



# In-Joist Silencer Stops **NOISE** To AND From Teleconference, Multi-Media And Audio-Listening Rooms



**Modular construction permits maximum performance match to full acoustical spectrum and aerodynamic requirements.**

Multiple audio speakers are required to reproduce full spectrum acoustic response from low frequency special effects through high frequency sound. The same basic laws of physics that limit dynamic range of sound reproduction apply equally to sound attenuation! Engineered Aeroacoustics, Inc. has recognized these design limitations and developed a modular family of silencers to accommodate any aeroacoustic spectra requirement. Sound attenuators range from the cost effective In-Joist silencer through high performance, high transmission loss (HTL) ALPHALOC sound attenuator systems.

**Contact Your Sales Representative For Engineering Assistance**



Octave Bands Hz			63	125	250	500	1000	2000	4000	8000
Model	Length (L)		dB Insertion Loss @ v=0							
	IN	mm								
IJR10-(L)	36	915	4	9	17	27	35	36	27	17
	60	1525	7	14	27	41	50	50	40	26
	84	2135	11	22	37	50	50	50	50	35
	108	2745	13	26	48	50	50	50	50	45
IJR20-(L)	36	915	3	7	13	21	32	29	22	13
	60	1525	6	12	22	33	50	48	39	17
	84	2135	9	18	30	46	50	50	44	26
	108	2745	11	22	34	50	50	50	46	40
IJR30-(L)	36	915	2	5	10	18	26	21	17	12
	60	1525	5	10	17	28	42	38	27	16
	84	2135	7	15	24	38	50	50	35	20
	108	2745	9	18	30	48	50	50	37	36
IJR40-(L)	36	915	2	4	8	15	23	15	11	10
	60	1525	3	7	13	24	33	29	18	12
	84	2135	5	11	20	33	46	41	24	15
	108	2745	7	14	26	40	50	50	33	26
IJR50-(L)	36	915	1	3	6	13	17	12	7	7
	60	1525	2	5	11	19	27	20	13	8
	84	2135	4	8	16	26	37	31	19	12
	108	2745	5	11	23	32	42	39	25	18

- Approach Velocity (Vf) =  $\frac{CFM}{Duct\ Area\ (In\ Square\ Feet)}$

- Corrected Pd =  $\left(\frac{Actual\ Vf}{Chart\ Vf}\right)^2 \times Chart\ Pd$

- If Approach Velocity Dictates Pd Higher Than Desired Go To Larger Module

- Silencers In Series: Pd total = Pd1 + Pd2 + ..... + Pdn

- See Application Notes For Corrections To System Pressure Drop

- Defacto Insertion Loss Will Vary With Silencer Distance From Noise Source

- Attenuation Over 50 dB Requires Special Flanking & Breakout Control

- For Velocities  $\leq \pm 2000$  FPM, Change In IL  $\leq 3$  dB

- See Application Notes For IL Interpolation And Extrapolation Procedures

- Self Generated Sound Power - See Application Notes

Pressure Drop	I.W.G		0.05	0.10	0.15	0.20	0.25	0.30	0.40	0.50
	Pascals		12.5	25	37	50	62	75	100	125
Model	IN	mm	Duct Approach Velocity - FPM							
	IJR10-(L)	36	915	435	600	740	850	950	1050	1200
60		1525	320	460	560	650	720	790	910	1050
84		2135	----	380	460	550	610	660	780	860
108		2745	----	340	410	480	530	580	680	750
IJR20-(L)	36	915	620	880	1050	1250	1400	1500	1750	1950
	60	1525	510	720	890	1050	1150	1250	1450	1650
	84	2135	440	620	760	880	980	1050	1200	1350
	108	2745	380	540	660	760	860	940	1100	1200
IJR30-(L)	36	915	810	1150	1450	1700	1900	2100	2400	2700
	60	1525	680	960	1150	1350	1550	1650	1950	2200
	84	2135	590	850	1050	1200	1300	1450	1700	1900
	108	2745	530	760	920	1050	1200	1300	1550	1750
IJR40-(L)	36	915	1100	1500	1900	2200	2400	2700	----	----
	60	1525	900	1300	1550	1800	2050	2250	2600	2900
	84	2135	800	1150	1350	1600	1800	1950	2250	2500
	108	2745	710	1050	1250	1450	1600	1750	2050	2250
IJR50-(L)	36	915	1350	1900	2300	2750	3000	----	----	----
	60	1525	1150	1600	2000	2300	2550	2800	----	----
	84	2135	1050	1450	1750	2050	2250	2500	2950	----
	108	2745	900	1300	1600	1850	2050	2250	2600	2950

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