




CASE STUDY

NUMBER FOUR

CLIENT REQUIREMENTS


- HVAC Silencers
- ICD 705
 - Forced Entry
 - Acoustic Requirement
 - Tempest Requirement/RF Isolation

Performance for Model 10S											
Airflow	Velocity	Pressure Drop	Dynamic Insertion Loss (dB)								
CFM	FPM	in. w.g.	31.5 Hz	63 Hz	125 Hz	250 Hz	500 Hz	1 KHz	2 KHz	4 KHz	8 KHz
500	500	0.12	0	13	24	42	49	52	50	49	43
			Self-Noise Power Levels								
			0	36	29	35	30	31	35	22	20

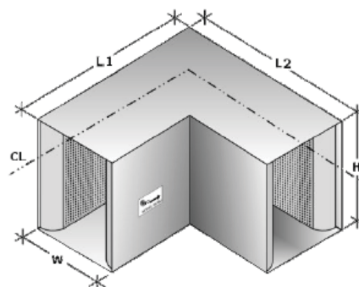
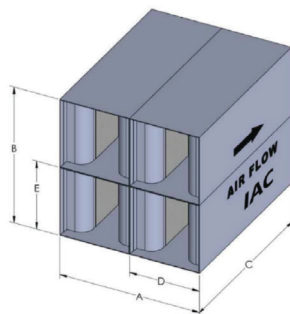
 Silencer performance data has been obtained from tests conducted in a laboratory facility NVLAP accredited for the ASTM E477 test standard.

 * Duct configuration must be known for at least 5 duct diameters upstream and downstream of the silencer to determine pressure drop with system effects.

Performance for Model 5ELBM-S											
Airflow	Velocity	Pressure Drop	Dynamic Insertion Loss (dB)								
CFM	FPM	in.w.g.	31.5 Hz	63 Hz	125 Hz	250 Hz	500 Hz	1 KHz	2 KHz	4 KHz	8 KHz
1500	500	0.09	0	8	18	25	46	50	51	46	31
			Self-Noise Power Levels								
			0	68	75	67	68	68	70	63	54

 Silencer performance data has been obtained from tests conducted in a laboratory facility NVLAP accredited for the ASTM E477 test standard.

 * Duct configuration must be known for at least 5 duct diameters upstream and downstream of the silencer to determine pressure drop with system effects.



OPPORTUNITY

IN THIS INSTANCE AN ENGINEERING FIRM REACHED OUT TO QUIETSTAR WITH THE OPPORTUNITY. THEY ASKED QUIETSTAR TO PROVIDE SPECIFICATIONS AND DATA ON POSSIBLE SOLUTIONS. ONCE THE PROJECT WAS SPECIFIED A MECHANICAL CONTRACTOR COORDINATED WITH QUIETSTAR SECURE TO SUPPLY:

- **IAC Acoustics Sentry® Silencers**
 - (6) 10S Silencers
 - HTL (high transmission loss) Casing designed to prevent breakout noise
 - Waveguides (Integrated waveguides designed for specific cutoff frequency)
 - No Man Bars required because opening was less than 100 sq. in.
 - (1) 90 degree elbow “S” Type Silencer
 - HTL (high transmission loss) Casing designed to prevent breakout noise
 - Waveguides (Integrated waveguides designed for specific cutoff frequency)
 - Man Bars
 - (1) “T” shaped “S” Type Silencer
 - HTL (high transmission loss) Casing designed to prevent breakout noise
 - Waveguides (Integrated waveguides designed for specific cutoff frequency)
 - Man Bars
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INTEGRATOR OPPORTUNITY

THE CONTRACTOR PROVIDED THE CLIENT:

- HVAC Mechanical Equipment
- QuietStar Secure’s Silencers / Waveguides / Man Bars (where required)
- Installation

RESULTS

QuietStar Secure worked closely with the engineering firm to specify material that would meet HVAC pressure drop and insertion loss, while maintaining the ICD 705 tempest and acoustic (breakout noise) requirements.



Photos shown are not project specific

