



Advancing Building Methods







Our focus is designing and engineering evolutionary products for contractors, architects, engineers, designers, and specifiers to fulfill the ongoing evolution of market demand and building energy efficiency code requirements.

Incorporated in 2009 and based in Southern California we are a proud U.S. Manufacturer of innovative patented products for the Building and HVAC Industries.

All of our superior products have been innovated through intense engineering, smart design, premium material selection, and rigorous laboratory testing. We are now the #1 Choice in the PRO-HVAC industry within the wall refrigerant piping penetration outlet seal and outdoor refrigerant piping insulation protection categories.



Please, visit our website for product information, inquires, specifications, brochures, CAD drawings.

www.airexmfg.com

Product Line



Engineered Wall Seal & Insulation Protection System!

The Airex Pro-System Kit is a 2-In-1 system that combines a wall-mounted HVAC piping outlet and air-tight seal with a piping insulation protector and UV Vapor Retarder for exterior application of refrigerant piping wall penetrations and outdoor insulation.







Air Leakage Wall Seal, Protect Indoor Air Quality!

The Titan Outlet is the engineered solution for wall sealing HVAC refrigerant line penetrations featuring a weather and air leakage resistant, vibration control, rodent proof, wall enclosure system, and has become the preferred industry leader.





UV Weather Protector and Vapor Retarder (All-In-One)!

The E-Flex Guard is an Insulation Protector for HVAC Piping on Outdoor applications that complies with mandatory requirements where adhesive tapes are no longer allowed by code, and as specifically prescribed by the new Building/Residential/Energy Codes. Engineered PVC Material is UV/Weather Resistant and a Class II Vapor Retarder to comply with new energy codes, and sustainably protects outdoor pipe insulation.



72 Series







90 Series



Typical Installations Guaranteed to Fail

Makeshift Methods Are Guaranteed to Fail



Example Building Damage 🔀 Energy Loss

X Rodent Intrusion 🔀 Unhealthy Indoor Air 🛛 🔀 Unprofessional, Ugly Installation

Airex Manufacturing-Superior Installation



Sustainable Solution Professionally Engineered





✓ Rodent Proof✓ Aesthetic Installation





Complete Sustainable HVAC & Building Performance

Product Summary

The Airex Pro-System Kit is a 2-In-1 system that combines air-tight sealing with a wall-mounted piping outlet and a UV/Vapor Retarder piping insulation protector for exterior applications of HVAC refrigerant piping wall penetrations and outdoor insulation.

Weather and Physical Damage Protection



AIREX PRO-SYSTEM KIT[™] is a 2-in-1 system for combined air-tight sealing wall-mounted piping outlets and UV/Vapor Retarder insulation protection system for exterior HVAC refrigerant piping penetrations and outdoor insulation located at the point of service connections for outdoor equipment.

The 2-In-1 System (Includes TITAN OUTLET and E-FLEX GUARD) Offers improved sustainability, energy efficiency, and optimum performance of building wall, outdoor pipe insulation, and HVAC equipment. Due to the multi-dimensional complexities of recent building energy codes, building codes, green codes, mechanical codes, residential codes, and standards within this category, using AIREX PRO-SYSTEM KIT[™] is the only guaranteed solution to meet all your quality needs and mandatory code requirements.



Titan Outlet

Engineered Solution for Wall Sealing HVAC Penetrations

E-Flex Guard

Insulation Protector for HVAC Piping on Outdoor Applications







Outlet Approved Product & Material Testing

- ASTM E283 Standard Test Method for Air Leakage
- ASTM E331 Standard Test Method for Water Penetration
- ASTM D1525C-09 Temperature Deformation Test
- ASTM D648-07 Temperature Load Deformation Test
- ASTM D412 Tension Deformation Test (UV Exposure & Water Immersion)
- UL 94 HB Flammability Test
- UL 746C Outdoor Suitability f1 Rating
- ASTM D573-04 Deterioration Test
- ASTM D746-07 Brittleness Temperature Impact Test

Codes & Standards Compliance

- IBC 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

Weather and Physical Damage Protection





Insulation Protector Approved Product & Material Testing

- 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

Codes & Standards Compliance

- 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 Standards (Title 24) 2013 -Residential & Commercial Requirement for Pipe Insulation120.3 -Section: 150.0(j) 3a & b
- California Building Energy Standards (Title 24) 2016 -Residential & Commercial Requirement for Pipe Insulation120.3 -Section: 150.0(j) 2 & 3 - Section 150.0(m)9
- ANSI/ASHRAE/IESNA Standard 90.1 2004, 2007, 2010





Seals HVAC Piping Wall Penetrations



Product Summary

The Titan Outlet is the engineered solution for wall sealing HVAC penetrations featuring a wall enclosure system that is weather and air leakage resistant, controls vibration, is rodent proof, and has become the preferred industry leader.

Air Leakage Wall Seal, Protect Indoor Air Quality!

- Meets mandatory Building Codes, Energy, Residential, Mechanical, and Green Codes
- Made in The USA
- Superior durable quality with UV/resistance and high impact strength design
- Gasket Compression System Seals Wall Air Leakage and Weather Moisture Wall Damage
- Flexible elastomeric outlet sleeve design offers, anti-wind, anti-rodent features
- Design supports HVAC systems with wall isolation & anti-vibration features
- Flexible Sleeve Reduces Piping Vibration and Noise

AIREX TITAN OUTLET – Professionally Engineered and with an Architectural aesthetic finish design, features a Wall Outlet Enclosure with excellent weather proofing capabilities that fits over and seals around wall surface piping penetrations, utilizing elastomeric gaskets and seals, as required by building, energy, and mechanical codes. AIREX TITAN OUTLET prevents wall gaps and exterior surface cracks associated with the use of rigid wall penetration sleeves or rigid penetration flashing materials. Featuring a combined fastener and gasket/seal applied compression-force system that accomplishes simultaneous, solid, internal wall structure attachment and all-surface wall gasket mounting for long-term sustainable and effective air leakage sealing.

An integral over-molded Flexible Elastomeric Sleeve, seals the refrigerant piping and insulation, creating an air leakage seal, that permanently supports the refrigerant piping at the point of equipment service areas, professionally engineered and with an architectural aesthetic finish design. The sleeve also features a designated region to accommodate a stainless-steel clamp that mechanically grips both refrigerant piping and piping insulation, mechanically securing against vibration, rodents, insects, and pipe insulation protection for outdoor usage.



TGS Series



TSS Series

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

Wall Surface Applications

- Brick
- Concrete
- Masonry
- Metal Paneling
- Siding
- Stone
- Stucco
- Drywall

Weather and Physical Damage Protection



Outlet Approved Product & Material Testing

- ASTM E283 Standard Test Method for Air Leakage
- ASTM E331 Standard Test Method for Water Penetration
- ASTM D1525C-09 Temperature Deformation Test
- ASTM D648-07 Temperature Load Deformation Test
- ASTM D412 Tension Deformation Test (UV Exposure & Water Immersion)
- UL 94 HB Flammability Test
- UL 746C Outdoor Suitability f1 Rating
- ASTM D573-04 Deterioration Test
- ASTM D746-07 Brittleness Temperature Impact Test

Codes & Standards Compliance

- IBC 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







Performing Insulation Protection

Product Summary

The E-Flex Guard is an Insulation Protector for HVAC Piping on Outdoor applications, complying with mandatory code requirements where adhesive tapes are no longer allowed, as specifically prescribed by the new Building/Residential/Energy Codes. Engineered PVC Material is UV/Weather Resistant and a Class II Vapor Retarder that complies with new energy codes, and sustainably protects outdoor pipe insulation (All-In-One).

UV Weather Protector & Vapor Retarder (All-In-One)!

- Meets mandatory Building Codes, Energy, Residential, Mechanical, and Green Codes
- Made in The USA
- 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

AIREX E-FLEX GUARD – Flexible, insulation protection jacket system engineered with PVC Sheeted Material specifically formulated for outdoor piping insulation protection. The integral fastening system is non-adhesive, dual bonded, hook and loop, making it Removable and Reusable for Maintenance required by code. Additional, unrivaled benefits include: Class "A" Fire/Smoke Rating, Vapor Retarder, Anti-Fungal, Anti-Microbial, variable piping insulation diameter sizes, lengths of up to 75 feet, plus available 90-Degree Angle fittings. The Insulation Protection System completes a code compliant, secure, professional aesthetic installation as a sustainable solution to maintain energy efficiency and optimum performance of HVAC equipment.



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



Weather and Physical Damage Protection



Insulation Protector Approved Product & Material Testing

- 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

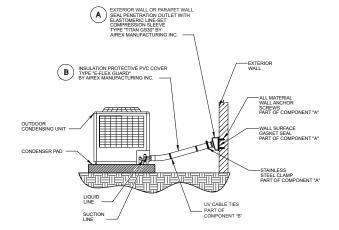
Codes & Standards Compliance

- 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 Standards (Title 24) 2013 -Residential & Commercial Requirement for Pipe Insulation120.3 – Section: 150.0(j) 3a & b
- California Building Energy Standards (Title 24) 2016 -Residential & Commercial Requirement for Pipe Insulation120.3 – Section: 150.0(j) 2 & 3 – Section 150.0(m)9
- ANSI/ASHRAE/IESNA Standard 90.1 2004, 2007, 2010



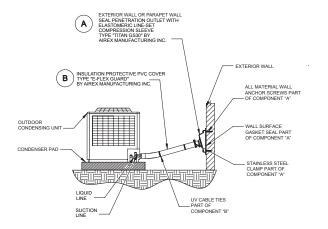


CAD Drawings Available



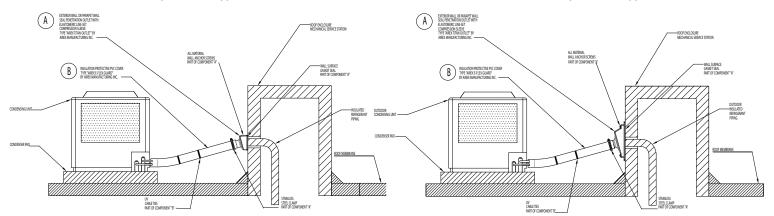
TSS Condensing Unit Refrigerant Piping Diagram

TGS Condensing Unit Refrigerant Piping Diagram



TSS Rooftop Enclosure Application

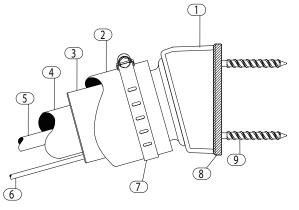
TGS Rooftop Enclosure Application



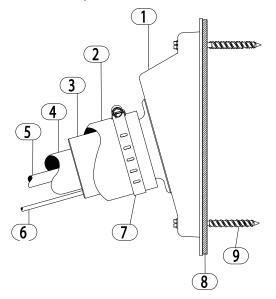
Download from www.airexmfg.com Available in the following formats: PDF, DXF, DWG,RFA

CAD Drawings Available

TGS Pipe Penetration Detail



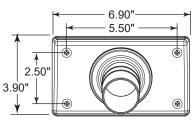
TGS Pipe Penetration Detail



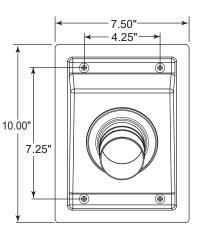
1. EXTERIOR WALL OR PARAPET WALL SEAL PENETRATION OUTLET WITH ELASTOMERIC SLEEVE

- 2. INSULATION PROTECTIVE PVC COVER
- 3. ELASTOMERIC LINE-SET COMPRESSION & ANTI-VIBRATION SLEEVE
- 4. INSULATION FOR REFRIGERATION SUCTION LINE
- 5. REFRIGERATION SUCTION LINE
- 6. REFRIGERATION LIQUID LINE COPPER
- 7. MECHANICAL CONNECTION SECURED WITH STAINLESS STEEL CLAMP
- 8. WALL SURFACE SEAL ELASTOMERIC GASKET
- 9. WALL FASTENERS SELF-TAPPING 3/8" HEX HEAD 1/4" DIAMETER ALL MATERIAL ANCHORS SCREWS WITH ELASTOMERIC WASHERS

TSS Dimensions (Inches)



TGS Dimensions (Inches)

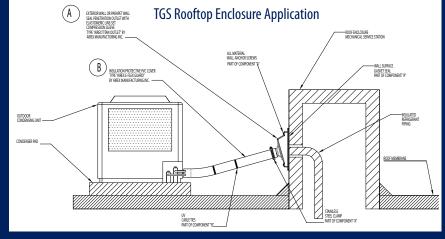


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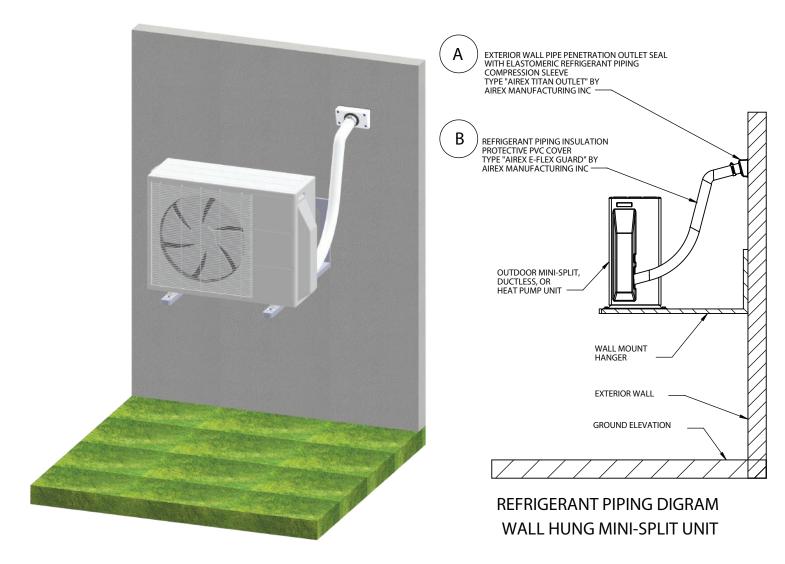


Rooftop Enclosure Installations





Mini-Split Unit Application







TGS Series Masonry, Stucco, & Flat Applications	Part Number	Fits Pipe Insulation Thickness	Color	TSS Series Siding or Compact Applications	Part Number	Fits Pipe Insulation Thickness	Color
	TGS-650G-72E-B	1/2"	Gray TITAN Black E-FLEX		TSS-650G-72E-B	1/2"	Gray TITAN Black E-FLEX
	TGS-675G-72C-B	3/4"	Gray TITAN Black E-FLEX		TSS-675G-72C-B	3/4"	Gray TITAN Black E-FLEX
	TGS-610G-72X-B	1"	Gray TITAN Black E-FLEX				
					TSS-650G-72E-W	1/2"	Gray TITAN White E-FLEX
	TGS-650G-72E-W	1/2"	Gray TITAN White E-FLEX		TSS-675G-72C-W	3/4"	Gray TITAN White E-FLEX
0	TGS-675G-72C-W	3/4"	Gray TITAN White E-FLEX				
	TGS-610G-72X-W	1"	Gray TITAN White E-FLEX		TSS-650W-72E-B	1/2"	White TITAN Black E-FLEX
	TGS-650W-72E-B	1/2"	White TITAN Black E-FLEX		TSS-675W-72C-B	3/4"	White TITAN Black E-FLEX
6	TGS-675W-72C-B	3/4"	White TITAN Black E-FLEX		TSS-650W-72E-W	1/2"	White TITAN White E-FLEX
	TGS-610W-72X-B	1"	White TITAN Black E-FLEX		TSS-675W-72C-W	3/4"	White TITAN White E-FLEX
•••	TGS-650W-72E-W	1/2"	White TITAN White E-FLEX				
	TGS-675W-72C-W	3/4"	White TITAN White E-FLEX				
• •	TGS-610W-72X-W	1"	White TITAN White E-FLEX				

Model Numbers

	ANOL IVAC Piping V		
TGS Series Masonry, Stucco, & Flat Applications	Part Number	Fits Pipe Insulation Thickness	Color
	TGS-550-G	1/2"	Gray TITAN
	TGS-575-G	3/4"	Gray TITAN
-	TGS-510-G	1"	Gray TITAN
•••	TGS-550-W	1/2"	White TITAN
	TGS-575-W	3/4"	White TITAN
	TGS-510-W	1"	White TITAN
TGS 3/4 Inch Ser 3/4" Thick Gasket Extreme Uneven Surfac	r ies ce Masonry, Stucco, Ap	plications	
	TGS-550-G-34	1/2"	Gray TITAN
G	TGS-575-G-34	3/4"	Gray TITAN
	TGS-510-G-34	1"	Gray TITAN
• •	TGS-550-W-34	1/2"	White TITAN
	TGS-575-W-34	3/4"	White TITAN
	TGS-510-W-34	1"	White TITAN
TSS Series Siding or Compact Applications			
102	TSS-550-G	1/2"	Gray TITAN
	TSS-575-G	3/4"	Gray TITAN
· •	TSS-550-W		
	TSS-575-W	3/4"	White TITAN



72 Series 6 ft. Lengths	Part Number	Fits Pipe Insulation Thickness	Color
	72E-B	1/2"	Black E-FLEX
	72C-B	3/4"	Black E-FLEX
	72X-B	1"	Black E-FLEX
	72E-W	1/2"	White E-FLEX
	72C-W	3/4"	White E-FLEX
	72X-W	1"	White E-FLEX

750	Series
	Lengths

•			
	750E-B	1/2"	Black E-FLEX
	750C-B	3/4"	Black E-FLEX
	750X-B	1"	Black E-FLEX
	750E-W	1/2"	White E-FLEX
	750C-W	3/4"	White E-FLEX
	750X-W	1"	White E-FLEX
90 Series			

90° Angles			
	90E-B	1/2"	Black 90 Angle
6	90C-B	3/4"	Black 90 Angle
	90X-B	1"	Black 90 Angle
	90E-W	1/2"	White 90 Angle
	90C-W	3/4"	White 90 Angle



Airex Industry Specification Providers



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Section 007100 BSD Roof Specialties Pipe Penetration Wall Seal and Insulated Piping Protection System

Section 230719 Airex HVAC Piping Insulation Engineered Wall Seals and Piping Insulation Protection System

Section 230719 HVAC Piping Insulation Engineered Wall Seals and Piping Insulation Protection System

Section 232300 BSD Refrigerant Piping Engineered Wall Seals and Piping Insulation Protection System



Section 230517 - Sleeves and Sleeve Seals For HVAC Piping 2.3 Wall Sleeve-Seal Systems Section 230719 - HVAC Piping Insulation 2.10 Field Applied Jackets (Piping Insulation Protection)



Section 230700 - HVAC Insulation Section 077000 - Roof and Wall Specialties and Accessories Section 076000 - Flashing and Sheet Metal

www.airexmfg.com/cad-library/

Specification Formats: PDF, Word Doc, TXT Also download CAD files: PDF, DXF, RFA, DWG

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) Residential & Commercial Requirement for Pipe Insulation120.3 – Section: 150.0(j) 3a & b
- California Building Energy Efficiency Standards (Title 24 Energy Code) 2016 Residential & Commercial Requirement for Pipe Insulation120.3 Section: 150.0(j) 2 & 3 Section 150.0(m) 9
- 2012 & 2015 International Energy Conservation Code (IECC) 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.
- Residential Section R403.3.1 (2012), R403.4.1 (2015)
- Commercial Section C403.2.8.1 (2012), C403.2.10.1 (2015)

Air Leakage/Wall Penetration Compliance per:

- ANSI/ASHRAE/IESNA Standard 90.1 2004, 2007, 2010 Air Leakage/Wall Penetration Compliance per:
- IBC 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 Air Leakage (Mandatory) -All Occupancies Section 117 Joints and other Openings/Exterior Wall Penetrations
- 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...
- 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.



For All Inquiries



Contact Information

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www.airexmfg.com

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