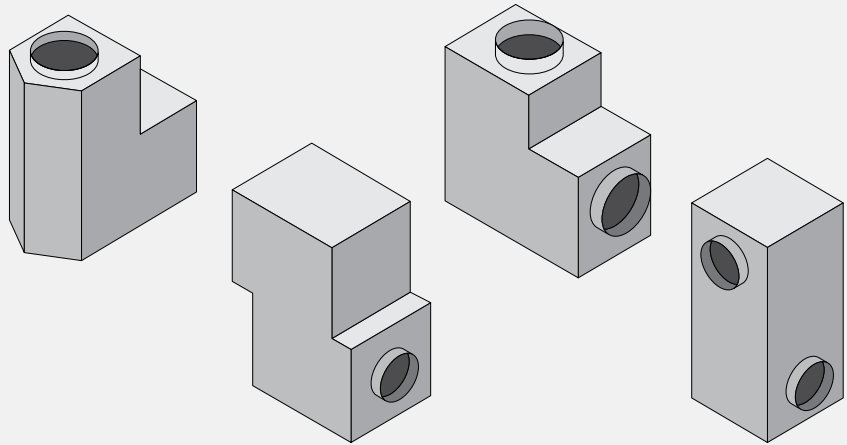


CENM

Circular Elbow
No-Media Silencers



Description

VIBRO-ACOUSTICS' CENM

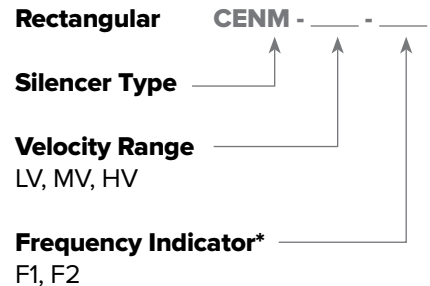
silencers do not contain glass fiber and are void of any fill material whatsoever. The Helmholtz resonator principle is used as the primary sound reducing mechanism. Splitters, sometimes called baffles, incorporate expansion chambers. The chambers are covered by specially tuned perforated metal. Space outside the duct connection size is also used for expansion chambers.

CENM silencers incorporate a full 90 degree and/or a partial bend to fit the duct system configuration. The splitters are aerodynamically designed to turn the air efficiently and minimize pressure drop. They vary in quantity and thickness, and air passages also vary in size.

Model Names

Vibro-Acoustics' silencer model names are coded to help identify their recommended application range.

*The lower the Frequency Indicator, the better the silencer's insertion loss in the low frequency range. The higher the Frequency Indicator, the better the silencer's insertion loss in the mid to high frequency ranges.



Applications

- > When there is not enough space for straight CNM silencers
- > Wherever glass fiber is not acceptable in duct and air handling systems
- > When it is necessary to periodically sterilize the entire interior of the silencer
- > In laboratory fume hood systems, pharmaceutical manufacturing facilities, food processing plants, hospitals, clean rooms, kitchen exhausts, etc.
- > In supply, return or exhaust ductwork
- > On the receiver side of valves, dampers terminal boxes, etc.
- > Recommended duct velocity range

CENM-LV 0-1250 fpm
CENM-MV 1250-1750 fpm
CENM-HV 1750-2250 fpm

Features and Benefits

- > Allows silencing when space does not permit the use of straight CNM silencers
- > Aerodynamic splitters and specially designed air passage ways efficiently turn the air for minimum pressure drop
- > Multiple configurations available such as
 - > Offset inlet and/or outlet connection
 - > “Z” shaped (two Elbows of any angle in series)
 - > Outer body shape and dimensions contoured to fit available space
- > No glass fiber particles to contaminate the airstream
- > No glass fiber to host contamination within the silencer
- > Ability to sterilize the silencer
- > Available in any diameters from 8” to 16”; also available in larger diameters - contact our application engineers
- > Can be selected to suit the acoustic, space, or energy-cost requirements
- > Construction quality and aerodynamic design optimized to give reliable performance, best acoustics, lowest pressure drop and lowest overall cost
- > When break-out noise is of prime concern CENM silencers may be appropriate selections. They may require mass/stiffness added to their outer casing. Refer to [Silencer Selection Instructions](#) for proper silencer location.

Cautions/When Not to Use CENM Silencers

- > When there is enough straight duct length to effectively use CNM straight silencers

Performance Data/Testing

See [Performance Data](#) section.

Vibro-Acoustics’ 5th generation aero-acoustic laboratory was the first laboratory to be NVLAP accredited (Lab Code 100424-0) for the ASTM E-477 silencer test code. NVLAP is administered by the U.S. Dept. of Commerce.

Silencer Selection and location

Vibro-Acoustics offers multiple selection methods, from our complete analysis service to Do-It-Yourself quick selections. Refer to [Silencer Selection Instructions](#) for details.

Standard Construction Features

HTL walls are custom designed to meet the system noise criteria requirements. Consult the Standard Construction Features of the Silencer Type to which the HTL walls are to be applied.

Special Construction Options

- > Galvanized, lockformed casing constructed to SMACNA standards
- > 2” slip connection at each end
- > Special “tuned” perforated galvanized splitters
- > Splitters configured with internal “tuned” chambers
- > No acoustical media
- > 90 degree and/or partial bend to fit system ductwork and space available
- > Heavier gauge casings and perforated metal
- > Continuously welded casings
- > Special materials e.g. stainless steel, aluminum
- > Flanges
- > Access doors
- > High transmission loss (HTL) casings to prevent break-out/break-in noise
- > Built in transitions
- > For details of above and more special options see [Special Construction Options](#).