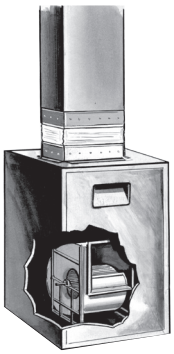
SUBMITTAL RECORD
JOB _____
LOCATION _____
SUBMITTED TO _____
SUBMITTAL PREPARED BY _____
APPROVED BY _____
DATE _____

Submittal Form Single Fold Flexible Duct Connector

DESCRIPTION

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 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 attached to sheet metal on both side, must be inserted between the equipment and the ductwork. This vibration isolator is called a "Flexible Duct Connector".

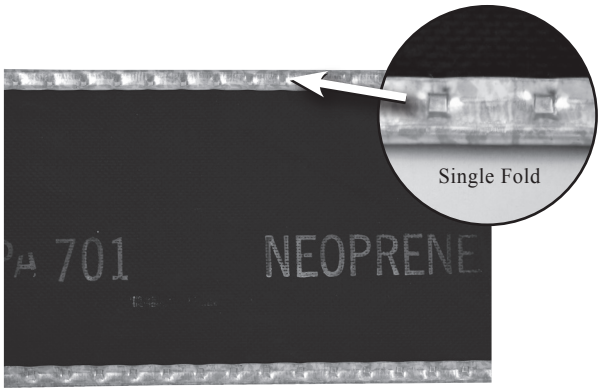


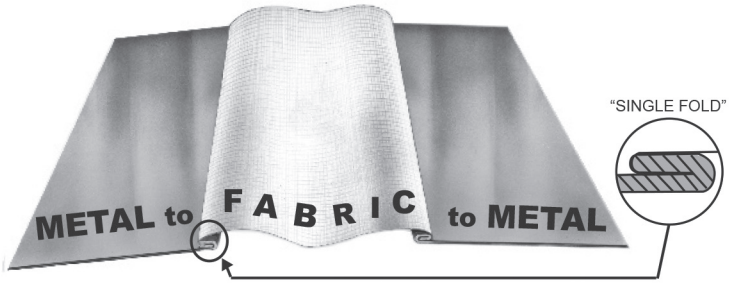
RELATED NFPA 90A & 90B STANDARDS

2-3.2.2 Vibration isolation connectors in duct systems shall be made of an approved flame-retardant fabric or shall consist of sleeve joints with packing of approved material, each having a maximum flame spread index of 25 and a maximum smoke developed index of 50. Exception: Approved flame-retardant fabric having a maximum length of 10 in. (25.4 cm) in the direction of airflow-**NFPA No. 90A 1999**

2-1.1.1 Exception No. 3: Vibration isolation connectors in duct systems shall be made of approved flame-retardant fabric or shall consist of sleeve joints with packing of approved noncombustible material. The fabric shall not exceed 10 in. (254 mm) in length in direction of airflow-**NFPA No. 90B 1999**

FABRIC COMPARISONS	Excelon[5] ☐	Neoprene ☐
UL Classified File #	**R4462**	**R4462**
Continuous Temp. Range	-40˚F. to 180˚F.	-40˚F. to 200˚F.
Color	Black	Black
Weight Per Square Yard	22	30
Abrasion Resistance[1]	15,000 cycles	600 cycles
Leakage Resistance[2]	350	595
Tear Strength[3]	100/100	12/12
Tensile Strength[4]	240/220	500/450
Base Fabric	Woven Nylon/ Polyester Blend	Woven Fiberglass
Coating	Vinyl	Neoprene
Features	High Tear Strength High Abrasion Resistance	General Purpose
Codes		
Metal-Fab 3x3x3 Single Fold	SFMBX333 (#10379)	SFMFN333 (#10377)
Super Metal-Fab 3x6x3 Single Fold	SFMB6X363 (#10381)	SFMF6N363 (#10380)
TDC/TDF 4x4x4 Single Fold	SFMBX444 (#10382)	SFMFN444 (#10384) SFRMFN444 (#10387 Reverse)
TDC/TDF 4x6x4 Single Fold	SFMBX464 (#10383)	





All Duro Dyne Flexible Duct Connector Products are suitable for pressures of -10 to +15 wg. Duro Dyne's 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.

Cross Reference Chart	
Previous Part #	**New Part #**
10130	10377
10164	10379
10217	10382
10218	10383
10219	10384
10289	10387
10201	10380
10202	10381

All Metal-Fab, Super Metal-Fab and TDC/TDF Flexible Duct Connectors are manufactured with 24 gauge galvanized steel.
Duro Dyne meets or exceeds the SMACNA steel requirements for flexible duct connector.
Other materials are available upon request.

Notes:

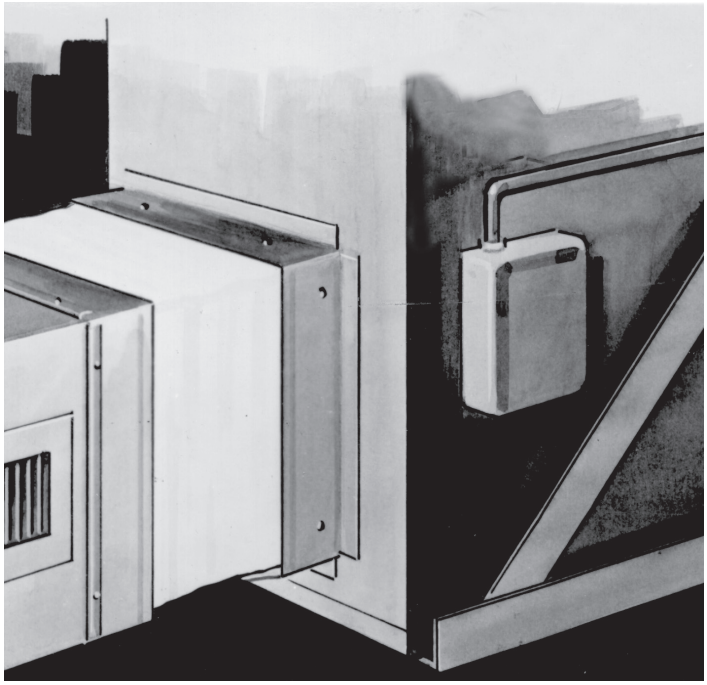
1. Abrasion resistance as per Federal Test Standard 191 Method #5306 using CS 17 wheel with 250 Gram load.
2. Leakage resistance as per Federal Test Standard 191 Method #5512. Results in P.S.I. (To convert inches of water multiply P.S.I. x 27.176.).
3. Tear strength in tongue pounds as per Federal Test Standard 191 Method #5134.1 (warp/fill).
4. Tensile strength in grab pounds as per Federal Test Standard 191 Method #5100 (warp/fill).
5. Standard Excelon is not LA city approved. Use Excelon-LA when LA city approval is necessary. (See Specification Form Excelon-LA - 203)

SUGGESTED SPECIFICATION

Vibration Isolating Flexible Duct Connector For Heating, Cooling & Exhaust Supplies & Returns.

At the inlet and discharge of all air handling equipment(unless otherwise noted) furnish and install vibration isolators. Vibration isolators shall be a coated woven fabric named _____ and shall be "Underwriters Laboratories Classified".

Vibration isolators shall have a tear strength of not less then _____, and a continuous temperature range of _____ .Vibration isolators shall be preassembled metal to exposed fabric to metal. Vibration isolators shall be code_____ (called Flexible Duct Connectors) as manufactured by Duro Dyne Corporation, Bay Shore, N.Y.



Specifications

All Listed Duro Dyne Flexible Duct Connector Fabrics are designed to meet the following specifications:

1. MIL-C-20696B Para. 4.4.3. (Oil Resistance).
2. MIL-C-20696B Para. 4.4.4. (Hydro Carbon Resistance).
3. NFPA 90A Installation of Air Conditioning and Ventilating Systems Para. 4.3.2.2 2012 Edition.
4. NFPA 90B Warm air heating and air conditioning systems. Para. 4.1.1.1.3.1 2012 Edition. *(*See note 1 below)*
5. NFPA701 Tests for Flame Propagation of Fabrics and film.
6. California State Fire Marshal Approved.
7. Los Angeles City Approved. *(*See note 2 below*)
8. Denver City Approved.

All Duro Dyne Flexible Duct Connectors utilize galvanized steel meeting ASTM-A-525 G 60 or better.

Note 1 - Standard Excelon does not currently meet NFPA 90B 2012 but does meet all previous editions. Use Excelon-LA if NFPA 90B 2012 approval is necessary.

****Note 2*** - Standard Excelon is not LA city approved. Use Excelon-LA when LA city approval is necessary. (See Submittal Form for Excelon-LA)

CHEMICAL RESISTANCE

(X = Extremely Resistant)
(NR = Not Recommended)
(O = No Data Available)

Chemical	Excelon	Neoprene
Acetic Acid	NR	X
Aluminum Chloride	X	X
Aluminum Sulfate	X	X
Ammonia (Anhyd)	X	X
Ammonium Hydroxide	X	X
Ammonium Sulfate	X	X
Barium Sulfide	X	X
Black Sulfate Liquor	X	X
Boric Acid	X	X
Butyl Alcohol	NR	X
Cadmium Plating Solution	X	NR
Calcium Chloride	X	X
Calcium Hypochlorite	X	NR
Chlorine Water	X	NR
Chromic Acid	X	NR
Chromium Plating Solution	X	O
Citric Acid	X	X
Copper Chloride	X	X
Copper Sulfate	X	X
Cottonseed Oil	X	X
Diacetone Alcohol	NR	X
Disodium Phosphate	X	NR
Ethyl Alcohol	NR	X
Ethylene Glycol	NR	X
Ferric Chloride	X	X
Ferric Sulfate	X	X
Fluroboric Acid	X	X
Formaldehyde (40%)	X	X
Formic Acid	X	X
Glucose	X	X
Glycerine	NR	X
Heptane	NR	X
Hexane	NR	X
Hydrobromic Acid (40%)	NR	X
Hydrochloric Acid (conc)	NR	X

Chemical	Excelon	Neoprene
Hydrofluoric Acid (100%)	NR	X
Hydrogen Peroxide	X	NR
Hydrogen Sulfide	X	X
Lactic Acid	NR	X
Linseed Oil	NR	X
Magnesium Chloride	NR	X
Maleic Acid	X	NR
Methyl Alcohol	NR	X
Methyl Cellosolve	NR	X
Mineral Oil	X	X
Naptha	NR	NR
Nickel Chloride	X	X
Nickel Sulfate	X	X
Nitric Acid (40%)	X	NR
Oleic Acid	X	NR
Oleum	NR	NR
Oxalic Acid	X	X
Phosphoric Acid (85%)	NR	X
Pickling Solution	X	NR
Potassium Chloride	X	X
Potassium Cyanide	X	X
Potassium Dichromate	X	X
Potassium Hydroxide (40%)	X	X
Potassium Sulfate	X	X
Propyl Alcohol	NR	X
Sodium Chloride	X	X
Sodium Hydroxide (40%)	NR	X
Sodium Hypochlorite	NR	NR
Steam	NR	X
Sulfur Dioxide (Liquid)	NR	X
Sulfuric Acid (50%)	X	NR
Sulfuric Acid (over 50%)	NR	NR
Tannic Acid	X	X
Vinegar	X	X

Duro Dyne East Division, Bay Shore, NY 631-249-9000 Fax: 631-249-8346
Duro Dyne Midwest Division, Hamilton, OH 513-870-6000 Fax: 513-870-6005
Duro Dyne West Division, Fontana, CA 562-926-1774 Fax: 562-926-5778
Duro Dyne Canada, Lachine, Quebec, Canada 514-422-9760 Fax: 514-636-0328
www.durodyne.com E-mail: durodyne@durodyne.com

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