

Air displacement units SD-3N

Application

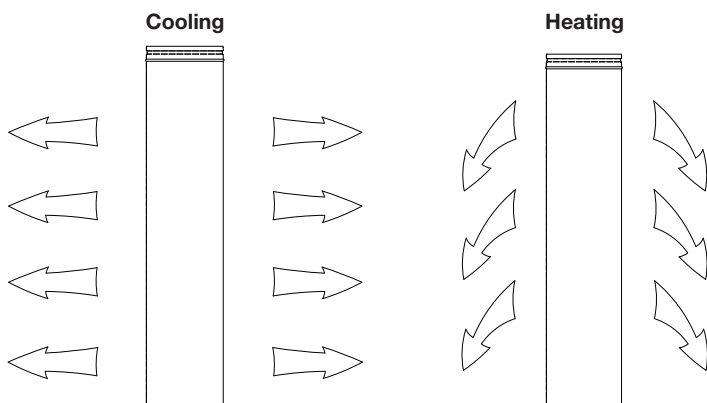
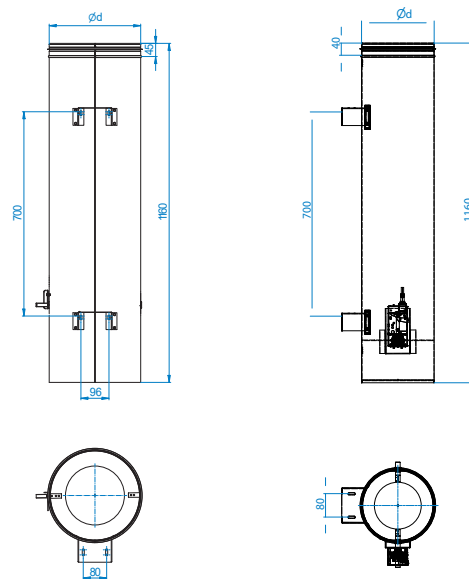
Air displacement units SD-3N are used for air conditioning for industry, sports and other major facilities. They are suitable for areas in which we are faced with higher heat loads or a significant pollution. SD-3N can be set to the regime for heating or cooling, either manually or with actuator. This is intended to change the direction of air supply, between horizontal and vertical.

Description

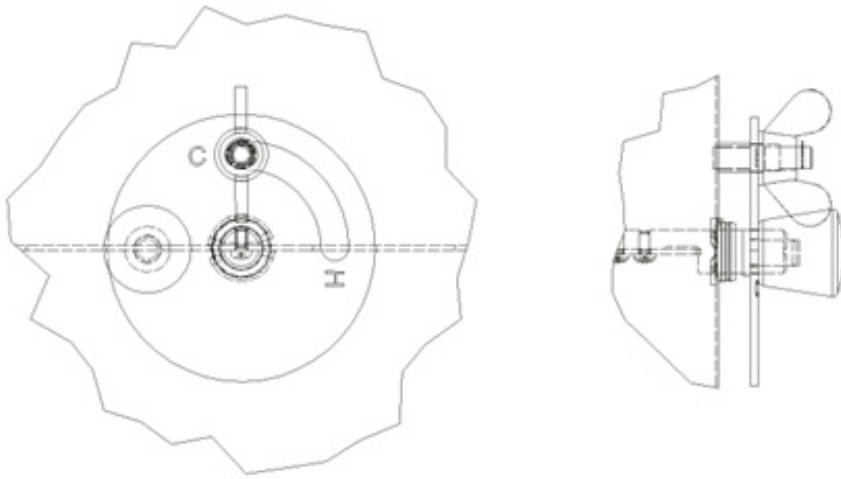
Air displacement units SD-3N are made of galvanized steel. On the customer request can be painted in colours by RAL colour chart. They consist of a perforated housing, bottom plate and the damper for the selection of heating-cooling regime. Diffusers SD-3N have to be placed upright and they can be individually fitted or attached to the wall. They are provided for the supply of large quantities of fresh air (to 10000m³/h), at low air speeds (from 0.1 to 0.3 m/s).



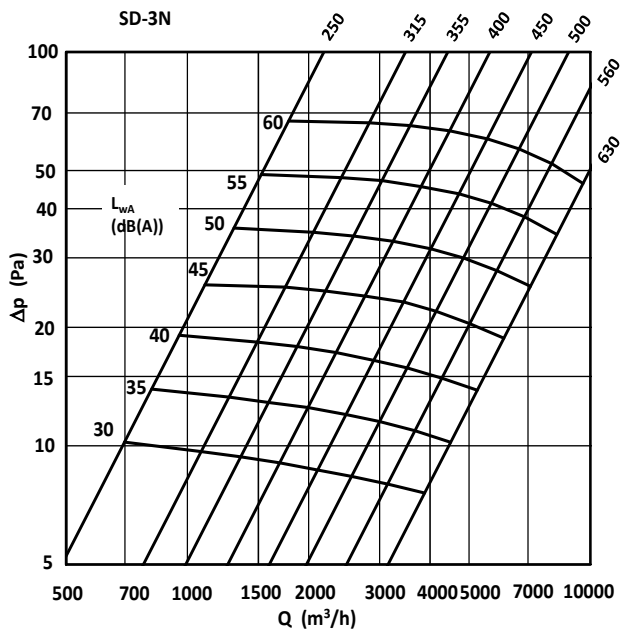
Size	Ød (mm)	H (mm)
250	248	1160
315	313	1160
355	353	1160
400	398	1160
450	448	1160
500	498	1160
560	558	1160
630	628	1160



Showing the proper placement of dampers for cooling mode (C). In the case of heating turn the damper into position H (heating).



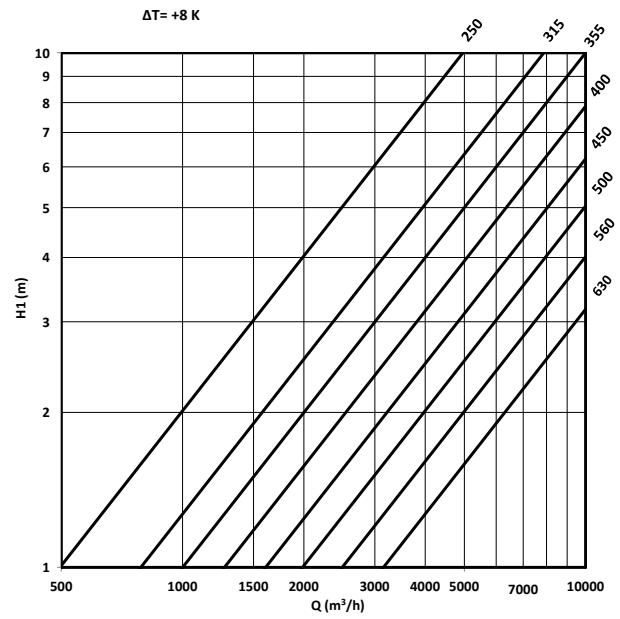
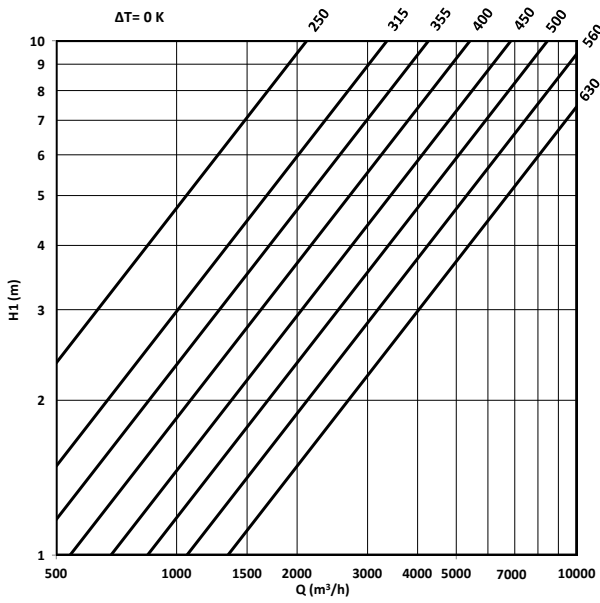
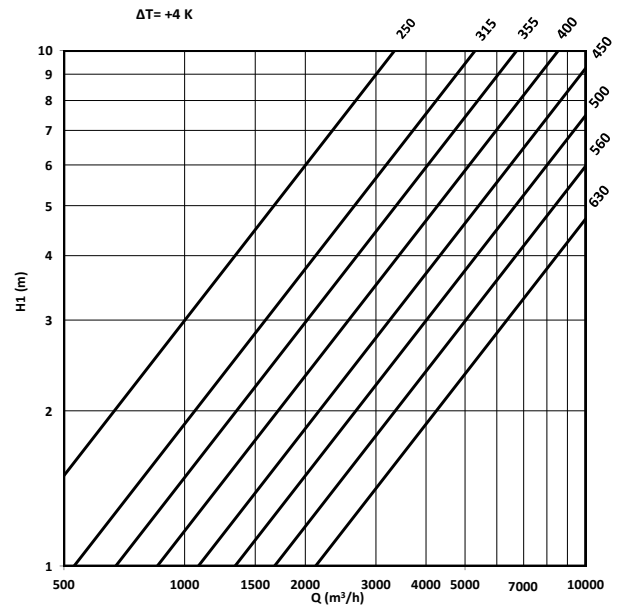
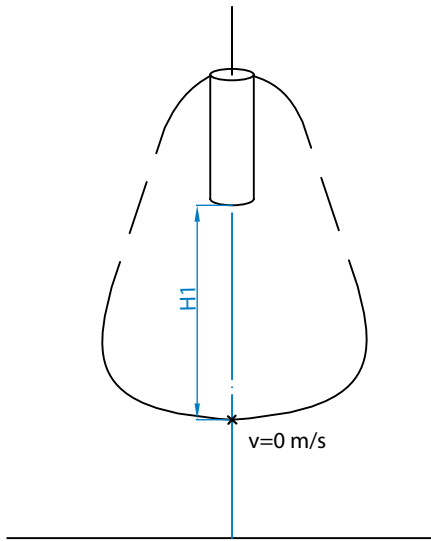
Pressure drop and noise level diagram



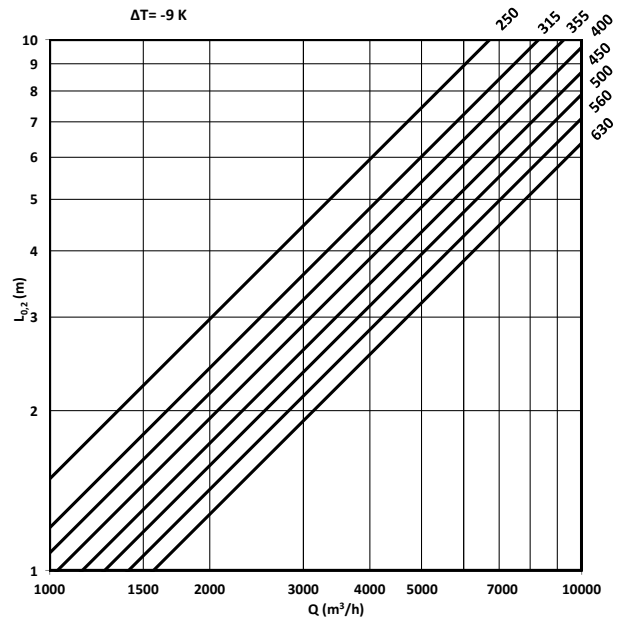
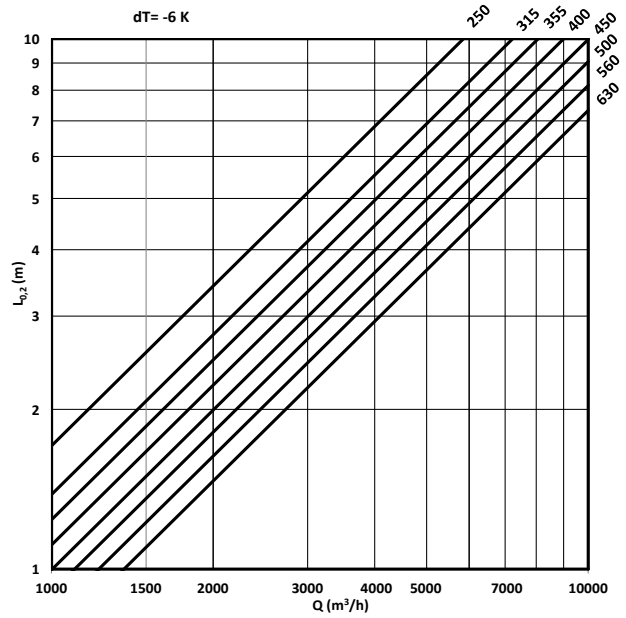
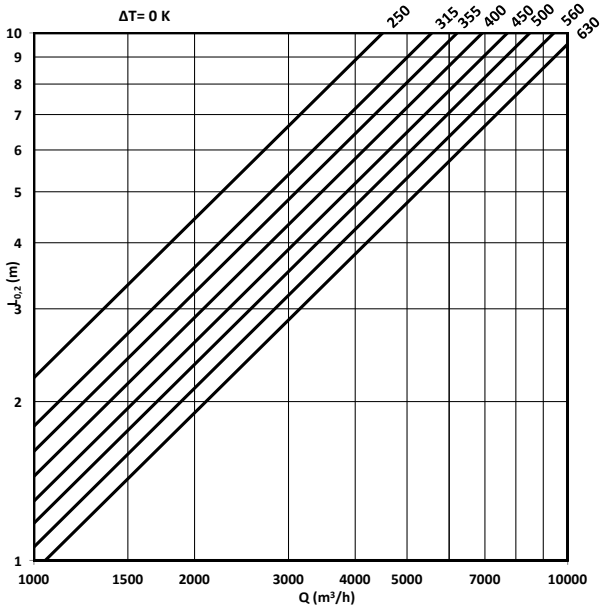
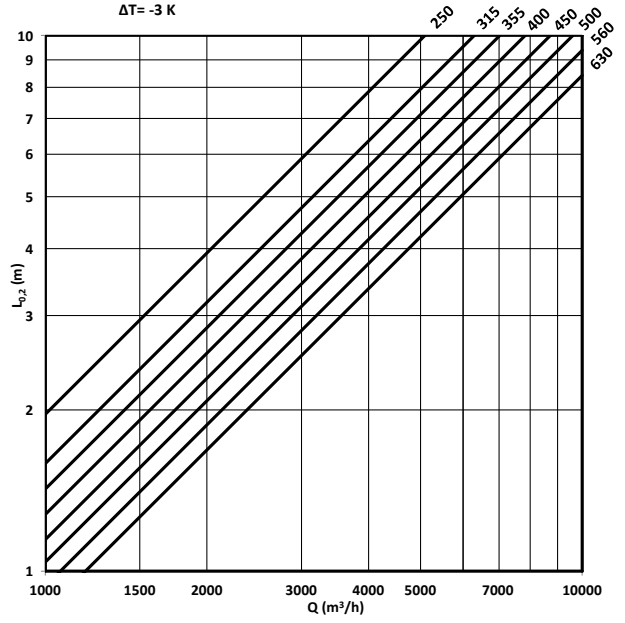
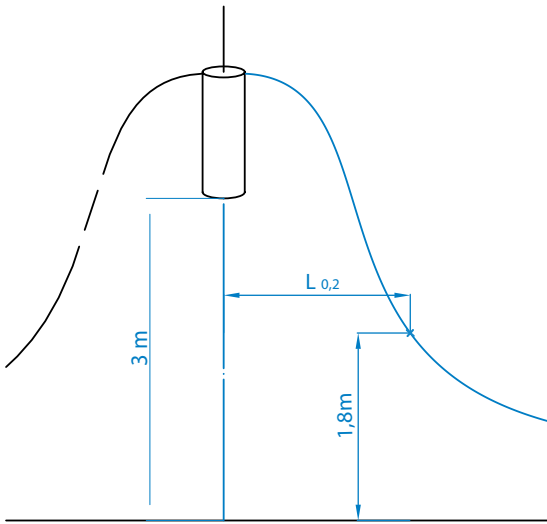
Symbols

L_{WA} (dB(A))	sound power level
Δp (Pa)	pressure drop
$L_{0,2}$ (m)	throw distance horizontally when the air speed is still 0,2 m/s
H1 (m)	throw distance vertically when the air speed reach speed 0,0 m/s (turning point)

Throw distances vertically – heating mode



Throw distances horizontally – cooling mode



Fast selection diagram

Size	250				315				355				400				
	Q (m3/h)	Δp (Pa)	L_{WA} (dB)	$L_{0,2}$ (m)	H1 (m)	Δp (Pa)	L_{WA} (dB)	$L_{0,2}$ (m)	H1 (m)	Δp (Pa)	L_{WA} (dB)	$L_{0,2}$ (m)	H1 (m)	Δp (Pa)	L_{WA} (dB)	$L_{0,2}$ (m)	H1 (m)
700	10	30	1,6	2,3	4	>25	1,2	1,5									
800	13	34	1,8	2,6	5	>25	1,5	1,7									
900	17	38	1,9	2,8	7	>25	1,6	1,8	4	>25	1,4	1,4					
1000	21	42	2,0	3,0	8	28	1,7	1,9	5	>25	1,5	1,6					
1500	47	54	2,9	4,5	19	40	2,5	2,8	11	33	2,2	2,2	7	26	1,9	1,8	
2000					33	49	3,2	3,8	20	42	2,8	3,0	13	35	2,6	2,4	
2500					52	56	3,9	4,3	32	49	3,5	4,3	20	42	3,2	2,9	
3000					74	62	4,8	5,6	46	55	4,3	4,5	28	48	3,8	3,5	
3500									62	59	5,0	4,8	39	52	4,5	4,1	
4000									82	64	5,7	5,9	50	57	5,0	4,7	
4500													64	60	5,6	5,3	
5000													79	63	6,3	5,9	

Size	450				500				560				630				
	Q (m3/h)	Δp (Pa)	L_{WA} (dB)	$L_{0,2}$ (m)	H1 (m)	Δp (Pa)	L_{WA} (dB)	$L_{0,2}$ (m)	H1 (m)	Δp (Pa)	L_{WA} (dB)	$L_{0,2}$ (m)	H1 (m)	Δp (Pa)	L_{WA} (dB)	$L_{0,2}$ (m)	H1 (m)
2000	8	28	2,3	1,9													
2500	12	35	2,8	2,3	8	29	2,5	1,8									
3000	18	41	3,4	2,8	12	35	3,2	1,9									
3500	24	46	4,0	3,3	16	40	3,7	3,3	10	34	3,3	2,1					
4000	31	50	4,5	3,7	20	44	4,1	3,0	13	38	3,7	2,4					
4500	40	54	5,0	4,2	26	48	4,7	3,4	16	42	4,3	2,7	10	35	3,8	2,2	
5000	49	57	5,7	4,7	32	51	5,2	3,7	20	45	4,7	3,0	13	38	4,2	2,4	
6000	71	62	6,3	5,1	46	57	6,2	4,1	29	51	5,6	3,3	18	45	5,0	2,6	
7000					63	62	7,2	4,5	40	56	6,5	3,7	25	50	5,8	2,8	
8000									52	60	7,5	4,7	32	54	6,7	3,8	
9000									66	64	8,4	5,4	41	58	7,5	4,3	
10000													50	61	8,3	4,7	

$L_{0,2}$ - horizontal throw at $\Delta T = -3$ K

H1 - vertical throw at $\Delta T = +4$ K

Ordering key

SD-3N / B1 / K Size 250

1 2 3 4

1 Type

SD-3N

2 Versions

B1 Belimo actuator LM24A
B2 Belimo actuator LM230A
R Manual regulation

3 Installation

K On duct
S On pillar

4 Standard sizes

250
315
355
400
450
500
560
630