

Sound Attenuator

No. 782-11

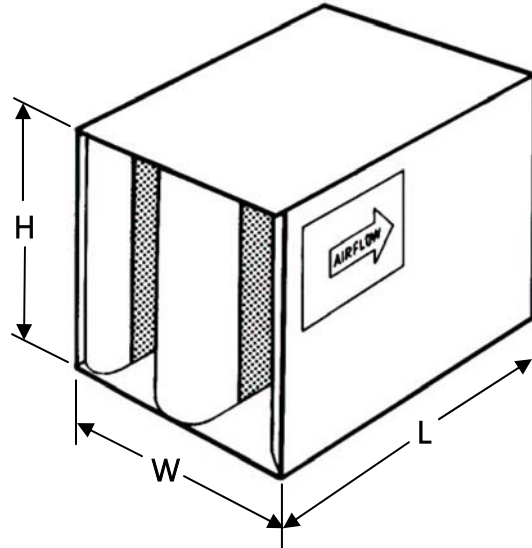


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A DIVISION OF METAL FORM MANUFACTURING

ENGINEERING DATA SHEET

Supersedes No. 782-95



MODEL HP-18

RECTANGULAR

NOMENCLATURE EXAMPLE:

WIDTH HEIGHT LENGTH MODEL
18 24 30 HP-18

Commercial Acoustics sound attenuators are engineered to achieve a maximum insertion loss and a minimum pressure drop. Commercial Acoustics sound attenuators feature airfoil design for efficient aerodynamic performance. Galvanized steel construction and an absorbent, inorganic mineral glass fiber acoustical fill; guarantee excellent reliability and performance.

TABLE I

OCTAVE BANDS	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
CENTER FREQUENCY (Hz)	63	125	250	500	1000	2000	4000	8000
FACE VELOCITY, fpm	DYNAMIC INSERTION LOSS IN DECIBELS (dB)							
-2000	8	13	18	23	25	20	13	11
-1000	7	12	18	22	22	19	16	14
0	7	11	16	20	20	20	14	14
+1000	5	10	15	18	20	20	14	12
+2000	5	9	15	18	20	20	14	12

TABLE II

OCTAVE BANDS	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
CENTER FREQUENCY (Hz)	63	125	250	500	1000	2000	4000	8000
FACE VELOCITY, fpm	SELF-NOISE SOUND POWER LEVELS dB re 10 ⁻¹² WATTS							
-2000	56	52	50	46	44	49	44	43
-1000	48	45	42	37	37	38	29	30
+1000	46	41	39	43	50	50	39	30
+2000	63	57	55	55	55	59	59	50

TABLE III

Sound Attenuator Face Area, Sq. Ft.*	0.375	0.75	1.5	3	6	12	24	48	96
PWL Adjustment Factor, dB	-9	-6	-3	0	3	6	9	12	15

*For immediate face areas, interpolate to nearest whole number

Static pressure loss, Model 3HP-18 = 0.26 in @ 1000 fpm

Actual fpm = Actual cfm ÷ Actual size in sq. ft.

For other velocities $\left(\frac{\text{Actual fpm}}{1000 \text{ fpm}} \right) \times 0.26 \text{ in} = \text{Actual P.D.}$

THIS TABLE CONTAINS BOTH FORWARD(+) AND REVERSE(-) FLOW ACOUSTIC AND AERODYNAMIC RATINGS BASED ON TEST RESULTS MEASURED IN ACCORDANCE

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