

High Temperature Pre-Insulated Tubing

Series 2210 Imperial Sizes



700°F to 1100°F
ASTM A269, A213
Steam, Gas, or
Liquid Transport.

Applications

- Steam supply lines
- Condensate return lines
- Gas transport lines
- Liquid transport lines

Features

- Compact design
- Low heat loss
- Light, durable, easy to handle
- Zero maintenance
- Employee protection
- Continuous lengths up to 1000 feet
- Easy to Install
- Cost savings up to 50% over field fabrication
- Made in USA

Tubing Materials:

- Welded or Seamless type 316/316L stainless steel to ASTM A269 and ASTM A213 (Except Average Wall)
- Seamless type 316/316L minimum wall stainless steel to ASTM A213
- Most High Temperature stainless steel alloys
- Most High Temperature nickel-based alloys
- Welded or Seamless type 316/316L stainless steel to ASTM A269 and ASTM A213 (Except Average Wall)
- Seamless type 316/316L minimum wall stainless steel to ASTM A213
- Most High Temperature stainless steel alloys
- Most High Temperature nickel-based alloy

Standard Outer Jacket Materials:

- 105°C Rated Flame-Retardant PVC
- 125°C Rated Flame-Retardant TPE
- Halogen-Free Flame-Retardant TPU

Scope

Series 2210 Pre-Insulated Tubing is a thermally insulated fluid transport line suitable for steam, gas, or liquid transport.

Each line is comprised of the following elements:

- Single metal process tube
- Moisture resistant, non-wicking, inorganic fibrous glass thermal insulation
- Choice of weather protective jacket

The energy-efficient design provides for nominal jacket surface temperatures of 170°F or lower at 80°F ambient conditions while transporting 700°F saturated steam. Bundles can be designed for applications operating at process temperatures up to 1100°F.

Tubing and jacket selections for these higher temperatures are limited. Contact us for more information on designs for 700°F to 1100°F.

Pre-Insulated Tubing Accessories:

| | Part # |
|-----------------------------------|------------|
| Seal-Tite End Boots | |
| Single Tube up to 750°F | BOOT-1 |
| Single Tube above 750°F | BOOT-1-3-3 |
| UniSeal Cable Entry Seals | |
| for Bundles up to 1.375" | Seal 1.60 |
| for Bundles up to 2.62" | Seal 2.75 |
| Unicut™ Bundle Jacket Cutter | 1631-01001 |
| RTV Silicone End Sealant | |
| 3 oz. Tube | 1535-02080 |
| 10.3 oz. Cartridge | 1535-02120 |
| Seal Patch Kits | |
| 8" x 8" Single Self-Sealing Patch | 1540-10000 |
| 8" x 25 foot Self-Sealing Patch | 1540-20000 |

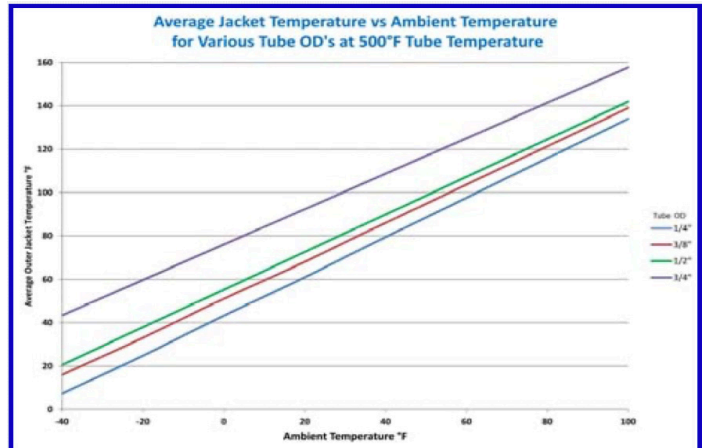
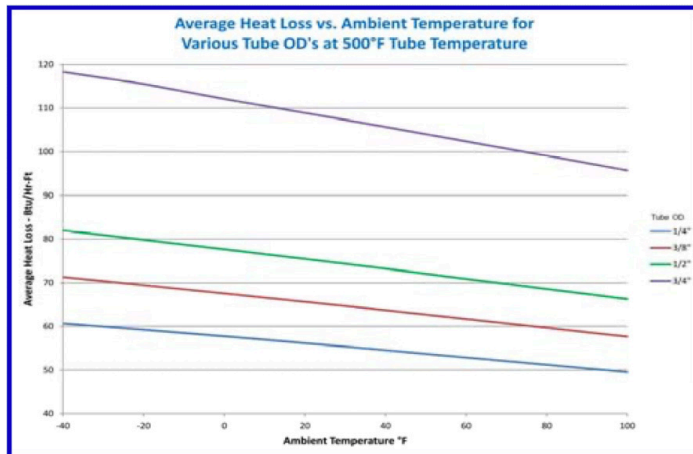
For assistance ordering this product, please contact your Marmon Industrial Energy & Infrastructure representative. Also Contact us for more information on available tubing materials as sizes.

Product Specifications 2210 Pre-Insulated Tubing:

| Op Tube | Tube OD | Tube Wall ⁽¹⁾ | Material ⁽²⁾ | ASTM Std | Wrk Press. Op. Temp ⁽³⁾ | Jacket Temp °F ⁽⁴⁾ | Nom. Bundle OD | Nom. Weight lb/ft | Min Bend Rad ⁽⁵⁾ |
|---------|---------|--------------------------|-------------------------|----------------|------------------------------------|-------------------------------|----------------|-------------------|-----------------------------|
| 500 | 1/4" | 0.035" | 316/316LS/S WLD | A-269/A213 EAW | 3850 PSI | 120 | 1.15" | 0.45 | 7" |
| 500 | 3/8" | 0.035" | 316/316LS/S WLD | A-269/A213 EAW | 2450 PSI | 125 | 1.30" | 0.50 | 8" |
| 500 | 1/2" | 0.035" | 316/316LS/S WLD | A-269/A213 EAW | 1810 PSI | 125 | 1.60" | 0.57 | 10" |
| 500 | 3/4" | 0.049 | 316/316LS/S WLD | A-269/A213 EAW | 1680 PSI | 145 | 1.70" | 0.69 | 11" |
| 600 | 1/4" | 0.035" | 316/316LS/S WLD | A-269/A213 EAW | 3600 PSI | 120 | 1.50" | 0.50 | 9" |
| 600 | 3/8" | 0.035" | 316/316LS/S WLD | A-269/A213 EAW | 2300 PSI | 125 | 1.65" | 0.55 | 10" |
| 600 | 1/2" | 0.035" | 316/316LS/S WLD | A-269/A213 EAW | 1700 PSI | 140 | 1.90" | 0.70 | 11" |
| 600 | 3/4" | 0.049 | 316/316LS/S WLD | A-269/A213 EAW | 1580 PSI | 150 | 1.85" | 0.85 | 11" |
| 750 | 1/4" | 0.035" | 316/316LS/S WLD | A-269/A213 EAW | 3380 PSI | 120 | 1.85" | 0.60 | 11" |
| 750 | 3/8" | 0.035" | 316/316LS/S WLD | A-269/A213 EAW | 2160 PSI | 135 | 1.95" | 0.64 | 12" |
| 750 | 1/2" | 0.035" | 316/316LS/S WLD | A-269/A213 EAW | 1590 PSI | 145 | 1.95" | 0.65 | 12" |
| 750 | 3/4" | 0.049 | 316/316LS/S WLD | A-269/A213 EAW | 1480 PSI | 150 | 2.35" | 1.05 | 14" |
| 1100 | 1/4" | 0.035" | 316/316LS/S WLD | A-269/A213 EAW | 3900 PSI | 150 | 2.00" | 0.75 | 26" |
| 1100 | 3/8" | 0.035" | 316/316LS/S WLD | A-269/A213 EAW | 1900 PSI | 155 | 2.15" | 0.78 | 27" |
| 1100 | 1/2" | 0.035" | 316/316LS/S WLD | A-269/A213 EAW | 1400 PSI | 180 | 2.30" | 0.82 | 27" |
| 1100 | 3/4" | 0.049 | 316/316LS/S WLD | A-269/A213 EAW | 1300 PSI | 155 | 2.75" | 1.02 | 27" |

- Note:**(1) other wall thickness are available
 (2) alternate metal and polymer tubing materials are available
 (3) working pressure based on welded tube, seamless will be higher
 (4) jacket temperature based on 80°F ambient and 2 mph wind
 (5) minimum bend radius based on FR-TPE jacket for 1100°F bundles. Contact us for alternate materials

- Note:** Standard outer jacket is a 105°C Rated flame retardant PVC for bundles with an operating temperature up to 750°F, alternate jackets are a 125°C Rated, flame retardant Thermoplastic polyolefin (FR-TPE) and a flexible, halogen-free flame retardant Thermoplastic urethane (FR-TPU). Only jacket available for bundles rated above 750°F is 125°C Rated FR-TPE. Contact us for alternate materials.



Heat Loss Multipliers

| Process Temp | Multipliers |
|--------------|-------------|
| 500 | 1.0 |
| 600 | 1.1 |
| 750 | 1.2 |
| 1000 | 1.8 |

Jacket Temp Multipliers

| Process Temp | Multipliers |
|--------------|-------------|
| 500 | 1.0 |
| 600 | 1.2 |
| 750 | 1.5 |
| 1000 | 1.7 |

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