

Case Study:

IAC Acoustics Moduline® Acoustic Test Enclosure

» Fisher Dynamics
St. Clair Shores, Michigan



IAC Acoustics Provides Double Wall Moduline Chamber to Automotive Seats Manufacturer

Fisher Dynamics, an automotive seat manufacturer, needed to perform acoustic measurements with a low noise electrodynamic shaker by MB Dynamics. The measurement space performance requirements were very strict to capture small buzz, squeak, and rattle (BSR) noises from tested products under specific vibration excitation profiles. The space is directly adjacent to a manufacturing line with a high noise level, so a significant reduction of sound was required to fulfill the demanding acoustic test facility specification.

Solution

IAC Acoustics provided an acoustic solution with an industry leading sound transmission loss enclosure to prevent outside noise from contaminating the acoustic measurements inside. Utilizing a Moduline Gemini STC-70 panel construction, the original requirement of 25 dBA was exceeded, with a final measured noise level of 22 dBA inside the test facility. Utilizing a double wall acoustic enclosure with an airspace, a noise level reduction of more than 60 dBA was achieved. A custom color was provided, along with windows in each of the double

outswing STC-51 (NIC 70) Noise-Lock® doors. As part of the IAC Acoustics complete solution, installation and ventilation silencers were also included in the project. Specially designed tandem hardware was applied to the Noise-Lock doors to allow the user to open and close the two double doors with one motion, improving safety and efficiency.

Installation

A complete installation was completed quickly and with minimal downtime around existing equipment. The IAC Acoustics installation crew is highly experienced, professional, and able to accommodate working hours around the clock to maintain maximum flexibility. Construction took place adjacent to three existing walls, so it was critical to have a detailed installation plan to ensure a smooth process.

Conclusion

An IAC Acoustics Moduline panel testing facility provided Fisher Dynamics an effective acoustic measurement space in a production environment. Exceeding the noise level target allowed them to future proof their acoustic measurement capabilities and ensure that even the smallest of sounds would be accurately captured.