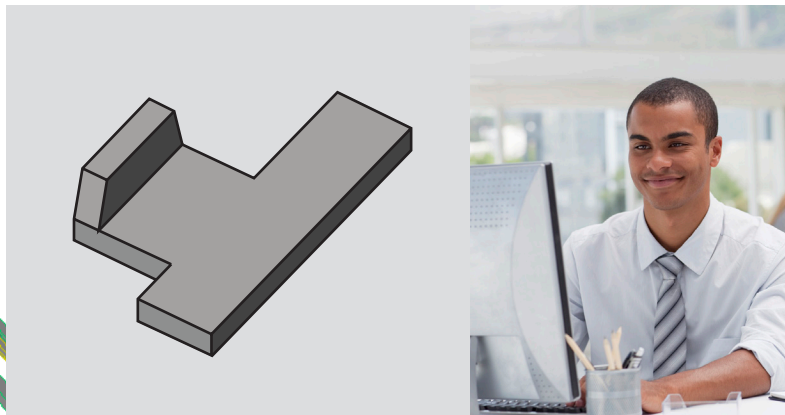
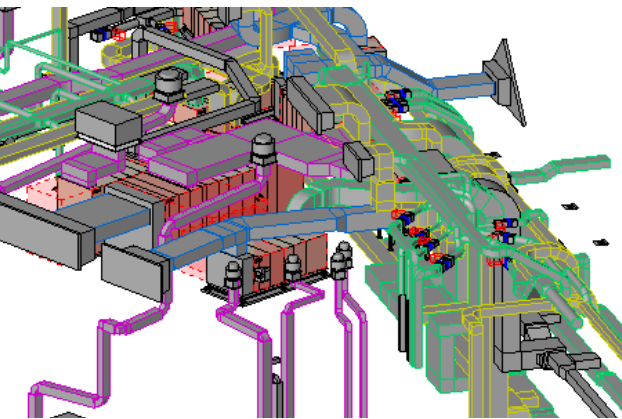


VIBROACOUSTICS®

Noise Control | Vibration Isolation | Restraint Systems

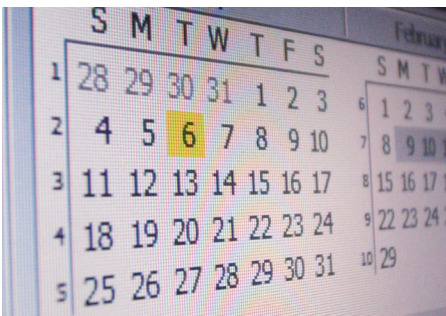
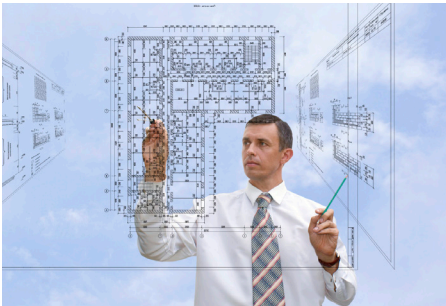
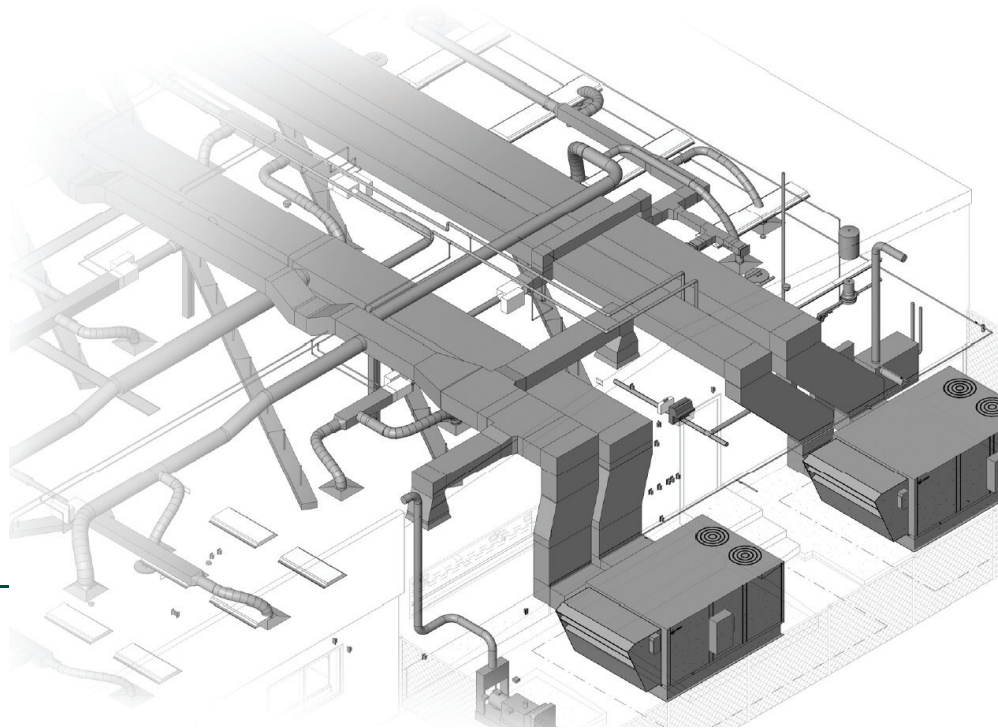


3D BIM Services for Noise Control

Utilizing BIM

BIM (Building Information Modelling) has drastically changed how construction documents are generated. The major values of utilizing BIM are seen in improved productivity, increased quality and better overall project results. In North America, the primary BIM software for MEP (Mechanical Electrical & Plumbing) design is Revit.

To complete a BIM model of a building, all components of the HVAC system, including noise control elements such as silencers, need to be modeled inside of Revit.



Issues: Resources and Efficiency

Out of all the members contributing to the construction of a building, **the engineering consultants are the most likely to need additional resources** to realize the increased value represented by BIM. The most labor-intensive is the development of Revit compatible parametric models for each component in the HVAC system. These are required, without exception, to finish the design.

- **Significant cost in time for Consultants:** For many HVAC components, BIM models are either not available or are only available in a basic format. This means that consultants are required to create their own component models.
- **Additional work to make corrections:** There are some noise control BIM models available, but they are not easy to use. They don't "snap" into place or resize themselves to suit the ductwork, leaving the consultant responsible to make corrections to what is available.
- **Time wasted in schedule creation:** Basic silencer models do not contain enough performance information for proper scheduling (pressure drop, dynamic insertion loss, etc.) and specification purposes. It is the design engineer that has to take extra time to create the schedule.

Comprehensive, Easy-to-Obtain Information

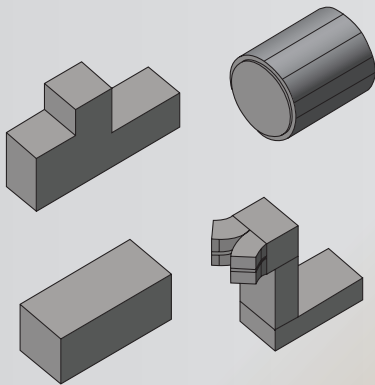
On average, engineers who work with Vibro-Acoustics save 16 hours per project.

Vibro-Acoustics' Revit families coupled with our Application Engineering Service will save the engineer an average of 16 hours per project. All **30 silencer models** are easy to use – silencer families contain all construction and performance information, including **dynamic insertion loss and pressure drop**, and 'snap' into place within the consultant's ducting model without adjusting and repositioning.



We make it easy for the consulting engineer to schedule noise control. All of our models are supplied with a **silencer schedule template** that automatically draws the necessary information from all the silencers in the consultant's HVAC model and develops a schedule. Performance information, currently only provided by Vibro-Acoustics, helps the consultant provide the owner with the necessary information for analysis or replacement purposes after building erection. This service saves engineers from having to search through files after the fact by providing the required information in the BIM model—right from the start.

Vibro-Acoustics Value Added



Revit Models

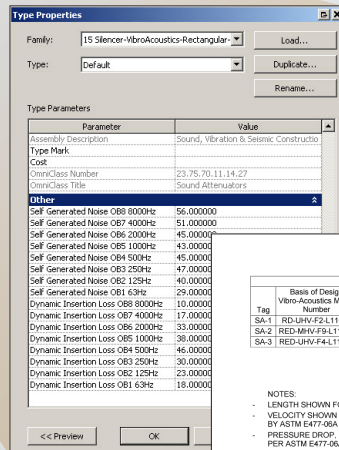
Families for 30 silencer configurations

User-friendly for integration with building model

Performance information included

Automated schedule templates

Saves time



Performance Data

Basis of Design		Dimensions, in				Design				Minimum Dynamic Insertion Loss, dB				Notes				
Tag	Vibro-Acoustics Model Number	Width	Height	Diameter	Length	Fan System	Design Air Flow (CFM)	Design Velocity (FPM)	Max. PD w/g	Max. PD with Sys. w/g	63Hz	125Hz	250Hz		500Hz	1000Hz	2000Hz	4000Hz
SA-1	RED-UHV-FZ-L11067	28"	12"	36"	Return	2400	1029	0.03	0.04	3	4	8	13	10	9	8	6	1
SA-2	RED-MHV-F9-L11067	12"	20"	84"	Supply	1800	950	0.18	0.18	8	15	24	36	51	47	36	28	1
SA-3	RED-UHV-F4-L11067	12"	20"	60"	Return	1800	960	0.10	0.22	6	9	12	20	26	28	24	16	1

- NOTES:
- LENGTH SHOWN FOR ELBOW SILENCERS IS CENTERLINE LENGTH
 - VELOCITY SHOWN IS - (FORWARD FLOW) OR - (REVERSE FLOW) AS DEFINED BY ASTM E477-08A
 - PRESSURE DROP, DYNAMIC INSERTION LOSS AND SELF GENERATED NOISE PER ASTM E477-08A
 - MAXIMUM PRESSURE DROP WITH SYSTEM EFFECTS = SILENCER PRESSURE DROP PER ASTM E477-08A + SYSTEM EFFECTS FOR NEARBY DUCT ELEMENTS

- 1 R-RECTANGULAR
RE-RECTANGULAR ELBOW
C-CIRCULAR
CE-CIRCULAR ELBOW
AC-AXIAL CONE
D-DISSIPATIVE
FL-FUL LINED
NM-NO MEDIA
EX-EXTENDED CASING
MB-MOLD-BLOCK

2 ACOUSTIC MEDIA SHALL BE VIBRO-ACOUSTICS'S MOLD-BLOCK MEDIA CONTAINING 100% NATURAL COTTON FIBERS TREATED WITH AN EPA

Schedule

For Vibro-Acoustics' Revit families configured specifically for your project, please contact us at BIM@vibro-acoustics.com

