

AIREX PROSYSTEMKIT™

Complete Sustainable HVAC & Building Performance

Energy Efficient Product 

30%
Energy Savings
Mandate*



2 IN System
Engineered Wall Seal & Superior Insulation Protection

U.S. Patents #9,091,377 B2
#9,523,200 B2

TGS-675G-72C-B (Shown)

Meets All Code Requirements:

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

Applications for:



Mini-Split Systems

Central Systems

1 TITAN OUTLET™
Seals Piping Wall Penetrations.



- Gasket Compression System Seals Wall Air Leakage & Weather Moisture Wall Damage
- Superior durable quality with U/V resistance & high impact strength design
- Flexible elastomeric outlet sleeve design offers wall isolation, anti-vibration, anti-noise, anti-wind, anti-rodent features

2 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)

Copper Piping & Pipe Insulation Are Shown for Illustration Purposes Only

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.**
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

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Physical Damage Protection

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Residential • Commercial • Multi-Family Units

Codes & Standards Compliance

- Pipe Insulation Protection Compliance per:**
- IECC 2012 - Protection of Piping Insulation – Commercial Section C403.2.8.1
 - 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 150.0(i)3, A. & B.
 - ANSI/ASHRAE/IESNA Standard 90.1 - 2004, 2007, 2010
- Air Leakage/Wall Penetration Compliance per:**
- IRC - 2006, 2009, 2012 Chapter 13
 - IRC - 2006, 2009, 2012 Chapter 11 Part IV Energy Efficiency - Section N1101 General - N1101.1 Scope - Air Leakage Section N1102.4 Section N1102.4.1 - Building Thermal Envelope - (1. All joints, seams, penetrations) Chapter 11 Refrigeration Section 1101.0 Scope -1101.3 Protection
 - IECC - 2006, 2009, & 2012 Air Leakage (Mandatory) - Residential Section 402.4.1 and 402.4.1.1 Building Thermal Envelope – Penetrations
 - IECC - 2006, 2009, & 2012 Air Leakage (Mandatory) - Commercial Section C402.4.3 and C402.4.2 Building Thermal Envelope – Penetrations
 - IMC - 2006, 2009, & 2012 Chapter 3 General Regulations Section 301.1 Scope – Sections 301.10, 301.11, 301.14, 301.15, 305.1, 305.2, 305.4
 - UMC - 2006, 2009, & 2012 Chapter 11 Refrigeration – Section 1101.0 Scope - Section 1101.1 - General Requirements Section 1106.0 – Section 1106.2, Section 1111.0 Erection of Refrigerant Piping – Sections 1111.1, 1111.2, 1111.4
 - 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
- ASTM E 2178 – Air Permeance of Building Materials
- **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
- ASTM D746-07 - Brittleness Temperature Impact Test
- **E-FLEX GUARD (Outdoor-Rated PVC Material)**
- 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

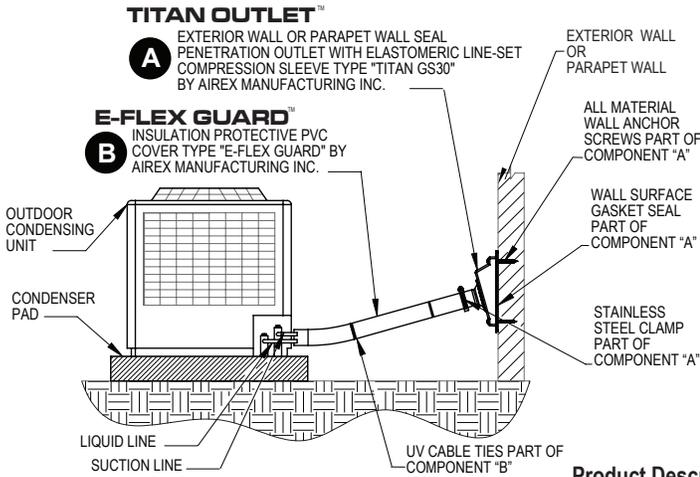
*Based on HVAC Industry and Manufacturer's Independent Study on a Combined ROI & Sustainable Energy Savings Calculation. A contributing product to the U.S. Energy Department's 30% Energy Savings Solution Initiative.

**Velcro is a trademark of Velcro USA



SUBMITTAL SHEET

Project _____
 Contractor _____
 Date _____
 Specification Reference _____
 Comments _____



PRO-SYSTEM KIT MODEL NUMBERS

Airex Part Number	Color Options	Model TGS: Stucco, Masonry Applications
TGS-650G-72E-B	Black	Fits: 1/2" wall thickness pipe insulation with 5/8", 3/4", 7/8" tube
TGS-650G-72E-W	White	
TGS-675G-72C-B	Black	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.
TGS-675G-72C-W	White	
TGS-610G-72X-B	Black	Fits: 1" wall thickness pipe insulation with 3/4", 7/8" tube or 3/4" wall thickness pipe insulation with 1-1/8"
TGS-610G-72X-W	White	

Airex Part Number	Color Options	Model TSS: Siding, Compact Applications
TSS-650G-72E-B	Black	Fits: 1/2" wall thickness pipe insulation with 5/8", 3/4", 7/8" tube
TSS-650G-72E-W	White	
TSS-675G-72C-B	Black	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.
TSS-675G-72C-W	White	

TITAN OUTLET™
 Color Options 
 When ordering, substitute Gray (G) for White (W)

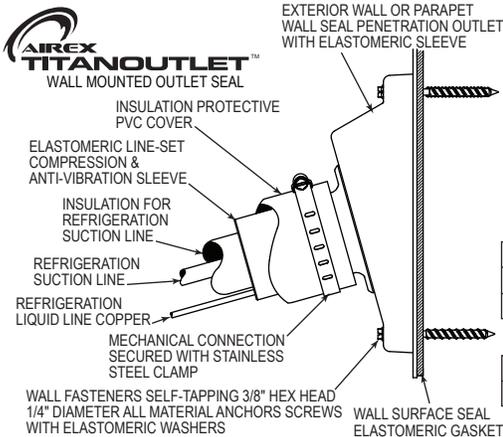
E-FLEX GUARD™
 Color Options 
 Substitute Black (B) for White (W)

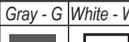
Product Description and Specification

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 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).**

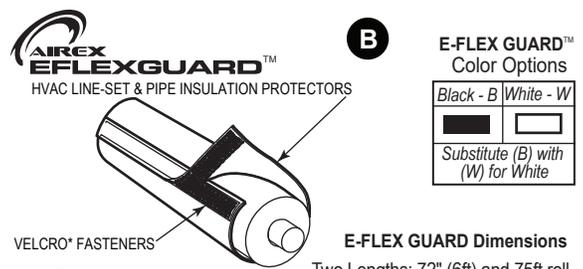
AIREX E-FLEX GUARD™ - An insulation protective cover by Airex Manufacturing Inc., shall be provided and installed to be flexible, U/V and weather resistant. The PVC plastic pipe insulation cover shall feature an integrated, outdoor-rated durability, industrial-grade, full-enclosure fastening system that 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 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 MATERIALS 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 performance material, as required per energy codes.**

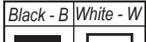


A **TITAN OUTLET™**
 Color Options 
 Substitute (G) with (W) for White

TITAN OUTLET Dimensions

Airex Part Number	Fits:
TGS-550-G	Fits: 1/2" wall insulation
TGS-575-G	Fits: 3/4" wall insulation
TGS-510-G	Fits: 1" wall insulation
Model TGS: Stucco, Masonry Applications	
TSS-550-G	Fits: 1/2" wall insulation
TSS-575-G	Fits: 3/4" wall insulation
Model TSS: Siding Applications	



B **E-FLEX GUARD™**
 Color Options 
 Substitute (B) with (W) for White

Airex Part Number	Fits:
72E-B (6 ft)	Fits: 1/2" wall thickness pipe insulation with 5/8", 3/4", 7/8" tube.
750E-B (75 ft)	
72C-B (6 ft)	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.
750C-B (75 ft)	
72X-B (6 ft)	Fits: 1" wall thickness pipe insulation with 3/4", 7/8" tube or 3/4" wall thickness pipe insulation with 1-1/8" tube.
750X-B (75 ft)	



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