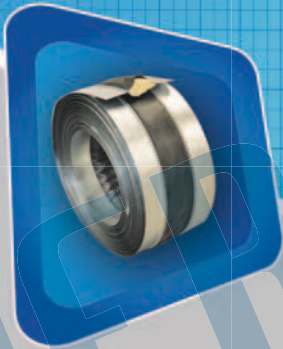
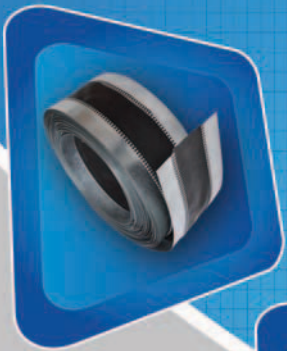


AERODUCT

Ducting Accessories



www.aeroduct.ae



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AERODUCT

FLEXIBLE DUCT CONNECTOR

ASTM E - 84 Class 1
BS 476, Part 7 - Class 1
BS 476, Part 6 - Class 0

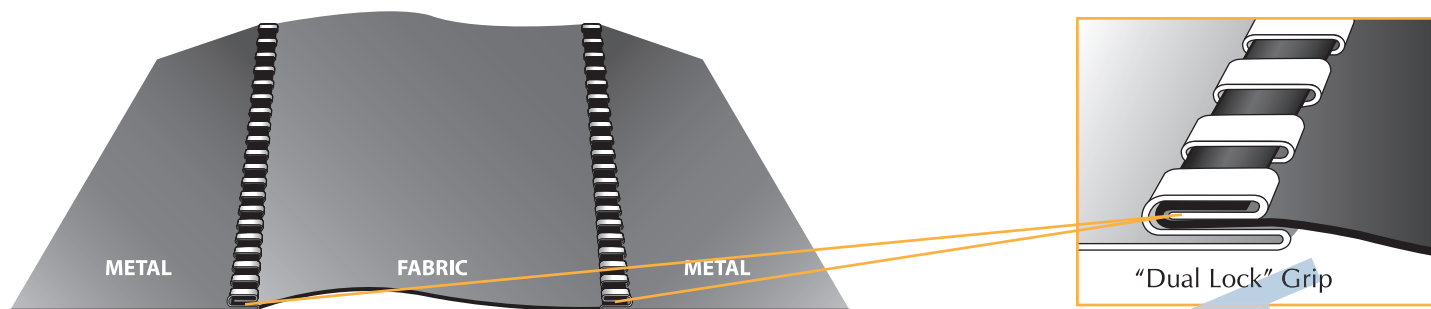


FLEXIBLE DUCT CONNECTOR

All mechanical equipments like Air Handling Units, Fan Coil Units and Ventilation Fans generate noise and vibrations when used. To eliminate the noise and vibrations from transmitting through the air ducts, it is necessary to install an airtight flexible joint between the outlet of the equipment, and the inlet of the ducts.

The joint formed by attaching a layer of fabric to two strips of metal on either side is called a "Flexible Duct Connector".

The most critical part of this Flexible Duct Connector is the fabric which has to be selected to suit the typical requirements of each installation.



Part No.	Size Metal x Fabric x Metal (mm)	Length (Feet)	Metal Gauge	Fabric Technical Specifications		Features
Vinyl						
V-G8-145-100	45 x 75 x 45	100	28	Basic Fabric	: Polyester Yarn	Vinyl is the most commonly used fabric for all air duct installations due to its high tear strength, and its high abrasion resistance. Recommended for low to medium pressure ductwork systems. Airtight and waterproof construction.
V-G8-230-100	70 x 100 x 70	100	28	Coating	: Vinyl	
V-G8-145-150	45 x 75 x 45	150	28	Weight	: 28 Gauge	
V-G8-230-150	70 x 100 x 70	150	28		: 576 gms /sq.mtr 17oz /sq. yard	
V-G4-225-100	75 x 75 x 75	100	24	Tear Strength	: 24gauge 745 gms /sq.mtr 22oz /sq. yard	
V-G4-250-100	75 x 100 x 75	100	24		: 45 x 45 kgs 100 x 100 lbs	
V-G4-300-100	75 x 150 x 75	100	24	Tensile Strength	: 108 x 100 kgs 240 x 220 lbs	
V-G4-350-100	100 x 150 x 100	100	24	Low Temp	: -40 deg C (-40 deg F)	
				High Temp	: 93 deg C (200 deg F)	
Neoprene BS						
BSN-G8-145-100	45 x 75 x 45	100	28	Basic Fabric	: Woven Fibreglass	Neoprene is recommended for use in application where high mechanical strength is required. Neoprene is extremely resistant to most alkalis, gasoline and toxic fumes. UV resistant. Airtight and waterproof construction.
BSN-G8-230-100	70 x 100 x 70	100	28	Coating	: Neoprene	
BSN-G8-145-150	45 x 75 x 45	150	28	Weight	: 1016 gms /sq.mtr 30 oz/sq. yard	
BSN-G8-230-150	70 x 100 x 70	150	28		Tear Strength	
BSN-G4-225-100	75 x 75 x 75	100	24	Tensile Strength	: 226 x 204 kgs 500 x 450 lbs	
BSN-G4-250-100	75 x 100 x 75	100	24		Low Temp	
BSN-G4-300-100	75 x 150 x 75	100	24	High Temp	: 93 deg C (200 deg F)	
BSN-G4-350-100	100 x 150 x 100	100	24			
						Achieves Class 1 when tested as per ASTM - E84 Surface Burning Characteristics
						Rated Class 1 as per BS 476, part 7 Flame Tests

Part No.	Size Metal x Fabric x Metal (mm)	Length (Feet)	Metal Gauge	Fabric Technical Specifications		Features
Silicon						
S-G8-145-100	45 x 75 x 45	100	28	Basic Fabric	: Woven Fibreglass	Silicon fabric has a special Silicon Rubber coating that has excellent resistance to high and low temperatures. Silicon is extremely resistant to chemicals and ozone, and emits very low smoke when burnt. Recommended for applications where high temperature is of main concern in both indoor and outdoor installations. UV resistant. Airtight and waterproof construction.
S-G8-230-100	70 x 100 x 70	100	28	Coating	: Silicon Rubber	
S-G4-225-100	75 x 75 x 75	100	24	Weight	: 627 gms /sq.mtr	
S-G4-250-100	75 x 100 x 75	100	24		: 18.5 oz/sq. yard	
S-G4-300-100	75 x 150 x 75	100	24	Tear Strength	: 27 x 22 kgs	
S-G4-350-100	100 x 150 x 100	100	24		: 60 x 50 lbs	
Rated for use at 400 deg C for 2 hours				Tensile Strength	: 81 x 90 kgs	Achieves Class 1 when tested as per ASTM - E84 Surface Burning Characteristics
					: 180 x 200 lbs	
				Low Temp	: -40 deg C (-40 deg F)	
				High Temp	: 300 deg C (573 deg F)	
Hypalon						
H-G8-145-100	45 x 75 x 45	100	28	Basic Fabric	: Woven Fibreglass	Hypalon coated fabric has the best resistance to ozone layer, and is the first choice for outdoor applications. It has excellent resistance to weathering, acids and is recommended for roof top applications. Airtight and waterproof construction
H-G8-230-100	70 x 100 x 70	100	28	Coating	: Hypalon	
H-G4-225-100	75 x 75 x 75	100	24	Weight	: 780 gms /sq.mtr	
H-G4-250-100	75 x 100 x 75	100	24		: 23 oz/sq. yard	
H-G4-300-100	75 x 150 x 75	100	24	Tear Strength	: 22 x 18 kgs	
H-G4-350-100	100 x 150 x 100	100	24		: 48 x 39 lbs	
				Tensile Strength	: 102 x 136 kgs	Meets the requirements of NFPA 701 (formerly UL 214)
					: 225 x 200 lbs	
				Low Temp	: -40 deg C (-40 deg F)	
				High Temp	: 121 deg C (250 deg F)	Achieves Class 1 when tested as per ASTM - E84 Surface Burning Characteristics
Polyurethane						
P-G8-145-100	45 x 75 x 45	100	28	Basic Fabric	: Woven Fibreglass	Polyurethane coated fabrics are fragile in construction but have a longer resistance period to high temperatures. Airtight and waterproof construction
P-G8-230-100	70 x 100 x 70	100	28	Coating	: Polyurethane	
P-G4-225-100	75 x 75 x 75	100	24	Weight	: 460 gms /sq.mtr	
P-G4-250-100	75 x 100 x 75	100	24		: 13 oz/sq. yard	
P-G4-300-100	75 x 150 x 75	100	24	Tear Strength	: 16 x 14 kgs	
P-G4-350-100	100 x 150 x 100	100	24		: 35 x 30 lbs	
				Tensile Strength	: 75 x 82 kgs	Meets the requirements of NFPA 701 (formerly UL 214)
					: 165 x 180 lbs	
				Low Temp	: -40 deg C (-40 deg F)	
				High Temp	: 200 deg C (392 deg F)	Rated Class 1 as per BS 476, Part 7 Tests.
						Rated Class 0 as per BS 476, Part 6 Tests.
						Achieves Class 1 when tested as per ASTM - E84 Surface Burning Characteristics

FLEXIBLE DUCT CONNECTOR

Part No.	Size Metal x Fabric x Metal (mm)	Length (Feet)	Metal Gauge	Fabric Technical Specifications	Features
Canvas					
C-G8-145-100	45 x 75 x 45	100	28	Basic Fabric : Canvas	Traditional Canvas cloth used for air conditioning and ventilating applications, indoors and outdoors. Airtight and waterproof construction
C-G8-230-100	70 x 100 x 75	100	28	Weight : 535 gms /sq.mtr	
C-G8-280-100	70 x 150 x 70	100	28	Tear Strength : 16 oz/sq. yard	
C-G8-300-100	75 x 150 x 75	100	28	9 x 9 lbs	
C-G4-300-100	75 x 150 x 75	100	24	Tensile Strength : 127 x 96 kgs 280 x 210 lbs	Fire rated as per EN 532 and EN 533.
				Low Temp : -40 deg C (-40 deg F)	
				High Temp : 93 deg C (200 deg F)	

All AERODUCT Connectors utilise galvanised steel meeting ASTM A-525-G90 standards.

All AERODUCT Connectors are designed to meet NFPA 90A and 90B standards.

Sizes other than the above can be manufactured on request.

Duct Fabric

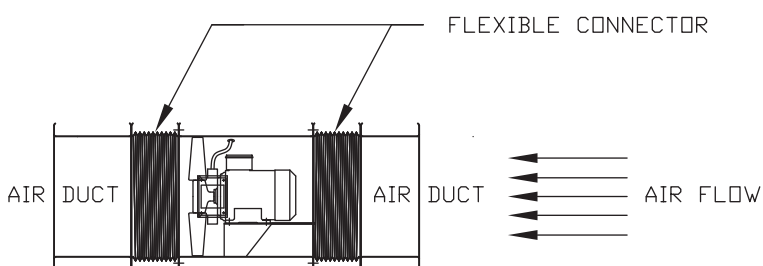
The complete range of AERODUCT fabrics are also available without metal for customers who have the need for only the fabric. Standard roll widths are given in the table and are available in lengths of 100 feet. Other widths and lengths are available on request.



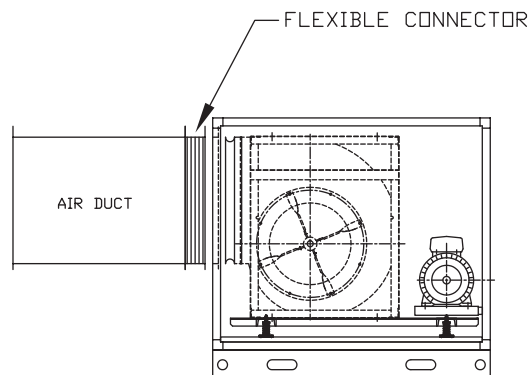
Fabric	Model No.	Width of Fabric	Length
Vinyl	V-75-100	3" (75 mm)	100 feet
Vinyl	V-100-100	4" (100 mm)	100 feet
Vinyl	V-150-100	6" (150 mm)	100 feet
Neoprene BS	BSN-75-100	3" (75 mm)	100 feet
Neoprene BS	BSN-100-100	4" (100 mm)	100 feet
Neoprene BS	BSN-150-100	6" (150 mm)	100 feet
Silicon	S-75-100	3" (75 mm)	100 feet
Silicon	S-100-100	4" (100 mm)	100 feet
Silicon	S-150-100	6" (150 mm)	100 feet

Fabric	Model No.	Width of Fabric	Length
Hypalon	H-75-100	3" (75 mm)	100 feet
Hypalon	H-100-100	4" (100 mm)	100 feet
Hypalon	H-150-100	6" (150 mm)	100 feet
Polyurethane	P-75-100	3" (75 mm)	100 feet
Polyurethane	P-100-100	4" (100 mm)	100 feet
Polyurethane	P-150-100	6" (150 mm)	100 feet

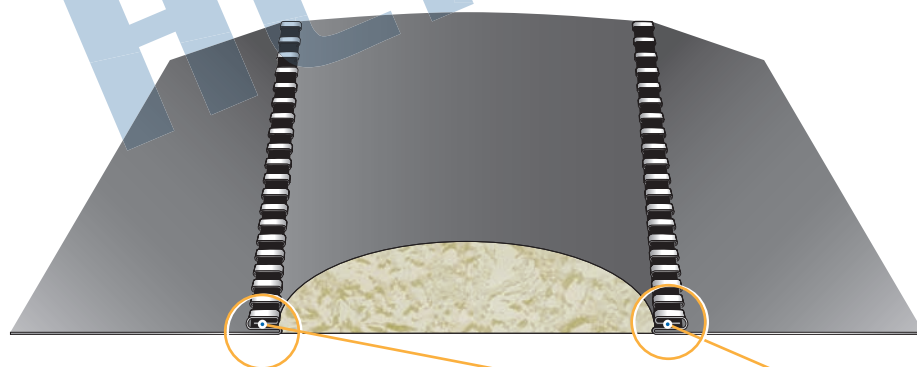
Typical Application



EXHAUST FANS



FAN COIL / AIR HANDLING UNITS



"Dual Lock" Grip






For acoustically treated ductwork and supply ducts, it is important that the fabric of the connector is also insulated in addition to the insulation fixed on the ducting. This enables the Flexible Duct Connector to achieve maximum effectiveness.

Externally insulating the fabric, may damage the coating on it, and also make it stiff thereby affecting the noise and vibration absorption properties of the fabric. AERODUCT has a complete range of "Insulated Duct Connectors" which use a 25mm thick fibreglass insulation of R Value 4.2, sandwiched between two layers of fabric. The various options of fabrics offered in insulated models, ensure that the Flexible Duct Connectors can be used for all possible types of ductwork installations. Thicker and higher density fibreglass can be provided on request.

All models of Insulated Duct Connectors from AERODUCT are available in 24 Gauge and 28 Gauge Steel.

INSULATED FLEXIBLE DUCT CONNECTOR

Part No.	Size Metal x Fabric Metal (mm)	Length (Feet)	Metal Gauge	Fabric Technical Specifications		Features	
VINYL							
ISV-G8-230-100 ISV-G8-280-100	70 X 100 X 70 70 X 150 X 70	100 100	28 28	Fabric Insulation	Vinyl Coated Polyester Yarn Fibreglass 12 kg/m ³ , 25mm thickness	Vinyl is the most commonly used fabric for all air duct installation due to its high tear strength and high abrasion resistance. Recommended for low to medium pressure ductwork systems.	
ISV-G4-250-100 ISV-G4-300-100	75 x 100 x 75 75 x 150 x 75	100 100	24 24	R Value Weight	4.2 576 gms /sq.mtr, 17oz /sq. yard		
				Tear Strength Tensile Strength	45 x 45 kgs (100 x 100 lbs) 108 x 100 kgs (240 x 220 lbs)	Achieves Class 1 when tested as per ASTM - E84 - Surface Burning Characteristics	
				Low Temp High Temp	- 40 deg C / - 40 deg F 93 deg C (200 deg F)		
NEOPRENE BS							
ISBSN-G8-230-100 ISBSN-G8-280-100	70 X 100 X 70 70 X 150 X 70	100 100	28 28	Fabric Insulation	Neoprene Coated Woven Fibreglass Fibreglass 12 kg/m ³ , 25mm thickness	Neoprene is recommended for use in application where high mechanical strength is required. Neoprene is extremely resistant to most alkalies, gasoline and toxic fumes.	
ISBSN-G4-250-100 ISBSN-G4-300-100	75 X 100 X 75 75 X 150 X 75	100 100	24 24	R Value Weight	4.2 1016 gms / sq. mtr (30 oz/sq.yard)		
				Tear Strength	5.5 x 5.5 kgs (12 x 12 lbs)	Achieves Class 1 when tested as per ASTM - E84 - Surface Burning Characteristics	
				Tensile Strength	226 x 204 kgs (500 x 450 lbs)		Rated Class 1 as per BS 476, Part 7 Flame Tests.
				Low Temp High Temp	-40 deg C (-40 deg F) 93 deg C (200 deg F)		
SILICON							
ISS-G8-230-100 ISS-G8-280-100	70 X 100 X 70 70 X 150 X 70	100 100	28 28	Fabric Insulation	Silicon Rubber coated Woven Fibreglass Fibreglass 12 kg/m ³ , 25mm thickness	Silicon fabric has a special Silicon coating that has excellent resistance to high and low temperatures. Silicon is extremely resistant to chemicals and ozone, and emits very low smoke when burnt. Recommended for applications where high temperature is of main concern in both indoor and outdoor installation.	
ISS-G4-250-100 ISS-G4-300-100	75 X 100 X 75 75 X 150 X 75	100 100	24 24	R Value Weight	4.2 627 gms /sq.mt (18.5 oz/sq. yard.)		
Rated for use at 400 deg C for 2 hours 				Tear Strength Tensile Strength	27 x 22 kgs (60 x 50 lbs) 81 x 90 kgs (180 x 200 lbs)	Achieves Class 1 when tested as per ASTM - E84 - Surface Burning Characteristics	
				Low Temp High Temp	- 40 deg C (- 40 deg F) 300 deg C (573 deg F)		UV resistant
POLYURETHANE							
ISP-G8-230-100 ISP-G8-280-100	70 X 100 X 70 70 X 150 X 70	100 100	28 28	Fabric Insulation	Polyurethane Coated Woven Fibreglass Fibreglass 12 kg/m ³ , 25mm thickness	Polyurethane Coated Fabrics are fragile in construction but have a longer resistance period to high temperatures.	
ISP-G4-250-100 ISP-G4-300-100	75 X 100 X 75 75 X 150 X 75	100 100	24 24	R Value Weight	4.2 460 gms /sq.mtr (13 oz/sq. yard)		
				Tear Strength Tensile Strength	16 x 14 kgs (35 x 30 lbs) 75 x 82 kgs (165 x 180 lbs)	Airtight and waterproof construction	
				Low Temp High Temp	-40 deg C (-40 deg F) 200 deg C (392 deg F)	Meets the requirements of NFPA 701 (formerly UL 214)	
						Rated Class 1 as per BS 476, Part 7 Tests Rated Class 0 as per BS 476, Part 6 Tests.	
						Achieves Class 1 when tested as per ASTM - E84 - Surface Burning Characteristics	

SPECIFICATION SHEET

Fabric	Weight	Thickness	Tensile Strength	Tear Strength	Low Temp	High Temp	Abrasion Resist- ance	Leakage Resista- nce	Fire Ratings
	TEST METHOD								
	ASTM D751-89	ASTM D1777-96	ASTM D751-89	ASTM D751-89	ASTM D573	ASTM D573	Federal Test Std.191 # 5306	Federal Test Std.191 # 5512	
Vinyl	28 gauge 576 gms /sq.mtr 17oz /sq. yard 24 gauge 745 gms /sq.mtr 22oz /sq. yard	0.41 +/- 0.03mm 0.46 +/- 0.03mm	108 x 100 kgs 240 x 220 lbs	45 x 45 kgs 100 x 100 lbs	- 40°C - 40°F	93°C 200°F	15,500 cycles	450 psi	ASTM E 84 - Class 1.
Neoprene BS	1016 gms/ sq.mtr 30 oz/ sq.yard	0.43 +/- 0.03mm	226 x 204 kgs 500 x 450 lbs	5.5 x 5.5 kgs 12 x 12 lbs	- 40°C - 40°F	93°C 200°F	550 cycles	140 psi	ASTM E 84 - Class 1. Rated Class 1 as per BS 476, part 7
Silicon Rated for use at 400 deg C for 2 hrs	627 gms/ sq.mtr 18.5 oz/ sq.yard	0.46 +/- 0.03mm	81 x 90 kgs 180 x 200 lbs	27 x 22 kgs 60 x 50 lbs	- 40°C - 40°F	300°C 573°F	135 cycles	450 psi	ASTM E 84 - Class 1.
Hypalon	780 gms/ sq.mtr 23 oz/ sq.yard	0.58 +/- 0.03mm	102 x 136 kgs 225 x 200 lbs	22 x 18 kgs 48 x 39 lbs	- 40°C - 40°F	121°C 250°F	500 cycles	250 psi	ASTM E 84 - Class 1. Meets requirements of NFPA 701 (formerly UL 214)
Polyurethane	460 gms/ sq.mtr 13 oz/ sq.yard	0.40 +/- 0.03mm	75 x 82 kgs 165 x 180 lbs	16 x 14 kgs 35 x 30 lbs	- 40°C - 40°F	200°C 392°F	110 cycles	400 psi	Rated Class 1 as per BS 476, Part 7 Tests Rated Class 0 as per BS 476, Part 6 Tests ASTM E 84 - Class 1. Meets requirements of NFPA 701 (formerly UL 214)
Canvas	535 gms/ sq.mtr 16 oz/ sq.yard	0.41 +/- 0.03mm	127 x 96 kgs 280 x 210 lbs	4 x 4 kgs 9 x 9 lbs	- 40°C - 40°F	93°C 200°F	70 cycles	400 psi	EN 532, EN 533

INTERNATIONAL TEST CERTIFICATES



Flexible Duct Connectors

(Vinyl, Neoprene, Silicon)
In accordance with
ANSI / NFPA 701



PSB Singapore



Flexible Duct Connectors

NFPA 701 (formerly UL214) (Vinyl, Neoprene, Silicon, Polyurethane)
ASTM E-84 (Vinyl, Neoprene, Silicon, Polyurethane)
BS 476 part 7, Class 1 (Neoprene, Polyurethane)
BS 476 part 7, Class O (Polyurethane)



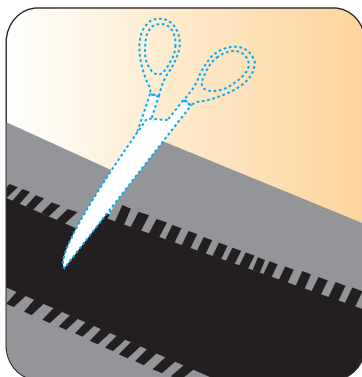
Flexible Ducts

BS 476 part 7, Class 1

RECOMMENDED INSTALLATION PROCEDURE

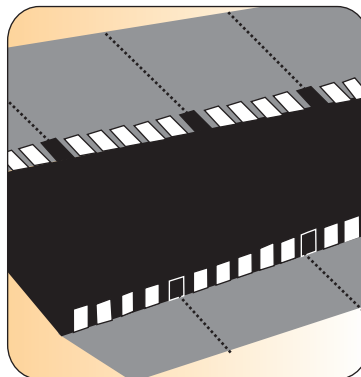
Ensure that the notched side of the connector faces outward and position the joint in the middle of a side rather than at a corner.

1.



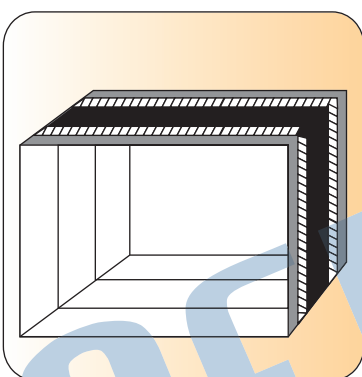
Remove the roll from the box, and cut the connector to the required length.

2.



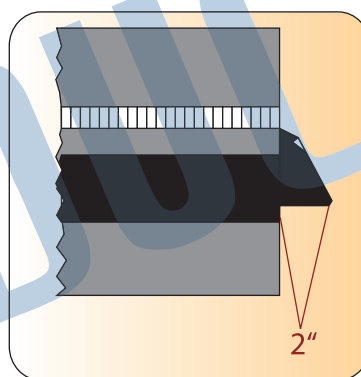
Holding the seam portion upwards to an angle of 90 degrees, make notches at the points where bending is required.

3.



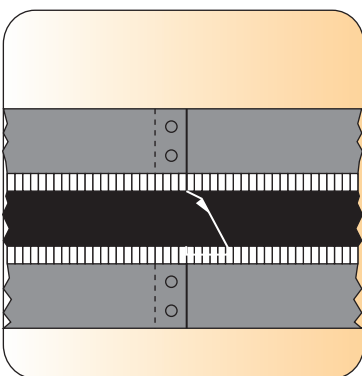
Bend the connector to form the required shape.

4.



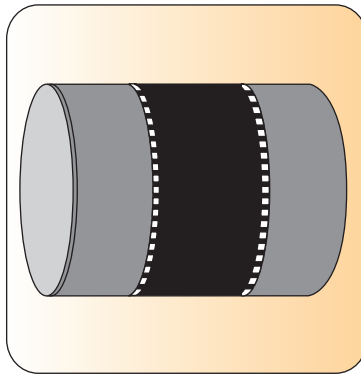
From the end of the connector, cut away the metal portion exposing only the fabric, with length of around 2 inches.

5.

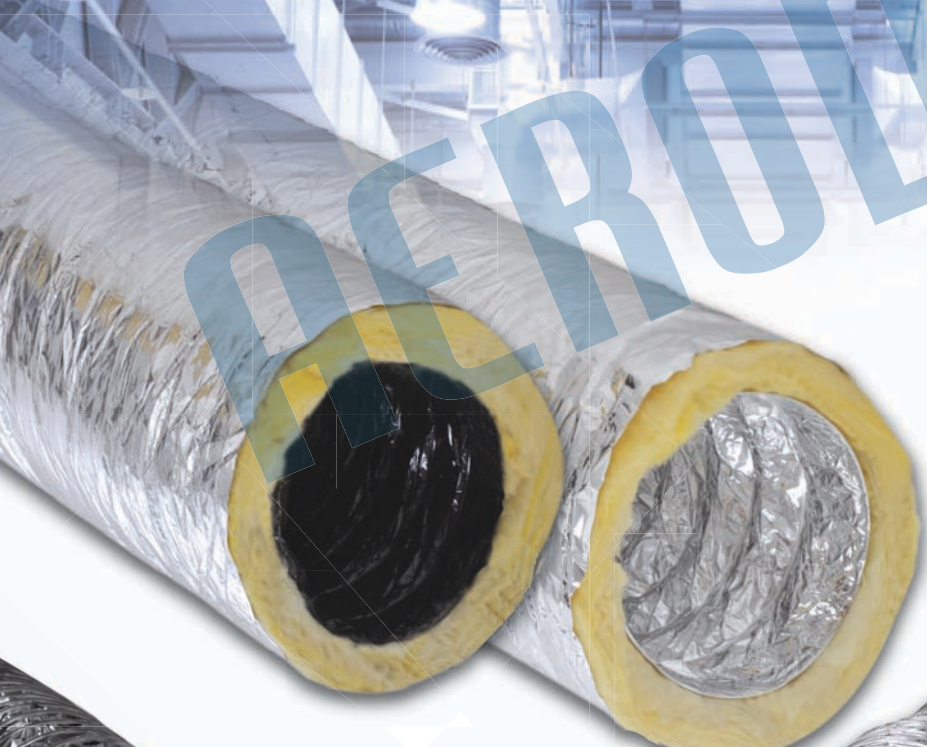
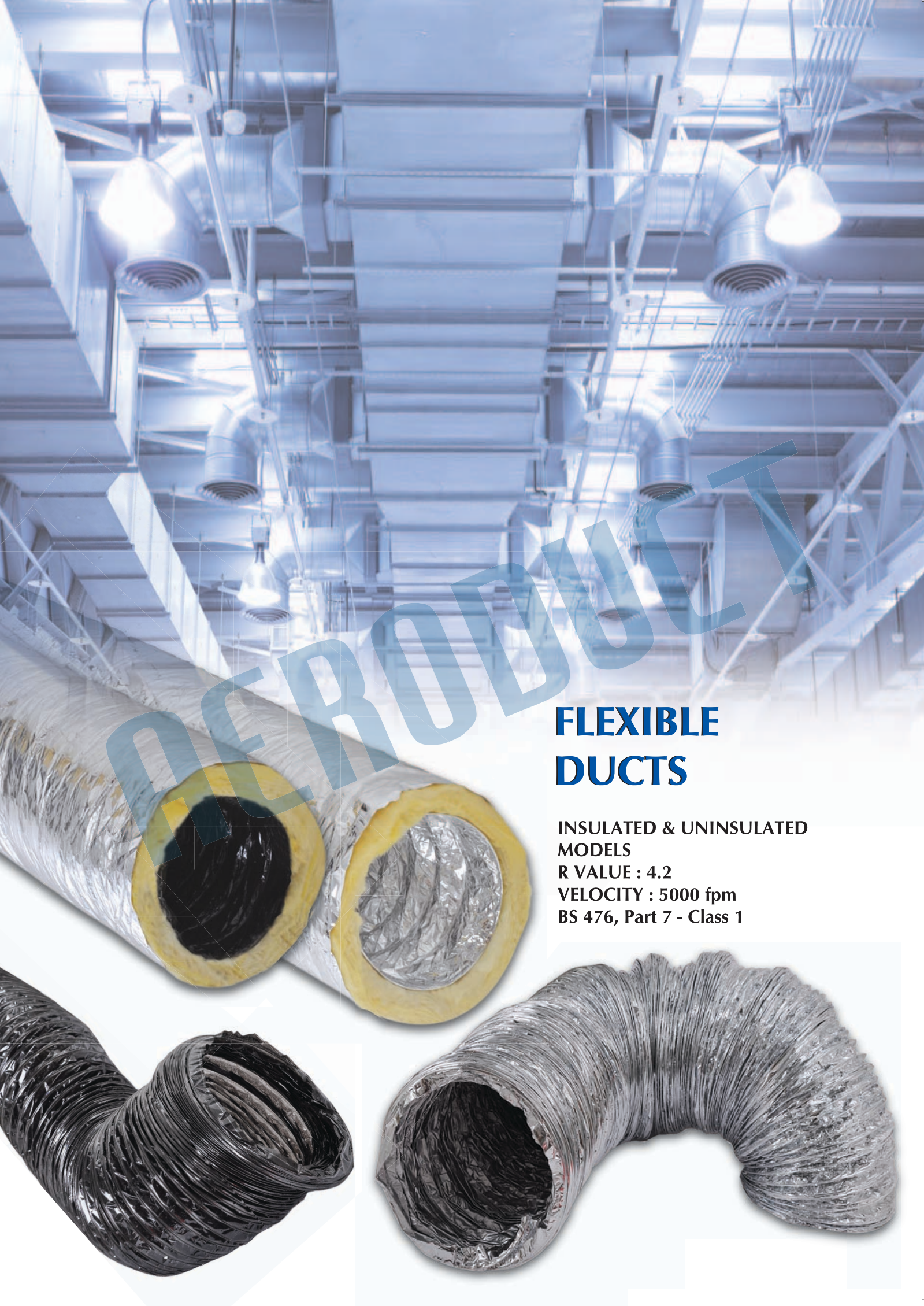


Join the two ends of the sheet metal by using rivets or screws. Apply a liberal amount of adhesive on the fabric portion under the tongue, and hold the joint for few seconds to ensure the seal.

6.



Round Flexible connections can also be fabricated using the same procedure.



FLEXIBLE DUCTS

**INSULATED & UNINSULATED
MODELS**

R VALUE : 4.2

VELOCITY : 5000 fpm

BS 476, Part 7 - Class 1



Specification Data



Specifications	Insulated	Insulated	Insulated - Reinforced Barrier	Insulated - Reinforced Barrier
MODEL No	ADI1	ADI2	ADIR-1	ADIR-2
Inner Core	Double laminated polyester film, with black pigmented adhesive, permanently bonded to corrosion resistant steel wire helix.	Triple laminated aluminum foil, polyester film, permanently bonded to corrosion resistant steel wire helix.	Double laminated polyester film, with black pigmented adhesive, permanently bonded to corrosion resistant steel wire helix.	Triple laminated aluminum foil, polyester film, permanently bonded to corrosion resistant steel wire helix.
Outer Core	Strong vapour barrier made from metallized polyester film laminate.	Strong vapour barrier made from metallized polyester film laminate.	Triple laminated aluminum foil, polyester and metallized polyester film with fibreglass scrim reinforced vapour barrier.	Triple laminated aluminum foil, polyester and metallized polyester film with fibreglass scrim reinforced vapour barrier.
Insulation thickness	25mm / 38mm / 50mm	25mm / 38mm / 50mm	25mm / 38mm / 50mm	25mm / 38mm / 50mm
Density	16kgm ³ / 24kgm ³	16kgm ³ / 24kgm ³	16kgm ³ / 24kgm ³	16kgm ³ / 24kgm ³
R value	4.2	4.2	4.2	4.2
Maximum Positive Pressure	10" w.g.- 4" to 16"	10" w.g.- 4" to 16"	10" w.g.- 4" to 16"	10" w.g.- 4" to 16"
	6" w.g. - 18 to 20"	6" w.g. - 18" to 20"	6" w.g. - 18" to 20"	6" w.g. - 18" to 20"
Maximum Negative Pressure	3/4" w.g. All diameters	3/4" w.g. All diameters	3/4" w.g. All diameters	3/4" w.g. All diameters
Maximum Velocity	5000 fpm	5000 fpm	5000 fpm	5000 fpm
Operating Temperature	-30 deg C to +150 deg C -20 deg F to +300 deg F	-30 deg C to +150 deg C -20 deg F to +300 deg F	-30 deg C to +150 deg C -20 deg F to +300 deg F	-30 deg C to +150 deg C -20 deg F to +300 deg F
Standard Length	25 feet	25 feet	25 feet	25 feet
Diameter	4" to 20"	4" to 20"	4" to 20"	4" to 20"
Fire Rating	-	BS 476, part 7 Class1	-	BS 476, part 7 Class1

Customised lengths available on request.

Specification Data



Specifications	Uninsulated	Uninsulated	Uninsulated
MODEL No	ADUI3	ADUI4	ADUI5
Inner Core	Triple laminated aluminum foil, polyester film, permanently bonded to corrosion resistant steel wire helix.	Double laminated metallized film, permanently bonded to corrosion resistant steel wire helix.	Double laminated polyester film, with black pigmented adhesive, permanently bonded to corrosion resistant steel wire helix.
Maximum Positive Pressure	10" w.g.- 4" to 16"	10" w.g.- 4" to 16"	10" w.g.- 4" to 16"
	6" w.g. - 18" to 20"	6" w.g. - 18" to 20"	6" w.g. - 18" to 20"
Maximum Negative Pressure	1" w.g. All diameters	1" w.g. All diameters	1" w.g. All diameters
Maximum Velocity	5000 fpm	5000 fpm	5000 fpm
Operating Temperature	-30 deg C to +150 deg C -20 deg F to +300 deg F	-30 deg C to +150 deg C -20 deg F to +300 deg F	-30 deg C to +150 deg C -20 deg F to +300 deg F
Standard Length	25 feet	25 feet	25 feet
Diameter	4" to 20"	4" to 20"	4" to 20"
Fire Rating	BS 476, part 7 Class1	-	-

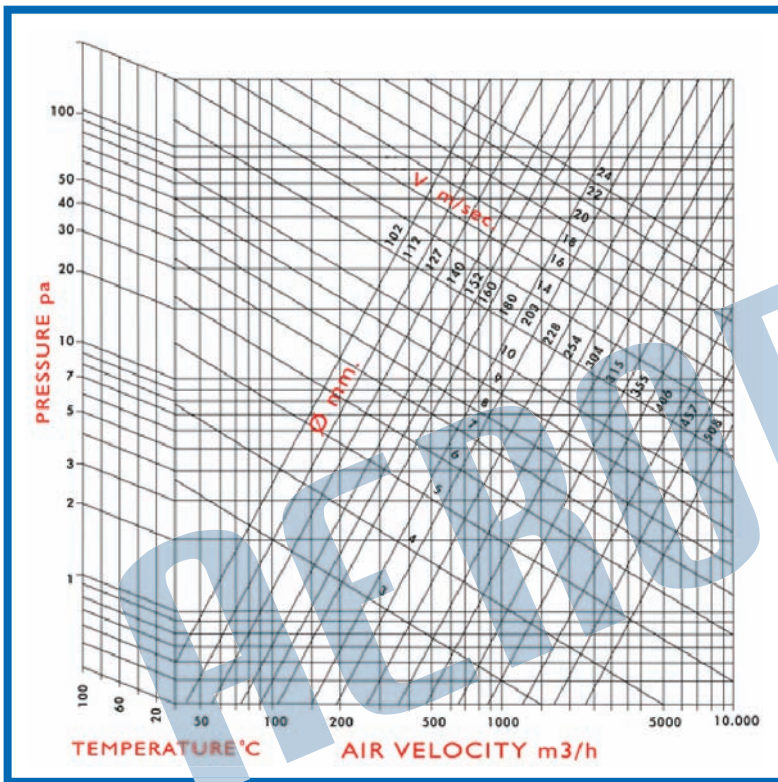
Customised lengths available on request.

All Aeroduct Flexible Ducts are designed to meet NFPA 90A and NFPA 90B Standards.

Main Features

- Economical solution to connecting equipment in air conditioning and ventilation systems, across a broad spectrum of applications such as residential, commercial and industrial projects
- Flexible construction renders ease of installation in areas where rigid ducts cannot be fixed
- Ideal for use in low to medium pressure ductwork systems
- Options for insulated and uninsulated models
- Tear and puncture resistant construction

Pressure Loss Diagram

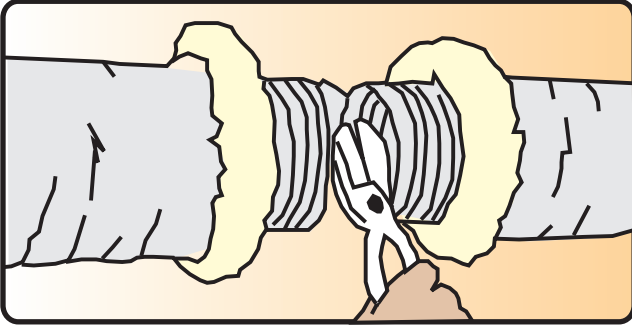


Accessories

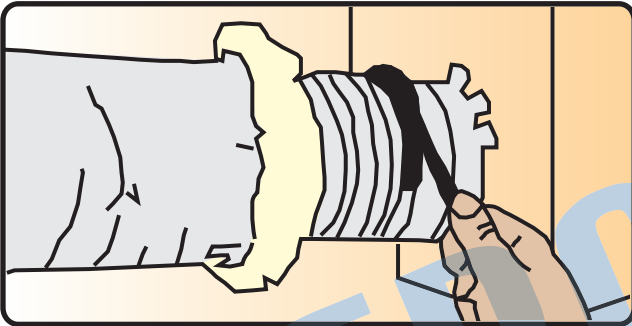
- Stranglehold Banding
- Standard Hose Clip
- Captive Screws



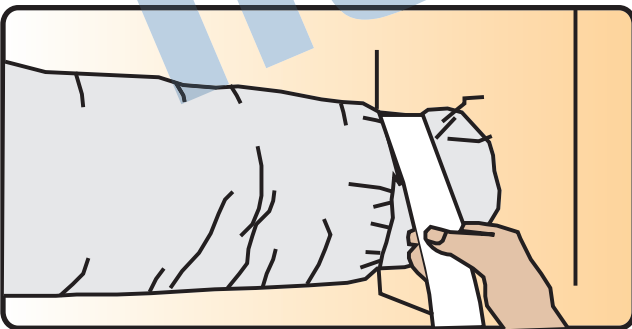
CONNECTIONS



Cut completely around and through the duct with knife or scissors. Cut the wire with wire cutters. Fold back the jacket and insulation

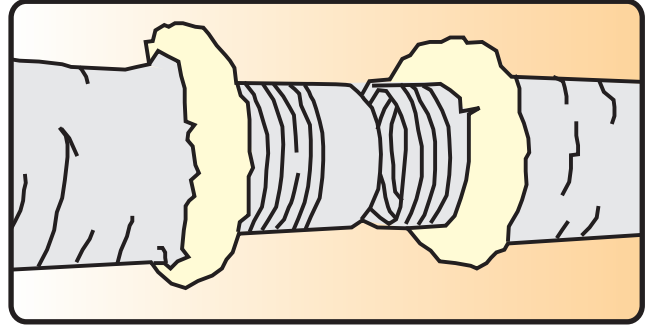


Slide at least 1" (25mm) of core over fitting and past the bead. Seal core to cover with 2 wraps of duct tape. Secure the connection with clamp placed over the core and tape and past the bead.

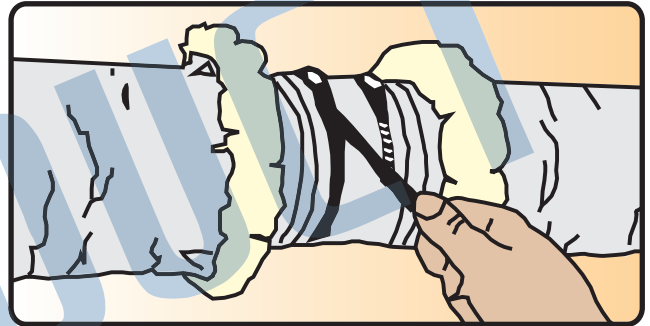


Pull jacket and insulation back over the core. Use at least 2 wraps of duct tape to tape the jacket. You may use a clamp along with or instead of the duct tape.

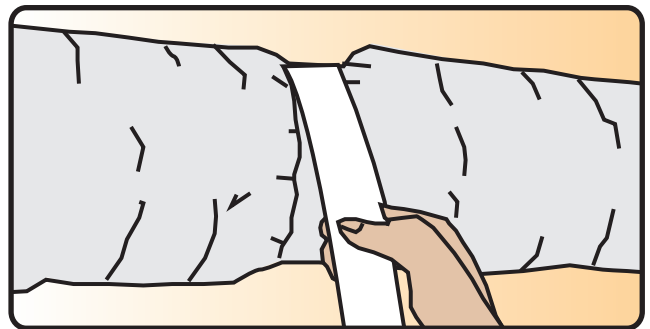
SPLICES



Fold back jacket and insulation from core. Butt 2 cores together on a standard 4" (100mm) length metal sleeve.



Use at least 2 wraps of duct tape to tape the jacket. Secure the connection with clamp placed over the core and tape and past the bead.



Pull jacket and insulation back over cores. Use at least 2 wraps of duct tape to tape the jacket.

Precautions during installation:

Aeroduct insulated ducts use fibreglass insulation which is classified as a possible cancer hazard by inhalation. In addition fibreglass insulation may cause temporary irritation to the eyes and skin. Kindly ensure that protective clothing, face mask and gloves are used while handling or installing the flexible ducts. Wash hands properly with soap and water after use.

CERTIFICATE OF COMPLIANCE

Certificate Number 20130329-R27561
Report Reference R27561-20130329
Issue Date 2013-MARCH-29

Issued to: HIRA INDUSTRIES L L C
 DUBAI INVESTMENTS PARK - 2
 DUBAI UNITED ARAB EMIRATES

**This is to certify that
 representative samples of**


AIR DUCT VIBRATION ISOLATION CONNECTORS
 Aeroduct Vibration Isolation Connectors identified as Vinyl,
 Silicon Coated Fiberglass and Neoprene Coated
 Fiberglass.

Have been investigated by UL in accordance with the
 Standard(s) indicated on this Certificate.

Standard(s) for Safety: NFPA 701- Standard Methods of Fire Tests for Flame
 Propagation of Textiles and Films – Methods 1 and 2

Additional Information: See the UL Online Certifications Directory at
www.ul.com/database for additional information

Only those products bearing the UL Classification Mark should be considered as being covered by
 UL's Classification and Follow-Up Service.

The UL Classification Mark includes: UL in a circle: with the word "CLASSIFIED"  (as shown); a control
 number (may be alphanumeric) assigned by UL; a statement to indicate the extent of UL's evaluation of
 the product; and the product category name (product identity) as indicated in the appropriate UL
 Directory.

Look for the UL Classification Mark on the product.



William R. Carney, Director, North American Certification Programs
 UL LLC

Any information and documentation involving UL Mark services are provided on behalf of UL LLC (UL) or any authorized licensee of UL. For questions, please
 contact a local UL Customer Service Representative at www.ul.com/contactus





AERODUCT

INSULATION FASTENERS

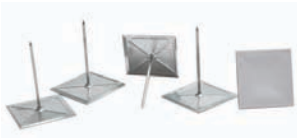
Designed to meet SMACNA Standards utilizing steel as per ASTM-A 591

Insulation Fasteners (IF) / PERFORATED BASE HANGERS (PIF)

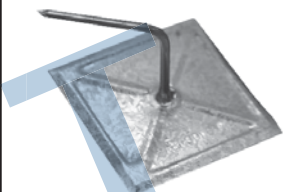
Base : 28 Gauge Metal
Size : 50mm x 50mm

Pin : 12 Gauge Zinc Plated
Packaging : 500 pieces per box with SW Washers

Self Adhesive Type - Steel Model No.	Self Adhesive Type - Aluminium Model No.	Perforated Base Type Model No.	Perforated Base Type - Aluminium Model No.	Pin Length (inches/mm)	Use for Insulation size
IF 34	IFA 34	PIF 34	PIFA 34	0.75"	½"
IF 114	IFA114	PIF 114	PIFA 114	1.25"	1"
IF 134	IFA 134	PIF 134	PIFA 134	1.75"	1½"
IF 200	IFA 200	PIF 200	PIFA 200	2.0"	1½"
IF 250	IFA 250	PIF 250	PIFA 250	2.5"	2"
IF 300	-	PIF 300	-	3.0"	3"
IF 80M	-	PIF 80M	-	80mm	3"
1F 400	-	PIF 400	-	4.0"	4"
IF 450	-	PIF 450	-	4.5"	4"
IF 120M	-	PIF 120M	-	120mm	4"
IF 130M	-	PIF 130M	-	130mm	5"
IF 140M	-	PIF 140M	-	140mm	5"
IF 150M	-	PIF 150M	-	150mm	6"



Self Adhesive Type - Steel Nail
Reinforced and plain base options



Self adhesive type-Aluminium nail
Easy to bend and cut



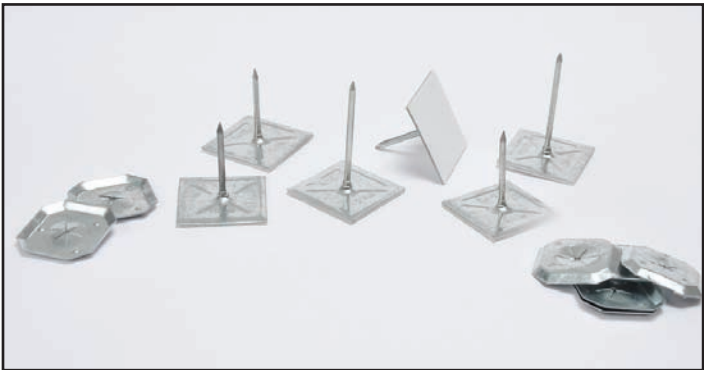
Perforated Base Type
Available in both Steel and Aluminium nail.

Insulation Fasteners Compact (IFC)

Base : 28 Gauge Metal
Size : 35mm x 35mm

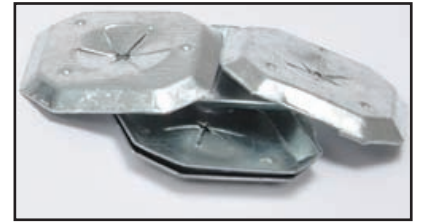
Pin : 12 Gauge Zinc Plated
Packaging : 1000 pieces per box with two boxes of SW Washers

Model No.	Pin Length (inches)	Use for Insulation size
IFC 114	1.25	1"
IFC 134	1.75	1½"
IFC 200	2.0	1½"
IFC 250	2.5	2"



SW Washers

Model No.	Description	Pieces per box
SW	Steel Washers 30 Gauge Galvanized	500

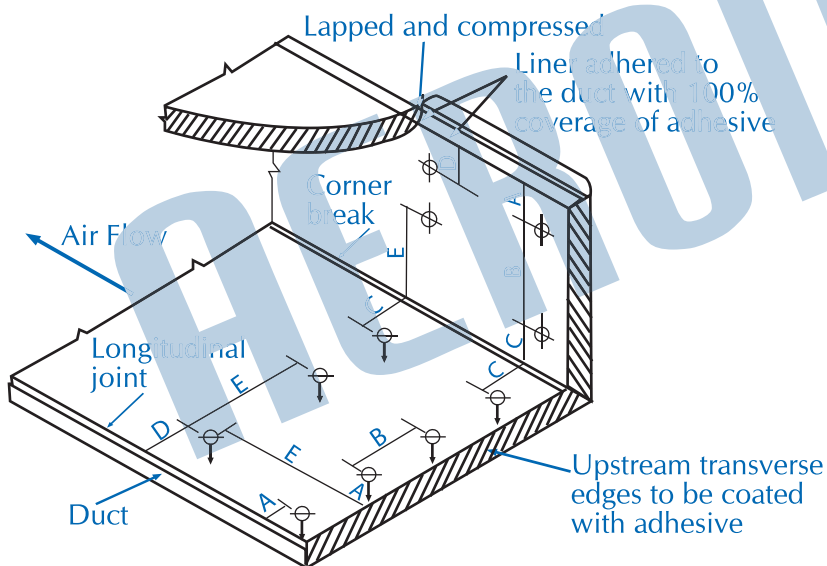


The steel base is made from 28 Gauge metal, a steel pin and double sided self adhesive tape having high shear strength. The use of this pin prevents corrosion on the sheet metal which is caused by the welding fasteners.

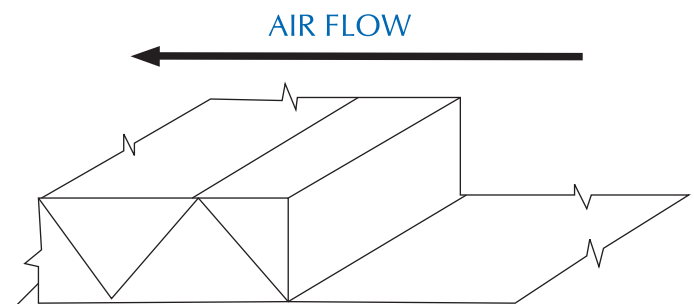
Adhesive Tape Technical Details

Base Material : Polyethylene foam with aggressive pressure sensitive rubber resin adhesive
 Service Temperature : - 40 deg C to + 70 Deg C.
 Highly resistant to abrasion, corrosion and moisture.
 Confirms to European Directive 2000/53 (Lead, Chromium VI, Mercury, Cadmium free)
 10 Minute 180 degree Peel Adhesion : 30 N/25mm
 500 Hour Static Shear (Stainless Steel) : 0.8 kg/cm²

Duct Liner Installation



Velocity	Dimensions				
	A	B	C	D	E
0-2500 FPM (0-12.7 MPS)	3"	12"	4"	6"	18"
	(76.2)	(305)	(102)	(152)	(457)
2501-6000 FPM (12.7-30.5 MPS)	3"	6"	4"	6"	16"
	(76.2)	(152)	(102)	(152)	(406)



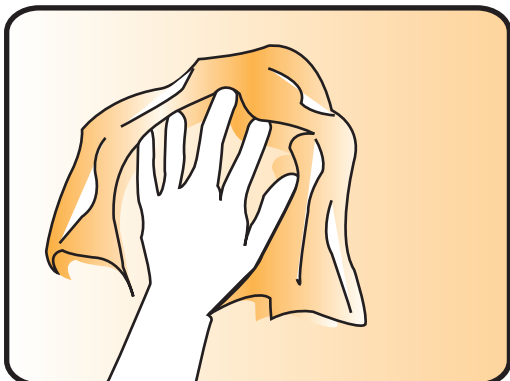
DETAIL-A

Metal Nosing Channel or Zee

Interior width of 8"(200mm) and less does not require pins

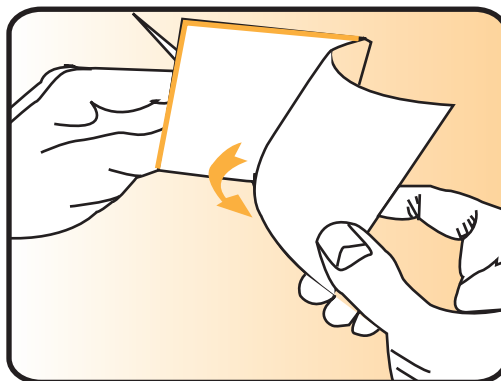
RECOMMENDED INSTALLATION PROCEDURE

1.



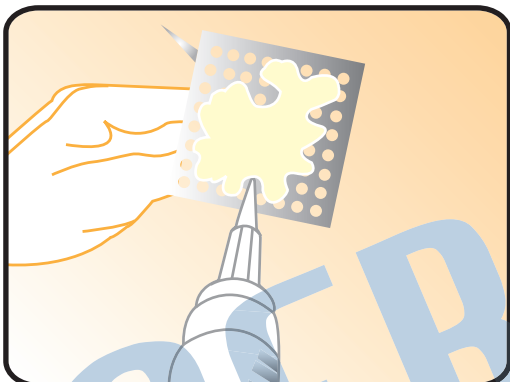
Ensure that the surface is clean and dry, free from oil, grease or any dust particles

2.



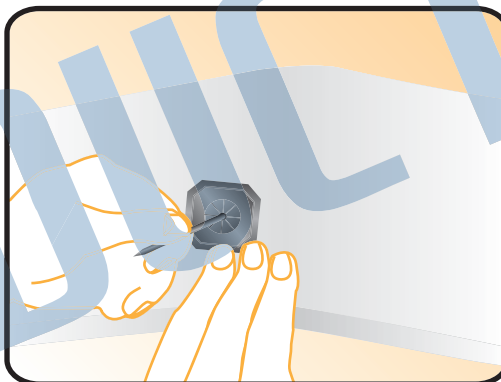
Remove protection paper from the base of the insulation fastener.

3.



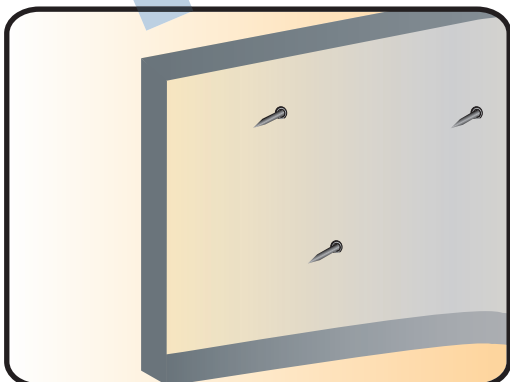
Apply glue to the base of the perforated hanger and fix to the surface

4.



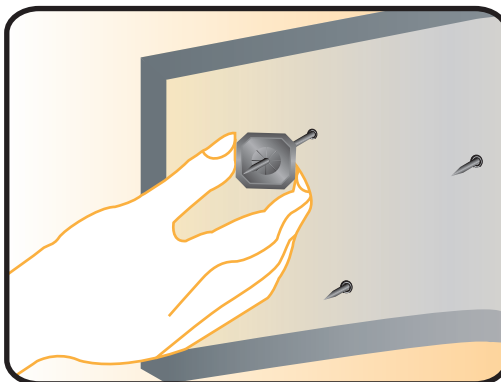
Firmly press the base of the pin at the required position on to the steel surface.

5.



Fix the insulation over the pins

6.

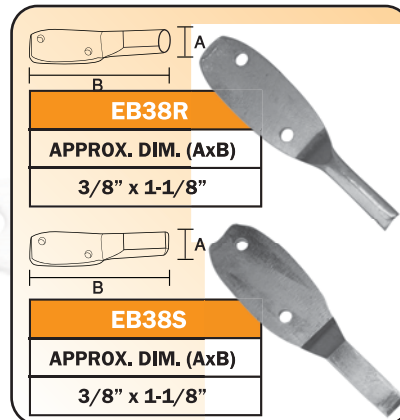
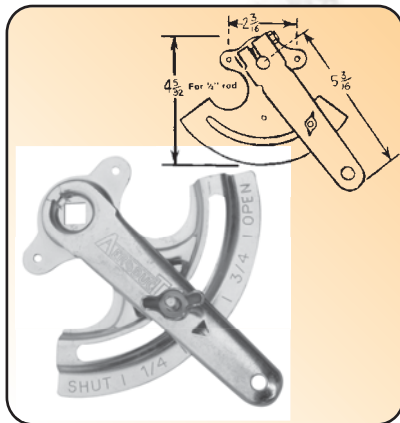


Lock the insulation firmly to the steel surface using the steel washers provided.

Aeroduct heavy gauge plated steel quadrants are designed with a smooth handle action with a fast wing nut adjustment , and locking of the damper. The marking on the frame indicates the exact position of the damper. Can be used on square and round ducts. Includes leak resistant bushes as a part of the standard package.

Damper Quadrant Sets

QRS-38 Quadrant Set 3/8" for dampers upto 20"

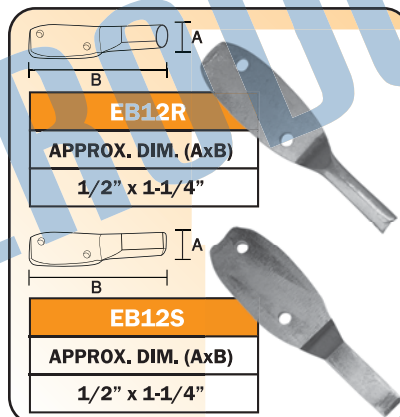
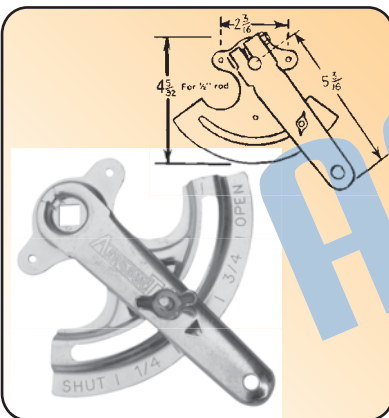


QRS-38 Set consists of :

- H38 Handle
- EB38S Square Bearing
- EB38R Round Bearing
- B38R Round Nylon Bush
- B38S Square Nylon Bush



QRS-12 Quadrant Set 1/2" for dampers upto 30"



QRS-12 Set consists of :

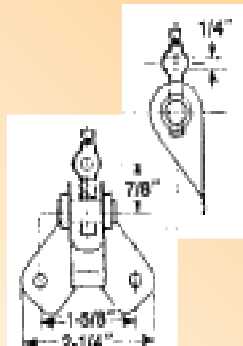
- H12 Handle
- EB12S Square Bearing
- EB12R Round Bearing
- B12R Round Nylon Bush
- B12S Square Nylon Bush



Damper Accessories

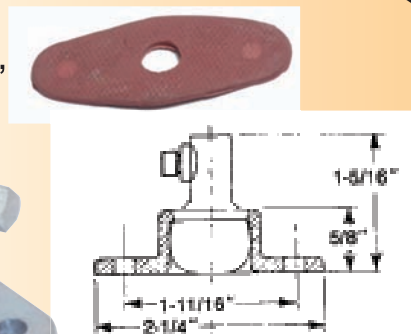
Splitter Damper Bracket 1/4" ADSD14

- Steel Bracket
- Brass Pivot
- Shaft Size: 1/4"



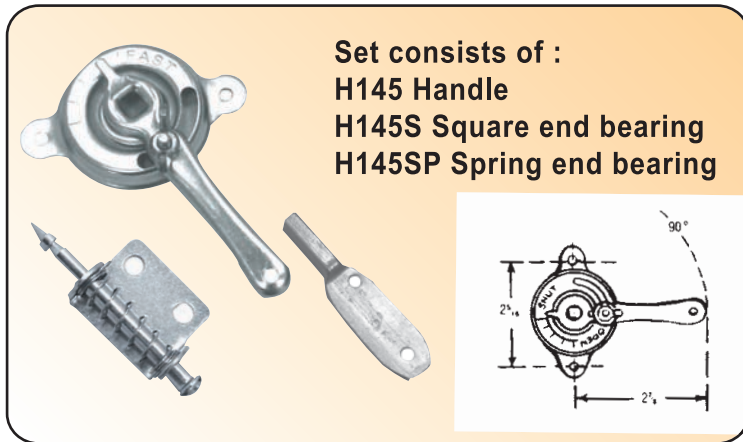
Ball Joint Casting 1/4" ADBJ14

- Cast Alloy
- Shaft Size: 1/4"



DAMPER ACCESSORIES

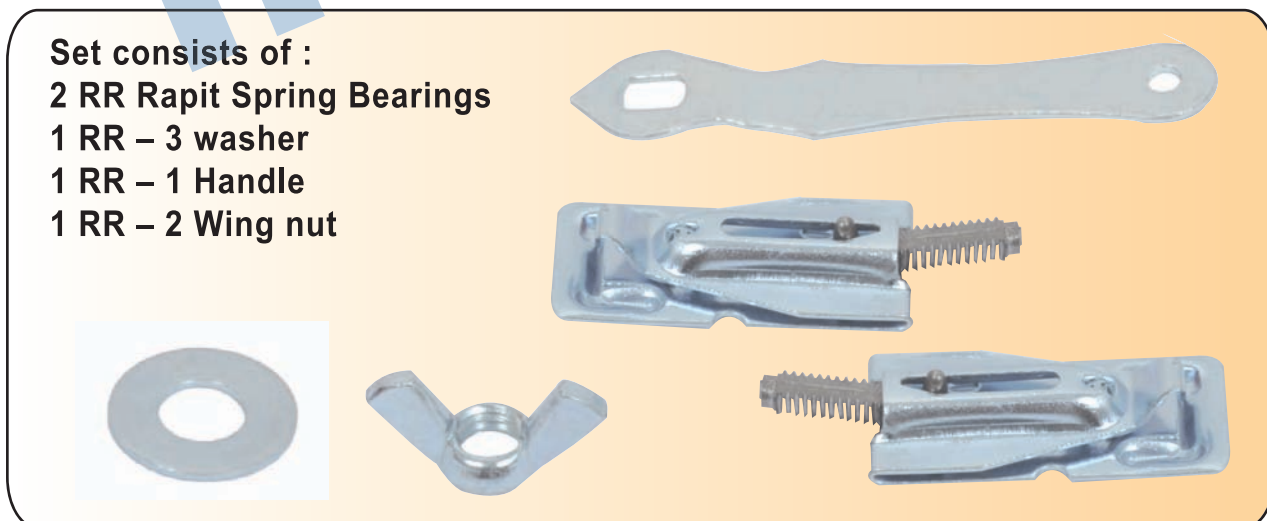
Damper (Dial) Regulator Set 1/4" ADQRS145



ADCL - Camlock



Rapit Regulator Set ADRP256





Certificate Number
43070

Initial Certification Date
22 July 2008

Certificate Issue Date
22 July 2011

Certificate Expiry Date
21 July 2014



1639
ISO/IEC 17021

Certificate of Registration

The following organization's quality management system has been assessed and registered by Intertek Semko Certification AB as conforming to the requirements of:

ISO 9001:2008

Organization:

Hira Industries (AERODUCT Division)

P.O. Box: 113462, Dubai Investment Park - Phase II, Dubai, United Arab Emirates

The Quality Management System is applicable to:

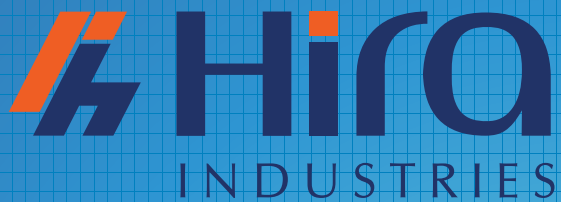
1. Manufacture of Ducting Accessories
2. Manufacture of DIAMOND Pipe support systems

In the issuance of this certificate, Intertek assumes no liability to any party other than to the Client, and then only in accordance with the agreed upon Certification Agreement.

A handwritten signature in blue ink, appearing to read "G. Lundgren", is written over a horizontal line.

AERODUCT

Ducting Accessories



Manufactured By: Hira Industries LLC (AERODUCT DIVISION)

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Tel : +91 250 321 1963 / 64 / 65

The Most Comprehensive Range of Ducting Accessories