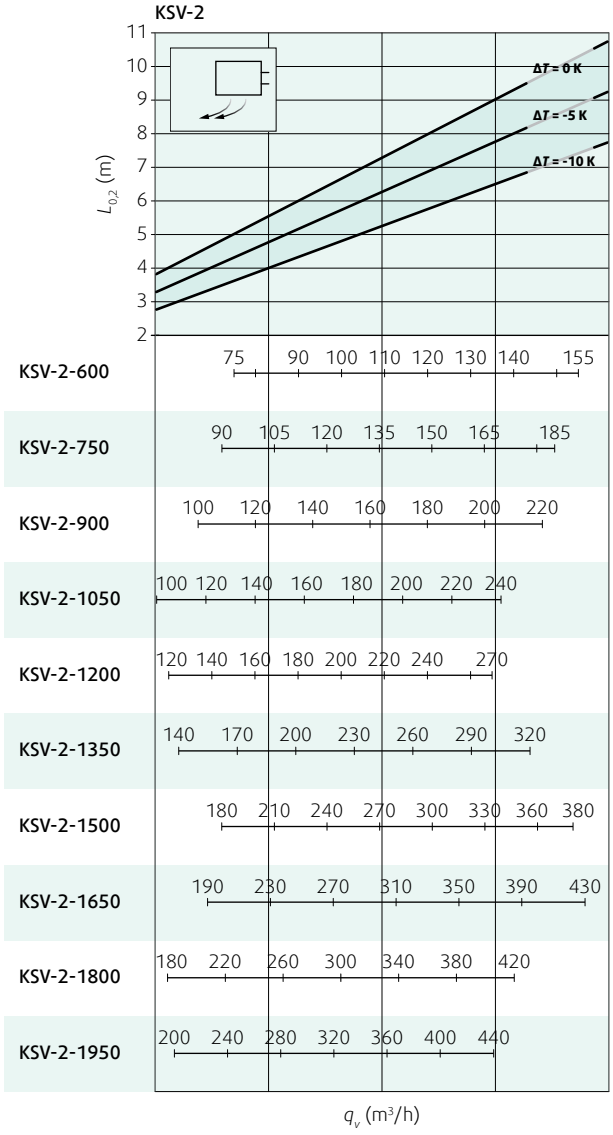


Diagram 24: Air throw length (horizontal flow pattern)

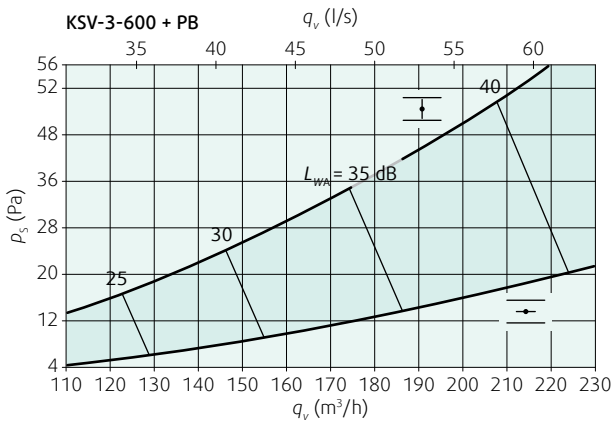


Diagram 25: Pressure drop & sound power level

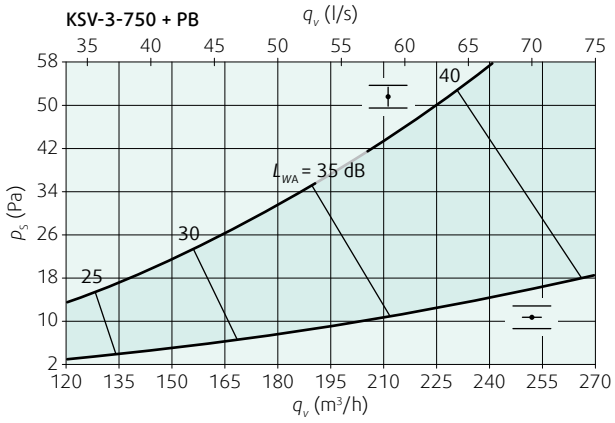


Diagram 26: Pressure drop & sound power level

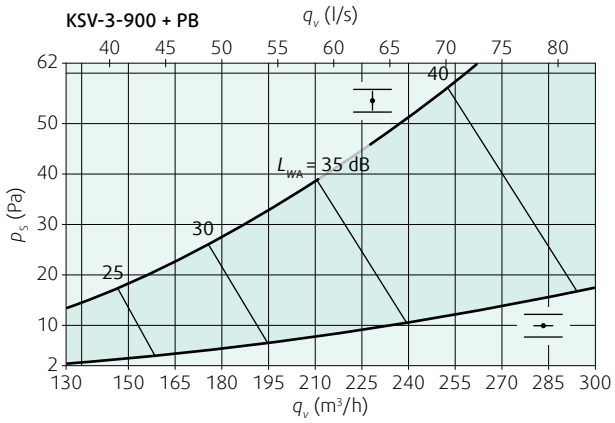


Diagram 27: Pressure drop & sound power level

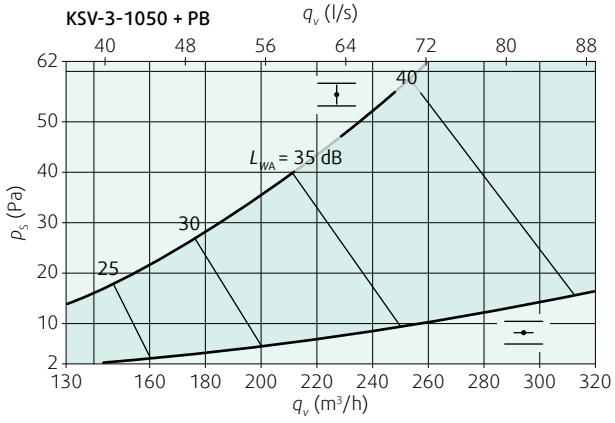


Diagram 28: Pressure drop & sound power level

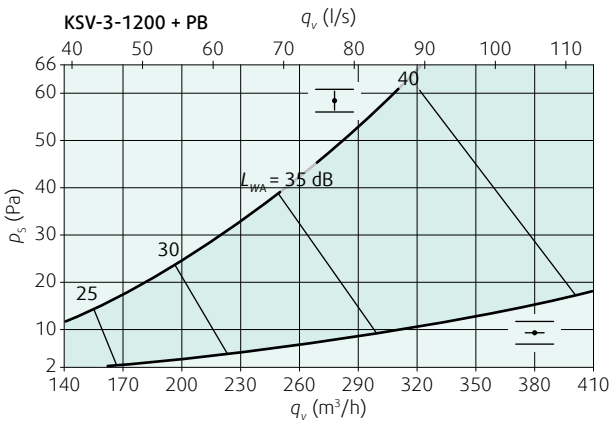


Diagram 29: Pressure drop & sound power level

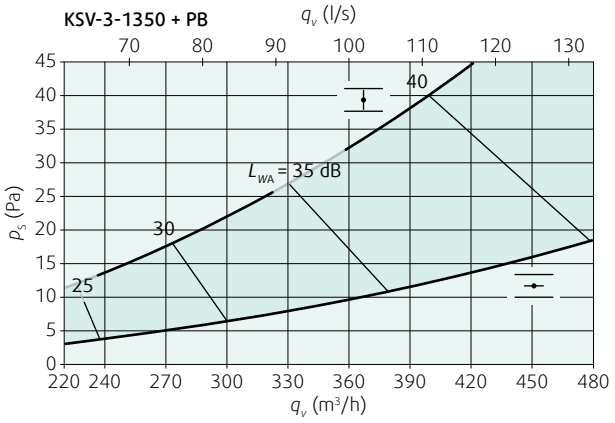


Diagram 30: Pressure drop & sound power level

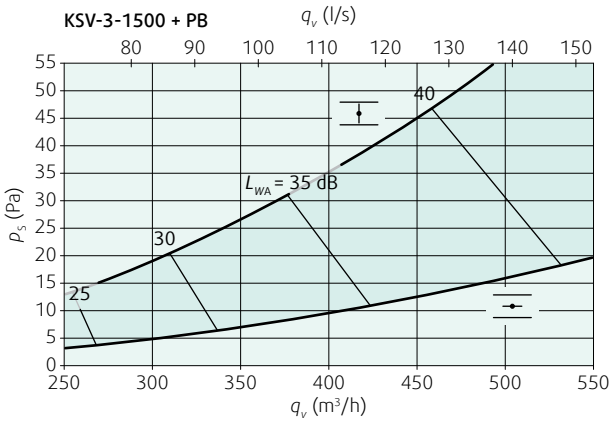


Diagram 31: Pressure drop & sound power level

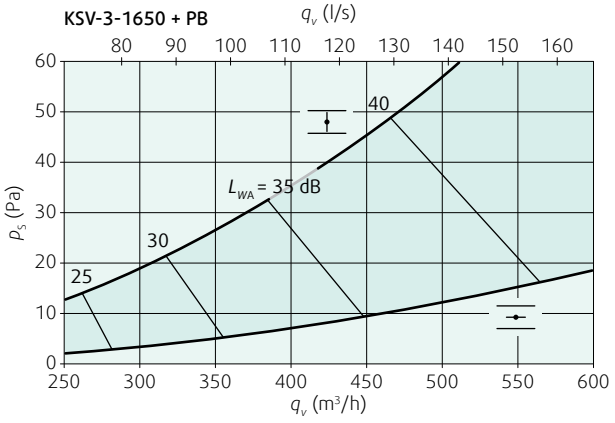


Diagram 32: Pressure drop & sound power level

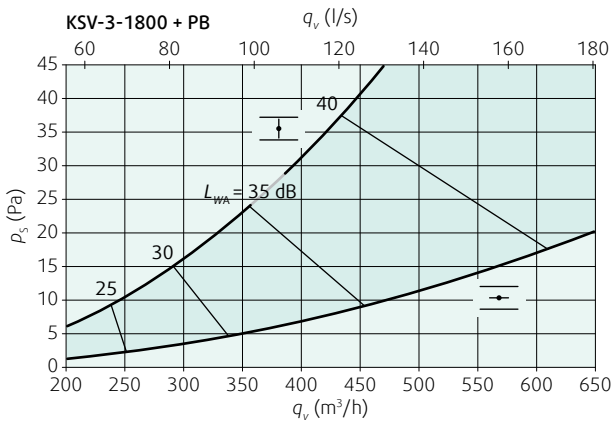


Diagram 33: Pressure drop & sound power level

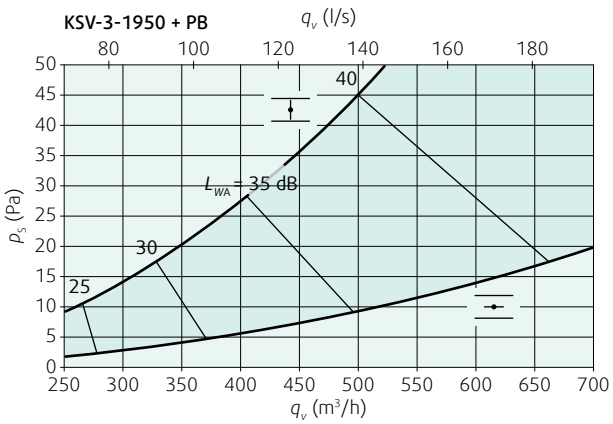


Diagram 34: Pressure drop & sound power level

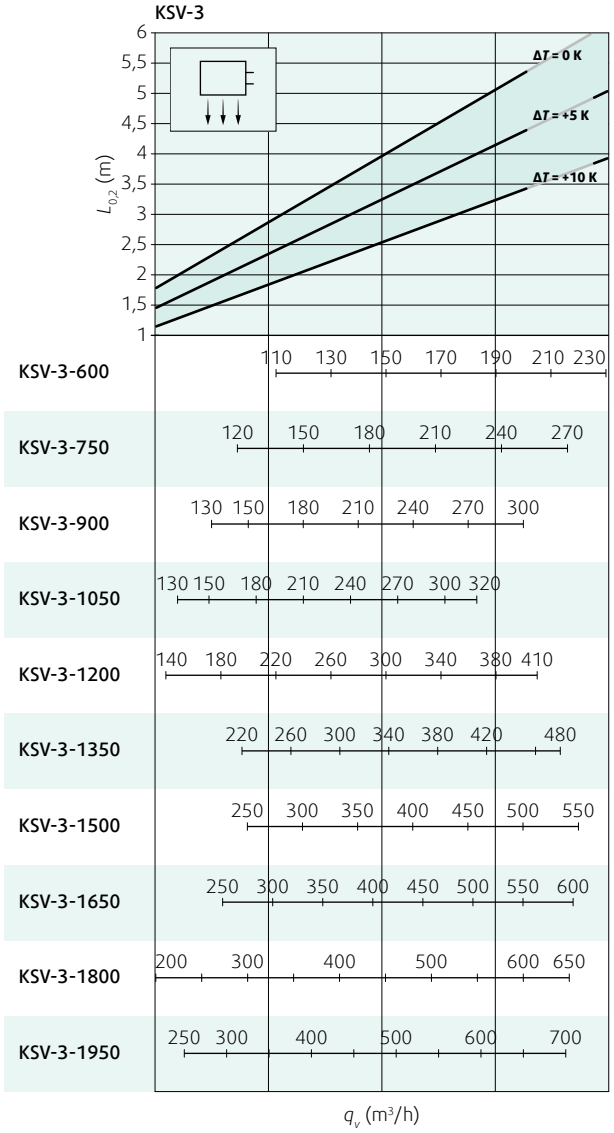


Diagram 35: Air throw length (vertical flow pattern)

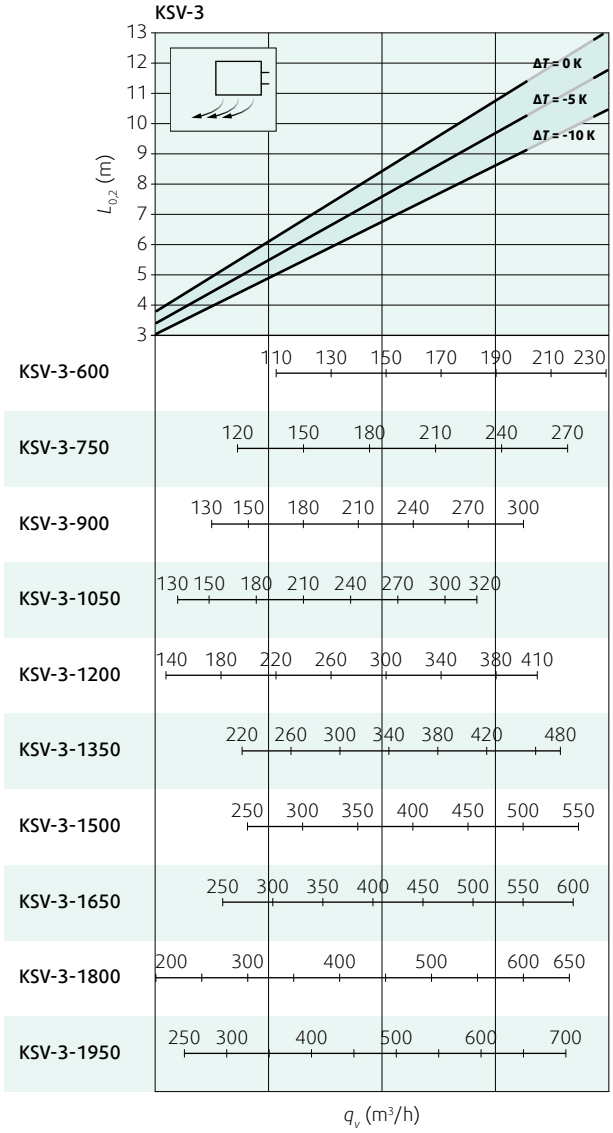


Diagram 36: Air throw length (horizontal flow pattern)

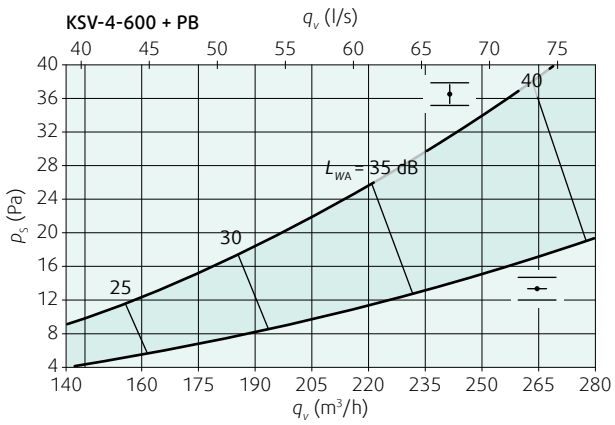


Diagram 37: Pressure drop & sound power level

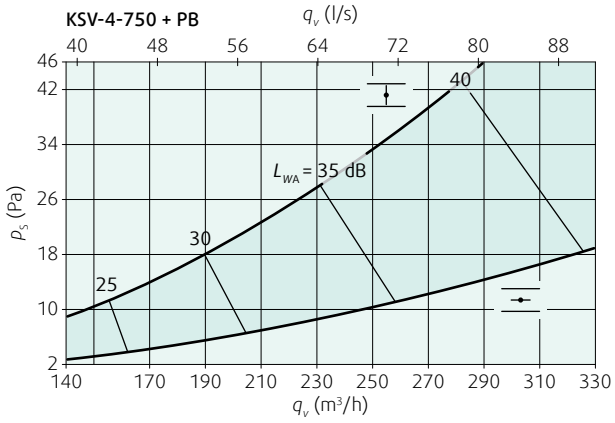


Diagram 38: Pressure drop & sound power level

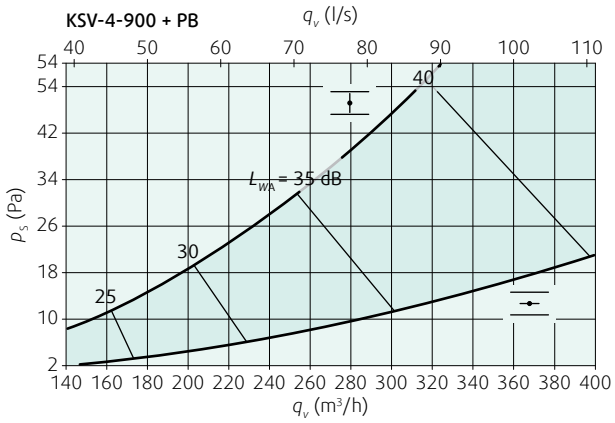


Diagram 39: Pressure drop & sound power level

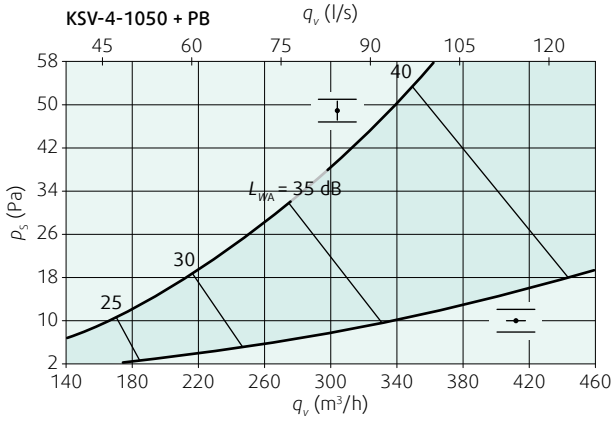


Diagram 40: Pressure drop & sound power level

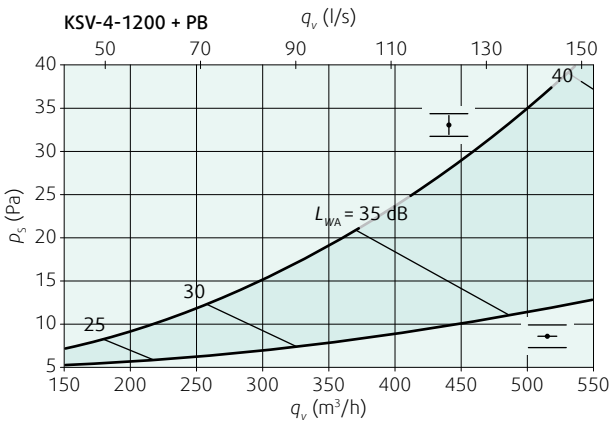


Diagram 41: Pressure drop & sound power level

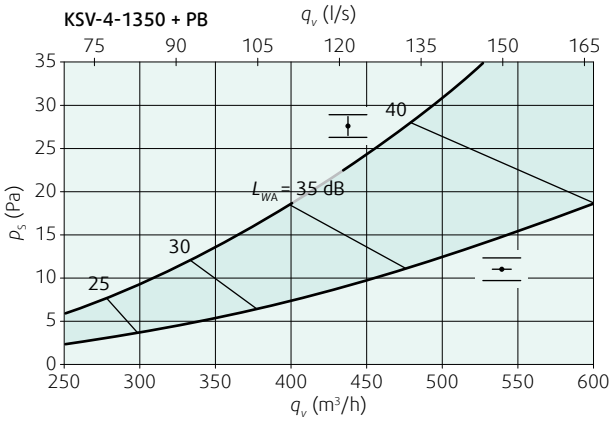


Diagram 42: Pressure drop & sound power level

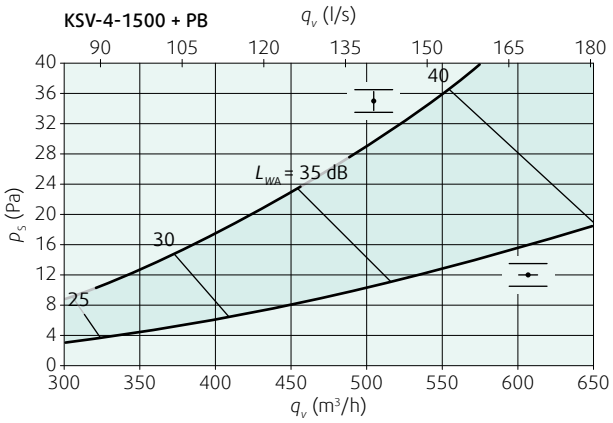


Diagram 43: Pressure drop & sound power level

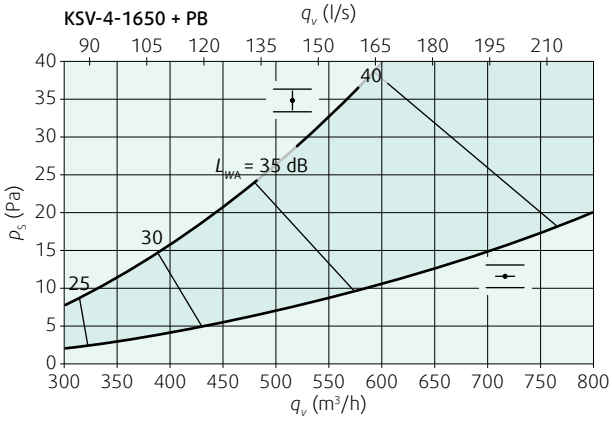


Diagram 44: Pressure drop & sound power level

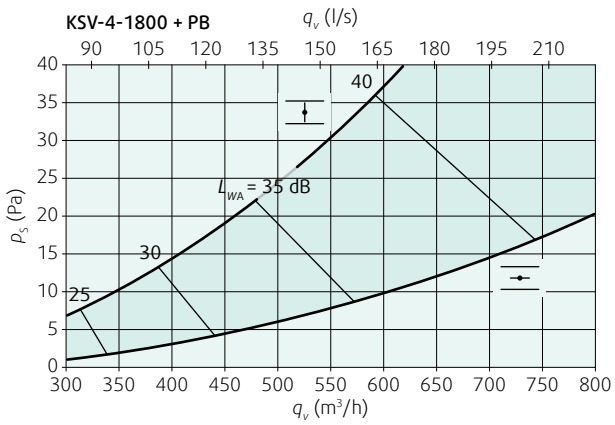


Diagram 45: Pressure drop & sound power level

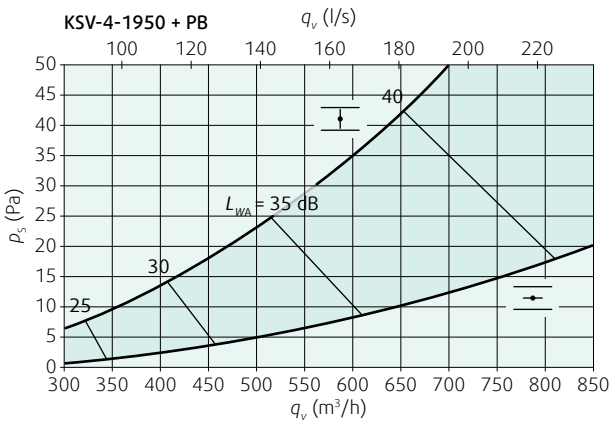


Diagram 46: Pressure drop & sound power level

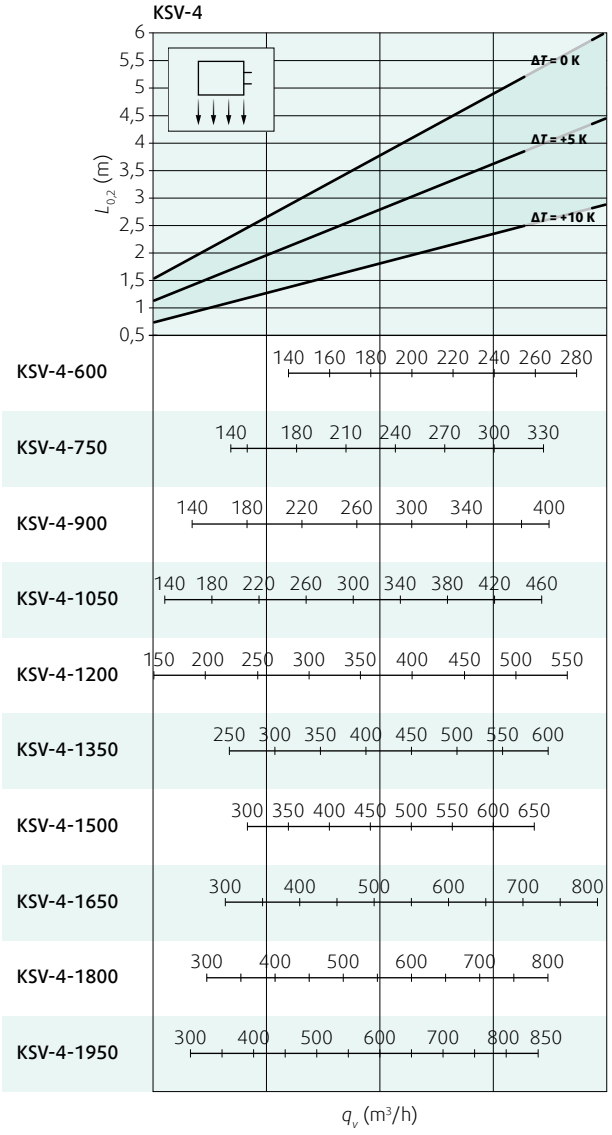


Diagram 47: Air throw length (vertical flow pattern)

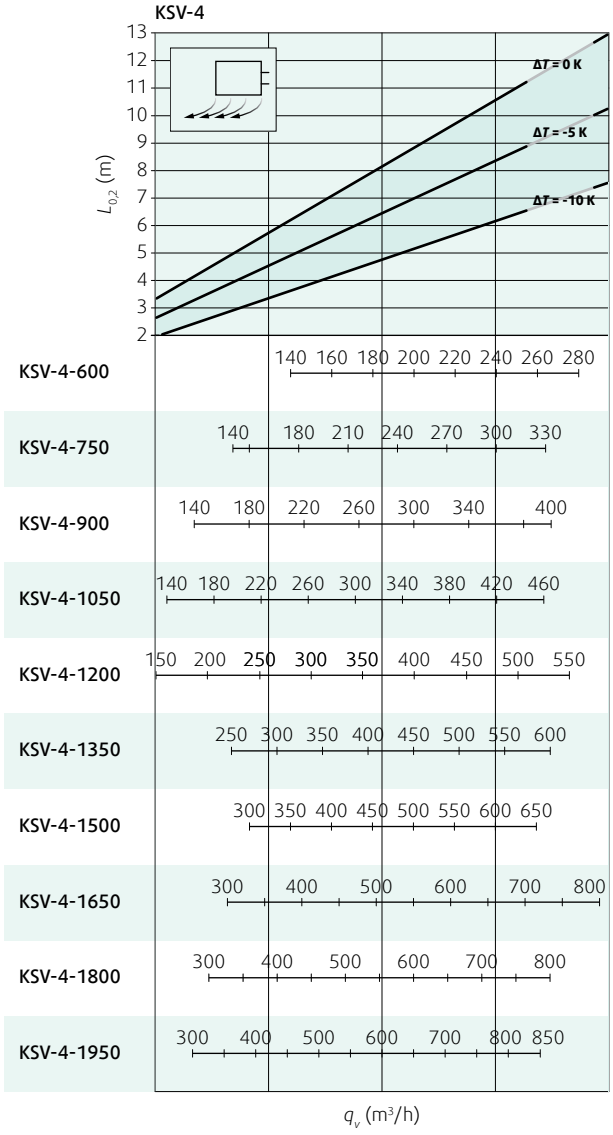


Diagram 48: Air throw length (horizontal flow pattern)

Accessories

KSV-MB

Mounting bridge

Ordering code

KSV-MB - □

Number of slots on diffuser	1 ... 4

Ordering code example

KSV-MB - 2

Mounting bridge for double slot diffuser KSV

Description

The mounting bridge is used for installation of KSV diffuser without plenum box in the suspended ceiling.

Design

KSV-MB is made from galvanized steel. It has a rivet nut to catch the fixing thread bolt of the diffuser.

PB-KSV

Plenum box

Ordering code

PB-KSV - □□□

Number of slots on diffuser		1 ... 4
Diffuser length (mm)		600 - 1950
Isolation *	Internal isolation 6 mm	I1
	External isolation	J

Ordering code example

PB-KSV - 2 - 900 - I1

Plenum box for double slot diffuser KSV, 900 mm length, internal isolation.

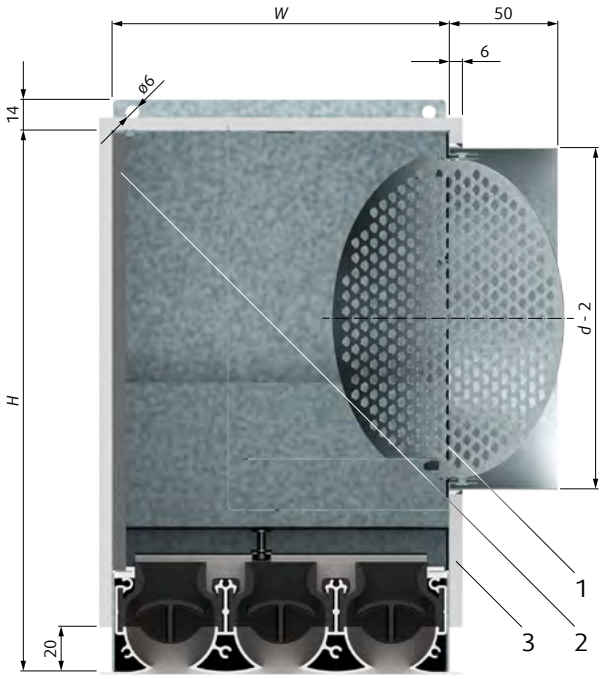
* NOTE: If no isolation defined in the ordering code, the plenum box comes without isolation (neither internal, nor external).

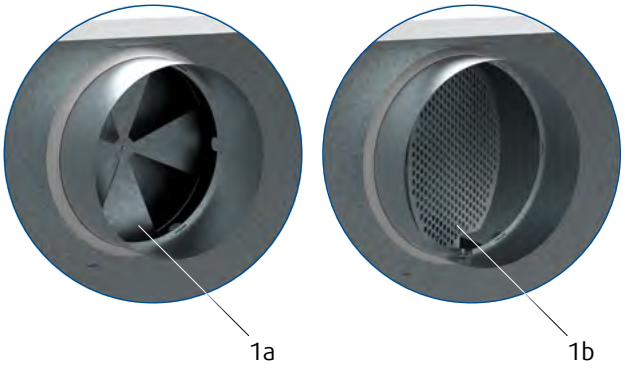
Description

The plenum box PB-KSV dimensions are adjusted the size and number of slots of the diffuser stated in the box ordering code.

Design

PB-KSV is made from galvanized steel sheet, equipped by duct connections with gasket. The air flow volume can be adjusted by damper at the box connection. The box can have isolation from inside and from outside





Product parts:

1. Damper
   1a Damper for PB-KSV-1 and PB-KSV-2
   1b Damper for PB-KSV-3 and PB-KSV-4
2. Internal isolation
3. External isolation

Fig. 5: Dimensions of the PB-KSV

Dimensions

The lengths L of diffuser and corresponding plenum box are identical.

L (mm)	Box height *H* (mm)				Box width *W* (mm)				Connection nominal diameter *d* (mm)			
	KSV-1	KSV-2	KSV-3	KSV-4	KSV-1	KSV-2	KSV-3	KSV-4	KSV-1	KSV-2	KSV-3	KSV-4
600	220	255	250	290	55	106	157	208	1 × 125	1 × 160	1 × 160	1 × 200
750												
900												
1050												
1200	255	295	290						1 × 160	1 × 200	1 × 200	
1350	220	255	250						2 × 125	2 × 160	2 × 160	2 × 200
1500												
1650												
1800												
1950												

Tab. 2: Dimensions of PB-KSV

L (mm)	Plenum box(es) PB-KSV				KSV + PB weight *m* (kg)			
	KSV-1	KSV-2	KSV-3	KSV-4	KSV-1	KSV-2	KSV-3	KSV-4
600	1 × PB-KSV1-600	1 × PB-KSV2-600	1 × PB-KSV3-600	1 × PB-KSV4-600	3,2	4,4	5,1	6,8
750	1 × PB-KSV1-750	1 × PB-KSV2-750	1 × PB-KSV3-750	1 × PB-KSV4-750	3,8	5,2	5,8	8,4
900	1 × PB-KSV1-900	1 × PB-KSV2-900	1 × PB-KSV3-900	1 × PB-KSV4-900	4,5	6,1	6,9	10
1050	1 × PB-KSV1-1050	1 × PB-KSV2-1050	1 × PB-KSV3-1050	1 × PB-KSV4-1050	5	7	8	11,4
1200	1 × PB-KSV1-1200	1 × PB-KSV2-1200	1 × PB-KSV3-1200	1 × PB-KSV4-1200	6,1	8,7	9,5	13,3
1350	"1 × PB-KSV1-600 1 × PB-KSV1-750"	"1 × PB-KSV2-600 1 × PB-KSV2-750"	"1 × PB-KSV3-600 1 × PB-KSV3-750"	"1 × PB-KSV4-600 1 × PB-KSV4-750"	6,9	9,6	10,6	14,9
1500	2 × PB-KSV1-750	2 × PB-KSV2-750	2 × PB-KSV3-750	2 × PB-KSV4-750	7,6	10,5	11,7	16,5
1650	"1 × PB-KSV1-750 1 × PB-KSV1-900"	"1 × PB-KSV2-750 1 × PB-KSV2-900"	"1 × PB-KSV3-750 1 × PB-KSV3-900"	"1 × PB-KSV4-750 1 × PB-KSV4-900"	8,4	11,7	12,3	18,2
1800	2 × PB-KSV1-900	2 × PB-KSV2-900	2 × PB-KSV3-900	2 × PB-KSV4-900	9,1	12,1	13,4	19,8
1950	"1 × PB-KSV1-900 1 × PB-KSV1-1050"	"1 × PB-KSV2-900 1 × PB-KSV2-1050"	"1 × PB-KSV3-900 1 × PB-KSV3-1050"	"1 × PB-KSV4-900 1 × PB-KSV4-1050"	9,7	13,7	14,4	21,4

Tab. 3: Weights of PB-KSV

Installation, maintenance and operation

The KSV slot diffusers can be installed with plenum box connected together by thread bolts in the diffuser slots. The plenum box has eyelets for hanging under ceiling. KSV can be installed without plenum box as well, directly in opening of suspended ceiling. The mounting bridge KSV-MB is used to hold the diffuser connected by thread bolt in the diffuser slot.
More details see in Installation, maintenance and operation manual (InstalMaintenOperInstr_PP-54_KSV).

Transport and storage

Dry indoor conditions with temperature range - 20 °C to + 50 °C.

Supplement

Any deviations from the technical specifications contained herein 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 are available at www.systemair.com.

Linear diffusers - related products

HELLA-A, HELLA-AT

Linear slot diffusers

Product information is available in the technical documentation TechSpec_TPI-85 and at www.systemair.com.