



Specification Form DDFDC 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 & 90 B 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. (45.4 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**

"METAL - FAB"

Gauge: 24*
Dimensions: 3" metal-
3" fabric- 3" metal
Seam: "Grip Loc"



"SUPER METAL - FAB"

Gauge: 24
Dimensions: 3" metal-
6" fabric- 3" metal
Seam: "Grip Loc"

FABRIC COMPARISONS	Envirofab	Dynalon	Excelon ⁴	Neoprene	Durolon	Insulflex*	Thermafab
Continuous Temp. Range	-40°F. - 200°F.	-40°F. - 280°F.	-40°F. to 180°F.	-40°F. to 200°F.	-40°F. to 250°F.	-40°F. to 180°F.	-65°F. to 500°F.
Color	Black/White	White	Black or Spec Chek Orange	Black	White	Black	Grey
Weight Per Square Yard	18	24	22	30	26	28(composite weight)	17
Leakage Resistance ¹	350	250	350	595	250	125	400
Tear Strength ²	60 x 80	110 x 100	100/100	12/12	12/12	8/11	50/40
Tensile Strength ³	200 x 190	280 x 235	240/220	500/450	225/300	70/70	200/150
Features	"Green" 10% recycled content UV reflective puncture resistant	Highly Flexible UV resistant excellent weathering	High Tear Strength High Abrasion Resistance.	General Purpose	Excellent Ozone and Weathering Resistance. Best Overall Acid Resistance.	Low Smoke Emission Insulated 3-4-3 Configuration	Very Low Smoke Emission. High Temperature Resistant.
Codes							
Metal-Fab	MEV4-100(#10301)	MYL4-100(#10316)	MBX(#10159) MSPX(#10263)	MFN(#10003)	MFD(#10002)	IDC(#10173) *Gauge: 28	MFT(#10005)
Super Metal-Fab			MB6X(#10160) MSP6X(#10265)	MF6N(#10012)	MF6D(#10011)		MF6T(#10013)
TDC/TDF	MEV4x4x4(#10300)	MYL4x4x4(#10315)	MBX4x4x4(#10210) MSPX4x4x4(#10264) MBX4x6x4(#10214)	MFN4x4x4(#10211) MFN4x6x4(#10246)	MFD4x4x4(#10237) MFD4x6x4(#10245)		

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)

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 than _____, an abrasion resistance of not less than _____, and a continuous temperature range of _____. Vibration isolators shall be preassembled metal to exposed fabric to metal. Fabric and metal shall be joined by means of a double lock seam.

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. 2-3.2.2 1999 Edition.
4. NFPA 90B Warm air heating and air conditioning systems. Para. 2-1.1.1 exc. no 3 1999 Edition.
5. NFPA701 Tests for Flame Propagation of Fabrics and film.
6. California State Fire Marshal Approved.
7. Los Angeles City Approved. (See note 1 below)
8. Denver City Approved.

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

Duro Dyne Flexible Duct Connectors are also available with 300 series stainless steel or 3003 aluminum upon request.

Note 1 - Standard Excelon is not LA city approved. Use Excelon-LA when LA city approval is necessary. (See Specification Form Excelon-LA - 203)

CHEMICAL RESISTANCE

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

Chemical	Excelon	Neoprene	Durodon	Insulflex	Thermafab	Envirofab	Dynalon	Chemical	Excelon	Neoprene	Durodon	Insulflex	Thermafab	Envirofab	Dynalon
Acetic Acid	~	X	X	~	~	~	~	Hydrofluoric Acid (100%)	~	X	X	~	~	~	~
Aluminum Chloride	X	X	X	X	X	X	X	Hydrogen Peroxide	X	~	X	X	X	X	X
Aluminum Sulfate	X	X	X	X	X	X	X	Hydrogen Sulfide	X	X	X	X	O	X	X
Ammonia (Anhyd)	X	X	X	X	X	X	X	Lactic Acid	~	X	X	~	O	~	~
Ammonium Hydroxide	X	X	X	X	X	X	X	Linseed Oil	~	X	X	~	X	~	~
Ammonium Sulfate	X	X	X	X	X	X	X	Magnesium Chloride	~	X	X	~	~	~	~
Barium Sulfide	X	X	X	X	O	X	X	Maleic Acid	X	~	X	X	X	X	X
Black Sulfate Liquor	X	X	X	X	~	X	X	Methyl Alcohol	~	X	X	~	~	~	~
Boric Acid	X	X	X	X	X	X	X	Methyl Cellosolve	~	X	X	~	~	~	~
Butyl Alcohol	~	X	X	~	~	~	~	Mineral Oil	X	X	X	X	~	X	X
Cadmium Plating Solution	X	~	~	~	O	X	X	Naptha	~	~	~	~	X	~	~
Calcium Chloride	X	X	X	X	X	X	X	Nickel Chloride	X	X	X	X	O	X	X
Calcium Hypochlorite	X	~	X	X	O	X	X	Nickel Sulfate	X	X	X	X	X	X	X
Chlorine Water	X	~	~	X	~	X	X	Nitric Acid (40%)	X	~	X	X	~	X	X
Chromic Acid	X	~	X	X	O	X	X	Oleic Acid	X	~	~	X	~	X	X
Chromium Plating Solution	X	O	O	~	O	X	X	Oleum	~	~	X	~	O	~	~
Citric Acid	X	X	X	X	X	X	X	Oxalic Acid	X	X	X	X	X	X	X
Copper Chloride	X	X	X	X	O	X	X	Phosphoric Acid (85%)	~	X	X	~	X	~	~
Copper Sulfate	X	X	X	X	O	X	X	Pickling Solution	X	~	X	X	O	X	X
Cottonseed Oil	X	X	X	X	X	X	X	Potassium Chloride	X	X	X	X	O	X	X
Diacetone Alcohol	~	X	X	~	O	~	~	Potassium Cyanide	X	X	X	X	O	X	X
Disodium Phosphate	X	~	~	X	O	X	X	Potassium Dichromate	X	X	X	X	O	X	X
Ethyl Alcohol	~	X	X	~	~	~	~	Potassium Hydroxide (40%)	X	X	X	~	X	X	X
Ethylene Glycol	~	X	X	~	X	~	~	Potassium Sulfate	X	X	X	X	O	X	X
Ferric Chloride	X	X	X	X	X	X	X	Propyl Alcohol	~	X	X	~	~	~	~
Ferric Sulfate	X	X	X	X	X	X	X	Sodium Chloride	X	X	X	X	X	X	X
Fluoroboric Acid	X	X	X	~	O	X	X	Sodium Hydroxide (40%)	~	X	X	~	X	~	~
Formaldehyde (40%)	X	X	X	X	O	X	X	Sodium Hypochlorite	~	~	X	~	~	~	~
Formic Acid	X	X	X	X	O	X	X	Steam	~	X	~	~	O	~	~
Glucose	X	X	X	X	X	X	X	Sulfur Dioxide (Liquid)	~	X	X	~	X	~	~
Glycerine	~	X	X	~	X	~	~	Sulfuric Acid (50%)	X	~	X	~	~	X	X
Heptane	~	X	X	~	O	~	~	Sulfuric Acid (over 50%)	~	~	X	~	~	~	~
Hexane	~	X	X	~	O	~	~	Tannic Acid	X	X	X	X	O	X	X
Hydrobromic Acid (40%)	~	X	X	~	O	~	~	Vinegar	X	X	X	X	X	X	X
Hydrochloric Acid (cone)	~	X	X	~	~	~	~								

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