

# *GT Exhaust Systems*

## **SUGGESTED SPECIFICATION**

### **EXHAUST SYSTEM**

**SILENCER,  
FLEX CONNECTOR,  
INSULATION BLANKETS,  
WALL / ROOF THIMBLES**

## **GT Exhaust**

### **1. General**

Exhaust system shall consist of a silencer, flexible exhaust connector, elbows, piping, roof thimble, and mounting hardware. Furnish and install all required steel supports, hangers, clamps for mounting the silencer to an overhead structure. Complete system shall be wrapped in insulation blankets.

### **2. Exhaust Silencer**

Furnish an exhaust silencer for \_\_\_\_\_ (Industrial, Residential, or Critical) type silencing. The silencer shall be sized to ensure that exhaust back-pressure does not exceed the maximum limitations specified by the engine manufacturer. The entire outer surface shall be \_\_\_\_\_ (carbon steel, aluminized, or stainless steel) construction. The silencer shall be of side (or end) inlet design for horizontal mounting. Silencer shall have a drain valve in the silencer at the lowest point for condensation drain. The silencer shall be GT Exhaust Systems, Inc. Model \_\_\_\_\_ or approved equivalent.

### **3. Exhaust Connector**

A flexible stainless steel exhaust connector shall be furnished between the engine and the silencer to minimize vibration as recommended by the engine manufacturer. Connector shall be of Type 321 stainless steel. The flex connector shall be GT Exhaust Systems, Inc. or approved equivalent.

### **4. Exhaust Insulation**

The interior exhaust piping, silencer, exhaust manifolds, and turbos shall be covered with insulation of a non-combustible type insulation material. Blanket temperature range shall be -67°F to 1200°F. Insulation material shall be high density – 11 lbs./cu.ft. Type “E” fibrous glass insulation with standard thickness at 1.00”. Blankets shall be totally encapsulated in 304 stainless steel mesh. Outer liner shall consist of a weather barrier silicone coated fiberglass cloth. All seams held together with 304 stainless steel “hog ring” staples. Tie down anchors, hooks, washers type 304 stainless steel. Lacing wire shall be type 304 stainless steel (16 GA.). No asbestos or asbestos-bearing products shall be used. The blankets shall be GT Exhaust Systems, Inc. or approved equivalent.

## **GT Exhaust**

### **5. Wall / Roof Thimble**

The exhaust piping shall pass through the wall of the building by utilizing an insulated thimble constructed in conformance with NFPA 37 and 110. The thimble shall be of welded construction, consisting on an inner and outer sleeve separated by vented separators constructed to minimize the conduction of heat from the inner to the outer sleeve. The exhaust pipe shall fit within the inner sleeve and insulation material. Thimble insulation material shall be high density type "E" fibers, fibrous glass – 11 lbs./cu.ft. The thimble shall extend at least nine inches above and nine inches below any portion of the structure. The thimble shall include a support collar and exterior flashing on the opening surface, welded to the outer sleeve of the thimble. Furnish a rain collar to clamp on the exhaust pipe and over the top of the thimble, to prevent the entrance of rain into the thimble. Include a screen to prevent entrance of birds and insects. Furnish an interior flashing piece to go on the inside of the structure. The rain collar and clamp shall be stainless steel. The thimble, support collar, and interior collars shall be of carbon steel with Galv-A-Grip protective coating. The thimbles shall be GT Exhaust Systems, Inc. or approved equivalent.

## GT Exhaust

### 6. Application / Silencer Types

#### Industrial Grade Series Model 201-2100

A rugged heavy-duty silencer for commercial or industrial areas where ambient noise levels are relatively high.

Typical Attenuation: 14 to 20 dB'A'

#### Residential Grade Series Model 201-4100

Silencers designed for residential areas where ambient noise levels are relatively low.

Typical Attenuation: 19 to 25 dB'A'

#### Critical Grade Series Model 201-5100

A critical level silencer for use where ambient noise levels are very low and a high degree of silencing is required.

Typical Attenuation: 25 to 33 dB'A'

#### Super Critical Grade Series Model 201-6100

A critical level silencer for use where ambient noise levels are extremely low and a high degree of silencing is required. Features compressed acoustical fiberglass inserted between the double shell. Provides 300 to 400 (F) degree reduction in surface skin temperature

Typical Attenuation: 32 to 40 dB'A'

#### Extreme Application Series Model 201-7100

An acute critical level silencer recommended for special applications when a single critical silencer is insufficient. It performs the work of two silencers in series. Features compressed acoustical fiberglass inserted between the double shell. Provides 300 to 400 (F) degree reduction in surface skin temperature. Silencer incorporates both multi-chambered and annular passage flow design to provide maximum attenuation of all frequencies.

Typical Attenuation: 45 to 52 dB'A'

#### Slim Line Critical Series Model 401-5100

Space conserving radial design specifically engineered to provide a high degree of attenuation in a space saving, low profile size. Features compressed thermal acoustical insulation.

Typical Attenuation: 27 to 32 dB'A'

Slim Line Super Critical Series Model 401-6100

Space conserving radial design specifically engineered to provide a high degree of attenuation in a space saving, low profile size. A critical level silencer for use where ambient noise levels are extremely low and a high degree of silencing is required. Features compressed thermal acoustical insulation.

Typical Attenuation: 30 to 36 dB'A'

Slim Line "Cool" Critical Series Model 401-C-5100

Space conserving radial design specifically engineered to provide a high degree of attenuation in a space saving, low profile size. Features compressed thermal acoustical insulation. The cool series provides additional internal insulation for lower surface temperatures.

Typical Attenuation: 28 to 33 dB'A'

Slim Line "Cool" Super Critical Series Model 401-C-6100

Space conserving radial design specifically engineered to provide a high degree of attenuation in a space saving, low profile size. A critical level silencer for use where ambient noise levels are extremely low and a high degree of silencing is required. Features compressed thermal acoustical insulation. The cool series provides additional internal insulation for lower surface temperatures.

Typical Attenuation: 32 to 38 dB'A'