



Uni-CHEM[®]
Composite Hoses



Combined with a lightweight construction and uniformly crimped ends for maximum operator ease of handling, Uni-CHEM's composite hose design provides for the most flexible media transfer solution.

Standard Chemical Service

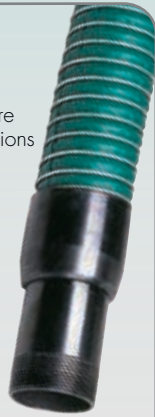
Uni-CHEM™ PG, PS, SG and SS composite hoses are specifically designed for in-plant liquid transfer operations as well as tank truck delivery and rail car loading. Constructed with multiple plies of polypropylene films and polyester vapour barriers. Full vacuum.

Uni-CHEM™ PG, PS

P-Polypropylene Coated Steel Inner Helix
G-High Tensile Galvanized Carbon Steel Outer Helix
S-316L Stainless Steel - Outer Helix

Uni-CHEM™ SG, SS

S-316L Stainless Steel - Inner Helix
G-High Tensile Galvanized Carbon Steel Outer Helix
S-316L Stainless Steel - Outer Helix



ID (INS)	1	1.5	2	3	4	6	8	10
ID (OUT)	1.5	1.9	2.4	3.4	4.4	7.0	9.4	10.5
Max WP PSI	250	250	250	250	250	250	250	150
Burst Pres PSI	1000	1000	1000	1000	1000	1000	1000	600
Bend Rad. Inches	4.0	5.0	6.0	7.9	11.9	22.0	30.0	40.0
Weight LB/FT	.58	.79	1.18	1.88	2.68	7.2	11.0	14.5

Rated for full vacuum. Maximum length: 100 ft. (10" 50 ft.)
Operating Temperature: -40°F to +212°F (-40°C to +80°C)

Special Chemical Service

Uni-FLON™ special chemical service hoses are built to meet the demands of today's highly aggressive media. Superior chemical resistance is achieved with a PTFE, inner liner, reinforced with multiple plies of polyester and polypropylene films. Full vacuum.

Uni-FLON™ SG

S-316L Stainless Steel - Inner Helix
G-High Tensile Galvanized Carbon Steel Outer Helix

Uni-FLON™ SS

S-316L Stainless Steel - Inner Helix
S-316L Stainless Steel - Outer Helix

Uni-FLON™ PS is available upon request



ID (INS)	1	1.5	2	3	4	6	8	10
ID (OUT)	2	2	2.5	3.5	4.5	7.0	9.4	10.5
Max WP PSI	250	250	250	250	250	250	250	150
Burst Pres PSI	1000	1000	1000	1000	1000	1000	1000	600
Bend Rad. Inches	4.0	5.0	6.0	7.9	11.9	22.0	30.0	40.0
Weight LB/FT	0.6	0.8	1.6	2.40	3.20	7.20	11.0	14.5

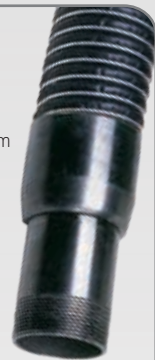
Rated for full vacuum. Maximum length: 100 ft. (10" 50 ft.)
Operating Temperature: -40°F to +250°F (-40°C to +121°C)

Standard Petroleum Service

Uni-OIL™ GG standard petroleum service hoses are designed for the transfer of a wide range of petroleum products. Uni-OIL™ GG hoses are ideal for transfer of media from storage tanks and process piping to rail cars or tank trucks. Multiple plies of polypropylene films and fabrics are encased in a polyester vapor barrier for superior operation. Full vacuum.

Uni-OIL™ GG

G-High Tensile Galvanized Carbon Steel Inner Helix
G-High Tensile Galvanized Carbon Steel Outer Helix



ID (INS)	1	1.5	2	3	4	6	8	10
ID (OUT)	1.5	2	2.5	3.5	4.5	7.0	9.4	10.5
Max WP PSI	250	250	250	250	250	250	250	150
Burst Pres PSI	1000	1000	1000	1000	1000	1000	1000	600
Bend Rad. Inches	4.0	5.0	6.0	7.9	11.9	22.0	30.0	40.0
Weight LB/FT	0.6	0.8	1.60	2.40	3.20	7.20	11.0	14.5

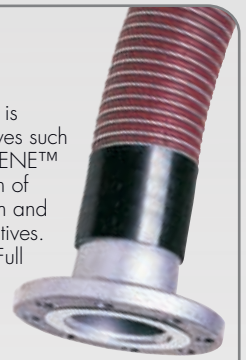
Rated for full vacuum. Maximum length: 100 ft. (10" 50 ft.)
Operating Temperature: -40°F to +212°F (-40°C to +80°C)

Special Petroleum Service

Uni-ZENE™ special service petroleum hose is designed to handle modern gasoline additives such as MTBE, ethanol and 31% benzene. Uni-ZENE™ hoses are built with an effective combination of polyamide, polyester and polypropylene film and fabrics to meet the demands of today's additives. Also recommended for all JP aviation fuels. Full vacuum.

Uni-ZENE™

G-High Tensile Galvanized Carbon Steel Inner Helix.
G-High Tensile Galvanized Carbon Steel Outer Helix.



ID (INS)	1	1.5	2	3	4	6	8	10
ID (OUT)	1.5	2	2.5	3.5	4.5	7.0	9.4	10.5
Max WP PSI	250	250	250	250	250	250	250	150
Burst Pres PSI	1000	1000	1000	1000	1000	1000	800	600
Bend Rad. Inches	4.0	5.0	6.0	7.9	11.9	22.0	30.0	40.0
Weight LB/FT	0.6	0.8	1.60	2.40	3.20	7.20	11.0	14.5

Rated for full vacuum. Maximum length: 100 ft. (10" 50 ft.)
Operating Temperature: -40°F to +250°F (-40°C to +121°C)

Uni-CHEM® Composite Hose Assemblies meet USCG 154.500; are manufactured in compliance with BS 5842 and are available with EN 13765 compliant construction.

Marine Service Applications: All Uni-CHEM® hose styles are constructed to marine service specifications in accordance with US Coast Guard spec. 154.500 and I.M.O regulations.

Uni-CHEM[®] Composite Hoses

Uni-CHEM[™] composite hoses are made only with carefully selected materials throughout, with a complete range of films, fabrics and covers to meet all standard and custom hose requirements.

Bottom Loading Service Uni-BL, Uni-OIL[™] or Uni-ZENE[™]

Uni-BL[™] is ideal for transferring petroleum and 100% aromatic products in production, refinery and distribution facilities. Suitable for all hose loading arms in bottom loading operations. Constructed with multiple plies of aromatic resistant films and fabrics. All hoses can be color coded to API color codes. Full vacuum.

Uni-BL[™]

G-High Tensile Galvanized Carbon Steel Inner Wire
G-High Tensile Galvanized Carbon Steel Outer Helix

TTMA FLANGES ARE STANDARD EACH END.

ID (INS)	1	1.5	2	3	4	6	8	10
ID (OUT)	1.5	1.9	2.4	3.4	4.4	7.0	9.4	10.5
Max WP PSI	250	250	250	250	250	250	250	150
Burst Pres PSI	1000	1000	1000	1000	1000	1000	1000	600
Bend Rad. Inches	4.0	5.0	6.0	7.9	11.9	22.0	30.0	40.0
Weight LB/FT	.58	.79	1.18	1.88	2.68	7.2	11.0	14.5

Rated for full vacuum. Maximum length: 100 ft. (10" 50 ft.)
Operating Temperature: Uni-OIL[™]: -40°F to +212°F (-40°C to +80°C)
Uni-ZENE[™]: -40°F to +250°F (-40°C to +121°C)

Vapor Recovery Service

Uni-VR[™] hose is ideal for use in petroleum and petrochemical vapour recovery systems in ship-to-shore, bottom loading and tank truck applications. This hose is lightweight and flexible. Manufactured to meet specification CFR33-154.

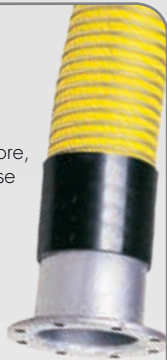
Uni-VR[™]

G-High Tensile Galvanized Carbon Steel Inner Helix
G-High Tensile Galvanized Carbon Steel Outer Helix

*Available with a polypropylene coated and stainless steel inner helix.

ID (INS)	1	1.5	2	3	4	6	8	10
ID (OUT)	1.5	1.9	2.4	3.4	4.4	7.0	9.4	10.5
Max WP PSI	100	100	100	100	100	100	100	100
Burst Pres PSI	400	400	400	400	400	400	400	400
Bend Rad. Inches	4.0	5.0	6.0	7.9	11.9	22.0	30.0	40.0
Weight LB/FT	.58	.79	1.18	1.88	2.68	7.2	11.0	14.5

Rated for full vacuum. Maximum length: 100 ft. (10" 50 ft.)
Operating Temperature: -40°F to +212°F (-40°C to +80°C)



These unique hoses are specifically designed for the Pump Rental Industry and the Bio-fuel market. They are extremely flexible, lightweight and easy to install.

Novaflex Pump-Flex™ Composite Hose

Novaflex Pump-Flex™ Composite Hoses are specifically designed for the pump rental industry. This rugged suction and discharge hose provides extreme flexibility, light-weight handling and excellent service life.

Advantages

- Crimped couplings
- Absorbs pump pulsations
- Less manpower to install than rubber hose
- Easy to package for shipping & storage
- Standard lengths: 10 ft & 20 ft
- Full vacuum

EXCELLENT FOR THE TRANSFER OF WATER AND OILY WATER

(Not for use in marine dock, crude oil, bunker oil or heavy viscous product applications. For these applications, contact Novaflex. Consult novaflex chemical resistance chart for chemical compatibility before use.)



ID (INS)	4	6	8	10
ID (OUT)	4.4	7.0	9.4	10.5
Max WP PSI	200	200	200	200
Burst Pres PSI	800	800	800	400
Bend Rad. Inches	14.2	22.0	30.0	40.0
Weight LB/FT	2.7	5.5	8.0	14.5
150# Flange & Coupling LB ea.	19	41	62	99

Rated for full vacuum. Maximum length: 100 ft. (10" 50 ft.)
Operating Temperature -40°F to +212°F (-40°C to +80°C)



Uni-BioFuel™ 100 Biodiesel and Ethanol Service

Uni-BioFuel™ 100, a special alternative fuel hose designed to handle all grades of biodiesel, including 100% B100, neat biodiesel and E85 - 85% ethanol fuel blends. Uni-BioFuel™ hoses are built with a specialized combination of high performance films and fabrics designed to handle today's fully concentrated alternative fuels. Full vacuum.

Uni-BioFuel™ 100

G-High Tensile Galvanized Carbon Steel Inner Helix
G-High Tensile Galvanized Carbon Steel Outer Helix

ID (INS)	1	1.5	2	3	4	6	8	10
ID (OUT)	1.0	2.0	2.5	3.5	4.5	7.0	9.4	10.5
Max WP PSI	250	250	250	250	250	250	250	150
Burst Pres PSI	1000	1000	1000	1000	1000	1000	800	600
Bend Rad. Inches	4.0	5.0	6.0	7.9	11.9	22.0	30.0	40.0
Max Lengths	100	100	100	100	100	100	100	100

Rated for full vacuum. Maximum length: 100 ft. (10" 50 ft.)
Operating Temperature -40°F to +250°F (-40°C to +121°C)

Hose Coupling - Use Coupling Manufacturer's recommendations for attachment, application and testing procedures.

Attention: **Never use any Novaflex hose outside the hose temperature limits marked on the hose. It should be noted, that even within these indicated hose temperature limits other factors such as (but not limited to); attached end fittings, different hose installations can place additional stress on couplings (i.e. vertically hung) and hose diameters can impact performance under elevated temperatures. For safety reasons Novaflex recommends that the hose working pressure should be de-rated by the following temperatures ranges: +122°F to +175°F (+50°C to +80°C); reduce working pressure by 15%. +178°F to +110°F (+81°C to +110°C); reduce working pressure by 30%. Over +230°F (+110° C); reduce working pressure by 50%.

Uni-Chem Composite Hoses

Uni-FLON™ and Uni-OIL™ high temperature composite hoses provide optimum chemical resistance, strength and the versatility needed to get the job done.

Uni-FLON™ HT Composite Hose

Novaflex Uni-FLON™ HT is designed as an upgraded version of Novaflex's standard Uni-FLON™, except that it has a temperature rating of 147°C. The high temperature version has the same Teflon® tube but the reinforcement elements have been upgraded to polyamides and nylons that have superior strength at elevated temperatures permitting the 250psi working pressure to be maintained. Full vacuum.



316LSS - Inner Helix

Available in Stainless Steel & Galvanized Outer Helix

ID (INS)	1	1.5	2	3	4	6	8	10
OUT ID (INS)	1.5	2.0	2.5	3.5	4.5	7.0	9.4	10.5
Max WP (PSI)	250	250	250	250	250	250	250	150
Burst Pres (PSI)	1000	1000	1000	1000	1000	1000	1000	600
Bend Radius (INS)	4.0	5.0	6.0	7.9	11.9	22.0	30.0	40.0
Weight LB/FT	.6	.8	1.6	2.4	3.2	7.20	11.0	14.5
Max Lengths (FT)	100	100	100	100	100	100	100	50

Rated for full vacuum. Maximum length: 100 ft. (10" 50 ft.)
Operating Temperature: -40°F to +350°F (-40°C to +177°C)

Uni-OIL™ 300HT High Temperature Composite Hose

Novaflex Uni-OIL™ 300HT is a high temperature version of the standard Uni-OIL™ petroleum. This high temperature hose can handle maximum operating temperatures of +300°F (+149°C). The hose design uses a composite of temperature resistant materials and is rated for use with a wide range of petroleum products. Full vacuum.



ID (INS)	1	1.5	2	3	4	6	8	10
OUT ID (INS)	1.5	2.0	2.5	3.5	4.5	7.0	9.4	10.5
Max WP (PSI)	250	250	250	250	250	250	250	150
Burst Pres (PSI)	1000	1000	1000	1000	1000	1000	1000	600
Bend Radius (INS)	4.0	5.0	6.0	7.9	11.9	22.0	30.0	40.0
Weight LB/FT	.65	.85	1.7	2.6	3.4	7.2	11.0	14.5
Max Lengths (FT)	100	100	100	100	100	100	100	50

Rated for full vacuum. Maximum length: 100 ft. (10" 50 ft.)
Operating Temperature: -40°F to +300°F (-40°C to +149°C)

Versatile End Configurations

Only Uni-CHEM® offers uniformly crimped hose ends (1" to 10" I.D.). Combined with our custom tooled end fittings Uni-CHEM® provides leak-free assembly every time.

Male NPT Ends: Carbon Steel, 316 Stainless Steel, 304 Stainless Steel, Polypropylene

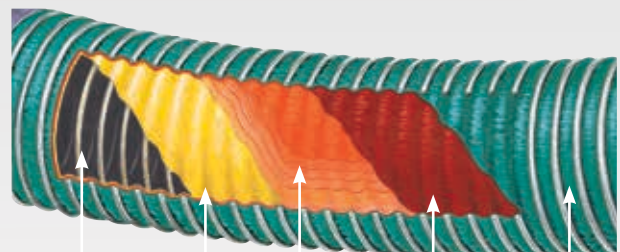
Flanged Ends: TTMA flanges for Bottom Loading hoses. Fixed or floating in Carbon Steel, 304 and 316 Stainless Steel

Cam and Groove: Quick disconnect couplings in 304 and 316 Stainless Steel and Aluminum



Superior Performance from the Inside Out

Uni-CHEM® composite hoses are made only with carefully selected materials throughout. Their inner films and fabrics provide optimum chemical resistance against today's highly aggressive media. Protected with the toughest PVC impregnated outer covers, Uni-CHEM® composite hoses provide the strength and versatility needed to get the job done.



Inner Helix Wire Polypropylene Inner tube Film & Fabric Vapor Barrier Films Reinforcing Fabric PVC Impregnated Nylon Cover and Outer Helix Wire

It is impossible to test Uni-CHEM® hose under all conditions to which it might be subjected in the field. It is therefore the buyer and/or end user's responsibility to test all Uni-CHEM® hose under conditions that duplicate the service condition prior to installation. Never use Novaflex Composite Hose above the ratings listed by Novaflex.

Please Note: It is important to advise Novaflex of the product being conveyed when ordering composite hoses. All hoses supplied have electrical continuity and are tested and certified accordingly.

***WARNING!** Elevated temperatures can change the chemical resistance rating of hose. Check the chemical resistance charts published by Novaflex to verify that the chemical to be transferred is rated for use with the polypropylene tube at the temperature & concentrations listed. Most chemicals become more aggressive the higher the temperature, reducing the ability of the tube material to withstand them. Compatibility information is available from Novaflex. If no data exists, it is the users responsibility to determine if the hose is compatible with the chemical to be transferred.

Bend Restrictor



Hose in service; note the gradual bend achieved off of the horizontal connections



Hose coiled and placed on pallet; ready for shipment

Bend Restrictor

A better way to move the tangent/flex point away from the end of the coupling system.

- Uni-CHEM® bend restrictors provide increased service life on hose connections.
- Long lasting ozone resistant EPDM rubber blend
- Reduced risk of premature hose wear due to kinking and hose fatigue at tangent point.

Part No.	Hose Size	Description	Actual ID	Actual OD	Wall Ga.	Length
5164BE-07333-FR	100	EPDM FLEX RESISTOR	4.875"	5.875"	.500"	30"
5164BE-09500-FR	150	EPDM FLEX RESISTOR	7.333"	8.833"	.750"	36"
5164BE-09500-FR	200	EPDM FLEX RESISTOR	9.500"	11.00"	.750"	42"



Uni-CHEM® Composite Hoses Available With Custom Flotation Systems

Hi-Flow Dry-Release Couplings

Hi-Flow Dry-Release Couplings provide for the safe transfer of potentially hazardous chemicals.

Hi-Flow Dry-Release Couplings employ proven valve technology that automatically stops the flow with zero product spillage.



Safety Breakaway Couplings

An economical solution to costly accidental drive-aways. The

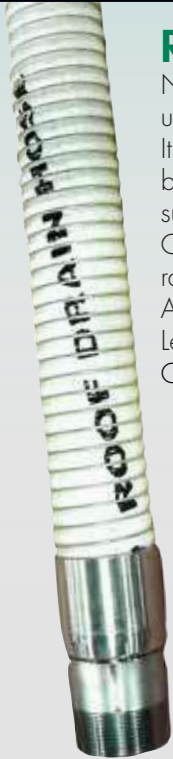
Safety Breakaway Coupling (SBC)

provides a lightweight full-flow means to prevent hard piping and loading arm damage. Available with female NPT threaded or ANSI 150 lb. flanged ends.



Uni-Chem Composite Hoses

Roof Drain Hose



Roof Drain Hose

Novaflex® Roof Drain Hose is manufactured for use in tanks with floating roof drain systems. It works well as a flexible elbow as it easily bends to 90°. Also suitable for oil skimmers, suction lines and water separators.

Compatible both inside and out for a wide range of PH solutions and chemicals.

Available in 1" to 4" diameters.

Lengths up to 100 ft.

Operating Temperature:

-40°F to +212°F (-40°C to +80°C)

Nova-Glow Photo Luminescent Hose

Nova-Glow™** Emits Soft Glow for Many Hours after Minimal Exposure to Light

Patented Nova-Glow™ Hoses can assist in visual sighting of hoses such as those commonly used in dock transfer operations occurring during night hours. Nova-Glow™ hoses, after having absorbed minimal light, store enough energy to emit an easily perceived glow that will last throughout the night.

Nova-Glow™ strip is non-toxic and available on our complete range of composite hoses as well as select rubber hoses.

Integral Safety Feature - Photo-luminescent Hose for night time hose transfer operations

Lightweight - Nova-Glow™ does not add any significant weight to hose assembly

*Long Service Life - Luminesce for minimum three years.**

**Note: Service life luminescent strip will be shortened if subject to abrasion / wear.*

***Patent Protected US 8,667,993 B2, Canada 2,762,243 and others.*



LPG Composite Hose

LPG Composite Style Hose Designed for the Transfer of Liquefied Petroleum Gas

Manufactured with 316 Stainless Steel inner and outer wires and polyamide reinforcement. Available with crimped on schedule 80 carbon steel or stainless steel threaded ends. Also available with ANSI flanges. All assemblies are hydrostatically tested and are tested for electrical continuity. CSA certified to CAN/CGA-8.1-M86

Construction

Diameters: 1¼", 2".

Maximum working pressure: 350psi

Safety factor: 5:1. Bend Radius: 1¼" = 5", 2" = 7"

Weight per foot: 1¼" = 1.1lbs, 2" = 1.7lbs.

Temperature Range: -130°F to +176°F (-90°C to +80°C).

Rated for full vacuum. Maximum length: 100 ft.





Novaflex® EN Compliant
 Composite Hose construction exceeds
 EN 13765:2010 Flammability Test

Uni-CHEM® Composite Hoses

Designed to meet the most demanding applications

Composite Petro-Chemical Hose for use in petroleum, chemical and oil transfer, petrochemical vapour recovery, all loading arms in bottom loading operations, as well as tank truck delivery. Uni-CHEM's flexible and lightweight liquid transfer and bottom loading composite hose offer optimum chemical resistance to aggressive media. Composite hose is available in a complete range of advanced films and fabrics to meet all hose requirements. Uni-CHEM® composite hoses are externally crimped, have dry seal fittings and are available from 1" to 10" diameter.



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The Novaflex Group is a market leader through excellence in product innovation and design. The Novaflex Group is a privately held company committed to the continuous advancement in hose and connector solutions. Novaflex has one of the broadest product ranges available in the hose and ducting marketplace, as well as the HVAC, Industrial Venting, Hose Industries and Commercial Exhaust Venting Systems. Products are sold in industries across North America and around the world.