

TEFLON HOSE

***CONVOLUTED AND SMOOTH BORE
HOSE & FITTINGS***



"NO ORDER TOO LARGE...NO ORDER TOO SMALL"

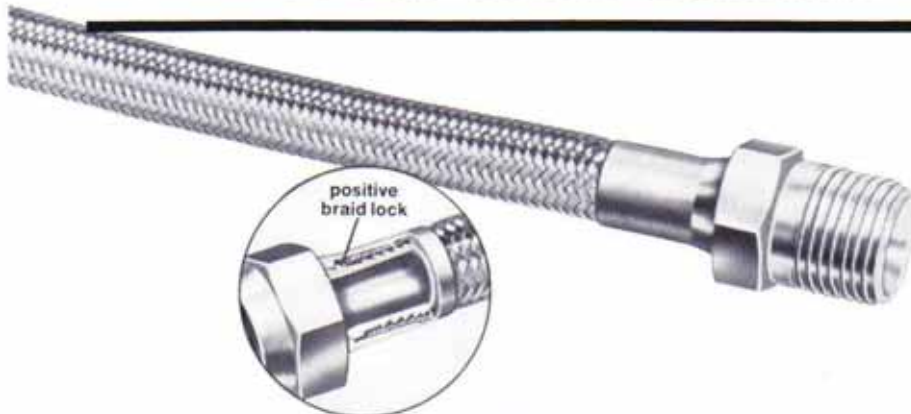
TWIN CITY HOSE, INC

9/01

• SERVING INDUSTRIAL HOSE NEEDS •
20615 COMMERCE BLVD. • ROGERS, MN 55374
(763) 428-5100 • FAX (763) 428-5111

TCR-115 Hose Assemblies

TCR-122 Conductive Hose Assemblies



These general-purpose Teflon hoses are most widely utilized hoses throughout industry. They are presently found in operations as diverse as chemical transfer, steel processing, paint spraying, fuel and lubricant handling, hydraulic systems, plastic molding machines, food processing, marine and transportation industries.

Sizes through 3/4" I.D. are rated for full vacuum. Larger hose sizes can be reinforced with an internal support spring for full vacuum service. For continuous pneumatic service at the highest pressure ratings, we recommend the use of high pressure hoses for enhanced performance.

Hose Construction

TCR-115 has a **smooth innercore** of extruded white Teflon resin with type 304 stainless wire braid reinforcement.

TCR-122 has a precisely controlled amount of carbon black added to the inner 15% of the Teflon innercore. This homogeneous material provides a continuous conductive path to the metal and fittings, to bleed off static electricity.

Temperature Range

-65°F to 450°F (-54°C to 232°C) for continuous service.
-100°F to 500°F (-73°C to 260°C) for intermittent service only.

Standards

Meets requirements of SAE 100R5.
Accepted by U.S. Coast Guard.

SPECIFICATIONS

Hose Part Number	Nominal Size, in.	Nominal I.D., in.	Nominal O.D., in.	Operating Pressure psi at room temp.	Operating Pressure psi at 450°F	Min. Burst Pressure psi at room temp.	Typ. Max. Continuous Length, ft.	Minimum Bend Radius, in.	Hose Weight lb./ft.
TCR-115-3	3/16	.125	.234	3,000	1,500	15,000	200	2	.050
TCR-115/122-4	1/4	.187	.312	3,000	1,500	15,000	200	2	.070
TCR-115/122-5	5/16	.250	.375	3,000	1,500	14,000	150	3	.099
TCR-115/122-6	3/8	.312	.445	2,500	1,500	12,000	150	4	.110
TCR-115-6T*	3/8	.375	.503	2,250	1,500	10,000	150	4.5	.124
TCR-115/122-8	1/2	.406	.549	2,000	1,500	10,000	100	5.2	.123
TCR-115/122-10	5/8	.500	.648	1,500	1,000	8,500	100	6.5	.154
TCR-115/122-12	3/4	.625	.778	1,200	1,000	6,000	75	7.7	.170
TCR-115-12T*	3/4	.755	.886	1,100	1,000	4,500	75	8.2	.198
TCR-115/122-16	1	.875	1.030	1,000	1,000	4,000	60	9	.273
TCR-115-16T*	1	1.000	1.135	900	900	3,800	60†	10	.305
TCR-115-162†	1	.875	1.065	1,250	1,250	8,000	60	9	.409
TCR-122-20	1 1/4	1.125	1.315	800	800	3,200	40	16	.540

*True bore. NOTE: Standard fittings not available for true bore hose.
†Double braid.



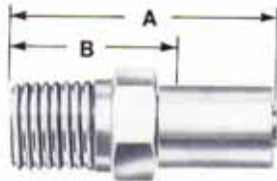
Permanently Attached Fittings for TCR-115 & TCR-122 Hose

QuickSwage is a patented attachment concept developed for smooth bore Teflon hose.

QuickSwage fittings feature the exclusive progressive swaging method of attachment, based upon extensive development engineering. The Teflon innercore and overbraid are firmly locked between the fitting collar and insert for a permanent, leak-proof assembly. The positive braid lock assures that strain is absorbed by the braid, not the Teflon hose.

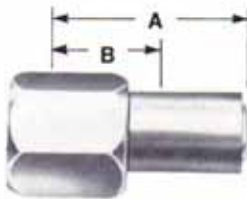
Twin City Hose Inc. has the capability to manufacture custom end fitting terminations. For special requirements, consult factory.

Materials. These QuickSwage fittings are available in carbon steel, brass, a combination of carbon steel and brass, or stainless steel, according to the specification table for each fitting. The wet surfaces of stainless steel fittings are type 303; other parts are type 304.



MALE PIPE NPT

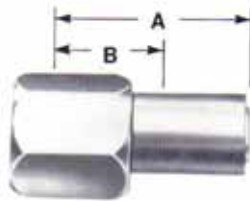
Stainless Steel Part Number	Brass Part Number	Size in.	Thread	Length A, in.	Length B, in.	Nominal I.D., in.
TC 100003	TC 110003	$\frac{1}{8}$	$\frac{1}{8}$ -27	1.155	.767	.095
TC 100104	TC 110104	$\frac{1}{4}$	$\frac{1}{4}$ -27	1.255	.767	.156
TC 100004	TC 110004	$\frac{1}{2}$	$\frac{1}{2}$ -18	1.472	.984	.156
TC 100005	TC 110005	$\frac{3}{4}$	$\frac{3}{4}$ -18	1.472	.984	.207
TC 100106	TC 110106	$\frac{1}{2}$	$\frac{1}{2}$ -18	1.602	.984	.277
TC 100006	TC 110006	$\frac{3}{4}$	$\frac{3}{4}$ -18	1.632	1.014	.277
TC 100108	TC 110108	$\frac{1}{2}$	$\frac{1}{2}$ -18	1.684	1.014	.358
TC 100008	TC 110008	$\frac{3}{4}$	$\frac{3}{4}$ -14	1.932	1.262	.358
TC 100010	TC 110010	$\frac{1}{2}$	$\frac{1}{2}$ -14	2.049	1.282	.469
TC 100012	TC 110012	$\frac{3}{4}$	$\frac{3}{4}$ -14	2.214	1.374	.594
TC 100016	TC 110016	1	1-11 $\frac{1}{2}$	2.562	1.583	.812



- FEMALE SWIVEL JIC (37° SEAT) SAE (45°) ALL SIZES EXCEPT - 6 & - 12 ARE INTERCHANGEABLE

Stainless Steel Part Number	Brass Part Number**	Size in.	Thread	Length A, in.	Length B, in.	Nominal I.D., in.
TC 100203	TC 110203	$\frac{1}{8}$	$\frac{1}{8}$ -24	.850	.467	.095
TC 100204	TC 110204	$\frac{1}{4}$	$\frac{1}{4}$ -20	.950	.467	.156
TC 100205	TC 110205	$\frac{1}{2}$	$\frac{1}{2}$ -20	1.010	.526	.207
TC 100206	TC 110206	$\frac{3}{4}$	$\frac{3}{4}$ -18	1.185	.572	.277
	*TC 110306	$\frac{1}{2}$	$\frac{1}{2}$ -18	1.185	.572	.277
TC 100208	TC 110208	$\frac{1}{2}$	$\frac{1}{2}$ -16	1.300	.635	.358
TC 100210	TC 110210	$\frac{3}{4}$	$\frac{3}{4}$ -14	1.470	.708	.469
TC 100212	TC 110212	$\frac{1}{2}$	1 $\frac{1}{2}$ -12	1.560	.725	.594
	*TC 110312	$\frac{3}{4}$	1 $\frac{1}{2}$ -24	1.560	.725	.594
TC 100216	TC 110216	1	1 $\frac{1}{2}$ -12	1.750	.776	.812

*SAE THREAD ONLY



FEMALE PIPE NPT

Stainless Steel Part Number	Stainless Brass Part Number**	St Size in.	Thread	Length A, in.	Length B, in.	Nominal I.D., in.
TC 100400	TC 110405	$\frac{1}{2}$	$\frac{1}{2}$ -18	1.421	1.932	.207

Convolved Teflon Hose

TCR-272 Hose Assemblies

TCR-276 Conductive Assemblies



TCR272 transfer hose is the most broadly applied convolved Teflon hose; a general-purpose workhorse found in hundreds of chemical transfer and industrial applications. Its present uses typically include water purification systems and food processing equipment.

TCR276 conductive transfer hose has the same general-purpose usefulness as TCR272, with special suitability where higher flow rates and the possibility of static charge accumulation are involved. Its conductive innercore is an important provision in such applications as fuel handling. It has unusually high resistance to thermal cycling; therefore is used extensively in tire presses, laundry presses and other types of steam service where on-off operating cycles cause wide temperature fluctuations inside the hose.

Hose Construction

Innercore of convolved Teflon, externally reinforced with Teflon-impregnated fiberglass and type 304 stainless steel wire braid. TCR276 hose has precisely controlled amount of carbon black added to the inner 15% of the Teflon innercore. This homogeneous material provides a continuous conductive path to the metal end fittings, to bleed off static electricity.

Temperature Range

-65°F to 400°F (-54°C to 204°C).

Standard

Accepted by U.S. Coast Guard.

TCR272 & TCR276 HOSE SPECIFICATIONS

Hose Part Number	Nominal Size, in.	Nominal I.D., in.	Nominal O.D., in.	Max. Oper. Pressure psi*	Min. Burst Pressure psi at room temp.	High Temp. Min. Burst psi	Typ. Max. Continuous Length, ft.	Minimum Bend Radius, in.	Hose Weight lb./ft.
TCR272/TCR276-8	3/8	.512	.785	1,000	4,000	2,800	75	1.00	.16
TCR272/TCR276-12	1/2	.750	1.090	1,000	4,000	2,500	50	2.00	.27
TCR272/TCR276-16	3/4	.998	1.300	1,000	4,000	2,500	50	3.00	.36
TCR272/TCR276-20	1 1/4	1.239	1.560	1,000	4,000	2,500	50	6.25	.48
TCR272/TCR276-24	1 1/2	1.500	1.792	750	3,000	2,100	50	7.50	.61
TCR272/TCR276-32	2	1.982	2.333	500	2,000	1,700	50	10.00	.97

*Maximum operating pressures shown apply to all temperatures up to 400° F

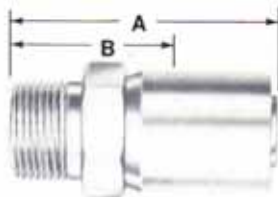
Fittings for all Convuluted Teflon Hoses

This expanded selection of fittings broadens the areas of application and the convenience of using convoluted hose. With these fittings, you can satisfy most installation needs. Stainless steel collars are available for use where stringent FDA requirements call for all-stainless construction.

Convoluted hose fittings feature the exclusive Twin City Hose, Inc. progressive swaging method of attachment. The innercore and overbraid are firmly locked between the fitting collar and insert for a permanent, leakproof assembly. The positive braid lock assures

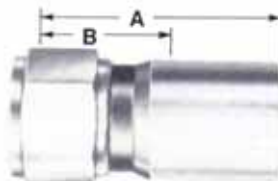
that strain is absorbed by the braid, not the hose innercore.

Materials. Male pipe and female inserts are available in carbon steel and type 316 stainless steel. Collars for the preceding fittings are either carbon steel or type 304 stainless steel. Flange retaining inserts are available in type 316 stainless steel. Note: carbon steel collars may be specified with stainless steel inserts, where only wetted surfaces require corrosion resistance.



MALE PIPE NPT

Stainless Steel Part Number	Carbon Steel Part Number	Size in.	Thread	Overall Length A, in.	Deduct Length B, in.	Nominal I.D., in.
TC 103008	TC 123008	1/2	1/2	2.590	1.470	.378
TC 103012	TC 123012	3/8	3/8	2.760	1.640	.630
TC 103016	TC 123016	1	1-11/2	2.948	1.828	.849
TC 103020	TC 123020	1 1/4	1 1/2-11/2	3.570	2.055	1.069
TC 103024	TC 123024	1 1/2	1 1/2-11/2	3.620	2.125	1.306
TC 103032	TC 123032	2	2-11/2	3.840	2.345	1.756



JIC-FEMALE SWIVEL (37° SEAT)

Stainless Steel Part Number	Carbon Steel Part Number	Size in.	Thread	Overall Length A, in.	Deduct Length B, in.	Nominal I.D., in.
TC 103208	TC 123208	1/2	3/8-16	2.168	1.073	.378
TC 103212	TC 123212	3/8	7/8-14	2.425	1.312	.630
TC 103216	TC 123216	1	1 1/8-12	2.371	1.272	.849
TC 103220	TC 123220	1 1/4	1 1/2-12	2.970	1.480	1.070
TC 103224	TC 123224	1 1/2	1 1/2-12	2.994	1.524	1.305
TC 103232	TC 123232	2	1 1/2-12	3.168	1.698	1.755

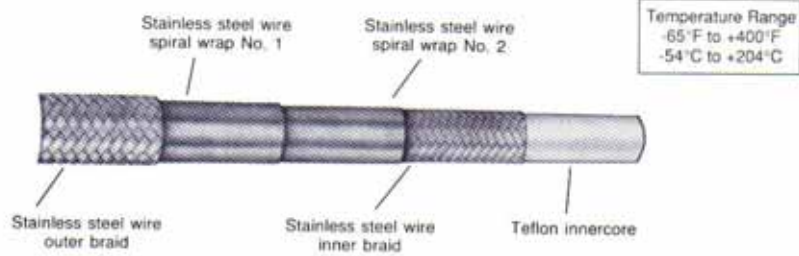


FLANGE RETAINING INSERT STAINLESS STEEL

Stainless Steel Part Number	Size in.	Overall Length A, in.	Deduct Length B, in.	Nominal I.D., in.
TC 103512	1/2	2.428	1.323	.630
TC 103516	1	2.894	1.791	.814
TC 102524	1 1/2	3.595	2.105	1.274
TC 103532	2	3.730	2.249	1.784

TCR – 58 SERIES

Spiral Wrap Stainless steel braided Teflon* hose is made from carbon black Teflon innercore and has layers of spiral wrap between two layers of braid which make this hose the premier in heavy duty ultra high pressure teflon hose.



All assemblies are supplied with stainless steel 37° JIC swivels and 100% tested to the test pressures shown below.

Hose Specifications

Part#	Nominal Size, in.	Actual I.D.	Actual O.D.	Working Pressure	Test Pressure	Room Temp. Burst	High Temp Burst	Bend Radius	Weight Per Foot
TCR-58904	1/4"	.229	.495	6,000	9,000	25,500	12,000	3.00	.24
TCR-58906	3/8"	.300	.617	6,000	9,000	25,500	12,000	5.00	.40
TCR-58908	1/2"	.395	.738	6,000	9,000	25,000	12,000	5.75	.49
TCR-58910	5/8"	.525	.885	4,000	6,000	16,500	12,500	6.25	.67
TCR-58912	3/4"	.650	1.070	4,000	6,000	16,500	12,500	7.75	.93
TCR-58916	1"	1.101	1.390	4,000	6,000	15,000	9,000	9.625	1.45

Fitting Specifications

Hose I.D.	Dash Size	Thread Size
1/4"	-4	7/16"-20
3/8"	-6	9/16"-18
1/2"	-8	3/4"-16
5/8"	-10	7/8"-14
3/4"	-12	1 1/16"-12
1"	-16	1 1/8"-12

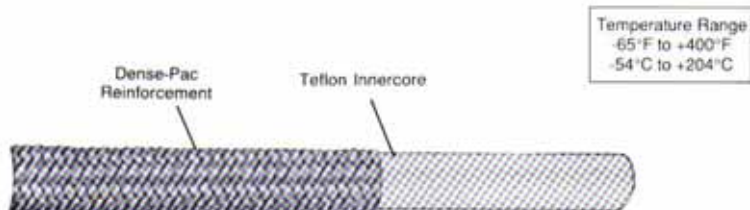
TCR-58 series comes standard with type 316 stainless steel 37° JIC swivels. When ordering place a "S" in front of the part number.



A wide variety of adapters available.

TCR – 1000 SERIES

Dense-Pac Stainless steel braided Teflon* hose is made from carbon black Teflon innercore and a multitude of stainless steel wires braided together to form a single braided ultra high pressure Teflon hose.



All assemblies are supplied with 37° JIC swivels and 100% tested to the test pressures shown below.

Hose Specifications

Part#	Nominal Size, in.	Actual I.D.	Actual O.D.	Working Pressure	Test Pressure	Room Temp. Burst	High Temp. Burst	Bend Radius	Weight Per Foot
TCR-1904	1/4"	.222	.390	5,000	10,000	18,500	12,000	1.50	.10
TCR-1906	3/8"	.308	.490	5,000	10,000	18,000	12,000	2.50	.16
TCR-1908	1/2"	.401	.615	5,000	10,000	18,000	12,000	2.88	.23
TCR-1910	5/8"	.495	.730	5,000	10,000	17,500	12,500	3.25	.32
TCR-1912	3/4"	.617	.990	5,000	10,000	17,500	12,500	3.88	.66
TCR-1916	1"	.867	1.270	5,000	10,000	17,000	9,000	5.00	1.02
TCR-1920	1 1/4"	1.118	1.660	5,000	10,000	16,500	9,500	12.00	1.85
TCR-1924	1 1/2"	1.375	1.900	4,000	9,000	15,000	9,000	14.00	1.91

+ Working pressure is for non impulse service. For impulse applications reduce operating pressure by 1000 PSI, if temperature reaches 400°F all of the above working pressures are 3,000 PSI.

Fitting Specifications

Hose I.D.	Dash Size	Thread Size
1/4"	-4	7/16"-20
3/8"	-6	9/16"-18
1/2"	-8	3/4"-16
5/8"	-10	7/8"-14
3/4"	-12	1 1/8"-12
1"	-16	1 5/8"-12
1 1/4"	-20	1 7/8"-12
1 1/2"	-24	2"-12

TCR - 1000 series gives you the choice of stainless steel or carbon steel JIC swivels attached. When ordering assemblies place a "C" for carbon steel or "S" for stainless steel in front of the part number to insure proper fitting material.

A wide variety of adapters available.

PROTECTIVE HOSE COVERINGS

SPRING GUARD



To prolong the life of hose lines that are exposed to rugged operating conditions, such as severe flexing, SpringGuard prevents kinking and protects the hose from abrasion and rough handling.

SILICONE FIRE SLEEVE



This fiberglass sleeving has a coating of silicone rubber bonded to it which offers temporary flame resistance that will protect the hose from extreme temperature conditions.

FIBERGLASS FIRE SLEEVE



An economical sleeving which protects hoses against heat penetration. Made of a smooth construction allows it to be applied easily permitting flexing and twisting.

HYPALON



This rubber covering offers protection against extreme environmental exposure, and is ideal where continuous handling is involved, as in loading and unloading operations.

ARMOR



A highly flexible heavy duty metal casing to protect the hose against severe handling abuse and overbending. This can be applied over the entire length or in short sections at the connection.

HEAT SHRINK TUBING



To minimize hose O.D., heat shrinkable tubing is used in applications where cleanliness is essential, such as food and pharmaceutical processes. This provides easy cleaning of the outer hose surface.