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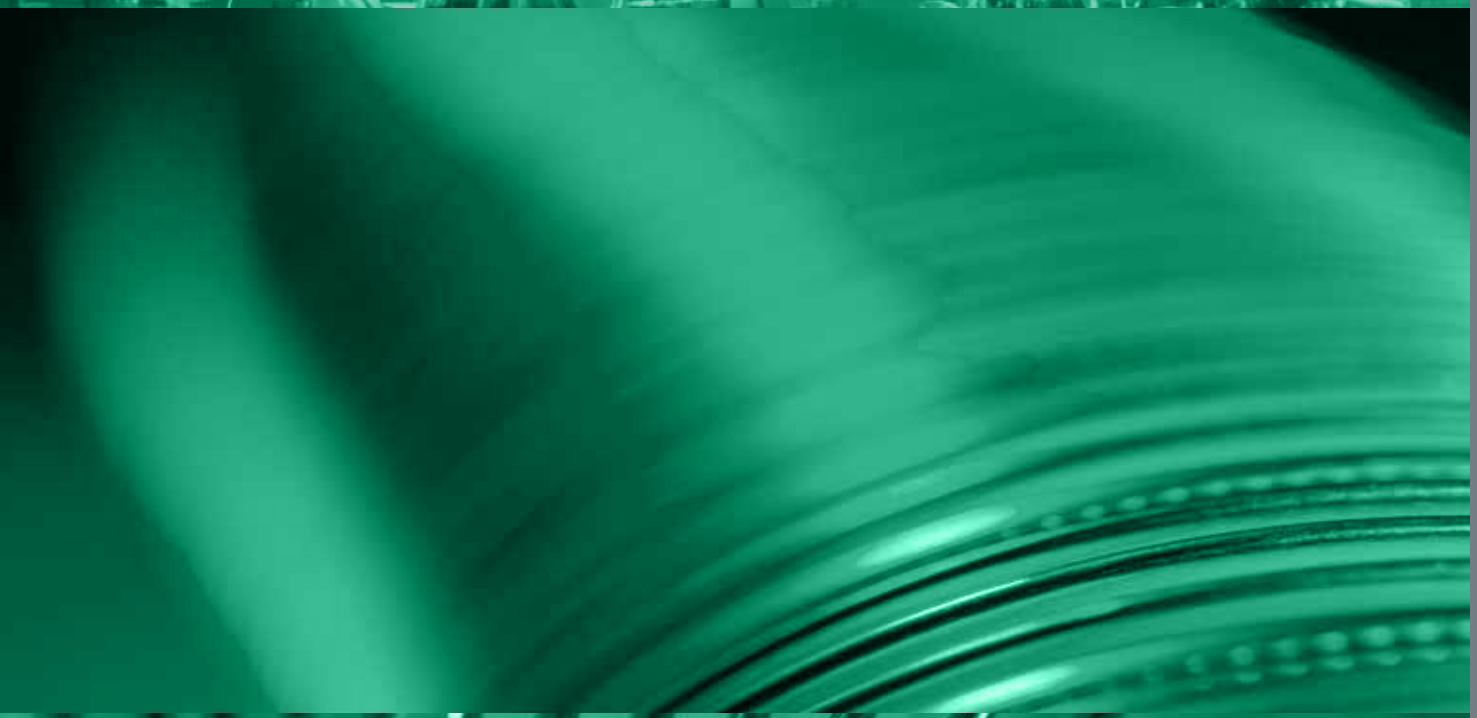
NovaFlex®

UNI-CHEM™



Uni-Chem™ Composite Hoses

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UNI-CHEM™ COMPOSITE HOSES

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

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 vapor barrier these hoses can be operated at working pressure or full vacuum.

Uni-Chem™ PG, PS
P-Polypropylene Coated Steel Inner Helix
G-High Tensile Galvanized Carbon Steel Outer Helix or
S-316L Stainless Steel - Outer Helix

Uni-Chem™ SG, SS
S-316L Stainless Steel - Inner Helix
G-High Tensile Galvanized Carbon Steel Outer Helix or
S-316L Stainless Steel - Outer Helix

INS* ID	1	1.5	2	3	4	6	8
OUT* ID	1.5	1.9	2.4	3.4	4.4	7.0	9.4
Max WP PSI	250	250	250	250	250	250	250
Burst Pres PSI	1000	1000	1000	1000	1000	1000	1000
Bend Rad. Inches	4.0	5.0	6.0	7.9	11.9	22.0	30.0
Weight LB/FT	0.58	0.79	1.18	1.88	2.68	7.20	11.0
Max Lengths	100	100	100	100	100	100	100

Operating Temperature -40°F to +212°F / -40°C to +100°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 Teflon® PTFE, inner liner, reinforced with multiple plies of polyester and polypropylene films.

Uni-FLON™ SG
S-316L Stainless Steel - Inner Helix
G-High Tensile Galvanized Carbon Steel Outer Helix

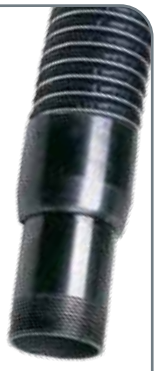
Uni-FLON™ SS
S-316L Stainless Steel - Inner Helix
S-316L Stainless Steel - Outer Helix

Uni-FLON™ PS *(available on request)*

INS* ID	1	1.5	2	3	4	6	8
OUT* ID	1.5	2.0	2.5	3.5	4.5	7.0	9.4
Max WP PSI	250	250	250	250	250	250	250
Burst Pres PSI	1000	1000	1000	1000	1000	1000	1000
Bend Rad. Inches	4.1	5.9	7.8	11.1	14.2	22.0	30.0
Weight LB/FT	0.6	0.8	1.6	2.4	3.2	7.2	11.0
Max Lengths	100	100	100	100	100	100	100

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.

Uni-OIL™ GG
G-High Tensile Galvanized Carbon Steel Inner Helix
G-High Tensile Galvanized Carbon Steel Outer Helix

INS* ID	1	1.5	2	3	4	6	8
OUT* ID	1.5	2.0	2.5	3.5	4.5	7.0	9.4
Max WP PSI	250	250	250	250	250	250	250
Burst Pres PSI	1000	1000	1000	1000	1000	1000	1000
Bend Rad. Inches	4.1	5.1	6.1	8.2	14.0	22.0	30.0
Weight LB/FT	0.6	0.8	1.6	2.4	3.2	7.2	11.0
Max Lengths	100	100	100	100	100	100	100

Operating Temperature -40°F to +212°F / -40°C to +100°C

Special Petroleum Service

Uni-ZENE™ special service petroleum hose is designed to handle modern gasoline additives such as MTBE, ethanol and 100% 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.

Uni-ZENE™
G-High Tensile Galvanized Carbon Steel Inner Helix.
G-High Tensile Galvanized Carbon Steel Outer Helix.

INS* ID	1	1.5	2	3	4	6	8
OUT* ID	1.5	2.0	2.5	3.5	4.5	7.0	9.4
Max WP PSI	250	250	250	250	250	250	250
Burst Pres PSI	1000	1000	1000	1000	1000	1000	1000
Bend Rad. Inches	4.1	5.1	6.1	8.2	14.0	22.0	30.0
Weight LB/FT	0.6	0.8	1.6	2.4	3.2	7.2	11.0
Max Lengths	100	100	100	100	100	100	100

Operating Temperature -40°F to +250°F / -40°C to +121°C

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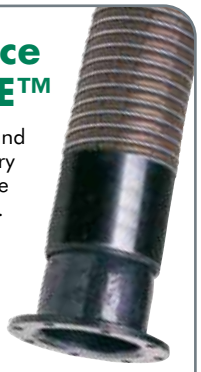
SUPERIOR PERFORMANCE

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-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.

Uni-BL™ GG
G-High Tensile Galvanized Carbon Steel Inner Wire
G-High Tensile Galvanized Carbon Steel Outer Helix

ALL TTMA FLANGED ENDS ARE CRIMPED, NOT SWAGED

Hose covers available in API colors.

INS* ID	3	4
OUT* ID	3.5	4.5
Max WP PSI	250	250
Burst Pres PSI	1000	1000
Bend Rad. Inches	8.2	14.0
Weight LB/FT	2.4	3.2
Max Lengths	100	100

Uni-OIL™ Operating Temperature -40°F to +212°F / -40°C to +121°C
Uni-ZENE™ Operating Temperature -40°F to +250°F / -40°C to +121°C

Vapor Recovery Service

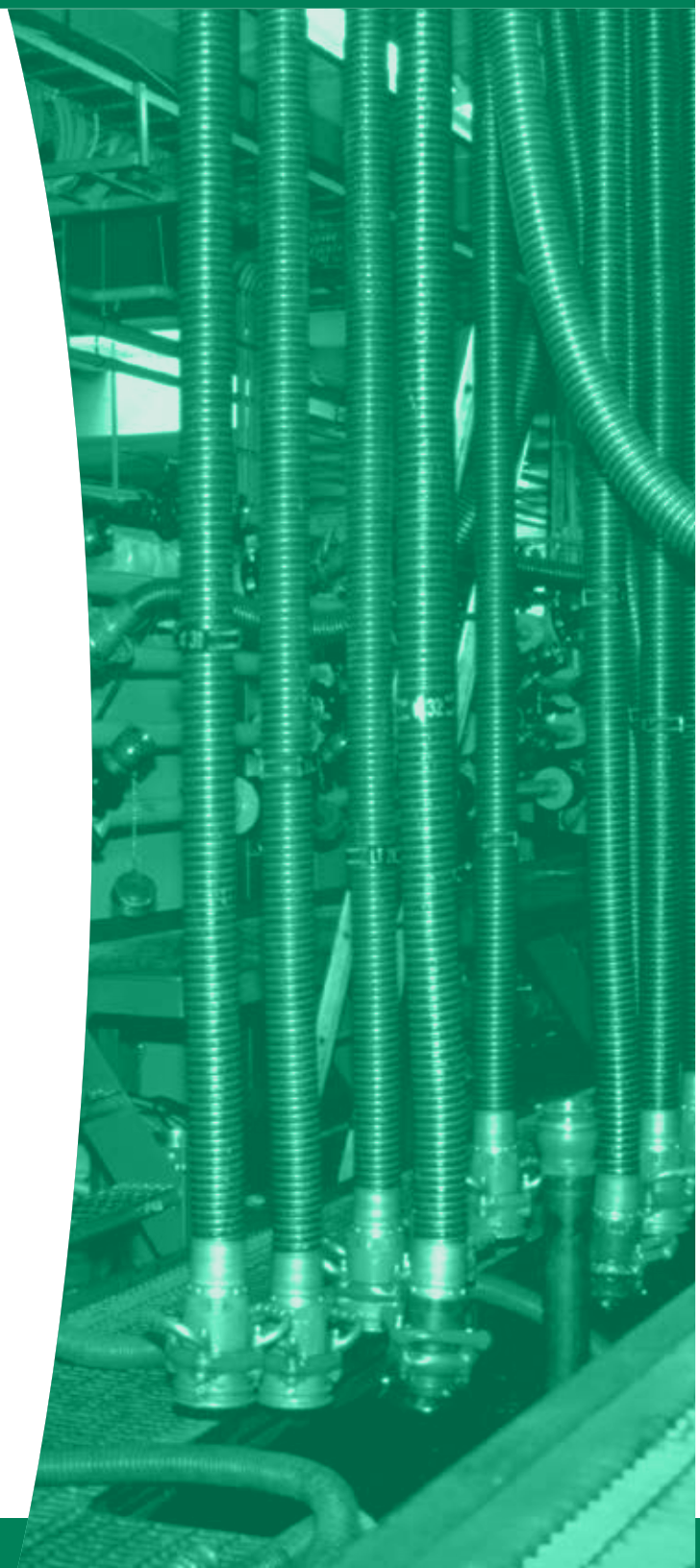
Uni-VR™ hose is ideal for use in petroleum and petrochemical vapor recovery systems in ship-to-shore, bottom loading and tank truck applications. This hose is lightweight and flexible. Manufactured to meet specification CFR33 -154. Available with a yellow or orange cover.

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.

INS* ID	1	1.5	2	3	4	6	8
OUT* ID	1.5	1.9	2.4	3.4	4.4	7.0	9.4
Max WP PSI	100	100	100	100	100	100	100
Burst Pres PSI	400	400	400	400	400	400	400
Bend Rad. Inches	3.9	4.8	6.8	7.7	10.8	22.0	30.0
Weight LB/FT	0.54	0.74	1.12	1.82	2.62	5.5	8.0
Max Lengths	100	100	100	100	100	100	100

Operating Temperature -40°F to +212°F / -40°C to +100°C



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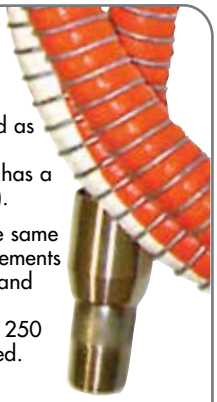
NovaFlex® UNI-CHEM™

UNI-FLON™ AND UNI-OIL™ COMPOSITE HOSES

Uni-FLON™ and Uni-OIL™ high temperature composite hoses provide optimum chemical resistance, strength and 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 350°F (177°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 250 psi working pressure to be maintained.

INS* ID	1	1.5	2	3	4
OUT* ID	1.5	2.0	2.5	3.5	4.5
Max WP PSI	250	250	250	250	250
Burst Pres PSI	1000	1000	1000	1000	1000
Bend Rad. Inches	4.1	5.9	7.8	11.1	14.2
Weight LB/FT	.6	.8	1.6	2.4	3.2
Max Lengths	100	100	100	100	100
Plies	2	2	2	2	2

Operating Temperature -40°F to +350°F / -40°C to +177°C

Uni-OIL™ 250 HT High Temperature Composite Hose

Novaflex Uni-OIL™ 250 HT is a high temperature version of the standard Uni-OIL™ petroleum.

This high temperature hose can handle maximum operating temperatures of 300°F. The hose design uses a composite of temperature resistant materials and is rated for use with a wide range of petroleum products.

INS* ID	1	1.5	2	3	4
OUT* ID	1.5	2.0	2.5	3.5	4.5
Max WP PSI	250	250	250	250	250
Burst Pres PSI	1000	1000	1000	1000	1000
Bend Rad. Inches	4.1	5.1	6.1	8.2	14.0
Weight LB/FT	.65	.85	1.7	2.6	3.4
Max Lengths	100	100	100	100	100

Operating Temperature -40°F to +300°F / -40°C to +148°C

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NovaFlex® UNI-CHEM™

SPECIALTY HOSE APPLICATIONS

These unique hoses are specifically designed for the pump rental industry and the biofuel 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 handlling 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: 10ft & 20ft
- Full vacuum

EXCELLENT FOR THE TRANSFER OF WATER, LIGHT CHEMICALS AND PETROLEUM PRODUCTS

(Consult Novaflex Chemical resistance chart for chemical compatibility before use).

INS* ID	4	6	8
OUT* ID	**4.4**	**7.0**	**9.4**
Max WP PSI	200	200	200
Burst Pres PSI	800	800	800
Bend Rad. Inches	12	23	33
Weight LB/FT	2.7	5.5	8.0
150# Flange & Coupling LB ea	19	41	62

Operating Temperature 200°F

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.

Uni-BioFuel™ 100
G-High Tensile Galvanized Carbon Steel Inner Helix
G-High Tensile Galvanized Carbon Steel Outer Helix

Part No	Inside I.D.	Outside I.D.	Max WP psi	Burst pres psi	Bend Radius (inch)	Weight/ lb/ft	Max Length
3UCBIOFUEL-01.00	1	1	250	1000	4.1	0.6	100
3UCBIOFUEL-08.00	1.5	2.0	250	1000	5.1	0.8	100
3UCBIOFUEL-02.00	2	2.5	250	1000	6.1	1.6	100
3UCBIOFUEL-03.00	3	3.5	250	1000	8.2	2.4	100
3UCBIOFUEL-04.00	4	4.5	250	1000	14.0	3.2	100
3UCBIOFUEL-06.00	6	7.0	250	1000	22.0	7.2	100
3UCBIOFUEL-08.00	8	9.4	250	1000	30.0	11.0	100

Operating Temperature -40°F to +250°F (-40°C to +121°C)
(intermittent, transfer service 250°F)

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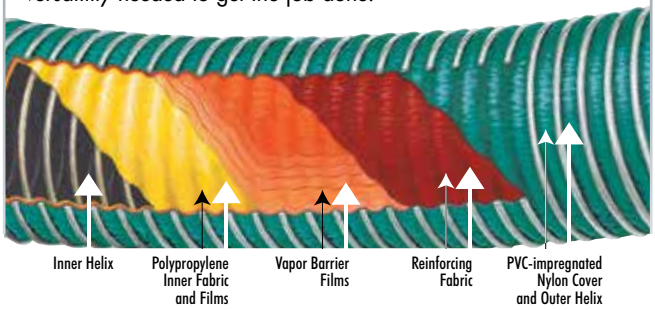
UNI-CHEM™ COMPOSITE HOSES

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.



Versatile End Configurations

Only Uni-Chem™ offers uniformly crimped hose ends (1"- 8" I.D.). Combined with our custom tooled end fittings Uni-Chem™ provides a leak free hose 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

Dry Break Couplings

Self Sealing Couplings: Provide for the safe transfer of potentially hazardous chemicals. Todo self sealing couplings employ proven valve technology that automatically stops the flow with zero product spillage.

Dry Break Couplings

Safety Breakaway Couplings

An economical solution to costly accidental driveaways. The 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.

Safety Breakaway Couplings

Marine Service Applications

All Uni-Chem™ hose styles are constructed to marine service specifications in accordance with U.S. Coast Guard spec. 154.500 and I.M.O. regulations.

DISTRIBUTOR STAMP

Uni-Chem™ Disclaimer

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

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