

Type B & C Silencers

Construction

Casings are of rolled, pre-galvanised sheet steel with spun end rings incorporating tapped inserts for fixing. Suitable fixing screws are provided with all steel silencers. The absorbent material is acoustic grade mineral fibre with an erosion resistant facing. It is protected and contained by a pre-galvanised perforated steel sheet formed to match the fan diameter.

Cylindrical silencers shall be suitable for air pressures up to a maximum of 1000 Pa. For duct pressures in excess of 1000 Pa, please enquire. A Melinex Lining (variant code M) can be supplied for critically clean applications such as hospitals to ensure no fibre migration. The lining may also be used in moisture or grease laden conditions, such as kitchen extract systems where the material is used to stop the ingress of grease etc. into the acoustic media. The use of the lining also allows the silencers to be low pressure steam cleaned. Some reduction of attenuation due to the lining will be experienced.

Temperature Range

Standard silencers are suitable for temperatures from -40°C to 200°C. When moisture resistant lining is used the continuous air handling temperature is limited to 80°C. Special treatments enable silencers to operate at temperatures up to 600°C. For smoke applications, please enquire.

Resistance to Air Flow

Type C Silencer

Size Range

Type B silencer diameters range from 315 mm to 1600 mm in lengths equal or twice the diameter (1D or 2D). Pressure loss for type B silencers is the same as a plain duct.

Type C silencers have a centrally mounted absorbent pod in the airway for increased attenuation. The pressure loss due to the pod is shown on the chart below.

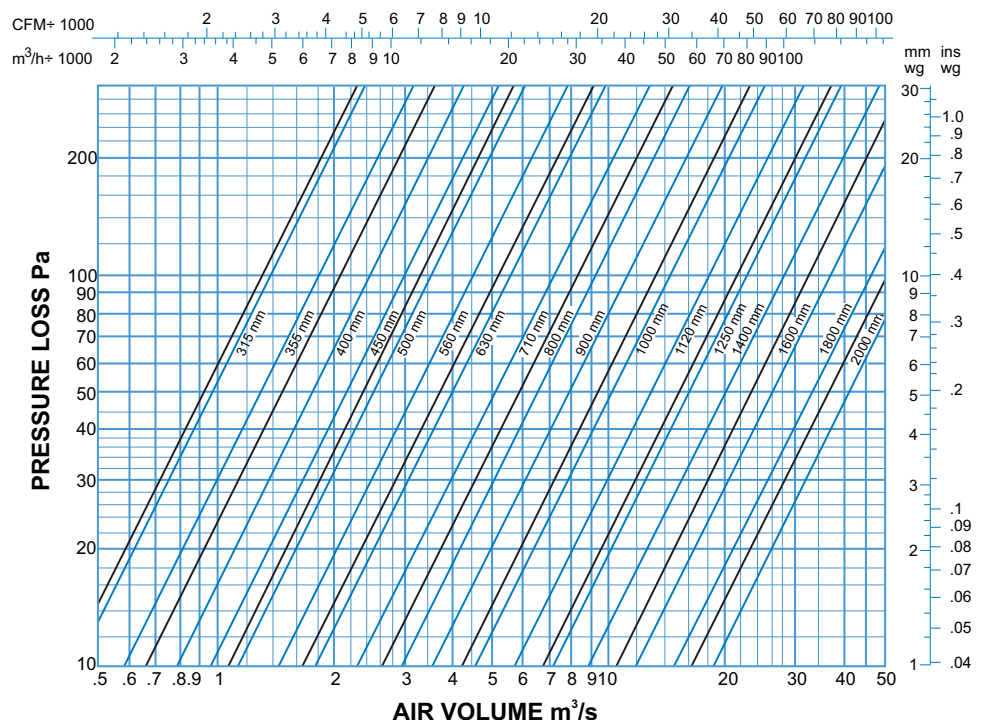
Performances

Are derived from tests to BS848. Measurements of fan noise are made with and without the silencer in position. The difference between recorded levels is the dynamic (with airflow) attenuation or insertion loss of the silencer. Type B silencers may be directly coupled to both inlet and outlet flanges of the fan. When type C silencers are directly coupled to the fan flanges they are most effective on the outlet. A spacer duct of 1D length between the fan inlet flange and a type C silencer is necessary to ensure maximum performance.

Note: C type silencers mounted close to a fan may effect the aerodynamic performance.

Finishes

Standard finish is galvanised zinc coating to BS2989 Z2. Other finishes including epoxy paint are available to special order.



Acoustic Performance

Type B Dynamic Attenuation

Octave-Band Mid Frequencies Hz									
Dia. mm (ID)	Length	63	125	250	500	1K	2K	4K	8K
315	1D	1	2	4	9	11	10	9	7
	2D	1	2	5	11	16	12	11	10
355	1D	1	2	4	10	12	10	9	7
	2D	1	2	5	11	16	12	11	10
400	1D	2	3	5	10	13	11	9	8
	2D	3	4	7	14	18	15	11	12
450	1D	2	3	6	12	13	11	10	6
	2D	3	4	8	17	18	15	11	11
500	1D	2	3	6	13	14	10	10	5
	2D	3	4	8	19	18	14	11	10
560	1D	2	4	7	14	14	9	10	7
	2D	3	5	9	19	18	14	12	11
630	1D	2	5	7	15	13	8	9	8
	2D	4	6	9	19	19	14	13	12
710	1D	3	5	7	15	13	9	9	8
	2D	4	6	9	19	17	13	12	11
800	1D	3	5	8	16	12	9	9	8
	2D	4	6	10	19	15	12	11	10
900	1D	3	5	10	17	13	11	10	8
	2D	4	6	12	19	15	12	11	10
1000	1D	4	5	11	16	11	10	8	9
	2D	4	6	13	19	14	12	11	11
1120	1D	4	5	11	17	11	9	8	8
	2D	4	6	13	19	14	12	11	8
1250	1D	4	6	12	17	10	9	8	7
	2D	4	6	14	19	14	11	11	9
1400	1D	4	6	12	16	10	8	7	6
	2D	4	7	14	18	13	10	10	8
1600	1D	4	7	12	16	10	8	7	6
	2D	4	8	15	18	12	10	9	7

Type C Dynamic Attenuation

Octave-Band Mid Frequencies Hz									
Dia. mm (ID)	Length	63	125	250	500	1K	2K	4K	8K
315	1D	2	5	5	9	18	20	18	15
	2D	2	6	6	12	20	25	20	17
355	1D	2	5	6	9	18	22	19	16
	2D	2	6	7	13	25	27	21	17
400	1D	2	6	6	10	19	24	20	17
	2D	3	7	8	14	29	29	23	18
450	1D	2	4	7	13	20	23	22	17
	2D	2	5	9	16	29	29	21	20
500	1D	2	3	8	16	21	22	21	17
	2D	2	4	10	20	29	30	20	26
560	1D	3	5	8	16	20	18	19	15
	2D	4	5	10	20	29	28	21	23
630	1D	3	5	8	15	19	16	14	12
	2D	5	6	10	19	29	25	21	20
710	1D	3	5	8	15	19	15	14	12
	2D	5	6	10	20	26	23	18	17
800	1D	4	5	8	16	19	15	14	13
	2D	5	7	11	22	23	21	16	14
900	1D	4	5	9	17	19	15	14	13
	2D	5	7	12	24	23	21	16	15
1000	1D	5	5	11	18	19	15	14	13
	2D	5	7	13	26	24	20	16	16
1120	1D	5	7	11	19	18	14	13	12
	2D	5	8	13	25	23	18	16	13
1250	1D	5	8	12	19	17	14	12	10
	2D	5	8	14	25	17	17	17	12
1400	1D	5	8	12	18	16	13	11	9
	2D	5	9	15	23	22	17	15	10
1600	1D	5	8	13	17	16	13	11	8
	2D	6	10	17	21	20	17	14	9

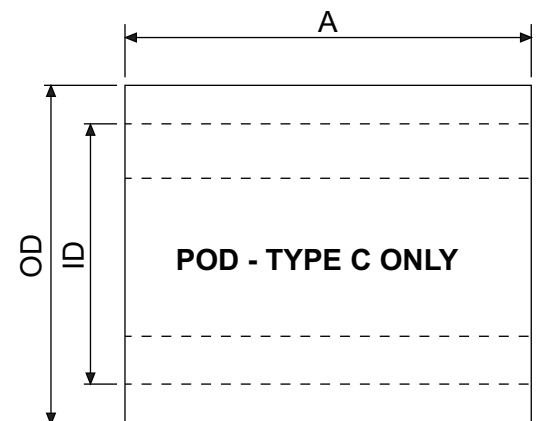
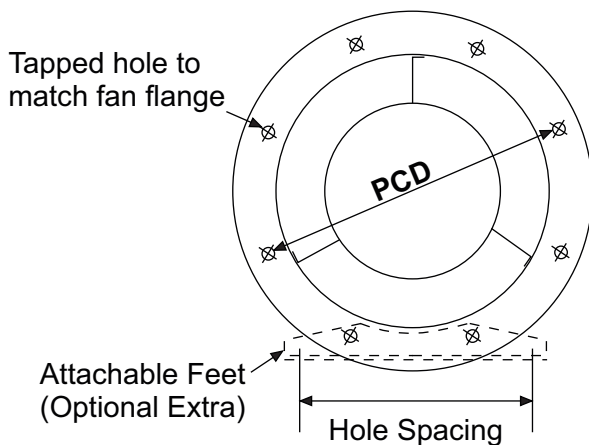
For sizes above 1600 mm, please enquire.

For increased attenuation use London and Breeze splitter silencers. Attenuation figures shown are typical in-situ Dynamic Performances. For critical applications, particularly high performance fan systems please consult London and Breeze Acoustic Department.

Dimensions & Weights

Size	Dimension (mm)							Weight (kg)					
Dia. mm (ID)	OD	No of Holes	PCD	Thread	Mounting Foot Holes		A Length		B		C		
					Dia	Spacing	1D	2D	1D	2D	1D	2D	
315	415	8	355	M8	10	265	315	630	10	17	13	19	
355	455	8	395	M8	10	305	355	710	12	20	15	24	
400	500	8	450	M10	10	350	400	800	15	25	18	30	
450	600	8	500	M10	10	400	450	900	20	33	24	39	
500	650	12	560	M10	10	450	500	1000	25	41	29	48	
560	710	12	620	M10	10	510	560	1120	30	50	35	58	
630	780	12	690	M10	12	580	630	1260	35	61	42	72	
710	860	16	770	M10	10	660	710	1420	44	76	53	90	
800	1000	16	860	M10	12	750	800	1600	55	96	66	116	
900	1100	16	970	M12	12	850	900	1800	70	129	84	150	
1000	1200	16	1070	M12	12	950	1000	2000	82	157	100	182	
1120	1320	20	1190	M12	16	1070	1120	2342	100	211	118	247	
1250	1450	20	1320	M12	16	1150	1250	2602	127	266	147	306	
1400	1600	20	1470	M12	16	1300	1400	2902	199	399	220	453	
1600	1800	24	1680	M16	16	1500	1600	3302	311	637	362	739	

All dimensions in mm.



Packing Specification:

- Protective Boards screwed to ends.
- Packed length is Silencer length plus 50 mm.
- Packed width and height = Silencer O.D.

Alternative crated packing (at extra cost)

Typically:

- Packed length is Silencer length plus 150 mm.
- Packed section is square.
- Side dimension is Silencer O.D. plus 200 mm.

