Commercial Section C402.5.1.1
Residential Section R402.4.1 through R402.4.4.
The building thermal envelope shall be constructed to
mitigate leakage in accordance with the requirements of
Sections R402.4.1 through R402.4.4.
Air Barrier Construction: Commercial Section C402.5.1.1
Penetrations of the air barrier shall be caulked, gasketed or
sealed in a manner compatible with the construction
materials and locations.

Protected Piping Wall Penetration Compliance per:
• IRC 2018 – Refrigerant Line Insulation Protection – M1411.6.1 - Section N1103.4.1
• IECC 2015 – Protection of Piping Insulation – Commercial Section C403.2.10.1
• IECC 2012 – Protection of Piping Insulation – Commercial Section C403.2.8.1

Pipe Insulation Protection Compliance per:
• ICC 2016 - Protection of Piping Insulation - Commercial Section C403.2.8.1
• IPC 2016 - Protection of Piping Insulation - Commercial Section C403.2.8.1
• BC 2018 - Refrigerant Line Insulation Protection - M1411.6.1 - Section N1103.4.1
• California Building Energy Efficiency Standards (Title 24 Energy Code) - Residential & Commercial
   Requirement for Pipe Insulation: 2015 – Section: 150.0(j) 3a & b
• California Building Energy Efficiency Standards (Title 24 Energy Code) 2016 - Residential & Commercial
   Requirement for Pipe Insulation: 2015 – Section: 150.0(j) 3a & b – Section 150.0(m) 9
• IRC 2018 – Refrigerant Line Insulation Protection – M1411.6.1 - Section N1103.4.1
• IECC 2015 – Protection of Piping Insulation – Commercial Section C403.2.10.1
• IECC 2012 – Protection of Piping Insulation – Commercial Section C403.2.8.1

E-FLEX GUARD (Outdoor-Rated Elastomeric Plastic)
• ASTM E96 – Water/Vapor Permeability
• ASTM D648-07 - Temperature Load Deformation Test
• ASTM D570 – Water Absorption
• ASTM E2178 - Air Permeance of Building Materials
• ASTM E331 – Standard Test Method for Water Penetration

Wall Outlet Sleeve (Outdoor-Rated Rigid Plastic)
• UL 746C - Outdoor Suitability - f1 Rating
• ASTM E 2178 - Air Permeance of Building Materials
• ASTM E331 – Standard Test Method for Water Penetration

Wall Mounted Outlet (Outdoor-Rated Rigid Plastic)
• ASTM E 2178 - Air Permeance of Building Materials
• ASTM E331 – Standard Test Method for Water Penetration

Copper Piping & Pipe Insulation Are Shown for Illustration Purposes Only

**Velcro is a trademark of Velcro USA Copyright © 2017 Airex Manufacturing, Inc.**
AIRX PRO-SYSTEM KIT™ (a combined wall seal and insulation protection system) by Airex Manufacturing Inc., to be provided and installed for sealing HVAC refrigerant line "wall penetrations" and protection of refrigerant line set piping insulation. The combined use of a compression gasket and wall seal system is required by energy codes to prevent: wall air-leakage, moisture intrusion, weather intrusion, rodent intrusion, piping vibration control, physical wall or piping damage, especially when mechanically connecting to thermal insulated refrigerant piping. In addition, pipe insulation is also required to be protected from sun, wind, snow, ice, equipment maintenance and physical damage. AIREX PRO-SYSTEM KIT™ to be provided is to ensure healthy building indoor air quality, long-term building durability, sustainable building energy efficiency and optimal HVAC system performance.

AIREX TITAN OUTLET™ - A wall outlet seal by Airex Manufacturing Inc., shall be provided and installed with its compression gasket mounting method and must be fastened to wall surface with supplied ICC-ES listed and approved non-corrosive screws with pre-loaded neoprene washers. Wall Outlet must also integrate an over-molded, flexible, elastomeric sleeve for sealing, supporting and isolating refrigerant pipes to also control vibration. The Wall Outlet shall also feature outdoor-rated durability and shall provide wall expansion and contraction protection features achieved by gaskets and seals as per energy code requirements. A stainless steel clamp must be utilized to create a "Mechanical Connection" between wall seal and pipe insulation protector as intended per energy codes to allow removable/reusable maintenance capabilities and designed to co-act with the AIREX E-FLEX GUARD™ Pipe Insulation Protection Cover. Wall Outlet seal and insulation protector must both be sustainably and securely installed, mechanically fastened together as one, due to piping vibration, and shall be assembled without the use of adhesives or adhesive tapes as per energy code requirements. Wall Outlet shall be tested and must meet the following testing: ASTM E 321 (Water Penetration), ASTM E 283 (Air Leakage), and ASTM E 2178 (Air Permeance of Building Materials).

AIREX E-FLEX GUARD™ - An insulation protective cover by Airex Manufacturing Inc., shall be provided and installed to be flexible, U/V and weather resistant. The PVC plastic pipe insulation cover shall feature an integrated, outdoor-rated durability, industrial-grade, full-enclosure fastening system that is double secured by molecular bonding, allowing custom, cut-to-length installations. The cut-to-length installations shall comprise of a non-unraveling PVC cover material that does not compromise long-term-effectiveness or require specialized tools and cutting equipment. The engineered fastening system is to allow the cover to be removable and reusable for maintenance without the use of adhesives as an attachment in any way shape or form, including either in the protector’s construction, installation, or attachment to pipe insulation, as this will negatively affect insulation permeance performance and promote insulation material degradation which causes added energy usage by equipment. WRAPPING TAPE OR ADHESIVE TAPE SHALL NOT BE PERMITTED AS PER ENERGY CODES. Insulation Protector shall be tested and meet the following testing: ASTM E 96 (Vapor Transmission of Materials), ASTM G 153 (Carbon Arc Light Exposure – Accelerated Weathering), ASTM D 412 (Tensile Strength after UV Exposure and Water Immersion) ASTM 570 (Water Absorption of Plastics) ASTM E 84/UL 723 (Surface Burning Characteristics of Building Materials), ASTM G 21 (Fungal Growth), UV/Protector Pipe Insulation Material shall Meet Class II vapor retarder per ASTM E 96 vapor/moisture permeability test) “1 perm or less”. THE USE OF U/V PAINT OR NON-PERMEABLE MATERIAL OR ADHESIVES ARE NOT PERMITTED FOR THIS APPLICATION. AIREX E-FLEX GUARD™ combines U/V weather and physical protection with a Class II rated vapor retarder permeability material, as required per energy codes.

A Combined HVAC Pipe Penetration Wall Seal and Piping Insulation Protection System

www.airexmfg.com

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Meets All Code Requirements:

- Building Codes
- Energy Codes
- Residential Codes
- Mechanical Codes
- Green Codes

**Velcro is a trademark of Velcro USA**

**U.S. Patents #9,523,200 B2**

**U.S. Patents #9,091,377 B2**

**International Energy Conservation Code (IECC) 2012 & 2015**

**Residential Section R402.4**

**Systems**

- Mini-Split
- Central

**Pipe Insulation Protection Compliance per:**

- California Building Energy Efficiency Standards (Title 24 Energy Code) 2016 - Residential Requirement for Pipe Insulation, Section 110.7-110.24 Building Thermal Envelope - (1. All joints, seams, penetrations) Chapter 11 Refrigeration Section 1101.0 Scope - (f. Insulation Protection) Chapter 11 Refrigeration Section 1101.0 Scope - 1101.3 Protection
- ICC-2009, 2012, Chapter 11
- ICC-2009, 2012, Chapter 11 Part IV Energy Efficiency - Section N101 General - N101.1 Scope - Air Leaksage Section N102-4 Section N102.4.1 - Building Thermal Envelope - (1. All joints, seams, penetrations) Chapter 11 Refrigeration Section 1101.0 Scope - 1101.3 Protection
- California Building Energy Efficiency Standards (Title 24 Energy Code) 2016 - Commercial Requirement for Pipe Insulation, Section 110.30 General Requirements - (b) Insulation Protection

**Pipe Inspection Protection Compliance per:**

- Commercial Section C402.4.3 and C402.4.2 Building Thermal Envelope - Penetrations
- IECC 2015 - Protection of Piping Insulation – Commercial Section C403.2.10.1
- IECC 2012 - Protection of Piping Insulation – Commercial Section C403.2.8.1
- IECC 2015 - Refrigerant Line Insulation Protection – N1141.6.1 - Section N1100.1.4
- California Building Energy Efficiency Standards (Title 24 Energy Code) 2016 - Commercial Requirement for Pipe Insulation, Section 110.7-110.24 Building Thermal Envelope - (1. All joints, seams, penetrations) Chapter 11 Refrigeration Section 1101.0 Scope - (f. Insulation Protection) Chapter 11 Refrigeration Section 1101.0 Scope - 1101.3 Protection
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A Combined HVAC Pipe Penetration Wall Seal and Piping Insulation Protection System

**SUBMITTAL SHEET**

Project ____________________________
Contractor __________________________
Date _____________________________
Specification Reference ___________________
Comments __________________________

**PRO-SYSTEM KIT MODEL NUMBERS**

<table>
<thead>
<tr>
<th>Airx Part Number</th>
<th>Model TSS: Stucco, Masonry Applications</th>
<th>Model TSS: Siding, Compact Applications</th>
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<tbody>
<tr>
<td>TGS-675G / TGS-72C-B</td>
<td>Black / White</td>
<td>Fits: 3/4&quot; wall thickness pipe insulation with 5/8&quot;, 3/4&quot;, 7/8&quot; tube or 1/2&quot; wall thickness pipe insulation with 1-1/8&quot; tube</td>
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<tr>
<td>TGS-610G / TGS-72X-B</td>
<td>White / Black</td>
<td>Fits: 1&quot; wall thickness pipe insulation with 3/4&quot;, 7/8&quot; tube or 3/4&quot; wall thickness pipe insulation with 1-1/8&quot; tube</td>
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**Product Description and Specification**

**AIREX PRO-SYSTEM KIT™** (a combined wall seal and insulation protection system) by Airex Manufacturing Inc., to be provided and installed for sealing HVAC refrigerant-line "wall penetrations" and protection of refrigerant "line set piping insulation". The combined use of a compression gasket and wall seal system is required by energy codes to prevent: wall air-leakage, moisture intrusion, weather intrusion, rodent intrusion, piping vibration control, physical wall or piping damage, especially when mechanically connecting to thermal insulated refrigerant piping. In addition, pipe insulation is also required to be protected from sun, wind, snow, ice, equipment maintenance and physical damage. AIREX PRO-SYSTEM KIT™ to be provided is to ensure healthy building indoor air quality, long-term building durability, sustainable building energy efficiency and optimal HVAC system performance.

**AIREX TITAN OUTLET™** - A wall outlet seal by Airex Manufacturing Inc., shall be provided and installed with its compression gasket mounting method and must be fastened to wall surface with supplied ICC-ES listed and approved non-corrosive screws with pre-loaded neoprene washers. Wall Outlet must also integrate an over-molded, flexible, elastomeric sleeve for sealing, supporting and isolating refrigerant pipes to also control vibration. The Wall Outlet shall also feature outdoor-rated durability and shall provide wall expansion and contraction protection features achieved by gaskets and seals as per energy code requirements. A stainless steel clamp must be utilized to create a "Mechanical Connection" between wall seal and pipe insulation protector as intended per energy codes to allow removable/reusable maintenance without the use of adhesives as an attachment in any way shape or form, including either in the protector’s construction, installation, or attachment to pipe insulation.

**AIREX E-FLEX GUARD™** - An insulation protective cover by Airex Manufacturing Inc., shall be provided and installed to be flexible, UV and weather resistant. The PVC plastic pipe insulation cover shall feature an integrated, outdoor-rated durability, industrial-grade, full-enclosure fastening system that is double secured by molecular bonding, allowing custom, cut-to-length installations. The cut-to-length installations shall comprise of a non-unraveling PVC cover material that does not compromise long-term-effectiveness or require specialized tools and cutting equipment. The engineered fastening system is to allow the cover to be removable and reusable for maintenance without the use of adhesives as an attachment in any way shape or form, including either in the protector’s construction, installation, or attachment to pipe insulation; as this will negatively affect insulation permeance performance and promote insulation material degradation which causes added energy usage by equipment. WRAPPING TAPE OR ADHESIVE TAPE SHALL NOT BE PERMITTED AS PER ENERGY CODES. Insulation Protector shall be tested and meet the following testing: ASTM E 96 (Vapor Transmission of Materials), ASTM G 153 (Carbon Arc Light Exposure – Accelerated Weathering), ASTM D 412 (Tensile Strength after UV Exposure), ASTM E 331 (Water Penetration), ASTM E 331 (Vapor Transmission of Materials), ASTM G 153 (Carbon Arc Light Exposure – Accelerated Weathering), ASTM D 412 (Tensile Strength after UV Exposure), ASTM G 153 (Carbon Arc Light Exposure – Accelerated Weathering), ASTM D 412 (Tensile Strength after UV Exposure), ASTM G 21 (Fungal Growth), UV/Protector Pipe Insulation Material shall Meet Class II vapor retarder per ASTM E 96 (vapor/moisture permeability test) “1 perm or less”. THE USE OF UV PAINT OR NON-PERMEABLE MATERIALS OR ADHESIVES ARE NOT PERMITTED FOR THIS APPLICATION. AIREX E-FLEX GUARD™ combines UV weather and physical protection with a Class II rated vapor retarder performance material, as required per energy codes.

**AIREX PRO-SYSTEM KIT MODEL NUMBERS**

- **PRO-SYSTEM KIT™** - A wall outlet seal by Airex Manufacturing Inc., shall be provided and installed with its compression gasket mounting method and must be fastened to wall surface with supplied ICC-ES listed and approved non-corrosive screws with pre-loaded neoprene washers. Wall Outlet must also integrate an over-molded, flexible, elastomeric sleeve for sealing, supporting and isolating refrigerant pipes to also control vibration. The Wall Outlet shall also feature outdoor-rated durability and shall provide wall expansion and contraction protection features achieved by gaskets and seals as per energy code requirements. A stainless steel clamp must be utilized to create a "Mechanical Connection" between wall seal and pipe insulation protector as intended per energy codes to allow removable/reusable maintenance capabilities and designed to co-act with the AIREX E-FLEX GUARD™ Pipe Insulation Protection Cover. Wall Outlet seal and insulation protector must both be sustainably and securely installed, mechanically fastened together as one, due to piping vibration, and shall be assembled without the use of adhesives or adhesive tapes as per energy code requirements. Wall Outlet shall be tested and must meet the following testing: ASTM E 331 (Water Penetration), ASTM E 283 (Air Leakage), and ASTM E 2178 (Air Permeance of Building Materials).

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### E-FLEX GUARD

**Protects Piping Insulation**
- Outdoor UV/Weather Grade Resistant Construction
- Self-Gripping, Dual-Bonded Hook & Loop Fastening System
- Removable/Reusable for Maintenance
- Protector and Class II Vapor Retarder (All-In-One)
- Meets ASTM G153 Weatherization and UV
- Meets ASTM E-96 Water/Vapor Permeability

### Meets New Code Requirements:
- Building Codes
- Energy Codes
- Residential Codes
- Mechanical Codes
- Green Codes

### Weather Damage Protection
- UV Radiation
- Ice Formation
- Rain-Wind Moisture
- Mold
- Snow
- Ice Formation
- Bird
- Rodents
- Insects
- Landscape Equipment
- Rain-Wind

### Physical Damage Protection
- Weather Damage Protection
- Physical Damage Protection

### Codes & Standards Compliance
- **Material Testing Standards**
  - ASTM G153 – Weatherization and UV Exposure
  - ASTM E96 – Water/Vapor Permeability
  - ASTM G21 – Anti-Fungal/anti-Microbial
  - ASTM D412 - Tension Deformation Test (UV Exposure & Water Immersion)
  - ASTM D570 – Water Absorption
  - ASTM E84/UL 723 - Flame and Smoke Rating 25/450

- **Pipe Insulation Protection for Compliance per:**
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  - IECC - 2015 Protection of Piping Insulation – Commercial Section C403.2.10.1
  - IRC - 2018 Refrigerant Line Insulation Protection – M1411.6.1 - Section N1103.4.1
  - California Building Energy Efficiency Standards (Title 24 Energy Code) 2016 - Commercial Requirement for Pipe Insulation, Section 120.3(a) 1. (b) 1. & 2.
  - California Building Energy Efficiency Standards (Title 24 Energy Code) 2016 - Residential Requirement for Pipe Insulation, Section 150.2j(3) A. & B.

### Application:
- Central Systems
- Mini-Split Systems
- 90° Elbows

### 75 ft. Mega Rolls

### 2012 & 2015 International Energy Conservation Code (IECC)

- Residential Section R403.3.1 (2012), R403.4.1 (2015)
- Commercial Section C403.2.8.1 (2012), C403.2.10.1 (2015)

**Protection of Piping Insulation:**
- Piping insulation exposed to weather shall be protected from damage, including that due to sunlight, moisture, equipment maintenance, wind and shall provide shielding from solar radiation that can cause degradation of the material. Adhesive tape shall not be permitted.

*Based on HVAC Industry and Manufacturer’s Independent Study on a Combined ROI & Sustainable Energy Savings Calculation. A contributing product to the U.S. Energy Department’s 30% Energy Savings Solution Initiative.

**Made in USA**

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Product Description and Specification

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Approved PVC Material Performance Testing

Material Testing Standards
• ASTM G153 – Weatherization and UV Exposure
• ASTM G96 – Water/Vapor Permeability
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E-FLEX GUARD™ Color Options

Black - B White - W
Substitute (W) with (B) for Black

<table>
<thead>
<tr>
<th>Airex Part Number</th>
<th>Recommended Sizing Chart</th>
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</thead>
<tbody>
<tr>
<td>72E-W (6 ft)</td>
<td>Fits: 1/2” wall thickness pipe insulation with 5/8”, 3/4”, 7/8” tube.</td>
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<td>72C-W (6 ft)</td>
<td>Fits: 3/4” wall thickness pipe insulation with 5/8”, 3/4”, 7/8” tube or 1/2” wall thickness pipe insulation with 1-1/8” tube.</td>
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<tbody>
<tr>
<td>90E-W</td>
<td>90° Angle fits E Series</td>
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<tr>
<td>90C-W</td>
<td>90° Angle fits C Series</td>
</tr>
<tr>
<td>90X-W</td>
<td>90° Angle fits X Series</td>
</tr>
</tbody>
</table>
Central Systems

Mini-Split Systems

Central Systems

Applications for:

- Mini-Split Systems
- Central Systems

750 Series

- 75 ft.
- Mega Rolls

90 Series

- 90° Elbows

Meets New Code Requirements:

- Building Codes
- Energy Codes
- Residential Codes
- Mechanical Codes
- Green Codes

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- Meets ASTM G153 Weatherization and UV
- Meets ASTM E-96 Water/Vapor Permeability

Material Testing Standards

- ASTM G153 – Weatherization and UV Exposure
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Codes & Standards Compliance

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Residential Section R403.3.1 (2012), R403.4.1 (2015)
Commercial Section C403.2.8.1 (2012), C403.2.10.1 (2015)

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*Based on HVAC Industry and Manufacturer’s Independent Study on a Combined ROI & Sustainable Energy Savings Calculation. A contributing product to the U.S. Energy Department’s 30% Energy Savings Solution Initiative.

Meadow, Kansas

Residential | Commercial | Multi-Family Units

Weather Damage Protection

- Blazing Sun
- UV Radiation
- Snow
- Ice Formation
- Rain-Wind
- Moisture
- Mold
- Growth
- Vapor Retarder
- Class II Vapor

Physical Damage Protection

- Landscape Equipment
- Rodents
- Insects
- Bird
- Damage
- Equipment

Material Testing Standards

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30% Energy Savings Mandate

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Made in USA
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**Approved PVC Material Performance Testing**

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<tr>
<td>ASTM D412 – Tension Deformation Test (UV Exposure &amp; Water Immersion)</td>
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<tr>
<td>ASTM D570 – Water Absorption</td>
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<tr>
<td>ASTM E84/UL 723 - Flame and Smoke Rating 25/450</td>
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</table>

**Recommended Sizing Chart**

**E-FLEX GUARD MODEL NUMBERS**

<table>
<thead>
<tr>
<th>Airex Part Number</th>
<th>Recommended Sizing Chart</th>
</tr>
</thead>
<tbody>
<tr>
<td>72C-B (6 ft)</td>
<td>Fits: 3/4&quot; wall thickness pipe insulation with 5/8&quot;, 3/4&quot;, 7/8&quot; tube or 1/2&quot; wall thickness pipe insulation with 1-1/8&quot; tube.</td>
</tr>
<tr>
<td>72X-B (6 ft)</td>
<td>Fits: 1&quot; wall thickness pipe insulation with 3/4&quot;, 7/8&quot; tube or 3/4&quot; wall thickness pipe insulation with 1-1/8&quot; tube.</td>
</tr>
</tbody>
</table>

**TITAN OUTLET™ Color Options**

- Gray - G
- Black - B
- White - W

When ordering, substitute Gray (G) for White (W) or Substitute Black (B) for White (W).

**750 Series**

75 Foot Rolls

<table>
<thead>
<tr>
<th>Airex Part Number</th>
<th>Recommended Sizing Chart</th>
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<tbody>
<tr>
<td>750C-B (75 ft)</td>
<td>Fits: 3/4&quot; wall thickness pipe insulation with 5/8&quot;, 3/4&quot;, 7/8&quot; tube or 1/2&quot; wall thickness pipe insulation with 1-1/8&quot; tube.</td>
</tr>
<tr>
<td>750X-B (75 ft)</td>
<td>Fits: 1&quot; wall thickness pipe insulation with 3/4&quot;, 7/8&quot; tube or 3/4&quot; wall thickness pipe insulation with 1-1/8&quot; tube.</td>
</tr>
</tbody>
</table>

**90 Series**

90° PVC Insulation Protectors

<table>
<thead>
<tr>
<th>Airex Part Number</th>
<th>Recommended Sizing Chart</th>
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</thead>
<tbody>
<tr>
<td>90E-B</td>
<td>90° Angle fits E Series</td>
</tr>
<tr>
<td>90C-B</td>
<td>90° Angle fits C Series</td>
</tr>
<tr>
<td>90X-B</td>
<td>90° Angle fits X Series</td>
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</tbody>
</table>
TITAN OUTLET
Seals Piping Wall Penetrations

- Superior Durable Quality with U/V Resistance & High Impact Strength Design
- Gasket Compression System Seals Wall Air Leakage & Weather Moisture Wall Damage
- Flexible Elastomeric Outlet Sleeve Design Prevents Air Infiltration & Rodent Intrusion
- Design Supports HVAC Systems with Wall Isolation & Anti-Vibration Features
- Flexible Sleeve Reduces Piping Vibration & Noise
- Seals to Protect Indoor Air Quality

Meets New Code Requirements:
- Building Codes
- Energy Codes
- Residential Codes
- Mechanical Codes
- Green Codes


Air Leakage (Mandatory): Residential Section 402.4
The building thermal envelope shall be constructed to limit air leakage in accordance with the requirements of Sections R402.4.1 through R402.4.4.

Air Barrier Construction: Commercial Section C402.5.1.1
Penetrations of the air barrier shall be caulked, gasketed or sealed in a manner compatible with the construction materials and locations...

Weather Damage Protection
- Blazing Sun
- Ice Formation
- Rain-Wind
- Mold
- ember Vibration
- Indoor Air Quality Protection
- Rodents
- Removable
- Reusable

Physical Damage Protection
- Insulation
- Fire Performance
- Snow
- Mold Growth
- Moisture

Residential
- Multi-Family Units

Codes & Standards Compliance
- IRC - 2006, 2009, 2012 - Energy Efficiency - Section N1101 - Air Leakage Section N1102.4 - Building Thermal Envelope - (1. All joints, seams, penetrations) - Section N1102.4.1 - Building Temperature Deformation Test - Section N1102.4.2 - Building Temperature Deformation Test
- IECC - 2006, 2009 & 2012 - Energy Efficiency - Residential Section N1102.4 - Building Temperature Deformation Test
- IMC - 2006, 2009, & 2012 - General Regulations - Section 301.1 - Scope
- UMC - 2006, 2009 & 2012 - Refrigeration - Section 1101.0 - General Requirements - Section 1101.1 - General Requirements - Section 1106.0 - Section 1106.2 - Section 1111.0 - Erection of Rigid Piping - Section 1111.1 - Section 1111.2 - Section 1111.3
- California Building Energy Efficiency Standards (Title 24 Energy Code) 2016, Part 6 - Section 110.7 - Mandatory Requirements to Limit Air Leakage

Approved Material & Performance Testing
- ASTM E283 – Standard Test Method for Air Leakage
- ASTM E331 – Standard Test Method for Water Penetration
- UL 746C - Outdoor Suitability - f1 Rating

Wall Outlet Sleeve (Outdoor-Rated Elastomeric Plastic)
- ASTM D573-04 - Deterioration Test
- ASTM D746-07 - Brittleness Temperature Impact Test

Wall Mounted Outlet (Outdoor-Rated Rigid Plastic)
- ASTM D1525C-09 - Temperature Deformation Test
- UL 94 HB - Flammability Test
- UL 746C - Outdoor Suitability - f1 Rating

AIR EX MANUFACTURING INC.

Made in USA

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Wall Outlet shall be tested and must meet the following testing: ASTM E 331 (Water Penetration), ASTM E 283 (Air Leakage), and ASTM E 2178 - Air Permeance of Building Materials.

Product Description and Specification

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Product Performance Testing

<table>
<thead>
<tr>
<th>Approved Material &amp; Performance Testing</th>
<th>Plastic Material Testing</th>
</tr>
</thead>
<tbody>
<tr>
<td>Wall Mounted Outlet (Rigid Plastic)</td>
<td>Plastic Material Testing</td>
</tr>
<tr>
<td>• ASTM E263 - Standard Test Method for Air Leakage</td>
<td>• ASTM D1525C-09 - Temperature Deformation Test</td>
</tr>
<tr>
<td>• ASTM E331 - Standard Test Method for Water Penetration of Exterior Walls by Uniform Static Air Pressure</td>
<td>• ASTM D648-07 - Temperature Load Deformation Test</td>
</tr>
<tr>
<td>• ASTM E 2178 - Air Permeance of Building Materials</td>
<td>• UL 94 HB - Flammability Test</td>
</tr>
<tr>
<td>• UL 746C - Outdoor Suitability - f1 Rating</td>
<td>• UL 746C - Outdoor Suitability - f1 Rating</td>
</tr>
<tr>
<td>• Wall Outlet Sleeve (Elastomeric Plastic)</td>
<td>• ASTM D573-04 - Deterioration Test</td>
</tr>
<tr>
<td>• ASTM D573-04 - Deterioration Test</td>
<td>• ASTM D746-07 - Brittleness Temperature Impact</td>
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Color Options

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<tr>
<th>Color Options</th>
<th>TITAN OUTLET™</th>
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</thead>
<tbody>
<tr>
<td>Gray - G</td>
<td>TGS Series</td>
</tr>
<tr>
<td>White - W</td>
<td>TGS Series</td>
</tr>
<tr>
<td>Substitute (G)</td>
<td>TSS Series</td>
</tr>
<tr>
<td>with (W)</td>
<td>TSS Series</td>
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</tbody>
</table>

Wall Mounted Outlet

- All-Surface Light-Density Wall Gasket (Pre-Loaded)
- Flexible Inlet Sleeve
- Stainless Steel Adjustable Clamp
- Anti-Corrosion, Lubricated, All-Material, Tap Screws
- Neoprene Washers (pre-mounted)

Wall Stud and/or Plywood

- Exterior Wall Surface

Refrigeration Pipe Penetration Detail

- EXTERIOR WALL OR PARAPET WALL SEAL PENETRATION OUTLET WITH ELASTOMERIC SLEEVE
- INSULATION PROTECTIVE PVC COVER
- ELASTOMERIC LINE-SET COMPRESSION & ANTI-VIBRATION SLEEVE
- INSULATION FOR REFRIGERATION SUCTION LINE
- REFRIGERATION SUCTION LINE
- REFRIGERATION LIQUID LINE COPPER
- MECHANICAL CONNECTION SECURED WITH STAINLESS STEEL CLAMP
- WALL FASTENERS SELF-TAPPING 3/8” HEX HEAD 1/4” DIAMETER ALL MATERIAL ANCHORS SCREWS WITH ELASTOMERIC WASHERS
- WALL SURFACE SEAL ELASTOMERIC GASKET

TITAN OUTLET™ Model Series

<table>
<thead>
<tr>
<th>Model Series</th>
<th>TGS Model Series</th>
<th>TSS Model Series</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sleeve Diameters</td>
<td>Insulation Thickness</td>
<td>Sleeve Diameters</td>
</tr>
<tr>
<td>TGS-550-W</td>
<td>1.70&quot; 1-11/16&quot;</td>
<td>1/2&quot;</td>
</tr>
<tr>
<td>TGS-575-W</td>
<td>2.375&quot; 2-3/8&quot;</td>
<td>3/4&quot;</td>
</tr>
<tr>
<td>TGS-510-W</td>
<td>3.1875&quot; 3-1/16&quot;</td>
<td>1&quot;</td>
</tr>
<tr>
<td>TSS-550-W</td>
<td>1.70&quot; 1-11/16&quot;</td>
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TSS Series
Siding or Compact Applications

TGS Series

Meets New Code Requirements:
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- Energy Codes
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- Mechanical Codes
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- Seals to Protect Indoor Air Quality

Physical Damage Protection

Residential
- Central Systems
- Mini-Split Systems

Commercial
- Central Systems

Multi-Family Units

Approved Material & Performance Testing
- ASTM E283 – Standard Test Method for Air Leakage
- ASTM E331 – Standard Test Method for Water Penetration
- ASTM E 217B – Air Permeance of Building Materials
- UL 94 HB – Flammability Test
- UL 746C - Outdoor Suitability - f1 Rating

Wall Mounted Outlet (Outdoor-Rated Rigid Plastic)
- ASTM D1525C-09 - Temperature Deformation Test
- ASTM D648-07 - Temperature Load Deformation Test
- UL 94 HB - Flammability Test
- UL 746C - Outdoor Suitability - f1 Rating

Wall Outlet Sleeve (Outdoor-Rated Elastomeric Plastic)
- ASTM D573-04 - Deterioration Test
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*Based on HVAC Industry and Manufacturer’s Independent Study on a Combined R22 & Sustainable Energy Savings Calculation. A contributing product to the U.S. Energy Department’s 30% Energy Savings Solution Initiative.

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**TITAN OUTLET MODEL NUMBERS**

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</table>

**Energy Efficient Products**

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