



FLANGED SILENCER

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Overview



Ideal for:

- bolting directly to fan flange
- all axial fans
- cross talk elimination
- flexible or spiral ducting

Overview

Elta Fans are able to provide 2 types of cylindrical silencers as standard; type DENP (without pod) and DEP (with pod), these are categorised as either compact silencers (ENP / EP) or standard silencers (ENP / EP / Melinex).

Construction

Both types are rigidly constructed in galvanised sheet steel, with a highly absorbent sound attenuating lining between the outer casing and the inner perforated steel lining. The end faces of the silencer has a series of threaded holes for direct mounting to the fixing flange / flexible collar. The EP (podded versions) will provide an improved level of attenuation. The inner acoustic pod is constructed from perforated steel sheet with a sound absorbent infill.

Melinex lined silencers must be used to prevent grease impregnation into the acoustic media for kitchen extract applications as prescribed in DW/172 HVAC Specification For Kitchen Ventilation Systems. For Melinex insertion losses, please contact Elta Fans. Silencers can be provided with differing lengths: 1D = 1 times diameter, 2D = 2 times diameter. The Velocity through podded silencer should not exceed 15m/s.

Silencer Attenuation

To determine the sound level of a fan fitted with a silencer, the dynamic insertion loss should be subtracted from the sound power level spectrum (dBW) of the fan. This should be done for the entire octave band mid-frequency spectrum. The fan dBW ratings and silencer attenuation apply equally to in duct applications, with a silencer connected between the fan and the duct system.

Dynamic Insertion Loss

The silencer attenuation is defined as the “dynamic insertion loss”. The values quoted in the tables represent the difference between the sound power level of a fan and silencer combination (dBW) and that of the fan alone (dBW). The dynamic insertion losses shown are the attenuations recorded under ideal working conditions. The achieved attenuation will vary according to the air velocity and flow pattern in the airways. Noise regeneration can occur at higher velocities, especially in EP silencers.

Square / Rectangular Silencers

In highly noise sensitive areas, where the circular silencers cannot achieve the necessary attenuation levels, Elta Fans can design and build optional splitter silencers for greater effect.

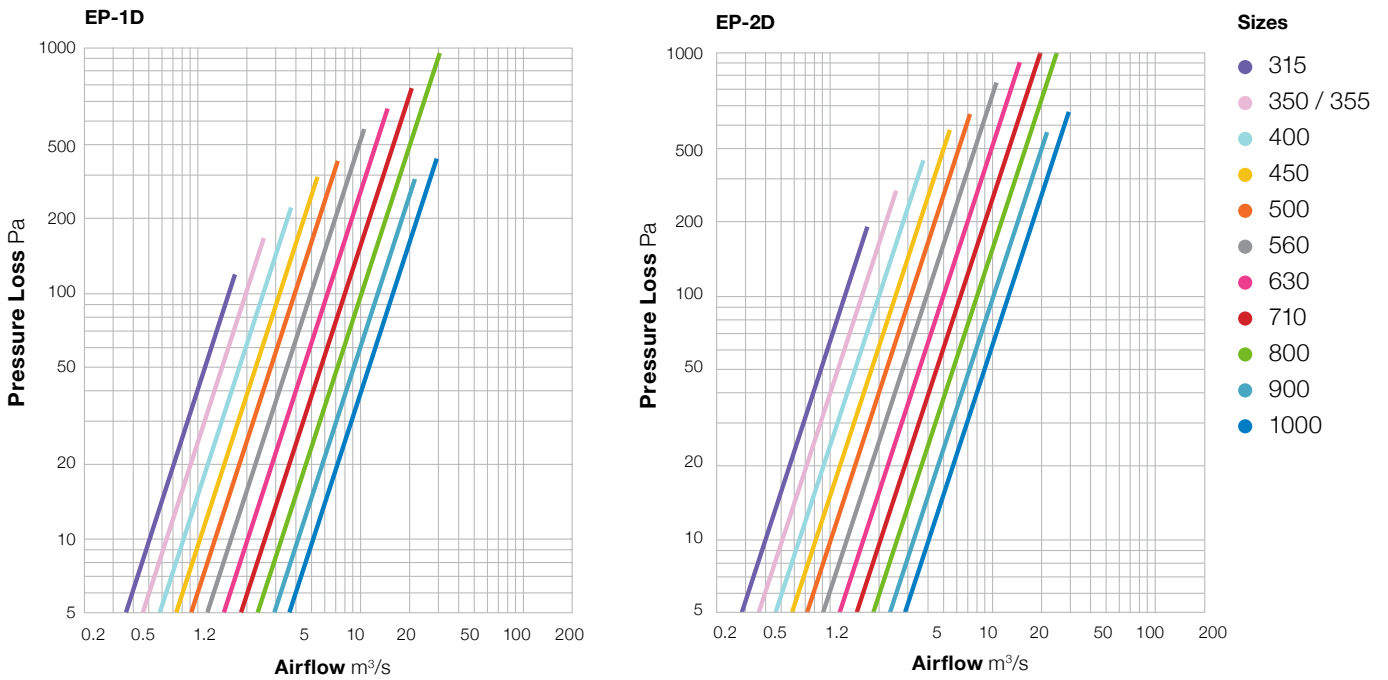
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Dynamic Insertion Loss & Pressure Graphs

Dynamic Insertion Loss

Fan Size	Silencer Length	Silencer Type	Insertion Loss @ Octave Band (Hz)							
			63	125	250	500	1k	2k	4k	8k
0250	1D	ENP	-2	-5	-6	-9	-13	-11	-6	-6
		EP	-4	-6	-8	-11	-14	-16	-11	-10
	2D	ENP	-4	-7	-10	-15	-19	-16	-12	-9
		EP	-7	-10	-15	-16	-15	-17	-13	-13
0315-0560	1D	ENP	-2	-5	-6	-9	-13	-11	-6	-6
		EP	-4	-6	-8	-11	-18	-19	-17	-14
	2D	ENP	-4	-8	-12	-17	-23	-17	-12	-10
		EP	-7	-10	-12	-21	-26	-26	-24	-22
0630-0800	1D	ENP	-3	-4	-9	-15	-15	-8	-7	-6
		EP	-4	-6	-8	-17	-23	-20	-18	-10
	2D	ENP	-6	-8	-13	-22	-22	-13	-12	-9
		EP	-8	-11	-16	-27	-32	-31	-29	-19
900-1000	1D	ENP	-3	-4	-9	-14	-13	-7	-7	-6
		EP	-4	-6	-11	-20	-18	-15	-13	-11
	2D	ENP	-6	-8	-13	-21	-18	-12	-11	-9
		EP	-8	-11	-18	-26	-27	-26	-22	-16

Podded Silencers Pressure Graphs



For Ø250 podded pressure losses, please contact Elta Fans.

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Dimensional Data

Compact Ø400-630

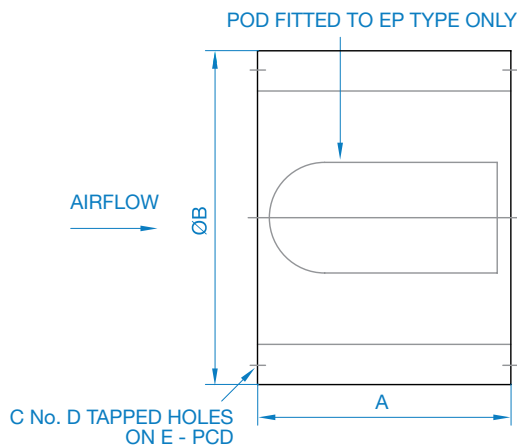
Product Code	Fan Dia	A 1D	A 2D	B	C	D	E	Weight kg			
								1DENP	1DEP	2DENP	2DEP
068-0400-*D**PC	400	400	800	500	12	M8	438	13	16	22	26
068-0450-*D**PC	450	450	900	602	12	M8	487	15	18	27	31
068-0500-*D**PC	500	500	1000	652	12	M8	541	18	22	32	37
068-0560-*D**PC	560	560	1120	712	16	M10	605	22	26	39	46
068-0630-*D**PC	630	630	1260	782	16	M10	674	26	32	48	57

*1 or 2 - see A (length in mm) **E (with pod) or EN - (without pod)

Standard Ø250-1000

Product Code	Fan Dia	A 1D	A 2D	B	C	D	E	Weight kg			
								1DENP	1DEP	2DENP	2DEP
068-0250-*D**P*	250	250	500	350	8	M8	299	7	9	11	13
068-0315-*D**P*	315	315	630	416	8	M8	355	9	11	15	17
068-0350-*D**P*	350	350	700	452	8	M8	395	11	13	18	21
038-0355-*D**P*	355	355	710	456	8	M8	395	11	13	18	21
068-0400-*D**P*	400	400	800	503	8	M10	450	13	16	22	26
068-0450-*D**P*	450	450	900	604	8	M10	500	15	18	27	31
068-0500-*D**P*	500	500	1000	657	12	M10	560	18	22	32	37
068-0560-*D**P*	560	560	1120	714	12	M10	620	22	26	39	46
068-0630-*D**P*	630	630	1260	784	12	M10	690	26	31	48	57
068-0710-*D**P*	710	710	1420	864	16	M10	770	32	39	59	71
068-0800-*D**P*	800	800	1600	954	16	M10	860	40	49	74	90
068-0900-*D**P*	900	900	1800	1103	16	M12	970	55	67	102	123
068-1000-*D**P*	1000	1000	2000	1203	16	M12	1070	66	82	124	151

*1 or 2 See A (length in mm) **E With Pod / EN Without Pod *M Melinex



Dimensions are in mm.

Building Services

Tel **+44 (0) 1384 275800**
Fax **+44 (0) 1384 275810**
Email **info@eltafans.co.uk**

46 Third Avenue, Pensnett Trading Estate, Kingswinford,
West Midlands, DY6 7US United Kingdom

Applied Technology & Building Services Export

Tel **+44 (0) 1489 566500**
Fax **+44 (0) 1489 566555**
Email **at@eltafans.co.uk / export@eltafans.co.uk**

17 Barnes Wallis Road, Segensworth East Industrial Estate,
Fareham, Hampshire, PO15 5ST United Kingdom

eltafans.com

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