

AcoustiClean™ Sonic Horns

AcoustiClean™ Sonic Horns are designed to produce low frequency, high volume sound vibration to prevent costly material build-up in hoppers, bins, silos, boilers, ESP, SCR, fans, etc. Sound waves are produced by applying 70-90 PSI of compressed air at a volume of 40-80 CFM to the sound generator, which vibrates a high strength titanium diaphragm. The size and shape of the horn's bell section determines the acoustic energy produced. A longer horn with a larger bell section will produce more energy and clean a larger area.

BENEFITS

- ✓ **Ease of Installation**
 - Can be mounted outside vessel or hung inside
- ✓ **Cast Iron or Stainless Steel Construction**
 - Can operate in high heat and/or food process
- ✓ **Low Operating Cost**
 - 70-90 PSI / 40-80 CFM air consumption
- ✓ **Low Maintenance**
 - Only replaceable part is a Titanium Diaphragm
- ✓ **Fewer Unscheduled Shut Downs for Cleaning**
 - Improved process efficiency and productivity

APPLICATIONS

- **Boilers** — Increases heat transfer efficiency
- **Baghouses** — Extends bag life
- **Precipitators** — Eliminates rapping system
- **Silos** — Eliminates rat holing and bridging
- **Bins** — Prevents particulate build up on vertical walls
- **Selective Catalytic Reduction (SCR)** — Cleans catalysts
- **Fans** — Eliminates material build-up on blades



MODELS

ACL-17220

Our smallest horn is used to fluidize material inside hoppers, bins and boilers. The effective cleaning distance is up to 15' in front of the horn and 6' in diameter. Frequency 220Hz / Sound Pressure Level 149dB.

A600

Our newest horn, modeled after the Analytec 600, has cleaning characteristics similar to the ACL-17220, however is designed to be installed with the bell section inside the vessel.

ACL-34230

This two-section horn can be used on bins and silos to break up rat-holing and plugging, as well as on boilers to keep tubes clean. The effective cleaning distance is up to 30' in front of the horn and 15' in diameter. Frequency 230Hz / Sound Pressure Level 149dB.

ACL-9475

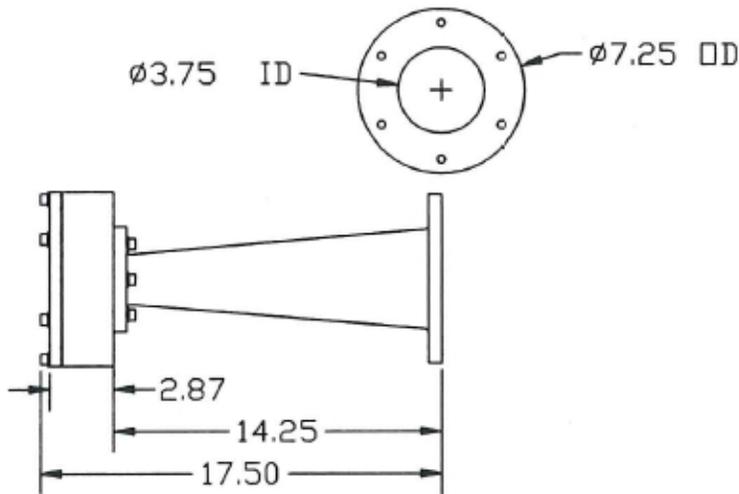
The largest AcoustiClean™ horn is typically used in baghouse, SCR, ESP applications, however can also be used effectively on top of a vessel to break up bridging and rat-holing. The effective cleaning distance is up to 60' in front of the horn and 20' in diameter. Frequency 100Hz / Sound Pressure Level 148dB.

ACL-53100

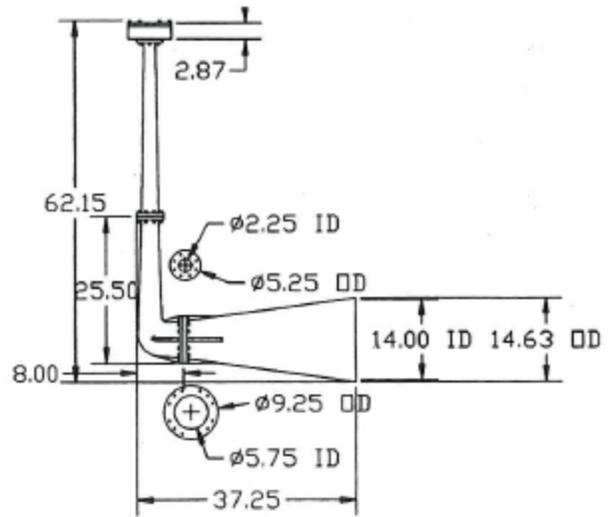
This curved horn, with characteristics similar to the ACL-9475, was developed to overcome space limitations found in many installations. When considering maintenance requirements and the need for future access to the hub unit it is often a good choice. Frequency 100 Hz / Sound Pressure 148dB.

ACOUSTICLEAN™ SONIC HORN DIMENSIONAL DRAWINGS

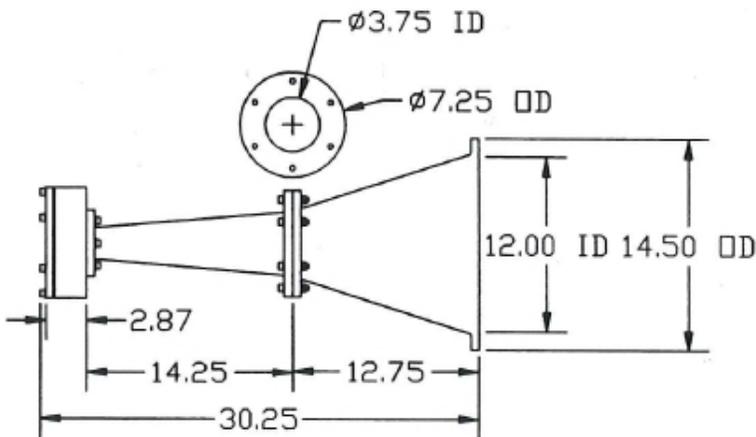
ACL 17720



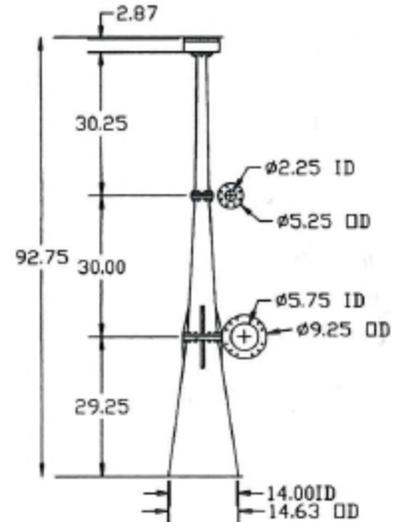
ACL 53100



ACL 34230



ACL 9475



Dimensions are Decimal Inches and (Millimeters in parentheses)

RECOMMENDATIONS FOR SUCCESSFUL SONIC HORN INSTALLATIONS

- Vessel must be clean and free of deposits. A sonic horn will not clean a dirty vessel with material stuck to the sidewalls. It will facilitate material flow best from a clean vessel.
- The material must be relatively dry and powdery. Sonic horns are typically not effective if the moisture content is above 25%. The best alternative is an Airsweep System.
- Compressed air must be clean and dry. Pressure and volume must be maintained at 70-90 PSI / 40-80 CFM to ensure horns are able to emit sound efficiently.
- Recommended starting point for sounding a horn is 10 seconds every 10 minutes. Sounding for a longer duration may over-stress the diaphragm and cause it to break prematurely.
- Users with flow issues in very large vessels may want to consider installing Airsweep Systems at the bottom of the vessel and sonic horns at the top to ensure the best possible flow.
- On boilers, the most effective installation will have the horn(s) blowing in the same direction as the pipes, where the acoustics can get between the pipes and the walls of the boiler. i.e. end-to-end. Sounding the horn behind pipes on one side of the boiler toward pipes on the other side will generally not produce effective results.