



Problem Solvers in vibration isolation, noise and shock control

22 April 2009

Re: KINETICS NOISE CONTROL, INC –Duct Silencers HTL Casings

Kinetics Noise Control, Inc. offers the following explanation concerning the pros and cons of using 16 gage HTL (high transmission loss casings) in lieu of 10 gage casings.

Disadvantages of using 10-ga (0.138”) HTL Casings

- Some manufacturers encourage consultants to specify 10-ga HTL silencer casings using the argument that 10-ga has more mass than 16-ga sheet metal therefore providing more sound transmission loss. But there is a downside to this argument.
- **The increase in TL going from 16-ga to 10-ga is only slight, often less than 2 dB.**
- 10-ga does not flex and therefore provides no low-frequency damping.
- 10-ga cannot be roll-formed and the casing must be stitch-welded or continuously-welded. These welds must be touched up with a special zinc rich coating (ZRC) to prevent rusting.
- 10-ga silencers are very heavy and difficult to install. Often the contractor will drag the silencer across the concrete floor, thereby scraping off the ZRC paint that protects the welds. (10 gage = 5.781 psf)
- Ceiling hangers for 10-ga silencers must be substantially upgraded, and elaborate hoisting equipment may be required to install the silencer.

Advantages of using 16-ga (0.063”) HTL Casings

- Experience has shown that 16-ga HTL casings provide the best performance/cost benefit.
- 16-ga galvanized steel has twice the mass of standard 22-ga sheet metal and therefore has a higher sound transmission loss.
- 16-ga sheet metal will also flex somewhat at low frequencies providing a degree of sound damping.
- 16-ga sheet metal can be lock-formed, eliminating the need for welds.
- The weight of 16-ga HTL silencers is reasonable making handling and installation uncomplicated. (16 gage = 2.626 psf)

Based on the knowledge obtained from the detailed information Kinetics Noise Control offers the following 16 gage HTL casings as standard.

Yours truly,

KINETICS NOISE CONTROL, INC.

John D. Sofra
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