McGill AirSilence 144

An enterprise of United McGill Corporation - Founded in 1951

<u>Availability</u>
Diameters from 12 to 60 inches, in 2-inch increments. Custom lengths available.





CSF-HV-L30

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

Table 1: Insertion Loss

ID	OD (in)	Length (in)	h Face Velocity (fpm)	Insertion Loss (dB)							
(in)				63Hz	125Hz	250Hz	500Hz	1000Hz	2000Hz	4000Hz	8000Hz
12	20	32	-4000	8	6	18	35	36	37	21	16
			0	3	4	18	31	32	35	22	14
			4000	4	6	14	22	30	34	19	12
	32	48	-4000	6	6	17	31	34	27	15	12
24			0	5	7	16	28	35	26	18	13
			4000	8	6	18	31	34	26	15	13
	44	72	-4000	5	5	16	28	33	26	18	13
36			0	5	6	14	22	31	23	17	14
			4000	5	6	15	20	29	25	17	14
	56	96	-4000	12	11	19	35	31	22	15	15
48			0	7	9	19	33	27	22	16	14
			4000	8	10	16	27	25	23	15	12
60	68	120	-4000	12	14	20	35	31	20	12	12
			0	13	13	22	37	31	21	10	14
			4000	9	13	21	32	30	21	12	13

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 32 inches, whichever is longer.

Table 2: Airflow Generated Sound Power

	ID (in)	Face Velocity	Airflow Generated Sound Power Level (dB)								
		(fpm)	63Hz	125Hz	250Hz	500Hz	1000Hz	2000Hz	4000Hz	8000Hz	
	24	-4000 -2000 2000 4000	69 67 63 71	64 55 55 64	65 53 47 61	65 48 48 61	63 49 51 64	61 38 46 64	55 31 38 62	55 32 31 55	

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

Table 4: Pressure Loss										
	Weight (lbs)	Loss Coefficient	Dynamic Pressure Loss (in wg)							
ID (in)			Face Velocity (fpm)							
			1000	2000	3000	4000	5000	6000		
12	60	0.25	0.02	0.06	0.14	0.25	0.39	0.56		
12 T	65	0.21	0.01	0.05	0.12	0.21	0.33	0.47		
24	155	0.25	0.02	0.06	0.14	0.25	0.39	0.56		
24 T	165	0.21	0.01	0.05	0.12	0.21	0.33	0.47		
36	330	0.25	0.02	0.06	0.14	0.25	0.39	0.56		
36 T	350	0.21	0.01	0.05	0.12	0.21	0.33	0.47		
48	630	0.25	0.02	0.06	0.14	0.25	0.39	0.56		
48 T	675	0.21	0.01	0.05	0.12	0.21	0.33	0.47		
60	1220	0.25	0.02	0.06	0.14	0.25	0.39	0.56		
60 T	1285	0.21	0.01	0.05	0.12	0.21	0.33	0.47		

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.