

TWOB/TBOB/TWOBHV/TBOBHV Series

Chemfluor® PTFE Fluoropolymer Helically Convoluted Inner Tube

Stainless Steel Braid • Open Pitch

applications

- Sanitary transfer
- Food, flavors and syrups
- Solvent transfer
- Drain and sample lines

common media

- Base chemicals
- Corn syrup
- Hexane (TBOB)
- Product transfer
- Caustic solutions

industry approvals & compliances

- USDA
- FDA (TWOB only)
- Pharmacopeia Class VI

features & benefits

Chemfluor® PTFE inner tube

- Excellent chemical resistance
- Compatible with almost all materials
- Rounded, open-pitch helical convolutions shaped to ensure smooth product flow
- Non-stick surface, easy to clean (steam, caustics, solvents or other cleaning agents)
- Assured sterility
- Easy to flex, yet won't flatten when bent

Chemfluor® black PTFE electrostatic dissipating conductive inner tube

- Co-extrusion design with minute amount of carbon added to inner portion of thick-wall construction
- Processed to prevent chemical leaching or friction contamination
- Chemfluor® PTFE properties are completely maintained

engineering specifications

| maximum length | | temperature rating |
|----------------|------|--------------------|
| 3/8" | 100' | • -100°F to +450°F |
| 1/2" | 100' | • -73°C to +232°C |
| 3/4" | 70' | |
| 1" | 65' | |
| 1-1/4" | 45' | |
| 1-1/2" | 70' | |
| 2" | 50' | |
| 3" | 30' | |
| 4" | 20' | |

details

construction

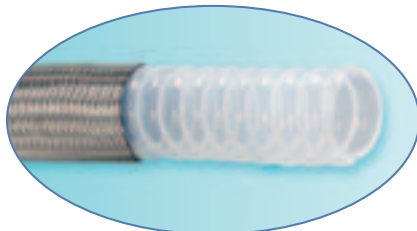
- Inner Tube
 - TWOB: Chemfluor® white PTFE
 - TBOB: Chemfluor® black PTFE electrostatic dissipating conductive
- Reinforcement: 316 stainless steel braid
 - Other braid options available:
 - Polypropylene – TWQY/TBOY, see page 19
 - PVDF (Kynar®) – TWOK/TBOK, see page 20

fittings

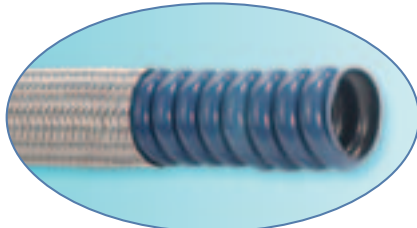
- PermaSeal® crimp-style
 - Over 40 styles
- Flare-Thru fitting technology available:
 - 150# lap-joint style flanged
 - Female cam and groove
 - Sanitary clamp style
 - 1/2" mini sanitary Flare-Thru available using 3/8" ID open pitch hose
- Fitting details begin on page 31

⚠ Important:

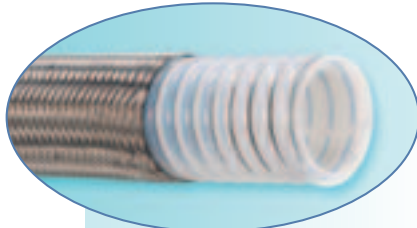
- Hose assemblies may be autoclaved; however, flare faces of Flare-Thru fittings must be clamped down to prevent damage to sealing surface



TWOB



TBOB



TWOBHV

TWOBHV/TBOBHV Series

- Fully rated vacuum hose
- Recommended for full vacuum applications
- Should always be used for 2-1/2", 3" and 4" I.D. assemblies

TWOB/TBOB Series hose specifications

| Part Number* | Inside Diameter | | Outside Diameter | | Maximum Working Pressure | | Minimum Burst Pressure | | Minimum Bend Radius | | Vacuum Hg @ 70°F | | Weight | |
|--------------|-----------------|-------|------------------|-------|--------------------------|------|------------------------|-------|---------------------|--------|------------------|-------|---------|--------|
| | in. | mm. | in. | mm. | PSI | Mpa | PSI | Mpa | in. | mm. | in. | mm. | lb./ft. | kg./m. |
| 8TWOB/TBOB | 1/2 | 12.7 | 3/4 | 19.1 | 500 | 3.45 | 2,000 | 13.79 | 2.00 | 50.80 | 29.9 | 75.95 | 0.20 | 0.30 |
| 12TWOB/TBOB | 3/4 | 19.1 | 1-1/8 | 28.6 | 425 | 2.93 | 1,700 | 11.72 | 2.75 | 69.85 | 29.9 | 75.95 | 0.30 | 0.45 |
| 16TWOB/TBOB | 1 | 25.4 | 1-1/4 | 31.8 | 350 | 2.41 | 1,400 | 9.65 | 4.00 | 101.60 | 29.9 | 75.95 | 0.40 | 0.60 |
| 20TWOB/TBOB | 1-1/4 | 31.8 | 1-5/8 | 41.3 | 337 | 2.32 | 1,350 | 9.31 | 5.50 | 139.70 | 29.9 | 75.95 | 0.70 | 1.04 |
| 24TWOB/TBOB | 1-1/2 | 38.1 | 2 | 50.8 | 275 | 1.90 | 1,100 | 7.58 | 7.00 | 177.80 | 29.9 | 75.95 | 0.75 | 1.12 |
| 32TWOB/TBOB | 2 | 50.8 | 2-1/2 | 63.5 | 250 | 1.72 | 1,000 | 6.90 | 8.50 | 215.90 | 29.9 | 75.95 | 1.05 | 1.56 |
| 40TWOB/TBOB | 2-1/2 | 63.5 | 3-1/8 | 79.4 | 212 | 1.46 | 850 | 5.86 | 13.00 | 330.20 | 29.9 | 75.95 | 1.35 | 2.01 |
| 48TWOB/TBOB | 3 | 76.2 | 3-7/8 | 98.4 | 175 | 1.21 | 700 | 4.83 | 14.00 | 355.60 | 29.9 | 75.95 | 1.75 | 2.61 |
| 64TWOB/TBOB | 4 | 101.6 | 5 | 127.0 | 150 | 1.03 | 600 | 4.14 | 16.00 | 406.40 | 29.9 | 75.95 | 2.10 | 3.13 |

⚠ Important: *Add HV to indicate HV Series.

⚠ Important:

Burst pressure ratings at ambient 70°F (21°C). See applicable notes below on vacuum/pressure ratings at temperatures other than ambient.

Working Pressure is given @ 70°F; decrease working pressure 1% for every 2°F above 250°F.

Vacuum Rating is given @ 70°F @ 2X minimum bend radius; decrease vacuum rating 1% for every 2°F above 250°F. Vacuum rating decreases when installed @ less than 2X minimum bend radius. TWOBHV/TBOBHV Series (heavy duty vacuum option) allows full vacuum ratings for 1-1/2", 2" and 2-1/2" sizes up to 350°F; decrease vacuum rating 1% for every 2°F above 350°F. Vacuum rating @ less than 2x minimum bend radius: 1-1/4" = 26" Hg; 1-1/2" = 25" Hg; 2" = 20" Hg; 2-1/2" = 17" Hg; 3" = 20" Hg; 4" = 17" Hg.

Extended Service Life Tip: Flexible Components suggests using full-length anti-kink armor casing or at least 16" to 24" long anti-kink cuffs (see Hose Cover Options, pages 75-76) at each fitting end to help reduce the strain on the crimp collar and fittings in high load installations. Prolonged service at elevated temperatures will reduce total service life.