

**INNOVATIVE TEFLON® and METAL SOLUTIONS**



## RUBBER COVERED



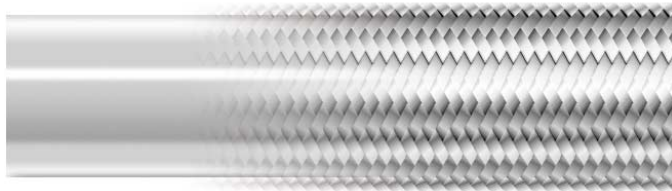
**Inner Core:** Smooth FEP Teflon®, Smooth PTFE Teflon®

**Reinforcement:** EPDM Rubber

**Construction:** White smooth bore Teflon® liner bonded to a reinforced EPDM rubber cover. An imbedded carbon steel wire helix provides, kink, crush and vacuum resistance.

**Applications:** Rubber covered Teflon® hose is ideal for applications requiring a smooth bore inner tube for improved flow that can be easily cleaned in place. Rubber covered Teflon® hose also offers tremendous abrasion resistance as well as good flexibility.

## SMOOTH BORE STAINLESS BRAIDED



**Inner Core:** Smooth PTFE Teflon® (natural or conductive)

**Reinforcement:** 300 Series Stainless steel braid

**Construction:** Extra thick natural or conductive smooth bore Teflon® PTFE tube, braided with 300 series stainless steel braid.

**Applications:** Smooth bore braided Teflon® hose is ideally suited for applications requiring a true smooth inner bore for improved flow and can be easily cleaned in place. The smooth bore product can be supplied with a conductive tube, which is excellent in static applications.

## CONVOLUTED STAINLESS BRAIDED



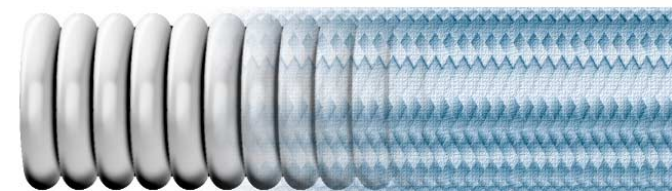
**Inner Core:** Seamless convoluted Teflon® PTFE (natural or conductive)

**Reinforcement:** 316 Stainless steel braid

**Construction:** Extra thick natural or conductive helically convoluted seamless Teflon® PTFE tube, braided with 316 stainless steel braid.

**Applications:** Convoluted hose is designed for Chemical, Pharmaceutical, FDA and any other application requiring an extremely flexible, lightweight PTFE hose assembly.

## CONVOLUTED POLYPROPYLENE BRAIDED



**Inner Core:** Seamless convoluted Teflon® PTFE (natural or conductive)

**Reinforcement:** Polypropylene UV stabilized braid also available.

**Construction:** Extra thick natural or conductive helically convoluted seamless Teflon® PTFE tube, braided with high denier polypropylene braid.

**Applications:** Convoluted hose is designed for Chemical, Pharmaceutical, FDA and any other application requiring an extremely flexible, lightweight PTFE hose assembly. The polypropylene braid has better abrasion resistance than metal braids and will help to eliminate safety issues.

## PIPE FITTINGS



Style	Sizes Available	Standard Material
Threaded, male and female	1/2" – 4"	316 SS, Carbon Steel, Monel
Flanged (#150 & #300)	1/2" – 4"	PTFE Flare Through, 316 SS, Carbon Steel
Female JIC	1/2" – 2"	Carbon Steel, 316 SS
Butt Weld	1/2" – 4"	316 SS

- Custom materials are available. Contact MFC for more information.

## CAM & GROOVE FITTINGS



Style	Sizes Available	Standard Material
Female Cam & Groove	3/4" – 4"	316 SS, Teflon® Encapsulated
Male Cam & Groove	3/4" – 4"	316 SS, Teflon® Encapsulated

- Custom materials are available. Contact MFC for more information.

## SANITARY & MISCELLANEOUS FITTINGS



Style	Sizes Available	Standard Material
Sanitary Tri-Clamp	1/2" x 1" Shank Size	316 SS
Mini Sanitary	1/2" – 3/4"	316 SS
Sanitary Elbow	1/2" x 1" Shank Size	316 SS
Sanitary I-Line	1" – 4"	316 SS
Bevel Seat	1" – 2"	316 SS
Compression Tube	1/2" – 1"	316 SS

- Custom materials are available. Contact MFC for more information.

***FABRICATING TO YOUR SPECIFICATIONS***

MFC has the capability to manufacture a complete line of metal hose products, in many different sizes, configurations and metal alloys. Our metal hose assemblies are ideal for absorbing vibration, pipe misalignment and movement in equipment. Assemblies can be manufactured and designed to handle a wide range of temperatures, from cryogenic to 1500 degrees F. Multiple layers of stainless braid can be added for applications involving higher working pressures.

MFC Metal assemblies can be manufactured using a wide variety of fittings, as well as the capability to custom fabricate non-standard end fitting configurations. Please contact MFC at 651-645-7522 or 800-351-9069 to discuss your specific application and requirements.

We inventory a wide range of products and end fitting configurations. Standard size flanged and threaded pump connectors are stocked for same day shipment when needed.



## **WHY TEFLON®**

*Many of today's pharmaceutical and biotech plants must be flexible, producing multiple products and still maintain purity, durability, and clean-ability with lower maintenance costs. To meet these somewhat difficult demands engineers are turning to flexible piping products made from Teflon® fluoro polymers. With unmatched chemical compatibility Teflon® products will handle just about any application in the biotech, biochem, or pharmaceutical process.*

*Teflon® flexible piping products are manufactured using a non-wetting surface that will resist buildup, and can be cleaned using the strongest cleaning solutions as well as clean-in-place steam processes.*

## **WHY METAL**

*There are many different critical hose applications and many different hoses that can be considered. MFC has put together some very basic guidelines that will help you to determine when and where a metal hose assembly is the best choice.*

- *Extreme temperature: Metal hose assemblies are designed to handle temperatures from a high of 1500 degrees F. to low cryogenics.*
- *Vibration and piping misalignment: MFC Metal hose assemblies can be designed to dampen Vibration and misalignment in piping systems.*
- *Vacuum applications: MFC metal hose assemblies can be designed to work in applications involving full vacuum. Under full vacuum a metal hose maintains its shape where other hose types may collapse.*
- *High Pressure applications: MFC metal hose assemblies can be designed to handle higher working pressures than most other hose types.*

***Teflon® and metal hose products are available in many different sizes and styles. Please contact MFC at 651-645-7522 or 800-351-9069 with your specific application requirements. We will gladly help you in the design of a specific product for your most challenging applications. MFC has the capability and inventory to help you overcome your toughest obstacles.***

## **OTHER PRODUCTS AVAILABLE**

<b>Products</b>	<b>Application</b>
<b>Rubber Hose</b>	<i>Air, water, acid, steam, oil or other material handling can be safely accomplished with MFC's stock of rubber hose and fittings.</i>
<b>Flexible Duct</b>	<i>Specific applications include ventilation, vapor recovery, pneumatic conveying and fume removal. Rubber, fabric, metal or plastic reinforced hose and duct.</i>
<b>PVC Hose</b>	<i>Economical for water, air, material handling, corrosives and food products. Durable, yet lightweight.</i>
<b>Tubing</b>	<i>Rubber and plastic tubing to meet a wide range of specific requirements.</i>
<b>Expansion Joints</b>	<i>Designed to help solve particularly challenging motion problems created by pressure and temperature. A size and style to fit any application.</i>
<b>Fittings</b>	<i>A variety of plastic and metal fittings including stainless steel, permanent or reusable, to support our full line of industrial hose.</i>
<b>Quick Disconnect</b>	<i>Most comprehensive range of quick connect couplings for hydraulics, pneumatics, water, gases, chemicals, and other fluids available anywhere.</i>
<b>Hose Accessories</b>	<i>Hose clamps, blowguns, safety chains, valves, hose reels, swivel joints, nozzles and fluid handling components.</i>



**MINNESOTA FLEXIBLE CORPORATION**  
*The Quality Industrial Hose Specialists*

803 Transfer Road • Saint Paul, MN 55114 USA  
Tel: (651) 645-7522 • Fax: (651) 645-8259 • Wats: (800) 351-9069  
[www.minnesotaflexible.com](http://www.minnesotaflexible.com) • [info@minnesotaflexible.com](mailto:info@minnesotaflexible.com)