

FOREWORD

This first edition of *HVAC Sound and Vibration* was developed to provide in-depth, HVAC-specific guidance in the art of sound and vibration measurement and mitigation. In addition to this manual a chapter on the subject is provided in *HVAC Systems Duct Design*. Also, in *HVAC Duct Construction Standards Metal and Flexible* commentary and illustrations are provided in Chapter 7 to evaluate the relationships between duct vibration and a number of factors—airflow velocity and pressure, metal gage, etc.

As building construction has become lighter and tighter, sound and vibration that previously may have gone unnoticed is more often becoming a nuisance. This creates both a problem and an opportunity—a problem because designers and installers must be diligent in using materials and techniques that mitigate the potential for sound and vibration problems and an opportunity for contractors that specialize in resolving occupant complaints related to sound and vibration.

While this manual provides industry-recognized methods and techniques, not all practices are discussed or illustrated as this would be impractical. Deviations from included recommendations may often be permissible, depending upon verification of satisfactory results under conditions other than those covered in this manual. Careful examination of the information herein and the expertise of local contractors will enable designers or facility managers to select the proper detail for practically any requirement. You can find a local SMACNA contractor using the online member list at <http://www.smacna.org/> for site-specific technical and design assistance.

SMACNA expresses appreciation to the committees and task forces, sheet metal contractors, journeymen sheet metal workers, manufacturers, and other interested individuals and companies that have contributed time, knowledge, and experience in the development of this manual. SMACNA's technical staff also gains insight into the need for additions and changes based on the incoming technical inquiries—a service offered to the public via the SMACNA Website—but also an ongoing feedback path for ideas and subject areas of industry interest. Suggestions regarding many drawings and commentary have been consigned to further study and, as the association is able to make additional clarification for various applications, it will do so.

SHEET METAL AND AIR CONDITIONING CONTRACTORS'
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