

Halton APL

Jet Nozzle Diffuser



- Compact jet air supply for cold, warm or isothermal air
- Wall or ceiling supply air, especially for large enclosures
- Long throw pattern with low velocity decay
- Directional air pattern; maximum deflection angle of 30° in all directions
- Circular duct connection with rubber gasket
- Corrosion resistance

Product Models

- Model with adjustment damper

MATERIAL AND FINISHING

PART	MATERIAL	FINISHING	NOTE
Deflection ball	Aluminium	Anodised White, RAL 9010	Special colours available
Mounting frame	Aluminium	Anodised White, RAL 9010	Special colours available
Gasket	Open cell polyester foam		

PRODUCT MODELS

PRODUCT MODEL	CODE	DESCRIPTION
APL with circular damper	APL/A	Adjustable airflow rate with aperture control
APL without damper (standard)	APL/N	

The aluminium aperture damper is connected to the adjustment knob via a stainless steel connecting link, tension spring and hardware, providing corrosion resistance.

QUICK SELECTION

qv	Pa	72	144	216	288	360	432	576	720	900	1080	1260	1440	1800	2160	2880
	l/s	20	40	60	80	100	120	160	200	250	300	350	400	500	600	800
	m ³ /h	72	144	216	288	360	432	576	720	900	1080	1260	1440	1800	2160	2880
APL/N-150	LpA	15	30	39	47											
	ΔPst	11	42	95	169											
	ΔPtot	11	45	102	182											
	L0.2 (Δ10 °C)	3,4	6,4	8,6	10,0											
APL/N-200	LpA		24	30	35	38	42	47								
	ΔPst		10	22	40	62	90	159								
	ΔPtot		11	25	44	68	98	175								
	L0.2 (Δ10 °C)		4,0	6,0	7,4	9,4	10,8	13,0								
APL/N-250	LpA					21	25	33	40	47						
	ΔPst					22	31	56	87	136						
	ΔPtot					24	35	62	97	152						
	L0.2 (Δ10 °C)					6,6	8,0	10,0	12,6	15,0						
APL/N-315	LpA						21	27	34	40	45	49				
	ΔPst						24	37	57	83	112	147				
	ΔPtot						26	41	64	92	125	163				
	L0.2 (Δ10 °C)						7,4	9,0	11,0	12,6	15,4	17,4				
APL/N-355	LpA							20	26	32	37	41	48			
	ΔPst							20	31	44	60	78	122			
	ΔPtot							22	34	49	67	88	137			
	L0.2 (Δ10 °C)							7,2	9,0	10,6	12,2	13,4	17,0			
APL/N-400	LpA								22	27	31	35	41	47		
	ΔPst								19	27	37	48	76	109		
	ΔPtot								21	31	42	54	85	123		
	L0.2 (Δ10 °C)								6,8	8,2	9,4	10,6	12,8	15,4		
APL/N-450	LpA									22	26	30	36	41	50	
	ΔPst									17	23	30	46	67	119	
	ΔPtot									19	26	34	52	75	134	
	L0.2 (Δ10 °C)									7,2	8,6	9,6	11,8	13,6	18,4	
APL/N-500	LpA										18	22	28	33	42	
	ΔPst										12	15	24	35	62	
	ΔPtot										14	18	28	40	72	
	L0.2 (Δ10 °C)										6,4	7,4	9,4	11,0	14,2	

LpA values presented with room attenuation 4 dB (red 10m² - sab). When using room attenuation 8 dB (red 25m² - sab):
LpA - 4dB.

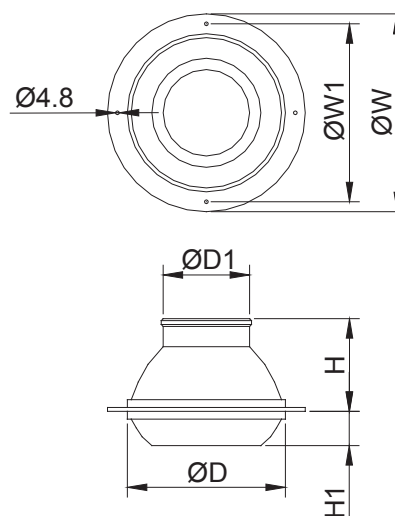
Pa Supply air heating capacity, W
LpA A-weighted sound pressure level, reduced by total equivalent absorption surface of 10m², dB(A) red 10m² - sab

ΔPst Static pressure drop, Pa
ΔPtot Total pressure drop, Pa
L0.2 Isotermal throw length, m when residual velocity of supply air jet 0,2 m/s

Room temperature (Tr) = 24 °C
Supply air temperature (Ta) = 34 °C

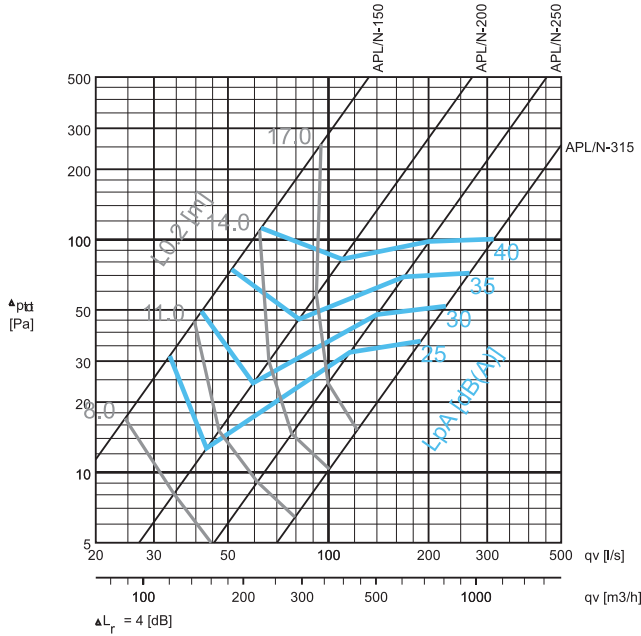
DIMENSIONS

NS	ØW	ØW1	H	H1	ØD	ØD1	Number of mounting holes
150	203	178	92	29	152	76	4
200	254	229	117	44	203	111	4
250	305	279	159	64	254	146	6
315	356	330	165	76	305	187	6
355	406	381	187	105	356	219	6
400	457	432	216	117	406	248	6
450	508	483	254	117	457	267	8
500	559	533	279	127	508	314	8

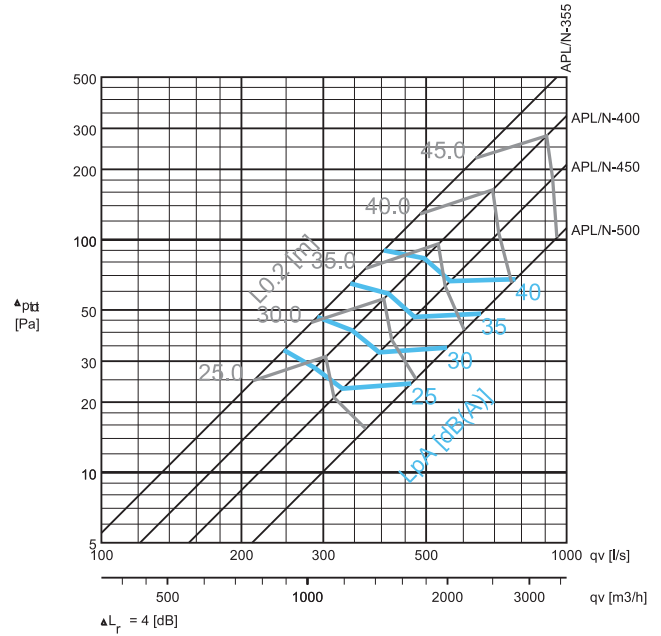


Pressure drop, throw pattern and sound data

APL-150, APL-200, APL-250, APL-315



APL-355, APL-400, APL-450, APL-500



Selection example:

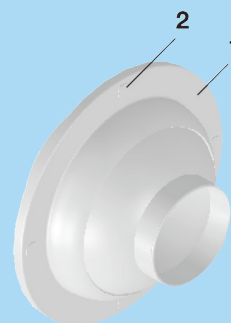
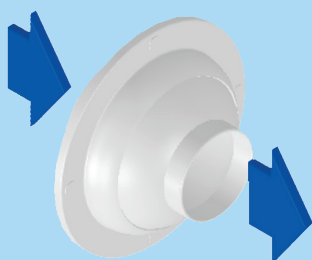
Requirements: qv = 300 l/s
 Lp(A) < 30 dB(A)
 L0.2 < 30.0 m

Selection: APL/N-400
 Lp(A) = 26 dB(A)
 L0.2 = 25.0 m
 ΔPtot = 30 Pa

SOUND LEVEL DATA

	qv (l/s)	(m³/h)	ΔPst (Pa)	ΔPtot (Pa)	F (Hz)												LpA [dB(A)]	NR	NC
					63	125	250	500	1000	2000	4000	8000							
APL/N-150	33	119	29	31	3	23	23	26	26	20	20	3	25	21	19				
	42	151	47	50	3	29	28	33	32	24	23	3	31	27	25				
	51	184	69	74	3	34	32	38	37	27	26	3	36	32	31				
	63	227	105	113	3	40	36	43	42	30	29	3	41	37	36				
APL/N-200	43	155	12	13	3	16	18	19	24	23	22	3	25	24	21				
	59	212	22	24	3	25	26	26	29	28	26	3	30	28	25				
	82	295	42	46	3	35	34	34	35	32	31	3	35	32	29				
	110	396	75	83	3	44	41	40	39	37	35	3	40	36	34				
APL/N-250	116	418	29	33	3	41	33	22	17	9	3	3	25	18	17				
	140	504	43	48	3	46	38	28	24	17	3	3	30	24	22				
	169	608	62	69	3	50	43	35	31	25	11	3	35	29	27				
	201	724	88	98	3	54	47	41	37	31	19	3	40	34	32				
APL/N-315	190	684	33	37	3	39	33	29	18	16	3	3	26	20	18				
	225	810	46	51	3	44	37	34	25	22	8	3	31	25	24				
	266	958	65	72	3	49	42	40	32	28	14	3	36	30	29				
	314	1130	91	100	3	53	46	45	38	33	19	3	41	36	35				
APL/N-355	247	889	30	34	3	37	34	29	19	19	3	3	26	19	18				
	291	1048	41	47	3	42	38	34	25	23	6	3	31	25	23				
	343	1235	57	65	3	48	43	39	31	28	12	3	36	30	28				
	405	1458	80	90	3	53	48	44	37	33	18	3	41	35	34				
APL/N-400	288	1037	25	28	3	39	35	28	16	12	3	3	26	20	17				
	346	1246	36	41	3	44	40	33	22	18	4	3	31	25	22				
	415	1494	52	59	3	49	45	38	29	24	11	3	36	30	28				
	495	1782	74	83	3	53	49	44	35	30	18	3	41	35	33				
APL/N-450	330	1188	20	23	3	40	33	26	17	12	7	3	25	19	16				
	400	1440	30	34	3	44	38	32	23	18	13	3	30	24	22				
	470	1692	41	46	3	48	43	36	28	23	18	3	35	29	27				
	560	2016	58	66	3	52	47	41	34	29	23	3	40	34	33				
APL/N-500	460	1656	20	24	3	41	33	25	20	12	6	3	26	18	16				
	550	1980	29	34	3	45	38	31	26	19	13	3	31	24	21				
	660	2376	42	49	3	50	44	37	32	25	19	3	36	29	26				
	780	2808	59	68	3	53	49	43	38	31	25	3	41	34	32				

LpA values presented with room attenuation 4 dB (red 10m² - sab). When using room attenuation 8 dB (red 25m² - sab): LpA - 4dB.
 NR/NC noise criteria



Function

Supply air is supplied to the space at a high velocity. The supply air mixes efficiently with the room air, with a high induction effect.

The supply air jet can be directed at an angle of 30° when the angle of roll is 360°.

Adjustment of the supply air pattern (APL/A model) can be performed manually.

Servicing

Remove the diffuser by unscrewing the visible fixing screws.

Clean the parts by wiping them with a damp cloth. Push the diffuser back into place and screw in the fixing screws.

Suggested Specifications

The APL jet nozzle shall be made of heavy aluminium. The colour of the diffuser shall be anodised or white (RAL 9010) as standard.

The APL diffuser shall include a sealing gasket.

Directional adjustment shall be accurate, accomplished without the use of special tools, and shall be able to provide 70° of global rotation with minimal restriction of movement.

The supply air jet shall be directional in an angle of 30°, when the angle of roll is 360°.

Installation

CODE DESCRIPTION

1	Frame
2	Fixing screws

The APL jet nozzle diffuser is fastened to the duct or wall with screws.

Screw the fixing screws into the pre-drilled holes in the front panel.

Product Code

APL/S-D

S = Model

A	With damper
B	Without damper

D = Diameter of duct connection

150, 200, 250, 315, 355, 400, 450, 500

Specifics and accessories

FI = Finishing

AN	Anodised
PN	Painted

CO = Colour

W	White
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Code example

APL/A-150, FI=AN