Insulated metal air supply valve

KNI

Description

KNI air supply valves can be installed in the ceiling, on the wall or directly in the mouth of a ventilation duct using a dedicated RM mounting frame. They allow smooth adjustment of the air exhaust flow rate by rotating the disk closure in the centre. The air flow rate depends on the opening ratio, i.e. the distance between the disk closure distance and the round bezel, and it is set with a locknut. The carefully designed geometry of the valve guarantees low noise level as well as quick and easy installation.
The air supply valves are available in sets with a mounting frame (product code: KNI-RMI).

Available materials — Product code examples
KNI-RMI-... - galvanized steel sheet, powder-coated finish high-gloss RAL 9016

Product code example
Product code: **KNI-RMI - aaa**

type
Ød

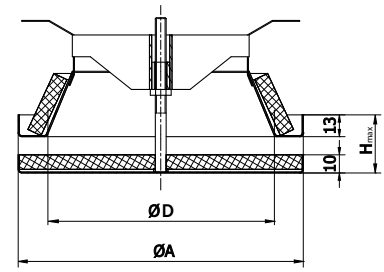
Technical specifications

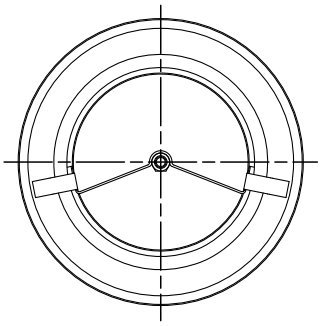
The following performance parameters:
volumetric flow rate, q (l/s or m^3/h), total pressure drop, P_t (Pa), and sound pressure level, L_A (dB(A)), for a specific disk closure depth can be read from the chart.

Pressure drop, P_t
The charts show the total pressure drop, P_t (Pa).

Sound pressure level, L_A
The charts show the sound pressure level, L_A (dB(A)).
The noise level is shown for the sound insulation level at 4 dB indoors, which corresponds to sound insulation performance in the reverberation zone at the room absorption level for 10 m^2 according to SABINE's formula

Dimensions





ØD$_{nom}$ [mm]	ØA [mm]	H_{max} [mm]	Weight [kg]
80	115	45	0.19
100	135	45	0.26
125	160	45	0.33
150	195	45	0.44
160	195	45	0.48
200	248	45	0.65

Sound pressure level, L_A (dB(A))

Dimensions [mm]	Mean frequency [Hz]						
	125	250	500	1000	2000	4000	8000
80	6	3	2	1	-4	-16	-20
100	4	3	2	0	-7	-15	-30
125	2	7	3	-2	-10	-20	-32
150	5	7	3	-2	-10	-19	-32
160	5	7	3	-2	-10	-19	-32
200	8	6	4	-3	-10	-19	-32
tolerance	3	2	2	2	2	2	3

Sound insulation level (dB)

Dimensions [mm]	Mean frequency [Hz]							
	63	125	250	500	1000	2000	4000	8000
80	22	19	14	11	2	3	7	8
100	22	16	11	8	6	6	3	6
125	20	15	9	6	4	3	3	5
150	18	13	8	5	4	4	5	6
160	18	13	8	5	4	4	5	6
200	17	11	7	6	6	5	6	6
tolerance	6	3	2	2	2	2	2	3

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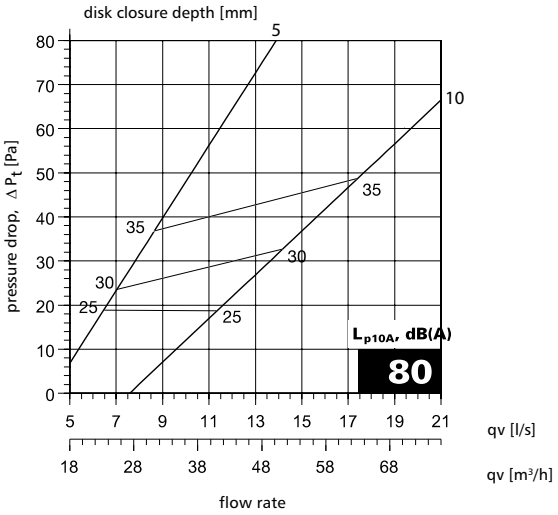
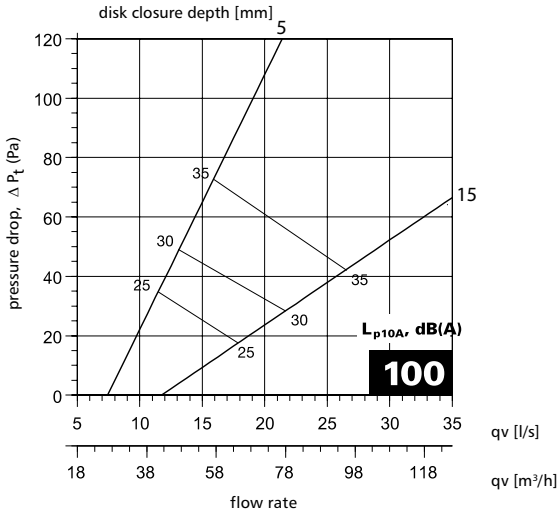
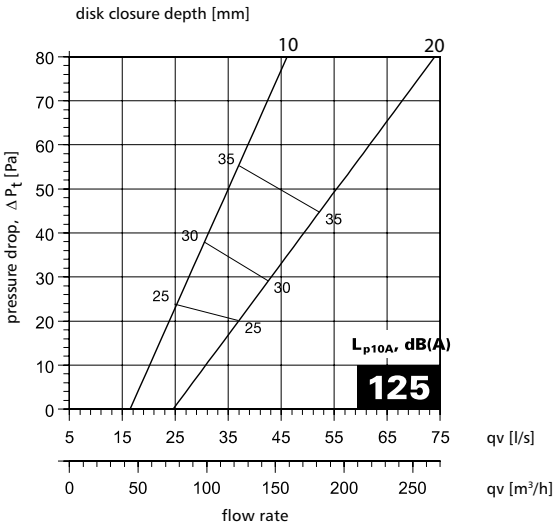
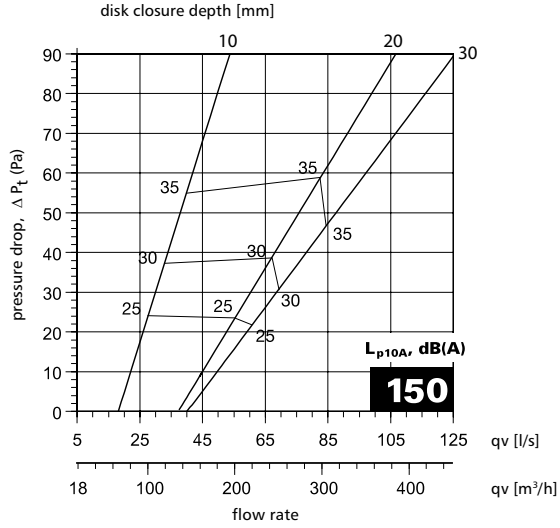
Technical specifications

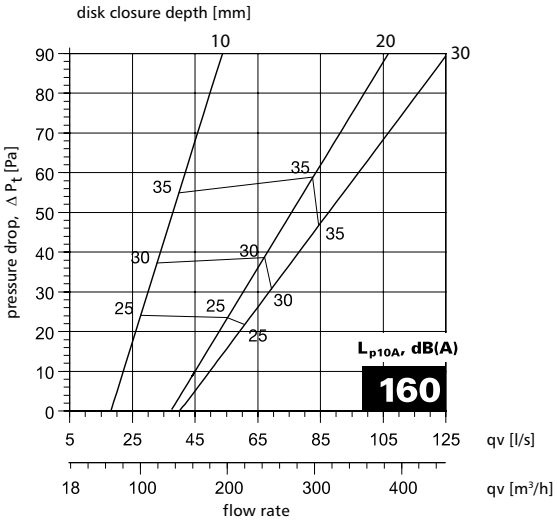
Selection charts

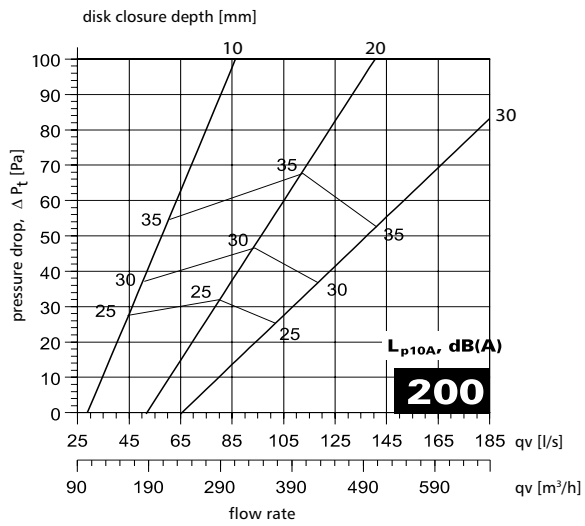












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Measure

DN	s [mm]	5	10	15
KNI-80	k	1,6	2,7	2,3
KNI-100	k	2	3,6	3,9
KNI-125	k	2,7	5,2	7,3
KNI-150	k	3,6	6,5	14,2
KNI-160	k	6,2	7,2	10
KNI-200	k	6	7,5	10,4

$q=k\cdot\sqrt{dp}$

q - air flow rate [l/s].
k - coefficient from the table [-].
dp - value of relative static pressure in the ventilation duct before the diffuser [Pa].
s - front plate position

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