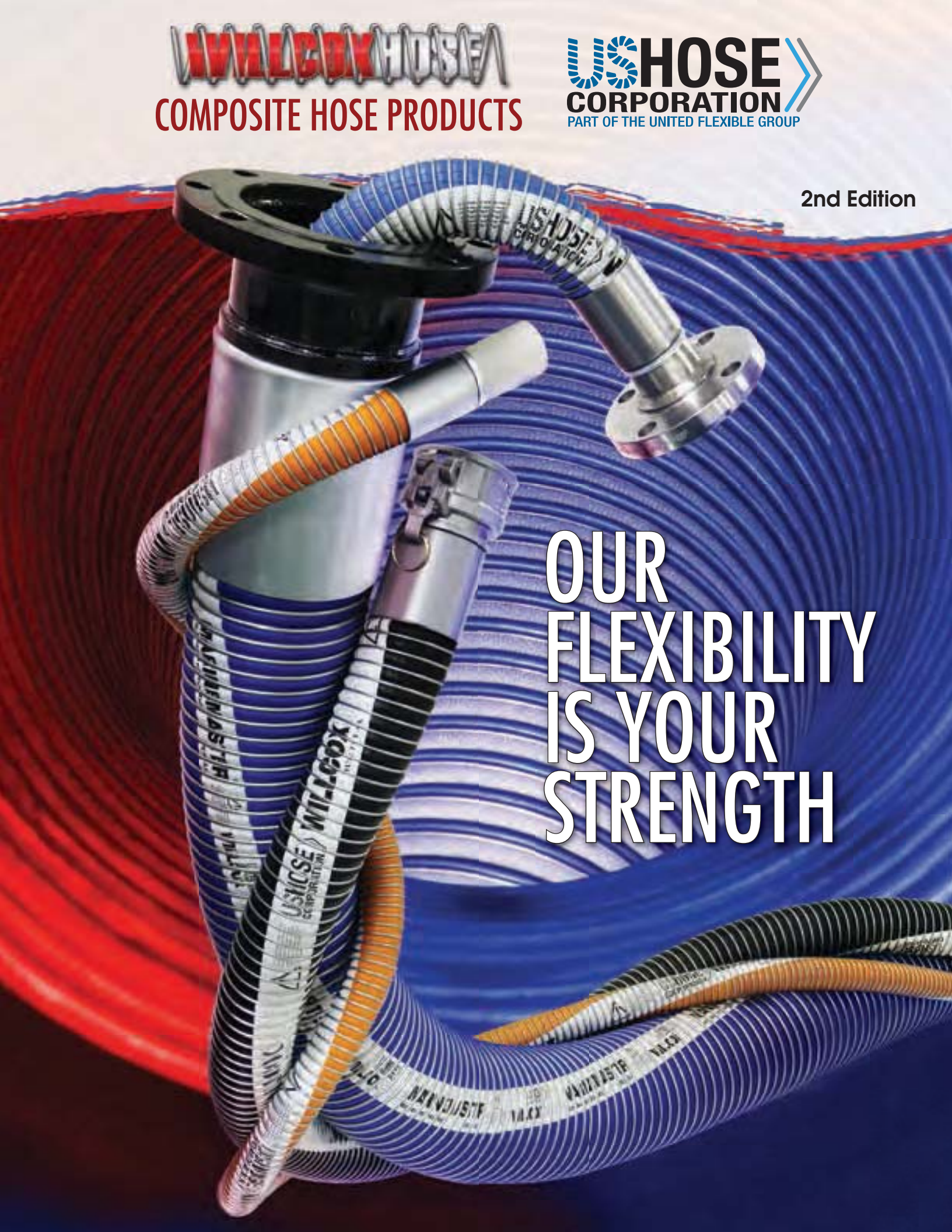


WILCOX HOSE
COMPOSITE HOSE PRODUCTS

U HOSE
CORPORATION
PART OF THE UNITED FLEXIBLE GROUP

2nd Edition

**OUR
FLEXIBILITY
IS YOUR
STRENGTH**



POLYPROPYLENE HOSE

Multi-Purpose Chemical Hose

Standard Duty Series:

3081PG

Temperature: -22° to +212°F (-20°C to +100°C)

* Depending on conveyant media

Typical Applications:

- In plant suction and discharge transfer
- Blending and drumming
- Tank car and railcar transfer

Heavy Duty Series:

3091PG, 3094PS, 4091SG, and 4094SS

Benefits and Features

- Extremely flexible and user friendly
- Seamless tubes to prevent leak paths
- Electrically continuous capability
- Retains flexibility in cold environments

FLUOROPOLYMER HOSE

Aggressive Chemical Hose

Heavy Duty Series:

4121SG and 4124SS

Temperature: -22° to +212°F (-20°C to +100°C)

Heavy Duty High-Temp Series:

4131SG and 4134SS

Temperature: -22° to +320°F (-20°C to +160°C)

Typical Applications:

- Aggressive chemicals
- Chemical purity, easy to clean
- Chemicals with elevated temperatures
- Alternative to convoluted Teflon® hose

UHMW Series: "Ultra Molecular-Weight Polyethylene"

1601G/G, 3601PG, 4601SG and 4604S

Temperature: -22° to +180°F (-20°C to +82°C)

* Depending on conveyant media

Benefits and Features

- More rugged than standard Teflon® hose
- PFA, FEP, PTFE, UHMW and Hostaflon materials
- Color coding for chemical identification
- Full vacuum

Willcox Chemical Hose Dimensional Data Chart 1" - 4" Diameter Hose

NOMINAL ID IN. (MM)	NOMINAL OD IN. (MM)	MAX. MAWP PSI (BAR) STD. DUTY	MAX. MAWP PSI (BAR) HVY. DUTY	MIN. BEND RADIUS IN. (MM)	WEIGHT LB FT (KG/M)	MAX. LENGTH FEET
1" (25)	1-1/2"(38)	200 (14)	250 (17.5)	4 (100)	.6 (.9)	100
1-1/2" (38)	2"(50)	200 (14)	250 (17.5)	5 (125)	1.0 (1.5)	100
2" (50)	2-1/2"(65)	200 (14)	250 (17.5)	6 (150)	1.5 (2.2)	100
3" (75)	3-1/2"(88)	200 (14)	250 (17.5)	8 (200)	2.1 (3.1)	100
4" (100)	4-1/2"(115)	200 (14)	250 (17.5)	13 (325)	2.3 (3.2)	100

Nominal Dimensional Chart

MAWP at 4:1 safety factor

Willcox Internal and External Wire Construction Identification

STYLE	INTERNAL WIRE	EXTERNAL WIRE
GG	Galvanized Steel	Galvanized Steel
PG	Black Polypropylene Coated	Galvanized Steel
PS	Black Polypropylene Coated	Stainless Steel
PP	Black Polypropylene Coated	Black Polypropylene Coated
SG	Stainless Steel	Galvanized Steel
SS	Stainless Steel	Stainless Steel

Notes:

- Fitting pressure rating may limit working pressure of an assembly.
- Increased operating temperatures will reduce working pressure of the hose.
- Rated working pressures are @ 70° F or worldwide ambient temperatures.

PETROMASTER® HOSE

Heavy Duty Series:

1091GG

Typical Applications:

- In-plant suction & discharge service
- Blending and drumming
- Tank car and railcar transfer
- Fuel transfer hose
- Lube oil blending

Benefits and Features

- Retains flexibility in extreme cold
- Superior fitting retention
- Seamless tubes to prevent leak paths
- Ozone/abrasion resistant cover
- 100% Aromatic resistance

Petromaster Dimensional Data Chart

NOMINAL ID IN. (MM)	NOMINAL OD IN. (MM)	MAX. WP PSI @ 70° (BAR)	MIN. BEND RADIUS IN. (MM)	TEMP. RATING (°F)	WEIGHT LB/FT (KG/M)	MAX. LENGTH FEET
1" (25)	1-1/2" (38)	250 (17.5)	4 (100)	-22°F to +212°F	.6 (.9)	100
1-1/2" (38)	2" (50)	250 (17.5)	5 (125)	-22°F to +212°F	1.0 (1.5)	100
2" (50)	2-1/2" (65)	250 (17.5)	6 (150)	-22°F to +212°F	1.5 (2.3)	100
3" (75)	3-1/2" (88)	250 (17.5)	8 (200)	-22°F to +212°F	2.3 (3.5)	100
4" (100)	4-1/2" (115)	250 (17.5)	13 (325)	-22°F to +212°F	2.3 (4.5)	100

Nominal Dimensional Chart

* Depending on conveyant media

MAWP at 4:1 safety factor

RACKMASTER® HOSE

Bottom Loading Hose

Heavy Duty Series:

1061GG (Standard Color is Black, API color coding available)

Typical Applications:

- Bottom loading arms
- Petroleum products
- Ethanol, Diesel and Bio-Diesel
- Aviation, JP Fuels
- Alternative Fuels

Benefits and Features

- Unique fire retardant barrier layer
- Seamless tubes to prevent leaks and permeation
- 100% aromatic resistant
- Suitable for all formulations of gasoline, diesel and jet fuel
- No outer braid to fray and cut the operators hands
- Ozone resistant cover

Rackmaster Dimensional Data Chart

NOMINAL ID IN. (MM)	NOMINAL OD IN. (MM)	MAX. WP PSI @ 70° (BAR)	MIN. BEND RADIUS IN. (MM)	WEIGHT LB/ FT (KG/M)	TEMP. RATING (°F)	MAX. LENGTH FEET
3" (75)	3-5/8" (89)	250 (17.5)	8 (200)	2.3 (3.5)	-22°F to +212°F	100
4" (100)	4-5/8" (120)	250 (17.5)	13 (325)	2.3 (4.5)	-22°F to +212°F	100

Nominal Dimensional Chart

MAWP at 4:1 safety factor

Rackmaster Special Ordering Information:

Composite hose elongates under pressure and it is imperative to provide the factory or authorized fabricator with the specific overall length required under a pressurized length or non-pressurized length. Rackmaster overall length tolerance is +/- 2". Please consult factory to assure the proper measuring lengths.

Notes:

- Fitting pressure rating may limit working pressure of an assembly.
- Increased operating temperatures will reduce working pressure of the hose.
- Rated working pressures are @ 70°F or worldwide ambient temperatures.

CRYOGENIC HOSE

Cryogenic 50 Series:

4014SS, 4011SG

Typical Applications:

- Tank truck and Railcar LPG transfers
- In plant LPG or LNG transfers
- Marine LPG and LNG transfers
- Suitable for a wide variety of cryogenic fluids
- LNG vessel-to-vessel transfer

Cryogenic 200 Series:

4004SS

Benefits and Features

- Flexible user friendly liquid gas hose
- Remains flexible during cold conditions
- Manufactured to IMO Gas Carrier Code
- 4004SS certified to EN00218061
- MAWP based on 5:1 safety factor

NOMINAL ID IN. (MM)	MAX. MAWP	MIN. BEND	TEMP. RATING	MAX. MAWP	TEMP. RATING	WEIGHT LB/FT (KG/M)	MAX. LENGTHS
	PSI (BAR) #4014SS	RADIUS IN. (MM)		PSI (BAR) #4004SS			
1" (25)	362 (25)	6 (150)	-50c to +50c	150 (10.5)	-200c to +50c	.6 (.9)	50
1.5" (38)	362 (25)	7 (175)	-50c to +50c	150 (10.5)	-200c to +50c	1.1 (1.6)	50
2" (50)	362 (25)	8 (200)	-50c to +50c	150 (10.5)	-200c to +50c	1.6 (2.4)	50
3" (75)	362 (25)	10 (250)	-50c to +50c	150 (10.5)	-200c to +50c	3.0 (4.5)	50
4" (100)	300 (21)	20 (500)	-50c to +50c	150 (10.5)	-200c to +50c	5.0 (7.5)	50
6" (150)	300 (21)	25 (660)	-50c to +50c	150 (10.5)	-200c to +50c	9.3 (13.8)	45
8" (200)	215 (15)	36 (910)	-50c to +50c	150 (10.5)	-200c to +50c	12.5 (18.7)	40

Nominal Dimensional Chart

MAWP at 5:1 safety factor

HOSE END ATTACHMENT FITTINGS

The end fittings in Willcox hose assemblies are engineered with end user safety as the primary objective. All fittings are subjected to a stringent quality control, inspection and traceability program. Fittings from sources other than

Willcox are not approved as they may be a source of a catastrophic failure. Willcox assemblies exceed and/or conform to NAHAD 600:2005 "Hose Assembly Guidelines" and British Standards BS5842 (1980).

HOSE SIZE	FERRULES		MALE PIPE				CAM & GROOVE			FIXED 150# OR 300# FLANGES		SWIVEL 150# OR 300# FLANGES		Polypro. 150# Flanges	PLAIN AND VICTAULIC ENDS	
	CS	SS	CS	SS	BR	POLY	ALUM	SS	BR	CS	SS	CS	SS		CS	SS
1"	✓	✓	✓	✓		✓				✓	✓	✓	✓	✓	✓	✓
1.5"	✓	✓	✓	✓	✓	✓				✓	✓	✓	✓	✓	✓	✓
2"	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
3"	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
4"	✓	✓	✓	✓		✓	✓			✓	✓	✓	✓	✓	✓	✓
6"	✓	✓	✓	✓		✓				✓	✓	✓	✓	✓	✓	✓
8"	✓	✓	✓	✓						✓	✓	✓	✓		✓	✓
10"	✓	✓	✓	✓						✓	✓	✓	✓		✓	✓
12"	✓	✓	✓	✓						✓	✓	✓	✓		✓	✓

Notes:

- SS ferrules are stocked as SS304. SS316 are available with minimum quantities per order required.
- All SS male pipe and cam & groove fittings are type SS316.
- 2" and 3" SS316 female cam & groove fittings are Dixon Ez-Lock™ locking style camlocks.
- Sanitary style end fittings and other custom fittings are available upon request.
- SS fixed or swivel (floating) flange ends are available in either SS304 or SS316 material. Must specify when ordering.
- Willcox stub ends for swivel or lap joint flange ends are made from either sch 40 carbon steel or SS316 materials.

- Polypropylene style flange ends are threaded and back-welded.
- Plain end fittings are available, but require additional fittings for testing when ordered in a assembly.
- Additional alloys such as; Hastelloy®, Monel® and Kynar® upon request.

Visit www.ushosecorp.com for more Willcox product information, additional hose styles and applications

MARINEMASTER® HOSE

Marine Ship-to-Shore Hose

Polypropylene Series:

1151GG, 3161PG, 3164PS, 4161SG, 4164SS and 1154GS

Typical Applications:

- Ship-to-shore transfer
- Ship-to-ship transfer
- Portable pump and temporary pipeline
- Hazardous chemical transfer
- Petroleum, chemical and acid transfer applications

Fluoropolymer Series:

4171SG, 4174SS, 1171GG and 3222SS

Benefits and Features

- Manufactured in accordance to BS5842:1980
- Exceeds USCG requirements 33CFR 154.500
- Manufactured in accordance to EN:13765
- Extremely flexible and operator friendly
- Custom color available

NOMINAL ID IN. (MM)	NOMINAL OD IN. (MM)	MAX. WP PSI (BAR) HVY DUTY	MIN. BEND RADIUS IN. (MM)	TEMP. RATING	TEMP. RATING	WEIGHT LB/FT (KG/M)	MAX. LENGTH FEET
				POLYPROPYLENE (°F)	FLUOROPOLYMER (°F)		
4" (100)	5" (125)	250 (17.5)	16 (400)	-22° to +212°	-22° to +212°	5.3 (8.0)	100
6" (150)	7" (175)	250 (17.5)	20 (500)	-22° to +212°	-22° to +212°	7.3 (11.0)	100
8" (200)	9 1/2" (250)	250 (17.5)	30 (762)	-22° to +212°	-22° to +212°	11.0 (16.5)	85
10" (250)	11.5" (288)	200 (17.5)	36 (900)	-22° to +212°	-22° to +212°	14.0 (21)	40

Nominal Dimensional Chart

* Depending on conveyant media

MAWP at 4:1 safety factor

VAPOR RECOVERY HOSE

Marine ship-to-shore Vapor Recovery Hose

Polypropylene Vapor Recovery Series:

1321GG, 3351PG, 1323G/P, 3354PS, 4321SG and 4324SS

Typical Applications:

- Marine vapor recovery
- Aggressive chemical vapor recovery
- Terminal vapor recovery
- Light duty general purpose transfer

Fluoropolymer Vapor Recovery Series:

1331G/G, 4331SG and 4334SS

Benefits and Features

- Exceeds U.S.C.G. 33 CFR 154.810, par. (d)
- Lightweight but durable for marine applications
- Long continuous lengths available 80-95 feet
- Ozone resistant bright yellow outer cover

NOMINAL ID IN. (MM)	NOMINAL OD IN. (MM)	MAX. WP PSI (BAR) HVY DUTY	MIN. BEND RADIUS IN. (MM)	TEMP. RATING	TEMP. RATING	WEIGHT LB/FT (KG/M)	MAX. LENGTH FEET
				POLYPROPYLENE (°F)	FLUOROPOLYMER (°F)		
3" (75)	3-1/2" (88)	100 (7)	8 (200)	-22° to +180°	-22° to +212°	1.5 (2.3)	100
4" (100)	5" (125)	100 (7)	9 (225)	-22° to +180°	-22° to +212°	1.6 (2.4)	100
6" (150)	7" (175)	100 (7)	17 (425)	-22° to +180°	-22° to +212°	3.7 (5.0)	100
8" (200)	9 1/2" (250)	100 (7)	27 (675)	-22° to +180°	-22° to +212°	5.3 (8.0)	85
10" (250)	11.5" (288)	60 (4)	33 (825)	-22° to +180°	-22° to +212°	8.0 (12.0)	40
12" (300)	13.5" (338)	60 (4)	47.2 (1200)	-22° to +180°	-22° to +212°	17.0 (26.0)	33

Nominal Dimensional Chart

MAWP at 4:1 safety factor

Note:

Willcox vapor recovery hoses are manufactured to meet or exceed US Coast Guard requirements in Federal Register volume 33 CFR chapter 1, sub-titled "Vapor Recovery Connections" para. 154-810 dated 7.1.98. All vapor recovery hose is manufactured with a bright yellow cover and 2" VAPOR logo. Each are marked red/yellow/red on each end and flanges have .625 pilot holes on each end.

Notes:

- Fitting pressure rating may limit working pressure of an assembly.
- Increased operating temperatures will reduce working pressure of the hose.
- Above working pressures are @ 70° F or worldwide ambient temperatures.

Willcox Internal and External Wire Construction Identification

STYLE	INTERNAL WIRE	EXTERNAL WIRE
GG	Galvanized Steel	Galvanized Steel
PG	Black Polypropylene Coated	Galvanized Steel
PS	Black Polypropylene Coated	Stainless Steel
PP	Black Polypropylene Coated	Black Polypropylene Coated
SG	Stainless Steel	Galvanized Steel
SS	Stainless Steel	Stainless Steel

Visit www.ushosecorp.com for more Willcox product information, additional hose styles and applications

INSULATING FLANGE

A different principle of an insulating joint is to use an insulating spool type flange offering the following advantages over traditional insulating flange kits:

- Minimum resistive path is in the order of one inch. 1012 ohm/cm
- The offset bolt pattern design assures foolproof and failsafe insulation.
- Simple one piece Nylatron GSM construction.
- Conforms to U.S.C.G. 154.810 "Vapor Line Connections" Section G – facility vapor connection and I.S.G.O.T.T. chapter 6 – Electrical Insulations
- Prevents any possibility of an electrical arc upon disconnection of the hose.

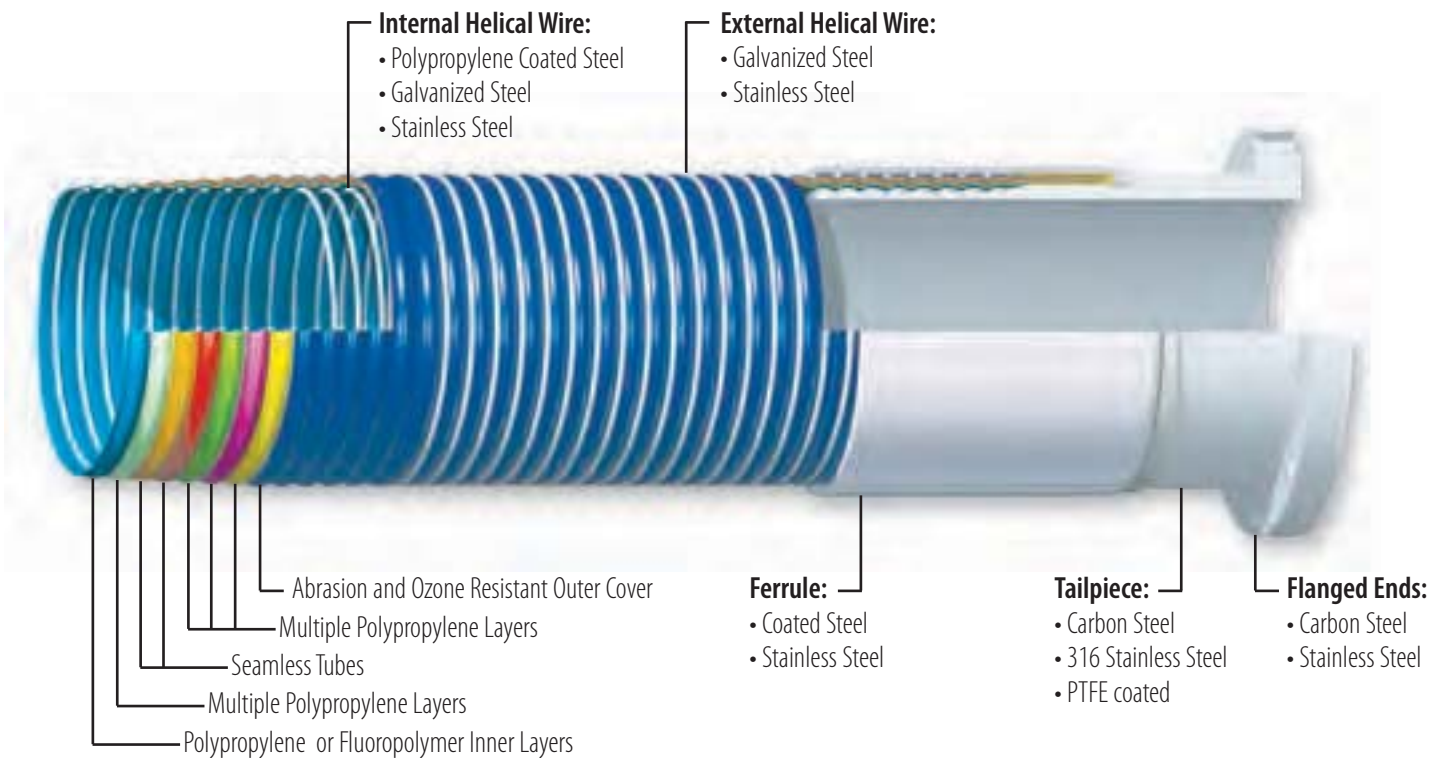
Contact Willcox Customer Service for pdf file brochure on Willcox's "Insulating Flange".

HOSE SLINGS

To enhance the ease of hose handling and prolong the life of your WillcoxHose, Willcox offers a complete line of Hose Slings including:

- Choker style slings 4" – 12"
- Steel reinforced cradle style slings 4" – 12"
- HoseBun™

WILLCOX HOSE CROSS SECTION



Teflon® is a trademark of E.I. DuPont Corp.
 Ez-Lock® is a registered name of Dixon Valve and Coupling
 Hastelloy® is a trademark of Cabot Corp.
 Monel® is a trademark of Special Metals Corp.
 Kynar® is a trademark of Atofina Chemicals, Inc.
 HoseBun™ is a trademark of Hosehandlers Int. Inc. (USA)



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Specifications are subject to change without notice



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WILLCOX HOSE