

STANDARD SIZES

	125	160	200	250	315	400
Ød [mm]	123	158	198	248	313	398
ØL [mm]	240	300	360	460	540	540
H [mm]	148	158	168	168	168	168
ØC [mm]	200	260	320	420	500	500

DESCRIPTION

NSO/R is a round air vent for supplying and exhausting air. It has a front panel of adjustable height, which allows for both horizontal and vertical directing of an airstream. The air vent is discreet, which makes it easy to fit into any surroundings. The change of direction of the airstream from horizontal to vertical can be easily achieved by adjusting the front panel and it does not require any tools.

ØC - size of the mounting hole

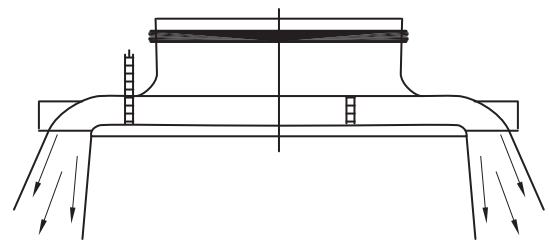
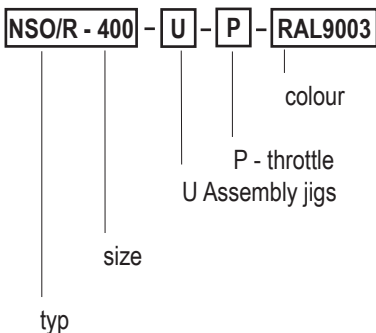
FEATURES

- air vent made of galvanized steel
- can be used with a damper
- default colour: RAL 9003
- on special request, it can be manufactured in any size and RAL colour
- airstream adjustment feature

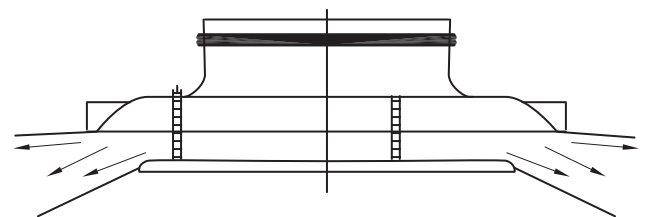
AIRSTREAM SHAPE

By default, NSO/R is supplied with a vertical air supply module. The direction of the supplied air stream can be changed to horizontal by moving the front panel.

ORDER REFERENCE



Vertical direction of the supplied air stream – the front panel in lower position



Horizontal direction of the supplied air stream – the front panel in upper position

round air vents with airstream control

PARAMETERS

Volumetric flow q (l/s lub $m^3/h.$), total pressure loss P_t (PA), airstream range l_{02} (m) and sound pressure level L_A (dB(A)) are described in diagrams. The diagrams provide data for the horizontal and vertical air supply, as well as for air exhaust.

RANGE

Range l_{02} for the end speed of 0.2 m/s and isothermal air supply (vertical or horizontal stream) can be read from the diagrams.

PRESSURE LOSS, P_t

The diagrams specify P_t (Pa) pressure loss, with an MBT-1 plenum system for air supply and with an MBF plenum system for air exhaust. Total pressure loss is defined as total P_t (Pa) pressure loss.

SOUND PRESSURE LEVEL, L_A

Sound pressure levels L_A (dB(A)) from the catalogue refer to the room absorption values of 4dB, which is equal to absorption level in room resonance zone (absorption ration of 10 m^2 SABINE).

SOUND LEVEL, L_W

Sound level $L_W = L_A + K_{ok}$
 K_{ok} – see the table 1

TABLE 1

Average frequency (Hz)							
Size	125	250	500	1000	2000	4000	8000
125	14	8	2	0	-6	-12	-14
160	14	8	3	-1	-8	-11	-13
200	15	0	1	-2	-8	-12	-13
250	16	9	1	-2	-5	-10	-12
315	15	9	-4	-7	-14	-16	-17
400	15	9	-3	-7	-15	-17	-20

SOUND ATTENUATION, $\emptyset L$

Sound attenuation $\emptyset L$ of an air vent, including reverberation inside the vent – see Table 2.

TABLE 2

Average frequency (Hz)								
	Size	125	250	500	1000	2000	4000	8000
Without SR/NSO/R	125	17	10	8	2	2	3	5
	160	14	9	7	3	1	3	6
	200	12	9	2	3	2	5	5
	250	11	9	5	1	2	5	4
	315	9	6	3	2	2	5	4
	400	6	6	0	1	2	4	3
with SR/NSO/R	125	8	2	12	7	18	19	22
	160	18	11	9	9	17	18	20
	200	15	11	17	14	17	17	18
	250	13	13	11	13	17	17	18
	315	10	10	13	10	15	16	19
	400	10	10	5	10	13	16	17

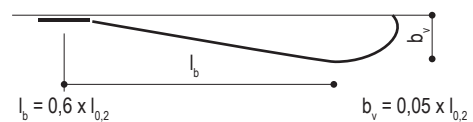
AIRSTREAM SHAPE

l_b = Distance from the air vent to the point of the maximum airstream width

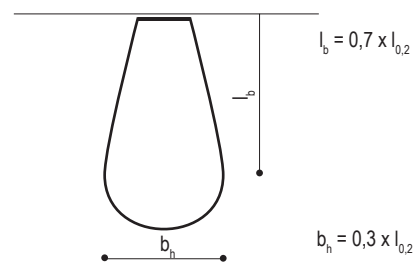
b_v = Vertical width of the airstream

b_h = Horizontal width of the airstream

Horizontal shape of the airstream



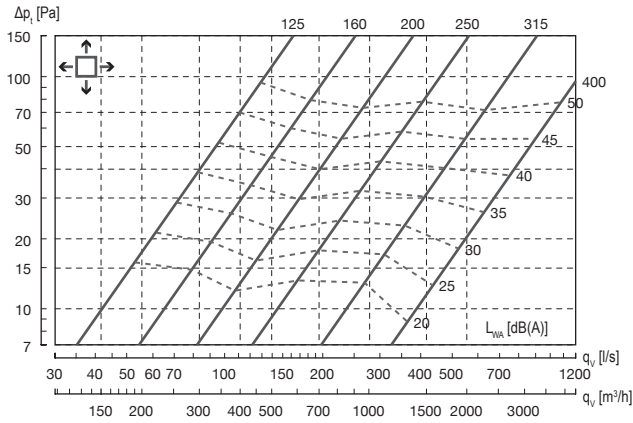
Vertical shape of the airstream



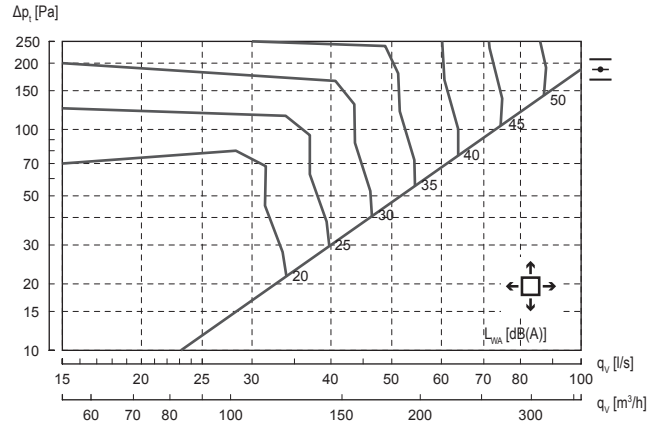
FEATURES

NSO/R WITHOUT A PLENUM BOX – AIR SUPPLY

VERTICAL AIR SUPPLY

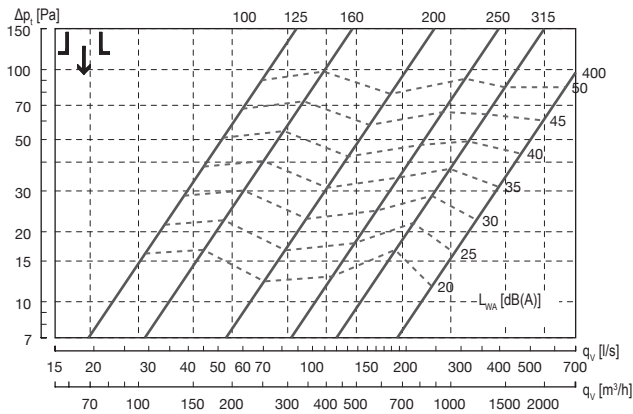


NSO/R 125 + SR/NSO/R – AIR SUPPLY

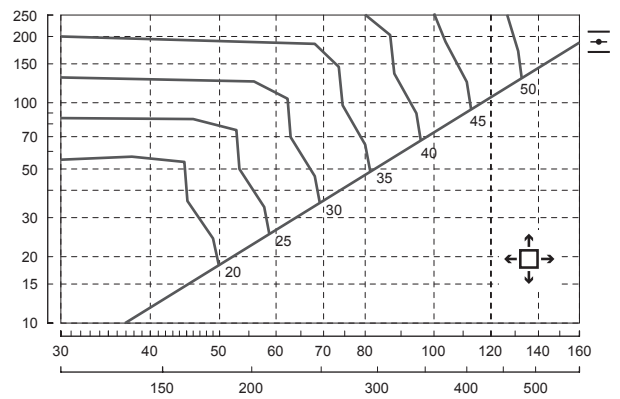


Hz	63	125	250	500	1K	2K	4K	8K
K_{sk}	11	9	3	-5	-6	-14	-20	-24

VERTICAL AIR SUPPLY

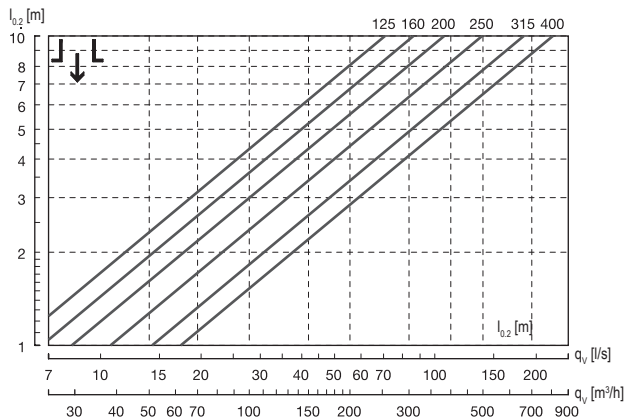


NSO/R 160 + SR/NSO/R - AIR SUPPLY



Hz	63	125	250	500	1K	2K	4K	8K
K_{sk}	11	12	3	-7	-7	-15	-20	-23

ISOTHERMAL AIR SUPPLY

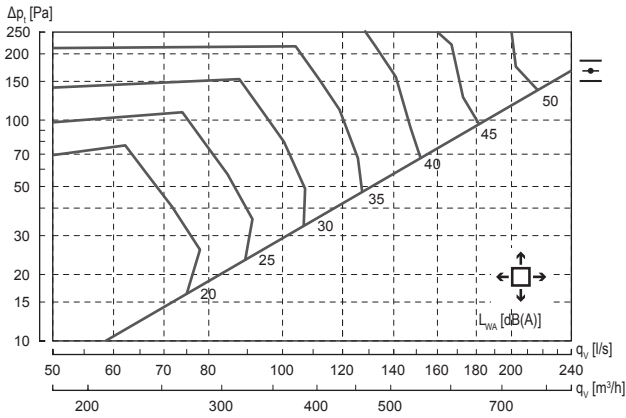


2.9 NSO/R

round air vents with airstream control

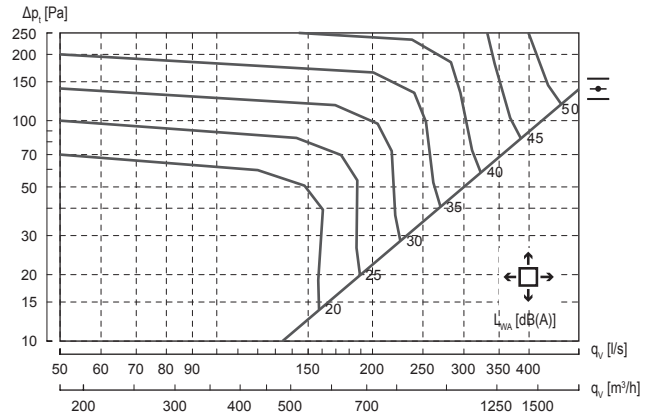
2

NSO/R 200 + SR/NSO/R - AIR SUPPLY



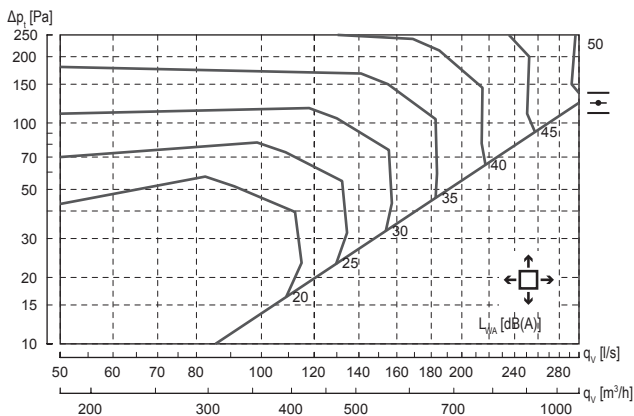
Hz	63	125	250	500	1K	2K	4K	8K
K_{sk}	12	11	1	-3	-7	-15	-20	-24

NSO/R 315 + SR/NSO/R - AIR SUPPLY



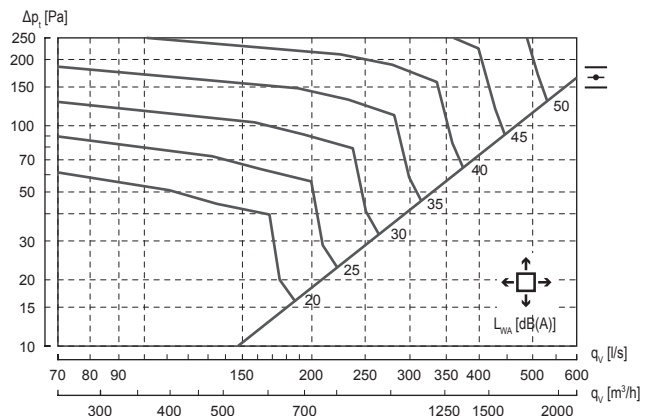
Hz	63	125	250	500	1K	2K	4K	8K
K_{sk}	15	4	1	-2	-6	-13	-17	-16

NSO/R 250 + SR/NSO/R - AIR SUPPLY



Hz	63	125	250	500	1K	2K	4K	8K
K_{sk}	15	7	0	-2	-6	-12	-16	-21

NSO/R 400 + SR/NSO/R - AIR SUPPLY



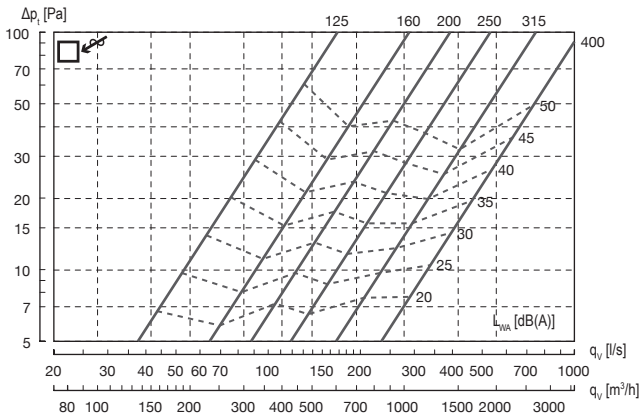
Hz	63	125	250	500	1K	2K	4K	8K
K_{sk}	11	3	0	-3	-5	-10	-14	-23

NSO/R 315 + SR/NSO/R - Air supply

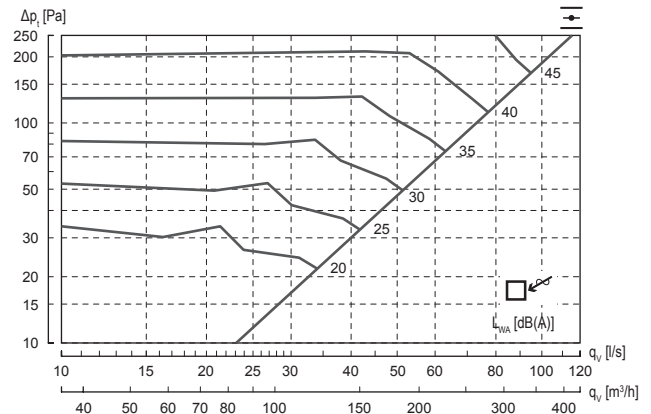
Correction of the vertical air supply. Sound intensity level (LWA) and pressure drop (Δp_t)

NSO/R + SR/NSO/R		Correction coefficient	
KANAŁ	NSO/R + SR/NSO/R	L_{WA}	Δp_t
Size \varnothing	Size \varnothing		
125	125	+1	x1
125	160	+8	x1,2
125	200	+1	x1
160 160	160	+10	x1,5
160	200	+3	x1,1
160	250	+0	x1
200	200	+7	x1,3
200	250	+0	x1
200	315	+1	x1
250	250	+2	x1
250	315	+0	x1
250	400	+0	x1,1
315	315	+2	x1,1
315	400	+3	x1,2

NSO/R WITHOUT A PLENUM BOX – AIR EXHAUST

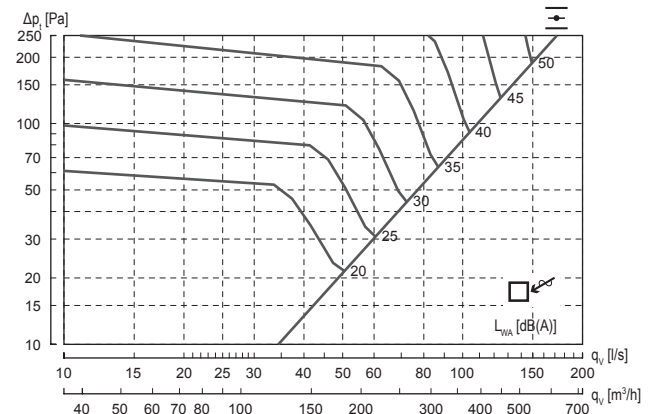


NSO/R 125 + SR/NSO/R – AIR SUPPLY



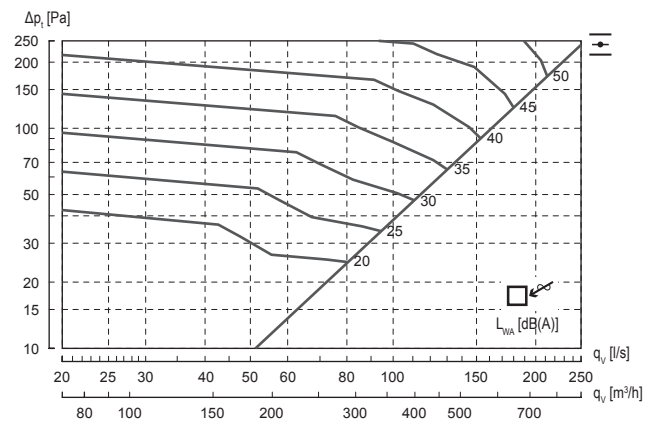
Hz	63	125	250	500	1K	2K	4K	8K
K_{ok}	14	5	-1	-3	-4	-12	-15	-21

NSO/R 160 + SR/NSO/R - AIR EXHAUST



Hz	63	125	250	500	1K	2K	4K	8K
K_{ok}	14	4	-1	-4	-4	-10	-16	-24

NSO/R 200 + SR/NSO/R - AIR EXHAUST



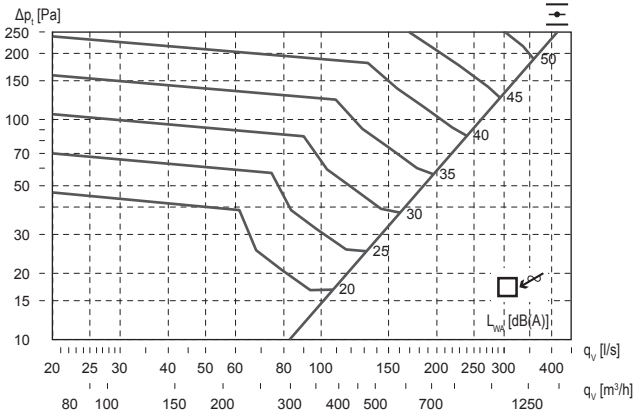
Hz	63	125	250	500	1K	2K	4K	8K
K_{ok}	15	5	-1	-3	-6	-9	-16	-25

2.9 NSO/R

round air vents with airstream control

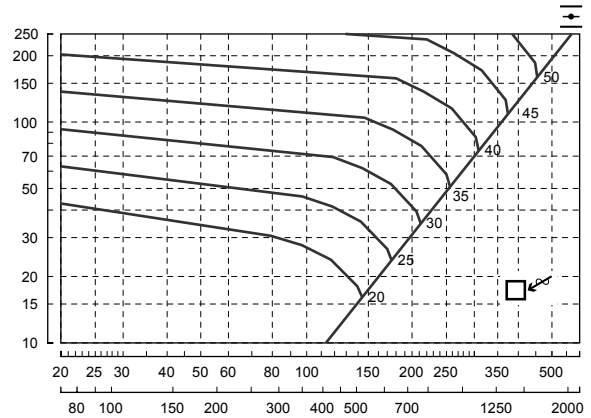
2

NSO/R 250 + SR/NSO/R - AIR EXHAUST



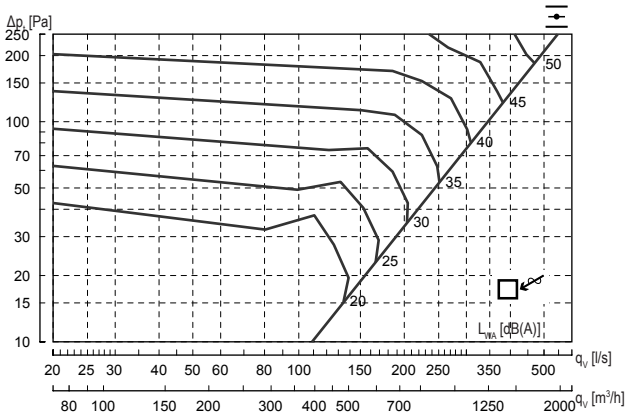
Hz	63	125	250	500	1K	2K	4K	8K
K_{ok}	11	6	2	-2	-7	-11	-15	-24

NSO/R 400 + SR/NSO/R - AIR EXHAUST



Hz	63	125	250	500	1K	2K	4K	8K
K_{ok}	11	5	2	-2	-7	-11	-15	-25

NSO/R 315 + SR/NSO/R - AIR EXHAUST



Hz	63	125	250	500	1K	2K	4K	8K
K_{ok}	13	5	2	-3	-6	-10	-15	-25