



CSF-HV-L20

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

Availability

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

Table 1: Insertion Loss

ID (in)	Length (in)	Face Velocity (fpm)	Insertion Loss (dB)							
			63Hz	125Hz	250Hz	500Hz	1000Hz	2000Hz	4000Hz	8000Hz
12	40	- 3000	1	2	7	13	15	9	9	8
		0	1	2	9	15	15	11	8	9
		3000	1	2	7	13	13	11	8	8
24	78	- 3000	4	4	11	18	15	9	9	9
		0	4	5	11	20	16	9	9	7
		3000	3	4	9	19	15	9	9	9
36	118	- 3000	4	4	11	20	14	10	8	14
		0	3	5	10	17	15	9	9	9
		3000	3	4	11	18	14	9	8	9
48	156	- 3000	5	5	12	20	14	8	7	6
		0	5	5	12	21	12	6	8	5
		3000	4	5	11	18	14	6	8	6
60	196	- 3000	6	6	14	18	12	5	6	5
		0	7	6	15	20	12	6	7	5
		3000	4	5	15	18	12	7	8	6

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 approximately 3.25 times the diameter.

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	-3000	71	67	65	60	59	58	55	48
	- 1500	63	53	47	41	42	35	28	23
	+1500	61	53	43	43	44	39	33	23
	+3000	69	64	61	57	58	60	58	50

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	1500	2000	2500	3000	4000
12	30	0.55	0.03	0.08	0.14	0.21	0.31	0.55
12 T	35	0.42	0.03	0.06	0.10	0.16	0.24	0.42
24	115	0.55	0.03	0.08	0.14	0.21	0.31	0.55
24 T	130	0.42	0.03	0.06	0.10	0.16	0.24	0.42
36	275	0.55	0.03	0.08	0.14	0.21	0.31	0.55
36 T	310	0.42	0.03	0.06	0.10	0.16	0.24	0.42
48	585	0.55	0.03	0.08	0.14	0.21	0.31	0.55
48 T	650	0.42	0.03	0.06	0.10	0.16	0.24	0.42
60	1020	0.55	0.03	0.08	0.14	0.21	0.31	0.55
60 T	1130	0.42	0.03	0.06	0.10	0.16	0.24	0.42

Notes: 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.