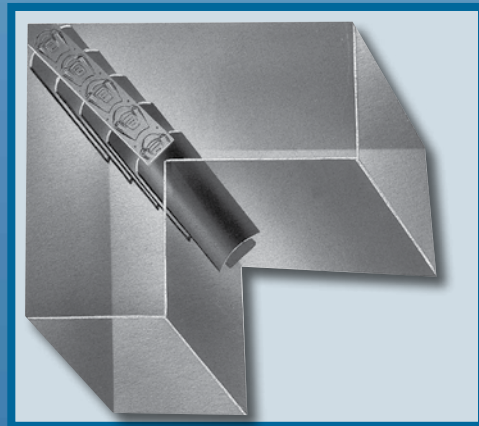




FLEXIBLE DUCT CONNECTOR & VANE RAIL

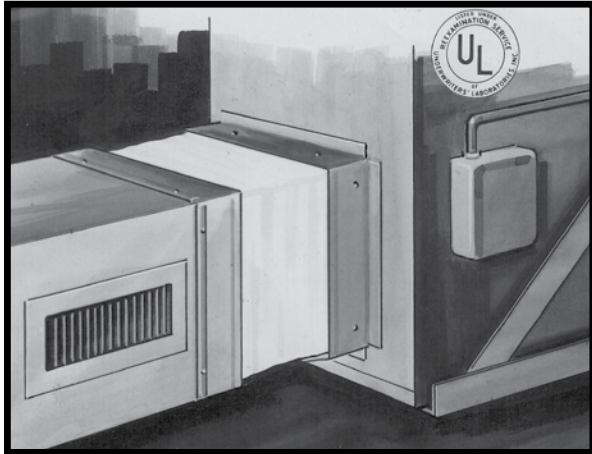


PRODUCT CATALOG



PRE-ASSEMBLED FLEXIBLE DUCT CONNECTOR

ELIMINATES DUCT SYSTEM NOISES AND VIBRATIONS



All air duct installations for heating, cooling or ventilation are attached to mechanical equipment containing a fan or blower. Vibrations, noises and rattles resulting from the operation of the fan or blower are transmitted into the metal ducts which carry the noises throughout the system.

In order to isolate the vibration and noises to the source, an air-tight flexible joint, consisting of a fabric which is secured to sheet metal on both sides, must be inserted between the equipment and the ductwork. This flexible joint is called a "Flexible Duct Connector."

To meet every type of installation requirement, whether it be for factory, institution, office or home; Duro Dyne offers the widest variety of flexible duct connector fabrics (U.L. Classified) and sizes; pre-assembled with the sheet metal permanently secured to the fabric by means of exclusive seam locks. Duro Dyne Flexible Duct Connectors are dispensed from the carton, ready to complete fabrication faster, more efficiently, and more economically than any conventional method.



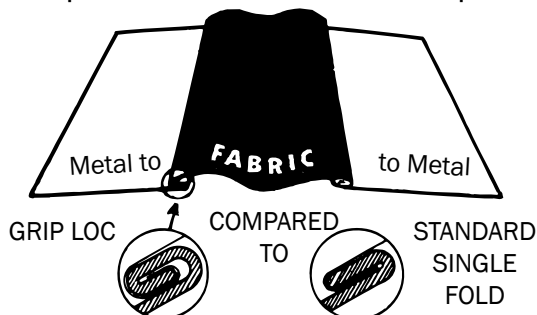
- All Duro Dyne Fabrics are designed to meet NFPA 701 (formerly UL 214.)
- All Duro Dyne Fabrics are designed to meet NFPA 90A & 90B.
- All Duro Dyne Fabrics are airtight and waterproof.
- All Duro Dyne Flexible Duct Connector utilize 24 or 28 gauge (.7 mm or .47 mm) galvanized steel meeting ASTM-A-525 G60.
- Standard roll length - 100 ft. (30.48 m)
- Flexible Duct Connector is available with 300 series or 316 series stainless steel or aluminum. (See chart for availability)
- Flexible Duct Connector and Vane Rail are manufactured in the United States.

CANVAS, OTHER FABRICS
& SIZES AVAILABLE AS
SPECIAL ORDER.

NOTE: All specification values shown in this catalog are typical and will vary within accepted commercial tolerances

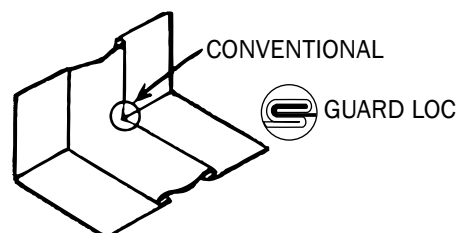
GRIP LOC™

The double-lock gripping fingers of metal-to-fabrics add tremendously to the holding power compared to the conventional singlefold method. Grip Loc is standard on Metal-Fab and Super Metal-Fab.



GUARD LOC™

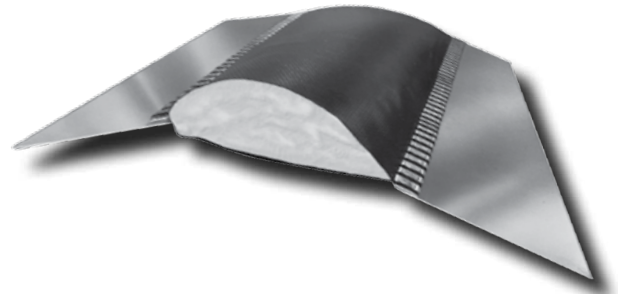
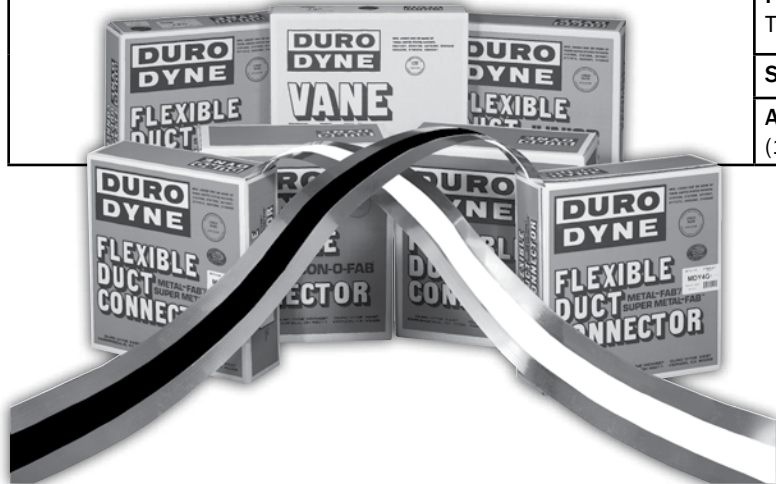
Another Duro Dyne exclusive. - Shielded with metal on both sides at the seam, Guard Loc forms a tough metal-to-fabric bond. Forming in a brake is simpler, and Guard Loc prevents tears in the fabric because of unique metal-shielded seams. Guard Loc is standard in Econ-O-Fab, Junior and Insulflex Connector.



The Duro Dyne standard 'single fold' metal to fabric grip has been tested by an independent testing laboratory to withstand a negative pressure of -10"WC and a positive pressure of +17.25" WC with no tearing or visible separation.

INDUSTRIAL/COMMERCIAL APPLICATIONS

METAL FAB™	SPECIFICATIONS (Metric)
Metal Fab is constructed of material which meets the requirements of heavy commercial systems. This factory fabricated flexible duct connection will allow for normal vibration in large duct systems without inhibiting the effectiveness of the flexible duct connector.	Gauge: 24 Galvanized (.7 mm)
	Dimensions: 3" metal - 3" fabric - 3" metal (76 mm metal - 76 mm fabric - 76 mm metal)
	Fabrics Supplied: Durolon, Excelon, Neoprene, Glasseal, Thermafab, Envirofab, Teflon
	Seam: Grip Loc
SUPER METAL FAB	SPECIFICATIONS (Metric)
Super Metal Fab is constructed of material to provide for special commercial duct systems. Very large equipment can cause excessive vibration. To compensate for this, a wider fabric is used to eliminate the transmission of vibration to the duct.	Gauge: 24 Galvanized (.7 mm)
	Dimensions: 3" metal - 6" fabric - 3" metal (76 mm metal - 152.4 mm fabric - 76 mm metal)
	Fabrics Supplied: Durolon, Excelon, Neoprene, Glasseal, Thermafab
	Seam: Grip Loc
TDC/TDF CONNECTOR	SPECIFICATIONS (Metric)
TDC/TDF Connector has ample material for roll forming a connecting flange on both sides of the flexible connection. This product is designed to be compatible with both TDC (Lockformer) and TDF (Engel) roll forming flange-fabricating equipment.	Gauge: 24 Galvanized (.7 mm)
	Dimensions: 4" metal - 4" fabric - 4" metal (102 mm metal - 102 mm fabric - 102 mm metal)
	Fabrics Supplied: Durolon, Excelon, Neoprene, Glasseal, Thermafab, Envirofab, Dynalon, Teflon
	Seam: Grip Loc
Also Available: 4" metal -6" fabric -4" metal (102 mm metal - 15 mm fabric - 102 mm metal)	



RESIDENTIAL/LIGHT COMMERCIAL APPLICATIONS

ECONOFAB	SPECIFICATIONS (Metric)
For light commercial or larger residential systems.	Gauge: 28 Galvanized (.47 mm)
	Dimensions: 2 ¾" metal - 4" fabric - 2 ¾" metal (70 mm metal - 102 mm fabric - 70 mm metal)
	Fabrics Supplied: Durolon, Excelon, Neoprene, Glasseal, Thermafab
	Seam: Guard Loc
JUNIOR CONNECTOR	SPECIFICATIONS (Metric)
For residential systems.	Gauge: 28 Galvanized (.47 mm)
	Dimensions: 1 ¾" metal - 3" fabric - 1 ¾" metal (44 mm metal - 76 mm fabric - 44 mm metal)
	Fabrics Supplied: Durolon, Excelon, Neoprene, Glasseal, Thermafab, Envirofab, Dynalon
	Seam: Guard Loc

FABRICS

FABRIC COMPARISONS	Excelon®	Neoprene (Standard Grade)	Neoprene (Specification Grade)	Durolon
UL Classified Listing #	R4462	R4462	R4462	R4462
Continuous Temp. Range	-40°F. to 180°F. (-40°C to 82°C)	-40°F. to 200°F. (-40°C to 93°C)	-40°F. to 200°F. (-40°C to 93°C)	-40°F. to 250°F. (-40°C to 121°C)
Color	Black or Spec Chek Orange	Black	Black	White
Commercial Grade Weight	22 oz. (746 g/sq. meter)	22 oz. (746 g/sq. meter)	30 oz. (1017 g/sq. meter)	26 oz. (814 g/sq. meter)
Residential Grade Weight	17 oz. (576g/sq. meter)	22 oz. (746 g/sq. meter)	30 oz. (1017 g/sq. meter)	26 oz. (814 g/sq. meter)
Leakage Resistance¹	350	595	595	250
Tear Strength²	100 lbs. / 100 lbs. (445 N x 445 N)	12 lbs. / 12 lbs. (58 N x 58 N)	12 lbs. / 12 lbs. (58 N x 58 N)	12 lbs. / 12 lbs. (58 N x 58 N)
Tensile Strength³	240 lbs. / 220 lbs. (1067 N x 978 N)	500 lbs. / 450 lbs. (2224 N x 2224 N)	500 lbs. / 450 lbs. (2224 N x 2224 N)	225 lbs. / 300 lbs. (1120 N x 1223 N)
Base Fabric	Woven Nylon/Polyester Blend	Woven Fiberglass	Woven Fiberglass	Woven Fiberglass
Coating	Vinyl	Neoprene	Neoprene	Hypalon
Features	• Excellent water resistance • Excellent tear strength • Excellent all purpose fabric • Unaffected by mildew	• Extremely resistant to alkalis & gasoline • Excellent on systems exposed to toxic fumes • Good general purpose fabric • Unaffected by mildew	• Extremely resistant to alkalis & gasoline • Excellent on systems exposed to toxic fumes • Good general purpose fabric • Unaffected by mildew	• Excellent ozone resistance • Excellent resistance to weathering • Best overall acid resistance • Recommended for rooftop applications • Unaffected by mildew
Codes				
Metal-Fab 3x3x3 Grip Loc 	MBX (#10159) MSPX (#10263) <u>Aluminum:</u> MBXAL-100 (#10168) <u>Stainless:</u> MBXSS-100 (#10231)	MLN (#10105)	MFN (#10003) <u>Aluminum:</u> MFNAL-100 (#10098) <u>Stainless:</u> MFNSS-100 (#10232)	MFD (#10002) <u>Aluminum:</u> MFDAL-100 (#10097) <u>Stainless:</u> MFDSS-100 (#10234)
Super Metal-Fab 3x6x3 Grip Loc 	MB6X (#10160) MSP6X (#10265)	ML6N (#10148)	MF6N (#10012)	MF6D (#10011)
TDC/TDF 4x4x4 Grip Loc  *4x6x4 also noted	MBX4x4x4 (#10210) MSPX4x4x4 (#10264) MBX4x6x4* (#10214) <u>Aluminum:</u> MBXAL4x4x4-100 (#10258) <u>Stainless:</u> MBX4x4x4SS-100 (#10259) MBX316SS4x4x4 (#10275) MBXSS4x6x4-100* (#10262)	Not Available	MFN4x4x4 (#10211) MFN4x6x4* (#10246) <u>Stainless:</u> MFN4x4x4SS-100 (#10260)	MFD4x4x4 (#10237) MFD4x6x4* (#10245) <u>Stainless:</u> MFD316SS4x4x4 (#10276)
Econofab Guard Loc	EBX (#10171)	EFN (#10035)	Not Available	EFD (#10034)
Junior Guard Loc	JBX (#10169)	JRN (#10028)	Not Available	JRD (#10027)
Fabric Only (100ft. length)	DBX-6 (#10161) 6" wide DBX-10 (#10162) 10" wide	Not Available	DFN-6 (#10043) 6" wide DFN-10 (#10051) 10" wide	DFD-6 (#10042) 6" wide DFD-10 (#10050) 10" wide

All Metal-Fab, Super Metal-Fab and TDC/TDF Flexible Duct Connectors are manufactured with 24 gauge galvanized steel. Other materials are available upon request. Stainless Steel configurations utilize 300 or 316 grade material. Aluminum configurations have an alloy and temp: 3003-H14 and thickness: .032.



Insulflex*	Thermafab®	Envirofab 	Teflon	Glasseal
R4462	R4462	R4462	n/a	R4462
-40°F. to 180°F. (-40°C to 82°C)	-65°F. to 500°F. (-54°C to 260°C)	-40°F. to 200°F. (-40°C to 93°C)	-150°F. to 500°F. (-101°C to 260°C)	-40°F. to 180°F. (-40°C to 82°C)
Black	Grey	Black/White	Grey Outside/ Beige Inside	Grey & Black
28 oz. (.47 mm) (composite weight)	17 oz. (576 g/sq. meter)	18 oz. (610 g/sq. meter)	16.5 oz. (559 g/sq. meter)	16 oz. (407 g/sq. meter)
28 oz. (.47 mm) (composite weight)	17 oz. (576 g/sq. meter)	18 oz. (610 g/sq. meter)	16.5 oz. (559 g/sq. meter)	16 oz. (407 g/sq. meter)
125	400	350	650	120
8 lbs. / 11 lbs. (39 N x 49 N)	50 lbs. / 40 lbs. (222 N x 178 N)	60 lbs. / 80 lbs. (267 N x 356 N)	50 lbs. / 30 lbs. (222 N x 133 N)	8 lbs. / 9 lbs. (36 N x 40 N)
70 lbs. / 70 lbs. (311 N x 311 N)	200 lbs. / 150 lbs. (889 N x 1120 N)	200 lbs. / 190 lbs. (889 N x 845 N)	400 lbs. / 300 lbs. (1779 N x 1223 N)	90 lbs. / 90 lbs. (400 N x 400 N)
Polyester	Woven Fiberglass	Polyester	Fiberglass/Satin Weave	Woven Fiberglass
Vinyl	Silicon Rubber	Proprietary Vinyl Blend	Teflon	Vinyl
• Low Smoke Emission • Insulated 3-4-3 Configuration	• Excellent high temp. resistance • Excellent low temp. resistance • Excellent chemical resistance • Extremely low smoke emission • Excellent ozone resistance • Excellent resistance to weathering • Unaffected by mildew	• Environmentally 'Green' Connector  • Minimum 10% recycled content • UV reflective (white side) • Unaffected by mildew	• High temperature resistant • High corrosion resistance • Excellent chemical resistance	• Good, low cost • Resistant to acids & chemical fumes • Resistant to grease & alkalies • Unaffected by mildew
IDC (#10173) *Gauge: 28 †Guard Loc	MFT (#10005) <u>Stainless:</u> MFTSS-100 (#10233)	MEV4-100 (#10301)	MCT333 (#10278)	MGL (#10004)
Not Available	MF6T (#10013)	Not Available	Not Available	MF6G (#10016)
Not Available	<u>Stainless:</u> MFT4x4x4SS-100 (#10261)	MEV4x4x4 (#10300)	MCT444 (#10279)	Not Available
Not Available	EFT (#10037)	Not Available	Not Available	EGL (#10036)
Not Available	JRT (#10030)	JEV-100 (#10302)	Not Available	JGL (#10029)
Not Available	DFT-6 (#10045) 6" wide DFT-10 (#10053) 10" wide	Not Available	Not Available	DGL-6 (#10044) 6" wide DGL-10 (#10052) 10" wide

Notes:

1. Leakage resistance as per Federal Test Standard 191 Method #5512. Results in P.S.I. (To convert inches of water multiply P.S.I. x 27.176.).
2. Tear strength in tongue pounds as per Federal Test Standard 191 Method #5134.1 (warp/fill).
3. Tensile strength in grab pounds as per Federal Test Standard 191 Method #5100 (warp/fill).
4. Standard Excelon is not LA city approved. Use Excelon-LA when LA city approval is necessary. (See Specification Form Excelon-LA - 203)

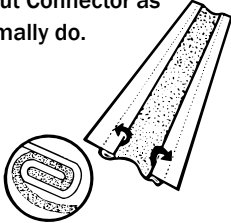
FABRICATING A FLEXIBLE CONNECTION

HOW TO STIFFEN FLEXIBLE CONNECTOR

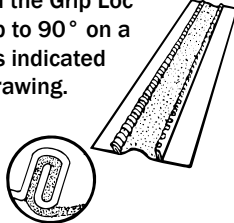
When installing large size flexible connectors in a duct system, some type of stiffening agent is usually required to keep the unit relatively rigid. Some contractors use angle iron, while in many cases a bar slip connection is used to achieve this result. Now it is possible to save valuable time and material by forming Duro Dyne's Grip Loc Seam found on Metal Fab and Super Metal Fab, to rigidize the connector over long sections. This simple method of stiffening the sides of Duro Dyne Flexible Connector can eliminate the costly addition of angle iron used to perform this job.

HERE IS HOW IT IS DONE:

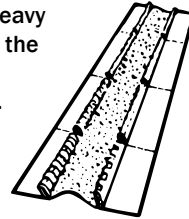
1. Lay out Connector as you normally do.



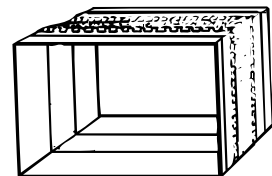
2. Bend the Grip Loc seam up to 90° on a brake as indicated in the drawing.



3. Using a heavy snips, notch the seam at the bend points.



4. Bend to form a completed connector.

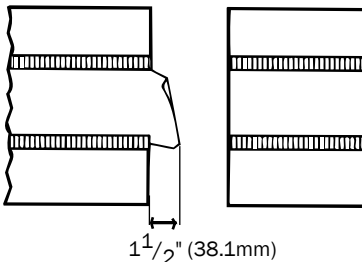


Note: The stiffening method illustrated here is recommended only with Duro Dyne Grip Loc Connector.

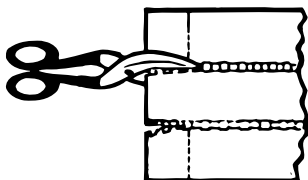
HOW TO SEAM FLEXIBLE CONNECTOR

Here is how we suggest the ends of Connector be prepared for making a joint:

1. Cut through center of the lock as indicated. Cut 1" (25.4mm) to 1 1/2" (38.1mm) deep to allow sufficient lap.



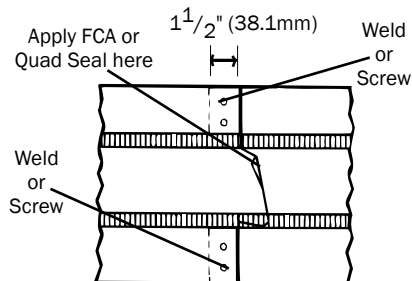
2. From the edge of the connector, cut away metal as indicated. The metal falls away exposing the fabric ready for seaming.



3. You have two options to finish your joint.

A. FCA

B. Duro Stapler with Quad Seal



3A. Apply one or two lines of FCA, sparingly, on the fabric, under the tongue. Press the tongue down on the adhesive. Rub the seam gently and hold it for 10 seconds. FCA can be used with Excelon, Neoprene, Durodon and Glasseal.



FCA Adhesive
1 oz. bottles
Item# 5090

3B. Put a liberal amount of Quad Seal between the two fabric flaps and press the two pieces together to allow the Quad Seal to spread. Roll the flap ends together and staple the seal (going through both pieces of fabric and the Quad Seal). Allow a minimum of 24 hours curing time before flexing the connection.

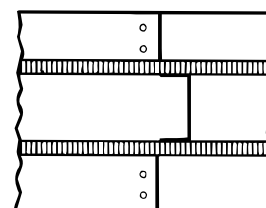
Quadseal can be used with Excelon, Neoprene, Durodon, Thermafab and Glasseal.

QS85 Quadseal
8 oz. can
Item# 8159



4. For an airtight connection, apply duct sealer over the metal joint. Refer to Duro Dyne's Adhesive Duct Sealer Catalog for further information on a suitable Duct Sealer.

Finished Joint



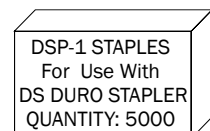
DURO STAPLER AND STAPLES

Duro Dyne's Flexible Connectors are preassembled metal-to-fabric which eliminates this difficult, time consuming shop operation. After forming the metal, the overlap can be riveted, screwed or spot welded.

The fabric seam can be quickly closed using the handy Duro Stapler. The result is a sturdily constructed, low cost flexible connector which meets engineering specifications. See Fabricating A Flexible Connection above.



ITEM# 10065

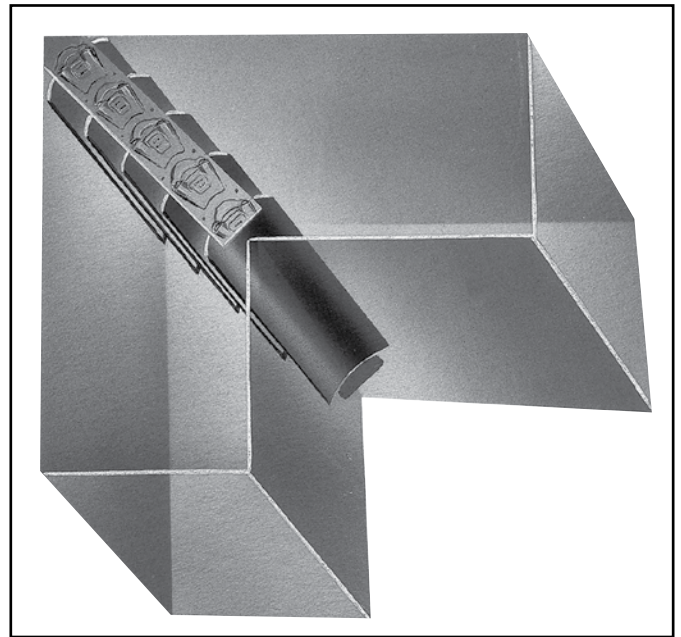


ITEM# 10059

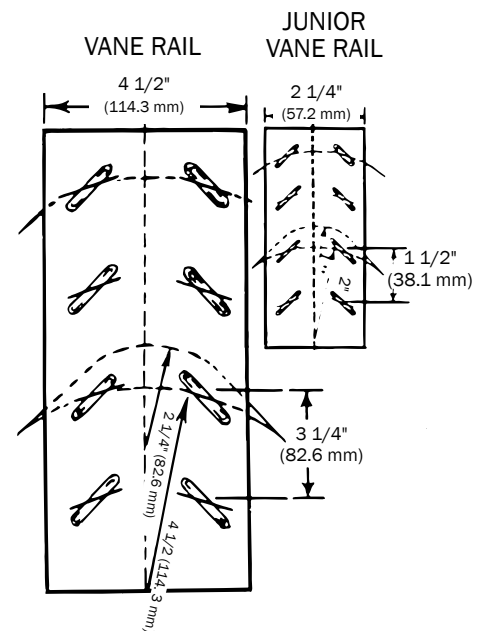
VANE RAIL

Air travelling throughout a duct is slowed up when it reaches a right turn angle. This "slow-up" is detrimental to the efficiency of the duct system, therefore air turning vane assemblies are used to guide air evenly around such turns. With today's high labor costs, it is expensive for shops to produce their own air turning assemblies. That is why Duro Dyne Vane Rail is a major contribution to sheet metal shops that require efficient, yet inexpensive air turning assemblies. With Duro Vane Rail, which is a pre-fab side rail, layout time is eliminated. Vanes can be sheared from scrap metal without tab cutting, and quickly assembled to rails with only one blow of a ball peen hammer.

Duro Dyne Vane Rail, made up of 24 gauge (.7 mm) galvanized steel, is precision-stamped and slotted assuring uniform spacing of vanes, and the fastest, easiest, most economical construction of vane assemblies. Duro Dyne Vane Rail is specially embossed adding strength and sturdiness to the finished section. Vane Rail can be used to make quality turning vanes for any size elbow including change of size elbows.



VANE RAIL		
ITEM	CODE	DESCRIPTION
4002	VR2	Vane Rail - 100 ft. (30.48 m) Continuous Coils
4003	JVR2	Junior Vane Rail - Two 100 ft. (30.48 m) Continuous Coils (Easily Dispensed Together or Singularly)
4007	VR2SS	300 Series Stainless Steel Vane Rail
4008	VR2AL	Aluminum Vane Rail



FABRICATING AIR TURNING VANES



1. Shear and form the vanes as indicated. Position the vanes in the Vane Rail slot. The slots force the vanes to take the correct curve.

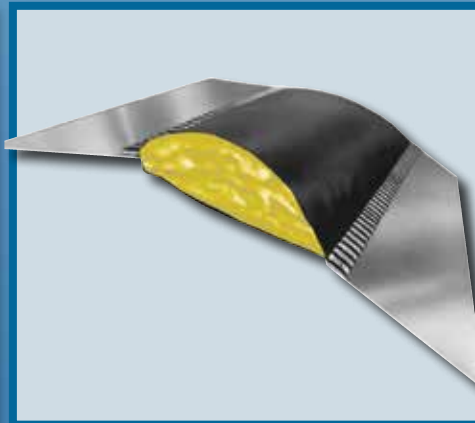
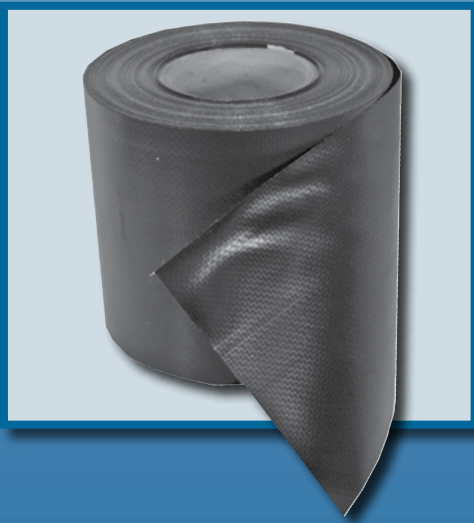


2. Secure the protruding vane with a ball peen hammer.



3. An extra deep depression in Vane Rail allows for superior gripping action. The vane assembly is then fastened in the elbow.

Please Visit Our Website
www.durodyne.com
for the most current product information.



Manufactured in the U.S.A.



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Printed in USA 10/13
BB008402

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Duro Dyne Midwest Division, Fairfield, OH	513-870-6000	Fax: 513-870-6005
Duro Dyne West Division, Santa Fe Springs, CA	562-926-1774	Fax: 562-926-5778
Duro Dyne Canada, Lachine, Quebec, Canada	514-422-9760	Fax: 514-636-0328
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