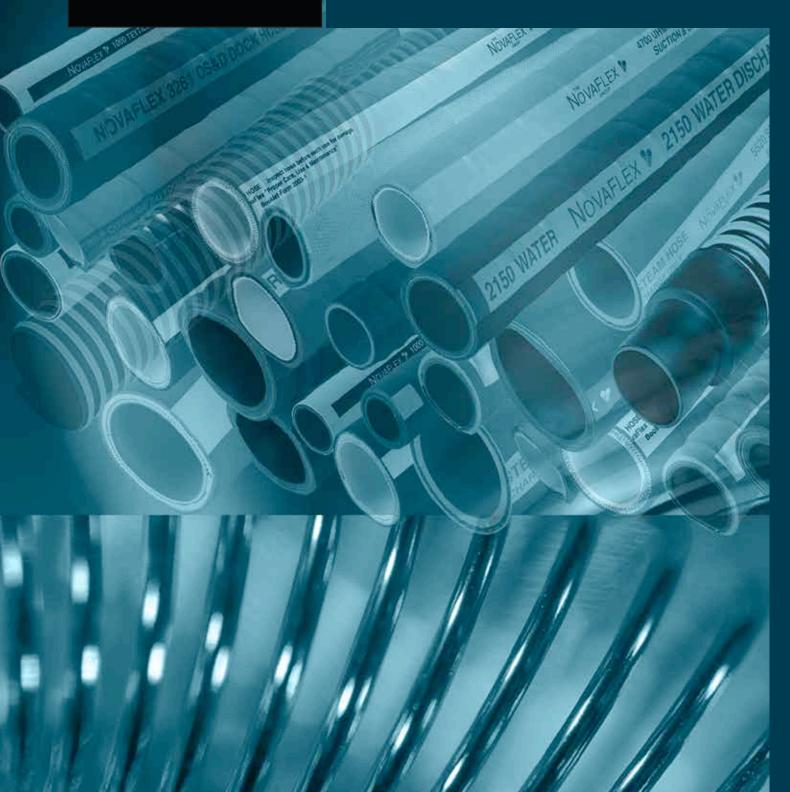


# Industrial Rubber & Plastic Hose Product Guide



# The Products

# **Rubber Hose and Connections**

NovaFlex® manufactures a complete line of material handling, petroleum, food grade, chemical and mining hoses, expansion joints and connectors. These are available with custom end configurations from built-in lined flanges to beaded ends. All products are available in a complete range of tube compounds and gauges for added resistance to abrasion, heat and corrosive conditions.

**Brands: NovaFlex Hose, Slurry-King** 

# Plastic Extruded Hose and Duct

NovaFlex® manufactures a complete line of extruded thermoplastic duct and hose products manufactured for use in material handling, clean room environments, fume control, welding, exhaust, agriculture, cable conduit and custom OEM applications. This product line has been designed to offer superior flexibility; high temperature, chemical resistance and abrasion resistance using advanced plastics technology. New products include, heavy duty vacuum and discharge hose, static conductor hose.

**Brands: NovaFlex Hose** 

# **Marine Hose and Connections**

NovaFlex® manufacturers a comprehensive range of marine hose products, all constructed to marine service specifications in accordance with ABYC, U.S. Coast Guard and I.M.O. regulations. Products are available for ship-to-shore transfer, ship-to-ship transfer, wellhead material supply, rig gas exchange, ship manifold exchange and marine refueling. Products include: conduit, exhaust and fuel systems, hardwall and softwall hoses, and ventilation and water systems hose products.

Brands: NovaFlex Hose, NovaFlex Marine Hose

# Composite Petro-Chemical Hose

NovaFlex®'s flexible and lightweight liquid transfer and bottom loading composite hose offer optimum chemical resistance to aggressive media. The products are available in a complete range of advanced films and fabrics to meet all hose requirements. Uni-Chem composite hoses are available with externally crimped dry seal fittings.

**Brands: Uni-Chem Composite** 



# **Industrial Rubber** Plastic Hose & Composite Hose Guide

Novaflex offers the most complete selection of industrial rubber and plastic hose.

Novaflex continuously seeks ways to improve product quality and processes. Success is based on an ability to create value with innovative products and services that exceed expectations and requirements.

Novaflex is an industry leader whose quality products are sold both across North America and around the world.

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www.novaflex.com Email: sales@novaflex.com



# Please read the following information carefully before using any of the information in this book.

This catalogue is a guide for use in selecting the correct hose for the correct application. It contains warnings, reference directions and directions for the safe use of industrial hose. All guidelines should be clearly understood before specifying or using any Novaflex® product.

Failure to follow recommended application information and recommended procedures may result in premature failure, resulting in bodily injury or property damage. Contact Novaflex® or your local Novaflex® distributor for assistance.

**Coupled assemblies** - Novaflex® hoses have specific working pressures published. Never exceed the working pressure for any reason. The choice of coupling and the attachment method may cause the assembly to have a lower working pressure because the couplings may not be able to take the hose to its rated burst pressure.

### 1. Chemical Hose

- a. Always consult the Novaflex® Chemical Resistance Chart to verify chemical compatibility. (At: www.novaflex.com)
- b. Do not use chemicals at higher temperatures than shown on the Chemical Resistance Chart. Higher temperatures increase the effect of chemicals on hose tubes. If temperatures above 125° F are applicable, please consult Novaflex®.

### 2. Proper Care Use & Maintenance

See Novaflex® Correct Care and Maintenance Guide form no 2003-1 located at the end of this guide (and also at: www.novaflex.com).

### 3. Hose Coupling

- a. Always use the NAHAD Assembly Guidelines for working pressure.
- b. Use Coupling Manufacturer's recommendations for attachment, application and testing procedures.
- 4. Temperature may effect the service life of a hose assembly. The temperature rating of the hose should never be exceeded. Even though the hose has a specific temperature rating, time can also effect the coupling attachment method. Always have an inspection and test program for all hoses every 6 months.
- 5. Always err on the side of safety. Remove a hose from service if there is any doubt about its serviceability.



Novaflex® recommends the use of NAHAD hose assembly guidelines.

The information provided within is for informational purposes only. We have made every effort to ensure the accuracy of the provided information and assume no responsibility for any loss or damage due to errors or omissions or to the use or misuse of any information supplied. It is impossible to test all products under all conditions to which they might be subjected in the field. It is therefore the buyer and/or end users' responsibility to test all products under the conditions that duplicate the service conditions prior to installation. All improvements, all specifications are subject to change without prior notice. It is the buyer and/or end users' responsibility to review our complete <u>Terms and Conditions of Sale</u> located on our web sites at: <u>www.novaflex.com</u> | <u>www.flexmaster.com</u>.

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# Air & Compressed Gas Hose

### Novaflex 1000\*

### **Textile Air Hose**

Designed for heavy-duty use on industrial pneumatic tools in mines, quarries and construction jobs.

#### **Construction:**

Tube: Medium oil resistant. Reinforcement: Plies of polyester

tire coro

Cover: Yellow weather and abrasion

resistant rubber Length: 100 ft

Temperature Range: -30° (-35°C) to +180°F

+82°C

\*Available in a non-conductive and 400psi

version



Part No.	I.D.	O.D.	Plies	WP psi	WT LBS/FT
1000BE-01250-00	11/4	1.71	2	300	0.64
1000BE-01500-00	11/2	2.05	2	300	0.94
1000BE-02000-00	2	2.56	2	300	1.27
1000BE-02000-30	2	2.68	4	300	2.43
1000BE-02500-00	21/2	3.13	4	300	1.68
1000BE-03000-00	3	3.68	4	250	2.15
1000BE-04000-00	4	4.68	4	250	2.78

### Novaflex 1208

### **Hot Air Blower Hose**

A flexible lightweight hose designed for transferring hot air to tanks on dry bulk material trucks. EPDM to withstand temperatures up to 375°F on an intermittent basis.

#### **Construction:**

Tube: Black EPDM

Reinforcement: Multiple plies of polyester tire

cord with wire helix

Cover: Black heat resistant EPDM rubber

Length: 100 ft

Temperature Range:  $-30^{\circ}F$  ( $-35^{\circ}C$ ) to  $+350^{\circ}F$  ( $+177^{\circ}C$ )

Not for Steam Service

Part No.	I.D.	O.D.	Plies	MBR (in)	WP psi	WT LBS/FT
1208BE-02000-00	2	2.68	2	10	150	1.46
1208BE-03000-00	3	3.68	2	10	150	1.69
1208BE-03000-01	3	3.68	4	10	150	1.80
1208BE-04000-00	4	4.68	2	14	150	2.28

# Novaflex 1210 Food Grade Hot Air Blower Hose

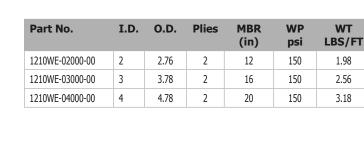
Food grade hot air blower hose is recommended for use in the bulk hauling industry where the product transferred requires clean air. Novaflex 1210 has a unique design utilizing an FDA high temperature tube compound combined with a high temperature hose carcass resulting in excellent hose life.



Tube: White high temperature FDA EPDM Cover: Blue high temperature EPDM

Length: 100 ft

Temperature Range: -40°F (-40°C) to +356°F (+180°C)





# Air & Compressed Gas Hose

### Novaflex 1971

Hot Air Blower Hose Corrugated

A flexible lightweight hose designed for transferring hot air to tanks on dry bulk material trucks. EPDM to withstand temperatures up to 325°F (+177°C) on an intermittent basis.



Tube: Black EPDM

Reinforcement: Multiple plies of polyester tire cord with wire helix Cover: Black heat resistant EPDM

rubber

Length: 100 ft

Temperature Range:  $-30^{\circ}F$  ( $-35^{\circ}C$ ) to  $+300^{\circ}F$  ( $+149^{\circ}C$ )

Not for steam service

Part No.	I.D.	O.D.	Plies	W.P. psi	WT LBS/FT
1971BE-01500-00	11/2	1.91	2	200	0.78
1971BE-02000-00	2	2.50	2	200	1.08
1971BE-02375-00	23/8	2.88	2	150	1.26
1971BE-02500-00	21/2	3.00	2	150	1.32
1971BE-03000-00	3	3.58	2	125	1.74
1971BE-03500-00	31/2	4.08	2	100	2.00
1971BE-04000-00	4	4.63	2	95	2.70
1971BE-04500-00	41/2	5.13	2	75	3.02
1971BE-05000-00	5	5.65	2	75	3.84
1971BE-06000-00	6	6.65	2	60	4.56
1971BE-06625-00	65/8	7.32	2	60	5.28

# Novaflex 9131

**Oxygen Charging Hose** 

Used for industrial applications where high pressure oxygen is needed.

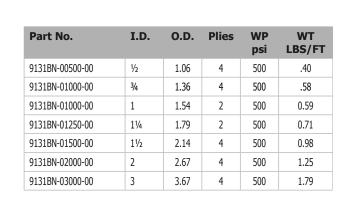
**Construction:** 

Tube: Black Neoprene rubber Reinforcement: Plies of polyester tire

Cover: Green weather and abrasion resistant neoprene rubber, pin pricked

Temperature Range -30° (-35°) to +180°F (+82°C) Made on stainless steel mandrels, no petroleum lubrications, ends capped.

Length: 100 ft



When coupling chemical and higher risk hoses, Novaflex  $\!\!^{\scriptscriptstyle{(\!0\!)}}$  recommends the use of crimp couplings using interlocking crimp ferrules.

### Novaflex 4200

### **EPDM Chemical Suction Hose**

A medium duty chemical suction and discharge hose designed to meet the general needs of the industry.

#### Construction:

Tube: Black high grade EPDM

Reinforcement: Multiple plies of tire cord

with dual helix wire Cover: Blue EPDM Length: 100 ft.

Temperature Range:  $-30^{\circ}F$  ( $-35^{\circ}C$ ) to  $+225^{\circ}F$  ( $+107^{\circ}C$ )

Consult chemical resistance chart.

Not for steam service. Can be open end steam cleaned

Part No.	I.D.	O.D.	Plies	MBR (in)	Vacuum HG	WP psi	WT LBS/FT
4200BE-01000-00	1	1.62	2	4	29"	150	0.59
4200BE-01250-00	11/4	1.88	2	4.5	29"	150	0.81
4200BE-01500-00	11/2	2.19	2	5	29"	150	1.02
4200BE-02000-00	2	2.63	2	8	29"	150	1.52
4200BE-02500-00	21/2	3.15	2	10	29"	150	1.84
4200BE-03000-00	3	3.75	2	16	29"	150	2.45
4200BE-04000-00	4	4.87	4	24	29"	150	3.55

When coupling chemical and higher risk hoses, Novaflex® recommends the use of crimp couplings using interlocking crimp ferrules.

# Novaflex 4201 EPDM Chemical Discharge Hose

A high quality discharge hose designed to transfer common chemicals found in industrial service.

### Construction:

Tube: Black high grade EPDM

Reinforcement: Multiple plies of tire cord

Cover: Blue EPDM Length: 100 ft.

Temperature Range: -30°F (-35°C) to +225°F (+107°C)

Consult chemical resistance chart before use.

Not for steam service. Can be open end steam cleaned

Part No.	I.D.	O.D.	Plies	WP psi	WT LBS/FT
4201BE-01000-00	1	1.55	2	150	0.41
4201BE-01250-00	11/4	1.80	2	150	0.53
4201BE-01500-00	11/2	2.07	2	150	0.63
4201BE-02000-00	2	2.70	4	150	1.02
4201BE-03000-00	3	3.70	4	150	1.47

When coupling chemical and higher risk hoses, Novaflex® recommends the use of crimp couplings using interlocking crimp ferrules.

### Novaflex 4203

# Diesel Exhaust Fluid (DEF) Transfer Hose

This is a 200psi working pressure rated hose specifically designed to transfer DEF fluids. This suction and discharge hose has an EPDM construction designed to be resistant to the effects of the media transferred. This hose is flexible and excellent for reel applications.

### Construction:

Tube: Specially formulated EPDM Reinforcement: Plies of cord and helix wire

Cover: Blue EPDM

Length: 50 ft & 100 ft plain ends/boxed

Temperature Range: -40° (-40°C) to +210°F (+98°C) Banding- DEF Hose, 4203BE, 200psi, 210° max temp,

urea fluid

Part No.	I.D.	MBR (in)	Vacuum HG	Plies	WP psi	WT LBS/FT
4203BE-00750-00	3/4	2.5	Full	2	200	0.48
4203BE-01000-00	1	3	Full	2	200	0.6
4203BE-01500-00	11/2	6	Full	2	200	0.63
4203BE-02000-00	2	6	Full	2	200	1.52





### Novaflex 4600

### **FEP Chemical Transfer Hose**

Recommended for the transfer of products that require a hose tube with the highest level of chemical resistance. The FEP "teflontype" tube provides that extra margin of safety; with a white chemical resistant back up rubber stock for high adhesions. FEP transfer hose is excellent for tank truck, barge loading, storage tank transfer and in plant

applications requiring flexibility and durability.

**Construction:** 

Tube: FEP

Reinforcement: Multiple plies of polyester tire cord with

helix wire

Cover: Blue EPDM (available in black, gray, yellow,

green, white with 400ft. order)

Length: 100 ft

Couplings: Use only permanently attached couplings

designed for "teflon-type" tube hoses

Temperature Range: -40° (-40°C) to +300°F (+149°C) dependant on chemical conveyed. Consult chemical resistant chart. Not for steam service. Can be open end

steam cleaned.

Part No.	I.D.	O.D	Plies	MBR (in)	Vacuum HG	WP psi	WT LBS/FT
4600CF-00500-00	1/2	0.96	2	3	29"	500	0.3
4600CF-00750-00	3/4	1.25	2	4	29"	500	0.45
4600CF-01000-00	1	1.49	2	7	29"	450	0.57
4600CF-01500-00	11/2	2.01	2	10	29"	350	0.8
4600CF-02000-00	2	2.52	2	14	29"	300	1.42

Non-stock orders - (other color hose covers: green, black, purple, yellow, white, gray) are available and require a 400ft minimum order per I.D.

Meets or exceeds the requirements of FDA & USDA under 21 CFR 177, 1550, 3-A sanitary standards 20-15.

When coupling chemical and higher risk hoses, Novaflex® recommends the use of crimp couplings using interlocking crimp ferrules.

### Novaflex 4700 UHMW Chemical Suction & Discharge Hose

A lightweight flexible chemical transfer hose designed for almost every common industrial chemical used in industry today. Non-staining UHMW tube.

### \*WARNING!!

### Construction:

Tube: Clear Ultra High Molecular

Weight polyethylene.

Reinforcement: Multiple plies of high tensile textile with

dual helix

Cover: Green abrasion resistant green EPDM

(Available in blue, yellow black and grey, white - with

400ft order) Length: 100 ft.

Temperature Range: up to -40°F (-40°C) to +250°F (+121°C). Consult chemical resistant chart. Not for steam

service. Can be open end steam cleaned

Part No.	I.D.	O.D	Plies	MBR (in)	Vacuum Hg	WP psi	WT LBS/FT
4700CU-07500-00	3/4	1.20	2	3.5	29"	250	0.58
4700CU-01000-00	1	1.55	2	4	29"	250	0.63
4700CU-01250-00	11/4	1.80	2	4.5	29"	250	0.80
4700CU-01500-00	11/2	2.05	2	5	29"	250	1.06
4700CU-02000-00	2	2.56	2	8	29"	250	1.33
4700CU-02500-00	21/2	3.08	2	10	29"	200	1.78
4700CU-03000-00	3	3.61	2	16	29"	200	2.12
4700CU-04000-00	4	4.65	2	24	29"	200	2.83
4700CU-06000-00	6	7.07	4	30	29"	200	4.95

Non-stock orders - (other color hose covers: blue, black, purple, yellow, white, gray) are available and require a 400ft minimum order per I.D.

\*WARNING! Elevated temperatures can change the chemical resistance rating of 4700. Check the chemical resistance charts published by Novaflex to verify that the chemical to be transferred is rated for use with the UHMWP 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.

Never use Novaflex 4700 above the ratings listed by Novaflex.

# **Chemical Hose**

# Novaflex 4704 Corrugated UHMW Chemical Suction & Discharge Hose

A corrugated version of 4700 designed to offer added flexibility.

### \*WARNING!!

#### **Construction:**

Tube: Clear Ultra High Molecular Weight polyethylene.

Reinforcement: Multiple plies of high tensile

textile with dual helix

Cover: Green abrasion resistant green EPDM (Available in blue, yellow black and grey, white - with

400ft order) Length: 100 ft.

Temperature Range: up to -40°F (-40°C) to +250°F (+121°C). Consult chemical resistant chart. Not for steam

service. Can be open end steam cleaned

Part No	I.D.	0.D.	Plies	MBR (in)	Vacuum Hg	WP psi	WT/ LBS/FT
4704CU-01500-00	11/2	2.10	2	4	29"	250	1.06
4704CU-02000-00	2	2.61	2	6	29"	250	1.33
4704CU-02500-00	21/2	3.13	2	7	29"	200	1.78
4704CU-03000-00	3	3.66	2	12	29"	200	2.12

Non-stock orders - (other color hose covers: blue, black, purple, yellow, white, gray) are available and require a 400ft minimum order per I.D.

\*WARNING! Elevated temperatures can change the chemical resistance rating of 4704. Check the chemical resistance charts published by Novaflex to verify that the chemical to be transferred is rated for use with the UHMWP 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.

Never use Novaflex 4704 above the ratings listed by Novaflex.

When coupling chemical and higher risk hoses, Novaflex® recommends the use of crimp couplings using interlocking crimp ferrules.

### Novaflex 4705 UHMW Crush & Kink Resistant Chemical Hose

Special kink and crush resistant version of 4700 design utilizing a multi-ply construction with dual special monofilament helix rods. Excellent for use in those demanding abusive transfer applications. To utilize the maximum temperature rating of the hose always permanently attach couplings

# \*WARNING!! Construction:

Tube: Ultra high molecular weight polyethylene. Reinforcement: Multiple plies of tire cord with dual monofilament helix, static wire.

Cover: Green EPDM rubber.

Length: 100 ft.

Temperature Range:  $-40^{\circ}F$  ( $-40^{\circ}C$ ) to  $+212^{\circ}F$  ( $+82^{\circ}C$ )

May be used at +250°F intermittent. Consult chemical resistant chart.

Teflon® is a registered trademark of DuPont

Part No.	I.D.	O.D	MBR (in)	VAC (Hg)	Plies	WP psi	WT LBS/FT
4705CU-00750-00	3/4	1.35	4	29"	2	200	0.40
4705CU-01000-00	1	1.60	4	29"	2	200	0.49
4705CU-01500-00	1½	2.10	5	29"	2	200	0.64
4705CU-02000-00	2	2.75	8	29"	2	200	1.28
4705CU-03000-00	3	3.79	10	29"	2	200	1.92

\*WARNING! Elevated temperatures can change the chemical resistance rating of 4705. Check the chemical resistance charts published by Novaflex to verify that the chemical to be transferred is rated for use with the UHMWP 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.

Never use Novaflex 4705 above the ratings listed by Novaflex.



# Novaflex 4710

### **UHMW Chemical Suction & Discharge Hose**

A lightweight flexible chemical transfer hose designed for almost every common industrial chemical used in industry today. Non-staining UHMW tube.

# \*WARNING!!

#### **Construction:**

Tube: Clear Ultra High Molecular Weight polyethylene.

Reinforcement: Multiple plies of high tensile

textile with dual helix

Cover: Green abrasion resistant green EPDM (Available in blue, yellow black and grey, white - with

400ft order) Length: 100 ft.

Temperature Range: up to -40°F (-40°C) to +250°F

(+121°C)

Consult chemical resistant chart. Not for steam service.

Can be open end steam cleaned

Part No.	I.D.	O.D	MBR (in)	VAC (Hg)	Plies	WP psi	WT LBS/FT
4710CU-00750-00	3/4	1.30	5	29"	2	300	.40
4710CU-01000-00	1	1.55	5	29"	2	300	.50
4710CU-01500-00	1½	2.06	7	29"	2	300	.92
4710CU-02000-00	2	2.66	10	29"	2	300	1.55
4710CU-03000-00	3	3.75	12	29"	2	300	2.30

\*WARNING! Elevated temperatures can change the chemical resistance rating of 4710. Check the chemical resistance charts published by Novaflex to verify that the chemical to be transferred is rated for use with the UHMWP 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.

Never use Novaflex 4710 above the ratings listed by Novaflex.

When coupling chemical and higher risk hoses, Novaflex® recommends the use of crimp couplings using interlocking crimp ferrules.



### Novaflex 4800 Red Smooth Nitrile Cover Novaflex 4878 Black Smooth Nitrile Cover Viton Acid Suction Hose

Recommended for transfer of acid, solvents and chemicals either by pressure or gravity flow. Used as chemical transfer hose for loading tank cars, transport trucks and storage tanks.

### Construction:

Tube: Viton® chemical and heat resistant

rubber

Reinforcement: Plies of polyester tire cord with

helix wire

Cover: Smooth black weather and abrasion resistant

nitrile rubber Length: 100 ft.

Temperature Range: -30°F (-35°C) to +250°F (+121°C) Consult chemical resistance chart. Not for steam service,

can be open end steam cleaned

Part No.	I.D.	O.D	Plies	WP psi	MBR	WT LBS/FT
XXXXBV-00750-00	3/4	1.42	2	200	4	0.19
XXXXBV-01000-00	1	1.59	2	200	4	0.47
XXXXBV-01250-00	11/4	1.86	2	200	6	1.15
XXXXBV-01500-00	11/2	2.13	2	200	6	1.33
XXXXBV-02000-00	2	2.83	2	200	8	2.14
XXXXBV-02500-00	21/2	3.20	2	200	10	2.19
XXXXBV-03000-00	3	3.70	2	200	12	2.67
XXXXBV-04000-00	4	4.76	4	200	16	4.25

When coupling chemical and higher risk hoses, Novaflex® recommends the use of crimp couplings using interlocking crimp ferrules.

# Novaflex 4801 / 4879

Viton® Acid Discharge Hose Novaflex 4801 Red Smooth Nitrile Cover Novaflex 4879 Black Smooth Nitrile Cover

Used as a discharge hose for highly corrosive chemicals.

#### Construction:

Tube: Viton® chemical and heat resistant

rubber.

Reinforcement: Plies of polyester tire cord. Cover: Black, weather resistant nitrile rubber.

Length: 100 ft.

Temperature Range: -30°F (-35°C) to +250°F (+121°C) Consult chemical resistance chart. Not for steam service, can be open end steam cleaned.

\*Viton® is a registered trade mark of DuPont

Part No.	I.D.	O.D.	Plies	WP psi	WT LBS/FT
XXXXBV-00500-00	1/2	1.22	2	200	0.36
XXXXBV-01000-00	1	1.47	2	200	0.61
XXXXBV-01250-00	11/4	1.72	2	200	0.73
XXXXBV-01500-00	11/2	2.03	2	200	0.97
XXXXBV-02000-00	2	2.65	4	200	1.53
XXXXBV-02500-00	21/2	3.15	4	200	1.04
XXXXBV-03000-00	3	3.65	4	200	2.19
XXXXBV-04000-00	4	4.70	4	150	3.04

# Standard Chemical Service Uni-CHEM™ PG 250, PS, SG and SS

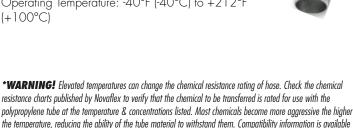
Designed for in-plant liquid transfer operations as well as tank truck delivery and rail car loading. Constructed with multiple plies of polypropylene films and polyester vapor barriers.

Rated for full vacuum.

Uni-CHEM™ PG PS Uni-CHEM™ SG SS

Maximum length: 100 ft (10" -80 ft)

Operating Temperature: -40°F (-40°C) to +212°F



from Novaflex. If no data exists, it is the users responsibility to determine if the hose is compatible with the chemical to be transferred. Never use Novaflex Composite Hose above the ratings listed by Novaflex.



Part No.	I.D.	0.D.	MAX W.P. PSI	BURST PRES. PSI	MBR	WT LBS/ FT	MAX LGT
3UCCHPG-01000-00	1	1.5	250	1000	4.0"	0.60	100
3UCCHPG-01500-00	1.5	1.9	250	1000	5.0"	0.80	100
3UCCHPG-02000-00	2	2.4	250	1000	6.0"	1.60	100
3UCCHPG-03000-00	3	3.4	250	1000	7.9"	2.40	100
3UCCHPG-04000-00	4	4.4	250	1000	11.9"	3.20	100
3UCCHPG-06000-00	6	7.0	250	1000	22.0"	7.20	100
3UCCHPG-08000-00	8	9.4	250	1000	30.0"	11.0	100
3UCCHPG-10000-00	10	11.5	200	800	40.0"	14.5	80

Part No.	I.D.	0.D.	MAX WP PSI	BURST PRES PSI	MBR	WT LBS/ FT	MAX LGT
3UCCHSG-01000-00	1	1.5	250	1000	4.0"	0.60	100
3UCCHSG-01500-00	1.5	1.9	250	1000	5.0"	0.80	100
3UCCHSG-02000-00	2	2.4	250	1000	6.0"	1.60	100
3UCCHSG-03000-00	3	3.4	250	1000	7.9"	2.40	100
3UCCHSG-04000-00	4	4.4	250	1000	11.9"	3.20	100
3UCCHSG-06000-00	6	7.0	250	1000	22.0"	7.20	100
3UCCHSG-08000-00	8	9.4	250	1000	30.0"	11.0	100
3UCCHSG-10000-00	10	11.5	200	800	40.0"	14.5	80

# 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.

Rated for full vacuum.

Maximum length: 100 ft (10" -80 ft)

Operating Temperature: -40°F (-40°C) to +212°F

(+100°C)



Part No.	I.D.	O.D.	MAX WP PSI	BURST PRES PSI	MBR	WT LBS/ FT	MAX LGT
3UCOIGG-01000-00	1	1.5	250	1000	4.0"	0.6	100
3UCOIGG-01500-00	1.5	2	250	1000	5.0"	0.8	100
3UCOIGG-02000-00	2	2.5	250	1000	6.0"	1.60	100
3UCOIGG-03000-00	3	3.5	250	1000	7.9"	2.40	100
3UCOIGG-04000-00	4	4.5	250	1000	11.9"	3.20	100
3UCOIGG-06000-00	6	7.0	250	1000	22.0"	7.20	100
3UCOIGG-08000-00	8	9.4	250	1000	30.0"	11.0	100
3UCOIGG-10000-00	10	11.5	200	800	40.0"	14.5	80

# **Special Petroleum Service** Uni-ZENE™ GG

Special service petroleum hose is designed to handle modern gasoline additives such as MTBE, ethanol and benzene.

Uni-ZENE™ GG 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.

Rated for full vacuum.

Maximum length: 100 ft (10" -80 ft)

Operating Temperature: -40°F (-40°C) to +250°F

(+121°C)

Part No.
3UCZEGG-0

Part No.	I.D.	0.D	MAX WP PSI	BURST PRES PSI	MBR	WT LBS/ FT	MAX LGT
3UCZEGG-01000-00	1	1.5	250	1000	4.0"	0.6	100
3UCZEGG-01500-00	1.5	2	250	1000	5.0"	0.8	100
3UCZEGG-02000-00	2	2.5	250	1000	6.0"	1.60	100
3UCZEGG-03000-00	3	3.5	250	1000	7.9"	2.40	100
3UCZEGG-04000-00	4	4.5	250	1000	11.9"	3.20	100
3UCZEGG-06000-00	6	7	250	1000	22.0"	7.20	100
3UCZEGG-08000-00	8	9.4	250	1000	30.0"	11.0	100
3UCZEGG-10000-00	10	11.5	200	800	40.0"	14.5	80





# 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.

Rated for full vacuum.

Uni-FLON™ SG Uni-FLON™ SS

Uni-FLON™ PS (is available on request)

Maximum length: 100 ft ( 10" - 80 ft)

Operating Temperature:  $-40^{\circ}F$  (-40°C) to  $+250^{\circ}F$ 

(+121°C)



Part No.	I.D.	0.D	MAX WP PSI	BURST PRES PSI	MBR	WT LBS/ FT	MAX LGT
3UCFLSG-01000-00	1	2	250	1000	4.0"	0.6	100
3UCFLSG-01500-00	1.5	2	250	1000	5.0"	0.8	100
3UCFLSG-02000-00	2	2.5	250	1000	6.0"	1.6	100
3UCFLSG-03000-00	3	3.5	250	1000	7.9"	2.40	100
3UCFLSG-04000-00	4	4.5	250	1000	11.9"	3.20	100
3UCFLSG-06000-00	6	7.0	250	1000	22.0"	7.20	100
3UCFLSG-08000-00	8	9.4	250	1000	30.0"	11.0	100
3UCFLSG-10000-00	10	11.5	200	800	40.0"	14.5	80

\*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. Never use Novaflex Composite Hose above the ratings listed by Novaflex.



Uni-BL™ Ideal for transferring petroleum and 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.

TTMA flanges are standard each end.

Maximum length: 100 ft Operating Temperature:

Uni-OlL™: -40°F (-40°C) to +212°F

(+100°C)

Uni-ZENE<sup>™</sup>: -40°F (-40°C) to +250°F (+121°C)

Part No.	I.D.	0.D	MAX WP PSI	BURST PRES PSI	MBR	WT LBS/FT	MAX LGT
Special	3	3.4	250	1000	7.9"	2.40	100
Special	4	4.4	250	1000	11.9"	3.20	100

# Vapor Recovery Service Uni-VR

This 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.

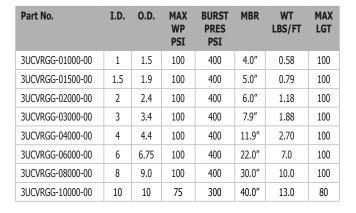
Rated for full vacuum.

Maximum length: 100 ft (10" -80 ft)

Operating Temperature: -40°F (-40°C) to +212°F

(+100°C

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



# Composite Hose

# Uni-FLON™ HT High Temperature Composite Hose

Novaflex Uni-FLON™ 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 250psi working pressure to be maintained. Rated for full vacuum.

### Uni-FLON™ SG Uni-FLON™ SS

Maximum length: 100 ft (10" -80 ft)
Operating Temperature: -40°F (-40°C) to +350°F

(+175°C)

Part No.	I.D.	O.D	MAX WP PSI	BURST PRES PSI	MBR	WT LBS/ FT	Plies	MAX LGT
3UCFLHTSS01.00	1	1.5	250	1000	4.0"	.6	2	100
3UCFLHTSS01.08	1.5	2.0	250	1000	5.0"	.8	2	100
3UCFLHTSS02.00	2	2.5	250	1000	6.0"	1.6	2	100
3UCFLHTSS03.00	3	3.5	250	1000	7.9"	2.4	2	100
3UCFLHTSS04.00	4	4.5	250	1000	11.9"	3.2	2	100
3UCFLHTSS06.00	6	7.0	250	1000	22.0"	7.20	2	100
3UCFLHTSS08.00	8	9.4	250	1000	30.0"	11.0	2	100
3UCFLHTSS10.00	10	11.5	200	800	40.0"	14.5	2	50

\*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. Never use Novaflex Composite Hose above the ratings listed by Novaflex.

# Uni-OIL™ 300HT High Temperature Composite Hose

Novaflex Uni-Oil™ HT is a high temperature version of the standard Uni-Oil™ petroleum hose. 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.

Rated for full vacuum.

Maximum length: 100 ft (10" -80 ft)

Operating Temperature: -40°F (-40°C) to +300°F

(+149°C)

Part No.	I.D.	0.D	MAX WP PSI	BURST PRES PSI	MBR	WT LBS/ FT	MAX LGT
3UCOIHT01.00	1	1.5	250	1000	4.0"	.65	100
3UCOIHT01.08	1.5	2.0	250	1000	5.0"	.85	100
3UCOIHT02.00	2	2.5	250	1000	6.0"	1.7	100
3UCOIHT03.00	3	3.5	250	1000	7.9"	2.6	100
3UCOIHT04.00	4	4.5	250	1000	11.9"	3.4	100
3UCOIHT06.00	6	7.0	250	1000	22.0"	7.2	100
3UCOIHT08.00	8	9.4	250	1000	30.0"	11.0	100
3UCOIHT10.00	10	10.5	200	800	40.0"	14.5	50

## Uni-BioFuel<sup>™</sup> 100 Biodiesel and Ethanol Service

Uni-BioFuel™ 100, a special alternative fuel hose designed to handle all grades of bio-diesel, including 100% B100, neat bio-diesel 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.

Rated for full vacuum.

Maximum length: 100 ft (10" -80 ft)

Temperature Range: -40°F (-40°C) to +250°F

(+121°C)

PART NO	I.D.	O.D.	MAX WP PSI	BURST PRES PSI	BEND RADIUS (INCH)	WT LBS/FT	MAX LGTH
3UCBIOFUEL-01.00	1	1.5	250	1000	4.0"	0.65	100
3UCBIOFUEL-01.08	1.5	2.0	250	1000	5.0"	0.85	100
3UCBIOFUEL-02.00	2	2.5	250	1000	6.0"	1.7	100
3UCBIOFUEL-03.00	3	3.5	250	1000	7.9"	2.6	100
3UCBIOFUEL-04.00	4	4.5	250	1000	11.9"	3.4	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
3UCBIOFUEL-10.00	10	11.5	200	800	40.0"	14.5	80



## **Novaflex Bend Restrictor for Composite Dock Hose**

A better way to move the tangent, flex point away from the end of the coupling system. Long lasting EPDM rubber provides added life.

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"



# Novaflex Pump-Flex™ Composite Hose

Specifically designed for the Pump Rental Industry. This suction & discharge hose requires less manpower to install than rubber hose; provides extreme flexibility, light-weight handling and excellent service life. This hose features crimped couplings, absorbs pump pulsations Excellent for the transfer of water, light chemicals and many light petroleum products. Easy to package for shipping and storage.

Rated for full vacuum.

#### Construction:

Standard lengths 10 ft & 20 ft. with CS 150lb fixed x floating flanges.

Flanges crimped each end.

Other fitting combinations available.

Maximum length 100 ft (10'' = 80 ft)

Operating Temperature -40° F to 212° F (-40° C to +100° C) (Consult the Novaflex chemical resistance chart for

chemical compatibility before use).

Part No.	INS ID	OUT ID	Min Bend Radius	Burst Pres PSI	WP PSI	Hose Wt/Ft Ibs
3UCFPGG04.00	4	4.4	14.2"	800	200	2.7
3UCFPGG06.00	6	6.75	22.0"	800	200	7.0
3UCFPGG08.00	8	9.0	30.0"	800	200	10
3UCFPGG10.00	10	11.5	40.0"	600	200	13
3UCFPGG12.00	12	13.5	47.0"	450	150	15.5

Not for use in Marine Dock, Crude Oil, Bunker Oil or heavy viscous product applications. For these applications, contact Novaflex.

# Composite Hose Couplings

Uni-Chem couplings are available to meet the applications connection requirements. These couplings are crimped on to the Uni-Cvvhem to insure a complete seal between the hose and the coupling.

Composite carbon and stainless steel couplings are designed to match the working pressure (WP) of Novaflex hoses. When using polypropylene/plastic couplings the working pressure of the hose assembly is reduced to the below WP of hose ID:

1", 11/2" & 2" IDS - max 100 psi WP

3" IDs - max 75 psi WP









# Extra Flexible Food Hose

Novaflex 6230 Extra Flexible Natural Rubber Food 150 Suction & Discharge Hose

A natural rubber food hose for non-oily transfer applications that require flexibility with a clean white FDA tube.

#### Construction:

Tube: FDA white NR rubber

Reinforcement: Multiple plies of polyester tire cord

with helix wire

Cover: Blue EPDM corrugated.

Length: 100ft.

Temperature Range:  $-40^{\circ}F$  ( $-40^{\circ}C$ ) to  $+160^{\circ}F$  ( $+71^{\circ}C$ )

Part No.	I.D.	O.D.	Plies	WP psi	MBR (")	WT LBS/FT
6230WG-01500-00	11/2	2.01	2	150	2	0.86
6230WG-02000-00	2	2.51	2	150	3	1.1
6230WG-02500-00	21/2	3.01	2	150	4	1.42
6230WG-03000-00	3	3.52	2	150	5	1.69
6230WG-04000-00	4	4.58	2	150	6.5	2.81

# Novaflex 6314 Extra Flexible Nitrile Food 150 Suction & Discharge Hose

Recommended for the food transfer application (oily and non-oily) that demands both flexibility and ruggedness with a clean white FDA grade tube. Meets FDA, USDA & 3A sanitary standards Authorized #1376. The food grade nitrile tube is odorless and tasteless for those oily transfer applications. This ultra smooth microbe resistant tube is built of special stainless steel mandrels for cleanliness.

#### **Construction:**

Tube: FDA white nitrile

Reinforcement: Multiple plies of polyester tire cord with

helix wire

Cover: Grey PVC nitrile corrugated

Length: 100 ft.

Temperature Range -40°F (-40°C) to +210°F (+99°C)

Cleaning in Place to 248°F (+120°C) Not for continuous steam service

Corrugated available with UHMWP cover "WTU" for added abrasion resistance.

I.D.	O.D.	Plies	WP psi	MBR	WT LBS/FT
11/2	2.05	2	150	2"	1.04
2	2.55	2	150	3"	1.34
21/2	3.05	2	150	4"	10.57
3	3.75	2	150	5"	2.78
4	4.76	2	150	6.5"	3.82
	1½ 2 2½ 3	1½     2.05       2     2.55       2½     3.05       3     3.75	1½     2.05     2       2     2.55     2       2½     3.05     2       3     3.75     2	psi           1½         2.05         2         150           2         2.55         2         150           2½         3.05         2         150           3         3.75         2         150	psi       1½     2.05     2     150     2"       2     2.55     2     150     3"       2½     3.05     2     150     4"       3     3.75     2     150     5"

Nova-Glide co	Nova-Glide cover									
Part No.	I.D.	O.D.	Plies	WP psi	MBR	WT LBS/FT				
6314WTU-01500-00	11/2	2.13	2	150	2.5"	1.05				
6314WTU-02000-00	2	2.62	2	150	4"	1.75				
6314WTU-02500-00	21/2	3.13	2	150	5"	1.58				
6314WTU-03000-00	3	3.85	2	150	6.5"	2.91				
6314WTU-04000-00	4	4.86	2	150	8.5"	3.92				

Nova-Glide is an UHMWP cover applied over the rubber cover to provide easy cleaning, low coefficient of friction and added abrasion.



# Extra Flexible Food Hose

# Novaflex 6430 Extra Flexible EPDM Food 150 Suction

Recommended for the food transfer applications that demands both flexibility and ruggedness with a clean white FDA grade tube. The food grade EPDM tube is odorless and tasteless for non-oily transfer applications. Excellent for suction an discharge applications. This ultra smooth microbe resistant tube is built on special stainless steel mandrels for cleanliness.

#### Construction:

Tube: White FDA EPDM (non-oily applications). Reinforcement: Multiple plies of polyester tire cord with

wire helix.

Cover: Grey EPDM Corrugated

Length: 100 ft.

Temperature Range: -40°F (-40°C) to +225°F (+116°C) Corrugated available with UHMWP cover "WTU" for

added abrasion resistance.

Part No.	I.D.	O.D.	Plies	WP psi	MBR	WT LBS/FT
6430WT-01500-00	11/2	2.07	2	150	2"	.99
6430WT-02000-00	2	2.57	2	150	3"	1.27
6430WT-02500-00	21/2	3.08	2	150	4"	1.57
6430WT-03000-00	3	3.68	2	150	5"	2.32
6430WT-04000-00	4	4.7	2	150	6.5"	3.02

### Nova-Glide cover

Part No.	I.D.	O.D.	Plies	WP psi	MBR	WT LBS/FT
6430WTU-02000-00	2	2.67	2	150	4"	1.3
6430WTU-02500-00	21/2	3.17	2	150	5.5"	1.61
6430WTU-03000-00	3	3.78	2	150	6.5"	2.36
6430WTU-04000-00	4	4.96	2	150	8.5"	3.27

Nova-Glide is an UHMWP cover applied over the rubber cover to provide easy cleaning, low coefficient of friction and added abrasion.

# Novaflex 6433 Extra Flexible White UHMW Tube EPDM Food Suction & Discharge Hose

Recommended for special applications that require smooth tubes and easy to clean surfaces. Recommended for the food transfer application that demands flexibility and ruggedness with a clean whit FDA ultra high molecular weight polyethylene grade tube. This food grade tube is odorless and tasteless for all those all purpose transfer applications. This ultras smooth microbe resistant tube is built on special stainless steel mandrels for cleanliness.

#### Construction:

Tube: White FDA UHMW - odorless and tasteless (non-

oily applications)

Reinforcement: Multiple plies of polyester tire cord with

helix wire.

Cover: Grey EPDM Corrugated

Length: 100 ft.

Temperature Range -40°F (-40°C) to +225°F (+116°C) Cleaning in Place to 248°F (+120°C) Not for continuous

steam service

Part No.	I.D.	O.D.	Max CP psi	Bend Radius	Vacuum HG	WT LBS/FT
6433CU-01500-00	11/2	2.03	150	2"	29"	.91
6433CU-02000-00	2	2.53	150	3″	29"	1.16
6433CU-03000-00	3	3.74	150	5″	29"	2.48
6433CU-04000-00	4	4.76	150	6.5"	29"	3.31

### Nova-Glide cover

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Part No.	I.D.	O.D.	CP psi	MBR	WT LBS/FT
6433CUU-01500-00	11/2	2.06	150	2.5"	.93
6433CUU-02000-00	2	2.57	150	3.5"	1.2
6433CUU-03000-00	3	3.71	150	6.5"	2.53
6433CUU-04000-00	4	4.79	150	8.5"	3.39

### Novaflex 6514 Extra Flexible Connoisseurs Food & Beverage Hose Suction & Discharge

The connoisseur line of food hose is designed to meet the food processing industries demanding applications. Connoisseur is built in a variety of hose constructions utilizing a white chlorobutyl tube for non-oily applications that will not impart taste or odor. Meets FDA, USDA, and 3-A Sanitary Standards Authorized (#1376). Resistant to CIP solutions. This ultra smooth microbe resistant tube is built of special stainless steel mandrels for cleanliness.

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Tube: White chlorobutyl (full vacuum non oily applications Reinforcement: Multiple plies of polyester tire cord with

helix wire (microbe resistant) Cover: Grey EPDM Corrugated

Length: 100 ft.

Temperature Range -40°F (-40°C) to +240°F (+116°C) Cleaning in Place to 248°F (+120°C) Not for continuous

steam service

Corrugated available with UHMWP cover

Part No.	I.D.	O.D.	Plies	WP psi	MBR	WT LBS/FT
6514WT-01500-00	11/2	2.04	2	150	2"	0.92
6514WT-02000-00	2	2.66	2	150	3″	1.44
6514WT-02500-00	21/2	3.231	2	150	4"	1.97
6514WT-03000-00	3	3.82	2	150	5"	2.97
6514WT-04000-00	4	4.82	2	150	7″	3.84

### Nova-Glide cover

Part No.	I.D.	O.D.	Plies	WP psi	MBR	WT LBS/FT
6514WEU-01500-00	11/2	2.06	2	150	2.5"	.94
6514WEU-02000-00	2	2.57	2	150	3.5"	1.47
6514WEU-02500-00	21/2	3.12	2	150	5.5"	2.03
6514WEU-03000-00	3	3.71	2	150	6.5"	3.03
6514WEU-04000-00	4	4.79	2	150	8.5"	3.91

Nova-Glide is an UHMWP cover applied over the rubber cover to provide easy cleaning, low coefficient of friction and added abrasion.

### Novaflex 6515 Extra Flexible Connoisseurs Food & Beverage Hose Suction & Discharge

Special highly flexible suction and discharge hose, designed for those more demanding applications requiring a products that meets FDA, USDA, and 3-A Sanitary Standards Authorized (#1376). Designed to meet the temperature and chemical resistance associated with "cleaning in place" systems. This ultra smooth microbe resistant tube is built for non-oily applications, on special stainless steel mandrels for cleanliness.



Tube: White chlorobutyl (non oily applications)

Reinforcement: Multiple plies of polyester tire cord with

steel helix wire

Cover: Grey EPDM abrasion resistant. Corrugated. UHMWP cover available for added abrasion resistance.

Length: 100 ft.

Temperature Range -40°F (-40°C) to +240°F (+116°C) Cleaning in Place to 248°F (+120°C) Not for continuous steam service

Corrugated available with UHMWP cover

Part No.	I.D.	O.D.	Plies	WP psi	MBR	WT LBS/FT
6515WB-01500-00	11/2	2.26	4	250	3″	1.31
6515WB-02000-00	2	2.76	4	250	4"	1.66
6515WB-02500-00	21/2	3.26	4	250	6"	2.09
6515WB-03000-00	3	3.78	4	250	8"	2.81
6515WB-04000-00	4	4.79	4	250	10"	3.85

### Nova-Glide cover

Part No.	I.D.	O.D.	Plies	WP psi	MBR	WT LBS/FT
6515WEU-01500-00	11/2	2.27	4	250	3.5"	1.31
6515WEU-02000-00	2	2.77	4	250	4.5"	1.66
6515WEU-02500-00	21/2	3.27	4	250	7"	2.1
6515WEU-03000-00	3	3.79	4	250	9"	2.83
6515WEU-04000-00	4	4.8	4	250	11"	3.88

Nova-Glide is an UHMWP cover applied over the rubber cover to provide easy cleaning, low coefficient of friction and added abrasion.



### Novaflex 6200

### Flour Suction Hose

Designed for the transfer of dry edible food products such as sugar, flour, beans etc. Use of helix wire is recommended for static dissipation. This ultra smooth microbe resistant tube is built on special stainless steel mandrels for cleanliness.

#### **Construction:**

Tube: 3/<sub>16</sub>" White FDA natural rubber. Reinforcement: Plies of polyester tire cord with

helix wire

Cover: Corrugated SBR grey high grade weather and

abrasion resistant synthetic rubber

Length: 100 ft.

Temperature Range Up to +160°F (+71°C)

Part No.	I.D.	O.D.	Plies	WP psi	WT LBS/FT
6200WG-02000-00	2	2.85	2	100	1.53
6200WG-03000-00	3	3.88	2	100	2.52
6200WG-04000-00	4	4.96	2	100	3.76
6200WG-05000-00	5	5.96	2	100	5.13

# Novaflex 6201

### Flour Discharge Hose (3/16" tube)

Designed for the transfer of dry edible food products such as sugar, flour, beans etc. This ultra smooth microbe resistant tube is built on special stainless steel mandrels for cleanliness.

### Construction:

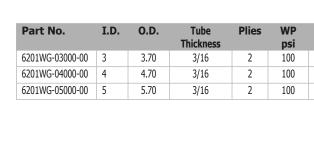
Tube: White FDA natural rubber. Reinforcement: Plies of polyester tire cord with static wire.

Cover: Grey SBR high grade weather and

abrasion resistant rubber

Length: 100 ft.

Temperature Range: Up to +160°F (+41°C)



WT

LBS/FT

1.95

2.5

3.35

### Novaflex 6284

### Potable Water Discharge Hose

Used by municipalities for temporary drinking water lines when water mains burst. This ultra smooth microbe resistant tube is built on special stainless steel mandrels for cleanliness.

#### **Construction:**

Tube: White FDA neoprene rubber. (Also

available in SBR tube)

Reinforcement: Plies of polyester tire cord. Cover: Blue weather and abrasion resistant

EPDM 100

Length: 100 ft.

Temperature Range: Up to +180°F (+82°C)

Part No.	I.D.	O.D.	Plies	WP psi	WT LBS/FT
6284WN-00750-00	3/4	1.24	2	250	0.36
6284WN-01000-00	1	1.49	2	250	0.45
6284WN-01500-00	11/2	1.99	2	250	0.66
6284WN-02000-00	2	2.50	2	200	0.87
6284WN-02500-00	21/2	3.00	2	175	1.19
6284WN-03000-00	3	3.50	2	145	1.40
6284WN-04000-00	4	4.58	2	125	2.20

# Novaflex 6285

### **Potable Water Suction Hose**

Used by municipalities for temporary drinking water lines when water mains burst. This ultra smooth microbe resistant tube is built on special stainless steel mandrels for cleanliness.

### **Construction:**

Tube: White FDA neoprene rubber (Also available in SBR tube)

Reinforcement: Plies of polyester tire cord with

helix wire

Cover: Smooth blue weather and abrasion resistant

EPDM rubber Length: 100 ft.

Temperature Range: Up to +180°F (+82°C)

Part No.	I.D.	O.D.	Plies	WP psi	WT LBS/FT
6285WN-01000-00	1	1.54	2	250	0.57
6285WN-01500-00	11/2	2.05	2	250	0.93
6285WN-02000-00	2	2.55	2	200	1.31
6285WN-02500-00	21/2	3.05	2	150	1.58
6285WN-03000-00	3	3.65	2	145	1.88
6285WN-04000-00	4	4.74	2	125	2.80

# Novaflex 6286

### Potable Water Suction &

### Discharge Hose

200psi working pressure hose that has a FDA plastic tube or for drinking water, along with FDA requirements under 21 CFR 177.1520. This ultra smooth microbe resistant tube is built on special stainless steels mandrels for cleanliness.

### **Construction:**

Tube: Special FDA plastic tube

Reinforcement: Multiple plies of polyester tire cord and

dual helix

Cover: Blue EPDM

Temperature Range: up to 180°F (+82°C)

Part No.	I.D.	O.D	Plies	MBR (in)	Vacuum Hg	WP psi	WT LBS/FT
6286CU-07500-00	3/4	1.28	2	3.5	29"	200	0.58
6286CU-01000-00	1	1.55	2	4	29"	200	0.63
6286CU-01250-00	11/4	1.81	2	4.5	29"	200	0.80
6286CU-01500-00	11/2	2.09	2	5	29"	200	1.06
6286CU-02000-00	2	2.56	2	8	29"	200	1.33
6286CU-02500-00	21/2	3.08	2	10	29"	200	1.78
6286CU-03000-00	3	3.72	2	16	29"	200	2.12
6286CU-04000-00	4	4.72	2	24	29"	200	2.83



# Novaflex 6300 Nitrile Food 150

**Suction & Discharge Hose** 

Recommended for the food transfer application that demands both flexibility and ruggedness with a clean white FDA grade tube. Meets FDA, USDA & 3A sanitary standards Authorized #1376. The food grade nitrile tube is odorless and tasteless for those oily transfer applications. Excellent for suction and discharge applications. This ultra smooth microbe resistant tube is built on special stainless steel mandrels for cleanliness.



Tube: FDA white nitrile

Reinforcement: Multiple plies of polyester tire cord with

Cover: Grey PVC nitrile. Length: 100ft.

Temperature Range:  $-40^{\circ}F$  ( $-40^{\circ}C$ ) to  $+210^{\circ}F$  ( $+99^{\circ}C$ ) (Cleaning In Place to 248°F (+120°C) Not for continuous

steam service

Part No.	I.D.	O.D.	Plies	WP psi	MBR	WT LBS/FT
6300WT-00750-00	3/4	1.29	2	150	4	0.4
6300WT-01000-00	1	1.54	2	150	5	0.5
6300WT-01500-00	11/2	2.05	2	150	6	0.71
6300WT-02000-00	2	2.55	2	150	7	0.95
6300WT-03000-00	3	3.76	2	150	9	1.51
6300WT-04000-00	4	4.76	2	150	12	1.98

Non-stock orders - (other color hose covers red, black, white) are available and require a 400ft minimum order per I.D.

Meets or exceeds the requirement of the Canadian Food Inspection Agency (File:N267)

# Novaflex 6301 Nitrile Food Discharge Hose

Recommended for the food transfer application that demands both flexibility and ruggedness with a clean white FDA grade tube. Meets FDA, USDA & 3A sanitary standards Authorized #1376. The food grade nitrile tube is odorless and tasteless for those oily transfer applications. Excellent for discharge applications. This ultra smooth microbe resistant tube is built on special stainless steel mandrels for cleanliness.



### Construction:

Tube: FDA white nitrile

Reinforcement: Multiple plies of polyester tire cord

Cover: Grey PVC nitrile. Length: 100ft

Temperature Range:-40°F (-40°C) to +210°F (+99°C) (Cleaning In Place to 248°F (+120°C) Not for continuous

steam service

Part No.	I.D.	O.D.	Plies	WP psi	MBR	WT LBS/FT
6301WT-00500-00	1/2	.99	2	250	n/a	0.31
6301WT-00750-00	3/4	1.24	2	250	n/a	0.41
6301WT-01000-01	1	1.62	4	250	n/a	0.64
6301WT-01500-01	11/2	2.12	4	250	n/a	0.93
6301WT-02000-01	2	2.62	4	250	n/a	1.26
6301WT-03000-00	3	3.64	4	250	n/a	1.64
6301WT-03000-01	3	3.76	6	250	n/a	1.91
6301WT-04000-00	4	4.64	4	250	n/a	2.19
6301WT-04000-01	4	4.76	6	250	n/a	2.53

Non-stock orders - (other color hose covers red, black, white) are available and require a 400ft minimum order per I.D.

### Novaflex 6303 Corrugated Nitrile Food 150 Suction & Discharge Hose

This food transfer hose is designed to provide maximum flexibility along with an abrasive resistant or Excellent for the transfer of ails product in

Cover: Grey PVC Nitrile. Length: 100ft

Temperature Range:  $-40^{\circ}F$  ( $-40^{\circ}C$ ) to  $+210^{\circ}F$  ( $+99^{\circ}C$ ) (Cleaning In Place to 248°F (+120°C) Not for continuous steam service

cover. Excellent for the transfer of oily product in
full suction and discharge applications. Meets
FDA, USDA & 3A sanitary standards Authorized
#1376. This ultra smooth microbe resistant tube
is built on special stainless steel mandrels for
cleanliness.
Construction:
Tube: White FDA Nitrile
Reinforcement: Multiple plies of polyester tire cord with helix

Part No.	I.D.	O.D.	Plies	WP psi	MBR	WT LBS/FT
6303WT-01500-00	11/2	2.13	2	150	6	0.73
6303WT-02000-00	2	2.63	2	150	7	0.98
6303WT-03000-00	3	3.74	2	150	9	1.53
6303WT-04000-00	4	4.75	2	150	12	1.99

Non-stock orders - (other color hose covers red, black, white) are available and require a 400ft minimum order per I.D.

Meets or exceeds the requirement of the Canadian Food Inspection Agency (File:N267)

### Novaflex 6400

### **EPDM Food 150 Suction & Discharge Hose**

Recommended for the food transfer application that demands both flexibility and ruggedness with a clean white FDA grade tube. The food grade EPDM tube is odorless and tasteless for non-oily transfer applications. Excellent for suction and discharge applications. This ultra smooth microbe resistant tube is built on special stainless steel mandrels for cleanliness.

#### **Construction:**

Tube: FDA white EPDM (non oily applications)
Reinforcement: Multiple plies of polyester tire cord with

wire helix

Cover: Gray EPDM. Length: 100ft

Temperature Range: -40°F (-40°C) to +225°F (+107°C)

Not for continuous steam service

Part No.	I.D.	O.D.	Plies	WP psi	MBR	WT LBS/FT
6400WE-00750-00	3/4	1.29	2	150	4	0.4
6400WE-01000-00	1	1.54	2	150	5	0.5
6400WE-01500-00	11/2	2.05	2	150	6	0.71
6400WE-02000-00	2	2.55	2	150	7	0.95
6400WE-03000-00	3	3.67	2	150	12	1.51
6400WE-04000-00	4	4.71	2	150	16	1.98

Non-stock orders - (other color hose covers white, green, red, yellow, blue, orange black, purple) are available and require a 400ft minimum order per I.D.

Meets or exceeds the requirement of the Canadian Food Inspection Agency (File: N267)

# Novaflex 6401 EPDM Food Discharge Hose

Recommended for the food transfer application that demands both flexibility and ruggedness with a clean white FDA grade tube. The food grade EPDM tube is odorless and tasteless for non-oily transfer applications. Excellent for discharge applications. This ultra smooth microbe resistant tube is built on special stainless steel mandrels for cleanliness.

#### Construction:

Tube: FDA white EPDM (non oily applications)
Reinforcement: Multiple plies of polyester tire cord

Cover: Gray EPDM. Length: 100ft

Temperature Range: -40°F (-40°C) to +225°F (+107°C) (Cleaning In Place to 248°F (+120°C) Not for use with

steam.

Part No.	I.D.	O.D.	Plies	WP psi	MBR	WT LBS/FT
6401WE-00500-00	1/2	.99	2	250	n/a	0.31
6401WE-00750-00	3/4	1.24	2	250	n/a	0.41
6401WE-01000-01	1	1.62	4	250	n/a	0.64
6401WE-01500-01	11/2	2.12	4	250	n/a	0.93
6401WE-02000-01	2	2.62	4	250	n/a	1.26
6401WE-03000-00	3	3.64	4	250	n/a	1.64
6401WE-03000-01	3	3.76	6	250	n/a	1.91
6401WE-04000-00	4	4.64	4	250	n/a	2.19
6401WE-04000-01	4	4.76	6	250	n/a	2.53

Non-stock orders - (other color hose covers white, green, red, yellow, blue, orange black, purple) are available and require a 400ft minimum order per I.D.

Meets or exceeds the requirement of the Canadian Food Inspection Agency (File: N267)

### Novaflex 6403 UHMW Tube EPDM Food Suction & Discharge Hose

Recommended for special applications that require smooth tubes and easy to clean surfaces. Recommended for the food transfer application that demands flexibility and ruggedness with a clean white FDA ultra high molecular weight polyethylene grade tube. This food grade tube is odorless and tasteless for all those all purpose transfer applications. This ultra smooth microbe resistant tube is built on special stainless steel mandrels for cleanliness.

### **Construction:**

Tube: FDA UHMW - odor and tasteless (non-oily

applications)

Reinforcement: Multiple plies of polyester tire cord with

helix wire

Cover: Gray EPDM. Length: 100ft

Temperature Range:  $-40^{\circ}F$  ( $-40^{\circ}C$ ) to  $+225^{\circ}F$  ( $+107^{\circ}C$ ) (Cleaning In Place to  $248^{\circ}F$  ( $+120^{\circ}C$ ) Not for use with steam.

Part No.	I.D.	O.D.	Max WP psi	Bend Radius	Vacuum HG	WT LBS/FT
6403CU-00750-00	3/4	1.28	200	3.5	29"	0.58
6403CU-01000-00	1	1.55	200	3.5	29"	0.63
6403CU-01500-00	11/2	2.06	200	5	29"	1.06
6403CU-02000-00	2	2.56	200	8	29"	1.33
6403CU-03000-00	3	3.75	200	12	29"	2.12
6403CU-04000-00	4	4.76	200	16	29"	2.83

Non-stock orders - (other color hose covers white, green, red, yellow, blue, orange black, purple) are available and require a 400ft minimum order per I.D.

Meets or exceeds the requirement of the Canadian Food Inspection Agency (File: N267)



### Novaflex 6500

### Connoisseurs Food & Beverage Suction and **Discharge Hose**

The connoisseur line of food hose is designed to meet the food processing industries demanding applications. Connoisseur is built in a variety of hose constructions utilizing a white chlorobutyl tube for non-oily applications that will not impart taste or odor. Meets FDA, USDA, and 3-A Sanitary Standards Authorized (#1376). Resistant to CIP solutions. This ultra smooth microbe resistant tube is built on special stainless steel mandrels for cleanliness.



Tube: White chlorobutyl (full vacuum non oily

applications)

Reinforcement: Multiple plies of polyester tire cord with

helix wire (microbe resistant) Cover: Gray EPDM. Length: 100 ft

Temperature Range:  $-40^{\circ}F$  ( $-40^{\circ}C$ ) to  $+240^{\circ}F + 116^{\circ}C$ ) (Cleaning In Place to 248°F (+120°C) Not for continuous

steam service

Part No.	I.D.	O.D.	Plies	Max WP psi	MBR	Vacuum Rating	WT LBS/FT
6500WB-00500-00	1/2						
6500WB-00750-00	3/4	1.29	2	150	4	Full	0.4
6500WB-01000-00	1	1.54	2	150	5	Full	0.5
6500WB-01500-00	11/2	2.05	2	150	6	Full	0.71
6500WB-02000-00	2	2.55	2	150	7	Full	0.95
6500WB-02500-00	21/2	3.14	2	150	8	Full	1.19
6500WB-03000-00	3	3.67	2	150	12	Full	1.51
6500WB-04000-00	4	4.67	2	150	16	Full	1.98

Meets or exceeds the requirement of the Canadian Food Inspection Agency (File:N267)

### Novaflex 6501

### **Connoisseurs Discharge Hose**

Same high quality hose as Novaflex 6500, designed to handle non-oily applications only. The multi-ply construction provides excellent resistance to kinking. Meets the requirements of FDA, USDA & 3-A (cert#1376)

#### **Construction:**

Tube: White chlorobutyl (microbe resistant

(non oily applications)

Reinforcement: Multiple plies of polyester

tire cord

Cover: Gray EPDM. Length: 100 ft

Temperature Range:  $-40^{\circ}F$  ( $-40^{\circ}C$ ) to  $+240^{\circ}F + 116^{\circ}C$ ) (Cleaning In Place to 248°F (+120°C) Not for continuous

steam service

Part No.	I.D.	O.D.	Plies	Max WP psi	MBR	WT LBS/FT
6501WB-00500-00	1/2	.99	2	250	n/a	0.31
6501WB-07500-00	3/4	1.24	2	250	n/a	0.41
6501WB-01000-00	1	1.49	2	250	n/a	0.52
6501WB-01000-01	1	1.62	4	250	n/a	0.64
6501WB-01500-01	11/2	2.12	4	250	n/a	0.93
6501WB-02000-01	2	2.62	4	250	n/a	1.26
6501WB-03000-00	3	3.64	4	250	n/a	1.64
6501WB-03000-01	3	3.76	6	250	n/a	1.91
6501WB-04000-00	4	4.64	4	250	n/a	2.19
6501WB-04000-01	4	4.76	6	250	n/a	2.53

Meets or exceeds the requirement of the Canadian Food Inspection Agency (File:N267)

# Novaflex 6502 (Heavier design)

### **High Pressure, Superior Quality Brewery Discharge Hose**

Novaflex 6502 special construction provides maximum flexibility for ease of handling. The special smooth chlorobutyl bacteria resistant tube designed for non-oily applications will not impart odor or taste. Meets FDA, USDA and 3-A (Cert#1376).

#### **Construction:**

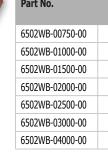
Tube: White chlorobutyl (non oily applications) Reinforcement: Multiple plies of polyester tire

cord

Cover: Red EPDM. Length 100 ft

Temperature Range:  $-40^{\circ}F$  (-40°C) to  $+240^{\circ}F + 116^{\circ}C$ ) (Cleaning In Place to 248°F (+120°C) Not for continuous

steam service



Part No.	I.D.	0.D.	Plies	Max WP psi	MBR	WT LBS/FT
6502WB-00750-00	3/4	1.37	4	350	n/a	.59
6502WB-01000-00	1	1.70	4	350	n/a	.85
6502WB-01500-00	11/2	2.25	4	350	n/a	1.25
6502WB-02000-00	2	2.88	6	350	n/a	1.89
6502WB-02500-00	21/2	3.51	6	350	n/a	2.70
6502WB-03000-00	3	4.04	6	350	n/a	3.45
6502WB-04000-00	4	5.31	6	350	n/a	5.40

Meets or exceeds the requirement of the Canadian Food Inspection Agency (File:N267)

### Novaflex 6503

### Connoisseurs Food & Beverage Hose

The same hose as Novaflex 6500 but with a corrugated cover. The special smooth chlorobutyl bacteria resistant tube is designed for non-oily products and will not impart odor or taste. Meets FDA, USDA & 3-A.

#### Construction:

Tube: White chlorobutyl (non oily applications) Reinforcement: Multiple plies of tire cord and

nelix wire

Cover: Grey EPDM. Length: 100 ft.

Temperature Range: -40°F (-40°C) to +240°F (+116°C)

(Cleaning In Place to 248°F (+120°C) Not for continuous steam service.

Part No.	I.D.	0.D.	MBR (in)	Plies	WP psi	WT LBS/FT
6503WB-02000-00	2	2.63	7	2	150	0.95
6503WB-02500-00	21/2	3.13	8	2	150	1.19
6503WB-03000-00	3	3.69	9	2	150	1.51
6503WB-04000-00	4	4.69	12	2	150	1.98

# Novaflex 6505

### **Connoisseurs Wine Hose**

Special kink and crush resistant hose, designed utilizing a multi-ply construction with dual special monofilament helix rods. 3-A certified (certificate # 1376). Meets FDA, USDA requirements. Designed to meet the demands of "cleaning in process". This ultra smooth microbe resistant tube is built for non-oily applications, on special stainless steel mandrels for cleanliness.



Tube: White chlorobutyl (non oily applications)
Reinforcement: Multiple plies of tire cord and dual

monofilament helix Cover: Purple EPDM. Length: 100 ft.

Temperature Range: -40°F (-40°C) to +240°F (+116°C)

(Cleaning In Place to 248°F (+120°C) Not for continuous steam service.

Part No.	I.D.	O.D.	MBR (in)	VAC (Hg)	Plies	WP psi	WT LBS/FT
6505WB-00750-00	3/4	1.41	3	Full	2	250	0.39
6505WB-01000-00	1	1.64	4	Full	2	250	0.48
6505WB-01500-00	11/2	2.14	5	Full	2	250	0.68
6505WB-02000-00	2	2.77	7	Full	4	250	1.27
6505WB-02500-00	21/2	3.29	13	Full	4	250	1.55
6505WB-03000-00	3	3.79	16	Full	4	250	1.89

Meets or exceeds the requirement of the Canadian Food Inspection Agency (File: N267)



### Novaflex 6506 Connoisseurs Food & Beverage Hose

Special kink and crush resistant suction & discharge hose, designed for those more demanding applications requiring a product that meets 3-A (cert# 1376), FDA & USDA standards. Designed to meet the temperatures and chemical resistance associated with "cleaning in place" systems. This ultra smooth microbe resistant tube is built for non-oily applications, on special stainless steel mandrels for cleanliness.



### **Construction:**

Tube: White Chlorobutyl (non oily applications)

Reinforcement: Multiple plies of polyester tire cord & dual

monofilament helix

Cover: Gray EPDM abrasion resistant. Length: 100 ft Temperature Range: -40°F (-40°C) to +240°F (+116°C) (Cleaning In Place to 248°F (+120°C) Not for continuous

steam service

Part No.	I.D.	O.D.	MBR (in)	VAC (Hg)	Plies	WP psi	WT LBS/FT
6506WB-00750-00	3/4	1.41	3.0	Full	2	250	0.33
6506WB-01000-00	1	1.64	3.5	Full	2	250	0.44
6506WB-01500-00	11/2	2.14	4.5	Full	2	250	0.63
6506WB-02000-00	2	2.77	7.0	Full	4	250	1.21
6506WB-02500-00	21/2	3.29	13.0	Full	4	250	1.52
6506WB-03000-00	3	3.79	16.0	Full	4	250	1.84

Meets or exceeds the requirement of the Canadian Food Inspection Agency (File:N267)

### Novaflex 6507 NovaBrew

NovaBrew is a state of the art designed hose based on the specific requirements of the modern day brewery. NovaBrew has a rugged but flexible construction with a super smooth white hose tube for non-oily applications, that is microbe resistant along with a dark burgundy red cover that resists dirt scuffs and is easily cleaned. NovaBrew is built on stainless steel mandrels for cleanliness and meets FDA USDA and 3-A (certificate #1376).



### Construction:

Tube: White chlorobutyl (non oily applications)
Reinforcement: Multiple plies of polyester tire cord, dual

monofilament helix rods Cover: Dark burgundy EPDM.

Lenath: 100ft

Temperature Range:- $40^{\circ}F$  (- $40^{\circ}C$ ) to + $240^{\circ}F$  (+ 1 1 6°C) (Can be open end steam cleaned) CIP to  $248^{\circ}F$  (+ 1  $20^{\circ}C$ )

Part No.	I.D.	O.D	WP psi	MBR	Vacuum Hg	WT LBS/FT
6507NB-07500-00	3/4	1.41	250	4	Full	0.33
6507NB-01000-00	1	1.64	250	4	Full	0.48
6507NB-01500-00	11/2	2.14	250	5	Full	0.65
6507NB-02000-00	2	2.77	250	7	Full	1.26
6507NB-02500-00	21/2	3.29	250	13	Full	1.54

# High Temperature Hose

### Novaflex 9155

**Furnace Door Fiberglass Hose** 

Designed to withstand extreme heat (1000°F) from exterior in open hearth steel mill furnaces. Carries water to the furnace door.

### Construction:

Tube: Green SBR non-conductive synthetic rubber. Reinforcement: Plies of polyester tire cord. Cover: 1-ply of white fiberglass fabric

Length: 100 ft. Temperature Range:

Up to +180°F (+82°C) internal (+1000°F external) (+538°C)



Part No.	I.D.	O.D.	Plies	WP psi	WT LBS/FT
9155GS-00500-00	1/2	1.05	2	400	0.34
9155GS-00750-00	3/4	1.38	2	400	0.53
9155GS-01000-00	1	1.67	2	300	0.72
9155GS-01250-00	11/4	1.93	2	300	0.85
9155GS-01500-00	11/2	2.18	2	250	0.99
9155GS-02000-00	2	2.80	4	250	1.58
9155GS-02250-00	21/4	3.05	4	250	1.75
9155GS-02375-00	23/8	3.22	4	250	1.97
9155GS-02500-00	21/2	3.35	4	250	2.06
9155GS-02750-00	23/4	3.60	4	250	2.25
9155GS-03000-00	3	3.85	4	250	2.43
9155GS-03250-00	31/4	4.10	4	250	2.61
9155GS-03500-00	31/2	4.35	4	250	2.78
9155GS-04000-00	4	4.87	4	250	3.41
9155GS-04500-00	41/2	5.37	4	250	3.78

Electrical resistivity: greater than 1000 gigaothms at 1000 volts DC

### Novaflex 9156

### **Furnace Door Nomex Hose**

Designed to withstand extreme heat from exterior in open hearth steel mill furnaces with the added abrasion resistance of nomex.

#### Construction:

Tube: Green SBR non-conductive

synthetic rubber.

Reinforcement: Plies of polyester

tire cord.

Cover: 1-ply of yellow nomex fabric.

Length: 100 ft.
Temperature Range:
Up to +180°F. (+82°C)
(+600°F external) (+316°C)



Part No.	I.D.	O.D.	Plies	WP.	WT
				psi	LBS/FT
9156GS-00500-00	1/2	1.05	2	400	0.33
9156GS-00750-00	3/4	1.44	2	400	0.58
9156GS-01000-00	1	1.68	2	300	0.70
9156GS-01250-00	11/4	1.94	2	300	0.85
9156GS-01500-00	11/2	2.18	2	250	0.98
9156GS-02000-00	2	2.82	4	250	1.56
9156GS-02250-00	21/4	3.08	4	250	1.73
9156GS-02375-00	23/8	3.24	4	250	1.96
9156GS-02500-00	21/2	3.37	4	250	2.04
9156GS-03000-00	3	3.85	4	250	2.41
9156GS-03500-00	31/2	4.37	4	250	2.76
9156GS-04000-00	4	4.89	4	250	3.37
9156GS-04500-00	41/2	5.39	4	250	3.74

Electrical resistivity: greater than 1000 gigaohms at 1000 volts DC





### Novaflex 360-03 All Rubber Vent Hose

Designed to meet SAE J1527 A2 requirements. This hose is excellent for use in vent applications where an EPA or CARB requirement is **not** required. This hose meets USCG, NMWA, ABYC and ISO 7840. Novaflex 360-03 is an all rubber construction for ease of coupling installation. The flame resistant cover is designed for enclosed engine compartment applications.

### Construction:

Tube: Black nitrile

Reinforcement: 2 plies of polyester

Cover: Black neoprene

Length: Standard package length, 250 ft

Temperature Range:  $-40^{\circ}F$  ( $-40^{\circ}C$ ) to  $+180^{\circ}F$  ( $+82^{\circ}C$ )

Part No.	I.D.	O.D.	Plies	WP psi	WT LBS/FT
360BT-00500-03-7200	1/2	.91	2	35	.34
360BT-00625-03-7200	5/8	1.05	2	35	.39

### **Fuel Compatibility:**

Ethanol up to E85 Biodiesel up to B20

# Novaflex 360-09 Barrier Fuel Feed and Vent Hose

Designed to meet fuel hose specifications of SAE J1527 - A1-15 and ISO 7840.

Novaflex 360-09 is certified by the EPA to be compliant with the 15G/M^/Day emission standard. The barrier construction provides the lowest permeation rating available for any marine fuel hose. (Meets CARB). Handles gasoline, diesel and alcohol blended fuels, and meets all requirements of USCG, NMMA, ABYC. It is certified by IMCI for use in the European community. Can be used in a feed or vent application. The flame resistant cover is designed for enclosed engine compartment applications.

### **Construction:**

Tube: Nitrile thermoplastic laminate (NTL) Reinforcement: Multiple high tensile textile spirals

Cover: Black OZO

Length: 250 ft. Reel lengths - cut lengths add 10% Temperature Range: -30°F (-35°C) to +180°F (+82°C)

Part No.	I.D.	O.D.	Plies	WP psi	WT LBS/FT
360BT-00250-09	1/4	0.54	2	35	0.11
360BT-00313-09	5/16	0.61	2	35	0.13
360BT-00375-09	3/8	0.68	2	35	0.16
360BT-05000-09	1/2	0.82	2	35	0.21
360BT-00625-09	5/8	1.00	2	35	0.29
360BT-00625-09	5/8	1.00	2	35	0.29

### **Fuel Compatibility:**

Compatible with
Ethanol Fuel Grades:
E10, E15 to E85

Compatible with
Bio-Diesel Fuel Grades:
All Grades up to B100

### Novaflex 842 Multi-Purpose Exhaust & Fuel Fill Hose

Novaflex 842 is a multi-purpose marine hose designed to meet the requirements of J1527 A2, ISO 7840, USCG, NMMA & ABYC fuel fill hose requirements. It also meet the requirements of SAJ2006 R2 for marine exhaust hose.

842 is listed/meets SAE 1942-1 For use in vital water applications.

### **Construction:**

Tube: Nitrile, black petroleum and heat resistant Reinforcement: Plies of polyester fabric with wire helix

Cover: Black flame resistant, oil resistant

Length: 50 ft

Temperature Range: -30°F (-35°C) to +212°F (100°C)

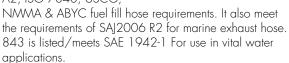
Working pressure is 25% rated burst pressure

Part No	I.D.	Length	Max W.P.	MBR (in)
842BT-00500-00-600	1/2	50	150	21/2
842BT-00625-00-600	5/8	50	150	21/2
842BT-00750-00-600	3/4	50	150	21/2
842BT-00875-00-600	7/8	50	150	3
842BT-01000-00-600	1	50	150	3
842BT-01250-00-600	11/4	50	150	3
842BT-01375-00-600	13/8	50	150	4
842BT-01500-00-600	11/2	50	150	4
842BT-01625-00-600	15/8	50	150	5
842BT-01750-00-600	13/4	50	150	5
842BT-01875-00-600	1%	50	150	5
842BT-02000-00-600	2	50	150	6
842BT-02125-00-600	21/8	50	150	6
842BT-02250-00-600	21/4	50	150	7
842BT-02375-00-600	23/8	50	150	7
842BT-02500-00-600	21/2	50	150	8
842BT-02625-00-600	25/8	50	150	9
842BT-02750-00-600	23/4	50	150	10
842BT-03875-00-600	21/8	50	150	11
842BT-03000-00-600	3	50	150	13
842BT-03125-00-600	31/8	50	35	15
842BT-03250-00-600	31/4	50	100	151/2
842BT-03500-00-600	31/2	50	100	151/2
842BT-04000-00-600	4	50	100	16
842BT-04500-00-600	41/2	50	100	18
842BT-05000-00-600	5	50	100	20
842BT-06000-00-600	6	50	100	24

Fuel Compatibility: Ethanol up to E85. Biodiesel up to B20

### Novaflex 843 Multi-Purpose Exhaust & Fuel Fill Hose

Novaflex 843 is a multipurpose marine hose designed to meet the requirements of J1527 A2, ISO 7840, USCG,



### **Construction:**

Tube: Nitrile, black petroleum and heat resistant Reinforcement: Plies of polyester fabric with wire helix

Cover: Black flame resistant, oil resistant

Length: 50 ft

Temperature Range: -30°F (-35°C) to +212°F (100°C)

Part No	I.D.	Length	Max W.P.	MBR (in)	WT LBS/FT
843-00500-00-600	1/2	50	150	1.5	.45
843-00625-00-600	5/8	50	150	2	.53
843-00750-00-600	3/4	50	150	2 1/2	.63
843-00875-00-600	7/8	50	150	3	.72
843-01000-00-600	1	50	150	3	.88
843-01250-00-600	11/4	50	150	4	.97
843-01375-00-600	13/8	50	150	4	1.62
843-01500-00-600	11/2	50	150	4.5	1.19
843-01625-00-600	15/8	50	150	5	1.28
843-01750-00-600	1¾	50	150	5	1.28
843-01875-00-600	1%	50	150	5.5	1.36
843-02000-00-600	2	50	150	6	1.53
843-02125-00-600	21/8	50	150	6.5	1.62
843-02250-00-600	21/4	50	150	6.5	1.69
843-02375-00-600	23/8	50	150	7	1.78
843-02500-00-600	21/2	50	150	7.5	1.85
843-02625-00-600	25/8	50	150	7.5	1.93
843-02750-00-600	23/4	50	150	8.5	2.02
843-03875-00-600	2%	50	150	8.5	2.09
843-03000-00-600	3	50	150	9	2.18
843-03125-00-600	31/8	50	150	9.5	2.27
843-03250-00-600	31/4	50	150	10	2.35
843-03500-00-600	31/2	50	150	10.5	2.51
843-04000-00-600	4	50	150	12	2.83
843-04500-00-600	41/2	50	150	13.5	3.50
843-05000-00-600	5	50	150	15	3.86
843-06000-00-600	6	50	150	18	4.57

Fuel Compatibility: Ethanol up to E85. Biodiesel up to B20



# Marine General Purpose Hose

### Novaflex Series 128 Split Conduit Tubing

Flame Retardant. Cable and wire harness

Construction:

Cover: Split for easy access to route wires

V2 rated UL 94A Color: Black and white

Temperature range:  $+25^{\circ}F$  ( $-4^{\circ}C$ ) to  $150^{\circ}F$  ( $+66^{\circ}C$ )



Part No	I.D.	Length
128BL-00250-00	1/4	50
128WL-00375-00	3/8	50
128BL-00375-00	3/8	50
128BL-00500-00	1/2	50
128BI-00625-00	5/8	50
128WL-00750-00	3/4	50
128BL-00750-00	3/4	50
128WL-01000-00	1	50
128BL-01000-00	1	50
128BL-01250-00	11/4	50
128WL-01500-00	11/2	50
128BL-01500-00	11/2	50
128BL-02000-00	2	50

# Outboard Motor Cable Cover Novaflex Series 186 (Black/ Grey)

Grey)
Cable conduit designed to conceal hose or cable of outboard motor.

Color: Black or grey



Part No	ID	Color
186GL-02000-00	Gray 2"	100
186BL-02000-00	Black 2"	100

### Novaflex Series 400 (Black) Novaflex Series 402 (White) Ventilation Ducting Flame resistant PVC ducting designed for

Flame resistant PVC ducting designed for venting bilge gases. Ozone and sunlight resistant



Part No	ID	Length (ft)
400WL-03000-00	3	50
400WL-04000-00	4	50
402BL-03000-00	3	50
402BL-04000-00	4	50

# Marine Sanitation Hose

# Novaflex Series 140 Corrugated PVC Sanitation Hose

Highly flexible PVC sanitation hose designed primarily as a discharge hose. Applications include: potable water fill, drain lines, holding tank pump-out and bilge discharge. FDA approved compound. Tube & filler is a special FDA PVC resin developed for extreme flexibility. Smooth tube with corrugated outside diameter. (Not designed for below waterline applications)

Construction:

Temperature Range:  $5^{\circ}F$  (-15°C) to +158°F (+70°C)

Part No	ID	MBR (in)	WP	WT/ft
140WL-01500-00	11/2	2"	50	0.28

# Novaflex Series 148 PVC Sanitation Hose Heavy Duty

Heavy duty PVC hose designed for sanitation systems. Smooth interior and exterior provide excellent clamping surface. Helical rod design provides flexibility and collapse resistance.

Construction:

Tube: White PVC
Reinforcement: PVC Rod
Cover: White PVC

Temperature Range:  $5^{\circ}F$  (-15°C) to +158°F (+70°C)

Part No	Color	ID	MBR (in)	WT/FT
148WL-00750-00	White	3/4	2	100
148WL-01000-00	White	1	2	100
148WL-01125-00	White	11/8	2.3	100
148WL-01250-00	White	11/4	2.5	100
148WL-01500-00	White	11/2	3.5	100
148WL-02000-00	White	2	3.5	100



# Marine Water & Exhaust Hose

# Novaflex Series 120 PVC Bilge & Water Transfer Hose

Uniquely designed for bilge

discharge. Corrugated polyethylene tubing provides maximum flexibility for ease of installation. Molded cuff is built in every 12" for easy clamping.

Construction:

Temperature Range: +25°F (-4°C) to 150°F (+66°C)

Part No	ID	MBR (in)	VAC Rating	WT LBS/FT
120BL-00625-00	5/8	1	20	5
120BL-00750-00	3/4	2	20	6
120BL-01125-00	11/8	4	20	7
120BL-01250-00	11/4	5	20	10
120BL-01500-00	11/2	6	20	13

# Novaflex Series 141 Corrugated PVC Scupper Hose



Smooth ID with corrugated OD. Gray PVC helix rod with clear vinyl

tube. Applications include potable water fill lines, drain lines, scupper drain lines, Live well aerators and bilge discharge. This hose is not designed for below waterline applications.

### **Construction:**

Temperature range:  $5^{\circ}F$  (-15°C) to +158°F (+70°C)

Part No	ID	MBR (in)	VAC Rating	WT LBS/FT
141GL-00750-00	3/4	1/2	20	8
141GL-01000-00	1	3/4	20	10
141GL-01125-00	11/8	1	20	19
141GL-01250-00	11/4	11/2	20	24
141GL-01500-00	11/2	15%	28	34
141GL-02000-00	2	13/4	28	34
141GL-03000-00	3	2	28	37

## Novaflex Series 149 PVC Live Well & Bilge Hose



### **Construction:**

Tube: Black PVC

Reinforcement: PVC helix rod

Length: 100 ft

Temperature Range:  $-20^{\circ}F$  ( $-29^{\circ}C$ ) to  $+120^{\circ}F$  ( $+49^{\circ}C$ )

Part No	I.D.	O.D.	MBR (in)	VAC Rating	WT LBS/FT
149BL-00750-00	3/4	<sup>31</sup> /32	3	28	20
149BL-01000-00	1	11/4	3	28	27
149BL-01125-00	11//8	1 <sup>11</sup> /32	3	28	28
149BL-01250-00	11/4	11/2	31/2	28	33
149BL-01500-00	11/2	1%	4	28	40
149BL-01875-00	1%	21/4	51/2	28	52

# Marine Water & Exhaust Hose

### Novaflex 200 Softwall Water/Exhaust Hose

Designed for a wide range of water transfer and discharge applications as well as the tough demands of wet exhaust. The softwall (non-wire) construction is designed for straight routings.

An excellent choice for bilge, toilet, scupper and water discharge applications that are straight. Meets SAE J2006R1 for marine exhaust hose.

Construction:

Tube: EPDM, Black

Reinforcement: Polyester fabric

Cover: EPDM, Black Length: 25-50 ft

Temperature Range: -40°F (-21°C) to +250°F (+121°C)

Not for steam service

Other diameters available on request

Part No.	I.D.	O.D.	Plies	WP psi	WT LBS/FT
200BE-01500-00	11/2	1.94	2	250	0.50
200BE-01625-00	15/8	2.06	2	250	0.54
200BE-01750-00	13/4	2.19	2	250	0.58
200BE-01875-00	1%	2.31	2	250	0.63
200BE-02000-00	2	2.44	2	200	0.67
200BE-02125-00	21/8	2.69	2	200	0.91
200BE-02250-00	21/4	2.81	2	200	0.97
200BE-02375-00	23/8	2.94	2	200	1.02
200BE-02500-00	21/2	3.06	2	150	1.07
200BE-02625-00	25/8	3.19	2	150	1.13
200BE-21875-00	27/8	3.44	2	150	1.23
200BE-03000-00	3	3.56	2	125	1.29
200BE-03125-00	31/8	3.69	2	125	1.34
200BE-03500-00	31/2	4.06	2	125	1.50
200BE-04000-00	4	4.56	2	100	1.72
200BE-04125-00	41/8	4.69	2	100	1.77
200BE-04500-00	41/2	5.13	2	100	2.15
200BE-05000-00	5	5.63	2	100	2.38
200BE-05500-00	51/2	6.13	2	100	2.62
200BE-06000-00	6	6.63	2	85	2.86
200BE-06625-00	65/8	7.41	2	75	3.95
200BE-08000-00	8	8.78	2	75	4.76

### Novaflex 250 Smooth-Flex Marine Hardwall Water Exhaust Hose

Designed for a wide range of demanding engine applications from water intake and engine coolant to marine wet exhaust. Its wire helix construction provides excellent flexibility and bend radius. Also an excellent choice for bilge discharge, toilet and holding tank connections, water discharge and scupper lines. Meets SAE J2006R2 for marine exhaust hose applications.

#### **Construction:**

Tube: Black EPDM

Reinforcement: Polyester fabric with helix

Cover: Black EPDM Length: 50 ft. Ends: Plain

Temperature Range:  $-40^{\circ}F$  ( $-40^{\circ}C$ ) to  $+250^{\circ}F$  ( $+121^{\circ}C$ )

Not for steam service

Part No.	I.D.	O.D.	WP psi	MBR (in)	WT LBS/FT
250BE-00500-00	1/2	0.78	300	21/2	0.24
250BE-00625-00	5/8	0.91	300	21/2	0.27
250BE-00750-00	3/4	1.06	300	21/2	0.29
250BE-00875-00	7/8	1.16	300	3	0.34
250BE-01000-00	1	1.28	300	3	0.37
250BE-01125-00	11/8	1.41	300	3	0.41
250BE-01225-00	11/4	1.53	300	3	0.48
250BE-01312-00	15/16	1.63	250	31/2	0.52
250BE-01375-00	13/8	1.69	250	4	0.54
250BE-01500-00	11/2	1.81	250	4	0.59
250BE-01625-00	15/8	1.94	200	5	0.62
250BE-01750-00	1¾	2.06	200	5	0.67
250BE-01875-00	1%	2.19	200	5	0.70
250BE-02000-00	2	2.31	200	6	0.80
250BE-02125-00	21/8	2.44	200	6	0.88
250BE-02225-00	21/4	2.56	200	61/2	0.90
250BE-02375-00	23/8	2.69	200	7	0.92
250BE-0250BE0-00	21/2	2.81	200	8	1.00
250BE-02625-00	25/8	2.94	150	9	1.05
250BE-02750-00	23/4	3.06	150	10	1.10
250BE-02875-00	27/8	3.19	150	11	1.13
250BE-03000-00	3	3.31	150	13	1.18
250BE-03125-00	31/8	3.44	150	15	1.32
250BE-03225-00	31/4	3.63	150	151/2	1.36
250BE-03500-00	31/2	3.81	125	16	1.44
250BE-04000-00	4	4.31	100	18	1.59
250BE-04500-00	41/2	4.81	100	24	1.85
250BE-05000-00	5	5.31	100	32	2.04
250BE-06000-00	6	6.31	75	36	2.36



# Marine Water & Exhaust Hose

Novaflex 260 **Heavy Duty EPDM** Premium

**Commercial Grade** 

**Heavy Duty Softwall Exhaust Hose** 

This heavy duty four ply construction is designed for the toughest wet exhaust applications.

The construction provides maximum resistance to panting, vibration and wall collapse. Exceeds SAEJ2006 R1 for marine exhaust hose applications.

**Construction:** 

Tube: Black EPDM

Reinforcement: Polyester tire cord Cover: Smooth black EPDM

Length: 50 ft. Ends: Plain

Temperature Range:  $-40^{\circ}F$  ( $-40^{\circ}C$ ) to  $+250^{\circ}F$  ( $+121^{\circ}C$ )

Not for steam service

Part No.	I.D.	O.D.	Plies	WP psi	WT LBS/FT
260BG-01000-00	1	1.41	4	250	0.56
260BG-01125-00	11/8	1.54	4	250	0.63
260BG-01250-00	11/4	1.66	4	225	0.69
260BG-01375-00	13/8	1.78	4	220	0.75
260BG-01500-00	11/2	1.96	4	200	0.89
260BG-1625-00	15/8	2.08	4	185	0.96
260BG-01750-00	13/4	2.26	4	175	1.11
260BG-01875-00	17/8	2.38	4	160	1.19
260BG-02000-00	2	2.50	4	150	1.25
260BG-02125-00	21/8	2.63	4	150	1.31
260BG-02250-00	21/4	2.76	4	140	1.38
260BG-02375-00	23/8	2.80	4	250	1.33
260BG-02500-00	21/2	3.07	4	250	1.80
260BG-02625-00	25/8	3.13	4	225	1.75
260BG-02750-00	23/4	3.31	4	220	1.98
260BG-02875-00	27/8	3.43	4	220	2.05
260BG-03000-00	3	3.54	4	210	2.07
260BG-03125-00	31/8	3.66	4	200	2.16
260BG-03250-00	31/4	3.80	4	190	2.29
260BG-03500-00	31/2	4.05	4	180	2.44
260BG-04000-00	4	4.60	4	150	3.11
260BG-04500-00	41/2	5.18	4	140	3.85
260BG-05000-00	5	5.69	4	130	4.31
260BG-05500-00	51/2	6.21	4	120	4.81
260BG-06000-00	6	6.74	4	110	5.48
260BG-06625-00	65/8	7.37	4	100	6.02

Novaflex 841

Heavy Duty Oil Resistant Soft Wall Exhaust Hose

This heavy duty marine softwall exhaust hose is an industry standard for use in oily applications. (Designed for straight applications). Meets SAEJ2006.

**Construction:** 

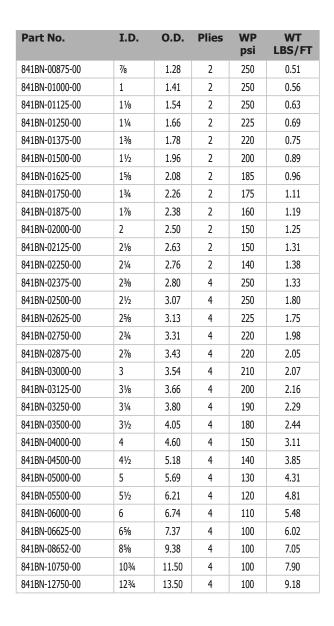
Tube: Nitrile Reinforcement: Polyester

tire cord

Cover: Black oil resistant Length: 50 ft or 100 ft.

Temperature Range: -40°F (-40°C) to +210°F (+99°C)

Not for steam service



# Material Handling Hose

### Novaflex 5000 Slurry King Hose Pure Gum Liner

Tough, versatile alternative to inflexible, cumbersome steel tubing. The easy handling and reusable quick-fastening flange system make installation a snap. Absorbs system vibration and saves wear on equipment. Compensates for thermal expansion and contraction, reduces noise. Flexible connection for hard piping misalignment. Can be cut on site for immediate installation. No welding necessary. Available with many inner tube compounds to meet specific material handling needs.

#### **Construction:**

Tube: Abrasion, red abrasion, black natural or pure gum

Reinforcement: Fabric and helix wire Cover: Ozone and ultra violet resistant

Temperature Range:  $-40^{\circ}F$  ( $-40^{\circ}C$ ) to  $+160^{\circ}F$  ( $+71^{\circ}C$ )

(depending on compound)

Length: 60 ft. Available in a variety of tube gauges

ranging from:  $\frac{1}{8}$ ",  $\frac{3}{16}$ ",  $\frac{1}{4}$ ",  $\frac{5}{16}$ ",  $\frac{3}{8}$ ",  $\frac{1}{2}$ "

Part No.	I.D.	O.D.	LINING THICKNESS (in)	MBR (in)	MAX PROD LENGTH (ft)	WP psi	WT LBS/FT
5000TG-02000-00	2	3.00	3/16	12	100	150	2.0
5000TG-03000-00	3	4.50	3/8	14	100	150	4.0
5000TG-04000-00	4	5.25	3/8	20	100	150	5.4
5000TG-05000-00	5	6.45	3/8	26	60	150	8.0
5000TG-06000-00	6	7.50	3/8	36	60	150	9.4
5000TG-08000-00	8	9.50	3/8	54	40	150	12.1
5000TG-10000-00	10	11.50	3/8	66	40	150	14.8
5000TG-12000-00	12	13.75	3/8	78	40	150	18.8
5000TG-14000-00	14	16.00	3/8	98	40	150	26.0

Optimum bend radius for maximum service life is 10 times the hose ID Flanges Available

# Novaflex 5000\* Slurry King Hose Yellow Abrasion Liner

Available with a variety of tube compounds including, black abrasion, red abrasion, black natural and pure gum for abrasion, oil, heat and corrosion resistance depending on applications.

Novaflex 5000RG - Red Gum for added abrasion resistance

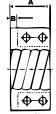
Novaflex 5000YG - Yellow Novaware tube superior abrasion

superior abrasion resistance

Part No.	I.D.	O.D.	LINING THICKNESS (in)	MBR (in)	MAX PROD LENGTH (ft)	WP psi	WT LBS/FT
5000XX-02000-00	2	3.00	3/16	12	100	150	2.0
5000XX-03000-00	3	4.50	3/8	14	100	150	4.0
5000XX-04000-00	4	5.25	3/8	20	100	150	5.4
5000XX-05000-00	5	6.45	3/8	26	60	150	8.0
5000XX-06000-00	6	7.50	3/8	36	60	150	9.4
5000XX-08000-00	8	9.50	3/8	54	40	150	12.1
5000XX-10000-00	10	11.50	3/8	66	40	150	14.8
5000XX-12000-00	12	13.75	3/8	78	40	150	18.8
5000XX-14000-00	14	16.00	3/8	98	40	150	26.0

Flanges Available XX= tube compund

# **Split Flange Coupling Specifications**





# **Novaflex Slurry King Gaskets**



ung Casi	CIS
Part No.	ID
7SKFGASK02	2
7SKFGASK03	3
7SKFGASK04	4
7SKFGASK05	5
7SKFGASK06	6
7SKFGASK08	8
7SKFGASK10	10
7SKFGASK12	12
7SKFGASK14	14

'D' I.D. Inches	'A' Inches	`B' Inches	`K' Inches	'P' Inches	`Z' Inches	`H' Inches	Approx/ WT/LBS
2	311/32	5/8	43/4	6	4	3/4	2.70
21/2	35/16	5/8	51/2	7	4	3/4	4.40
3	35/16	5/8	6	71/2	4	3/4	4.50
4	35/16	5/8	71/2	9	8	3/4	6.30
41/2	41/8	5/8	81/2	10	8	7/8	7.70
5	41/8	5/8	81/2	10	8	7/8	7.70
6	41/2	1/16	91/2	11	8	7/8	8.80
8	5%	3/4	11¾	131/2	8	7/8	12.40
10	6%	11/8	141/4	16	12	1	26.70
12	711/16	11/8	17	19	12	1	40.70
14	711/16	11/8	18¾	21	12	11/8	44.30



# Material Handling Hose

# Novaflex 5010

Sludge Slayer  $^{5/}$ 16" Gum Tube

Heavy duty material handling hose designed for portable and central industrial vacuum equipment as well as truck mount applications. The <sup>5/</sup>16" abrasion resistant tube is designed to resist cutting, tearing and wear from abrasive media. The heavy helix wire is designed to resist kinking and crushing well as handle full vacuum. (Ground using

well as handle full vacuum. (Ground using helix wire to make static conductive.)



Tube: 5/16" white gum

Reinforcement: Plies of fabric with helix wire Cover: Green Corrugated Length: 50 ft.

Temperature Range:  $-40^{\circ}F$  ( $-40^{\circ}$ ) to  $+160^{\circ}F$  ( $+71^{\circ}C$ )

Part No	ID	OD	MBR (in)	VAC (Hg)	WT LBS/FT
5010WG-02500-56	21/2	3.61	15	29	3.29
5010WG-03000-56	3	4.11	18	29	3.85
5010WG-04000-56	4	5.12	24	29	5.12
5010WG-06000-56	6	6.95	36	29	6.05
5010WG-08000-56	8	9.02	48	29	8.70
5010WG-10000-56	10	11.17	60	29	11.28

Novaflex 5010YG = Yellow Novaware 1/4" tube superior abrasion resistance

### Novaflex 5015

Material Handling Hose 1/8" Gum Tube

Lightweight material handling hose designed for portable and central industrial vacuum equipment.

The 1/8" abrasion resistant tube is ideal for conveying light materials by gravity flow or at low working pressures. (Ground using helix wire to make static conductive.)

### **Construction:**

Tube: 1/8" Tan gum

Reinforcement: Plies of fabric with helix wire

Cover: SBR Black Corrugated Length: 50 ft. Ends: Plain or soft cuffs

Temperature Range:  $-40^{\circ}F$  ( $-40^{\circ}$ ) to  $+160^{\circ}F$  ( $+71^{\circ}C$ )

Part No.	I.D.	O.D.	MBR (in)	VAC (Hg)	WT LBS/FT
5015TG-02500-00	21/2	3.13	9	29"	1.1
5015TG-03000-00	3	3.63	12	29"	1.4
5015TG-04000-00	4	4.63	24	29"	2.0
5015TG-06000-00	6	6.63	36	29"	3.0
5015TG-08000-00	8	8.63	48	17"	5.3
5015TG-10000-00	10	10.63	60	9″	7.0
5015TG-12000-00	12	12.63	72	9"	9.0

# Novaflex 5016 (Vacuum Only) Material Handling Hose 1/4" Gum Tube

Heavy duty material handling hose designed for portable and central industrial vacuum equipment as well as truck mount applications. The 1/4" abrasion resistant tube is designed to resist cutting, tearing and wear from abrasive media. The heavy helix wire is designed to resist kinking and crushing as well as handle full vacuum. (Ground using helix wire to make static conductive.)

### **Construction:**

Tube: ¼" Tan gum

Reinforcement: Plies of fabric with helix wire

Cover: SBR Black Corrugated

Length: 50 ft. Ends: Plain or soft cuffs

Temperature Range:- $40^{\circ}F$  (- $40^{\circ}$ ) to +160°F (+71°C)

Part No.	I.D.	O.D.	MBR (in)	VAC (Hg)	WT LBS/FT
5016TG-02500-00	21/2	3.18	9	29"	2.0
5016TG-03000-00	3	3.63	12	29"	2.2
5016TG-04000-00	4	4.63	24	29"	3.0
5016TG-06000-00	6	6.76	36	29"	4.1
5016TG-08000-00	8	8.88	48	17"	7.2
5016TG-10000-00	10	10.88	60	9″	9.0
5016TG-12000-00	12	12.88	72	9″	11.4

Novaflex 5016YG = Yellow Novaware tube superior abrasion resistance

## Novaflex 5017 Bulk Material Transfer Hose

Novaflex 5017TG is the 150 psi working pressure rated version of Novaflex 5016TG. This ¼" Tan Gum rubber tube is produced with a high abrasion resistance tube that is designed for the transfer of bulk materials.

Novaflex 5017TG hose is corrugated to provide maximum flexibility.



Tube: ¼" Tan gum natural rubber

Reinforcement: Plies of tire cord and helix wire

Cover: Black SBR corrugated

Length: 50 ft. Ends: plain or soft cuffs
Temperature Range: -40°F (-40°) to +160°F (+71°C)

Part No.	I.D.	O.D.	Plies	WP psi	MBR (in)	VAC" (Hg)	WT LBS/FT
5017TG-02500-00	21/2	3.48	2	150	9	29	2.6
5017TG-03000-00	3	3.98	2	150	12	29	3.1
5017TG-04000-00	4	5.0	2	150	24	29	4.1
5017TG-05000-00	5	6.13	4	150	30	29	5.6
5017TG-06000-00	6	7.13	4	150	36	29	6.6
5017TG-08000-00	8	9.27	4	150	48	17	9.95

Novaflex 5017YG = Yellow Novaware tube - superior abrasion resistance

## Novaflex 5018 Bulk Material Transfer Hose

Novaflex 5018 is the higher rated temperature version of Novaflex 5017 designed for transferring bulk materials at maximum temperatures of 200°F Novaflex 5018 bulk material transfer hose is corrugated to provide maximum flexibility and is designed with a ¼" thick tube for abrasion resistance.

Construction:

Tube: High temperature co-polymer

Reinforcement: Plies of tire cord and helix wire Cover: Black high temperature co-polymer Length: 50 ft. Ends: Plain or soft cuffs

Temperature Range:  $-40^{\circ}F$  ( $-40^{\circ}C$ ) to  $+200^{\circ}F$  ( $+93^{\circ}C$ )

Part No.	I.D.	O.D.	Plies	WP psi	MBR (in)	VAC (Hg)	WT LBS/FT
5018BE-02500-00	21/2	2.92	2	150	9	29	2.6
5018BE-03000-00	3	3.98	2	150	12	29	3.1
5018BE-04000-00	4	5.0	2	150	24	29	4.1
5018BE-05000-00	5	6.13	4	150	30	29	5.6
5018BE-06000-00	6	7.13	4	150	36	29	6.6
5018BE-08000-00	8	9.27	4	150	48	17	9.95

## Novaflex 5020 Industrial Vacuum Hose

Designed for light duty commercial vacuum cleaners used in foundries, factories and similar applications where a flexible and lightweight construction is preferred.

### **Construction:**

Tube: 1/16" abrasion resistant
Reinforcement: Fabric with helix wire
Cover: Black corrugated Length 50 ft.
Ends: Plain. (Also available with cuffs.)

Temperature Range:  $-40^{\circ}F$  ( $-40^{\circ}$ ) to  $+160^{\circ}F$  ( $+71^{\circ}C$ )

(Depending on compound)

Part No.	I.D.	O.D.	Plies	MBR (in)	WT LBS/FT
5020BG-01000-00	1	1.38	1	3	0.4
5020BG-01250-00	11/4	1.63	1	4	0.4
5020BG-01500-00	11/2	1.88	1	5	0.5
5020BG-02000-00	2	2.38	1	8	0.7
5020BG-02500-00	21/2	2.88	1	8	0.8
5020BG-03000-00	3	3.38	1	9	0.9
5020BG-04000-00	4	4.38	1	12	1.9

Novaflex 5020YG = Yellow Novaware tube - superior abrasion resistance



## Novaflex 5164TG

Tan Gum Tubing

Wrapped finish, mandrel made tan gum tubing designed for a variety of industrial, construction and chemical applications.

#### Construction:

Tube: Tan gum Length: 50 ft

Temperature Range: -40°F (-40°C)

to +140°F (+60°C) Durometer: 42 durometer

Available in EPDM, SBR, Nitrile and Neoprene A large variety of diameters available ranging from

 $1\frac{1}{4}$ " to 24" upon request.

I.D.	3/16"	1/4"	3/8"	1/2"
	19	25	38	50
11/4	5164TG-01250-19	5164TG-01250-25	5164TG-01250-38	5164TG-01250-50
11/2	5164TG-01500-19	5164TG-01500-25	5164TG-01500-38	5164TG-01500-50
2	5164TG-02000-19	5164TG-02000-25	5164TG-02000-38	5164TG-02000-50
3	5164TG-03000-19	5164TG-03000-25	5164TG-03000-38	5164TG-03000-50
4	5164TG-04000-19	5164TG-04000-25	5164TG-04000-38	5164TG-04000-50
6	5164TG-06000-19	5164TG-06000-25	5164TG-06000-38	5164TG-06000-50
8	5164TG-08000-19	5164TG-08000-25	5164TG-08000-38	5164TG-08000-50
10	5164TG-10000-19	5164TG-10000-25	5164TG-10000-38	5164TG-10000-50
12	5164TG-12000-19	5164TG-12000-25	5164TG-12000-38	5164TG-12000-50
18*	5164TG-18000-19-306	5164TG-18000-25-306	5164TG-18000-38-306	5164TG-18000-50-306
20*	5164TG-20000-19-300	5164TG-20000-25-300	5164TG-20000-38-300	5164TG-20000-50-300
24*	5164TG-24000-19-300	5164TG-24000-25-300	5164TG-24000-38-300	5164TG-24000-50-300

\*25ft. lengths, all other I.D's - 50ft lengths standard. Cut lengths add 10% (5ft increments)

## Novaflex 5164BG **Black Gum Tubing**

Wrapped finish, mandrel made tan gum tubing

designed for a variety of industrial, construction and chemical applications. Black gum rubber made for those applications where a black color is preferred.

#### **Construction:**

Tube: Black gum Length: 50 ft

Temperature Range: Max temperature +160°F (+71°C)

Durometer: 50 durometer

Available in EPDM, SBR, Nitrile and Neoprene. A large variety of diameters available ranging from

 $1\frac{1}{4}$ " to 24" upon request.

ID	3/16"	1/4"	3/8"	1/2"
	19	25	38	50
11/4	5164BG-01250-19	5164BG-01250-25	5164BG-01250-38	5164BG-01250-50
11/2	5164BG-01500-19	5164BG-01500-25	5164BG-01500-38	5164BG-01500-50
2	5164BG-02000-19	5164BG-02000-25	5164BG-02000-38	5164BG-02000-50
3	5164BG-03000-19	5164BG-03000-25	5164BG-03000-38	5164BG-03000-50
4	5164BG-04000-19	5164BG-04000-25	5164BG-04000-38	5164BG-04000-50
6	5164BG-06000-19	5164BG-06000-25	5164BG-06000-38	5164BG-06000-50
8	5164BG-08000-19	5164BG-08000-25	5164BG-08000-38	5164BG-08000-50
10	5164BG-10000-19	5164BG-10000-25	5164BG-10000-38	5164BG-10000-50
12	5164BG-12000-19	5164BG-12000-25	5164BG-12000-38	5164BG-12000-50
18*	5164BG-18000-19	5164BG-18000-25	5164BG-18000-38	5164BG-18000-50
20*	5164BG-20000-19	5164BG-20000-25	5164BG-20000-38	5164BG-20000-50
24*	5164BG-24000-19	5164BG-24000-25	5164BG-24000-38	5164BG-24000-50

1/2"

50

5164BE-01250-50

5164BE-01500-50

5164BE-02000-50

5164BE-03000-50

5164BE-04000-50

5164BE-06000-50

5164BE-08000-50

5164BE-10000-50

5164BE-12000-50

5164BE-18000-50

5164BE-20000-50

5164BE-24000-50

°25ft. lengths, all other I.D's - 50ft lengths standard. Cut lengths add 10% (5ft increments)

## Novaflex 5164BE **Black EPDM Gum Tubing**

Wrapped finish, mandrel

made tan gum tubing designed for a variety of industrial, construction and chemical applications. Black EPDM rubber, made for those applications where heat, chemical resistance and the properties of EPDM are preferable over gum rubber.

### Construction:

Tube: Black gum Length: 50 ft

Temperature Range: Max temperature +300°F (+149°C)

Durometer: 60 durometer

Available in EPDM, SBR, Nitrile and Neoprene. A large variety of diameters available ranging from  $1\frac{1}{4}$ " to 24" upon request.

ID 3/16' 19 25 38 11/4 5164BE-01250-19 5164BE-01250-25 5164BE-01250-38 11/4 5164BE-01500-19 5164BE-01500-25 5164BE-01500-38 2 5164BE-02000-19 5164BE-02000-25 5164BE-02000-38 3 5164BE-03000-25 5164BE-03000-38 5164BE-03000-19 4 5164BE-04000-19 5164BE-04000-25 5164BE-04000-38 6 5164BE-06000-19 5164BE-06000-25 5164BE-06000-38 5164BE-08000-19 5164BE-08000-25 5164BE-08000-38 10 5164BE-10000-19 5164BE-10000-25 5164BE-10000-38

5164BE-12000-25

5164BE-18000-25

5164BE-20000-25

5164BE-12000-38

5164BE-18000-38

5164BE-20000-38

5164BE-24000-38

24\* 5164BE-24000-19 5164BE-24000-25 \*25ft. lengths, all other I.D's - 50ft lengths standard. Cut lengths add 10% (5ft increments)

5164BE-12000-19

5164BE-18000-19

5164BE-20000-19

12

18\*

20\*

### Novaflex 5284 Elephant Trunk Hose

Designed for open end discharge and gravity flow of dry bulk materials and abrasives.

#### **Construction:**

Tube: 1/8" Tan natural rubber. Reinforcement: 2 plies fabric Cover: Black SBR Black Length: 50 ft standard.

(Cut lengths available upon request)

Ends: Plain

Temperature Range:  $-20^{\circ}F$  ( $-29^{\circ}C$ ) to  $+160^{\circ}F$ 

(+171°C)



Part No.	I.D.	O.D.	Plies	MBR (in)	WT LBS/FT
5284TG-04000-00	4	4.54	2	100	1.89
5284TG-06000-00	6	6.50	2	75	2.55
5284TG-06625-00	65/8	7.12	2	50	2.80
5284TG-08000-00	8	8.50	2	50	3.36
5284TG-08625-00	85/8	9.12	2	50	3.62
5284TG-10000-00	10	10.50	2	45	4.18
5284TG-10750-00	10¾	11.25	2	40	4.48
5284TG-12000-00	12	12.62	4	75	6.47
5284TG-12750-00	12¾	13.37	4	70	6.87
5284TG-14000-00	14	14.62	4	65	7.52

**Novaflex 5284BG** is same hose with black static conductive tube

### Novaflex 5300 Premium Sandblast Hose

Designed with an extra thick, extremely abrasion resistant tube to extend life in sandblasting service. Flexible and kink resistant to reduce operator fatigue and further extend wear of the hose. The best quality sandblast hose on the market today.

#### **Construction:**

Tube: Black abrasion resistant synthetic rubber Reinforcement: Plies of polyester tire cord Cover: Black abrasion and weather resistant

synthetic rubber Length: 100 ft

Temperature Range:  $-20^{\circ}F$  ( $-29^{\circ}C$ ) to  $+180^{\circ}F$  ( $+82^{\circ}C$ )

Part No.	I.D.	O.D.	Plies	WP psi	WT LBS/FT
5300BS-00500-00	1/2	1.14	2	150	0.51
5300BS-00750-00	3/4	1.52	2	150	0.74
5300BS-01000-00	1	1.88	2	150	1.09
5300BS-01250-00	11/4	2.13	2	150	1.28
5300BS-01500-00	11/2	2.38	2	150	1.47
5300BS-02000-00	2	2.83	2	150	1.74



### Novaflex 5328

### Plaster Hose

A flexible, easy to handle, long lasting, high pressure hose specially designed for use with coment, plaster and avasum

for use with cement, plaster and gypsum. The cover is ozone and weather resistant and the rubber tube is abrasion resistant. Good for jetting applications.

#### **Construction:**

Tube: Black abrasion resistant synthetic rubber Reinforcement: Plies of polyester tire cord Cover: Brown abrasion and weather resistant

synthetic rubber Length: 100 ft

Temperature Range: Up to +180°F (+82°C)

Part No.	I.D.	O.D.	Plies	WP psi	WT LBS/FT
5328BS-01250-00	11/4	1.84	4	600	0.97
5328BS-01500-00	11/2	2.09	4	600	1.10
5328BS-02000-00	2	2.72	6	600	1.80
5328BS-02500-00	21/2	3.22	6	600	2.18
5328BS-03000-00	3	3.77	6	500	2.74

## Novaflex 5331

## **Dredge Sleeves/Sand Discharge Hose**

A specially compounded abrasive resistant and static conductive tube. This hose is manufactured to very close O.D. tolerances.

#### **Construction:**

Tube: Black abrasion resistant synthetic

rubber

Reinforcement: Polyester tire cord Cover: Black abrasion and weather

resistant synthetic rubber

Length: 20 ft.

Temperature Range: Up to +180°F (+82°C)

Part No.	I.D.	O.D.	Tube Gauge	Plies	WP psi	WT LBS/FT
5331BS-04500-00	41/2	5.73	3/8	4	150	5.45
5331BS-06000-00	6	7.25	3/8	4	150	7.51
5331BS-06625-00	65/8	8.07	3/8	6	150	9.26
5331BS-08625-00	85/8	10.19	3/8	8	150	12.97
5331BS-10750-00	10¾	12.50	1/2	8	150	17.83
5331BS-12750-00	12¾	14.55	1/2	8	150	22.80
5331BS-14000-00	14	16.04	1/2	12	150	27.21
5331BS-16000-00	16	18.04	1/2	12	150	30.82

### Novaflex 5332 Sand Suction & Discharge Hose

A specially compounded abrasive resistant and static conductive tube. This hose is manufactured to very close O.D. tolerances.

#### **Construction:**

Tube: Black abrasion resistant synthetic static

conductive rubber

Reinforcement: Polyester tire cord with helix wire (full vacuum rated) Cover: Smooth black abrasion and weather resistant synthetic rubber

Length: 20 ft.

Temperature Range: Up to +180°F (+82°C)

Part No.	I.D.	O.D.	Tube Gauge	Plies	WP psi	WT LBS/FT
5332BS-04000-00	4	5.54	3/8	4	150	6.75
5332BS-04500-00	41/2	5.95	3/8	4	150	7.46
5332BS-06000-00	6	7.57	3/8	4	100	11.37
5332BS-06625-00	65/8	8.20	3/8	4	100	12.41
5332BS-08000-00	8	9.64	3/8	6	100	15.86
5332BS-08625-00	85/8	10.32	3/8	6	100	16.87
5332BS-10000-00	10	12.06	1/2	6	100	25.42
5332BS-10750-00	10¾	12.86	1/2	6	100	22.06
5332BS-12000-00	12	14.11	1/2	6	100	30.55
5332BS-12750-00	12¾	14.86	1/2	6	100	32.29
5332BS-14000-00	14	16.37	1/2	8	100	42.66

**Novaflex 5332YG** = Yellow Novaware tube - superior abrasion resistance. Temperature to 160°F (171°C)

### Novaflex 5500 Molten Sulphur Hose

Novaflex Molten Sulphur 5500BE is made for use in loading and unloading barges, ships and tank trucks. This is an engineered hose designed with a high temperature EPDM tube with built in nipples and flanges.

### Construction:

Tube: Special high temperature EPDM Reinforcement: Multiple plies of polyester tire

cord with helix Cover: Black EPDM Length: 100 ft

Operating Temperature Range: +300°F (+149°C)

(intermittent to 350°F {177°C})



Part No.	I.D.	O.D.	WP psi	MBR	WT LBS/FT
5500BE-06000-00	6	7.87	200	42	10.8
5500BE-08000-00	8	10.15	200	54	17.4
55500BE-10000-00	10	12.30	200	72	25.5



## Novaflex 5770/5771/5772

**Bulk Material Discharge Hose** 

Abrasion resistant hose designed for transferring dry bulk material such as cement, sand, lime, fertilizers, etc. Static dissipating tube is designed to resist cutting and abrasion.

Cover is abrasion, age and weather resistant.

#### **Construction:**

Tube: Black abrasion resistant static conductive natural rubber blend Reinforcement: Multiple plies of tire cord

Cover: Black synthetic rubber

Length: 100 ft.

Temperature Range:  $-10^{\circ}F$  ( $-23^{\circ}C$ ) to  $+180^{\circ}F$  ( $+82^{\circ}C$ 

Part No.	I.D.	Туре	Tube Gauge	O.D.	Plies	WP psi	WT LBS/ FT
5770BG-04000-00	4	5770	1/8	4.45	2	100	1.57
5771BG-04000-00	4	5771	3/16	4.58	2	75	1.94
5772BG-04000-00	4	5772	1/4	4.70	2	75	2.44
5772BG-05000-00	5	5772	1/4	5.74	2	75	3.41
5772BG-06000-00	6	5772	1/4	6.74	2	75	4.04

Novaflex 5776 1/4" tube; suction/hardwall version available

Part No.	I.D.	Туре	Tube Gauge	O.D.	Plies	WP psi	WT LBS/FT
5776BG-04000-00	4	5776	1/4	6.95	2	75	4.25

## Novaflex 5787

Concrete Pumping Hose

High pressure hose designed to handle the pumping of concrete, plaster or grout mixture. All purpose cover provides excellent flexibility and wear resistance to abrasive slurries.

#### Construction:

Tube: Abrasion resistant static dissipating SBR

Reinforcement: tire cord Cover: Black EPDM/SBR

Length: 100 ft

Temperature Range: -20°F (-29°C) to +160°F

(+171°C

Safety Factor: 2:1

Part No.	I.D.	0.D.	WP	Min Burst Pressure	WT LBS/FT
5787BG-01500-00	11/2	2.19	1233	2580	1.23
5787BG-02000-00	2	2.83	1233	2580	1.89
5787BG-02500-00	21/2	3.33	1233	2580	2.28
5787BG-03000-00	3	4.01	1233	2580	3.44
5787BG-03500-00	31/2	4.65	1233	2580	4.47
5787BG-04000-00	4	5.10	1233	2580	4.81
5787BG-05000-00	5	6.09	1233	2580	6.13

Novaflex 5900 **Heavy Duty Sandblast Hose** 

Heavy duty (4 ply) abrasion resistant sand and shot blast hose that will accept higher working pressures and the most severe applications.

Construction:

Tube: Black abrasion resistant synthetic rubber Reinforcement: Plies of polyester tire cord Cover: Black abrasion and weather resistant

synthetic rubber Length: 100 ft

Temperature Range: -20°F (-29°C) to

+180°F (+82°C)

Part No.	I.D.	O.D.	Plies	WP psi	WT LBS/FT
5900BG-01000-00	1	1.89	4	250	1.15
5900BG-01250-00	11/4	2.14	4	250	1.35
5900BG-01500-00	11/2	2.39	4	250	1.54
5900BG-02000-00	2	2.89	4	250	1.95
5900BG-02500-00	21/2	3.40	4	250	2.39
5900BG-03000-00	3	3.90	4	150	2.78
5900BG-04000-00	4	5.26	4	150	5.43

## **Novaflex AF Liner**

A low pressure hose, designed to be extremely lightweight, but offer high flexibility and abrasion resistance in vacuum and discharge applications.

### **Construction:**

Tube: 1/8" ultra high abrasion resistant

red natural rubber

Reinforcement: Multiple plies of fabric

with steel helix

Cover: Rubberized fabric

Temperature Range:  $-30^{\circ}F$  ( $-35^{\circ}C$ ) to  $+140^{\circ}F$  ( $+60^{\circ}C$ )

Other rubber tubes available: SBR, EPDM

Part No.	I.D.	WP	MBR	VAC	WT LBS/FT
3MBAF2RA02	2	30	10	29"	0.95
3MBAF2RA02.08	21/2	30	13	29"	1.13
3MBAF2RA03	3	30	15	29"	1.40
3MBAF2RA04	4	25	20	28"	1.98
3MBAF2RA05	5	20	25	26"	2.40
3MBAF2RA06	6	16	30	23"	2.85
3MBAF2RA07	7	14	35	18"	3.30
3MBAF2RA08	8	12	40	12"	3.75
3MBAF2RA10	10	10	50	8"	5.15
3MBAF2RA12	12	8	60	5"	6.15



## **Duck & Rubber Flange**

The tube and all fabric reinforcement is turned up the Face of the flange end. A split steel back up flange is fitted to the back of the fabric flange face. Hose and flange are integral. This design is used for light weight flanged connections and where There is abrasion or the media conveyed can damage standard steel ends.



## Steel Nipple

Built In Steel Nipples with either fixed or floating flanges. The strongest end connection design that can be used in higher pressure hoses. This design has the hose tube butted up against the hose nipple end, and continued over the built in nipple. This type end is used where the media conveyed is not damaging to the steel connections.



## Steel Nipple (Rubber Lined)

This is a superior design to Duck & Rubber Flanges. The rubber tube is built under the hose nipple and turned up the face of the flange. This is a stronger end connection. This design is used where there is abrasion or the media conveyed can damage the metal used on end connections. The steel back-up flange rotates to easily mate with the bolt holes on the joining flange, eliminates potential damage from hose torque.



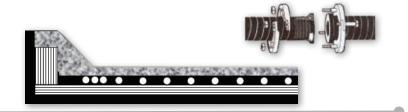
## Capped End

The tube is turned up and vulcanized into the hose cover. The reinforcement of the hose is completely encapsulated in rubber. This design protects the interior and exterior of the hose from the media being conveyed.



### **Beaded End**

A special angled build up at the hose end designed to provide a rubber to rubber seal. This type hose end uses metal split back-up rings (150# drilling) to fit the angle of the built up area and are used to pull beaded end tight to its connection forming a good seal.



## Slip Ring End

This special end permits the attachment of large ID discharge hose (8" to 24" ID) with out the use of couplings. This special Novaflex end permits full flow and uses the internal hose pressure to form the liquid seal.



## Mining Hose

I.D.

1/2

1

11/8

11/4

1%

11/2

1¾

2

21/4

21/2

31/2

4

3

O.D.

0.93

1.06

1.17

1.3

1.42

1.55

1.68

1.81

1.92

2.17

2.43

2.68

2.8

2.93

3.43

3.92

4.42

WT LBS/FT

0.32

0.38

0.43

0.48

0.54

0.59

0.65

0.71

0.76

0.87

0.98

1.10

1.15

1.21

1.43

1.87

Part No.

7005BS-00500-00

7005BS-00625-00

7005BS-00750-00

7005BS-00875-00

7005BS-01000-00

7005BS-01125-00

7005BS-01250-00

7005BS-01375-00

7005BS-01500-00

7005BS-01750-00

7005BS-02000-00

7005BS-02250-00

7005BS-02375-00

7005BS-02500-00

7005BS-03000-00

7005BS-03500-00

7005BS-04000-00

### Novaflex 7005

### Mining Conduit Hose (Non Reinforced)

Recommended for electrical cable protection in mines and on mining equipment. Meets MSHA 2G-1C-34/3 flame-resistant requirements and is non-conductive. Construction maintains open I.D. for easy application.

#### Construction:

Tube: Black synthetic rubber Cover: Black synthetic rubber

Length: 50 ft. Ends: Plain.

Temperature Range: -25°F (-32°C) to +200°F

(+93°C)

CAUTION: Not to be used as an insulator.



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Mining Conduit Hose
Recommended for electrical cable protection in mines and on mining equipment.
Meets MSHA 2G-1C-34/3 flame-resistant requirements and is non-conductive. Construction maintains open I.D. for easy application.

### Construction:

Tube: Black synthetic rubber Reinforcement: 1 wrapped ply fabric Cover: Black synthetic rubber

Length: 50 ft. Ends: Plain.

Temperature Range:  $-25^{\circ}F$  ( $-32^{\circ}C$ ) to  $+200^{\circ}F$ 

(+93°C)

CAUTION: Not to be used as an insulator.



Part No.	I.D.	O.D.	WT LBS/FT
7008BS-00500-00	1/2	0.93	0.31
7008BS-00625-00	5/8	1.06	0.37
7008BS-00750-00	3/4	1.18	0.41
7008BS-00875-00	7/8	1.31	0.47
7008BS-01000-00	1	1.43	0.52
7008BS-01125-00	11/8	1.56	0.58
7008BS-01250-00	11/4	1.67	0.64
7008BS-01375-00	13/8	1.81	0.69
7008BS-01500-00	11/2	1.93	0.73
7008BS-01750-00	13/4	2.18	0.85
7008BS-02000-00	2	2.44	0.96
7008BS-02250-00	21/4	2.69	1.07
7008BS-02375-00	23/8	2.81	1.12
7008BS-02500-00	21/2	2.93	1.17
7008BS-03000-00	3	3.43	1.39
7008BS-03500-00	31/2	3.98	1.62

## Novaflex 7013

### **Crush Resistant Rock Dust Hose**

Recommended for conveying rock dust from blowing machines in coals mines. Meets MSHA requirements. Hose will rebound when crushed by equipment or run over by rubber wheels. Highly recommended for service where heavy abuse is expected. Plastic rod maintains open I.D. even in tight bends.

#### Construction:

Tube: Abrasion resistant, static-conductive. Reinforcement: Helical plastic rod between 2

plies of fabric.

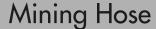
Cover: Black flame resistant, corrugated.

Length: 50 ft. Ends: Soft cuffs

Temperature Range: -30°F (-35°C) to +180°F (+82°C)



Part No.	I.D.	O.D.	Plies	WP psi	Suction (Hg)	MBR (in)	WT LBS/FT
7013BG-01500-00	11/2	1.88	2	100	28"	8"	0.60
7013BG-02000-00	2	2.38	2	85	28"	9"	0.80
7013BG-02500-00	21/2	2.88	2	65	28"	10"	1.00





Smooth-Flex Mine Rock Dust Collector Hose

Recommended for mining dust collectors and roof-bolt drills where cover wear and drag is important. Smooth cover prevents excessive drag on moving arms of the equipment. Meets MSHA requirements.

**Construction:** 

Tube: Abrasive-resistant, static-conductive Reinforcement: Helical wire with single ply

of nylon fabric

Cover: Black flame resistant, smooth Length 50 ft. Ends: Soft cuffs/plain.

Temperature Range:-30°F (-35°C) to +180°F (+82°C)

Part No.	I.D.	O.D.	Plies	WP psi	Suction (Hg)	MBR (in)	WT LBS/FT
7080BG-01250-00	11/4	1.56	1	50	20"	3″	0.40
7080BG-01500-00	11/2	1.81	1	50	20"	3″	0.57
7080BG-02000-00	2	2.38	1	50	20"	4"	0.92
7080BG-02500-00	21/2	2.88	1	45	20"	6"	1.14
7080BG-03000-00	3	3.88	1	35	15"	7″	1.35
7080BG-04000-00	4	4.38	1	30	15"	9″	1.46

Novaflex 7086

**Superflex Rock Dust Collector Hose** 

Recommended for mining dust collectors and roof-bolt drills. Corrugated cover gives good flexibility and bend radius. Meets MSHA requirements.

**Construction:** 

Tube: Abrasive-resistant, static-conductive Reinforcement: Helical wire with single ply of

nylon fabric

Cover: Black flame resistant, corrugated

Length 50 ft. Ends: Soft cuffs

Temperature Range: -30°F (-35°C) to +180°F (+82°C)

Part No.	I.D.	O.D.	Plies	WP psi	Suction (Hg)	MBR (in)	WT LBS/FT
7086BG-01250-00	11/4	1.63	1	50	20"	3″	0.40
7086BG-01500-00	11/2	1.88	1	50	20"	3"	0.47
7086BG-02000-00	2	2.38	1	45	15"	4"	0.61
7086BG-02500-00	21/2	2.88	1	40	15"	4"	0.89
7086BG-03000-00	3	3.38	1	35	10"	5"	1.11
7086BG-04000-00	4	4.38	1	30	10"	9″	1.21

Novaflex 143 PVC Conduit Hose MSHA Flame Resistant

An excellent cable cover for the mining industry. Low cost, flexible and easy to install. Meets the requirements of MSHA 1C-14/2. Split lengthwise for simple installation.



Tube: PVC Cover: PVC Length 50ft & 100ft

Temperature Range: -20°F (-29°C) to +120°F (+49°C)

Part No.	I.D.	O.D.	Standard Length/ft	WT LBS/FT
143WL-01000-00	1	1.46	100	0.40
143WL-01500-00	11/2	1.96	100	0.46
143WL-02000-00	2	2.46	50	0.50
143WL-02500-00	21/2	2.96	50	0.58
143WL-03000-00	3	3.46	50	0.66
143WL-04000-00	4	3.38	50	0.89

## Petroleum Hose

### Novaflex 3233 SAE 100R4 Low Temp Oil Return Hose

A special low temperature hydraulic return line that meets or exceeds the requirements of SAE 100R4 type hose. This hose provides good flexibility for those hydraulic applications that operate in temperatures to -65°F

#### **Construction:**

Tube: Special Low temperature nitrile

Reinforcement: Polyester tire cord with steel helix Cover: Special black low temperature nitrile

Length: 100 ft.

Temperature Range: -65°F (-54°C) to +180°F

(+82°C)

Part No.	I.D.	0.D.	Plies	MBR (in)	VAC (Hg)	WP psi	WT LBS/FT
3233BT-00750-00	3/4	1.24	2	2	30"	300	0.49
3233BT-01000-00	1	1.48	2	21/2	30"	250	0.55
3233BT-01250-00	11/4	1.73	2	3	30"	200	0.71
3233BT-01500-00	11/2	1.98	2	4	30"	150	0.80
3233BT-02000-00	2	2.52	2	6	30"	100	1.14
3233BT-02500-00	21/2	3.05	2	6	30"	100	1.58
3233BT-03000-00	3	3.56	2	8	30"	100	1.89

### Novaflex 3254 SAE100R4 Oil Return Hose

A very flexible return line hose designed for farming, industrial and construction equipment and other similar applications.

#### **Construction:**

Tube: Nitrile

Reinforcement: Multiple plies polyester tire cord and steel wire helix

Cover: Black Neoprene

Length: 100 ft.

Temperature Range: -30°F (35°C) to

+200°F (+93°C)

Part No.	I.D.	O.D.	Plies	MBR (in)	VAC (Hg)	WP psi	WT LBS/FT
3254BT-00750-00	3/4	1.24	2	2	30"	300	0.49
3254BT-01000-00	1	1.48	2	21/2	30"	250	0.55
3254BT-01250-00	11/4	1.73	2	3	30"	200	0.71
3254BT-01500-00	11/2	1.98	2	4	30"	150	0.80
3254BT-02000-00	2	2.52	2	6	30"	100	1.14
3254BT-02500-00	21/2	3.05	2	6	30"	100	1.58
3254BT-03000-00	3	3.56	2	8	30"	100	1.89

### Novaflex 3261 Dock Hose

This is a multi-purpose hose designed for suction and discharge applications. This dock hose is highly flexible and has an all weather cover which is resistant to oil, cuts, abrasion and gouges. The tube is resistant to petroleum products with aromatics content to 55%. Meets all US Coast Guard requirements for Dock/OS & D. hose.

#### Construction:

Tube: Nitrile

Reinforcement: Multiple plies polyester tire

cord and steel wire helix.

Cover: Smooth black oil resistant neoprene.

Length: Cut & 100 ft. lengths

Temperature Range: -30°F (-35°C) to +200°F (+93°C)

Part No.	I.D.	O.D.	Plies	MBR (in)	VAC (Hg)	WP psi	WT LBS/FT
3261BT-04000-00	4	4.94	4	24	30"	225	4.34
3261BT-06000-00	6	7.33	4	36	30"	225	8.75
3261BT-08000-00	8	9.67	6	48	30"	225	12.00
3261BT-10000-00	10	11.50	6	60	30"	225	16.04
3261BT-12000-00	12	13.68	8	72	30"	225	25.50

## Fuel Compatibility at ambient temperature:

Ethanol up to E85, E 100. Biodiesel up to B20

Also available - Novaflex 3267 Heavy Duty AOS & Dock Hose with Built in Nipples.



## Novaflex 3261 OS & D Dock Hose with **Built in Nipples**

150# RF fixed flanges each end Smooth black oil resistant cover

Temperature Range: -30°F (-35°C) to +200°F (+93°C)



Fuel Compatibility at ambient temperature: Ethanol up to E85, E 100. Biodiesel up to B20

I.D.	lb/ft	lb/set Nipples
4	4.94	75
6	7.12	100
8	9.2	150
10	11.46	200
12	13.68	275

Meets USCG requirements

## Novaflex 3265 **Corrugated Dock Hose**

Specially designed for barge unloading where flexibility and ease of handling are required. Special tire cord reinforcement with dual wire helix and corrugated cover enhances the characteristics. Tube resistant to 55% aromatic

fuels Construction:

Tube: NBR

Reinforcement: Polyester tire cord, dual wire

Cover: Black NBR/PVC corrugated

Ends: Straight Length 100 ft (max)

Temperature Range: -30°F (-35°C) to +200°F (+93°C)

Part No.	I.D.	O.D.	Plies	MBR (in)	VAC (Hg)	WP psi	WT LBS/FT
3265BT-06000-00	6	7.38	4	30	30"	225	8.85
3265BT-08000-00	8	9.44	6	42	30"	225	13.00
3265BT-10000-00	10	11.80	6	60	30"	225	19.50
3265BT-12000-00	12	13.97	8	72	30"	225	25.70

Meets USCG requirements

Fuel Compatibility at ambient temperature:

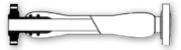
Ethanol up to E85, E 100. Biodiesel up to B20

Available Novaflex 3268 Built in Nipples Heavy Duty Corrugated OS & D Dock Hose

## Novaflex 3265 **Built-in Nipples** Corrugated OS& D Hose

150# RF fixed flanges each end Corrugated oil resistant black cover Smooth black oil resistant cover

Temperature Range:  $-30^{\circ}F$  ( $-35^{\circ}C$ ) to  $+200^{\circ}F$  ( $+93^{\circ}C$ )



Fuel Compatibility at ambient temperature: Ethanol up to E85, E 100. Biodiesel up to B20

I.D.	lb/ft	lb/set Nipples
6	8.20	100
8	11.50	150
10	15.70	200
12	21.40	275

## Novaflex 3277 **Dock Hose (Smooth Cover)**

Meets BS EN 1765, Type S15. A special design to meet international requirements, complies with the BS EN 1765 standard for Type S 15 dock hose. This hose has built in nipples with flanges but is available with crimped on coupling & flanges through 8" ID. All hoses come with test certificates. Tube resistant to 55% aromatic fuels.



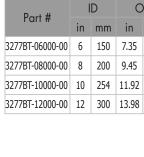
Reinforcement: Polyester tire cord plies with helix wire

Cover: Black NBR blend

Ends: Straight (built in nipples & crimped available)

Length: 100 ft

Temperature Range: 30°F (-35°C) to +200°F (+93°C)t



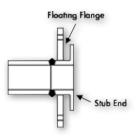
	ı	D	0	D	٨	1BR	VAC	WP		Wei	aht
Part #	in	mm	in	mm	in	mm	(Hg)	PSI	Bar		Kg/m
277BT-06000-00	6	150	7.35	187	36	915	Full	220	15	8.3	27.2
277BT-08000-00	8	200	9.45	240	48	1220	Full	220	15	12.69	41.6
277BT-10000-00	10	254	11.92	303	60	1525	Full	220	15	20.35	66.7
277BT-12000-00	12	300	13.98	355	72	1829	Full	220	15	23.95	78.5

**Fuel Compatibility:** 

Ethanol up to E85. Biodiesel up to B20

# Novaflex Built in Nipples Floating Flange add on price

Add this price to the hose for each floating flange required.



I.D.	lb/ea. Nipples
4	39
6	55
8	81
10	110
12	150

## Novaflex 3859 Hot Tar and Asphalt Hose

Designed for the transfer of tar, asphalt, hot oils and other high temperature petroleum based products.

### **Construction:**

Tube: Black high grade nitrile rubber

Reinforcement: Plies of polyester tire cord with

helix wire

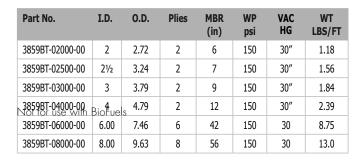
Cover: Smooth black abrasion resistant nitrile

Length: 100 ft.

Temperature Range: -40° (-40°C) to +350°F

(+177°C)

(Intermittent service only)



When coupling chemical and higher risk hoses, Novaflex® recommends the use of crimp couplings using interlocking crimp ferrules.

## Novaflex 3860

### Nitrile Tube Hot Tar and Asphalt HD

A more robust hose with extra working pressure to meet higher application requirements. This is a heavy duty hot tar and hot oil suction and transfer hose.

#### **Construction:**

Tube: Black high grade nitrile rubber.

Reinforcement: Plies of polyester tire cord with helix

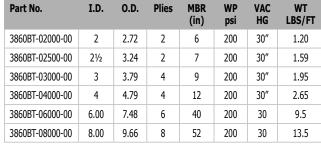
wire

Cover: Corrugated black oil resistant cover

Length: 100 ft.

Temperature Range:  $-40^{\circ}$  ( $-40^{\circ}$ C) to  $+350^{\circ}$ F

(+177°C) (Intermittent service only)



Not for use with BioFuels



### Novaflex 4805

### Nova BioFuel 100 Suction/Discharge

A rubber hose designed to handle all grades of Biodiesel and Ethanol.

This is a flexible, full suction and discharge hose for in plant applications or for loading tank cars and trucks.

#### **Construction:**

Tube: Viton® chemical and heat resistant rubber Reinforcement: Plies of polyester tire cord with helix

Cover: Smooth red weather and abrasion resistant nitrile

rubber Length: 100 ft.

Temperature Range: -20°F (-29°C) to +250°F (+121°C)

Consult chemical resistance chart.

Not for steam service, can be open end steam cleaned.

Part No.	I.D.	0.D	Plies	WP psi	MBR	WT LBS/FT
4805BV-01000-00	1	1.39	2	200	4	0.69
4805BV-01250-00	11/4	1.66	2	200	6	0.83
4805BV-01500-00	11/2	1.89	2	200	6	1.06
4805BV-02000-00	2	2.39	2	200	8	1.42
4805BV-02500-00	21/2	2.89	2	200	10	1.73
4805BV-03000-00	3	3.59	2	200	12	2.21
4805BV-04000-00	4	4.53	4	200	16	3.46

### **Fuel Compatibility:**

Ethanol up to E100. Biodiesel up to B100.

When coupling chemical and higher risk hoses, Novaflex® recommends the use of crimp couplings using interlocking crimp ferrules.

### Novaflex 3250

### **HP Petroleum Transfer Hose**

HP Petroleum Transfer Hose is a multi-purpose hose designed for suction and discharge applications that require working pressures up to 400 psi. This hose is both flexible with a lighter weight design and has an all weather cover which is resistant to oil, cuts, abrasion and gouges. This hose can have a UHMWP wear cover added for additional abrasion resistance (U version). The tube is resistant to petroleum products with aromatic content to 55%.

#### **Construction:**

Reinforcement: Multiple plies polyester tire cord and steel wire helix

Cover: **a.** Smooth black oil, ozone & UV resistant compound.

**b.** Optional UHMWP wear cover in the U version

Length: Up to 100 ft. (30m)

Temperature Range: -40°F (-40°C) to +200°F (+93°C

<b>Product No</b>	ID"	OD"	WP	MBR	Wt/Ft
3250BT-03000-00	3	3.71	400 psi	18	2.15lbs
3250BT-04000-00	4	4.8	400 psi	24	3.16 lbs

#### **Fuel Compatibility:**

Ethanol up to E85. Biodiesel up to B20

### Novaflex 3251 Extra Flexible Tank Truck Hose

A very flexible economical, lightweight hose design transfer of petroleum products. Excellent for us in oil applications

Construction:

Tube: Nitrile

Reinforcement: Multiple plies polyester tire cord on steel wire helix

Cover: Corrugated black oil resistant cover

Length: Up to 100 ft.

Temperature Range: -30°F (-35°C) to +180°F (+82

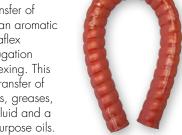
<b>Product No</b>	ID	OD	Plies	WP psi	MBR	WT LBS/FT
3251BT-01500-00	11/2	1.97	2	150	2"	.92
3251BT-02000-00	2	2.47	2	150	3″	1.18
3251BT-02500-00	21/2	3.02	2	150	4"	1.59
3251BT-03000-00	3	3.54	2	150	5″	2.16
3251BT-04000-00	4	4.63	2	150	7"	3.06

Fuel Compatibility: Ethanol up to E85. Biodiesel up to B20

When coupling chemical and higher risk hoses, Novaflex® recommends the use of crimp couplings using interlocking crimp ferrules.

# Novaflex 3255R Petroleum Suction & Discharge Hose

Novaflex Novalite 3255R is recommended for the transfer of petroleum products with an aromatic content up to 55%. Novaflex 3255R has a close corrugation design permitting easy flexing. This hose is excellent for the transfer of oily products such as; fats, greases, vegetable oil, hydraulic fluid and a wide range of general purpose oils.



Construction:

Tube: Black Nitrile RMA Class A

Reinforcement: Polyester tire cord and dual helix

Cover: Red oil resistant blend

Temperature: 40°F (-40°C) to 180°F (+82°C)

Part No	ID	OD	Plies	WP PSI	MBR	WT LBS/FT
3255RBT-01500-00	11/2	1.96	2	150	4	0.84
3255RBT-02000-00	2	2.46	2	150	4	1.08
3255RBT-02500-00	21/2	3.01	2	150	5	1.44
3255RBT-03000-00	3	3.52	2	150	6	1.85
3255RBT-04000-00	4	4.63	2	150	9	2.67

Novaflex 3255BT - black cover available

### **Fuel Compatibility:**

Ethanol up to E85. Biodiesel up to B20

When coupling chemical and higher risk hoses, Novaflex® recommends the use of crimp couplings using interlocking crimp ferrules.

### Novaflex 3257 Corrugated Low Temp Tank Truck

A medium duty low temperature petroleum suction and transfer hose designed to be highly flexible with a hose cover that provides extra abrasion resistance to meet the demanding requirements of industry. Handles all grades of gasoline with aromatic contents to 55%.

### Construction:

Tube: Black Nitrile

Reinforcement: Multiple plies polyester

tire cord with helix

Cover: Corrugated black oil resistant

rubber

Length: 100 ft.

Temperature Range:  $-65^{\circ}F$  ( $-54^{\circ}C$ ) to  $+180^{\circ}F$  ( $+82^{\circ}C$ )

Part No.	I.D.	O.D.	Plies	MBR (in)	VAC (Hg)	WP psi	WT LBS/FT
3257BT-01250-00	11/4	1.69	2	5	30"	150	0.65
3257BT-01500-00	11/2	2.00	2	6	30"	150	0.89
3257BT-02000-00	2	2.50	2	8	30"	150	1.14
3257BT-02500-00	21/2	3.10	2	10	30"	150	1.75
3257BT-03000-00	3	3.60	2	12	30"	150	2.07
3257BT-04000-00	4	4.66	2	16	30"	150	2.98

Fuel Compatibility: Ethanol up to E85. Biodiesel up to B20



Novaflex 3258

Crush & Kink Resistant Petroleum Suction and Discharge Hose

Special kink and crush resistant version of Novaflex 3253 design, utilizing a multi-ply construction with dual monofilament helix rods. Excellent for use in those demanding abusive situations.

### **Construction:**

Tube: Nitrile resistant to 55% aromatic fuels Reinforcement: Multiple plies of tire cord with dual monofilament helix, static wire

Cover: Black oil and abrasion resistant compound

Length: 100 ft.

Temperature Range: 40°F (-40°C) to 180°F (+82°C)

Part No.	I.D.	O.D.	Plies	MBR (in)	VAC (Hg)	WP psi	WT LBS/FT
3258BT-00750-00	3/4	.126	2	4	30"	200	0.71
3258BT-01500-00	11/2	2.00	2	5	30"	200	0.84
3258BT-02000-00	2	2.66	2	6	30"	200	1.08
3258BT-02500-00	21/2	3.00	2	8	30"	200	1.44
3258BT-03000-00	3	3.61	2	10	30"	200	1.85

### **Fuel Compatibility:**

Ethanol up to E85. Biodiesel up to B20

When coupling chemical and higher risk hoses, Novaflex® recommends the use of crimp couplings using interlocking crimp ferrules.

## Novaflex 3260

#### Tank Truck Hose

A very economical, lightweight designed for transfer of petroleum products. Excellent for use in oil field applications.

### **Construction:**

Tube: Nitrile.

Reinforcement: Multiple plies polyester tire cord and steel wire

helix

Cover: Smooth black oil resistant

cover

Length: 100 ft.

Temperature Range: -30°F (-35°C) to

+180°F (+82°C)

Part No.	I.D.	O.D.	Plies	MBR (in)	VAC (Hg)	WP psi	WT LBS/FT
3260BT-01000-00	1	1.48	2	4	30"	150	0.62
3260BT-01250-00	11/4	1.74	2	4	30"	150	0.67
3260BT-01500-00	11/2	1.99	2	5	30"	150	0.80
3260BT-02000-00	2	2.49	2	6	30"	150	1.01
3260BT-02500-00	21/2	3.01	2	8	30"	150	1.33
3260BT-03000-00	3	3.52	2	9	30"	150	1.59
3260BT-04000-00	4	4.61	2	12	30"	150	2.47
3260BT-06000-00	6	6.88	2	30	30"	150	5.31

## Novaflex 3269 Oil Field Vacuum Hose

A tank truck service, including oil field vacuum truck service, where full suction is required. Ideal for handling crude oil, salt and fresh water, tank bottoms, drilling mud, along with diluted solutions of hydrochloric acids and diesel fuels. (Not for use with oil base fluids.)

Note: Not recommended for refined petroleum products such as gasoline! Construction:

Tube: Black Type C Nitrile

Reinforcement: Multiple plies of polyester tire cord & helix

wire

Cover: Smooth Black EPDM/SBR blend

Temperature Range: -40°(-40°C) to +180°F (+82°C

Part No.	I.D.	0.D.	Plies	MBR (in)	VAC (HG)	WP psi	WT LB/FT
3269BT-01500-00	11/2	1.99	2	5	30"	150	0.75
3269BT-02000-00	2	2.49	2	7	30"	150	0.99
3269BT-02500-00	21/2	3.01	2	8	30"	150	1.33
3269BT-03000-00	3	3.51	2	10	30"	150	1.57
3269BT-04000-00	4	4.61	2	14	30"	150	2.44

Not for use with BioFuels

When coupling chemical and higher risk hoses, Novaflex® recommends the use of crimp couplings using interlocking crimp ferrules.

### Novaflex 3283 300 PSI Tank Truck Hose

With the same construction as Novaflex 3260, economical, lightweight designed for the transfer of petroleum products. Excellent for use in oil field where higher pressure is required.



Part No.	I.D.	O.D.	Plies	MBR (in)	VAC (Hg)	WP psi	WT LBS/FT
3283BT-01500-00	11/2	2.00	2	5	30"	300	.83
3283BT-02000-00	2	2.60	4	8	30"	300	1.30
3283BT-03000-00	3	3.65	4	12	30"	300	2.06
3283BT-04000-00	4	4.74	4	18	30"	300	3.05
3283BT-06000-00	6	6.94	4	42	30"	300	5.95

### **Fuel Compatibility:**

Ethanol up to E85. Biodiesel up to B20



## Novaflex 3273 Oil Field Fracturing Hose

Oil Field Fracturing Hose is designed for higher pressure discharge applications that require working pressures up to 400 psi. This hose is a rugged design and has an all weather cover which is resistant to oil, cuts, abrasion and gouges. This hose can have a UHMWP wear cover added for additional abrasion resistance (U version). The tube is resistant to petroleum products with aromatic content to 55%.

#### Construction:

Tube: Nitrile

Reinforcement: Multiple plies polyester tire cord

with static wire.

Cover: **a.** Smooth black oil, ozone & UV resistant compound.

**b.** Optional UHMWP wear cover in the U version Temperature range: -40°F (-40°C) to +200°F (+93°C)

<b>Product No</b>	ID	OD	WP	Wt/Ft
3273BT-03000-00	3	3.87	400 psi	2.10lbs
3273BT-04000-00	4	4.76	400 psi	3.05 lbs
3273BTU-03000-00	3	3.88	400 psi	2.11 lbs
3273BTU-04000-00	4	4.88	400 psi	3.40 lbs

### **Fuel Compatibility:**

Ethanol up to E85. Biodiesel up to B20

When coupling chemical and higher risk hoses, Novaflex® recommends the use of crimp couplings using interlocking crimp ferrules.

## Novaflex 3274 Oil Field Fracturina Hose

Oil Field Fracturing Hose is designed for higher pressure suction and discharge applications that require working pressures up to 400 psi. This hose has a rugged design and has an all weather cover which is resistant to oil, cuts, abrasion and gouges. This hose can have a UHMVVP wear cover added for additional abrasion resistance (U version). The tube is resistant to petroleum products with aromatic content to 55%.



Tube: Nitrile

Reinforcement: Multiple plies polyester tire cord and helical wire

Cover: a. Smooth black oil, ozone & UV resistant compound.

**b.** Optional UHMWP wear cover in the U version Temperature range: -40°F (-40°C) to +200°F (+93°C)

<b>Product No</b>	ID	OD	WP	MBR	Wt/Ft
3274BT-04000-00	4	4.82	400 psi	40"	4.12lbs
3274BT-04000-02	4	5.09	500 psi	48"	5.91lbs

### **Fuel Compatibility:**

Ethanol up to E85. Biodiesel up to B20

When coupling chemical and higher risk hoses, Novaflex® recommends the use of crimp couplings using interlocking crimp ferrules.

### Novaflex 3275

### **Corrugated Oil Field Vacuum Hose**

Novaflex® 3275 is a rugged suction and discharge, flexible hose designed for oilfield vacuum truck and oilfield fracturing applications. This hose is ideal where applications require a hose designed for the transfer of salt & fresh water, tank bottoms, drilling mud, combined with dilute solutions of crude oil. (Not for use with oil base fluids.)

# Note: Not recommended for refined petroleum products such as gasoline! Construction:

Tube: Black blended nitrile

Reinforcement: Multiple tire cord layers & dual wire helix,

full suction and discharge

Cover: Black abrasion, ozone & UV resistant Temperature Range: -40°(-40°C) to +180°F (+82°C)

Branding: Full suction /150 psi WP

Not recommended for use with refined petroleum products

such as gasoline.

Part No.	I.D.	O.D.	WP psi	MBR (in)	Wt LB/Ft
3275BT-02000-00	2	2.49	150	6	1.23
3275BT-03000-00	3	3.58	150	8	2.07
3275BT-04000-00	4	4.59	150	12	2.87
3275BT-06000-00	6	6.74	150	24	5.81
3275BT-08000-00	8	8.75	150	40	8.05
3275BT-10000-00	10	10.77	100	60	11.49
3275BT-12000-00	12	12.75	40	72	12.70

Not for use with BioFuels

### Novaflex 3278

Same hose but rated for full refined petroleum products

## Novaflex 3278 Corrugated Oil Field Vac Hose

Novaflex® 3278 is a rugged suction and discharge, flexible hose designed for oilfield vacuum truck and oilfield fracturing applications. This hose is ideal where applications require a hose designed for the transfer of petroleum based fluids.

### Construction:

Tube: Black nitrile

Reinforcement: Multiple tire cord layers & dual wire helix,

full suction and discharge

Cover: Black oil abrasion, ozone & UV resistant Temperature Range: -40°(-40°C) to +180°F (+82°C)

Branding: Full suction /150 psi WP

Part No.	I.D.	O.D.	WP psi	MBR (in)	Wt LB/Ft
3278BT-02000-00	2	2.49	150	6	1.23
3278BT-03000-00	3	3.58	150	8	2.07
3278BT-04000-00	4	4.59	150	12	2.87
3278BT-06000-00	6	6.74	150	24	5.81
3278BT-08000-00	8	8.75	150	40	8.05
3278BT-12000-00	12	12.75	40	72	12.70

### **Fuel Compatibility:**

Ethanol up to E85. Biodiesel up to B20

When coupling chemical and higher risk hoses, Novaflex® recommends the use of crimp couplings using interlocking crimp ferrules.

### Novaflex 3477 Novalite Tank Truck Hose

Recommended for the transfer of petroleum products with an aromatic content of up to 55%. Novalite has a unique design utilizing a flat corrugation design permitting extreme ease when flexing. Novalite is excellent for the transfer of other oily products, such as fats, greases, vegetable oil, hydraulic fluid and a wide range of chemicals. This hose takes a very little force to flex the hose as compared to other constructions.

### **Construction:**

Reinforcement: Multiple plies of Polyester tire

cord with dual helix wire

Cover: Black Oil & Abrasion Resistant Rubber

Length: 100ft (maximum)

Temperature range -40°(-40°C) to +180°F (+82°C)

Part No	ID	OD	Plies	WP PSI	MBR	WT LBS/FT
3477BT-01000-00	1	1.55	2	150	2	0.6
3477BT-01250-00	11/4	1.80	2	150	3	0.7
3477BT-01500-00	11/2	2.15	2	150	3	5.9
3477BT-02000-00	2	2.68	2	150	4	1.2
3477BT-02500-00	21/2	3.20	2	150	5	1.45
3477BT-03000-00	3	3.73	2	150	6	1.9
3477BT-04000-00	4	4.73	2	150	9	2.6
3477BT 06000 00	6	6 75	4	150	20	5.31

### **Fuel Compatibility:**

Ethanol up to E85. Biodiesel up to B20



Novaflex 3549
Petroleum Discharge Hose

A lightweight petroleum discharge hose. Handles all grades of petroleum with aromatic content to 55%

**Construction:** 

Tube: Black Nitrile

Reinforcement: Multiple plies of tire cord, 2 plies fabric with static

wire

Cover: Black oil and abrasion

resistant rubber Length: 100ft.

Temperature Range: 30°F (-35°C) to 180°F (+82°C

Part No.	I.D.	O.D.	Plies	MBR (in)	VAC (Hg)	WP psi	WT LBS/FT
3549BT-02000-00	2	2.49	2	n/a	n/a	200	1.08
3549BT-03000-00	3	3.50	2	n/a	n/a	200	1.85
3549BT-04000-00	4	4.58	2	n/a	n/a	200	3.11
3549BT-06000-00	6	6.72	4	n/a	n/a	200	4.20

**Fuel Compatibility:** 

Ethanol up to E85. Biodiesel up to B20

When coupling chemical and higher risk hoses, Novaflex® recommends the use of crimp couplings using interlocking crimp ferrules.

### Novaflex 3550 Heavier Duty Petroleum Discharge Hose

Designed to be flexible with a hose cover that provides extra abrasion resistance to meet the demanding requirements of industry. Handles all grades of petroleum with aromatic contents to 55%.



Tube: Black Nitrile

Reinforcement: Multiple plies tire cord with

static wire

Cover: Black oil and abrasion resistant rubber

Length: 100 ft.

Temperature Range: -30°F (-35°C) to +180°F (+82°C)

(Also available with red cover)

Part No.	I.D.	0.D.	Plies	MBR (in)	VAC (Hg)	WP psi	WT LBS/FT
3550BT-01000-05	1	1.52	2	n/a	n/a	250	0.57
3550BT-01500-05	11/2	2.14	2	n/a	n/a	250	0.96
3550BT-02000-05	2	2.64	2	n/a	n/a	250	1.23
3550BT-02500-05	21/2	3.14	2	n/a	n/a	250	1.49
3550BT-03000-05	3	3.54	2	n/a	n/a	250	2.10
3550BT-04000-05	4	4.65	4	n/a	n/a	250	2.42
3550BT-06000-05	6	6.70	4	n/a	n/a	250	4.90

**Fuel Compatibility:** 

Ethanol up to E85. Biodiesel up to B20

When coupling chemical and higher risk hoses, Novaflex® recommends the use of crimp couplings using interlocking crimp ferrules.

## Novaflex 3555 Hydrocarbon Drain Hose

Novaflex Hydrocarbon drain hose is designed for use in refining industry for those applications where the transfer of hydrocarbons and related petroleum chemicals is used during plant operations. This softwall discharge hose offers high temperature capability along with lightweight handling and kink resistance.



Tube: High Temperature Nitrile

Reinforcement: Multiple plies tire cord with stainless steel

static wire

Cover: Blue oil and abrasion resistant

Length: 100 ft.

Temperature Range: -40°F (-40°C) to +300°F (+148°C)

(intermittent 350°F {176°C})

Part No.	I.D.	0.D.	Plies	WP psi	WT LBS/FT
3555BT-00750-00	3/4	1.37	4	300	.63
3555BT-01000-00	1	1.61	4	300	.77
3555BT-01500-00	11/2	2.14	4	300	1.18
3555BT-02000-00	2	2.64	4	300	1.3
3555BT-03000-00	3	3.68	4	300	2.0
3555BT-03000-02	3	3.84	6	300	2.6
3555BT-04000-00	4	4.68	4	300	2.6
3555BT-04000-02	4	4.84	6	300	3.4

## PVC, Urethane & Thermal Plastic Rubber

### Novaflex Yellow Jack Pumper-Sanitation Hose

A smooth interior for optimum flow and unique crush resistance. An external wear rib prevents damage from abrasion.
Used for liquid transfer; sanitary and cesspool. Suction; construction and quarry. Suction service; machine and tank liquid transfer and more.

### Construction:

Material: Eva/Polyethylene

co-polymer

Length: 11/2" to 3" diameter: 10ft, 20ft, 25ft, 30ft, 50ft,

60ft. 4" diameter: 10ft, 20ft, 25ft

Temperature Range:  $-40^{\circ}F$  ( $-40^{\circ}C$ ) to  $+140^{\circ}F$  ( $+93^{\circ}C$ )

Not for steam service

Part No.	I.D.	O.D.	Neg. Press. in/hg	Max Pos. Press(psi)	WT LBS/FT	Bend radius at 90°	WT/FT Bulk hose			
9NFYLJK01.08	11/2	1.975"	29	25	.3	3.50"	0.28			
9NFYLJK02	2	2.65"	29	25	.6	3.75"	0.53			
9NFYLJK02.08	21/2	3.32"	29	20	.8	4.75"	0.78			
9NFYLJK03	3	3.97"	29	20	1.4	6.25"	1.32			
9NFYLJK04	4	5.00"	29	10	1.9	8.50"	1.55			
Available with factory installed cuffs or in bulk lengths										

## Novaflex TPU Heavy Duty Vacuum Hose

All extruded construction, lightweight alternative to cumbersome rubber hose.
Designed specifically for transfer of abrasive materials under vacuum, from storage tanks,

barges and tankers, including underwater applications in aquaculture; hatchery, pen transfer and stream release.

#### Construction:

Material: Urethane wall, urethane encapsulated rigid

PVC helix

Weight: 6" diameter = 2.5 lbs/ft

Lengths: 50 ft

Color: Extruded Transparent Blue TPU

Temperature Range: -50°F (-46°C) to +200°F (+93°C)

Rated for full vacuum

Available with copper static wire.

Part No.	I.D.	O.D.	Bend Radius	Neg Pres (inch) Hg	Pos. W.P PSI	Pitch	Wall Gauge (thou")	WT/FT
9SFTPUX04FV	4"	4.45"	9.5"	25"	35	.75″	0.07	1.66
9SFTPUX06FV	6"	6.65"	14"	25"	30	.75″	0.07	2.5
9SFTPUX08FV	8"	8.85"	14"	25"	30	1.00"	0.085	3.4



## PVC, Urethane & Thermal Plastic Rubber

### Novaflex HDAP All Purpose Thermoplastic Rubber Hose Wet And Dry Material Handling

Heavy duty thermoplastic inner tube with fully encapsulated external helix. Heavy wall for industrial use. Good chemical resistance. Abrasion resistance for medium duty material handling, with smooth interior for superior product flow.

#### **Construction:**

Material: Thermoplastic rubber

Diameters: 2" to 8" Weight: 3'' = 1.4 lbs/ft

Length: Diameters 2" to 4", 100ft lengths

Diameters 5" to 8", 50ft lengths

Temperature Range: -65°F (-46°C) to +160°F (+70°C)

Color: Black with external helix

Part No.	I.D.	O.D.	Working Pressure PSI	Vacuum Rating inch/Hg	Bend Radius Inch	WT/FT
9SFHDAP02	2	2.77	40	29	2	0.97
9SFHDAP03	3	3.60	35	29	4	1.40
9SFHDAP04	4	4.67	30	29	5	1.70
9SFHDAP06	6	6.85	30	29	10	1.90
9SFHDAP08	8	9.40	30	29	15	3.50

### **Novaflex Medium Duty Material Handling Hose** Static Conductor\*

A flexible conductive hose designed to allow for safe grounding during wet and dry material transfer operations. This hose is lightweight with a smooth interior for optimum flow.

#### Construction:

Material: TPR co-polymer with rigid plastic external scuff guard

Diameters: 2" to 6" Weight: 4" I.D. = 1.4 lbs

Lengths: Diameters 2" to 4", 100 ft, 6" Diameter 50ft Color: Red with black scuff guard

Temperature Range:  $-40^{\circ}F$  ( $-40^{\circ}C$ ) to  $+200^{\circ}F$  ( $+93^{\circ}C$ )

Conductivity of hose should be tested regularly. Test with OHMS meter using conductive fittings inserted into each end of hose.

Part No.	I.D.	O.D.	Working Pressure PSI	Vacuum Rating inch/Hg	Bend Radius Inch	WT/FT
9NFSCAP02	2	2.45	40	29	2.25	0.70
9NFSCAP03	3	3.6	35	29	2.75	1.00
9NFSCAP04	4	4.8	30	29	4.25	1.40
9NFSCAP06	6	6.925	30	28	9.00	2.30

## Specialty Hose

### Novaflex 9500 Lo-Volt Hose

This hose has a conductive tube that allows a low level electrical charge. Suitable for applications, including cable covers and electrical protective covers.

#### Construction:

Tube: Yellow non-conductive

synthetic rubber

Reinforcement: Plies of polyester

tire cord

Cover: Black weather and abrasion

resistant rubber Length: 100 ft.

Temperature Range: Up to +180°F (+82°C)



Part No.	I.D.	O.D.	Plies	WP psi	WT LBS/FT
9500YE-00750-00	3/4	1.21	2	200	0.44
9500YE-01000-00	1	1.46	2	200	0.58
9500YE-01125-00	11/8	1.58	2	200	0.64
9500YE-01250-00	11/4	1.71	2	200	0.70
9500YE-01375-00	13/8	1.84	2	200	0.76
9500YE-01500-00	11/2	1.96	2	200	0.82
9500YE-01625-00	15/8	2.13	2	200	0.98
9500YE-01688-00	111/16	2.20	2	200	1.02
9500YE-01750-00	1¾	2.26	2	200	1.05
9500YE-01813-00	113/16	2.32	2	200	1.09
9500YE-01875-00	1%	2.38	2	200	1.12
9500YE-02000-00	2	2.51	2	200	1.18
9500YE-02125-00	21/8	2.63	2	200	1.25
9500YE-02250-00	21/4	2.76	2	200	1.31
9500YE-02375-00	23/8	2.88	2	200	1.37
9500YE-02500-00	21/2	3.01	2	200	1.44

Electrical resistivity: 50 gigaohms per foot at 1000 volts DC

### Novaflex 9540 Hi-Volt Hose

Used in applications where complete electrical non conductivity is a critical issue. Both tube and cover are non conductive material. Suitable for severe electrical applications like power plants and underground mining applications.

### **Construction:**

Tube: Yellow non-conductive synthetic rubber Reinforcement: Plies of polyester tire cord Cover: Green non-conductive weather and

abrasion resistant rubber

Length: 100 ft.

Temperature Range: Up to +180°F (+82°C)



Part No.	I.D.	O.D.	Plies	WP psi	WT LBS/FT
9540YS-00500-00	1/2	1.00	2	200	0.38
9540YS-00750-00	3/4	1.25	2	200	0.51
9540YS-01000-00	1	1.54	2	200	0.71
9540YS-01125-00	11/8	1.72	2	200	0.86
9540YS-01250-00	11/4	1.84	2	200	0.93
9540YS-01375-00	13/8	1.97	2	200	1.01
9540YS-01500-00	11/2	2.09	2	200	1.08
9540YS-01563-00	19/16	2.16	2	200	1.13
9540YS-01625-00	15/8	2.22	2	200	1.16
9540YS-01750-00	13/4	2.36	2	200	1.33
9540YS-01813-00	113/16	2.41	2	200	1.37
9540YS-01875-00	1%	2.48	2	200	1.41
9540YS-02000-00	2	2.71	4	200	1.71
9540YS-02250-00	21/4	2.99	4	200	2.11
9540YS-02375-00	2%	3.11	4	200	2.21
9540YS-02500-00	21/2	3.23	4	200	2.31
9540YS-03000-00	3	3.73	4	200	2.71
9540YS-03500-00	31/2	4.23	4	200	3.11
9540YS-04000-00	4	4.73	4	200	3.52

Electrical resistivity: 100 gigaohms per foot at 1000 volts DC or better.



Black Low Pressure Conductive Steam Hose 100psi

This textile reinforced steam hose is an excellent flexible light weight hose for transferring steam in medium temperature applications.

Construction:

Tube: Black EPDM

Reinforcement: Plies of fiberglass tire cord Cover: Smooth black weather and abrasion

resistant EPDM Length: 100 ft.

Temperature Range: Up to +338°F (+170°C)

Part No.	I.D.	O.D.	Plies Fiberglass	WP psi	WT LBS/ FT
5510BE-00500-00	1/2	1.02	4	100	0.34
5510BE-00750-00	3/4	1.27	4	100	0.45
5510BE-01000-00	1	1.52	4	100	0.56
5510BE-01250-00	11/4	1.82	4	100	0.75
5510BE-01500-00	11/2	2.07	4	100	0.87
5510BE-02000-00	2	2.57	4	100	1.11

Novaflex 5520

Red Low Pressure Non-Conductive Steam Hose 100psi

This textile reinforced steam hose is an excellent flexible light weight hose for transferring steam in medium temperature applications that require an electrically non-conductive hose.

**Construction:** 

Tube: Red EPDM rubber

Reinforcement: Plies of fiberglass tire cord Cover: Smooth Red weather and abrasion

resistant EPDM rubber Length: 100 ft.

Temperature Range: Up to +338°F (+170°C)

Non-conductive

Part No.	I.D.	O.D.	Plies Fiberglass	WP psi	WT LBS/FT
5520RE-00500-00	1/2	1.02	4	100	0.34
5520RE-00750-00	3/4	1.27	4	100	0.45
5520RE-01000-00	1	1.52	4	100	0.56
5520RE-01250-00	11/4	1.82	4	100	0.75
5520RE-01500-00	11/2	2.07	4	100	0.87
5520RE-02000-00	2	2.57	4	100	1.11
5520RE-03000-00	3	3.76	6	100	2.19

### Novaflex 1501 Built on Nozzle, Washdown Hose

A wash down hose designed to provide excellent service life in the rugged industrial applications that require a built on nozzle. This product combines a robust 300psi waster hose that provides excellent abrasion resistance and a built on nozzle that is easy to grip.

#### Construction

Tube: EPDM, Black chemical resistant compound Cover: Black SBR blend abrasion, ozone resistant

compound

Reinforcement: Multiple plies of polyester tire cord

Length: 50 ft

Temperature Range: -20°F (-29°C) to +180°F

(+82°C)

Part No	I.D.	O.D.	WP psi	WT/ LBS/FT
1501BE-00750-00	3/4	1.37	300	.61
1501BE-01000-00	1	1.65	300	.73
1501BE-01500-00	11/4	1.80	300	.94

Other color covers available

## Novaflex 2140

## Papermill Washdown Hose with Nozzle 50ft. lengths

A quality wash down hose used in paper mills and other industrial applications. Supplied with integral tapered nozzle built to end.

#### **Construction:**

Tube: Black synthetic rubber

Reinforcement: plies of polyester tire cord

Cover: Green weather and abrasion resistant rubber supplied with integral tapered rubber nozzle built

into end. (Optional colors available) Length: 50ft (lengths up to 100ft available on

request)

Temperature Range: -30° (-35°C) to +200°F (+93°C)

Part No.	I.D.	O.D.	Plies	WP psi	WT LBS/FT
2140BE-00500-61	1/2	0.91	2	200	0.28
2140BE-00750-61	3/4	1.16	2	200	0.38
2140BE-01000-61	1	1.42	2	200	0.50
2140BE-01250-61	11/4	1.77	2	150	0.78
2140BE-01500-61	11/2	2.06	2	150	0.99

### Novaflex 2145

## Hot Water Washdown Hose White oil resistant non marking cover

An excellent, long lasting washdown hose designed for the rugged requirement found in the food processing industry.

### Construction:

Tube: White EPDM

Reinforcement: Polyester Tire Cord

Cover: White Nitrile Length: 100 ft.

Temperature Range: -30°F (-35°C) to +210°F

(+99°C)

(Not rated for steam)



Part No.	I.D.	O.D.	Plies	WP psi	WT LBS/FT
2145WE-00750-01	3/4	1.25	2	250	.44
2145WE-01000-01	1	1.54	4	250	.62
2145WE-01250-01	11/4	1.79	4	250	.74
2145WE-01500-01	11/2	2.04	4	250	.86



### Water Discharge Hose

A lightweight rubber water discharge hose designed for use on portable pumps by contractors and municipalities.

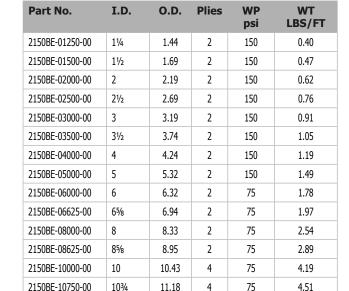
#### Construction:

Tube: Black synthetic EPDM rubber Reinforcement: Plies of polyester tire cord Cover: Smooth black weather and abrasion

resistant rubber Length: 100ft.

Temperature Range: -30° (-35°C) to

+180°F (+82°C)



12.43

13.18

12

12¾

2150BE-12000-00 2150BE-12750-00

### Novaflex 2151

### Heavy Duty Hot Water Washdown Hose

Designed to meet the rugged washdown applications in the food processing industry.

### Construction:

Tube: White EPDM

Reinforcement: Multiple layers of polyester cord Cover: White EPDM non marking. Length: 100ft. Temperature Range: -40° (-40°C) to +212°F

(+100°C)

Not rated for steam



Part No.	I.D.	O.D.	Plies	WP psi	WT LBS/Ft
2151WE-00750-00	3/4	1.31	4	300	0.44
2151WE-01000-00	1	1.56	4	300	0.54
2151WE-01250-00	11/4	1.81	4	300	0.65

4

4

75

75

5.02

5.33

### Novaflex 2152

#### **Water Suction Hose**

This heavy duty water suction hose is designed for use on portable pumps by contractors, quarries and mine sites.

#### **Construction:**

Tube: Black synthetic EPDM rubber

Reinforcement: Plies of polyester tire cord with wire helix

Cover: Smooth black weather and abrasion

resistant rubber Length: 100ft.

Temperature Range:  $-30^{\circ}$  ( $-35^{\circ}$ C) to  $+180^{\circ}$ F

(+82°C)



Part No.	I.D.	O.D.	Plies	WP psi	WT LBS/FT
2152BE-00750-00	3/4	1.11	2	300	0.39
2152BE-01000-00	1	1.36	2	300	0.50
2152BE-01250-00	11/4	1.61	2	300	0.60
2152BE-01500-00	11/2	1.86	2	250	0.70
2152BE-02000-00	2	2.43	2	200	1.13
2152BE-02500-00	21/2	2.93	2	175	1.38
2152BE-03000-00	3	3.43	2	150	1.63
2152BE-03500-00	31/2	3.99	2	125	2.37
2152BE-04000-00	4	4.49	2	100	2.70
2152BE-05000-00	5	5.58	2	100	4.31
2152BE-06000-00	6	6.65	2	75	5.81
2152BE-08000-00	8	8.74	2	75	8.36
2152BE-10000-00	10	10.85	2	75	13.47
2152BE-12000-00	12	12.95	4	75	17.52

### **Heavy Duty Water Discharge Hose**

A heavy duty water discharge hose for the toughest industrial or construction applications. The cover is designed to withstand weather, abrasion and ozone.

#### **Construction:**

Tube: Black synthetic EPDM rubber Reinforcement: 4 ply polyester tire cord

Cover: Smooth black weather and abrasion resistant

rubber

Length: 100ft.

Temperature Range: -40°F (-40°C) to +180°F (+82°C



Part No.	I.D.	O.D.	Plies	WP psi	WT LBS/FT
2226BE-01500-00	11/2	2.04	4	200	0.84
2226BE-02000-00	2	2.54	4	200	1.08
2226BE-02500-00	21/2	3.04	4	200	1.32
2226BE-03000-00	3	3.54	4	200	1.56
2226BE-04000-00	4	4.54	4	200	2.04
2226BE-05000-00	5	5.54	4	200	2.53
2226BE-06000-00	6	6.58	4	200	2.96
2226BE-08000-00	8	8.58	4	200	4.10
2226BE-10000-00	10	10.58	4	150	5.08
2226BE-12000-00	12	12.61	4	150	6.53

## Novaflex 2636

## Slip Ring / Coupless Rubber Water Hose

A lightweight lay-flat water discharge hose which is connected without couplings. The hose is built with a male and female end enabling the user to connect hoses. The male end is inserted into the female end and locked into place with a steel ring. The hoses can be easily connected and disconnected in the field without tools. Ideal for de-watering applications, irrigation, light dredging, etc.



### Construction:

Tube: Black synthetic EPDM rubber

Reinforcement: Multiple plies polyester tire cord

Cover: Black synthetic rubber Length: Standard lengths, 50 ft.

Temperature Range:  $-40^{\circ}F$  ( $-40^{\circ}C$ ) to  $+180^{\circ}F$  ( $+82^{\circ}C$ )

Part No.	I.D.	O.D.	Plies	WP psi	WT PER LGTH
2636BE-04000-00	4	4.22	2	100	40
2636BE-06000-00	6	6.22	2	75	62
2636BE-08000-00	8	8.22	2	65	79
2636BE-10000-00	10	10.22	2	50	96
2636BE-12000-00	12	12.20	2	40	120
2636BE-14000-00	14	14.22	2	35	135
2636BE-16000-00	16	16.22	2	35	163
2636BE-24000-00	24	24.22	2	30	235



### **Coolant Hose**

Designed for heavy duty industrial or automotive coolant service. The 3 ply construction hose has a specially blended tube compound designed to resist heat and oil. Meets SAE J20-R1 (3 & 5 ply only).

#### **Construction:**

Tube: Black EPDM

Reinforcement: Plies of fabric

Cover: Black EPDM

Length: Available in 50 ft lengths.

Temperature Range: -40°F (-40°C) to +200°F

(+93°C)



Part No.	I.D.	O.D.	Plies	WP psi	WT LBS/ FT
2019BE-06250-70	5/8	1.00	2	130	0.35
2019BE-07500-70	3/4	1.21	2	115	0.44
2019BE-08750-70	7/8	1.34	2	100	0.50
2019BE-01000-70	1	1.46	2	90	0.55
2019BE-01125-70	11//8	1.59	2	80	0.61
2019BE-01250-70	11/4	1.71	2	75	0.67
2019BE-01938-70	15/16	1.75	2	70	0.69
2019BE-01375-70	13/8	1.84	2	70	0.72
2019BE-01500-70	11/2	1.96	2	65	0.78
2019BE-01625-70	15/8	2.09	2	60	0.84
2019BE-01750-70	13/4	2.21	2	55	0.89
2019BE-01875-70	1%	2.34	2	55	0.95
2019BE-02000-70	2	2.46	2	50	1.00
2019BE-02125-70	21/8	2.59	2	50	1.06
2019BE-02250-70	21/4	2.71	2	50	1.12
2019BE-02375-70	23/8	2.84	2	50	1.17
2019BE-02500-70	21/2	2.96	2	50	1.23
2019BE-02625-70	25/8	3.09	2	50	1.29
2019BE-02750-70	2¾	3.21	2	50	1.34
2019BE-02875-70	27/8	3.34	2	50	1.40
2019BE-03000-70	3	3.46	2	50	1.45
2019BE-03125-70	31/8	3.59	2	50	1.51
2019BE-03250-70	31/4	3.71	2	50	1.57
2019BE-03500-70	31/2	3.96	2	50	1.68
2019BE-04000-70	4	4.46	2	50	1.90
2019BE-04500-70	41/2	4.96	2	50	2.13
2019BE-04750-70	43/4	5.26	2	50	2.24
2019BE-05000-70	5	5.46	2	50	2.35
2019BE-05500-70	51/2	5.96	2	50	2.58

## Novaflex 2200

### **Water Jetting Hose**

Designed for extremely flexible, lightweight high pressure water jetting hose. Premium cover provides protection against cuts, gouging, scuffs and ozone.

## Construction:

Tube: Black EPDM

Reinforcement: Polyester tire cord Cover: Smooth black EPDM cover

Length: 100ft.

Temperature Range: -30° (-35°C) to +180°F (+82°C)



Part No.	I.D.	O.D.	Plies	WP psi	WT LBS/FT
2200BE-02000-00	2	2.48	2	500	0.91
2200BE-02500-00	21/2	3.08	4	500	1.34
2200BE-03000-00	3	3.61	4	400	1.59
2200BE-04000-00	4	4.61	4	300	2.07

## Water Hose - Fire Engine Suction

### Novaflex 2250

### **High Pressure Water Jetting Hose**

Designed for heavy duty, high pressure water jetting. Premium quality compounds provide excellent resistance to the common abuses associated with water jetting in the marine and construction industry.

#### **Construction:**

Tube: Black EPDM

Reinforcement: Polyester tire cord

Cover: Smooth black EPDM cover Length:

100ft

Temperature Range:  $-30^{\circ}$  ( $-35^{\circ}$ C) to  $+180^{\circ}$ F

(+82°C)

Part No.	I.D.	O.D.	Plies	WP psi	WT LBS/FT
2250BE-02000-00	2	2.80	6	800	1.30
2250BE-02500-00	21/2	3.30	6	800	1.59
2250BE-03000-00	3	3.80	6	800	1.87
2250BE-04000-00	4	4.84	6	800	2.42
2250BE-05000-00	5	5.92	6	500	2.68
2250BE-06000-00	6	6.92	6	500	3.20
223UDE-U0UUU-UU	0	0.92	O	500	3.20

## Novaflex 2160

### Water Removal and Hydrant Services

Premium quality heavy duty hose designed for suction and discharge applications commonly found in water removal and hydrant service on fire trucks

### **Construction:**

Tube: SBR

Reinforcement: Multiple plies of polyester

tire cord with helix Cover: Smooth SBR

Length: Available in specific lengths with cuff ends - price

on application

Temperature Range: -40° (-40°C) to +180°F (+82°C) Meets of exceeds NFPA #189 & 1901 requirements



Part No.	I.D.	O.D.	Plies	WP psi	Min Order Lgth	WT LBS/FT
2160BS-02000-00	2	3.25	2	150	100′	2.46
2160BS-02500-00	21/2	3.687	2	150	100′	2.88
2160BS-03000-00	3	4.25	2	150	50′	3.77
2160BS-04000-00	4	4.687	4	150	50′	5.16
2160BS-05000-00	5	5.75	4	150	50′	5.77
2160BS-06000-00	6	6.75	4	150	50′	7.03

### Novaflex 2161

### Water Removal and Hydrant Services

Premium quality heavy duty hose designed for suction and discharge applications commonly found in water removal and hydrant service on fire trucks.

### **Construction:**

Tube: SBR

Reinforcement: Multiple plies of polyester

tire cord with helix

Cover: Corrugated black EPDM cover

Length: up to 100 ft

Temperature Range:  $-40^{\circ}$  ( $-40^{\circ}$ C) to  $+180^{\circ}$ F ( $+82^{\circ}$ C) Hose comes with 6" cuffed ends. Meets or exceeds

NFPA #189 & 1901 requirements.



Part No.	I.D.	O.D.	Plies	WP psi	Min Qty	WT LBS/FT
2161BS-02500-00	2	3.04	2	150	4	2.42
2161BS-02500-00	21/2	3.54	2	150	4	2.90
2161BS-03000-00	3	4.54	2	150	2	3.47
2161BS-04000-00	4	4.687	4	159	2	5.2
2161BS-05000-00	5	5.54	4	150	2	5.88
2161BS-06000-00	6	6.58	4	150	2	7.36



The NovaFlex Group has implemented a quality policy to supply to our customers the correct hose or hose assembly for the application. Consistent with this policy NovaFlex has prepared this technical booklet to assist our customers and users of NovaFlex hose assemblies with information directed toward maximum safe hose assembly life and user safety. This booklet also addresses NovaFlex's "Duty to Warn" responsibility regarding misuse of these products.

The most current version of this guide is located on our web site at www.novaflex. com, and supersedes all other versions. (Additional information such as detailed information on Rubber Dock Hose, Composite Dock Hose and Chemical Resistance is on the Novaflex web site). Please check the version date of any booklet you may have, and always reference the most current.

The information contained in this booklet is intended to be a guide. It is the responsibility of the user to apply this information in the appropriate manner to insure safe operating procedures.

## Introduction

### General instructions for hose use, care and maintenance.

**NovaFlex** customers have requested information pertaining to the use, care and maintenance of **NovaFlex's** assemblies. As a result **NovaFlex** has developed this technical booklet to improve users' understanding.

This technical information is intended solely for the use of NovaFlex's customers as a guide for the use, care and maintenance of NovaFlex's hose and hose assemblies.

This information should be made available to all of the customers' representatives who use NovaFlex's hose and hose assemblies.

Hoses are designed to convey products and to operate in a dynamic work environment. This operation can present a serious safety hazard if safe operating procedures are not followed! "All hose will fail in time!" Each hose is designed for a specific application, only use the hose for the service marked on the hose.

This booklet is designed to supplement safe operating procedures, not replace them. All hose and couplings are designed for specific uses and it is critical for the user to understand how and what is important for the safe and correct use of a hose assembly. <u>Users of rubber & plastic hose should have in place a preventative maintenance program designed to identify potential problems before failures occur.</u>

It is always necessary to know the data presented in this booklet concerning the intended service and application of any particular hose **before** you use or request a hose.

NovaFlex recommends the use of assembly guide lines as published by NAHAD Hose Safety Institute.

It is the responsibility of the hose assembling company to ensure the use of the correct coupling and attachment method based on the coupling manufacturer's recommendations for the specific hose. Always use a coupling attachment method that the coupling manufacturer has assigned a working pressure equal or greater than the hose. Assembly pressure validation should be in accordance with ASDTM D380.

Every hose user must ensure their staff is familiar with this information and have in place a safety procedure to implement in the event of a hose failure (see page 15). Should you have any questions on any topic covered in this booklet, please contact

NovaFlex at: (905) 731-9411. For up to date technical information, please see our web site at www.novaflex.com

**Warning** - In any hose application, there may be inherent risk of bodily injury or property damage and the hose user is responsible for the implementation of adequate safety precautions. It is the responsibility of the person supplying the hose to advise the ultimate user of proper instructions for the adequate safe "Use, Care & Maintenance" of the hose and to warn the user of the consequences of failure to heed such instructions. Should a Hose assembly fail during use because of excessive pressure, damaging chemicals, excess temperature, incorrect material conveyed, serious bodily injury or destruction of property could result from such things as propelled couplings, whipping

hose, high pressure or high velocity discharge, chemical contact, release of flammable fluid, high temperature or fire.

STAMPED	
S' Size	The hose inside diameter (I.D.) and length required to meet the applications requirements (i.e. 3" x 10 ft). If OD is an issue, also specify.
'T' Temperature	Maximum & minimum temperature of the product conveyed through the hose assembly. Continuous? (i.e. 200° F) Exterior temperature if present.
'A' Application	Describe the actual use of the hose (i.e. Ship to Shore unloading, LPG transfer, in plant chemical use, etc.)
'M' Material Conveyed, Hours per day	Air, water, the specific chemical, product or material conveyed (i.e. compressed air, chemical transferred, etc.)
'P' Pressure	The maximum pressure or vacuum at which the material is being conveyed through the hose assembly. (i.e. 100 psi., including pressure spikes ). Is testing required?
'E' Ends	Type of end connections required to attach the NovaFlex hose to the mating connection (i.e. NPT male, Cam & Groove, Acme swivel etc).

Once the information in the acronym "STAMPED" referenced above is obtained, it is essential that a hose and coupling combination meet all of the "STAMPED" requirements as recommended by NovaFlex

"Always use the printed information from NovaFlex to insure accuracy of any recommendation." Do not exceed the printed, recommended service criteria. It is the ultimate objective to obtain maximum safe service life for a product; to accomplish this NovaFlex recommends the user maintain specific care during the use of the hose assembly to insure continued safe operations.

### Elements of a Hose

Tube

Its purpose is to handle the liquid, solid or gaseous material the hose is transferring. The tube is the innermost element of the hose and is intended to be resistant to the product conveyed.

Date the product is required (i.e. Nov 6, 2013).

Reinforcement

'D' Delivery

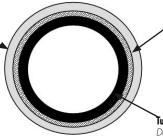
Its purpose is to withstand the working forces necessary to transfer the product conveyed by the hose tube in the application. Typically this is rated in a maximum rated working pressure (WP) in pounds per square inch (psi).

Its primary purpose is to protect the tube and reinforcement from external factors such as, abrasion, weather, ozone and external abuse.

Cover

Cover

Provides protection against external elements. Weather & ozone abrasion, cutting & gouging work environment chemicals



Reinforcement Provides

strength to resist pressure and vacuum. Combinations of textile and wire are used

Tube

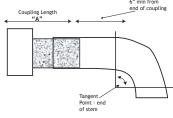
Designed to resist the product to be conveyed through the hose. Can be made from rubber, metal, plastic or Teflon

## Industrial & Marine Care & Maintenance Guide

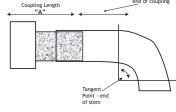
## Operator requirements for safe hose use

- Working Pressure on hose (WP) should never be exceeded, including pressure spikes. Never leave liquids or gasses trapped in a hose with each end sealed or valves closed. Thermal expansion of some products may cause pressures to exceed working pressure.
- Always rate the Working Pressure of the coupled hose assembly by the lowest rated element (hose WP or coupling WP which ever is lowest). Try to identify all Critical Applications-those hazardous applications such as: high pressure (over 50psi), petroleum products, chemicals or high heat (over 120°F).
- Only use the hose assembly for the service marked on the hose or for the service recommended in the printed literature. Have a HOSE INSPECTION & TEST **PLAN** to insure unsafe hoses and/or worn or damaged couplings are removed
- Inspects and test all hose assemblies as required every six (6) months (or sooner) to insure the assembly is safe for continued use. (Use RMA, ASTM, OSHA, NFPA, LPGA, NAHAD, USCG, SAE, AEYC or other regulatory agency recommendations for pressure testing along with these guidelines.)
- Educate your Hose Handlers/Users as to the conditions associated with unsafe hose; the operator is the last line of defense against spills and injuries. Teach your employees that: "When in doubt; Remove the Hose From Service!". Maintain a HOSE Inspection & Test Plan that requires a visual inspection prior to each hose use with pressure test (see Para.
- Always use appropriate Chemical Resistance Charts to verify that the chemical or product conveyed is compatible with the hose tube and alloy of the coupling. "Remember, the temperature and concentration of the chemical/ product conveyed must not exceed the manufacturer's recommendations. It is recommended to always flush chemicals from hose after each use. Different chemical concentrations may cause damage to couplings or to hose. In some situations a hose assembly may be recommended for high (90%) concentrations but low concentrations (30%) may cause damage. After chemical use, cap the hose - prevent atmosphere & moisture from entering the hose.
- Always use a coupling made from material suitable for the application and product conveyed. (Refer to alloy chart).
- **Before each hose use**, always check the coupling for slippage.
- In many cases the pumping of product develops hose pulsations. This pulsation can cause the hose cover to wear very auickly. It is important to train the hose operators to take care when using hose so that cutting, gouging and kinking can be avoided.
  - In some cases a NovaFlex Scuff-Guard can be added to the hose to protect the cover from abrasion. This extra guard will wear over time. Operators can add extra life to hose by simply rotating the hose so that cover wear is uniform. Should the Scuff-Guard be worn excessively, the operator should advise management to replace the Scuff-Guard for field inspections.
- 11. If a hose is used to transfer a product at higher temperatures (above 100°F), the hose should not be insulated. It is best to let the heat dissipate to the atmosphere, unless approved by NovaFlex.
- 12. When measuring a hose for specific installation, it is important to remember that

the tangent point for hose bending is at the end of the hose nipple portion inside the hose. It is recommended to add a minimum of 6" to dimension 'A' shown below. Always keep the bend radius of the hose within the recommended dimensions published for the specific hose. (See catalog). When flexing short length



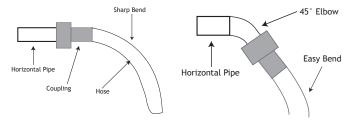
hose (less than 5') the bend point should always be centered in the hose length.



If there is the potential of a pull-away, buttressing of the piping system is a must. This will prevent piping fracture and make the hose the weakest link, causing it to separate. It is recommended to use a break-away devise along with dry-brake couplings for those applications with hazardous chemicals that may cause human injury or environmental damaae.

## Operator requirements for a safe hose assembly

- 14. If a hose application requires that the hose be electrically conductive, insure that the hose is grounded by using the steel helix wires or the ground wire located in the hose. To ground the hose to the coupling, simply extract enough helix or ground wire so that 1/2" can be bent into the hose ID. When the coupling is inserted the coupling stem must be in contact with these wires. Always test the conductivity with an ohm meter; coupling to coupling.
- 15. Scuff-Guard for field installation. Hose life can be safely extended through this simple maintenance procedure (some users have improvised and placed mats or other protection under hoses in this type application to reduce cover wear).
- Crushing or kinking of hose can cause serious damage to reinforcement. If the outside diameter (OD) of the hose is reduced more than 20%, the hose must be retired from service. If the outside diameter (OD) is reduced by less than 20% inspect and hydro



test. If hose can't be tested, remove from source.

- Internal & external abrasion results in shortened service life. Care should be taken while handling hose to prevent abnormal wear on the hose cover. In applications that cause internal abrasion, **NovaFlex** recommends that the hose be as straight as possible to eliminate excessive wear on the outside radius of hose tube in the bend area. Hoses that are bent should be rotated 90° every 3 months to spread the wear on the complete  $360^{\circ}$  surface area of the hose ID.
- Hose when used in a Horizontal Outlet application will have a shortened service life. This type of application places strain on the sharp bend of the hose. In order to increase service life in this type of application it is recommended to minimize the bend of the hose with a bend restrictor or place a 45° elbow on the piping (see below).
- 19. It is impossible to test **NovaFlex** hoses under all the conditions to which they might be subjected in the field. It is therefore the buyer and/or end user's responsibility to test all **NovaFlex** hoses under conditions that duplicate the service condition prior to installation.

#### 20. **Novaflex Temperature Safety Guidelines:**

Novaflex designs its hose working pressures in accordance with RMA design and safety factors at ambient temperatures. In many applications requiring higher temperatures resistance, Novaflex has accommodated the higher working temperature by using appropriate compounds and reinforcements to meet these parameters.

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 below temperatures ranges: 80° to 150° F — Reduce working pressure by 15%. 150° to 225° F — Reduce working pressure by 30%. Over 225° F — Reduce working pressure by 50%.



- 21. When crimping or swaging on a coupling, always measure the hose OD on each hose end to verify the exact OD of the hose to get a correct crimp based on that OD. Hose ODs can vary!
- 22. Some hose applications transfer products with higher temperatures, such as Asphalt Hose and Hot Sulfur Hose or other. These temperatures will shorten hose service life when compared to normal dock hose applications. Temperature is a natural enemy of rubber, it causes rubber to stiffen and harden. When a hose operates above 200°F, (92°C) the life of the hose is affected adversely by the amount of time the hose is used at the elevated temperature. It is impossible for Novaflex to project service life of this type product. After 6 months in service, it is incumbent on the user to inspect closely and test the hose before each use to ensure its continued safe operation or retire it should it fail inspection.

# General Instructions for Visual Inspection of NovaFlex Hose

Information obtained from RMA Hose Handbook IP-2 [1987] &. National Propone Gas Association Flyer# 114-91 & # 134-81) **All hose should be externally inspected prior to each use** and thoroughly inspected every six (6) months or sooner. All hose should be hydrostatically tested to 1.5 times working pressure (or to appropriate industry standards) every six (6) months to verify the hose assembly's integrity. Hose, prior to inspection, must be depressurized and laid out straight for inspection. Coupling selection should be made with the intent of providing the maximum level of safety with the best performance capability possible. Daily inspection is a visual inspection for any damage or unusual conditions.

INSPECT DAILY FOR:	CORRECTIVE ACTION
Check to ensure that this is the correct hose for the application. (Review application markings on hose)	If incorrect hose, remove from service.
2. Look for cuts, gouges, kinks or worn spots in the hose cover that expose textile or wire reinforcement.	Remove hose from service. Contact <b>NovaFlex</b> for
	repair instructions
3. Inspect for soft spots, bulges or blisters in cover, sections of mashed flat hose or kinked areas.	Remove hose from service.
	Contact <b>NovaFlex</b> for repair instructions
4. Carefully examine a length of the hose (18" in length adjacent to where the coupling is attached) for any damage	Remove hose from service.
such as kinks, soft spots, cover cracks, or permanent deformation of the hose from its original form.	Contact <b>NovaFlex</b> for repair instructions
5. Check couplings for any slippage which is evidenced by misalignment of the coupling or scored/exposed areas on the	Remove hose from service.
hose cover next to the coupling which indicates movement of the coupling.	Contact <b>NovaFlex</b> for repair instructions
6. Check couplings for worn threads, loose clamps or bands, worn gaskets, worn or broken handles, cam-arms and pins.	Remove hose from service. Remove suspect couplings from the hose and replace with new coupling.
7. Inspect for hose cover blisters or loose outer cover. This may indicate conveyed product is passing through the carcass of the hose.	Remove hose from service. Contact <b>NovaFlex</b> for repair instructions
8. Before each use look down the inside of the hose couplings damage or blockages.	If broken parts or blockages are found, remove from service.
9. Inspect couplings for any worn parts that may prevent normal function, damage to any safety device that prevents them from working, worn threads, excessive corrosion or rust, or cracks in any part of the coupling.	Remove hose from service. If possible, remove suspect couplings from the hose
	and replace with new coupling.
10. Look for changes in cover color. This may indicate chemical attack.	Remove hose from service.
	Contact <b>NovaFlex</b> for repair instructions

Details of visual inspection should be recorded on an inspection form, indicating location of significant damage or defect. The hose itself should also be marked at these locations prior to hydrostatic testing in order to determine if point of failure corresponds to observed damage.

## Industrial & Marine Care & Maintenance Guide

# General Instructions for Hose Hydrostatic Inspection and Testing

(Information obtained from RMA Hose handbook IP-2 [1987])

#### **New Hose**

- 1. All new Rubber hoses are to be hydrostatically tested to 2 times (200%) the working pressure indicated on the hose label for 5 minutes. Other test regulatory agencies have testing requirements that will super seed Novaflex's requirements ( such as US Coast Guard, EPA, Military, or others). The hose assembling company must follow the applicable requirements as set forth by the application. The hose should have an external inspection to insure the hose is free of kinks, cover cuts or gouges, loose or damaged hose cover and other external problems that would prevent the hose from being placed into service.
- 2. All new Composite hoses are to be tested to 1.5 times the working pressure shown on the hose for 5 minutes (dock hose and heavy duty composite hose are tested for 30 minutes). The hose should have an external inspection to ensure the hose is free of cuts, gouges, kinks, bent wires or damages that would prevent the hose from being placed into service.

**Used Hose** — Remember if there is an issue or suspected problem always error on the side of safety and remove the hose from service. An inspection and hydrostatic test is to be made at periodic intervals (not exceeding 6 months) to determine if a hose is suitable for continued safe service. Novaflex only recommends Hydrostatic Testing for rubber hose.

A visual inspection of the hose as described previously for loose cover, kinked hose, cover bulges, soft spots, displaced wire or any other damage which might indicate damaged hose should be made first. If damage is observed, the hose must be retired from service. The coupling (or fittings) should also be closely examined and if there is any sign of movement of the hose from the couplings, the hose must be rejected and removed from service.

The periodic inspection is to include a hydrostatic test for 5 minutes at 1.5 times the working pressure labeled on the hose. During the test the hose should be straight (not coiled). Water is the recommended media for testing and following the test the hose may be flushed with Alcohol to remove the water (if the hose tube is resistant to Alcohol). If a hose is expected to be electrically continuous or discontinuous, it should be tested at this time. Use an OHMS meter to verify the electrical properties of the hose. After testing, inspect the hose tube (internally) with a flashlight for tube damage. Tubes that have discoloration, bubbles, cracks or have loose spots must be rejected.

## **Safety Warning**

## Air or other compressed gases should not be used for pressure testing due to the explosive nature of this type testing!

When hydro testing, all air should be removed from the hose prior to testing by bleeding it though an outlet valve attached to one end of the hose (elevate this end to bleed off air). The hose to be tested should be completely restrained by enclosing the test area or using tie down straps at 10 ft. intervals along the hose length to prevent wiping should a hose end be ejected. The ends of the hose should be anchored to the test structure in such a manner that they do not restrict the ability of the hose to move, but insure that should a hose coupling be ejected that they are contained.

Provisions must be made to protect personnel from the effects of a hose rupture at the highest pressure tested. Testing personnel, after the hose is taken to test pressure and returned to working pressure, can then perform the necessary hose inspections required (i.e. look for leaks, blisters, loose spots). After testing, the tube should be inspected for hardness, color changes, cracks, blisters, erosion, etc.

If compressed gas testing is used **against** Novaflex's recommendations, all risks for this type testing are assumed by the company performing the compressed gas testing.

## General Instructions for Proper Hose & Duct

Storage Some Information obtained from RMA Hose Handbook IP-2[2009] & NAHAD Guideline 520[2009])

Hose products in storage can be affected adversely by temperatures, humidity, ozone, sunlight, oils, solvents, corrosive liquids and fumes, insects, rodents and radioactive materials.

The appropriate method for storing hose depends to a great extent on its size (diameter and length), the quantity to be stored and the way in which it is packaged. Hose should not be piled or stacked to such an extent that the weight of the stack creates distortions on the hose lengths stored at the bottom. Since hose products vary considerably in size, weight and length, it is not practical to establish definite recommendations on this point. Hose having a very thin wall will not support as much load as could a hose having a heavier wall or hose having wire reinforcement. Hose shipped in coils or bales stacked to save freight should be stored so that the coils are in a horizontal plane and re-stacked to prevent weight damage.

Whenever feasible, hose products should be stored in their original shipping containers, especially when such containers are wooden crates or cardboard cartons which provide some protection against the deteriorating effects of oil, solvents and corrosive liquids; shipping containers also afford some protection against sunlight and ozone. Certain rodents and insects will damage hose, protection from these elements must be provided. The ideal temperature for storage of rubber & plastic hose products ranges from  $50^{\circ} - 70^{\circ}$  F ( $10^{\circ}$ - $21.2^{\circ}$  C), with a maximum limit of  $100^{\circ}$  F ( $38^{\circ}$  C) for short periods. If stored below  $32^{\circ}$  F ( $0^{\circ}$  C) some product will become stiff and will require warming before bending or being put in service. Hose product should not be stored near sources of heat, such as radiators, heaters etc. Nor should they be stored under conditions of high or low humidity (recommended 30% to 60%).

To avoid the effect of high ozone concentrations, rubber hose products should not be stored near electrical equipment that may generate ozone or be stored for any lengthy period in geographical areas of know high ozone concentrations. Hose should not be stored in locations where the ozone level exceeds the national Institute of Occupational safety & Health's upper limit of 0.10 ppm. (in areas of higher ozone, storage life is greatly reduced). Exposure to direct or reflected sunlight; even through windows should be avoided. Uncovered hose should not be stored under florescent or mercury lamps which generate light waves harmful to hose. . Protection from such lighting should be provided.

To obtain best results storage areas must be cool and dark, free of dampness and mildew. Items should always be stored on a first in first out basis; even under the best of conditions unusually long shelf life could deteriorate plastic or rubber hose. It is incumbent on the storage facility to maintain the correct storage conditions and inspect and manage the products inventoried to insure that they maintain the level of serviceability as set forth by the manufacturer.



### Do's and Don'ts of Hose Care and Use

Hose is a very vulnerable link in most process and transfer applications. **All hose will fail in time!** It handles valuable and potentially dangerous materials, and hose failures can be expensive in terms of lost product, ruined equipment, spill clean up, and — most important personal injuries.

For this reason, hose is carefully designed and built to do a specific job safely and economically. Yet, unfortunately, the years of research and development invested in hose construction can be canceled by improper storage, misuse, and other abuse by the hose user, warehousemen, and other work personnel.

**NovaFlex** recommends careful observation of the following points to improve service, safety and economy from the hose you use.

**Do -** Use hose designed and recommended for the service intended. Contact **NovaFlex** and our staff will assist you in the selection of the best hose product for your requirements.

**Do** - Make sure hose is easily identifiable as to the type and use. Where dangerous misuse can occur, use different fittings or end connections.

**Do** - Make sure your **NovaFlex** Hose is the correct length for the job intended. Remember to engineer for a possible -4% contraction to +5% elongation at max working pressure on the hose assembly.

**Do** — Always wear safety clothing, gloves, boots, hard hat and eye protection when using a hose.

**Do** - Avoid subjecting hose to damage by vehicles, falling rocks, or other objects. It is easy to install protective covers on hose.

**Do** - Check manufacturer's chemical resistant charts to insure the hose will transfer the chemical at the concentration and temperature **before** it is put in the hose.

**Do -** Store hose in a cool, dry, dark and clean place.

**Do** - Insulate a hose to protect it from damage due to external direct or radiant heat sources. (Some hose can be built with insulation.)

**Do -** Always clean hose before putting it into service to ensure it is clean.

**Do -** Always clean/sanitize food hoses before putting into service to ensure it is clean.

**Do** - Always closely inspect before each use of any hose used at high temperatures for signs of heat aging. High heat hoses typically have shorter services lives. Check for cover cracks and hard brittle covers that expose the reinforcement; if found retire the hose from service.

**Do** - Make sure that the hose couplings and their attachment method is correct for the application. Check with the coupling manufacturer's for correct recommendations.

**Do** — Test hoses every six (6) months or sooner to 1.5 times the working pressure or to industry recommended pressures based on RMA, USCG, OSHA, DOT, API, NPGA or others, NAHAD - Hose Safety Institute.

**Do** — Educate all employees on how to inspect a hose before <u>each use to ensure</u> it is safe to use along with correct hose use and care. Teach employees to — Error on the side of safety! **"When in doubt, remove the hose from service!"** 

**Do** — Store hose in a flat coil. Be sure no kinks are left in the coil. Lay it on the floor, a shelf or table. Long lengths are best stored on hose reels. Store at temperatures between 50°F (10°C) to 70°F (21°C) Maximum 100°F (38°C)

**Do** — Protect hose from the effects of ozone (O3), the active form of oxygen which is more prevalent than most people think. Store away from electrical or ozone producing equipment.

**Do** — If a hose is suspended in the air, always attach a safety chain or cable to prevent a hose from falling should a connection separate from the hose.

**Don't** — Never perform welding of any type on hose that have couplings crimped or attached to rubber or composite hoses due to heat transfer damaging the hose. Welding should be performed on couplings before attachment.

**Don't** — Crush or kink hose. Avoid repeated bending which may eventually break the reinforcement of the hose leading to a rupture.

**Don't** — Substitute hose types. All hoses are not equal. Consult your hose supplier for the correct recommendations.

**Don't** — Use a hose if any of the reinforcement is exposed through the cover due to cuts, gouges or just prolonged use.

**Don't** — Exceed the working pressure of the hose for any reason (including pressure spikes).

**Don't** — Use damaged or worn fittings. Check to see if the coupling is loose or has moved, has worn threads, worn gasket or is corroded. Successful hydro testing will help verify the integrity of the coupled assembly.

**Don't** — Store hose after use, without rinsing & draining if it carried substances that ultimately deteriorate the hose tube.

**Don't** — Use a hose outside its recommended temperature limits.

**Don't** — Never pull on a hose by its coupling.

**Don't** — Never kink a hose to stop the flow of product. Kinking can seriously damage the tube and reinforcement.

**Don't** — Never lift a hose by the middle with the ends hanging down. This can kink the hose in the middle (especially in hoses over 3" ID). Use hose lifting saddles to prevent kinking.

**Don't** — Never bend a hose beyond it minimum bend radius

**Don't** — Subject a hose to temperatures above its rated temperature recommendations (especially any hose with plastic parts, PVC, etc).

**Don't** — Never insulate a hose that is used to transfer heated materials over (100°F). Hose is designed to let heat radiate from the hose cover to the atmosphere.

**Don't** — Never hang a hose by the hose fittings/connections without attaching a safety strap to each end to hold the hose in the case of a coupling ejection. This is to protect staff that may work under the hose.

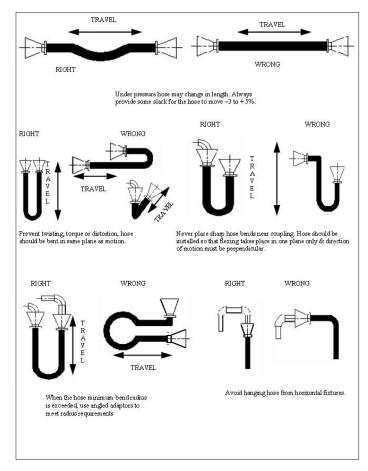
**Don't** - Never store a type of hose so the weight of the couplings is a dead weight hanging free. The weight of the coupling over time will weaken the hose at the back of the coupling (this is the reverse of a horizontal outlet problem).



## Industrial & Marine Care & Maintenance Guide

## **Correct Assembly Installation**

Satisfactory performance and appearance depends upon proper hose installation. Excessive length destroys the trim appearance and adds unnecessary stress to the hose if it causes the hose to exceed minimum bend radius. Hose assemblies of insufficient length may cause coupling pull out or over stress the hose causing short service life. The diagrams below offer suggestions (for other configurations contact **NovaFlex**) for proper hose installation.



Hose should never be placed into an application that induces twist, rotation or torques the hose.

## **Cleaning Tips for NovaFlex Hose**

In many hose applications it is "Best Practice" to clean the hose after each use. This prevents the:

- Long term effects of potentially hazardous chemicals from damaging hose & couplings (even 316 stainless steel is effected over time by some common chemicals).
- 2. Contamination of product, should one hose be used to convey multiple products.
- 3. Prevent accidental spillage from chemical residue left in the inside of a hose.

This process is typically accomplished by flushing the interior of the hose with water or a cleaning solution. Cleaning procedures may differ by industry but should at least include the below **NovaFlex** recommendations.

Companies that conform to "Best Practice" programs realize that all safety programs and safety products are only as good as the human element responsible for using and maintaining the products used in the industrial arena. Hose can be dangerous!

It is important that companies take reasonable care to educate their employees to correctly use hoses in their respective work environments. To this end it is incumbent on the employer to institute the simple elements of a hose safety program to maintain safe hose operations by their work staffs.

All staff must wear personnel protective gear, i.e. eye protection & hard hat, gloves, protective clothing, etc.

Cleaning solutions should be able to dissolve or remove the residue material in the hose assembly and must be compatible with the hose tube & couplings.

All material flushed along with the cleaning solution must be processed in accordance with EPA requirements.

Extreme care must be taken when inserting cleaning devices in to the I.D. of a **NovaFlex** hose, such as brushes, steam wands etc. **Novaflex** does not recommend this because hose tubes can be damaged during this process.

- Steam cleaning is not the preferred method for cleaning any hose due to the
  possibility of overheating the hose and coupling. If steam cleaning is necessary
  the procedure, as below, is recommended:
- 2. The hose should be placed in a straight line with one end higher in elevation to permit draining from the lower open end.
- Never use super heated steam (steam temperature going into the hose should not exceed the max temperature of the hose to be cleaned -212°F is recommended.
- 4. Use a steam supply line not larger than 34" ID into an adaptor to match the ID of the hose to be cleaned.
- 5. The hose to be cleaned must have the other end open to the atmosphere. Care must be taken to ensure that the velocity of steam in the hose to be cleaned is minimal (steam [jets] velocities will damage the hose tube (liner). The use of wand ends or nozzles in the hose ID is not authorized.
- 6. Steam cleaning duration of 15 minutes or less is recommended.
- 7. The hose should be flushed with clean water after cleaning.

To insure no cleaning chemical residue is left in the hose assembly, the hose can be hung vertical for a brief time to drain. It is common to hang hose to facilitate draining (hose with a convoluted tube surface may require this method).

Warm air (120°) F can be circulated through the hose for drying.

If hose is cleaned in a dip tank, do not exceed the maximum temperature marked on the hose. Cleaning time in the dip tank should not exceed 15 minutes.



## **General Instructions for Hose Clamps and Marine** Hose

There are numerous manufactures of hose clamps, Novaflex Marine does not recommend any particular brand. There are common practices for the use of clamps and preferred clamp styles. Improperly attached clamps can cause damage to hose; hose ejection from the fixture or leaky connections resulting in spills. A superior type of hose attachment method is a permanently attached crimped or swaged coupling system. Due to the vastly different hose attachment applications common in boat building, worm drive bands have become the convenient method of choice.

- Each manufacture of hose clamps rates their clamps differently. Novaflex Marine recommends that a worm gear type hose clamp not be used on any hose with working pressures over 75 psig with out the manufactures approval. This max working pressure will change by hose ID.
- Novaflex Marine recommends clamps that are made with an inner liner to prevent rubber extrusion through the screw slots.

Rubber protruded through clamp, causing damage



Proper clamp and adjustment

- All hose is subject to cold flow. This is the loss of compression over time due to stress placed on rubber or plastic over time. Clamps should be re-tightened periodically, inspect for leaks and tighten to stop a leak. Replace if leak persist.
- Do not over tighten clamps, this could cause the clamps to cut into the rubber or plastic resulting in shortened service life. Never exceed the torque rating recommended by the manufacture of the clamp!
- Use 2 clamps per connection end to obtain a safe seal or meet industry requirements (USCG, SAE, NMMA or ABYC). It is incumbent on the installer to know the requirements and use correct procedures. When 2 clamps are used, offset the screw tightening head approximately 180° to get the best seal.
- Use only marine grade stainless steel clams to resist the effects of corrosion.
- Always inspect hoses used on the boat at least every six months. 7.

## **Examples Of Common Damage That Signal Rubber** & Plastics Should Be Replaced

The below examples are the most common visual signs that a hose is demonstrating danger signals. Examples of hose damage are not limited to what is shown, there may be other situations that can result in severely shorting hose life. When inspecting hose, tubing, ducting or other rubber or plastic product always error on the side of safety! "When in doubt, remove from service".



Hose cover melted due to contact with high heat of hot engine parts



Hole in hose cover that exposes reinforcement



Hose bent too tight, damaged at end of coupling





Exhaust hose with cover worn, exposing reinforcement



Crushed vent ducting, will impede proper and safe venting of fumes. Replace damaged duct



Hard wall hose kinked flat. Hose needs to be replaced.



Clamps installed with screw tightening heads in line. It is recommended to offset as see below.



Hose with cover cracks due to age or the effects of ozone. Hose covers over time harden and should be replaced if this condition is found. (note: if boat has an ozone generator on board this could accelerate this condition



Hose with cover charred area from high heat or extreme aging due to heat or ozone

## Industrial & Marine Care & Maintenance Guide

# Elements of a Hose Safety Program Rubber Hose - Conductivity

Rubber hose can be made to meet conductive and non-conductive requirements. It is important that the specific electrical requirements be conveyed to **NovaFlex** so the correct hose construction can be supplied. Always test the finished hose assembly to insure that the electrical requirements have not be impeded due to damage or wear. The use of an ohm meter can be used to insure the hose meets the specific specification. In an effort to provide assistance for hose safety, **NovaFlex** recommends that a safety program involving (but not limited to) these key elements be used.

- Hose identification system
- Coupling identification system
- Hose application identification program
- Employee training program on Hose Care, Use and Maintenance.
- Root Cause Analysis of hose failures
- Hazardous Application Hose Failure Action Plan

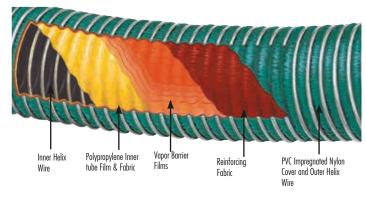
## **Composite Hose Information**

Composite hose is a unique hose composed of many layers of special materials, held together between an inner and outer wire. This type of hose is still subject to the same operational parameters as regular hose.

This type of hose can be maintained in accordance with the instructions in this booklet. The only additional points are:

Care should be taken to not damage the exterior of the hose. If the outer wire is broken or damaged, the hose should be replaced.

If the outer cover plies are abraded to the point the inner carcass plies are exposed, the hose should be replaced. Insure the hose is used to transfer products in accordance with the chemical resistance chart.



If thick highly viscous materials are heated to remain fluid, it is incumbent on the user to insure the product conveyed is free of solids due to coagulation due to cooling.

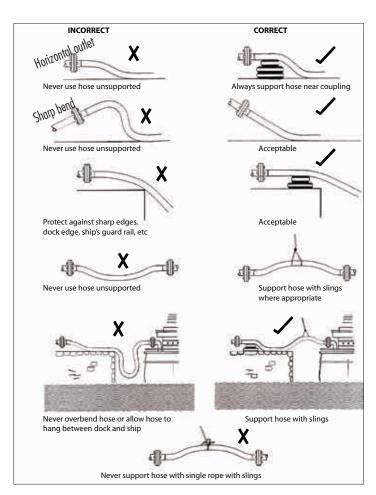
## **Inspection and Testing of Composite Hose**

This document provides procedures for the inspection and testing of composite hoses inservice, as well as criteria for their retirement. These include visual inspection, hydrostatic testing and service/age retirement criteria.

In the case of damaged or defective hose that may pass the hydrostatic test but does not satisfy the remaining criteria, burst testing of the hose is suggested to assess remaining hose strength as well as the mode of failure. This data is useful to verify or re-assess the current retirement criteria.

To ensure long trouble free service with NovaFlex composite and rubber hoses, it is recommended that the following installation and maintenance procedures be followed:

ALWAYS	NEVER
Support the hose near flange connections	Use the hose unsupported.
Support the hose at the appropriate points	Support the hose with a single rope.
Cushion the hose against sharp edges, dock edges, ship's rail etc.	Allow the hose to hang unsupported between ship and dock



Use a **BEND RESTRICTOR** to prolong hose life when hose is used on horizontal outlets or sharp bends. (See also page 6)

**Note:** Due to the inherent nature of composite hose it is susceptible to stretching in length while pressurized. Hose elongation while under pressure is not an indication of failure of films and fabrics. It is therefore critical that this be taken into consideration when calculating the overall length for a hose assembly in operation.

Hose should never be placed into an application that induces twist, rotation or torques the hose.



## **Visual Inspection**

Details of visual inspection should be recorded on an Inspection Form, indicating location of significant damage or defects. The hose itself should also be marked at these locations prior to hydrostatic testing in order to determine if point of failure corresponds to observed damage.

## Composite hose retirement criteria based on visual inspection includes the following:

- 1. Dents or kinks in the carcass and the inner or outer wire.
- 2. Displacement of 2 or more adjacent inner or outer wire helix from their normal nitch
- 3. Corrosion or abrasion of the outer wire.
- 4. Displacement of end fittings or signs of leakage from the ends.
- 5. Damage to the outer cover and underlying reinforcement fabric.
- Moderate abrasion of the outer cover is acceptable and repairable if the reinforcing fabrics below the cover are not damaged.

## **Hydrostatic Test**

The hydrostatic test shall be performed as described below. Electrical continuity checks, as per part 6, shall also be done during the test. Hose assembly lengths shall be measured between flange faces. (NAHAD 600. Guidelines 2005).

### Warning

The use of a compressed gas is not authorized because of the risk to operators. Any failure during gas testing is likely to be of a highly explosive nature. Water is the approved test liquid.

It shall also be stressed that when a liquid is used as the test medium it is essential that all air is expelled from the hose or hose assembly because of the risk of injury to the operator due to the sudden expansion of trapped air being released when the hose bursts. Always ensure testing staff wear appropriate safety equipment and that during testing they are protected from possible coupling ejection and hose rupture.

- 1. Lay the hose straight out and permit free movement under pressure. (Hose will elongate under pressure.)
- 2. Place blanks over both ends and fill the hose with fresh water.
- 3. Vent the trapped air by raising one end of the hose.
- Pressure test requirements: 1" to 4" I.D. test hose to 150% of working pressure for 5 minutes.
- 5. Check for electrical continuity
- 6. If length measurements are required:
  - a. Pressurize the hose to one time working pressure, hold for 30 seconds, release pressure to 10psi and take the initial length measurement at 10psi. Lo=
  - b. Measure the hose length at test pressure (150% of hose WP), Lt=\_\_\_\_\_.

    Calculate the temporary elongation as follows: Lt Lo X 100=\_\_\_\_\_% Lo
- 7. Composite carbon and stainless steel couplings are designed to match the working pressure (WP) of NovaFlex hoses. When using polypropylene/plastic couplings the working pressure of the hose assembly is reduced to the below WP by hose ID: 1", 1½" and 2" max
  - 100 psi WP. 2"  $2\frac{1}{2}$ " & 3" max 75 psi WP. Based on the type hose tested, a hose can elongate up to 15%.

## **Electrical Continuity**

#### **Composite Hose**

**NovaFlex's** composite hose is designed to be electrically conductive. Assemblies are conductive through the use of hose couplings connected to various wires that run the length of the hose. All **NovaFlex** composite hose is designed to provide an electrical ohm resistance that does not exceed 10 ohms. The user should always test the conductivity of the hose when the hose safety pressure test is made. This test can be easily accomplished using an ohm meter. If conductivity is a major concern, the user of the hose can test for conductivity as often as deemed necessary.

#### **Rubber Hose**

When using rubber hose, different hose applications may require a conductive hose. All hose applications transferring any product that can build up a static charge in the hose must be grounded. All hoses transferring chemical or flammable products must be grounded. Grounding the hose can be accomplished by using the helix wire or a ground wire that is built into the hose. This hose end is cut away so that the wires are extended from each end of the hose and folded into the hose ID about ½" so that when the coupling is inserted into the hose ID it is clearly in contact with the respective wires. Use an OHM meter to check for conductivity for each length. Conductivity should be verified at least every six (6) months when in service.

### **Cleaning All Types of Hose:**

Hoses should be thoroughly flushed out and drained before testing and after service or prolonged storage.

- Flush with fresh water, detergent or suitable solvent at ambient temperatures.
- Cleaning fluids should be flushed out to avoid chemical reactions with service products.
- During steam cleaning composite hose, the temperature of the steam must not exceed 212°F (100°C). Care must be taken to insure plant steam (which is generally above 300°F) is not directly injected to the hose ID.

**Note:** Hoses should be electrically grounded during cleaning. When cleaning, to avoid internal damage to hose

do not exceed maximum working temperature and pressure.

### Other Novaflex products data sheets:

- 1. Dock hose "Care and Maintenance Guide"
- 2. Heat Traced "Care and Maintenance Guide"

## Industrial & Marine Care & Maintenance Guide

## **Novaflex Temperature Safety**

You can extend the safe operating service life of hose by implementing simple safe operating procedures.

Novaflex® designs its hose working pressures in accordance with RMA design and safety factors at ambient temperatures. In many applications requiring higher temperatures, Novaflex® has accommodated the higher working temperature by using appropriate compounds and reinforcements to meet these parameters.

## Never use any Novaflex<sup>®</sup> hose outside the hose temperature limits marked on the hose.

It should be noted that even within these hose temperature limits, attached end fittings differ. 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/vacuum should be de-rated by the temperature ranges hereby listed below:

125° to 175°F - Reduce working pressure by 15%
176° to 225°F - Reduce working pressure by 30%
- Reduce working pressure by 50%

## NovaFlex® Returned Material Authorization (RMA)

- 1. To return a product, the customer must be issued with a NovaFlex RMA#.
- Products returned without a NovaFlex RMA# will be refused by the shipping department.
- 3. After the issuance of the RMA # the customer has 30 days to have the product returned to the NovaFlex site specified on the RMA.
- 4. All returned hoses must be clean and free of any materials transferred. Should a hose be returned and found not to have been cleaned and is deemed contaminated with chemicals, NovaFlex will dispose of the hose in accordance with NovaFlex's Environmental Hazard Waste protocol without approval by the customer. NovaFlex is not in a position to handle or store contaminated product.
- Once the product is received by NovaFlex, the RMA will processed, inspected and a determination will be made in a timely manner.



## Terms and Conditions of Sale

The items described in this document and other documents provided by NovaFlex Hose Inc., NovaFlex Industries Inc., Z-Flex U.S. Inc., their subsidiaries and their authorized representatives ("Seller") are available for sale at prices established by Seller. An order from any customer ("Buyer") shall be governed by all of the following terms and conditions of sale ("Terms and Conditions"). Upon Seller's acceptance of Buyer's purchase order the Terms and Conditions from part of the agreement between Buyer and Seller. All goods available for sale are referred to as "Products". The Terms and Conditions are also available on our website at www.novaflex.com.

- 1. Prices; Price Adjustments; Payments. Prices stated in this document are valid for 30 days. Minimum purchase per order is \$250. After 30 days, Seller may change prices to reflect any increase in its costs resulting from state, provincial, federal or local legislation, price increases from its suppliers, or any change in the rate, charge, or classification of any carrier. The prices in this document do not include any sales, use, or other taxes unless so stated. Buyer shall be responsible for any present or future sales, exercise or similar tax applicable to the sale or use of the Products. Unless otherwise specified by Seller, all prices are F.O.B. Seller's facility, and payment is due 30 days from the date of invoice. After 30 days, Buyer shall pay interest on any unpaid invoices at the rate of 1.5% per month.
- 2. Delivery Dates; Title and Risk; Shipment. All delivery dates are approximate and Seller shall not be responsible for any damages resulting from any delay due to a cause beyond its control. Regardless of manner of shipment, title to any Products and risk of loss or damage shall pass to Buyer upon tender to the carrier at Seller's facility. Unless otherwise stated, Seller may exercise its judgment in choosing the carrier and means of delivery. At Seller's option carrier charges shall be prepaid and invoiced to Buyer. A \$5.00 handling charge will be added to all UPS shipments. No deferment of shipment at Buyers' request beyond the respective dates indicated will be made except on terms that will indemnify and hold Seller harmless against all loss and additional expense. Buyer shall be responsible for any additional shipping charges incurred by Seller due to Buyer's changes in shipping or product specifications.
- Buyer Responsibility and Acceptances. Buyer, and user, if different, through their own analysis and testing are solely responsible for making the final selection of Products and assuring that all performance, endurance, maintenance, safety and warning requirements are met. User must analyze all aspects of the application in the field and follow applicable industry standards and Product information. Adequate testing in actual service conditions must be carried out by Buyer and/or user to establish definite suitability for end use. If Seller suggests Products for an application based on data, drawings, designs, diagrams, specifications or other communications ("Information") provided by Buyer or user, then Buyer and user are responsible for determining that the Information is suitable for use of the Product in the application. Submission of an order for production quantities of a Product following receipt of a final version of a prototype is (a) Buyer's acceptance of the prototype as meeting all of Buyer's requirements as set out in the Information supplied by Buyer and, (b) Buyer's acceptance of the Products based on the prototype, provided the Products are manufactured within Seller's standard tolerances.
- 4. Returns, Cancellations and Changes. Returns shall not be accepted. Orders shall not be subject to cancellation or change by Buyer for any reason, except with Seller's written consent on terms which protect Seller

from any loss. Seller may change product features, specifications, designs and availability with notice to Buyer.

- 5. Claims. Buyer shall promptly inspect all Products upon delivery. No claims for corrections or deductions from invoices will be allowed unless reported to Seller within 30 days of delivery.
- 6. Contingencies. Seller shall not be liable for any default or delay in performance if caused by circumstances beyond the reasonable control of Seller.
- 7. Warranty. Seller warrants that the Products sold hereunder shall be free from defects in material or workmanship for a period of twelve months from the date of delivery to Buyer. This warranty is made only to Buyer and does not extend to anyone to whom Products are sold after purchased from Seller. The prices charged for Seller's products are based upon the exclusive limited warranty stated above, and upon the following disclaimer: DISCLAIMER OF WARRANTY: This warranty comprises the sole and entire warranty pertaining to Products. Seller disclaims all other warranties, express and implied, including merchantability and fitness for a particular purpose.
- 8. Limitation of Liability. For a period of 30 days from delivery Seller will, upon notification, at its option, repair or replace a defective product, or refund the purchase price. In no event shall Seller be liable to Buyer for any special, indirect, incidental or consequential damages arising out of, or as the result of, the sale, delivery, non-delivery, servicing, use or loss of use of the Products or any part thereof, or for any charges or expenses of any nature incurred without Seller's written consent, even if Seller has been negligent, whether in contract, tort or other legal theory. In no event shall Seller's liability under any claim made by Buyer exceed the purchase price of the Products.
- 9. Improper Use and Indemnity. Buyer shall indemnify, defend, and hold Seller harmless from any claim, liability, damages, lawsuits, and costs (including lawyer's fees), whether for personal injury, property damage, patent, trademark or copyright infringement or any other claim, brought by or incurred by Buyer, Buyer's employees, or any other person, arising out of: (a) improper selection, improper application or other misuse of Products purchased by Buyer; (b) any act or omission, negligent or otherwise, of Buyer; (c) Seller's use of Information furnished by Buyer to manufacture Products; or (d) Buyer's failure to comply with the Terms and Conditions. Seller will not indemnify Buyer under any circumstances except as otherwise provided.
- 10. Limitation on Assignment. Buyer may not assign its rights or obligations under this agreement without the prior written consent of Seller
- 11. Entire Agreement. This agreement contains the entire agreement between the Buyer and Seller with respect to the subject matter of this agreement and supersedes all prior agreements, understandings, negotiations and discussions whether written or not.
- 12. Waiver. Failure to enforce any provision of this agreement will not waive the provision nor prejudice Seller's right to enforce the provision in the future
- 13. Governing Law. This agreement shall be governed by and construed in accordance with the laws of the State of New Hampshire.













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

Products are sold in industries across North America and around the world.



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