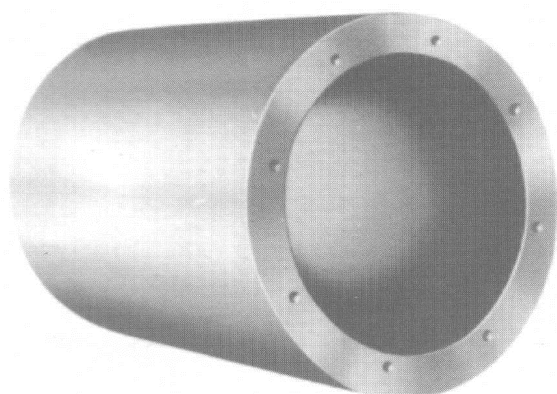
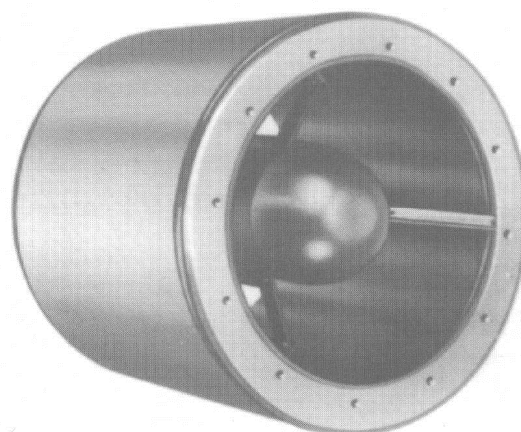


Cylindrical silencers CS type and CP type for axial fans and ventilation plants



CS TYPE



CP TYPE

General

COMET silencers are manufactured in two different types : type CS, straight, and type CP, with internal pod insert for extra noise reduction.

Both types are suitable for all the main civil and industrial applications, in air conditioning and ventilation plants, and can be installed on ducts or directly coupled with COMET AF and AFT Series axial fans.

Description

All silencers are made of galvanised carbon steel. Acoustic material (glass wool/mineral wool/closed cells polyurethane) is protected against humidity and internal surfaces are smooth to reduce air resistance.

CS Type

Straight type cylinder, without pod. It should be used when a simple design and a cost-effective solution is necessary, or when the additional pressure drop must be kept to a minimum.

CP Type

It features a pod insert with the same length of the silencer, to allow extra noise reduction. Pressure losses are higher than those of the CS type, but minimised by a careful design.

Mounting feet and coupling flanges can be supplied upon request.

Temperature range of standard CS and CP types is -40 / +150 °C.

Special features

All types of COMET silencers are available in three standard lengths to allow a perfect choice according to the type of application :

Model 1D : length = 1 diameter

Model 1.5D : length = 1.5 diameter

Model 2D : length = 2 diameters

Metal parts with different finish (painting, hot dip galvanisation) or made of different materials (stainless steel, aluminium) are available.

For critical environments, heavy duty, or special noise requirements, tailored designs can be carried out, according to customer's request.

Table 1 - Noise reduction with CS type silencer (without pod)

Diam. [mm] [in]	Type	Noise reduction at frequency (Hz)							
		63	125	250	500	1k	2k	4k	8k
CS 355 15	1D	1	1	4	10	11	11	9	7
	1.5D	3	5	8	13	15	14	12	10
	2D	4	7	11	17	20	17	13	11
CS 400	1D	2	4	6	10	13	9	9	6
	1.5D	3	5	8	13	15	13	11	9
	2D	4	7	11	17	20	16	13	10
CS 450	1D	2	4	6	10	13	10	7	7
	1.5D	3	5	8	13	15	12	10	9
	2D	4	7	11	17	20	16	11	9
CS 500 CS19"	1D	2	4	6	10	13	10	7	6
	1.5D	3	5	8	13	15	13	10	8
	2D	4	7	11	17	20	15	12	9
CS 560	1D	2	4	6	10	13	9	6	5
	1.5D	3	5	8	13	15	12	9	6
	2D	4	7	11	17	20	15	11	8
CS 630 CS24"	1D	3	4	8	14	13	10	6	6
	1.5D	4	5	10	16	15	13	9	7
	2D	6	8	13	22	20	15	11	7
CS 710	1D	3	4	8	14	13	8	6	6
	1.5D	4	5	10	16	15	10	7	8
	2D	6	8	13	22	20	12	9	9
CS 800 CS30"	1D	3	4	8	14	13	7	6	5
	1.5D	4	5	10	16	15	10	8	8
	2D	6	8	13	22	20	11	10	8
CS 900	1D	3	4	9	14	11	7	6	5
	1.5D	4	5	10	16	13	8	8	6
	2D	6	8	13	21	16	10	8	7
CS 1000 CS38"	1D	3	4	9	14	11	5	5	5
	1.5D	4	5	10	16	13	7	7	6
	2D	6	8	13	21	16	8	8	7
CS 1120	1D	3	4	9	14	11	6	5	4
	1.5D	4	5	10	16	13	7	6	5
	2D	6	8	13	21	16	8	7	7
CS 1250 CS48"	1D	3	4	9	14	11	5	5	4
	1.5D	4	5	10	16	13	6	6	5
	2D	6	8	13	21	16	7	7	6
CS 1400	1D	4	5	10	14	10	7	6	6
	1.5D	5	6	11	16	12	9	8	7
	2D	8	9	14	20	16	11	10	9
CS 1600 CS60"	1D	4	5	10	14	10	7	6	6
	1.5D	5	6	11	16	12	9	8	7
	2D	8	9	14	20	16	11	10	9
CS 1800	1D	4	5	10	14	10	7	6	6
	1.5D	5	6	11	16	12	9	8	7
	2D	8	9	14	20	16	11	10	9

Table 2 - Pressure losses of type CS silencers

Air Flow [m3/s]										
0,6	1	2	4	6	10	15	20	30	40	50
Pressure loss [Pa]										
3,7	10									
5,55	15									
7,4	20									
0,8	5,2	9,1	30							
1,2	7,8	14	45							
1,6	10	18	60							
0,8	5,2	9,1	30							
1,2	7,8	14	45							
1,6	10	18	60							
		3	10	21						
		4,5	15	32						
		6	20	42						
		3	10	21						
		4,5	15	32						
		6	20	42						
		3,4	7,4	20						
		5,1	11	30						
		6,8	15	40						
		3,4	7,4	20						
		5,1	11	30						
		6,8	15	40						
		1,8	5,3	11	19					
		2,7	8	17	29					
		4,1	12	25	43					
		1,8	5,3	11	19					
		2,7	8	17	29					
		4,1	12	25	43					
		1,6	3,5	6,3	12	20				
		2,4	5,3	9,5	18	30				
		3,6	7,9	14	27	45				
		1,6	3,5	6,3	12	20				
		2,4	5,3	9,5	18	30				
		3,6	7,9	14	27	45				
		1,1	2,1	3,8	6,7	10				
		1,7	3,2	5,7	10	15				
		2,5	4,7	8,6	15	23				
			1,1	2,2	3,8	5,5				
			1,7	3,3	5,7	8,3				
			2,5	5	8,6	12				
					2	3				
					3	4,5				
					4,5	6,8				
					1,2	1,8				
					1,8	2,7				
					2,7	4,1				

The above losses are valid for straight silencers Type CS (without pod).
Please refer to Diagram 1 for losses of pod silencers Type CP.

Table 3 - Noise reduction with CP type silencer (with pod)

Diam. [mm] [in]	Type	Noise reduction at frequency (Hz)							
		63	125	250	500	1k	2k	4k	8k
CP 355 CP15"	1D	4	6	8	12	18	18	16	13
	1.5D	5	7	11	16	21	21	19	17
	2D	7	10	15	21	26	26	24	21
CP 400	1D	4	6	8	12	18	19	15	12
	1.5D	5	7	11	16	21	21	20	15
	2D	7	10	15	21	26	26	24	17
CP 450	1D	4	6	8	12	18	18	14	10
	1.5D	5	7	11	16	21	21	19	13
	2D	7	10	15	21	26	26	22	16
CP 500 CP19"	1D	4	6	8	12	18	17	12	9
	1.5D	5	7	11	16	21	21	15	11
	2D	7	10	15	21	26	26	19	13
CP 560	1D	4	6	8	12	18	18	12	9
	1.5D	5	7	11	16	21	21	16	12
	2D	7	10	15	21	26	26	19	13
CP 630 CP24"	1D	4	6	9	17	23	20	11	10
	1.5D	5	8	12	21	27	24	15	11
	2D	8	11	16	27	32	30	16	13
CP 710	1D	4	6	9	17	23	19	13	11
	1.5D	5	8	12	21	27	26	14	12
	2D	8	11	16	27	32	32	19	16
CP 800 CP30"	1D	4	6	9	17	23	16	10	9
	1.5D	5	8	12	21	27	23	13	12
	2D	8	11	16	27	32	27	16	13
CP 900	1D	4	6	11	20	19	12	9	8
	1.5D	5	8	14	22	22	16	11	10
	2D	8	11	19	26	27	21	13	12
CP 1000 CP38"	1D	4	6	11	20	19	18	13	11
	1.5D	5	8	14	22	22	21	17	13
	2D	8	11	19	26	27	26	20	14
CP 1120	1D	4	6	11	20	19	15	9	8
	1.5D	5	8	14	22	22	21	12	11
	2D	8	11	19	26	27	25	14	12
CP 1250 CP48"	1D	4	6	11	20	19	11	7	7
	1.5D	5	8	14	22	22	15	10	8
	2D	8	11	19	26	27	18	12	10
CP 1400	1D	5	7	12	19	18	13	11	9
	1.5D	7	10	16	21	22	18	13	11
	2D	10	14	22	25	27	25	16	15
CP 1600 CP60"	1D	5	7	12	19	18	13	11	9
	1.5D	7	10	16	21	22	18	13	11
	2D	10	14	22	25	27	25	16	15
CP 1800	1D	5	7	12	19	18	13	11	9
	1.5D	7	10	16	21	22	18	13	11
	2D	10	14	22	25	27	25	16	15

End Reflection

Noise reduction values shown in Table 1 and 3 are valid for silencers installed at fan inlet side or with both mouths connected to a duct. In case of silencers installed at the end of a duct, please refer to Table 4 for free end correction.

Table 4 - Correction values for free end reflection (to be added)

Diam. [mm] [in]	Values in dB at frequency				
	63	125	250	500	1k to 8k
355 15	14	8	4	1	0
400	13	8	4	0	0
450	12	7	3	0	0
500 19	11	6	2	0	0
560	10	5	2	0	0
630 24	9	5	1	0	0
710	8	4	1	0	0
800 30	7	3	1	0	0
900	6	2	0	0	0
1000 38	5	2	0	0	0
1120	5	2	0	0	0
1250 48	5	1	0	0	0
1400	3	1	0	0	0
1600 60	2	1	0	0	0
1800	2	0	0	0	0

Diagram 1 - Pressure losses of CP type silencers

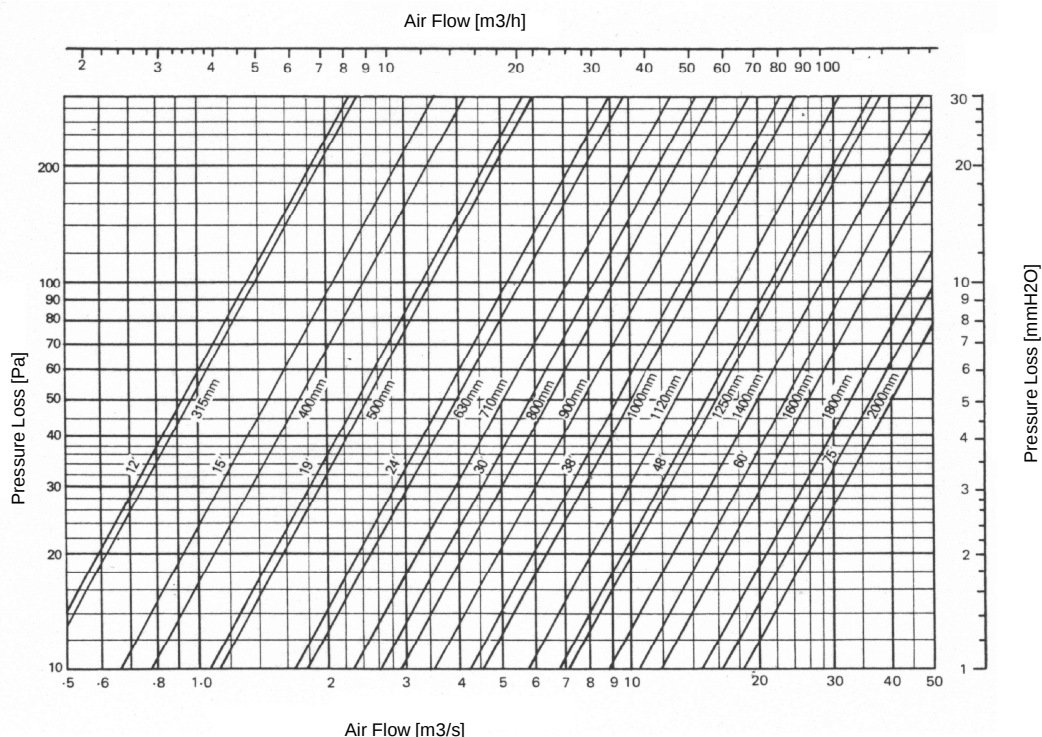
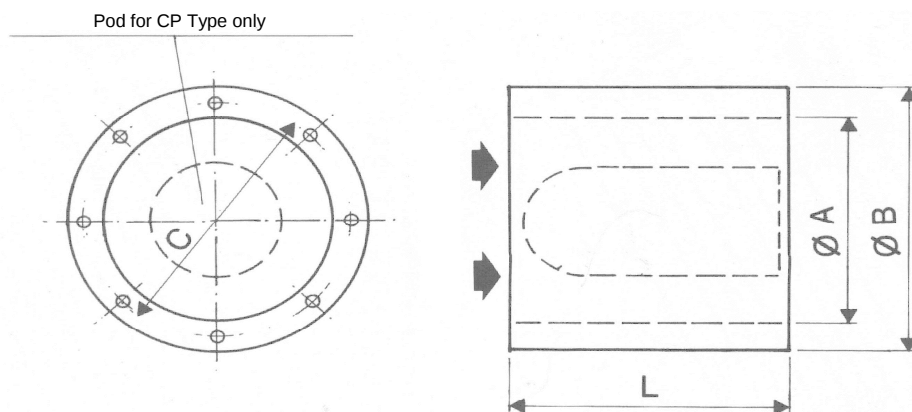


Table 5 - Weights and dimensions



Diameter		Dimension [mm]					Approximate Weight [kg]					
A		B	C	L			Type CS			Type CP		
[mm]	[in]			1D	1.5D	2D	1D	1.5D	2D	1D	1.5D	2D
355	15	495	395	355	535	710	15	19	24	17	23	29
400		540	450	400	600	800	17	23	29	20	27	35
450		610	500	450	675	900	20	26	34	24	31	41
500	19	660	560	500	750	1000	23	31	40	29	39	50
560		720	620	560	840	1120	26	36	47	33	46	60
630	24	790	690	630	945	1260	32	46	60	44	64	84
710		870	770	710	1065	1420	42	58	75	57	78	101
800	30	1000	860	800	1200	1600	50	70	90	66	93	120
900		1100	970	900	1350	1800	80	101	122	107	135	163
1000	38	1200	1070	1000	1500	2000	115	137	160	149	178	208
1120		1320	1190	1120	1680	2240	134	160	186	174	208	226
1250	48	1450	1320	1250	1875	2500	159	191	223	206	248	289
1400		1600	1470	1400	2100	2800	218	270	322	283	351	418
1600	60	1820	*	1600	2400	3200	290	434	578	377	564	751
1800		2020	*	1800	2700	3600	365	545	725	470	705	940