



**UNIVERSAL**

Acoustic & Emission Technologies

# Installation, Operation and Maintenance Instructions for QuietShield™ Engine Silencers

## Description

The QuietShield™ engine exhaust silencers are designed for engine applications such as generators and compressors that require high-quality, durable products. These silencers have a high-performance internal design that delivers excellent silencing in a smaller package than conventional silencers. They utilize a combination of reactive and absorptive silencing design that is suitable for most reciprocating engine exhaust applications. QuietShield™ silencers provide effective noise reduction for a wide range of operating conditions. They are available in Commercial, Critical, Hospital & Ultra-Quiet silencing grades. The QuietShield™ silencer series is designed for applications where the exhaust gas temperature does not exceed 1000°F, and the pressure does not exceed 5 psig. There are no moving parts in the operation of the silencer units.

## Receiving Inspection

- Upon receipt of the unit, check the nameplate against the packing list to verify the correct part numbers are received.
- Keep the shipping container to protect the unit until installation has been completed.
- Prior to unpacking, check for shipping damage.
- Advise Universal of shipping damage within three days of receipt of the product.

## Storage

- Leave any cardboard boxing, plywood covering, crating, and/or plastic covering intact until ready to install.
- Be sure that all openings are closed so that no debris, vermin, rain, snow and/or ice can get into the unit.
- Store the unit on blocks, a minimum of 4" high, so that air can freely circulate around the unit.

## Inspection and maintenance

- Components are either complete weldments or permanently assembled having no replaceable parts.
- Spare parts are not required.
- Periodically inspect paint finish for damage or deterioration. **NOTE:** Minor localized damage, such as scratches, may be repaired using high-

- Do not store the unit in contact with the ground or in a wet, humid or flooded area.
- Indoor ambient temperature storage is preferable. If this is not possible, keep the unit covered and protected from the weather.
- Clean the unit prior to installation. Remove any minor corrosion and refinish per paint manufacturer's recommendations. If major corrosion has occurred such that the integrity of the unit is in question, contact Universal.

## Mounting and alignment

- Ensure that the necessary equipment to install the unit, including support brackets, flange bolts, outlet elbows and expansion joints, are available before beginning.
- + **IMPORTANT:** The unit is not designed to serve as a support for any piping, additional mounting pads or additional loads on the inlet or outlet other than those stated on the Universal drawing or product bulletin.
- Align the silencer with the engine and/or piping connections.
- Be sure to connect the silencer with the proper orientation for the indicated flow direction.
- Install a suitable expansion joint (bellows) between the silencer and the engine to reduce the likelihood of vibration or thermal growth damage to the unit.
- Mount the silencer securely to the application.
- Torque the flange bolts to the proper values.
- Use thread lubricant on all bolts.
- Use gaskets on all flanged connections. If you replace or add bolts or gaskets, use the same size and material as the originals.
- Ensure that the unit is firmly mounted immediately prior to startup of the equipment and again 24 hours after startup to verify that the unit has not vibrated loose from the mounting support.

- temperature touch-up paint. Areas with extensive damage or deterioration may require spot blasting and recoating. Consult paint manufacturer's recommendations.
- Examine connecting flanges and support bolting at least annually. Retighten loose nuts as required.



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## Safety Issues

- **CAUTION** - All personnel working near high-temperature components during operation and cool down period should use care to prevent injury due to contact with high temperature surfaces.
- If performing any work on the silencer or adjacent components, ensure that all space requirements are met and that all tools and other materials are removed once work is completed.