



CSF-HV-L45

Circular, Straight, Fiber-Filled,
High Velocity Sounpak®
Silencer

Availability

Diameters from 12 to 60 inches, in 2-inch increments.
Standard lengths shown in Table 1. Custom lengths available.

Table 1: Insertion Loss

ID (in)	OD (in)	Length (in)	Face Velocity (fpm)	Insertion Loss (dB)							
				63Hz	125Hz	250Hz	500Hz	1000Hz	2000Hz	4000Hz	8000Hz
12	24	36	- 4000	11	17	25	29	36	35	23	15
			0	11	15	23	29	40	40	30	24
			4000	9	13	22	25	33	33	24	21
24	40	48	- 4000	10	16	18	25	31	25	13	10
			0	10	15	17	24	32	25	14	10
			4000	9	14	15	22	30	25	13	10
36	52	72	- 4000	10	17	20	26	29	20	15	12
			0	11	16	19	25	29	21	15	11
			4000	9	14	17	23	29	23	16	12

Note that ASTM inter-laboratory testing has shown insertion loss may vary as much as 6 dB in the 63hz band, and 3 dB for all other frequencies. Data in parenthesis () may be greater than shown due to limitations in laboratory equipment and/or facilities. Length equal to 2 times the diameter or 36 inches, whichever is longer.

Table 2: Airflow Generated Sound Power

ID (in)	Face Velocity (fpm)	Airflow Generated Sound Power Level (dB)							
		63Hz	125Hz	250Hz	500Hz	1000Hz	2000Hz	4000Hz	8000Hz
24	-4000	75	73	67	63	59	62	61	55
	- 2000	61	58	48	43	44	46	44	39
	- 1000	45	41	30	27	29	31	29	26
	1000	41	34	34	35	33	31	26	28
	2000	57	45	47	50	49	47	42	39
	4000	72	61	59	64	65	64	61	54

Note that ASTM inter-laboratory testing has shown that generated noise may vary as much as 6 dB in the 63hz band, and 3 dB for all other frequencies. Data in parenthesis () may be less than shown due to limitations in laboratory equipment.

Table 3: Face Area Adjustment Factor

Silencer Diameter (in)						
12	18	24	34	48	68	96
-6	-3	0	+3	+6	+9	+12

Look up silencer cross-sectional area in table. Add adjustment to each octave band airflow generated sound power level from Table 2.

Table 4: Pressure Loss

ID (in)	Weight (lbs)	Loss Coefficient	Dynamic Pressure Loss (in wg)				
			Face Velocity (fpm)				
			1000	2000	3000	4000	4500
12	80	0.33	0.02	0.08	0.19	0.33	0.42
12 T	85	0.29	0.02	0.07	0.16	0.29	0.37
24	260	0.33	0.02	0.08	0.19	0.33	0.42
24 T	270	0.29	0.02	0.07	0.16	0.29	0.37
36	515	0.33	0.02	0.08	0.19	0.33	0.42
36 T	535	0.29	0.02	0.07	0.16	0.29	0.37

Note: T denotes silencer with tail cone. Weights rounded up to nearest 5 lbs. Shaded regions represent a design condition that may have negative consequences for acoustically sensitive applications.