



SPIR STAR[®]

Your Specialists in High Pressure Hose

Adapters ▪ Valves ▪ Quick Disconnects



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ISO 9001:2008 Certified

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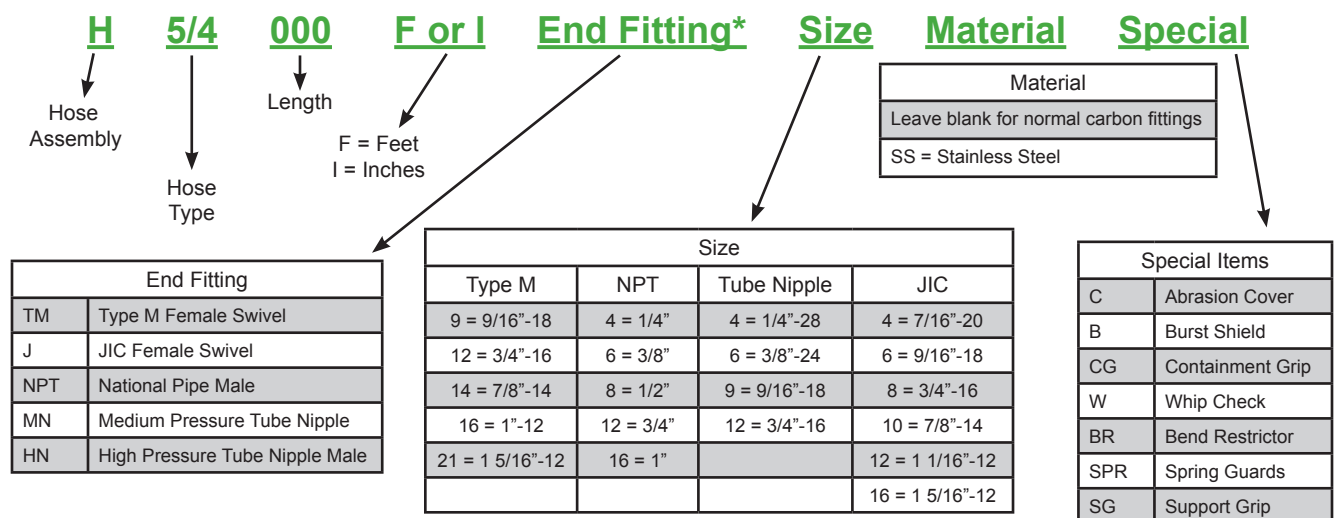
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Advantages of SPIR STAR Thermoplastic Hose

Chemical Resistant	to almost all chemicals, detergents and solvents.
High Temperature Stability	ranging between -22°F to 300°F according to materials.
Weight Savings	up to 50% reduction in weight with regard to comparable rubber hose.
Weather Resistant	to ozone and ultraviolet light.
Aging Resistant	even with frequent change of environmental influences, decomposition does not occur.
Volumetric Expansion	extremely low even at maximum working pressure allowing for faster response time.
External Pressure Collapse	high collapse resistance due to wire reinforcement allows use in deepwater projects.
Minimal Pressure Drop	friction loss is reduced due to smooth inner core.
Impulse Resistant	unique spiralized construction decreases fatigue thus maximizing service life.
Abrasion Resistant	Duralife® Flex outer cover reduces abrasion and wear.
Low Permeation Rate	to most gaseous media and chemicals, such as methanol.
Seawater Resistant	outer cover is resistant against hydrolysis and microbes.
Kink Resistant	advanced construction techniques offer greater flexibility while protecting the hose from kinks.

Hose Assembly Part Number System



* If the hose requires different end fittings, list them both in the part number.

Example: The part number for a 6/2W hose 50 feet long with Type M 9/16 and 1/4 HP Tube Nipple would be written as:
H6/2W050FTM9HN4

Hose Denomination



Inner Diameter in
Millimeter (mm)

Series
Description

5/6H

Number of
Spiral Layers

E	Stainless Steel Wire
F	PTFE Inner Core
H	Reinforced Type
HCR	External Pressure Resistant
HT	Suitable for Extremely High Temperatures
K	Braided Layer
L	Particularly Flexible
M	Special Treated PA11 Inner Core for Offshore Applications
PPA	PVDF Inner Core/Polyamide Outer Cover
R	Reinforced Outer Cover
S	Seawater Resistant Stainless Steel
W	Open Spiral Layer

Care and Use of High Pressure Hose

The following is SPIR STAR's list of Do's and Don'ts for the proper and safe handling of high pressure hose. The improper use of high pressure hose can cause serious injury or property damage. NEVER handle a leaking hose assembly. Treat any injury from high pressure fluid seriously and seek immediate medical attention.

Do's

- Treat high pressure hose with extreme caution. SPIR STAR hoses are wire reinforced hoses, not garden hoses, and should be treated with the same care as a high pressure containment vessel.
- When using hoses for waterjetting, read and understand Recommended Practices for the Use of Manually Operated High Pressure Waterjet Equipment (Waterjet Technology Association, Phone: 314-241-1445, www.wjta.org) prior to use.
- Always visually inspect the hose for damage, cuts, or wear spots before using.
- Check the hose end connections and threads for wear, rust, cracks, mechanical abuse, or other deterioration which could produce a dangerous projectile.
- Know the working and burst pressures of the hose before putting it in service.
- Always use clean, filtered water to prolong hose life. Some plants' water sources are high in sulfur, which attacks stainless steel.
- Always clean, drain, and coil hoses after use. Soap and water usually provide an excellent cleaning agent.
- Always wear protective gloves, eyewear, and garments when handling high pressure hose and waterjet lances.

Don'ts

- Don't use a hose that has cuts, damage, or wires showing through the outer cover.
- Don't use a hose that has been kinked.
- Don't use a hose that has bubbles or blisters in the outer cover.
- Don't exceed the bend radius or pressure rating for each hose.
- Don't run over or crush the hose with heavy vehicles.
- Don't use a hose with corroded or leaking end connections. Take them out of service immediately.
- Don't use hose that has been exposed to chemical attack or over temperature.
- Don't bend the hose over scaffolding or pull heavy equipment with the hose.
- Don't apply torque to the hose assembly.
- Don't let hose support its own weight off towers or buildings.
- Avoid using dirty water or water with sulfur compounds in it. Tests have documented that hoses fail more rapidly when using water sources from chemical plants and refineries.
- Don't expect water jetting or hydraulic hose to last forever.

Be Safe – Replace!



Common Product Application Per Hose Types

TYPE 2 SERIES HOSE										
Category & Applications		Hose Type & Working Pressure (psi)								
		3/2	4/2	5/2	6/2	8/2PA	10/2	13/2	20/2	25/2
		14,500	17,400	15,080	14,500	12,180	10,000	10,000	7,540	6,380
Hydraulics	Instrumentation Packages for Gauges	■	■	■	■	■				
	Pressure Testing for Valves, Tooling and Control Panels	■	■	■	■	■	■	■	■	■
Oil & Gas	Grease Injection							■	■	
	Nitrogen Service								■	■
Waterblasting	Automated Cleaning Booths							■		
	Heat Exchanger Tube Cleaning	■	■	■	■	■				
	Large Bore Pipe Cleaning						■	■	■	■
	Paint Removal							■		
	Tank and Vessel Cleaning							■	■	
	Waterblast Supply Hose							■	■	■

TYPE 2W SERIES HOSE								
Category & Applications		Hose Type & Working Pressure (psi)						
		4/2W	6/2W	8/2W	10/2W	13/2W	20/2W	25/2W
		20,300	18,560	15,080	15,950	15,080	11,020	9,280
Hydraulics	Bolt Tensioning and Torque Tools	■	■	■	■	■		
	Controls for Service Equipment	■	■	■	■	■	■	■
	Hydraulic Jacks	■	■	■	■	■	■	■
	Hydraulic Tools	■		■	■			
	Instrumentation Packages for Gauges	■	■	■	■	■		
	Pressure Testing for Valves, Tooling and Control Panels	■	■	■	■	■	■	■
Oil & Gas	Gaseous Media Handling			■	■	■	■	■
	Grease Injection			■	■	■	■	■
	Hydraulic Control			■	■	■	■	■
	Nitrogen Service			■	■	■	■	■
	Sub Sea Well Control			■	■	■	■	

“■” Indicates Application is suitable for hose type.

Common Product Application Per Hose Types



TYPE 2WL SERIES HOSE			
Category & Applications		Hose Type & Working Pressure (psi)	
		6/2WL	8/2WL
		17,400	14,500
Hydraulics	Bolt Tensioning and Torque Tools	■	■
	Controls for Service Equipment	■	■
	Hydraulic Jacks	■	■
	Hydraulic Tools		■
	Instrumentation Packages for Gauges	■	■
	Pressure Testing for Valves, Tooling and Control Panels	■	■

TYPE 2OK SERIES HOSE			
Category & Applications		Hose Type & Working Pressure (psi)	
		5/2OK	6/2OK
		15,080	14,500
Hydraulics	Instrumentation Packages for Gauges	■	■
	Pressure Testing for Valves, Tooling and Control Panels	■	■
Waterblasting	Heat Exchanger Tube Cleaning	■	■
	Tube Cleaning	■	■

TYPE 3 SERIES HOSE			
Category & Applications		Hose Type & Working Pressure (psi)	
		5/3	6/3
		16,240	15,080
Hydraulics	Instrumentation Packages for Gauges	■	■
	Pressure Testing for Valves, Tooling and Control Panels	■	■
Waterblasting	Heat Exchanger Tube Cleaning	■	■

“■” Indicates Application is suitable for hose type.



Common Product Application Per Hose Types

TYPE 4 SERIES HOSE											
Category & Applications		Hose Type & Working Pressure (psi)									
		3/4	4/4	5/4	6/4	8/4	10/4	13/4H	16/4	20/4	25/4
		29,000	31,900	26,100	21,750	21,750	21,750	20,300	15,080	15,080	13,050
Hydraulics	Bolt Tensioning and Torque Tools			■	■						
	Controls for Service Equipment			■	■	■	■	■	■	■	■
	Hydraulic Jacks			■	■	■	■				
	Hydraulic Tools			■							
	Instrumentation Packages for Gauges	■	■	■	■	■					
	Pressure Testing for Valves, Tooling and Control Panels	■	■	■	■	■	■	■	■	■	■
Oil & Gas	Chemical Injection			■	■	■		■	■	■	■
	Gaseous Media Handling			■	■	■	■	■	■	■	■
	Grease Injection			■	■	■	■	■	■		
	Hydraulic Control			■	■	■	■	■	■		
	Nitrogen Service			■	■	■	■	■	■	■	■
Waterblasting	Heat Exchanger Tube Cleaning		■	■	■	■	■				
	Hydro Demolition of Concrete						■	■	■		
	Large Bore Pipe Cleaning						■	■	■	■	■
	Rotating Cleaning Device for Waterblast							■			
	Tank and Vessel Cleaning						■	■	■	■	■
	Ultra High Pressure Waterblast Tube Cleaning	■									
	Waterblast Supply Hose						■	■	■	■	■

“■” Indicates Application is suitable for hose type.

Common Product Application Per Hose Types



TYPE 6 SERIES HOSE										
Category & Applications		Hose Type & Working Pressure (psi)								
		3/6	4/6	5/6	8/6	10/6	13/6	16/6	20/6	25/6
		40,600	40,600	36,250	30,450	27,840	26,100	22,040	20,300	20,300
Hydraulics	Bolt Tensioning and Torque Tools		■	■						
	Controls for Service Equipment			■			■	■		
	Hydraulic Jacks		■	■						
	Instrumentation Packages for Gauges	■								
	Pressure Testing for Valves, Tooling and Control Panels	■	■	■	■	■		■	■	■
Oil & Gas	Chemical Injection							■	■	■
	Gaseous Media Handling							■	■	■
	Grease Injection						■	■		
	Hydraulic Control							■		
	Nitrogen Service						■	■	■	■
Waterblasting	Automated Cleaning Booths		■	■	■	■				
	Hydro Demolition of Concrete			■	■	■	■	■		
	Large Bore Pipe Cleaning					■	■	■	■	■
	Paint Removal		■	■	■	■				
	Robotic Surface Cleaning of Ships			■	■	■				
	Rotating Cleaning Device for Waterblast		■	■					■	■
	Surface Preparation		■	■	■	■				
	Tank and Vessel Cleaning			■	■	■	■	■	■	■
	Ultra High Pressure Waterblast Tube Cleaning	■	■	■						
	Ultra High Pressure Waterjet Table Cutting		■	■	■					
	Waterblast Supply Hose					■	■	■	■	■

“■” Indicates Application is suitable for hose type.



Common Product Application Per Hose Types

TYPE 6H SERIES HOSE					
Category & Applications		Hose Type & Working Pressure (psi)			
		5/6H	6/6H	8/6H	13/6H
		40,600	40,600	36,250	29,000
Hydraulics	Bolt Tensioning and Torque Tools	■			
	Controls for Service Equipment	■	■		■
	Hydraulic Jacks	■			
	Pressure Testing for Valves, Tooling and Control Panels	■	■	■	
Oil & Gas	Grease Injection				■
	Nitrogen Service				■
Waterblasting	Automated Cleaning Booths	■	■	■	
	Hydro Demolition of Concrete	■	■	■	■
	Large Bore Pipe Cleaning				■
	Paint Removal	■	■	■	
	Robotic Surface Cleaning of Ships	■	■	■	
	Rotating Cleaning Device for Waterblast	■	■		
	Surface Preparation	■	■	■	
	Tank and Vessel Cleaning	■	■	■	■
	Ultra High Pressure Waterblast Tube Cleaning	■	■		
	Ultra High Pressure Waterjet Table Cutting	■	■	■	
	Waterblast Supply Hose				■

TYPE 8 SERIES HOSE		
Category & Applications		Hose Type & Working Pressure (psi)
		8/8
		40,600
Hydraulics	Pressure Testing for Valves, Tooling and Control Panels	■
Waterblasting	Automated Cleaning Booths	■
	Hydro Demolition of Concrete	■
	Paint Removal	■
	Robotic Surface Cleaning of Ships	■
	Surface Preparation	■
	Tank and Vessel Cleaning	■
	Ultra High Pressure Waterjet Table Cutting	■

“■” Indicates Application is suitable for hose type.

Common Product Application Per Hose Types



TYPE HT SERIES HOSE								
Category & Applications		Hose Type & Working Pressure (psi)						
		5/4HT	6/2WHT	6/4HT	8/2WHT	8/4HT	10/4HT	13/4HHT
		18,630	13,260	15,730	10,800	15,730	15,730	15,080
Oil & Gas	Chemical Injection	■	■	■	■	■	■	■
	Gaseous Media Handling	■	■	■	■	■	■	■
	Methanol Injection	■	■	■	■	■	■	■
	Nitrogen Service	■	■	■	■	■	■	■

TYPE M SERIES HOSE								
Category & Applications		Hose Type & Working Pressure (psi)						
		6/2WM	6/4M	8/2WM	10/2WM	13/2WM	25/2KM	
		15,950	15,000	15,080	15,950	15,080	7,250	
Oil & Gas	Chemical Injection	■	■	■	■	■	■	
	Hydraulic Control	■	■	■	■	■	■	
	Methanol Injection	■	■	■	■	■	■	
	Nitrogen Service	■	■	■	■	■	■	
	Sub Sea Well Control	■	■	■	■	■	■	

TYPE PPA SERIES HOSE								
Category & Applications		Hose Type & Working Pressure (psi)						
		5/4PPA	6/2WPPA	6/4PPA	8/2PPA	8/2WPPA	8/4PPA	10/4PPA
		18,630 psi	15,000 psi	17,110 psi	8,260 psi	11,450 psi	15,730 psi	17,110 psi
Oil & Gas	Chemical Injection	■	■	■	■	■	■	■
	Gaseous Media Handling	■	■	■	■	■	■	■
	Grease Injection							
	Hydraulic Control	■	■	■	■	■	■	■
	Methanol Injection	■	■	■	■	■	■	■
	Nitrogen Service	■	■	■	■	■	■	■
	Oilfield Well Service							
	Sub Sea Well Control	■	■	■	■	■	■	■
Category & Applications		Hose Type & Working Pressure (psi)						
		13/2WPPA	13/4HPPA	16/4PPA	20/4PPA	20/6PPA	25/4PPA	
		11,450 psi	15,080 psi	11,450 psi	11,230 psi	15,080 psi	10,000 psi	
Oil & Gas	Chemical Injection	■	■	■	■	■	■	
	Gaseous Media Handling	■	■	■	■	■	■	
	Grease Injection	■		■				
	Hydraulic Control	■	■	■	■	■	■	
	Methanol Injection	■	■		■	■	■	
	Nitrogen Service	■	■	■	■	■	■	
	Oilfield Well Service	■						
	Sub Sea Well Control	■	■		■	■	■	

“■” Indicates Application is suitable for hose type.



Common Product Application Per Hose Types

TYPE R SERIES HOSE			
Category & Applications		Hose Type & Working Pressure (psi)	
		8/2WR	13/2WR
		15,080	15,080
Hydraulics	Pressure Testing for Valves, Tooling and Control Panels	■	■
Oil & Gas	Gaseous Media Handling	■	■
	Grease Injection	■	■
	Nitrogen Service	■	■
Waterblasting	Large Bore Pipe Cleaning	■	■
	Rotating Cleaning Device for Waterblast	■	■
	Tank and Vessel Cleaning	■	■
	Waterblast Supply Hose	■	■

TYPE UHP SERIES HOSE								
Category & Applications		Hose Type & Working Pressure (psi)						
		5mmUHP	6mmUHP	8/6UHP	8/6UHP-X	8mmUHP	13mmUHP	16mmUHP
		46,400	46,400	40,600	44,000	46,400	40,600	29,000
Hydraulics	Controls for Service Equipment							■
	Pressure Testing for Valves, Tooling and Control Panels	■	■	■	■	■	■	■
Oil & Gas	Chemical Injection							■
	Gaseous Media Handling						■	■
	Grease Injection							■
	Hydraulic Control							■
	Nitrogen Service						■	■
Waterblasting	Automated Cleaning Booths	■	■	■	■	■		
	Hydro Demolition of Concrete	■	■	■	■	■	■	■
	Large Bore Pipe Cleaning						■	■
	Paint Removal	■	■	■	■	■		
	Robotic Surface Cleaning of Ships	■	■	■	■	■		
	Surface Preparation	■	■	■	■	■		
	Tank and Vessel Cleaning	■	■	■	■	■	■	■
	Ultra High Pressure Waterjet Table Cutting	■	■	■	■	■		
	Waterblast Supply Hose					■	■	■

“■” Indicates Application is suitable for hose type.

Common Product Application Per Hose Types



TYPE WL TWIN HOSE SERIES HOSE			
Category & Applications		Hose Type & Working Pressure (psi)	
		6/2WL Twin Hose	8/2W Twin Hose
		17,400	15,080
Hydraulics	Bolt Tensioning and Torque Tools	■	■
	Controls for Service Equipment	■	■
	Hydraulic Jacks	■	■
	Hydraulic Tools	■	■
	Instrumentation Packages for Gauges	■	■
	Pressure Testing for Valves, Tooling and Control Panels	■	■

TYPE HL SERIES HOSE - HYDRAULIC LINE						
Category & Applications		Hose Type & Working Pressure (psi)				
		Viper	Viper-Twin	Mamba	Mamba-Twin	Cobra
		10,150	10,150	17,400	17,400	26,100
Hydraulics	Bolt Tensioning and Torque Tools	■	■	■	■	■
	Hydraulic Jacks	■	■	■	■	■
	Hydraulic Tools	■	■	■	■	■
	Tooling Panels	■	■	■	■	■

“■” Indicates Application is suitable for hose type.

Containment Grips

Containment grips limit the possibility of serious injury to personnel in the event of a connection failure. Containment grips are available in stainless steel or galvanized carbon steel.



Support Grips

Support grips assist in holding the weight of the hose as it hangs in vertical or slanted positions. Support grips are made of high grade, coated, galvanized wire.



Whip Checks

Whip checks limit the hose from whipping in the event of a connection failure. Whip checks are made of durable nylon strapping with extra heavy stitching.



Bend Restrictors

Bend restrictors, which are available for most hoses, assist in reducing the stress near the end fitting as well as prevent kinking of the hose. Bend restrictors are made of PVC material.



Spring Guards

Spring guards, which are available for most hoses, reduce stress near the hose end fitting and prevent kinking of the hose. In addition, they can be custom fit to the length of the hose. Spring guards are made of high tensile spring steel with a rust resistant coating.



Burst Guards

Burst guards protect the operator and surrounding equipment from hose failure. Burst guards are made of synthetic rubber with steel wire reinforcement.



Abrasion Cover

Abrasion covers help protect the hose from excessive wear due to use on rough surfaces, thereby increasing the working life of the hose. Abrasion covers are made of clear vinyl and reinforced with a rigid PVC helix coil.





Hose Data Information

Type 2	15
Type 2W	25
Type 2WL	33
Type 2OK	35
Type 3	37
Type 4	39
Type 6	49
Type 6H	59
Type 8	63
Type HT	65
Type M	73
Type PPA	79
Type R	93
Type UHP	95
Type WL Twin	103
Type HL (Hydraulic Line)	105

Hose Type 3/2



Applications

Waterblasting: Heat Exchanger Tube Cleaning

Hydraulics: Instrumentation Packages for Gauges; Pressure Testing for Valves, Tooling and Control Panels

Inner Core: Polyoxymethylene (POM)
 Pressure Support: 2 layers of high-tensile steel wire
 Outer Cover: Polyamide (PA)
 Colour: green, other colours upon request
 Temperature: -22°F to 140°F [-30°C to +60°C]



Ø ID	Ø OD	Working Pressure ^{*)}	Burst Pressure ¹⁾	Min. Bend Radius	Weight	Nipple Ø ID	Sleeve	Sleeve Ø OD
0.13 inch	0.27 inch	14,500 psi	36,250 psi	2.36 inch	0.048 lbs/ft	0.08 inch	10320101 carbon steel	0.35 inch
3.4 mm	6.9 mm	1,000 bar	2,500 bar	60 mm	0.072 kg/m	2.0 mm		8.9 mm

Fittings: ID3, Series A and X

Description	Size	Material	Part Number	
male fitting one piece waterblast	1/16"x27 NPTF	carbon steel	30320402X / 30320402/1X	male one piece fitting
male fitting one piece waterblast	M6x1	carbon steel	30320101X / 30320101/1X	
BSP female swivel	G1/4"	carbon steel AISI 316Ti	20320302A / 50540301 swivel nut / 50540305	

----- Additional fittings are available upon request. -----

¹⁾Production related variations up to 5 % are possible

^{*)} The safety factors between the burst pressure and the working pressure as well as the test pressure depend on the operating conditions. For gaseous media the outer cover is to be pinpricked. Regarding the safety factor for gaseous media please contact your local SPIR STAR[®] assembling center. The indicated working pressure refers to the hose only. Depending on the used fitting the permitted working pressure of a hose assembly can be less. We reserve our rights for changes without notice.



Hose Type 4/2

Duralife Flex™



Applications

Waterblasting: Heat Exchanger Tube Cleaning

Hydraulics: Instrumentation Packages for Gauges; Pressure Testing for Valves, Tooling and Control Panels

Inner Core: **Polyoxymethylene (POM)**
 Pressure Support: **2 layers of high-tensile steel wire**
 Outer Cover: **Polyamide (PA)**
 Colour: **red, other colours upon request**
 Temperature: **-22°F to 140°F [-30°C to +60°C]**



Ø ID	Ø OD	Working Pressure*)	Burst Pressure ¹)	Min. Bend Radius	Weight	Nipple Ø ID	Sleeve	Sleeve Ø OD
0.16 inch	0.31 inch	17,400 psi	43,500 psi	2.95 inch	0.074 lbs/ft	0.10 inch	10420101 carbon steel	0.40 inch
4.0 mm	8.0 mm	1,200 bar	3,000 bar	75 mm	0.110 kg/m	2.5 mm	10420105 AISI 316Ti	10.1 mm

Fittings: ID4, Series A and X

Description	Size	Material	Part Number	
HP fitting	1/4"x28UNF LH	AISI 316Ti	40420205A	
male fitting one piece waterblast	1/16"x27 NPTF	carbon steel	30420452X / 30420452/1X	
male fitting one piece waterblast	1/8"x27 NPTF	carbon steel	30420462X / 30420462/1X	
male fitting one piece waterblast	5/16"x24 UNF	carbon steel	30420601X / 30420452/1X	
male fitting	1/16"x27 NPTF	carbon steel	30420412A	
male fitting	1/8"x27 NPTF	carbon steel	30420542A	
male fitting	1/4"x18 NPTF	carbon steel	30420422A	
male fitting	G1/8"	carbon steel	30420302A	
male fitting flat seal nozzle type	G1/8"	carbon steel	30420382A	
male fitting	G1/4"	carbon steel	30420322A	
male fitting USIT®-Ring	G1/4"	carbon steel	30420351A	
male fitting special part 100° cone	G1/4"	carbon steel	30420362A	
male fitting	M7	carbon steel	30420042A	
male fitting flat seal nozzle type	M7	carbon steel	30420082A	
male fitting	M8	carbon steel	30420052A	
male fitting	M10x1	carbon steel	30420002A	
BSP female swivel	G1/4"	carbon steel carbon steel AISI 316Ti	20430302A swivel nut / 50540301 swivel nut / 50540305	
metric female swivel with O-Ring	M24x1.5	carbon steel	20420042A / 51360201	
Type M female swivel	9/16"x18 UNF	carbon steel carbon steel	20420642A swivel nut / 50540601	

----- Additional fittings are available upon request. -----

¹) Production related variations up to 5 % are possible

*) The safety factors between the burst pressure and the working pressure as well as the test pressure depend on the operating conditions. For gaseous media the outer cover is to be pinpricked. Regarding the safety factor for gaseous media please contact your local SPIR STAR® assembling center. The indicated working pressure refers to the hose only. Depending on the used fitting the permitted working pressure of a hose assembly can be less. We reserve our rights for changes without notice.



Hose Type 5/2

Duralife Flex™



Applications

Waterblasting: Heat Exchanger Tube Cleaning

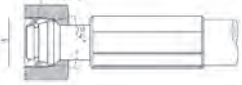
Hydraulics: Instrumentation Packages for Gauges; Pressure Testing for Valves, Tooling and Control Panels



Inner Core: **Polyoxymethylene (POM)**
 Pressure Support: **2 layers of high-tensile steel wire**
 Outer Cover: **Polyamide (PA)**
 Colour: **blue, other colours upon request**
 Temperature: **-22°F to 140°F [-30°C to +60°C]**

Ø ID	Ø OD	Working Pressure*)	Burst Pressure 1)	Min. Bend Radius	Weight	Nipple Ø ID	Sleeve	Sleeve Ø OD
0.20 inch	0.37 inch	15,080 psi	37,700 psi	3.74 inch	0.084 lbs/ft	0.12 inch 0.14 inch ¹⁾	10520101 carbon steel	0.51 inch
5.0 mm	9.4 mm	1,040 bar	2,600 bar	95 mm	0.125 kg/m	3.0 mm 3.5 mm ¹⁾		12.9 mm

Fittings: ID5, Series A and X

Description	Size	Material	Part Number	
male fitting one piece waterblast	1/8"x27 NPTF	carbon steel	30520442X / 30520442/1X	
male fitting	1/8"x27 NPTF	carbon steel	30520401A	
male fitting	1/4"x18 NPTF	carbon steel	30520451A	
male fitting	G1/8"	carbon steel	30520301A	
male fitting flat seal nozzle type	G1/8"	carbon steel	30520381A	
male fitting	G1/4"	carbon steel	30520321A	
male fitting	M7	carbon steel	30520011A	
male fitting	M10x1	carbon steel	30520041A	
metric female swivel with O-Ring	M24x1.5	carbon steel	20520042A / 51360201	
Type M female swivel	9/16"x18 UNF	carbon steel AISI 316Ti	20520601A / 50540601 swivel nut / 50540605	
BSP female swivel	G1/4"	carbon steel AISI 316Ti	20520301A / 50540301 swivel nut / 50540305	
metric female swivel	M14x1.5	carbon steel	20520101A / 50540101	

----- Additional fittings are available upon request. -----

¹⁾ Production related variations up to 5 % are possible

*) The safety factors between the burst pressure and the working pressure as well as the test pressure depend on the operating conditions. For gaseous media the outer cover is to be pinpricked. Regarding the safety factor for gaseous media please contact your local SPIR STAR® assembling center. The indicated working pressure refers to the hose only. Depending on the used fitting the permitted working pressure of a hose assembly can be less. We reserve our rights for changes without notice.



Hose Type 6/2

Duralife Flex™



Applications

Waterblasting: Heat Exchanger Tube Cleaning

Hydraulics: Instrumentation Packages for Gauges; Pressure Testing for Valves, Tooling and Control Panels



Inner Core: **Polyoxymethylene (POM)**
 Pressure Support: **2 layers of high-tensile steel wire**
 Outer Cover: **Polyamide (PA)**
 Colour: **green, other colours upon request**
 Temperature: **-22°F to 140°F [-30°C to +60°C]**

Ø ID	Ø OD	Working Pressure*)	Burst Pressure 1)	Min. Bend Radius	Weight	Nipple Ø ID	Sleeve	Sleeve Ø OD
0.25 inch	0.45 inch	14,500 psi	36,250 psi	4.33 inch	0.118 lbs/ft	0.16 inch	10620101 carbon steel	0.55 inch
6.3 mm	11.5 mm	1,000 bar	2,500 bar	110 mm	0.175 kg/m	4.0 mm		13.9 mm

Fittings: ID6, Series A ,X and WX

Description	Size	Material	Part Number	
HP fitting	9/16"x18 UNF LH	AISI 316Ti	40620205A	
male fitting one piece waterblast	1/4"x18 NPTF	carbon steel	30620469WX / 30620462/1X	
male fitting one piece waterblast	G1/4"	carbon steel	30620369X / 30620462/1X	
male fitting	1/8"x27 NPTF	carbon steel	30620411A	
male fitting	1/4"x18 NPTF	carbon steel	30620401A	
male fitting	1/4"x18 NPTF	AISI 316Ti	30620405A	
male fitting	3/8"x18 NPTF	carbon steel	30620451A	
male fitting	G1/8"	carbon steel	30620311A	
male fitting with 60° cone	G1/4"	carbon steel	30620341A	
male fitting for USIT®-Ring	G1/4"	carbon steel	30620391A	
male fitting DIN3852 T2 form A	G1/4"	carbon steel	30620301A	
male fitting flat seal nozzle type	G1/4"	carbon steel	30620381A	
male fitting special part 100° cone	G1/4"	carbon steel	30620361A	
male fitting with 60° cone	G3/8"	carbon steel	30620321A	
male fitting for USIT®-Ring	G3/8"	carbon steel	30620351A	
BSP female swivel	G1/4"	carbon steel	20620301A / 50540301	
BSP female swivel	G1/4"	AISI 316Ti	20620305A / 50540305	
metric female swivel with O-Ring	M18x1.5	carbon steel	20620241A / 50620201	
metric female swivel with O-Ring	M22x1.5	carbon steel carbon steel AISI 316Ti	20620211A swivel nut / 51060201 swivel nut / 51060205	
metric female swivel with O-Ring	M24x1.5	carbon steel	20620042A / 51360201	
Type M female swivel	9/16"x18 UNF	carbon steel	20620641A / 50540601	
Type M female swivel	9/16"x18 UNF	AISI 316Ti	20620645A / 50540605	
JIC female swivel	9/16"x18 UNF	AISI 316Ti	S20630615A / S5063615	
female fitting	1/4"x18 NPTF	carbon steel	30620441A	
metric female swivel	M14x1.5	carbon steel	20620101A / 50540101	
metric female swivel	M16x1.5	carbon steel	20620141A / 50620121	
metric female swivel	M16x1.5	AISI 316Ti	20620145A / 50620125	

----- Additional fittings are available upon request. -----

1) Production related variations up to 5 % are possible

*) The safety factors between the burst pressure and the working pressure as well as the test pressure depend on the operating conditions. For gaseous media the outer cover is to be pinpricked. Regarding the safety factor for gaseous media please contact your local SPIR STAR® assembling center. The indicated working pressure refers to the hose only. Depending on the used fitting the permitted working pressure of a hose assembly can be less. We reserve our rights for changes without notice.



Hose Type 8/2 PA

Duralife Flex™



Applications

Waterblasting: Heat Exchanger Tube Cleaning

Hydraulics: Instrumentation Packages for Gauges; Pressure Testing for Valves, Tooling and Control Panels

Inner Core: Polyamide (PA)
 Pressure Support: 2 layers of high-tensile steel wire
 Outer Cover: Polyamide (PA)
 Colour: blue, other colours upon request
 Temperature: -22°F to 140°F [-30°C to +60°C]



Ø ID	Ø OD	Working Pressure*)	Burst Pressure 1)	Min. Bend Radius	Weight	Nipple Ø ID	Sleeve	Sleeve Ø OD
0.32 inch	0.52 inch	12,180 psi	30,450 psi	5.12 inch	0.134 lbs/ft	0.22 inch	10820101 carbon steel	0.7 inch
8.1 mm	13.3 mm	840 bar	2,100 bar	130 mm	0.200 kg/m	5.5 mm		17.8 mm

Fittings: ID8, Series A and X

Description	Size	Material	Part Number	
male fitting one piece waterblast	1/4"x18 NPTF	carbon steel	30820461X / 30820441/1X	
male fitting one piece waterblast	3/8"x18 NPTF	carbon steel	30820441X / 30820441/1X	
male fitting	1/4"x18 NPTF	carbon steel	30820411A	
male fitting	3/8"x18 NPTF	carbon steel	30820401A	
male fitting DIN3852 T2 form A	G1/4"	carbon steel	30820351A	
male fitting with 60° cone	G1/4"	carbon steel	30820321A	
male fitting flat seal nozzle type	G1/4"	carbon steel	30820381A	
male fitting DIN3852 T2 form A	G3/8"	carbon steel	30820341A	
male fitting with 60° cone	G3/8"	carbon steel	30820301A	
BSP female swivel	G3/8"	carbon steel	20820301A / 50860301	
metric female swivel with O-Ring	M20x1.5	carbon steel	20820201A / 50860201	
metric female swivel with O-Ring	M24x1.5	carbon steel	20820042A / 50820241	
Type M female swivel	3/4"x16 UNF	AISI 316Ti AISI 316Ti carbon steel	20820645A swivel nut / 50840605 swivel nut / 50840601	
JIC female swivel	9/16"x18 UNF	carbon steel	20820601A / 50820601	
JIC female swivel	9/16"x18 UNF	AISI 316 Ti AISI 316 Ti	20820605A swivel nut / 50820605	

----- Additional fittings are available upon request. -----

*) Production related variations up to 5 % are possible

*) The safety factors between the burst pressure and the working pressure as well as the test pressure depend on the operating conditions. For gaseous media the outer cover is to be pinpricked. Regarding the safety factor for gaseous media please contact your local SPIR STAR® assembling center. The indicated working pressure refers to the hose only. Depending on the used fitting the permitted working pressure of a hose assembly can be less. We reserve our rights for changes without notice.



Hose Type 10/2



Applications

Waterblasting: Large Bore Pipe Cleaning

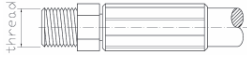
Hydraulics: Pressure Testing for Valves, Tooling and Control Panels

Inner Core: Polyamide (PA)
 Pressure Support: 2 layers of high-tensile steel wire
 Outer Cover: Polyamide (PA)
 Colour: blue, other colours upon request
 Temperature: -22°F to 140°F [-30°C to +60°C]



Ø ID	Ø OD	Working Pressure*)	Burst Pressure ¹⁾	Min. Bend Radius	Weight	Nipple Ø ID	Sleeve	Sleeve Ø OD
0.40 inch	0.61 inch	10,000 psi	25,010 psi	6.30 inch	0.188 lbs/ft	0.26 inch	11020101 carbon steel	0.82 inch
10.1 mm	15.5 mm	690 bar	1,725 bar	160 mm	0.280 kg/m	6.5 mm		20.8 mm

Fittings: ID10, Series A

Description	Size	Material	Part Number	
male fitting	3/8"x18 NPTF	carbon steel	31020401A	
male fitting	3/8"x18 NPTF	AISI 316 Ti	31020405A	
male fitting	1/2"x14 NPT	AISI 316 Ti	31020425A	
male fitting with 60° cone	G3/8"	carbon steel	31020311A	
male fitting DIN3852 T2 form A	G3/8"	carbon steel	31020341A	
BSP female swivel	G1/2"	carbon steel	21020301A / 51060311	
BSP female swivel	G1/2"	AISI 316 Ti	21020305A / 51060315	
metric female swivel with O-Ring	M22x1.5	carbon steel carbon steel AISI 316 Ti	21020221A swivel nut / 51060201 swivel nut / 51060205	
Type M female swivel	3/4"x16 UNF	AISI 316 Ti AISI 316 Ti	21020645A swivel nut / 51320615	

----- Additional fittings are available upon request. -----

¹⁾ Production related variations up to 5 % are possible

*) The safety factors between the burst pressure and the working pressure as well as the test pressure depend on the operating conditions. For gaseous media the outer cover is to be pinpricked. Regarding the safety factor for gaseous media please contact your local SPIR STAR® assembling center. The indicated working pressure refers to the hose only. Depending on the used fitting the permitted working pressure of a hose assembly can be less. We reserve our rights for changes without notice.



Hose Type 13/2



Applications

Waterblasting: Paint Removal; Tank and Vessel Cleaning;
Automated Cleaning Booths; Waterblast Supply Hose;
Large Bore Pipe Cleaning

Hydraulics: Pressure Testing for Valves, Tooling and Control
Panels

Oil and Gas: Grease Injection

Inner Core: Polyamide (PA)
Pressure Support: 2 layers of high-tensile steel wire
Outer Cover: Polyamide (PA)
Colour: green, other colours upon request
Temperature: -22°F to 140°F [-30°C to +60°C]



Ø ID	Ø OD	Working Pressure*)	Burst Pressure 1)	Min. Bend Radius	Weight	Nipple Ø ID	Sleeve	Sleeve Ø OD
0.51 inch	0.76 inch	10,000 psi	25,010 psi	7.87 inch	0.292 lbs/ft	0.33 inch	11320101 carbon steel	1.02 inch
12.9 mm	19.3 mm	690 bar	1,725 bar	200 mm	0.435 kg/m	8.5 mm		26.0 mm

Fittings: ID13, Series A

Description	Size	Material	Part Number	
male fitting	1/2"x14 NPTF	carbon steel AISI 316Ti	31320401A 31320405A	
BSP female swivel	G1/2"	carbon steel	21320311A	
BSP female swivel	G1/2"	carbon steel	swivel nut / 51060311	
		AISI 316 Ti	213202315A	
		AISI 316 Ti	swivel nut / 51060315	
metric female swivel with O-Ring	M22x1.5	carbon steel	21320101A	
metric female swivel with O-Ring	M24x1.5	carbon steel	swivel nut / 51360221	
		carbon steel	21320241A	
		carbon steel	swivel nut / 51360201	
metric female swivel with O-Ring	M24x1.5	AISI 316Ti	21320245A	
		AISI 316Ti	swivel nut / 51360205	
Type M female swivel	1"x12 UNF	carbon steel	21320641A	
Type M female swivel	1"x12 UNF	carbon steel	swivel nut / 51360641	
		AISI 316Ti	21320645A	
		AISI 316Ti	swivel nut / 51360645	
		AISI 303	swivel nut / 51360643	

----- Additional fittings are available upon request. -----

*) Production related variations up to 5 % are possible

*) The safety factors between the burst pressure and the working pressure as well as the test pressure depend on the operating conditions. For gaseous media the outer cover is to be pinpricked. Regarding the safety factor for gaseous media please contact your local SPIR STAR® assembling center. The indicated working pressure refers to the hose only. Depending on the used fitting the permitted working pressure of a hose assembly can be less. We reserve our rights for changes without notice.



Hose Type 20/2



Applications

Waterblasting: Large Bore Pipe Cleaning; Tank and Vessel Cleaning; Waterblast Supply Hose

Hydraulics: Pressure Testing for Valves, Tooling and Control Panels

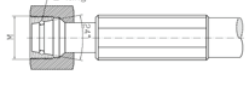
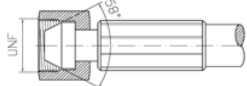
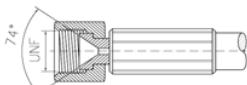
Oil and Gas: Grease Injection; Nitrogen Service

Inner Core: Polyamide (PA)
 Pressure Support: 2 layers of high-tensile steel wire
 Outer Cover: Polyamide (PA)
 Colour: green, other colours upon request
 Temperature: -22°F to 140°F [-30°C to +60°C]



Ø ID	Ø OD	Working Pressure*)	Burst Pressure ¹⁾	Min. Bend Radius	Weight	Nipple Ø ID	Sleeve	Sleeve Ø OD
0.75 inch	1.03 inch	7,540 psi	18,850 psi	9.45 inch	0.504 lbs/ft	0.51 inch	12020101 carbon steel	1.35 inch
19.0 mm	26.2 mm	520 bar	1,300 bar	240 mm	0.750 kg/m	13.0 mm		34.2 mm

Fittings: ID 20, Series A

Description	Size	Material	Part Number	
male fitting	1"x 1 1/2 NPT	carbon steel	32020421A	
male fitting	1"x 1 1/2 NPT	AISI 316Ti	32020425A	
metric female swivel with O-Ring	M36x2	carbon steel	22020201A / 52040211	
Type M female swivel	1 5/16"x12 UN	AISI 316Ti AISI 316Ti	22020645A swivel nut / 52040645	
JIC female swivel	1 5/16"x12 UN	AISI 316Ti AISI 316Ti	22020605A swivel nut / 52040605	

----- Additional fittings are available upon request. -----

¹⁾ Production related variations up to 5 % are possible

*) The safety factors between the burst pressure and the working pressure as well as the test pressure depend on the operating conditions. For gaseous media the outer cover is to be pinpricked. Regarding the safety factor for gaseous media please contact your local SPIR STAR[®] assembling center. The indicated working pressure refers to the hose only. Depending on the used fitting the permitted working pressure of a hose assembly can be less. We reserve our rights for changes without notice.



Hose Type 25/2



Applications

Waterblasting: Large Bore Pipe Cleaning; Waterblast Supply Hose

Hydraulics: Pressure Testing for Valves, Tooling and Control Panels

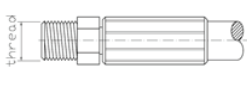
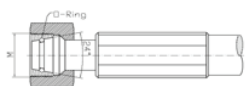
Oil and Gas: Nitrogen Service

Inner Core: Polyamide (PA)
 Pressure Support: 2 layers of high-tensile steel wire
 Outer Cover: Polyamide (PA)
 Colour: green, other colours upon request
 Temperature: -22°F to 140°F [-30°C to +60°C]



Ø ID	Ø OD	Working Pressure*)	Burst Pressure ¹⁾	Min. Bend Radius	Weight	Nipple Ø ID	Sleeve	Sleeve Ø OD
0.98 inch	1.32 inch	6,380 psi	15,950 psi	11.81 inch	0.638 lbs/ft	0.65 inch	12520121 carbon steel	1.57 inch
24.8 mm	33.5mm	440 bar	1,100 bar	300 mm	0.950 kg/m	16.5 mm		40.0 mm

Fittings: ID 25, Series T

Description	Size	Material	Part Number	
male fitting	1"x11 ½ NPTF	carbon steel	32530411T	
male fitting	1"x11 ½ NPTF	AISI 316Ti	32530415T	
metric female swivel with O-Ring	M42x2	carbon steel	22530201T / 52520201	

----- Additional fittings are available upon request. -----

¹⁾Production related variations up to 5 % are possible

*) The safety factors between the burst pressure and the working pressure as well as the test pressure depend on the operating conditions. For gaseous media the outer cover is to be pinpricked. Regarding the safety factor for gaseous media please contact your local SPIR STAR® assembling center. The indicated working pressure refers to the hose only. Depending on the used fitting the permitted working pressure of a hose assembly can be less. We reserve our rights for changes without notice.



Hose Type 4/2W



Applications

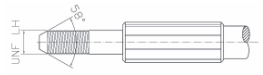
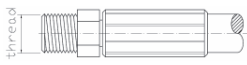
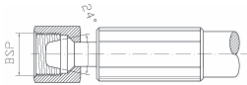
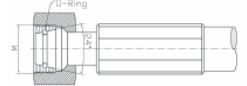
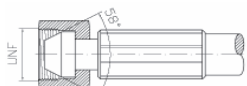
Hydraulics: Bolt Tensioning and Torque Tools; Controls for Service Equipment; Hydraulic Jacks; Instrumentation Packages for Gauges; Pressure Testing for Valves, Tooling and Control Panels; Hydraulic Tools



Inner Core:	Polyamide (PA)
Pressure Support:	4 layers of high-tensile steel wire
Outer Cover:	Polyurethane (PUR)
Colour:	black, other colours upon request
Temperature:	-22°F to 140°F [-30°C to +60°C]

Ø ID	Ø OD	Working Pressure*)	Burst Pressure 1)	Min. Bend Radius	Weight	Nipple Ø ID	Sleeve	Sleeve Ø OD
0.16 inch	0.39 inch	20,300 psi	50,750 psi	2.56 inch	0.108 lbs/ft	0.10 inch	10430101 carbon steel	0.51 inch
4.0 mm	9.8 mm	1,400 bar	3,500 bar	65 mm	0.160 kg/m	2.5 mm	10430105 AISI 316Ti	13.0 mm

Fittings: ID4, Series A

Description	Size	Material	Part Number	
HP fitting	1/4"x28 UNF LH	AISI 316Ti	40420205A	
male fitting	1/16"x27 NPTF	carbon steel	30420412A	
male fitting	1/8"x27 NPTF	carbon steel	30420542A	
male fitting	1/4"x18 NPTF	carbon steel	30420422A	
male fitting	G1/8"	carbon steel	30420302A	
male fitting flat seal nozzle type	G1/8"	carbon steel	30420382A	
male fitting	G1/4"	carbon steel	30420322A	
male fitting USIT®-Ring	G1/4"	carbon steel	30420351A	
male fitting special part 100° cone	G1/4"	carbon steel	30420362A	
male fitting	M7	carbon steel	30420042A	
male fitting flat seal nozzle type	M7	carbon steel	30420082A	
male fitting	M8	carbon steel	30420052A	
male fitting	M10x1	carbon steel	30420002A	
BSP female swivel	G1/4"	carbon steel carbon steel AISI 316Ti	20430302A swivel nut / 50540301 swivel nut / 50540305	
metric female swivel with O-Ring	M24x1.5	carbon steel	20420042A / 51360201	
Type M female swivel	9/16"x18 UNF	carbon steel carbon steel	20420642A swivel nut / 50540601	

----- Additional fittings are available upon request. -----

1) Production related variations up to 5 % are possible

*) The safety factors between the burst pressure and the working pressure as well as the test pressure depend on the operating conditions. For gaseous media the outer cover is to be pinpricked. Regarding the safety factor for gaseous media please contact your local SPIR STAR® assembling center. The indicated working pressure refers to the hose only. Depending on the used fitting the permitted working pressure of a hose assembly can be less. We reserve our rights for changes without notice.



Hose Type 6/2W



Applications

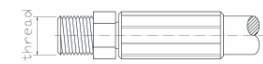
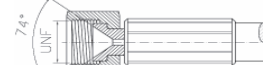
Hydraulics: Bolt Tensioning and Torque Tools; Hydraulic Jacks; Controls for Service Equipment; Instrumentation Packages for Gauges; Pressure Testing for Valves, Tooling and Control Panels

Inner Core: Polyamide (PA)
Pressure Support: 4 layers of high-tensile steel wire
Outer Cover: Polyurethane (PUR)
Colour: black, other colours upon request
Temperature: -22°F to 140°F [-30°C to +60°C]



Ø ID	Ø OD	Working Pressure*)	Burst Pressure ¹⁾	Min. Bend Radius	Weight	Nipple Ø ID	Sleeve	Sleeve Ø OD
0.24 inch	0.47 inch	18,560 psi	46,400 psi	3.74 inch	0.155 lbs/ft	0.16 inch	10630191W carbon steel	0.61 inch
6.0 mm	12.0 mm	1,280 bar	3,200 bar	95 mm	0.230 kg/m	4.0 mm	10630195W AISI 316Ti	15.4 mm

Fittings: ID6, Series A

Description	Size	Material	Part Number	
HP fitting	9/16"x18 UNF LH	AISI 316Ti	40620205A	
male fitting	1/8"x27 NPTF	carbon steel	30620411A	
male fitting	1/4"x18 NPTF	carbon steel	30620401A	
male fitting	1/4"x18 NPTF	AISI 316Ti	30620405A	
male fitting	3/8"x18 NPTF	carbon steel	30620451A	
male fitting	G1/8"	carbon steel	30620311A	
male fitting with 60° cone	G1/4"	carbon steel	30620341A	
male fitting for USIT® -Ring	G1/4"	carbon steel	30620391A	
male fitting DIN3852 T2 form A	G1/4"	carbon steel	30620301A	
male fitting flat seal nozzle type	G1/4"	carbon steel	30620381A	
male fitting special part 100° cone	G1/4"	carbon steel	30620361A	
male fitting with 60° cone	G3/8"	carbon steel	30620321A	
male fitting for USIT® -Ring	G3/8"	carbon steel	30620351A	
BSP female swivel	G1/4"	carbon steel	20620301A / 50540301	
BSP female swivel	G1/4"	AISI 316Ti	20620305A / 50540305	
metric female swivel with O-Ring	M18x1.5	carbon steel	20620241A / 50620201	
metric female swivel with O-Ring	M22x1.5	carbon steel AISI 316Ti	20620211A swivel nut / 51060201 swivel nut / 51060205	
metric female swivel with O-Ring	M24x1.5	carbon steel	20620042A / 51360201	
Type M female swivel	9/16"x18 UNF	carbon steel	20620641A / 50540601	
Type M female swivel	9/16"x18 UNF	AISI 316Ti	20620645A / 50540605	
JIC female swivel	9/16"x18 UNF	AISI 316Ti	S20630615A / S5063615	
female fitting	1/4"x18 NPTF	carbon steel	30620441A	
metric female swivel	M14x1.5	carbon steel	20620101A / 50540101	
metric female swivel	M16x1.5	carbon steel	20620141A / 50620121	
metric female swivel	M16x1.5	AISI 316Ti	20620145A / 50620125	

----- Additional fittings are available upon request. -----

¹⁾Production related variations up to 5 % are possible

*) The safety factors between the burst pressure and the working pressure as well as the test pressure depend on the operating conditions. For gaseous media the outer cover is to be pinpricked. Regarding the safety factor for gaseous media please contact your local SPIR STAR® assembling center. The indicated working pressure refers to the hose only. Depending on the used fitting the permitted working pressure of a hose assembly can be less. We reserve our rights for changes without notice.



Hose Type 8/2W



Applications

Hydraulics: Bolt Tensioning and Torque Tools; Hydraulic Jacks; Controls for Service Equipment; Instrumentation Packages for Gauges; Pressure Testing for Valves, Tooling and Control Panels; Hydraulic Tools

Oil and Gas: Gaseous Media Handling; Grease Injection; Hydraulic Control; Nitrogen Service; Sub Sea Well Control



Inner Core:	Polyamide (PA)
Pressure Support:	4 layers of high-tensile steel wire
Outer Cover:	Polyurethane (PUR)
Colour:	black, other colours upon request
Temperature:	-22°F to 140°F [-30°C to +60°C]

Ø ID	Ø OD	Working Pressure*)	Burst Pressure ¹⁾	Min. Bend Radius	Weight	Nipple Ø ID	Sleeve	Sleeve Ø OD
0.31 inch	0.56 inch	15,080 psi	37,700 psi	4.33 inch	0.211 lbs/ft	0.22 inch	10830191W carbon steel	0.72 inch
8.0 mm	14.3 mm	1,040 bar	2,600 bar	110 mm	0.314 kg/m	5.5 mm	10830195W AISI 316Ti	18.3 mm

Fittings: ID8, Series A

Description	Size	Material	Part Number	
male fitting	1/4"x18 NPTF	carbon steel	30820411A	
male fitting	3/8"x18 NPTF	carbon steel	30820401A	
male fitting DIN3852 T2 form A	G1/4"	carbon steel	30820351A	
male fitting with 60° cone	G1/4"	carbon steel	30820321A	
male fitting flat seal nozzle type	G1/4"	carbon steel	30820381A	
male fitting DIN3852 T2 form A	G3/8"	carbon steel	30820341A	
male fitting with 60° cone	G3/8"	carbon steel	30820301A	
BSP female swivel	G3/8"	carbon steel	20820301A / 50860301	
metric female swivel with O-Ring	M20x1.5	carbon steel	20820201A / 50860201	
metric female swivel with O-Ring	M24x1.5	carbon steel	20820042A / 50820241	
Type M female swivel	3/4"x16 UNF	AISI 316Ti AISI 316Ti carbon steel	20820645A swivel nut / 50840605 swivel nut / 50840601	
JIC female swivel	9/16"x18 UNF	carbon steel	20820601A / 50820601	
JIC female swivel	9/16"x18 UNF	AISI 316 Ti AISI 316 Ti	20820605A swivel nut / 50820605	

----- Additional fittings are available upon request. -----

¹⁾ Production related variations up to 5 % are possible

*) The safety factors between the burst pressure and the working pressure as well as the test pressure depend on the operating conditions. For gaseous media the outer cover is to be pinpricked. Regarding the safety factor for gaseous media please contact your local SPIR STAR[®] assembling center. The indicated working pressure refers to the hose only. Depending on the used fitting the permitted working pressure of a hose assembly can be less. We reserve our rights for changes without notice.



Hose Type 10/2W



Applications

Hydraulics: Bolt Tensioning and Torque Tools; Hydraulic Jacks; Controls for Service Equipment; Instrumentation Packages for Gauges; Pressure Testing for Valves, Tooling and Control Panels; Hydraulic Tools

Oil and Gas: Gaseous Media Handling; Grease Injection; Hydraulic Control; Nitrogen Service; Sub Sea Well Control

Inner Core: **Polyamide (PA)**
 Pressure Support: **4 layers of high-tensile steel wire**
 Outer Cover: **Polyurethane (PUR)**
 Colour: **black, other colours upon request**
 Temperature: **-22°F to 140°F [-30°C to +60°C]**



Ø ID	Ø OD	Working Pressure ^{*)}	Burst Pressure ¹⁾	Min. Bend Radius	Weight	Nipple Ø ID	Sleeve	Sleeve Ø OD
0.39 inch	0.68 inch	15,950 psi	40,020 psi	4.92 inch	0.289 lbs/ft	0.26 inch	11030191W carbon steel	0.85 inch
10.0 mm	17.2 mm	1,100 bar	2,760 bar	125 mm	0.430 kg/m	6.5 mm	11030195W AISI 316Ti	21.5 mm

Fittings: ID10, Series A

Description	Size	Material	Part Number	
male fitting	3/8"x18 NPTF	carbon steel	31020401A	
male fitting	3/8"x18 NPTF	AISI 316 Ti	31020405A	
male fitting	1/2"x14 NPT	AISI 316 Ti	31020425A	
male fitting with 60° cone	G3/8"	carbon steel	31020311A	
male fitting DIN3852 T2 form A	G3/8"	carbon steel	31020341A	
BSP female swivel	G1/2"	carbon steel	21020301A / 51060311	
BSP female swivel	G1/2"	AISI 316 Ti	21020305A / 51060315	
metric female swivel with O-Ring	M22x1.5	carbon steel carbon steel AISI 316 Ti	21020221A swivel nut / 51060201 swivel nut / 51060205	
Type M female swivel	3/4"x16 UNF	AISI 316 Ti AISI 316 Ti	21020645A swivel nut / 51320615	

----- Additional fittings are available upon request. -----

¹⁾ Production related variations up to 5 % are possible

^{*)} The safety factors between the burst pressure and the working pressure as well as the test pressure depend on the operating conditions. For gaseous media the outer cover is to be pinpricked. Regarding the safety factor for gaseous media please contact your local SPIR STAR[®] assembling center. The indicated working pressure refers to the hose only. Depending on the used fitting the permitted working pressure of a hose assembly can be less. We reserve our rights for changes without notice.



Hose Type 13/2W



Applications

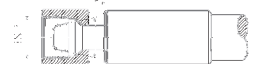
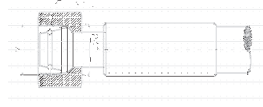
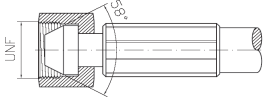
Hydraulics: Bolt Tensioning and Torque Tools; Hydraulic Jacks; Controls for Service Equipment; Instrumentation Packages for Gauges; Pressure Testing for Valves, Tooling and Control Panels
Oil and Gas: Gaseous Media Handling; Grease Injection; Hydraulic Control; Nitrogen Service; Sub Sea Well Control



Inner Core: Polyamide (PA)
Pressure Support: 4 layers of high-tensile steel wire
Outer Cover: Polyurethane (PUR)
Colour: black, other colours upon request
Temperature: -22°F to 140°F [-30°C to +60°C]

Ø ID	Ø OD	Working Pressure*)	Burst Pressure ¹⁾	Min. Bend Radius	Weight	Nipple Ø ID	Sleeve	Sleeve Ø OD
0.50 inch	0.82 inch	15,080 psi	37,700 psi	5.91 inch	0.396 lbs/ft	0.33 inch	11330191W carbon steel	1.05 inch
12.8 mm	20.8 mm	1,040 bar	2,600 bar	150 mm	0.590 kg/m	8.5 mm	11330195W AISI 316Ti	26.70 mm

Fittings: ID13, Series A

Description	Size	Material	Part Number	
male fitting	1/2"x14 NPTF	carbon steel AISI 316Ti	31320401A 31320405A	
BSP female swivel	G1/2"	carbon steel	21320311A swivel nut / 51060311	
BSP female swivel	G1/2"	AISI 316Ti	21320315A swivel nut / 51060315	
metric female swivel with O-Ring	M22x1.5	carbon steel	21320101A swivel nut / 51360221	
metric female swivel with O-Ring	M24x1.5	carbon steel	21320241A swivel nut / 51360201	
metric female swivel with O-Ring	M24x1.5	AISI 316Ti	21320245A swivel nut / 51360205	
Type M female swivel	1"x12 UNF	carbon steel	21320641A swivel nut / 51360641	
Type M female swivel	1"x12 UNF	AISI 316Ti AISI 316Ti AISI 303	21320645A swivel nut / 51360645 swivel nut / 51360643	

----- Additional fittings are available upon request. -----

¹⁾ Production related variations up to 5 % are possible

*) The safety factors between the burst pressure and the working pressure as well as the test pressure depend on the operating conditions. For gaseous media the outer cover is to be pinpricked. Regarding the safety factor for gaseous media please contact your local SPIR STAR[®] assembling center. The indicated working pressure refers to the hose only. Depending on the used fitting the permitted working pressure of a hose assembly can be less. We reserve our rights for changes without notice.



Hose Type 20/2W



Applications

Hydraulics: Controls for Service Equipment; Hydraulic Jacks; Pressure Testing for Valves, Tooling and Control Panels

Oil and Gas: Gaseous Media Handling; Grease Injection; Hydraulic Control; Nitrogen Service; Sub Sea Well Control

Inner Core: **Polyamide (PA)**
 Pressure Support: **4 layers of high-tensile steel wire**
 Outer Cover: **Polyurethane (PUR)**
 Colour: **black, other colours upon request**
 Temperature: **-22°F to 140°F [-30°C to +60°C]**



Ø ID	Ø OD	Working Pressure*)	Burst Pressure 1)	Min. Bend Radius	Weight	Nipple Ø ID	Sleeve	Sleeve Ø OD
0.74 inch	1.16 inch	11,020 psi	27,550 psi	8.66 inch	0.779 lbs/ft	0.51 inch	12020191W carbon steel	1.43 inch
18.8 mm	29.5 mm	760 bar	1,900 bar	220 mm	1.160 kg/m	13.0 mm		36.3 mm

Fittings: ID 20, Series A

Description	Size	Material	Part Number	
male fitting	1"x 11 1/2 NPT	carbon steel	32020421A	
male fitting	1"x 11 1/2 NPT	AISI 316Ti	32020425A	
metric female swivel with O-Ring	M36x2	carbon steel	22020201A / 52040211	
Type M female swivel	1 5/16"x12 UN	AISI 316Ti AISI 316Ti	22020645A swivel nut / 52040645	
JIC female swivel	1 5/16"x12 UN	AISI 316Ti AISI 316Ti	22020605A swivel nut / 52040605	

----- Additional fittings are available upon request. -----

*)Production related variations up to 5 % are possible

*) The safety factors between the burst pressure and the working pressure as well as the test pressure depend on the operating conditions. For gaseous media the outer cover is to be pinpricked. Regarding the safety factor for gaseous media please contact your local SPIR STAR® assembling center. The indicated working pressure refers to the hose only. Depending on the used fitting the permitted working pressure of a hose assembly can be less. We reserve our rights for changes without notice.



Hose Type 25/2W



Applications

Hydraulics: Controls for Service Equipment; Hydraulic Jacks; Pressure Testing for Valves, Tooling and Control Panels

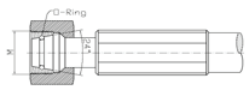
Oil and Gas: Gaseous Media Handling; Grease Injection; Hydraulic Control; Nitrogen Service

Inner Core: Polyamide (PA)
 Pressure Support: 4 layers of high-tensile steel wire
 Outer Cover: Polyurethane (PUR)
 Colour: black, other colours upon request
 Temperature: -22°F to 140°F [-30°C to +60°C]



Ø ID	Ø OD	Working Pressure*)	Burst Pressure 1)	Min. Bend Radius	Weight	Nipple Ø ID	Sleeve	Sleeve Ø OD
0.98 inch	1.40 inch	9,280 psi	23,200 psi	11.02 inch	1.001 lbs/ft	0.65 inch	12530111W carbon steel	1.73 inch
25.0 mm	35.6 mm	640 bar	1,600 bar	280 mm	1.490 kg/m	16.5 mm		44.0 mm

Fittings: ID 25, Series T

Description	Size	Material	Part Number	
male fitting	1"x11 ½ NPTF	carbon steel	32530411T	
male fitting	1"x11 ½ NPTF	AISI 316Ti	32530415T	
metric female swivel with O-Ring	M42x2	carbon steel	22530201T / 52520201	

----- Additional fittings are available upon request. -----

1) Production related variations up to 5 % are possible

*) The safety factors between the burst pressure and the working pressure as well as the test pressure depend on the operating conditions. For gaseous media the outer cover is to be pinpricked. Regarding the safety factor for gaseous media please contact your local SPIR STAR® assembling center. The indicated working pressure refers to the hose only. Depending on the used fitting the permitted working pressure of a hose assembly can be less. We reserve our rights for changes without notice.



Hose Type 6/2WL



Applications

Hydraulics: Bolt Tensioning and Torque Tools; Hydraulic Jacks; Controls for Service Equipment; Instrumentation Packages for Gauges; Pressure Testing for Valves, Tooling and Control Panels

Inner Core: Polyamide (PA)
Pressure Support: 4 layers of high-tensile steel wire
Outer Cover: Polyurethane (PUR)
Colour: black, other colours upon request
Temperature: -22°F to 140°F [-30°C to +60°C]



Ø ID	Ø OD	Working Pressure*)	Burst Pressure 1)	Min. Bend Radius	Weight	Nipple Ø ID	Sleeve	Sleeve Ø OD
0.23 inch	0.47 inch	17,400 psi	43,500 psi	3.15 inch	0.159 lbs/ft	0.16 inch	10630191W carbon steel	0.61 inch
5.9 mm	12.0 mm	1,200 bar	3,000 bar	80 mm	0.237 kg/m	4.0 mm	10630195W AISI 316Ti	15.5 mm

Fittings: ID6, Series A

Description	Size	Material	Part Number	
HP fitting	9/16"x18 UNF LH	AISI 316Ti	40620205A	
male fitting	1/8"x27 NPTF	carbon steel	30620411A	
male fitting	1/4"x18 NPTF	carbon steel	30620401A	
male fitting	1/4"x18 NPTF	AISI 316Ti	30620405A	
male fitting	3/8"x18 NPTF	carbon steel	30620451A	
male fitting	G1/8"	carbon steel	30620311A	
male fitting with 60° cone	G1/4"	carbon steel	30620341A	
male fitting for USIT®-Ring	G1/4"	carbon steel	30620391A	
male fitting DIN3852 T2 form A	G1/4"	carbon steel	30620301A	
male fitting flat seal nozzle type	G1/4"	carbon steel	30620381A	
male fitting special part 100° cone	G1/4"	carbon steel	30620361A	
male fitting with 60° cone	G3/8"	carbon steel	30620321A	
male fitting for USIT®-Ring	G3/8"	carbon steel	30620351A	
BSP female swivel	G1/4"	carbon steel	20620301A / 50540301	
BSP female swivel	G1/4"	AISI 316Ti	20620305A / 50540305	
metric female swivel with O-Ring	M18x1.5	carbon steel	20620241A / 50620201	
metric female swivel with O-Ring	M22x1.5	carbon steel AISI 316Ti	20620211A swivel nut / 51060201 swivel nut / 51060205	
metric female swivel with O-Ring	M24x1.5	carbon steel	20620042A / 51360201	
Type M female swivel	9/16"x18 UNF	carbon steel	20620641A / 50540601	
Type M female swivel	9/16"x18 UNF	AISI 316Ti	20620645A / 50540605	
JIC female swivel	9/16"x18 UNF	AISI 316Ti	S20630615A / S5063615	
female fitting	1/4"x18 NPTF	carbon steel	30620441A	
metric female swivel	M14x1.5	carbon steel	20620101A / 50540101	
metric female swivel	M16x1.5	carbon steel	20620141A / 50620121	
metric female swivel	M16x1.5	AISI 316Ti	20620145A / 50620125	

----- Additional fittings are available upon request. -----

1) Production related variations up to 5 % are possible

*) The safety factors between the burst pressure and the working pressure as well as the test pressure depend on the operating conditions. For gaseous media the outer cover is to be pinpricked. Regarding the safety factor for gaseous media please contact your local SPIR STAR® assembling center. The indicated working pressure refers to the hose only. Depending on the used fitting the permitted working pressure of a hose assembly can be less. We reserve our rights for changes without notice.



Hose Type 8/2WL



Applications

Hydraulics: Bolt Tensioning and Torque Tools; Hydraulic Jacks; Controls for Service Equipment; Instrumentation Packages for Gauges; Pressure Testing for Valves, Tooling and Control Panels; Hydraulic Tools



Inner Core:	Polyamide (PA)
Pressure Support:	4 layers of high-tensile steel wire
Outer Cover:	Polyurethane (PUR)
Colour:	black, other colours upon request
Temperature:	-22°F to 140°F [-30°C to +60°C]

Ø ID	Ø OD	Working Pressure*)	Burst Pressure 1)	Min. Bend Radius	Weight	Nipple Ø ID	Sleeve	Sleeve Ø OD
0.31 inch	0.55 inch	14,500 psi	36,250 psi	3.94 inch	0.213 lbs/ft	0.22 inch	10830191W carbon steel	0.72 inch
8.0 mm	14.0 mm	1,000 bar	2,500 bar	100 mm	0.317 kg/m	5.5 mm	10830195W AISI 316Ti	18.3 mm

Fittings: ID8, Series A

Description	Size	Material	Part Number	
male fitting	1/4"x18 NPTF	carbon steel	30820411A	
male fitting	3/8"x18 NPTF	carbon steel	30820401A	
male fitting DIN3852 T2 form A	G1/4"	carbon steel	30820351A	
male fitting with 60° cone	G1/4"	carbon steel	30820321A	
male fitting flat seal nozzle type	G1/4"	carbon steel	30820381A	
male fitting DIN3852 T2 form A	G3/8"	carbon steel	30820341A	
male fitting with 60° cone	G3/8"	carbon steel	30820301A	
BSP female swivel	G3/8"	carbon steel	20820301A / 50860301	
metric female swivel with O-Ring	M20x1.5	carbon steel	20820201A / 50860201	
metric female swivel with O-Ring	M24x1.5	carbon steel	20820042A / 50820241	
Type M female swivel	3/4"x16 UNF	AISI 316Ti AISI 316Ti carbon steel	20820645A swivel nut / 50840605 swivel nut / 50840601	
JIC female swivel	9/16"x18 UNF	carbon steel	20820601A / 50820601	
JIC female swivel	9/16"x18 UNF	AISI 316 Ti AISI 316 Ti	20820605A swivel nut / 50820605	

----- Additional fittings are available upon request. -----

*) Production related variations up to 5 % are possible

*) The safety factors between the burst pressure and the working pressure as well as the test pressure depend on the operating conditions. For gaseous media the outer cover is to be pinpricked. Regarding the safety factor for gaseous media please contact your local SPIR STAR® assembling center. The indicated working pressure refers to the hose only. Depending on the used fitting the permitted working pressure of a hose assembly can be less. We reserve our rights for changes without notice.



Hose Type 5/20K

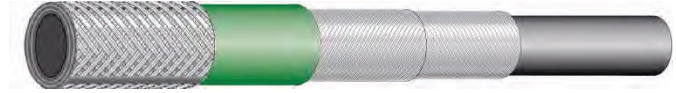


Applications

Waterblasting: Tube Cleaning; Heat Exchanger Tube Cleaning

Hydraulics: Instrumentation Packages for Gauges; Pressure Testing for Valves, Tooling and Control Panels

Inner Core: **Polyoxymethylene (POM)**
 Pressure Support: **2 layers of high-tensile steel wire**
 Outer Cover: **Polyamide (PA)**
 Top Cover: **1 braided layer of stainless steel wire**
 Temperature: **-22°F to 140°F [-30°C to +60°C]**



Ø ID	Ø OD	Working Pressure*)	Burst Pressure 1)	Min. Bend Radius	Weight	Nipple Ø ID	Sleeve	Sleeve Ø OD
0.20 inch	0.37 inch	15,080 psi	37,700 psi	3.74 inch	0.148 lbs/ft	0.14inch	30530451KX carbon steel	0.52 inch
5.0 mm	10.8 mm	1,040 bar	2,600 bar	95 mm	0.220 kg/m	3.5 mm		13.3 mm

Fittings: ID5, Series KX

Description	Size	Material	Part Number	
male fitting one piece waterblast	1/8"x27 NPTF	carbon steel	30530451KX / 30520442/1X	

----- Additional fittings are available upon request. -----

1)Production related variations up to 5 % are possible

*) The safety factors between the burst pressure and the working pressure as well as the test pressure depend on the operating conditions. For gaseous media the outer cover is to be pinpricked. Regarding the safety factor for gaseous media please contact your local SPIR STAR® assembling center. The indicated working pressure refers to the hose only. Depending on the used fitting the permitted working pressure of a hose assembly can be less. We reserve our rights for changes without notice.



Hose Type 6/20K



Applications

Waterblasting: Tube Cleaning; Heat Exchanger Tube Cleaning

Hydraulics: Instrumentation Packages for Gauges; Pressure Testing for Valves, Tooling and Control Panels

Inner Core: **Polyoxymethylene (POM)**
 Pressure Support: **2 layers of high-tensile steel wire**
 Outer Cover: **Polyamide (PA)**
 Top Cover: **1 braided layer of stainless steel wire**
 Temperature: **-22°F to 140°F [-30°C to +60°C]**



Ø ID	Ø OD	Working Pressure*)	Burst Pressure ¹⁾	Min. Bend Radius	Weight	Nipple Ø ID	Sleeve	Sleeve Ø OD
0.24 inch	0.52 inch	14,500 psi	36,250 psi	4.33 inch	0.206 lbs/ft	0.16 inch	30630451KX carbon steel	0.59 inch
6.2 mm	13.1 mm	1,000 bar	2,500 bar	110 mm	0.306 kg/m	4.0 mm		15.0 mm

Fittings: ID6, Series KX

Description	Size	Material	Part Number	
male fitting one piece waterblast	1/4"x18 NPTF	carbon steel	30630451KX / 30620462/1X	

----- Additional fittings are available upon request. -----

¹⁾Production related variations up to 5 % are possible

*) The safety factors between the burst pressure and the working pressure as well as the test pressure depend on the operating conditions. For gaseous media the outer cover is to be pinpricked. Regarding the safety factor for gaseous media please contact your local SPIR STAR[®] assembling center. The indicated working pressure refers to the hose only. Depending on the used fitting the permitted working pressure of a hose assembly can be less. We reserve our rights for changes without notice.



Hose Type 5/3

Duralife Flex™



Applications

Waterblasting: Heat Exchanger Tube Cleaning

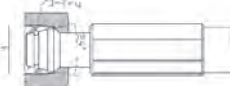
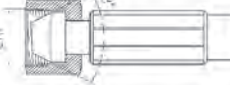
Hydraulics: Instrumentation Packages for Gauges; Pressure Testing for Valves, Tooling and Control Panels



Inner Core: Polyoxymethylene (POM)
Pressure Support: 2 layers of high-tensile steel wire
 1 braided layer of steel wire
Outer Cover: Polyamide (PA)
Colour: blue, other colours upon request
Temperature: -22°F to 140°F [-30°C to +60°C]

Ø ID	Ø OD	Working Pressure*)	Burst Pressure ¹⁾	Min. Bend Radius	Weight	Nipple Ø ID	Sleeve	Sleeve Ø OD
0.20 inch	0.41 inch	16,240 psi	40,600 psi	3.74 inch	0.146 lbs/ft	0.12 inch 0.14 inch ¹⁾	10530111 carbon steel	0.51 inch
5.0 mm	10.3 mm	1,120 bar	2,800 bar	95 mm	0.218 kg/m	3.0 mm 3.5 mm ¹⁾		12.9 mm

Fittings: ID5, Series A and X

Description	Size	Material	Part Number	
male fitting one piece waterblast	1/8"x27 NPTF	carbon steel	30530442X / 30520442/1X	
male fitting	1/8"x27 NPTF	carbon steel	30520401A	
male fitting	1/4"x18 NPTF	carbon steel	30520451A	
male fitting	G1/8"	carbon steel	30520301A	
male fitting flat seal nozzle type	G1/8"	carbon steel	30520381A	
male fitting	G1/4"	carbon steel	30520321A	
male fitting	M7	carbon steel	30520011A	
male fitting	M10x1	carbon steel	30520041A	
metric female swivel with O-Ring	M24x1.5	carbon steel	20520042A / 51360201	
Type M female swivel	9/16"x18 UNF	carbon steel AISI 316Ti	20520601A / 50540601 swivel nut / 50540605	
BSP female swivel	G1/4"	carbon steel AISI 316Ti	20520301A / 50540301 swivel nut / 50540305	
metric female swivel	M14x1.5	carbon steel	20520101A / 50540101	

----- Additional fittings are available upon request. -----

¹⁾ Production related variations up to 5 % are possible

^{*)} The safety factors between the burst pressure and the working pressure as well as the test pressure depend on the operating conditions. For gaseous media the outer cover is to be pinpricked. Regarding the safety factor for gaseous media please contact your local SPIR STAR® assembling center. The indicated working pressure refers to the hose only. Depending on the used fitting the permitted working pressure of a hose assembly can be less. We reserve our rights for changes without notice.



Hose Type 6/3

Duralife Flex™



Applications

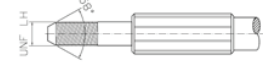
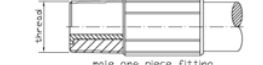
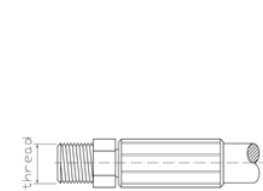
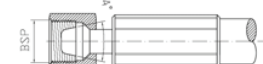
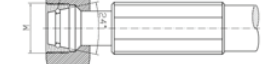
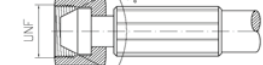
Waterblasting: Heat Exchanger Tube Cleaning
Hydraulics: Instrumentation Packages for Gauges; Pressure Testing for Valves, Tooling and Control Panels



Inner Core: Polyoxymethylene (POM)
Pressure Support: 2 layers of high-tensile steel wire
 1 braided layer of steel wire
Outer Cover: Polyamide (PA)
Colour: green, other colours upon request
Temperature: -22°F to 140°F [-30°C to +60°C]

Ø ID	Ø OD	Working Pressure*)	Burst Pressure ¹⁾	Min. Bend Radius	Weight	Nipple Ø ID	Sleeve	Sleeve Ø OD
0.24 inch	0.48 inch	15,080 psi	37,700 psi	4.33 inch	0.188 lbs/ft	0.16 inch	10630111 carbon steel	0.56 inch
6.1 mm	12.3 mm	1,040 bar	2,600 bar	110 mm	0.280 kg/m	4.0 mm		14.1 mm

Fittings: ID6, Series A and X

Description	Size	Material	Part Number	
HP fitting	9/16"x18 UNF LH	AISI 316Ti	40620205A	
male fitting one piece waterblast	1/4"x18 NPTF	carbon steel	30630462X / 30620462/1X	
male fitting	1/8"x27 NPTF	carbon steel	30620411A	
male fitting	1/4"x18 NPTF	carbon steel	30620401A	
male fitting	1/4"x18 NPTF	AISI 316Ti	30620405A	
male fitting	3/8"x18 NPTF	carbon steel	30620451A	
male fitting	G1/8"	carbon steel	30620311A	
male fitting with 60° cone	G1/4"	carbon steel	30620341A	
male fitting for USIT®-Ring	G1/4"	carbon steel	30620391A	
male fitting DIN3852 T2 form A	G1/4"	carbon steel	30620301A	
male fitting flat seal nozzle type	G1/4"	carbon steel	30620381A	
male fitting special part 100° cone	G1/4"	carbon steel	30620361A	
male fitting with 60° cone	G3/8"	carbon steel	30620321A	
male fitting for USIT®-Ring	G3/8"	carbon steel	30620351A	
BSP female swivel	G1/4"	carbon steel	20620301A / 50540301	
BSP female swivel	G1/4"	AISI 316Ti	20620305A / 50540305	
metric female swivel with O-Ring	M18x1.5	carbon steel	20620241A / 50620201	
metric female swivel with O-Ring	M22x1.5	carbon steel carbon steel AISI 316Ti	20620211A swivel nut / 51060201 swivel nut / 51060205	
metric female swivel with O-Ring	M24x1.5	carbon steel	20620042A / 51360201	
Type M female swivel	9/16"x18 UNF	carbon steel	20620641A / 50540601	
Type M female swivel	9/16"x18 UNF	AISI 316Ti	20620645A / 50540605	
JIC female swivel	9/16"x18 UNF	AISI 316Ti	S20630615A / S5063615	
female fitting	1/4"x18 NPTF	carbon steel	30620441A	
metric female swivel	M14x1.5	carbon steel	20620101A / 50540101	
metric female swivel	M16x1.5	carbon steel	20620141A / 50620121	
metric female swivel	M16x1.5	AISI 316Ti	20620145A / 50620125	

----- Additional fittings are available upon request. -----

¹⁾ Production related variations up to 5 % are possible

^{*)} The safety factors between the burst pressure and the working pressure as well as the test pressure depend on the operating conditions. For gaseous media the outer cover is to be pinpricked. Regarding the safety factor for gaseous media please contact your local SPIR STAR® assembling center. The indicated working pressure refers to the hose only. Depending on the used fitting the permitted working pressure of a hose assembly can be less. We reserve our rights for changes without notice.



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Hose Type 3/4



Applications

Waterblasting: Ultra High Pressure Waterblast Tube Cleaning

Hydraulics: Instrumentation Packages for Gauges; Pressure Testing for Valves, Tooling and Control Panels

Inner Core:	Polyoxymethylene (POM)
Pressure Support:	4 layers of high-tensile steel wire
Outer Cover:	Polyamide (PA)
Colour:	grey, other colours upon request
Temperature:	-22°F to 140°F [-30°C to +60°C]



Ø ID	Ø OD	Working Pressure*)	Burst Pressure ¹⁾	Min. Bend Radius	Weight	Nipple Ø ID	Sleeve	Sleeve Ø OD
0.13 inch	0.31 inch	29,000 psi	72,500 psi	4.33 inch	0.091 lbs/ft	0.08 inch	10340102 carbon steel	0.48 inch
3.4 mm	8.0 mm	2,000 bar	5,000 bar	110 mm	0.135 kg/m	2.0 mm		12.1 mm

Fittings: ID3, Series B

Description	Size	Material	Part Number	
HP fitting	1/4"x28UNF LH	carbon steel	40340202B	
Type M female swivel	9/16"x18UNF	carbon steel AISI 316Ti	20340602B / 50540601 swivel nut / 50540605	
metric female swivel	M12x1.5	carbon steel	20340112B / 50340111	

----- Additional fittings are available upon request. -----

¹⁾Production related variations up to 5 % are possible

*) The safety factors between the burst pressure and the working pressure as well as the test pressure depend on the operating conditions. For gaseous media the outer cover is to be pinpricked. Regarding the safety factor for gaseous media please contact your local SPIR STAR[®] assembling center. The indicated working pressure refers to the hose only. Depending on the used fitting the permitted working pressure of a hose assembly can be less. We reserve our rights for changes without notice.



Hose Type 4/4

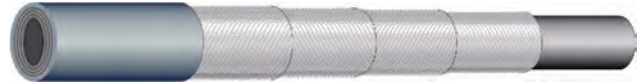


Applications

Waterblasting: Heat Exchanger Tube Cleaning

Hydraulics: Instrumentation Packages for Gauges; Pressure Testing for Valves, Tooling and Control Panels

Inner Core: Polyoxymethylene (POM)
 Pressure Support: 4 layers of high-tensile steel wire
 Outer Cover: Polyamide (PA)
 Colour: grey, other colours upon request
 Temperature: -22°F to 140°F [-30°C to +60°C]



Ø ID	Ø OD	Working Pressure*)	Burst Pressure ¹⁾	Min. Bend Radius	Weight	Nipple Ø ID	Sleeve	Sleeve Ø OD
0.16 inch	0.41 inch	31,900 psi	79,750 psi	5.12 inch	0.157 lbs/ft	0.07 inch	10440102 carbon steel	0.58 inch
4.0 mm	10.3 mm	2,200 bar	5,500 bar	130 mm	0.234 kg/m	1.8 mm		14.7 mm

Fittings: ID4, Series B and C

Description	Size	Material	Part Number	
HP fitting	1/4"x28 UNF LH	stainless steel	40460204C	
HP fitting	3/8"x24 UNF LH	stainless steel	40460224C	
HP fitting	9/16"x18 UNF LH	stainless steel	40460234C	
male fitting	1/8"x27 NPTF	carbon steel	30440402B	
male fitting	G1/8"	carbon steel	30440302B	
BSP female swivel	G1/4"	carbon steel AISI 316Ti	20440302B / 50540301 swivel nut / 50540305	
Type M female swivel	9/16"x18 UNF"	stainless steel AISI 316Ti carbon steel	20460644C swivel nut / 50560605 swivel nut / 50560601	

----- Additional fittings are available upon request. -----

¹⁾Production related variations up to 5 % are possible

*) The safety factors between the burst pressure and the working pressure as well as the test pressure depend on the operating conditions. For gaseous media the outer cover is to be pinpricked. Regarding the safety factor for gaseous media please contact your local SPIR STAR[®] assembling center. The indicated working pressure refers to the hose only. Depending on the used fitting the permitted working pressure of a hose assembly can be less. We reserve our rights for changes without notice.



Hose Type 5/4

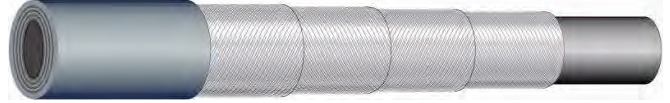


Applications

Waterblasting: Heat Exchanger Tube Cleaning

Hydraulics: Bolt Tensioning and Torque Tools; Hydraulic Jacks; Controls for Service Equipment; Instrumentation Packages for Gauges; Pressure Testing for Valves, Tooling and Control Panels; Hydraulic Tools

Oil and Gas: Chemical Injection; Gaseous Media Handling; Grease Injection; Hydraulic Control; Nitrogen Service



Inner Core:	Polyoxymethylene (POM)
Pressure Support:	4 layers of high-tensile steel wire
Outer Cover:	Polyamide (PA)
Colour:	grey, other colours upon request
Temperature:	-22°F to 140°F [-30°C to +60°C]

Ø ID	Ø OD	Working Pressure ¹⁾	Burst Pressure ¹⁾	Min. Bend Radius	Weight	Nipple Ø ID	Sleeve	Sleeve Ø OD
0.20 inch	0.44 inch	26,100 psi	65,250 psi	5.91 inch	0.175 lbs/ft	0.10 inch	10540101 carbon steel	0.59 inch
5.0 mm	11.2 mm	1,800 bar	4,500 bar	150 mm	0.260 kg/m	2.5 mm	10540105 AISI 316Ti	15.0 mm

Fittings: ID5, Series B and Y

Description	Size	Material	Part Number	
HP fitting	1/4"x28 UNF LH	carbon steel	40540211B	
HP fitting	1/4"x28 UNF LH	AISI 316Ti	40540215B	
HP fitting BLAST PRO ²⁾	1/4"x28 UNF LH	stainless steel carbon steel	40540234Y sleeve / 10540232	
HP fitting	3/8"x24 UNF LH	AISI 316Ti	40540205B	
HP fitting BLAST PRO ²⁾	3/8"x24 UNF LH	stainless steel carbon steel	40540214Y sleeve / 10540232	
HP fitting	9/16"x18 UNF LH	AISI 316Ti	40540225B	
HP female BLAST PRO ²⁾	1/4"x28UNF LH	stainless steel carbon steel	40540254Y sleeve / 10540232	
HP female BLAST PRO ²⁾	3/8"x24 UNF	stainless steel carbon steel	40540244Y sleeve / 10540232	
male fitting	1/4"x18 NPTF	carbon steel	30540401B	
male fitting with 60° cone	G1/4"	carbon steel	30540301B	
male fitting for USIT®-Ring	G1/4"	carbon steel	30540351B	
male fitting special part 100° cone	G1/4"	carbon steel	30540361B	
BSP female swivel	G1/4"	carbon steel	20540301B / 50540301	
BSP female swivel	G1/4"	AISI 316Ti	20540305B / 50540305	
metric female swivel with O-Ring	M20x1.5	carbon steel	20540041B / 50860201	
Type M female swivel	9/16"x18 UNF	carbon steel	20540641B / 50540601	
Type M female swivel	9/16"x18 UNF	AISI 316Ti	20540645B / 50540605	
metric female swivel	M14x1.5	carbon steel	20540101B / 50540101	

----- Additional fittings are available upon request. -----

¹⁾ Production related variations up to 5 % are possible

²⁾ BLAST PRO fittings must only be used for tube cleaning operation inside the tube. They are not designed for the use outside of tubes.

^{*}) The safety factors between the burst pressure and the working pressure as well as the test pressure depend on the operating conditions. For gaseous media the outer cover is to be pinpricked. Regarding the safety factor for gaseous media please contact your local SPIR STAR® assembling center. The indicated working pressure refers to the hose only. Depending on the used fitting the permitted working pressure of a hose assembly can be less. We reserve our rights for changes without notice.



Hose Type 6/4



Applications

Waterblasting: Heat Exchanger Tube Cleaning

Hydraulics: Bolt Tensioning and Torque Tools; Hydraulic Jacks; Controls for Service Equipment; Pressure Testing for Valves, Tooling and Control Panels; Instrumentation Packages for Gauges

Oil and Gas: Chemical Injection; Gaseous Media Handling; Grease Injection; Hydraulic Control; Nitrogen Service



Inner Core: Polyoxymethylene (POM)
Pressure Support: 4 layers of high-tensile steel wire
Outer Cover: Polyamide (PA)
Colour: grey, other colours upon request
Temperature: -22°F to 140°F [-30°C to +60°C]

Ø ID	Ø OD	Working Pressure*)	Burst Pressure 1)	Min. Bend Radius	Weight	Nipple Ø ID	Sleeve	Sleeve Ø OD
0.25 inch	0.50 inch	21,750 psi	55,100 psi	7.09 inch	0.198 lbs/ft	0.14 inch	10640101 carbon steel	0.65 inch
6.3mm	12.6 mm	1,500 bar	3,800 bar	180 mm	0.295 kg/m	3.5 mm	10640105 AISI 316Ti	16.4 mm

Fittings: ID6, Series B and Y

Description	Size	Material	Part Number	
HP fitting	3/8"x24 UNF LH	AISI 316Ti	40640205B	
HP fitting BLAST PRO 2)	3/8"x24 UNF LH	stainless steel carbon steel	40640214Y sleeve / 10640232	
HP female BLAST PRO 2)	3/8"x24 UNF	stainless steel carbon steel	40640234Y sleeve / 10640232	
male fitting	1/4"x18 NPTF	carbon steel	30640401B	
male fitting with 60° cone	G1/4"	carbon steel	30640301B	
BSP female swivel	G1/4"	carbon steel carbon steel AISI 316Ti	20640301B swivel nut / 50540301 swivel nut / 50540305	
metric female swivel with O-Ring	M18x1.5	carbon steel	20640241B / 50620201	
Type M female swivel	9/16"x18 UNF	carbon steel	20640641B / 50540601	
Type M female swivel	9/16"x18 UNF	AISI 316Ti	20640645B / 50540605	
JIC female swivel	9/16"x18 UNF	AISI 316Ti	20640655B / 50540605	

----- Additional fittings are available upon request. -----

1) Production related variations up to 5 % are possible

2) BLAST PRO fittings must only be used for tube cleaning operation inside the tube. They are not designed for the use outside of tubes.

*) The safety factors between the burst pressure and the working pressure as well as the test pressure depend on the operating conditions. For gaseous media the outer cover is to be pinpricked. Regarding the safety factor for gaseous media please contact your local SPIR STAR® assembling center. The indicated working pressure refers to the hose only. Depending on the used fitting the permitted working pressure of a hose assembly can be less. We reserve our rights for changes without notice.



Hose Type 8/4



Applications

Waterblasting: Heat Exchanger Tube Cleaning

Hydraulics: Hydraulic Jacks; Controls for Service Equipment; Instrumentation Packages for Gauges; Pressure Testing for Valves, Tooling and Control Panels

Oil and Gas: Chemical Injection; Gaseous Media Handling; Grease Injection; Hydraulic Control; Nitrogen Service



Inner Core:	Polyoxymethylene (POM)
Pressure Support:	4 layers of high-tensile steel wire
Outer Cover:	Polyamide (PA)
Colour:	grey, other colours upon request
Temperature:	-22°F to 140°F [-30°C to +60°C]

Ø ID	Ø OD	Working Pressure*)	Burst Pressure ¹⁾	Min. Bend Radius	Weight	Nipple Ø ID	Sleeve	Sleeve Ø OD
0.31 inch	0.57 inch	21,750 psi	55,100 psi	7.87 inch	0.262 lbs/ft	0.18 inch	10840102 carbon steel	0.80 inch
8.0 mm	14.6 mm	1,500 bar	3,800 bar	200 mm	0.390 kg/m	4.5 mm	10840105 AISI 316Ti	20.3 mm

Fittings: ID8, Series B and Y

Description	Size	Material	Part Number	
HP fitting	9/16"x18 UNF LH	AISI 316Ti	40840205B	
MP fitting BLAST PRO ²⁾	9/16"x18 UNF LH	stainless steel carbon steel	40840244Y sleeve / 10840142	
male fitting	1/4"x18 NPTF	carbon steel	30840411B	
male fitting	3/8"x18 NPTF	carbon steel	30840401B	
male fitting	G1/4"	carbon steel	30840341B	
male fitting special part 100° cone	G1/4"	AISI 316Ti	30840365B	
male fitting with 60° cone	G3/8"	carbon steel	30840301B	
BSP female swivel	G3/8"	carbon steel	20840301B / 50860301	
BSP female swivel	G3/8"	AISI 316Ti	20840305B / 50840305	
metric female swivel with O-Ring	M22x1.5	carbon steel carbon steel AISI 316Ti	20840231B swivel nut / 51060201 swivel nut / 51060205	
metric female swivel with O-Ring	M24x1.5	carbon steel carbon steel AISI 316Ti	20840221B swivel nut / 51360201 swivel nut / 51360205	
Type M female swivel	3/4"x16 UNF	carbon steel	20840641B / 50840601	
Type M female swivel	3/4"x16 UNF	AISI 316Ti	20840645B / 50840605	
JIC female swivel	3/4"x16 UNF	AISI 316Ti	20840605B / 50840605	

----- Additional fittings are available upon request. -----

¹⁾ Production related variations up to 5 % are possible

²⁾ BLAST PRO fittings must only be used for tube cleaning operation inside the tube. They are not designed for the use outside of tubes.

*) The safety factors between the burst pressure and the working pressure as well as the test pressure depend on the operating conditions. For gaseous media the outer cover is to be pinpricked. Regarding the safety factor for gaseous media please contact your local SPIR STAR® assembling center. The indicated working pressure refers to the hose only. Depending on the used fitting the permitted working pressure of a hose assembly can be less. We reserve our rights for changes without notice.



Hose Type 10/4



Applications

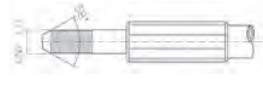
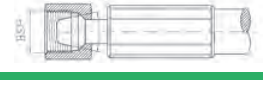
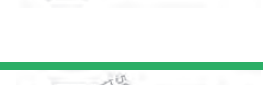
Waterblasting: Heat Exchanger Tube Cleaning; Hydro Demolition of Concrete; Large Bore Pipe Cleaning; Tank and Vessel Cleaning; Waterblast Supply Hose
Hydraulics: Controls for Service Equipment; Hydraulic Jacks; Pressure Testing for Valves, Tooling and Control Panels
Oil and Gas: Gaseous Media Handling; Grease Injection; Hydraulic Control; Nitrogen Service



Inner Core: Polyoxymethylene (POM)
Pressure Support: 4 layers of high-tensile steel wire
Outer Cover: Polyamide (PA)
Colour: grey, other colours upon request
Temperature: -22°F to 140°F [-30°C to +60°C]

Ø ID	Ø OD	Working Pressure*)	Burst Pressure 1)	Min. Bend Radius	Weight	Nipple Ø ID	Sleeve	Sleeve Ø OD
0.39 inch	0.72 inch	21,750 psi	55,100 psi	7.87 inch	0.464 lbs/ft	0.22 inch	11040102 carbon steel	0.91 inch
9.9 mm	18.4 mm	1,500 bar	3,800 bar	200 mm	0.690 kg/m	5.5 mm	11040105 AISI 316 Ti	23.1 mm

Fittings: ID10, Series B,C and Y

Description	Size	Material	Part Number	
HD fitting	9/16"x18 UNF LH	stainless steel	41060204C	
MP fitting BLAST PRO 2)	9/16"x18 UNF LH	stainless steel carbon steel	41040244Y sleeve / 11040232	
male fitting with 60° cone	G3/8"	carbon steel	31060311B	
BSP female swivel	G1/2"	stainless steel carbon steel	21060304C swivel nut / 51060311	
metric female swivel with O-Ring	M22x1.5	stainless steel AISI 316Ti carbon steel	21060204C swivel nut / 51060205 swivel nut / 51060201	
metric female swivel with O-Ring	M24x1.5	stainless steel AISI 316Ti	21060224C swivel nut / 51360205	
metric female swivel with O-Ring	M24x1.5	carbon steel carbon steel	21060221B swivel nut / 51360201	
Type M female swivel	3/4"x16 UNF	AISI 316Ti AISI 316Ti	21040645B swivel nut / 51320615	

----- Additional fittings are available upon request. -----

1) Production related variations up to 5 % are possible

2) BLAST PRO fittings must only be used for tube cleaning operation inside the tube. They are not designed for the use outside of tubes.

*) The safety factors between the burst pressure and the working pressure as well as the test pressure depend on the operating conditions. For gaseous media the outer cover is to be pinpricked. Regarding the safety factor for gaseous media please contact your local SPIR STAR® assembling center. The indicated working pressure refers to the hose only. Depending on the used fitting the permitted working pressure of a hose assembly can be less. We reserve our rights for changes without notice.



Hose Type 13/4H



Applications

Waterblasting: Hydro Demolition of Concrete; Large Bore Tube Cleaning; Tank and Vessel Cleaning; Waterblast Supply Hose; Rotating Cleaning Device for Waterblast

Hydraulics: Controls for Service Equipment; Pressure Testing for Valves, Tooling and Control Panels

Oil and Gas: Chemical Injection; Gaseous Media Handling; Grease Injection; Hydraulic Control; Nitrogen Service



Inner Core:	Polyamide (PA)
Pressure Support:	4 layers of high-tensile steel wire
Outer Cover:	Polyamide (PA)
Colour:	grey, other colours upon request
Temperature:	-22°F to 140°F [-30°C to +60°C]

Ø ID	Ø OD	Working Pressure*)	Burst Pressure 1)	Min. Bend Radius	Weight	Nipple Ø ID	Sleeve	Sleeve Ø OD
0.50 inch	0.87 inch	20,300 psi	50,750 psi	7.87 inch	0.591 lbs/ft	0.30 inch	11340232 carbon steel	1.16 inch
12.8mm	22.0 mm	1,400 bar	3,500 bar	200 mm	0.880 kg/m	7.5 mm		29.5 mm

Fittings: ID13, Series B and C

Description	Size	Material	Part Number	
HP fitting	9/16"x18 UNF LH	stainless steel	41360214C	
MP fitting	3/4"x16 UNF LH	stainless steel	41360204C	
BSP female swivel	G1/2"	stainless steel	21340314B swivel nut / 51060315 swivel nut / 51060311	
metric female swivel with O-Ring	M24x1.5	stainless steel AISI 316Ti carbon steel	21360244C swivel nut / 51360205 swivel nut / 51360201	
Type M female swivel	1"x12 UNF	stainless steel AISI 316Ti carbon steel AISI 303	21360644C swivel nut / 51360645 swivel nut / 51360641 swivel nut / 51360643	

----- Additional fittings are available upon request. -----

*) Production related variations up to 5 % are possible

*) The safety factors between the burst pressure and the working pressure as well as the test pressure depend on the operating conditions. For gaseous media the outer cover is to be pinpricked. Regarding the safety factor for gaseous media please contact your local SPIR STAR® assembling center. The indicated working pressure refers to the hose only. Depending on the used fitting the permitted working pressure of a hose assembly can be less. We reserve our rights for changes without notice.



Hose Type 16/4



Applications

Waterblasting: Hydro Demolition of Concrete; Large Bore Pipe Cleaning; Tank and Vessel Cleaning; Waterblast Supply Hose

Hydraulics: Controls for Service Equipment; Pressure Testing for Valves, Tooling and Control Panels

Oil and Gas: Chemical Injection; Gaseous Media Handling; Grease Injection; Hydraulic Control; Nitrogen Service



Inner Core:	Polyamide (PA)
Pressure Support:	4 layers of high-tensile steel wire
Outer Cover:	Polyamide (PA)
Colour:	grey, other colours upon request
Temperature:	-22°F to 140°F [-30°C to +60°C]

Ø ID	Ø OD	Working Pressure*)	Burst Pressure ¹⁾	Min. Bend Radius	Weight	Nipple Ø ID	Sleeve	Sleeve Ø OD
0.63 inch	1.00 inch	15,080 psi	37,700 psi	9.84 inch	0.673 lbs/ft	0.41 inch	11640112 carbon steel	1.29 inch
16.0 mm	25.5 mm	1,040 bar	2,600 bar	250 mm	1.002 kg/m	10.5 mm		32.7 mm

Fittings: ID16, Series B

Description	Size	Material	Part Number	
MP fitting	3/4"x16 UNF LH	AISI 316Ti	41640305B	
male fitting	3/4"x14 NPT	carbon steel	31640401B	
metric female swivel with O-Ring	M30x2	carbon steel	21640101B / 51640201	
Type M female swivel	1 5/16"x12 UN	AISI 316Ti	21640605B / 52040645	
JIC female swivel	1 1/16"x12 UN	AISI 316Ti	21640645B / 51640605	

----- Additional fittings are available upon request. -----

¹⁾ Production related variations up to 5 % are possible

*) The safety factors between the burst pressure and the working pressure as well as the test pressure depend on the operating conditions. For gaseous media the outer cover is to be pinpricked. Regarding the safety factor for gaseous media please contact your local SPIR STAR[®] assembling center. The indicated working pressure refers to the hose only. Depending on the used fitting the permitted working pressure of a hose assembly can be less. We reserve our rights for changes without notice.



Hose Type 20/4



Applications

Waterblasting: Large Bore Pipe Cleaning; Tank and Vessel

Cleaning; Waterblast Supply Hose

Hydraulics: Controls for Service Equipment; Pressure Testing for Valves, Tooling and Control Panels

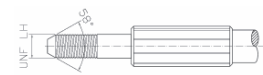
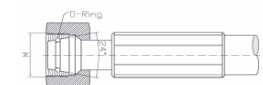
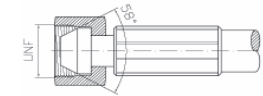
Oil and Gas: Chemical Injection; Gaseous Media Handling; Nitrogen Service



Inner Core:	Polyamide (PA)
Pressure Support:	4 layers of high-tensile steel wire
Outer Cover:	Polyamide (PA)
Colour:	grey, other colours upon request
Temperature:	-22°F to 140°F [-30°C to +60°C]

Ø ID	Ø OD	Working Pressure*)	Burst Pressure ¹⁾	Min. Bend Radius	Weight	Nipple Ø ID	Sleeve	Sleeve Ø OD
0.74 inch	1.13 inch	15,080 psi	37,700 psi	9.84 inch	0.907 lbs/ft	0.51 inch	12040131 carbon steel	1.45 inch
18.8 mm	28.8 mm	1,040 bar	2,600 bar	250 mm	1.350 kg/m	13.0 mm		36.9 mm

Fittings: ID 20, Series C

Description	Size	Material	Part Number	
MP fitting	1"x14 UNS LH	stainless steel	42060304C	
metric female swivel with O-Ring	M36x2	carbon steel	22060202C / 52040201	
Type M female swivel	1 5/16"x12 UN	stainless steel AISI 316Ti	22060644C swivel nut / 52040645	

----- Additional fittings are available upon request. -----

¹⁾Production related variations up to 5 % are possible

*) The safety factors between the burst pressure and the working pressure as well as the test pressure depend on the operating conditions. For gaseous media the outer cover is to be pinpricked. Regarding the safety factor for gaseous media please contact your local SPIR STAR[®] assembling center. The indicated working pressure refers to the hose only. Depending on the used fitting the permitted working pressure of a hose assembly can be less. We reserve our rights for changes without notice.



Hose Type 25/4



Applications

Waterblasting: Large Bore Pipe Cleaning; Tank and Vessel Cleaning; Waterblast Supply Hose

Hydraulics: Controls for Service Equipment; Pressure Testing for Valves, Tooling and Control Panels

Oil and Gas: Chemical Injection; Nitrogen Service; Gaseous Media Handling



Inner Core: Polyamide (PA)
 Pressure Support: 4 layers of high-tensile steel wire
 Outer Cover: Polyamide (PA)
 Colour: grey, other colours upon request
 Temperature: -22°F to 140°F [-30°C to +60°C]

Ø ID	Ø OD	Working Pressure*)	Burst Pressure ¹⁾	Min. Bend Radius	Weight	Nipple Ø ID	Sleeve	Sleeve Ø OD
0.98 inch	1.43 inch	13,050 psi	32,620 psi	11.81 inch	1.152 lbs/ft	0.75 inch	12540235 AISI 316Ti	1.81 inch
24.8 mm	36.3 mm	900 bar	2,250 bar	300 mm	1.715 kg/m	19.0 mm		45.9 mm

Fittings: ID 25, Series B

Description	Size	Material	Part Number	
male fitting	1"x11 ½ NPTF	AISI 316Ti	32540405B	
metric female swivel with O-Ring	M42x2	AISI 316Ti carbon steel	22540205B swivel nut / 52520201	
Type M female swivel	1 5/16"x12 UN	AISI 316Ti	22540645B / 52530645	
JIC female swivel	1 5/16"x12 UN	AISI 316Ti	22540605B / 52530605	

----- Additional fittings are available upon request. -----

¹⁾Production related variations up to 5 % are possible

*) The safety factors between the burst pressure and the working pressure as well as the test pressure depend on the operating conditions. For gaseous media the outer cover is to be pinpricked. Regarding the safety factor for gaseous media please contact your local SPIR STAR[®] assembling center. The indicated working pressure refers to the hose only. Depending on the used fitting the permitted working pressure of a hose assembly can be less. We reserve our rights for changes without notice.



Hose Type 3/6



Applications

Waterblasting: Ultra High Pressure Waterblast Tube Cleaning

Hydraulics: Instrumentation Packages for Gauges; Pressure Testing for Valves, Tooling and Control Panels

Inner Core: **Polyoxymethylene (POM)**
 Pressure Support: **6 layers of high-tensile steel wire**
 Outer Cover: **Polyamide (PA)**
 Colour: **blue, other colours upon request**
 Temperature: **-22°F to 140°F [-30°C to +60°C]**



Ø ID	Ø OD	Working Pressure*)	Burst Pressure ¹⁾	Min. Bend Radius	Weight	Nipple Ø ID	Sleeve	Sleeve Ø OD
0.12 inch	0.36 inch	40,600 psi	101,500 psi	5.91 inch	0.149 lbs/ft	0.07 inch	10360102 carbon steel	0.60 inch
3.0 mm	9.1 mm	2,800 bar	7,000 bar	150 mm	0.222 kg/m	1.8 mm		15.3 mm

Fittings: ID3, Series C

Description	Size	Material	Part Number	
HP fitting	1/4"x28UNF LH	stainless steel	40360204C	
HP fitting	3/8"x24UNF LH	stainless steel	40360224C	

----- Additional fittings are available upon request. -----

¹⁾Production related variations up to 5 % are possible

*) The safety factors between the burst pressure and the working pressure as well as the test pressure depend on the operating conditions. For gaseous media the outer cover is to be pinpricked. Regarding the safety factor for gaseous media please contact your local SPIR STAR[®] assembling center. The indicated working pressure refers to the hose only. Depending on the used fitting the permitted working pressure of a hose assembly can be less. We reserve our rights for changes without notice.



Hose Type 4/6



Applications

Hydraulics: Bolt Tensioning and Torque Tools; Hydraulic Jacks;

Pressure Testing for Valves, Tooling and Control Panels

Waterblasting: Ultra High Pressure Waterjet Table Cutting; Ultra High Pressure Waterblast Tube Cleaning; Surface Preparation; Paint Removal; Automated Cleaning Booths; Rotating Cleaning Device for Waterblast



Inner Core:	Polyoxymethylene (POM)
Pressure Support:	6 layers of high-tensile steel wire
Outer Cover:	Polyamide (PA)
Colour:	blue, other colours upon request
Temperature:	-22°F to 140°F [-30°C to +60°C]

Ø ID	Ø OD	Working Pressure*)	Burst Pressure ¹⁾	Min. Bend Radius	Weight	Nipple Ø ID	Sleeve	Sleeve Ø OD
0.16 inch	0.45 inch	40,600 psi	101,500 psi	6.89 inch	0.245 lbs/ft	0.07 inch	10460102 carbon steel	0.67 inch
4.0 mm	11.5 mm	2,800 bar	7,000 bar	175 mm	0.365 kg/m	1.8 mm		17.1 mm

Fittings: ID4, Series C

Description	Size	Material	Part Number	
HP fitting	1/4"x28 UNF LH	stainless steel	40460204C	
HP fitting	3/8"x24 UNF LH	stainless steel	40460224C	
HP fitting	9/16"x18 UNF LH	stainless steel	40460234C	
Type M female swivel	9/16"x18 UNF"	stainless steel AISI 316Ti carbon steel	20460644C swivel nut / 50560605 swivel nut / 50560601	

----- Additional fittings are available upon request. -----

¹⁾Production related variations up to 5 % are possible

*) The safety factors between the burst pressure and the working pressure as well as the test pressure depend on the operating conditions. For gaseous media the outer cover is to be pinpricked. Regarding the safety factor for gaseous media please contact your local SPIR STAR[®] assembling center. The indicated working pressure refers to the hose only. Depending on the used fitting the permitted working pressure of a hose assembly can be less. We reserve our rights for changes without notice.



Hose Type 5/6



Applications

Hydraulics: Bolt Tensioning and Torque Tools; Hydraulic Jacks; Controls for Service Equipment; Pressure Testing for Valves, Tooling and Control Panels

Waterblasting: Ultra High Pressure Waterjet Table Cutting; Ultra High Pressure Waterblast Tube Cleaning; Surface Preparation; Paint Removal; Automated Cleaning Booths; Rotating Cleaning Device for Waterblast; Hydro Demolition of Concrete; Robotic Surface Cleaning of Ships; Tank and Vessel Cleaning



Inner Core:	Polyoxymethylene (POM)
Pressure Support:	6 layers of high-tensile steel wire
Outer Cover:	Polyamide (PA)
Colour:	blue, other colours upon request
Temperature:	-22°F to 140°F [-30°C to +60°C]

Ø ID	Ø OD	Working Pressure*)	Burst Pressure ¹⁾	Min. Bend Radius	Weight	Nipple Ø ID	Sleeve	Sleeve Ø OD
0.19 inch	0.52 inch	36,250 psi	90,620 psi	7.87 inch	0.302 lbs/ft	0.08 inch	10560106 carbon steel	0.69 inch
4.8 mm	13.2 mm	2,500 bar	6,250 bar	200 mm	0.450 kg/m	2.0 mm	10560105 AISI 316Ti	17.5 mm

Fittings: ID5, Series D

Description	Size	Material	Part Number	
HP fitting	1/4"x28 UNF LH	stainless steel	40560294D	
HP fitting	3/8"x24 UNF LH	stainless steel	40560284D	
HP fitting	9/16"x18 UNF LH	stainless steel	40560264D	
HP fitting	M14x1.5 LH	stainless steel	40560274D	
HP-female swivel	9/16"x18 UNF	stainless steel AISI316Ti carbon steel	20560614D swivel nut / 50560605 swivel nut / 50560601	
BSP female swivel	G1/4"	stainless steel carbon steel	20560314D swivel nut / 50560301	
Type M female swivel	9/16"x18 UNF	stainless steel AISI 316Ti carbon steel	20560694D swivel nut / 50560605 swivel nut / 50560601	
metric female swivel	M14x1.5	stainless steel carbon steel	20560164D swivel nut / 50540101	

----- Additional fittings are available upon request. -----

¹⁾Production related variations up to 5 % are possible

*) The safety factors between the burst pressure and the working pressure as well as the test pressure depend on the operating conditions. For gaseous media the outer cover is to be pinpricked. Regarding the safety factor for gaseous media please contact your local SPIR STAR[®] assembling center. The indicated working pressure refers to the hose only. Depending on the used fitting the permitted working pressure of a hose assembly can be less. We reserve our rights for changes without notice.



Hose Type 8/6



Applications

Waterblasting: Ultra High Pressure Waterjet Table Cutting; Surface Preparation; Paint Removal; Tank and Vessel Cleaning; Hydro Demolition of Concrete; Robotic Surface Cleaning of Ships; Automated Cleaning Booths

Hydraulics: Pressure Testing for Valves, Tooling and Control Panels



Inner Core: **Polyoxymethylene (POM)**
 Pressure Support: **6 layers of high-tensile steel wire**
 Outer Cover: **Polyamide (PA)**
 Colour: **blue, other colours upon request**
 Temperature: **-22°F to 140°F [-30°C to +60°C]**

Ø ID	Ø OD	Working Pressure*)	Burst Pressure ¹⁾	Min. Bend Radius	Weight	Nipple Ø ID	Sleeve	Sleeve Ø OD
0.31 inch	0.65 inch	30,450 psi	76,120 psi	9.84 inch	0.430 lbs/ft	0.18 inch	10860106 carbon steel	0.85 inch
8.0 mm	16.4 mm	2,100 bar	5,250 bar	250 mm	0.640 kg/m	4.5 mm		21.6 mm

Fittings: ID8, Series C

Description	Size	Material	Part Number	
HP fitting	3/8"x24 UNF LH	stainless steel	40860214C	
HP fitting	9/16"x18 UNF LH	stainless steel	40860204C	
HP fitting	M14x1.5 LH	stainless steel	40860104C	
MP fitting	3/4"x16 UNF LH	stainless steel	40860324C	
metric female swivel with O-Ring	M24x1.5	stainless steel AISI 316Ti carbon steel	20860224C swivel nut / 51360205 swivel nut / 51360201	
Type M female swivel	3/4"x16 UNF	stainless steel AISI 316 Ti carbon steel	20860644C swivel nut / 50840605 swivel nut / 50840601	
Type M female swivel	7/8"x14 UNF	stainless steel AISI 316 Ti	20860684C swivel nut / 50860675	

----- Additional fittings are available upon request. -----

¹⁾Production related variations up to 5 % are possible

*) The safety factors between the burst pressure and the working pressure as well as the test pressure depend on the operating conditions. For gaseous media the outer cover is to be pinpricked. Regarding the safety factor for gaseous media please contact your local SPIR STAR[®] assembling center. The indicated working pressure refers to the hose only. Depending on the used fitting the permitted working pressure of a hose assembly can be less. We reserve our rights for changes without notice.



SPIR STAR®

Ø ID	Ø OD	Working Pressure*)	Burst Pressure 1)	Min. Bend Radius	Weight	Nipple Ø ID	Sleeve	Sleeve Ø OD
0.39 inch	0.80 inch	27,840 psi	69,600 psi	9.84 inch	0.672 lbs/ft	0.22 inch	11060102 carbon steel	1.05 inch
9.8 mm	20.4 mm	1,920 bar	4,800 bar	250 mm	1.000 kg/m	5.5 mm		26.6mm

Description	Size	Material	Part Number	
HD fitting	9/16"x18 UNF LH	stainless steel	41060204C	
BSP female swivel	G1/2"	stainless steel carbon steel	21060304C swivel nut / 51060311	
metric female swivel with O-Ring	M22x1.5	stainless steel AISI 316Ti carbon steel	21060204C swivel nut / 51060205 swivel nut / 51060201	
metric female swivel with O-Ring	M24x1.5	stainless steel AISI 316Ti carbon steel	21060224C swivel nut / 51360205 swivel nut / 51360201	



Hose Type 13/6



Applications

Waterblasting: Hydro Demolition of Concrete; Large Bore Pipe Cleaning; Tank and Vessel Cleaning; Waterblast Supply Hose
Hydraulics: Controls for Service Equipment
Oil and Gas: Grease Injection; Nitrogen Service

Inner Core: Polyamide (PA)
Pressure Support: 6 layers of high-tensile steel wire
Outer Cover: Polyamide (PA)
Colour: blue, other colours upon request
Temperature: -22°F to 140°F [-30°C to +60°C]



Ø ID	Ø OD	Working Pressure*)	Burst Pressure 1)	Min. Bend Radius	Weight	Nipple Ø ID	Sleeve	Sleeve Ø OD
0.50 inch	0.92 inch	26,100 psi	65,250 psi	11.81 inch	0.779 lbs/ft	0.30 inch	11360132 carbon steel	1.19 inch
12.8mm	23.4 mm	1,800 bar	4,500 bar	300 mm	1.160 kg/m	7.5 mm	11360135 AISI 316Ti	30.1 mm

Fittings: ID13, Series C

Description	Size	Material	Part Number	
HP fitting	9/16"x18 UNF LH	stainless steel	41360214C	
MP fitting	3/4"x16 UNF LH	stainless steel	41360204C	
metric female swivel with O-Ring	M24x1.5	stainless steel AISI 316Ti carbon steel	21360244C swivel nut / 51360205 swivel nut / 51360201	
Type M female swivel	1"x12 UNF	stainless steel AISI 316Ti carbon steel AISI 303	21360644C swivel nut / 51360645 swivel nut / 51360641 swivel nut / 51360643	

----- Additional fittings are available upon request. -----

*)Production related variations up to 5 % are possible

*) The safety factors between the burst pressure and the working pressure as well as the test pressure depend on the operating conditions. For gaseous media the outer cover is to be pinpricked. Regarding the safety factor for gaseous media please contact your local SPIR STAR® assembling center. The indicated working pressure refers to the hose only. Depending on the used fitting the permitted working pressure of a hose assembly can be less. We reserve our rights for changes without notice.



Hose Type 16/6



Applications

Waterblasting: Hydro Demolition of Concrete; Large Bore Pipe Cleaning; Tank and Vessel Cleaning; Waterblast Supply Hose

Hydraulics: Controls for Service Equipment; Pressure Testing for Valves, Tooling and Control Panels

Oil and Gas: Chemical Injection; Gaseous Media Handling; Grease Injection; Hydraulic Control; Nitrogen Service



Inner Core:	Polyamide (PA)
Pressure Support:	6 layers of high-tensile steel wire
Outer Cover:	Polyamide (PA)
Colour:	blue, other colours upon request
Temperature:	-22°F to 140°F [-30°C to +60°C]

Ø ID	Ø OD	Working Pressure*)	Burst Pressure ¹⁾	Min. Bend Radius	Weight	Nipple Ø ID	Sleeve	Sleeve Ø OD
0.63 inch	1.09 inch	22,040 psi	55,100 psi	12.60 inch	0.995 lbs/ft	0.41 inch	11660102 carbon steel	1.38 inch
15.9 mm	27.7 mm	1,520 bar	3,800 bar	320 mm	1.480 kg/m	10.5 mm		35.0 mm

Fittings: ID16, Series C

Description	Size	Material	Part Number	
HP fitting	M18x1.5 LH	stainless steel	41660114C	
metric female swivel with O-Ring	M30x2	stainless steel carbon steel	21660104C swivel nut / 51640201	
Type M female swivel	1 5/16"x12 UN	stainless steel AISI 316Ti	21660604C swivel nut / 52040645	
JIC female swivel	1 5/16"x12 UN	stainless steel AISI 316Ti	21660644C swivel nut / 52040605	

----- Additional fittings are available upon request. -----

¹⁾Production related variations up to 5 % are possible

*) The safety factors between the burst pressure and the working pressure as well as the test pressure depend on the operating conditions. For gaseous media the outer cover is to be pinpricked. Regarding the safety factor for gaseous media please contact your local SPIR STAR[®] assembling center. The indicated working pressure refers to the hose only. Depending on the used fitting the permitted working pressure of a hose assembly can be less. We reserve our rights for changes without notice.



Hose Type 20/6



Applications

Waterblasting: Large Bore Pipe Cleaning; Tank and Vessel Cleaning; Waterblast Supply Hose; Rotating Cleaning Device for Waterblast

Hydraulics: Pressure Testing for Valves, Tooling and Control Panels

Oil and Gas: Chemical Injection; Nitrogen Service; Gaseous Media Handling



Inner Core:	Polyamide (PA)
Pressure Support:	6 layers of high-tensile steel wire
Outer Cover:	Polyamide (PA)
Colour:	blue, other colours upon request
Temperature:	-22°F to 140°F [-30°C to +60°C]

Ø ID	Ø OD	Working Pressure*)	Burst Pressure 1)	Min. Bend Radius	Weight	Nipple Ø ID	Sleeve	Sleeve Ø OD
0.74 inch	1.29 inch	20,300 psi	50,750 psi	13.78 inch	1.458 lbs/ft	0.51 inch	12060111 carbon steel	1.69 inch
18.8 mm	32.8 mm	1,400 bar	3,500 bar	350 mm	2.170 kg/m	13.0 mm		42.9 mm

Fittings: ID 20, Series C

Description	Size	Material	Part Number	
MP fitting	1"x14 UNS LH	stainless steel	42060304C	
metric female swivel with O-Ring	M36x2	carbon steel	22060202C / 52040201	
Type M female swivel	1 5/16"x12 UN	stainless steel AISI 316Ti	22060644C swivel nut / 52040645	

----- Additional fittings are available upon request. -----

1) Production related variations up to 5 % are possible

*) The safety factors between the burst pressure and the working pressure as well as the test pressure depend on the operating conditions. For gaseous media the outer cover is to be pinpricked. Regarding the safety factor for gaseous media please contact your local SPIR STAR® assembling center. The indicated working pressure refers to the hose only. Depending on the used fitting the permitted working pressure of a hose assembly can be less. We reserve our rights for changes without notice.



Hose Type 25/6

ULTRAFLOW



Applications

Waterblasting: Large Bore Pipe Cleaning; Tank and Vessel Cleaning; Waterblast Supply Hose; Rotating Cleaning Device for Waterblast

Hydraulics: Pressure Testing for Valves, Tooling and Control Panels

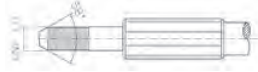
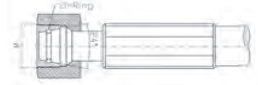
Oil and Gas: Chemical Injection; Nitrogen Service; Gaseous Media Handling



Inner Core:	Polyamide (PA)
Pressure Support:	6 layers of high-tensile steel wire
Outer Cover:	Polyamide (PA)
Colour:	blue, other colours upon request
Temperature:	-22°F to 140°F [-30°C to +60°C]

Ø ID	Ø OD	Working Pressure*)	Burst Pressure ¹⁾	Min. Bend Radius	Weight	Nipple Ø ID	Sleeve	Sleeve Ø OD
0.98 inch	1.57 inch	20,300 psi	43,500 psi	23.62 inch	1.88 lbs/ft	0.69 inch	12560232 carbon steel	1.93 inch
24.8 mm	39.8 mm	1,400 bar	3,000 bar	600 mm	2.80 kg/m	17.5 mm		49.0 mm

Fittings: ID 25, Series C

Description	Size	Material	Part Number	
MP fitting	1"x14UNS LH	stainless steel	42560304C	
metric female swivel with O-Ring	M42x2	stainless steel carbon steel	22560204C / 52520201	

----- Additional fittings are available upon request. -----

¹⁾Production related variations up to 5 % are possible

*) The safety factors between the burst pressure and the working pressure as well as the test pressure depend on the operating conditions. For gaseous media the outer cover is to be pinpricked. Regarding the safety factor for gaseous media please contact your local SPIR STAR[®] assembling center. The indicated working pressure refers to the hose only. Depending on the used fitting the permitted working pressure of a hose assembly can be less. We reserve our rights for changes without notice.



Hose Type 5/6H



Applications

Hydraulics: Bolt Tensioning and Torque Tools; Hydraulic Jacks; Controls for Service Equipment; Pressure Testing for Valves, Tooling and Control Panels

Waterblasting: Ultra High Pressure Waterjet Table Cutting; Ultra High Pressure Waterblast Tube Cleaning; Surface Preparation; Paint Removal; Automated Cleaning Booths; Rotating Cleaning Device for Waterblast; Hydro Demolition of Concrete; Robotic Surface Cleaning of Ships; Tank and Vessel Cleaning



Inner Core:	Polyoxymethylene (POM)
Pressure Support:	6 layers of high-tensile steel wire
Outer Cover:	Polyamide (PA)
Colour:	red, other colours upon request
Temperature:	-22°F to 140°F [-30°C to +60°C]

Ø ID	Ø OD	Working Pressure*)	Burst Pressure ¹⁾	Min. Bend Radius	Weight	Nipple Ø ID	Sleeve	Sleeve Ø OD
0.18 inch	0.57 inch	40,600 psi	101,500 psi	8.66 inch	0.378 lbs/ft	0.08 inch	10560126 carbon steel	0.78 inch
4.6 mm	14.4 mm	2,800 bar	7,000 bar	220 mm	0.563 kg/m	2.0 mm		19.7 mm

Fittings: ID5, Series D

Description	Size	Material	Part Number	
HP fitting	1/4"x28 UNF LH	stainless steel	40560294D	
HP fitting	3/8"x24 UNF LH	stainless steel	40560284D	
HP fitting	9/16"x18 UNF LH	stainless steel	40560264D	
HP fitting	M14x1.5 LH	stainless steel	40560274D	
HP female swivel	9/16"x18 UNF	stainless steel AISI 316Ti carbon steel	20560614D swivel nut / 50560605 swivel nut / 50560601	
BSP female swivel	G1/4"	stainless steel carbon steel	20560314D swivel nut / 50560301	
Type M female swivel	9/16"x18 UNF	stainless steel AISI 316Ti carbon steel	20560694D swivel nut / 50560605 swivel nut / 50560601	
metric female swivel	M14x1.5	stainless steel carbon steel	20560164D swivel nut / 50540101	

----- Additional fittings are available upon request. -----

¹⁾ Production related variations up to 5 % are possible

*) The safety factors between the burst pressure and the working pressure as well as the test pressure depend on the operating conditions. For gaseous media the outer cover is to be pinpricked. Regarding the safety factor for gaseous media please contact your local SPIR STAR[®] assembling center. The indicated working pressure refers to the hose only. Depending on the used fitting the permitted working pressure of a hose assembly can be less. We reserve our rights for changes without notice.



Hose Type 6/6H MAXIMUS™



Applications

Waterblasting: Ultra High Pressure Waterjet Table Cutting; Ultra High Pressure Waterblast Tube Cleaning; Surface Preparation; Paint Removal; Automated Cleaning Booths; Rotating Cleaning Device for Waterblast; Hydro Demolition of Concrete; Robotic Surface Cleaning of Ships; Tank and Vessel Cleaning

Hydraulics: Controls for Service Equipment; Pressure Testing for Valves, Tooling and Control Panels



Inner Core:	Polyoxymethylene (POM)
Pressure Support:	6 layers of high-tensile steel wire
Outer Cover:	Polyamide (PA)
Colour:	red, other colours upon request
Temperature:	-22°F to 140°F [-30°C to +60°C]

Ø ID	Ø OD	Working Pressure*)	Burst Pressure 1)	Min. Bend Radius	Weight	Nipple Ø ID	Sleeve	Sleeve Ø OD
0.23 inch	0.65 inch	40,600 psi	101,500 psi	9.84 inch	0.504 lbs/ft	0.12 inch	10660102 carbon steel	0.84 inch
5.9mm	16.4 mm	2,800 bar	7,000 bar	250 mm	0.750 kg/m	3.0 mm		21.4 mm

Fittings: ID6, Series C

Description	Size	Material	Part Number	
HP fitting	3/8"x24 UNF LH	stainless steel	40660204C	
HP fitting	9/16"x18 UNF LH	stainless steel	40660224C	
HP fitting	M14x1,5 LH	stainless steel	40660124C	
Type M female swivel	9/16"x18 UNF	stainless steel AISI 316Ti carbon steel	20660604C swivel nut / 50560605 swivel nut / 50560601	

----- Additional fittings are available upon request. -----

*) Production related variations up to 5 % are possible

*) The safety factors between the burst pressure and the working pressure as well as the test pressure depend on the operating conditions. For gaseous media the outer cover is to be pinpricked. Regarding the safety factor for gaseous media please contact your local SPIR STAR® assembling center. The indicated working pressure refers to the hose only. Depending on the used fitting the permitted working pressure of a hose assembly can be less. We reserve our rights for changes without notice.



Hose Type 8/6H



Applications

Waterblasting: Ultra High Pressure Waterjet Table Cutting; Surface Preparation; Paint Removal; Tank and Vessel Cleaning; Hydro Demolition of Concrete; Robotic Surface Cleaning of Ships; Automated Cleaning Booths

Hydraulics: Pressure Testing for Valves, Tooling and Control Panels



Inner Core: Polyoxymethylene (POM)
Pressure Support: 6 layers of high-tensile steel wire
Outer Cover: Polyamide (PA)
Colour: red, other colours upon request
Temperature: -22°F to 140°F [-30°C to +60°C]

Ø ID	Ø OD	Working Pressure*)	Burst Pressure ¹⁾	Min. Bend Radius	Weight	Nipple Ø ID	Sleeve	Sleeve Ø OD
0.30 inch	0.74 inch	36,250 psi	90,620 psi	10.24 inch	0.622 lbs/ft	0.18 inch	10860126 carbon steel	1.01 inch
7.7 mm	18.8 mm	2,500 bar	6,250 bar	260 mm	0.925 kg/m	4.5 mm		25.7 mm

Fittings: ID8, Series C

Description	Size	Material	Part Number	
HP fitting	3/8"x24 UNF LH	stainless steel	40860214C	
HP fitting	9/16"x18 UNF LH	stainless steel	40860204C	
HP fitting	M14x1.5 LH	stainless steel	40860104C	
MP fitting	3/4"x16 UNF LH	stainless steel	40860324C	
metric female swivel with O-Ring	M24x1.5	stainless steel AISI 316Ti carbon steel	20860224C swivel nut / 51360205 swivel nut / 51360201	
Type M female swivel	3/4"x16 UNF	stainless steel AISI 316 Ti carbon steel	20860644C swivel nut / 50840605 swivel nut / 50840601	
Type M female swivel	7/8"x14 UNF	stainless steel AISI 316 Ti	20860684C swivel nut / 50860675	

----- Additional fittings are available upon request. -----

¹⁾Production related variations up to 5 % are possible

*) The safety factors between the burst pressure and the working pressure as well as the test pressure depend on the operating conditions. For gaseous media the outer cover is to be pinpricked. Regarding the safety factor for gaseous media please contact your local SPIR STAR[®] assembling center. The indicated working pressure refers to the hose only. Depending on the used fitting the permitted working pressure of a hose assembly can be less. We reserve our rights for changes without notice.



Hose Type 13/6H



Applications

Waterblasting: Hydro Demolition of Concrete; Large Bore Pipe Cleaning; Tank and Vessel Cleaning; Waterblast Supply Hose

Hydraulics: Controls for Service Equipment

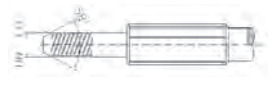
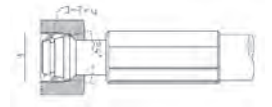
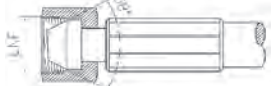
Oil and Gas: Grease Injection; Nitrogen Service

Inner Core: Polyoxymethylene (POM)
Pressure Support: 6 layers of high-tensile steel wire
Outer Cover: Polyamide (PA)
Colour: red, other colours upon request
Temperature: -22°F to 140°F [-30°C to +60°C]



Ø ID	Ø OD	Working Pressure*)	Burst Pressure 1)	Min. Bend Radius	Weight	Nipple Ø ID	Sleeve	Sleeve Ø OD
0.50 inch	0.97 inch	29,000 psi	72,650 psi	11.81 inch	0.806 lbs/ft	0.30 inch	11360232 carbon steel	1.30 inch
12.7mm	24.6 mm	2,000 bar	5,000 bar	300 mm	1.200 kg/m	7.5 mm		32.9 mm

Fittings: ID13, Series C

Description	Size	Material	Part Number	
HP fitting	9/16"x18 UNF LH	stainless steel	41360214C	
MP fitting	3/4"x16 UNF LH	stainless steel	41360204C	
metric female swivel with O-Ring	M24x1.5	stainless steel AISI 316Ti carbon steel	21360244C swivel nut / 51360205 swivel nut / 51360201	
Type M female swivel	1"x12 UNF	stainless steel AISI 316Ti carbon steel AISI 303	21360644C swivel nut / 51360645 swivel nut / 51360641 swivel nut / 51360643	

----- Additional fittings are available upon request. -----

*) Production related variations up to 5 % are possible

*) The safety factors between the burst pressure and the working pressure as well as the test pressure depend on the operating conditions. For gaseous media the outer cover is to be pinpricked. Regarding the safety factor for gaseous media please contact your local SPIR STAR® assembling center. The indicated working pressure refers to the hose only. Depending on the used fitting the permitted working pressure of a hose assembly can be less. We reserve our rights for changes without notice.



Hose Type 8/8



Applications

Waterblasting: Ultra High Pressure Waterjet Table Cutting; Surface Preparation; Paint Removal; Tank and Vessel Cleaning; Hydro Demolition of Concrete; Robotic Surface Cleaning of Ships; Automated Cleaning Booths

Hydraulics: Pressure Testing for Valves, Tooling and Control Panels



Inner Core: Polyoxymethylene (POM)
Pressure Support: 8 layers of high-tensile steel wire
Outer Cover: Polyamide (PA)
Colour: purple red, other colours upon request
Temperature: -22°F to 140°F [-30°C to +60°C]

Ø ID	Ø OD	Working Pressure*)	Burst Pressure ¹⁾	Min. Bend Radius	Weight	Nipple Ø ID	Sleeve	Sleeve Ø OD
0.30 inch	0.82 inch	40,600 psi	101,500 psi	11.81 inch	0.867 lbs/ft	0.18 inch	10880112 carbon steel	1.10 inch
7.6 mm	20.8 mm	2,800 bar	7,000 bar	300 mm	1.290 kg/m	4.5 mm		27.9 mm

Fittings: ID8, Series C

Description	Size	Material	Part Number	
HP fitting	3/8"x24 UNF LH	stainless steel	40860214C	
HP fitting	9/16"x18 UNF LH	stainless steel	40860204C	
HP fitting	M14x1.5 LH	stainless steel	40860104C	
MP fitting	3/4"x16 UNF LH	stainless steel	40860324C	
metric female swivel with O-Ring	M24x1.5	stainless steel AISI 316Ti carbon steel	20860224C swivel nut / 51360205 swivel nut / 51360201	
Type M female swivel	3/4"x16 UNF	stainless steel AISI 316 Ti carbon steel	20860644C swivel nut / 50840605 swivel nut / 50840601	
Type M female swivel	7/8"x14 UNF	stainless steel AISI 316Ti	20860684C swivel nut / 50860675	

----- Additional fittings are available upon request. -----

¹⁾ Production related variations up to 5 % are possible

*) The safety factors between the burst pressure and the working pressure as well as the test pressure depend on the operating conditions. For gaseous media the outer cover is to be pinpricked. Regarding the safety factor for gaseous media please contact your local SPIR STAR® assembling center. The indicated working pressure refers to the hose only. Depending on the used fitting the permitted working pressure of a hose assembly can be less. We reserve our rights for changes without notice.



Hose Type 5/4HT

High Temperature to 300°F (+150°C)



Applications

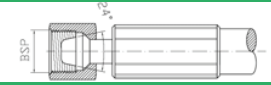
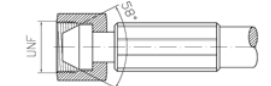
Oil and Gas: Chemical Injection; Gaseous Media Handling;
Methanol Injection; Nitrogen Service

Inner Core: **PVDF**
Pressure Support: **4 layers of high-tensile steel wire**
Outer Cover: **PVDF**
Colour: **grey, other colours upon request**
Temperature: **-4°F to 300°F [-20°C to +150°C]**



Ø ID	Ø OD	Working Pressure*)	Burst Pressure ¹⁾	Min. Bend Radius	Weight	Nipple Ø ID	Sleeve	Sleeve Ø OD
0.20 inch	0.44 inch	18,630 psi	65,250 psi	9.84 inch	0.188 lbs/ft	0.10 inch	10540145 AISI 316Ti	0.61 inch
5.0 mm	11.2 mm	1,285 bar	4,500 bar	250 mm	0.280 kg/m	2.5 mm		15.4 mm

Fittings: ID5, Series H

Description	Size	Material	Part Number	
BSP female swivel	G1/4"	AISI 316Ti	20540315H / 50540305	
Type M female swivel	9/16"x18 UNF	AISI 316Ti	20540665H / 50540605	

Important Information!

In case of accidental leakage when transferring hot medium through SPIR STAR hoses the potential for injury exists from escaping fluids at high temperature (up to 150 C or 300F) while under pressure. When used for this purpose SPIR STAR HT series hoses should only be used when there is appropriate protecting devices in place to rule out the possibility of injury. The protecting devices may be removed only (e.g. for repairs) after the hose assembly has been depressurized and cooled to ambient temperature.

----- Additional fittings are available upon request. -----

¹⁾Production related variations up to 5 % are possible

*) The safety factors between the burst pressure and the working pressure as well as the test pressure depend on the operating conditions. For gaseous media the outer cover is to be pinpricked. Regarding the safety factor for gaseous media please contact your local SPIR STAR[®] assembling center. The indicated working pressure refers to the hose only. Depending on the used fitting the permitted working pressure of a hose assembly can be less. We reserve our rights for changes without notice.



Hose Type 6/2WHT

High Temperature to 300°F (+150°C)



Applications

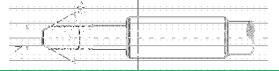
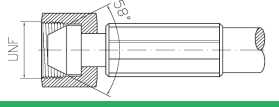
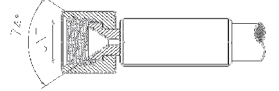
Oil and Gas: Chemical Injection; Gaseous Media Handling;
Methanol Injection; Nitrogen Service

Inner Core: PVDF
Pressure Support: 4 layers of high-tensile steel wire
Outer Cover: PVDF
Colour: grey, other colours upon request
Temperature: -4°F to 300°F [-20°C to +150°C]



Ø ID	Ø OD	Working Pressure*)	Burst Pressure ¹⁾	Min. Bend Radius	Weight	Nipple Ø ID	Sleeve	Sleeve Ø OD
0.25 inch	0.48 inch	13,260 psi	46,400 psi	5.91 inch	0.179 lbs/ft	0.16 inch	10640115 AISI 316Ti	0.67 inch
6.3 mm	12.2 mm	915 bar	3,200 bar	150 mm	0.266 kg/m	3.5 mm		17.1 mm

Fittings: ID6, Series HB

Description	Size	Material	Part Number	
HP fitting	3/8"x24 UNF LH	AISI 316Ti	40640205HB	
Type M female swivel	9/16"x18 UNF	AISI 316Ti	20640645HB / S5063615	
JIC female swivel	9/16"x18 UNF	AISI 316Ti	20640655HB / S5063615	

Important Information!

In case of accidental leakage when transferring hot medium through SPIR STAR hoses the potential for injury exists from escaping fluids at high temperature (up to 150 C or 300F) while under pressure. When used for this purpose SPIR STAR HT series hoses should only be used when there is appropriate protecting devices in place to rule out the possibility of injury. The protecting devices may be removed only (e.g. for repairs) after the hose assembly has been depressurized and cooled to ambient temperature.

----- Additional fittings are available upon request. -----

¹⁾Production related variations up to 5 % are possible

^{*)} The safety factors between the burst pressure and the working pressure as well as the test pressure depend on the operating conditions. For gaseous media the outer cover is to be pinpricked. Regarding the safety factor for gaseous media please contact your local SPIR STAR[®] assembling center. The indicated working pressure refers to the hose only. Depending on the used fitting the permitted working pressure of a hose assembly can be less. We reserve our rights for changes without notice.



Hose Type 6/4HT

High Temperature to 300°F (+150°C)



Applications

Oil and Gas: Chemical Injection; Gaseous Media Handling;
Methanol Injection; Nitrogen Service

Inner Core: **PVDF**
Pressure Support: **4 layers of high-tensile steel wire**
Outer Cover: **PVDF**
Colour: **grey, other colours upon request**
Temperature: **-4°F to 300°F [-20°C to +150°C]**



Ø ID	Ø OD	Working Pressure*)	Burst Pressure 1)	Min. Bend Radius	Weight	Nipple Ø ID	Sleeve	Sleeve Ø OD
0.25 inch	0.50 inch	15,730 psi	55,100 psi	11.02 inch	0.215 lbs/ft	0.14 inch	10640115 AISI 316Ti	0.69 inch
6.3mm	12.6 mm	1,085 bar	3,800 bar	280 mm	0.320 kg/m	3.5 mm		17.5 mm

Fittings: ID6, Series HB

Description	Size	Material	Part Number	
HP fitting	3/8"x24 UNF LH	AISI 316Ti	40640205HB	
Type M female swivel	9/16"x18 UNF	AISI 316Ti	20640645HB / S5063615	
JIC female swivel	9/16"x18 UNF	AISI 316Ti	20640655HB / S5063615	

Important Information!

In case of accidental leakage when transferring hot medium through SPIR STAR hoses the potential for injury exists from escaping fluids at high temperature (up to 150 C or 300F) while under pressure. When used for this purpose SPIR STAR HT series hoses should only be used when there is appropriate protecting devices in place to rule out the possibility of injury. The protecting devices may be removed only (e.g. for repairs) after the hose assembly has been depressurized and cooled to ambient temperature.

----- Additional fittings are available upon request. -----

1) Production related variations up to 5 % are possible

2) BLAST PRO fittings must only be used for tube cleaning operation inside the tube. They are not designed for the use outside of tubes.

*) The safety factors between the burst pressure and the working pressure as well as the test pressure depend on the operating conditions. For gaseous media the outer cover is to be pinpricked. Regarding the safety factor for gaseous media please contact your local SPIR STAR® assembling center. The indicated working pressure refers to the hose only. Depending on the used fitting the permitted working pressure of a hose assembly can be less. We reserve our rights for changes without notice.



Hose Type 8/2WHT

High Temperature to 300°F (+150°C)



Applications

Oil and Gas: Chemical Injection; Gaseous Media Handling;
Methanol Injection; Nitrogen Service

Inner Core: **PVDF**
Pressure Support: **4 layers of high-tensile steel wire**
Outer Cover: **PVDF**
Colour: **grey, other colours upon request**
Temperature: **-4°F to 300°F [-20°C to +150°C]**



Ø ID	Ø OD	Working Pressure*)	Burst Pressure ¹⁾	Min. Bend Radius	Weight	Nipple Ø ID	Sleeve	Sleeve Ø OD
0.31 inch	0.57 inch	10,800 psi	37,700 psi	9.84 inch	0.269 lbs/ft	0.16 inch	10830145 AISI 316Ti	0.82 inch
8.0 mm	14.5 mm	745 bar	2,600 bar	250 mm	0.400 kg/m	4.0 mm		20.7 mm

Fittings: ID8, Series H

Description	Size	Material	Part Number	
Type M female swivel	3/4"x16 UNF	AISI 316Ti	20820665H / 50840605	
JIC female swivel	9/16"x18 UNF	AISI 316Ti	20820615H / 50820605	
JIC female swivel	3/4"x16 UNF	AISI 316Ti	20820605H / 50840605	

Important Information!

In case of accidental leakage when transferring hot medium through SPIR STAR hoses the potential for injury exists from escaping fluids at high temperature (up to 150 C or 300F) while under pressure. When used for this purpose SPIR STAR HT series hoses should only be used when there is appropriate protecting devices in place to rule out the possibility of injury. The protecting devices may be removed only (e.g. for repairs) after the hose assembly has been depressurized and cooled to ambient temperature.

----- Additional fittings are available upon request. -----

¹⁾Production related variations up to 5 % are possible

*) The safety factors between the burst pressure and the working pressure as well as the test pressure depend on the operating conditions. For gaseous media the outer cover is to be pinpricked. Regarding the safety factor for gaseous media please contact your local SPIR STAR[®] assembling center. The indicated working pressure refers to the hose only. Depending on the used fitting the permitted working pressure of a hose assembly can be less. We reserve our rights for changes without notice.



Hose Type 8/4HT

High Temperature to 300°F (+150°C)



Applications

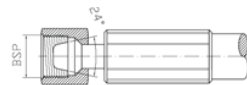
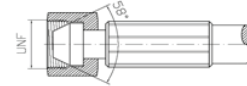
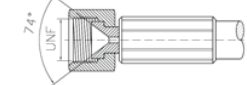
Oil and Gas: Chemical Injection; Gaseous Media Handling; Methanol Injection; Nitrogen Service

Inner Core: **PVDF**
 Pressure Support: **4 layers of high-tensile steel wire**
 Outer Cover: **PVDF**
 Colour: **grey, other colours upon request**
 Temperature: **-4°F to 300°F [-20°C to +150°C]**



Ø ID	Ø OD	Working Pressure*)	Burst Pressure ¹⁾	Min. Bend Radius	Weight	Nipple Ø ID	Sleeve	Sleeve Ø OD
0.31 inch	0.57 inch	15,730 psi	55,100 psi	11.81 inch	0.278 lbs/ft	0.18 inch	10840152 carbon steel	0.80 inch
8.0 mm	14.6 mm	1,085 bar	3,800 bar	300 mm	0.413 kg/m	4.5 mm	10840155 AISI 316 Ti	20.2 mm

Fittings: ID8, Series HB

Description	Size	Material	Part Number	
BSP female swivel	G3/8"	carbon steel carbon steel AISI 316Ti	20840311HB swivel nut / 50860301 swivel nut / 50840305	
Type M female swivel	3/4"x16 UNF	AISI 316Ti AISI 316Ti carbon steel	20840645HB swivel nut / 50840605 swivel nut / 50840601	
JIC female swivel	3/4"x16 UNF	AISI 316Ti AISI 316Ti carbon steel	20840605HB swivel nut / 50840605 swivel nut / 50840601	

Important Information!

In case of accidental leakage when transferring hot medium through SPIR STAR hoses the potential for injury exists from escaping fluids at high temperature (up to 150 C or 300F) while under pressure. When used for this purpose SPIR STAR HT series hoses should only be used when there is appropriate protecting devices in place to rule out the possibility of injury. The protecting devices may be removed only (e.g. for repairs) after the hose assembly has been depressurized and cooled to ambient temperature.

----- Additional fittings are available upon request. -----

¹⁾Production related variations up to 5 % are possible

*) The safety factors between the burst pressure and the working pressure as well as the test pressure depend on the operating conditions. For gaseous media the outer cover is to be pinpricked. Regarding the safety factor for gaseous media please contact your local SPIR STAR[®] assembling center. The indicated working pressure refers to the hose only. Depending on the used fitting the permitted working pressure of a hose assembly can be less. We reserve our rights for changes without notice.



Hose Type 10/4HT

High Temperature to 300°F (+150°C)



Applications

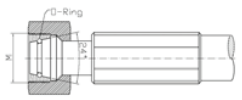
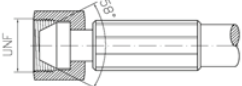
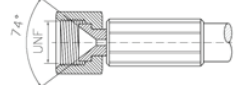
Oil and Gas: Chemical Injection; Gaseous Media Handling;
Methanol Injection; Nitrogen Service



Inner Core: PVDF
Pressure Support: 4 layers of high-tensile steel wire
Outer Cover: PVDF
Colour: grey, other colours upon request
Temperature: -4°F to 300°F [-20°C to +150°C]

Ø ID	Ø OD	Working Pressure*)	Burst Pressure ¹⁾	Min. Bend Radius	Weight	Nipple Ø ID	Sleeve	Sleeve Ø OD
0.39 inch	0.72 inch	15,730 psi	55,100 psi	11.81 inch	0.467 lbs/ft	0.20 inch	11040145 AISI 316Ti	0.98 inch
9.9 mm	18.4 mm	1,085 bar	3,800 bar	300 mm	0.695 kg/m	5.0 mm		24.9 mm

Fittings: ID10, Series H

Description	Size	Material	Part Number	
metric female swivel with O-Ring	M22x1.5	AISI316Ti AISI316Ti carbon steel	21040115H swivel nut / 51060205 swivel nut / 51060201	
Type M female swivel	3/4"x16 UNF	AISI 316Ti AISI 316Ti	21040645H swivel nut / 51320615	
JIC female swivel	3/4"x16 UNF	AISI316Ti	21040605H / 51320615	
JIC female swivel	9/16"x18 UNF	AISI316Ti	21040615H / 51040615	

Important Information!

In case of accidental leakage when transferring hot medium through SPIR STAR hoses the potential for injury exists from escaping fluids at high temperature (up to 150 C or 300F) while under pressure. When used for this purpose SPIR STAR HT series hoses should only be used when there is appropriate protecting devices in place to rule out the possibility of injury. The protecting devices may be removed only (e.g. for repairs) after the hose assembly has been depressurized and cooled to ambient temperature.

----- Additional fittings are available upon request. -----

¹⁾Production related variations up to 5 % are possible

*) The safety factors between the burst pressure and the working pressure as well as the test pressure depend on the operating conditions. For gaseous media the outer cover is to be pinpricked. Regarding the safety factor for gaseous media please contact your local SPIR STAR[®] assembling center. The indicated working pressure refers to the hose only. Depending on the used fitting the permitted working pressure of a hose assembly can be less. We reserve our rights for changes without notice.



Hose Type 13/4HHT

High Temperature to 300°F (+150°C)



Applications

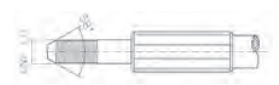
Oil and Gas: Chemical Injection; Gaseous Media Handling;
Methanol Injection; Nitrogen Service

Inner Core: PVDF
Pressure Support: 4 layers of high-tensile steel wire
Outer Cover: PVDF
Colour: grey, other colours upon request
Temperature: -4°F to 300°F [-20°C to +150°C]



Ø ID	Ø OD	Working Pressure*)	Burst Pressure 1)	Min. Bend Radius	Weight	Nipple Ø ID	Sleeve	Sleeve Ø OD
0.50 inch	0.87 inch	15,080 psi	52,490 psi	11.81 inch	0.672lbs/ft	0.30 inch	11340232 carbon steel	1.16 inch
12.8mm	22.0 mm	1,040 bar	3,620 bar	300 mm	1.000 kg/m	7.5 mm		29.5 mm

Fittings: ID13, Series C

Description	Size	Material	Part Number	
HP fitting	9/16"x18 UNF LH	stainless steel	41360214C	
MP fitting	3/4"x16 UNF LH	stainless steel	41360204C	
BSP female swivel	G1/2"	stainless steel AISI 316Ti carbon steel	21360314C swivel nut / 51060315 swivel nut / 51060311	
metric female swivel with O-Ring	M24x1.5	stainless steel AISI 316Ti carbon steel	21360244C swivel nut / 51360205 swivel nut / 51360201	
Type M female swivel	1"x12 UNF	stainless steel AISI 316Ti carbon steel AISI 303	21360644C swivel nut / 51360645 swivel nut / 51360641 swivel nut / 51360643	

Important Information!

In case of accidental leakage when transferring hot medium through SPIR STAR hoses the potential for injury exists from escaping fluids at high temperature (up to 150 C or 300F) while under pressure. When used for this purpose SPIR STAR HT series hoses should only be used when there is appropriate protecting devices in place to rule out the possibility of injury. The protecting devices may be removed only (e.g. for repairs) after the hose assembly has been depressurized and cooled to ambient temperature.

----- Additional fittings are available upon request. -----

*)Production related variations up to 5 % are possible

*) The safety factors between the burst pressure and the working pressure as well as the test pressure depend on the operating conditions. For gaseous media the outer cover is to be pinpricked. Regarding the safety factor for gaseous media please contact your local SPIR STAR® assembling center. The indicated working pressure refers to the hose only. Depending on the used fitting the permitted working pressure of a hose assembly can be less. We reserve our rights for changes without notice.



Hose Type 6/2WM



Applications

Oil and Gas: Chemical Injection; Hydraulic Control; Methanol Injection; Nitrogen Service; Sub Sea Well Control

Inner Core: BESNO P40 TLO (PA11)
Pressure Support: 4 layers of high-tensile steel wire
Outer Cover: Polyamide (PA)
Colour: dark blue, other colours upon request
Temperature: -22°F to 140°F [-30°C to +60°C]



Ø ID	Ø OD	Working Pressure ^{*)}	Burst Pressure ¹⁾	Min. Bend Radius	Weight	Nipple Ø ID	Sleeve	Sleeve Ø OD
0.24 inch	0.48 inch	15,950 psi	40,020 psi	3.74 inch	0.161 lbs/ft	0.16 inch	10630171W carbon steel	0.66 inch
6.0 mm	12.2 mm	1,100 bar	2,760 bar	95 mm	0.240 kg/m	4.0 mm	10630185W AISI 316Ti	16.8 mm

Fittings: ID6, Series M

Description	Size	Material	Part Number	
MP fitting	3/8"x24 UNF LH	AISI 316 Ti	40620305M	
male fitting	1/4"x18 NPT	carbon steel	30620401M	
Type M female swivel	9/16"x18 UNF	AISI 316 Ti AISI 316 Ti	20620645M swivel nut / 50540605	
JIC female swivel	7/16"x20 UNF	AISI 316Ti AISI 316Ti carbon steel	20620605M swivel nut / 50620605 swivel nut / 50620601	
JIC female swivel	9/16"x18 UNF	AISI 316Ti AISI 316Ti carbon steel	20620625M swivel nut / 50540605 swivel nut / 50540601	

----- Additional fittings are available upon request. -----

¹⁾Production related variations up to 5 % are possible

^{*)} The safety factors between the burst pressure and the working pressure as well as the test pressure depend on the operating conditions. For gaseous media the outer cover is to be pinpricked. Regarding the safety factor for gaseous media please contact your local SPIR STAR[®] assembling center. The indicated working pressure refers to the hose only. Depending on the used fitting the permitted working pressure of a hose assembly can be less. We reserve our rights for changes without notice.



Hose Type 6/4M



Applications

Oil and Gas: Chemical Injection; Hydraulic Control; Methanol Injection; Nitrogen Service; Sub Sea Well Control

Inner Core: **BESNO P40 TLO (PA11)**
 Pressure Support: **4 layers of high-tensile steel wire**
 Outer Cover: **Polyamide (PA)**
 Colour: **dark blue, other colours upon request**
 Temperature: **-22°F to 140°F [-30°C to +60°C]**



Ø ID	Ø OD	Working Pressure ^{*)}	Burst Pressure ¹⁾	Min. Bend Radius	Weight	Nipple Ø ID	Sleeve	Sleeve Ø OD
0.24 inch	0.51 inch	15,000 psi	60,030 psi	7.09 inch	0.227 lbs/ft	0.12 inch	10640185W	0.78 inch
6.0 mm	13.0 mm	1,035 bar	4,140 bar	180 mm	0.338 kg/m	3.0 mm	AISI 316Ti	19.9 mm

Fittings: NW6 Series MB

Description	Size	Material	Part Number	
MP fitting	3/8"x24 UNF LH	AISI 316 Ti	40640305MB	
JIC female swivel	9/16"x18 UNF	AISI 316Ti AISI 316Ti	20640645MB swivel nut / 50540605	

----- Additional fittings are available upon request. -----

¹⁾Production related variations up to 5 % are possible

^{*)} The safety factors between the burst pressure and the working pressure as well as the test pressure depend on the operating conditions. For gaseous media the outer cover is to be pinpricked. Regarding the safety factor for gaseous media please contact your local SPIR STAR[®] assembling center. The indicated working pressure refers to the hose only. Depending on the used fitting the permitted working pressure of a hose assembly can be less. We reserve our rights for changes without notice.



Hose Type 8/2WM



Applications

Oil and Gas: Chemical Injection; Hydraulic Control; Methanol Injection; Nitrogen Service; Sub Sea Well Control

Inner Core: **BESNO P40 TLO (PA11)**
 Pressure Support: **4 layers of high-tensile steel wire**
 Outer Cover: **Polyamide (PA)**
 Colour: **dark blue, other colours upon request**
 Temperature: **-22°F to 140°F [-30°C to +60°C]**



Ø ID	Ø OD	Working Pressure ^{*)}	Burst Pressure ¹⁾	Min. Bend Radius	Weight	Nipple Ø ID	Sleeve	Sleeve Ø OD
0.31 inch	0.56 inch	15,080 psi	37,700 psi	4.33 inch	0.211 lbs/ft	0.22 inch	10830181W carbon steel	0.72 inch
8.0 mm	14.3 mm	1,040 bar	2,600 bar	110 mm	0.314 kg/m	5.5 mm	10830185W AISI 316Ti	18.3 mm

Fittings: ID8, Series M

Description	Size	Material	Part Number	
male fitting	3/8"x18 NPT	carbon steel	30820401M	
Type M female swivel	3/4"x16 UNF	AISI 316 Ti	20820645M / 50840605	
JIC female swivel	9/16"x18 UNF	AISI 316Ti	20820655M / 51040615	

----- Additional fittings are available upon request. -----

¹⁾Production related variations up to 5 % are possible

^{*)} The safety factors between the burst pressure and the working pressure as well as the test pressure depend on the operating conditions. For gaseous media the outer cover is to be pinpricked. Regarding the safety factor for gaseous media please contact your local SPIR STAR[®] assembling center. The indicated working pressure refers to the hose only. Depending on the used fitting the permitted working pressure of a hose assembly can be less. We reserve our rights for changes without notice.



Hose Type 10/2WM



Applications

Oil and Gas: Chemical Injection; Hydraulic Control; Methanol Injection; Nitrogen Service; Sub Sea Well Control

Inner Core: **BESNO P40 TLO (PA11)**
 Pressure Support: **4 layers of high-tensile steel wire**
 Outer Cover: **Polyamide (PA)**
 Colour: **dark blue, other colours upon request**
 Temperature: **-22°F to 140°F [-30°C to +60°C]**



Ø ID	Ø OD	Working Pressure ^{*)}	Burst Pressure ¹⁾	Min. Bend Radius	Weight	Nipple Ø ID	Sleeve	Sleeve Ø OD
0.39 inch	0.68 inch	15,950 psi	40,020 psi	4.92 inch	0.313 lbs/ft	0.20 inch	11030185W AISI 316Ti	0.85 inch
10.0 mm	17.2 mm	1,100 bar	2,760 bar	125 mm	0.466 kg/m	5.0 mm		21.5 mm

Fittings: ID10, Series M

Description	Size	Material	Part Number	
Type M female swivel	3/4"x16 UNF	AISI 316Ti	21020645M / 51320615	
JIC female swivel	9/16"x18 UNF	AISI 316Ti	21020605M / 51040615	

----- Additional fittings are available upon request. -----

¹⁾Production related variations up to 5 % are possible

^{*)} The safety factors between the burst pressure and the working pressure as well as the test pressure depend on the operating conditions. For gaseous media the outer cover is to be pinpricked. Regarding the safety factor for gaseous media please contact your local SPIR STAR[®] assembling center. The indicated working pressure refers to the hose only. Depending on the used fitting the permitted working pressure of a hose assembly can be less. We reserve our rights for changes without notice.



Hose Type 13/2WM



Applications

Oil and Gas: Chemical Injection; Hydraulic Control; Methanol Injection; Nitrogen Service; Sub Sea Well Control

Inner Core: **BESNO P40 TLO (PA11)**
 Pressure Support: **4 layers of high-tensile steel wire**
 Outer Cover: **Polyamide (PA)**
 Colour: **dark blue, other colours upon request**
 Temperature: **-22°F to 140°F [-30°C to +60°C]**



Ø ID	Ø OD	Working Pressure ^{*)}	Burst Pressure ¹⁾	Min. Bend Radius	Weight	Nipple Ø ID	Sleeve	Sleeve Ø OD
0.5 inch	0.82 inch	15,080 psi	37,700 psi	5.91 inch	0.423 lbs/ft	0.33 inch	11330181W carbon steel	1.09 inch
12.7 mm	20.8 mm	1,040 bar	2,600 bar	150 mm	0.630 kg/m	8.5 mm	11330185W AISI 316Ti	27.8 mm

Fittings: ID13, Series M

Description	Size	Material	Part Number	
male fitting	1/2"x14 NPT	carbon steel	31320401M	
Type M female swivel	1"x12 UNF	AISI 316Ti	21320645M / 51360645	
JIC female swivel	3/4"x16 UNF	AISI 316Ti	21320615M / 51320615	

----- Additional fittings are available upon request. -----

¹⁾Production related variations up to 5 % are possible

^{*)} The safety factors between the burst pressure and the working pressure as well as the test pressure depend on the operating conditions. For gaseous media the outer cover is to be pinpricked. Regarding the safety factor for gaseous media please contact your local SPIR STAR[®] assembling center. The indicated working pressure refers to the hose only. Depending on the used fitting the permitted working pressure of a hose assembly can be less. We reserve our rights for changes without notice.



Hose Type 25/2KM



Applications

Oil and Gas: Chemical Injection; Hydraulic Control; Methanol Injection; Nitrogen Service; Sub Sea Well Control

Inner Core: BESNO P40 TLO (PA11)
Pressure Support: 2 layers of high-tensile steel wire
 1 braided layer of steel wire
Outer Cover: Polyamide (PA)
Colour: dark blue, other colours upon request
Temperature: -22°F to 140°F [-30°C to +60°C]



Ø ID	Ø OD	Working Pressure*)	Burst Pressure ¹⁾	Min. Bend Radius	Weight	Nipple Ø ID	Sleeve	Sleeve Ø OD
0.93 inch	1.28 inch	7,250 psi	18,120 psi	11.02 inch	0.806 lbs/ft	0.65 inch	12530245 AISI 316Ti	1.65 inch
23.6 mm	32.6 mm	500 bar	1,250 bar	280 mm	1.20 kg/m	16.5 mm		42.0 mm

Fittings: ID25, Series S

Description	Size	Material	Part Number	
Type M female swivel	1 5/16"x12 UN	AISI 316Ti	22530645S / 52530645	
JIC female swivel	1 5/16"x12 UN	AISI 316Ti	22530605S / 52530605	

----- Additional fittings are available upon request. -----

¹⁾Production related variations up to 5 % are possible

*) The safety factors between the burst pressure and the working pressure as well as the test pressure depend on the operating conditions. For gaseous media the outer cover is to be pinpricked. Regarding the safety factor for gaseous media please contact your local SPIR STAR® assembling center. The indicated working pressure refers to the hose only. Depending on the used fitting the permitted working pressure of a hose assembly can be less. We reserve our rights for changes without notice.



Hose Type 5/4PPA



Applications

Oil and Gas: Chemical Injection; Gaseous Media Handling; Hydraulic Control; Methanol Injection; Nitrogen Service; Sub Sea Well Control

Inner Core: **PVDF**
 Pressure Support: **4 layers of high-tensile steel wire**
 Outer Cover: **Polyamide (PA)**
 Colour: **dark green, other colours upon request**
 Temperature: **-4°F to 176°F [-20°C to +80°C]**



Ø ID	Ø OD	Working Pressure*)	Burst Pressure ¹)	Min. Bend Radius	Weight	Nipple Ø ID	Sleeve	Sleeve Ø OD
0.20 inch	0.44 inch	18,630 psi	65,250 psi	9.84 inch	0.172 lbs/ft	0.10 inch	10540101 carbon steel	0.59 inch
5.0 mm	11.2 mm	1,285 bar	4,500 bar	250 mm	0.256 kg/m	2.5 mm	10540105 AISI 316Ti	15.0 mm

Fittings: ID5, Series B and Y

Description	Size	Material	Part Number	
HP fitting	1/4"x28 UNF LH	carbon steel	40540211B	
HP fitting	1/4"x28 UNF LH	AISI 316Ti	40540215B	
HP fitting BLAST PRO ²)	1/4"x28 UNF LH	stainless steel carbon steel	40540234Y sleeve / 10540232	
HP fitting	3/8"x24 UNF LH	AISI 316Ti	40540205B	
HP fitting BLAST PRO ²)	3/8"x24 UNF LH	stainless steel carbon steel	40540214Y sleeve / 10540232	
HP fitting	9/16"x18 UNF LH	AISI 316Ti	40540225B	
HP female BLAST PRO ²)	1/4"x28 UNF LH	stainless steel carbon steel	40540254Y sleeve / 10540232	
HP female BLAST PRO ²)	3/8"x24 UNF	stainless steel carbon steel	40540244Y sleeve / 10540232	
male fitting	1/4"x18 NPTF	carbon steel	30540401B	
male fitting with 60° cone	G1/4"	carbon steel	30540301B	
male fitting for USIT®-Ring	G1/4"	carbon steel	30540351B	
male fitting special part 100° cone	G1/4"	carbon steel	30540361B	
BSP female swivel	G1/4"	carbon steel	20540301B / 50540301	
BSP female swivel	G1/4"	AISI 316Ti	20540305B / 50540305	
metric female swivel with O-Ring	M20x1.5	carbon steel	20540041B / 50860201	
Type M female swivel	9/16"x18 UNF	carbon steel	20540641B / 50540601	
Type M female swivel	9/16"x18 UNF	AISI 316Ti	20540645B / 50540605	
metric female swivel	M14x1.5	carbon steel	20540101B / 50540101	

---- Additional fittings are available upon request. ----

¹) Production related variations up to 5 % are possible

²) BLAST PRO fittings must only be used for tube cleaning operation inside the tube. They are not designed for the use outside of tubes.

*) The safety factors between the burst pressure and the working pressure as well as the test pressure depend on the operating conditions. For gaseous media the outer cover is to be pinpricked. Regarding the safety factor for gaseous media please contact your local SPIR STAR® assembling center. The indicated working pressure refers to the hose only. Depending on the used fitting the permitted working pressure of a hose assembly can be less. We reserve our rights for changes without notice.



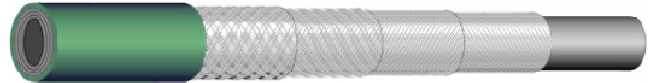
Hose Type 6/2WPPA



Applications

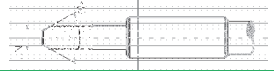
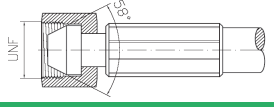
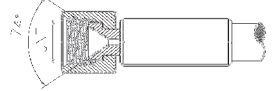
Oil and Gas: Chemical Injection; Gaseous Media Handling; Hydraulic Control; Methanol Injection; Nitrogen Service; Sub Sea Well Control

Inner Core: **PVDF**
 Pressure Support: **4 layers of high-tensile steel wire**
 Outer Cover: **Polyamide (PA)**
 Colour: **dark green, other colours upon request**
 Temperature: **-4°F to 176°F [-20°C to +80°C]**



Ø ID	Ø OD	Working Pressure*)	Burst Pressure ¹⁾	Min. Bend Radius	Weight	Nipple Ø ID	Sleeve	Sleeve Ø OD
0.25 inch	0.48 inch	15,000 psi	46,400 psi	5.91 inch	0.179 lbs/ft	0.14 inch	10640115 AISI 316Ti	0.67 inch
6.3 mm	12.2 mm	1,035 bar	3,200 bar	150 mm	0.266 kg/m	3.5 mm		17.1 mm

Fittings: ID6, Series HB

Description	Size	Material	Part Number	
HP fitting	3/8"x24 UNF LH	AISI 316Ti	40640205HB	
Type M female swivel	9/16"x18 UNF	AISI 316Ti	20640645HB / S5063615	
JIC female swivel	9/16"x18 UNF	AISI 316Ti	20640655HB / S5063615	

----- Additional fittings are available upon request. -----

¹⁾ Production related variations up to 5 % are possible

*) The safety factors between the burst pressure and the working pressure as well as the test pressure depend on the operating conditions. For gaseous media the outer cover is to be pinpricked. Regarding the safety factor for gaseous media please contact your local SPIR STAR[®] assembling center. The indicated working pressure refers to the hose only. Depending on the used fitting the permitted working pressure of a hose assembly can be less. We reserve our rights for changes without notice.



Hose Type 6/4PPA



Applications

Oil and Gas: Chemical Injection; Gaseous Media Handling; Hydraulic Control; Methanol Injection; Nitrogen Service; Sub Sea Well Control

Inner Core: PVDF
Pressure Support: 4 layers of high-tensile steel wire
Outer Cover: Polyamide (PA)
Colour: dark green, other colours upon request
Temperature: -4°F to 176°F [-20°C to +80°C]



Ø ID	Ø OD	Working Pressure*)	Burst Pressure ¹⁾	Min. Bend Radius	Weight	Nipple Ø ID	Sleeve	Sleeve Ø OD
0.25 inch	0.50 inch	17,110 psi	60,030 psi	11.02 inch	0.205 lbs/ft	0.14 inch	10640101 carbon steel	0.65 inch
6.3mm	12.6 mm	1,180 bar	4,140 bar	280 mm	0.305 kg/m	3.5 mm	10640105 AISI 316Ti	16.4 mm

Fittings: ID6, Series B and Y

Description	Size	Material	Part Number	
HP fitting	3/8"x24 UNF LH	AISI 316Ti	40640205B	
HP fitting BLAST PRO ²⁾	3/8"x24 UNF LH	stainless steel carbon steel	40640214Y sleeve / 10640232	
HP female BLAST PRO ²⁾	3/8"x24 UNF	stainless steel carbon steel	40640234Y sleeve / 10640232	
male fitting	1/4"x18 NPTF	carbon steel	30640401B	
male fitting with 60° cone	G1/4"	carbon steel	30640301B	
BSP female swivel	G1/4"	carbon steel carbon steel AISI 316 Ti	20640301B swivel nut / 50540301 swivel nut / 50540305	
metric female swivel with O-Ring	M18x1.5	carbon steel	20640241B / 50620201	
Type M female swivel	9/16"x18 UNF	carbon steel	20640641B / 50540601	
Type M female swivel	9/16"x18 UNF	AISI 316Ti	20640645B / 50540605	
JIC female swivel	9/16"x18 UNF	AISI 316Ti	20640655B / 50540605	

----- Additional fittings are available upon request. -----

¹⁾ Production related variations up to 5 % are possible

²⁾ BLAST PRO fittings must only be used for tube cleaning operation inside the tube. They are not designed for the use outside of tubes.

*) The safety factors between the burst pressure and the working pressure as well as the test pressure depend on the operating conditions. For gaseous media the outer cover is to be pinpricked. Regarding the safety factor for gaseous media please contact your local SPIR STAR® assembling center. The indicated working pressure refers to the hose only. Depending on the used fitting the permitted working pressure of a hose assembly can be less. We reserve our rights for changes without notice.



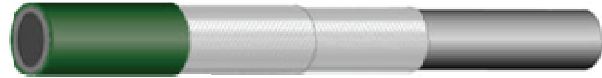
Hose Type 8/2PPA



Applications

Oil and Gas: Chemical Injection; Gaseous Media Handling;
Hydraulic Control; Methanol Injection; Nitrogen Service; Sub Sea
Well Control

Inner Core: PVDF
Pressure Support: 2 layers of high-tensile steel wire
Outer Cover: Polyamide (PA)
Colour: dark green, other colours upon request
Temperature: -4°F to 176°F [-20°C to +80°C]



Ø ID	Ø OD	Working Pressure*)	Burst Pressure 1)	Min. Bend Radius	Weight	Nipple Ø ID	Sleeve	Sleeve Ø OD
0.32 inch	0.52 inch	8,260 psi	29,000 psi	11.81 inch	0.155 lbs/ft	0.22 inch	10820101 carbon steel	0.70 inch
8.1 mm	13.3 mm	570 bar	2,000 bar	300 mm	0.230 kg/m	5.5 mm		17.8 mm

Fittings: ID8, Series A and X

Description	Size	Material	Part Number	
male fitting one piece waterblast	1/4"x18 NPTF	carbon steel	30820461X / 30820441/1X	
male fitting one piece waterblast	3/8"x18 NPTF	carbon steel	30820441X / 30820441/1X	
male fitting	1/4"x18 NPTF	carbon steel	30820411A	
male fitting	3/8"x18 NPTF	carbon steel	30820401A	
male fitting DIN3852 T2 form A	G1/4"	carbon steel	30820351A	
male fitting with 60° cone	G1/4"	carbon steel	30820321A	
male fitting flat seal nozzle type	G1/4"	carbon steel	30820381A	
male fitting DIN3852 T2 form A	G3/8"	carbon steel	30820341A	
male fitting with 60° cone	G3/8"	carbon steel	30820301A	
BSP female swivel	G3/8"	carbon steel	20820301A / 50860301	
metric female swivel with O-Ring	M20x1.5	carbon steel	20820201A / 50860201	
metric female swivel with O-Ring	M24x1.5	carbon steel	20820042A / 50820241	
Type M female swivel	3/4"x16 UNF	AISI 316Ti AISI 316Ti carbon steel	20820645A swivel nut / 50840605 swivel nut / 50840601	
JIC female swivel	9/16"x18 UNF	carbon steel	20820601A / 50820601	
JIC female swivel	9/16"x18 UNF	AISI 316 Ti AISI 316 Ti	20820605A swivel nut / 50820605	

----- Additional fittings are available upon request. -----

*) Production related variations up to 5 % are possible

*) The safety factors between the burst pressure and the working pressure as well as the test pressure depend on the operating conditions. For gaseous media the outer cover is to be pinpricked. Regarding the safety factor for gaseous media please contact your local SPIR STAR® assembling center. The indicated working pressure refers to the hose only. Depending on the used fitting the permitted working pressure of a hose assembly can be less. We reserve our rights for changes without notice.



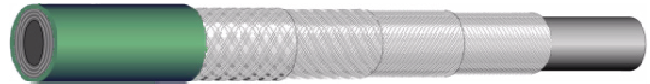
Hose Type 8/2WPPA



Applications

Oil and Gas: Chemical Injection; Gaseous Media Handling; Hydraulic Control; Methanol Injection; Nitrogen Service; Sub Sea Well Control

Inner Core: PVDF
Pressure Support: 4 layers of high-tensile steel wire
Outer Cover: Polyamide (PA)
Colour: dark green, other colours upon request
Temperature: -4°F to 176°F [-20°C to +80°C]



Ø ID	Ø OD	Working Pressure*)	Burst Pressure 1)	Min. Bend Radius	Weight	Nipple Ø ID	Sleeve	Sleeve Ø OD
0.31 inch	0.57 inch	11,450 psi	40,000 psi	9.84 inch	0.242 lbs/ft	0.22 inch	10830191W carbon steel	0.72 inch
8.0 mm	14.5 mm	790 bar	2,760 bar	250 mm	0.360 kg/m	5.5 mm	10830195W AISI 316Ti	18.3 mm

Fittings: ID8, Series A

Description	Size	Material	Part Number	
male fitting	1/4"x18 NPTF	carbon steel	30820411A	
male fitting	3/8"x18 NPTF	carbon steel	30820401A	
male fitting DIN3852 T2 form A	G1/4"	carbon steel	30820351A	
male fitting with 60° cone	G1/4"	carbon steel	30820321A	
male fitting flat seal nozzle type	G1/4"	carbon steel	30820381A	
male fitting DIN3852 T2 form A	G3/8"	carbon steel	30820341A	
male fitting with 60° cone	G3/8"	carbon steel	30820301A	
BSP female swivel	G3/8"	carbon steel	20820301A / 50860301	
metric female swivel with O-Ring	M20x1.5	carbon steel	20820201A / 50860201	
metric female swivel with O-Ring	M24x1.5	carbon steel	20820042A / 50820241	
Type M female swivel	3/4"x16 UNF	AISI 316Ti AISI 316Ti carbon steel	20820645A swivel nut / 50840605 swivel nut / 50840601	
JIC female swivel	9/16"x18 UNF	carbon steel	20820601A / 50820601	
JIC female swivel	9/16"x18 UNF	AISI 316 Ti AISI 316 Ti	20820605A swivel nut / 50820605	

----- Additional fittings are available upon request. -----

1) Production related variations up to 5 % are possible

2) BLAST PRO fittings must only be used for tube cleaning operation inside the tube. They are not designed for the use outside of tubes.

*) The safety factors between the burst pressure and the working pressure as well as the test pressure depend on the operating conditions. For gaseous media the outer cover is to be pinpricked. Regarding the safety factor for gaseous media please contact your local SPIR STAR® assembling center. The indicated working pressure refers to the hose only. Depending on the used fitting the permitted working pressure of a hose assembly can be less. We reserve our rights for changes without notice.



Hose Type 8/4PPA



Applications

Oil and Gas: Chemical Injection; Gaseous Media Handling; Hydraulic Control; Methanol Injection; Nitrogen Service; Sub Sea Well Control

Inner Core: **PVDF**
 Pressure Support: **4 layers of high-tensile steel wire**
 Outer Cover: **Polyamide (PA)**
 Colour: **dark green, other colours upon request**
 Temperature: **-4°F to 176°F [-20°C to +80°C]**



Ø ID	Ø OD	Working Pressure*)	Burst Pressure 1)	Min. Bend Radius	Weight	Nipple Ø ID	Sleeve	Sleeve Ø OD
0.31 inch	0.58 inch	15,730 psi	55,100 psi	11.81 inch	0.282 lbs/ft	0.18 inch	10840102 carbon steel	0.80 inch
8.0 mm	14.7 mm	1,085 bar	3,800 bar	300 mm	0.420 kg/m	4.5 mm	10840105 AISI 316Ti	20.3 mm

Fittings: ID8, Series B and Y

Description	Size	Material	Part Number	
HP fitting	9/16"x18 UNF LH	AISI 316Ti	40840205B	
MP fitting BLAST PRO 2)	9/16"x18 UNF LH	stainless steel carbon steel	40840244Y sleeve / 10840142	
male fitting	1/4"x18 NPTF	carbon steel	30840411B	
male fitting	3/8"x18 NPTF	carbon steel	30840401B	
male fitting	G1/4"	carbon steel	30840341B	
male fitting special part 100° cone	G1/4"	AISI 316 Ti	30840365B	
male fitting with 60° cone	G3/8"	carbon steel	30840301B	
BSP female swivel	G3/8"	carbon steel	20840301B / 50860301	
BSP female swivel	G3/8"	AISI 316Ti	20840305B / 50840305	
metric female swivel with O-Ring	M22x1.5	carbon steel carbon steel AISI 316Ti	20840231B swivel nut / 51060201 swivel nut / 51060205	
metric female swivel with O-Ring	M24x1.5	carbon steel carbon steel AISI 316 Ti	20840221B swivel nut / 51360201 swivel nut / 51360205	
Type M female swivel	3/4"x16 UNF	carbon steel	20840641B / 50840601	
Type M female swivel	3/4"x16 UNF	AISI 316Ti	20840645B / 50840605	
JIC female swivel	3/4"x16 UNF	AISI 316Ti	20840605B / 50840605	

----- Additional fittings are available upon request. -----

1) Production related variations up to 5 % are possible

2) BLAST PRO fittings must only be used for tube cleaning operation inside the tube. They are not designed for the use outside of tubes.

*) The safety factors between the burst pressure and the working pressure as well as the test pressure depend on the operating conditions. For gaseous media the outer cover is to be pinpricked. Regarding the safety factor for gaseous media please contact your local SPIR STAR® assembling center. The indicated working pressure refers to the hose only. Depending on the used fitting the permitted working pressure of a hose assembly can be less. We reserve our rights for changes without notice.



Hose Type 10/4PPA



Applications

Oil and Gas: Chemical Injection; Gaseous Media Handling; Hydraulic Control; Methanol Injection; Nitrogen Service; Sub Sea Well Control

Inner Core: PVDF
Pressure Support: 4 layers of high-tensile steel wire
Outer Cover: Polyamide (PA)
Colour: dark green, other colours upon request
Temperature: -4°F to 176°F [-20°C to +80°C]



Ø ID	Ø OD	Working Pressure*)	Burst Pressure ¹⁾	Min. Bend Radius	Weight	Nipple Ø ID	Sleeve	Sleeve Ø OD
0.39 inch	0.72 inch	17,110 psi	60,030 psi	11.81 inch	0.457 lbs/ft	0.22 inch	11040102 carbon steel	0.91 inch
10.0 mm	18.4 mm	1,180 bar	4,140 bar	300 mm	0.680 kg/m	5.5 mm	11040105 AISI 316 Ti	23.1 mm

Fittings: ID10, Series B,C and Y

Description	Size	Material	Part Number	
HP fitting	9/16"x18 UNF LH	stainless steel	41060204C	
MP fitting BLAST PRO ²⁾	9/16"x18 UNF LH	stainless steel carbon steel	41040244Y sleeve / 11040232	
male fitting with 60° cone	G3/8"	carbon steel	31060311B	
BSP female swivel	G1/2"	stainless steel AISI 316Ti carbon steel	21060304C swivel nut / 51060315 swivel nut / 51060311	
metric female swivel with O-Ring	M22x1.5	stainless steel AISI 316Ti carbon steel	21060204C swivel nut / 51060205 swivel nut / 51060201	
metric female swivel with O-Ring	M24x1.5	stainless steel AISI 316Ti	21060224C swivel nut / 51360205	
metric female swivel with O-Ring	M24x1.5	carbon steel	21060221B / 51360201	
Type M female swivel	3/4"x16 UNF	AISI 316Ti AISI 316Ti	21040645B swivel nut / 51320615	

----- Additional fittings are available upon request. -----

¹⁾ Production related variations up to 5 % are possible

²⁾ BLAST PRO fittings must only be used for tube cleaning operation inside the tube. They are not designed for the use outside of tubes.

^{*)} The safety factors between the burst pressure and the working pressure as well as the test pressure depend on the operating conditions. For gaseous media the outer cover is to be pinpricked. Regarding the safety factor for gaseous media please contact your local SPIR STAR[®] assembling center. The indicated working pressure refers to the hose only. Depending on the used fitting the permitted working pressure of a hose assembly can be less. We reserve our rights for changes without notice.



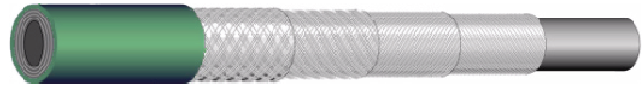
Hose Type 13/2WPPA



Applications

Oil and Gas: Oilfield Well Service; Grease Injection; Hydraulic Control;
Nitrogen Service; Chemical Injection; Methanol Injection;
Gaseous Media Handling; Sub Sea Well Control

Inner Core: PVDF
Pressure Support: 4 layers of high-tensile steel wire
Outer Cover: Polyamide (PA)
Colour: dark green, other colours upon request
Temperature: -4°F to 176°F [-20°C to +80°C]



Ø ID	Ø OD	Working Pressure*)	Burst Pressure ¹⁾	Min. Bend Radius	Weight	Nipple Ø ID	Sleeve	Sleeve Ø OD
0.50 inch	0.82 inch	11,450 psi	40,020 psi	11.81 inch	0.450 lbs/ft	0.33 inch	11330191W carbon steel	1.04 inch
12.8 mm	20.8 mm	790 bar	2,760 bar	300 mm	0.670 kg/m	8.5 mm	11330195W AISI 316Ti	26.50 mm

Fittings: ID13, Series A

Description	Size	Material	Part Number	
male fitting	1/2"x14 NPTF	carbon steel AISI 316Ti	31320401A 31320405A	
BSP female swivel	G1/2"	carbon steel carbon steel	21320311A swivel nut / 51060311	
BSP female swivel	G1/2"	AISI 316Ti AISI 316Ti	21320315A swivel nut / 51060315	
metric female swivel with O-Ring	M22x1.5	carbon steel	21320101A swivel nut / 51360221	
metric female swivel with O-Ring	M24x1.5	carbon steel carbon steel	21320241A swivel nut / 51360201	
metric female swivel with O-Ring	M24x1.5	AISI 316Ti AISI 316Ti	21320245A swivel nut / 51360205	
Type M female swivel	1"x12 UNF	carbon steel	21320641A swivel nut / 51360641	
Type M female swivel	1"x12 UNF	AISI 316Ti AISI 316Ti AISI 303	21320645A swivel nut / 51360645 swivel nut / 51360643	

----- Additional fittings are available upon request. -----

¹⁾ Production related variations up to 5 % are possible

*) The safety factors between the burst pressure and the working pressure as well as the test pressure depend on the operating conditions. For gaseous media the outer cover is to be pinpricked. Regarding the safety factor for gaseous media please contact your local SPIR STAR[®] assembling center. The indicated working pressure refers to the hose only. Depending on the used fitting the permitted working pressure of a hose assembly can be less. We reserve our rights for changes without notice.



Hose Type 13/4HPPA



Applications

Oil and Gas: Chemical Injection; Gaseous Media Handling; Hydraulic Control; Methanol Injection; Nitrogen Service; Sub Sea Well Control

Inner Core: **PVDF**
 Pressure Support: **4 layers of high-tensile steel wire**
 Outer Cover: **Polyamide (PA)**
 Colour: **dark green, other colours upon request**
 Temperature: **-4°F to 176°F [-20°C to +80°C]**



Ø ID	Ø OD	Working Pressure*)	Burst Pressure ¹⁾	Min. Bend Radius	Weight	Nipple Ø ID	Sleeve	Sleeve Ø OD
0.50 inch	0.87 inch	15,080 psi	52,490 psi	11.81 inch	0.672 lbs/ft	0.30 inch	11340232 carbon steel	1.16 inch
12.8mm	22.0 mm	1,040 bar	3,620 bar	300 mm	1.000 kg/m	7.5 mm		29.5 mm

Fittings: ID13, Series C

Description	Size	Material	Part Number	
HP fitting	9/16"x18 UNF LH	stainless steel	41360214C	
MP fitting	3/4"x16 UNF LH	stainless steel	41360204C	
metric female swivel with O-Ring	M24x1.5	stainless steel AISI 316Ti carbon steel	21360244C swivel nut / 51360205 swivel nut / 51360201	
Type M female swivel	1"x12 UNF	stainless steel AISI 316Ti carbon steel AISI 303	21360644C swivel nut / 51360645 swivel nut / 51360641 swivel nut / 51360643	

----- Additional fittings are available upon request. -----

¹⁾Production related variations up to 5 % are possible

*) The safety factors between the burst pressure and the working pressure as well as the test pressure depend on the operating conditions. For gaseous media the outer cover is to be pinpricked. Regarding the safety factor for gaseous media please contact your local SPIR STAR[®] assembling center. The indicated working pressure refers to the hose only. Depending on the used fitting the permitted working pressure of a hose assembly can be less. We reserve our rights for changes without notice.



Hose Type 16/4PPA



Applications

Oil and Gas: Chemical Injection; Gaseous Media Handling; Grease Injection; Hydraulic Control; Nitrogen Service

Inner Core: PVDF
Pressure Support: 4 layers of high-tensile steel wire
Outer Cover: Polyamide (PA)
Colour: dark green, other colours upon request
Temperature: -4°F to 176°F [-20°C to +80°C]



Ø ID	Ø OD	Working Pressure ^{*)}	Burst Pressure ¹⁾	Min. Bend Radius	Weight	Nipple Ø ID	Sleeve	Sleeve Ø OD
0.63 inch	1.00 inch	11,450 psi	40,020 psi	15.75 inch	0.726 lbs/ft	0.41 inch	11640112 carbon steel	1.29 inch
16.0 mm	25.5 mm	790 bar	2,760 bar	400 mm	1.082 kg/m	10.5 mm	11640115 AISI 316Ti	32.7 mm

Fittings: ID16, Series B

Description	Size	Material	Part Number	
MP fitting	3/4"x16 UNF LH	AISI 316Ti	41640305B	
male fitting	3/4"x14 NPT	carbon steel	31640401B	
metric female swivel with O-Ring	M30x2	carbon steel	21640101B / 51640201	
Type M female swivel	1 5/16"x12 UN	AISI 316Ti	21640605B / 52040645	
JIC female swivel	1 1/16"x12 UN	AISI 316Ti	21640645B / 51640605	

----- Additional fittings are available upon request. -----

¹⁾Production related variations up to 5 % are possible

^{*)} The safety factors between the burst pressure and the working pressure as well as the test pressure depend on the operating conditions. For gaseous media the outer cover is to be pinpricked. Regarding the safety factor for gaseous media please contact your local SPIR STAR[®] assembling center. The indicated working pressure refers to the hose only. Depending on the used fitting the permitted working pressure of a hose assembly can be less. We reserve our rights for changes without notice.



Hose Type 20/4PPA



Applications

Oil and Gas: Chemical Injection; Gaseous Media Handling; Hydraulic Control; Methanol Injection; Nitrogen Service; Sub Sea Well Control

Inner Core: **PVDF**
 Pressure Support: **4 layers of high-tensile steel wire**
 Outer Cover: **Polyamide (PA)**
 Colour: **dark green, other colours upon request**
 Temperature: **-4°F to 176°F [-20°C to +80°C]**



Ø ID	Ø OD	Working Pressure*)	Burst Pressure ¹⁾	Min. Bend Radius	Weight	Nipple Ø ID	Sleeve	Sleeve Ø OD
0.74 inch	1.13 inch	11,230 psi	40,020 psi	19.69 inch	0.907 lbs/ft	0.51 inch	12040131 carbon steel	1.45 inch
18.8 mm	28.8 mm	775 bar	2,760 bar	500 mm	1.350 kg/m	13.0 mm		36.9 mm

Fittings: ID 20, Series C

Description	Size	Material	Part Number	
MP fitting	1"x14 UNS LH	stainless steel	42060304C	
metric female swivel with O-Ring	M36x2	carbon steel	22060202C / 52040211	
Type M female swivel	1 5/16"x12 UN	stainless steel AISI 316Ti	22060644C swivel nut / 52040645	

----- Additional fittings are available upon request. -----

¹⁾Production related variations up to 5 % are possible

*) The safety factors between the burst pressure and the working pressure as well as the test pressure depend on the operating conditions. For gaseous media the outer cover is to be pinpricked. Regarding the safety factor for gaseous media please contact your local SPIR STAR[®] assembling center. The indicated working pressure refers to the hose only. Depending on the used fitting the permitted working pressure of a hose assembly can be less. We reserve our rights for changes without notice.



Hose Type 20/6PPA



Applications

Oil and Gas: Chemical Injection; Gaseous Media Handling; Hydraulic Control; Methanol Injection; Nitrogen Service; Sub Sea Well Control

Inner Core: **PVDF**
 Pressure Support: **6 layers of high-tensile steel wire**
 Outer Cover: **Polyamide (PA)**
 Colour: **dark green, other colours upon request**
 Temperature: **-4°F to 176°F [-20°C to +80°C]**



Ø ID	Ø OD	Working Pressure*)	Burst Pressure ¹⁾	Min. Bend Radius	Weight	Nipple Ø ID	Sleeve	Sleeve Ø OD
0.74 inch	1.29 inch	15,080 psi	52,490 psi	23.62 inch	1.458 lbs/ft	0.51 inch	12060111 carbon steel	1.7 inch
18.8 mm	32.8 mm	1,040 bar	3,620 bar	600 mm	2.170 kg/m	13.0 mm		43.1 mm

Fittings: ID 20, Series C

Description	Size	Material	Part Number	
MP fitting	1"x14 UNS LH	stainless steel	42060304C	
metric female swivel with O-Ring	M36x2	carbon steel	22060202C / 52040201	
Type M female swivel	1 5/16"x12 UN	stainless steel AISI 316Ti	22060644C swivel nut / 52040645	

----- Additional fittings are available upon request. -----

¹⁾Production related variations up to 5 % are possible

*) The safety factors between the burst pressure and the working pressure as well as the test pressure depend on the operating conditions. For gaseous media the outer cover is to be pinpricked. Regarding the safety factor for gaseous media please contact your local SPIR STAR[®] assembling center. The indicated working pressure refers to the hose only. Depending on the used fitting the permitted working pressure of a hose assembly can be less. We reserve our rights for changes without notice.



Hose Type 25/4PPA



Applications

Oil and Gas: Chemical Injection; Gaseous Media Handling; Hydraulic Control; Methanol Injection; Nitrogen Service; Sub Sea Well Control

Inner Core: PVDF
 Pressure Support: 4 layers of high-tensile steel wire
 Outer Cover: Polyamide (PA)
 Colour: dark green, other colours upon request
 Temperature: -4°F to 176°F [-20°C to +80°C]



Ø ID	Ø OD	Working Pressure*)	Burst Pressure ¹⁾	Min. Bend Radius	Weight	Nipple Ø ID	Sleeve	Sleeve Ø OD
0.98 inch	1.43 inch	10,000 psi	32,620 psi	19.69 inch	1.223 lbs/ft	0.75 inch	12540235 AISI 316Ti	1.81 inch
24.8 mm	36.3 mm	690 bar	2,250 bar	500 mm	1.820 kg/m	19.0 mm		45.9 mm

Fittings: ID 25, Series B

Description	Size	Material	Part Number	
male fitting	1"x11 ½ NPTF	AISI 316Ti	32540405B	
metric female swivel with O-Ring	M42x2	AISI 316Ti carbon steel	22540205B swivel nut / 52520201	
Type M female swivel	1 5/16"x12 UN	AISI 316Ti	22540645B / 52530645	
JIC female swivel	1 5/16"x12 UN	AISI 316Ti	22540605B / 52530605	

----- Additional fittings are available upon request. -----

¹⁾Production related variations up to 5 % are possible

*) The safety factors between the burst pressure and the working pressure as well as the test pressure depend on the operating conditions. For gaseous media the outer cover is to be pinpricked. Regarding the safety factor for gaseous media please contact your local SPIR STAR[®] assembling center. The indicated working pressure refers to the hose only. Depending on the used fitting the permitted working pressure of a hose assembly can be less. We reserve our rights for changes without notice.



Hose Type 8/2WR

Heavy duty outer cover for rough service



Applications

Waterblasting: Rotating Cleaning Device for Waterblast; Large Bore Pipe Cleaning; Tank and Vessel Cleaning; Waterblast Supply Hose

Hydraulics: Pressure Testing for Valves, Tooling and Control Panels
Oil and Gas: Gaseous Media Handling; Grease Injection; Nitrogen Service



Inner Core: **Polyamide (PA)**
 Pressure Support: **4 layers of high-tensile steel wire**
 Outer Cover: **Polyurethane (PUR)**
 Colour: **grey, other colours upon request**
 Temperature: **-22°F to 140°F [-30°C to +60°C]**

Ø ID	Ø OD	Working Pressure*)	Burst Pressure ¹⁾	Min. Bend Radius	Weight	Nipple Ø ID	Sleeve	Sleeve Ø OD
0.31 inch	0.63 inch	15,080 psi	37,700 psi	4.33 inch	0.245 lbs/ft	0.18 inch	10830201WR	0.84 inch
8.0 mm	16.0 mm	1,040 bar	2,600 bar	110 mm	0.364 kg/m	4.5 mm	carbon steel	21.3 mm

Fittings: ID8, Series B

Description	Size	Material	Part Number	
HP fitting	9/16"x18 UNF LH	AISI 316Ti	40840205B	
male fitting	1/4"x18 NPTF	carbon steel	30840411B	
male fitting	3/8"x18 NPTF	carbon steel	30840401B	
male fitting	G1/4"	carbon steel	30840341B	
male fitting special part 100° cone	G1/4"	AISI 316Ti	30840365B	
male fitting with 60° cone	G3/8"	carbon steel	30840301B	
BSP female swivel	G3/8"	carbon steel	20840301B / 50860301	
BSP female swivel	G3/8"	AISI 316Ti	20840305B / 50840305	
metric female swivel with O-Ring	M22x1.5	carbon steel carbon steel AISI 316Ti	20840231B swivel nut / 51060201 swivel nut / 51060205	
metric female swivel with O-Ring	M24x1.5	carbon steel carbon steel AISI 316Ti	20840221B swivel nut / 51360201 swivel nut / 51360205	
Type M female swivel	3/4"x16 UNF	carbon steel	20840641B / 50840601	
Type M female swivel	3/4"x16 UNF	AISI 316Ti	20840645B / 50840605	
JIC female swivel	3/4"x16 UNF	AISI 316Ti	20840605B / 50840605	

----- Additional fittings are available upon request. -----

¹⁾ Production related variations up to 5 % are possible

*) The safety factors between the burst pressure and the working pressure as well as the test pressure depend on the operating conditions. For gaseous media the outer cover is to be pinpricked. Regarding the safety factor for gaseous media please contact your local SPIR STAR® assembling center. The indicated working pressure refers to the hose only. Depending on the used fitting the permitted working pressure of a hose assembly can be less. We reserve our rights for changes without notice.



Hose Type 13/2WR

Silver Mongoose

Heavy duty outer cover for rough service



Applications

Waterblasting: Tank and Vessel Cleaning; Large Bore Pipe Cleaning; Rotating Cleaning Device for Waterblast; Waterblast Supply Hose

Hydraulics: Pressure Testing for Valves, Tooling and Control Panels

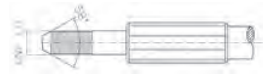
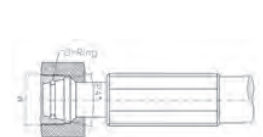
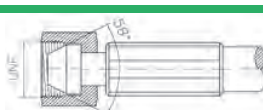
Oil and Gas: Gaseous Media Handling; Grease Injection; Nitrogen Service



Inner Core:	Polyamide (PA)
Pressure Support:	4 layers of high-tensile steel wire
Outer Cover:	Polyurethane (PUR)
Colour:	grey, other colours upon request
Temperature:	-22°F to 140°F [-30°C to +60°C]

Ø ID	Ø OD	Working Pressure*)	Burst Pressure ¹⁾	Min. Bend Radius	Weight	Nipple Ø ID	Sleeve	Sleeve Ø OD
0.50 inch	0.87 inch	15,080 psi	37,700 psi	5.91 inch	0.396 lbs/ft	0.30 inch	11330206WR carbon steel	1.08 inch
12.8mm	22.2 mm	1,040 bar	2,600 bar	150 mm	0.590 kg/m	7.5 mm	11330205WR AISI 316Ti	27.5 mm

Fittings: ID13, Series O

Description	Size	Material	Part Number	
MP fitting	9/16"x18UNF LH	AISI 316Ti	41360205O	
male fitting	1/2"x14 NPTF	carbon steel	31360401O	
male fitting	1/2"x14 NPTF	AISI 316Ti	31360405O	
BSP female swivel	G1/2"	carbon steel	21360332O / 51060311	
BSP female swivel	G1/2"	AISI 316Ti	21360335O / 51060315	
metric female swivel with O-Ring	M22x1.5	carbon steel	21360122O / 51360221	
metric female swivel with O-Ring	M24x1.5	carbon steel	21360242O / 51360201	
metric female swivel with O-Ring	M24x1.5	AISI 316Ti	21360245O / 51360205	
Type M female swivel	1"x12 UNF	carbon steel	21360642O / 51360641	
Type M female swivel	1"x12 UNF	AISI 316Ti	21360645O / 51360645	

----- Additional fittings are available upon request. -----

¹⁾ Production related variations up to 5 % are possible

*) The safety factors between the burst pressure and the working pressure as well as the test pressure depend on the operating conditions. For gaseous media the outer cover is to be pinpricked. Regarding the safety factor for gaseous media please contact your local SPIR STAR[®] assembling center. The indicated working pressure refers to the hose only. Depending on the used fitting the permitted working pressure of a hose assembly can be less. We reserve our rights for changes without notice.



Hose Type 5mmUHP



Applications

Hydraulics: Pressure Testing for Valves, Tooling and Control Panels

Waterblasting: Ultra High Pressure Waterjet Table Cutting; Surface Preparation; Paint Removal; Automated Cleaning Booths; Hydro Demolition of Concrete; Robotic Surface Cleaning of Ships; Tank and Vessel Cleaning



Inner Core: **Polyoxymethylene (POM)**
 Pressure Support: **8 layers of high-tensile steel wire**
 Outer Cover: **Polyamide (PA)**
 Colour: **yellow, other colours upon request**
 Temperature: **-22°F to 140°F [-30°C to +60°C]**

Ø ID	Ø OD	Working Pressure*)	Burst Pressure ¹⁾	Min. Bend Radius	Weight	Nipple Ø ID	Sleeve	Sleeve Ø OD
0.18 inch	0.60 inch	46,400 psi	116,000 psi	9.84 inch	0.466 lbs/ft	0.08 inch	10580106 carbon steel	0.81 inch
4.5 mm	15.3 mm	3,200 bar	8,000 bar	250 mm	0.693 kg/m	2.0 mm		20.5 mm

Fittings: ID5, Series D

Description	Size	Material	Part Number	
HP fitting	1/4"x28 UNF LH	stainless steel	40560294D	
HP fitting	3/8"x24 UNF LH	stainless steel	40560284D	
HP fitting	9/16"x18 UNF LH	stainless steel	40560264D	
HP fitting	M14x1.5 LH	stainless steel	40560274D	
HP female swivel	9/16"x18 UNF	stainless steel AISI 316Ti carbon steel	20560614D swivel nut / 50560605 swivel nut / 50560601	
BSP female swivel	G1/4"	stainless steel carbon steel	20560314D swivel nut / 50560301	
Type M female swivel	9/16"x18 UNF	stainless steel AISI 316Ti carbon steel	20560694D swivel nut / 50560605 swivel nut / 50560601	
metric female swivel	M14x1.5	stainless steel carbon steel	20560164D swivel nut / 50540101	

----- Additional fittings are available upon request. -----

¹⁾Production related variations up to 5 % are possible

*) The safety factors between the burst pressure and the working pressure as well as the test pressure depend on the operating conditions. For gaseous media the outer cover is to be pinpricked. Regarding the safety factor for gaseous media please contact your local SPIR STAR[®] assembling center. The indicated working pressure refers to the hose only. Depending on the used fitting the permitted working pressure of a hose assembly can be less. We reserve our rights for changes without notice.



Hose Type 6mmUHP MAXIMUS™



Applications

Hydraulics: Pressure Testing for Valves, Tooling and Control Panels

Waterblasting: Ultra High Pressure Waterjet Table Cutting; Surface Preparation; Paint Removal; Automated Cleaning Booths; Hydro Demolition of Concrete; Robotic Surface Cleaning of Ships; Tank and Vessel Cleaning



Inner Core:	Polyoxymethylene (POM)
Pressure Support:	8 layers of high-tensile steel wire
Outer Cover:	Polyamide (PA)
Colour:	yellow, other colours upon request
Temperature:	-22°F to 140°F [-30°C to +60°C]

Ø ID	Ø OD	Working Pressure*)	Burst Pressure ¹⁾	Min. Bend Radius	Weight	Nipple Ø ID	Sleeve	Sleeve Ø OD
0.23 inch	0.73 inch	46,400 psi	116,000 psi	11.02 inch	0.712 lbs/ft	0.12 inch	10680102 carbon steel	0.93 inch
5.8 mm	18.6 mm	3,200 bar	8,000 bar	280 mm	1.060 kg/m	3.0 mm		23.7 mm

Fittings: ID6, Series C

Description	Size	Material	Part Number	
HP fitting	3/8"x24 UNF LH	stainless steel	40660204C	
HP fitting	9/16"x18 UNF LH	stainless steel	40660224C	
HP fitting	M14x1,5 LH	stainless steel	40660124C	
Type M female swivel	9/16"x18 UNF"	stainless steel AISI 316Ti carbon steel	20660604C swivel nut / 50560605 swivel nut / 50560601	

----- Additional fittings are available upon request. -----

¹⁾Production related variations up to 5 % are possible

*) The safety factors between the burst pressure and the working pressure as well as the test pressure depend on the operating conditions. For gaseous media the outer cover is to be pinpricked. Regarding the safety factor for gaseous media please contact your local SPIR STAR® assembling center. The indicated working pressure refers to the hose only. Depending on the used fitting the permitted working pressure of a hose assembly can be less. We reserve our rights for changes without notice.



Hose Type 8/6UHP



Applications

Waterblasting: Ultra High Pressure Waterjet Table Cutting; Surface Preparation; Paint Removal; Tank and Vessel Cleaning; Hydro Demolition of Concrete; Robotic Surface Cleaning of Ships; Automated Cleaning Booths

Hydraulics: Pressure Testing for Valves, Tooling and Control Panels

Inner Core: Polyoxymethylene (POM)
 Pressure Support: 6 layers of high-tensile steel wire
 Outer Cover: Polyamide (PA)
 Colour: yellow, other colours upon request
 Temperature: -22°F to 140°F [-30°C to +60°C]



Ø ID	Ø OD	Working Pressure*)	Burst Pressure '1)	Min. Bend Radius	Weight	Nipple Ø ID	Sleeve	Sleeve Ø OD
0.30 inch	0.76 inch	40,600 psi	101,500 psi	11.81 inch	0.709 lbs/ft	0.18 inch	10860116 carbon steel	0.91 inch
7.6 mm	19.3 mm	2,800 bar	7,000 bar	300 mm	1.055 kg/m	4.5 mm		23.3 mm

Fittings: ID8, Series E

Description	Size	Material	Part Number	
HP fitting	3/8"x24 UNF LH	stainless steel	40860214E	
HP fitting	9/16"x18 UNF LH	stainless steel	40860204E	
HP fitting	3/4"x16 UNF LH	stainless steel	40860324E	
HP fitting	M14x1,5 LH	stainless steel	40860104E	
Type M female swivel	3/4"x16 UNF	stainless steel AISI 316Ti	20860644E swivel nut / 50840605	
Type M female swivel	7/8"x14 UNF	stainless steel AISI 316Ti	20860684E swivel nut / 50860675	
Type M female swivel	1 1/8"x12 UNF	stainless steel AISI 316Ti	20860694E swivel nut / 50860695	

----- Additional fittings are available upon request. -----

*) Production related variations up to 5 % are possible

*) The safety factors between the burst pressure and the working pressure as well as the test pressure depend on the operating conditions. For gaseous media the outer cover is to be pinpricked. Regarding the safety factor for gaseous media please contact your local SPIR STAR® assembling center. The indicated working pressure refers to the hose only. Depending on the used fitting the permitted working pressure of a hose assembly can be less. We reserve our rights for changes without notice.



Hose Type 8/6UHP-X



Applications

Waterblasting: Ultra High Pressure Waterjet Table Cutting; Surface Preparation; Paint Removal; Tank and Vessel Cleaning; Hydro Demolition of Concrete; Robotic Surface Cleaning of Ships; Automated Cleaning Booths

Hydraulics: Pressure Testing for Valves, Tooling and Control Panels

Inner Core: Polyoxymethylene (POM)
 Pressure Support: 6 layers of high-tensile steel wire
 Outer Cover: Polyamide (PA)
 Colour: yellow, other colours upon request
 Temperature: -22°F to 140°F [-30°C to +60°C]



Ø ID	Ø OD	Working Pressure*)	Burst Pressure ¹⁾	Min. Bend Radius	Weight	Nipple Ø ID	Sleeve	Sleeve Ø OD
0.30 inch	0.76 inch	44,000 psi	101,500 psi	11.81 inch	0.709 lbs/ft	0.18 inch	10860116 carbon steel	0.91 inch
7.6 mm	19.3 mm	3,035 bar	7,000 bar	300 mm	1.055 kg/m	4.5 mm		23.3mm

Fittings: ID8, Series E

Description	Size	Material	Part Number	
HP fitting	3/8"x24 UNF LH	stainless steel	40860214E	
HP fitting	9/16"x18 UNF LH	stainless steel	40860204E	
HP fitting	3/4"x16 UNF LH	stainless steel	40860324E	
HP fitting	M14x1,5 LH	stainless steel	40860104E	
Type M female swivel	3/4"x16 UNF	stainless steel AISI 316Ti	20860644E swivel nut / 50840605	
Type M female swivel	7/8"x14 UNF	stainless steel AISI 316Ti	20860644E swivel nut / 50860675	
Type M female swivel	1 1/8"x12 UNF	stainless steel AISI 316Ti	20860694E swivel nut / 50860695	

----- Additional fittings are available upon request. -----

¹⁾ Production related variations up to 5 % are possible

*) The safety factors between the burst pressure and the working pressure as well as the test pressure depend on the operating conditions. For gaseous media the outer cover is to be pinpricked. Regarding the safety factor for gaseous media please contact your local SPIR STAR[®] assembling center. The indicated working pressure refers to the hose only. Depending on the used fitting the permitted working pressure of a hose assembly can be less. We reserve our rights for changes without notice.



Hose Type 8mmUHP



Applications

Waterblasting: Ultra High Pressure Waterjet Table Cutting; Surface Preparation; Paint Removal; Tank and Vessel Cleaning; Hydro Demolition of Concrete; Robotic Surface Cleaning of Ships; Automated Cleaning Booths; Waterblast Supply Hose

Hydraulics: Pressure Testing for Valves, Tooling and Control Panels



Inner Core:	Polyoxymethylene (POM)
Pressure Support:	8 layers of high-tensile steel wire
Outer Cover:	Polyamide (PA)
Colour:	yellow, other colours upon request
Temperature:	-22°F to 140°F [-30°C to +60°C]

Ø ID	Ø OD	Working Pressure ^{*)}	Burst Pressure ¹⁾	Min. Bend Radius	Weight	Nipple Ø ID	Sleeve	Sleeve Ø OD
0.30 inch	0.87 inch	46,400 psi	107,300 psi	11.81 inch	1.008 lbs/ft	0.18 inch	10880142 carbon steel	1.17 inch
7.6 mm	22.0 mm	3,200 bar	7,400 bar	300 mm	1.500 kg/m	4.5 mm		29.7 mm

Fittings: ID8, Series C

Description	Size	Material	Part Number	
HP fitting	3/8"x24 UNF LH	stainless steel	40860214C	
HP fitting	9/16"x18 UNF LH	stainless steel	40860204C	
HP fitting	M14x1.5 LH	stainless steel	40860104C	
MP fitting	3/4"x16 UNF LH	stainless steel	40860324C	
metric female swivel with O-Ring	M24x1.5	stainless steel AISI 316Ti carbon steel	20860224C swivel nut / 51360205 swivel nut / 51360201	
Type M female swivel	3/4"x16 UNF	stainless steel AISI 316 Ti carbon steel	20860644C swivel nut / 50840605 swivel nut / 50840601	
Type M female swivel	7/8"x14 UNF	stainless steel AISI 316Ti	20860684C swivel nut / 50860675	

----- Additional fittings are available upon request. -----

¹⁾Production related variations up to 5 % are possible

^{*)} The safety factors between the burst pressure and the working pressure as well as the test pressure depend on the operating conditions. For gaseous media the outer cover is to be pinpricked. Regarding the safety factor for gaseous media please contact your local SPIR STAR[®] assembling center. The indicated working pressure refers to the hose only. Depending on the used fitting the permitted working pressure of a hose assembly can be less. We reserve our rights for changes without notice.



Hose Type 13mmUHP



Applications

Waterblasting: Hydro Demolition of Concrete; Large Bore Pipe Cleaning; Tank and Vessel Cleaning; Waterblast Supply Hose

Hydraulics: Pressure Testing for Valves, Tooling and Control Panels

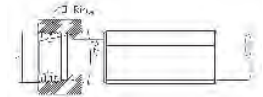
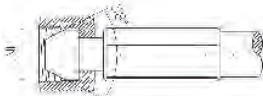
Oil and Gas: Gaseous Media Handling; Nitrogen Service

Inner Core: **Polyoxymethylene (POM)**
 Pressure Support: **8 layers of high-tensile steel wire**
 Outer Cover: **Polyamide (PA)**
 Colour: **yellow, other colours upon request**
 Temperature: **-22°F to 140°F [-30°C to +60°C]**



Ø ID	Ø OD	Working Pressure*)	Burst Pressure ¹⁾	Min. Bend Radius	Weight	Nipple Ø ID	Sleeve	Sleeve Ø OD
0.50 inch	1.09 inch	40,600 psi	87,000 psi	13.78 inch	1.401 lbs/ft	0.30 inch	11380242 carbon steel	1.36 inch
12.8mm	27.7 mm	2,800 bar	6,000 bar	350 mm	2.085 kg/m	7.5 mm		34.6 mm

Fittings: ID13, Series C

Description	Size	Material	Part Number	
HP fitting	9/16"x18 UNF LH	stainless steel	41360214C	
MP fitting	3/4"x16 UNF LH	stainless steel	41360204C	
metric female swivel with O-Ring	M24x1.5	stainless steel AISI 316Ti carbon steel	21360244C swivel nut / 51360205 swivel nut / 51360201	
Type M female swivel	1"x12 UNF	stainless steel AISI 316Ti carbon steel AISI 303	21360644C swivel nut / 51360645 swivel nut / 51360641 swivel nut / 51360643	

----- Additional fittings are available upon request. -----

¹⁾Production related variations up to 5 % are possible

*) The safety factors between the burst pressure and the working pressure as well as the test pressure depend on the operating conditions. For gaseous media the outer cover is to be pinpricked. Regarding the safety factor for gaseous media please contact your local SPIR STAR[®] assembling center. The indicated working pressure refers to the hose only. Depending on the used fitting the permitted working pressure of a hose assembly can be less. We reserve our rights for changes without notice.



Hose Type 16mmUHP



Applications

Waterblasting: Hydro Demolition of Concrete; Large Bore Pipe Cleaning; Tank and Vessel Cleaning; Waterblast Supply Hose

Hydraulics: Controls for Service Equipment; Pressure Testing for Valves, Tooling and Control Panels

Oil and Gas: Chemical Injection; Gaseous Media Handling; Grease Injection; Hydraulic Control; Nitrogen Service

Inner Core: **Polyoxymethylene (POM)**
 Pressure Support: **8 layers of high-tensile steel wire**
 Outer Cover: **Polyamide (PA)**
 Colour: **yellow, other colours upon request**
 Temperature: **-22°F to 140°F [-30°C to +60°C]**



Ø ID	Ø OD	Working Pressure*)	Burst Pressure ¹⁾	Min. Bend Radius	Weight	Nipple Ø ID	Sleeve	Sleeve Ø OD
0.63 inch	1.25 inch	29,000 psi	72,500 psi	15.75 inch	1.693 lbs/ft	0.41 inch	11680242 carbon steel	1.5 inch
15.9 mm	31.8 mm	2,000 bar	5,000 bar	400 mm	2.523 kg/m	10.5 mm		38.0 mm

Fittings: ID16, Series C

Description	Size	Material	Part Number	
HP fitting	M18x1.5 LH	stainless steel	41660114C	
metric female swivel with O-Ring	M30x2	stainless steel carbon steel	21660104C swivel nut / 51640201	
Type M female swivel	1 5/16"x12 UN	stainless steel AISI 316Ti	21660604C swivel nut / 52040645	
JIC female swivel	1 5/16"x12 UN	stainless steel AISI 316Ti	21660644C swivel nut / 52040605	

----- Additional fittings are available upon request. -----

¹⁾Production related variations up to 5 % are possible

*) The safety factors between the burst pressure and the working pressure as well as the test pressure depend on the operating conditions. For gaseous media the outer cover is to be pinpricked. Regarding the safety factor for gaseous media please contact your local SPIR STAR[®] assembling center. The indicated working pressure refers to the hose only. Depending on the used fitting the permitted working pressure of a hose assembly can be less. We reserve our rights for changes without notice.

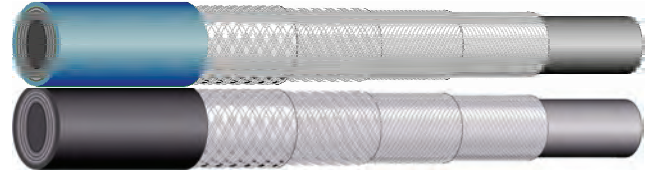


Hose Type 6/2WL Twin Hose



Applications

Hydraulics: Bolt Tensioning and Torque Tools; Hydraulic Jacks; Controls for Service Equipment; Instrumentation Packages for Gauges; Pressure Testing for Valves, Tooling and Control Panels; Hydraulic Tools



Inner Core: Polyamide (PA)
Pressure Support: 4 layers of high-tensile steel wire
Outer Cover: Polyurethane (PUR)
Colour: black and blue, other colours upon request
Temperature: -22°F to 140°F [-30°C to +60°C]

Ø ID	Ø OD	Working Pressure*)	Burst Pressure 1)	Min. Bend Radius	Weight	Nipple Ø ID	Sleeve	Sleeve Ø OD
0.23 inch	0.47 inch	17,400 psi	43,500 psi	3.15 inch	0.319 lbs/ft	0.16 inch	10630191W carbon steel	0.61 inch
5.9 mm	12.0 mm	1,200 bar	3,000 bar	80 mm	0.474 kg/m	4.0 mm	1630195W AISI 316Ti	15.5 mm

Fittings: ID6, Series A

Description	Size	Material	Part Number	
HP fitting	9/16"x18 UNF LH	AISI 316Ti	40620205A	
male fitting	1/8"x27 NPTF	carbon steel	30620411A	
male fitting	1/4"x18 NPTF	carbon steel	30620401A	
male fitting	1/4"x18 NPTF	AISI 316Ti	30620405A	
male fitting	3/8"x18 NPTF	carbon steel	30620451A	
male fitting	G1/8"	carbon steel	30620311A	
male fitting with 60° cone	G1/4"	carbon steel	30620341A	
male fitting for USIT®-Ring	G1/4"	carbon steel	30620391A	
male fitting DIN3852 T2 form A	G1/4"	carbon steel	30620301A	
male fitting flat seal nozzle type	G1/4"	carbon steel	30620381A	
male fitting special part 100° cone	G1/4"	carbon steel	30620361A	
male fitting with 60° cone	G3/8"	carbon steel	30620321A	
male fitting for USIT®-Ring	G3/8"	carbon steel	30620351A	
BSP female swivel	G1/4"	carbon steel carbon steel AISI 316Ti	20620301A swivel nut / 50540301 swivel nut / 50540305	
metric female swivel with O-Ring	M18x1.5	carbon steel	20620241A / 50620201	
metric female swivel with O-Ring	M22x1.5	carbon steel carbon steel AISI 316Ti	20620211A swivel nut / 51060201 swivel nut / 51060205	
metric female swivel with O-Ring	M24x1.5	carbon steel	20620042A / 51360201	
Type M female swivel	9/16"x18 UNF	carbon steel	20620641A / 50540601	
Type M female swivel	9/16"x18 UNF	AISI 316Ti	20620645A / 50540605	
JIC female swivel	9/16"x18 UNF	AISI 316Ti	S20630615A / S5063615	
female fitting	1/4"x18 NPTF	carbon steel	30620441A	
metric female swivel	M14x1.5	carbon steel	20620101A / 50540101	
metric female swivel	M16x1.5	carbon steel	20620141A / 50620121	
metric female swivel	M16x1.5	AISI 316Ti	20620145A / 50620125	

----- Additional fittings are available upon request. -----

1) Production related variations up to 5 % are possible

*) The safety factors between the burst pressure and the working pressure as well as the test pressure depend on the operating conditions. For gaseous media the outer cover is to be pinpricked. Regarding the safety factor for gaseous media please contact your local SPIR STAR® assembling center. The indicated working pressure refers to the hose only. Depending on the used fitting the permitted working pressure of a hose assembly can be less. We reserve our rights for changes without notice.



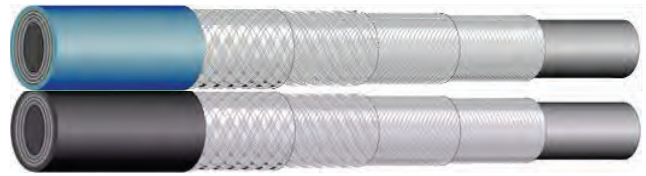
Hose Type 8/2W Twin Hose



Applications

Hydraulics: Bolt Tensioning and Torque Tools; Hydraulic Jacks; Controls for Service Equipment; Instrumentation Packages for Gauges; Pressure Testing for Valves, Tooling and Control Panels; Hydraulic Tools

Inner Core: Polyamide (PA)
 Pressure Support: 4 layers of high-tensile steel wire
 Outer Cover: Polyurethane (PUR)
 Colour: black and blue , other colours upon request
 Temperature: -22°F to 140°F [-30°C to +60°C]



Ø ID	Ø OD	Working Pressure*)	Burst Pressure ¹⁾	Min. Bend Radius	Weight	Nipple Ø ID	Sleeve	Sleeve Ø OD
0.31 inch	0.56 inch	15,080 psi	37,700 psi	4.33 inch	0.442 lbs/ft	0.22 inch	10830191W carbon steel	0.72 inch
8.0 mm	14.3 mm	1,040 bar	2,600 bar	110 mm	0.628 kg/m	5.5 mm	10830195W AISI 316Ti	18.3 mm

Fittings: ID8, Series A

Description	Size	Material	Part Number	
male fitting	1/4"x18 NPTF	carbon steel	30820411A	
male fitting	3/8"x18 NPTF	carbon steel	30820401A	
male fitting DIN3852 T2 form A	G1/4"	carbon steel	30820351A	
male fitting with 60° cone	G1/4"	carbon steel	30820321A	
male fitting flat seal nozzle type	G1/4"	carbon steel	30820381A	
male fitting DIN3852 T2 form A	G3/8"	carbon steel	30820341A	
male fitting with 60° cone	G3/8"	carbon steel	30820301A	
BSP female swivel	G3/8"	carbon steel	20820301A / 50860301	
metric female swivel with O-Ring	M20x1.5	carbon steel	20820201A / 50860201	
metric female swivel with O-Ring	M24x1.5	carbon steel	20820042A / 50820241	
Type M female swivel	3/4"x16 UNF	AISI 316Ti AISI 316Ti carbon steel	20820645A swivel nut / 50840605 swivel nut / 50840601	
JIC female swivel	9/16"x18 UNF	carbon steel	20820601A / 50820601	
JIC female swivel	9/16"x18 UNF	AISI 316 Ti AISI 316 Ti	20820605A swivel nut / 50820605	

----- Additional fittings are available upon request. -----

¹⁾Production related variations up to 5 % are possible

*) The safety factors between the burst pressure and the working pressure as well as the test pressure depend on the operating conditions. For gaseous media the outer cover is to be pinpricked. Regarding the safety factor for gaseous media please contact your local SPIR STAR[®] assembling center. The indicated working pressure refers to the hose only. Depending on the used fitting the permitted working pressure of a hose assembly can be less. We reserve our rights for changes without notice.



Hose Type



Applications

Hydraulics: Bolt Tensioning and Torque Tools; Hydraulic Jacks; Hydraulic Tools; Tooling Panels

Inner Core: Polyamide (PA)

Pressure Support: multi layers of high-tensile steel wire and open synthetic fibrons

Outer Cover: Polyurethane (PUR)

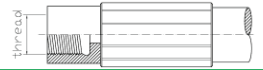
Colour: luminous yellow, other colours upon request

Temperature: -22°F to 140°F [-30°C to +60°C]



Ø ID	Ø OD	Working Pressure*)	Min. Burst Pressure	Min. Bend Radius	Weight	Nipple Ø ID	Sleeve	Sleeve Ø OD
0.24 inch	0.49 inch	10,150 psi	26,100 psi	3.15 inch	0.138 lbs/ft	0.16 inch	VIPER-S carbon steel	0.57 inch
6.1mm	12.5 mm	700 bar	1,800 bar	80 mm	0.206 kg/m	4.0 mm		14.4 mm

Fittings:

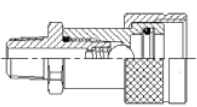
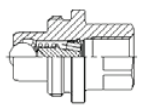
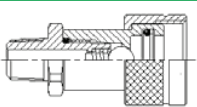
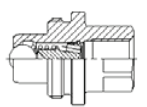
Description	Size	Material	Part Number	
male fitting	1/4"x18 NPTF	carbon steel	VIPER-M-1/4x18NPTF	
male fitting	3/8"x18 NPTF	carbon steel	VIPER-M-3/8x18NPTF	
female fitting	1/4"x18 NPTF	carbon steel	VIPER-F-1/4x18NPTF	

---- Additional fittings are available upon request. ----

Bend restrictor shown below is suitable for hose type 

Description	Size	Material	Part Number
bend restrictor	30x14,5mm	rubber	1.9518600
crimp ring	30mm	carbon steel	1003135

The  hose is usable for the following SPIR STAR coupler:

Description	Thread/Size (hose connection)	Material	Part Number	
High Pressure Screw Coupler max WP 700 bar	male 1/4" NPT	carbon steel	C-700-1452	
Metal cap for 700 bar for coupler	male 1/4" NPT	carbon steel	C-700-1452-m-cap	
High Pressure Plug max WP 700 bar	female 1/4" NPT	carbon steel	C-700-6402	
Metal cap for 700 bar for plug	female 1/4" NPT	carbon steel	C-700-6402-fm-cap	
High Pressure Screw Coupler max WP 700 bar	male 3/8" NPT	carbon steel	C-700-1454	
Metal cap for 700 bar for coupler	male 3/8" NPT	carbon steel	C-700-1454-m-cap	
High Pressure Plug max WP 700 bar	female 3/8" NPT	carbon steel	C-700-6404	
Metal cap for 700 bar for plug	female 3/8" NPT	carbon steel	C-700-6404-fm-cap	

*) Production related variations up to 5 % are possible

*) The safety factors between the burst pressure and the working pressure as well as the test pressure depend on the operating conditions. For gaseous media the outer cover is to be pinpricked. Regarding the safety factor for gaseous media please contact your local SPIR STAR[®] assembling center. The indicated working pressure refers to the hose only. Depending on the used fitting the permitted working pressure of a hose assembly can be less. We reserve our rights for changes without notice.



Hose Type *Viper-7win*



Applications

Hydraulics: Bolt Tensioning and Torque Tools; Hydraulic Jacks; Hydraulic Tools; Tooling Panels

Inner Core: Polyamide (PA)

Pressure Support: multi- layers of high-tensile steel wire and open synthetic fibrons

Outer Cover: Polyurethane (PUR)

Colour: luminous yellow and purple red, other colours upon request

Temperature: -22°F to 140°F [-30°C to +60°C]



Ø ID	Ø OD	Working Pressure*)	Min. Burst Pressure	Min. Bend Radius	Weight	Nipple Ø ID	Sleeve	Sleeve Ø OD
0.24 inch	0.49 inch	10,150 psi	26,100 psi	3.15 inch	0.276 lbs/ft	0.16 inch	VIPER-S carbon steel	0.57 inch
6.1mm	12.5 mm	700 bar	1,800 bar	80 mm	0.412 kg/m	4.0 mm		14.4 mm

Fittings:

Description	Size	Material	Part Number	
male fitting	1/4"x18 NPTF	carbon steel	VIPER-M-1/4x18NPTF	
male fitting	3/8"x18 NPTF	carbon steel	VIPER-M-3/8x18NPTF	
female fitting	1/4"x18 NPTF	carbon steel	VIPER-F-1/4x18NPTF	

---- Additional fittings are available upon request. ----

Bend restrictor shown below is suitable for hose type *Viper-7win*:

Description	Size	Material	Part Number
bend restrictor	30x14,5mm	rubber	1.9518600
crimp ring	30mm	carbon steel	1003135

The *Viper-7win* hose is usable for the following SPIR STAR coupler:

Description	Thread/Size (hose connection)	Material	Part Number	
High Pressure Screw Coupler max WP 700 bar	male 1/4" NPT	carbon steel	C-700-1452	
Metal cap for 700 bar for coupler	male 1/4" NPT	carbon steel	C-700-1452-m-cap	
High Pressure Plug max WP 700 bar	female 1/4" NPT	carbon steel	C-700-6402	
Metal cap for 700 bar for plug	female 1/4" NPT	carbon steel	C-700-6402-fm-cap	
High Pressure Screw Coupler max WP 700 bar	male 3/8" NPT	carbon steel	C-700-1454	
Metal cap for 700 bar for coupler	male 3/8" NPT	carbon steel	C-700-1454-m-cap	
High Pressure Plug max WP 700 bar	female 3/8" NPT	carbon steel	C-700-6404	
Metal cap for 700 bar for plug	female 3/8" NPT	carbon steel	C-700-6404-fm-cap	

*) Production related variations up to 5 % are possible

*) The safety factors between the burst pressure and the working pressure as well as the test pressure depend on the operating conditions. For gaseous media the outer cover is to be pinpricked. Regarding the safety factor for gaseous media please contact your local SPIR STAR® assembling center. The indicated working pressure refers to the hose only. Depending on the used fitting the permitted working pressure of a hose assembly can be less. We reserve our rights for changes without notice.



Hose Type *Mamba*



Applications

Hydraulics: Bolt Tensioning and Torque Tools; Hydraulic Jacks; Hydraulic Tools; Tooling Panels

Inner Core: Polyamide (PA)
Pressure Support: multi-layers of high-tensile steel wire
Outer Cover: Polyurethane (PUR)
Colour: red, other colours upon request
Temperature: -22°F to 140°F [-30°C to +60°C]



Ø ID	Ø OD	Working Pressure*)	Burst Pressure ¹⁾	Min. Bend Radius	Weight	Nipple Ø ID	Sleeve	Sleeve Ø OD
0.23 inch	0.47 inch	17,400 psi	43,500 psi	3.15 inch	0.159 lbs/ft	0.16 inch	MAMBA-S carbon steel	0.61 inch
5.9 mm	12.0 mm	1,200 bar	3,000 bar	80 mm	0.237 kg/m	4.0 mm		15.5 mm

Fittings:

Description	Size	Material	Part Number	
male fitting	1/4"x18 NPTF	carbon steel	MAMBA-M-1/4x18NPTF	
male fitting	3/8"x18NPTF	carbon steel	MAMBA-M-3/8x18NPTF	
male fitting for USIT®-Ring 60° internal cone	G1/4"	carbon steel	MAMBA-M-1/4-U	
male fitting special part 100° external cone	G1/4"	carbon steel	MAMBA-M-1/4-100	
female fitting	1/4"x18 NPTF	carbon steel	MAMBA-F-1/4x18NPTF	
BSP female swivel	G1/4"	carbon steel	MAMBA-F-I-1/4 & MAMBA-F-N-1/4	

----- Additional fittings are available upon request. -----

Bend restrictor shown below is suitable for hose type *Mamba*:

Description	Size	Material	Part Number
bend restrictor	30x14,5mm	rubber	1.9518600
crimp ring	30mm	carbon steel	1003135

The *Mamba* hose is usable for the following SPIR STAR coupler:

Description	Thread/Size (hose connection)	Material	Part Number	
High Pressure Coupler incl. dust cap – max WP 1500bar	BSP female G1/4"	carbon steel	C-200-1202	
High pressure push-in plug incl. dust cap – max WP 1500bar	BSP female G1/4"	carbon steel	C-200-6202	

¹⁾Production related variations up to 5 % are possible

*) The safety factors between the burst pressure and the working pressure as well as the test pressure depend on the operating conditions. For gaseous media the outer cover is to be pinpricked. Regarding the safety factor for gaseous media please contact your local SPIR STAR® assembling center. The indicated working pressure refers to the hose only. Depending on the used fitting the permitted working pressure of a hose assembly can be less. We reserve our rights for changes without notice.



Hose Type *Mamba-Twin*



Applications

Hydraulics: Bolt Tensioning and Torque Tools; Hydraulic Jacks; Hydraulic Tools; Tooling Panels

Inner Core: Polyamide (PA)
Pressure Support: multi-layers of high-tensile steel wire
Outer Cover: Polyurethane (PUR)
Colour: red and dark grey,
 other colours upon request
Temperature: -22°F to 140°F [-30°C to +60°C]



Ø ID	Ø OD	Working Pressure*)	Burst Pressure *)	Min. Bend Radius	Weight	Nipple Ø ID	Sleeve	Sleeve Ø OD
0.23 inch	0.47 inch	17,400 psi	43,500 psi	3.15 inch	0.318 lbs/ft	0.16 inch	MAMBA-S carbon steel	0.61 inch
5.9 mm	12.0 mm	1,200 bar	3,000 bar	80 mm	0.474 kg/m	4.0 mm		15.5 mm

Fittings:

Description	Size	Material	Part Number	
male fitting	1/4"x18 NPTF	carbon steel	MAMBA-M-1/4x18NPTF	
male fitting	3/8"x18NPTF	carbon steel	MAMBA-M-3/8x18NPTF	
male fitting for USIT®-Ring 60° internal cone	G1/4"	carbon steel	MAMBA-M-1/4-U	
male fitting special part 100° external cone	G1/4"	carbon steel	MAMBA-M-1/4-100	
female fitting	1/4"x18 NPTF	carbon steel	MAMBA-F-1/4x18NPTF	
BSP female swivel	G1/4"	carbon steel	MAMBA-F-I-1/4 & MAMBA-F-N-1/4	

----- Additional fittings are available upon request. -----

Bend restrictor shown below is suitable for hose type *Mamba-Twin*:

Description	Size	Material	Part Number
bend restrictor	30x14,5mm	rubber	1.9518600
crimp ring	30mm	carbon steel	1003135

The *Mamba-Twin* hose is usable for the following SPIR STAR coupler:

Description	Thread/Size (hose connection)	Material	Part Number	
High Pressure Coupler incl. dust cap – max WP 1500bar	BSP female G1/4"	carbon steel	C-200-1202	
High pressure push-in plug incl. dust cap – max WP 1500bar	BSP female G1/4"	carbon steel	C-200-6202	

*) Production related variations up to 5 % are possible

*) The safety factors between the burst pressure and the working pressure as well as the test pressure depend on the operating conditions. For gaseous media the outer cover is to be pinpricked. Regarding the safety factor for gaseous media please contact your local SPIR STAR® assembling center. The indicated working pressure refers to the hose only. Depending on the used fitting the permitted working pressure of a hose assembly can be less. We reserve our rights for changes without notice.



Applications

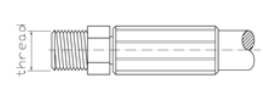
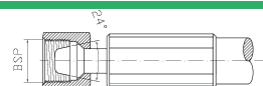
Hydraulics: Bolt Tensioning and Torque Tools; Hydraulic Jacks; Hydraulic Tools; Tooling Panels

Inner Core: Polyoxymethylene (POM)
Pressure Support: multi-layers of high-tensile steel wire
Outer Cover: Polyamide (PA)
Colour: dark blue, other colours upon request
Temperature: -22°F to 140°F [-30°C to +60°C]



Ø ID	Ø OD	Working Pressure*)	Burst Pressure ¹⁾	Min. Bend Radius	Weight	Nipple Ø ID	Sleeve	Sleeve Ø OD
0.20 inch	0.44 inch	26,100 psi	65,250 psi	5.91 inch	0.175 lbs/ft	0.10 inch	COBRA-S carbon steel	0.59 inch
5.0 mm	11.2 mm	1,800 bar	4,500 bar	150 mm	0.260 kg/m	2.5 mm		15.0 mm

Fittings:

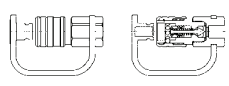
Description	Size	Material	Part Number	
male fitting for USIT®-Ring	G1/4"	carbon steel	COBRA-M-1/4-U	
male fitting special part 100°external cone	G1/4"	carbon steel	COBRA-M-1/4-100	
BSP female swivel	G1/4"	carbon steel	COBRA-F-I-1/4 & COBRA-F-N-1/4	

----- Additional fittings are available upon request. -----

Bend restrictor shown below is suitable for hose type **Cobra**:

Description	Size	Material	Part Number
bend restrictor	30x14,5mm	rubber	1.9518600
crimp ring	30mm	carbon steel	1003135

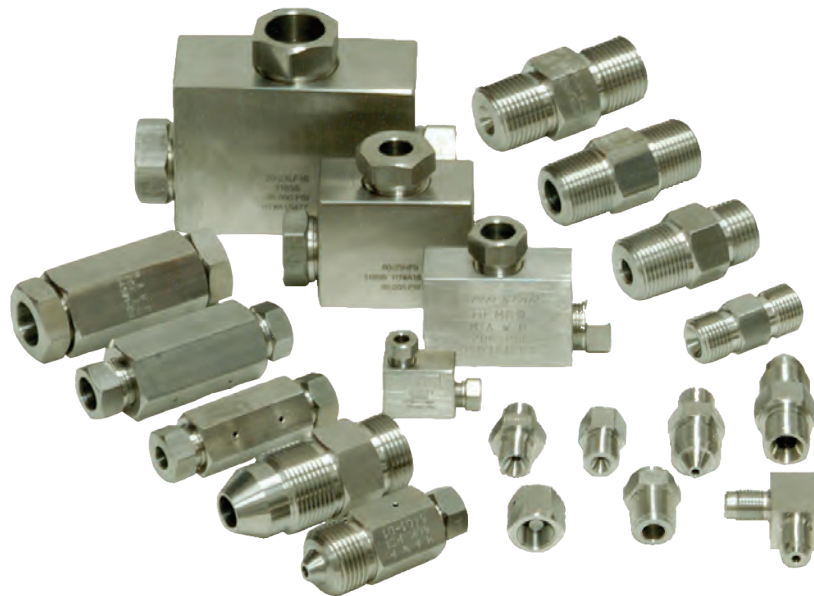
The **Cobra** hose is usable for the following SPIR STAR coupler:

Description	Thread/Size (hose connection)	Material	Part Number	
High Pressure Coupler incl. dust cap – max WP 1500bar	BSP female G1/4"	carbon steel	C-200-1202	
High pressure push-in plug incl. dust cap – max WP 1500bar	BSP female G1/4"	carbon steel	C-200-6202	

¹⁾ Production related variations up to 5 % are possible

²⁾ BLAST PRO fittings must only be used for tube cleaning operation inside the tube. They are not designed for the use outside of tubes.

*) The safety factors between the burst pressure and the working pressure as well as the test pressure depend on the operating conditions. For gaseous media the outer cover is to be pinpricked. Regarding the safety factor for gaseous media please contact your local SPIR STAR® assembling center. The indicated working pressure refers to the hose only. Depending on the used fitting the permitted working pressure of a hose assembly can be less. We reserve our rights for changes without notice.



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High Pressure Fittings

SPIR STAR High Pressure fittings seal with a 60 degree cone and are rated for working pressures up to 60,000 psi.

<i>Common Description</i>	<i>Actual Thread Dimension</i>
1/4" High Pressure	9/16"-18 Thread on Gland Nut
3/8" High Pressure	3/4"-16 Thread on Gland Nut
9/16" High Pressure	1 1/8"-12 Thread on Gland Nut

High Pressure Male Hex Nipples

Part Number	Description	Max Working Pressure
<i>HHM4-HM4</i>	1/4" HP Male x 1/4" HP Male	60,000 psi
<i>HHM4-HM6</i>	1/4" HP Male x 3/8" HP Male	60,000 psi
<i>HHM4-HM9</i>	1/4" HP Male x 9/16" HP Male	60,000 psi
<i>HHM6-HM6</i>	3/8" HP Male x 3/8" HP Male	60,000 psi
<i>HHM6-HM9</i>	3/8" HP Male x 9/16" HP Male	60,000 psi
<i>HHM9-HM9</i>	9/16" HP Male x 9/16" HP Male	60,000 psi



High Pressure Female Elbows

Part Number	Description	Max Working Pressure
<i>HEHF4</i>	1/4" HP Female Elbow	60,000 psi
<i>HEHF6</i>	3/8" HP Female Elbow	60,000 psi
<i>HEHF9</i>	9/16" HP Female Elbow	60,000 psi



High Pressure Female Tees

Part Number	Description	Max Working Pressure
<i>HTHF4</i>	1/4" HP Female Tee	60,000 psi
<i>HTHF6</i>	3/8" HP Female Tee	60,000 psi
<i>HTHF9</i>	9/16" HP Female Tee	60,000 psi



High Pressure Female Crosses

Part Number	Description	Max Working Pressure
<i>HCRHF4</i>	1/4" HP Female Cross	60,000 psi
<i>HCRHF6</i>	3/8" HP Female Cross	60,000 psi
<i>HCRHF9</i>	9/16" HP Female Cross	60,000 psi



High Pressure Fittings



High Pressure Female x High Pressure Male



Part Number	Description	Max Working Pressure
HHF4-HM6	1/4" HP Female x 3/8" HP Male	60,000 psi
HHF4-HM9	1/4" HP Female x 9/16" HP Male	60,000 psi
HHF6-HM4	3/8" HP Female x 1/4" HP Male	60,000 psi
HHF6-HM9	3/8" HP Female x 9/16" HP Male	60,000 psi
HHF9-HM4	9/16" HP Female x 1/4" HP Male	60,000 psi
HHF9-HM6	9/16" HP Female x 3/8" HP Male	60,000 psi

High Pressure Slimline Couplers

Slimline couplers are designed to be used ONLY for high pressure waterjetting applications, such as tube bundle cleaning.



Part Number	Description	Max Working Pressure
HCSL-HF4-LL	1/4" HP Female Slimline Coupler Left x Left* 0.445" OD	40,000 psi
HCSL-HF4-LR	1/4" HP Female Slimline Coupler Left x Right* 0.445" OD	40,000 psi
HCSL-HF4-RR	1/4" HP Female Slimline Coupler Right x Right* 0.445" OD	40,000 psi
HCSL-HF6-LL	3/8" HP Female Slimline Coupler Left x Left* 0.562" OD	40,000 psi
HCSL-HF6-LR	3/8" HP Female Slimline Coupler Left x Right* 0.562" OD	40,000 psi
HCSL-HF6-RR	3/8" HP Female Slimline Coupler Right x Right* 0.562" OD	40,000 psi
HCSL-HF9-LL	9/16" HP Female Slimline Coupler Left x Left* 0.750" OD	40,000 psi
HCSL-HF9-LR	9/16" HP Female Slimline Coupler Left x Right* 0.750" OD	40,000 psi
HCSL-HF9-RR	9/16" HP Female Slimline Coupler Right x Right* 0.750" OD	40,000 psi
* Designates Left Hand Thread or Right Hand Thread		

High Pressure Heavy Duty Couplers



Part Number	Description	Max Working Pressure
HC-HF4	1/4" HP Female Coupler	60,000 psi
HC-HF6	3/8" HP Female Coupler	60,000 psi
HC-HF9	9/16" HP Female Coupler	60,000 psi
HC-HF9-HF6	9/16" HP x 3/8" HP Female Coupler	60,000 psi

Also available as bulkhead.

High Pressure Tube Nipples

Part Number	Description	Max Working Pressure
HHM4-3.00	1/4" HP Nipple x 3" Long	60,000 psi
HHM4-6.00	1/4" HP Nipple x 6" Long	60,000 psi
HHM6-3.00	3/8" HP Nipple x 3" Long	60,000 psi
HHM6-4.00	3/8" HP Nipple x 4" Long	60,000 psi
HHM9-4.00	9/16" HP Nipple x 4" Long	60,000 psi
HHM9-6.00	9/16" HP Nipple x 6" Long	60,000 psi



High Pressure Plugs

Part Number	Description	Max Working Pressure
HHM2-PLUG	1/8" HP Plug	60,000 psi
HHM4-PLUG	1/4" HP Plug	60,000 psi
HHM6-PLUG	3/8" HP Plug	60,000 psi
HHM9-PLUG	9/16" HP Plug	60,000 psi



High Pressure Gland Nuts & Collars

Part Number	Description	Max Working Pressure
GN-1/8HP	1/8" HP Gland Nut	60,000 psi
GN-1/4HP	1/4" HP Gland Nut	60,000 psi
GN-3/8HP	3/8" HP Gland Nut	60,000 psi
GN-9/16HP	9/16" HP Gland Nut	60,000 psi
CLR-1/8HP	1/8" HP Collar	60,000 psi
CLR-1/4HP	1/4" HP Collar	60,000 psi
CLR-3/8HP	3/8" HP Collar	60,000 psi
CLR-9/16HP	9/16" HP Collar	60,000 psi
* GN-1/4HP-AV	1/4" HP Anti-Vibration Assembly	60,000 psi
* GN-3/8HP-AV	3/8" HP Anti-Vibration Assembly	60,000 psi
* GN-9/16HP-AV	9/16" HP Anti-Vibration Assembly	60,000 psi
* Indicates Anti-Vibration style		



High Pressure Fittings



High Pressure Caps



Part Number	Description	Max Working Pressure
HHF4-CAP	1/4" HP Female Cap	60,000 psi
HHF6-CAP	3/8" HP Female Cap	60,000 psi
HHF9-CAP	9/16" HP Female Cap	60,000 psi



High Pressure x Medium Pressure Adapters

SPIR STAR High Pressure x Medium Pressure adapters seal with a 60 degree cone and are rated for working pressures up to 20,000 psi.

<i>Common Description</i>	<i>Actual Thread Dimension</i>
1/4" High Pressure	9/16"-18 Thread on Gland Nut
3/8" High Pressure	3/4"-16 Thread on Gland Nut
9/16" High Pressure	1 1/8"-12 Thread on Gland Nut
1/4" Medium Pressure	7/16"-20 Thread on Gland Nut
3/8" Medium Pressure	9/16"-18 Thread on Gland Nut
9/16" Medium Pressure	13/16"-16 Thread on Gland Nut
3/4" Medium Pressure	3/4"-14 Thread on Gland Nut

High Pressure Male x Medium Pressure Male

Part Number	Description	Max Working Pressure
<i>HHM4-MM4</i>	1/4" HP Male x 1/4" MP Male	20,000 psi
<i>HHM4-MM6</i>	1/4" HP Male x 3/8" MP Male	20,000 psi
<i>HHM4-MM9</i>	1/4" HP Male x 9/16" MP Male	20,000 psi
<i>HHM6-MM4</i>	3/8" HP Male x 1/4" MP Male	20,000 psi
<i>HHM6-MM6</i>	3/8" HP Male x 3/8" MP Male	20,000 psi
<i>HHM6-MM9</i>	3/8" HP Male x 9/16" MP Male	20,000 psi
<i>HHM9-MM6</i>	9/16" HP Male x 3/8" MP Male	20,000 psi
<i>HHM9-MM9</i>	9/16" HP Male x 9/16" MP Male	20,000 psi
<i>HHM9-MM12</i>	9/16" HP Male x 3/4" MP Male	20,000 psi



High Pressure Female x Medium Pressure Male

Part Number	Description	Max Working Pressure
<i>HHF4-MM4</i>	1/4" HP Female x 1/4" MP Male	20,000 psi
<i>HHF4-MM6</i>	1/4" HP Female x 3/8" MP Male	20,000 psi
<i>HHF4-MM9</i>	1/4" HP Female x 9/16" MP Male	20,000 psi
<i>HHF6-MM4</i>	3/8" HP Female x 1/4" MP Male	20,000 psi
<i>HHF6-MM6</i>	3/8" HP Female x 3/8" MP Male	20,000 psi
<i>HHF6-MM9</i>	3/8" HP Female x 9/16" MP Male	20,000 psi
<i>HHF9-MM6</i>	9/16" HP Female x 3/8" MP Male	20,000 psi
<i>HHF9-MM9</i>	9/16" HP Female x 9/16" MP Male	20,000 psi



High Pressure x Medium Pressure Adapters



Medium Pressure Female x High Pressure Male



Part Number	Description	Max Working Pressure
HMF4-HM4	1/4" MP Female x 1/4" HP Male	20,000 psi
HMF4-HM6	1/4" MP Female x 3/8" HP Male	20,000 psi
HMF4-HM9	1/4" MP Female x 9/16" HP Male	20,000 psi
HMF6-HM4	3/8" MP Female x 1/4" HP Male	20,000 psi
HMF6-HM6	3/8" MP Female x 3/8" HP Male	20,000 psi
HMF6-HM9	3/8" MP Female x 9/16" MP Male	20,000 psi
HMF9-HM4	9/16" MP Female x 1/4" HP Male	20,000 psi
HMF9-HM6	9/16" MP Female x 3/8" HP Male	20,000 psi
HMF9-HM9	9/16" MP Female x 9/16" HP Male	20,000 psi



High Pressure x NPT Adapters

SPIR STAR High Pressure x NPT (National Pipe Taper) adapters seal with a 60 degree cone High Pressure connection and a tapered thread NPT connection and are rated for working pressures up to 15,000 psi. However, working pressures may be decreased depending upon the NPT thread size.

<i>Common Description</i>	<i>Actual Thread Dimension</i>
1/4" High Pressure	9/16"-18 Thread on Gland Nut
3/8" High Pressure	3/4"-16 Thread on Gland Nut
9/16" High Pressure	1 1/8"-12 Thread on Gland Nut

<i>NPT Thread Size</i>	<i>Working Pressure</i>
1/16" - 1/2" NPT	15,000 psi
3/4" - 1" NPT	10,000 psi

High Pressure Male x NPT Male

Part Number	Description	Max Working Pressure
HHM4-NM4	1/4" HP Male x 1/4" NPT Male	15,000 psi
HHM4-NM6	1/4" HP Male x 3/8" NPT Male	15,000 psi
HHM4-NM8	1/4" HP Male x 1/2" NPT Male	15,000 psi
HHM6-NM4	3/8" HP Male x 1/4" NPT Male	15,000 psi
HHM6-NM6	3/8" HP Male x 3/8" NPT Male	15,000 psi
HHM6-NM8	3/8" HP Male x 1/2" NPT Male	15,000 psi
HHM9-NM4	9/16" HP Male x 1/4" NPT Male	15,000 psi
HHM9-NM6	9/16" HP Male x 3/8" NPT Male	15,000 psi
HHM9-NM8	9/16" HP Male x 1/2" NPT Male	15,000 psi
HHM9-NM12	9/16" HP Male x 3/4" NPT Male	10,000 psi
HHM9-NM16	9/16" HP Male x 1" NPT Male	10,000 psi



High Pressure Female x NPT Male

Part Number	Description	Max Working Pressure
HHF4-NM4	1/4" HP Female x 1/4" NPT Male	15,000 psi
HHF4-NM6	1/4" HP Female x 3/8" NPT Male	15,000 psi
HHF4-NM8	1/4" HP Female x 1/2" NPT Male	15,000 psi
HHF6-NM4	3/8" HP Female x 1/4" NPT Male	15,000 psi
HHF6-NM6	3/8" HP Female x 3/8" NPT Male	15,000 psi
HHF6-NM8	3/8" HP Female x 1/2" NPT Male	15,000 psi
HHF9-NM6	9/16" HP Female x 3/8" NPT Male	15,000 psi
HHF9-NM8	9/16" HP Female x 1/2" NPT Male	15,000 psi
HHF9-NM16	9/16" HP Female x 1" NPT Male	10,000 psi



High Pressure x NPT Adapters



NPT Female x High Pressure Male



Part Number	Description	Max Working Pressure
<i>HNF4-HM4</i>	1/4" NPT Female x 1/4" HP Male	15,000 psi
<i>HNF4-HM6</i>	1/4" NPT Female x 3/8" HP Male	15,000 psi
<i>HNF4-HM9</i>	1/4" NPT Female x 9/16" HP Male	15,000 psi
<i>HNF6-HM4</i>	3/8" NPT Female x 1/4" HP Male	15,000 psi
<i>HNF6-HM6</i>	3/8" NPT Female x 3/8" HP Male	15,000 psi
<i>HNF8-HM4</i>	1/2" NPT Female x 1/4" HP Male	15,000 psi
<i>HNF8-HM6</i>	1/2" NPT Female x 3/8" HP Male	15,000 psi
<i>HNF8-HM9</i>	1/2" NPT Female x 9/16" HP Male	15,000 psi



Medium Pressure Fittings

SPIR STAR Medium Pressure fittings (sometimes known as “Slimline”) seal with a 60 degree cone and are rated for working pressures up to 20,000 psi.

<i>Common Description</i>	<i>Actual Thread Dimension</i>
1/4" Medium Pressure	7/16"-20 Thread on Gland Nut
3/8" Medium Pressure	9/16"-18 Thread on Gland Nut
9/16" Medium Pressure	13/16"-16 Thread on Gland Nut
3/4" Medium Pressure	3/4"-14 Thread on Gland Nut
1" Medium Pressure	1 3/8"-12 Thread on Gland Nut

Medium Pressure Male Hex Nipples

Part Number	Description	Max Working Pressure
HMM4-MM4	1/4" MP Male x 1/4" MP Male	20,000 psi
HMM6-MM6	3/8" MP Male x 3/8" MP Male	20,000 psi
HMM6-MM9	3/8" MP Male x 9/16" MP Male	20,000 psi
HMM9-MM9	9/16" MP Male x 9/16" MP Male	20,000 psi
HMM9-MM12	9/16" MP Male x 3/4" MP Male	20,000 psi
HMM9-MM16	9/16" MP Male x 1" MP Male	20,000 psi
HMM12-MM12	3/4" MP Male x 3/4" MP Male	20,000 psi
HMM16-MM16	1" MP Male x 1" MP Male	20,000 psi



Medium Pressure Female Elbows

Part Number	Description	Max Working Pressure
HEMF4	1/4" MP Female Elbow	20,000 psi
HEMF6	3/8" MP Female Elbow	20,000 psi
HEMF9	9/16" MP Female Elbow	20,000 psi
HEMF12	3/4" MP Female Elbow	20,000 psi
HEMF16	1" MP Female Elbow	20,000 psi



Medium Pressure Female Tees

Part Number	Description	Max Working Pressure
HTMF4	1/4" MP Female Tee	20,000 psi
HTMF6	3/8" MP Female Tee	20,000 psi
HTMF9	9/16" MP Female Tee	20,000 psi
HTMF12	3/4" MP Female Tee	20,000 psi
HTMF16	1" MP Female Tee	20,000 psi



Medium Pressure Fittings



Medium Pressure Female Crosses



Part Number	Description	Max Working Pressure
<i>HCRMF4</i>	1/4" MP Female Cross	20,000 psi
<i>HCRMF6</i>	3/8" MP Female Cross	20,000 psi
<i>HCRMF9</i>	9/16" MP Female Cross	20,000 psi
<i>HCRMF12</i>	3/4" MP Female Cross	20,000 psi
<i>HCRMF16</i>	1" MP Female Cross	20,000 psi

Medium Pressure Female x Medium Pressure Male



Part Number	Description	Max Working Pressure
<i>HMF4-MM6</i>	1/4" MP Female x 3/8" MP Male	20,000 psi
<i>HMF4-MM9</i>	1/4" MP Female x 9/16" MP Male	20,000 psi
<i>HMF6-MM9</i>	3/8" MP Female x 9/16" MP Male	20,000 psi
<i>HMF9-MM6</i>	9/16" MP Female x 3/8" MP Male	20,000 psi
<i>HMF9-MM12</i>	9/16" MP Female x 3/4" MP Male	20,000 psi
<i>HMF9-MM16</i>	9/16" MP Female x 1" MP Male	20,000 psi

Medium Pressure Slimline Couplers

Slimline couplers are designed to be used ONLY for high pressure waterjetting applications, such as tube bundle cleaning.



Part Number	Description	Max Working Pressure
<i>HCSL-MF4-LL</i>	1/4" MP Female Slimline Coupler Left x Left* 0.374" OD	20,000 psi
<i>HCSL-MF4-LR</i>	1/4" MP Female Slimline Coupler Left x Right* 0.374" OD	20,000 psi
<i>HCSL-MF4-RR</i>	1/4" MP Female Slimline Coupler Right x Right* 0.374" OD	20,000 psi
<i>HCSL-MF6-LL</i>	3/8" MP Female Slimline Coupler Left x Left* 0.499" OD	20,000 psi
<i>HCSL-MF6-LR</i>	3/8" MP Female Slimline Coupler Left x Right* 0.499" OD	20,000 psi
<i>HCSL-MF6-RR</i>	3/8" MP Female Slimline Coupler Right x Right* 0.499" OD	20,000 psi
<i>HCSL-MF9-LL</i>	9/16" MP Female Slimline Coupler Left x Left* 0.687" OD	20,000 psi
<i>HCSL-MF9-LR</i>	9/16" MP Female Slimline Coupler Left x Right* 0.687" OD	20,000 psi
<i>HCSL-MF9-RR</i>	9/16" MP Female Slimline Coupler Right x Right* 0.687" OD	20,000 psi
	* Designates Left Hand Thread or Right Hand Thread	



Medium Pressure Fittings

Medium Pressure Heavy Duty Couplers

Part Number	Description	Max Working Pressure
HC-MF4	1/4" MP Female Coupler	20,000 psi
HC-MF6	3/8" MP Female Coupler	20,000 psi
HC-MF9	9/16" MP Female Coupler	20,000 psi
HC-MF12	3/4" MP Female Coupler	20,000 psi
HC-MF16	1" MP Female Coupler	20,000 psi

Also available as bulkhead.



Medium Pressure Tube Nipples

Part Number	Description	Max Working Pressure
HMM6-3.00	3/8" MP Nipple x 3" Long	20,000 psi
HMM9-3.00	9/16" MP Nipple x 3" Long	20,000 psi
HMM9-4.00	9/16" MP Nipple x 4" Long	20,000 psi
HMM9-6.00	9/16" MP Nipple x 6" Long	20,000 psi
HMM9-8.00	9/16" MP Nipple x 8" Long	20,000 psi



Medium Pressure Plugs

Part Number	Description	Max Working Pressure
HMM4-PLUG	1/4" MP Plug	20,000 psi
HMM6-PLUG	3/8" MP Plug	20,000 psi
HMM9-PLUG	9/16" MP Plug	20,000 psi
HMM12-PLUG	3/4" MP Plug	20,000 psi
HMM16-PLUG	1" MP Plug	20,000 psi



Medium Pressure Fittings

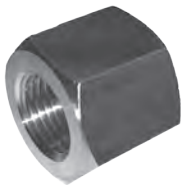


Medium Pressure Gland Nuts & Collars



Part Number	Description	Max Working Pressure
<i>GN-1/4MP</i>	1/4" MP Gland Nut	20,000 psi
<i>GN-3/8MP</i>	3/8" MP Gland Nut	20,000 psi
<i>GN-9/16MP</i>	9/16" MP Gland Nut	20,000 psi
<i>GN-3/4MP</i>	3/4" MP Gland Nut	20,000 psi
<i>GN-1MP</i>	1" MP Gland Nut	20,000 psi
<i>CLR-1/4MP</i>	1/4" MP Collar	20,000 psi
<i>CLR-3/8MP</i>	3/8" MP Collar	20,000 psi
<i>CLR-9/16MP</i>	9/16" MP Collar	20,000 psi
<i>CLR-3/4MP</i>	3/4" MP Collar	20,000 psi
<i>CLR-1MP</i>	1" MP Collar	20,000 psi
<i>* GN-1/4MP-AV</i>	1/4" MP Anti-Vibration Assembly	20,000 psi
<i>* GN-3/8MP-AV</i>	3/8" MP Anti-Vibration Assembly	20,000 psi
<i>* GN-9/16MP-AV</i>	9/16" MP Anti-Vibration Assembly	20,000 psi
* Indicates Anti-Vibration style		

Medium Pressure Caps



Part Number	Description	Max Working Pressure
<i>HMF4-CAP</i>	1/4" MP Female Cap	20,000 psi
<i>HMF6-CAP</i>	3/8" MP Female Cap	20,000 psi
<i>HMF9-CAP</i>	9/16" MP Female Cap	20,000 psi
<i>HMF12-CAP</i>	3/4" MP Female Cap	20,000 psi
<i>HMF16-CAP</i>	1" MP Female Cap	20,000 psi



Medium Pressure x NPT Adapters

SPIR STAR Medium Pressure x NPT (National Pipe Taper) adapters seal with a 60 degree cone Medium pressure connection and a tapered thread NPT connection. They are rated for 15,000 psi, however, working pressures may be decreased depending upon the NPT thread size.

Common Description	Actual Thread Dimension
1/4" Medium Pressure	7/16"-20 Thread on Gland Nut
3/8" Medium Pressure	9/16"-18 Thread on Gland Nut
9/16" Medium Pressure	13/16"-16 Thread on Gland Nut
3/4" Medium Pressure	3/4"-14 Thread on Gland Nut
1" Medium Pressure	1 3/8"-12 Thread on Gland Nut

NPT Thread Size	Working Pressure
1/16" - 1/2" NPT	15,000 psi
3/4" - 1" NPT	10,000 psi

Medium Pressure Male x NPT Male

Part Number	Description	Max Working Pressure
HMM4-NM4	1/4" MP Male x 1/4" NPT Male	15,000 psi
HMM4-NM6	1/4" MP Male x 3/8" NPT Male	15,000 psi
HMM6-NM4	3/8" MP Male x 1/4" NPT Male	15,000 psi
HMM6-NM6	3/8" MP Male x 3/8" NPT Male	15,000 psi
HMM6-NM8	3/8" MP Male x 1/2" NPT Male	15,000 psi
HMM9-NM4	9/16" MP Male x 1/4" NPT Male	15,000 psi
HMM9-NM6	9/16" MP Male x 3/8" NPT Male	15,000 psi
HMM9-NM8	9/16" MP Male x 1/2" NPT Male	15,000 psi
HMM9-NM16	9/16" MP Male x 1" NPT Male	10,000 psi
HMM12-NM8	3/4" MP Male x 1/2" NPT Male	15,000 psi
HMM12-NM12	3/4" MP Male x 3/4" NPT Male	10,000 psi
HMM12-NM16	3/4" MP Male x 1" NPT Male	10,000 psi
HMM16-NM8	1" MP Male x 1/2" NPT Male	15,000 psi
HMM16-NM12	1" MP Male x 3/4" NPT Male	10,000 psi
HMM16-NM16	1" MP Male x 1" NPT Male	10,000 psi



Medium Pressure Female x NPT Male

Part Number	Description	Max Working Pressure
HMF6-NM4	3/8" MP Female x 1/4" NPT Male	15,000 psi
HMF6-NM6	3/8" MP Female x 3/8" NPT Male	15,000 psi
HMF6-NM8	3/8" MP Female x 1/2" NPT Male	15,000 psi
HMF9-NM4	9/16" MP Female x 1/4" NPT Male	15,000 psi
HMF9-NM6	9/16" MP Female x 3/8" NPT Male	15,000 psi
HMF9-NM8	9/16" MP Female x 1/2" NPT Male	15,000 psi
HMF9-NM16	9/16" MP Female x 1" NPT Male	10,000 psi



Medium Pressure x NPT Adapters



NPT Female x Medium Pressure Male



Part Number	Description	Max Working Pressure
<i>HNF2-MM9</i>	1/8" NPT Female x 9/16" MP Male	15,000 psi
<i>HNF4-MM4</i>	1/4" NPT Female x 1/4" MP Male	15,000 psi
<i>HNF4-MM6</i>	1/4" NPT Female x 3/8" MP Male	15,000 psi
<i>HNF4-MM9</i>	1/4" NPT Female x 9/16" MP Male	15,000 psi
<i>HNF6-MM9</i>	3/8" NPT Female x 9/16" MP Male	15,000 psi
<i>HNF8-MM9</i>	1/2" NPT Female x 9/16" MP Male	15,000 psi
<i>HNF8-MM12</i>	1/2" NPT Female x 3/4" MP Male	15,000 psi
<i>HNF8-MM16</i>	1/2" NPT Female x 1" MP Male	15,000 psi
<i>HNF12-MM16</i>	3/4" NPT Female x 1" MP Male	10,000 psi
<i>HNF16-MM16</i>	1" NPT Female x 1" MP Male	10,000 psi

NPT (National Pipe Taper) fittings have working pressures up to 15,000 psi. However, working pressures may be decreased depending upon thread size.

NPT Thread Size	Working Pressure
1/16" - 1/2" NPT	15,000 psi
3/4" - 1" NPT	10,000 psi

NPT Male Hex Nipples

Part Number	Description	Max Working Pressure
HNM2-NM2	1/8" NPT Male x 1/8" NPT Male	15,000 psi
HNM4-NM4	1/4" NPT Male x 1/4" NPT Male	15,000 psi
HNM6-NM4	3/8" NPT Male x 1/4" NPT Male	15,000 psi
HNM6-NM6	3/8" NPT Male x 3/8" NPT Male	15,000 psi
HNM8-NM4	1/2" NPT Male x 1/4" NPT Male	15,000 psi
HNM8-NM6	1/2" NPT Male x 3/8" NPT Male	15,000 psi
HNM8-NM8	1/2" NPT Male x 1/2" NPT Male	15,000 psi
HNM12-NM8	3/4" NPT Male x 1/2" NPT Male	10,000 psi
HNM12-NM12	3/4" NPT Male x 3/4" NPT Male	10,000 psi
HNM16-NM8	1" NPT Male x 1/2" NPT Male	10,000 psi
HNM16-NM12	1" NPT Male x 3/4" NPT Male	10,000 psi
HNM16-NM16	1" NPT Male x 1" NPT Male	10,000 psi



NPT Bushings

Part Number	Description	Max Working Pressure
HNF1-NM2	1/16" NPT Female x 1/8" NPT Male	15,000 psi
HNF1-NM4	1/16" NPT Female x 1/4" NPT Male	15,000 psi
HNF1-NM6	1/16" NPT Female x 3/8" NPT Male	15,000 psi
HNF1-NM8	1/16" NPT Female x 1/2" NPT Male	15,000 psi
HNF2-NM4	1/8" NPT Female x 1/4" NPT Male	15,000 psi
HNF2-NM6	1/8" NPT Female x 3/8" NPT Male	15,000 psi
HNF2-NM8	1/8" NPT Female x 1/2" NPT Male	15,000 psi
HNF4-NM6	1/4" NPT Female x 3/8" NPT Male	15,000 psi
HNF4-NM8	1/4" NPT Female x 1/2" NPT Male	15,000 psi
HNF4-NM12	1/4" NPT Female x 3/4" NPT Male	10,000 psi
HNF4-NM16	1/4" NPT Female x 1" NPT Male	10,000 psi
HNF6-NM4	3/8" NPT Female x 1/4" NPT Male	15,000 psi
HNF6-NM8	3/8" NPT Female x 1/2" NPT Male	15,000 psi
HNF6-NM12	3/8" NPT Female x 3/4" NPT Male	10,000 psi
HNF6-NM16	3/8" NPT Female x 1" NPT Male	10,000 psi
HNF8-NM4	1/2" NPT Female x 1/4" NPT Male	15,000 psi
HNF8-NM6	1/2" NPT Female x 3/8" NPT Male	15,000 psi
HNF8-NM12	1/2" NPT Female x 3/4" NPT Male	10,000 psi
HNF8-NM16	1/2" NPT Female x 1" NPT Male	10,000 psi
HNF12-NM16	3/4" NPT Female x 1" NPT Male	10,000 psi



NPT Fittings



NPT Female Elbows



Part Number	Description	Max Working Pressure
<i>HENF4</i>	1/4" NPT Female Elbow	15,000 psi
<i>HENF6</i>	3/8" NPT Female Elbow	15,000 psi
<i>HENF8</i>	1/2" NPT Female Elbow	15,000 psi
<i>HENF12</i>	3/4" NPT Female Elbow	10,000 psi
<i>HENF16</i>	1" NPT Female Elbow	10,000 psi

NPT Street Elbows



Part Number	Description	Max Working Pressure
<i>HSENF4</i>	1/4" NPT Male x NPT Female Street Elbow	15,000 psi
<i>HSENF6</i>	3/8" NPT Male x NPT Female Street Elbow	15,000 psi
<i>HSENF8</i>	1/2" NPT Male x NPT Female Street Elbow	15,000 psi

NPT Female Tees



Part Number	Description	Max Working Pressure
<i>HTNF4</i>	1/4" NPT Female Tee	15,000 psi
<i>HTNF6</i>	3/8" NPT Female Tee	15,000 psi
<i>HTNF8</i>	1/2" NPT Female Tee	15,000 psi
<i>HTNF12</i>	3/4" NPT Female Tee	10,000 psi
<i>HTNF16</i>	1" NPT Female Tee	10,000 psi

NPT Street Tees



Part Number	Description	Max Working Pressure
<i>HSTNF4</i>	1/4" NPT Male x NPT Female Street Tee	15,000 psi
<i>HSTNF6</i>	3/8" NPT Male x NPT Female Street Tee	15,000 psi
<i>HSTNF8</i>	1/2" NPT Male x NPT Female Street Tee	15,000 psi

NPT Female Crosses

Part Number	Description	Max Working Pressure
<i>HCRNF4</i>	1/4" NPT Female Cross	15,000 psi
<i>HCRNF6</i>	3/8" NPT Female Cross	15,000 psi
<i>HCRNF8</i>	1/2" NPT Female Cross	15,000 psi
<i>HCRNF12</i>	3/4" NPT Female Cross	10,000 psi
<i>HCRNF16</i>	1" NPT Female Cross	10,000 psi



NPT Slimline Couplers

Slimline couplers are designed to be used ONLY for high pressure waterjetting applications, such as tube bundle cleaning.

Part Number	Description	Max Working Pressure
<i>HCSL-NF1</i>	1/16" NPT Female Slimline Coupler 0.375" OD	10,000 psi
<i>HCSL-NF2</i>	1/8" NPT Female Slimline Coupler 0.480" OD	10,000 psi
<i>HCSL-NF2-NF1</i>	1/8" NPT Female x 1/16" NPT Female Slimline Coupler 0.480" OD	10,000 psi
<i>HCSL-NF4</i>	1/4" NPT Female Slimline Coupler 0.690" OD	10,000 psi
<i>HCSL-NF6</i>	3/8" NPT Female Slimline Coupler 0.875" OD	10,000 psi
<i>HCSL-NF8</i>	1/2" NPT Female Slimline Coupler 1.130" OD	10,000 psi



NPT Heavy Duty Couplers

Part Number	Description	Max Working Pressure
<i>HC-NF4 HD</i>	1/4" NPT Female Coupler	15,000 psi
<i>HC-NF6 HD</i>	3/8" NPT Female Coupler	15,000 psi
<i>HC-NF6-NF4 HD</i>	3/8" NPT Female x 1/4" NPT Female Coupler	15,000 psi
<i>HC-NF8 HD</i>	1/2" NPT Female Coupler	15,000 psi
<i>HC-NF8-NF4 HD</i>	1/2" NPT Female x 1/4" NPT Female Coupler	15,000 psi
<i>HC-NF8-NF6 HD</i>	1/2" NPT Female x 3/8" NPT Female Coupler	15,000 psi
<i>HC-NF12 HD</i>	3/4" NPT Female Coupler	10,000 psi
<i>HC-NF12-NF8 HD</i>	3/4" NPT Female x 1/2" NPT Female Coupler	10,000 psi
<i>HC-NF16 HD</i>	1" NPT Female Coupler	10,000 psi
<i>HC-NF16-NF12 HD</i>	1" NPT Female x 3/4" NPT Female Coupler	10,000 psi



Also available as bulkhead.

NPT Fittings



NPT Pipe Nipples



Part Number	Description	Max Working Pressure
<i>HNM4-2.00</i>	1/4" NPT Male Nipple x 2" Long	15,000 psi
<i>HNM4-3.00</i>	1/4" NPT Male Nipple x 3" Long	15,000 psi
<i>HNM4-4.00</i>	1/4" NPT Male Nipple x 4" Long	15,000 psi
<i>HNM4-6.00</i>	1/4" NPT Male Nipple x 6" Long	15,000 psi
<i>HNM6-2.00</i>	3/8" NPT Male Nipple x 2" Long	15,000 psi
<i>HNM6-3.00</i>	3/8" NPT Male Nipple x 3" Long	15,000 psi
<i>HNM6-4.00</i>	3/8" NPT Male Nipple x 4" Long	15,000 psi
<i>HNM6-6.00</i>	3/8" NPT Male Nipple x 6" Long	15,000 psi
<i>HNM8-2.00</i>	1/2" NPT Male Nipple x 2" Long	15,000 psi
<i>HNM8-3.00</i>	1/2" NPT Male Nipple x 3" Long	15,000 psi
<i>HNM8-4.00</i>	1/2" NPT Male Nipple x 4" Long	15,000 psi
<i>HNM8-6.00</i>	1/2" NPT Male Nipple x 6" Long	15,000 psi
<i>HNM12-4.00</i>	3/4" NPT Male Nipple x 4" Long	10,000 psi
<i>HNM12-6.00</i>	3/4" NPT Male Nipple x 6" Long	10,000 psi
<i>HNM16-4.00</i>	1" NPT Male Nipple x 4" Long	10,000 psi
<i>HNM16-6.00</i>	1" NPT Male Nipple x 6" Long	10,000 psi

NPT Plugs



Part Number	Description	Max Working Pressure
<i>HNM1-PLUG</i>	1/16" NPT Male Plug	15,000 psi
<i>HNM2-PLUG</i>	1/8" NPT Male Plug	15,000 psi
<i>HNM4-PLUG</i>	1/4" NPT Male Plug	15,000 psi
<i>HNM6-PLUG</i>	3/8" NPT Male Plug	15,000 psi
<i>HNM8-PLUG</i>	1/2" NPT Male Plug	15,000 psi
<i>HNM12-PLUG</i>	3/4" NPT Male Plug	10,000 psi
<i>HNM16-PLUG</i>	1" NPT Male Plug	10,000 psi



JIC Adapters

SPIR STAR JIC adapters seal with a 37 degree cone and are rated for working pressures up to 10,000 psi.

<i>Common Description</i>	<i>Actual Thread Dimension</i>
#4 1/4" JIC	7/16"-20 Thread
#6 3/8" JIC	9/16"-18 Thread
#8 1/2" JIC	3/4"-16 Thread
#12 3/4" JIC	1 1/16"-12 Thread
#16 1" JIC	1 5/16"-12 Thread

JIC Male x JIC Male

Part Number	Description	Max Working Pressure
HMJ4-MJ4	1/4" JIC Male x 1/4" JIC Male	10,000 psi
HMJ4-MJ6	1/4" JIC Male x 3/8" JIC Male	10,000 psi
HMJ4-MJ8	1/4" JIC Male x 1/2" JIC Male	10,000 psi
HMJ6-MJ6	3/8" JIC Male x 3/8" JIC Male	10,000 psi
HMJ6-MJ8	3/8" JIC Male x 1/2" JIC Male	10,000 psi
HMJ8-MJ8	1/2" JIC Male x 1/2" JIC Male	10,000 psi
HMJ16-MJ16	1" JIC Male x 1" JIC Male	10,000 psi



JIC Male x NPT Male

Part Number	Description	Max Working Pressure
HMJ4-NM4	1/4" JIC Male x 1/4" NPT Male	10,000 psi
HMJ4-NM6	1/4" JIC Male x 3/8" NPT Male	10,000 psi
HMJ4-NM8	1/4" JIC Male x 1/2" NPT Male	10,000 psi
HMJ6-NM4	3/8" JIC Male x 1/4" NPT Male	10,000 psi
HMJ6-NM6	3/8" JIC Male x 3/8" NPT Male	10,000 psi
HMJ6-NM8	3/8" JIC Male x 1/2" NPT Male	10,000 psi
HMJ8-NM4	1/2" JIC Male x 1/4" NPT Male	10,000 psi
HMJ8-NM6	1/2" JIC Male x 3/8" NPT Male	10,000 psi
HMJ8-NM8	1/2" JIC Male x 1/2" NPT Male	10,000 psi
HMJ8-NM12	1/2" JIC Male x 3/4" NPT Male	10,000 psi
HMJ8-NM16	1/2" JIC Male x 1" NPT Male	10,000 psi
HMJ16-NM16	1" JIC Male x 1" NPT Male	10,000 psi



JIC Male x High Pressure Male

Part Number	Description	Max Working Pressure
HMJ4-HM4	1/4" JIC Male x 1/4" HP Male	10,000 psi
HMJ4-HM6	1/4" JIC Male x 3/8" HP Male	10,000 psi
HMJ4-HM9	1/4" JIC Male x 9/16" HP Male	10,000 psi
HMJ6-HM4	3/8" JIC Male x 1/4" HP Male	10,000 psi
HMJ6-HM6	3/8" JIC Male x 3/8" HP Male	10,000 psi
HMJ6-HM9	3/8" JIC Male x 9/16" HP Male	10,000 psi
HMJ8-HM4	1/2" JIC Male x 1/4" HP Male	10,000 psi
HMJ8-HM6	1/2" JIC Male x 3/8" HP Male	10,000 psi
HMJ8-HM9	1/2" JIC Male x 9/16" HP Male	10,000 psi



JIC Adapters

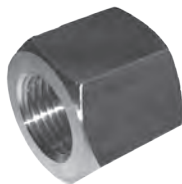


JIC Male x Medium Pressure Male



Part Number	Description	Max Working Pressure
HMJ4-MM4	1/4" JIC Male x 1/4" MP Male	10,000 psi
HMJ4-MM6	1/4" JIC Male x 3/8" MP Male	10,000 psi
HMJ4-MM9	1/4" JIC Male x 9/16" MP Male	10,000 psi
HMJ6-MM4	3/8" JIC Male x 1/4" MP Male	10,000 psi
HMJ6-MM6	3/8" JIC Male x 3/8" MP Male	10,000 psi
HMJ6-MM9	3/8" JIC Male x 9/16" MP Male	10,000 psi
HMJ6-MM12	3/8" JIC Male x 3/4" MP Male	10,000 psi
HMJ8-MM4	1/2" JIC Male x 1/4" MP Male	10,000 psi
HMJ8-MM6	1/2" JIC Male x 3/8" MP Male	10,000 psi
HMJ8-MM9	1/2" JIC Male x 9/16" MP Male	10,000 psi
HMJ8-MM12	1/2" JIC Male x 3/4" MP Male	10,000 psi
HMJ8-MM16	1/2" JIC Male x 1" MP Male	10,000 psi
HMJ16-MM12	1" JIC Male x 3/4" MP Male	10,000 psi
HMJ16-MM16	1" JIC Male x 1" MP Male	10,000 psi

JIC Caps



Part Number	Description	Max Working Pressure
HFJ4-CAP	1/4" JIC Female Cap	10,000 psi
HFJ6-CAP	3/8" JIC Female Cap	10,000 psi
HFJ8-CAP	1/2" JIC Female Cap	10,000 psi
HFJ12-CAP	3/4" JIC Female Cap	10,000 psi
HFJ16-CAP	1" JIC Female Cap	10,000 psi

JIC Plugs



Part Number	Description	Max Working Pressure
HMJ4-PLUG	1/4" JIC Male Plug	10,000 psi
HMJ6-PLUG	3/8" JIC Male Plug	10,000 psi
HMJ8-PLUG	1/2" JIC Male Plug	10,000 psi
HMJ12-PLUG	3/4" JIC Male Plug	10,000 psi
HMJ16-PLUG	1" JIC Male Plug	10,000 psi



Type M Adapters

SPIR STAR Type M adapters are for use with Type M swivel hose end fittings. These adapters seal with a 58 degree cone and are rated for working pressures up to 50,000 psi.

Common Description	Actual Thread Dimension
M9	9/16"-18 Thread
M12	3/4"-16 Thread
M14	7/8"-14 Thread
M16	1"-12 Thread
M18	1 1/8"-12 Thread
M21	1 5/16"-12 Thread

Type M Male x Type M Male

Part Number	Description	Max Working Pressure
M9-M9	9/16"-18 Type M x 9/16"-18 Type M	50,000 psi
M12-M9	3/4"-16 Type M x 9/16"-18 Type M	30,000 psi
M12-M12	3/4"-16 Type M x 3/4"-16 Type M	30,000 psi
M14-M9	7/8"-14 Type M x 9/16"-18 Type M	50,000 psi
M14-M14	7/8"-14 Type M x 7/8"-14 Type M	50,000 psi
M16-M9	1"-12 Type M x 9/16"-18 Type M	30,000 psi
M16-M12	1"-12 Type M x 3/4"-16 Type M	30,000 psi
M16-M16	1"-12 Type M x 1"-12 Type M	30,000 psi
M18-M9	1 1/8"-12 Type M x 9/16"-18 Type M	50,000 psi
M18-M14	1 1/8"-12 Type M x 7/8"-14 Type M	50,000 psi
M18-M18	1 1/8"-12 Type M x 1 1/8"-12 Type M	50,000 psi
M21-M16	1 5/16"-12 Type M x 1"-12 Type M	20,000 psi
M21-M21	1 5/16"-12 Type M x 1 5/16"-12 Type M	20,000 psi



Type M Male x NPT Male

Part Number	Description	Max Working Pressure
M9-NM4	9/16"-18 Type M x 1/4" NPT Male	15,000 psi
M9-NM6	9/16"-18 Type M x 3/8" NPT Male	15,000 psi
M9-NM8	9/16"-18 Type M x 1/2" NPT Male	15,000 psi
M9-NM12	9/16"-18 Type M x 3/4" NPT Male	10,000 psi
M9-NM16	9/16"-18 Type M x 1" NPT Male	10,000 psi
M12-NM4	3/4"-16 Type M x 1/4" NPT Male	15,000 psi
M12-NM6	3/4"-16 Type M x 3/8" NPT Male	15,000 psi
M12-NM8	3/4"-16 Type M x 1/2" NPT Male	15,000 psi
M12-NM12	3/4"-16 Type M x 3/4" NPT Male	10,000 psi
M12-NM16	3/4"-16 Type M x 1" NPT Male	10,000 psi
M16-NM6	1"-12 Type M x 3/8" NPT Male	15,000 psi
M16-NM8	1"-12 Type M x 1/2" NPT Male	15,000 psi
M16-NM12	1"-12 Type M x 3/4" NPT Male	10,000 psi
M16-NM16	1"-12 Type M x 1" NPT Male	10,000 psi
M21-NM8	1 5/16"-12 Type M x 1/2" NPT Male	15,000 psi
M21-NM12	1 5/16"-12 Type M x 3/4" NPT Male	10,000 psi
M21-NM16	1 5/16"-12 Type M x 1" NPT Male	10,000 psi



Type M Adapters



Type M Male x Medium Pressure Male



Part Number	Description	Max Working Pressure
M9-MP4	9/16"-18 Type M x 1/4" MP Male	20,000 psi
M9-MP6	9/16"-18 Type M x 3/8" MP Male	20,000 psi
M9-MP9	9/16"-18 Type M x 9/16" MP Male	20,000 psi
M9-MP12	9/16"-18 Type M x 3/4" MP Male	20,000 psi
M9-MP16	9/16"-18 Type M x 1" MP Male	20,000 psi
M12-MP4	3/4"-16 Type M x 1/4" MP Male	20,000 psi
M12-MP6	3/4"-16 Type M x 3/8" MP Male	20,000 psi
M12-MP9	3/4"-16 Type M x 9/16" MP Male	20,000 psi
M12-MP12	3/4"-16 Type M x 3/4" MP Male	20,000 psi
M12-MP16	3/4"-16 Type M x 1" MP Male	20,000 psi
M16-MP6	1"-12 Type M x 3/8" MP Male	20,000 psi
M16-MP9	1"-12 Type M x 9/16" MP Male	20,000 psi
M16-MP12	1"-12 Type M x 3/4" MP Male	20,000 psi
M16-MP16	1"-12 Type M x 1" MP Male	20,000 psi
M21-MP9	1 5/16" Type M x 9/16" MP Male	20,000 psi
M21-MP12	1 5/16" Type M x 3/4" MP Male	20,000 psi
M21-MP16	1 5/16" Type M x 1" MP Male	20,000 psi

Type M Male x High Pressure Male



Part Number	Description	Max Working Pressure
M9-HP4	9/16"-18 Type M x 1/4" HP Male	50,000 psi
M9-HP6	9/16"-18 Type M x 3/8" HP Male	50,000 psi
M9-HP9	9/16"-18 Type M x 9/16" HP Male	50,000 psi
M12-HP4	3/4"-16 Type M x 1/4" HP Male	30,000 psi
M12-HP6	3/4"-16 Type M x 3/8" HP Male	30,000 psi
M12-HP9	3/4"-16 Type M x 9/16" HP Male	30,000 psi
M14-HP6	7/8"-14 Type M x 3/8" HP Male	50,000 psi
M14-HP9	7/8"-14 Type M x 9/16" HP Male	50,000 psi
M16-HP6	1"-12 Type M x 3/8" HP Male	30,000 psi
M16-HP9	1"-12 Type M x 9/16" HP Male	30,000 psi
M16-HP16	1"-12 Type M x 1" HP Male	30,000 psi
M18-HP9	1 1/8"-12 Type M x 9/16" HP Male	50,000 psi
M21-HP9	1 5/16"-12 Type M x 9/16" HP Male	20,000 psi



Type M Adapters

Type M Caps

Part Number	Description	Max Working Pressure
M9-CAP	9/16"-18 Type M Cap	50,000 psi
M12-CAP	3/4"-16 Type M Cap	30,000 psi
M16-CAP	1"-12 Type M Cap	30,000 psi
M21-CAP	1 5/16"-12 Type M Cap	20,000 psi



Type M Plugs

Part Number	Description	Max Working Pressure
M9-PLUG	9/16"-18 Type M Plug	50,000 psi
M12-PLUG	3/4"-16 Type M Plug	30,000 psi
M16-PLUG	1"-12 Type M Plug	30,000 psi
M21-PLUG	1 5/16"-12 Type M Plug	20,000 psi





BSPP Adapters

SPIR STAR BSPP fittings are available with both internal and external sealing cones.

Please note that when sealing BSPP adapters with bonded seals rather than on the cone, the working pressure of the fitting may be lower than the working pressure stated on the fitting.

Ext	120 degree external sealing cone
Int	60 degree internal sealing cone

BSPP Adapters

Part Number	Description	Max Working Pressure
C09-125-1680	1/4" MBSPP-Ext. x 1/4" HP Male	30,000 psi
C09-125-1681	1/4" MBSPP-Ext. x 1/4" MP Male	20,000 psi
C19-950-0029	1/4" MBSPP-Ext. x 9/16"-18 Type M Male	30,000 psi
C19-950-1601	1/4" MBSPP-Ext. x 1/4" MBSPP-Ext.	30,000 psi
C19-950-1602	1/4" MBSPP-Ext. x 1/4" MBSPP-Int.	30,000 psi
C19-950-1622	1/4" MBSPP-Int. x 1/4" MBSPP-Int.	30,000 psi
C19-950-1623	1/4" MBSPP-Int. x 1/4" NPT Male	15,000 psi
C19-950-1624	1/4" MBSPP-Int. x 1/2" NPT Male	15,000 psi
C19-950-1625	1/4" MBSPP-Ext. x 1/4" NPT Male	15,000 psi
C19-950-1680	1/4" BSPP Female Cross	30,000 psi
C19-950-1681	1/4" BSPP Female Tee	30,000 psi
C19-950-HEBM4	1/4" MBSPP-Ext. Elbow	30,000 psi
C19-950-PLUG	1/4" MBSPP-Ext. Plug	30,000 psi
C19-950-0062	1/4" BSPP Bonded Seal	14,500 psi
C19-950-0083	1/4" BSPP Bonded Seal	21,750 psi





Quick Disconnect Couplings

SPIR STAR offers a variety of Quick Disconnect Couplings in multiple thread styles and working pressures up to 30,000 psi.

Screw Type Quick Disconnects (no check valve) - Stainless Steel

Part Number	Description	Max Working Pressure
<i>CQD-08-SET</i>	1/2" NPT Female Screw Together Quick Disconnect Set	15,000 psi
<i>CQD-MP9-SET</i>	9/16" MP Female Screw Together Quick Disconnect Set	20,000 psi



Screw Type Quick Disconnects (with check valve) - Hydraulic Service

Part Number	Description	Max Working Pressure
<i>CPVV-14-F</i>	1/4" NPT Male Screw Together Quick Disconnect Coupler	10,000 psi
<i>CPVV-14-M</i>	1/4" NPT Female Screw Together Quick Disconnect Nipple	10,000 psi
<i>CPVV-38-F</i>	3/8" NPT Male Screw Together Quick Disconnect Coupler	10,000 psi
<i>CPVV-38-M</i>	3/8" NPT Female Screw Together Quick Disconnect Nipple	10,000 psi



Coupler



Nipple

Quick Disconnect Couplings



Push/Pull Type Quick Disconnects (with check valve) - Hydraulic Service

Coupler



Nipple



Part Number	Description	Max Working Pressure
C10-116-1402	1/4" NPT Female Coupler	21,750 psi*
C10-116-6402	1/4" NPT Female Nipple	21,750 psi*
C10-116-1202	1/4" Female BSPP Coupler	21,750 psi
C10-116-6202	1/4" Female BSPP Nipple	21,750 psi
C10-125-1202	1/4" Female BSPP Coupler	29,000 psi
C10-125-6202	1/4" Female BSPP Nipple	29,000 psi
*Working pressure refers to the QD body. Recommended working pressure for 1/4" NPT thread is 15,000 psi		

Push/Pull Type Quick Disconnects (no check valve) - Waterblast Service

Coupler



Nipple



Part Number	Description	Max Working Pressure
CQD-08-FD-F	1/2" NPT Female Push/Pull Quick Disconnect Coupler	10,000 psi
CQD-08-FD-M	1/2" NPT Female Push/Pull Quick Disconnect Nipple	10,000 psi



SPC Series Quick Disconnect Couplings

- 30,000 psi maximum working pressure
- Stainless Steel construction
- 0.25" inner diameter (ID) port size
- Rated for full working pressure when disconnected

Quick Disconnect Female Couplers with Check Valve

Part Number	Description	Max Working Pressure
SPC600-0-M9	Coupler with Check Valve x 9/16"-18 Type M	30,000 psi
SPC600-0-M12	Coupler with Check Valve x 3/4"-16 Type M	30,000 psi
SPC600-0-M16	Coupler with Check Valve x 1"-12 Type M	30,000 psi
SPC600-0-MJ4	Coupler with Check Valve x 1/4" JIC Male	10,000 psi
SPC600-0-MJ6	Coupler with Check Valve x 3/8" JIC Male	10,000 psi
SPC600-0-MJ8	Coupler with Check Valve x 1/2" JIC Male	10,000 psi
SPC600-0-NM4	Coupler with Check Valve x 1/4" NPT Male	15,000 psi
SPC600-0-NM6	Coupler with Check Valve x 3/8" NPT Male	15,000 psi
SPC600-0-NM8	Coupler with Check Valve x 1/2" NPT Male	15,000 psi
SPC600-0-NF4	Coupler with Check Valve x 1/4" NPT Female	15,000 psi
SPC600-0-NF6	Coupler with Check Valve x 3/8" NPT Female	15,000 psi
SPC600-0-NF8	Coupler with Check Valve x 1/2" NPT Female	15,000 psi
SPC600-0-MP4	Coupler with Check Valve x 1/4" MP Male	20,000 psi
SPC600-0-MP6	Coupler with Check Valve x 3/8" MP Male	20,000 psi
SPC600-0-MP9	Coupler with Check Valve x 9/16" MP Male	20,000 psi
SPC600-0-HP4	Coupler with Check Valve x 1/4" HP Male	30,000 psi
SPC600-0-HP6	Coupler with Check Valve x 3/8" HP Male	30,000 psi
SPC600-0-HP9	Coupler with Check Valve x 9/16" HP Male	30,000 psi
SPC600-0-X13	Coupler with Check Valve x Low Angle Male	30,000 psi



NOTE: All SPC Series Quick Disconnect Couplings are made in the U.S.A.

SPC Series Quick Disconnect Couplings



Quick Disconnect Male Nipples with Check Valve



Part Number	Description	Max Working Pressure
SPC600-2-M9	Nipple with Check Valve x 9/16"-18 Type M	30,000 psi
SPC600-2-M12	Nipple with Check Valve x 3/4"-16 Type M	30,000 psi
SPC600-2-M16	Nipple with Check Valve x 1"-12 Type M	30,000 psi
SPC600-2-MJ4	Nipple with Check Valve x 1/4" JIC Male	10,000 psi
SPC600-2-MJ6	Nipple with Check Valve x 3/8" JIC Male	10,000 psi
SPC600-2-MJ8	Nipple with Check Valve x 1/2" JIC Male	10,000 psi
SPC600-2-NM4	Nipple with Check Valve x 1/4" NPT Male	15,000 psi
SPC600-2-NM6	Nipple with Check Valve x 3/8" NPT Male	15,000 psi
SPC600-2-NM8	Nipple with Check Valve x 1/2" NPT Male	15,000 psi
SPC600-2-NF4	Nipple with Check Valve x 1/4" NPT Female	15,000 psi
SPC600-2-NF6	Nipple with Check Valve x 3/8" NPT Female	15,000 psi
SPC600-2-NF8	Nipple with Check Valve x 1/2" NPT Female	15,000 psi
SPC600-2-MP4	Nipple with Check Valve x 1/4" MP Male	20,000 psi
SPC600-2-MP6	Nipple with Check Valve x 3/8" MP Male	20,000 psi
SPC600-2-MP9	Nipple with Check Valve x 9/16" MP Male	20,000 psi
SPC600-2-HP4	Nipple with Check Valve x 1/4" HP Male	30,000 psi
SPC600-2-HP6	Nipple with Check Valve x 3/8" HP Male	30,000 psi
SPC600-2-HP9	Nipple with Check Valve x 9/16" HP Male	30,000 psi
SPC600-2-X13	Nipple with Check Valve x Low Angle Male	30,000 psi

Quick Disconnect Male Nipples without Check Valve



Part Number	Description	Max Working Pressure
SPC600-1-M9	Nipple without Check Valve x 9/16"-18 Type M	30,000 psi
SPC600-1-M12	Nipple without Check Valve x 3/4"-16 Type M	30,000 psi
SPC600-1-M16	Nipple without Check Valve x 1"-12 Type M	30,000 psi
SPC600-1-MJ4	Nipple without Check Valve x 1/4" JIC Male	10,000 psi
SPC600-1-MJ6	Nipple without Check Valve x 3/8" JIC Male	10,000 psi
SPC600-1-MJ8	Nipple without Check Valve x 1/2" JIC Male	10,000 psi
SPC600-1-NM4	Nipple without Check Valve x 1/4" NPT Male	15,000 psi
SPC600-1-NM6	Nipple without Check Valve x 3/8" NPT Male	15,000 psi
SPC600-1-NM8	Nipple without Check Valve x 1/2" NPT Male	15,000 psi
SPC600-1-NF4	Nipple without Check Valve x 1/4" NPT Female	15,000 psi
SPC600-1-NF6	Nipple without Check Valve x 3/8" NPT Female	15,000 psi
SPC600-1-NF8	Nipple without Check Valve x 1/2" NPT Female	15,000 psi
SPC600-1-MP4	Nipple without Check Valve x 1/4" MP Male	20,000 psi
SPC600-1-MP6	Nipple without Check Valve x 3/8" MP Male	20,000 psi
SPC600-1-MP9	Nipple without Check Valve x 9/16" MP Male	20,000 psi
SPC600-1-HP4	Nipple without Check Valve x 1/4" HP Male	30,000 psi
SPC600-1-HP6	Nipple without Check Valve x 3/8" HP Male	30,000 psi
SPC600-1-HP9	Nipple without Check Valve x 9/16" HP Male	30,000 psi
SPC600-1-X13	Nipple without Check Valve x Low Angle Male	30,000 psi

NOTE: All SPC Series Quick Disconnect Couplings are made in the U.S.A.

SPIR STAR offers a large variety of needle, ball, and check valves with several thread variations and working pressures up to 60,000 psi.

Repair kits for all valve types are offered by SPIR STAR. Also, stainless steel handles are available for needle valves upon request.

Two Way Needle Valves - 15K

Part Number	Description	Max Working Pressure
HVNF4-15K	1/4" NPT Female Two Way Straight Needle Valve	15,000 psi
HVNF6-15K	3/8" NPT Female Two Way Straight Needle Valve	15,000 psi
HVNF8-15K	1/2" NPT Female Two Way Straight Needle Valve	15,000 psi
HVNF8NM8-15K	1/2" NPT Female x 1/2" NPT Male Two Way Straight Needle Valve	15,000 psi



Two Way Needle Valves - 20K

Part Number	Description	Max Working Pressure
HVMF4-20K	1/4" MP Female Two Way Straight Needle Valve	20,000 psi
HVMF6-20K	3/8" MP Female Two Way Straight Needle Valve	20,000 psi
HVMF9-20K	9/16" MP Female Two Way Straight Needle Valve	20,000 psi
HVMF9-12-20K	9/16" MP Female Two Way Angle Needle Valve	20,000 psi
HVMF16-20K	1" MP Female Two Way Straight Needle Valve	20,000 psi



Two Way Needle Valves - 30K to 60K

Part Number	Description	Max Working Pressure
HVHF4-30K	1/4" HP Female Two Way Straight Needle Valve	30,000 psi
HVHF6-30K	3/8" HP Female Two Way Straight Needle Valve	30,000 psi
HVHF9-30K	9/16" HP Female Two Way Straight Needle Valve	30,000 psi
HVHF4-60K	1/4" HP Female Two Way Straight Needle Valve	60,000 psi
HVHF4-12-60K	1/4" HP Female Two Way Angle Needle Valve	60,000 psi
HVHF6-60K	3/8" HP Female Two Way Straight Needle Valve	60,000 psi
HVHF9-60K	9/16" HP Female Two Way Straight Needle Valve	60,000 psi
HVHF9-12-60K	9/16" HP Female Two Way Angle Needle Valve	60,000 psi



Valves



Two Way Ball Valves - 15K



Part Number	Description	Max Working Pressure
<i>HVBNF4-15K</i>	1/4" NPT Female Two Way Straight Ball Valve	15,000 psi
<i>HVBNF6-15K</i>	3/8" NPT Female Two Way Straight Ball Valve	15,000 psi
<i>HVBNF8-15K</i>	1/2" NPT Female Two Way Straight Ball Valve	15,000 psi

Two Way Ball Valves - 20K



Part Number	Description	Max Working Pressure
<i>HVBMF4-20K</i>	1/4" MP Female Two Way Straight Ball Valve	20,000 psi
<i>HVBMF6-20K</i>	3/8" MP Female Two Way Straight Ball Valve	20,000 psi
<i>HVBMF9-20K</i>	9/16" MP Female Two Way Straight Ball Valve	20,000 psi

NPT Check Valves - 15K



Part Number	Description	Max Working Pressure
<i>CV-NF4SS</i>	1/4" NPT Female Check Valve	15,000 psi
<i>CV-NF6SS</i>	3/8" NPT Female Check Valve	15,000 psi
<i>CV-NF8SS</i>	1/2" NPT Female Check Valve	15,000 psi

Medium Pressure Check Valves - 20K

Part Number*	Description	Max Working Pressure
CV-MF4	1/4" MP Female Check Valve	20,000 psi
CV-MF6	3/8" MP Female Check Valve	20,000 psi
CV-MF9	9/16" MP Female Check Valve	20,000 psi
<i>*Medium Pressure Check valves are available with ball or soft seat. Designate preference by adding "BS" for ball seat or "SS" for soft seat after the part number (i.e., CV-MF4-SS)</i>		



High Pressure Check Valves - 60K

Part Number*	Description	Max Working Pressure
CV-HF4	1/4" HP Female Check Valve	60,000 psi
CV-HF6	3/8" HP Female Check Valve	60,000 psi
CV-HF9	9/16" HP Female Check Valve	60,000 psi
<i>*High Pressure Check valves are available with ball or soft seat. Designate preference by adding "BS" for ball seat or "SS" for soft seat after the part number (i.e., CV-HF4-SS)</i>		





Recommended Tightening Procedures

Leakage at Swivel Nut-to-Adapter Joint

(Observed by leak at weep hole in swivel nut)

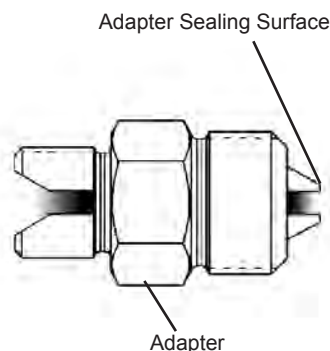
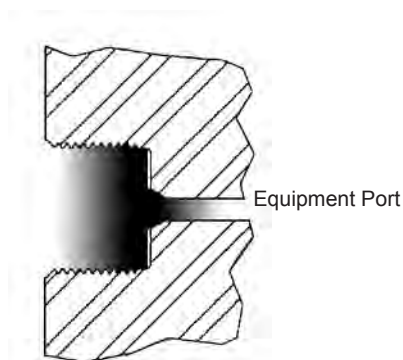
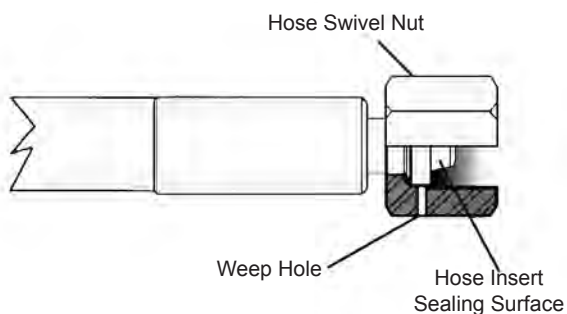
1. Reduce system pressure to zero.
2. Unscrew swivel nut and check cone surfaces of hose insert and adapter.
3. If hose insert is damaged, return hose to SPIR STAR for repair and retest.
4. If cone surfaces look good after inspection and cleaning, retighten swivel nut. Do not exceed 150% of recommended torque.

Leakage at Type M Adapter-to-Port

(Observed by leak at weep hole in pressure port or leak at threads for NPT Adapters)

1. Reduce system pressure to zero.
2. Loosen hose swivel nut.
3. Tighten adapter into port.
4. Re-tighten swivel nut.

Never use the Type M swivel nut to tighten the adapter into the port.



Connection	Thread Sizes	Tightening Torque (ft. lb.)
<i>High Pressure</i>		
1/4"	9/16" - 18	25
3/8"	3/4" - 16	50
9/16"	1 1/18" - 12	75
<i>Medium Pressure</i>		
1/4"	7/16" - 20	20
3/8"	9/16" - 18	30
9/16"	13/16" - 16	85
3/4"	3/4" NPSM	90
1"	1 3/8" - 12	125
<i>Type M Swivel</i>		
M9	9/16" - 18	25 - 30
M12	3/4" - 16	40 - 50
M14	7/8" - 14	50 - 60
M16	1" - 12	75 - 85
M21	1 5/16" - 12	100 - 120
<i>JIC</i>		
-4	7/16" - 20thd	11 - 12
-6	9/16" - 18thd	18 - 21
-8	3/4" - 16thd	36 - 39
-12	1 1/16" - 12thd	80 - 88
-16	1 5/16" - 12thd	100 - 108



Chemical Resistance

R	Resistant
NR	Not Resistant
---	No Data Available

Medium	PA - polyamide		PUR - polyurethane		POM - polyoxymethylene	
	68°F	140°F	68°F	140°F	68°F	140°F
	20°C	60°C	20°C	60°C	20°C	60°C
acetate solvents	R	R	NR	NR	NR	NR
- dibutyl phthalate	R	R	---	---	---	---
- dibutyl sebacate	R	R	---	---	---	---
- dihexyl phthalate	R	R	---	---	---	---
- dioctyl phthalate	R	R	---	---	---	---
1-butanone	R	NR	---	NR	---	---
acetic acid	NR	NR	NR	NR	R	R
acetic anhydride	R	NR	NR	NR	---	---
acetone	R	NR	NR	NR	R	NR
acetylene	R	R	R	R	---	---
alumen	R	R	R	R	---	---
ammonia (concentrate)	NR	NR	R	R	R	R
ammonia gas	R	R	---	---	R	R
ammonium chloride	R	R	R	NR	---	---
ammonium hydroxide	NR	NR	R	R	---	---
ammonium nitrate	R	R	NR	NR	---	---
ammonium phosphate	R	R	R	NR	---	---
ammonium sulphate	R	R	NR	NR	---	---
amyl acetate	R	NR	NR	NR	---	---
amyl alcohol	R	NR	NR	NR	NR	NR
antifreezing compound	R	R	---	---	---	---
benzene	R	NR	NR	NR	NR	NR
benzoic acid	R	R	---	---	---	---
biodiesel	R	R	---	---	---	---
boric acid	NR	NR	R	R	---	---
brake fluid	R	R	NR	NR	NR	NR
brine	R	R	R	NR	R	R
butane	R	R	---	---	---	---
butanol	R	R	---	---	R	R
butyl acetate	R	R	NR	NR	---	---
butyl alcohol	R	R	NR	NR	---	---
calcium chloride	R	R	R	NR	R	R
calcium hydrochloride	NR	NR	---	---	NR	NR
calcium hydroxide	R	R	NR	NR	---	---
calcium nitrate	R	NR	---	---	---	---
chloric gas	R	R	---	---	NR	NR
chlorine, liquid	NR	NR	---	---	---	---
chloroacetic acid	NR	NR	NR	NR	---	---

The Chemical Resistance Chart is not guaranteed to be complete, nor is it binding. It contains information from sources other than SPIR STAR and should be used for reference only. SPIR STAR does not guarantee the performance of its hose with any of the listed media. The behavior of the media under pressure, at certain temperatures, and under the effects of other influences must be tested by the user themselves.

Chemical Resistance



R	Resistant
NR	Not Resistant
---	No Data Available

Medium	PA - polyamide		PUR - polyurethane		POM - polyoxymethylene	
	68°F	140°F	68°F	140°F	68°F	140°F
	20°C	60°C	20°C	60°C	20°C	60°C
chlorobenzene	NR	NR	NR	NR	---	---
chlorofluorocarbons	R	R	---	---	---	---
chloroform	NR	NR	NR	NR	---	---
chlorosulphonic acid	NR	NR	NR	NR	---	---
chromic acid	NR	NR	NR	NR	---	---
citric acid	R	NR	---	---	R	NR
crude oil	R	R	R	R	R	R
crude petroleum	R	R	R	R	R	R
cyclohexane	R	R	NR	NR	---	---
cyclohexanol	R	R	---	---	---	---
cyclohexanone	R	R	---	---	---	---
de-ionized water	R	R	---	---	R	R
demineralized water	R	R	---	---	R	R
diesel oil	R	R	R	NR	R	R
ether	NR	NR	R	NR	R	R
ethyl acetate	R	R	NR	NR	---	---
ethyl alcohol	R	R	NR	NR	R	R
ethylene glycol	R	NR	R	R	R	NR
formaldehyde	NR	NR	R	NR	R	R
formalin	R	R	---	---	---	---
formic acid	NR	NR	NR	NR	R	NR
gas oil	R	R	---	---	R	NR
gasoline	R	R	R	NR	R	R
glycerin	R	NR	R	R	R	R
glycol	R	R	R	R	R	R
heptane	R	R	---	---	---	---
hexane	R	R	---	---	---	---
hydrochloric acid	NR	NR	---	---	NR	NR
hydrofluoric acid	NR	NR	---	---	NR	NR
hydrogen peroxide 10%	R	NR	---	---	R	NR
hydrogen sulphide, H ₂ S low percentage	R	R	---	---	---	---
isooctane	R	R	R	---	---	---
isopropanol	R	NR	---	---	---	---
lactic acid	NR	NR	NR	NR	R	NR
lockheed	R	R	---	---	---	---
lubricating greases	R	R	R	R	R	R
lubricating oils	R	R	R	R	R	R

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Chemical Resistance

R	Resistant
NR	Not Resistant
---	No Data Available

Medium	PA - polyamide		PUR - polyurethane		POM - polyoxymethylene	
	68°F	140°F	68°F	140°F	68°F	140°F
	20°C	60°C	20°C	60°C	20°C	60°C
mercury	R	R	---	---	---	---
methanol	R	R	---	---	R	R
methyl alcohol	NR	NR	R	NR	R	R
methyl ethyl ketone	R	NR	NR	NR	NR	NR
methyl isopropyl ketone	R	NR	NR	NR	R	R
methylene chloride	R	NR	R	NR	NR	NR
mineral oils	R	R	R	R	R	R
motor oils (motor vehicles)	R	R	R	NR	R	R
naphtha	R	R	NR	NR	R	R
sodiumhypochlorid	NR	R	NR	NR	NR	NR
natural gas	Upon Request					
nitrobenzene	R	---	---	---	NR	NR
nitrogen	R	R	---	---	R	R
oceanic hw 443	R	R	---	---	---	---
octane	R	R	---	---	---	---
oils, etherial	R	R	R	R	R	R
oleum (fuming sulfuric acid)	NR	NR	---	---	---	---
oxygen	R	R	---	---	R	R
ozone	R	NR	R	R	---	---
paraffin	R	R	---	---	---	---
paraffin oil	R	R	---	---	---	---
petroleum ether	R	R	R	NR	---	---
phenol	NR	NR	NR	NR	NR	NR
phosphoric acid	NR	NR	---	---	R	NR
phosphorous pentoxide	NR	NR	---	---	---	---
polyfluorcarbon	---	---	---	---	R	R
propane, gaseous	R	R	---	---	---	---
propane, liquid	R	---	---	---	---	---
pydraul	R	R	---	---	---	---
sagrotan	NR	NR	---	---	---	---
seawater	R	R	R	NR	R	R
silicone oils	R	R	---	---	---	---
sodium bicarbonate	R	R	R	NR	R	R
sodium bisulphate	R	R	R	NR	---	---
sodium carbonate	R	R	NR	NR	---	---
sodium chloride	R	R	R	R	R	R
sodium chlorite solution (5%)	R	NR	---	---	R	NR
sodium cyanide	R	R	NR	NR	---	---

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Chemical Resistance



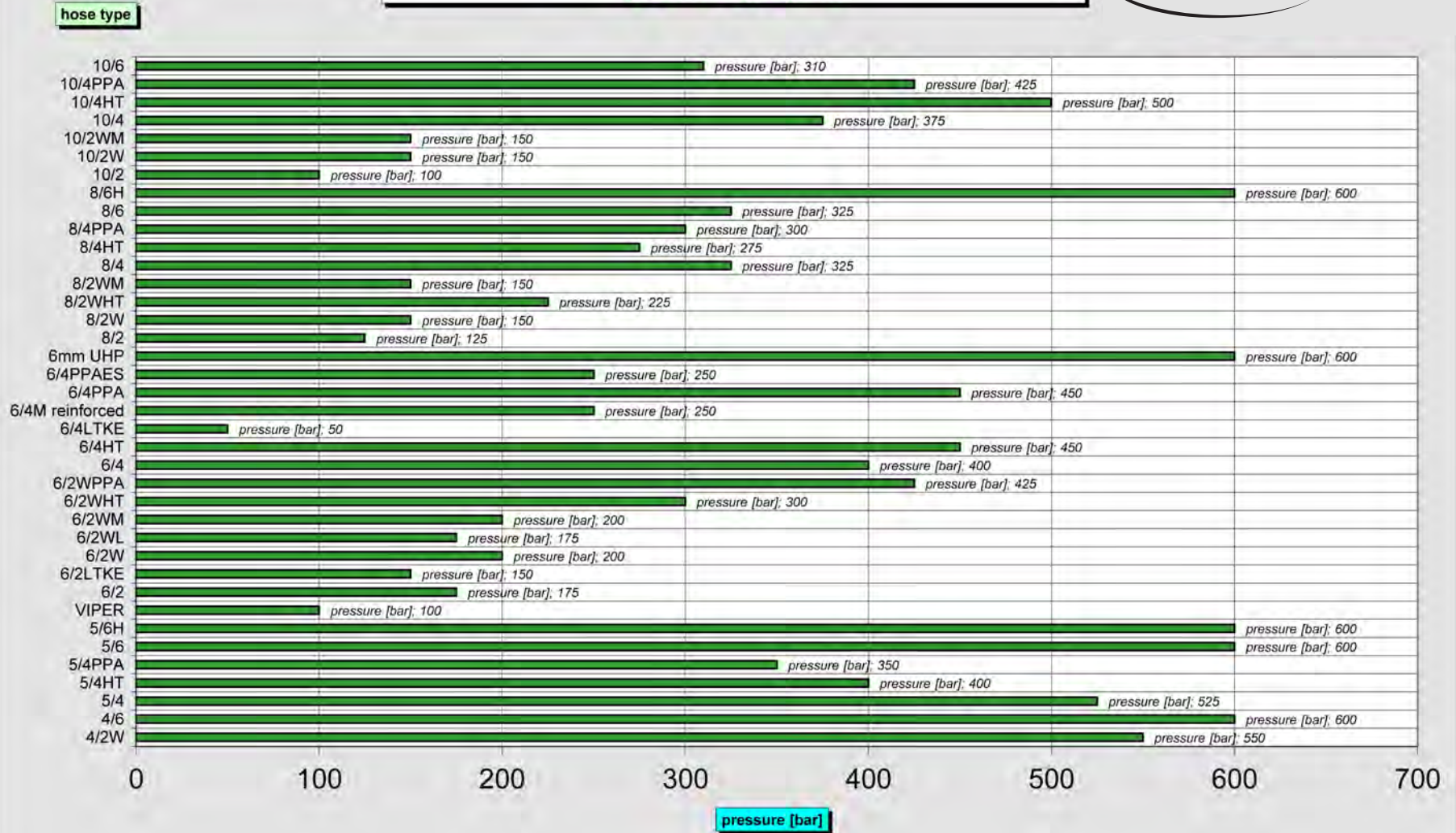
R	Resistant
NR	Not Resistant
---	No Data Available

Medium	PA - polyamide		PUR - polyurethane		POM - polyoxymethylene	
	68°F	140°F	68°F	140°F	68°F	140°F
	20°C	60°C	20°C	60°C	20°C	60°C
sodium hydroxide	R	R	NR	NR	R	R
sodium nitrate	R	R	R	NR	---	---
sodium perborate	R	R	R	NR	---	---
sodium phosphates	R	R	---	---	---	---
sodium silicate	R	R	NR	NR	---	---
sodium sulfide	R	R	R	NR	---	---
solvent naphtha (white spirit)	R	NR	---	---	---	---
sulphur	R	R	R	R	---	---
sulphur chloride	NR	NR	NR	NR	---	---
sulphur trioxide	NR	NR	NR	NR	---	---
sulphuric acid	R	NR	R	NR	NR	NR
toluene	R	NR	NR	NR	R	R
trichlorethylene	NR	NR	NR	NR	NR	NR
water	R	R	R	NR	R	R
xylene	R	NR	NR	NR	R	R
zinc chloride	R	R	NR	NR	---	---
zinc sulphate	R	R	R	NR	---	---
zinn chlorid	R	R	NR	NR	---	---

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Resistance against External Pressure (Collapse Pressure Test) ID 4mm - ID 10mm

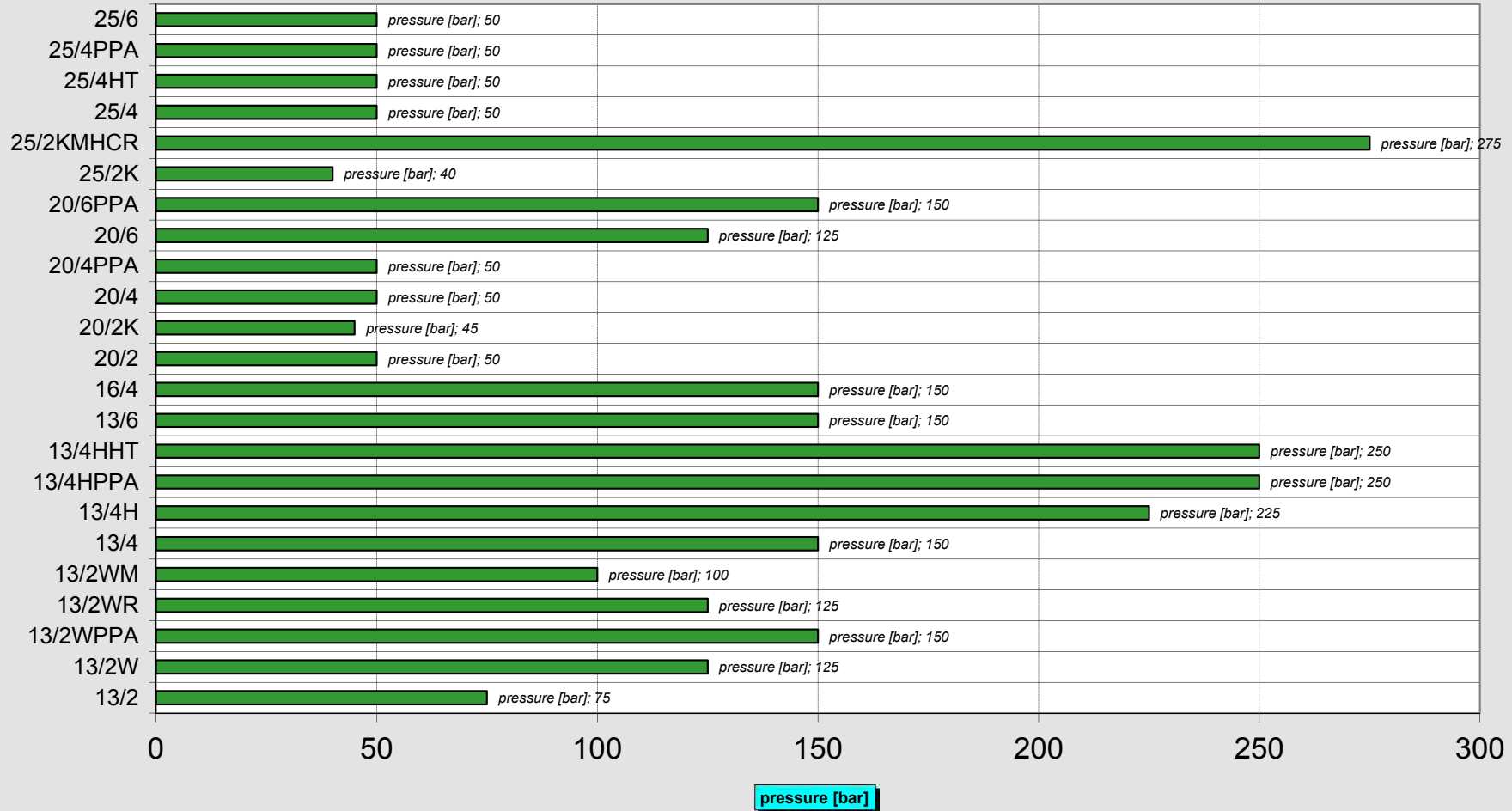
SPIR STAR®



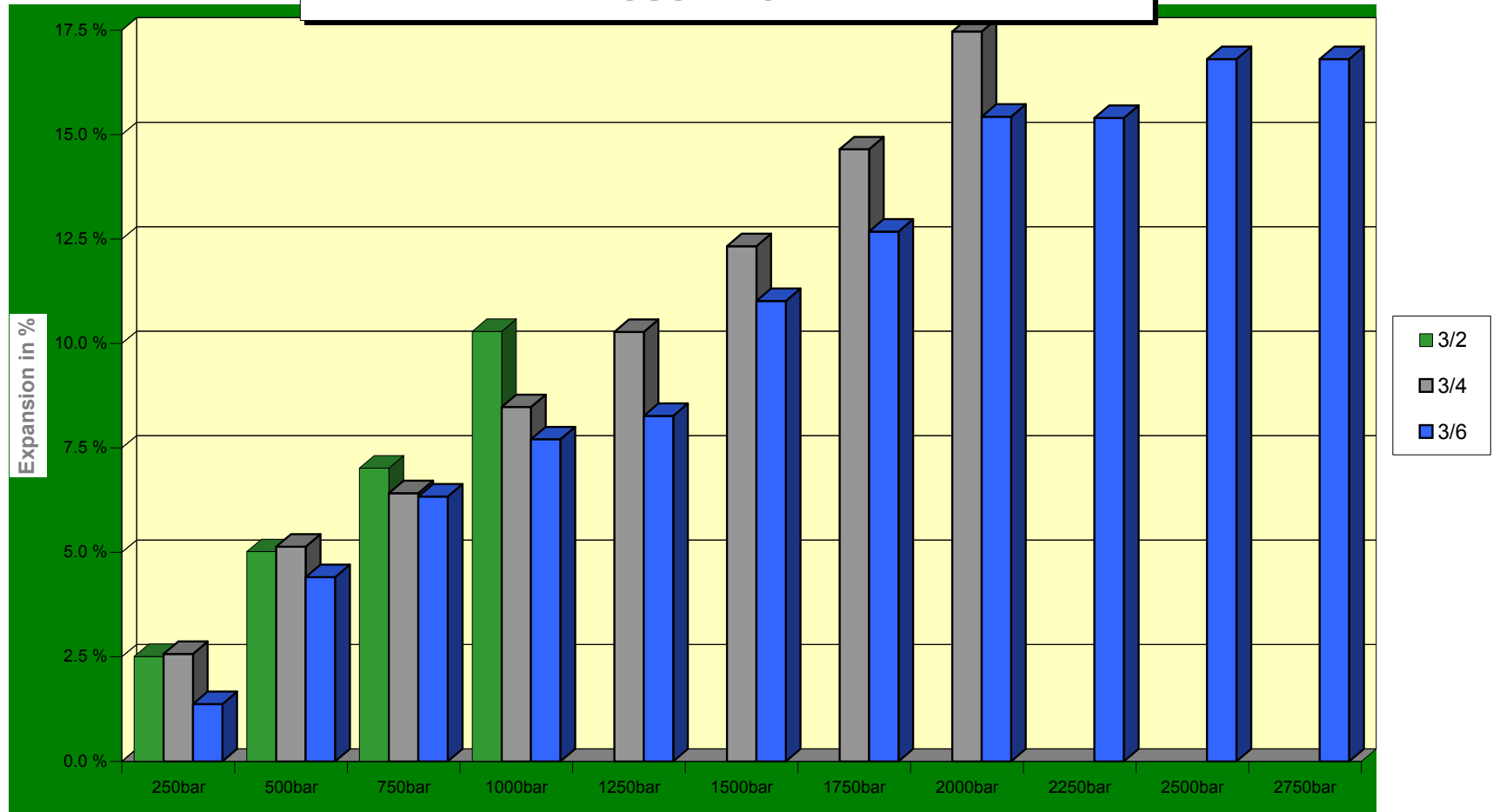
Resistance against External Pressure (Collapse Pressure Test) ID 13mm - ID 25mm



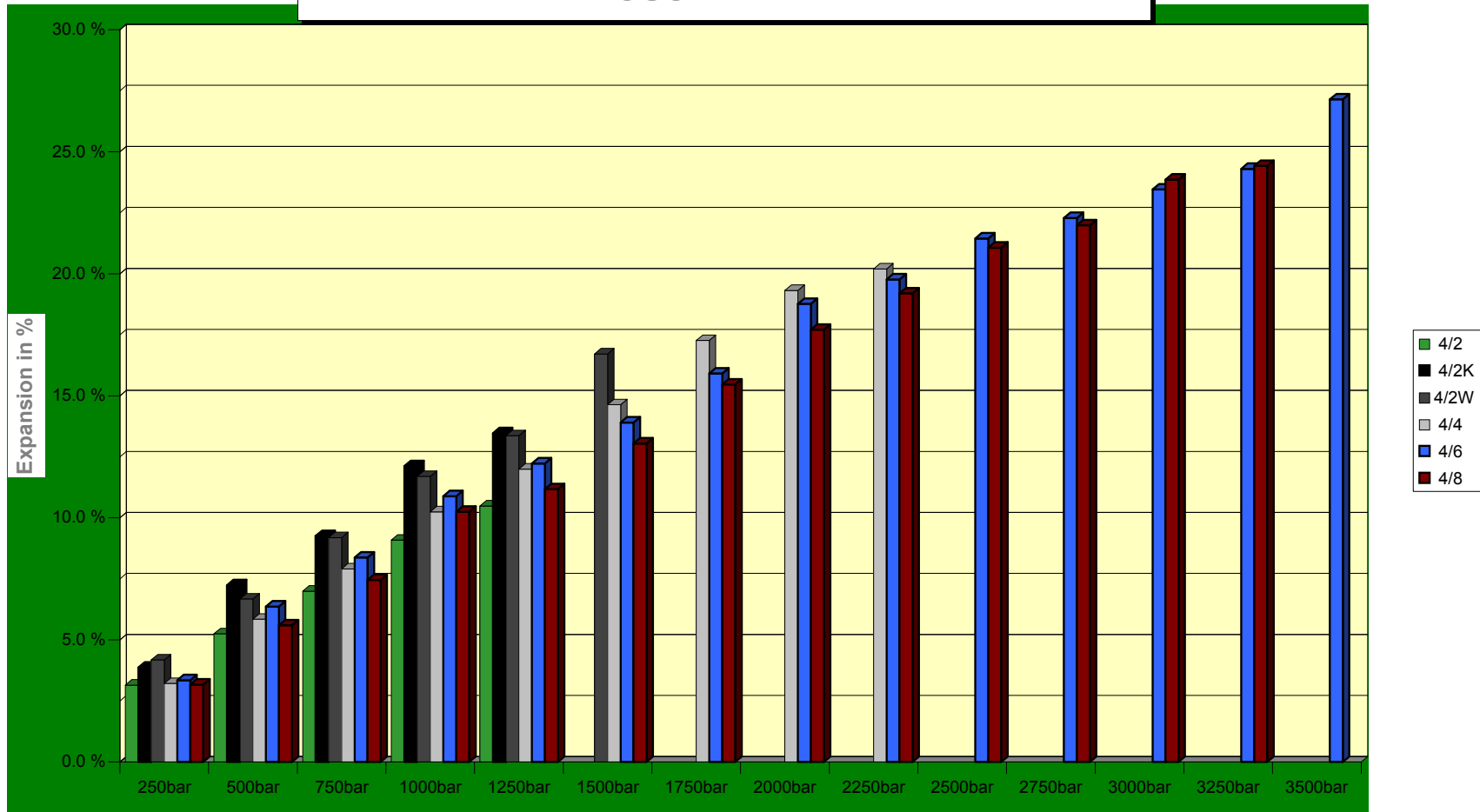
hose type



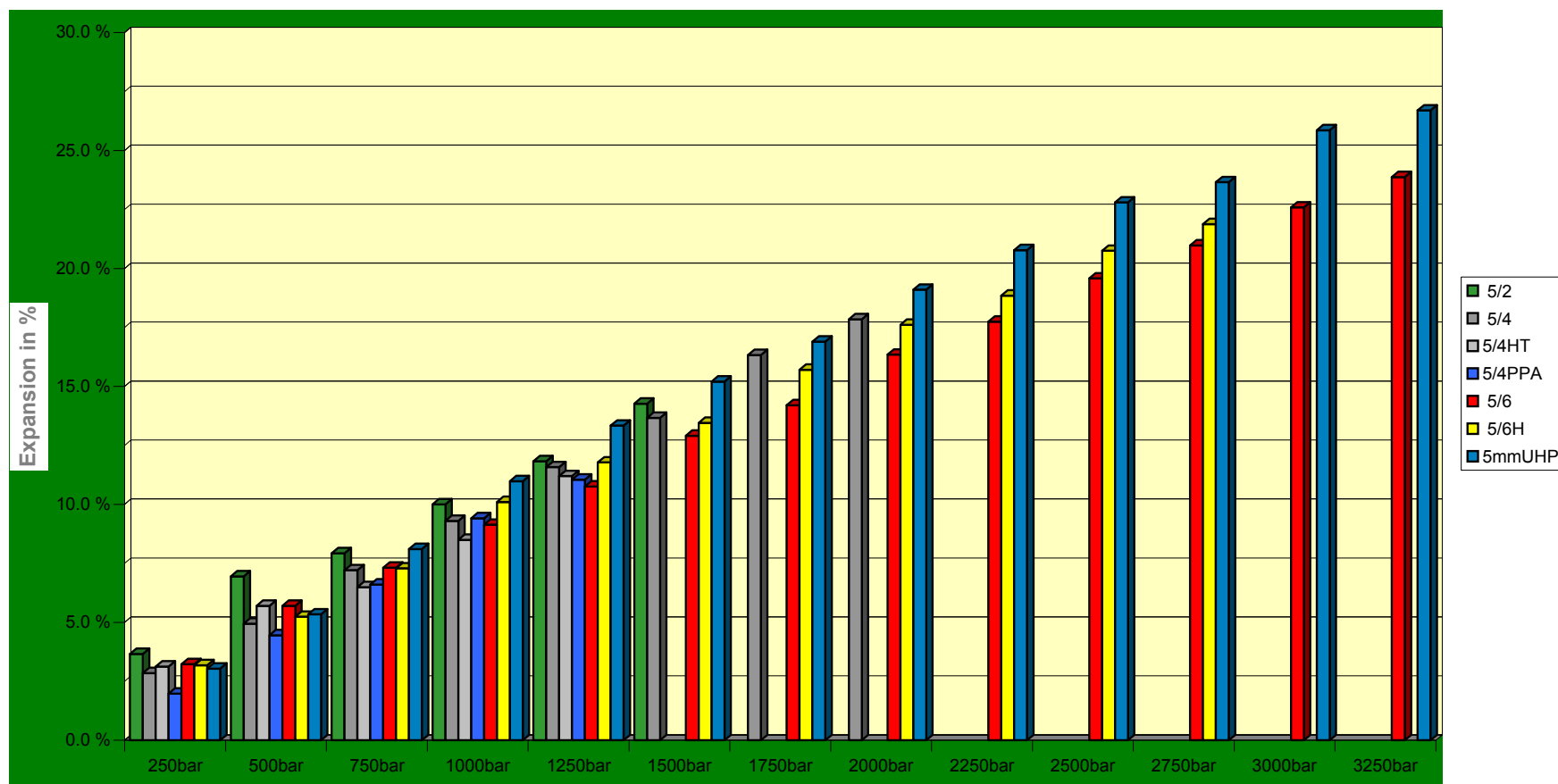
SPIR STAR® Volumetric Expansion Chart Hose ID 3 mm



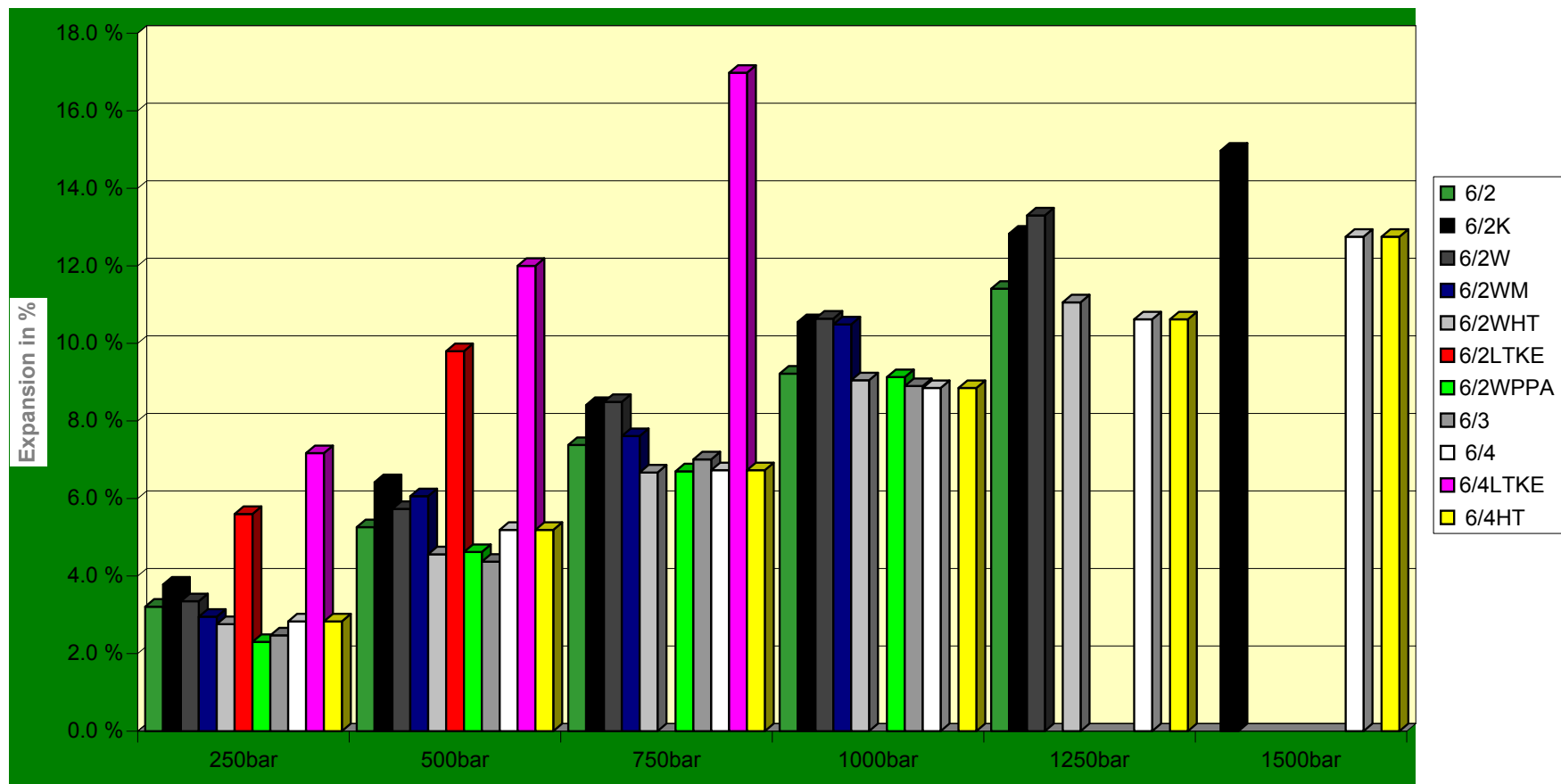
SPIR STAR® Volumetric Expansion Chart Hose ID 4 mm



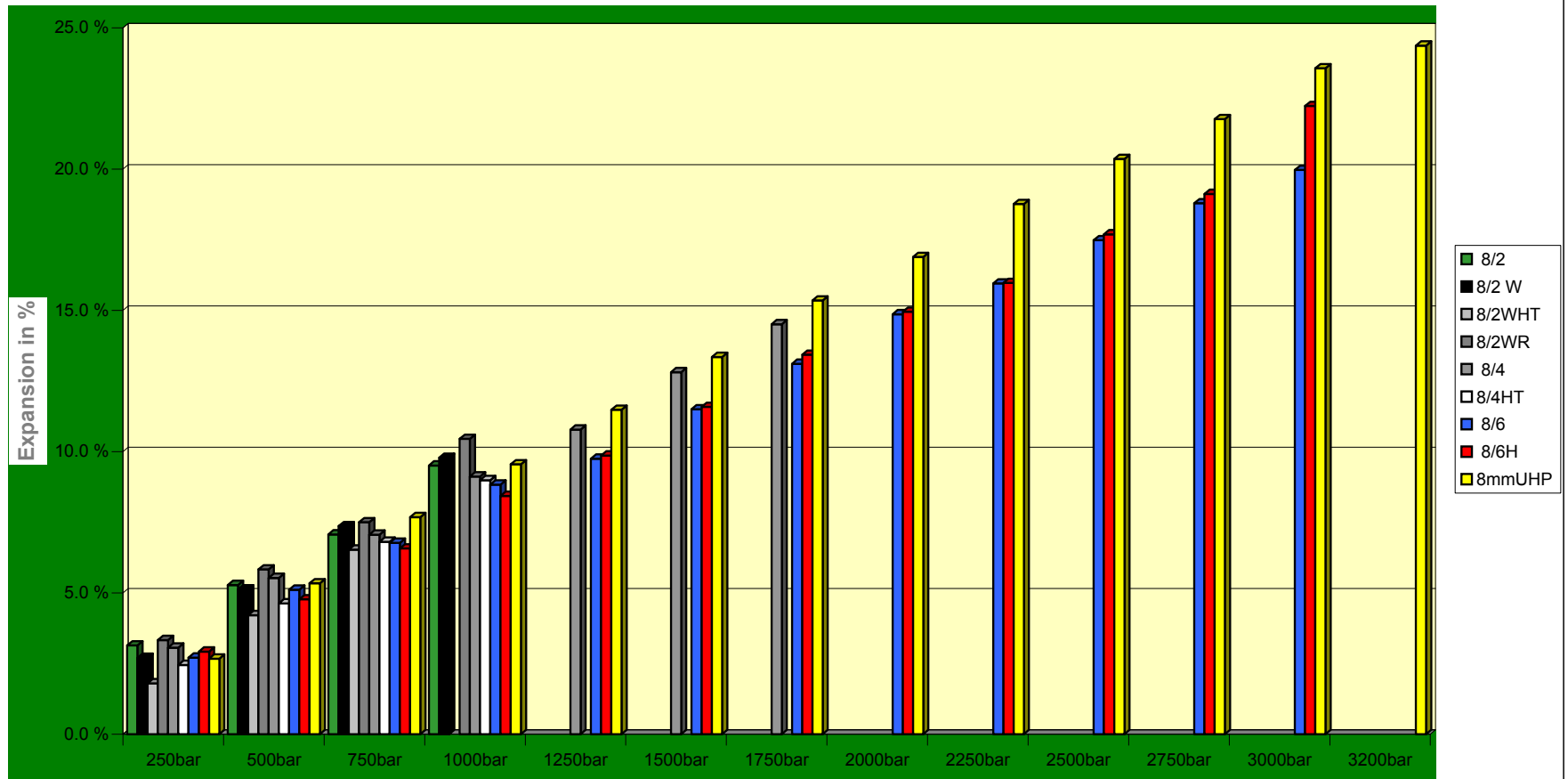
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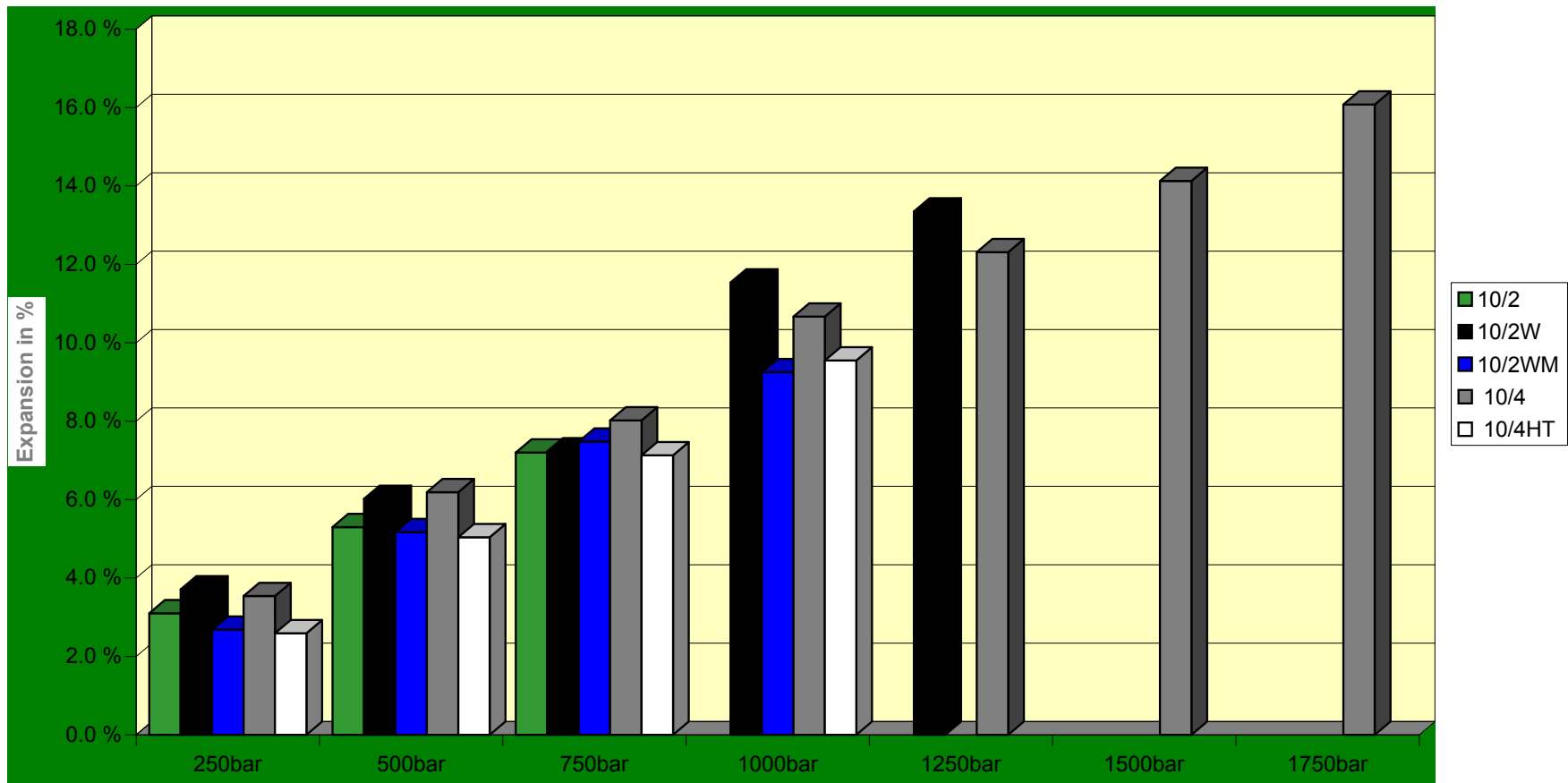
SPIR STAR[®] Volumetric Expansion Chart **Hose ID 6 mm**



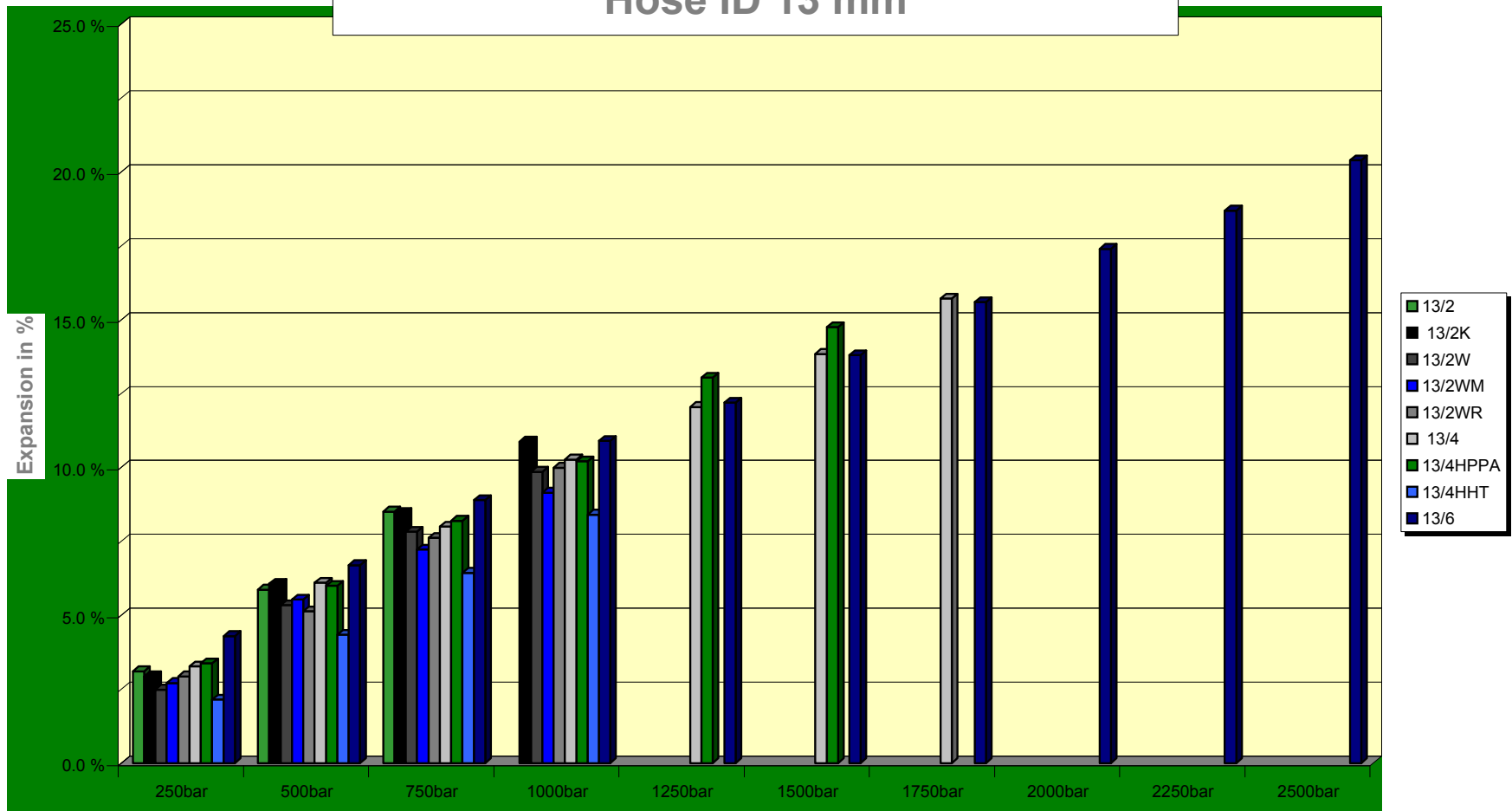
SPIR STAR® Volumetric Expansion Chart Hose ID 8 mm



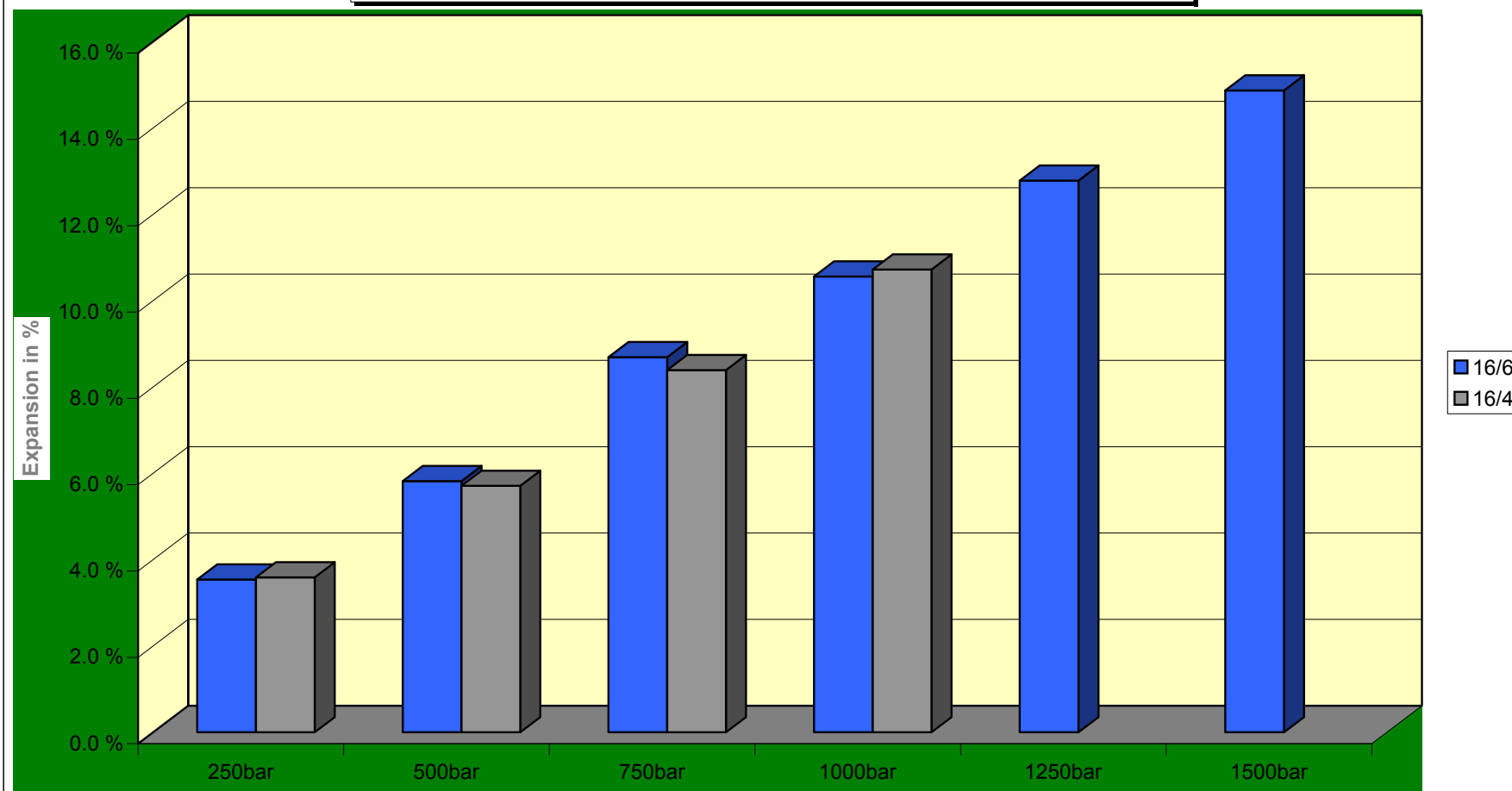
SPIR STAR® Volumetric Expansion Chart **Hose ID 10 mm**

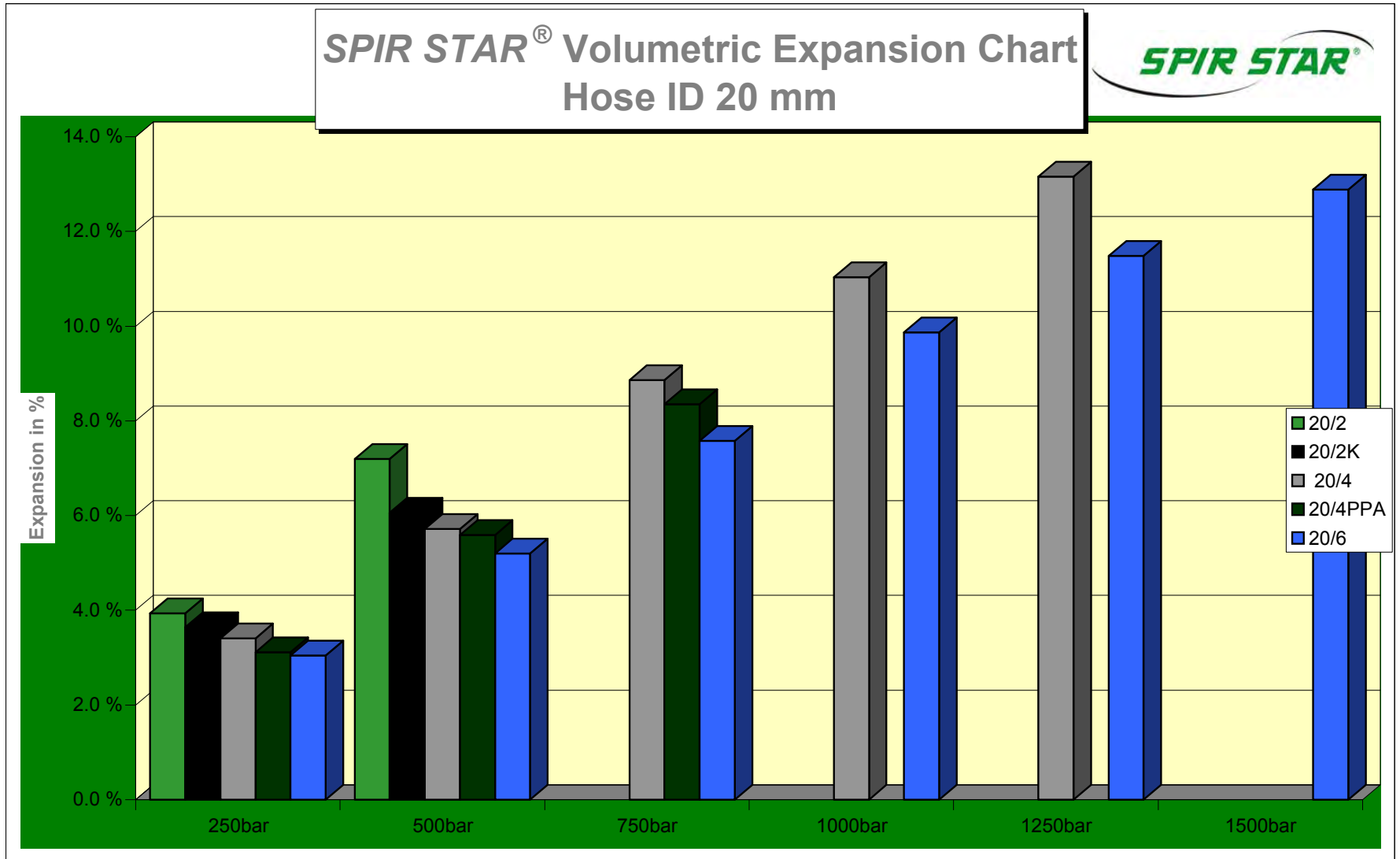


SPIR STAR® Volumetric Expansion Chart Hose ID 13 mm

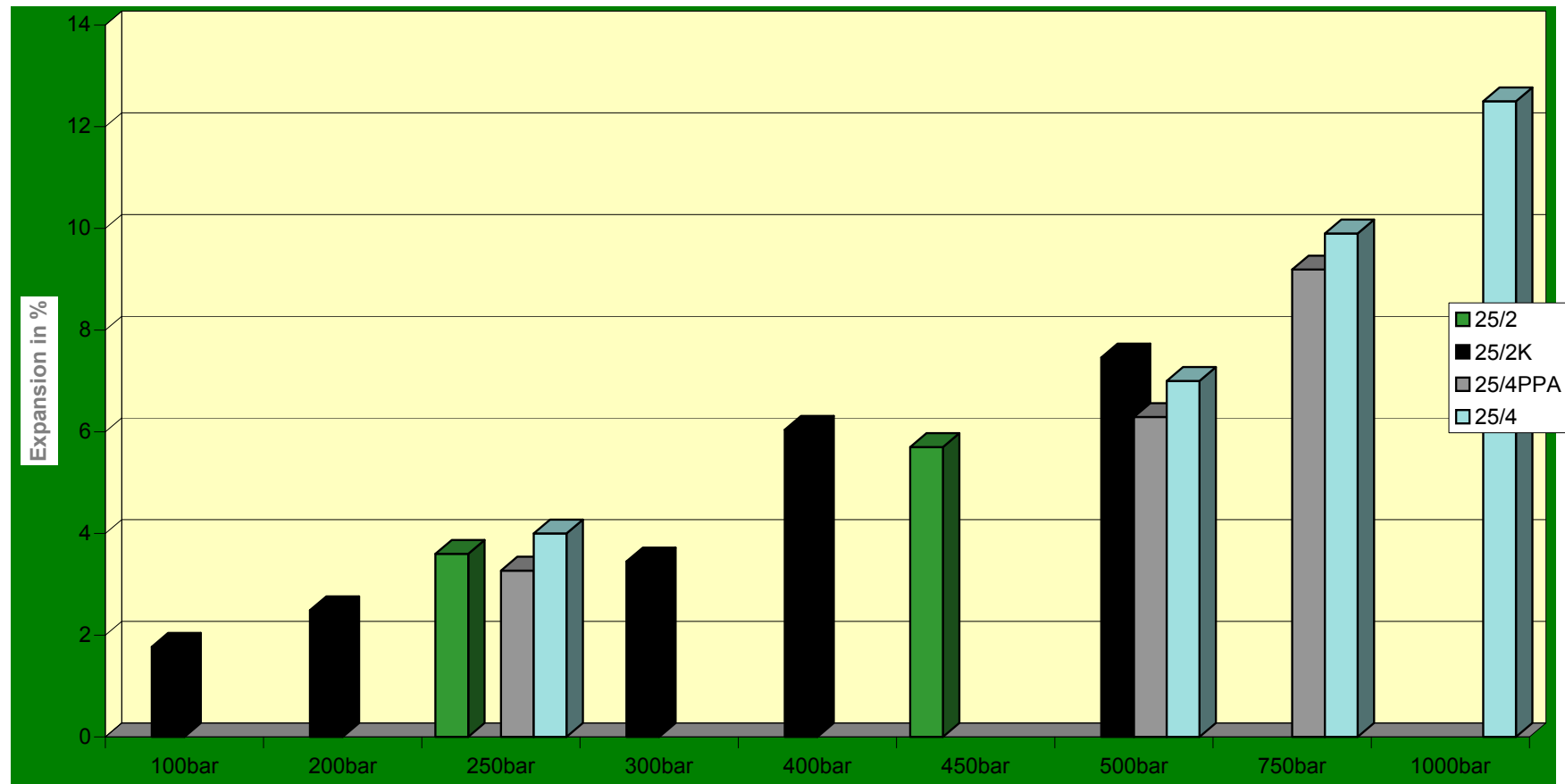


SPIR STAR® Volumetric Expansion Chart Hose ID 16mm





SPIR STAR® Volumetric Expansion Chart Hose ID 25 mm





Terms and Conditions

The sale of **SPIR STAR, Ltd.** ("SPIR STAR") products is governed by the following terms and conditions ("Terms"). All references to "Customer" mean the customer (including its subsidiaries and affiliates) whose name appears on SPIR STAR's credit application, sales order or acceptance, or invoice.

1. **Terms and Conditions of Sale:** All descriptions, quotations, proposals, offers, acknowledgments, acceptances and sales of SPIR STAR's products are subject to and shall be governed exclusively by these Terms, which shall constitute a contract between Customer and SPIR STAR. Any terms or conditions proposed by Customer that are in addition to, or inconsistent with those stated herein, are hereby rejected. No such additional different or inconsistent terms and conditions shall become part of the sale between Customer and SPIR STAR unless expressly accepted in advance, in writing, by an officer of SPIR STAR. SPIR STAR's acceptance of any offer to purchase by Customer is expressly conditioned upon Customer's assent to all the Terms stated herein. Acceptance of SPIR STAR's products by Customer shall, in any event, constitute assent to the Terms.
2. **Payment:** Payment shall be made by Customer net 30 days from the date of delivery of the products. Any claims by Customer for omissions or shortages in a shipment shall be deemed to be waived unless SPIR STAR receives notice thereof within 30 days after Customer's receipt of the shipment.
3. **Delivery:** Unless otherwise provided on the face of the order, as accepted, delivery shall be made F.O.B. SPIR STAR's facility. Regardless of the method of delivery, however, risk or loss shall pass to Customer upon SPIR STAR's delivery to a carrier. Any delivery dates shown are approximate and SPIR STAR shall have no liability for delays in delivery.
4. **Changes, Reschedules and Cancellations:** No change, rescheduling or cancellation of an order requested by Customer shall be valid unless accepted by SPIR STAR in writing. Acceptance of any such requested change, rescheduling or cancellation shall be upon such terms and conditions as SPIR STAR requires.
5. **Force Majeure:** SPIR STAR does not assume the risk of, and shall not be liable for, delay or failure to perform any of SPIR STAR's obligations by reason of circumstances beyond the reasonable control of SPIR STAR. Such circumstances include, but are limited to: accidents; acts of God; strikes or other labor disputes; acts, laws, rules, or regulations of any governmental or quasi-governmental agency; fires, floods, war or acts of terrorism; delays or failures in delivery of carriers or suppliers; or shortages of materials.
6. **Documents and Notices:** All documents passing between SPIR STAR and customer may be delivered according to the rules set forth below. Documents include, but are not limited to, the following: offers, acceptances, orders, invoices, statements, notices, letters, shop drawings, specifications, and change orders. Any Document required or permitted to be delivered shall be in writing and may be delivered: (a) personally; or (b) by United States Mail, postage prepaid, registered or certified mail, return receipt requested, addressed to the parties at their respective addresses indicated on this credit application or a sales order, or at such other addresses as may be specified by written notice delivered or sent in accordance herewith; or (c) by facsimile or electronic mail ("email"), at the respective numbers or email addresses indicated on the front page of this credit application, or at such other numbers or addresses as may be specified by written notice delivered or sent in accordance herewith. Where delivery has been made personally, a receipt must be obtained from the persons signing this credit application or another member of upper management. Where delivery is by facsimile or email, the sender must use equipment that produces an authentication of transmission in printable format and must retain a copy thereof. Commencement of time limitations dependent on notice are: (a) by personal delivery, at the time of delivery; (b) by mail, 12:01 a.m. on the day that is 3 days from the date on the registered or certified mail receipt or the date of the last attempted delivery; or (c) by fax or email, 24 hours from the time of authenticated transmission.
7. **Limited Warranty:** SPIR STAR PROVIDES THE FOLLOWING LIMITED WARRANTY. THE TERM "HOSE" AS USED IN THIS LIMITED WARRANTY SHALL INCLUDE COUPLERS AND END FITTING ASSEMBLIES ("EFAs"), IF AND ONLY IF, THEY ARE ATTACHED OR ASSEMBLED ON THE HOSE BY SPIR STAR. SPIR STAR PROVIDES NO WARRANTY FOR THE COUPLERS OR EFAs AS INDIVIDUAL COMPONENTS.

HIGH PRESSURE HOSE ("HPH") LIMITED WARRANTY: HPH is warranted to be free from defects in material and workmanship for 30 days from the date of receipt by the Customer. Due to the variation in performance of certain pumps and related equipment and the potential for failure due to mishandling, abuse, misuse, accident, or alteration of the HPH, SPIR STAR reserves the right to evaluate HPH that is claimed to have failed during the warranty period. Items that will void the warranty include, but are not limited to:

- exceeding minimum bend radius;
- exceeding pressure rating;
- excessive temperatures;
- excessive torquing of COUPLERS OR EFAs;
- introduction of foreign particles into the HPH;
- flexing near the COUPLER OR EFA of the HPH, and;
- dragging or hauling equipment or other objects with the HPH.

If a failure occurs within the warranty period, Customer must submit the HPH for a warranty evaluation by contacting SPIR STAR at 800-890-7827. Please have the part number of the HPH, the serial number, and the purchase date or sales order number. If the information for the HPH meets the criteria for evaluation, SPIR STAR will issue a Returned Goods Authorization ("RGA") number. The HPH may then be returned to SPIR STAR, freight prepaid (SPIR STAR to choose carrier and type of service). The RGA number must be clearly written on the shipping label and on all documentation submitted by the Customer. Upon receipt of the HPH by SPIR STAR, it will be inspected and evaluated to determine the cause of the failure. Upon completion of this evaluation, SPIR STAR will decide whether the failure was covered by the Limited Warranty. Please allow approximately 2 weeks for the evaluation. If the failure is covered by the Limited Warranty, SPIR STAR will, at its discretion, either replace or repair the HPH at no cost to the Customer or will apportion the cost, on a prorated basis, between itself and the Company.

Terms and Conditions



ULTRA HIGH PRESSURE HOSE ("UHP") LIMITED WARRANTY: UHP is warranted to be free from defects in material and workmanship for a period of 60 days of field use. Due to the variance in performance of certain pumps and related equipment and the potential for failure due to mishandling, abuse, misuse, accident, or alteration of the UHP, *SPIR STAR* reserves the right to evaluate UHP that is claimed to have failed during the warranty period. Items that will void the warranty include, but are not limited to:

- exceeding minimum bend radius;
- exceeding pressure rating;
- excessive temperatures;
- excessive torquing of COUPLERS OR EFAs;
- introduction of foreign particles into the UHP;
- flexing near the COUPLER OR EFA of the UHP, and;
- dragging or hauling equipment or other objects with the UHP.

If a failure occurs within the warranty period, Customer must submit the UHP for a warranty evaluation, by contacting *SPIR STAR* at 800-890-7827. Please have the part number of the UHP, the serial number, and the purchase date or sales order number. If the information for the UHP meets the criteria for evaluation, *SPIR STAR* will issue a Returned Goods Authorization ("RGA") number. The UHP may then be returned to *SPIR STAR*, freight prepaid (*SPIR STAR* to choose carrier and type of service). The RGA number must be clearly written on the shipping label and on all documentation submitted by the Customer. Upon receipt of the UHP by *SPIR STAR*, it will be inspected and evaluated to determine the cause of the failure. Upon completion of this evaluation, *SPIR STAR* will decide whether the failure was covered by the Limited Warranty. Please allow approximately 2 weeks for the evaluation. If the failure is covered by the Limited Warranty, *SPIR STAR* will, at its discretion, either replace or repair the UHP at no cost to the Customer or will apportion the cost, on a prorated basis, between itself and the Customer.

THIS LIMITED WARRANTY COMPRISES THE SOLE AND ENTIRE WARRANTY TO THE CUSTOMER. *SPIR STAR* MAKES NO OTHER REPRESENTATIONS OR WARRANTIES BY COURSE OF DEALING, USES OF TRADE, OR OTHERWISE, EXPRESSED OR IMPLIED. EXCEPT AS EXPRESSLY STATED BELOW, CUSTOMER HEREBY WAIVES ALL OTHER WARRANTIES, GUARANTEES, CONDITIONS OR LIABILITIES, EXPRESSED OR IMPLIED, ARISING BY LAW OR OTHERWISE, INCLUDING BUT NOT LIMITED TO ANY WARRANTY OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE UNDER THE UNIFORM COMMERCIAL CODE. ANY WARRANTY CONTAINED HEREIN SHALL NOT BE EXTENDED, ALTERED, OR VARIED EXCEPT BY A WRITTEN INSTRUMENT SIGNED BY *SPIR STAR* AND CUSTOMER.

8. **Limitation of Remedy:** *SPIR STAR*'S LIABILITY ARISING FROM OR IN ANY WAY CONNECTED WITH THE PRODUCTS SHALL BE LIMITED EXCLUSIVELY TO REPAIR, PRORATION OF THE COST, OR REPLACEMENT, AS DECIDED BY *SPIR STAR*. IN NO EVENT SHALL *SPIR STAR* BE LIABLE FOR ANY INCIDENTAL, CONSEQUENTIAL OR SPECIAL DAMAGES OF ANY KIND OR NATURE WHATSOEVER, INCLUDING BUT NOT LIMITED TO, LOST PROFITS, CLAIMS FOR BREACH OF WARRANTY, WHETHER EXPRESSED OR IMPLIED, BREACH OF CONTRACT, CLAIMS IN TORT, INCLUDING WITHOUT LIMITATION, NEGLIGENCE, FAILURE TO WARN, STRICT LIABILITY OR DECEPTIVE TRADE PRACTICES ACT VIOLATIONS.

SOME STATES DO NOT ALLOW THE EXCLUSION OR LIMITATION OF INCIDENTAL OR CONSEQUENTIAL DAMAGES, OR LIMITATIONS ON HOW LONG AN IMPLIED WARRANTY LASTS, SO THE FOREGOING LIMITATIONS MAY NOT APPLY. THIS LIMITED WARRANTY GIVES THE CUSTOMER SPECIFIC LEGAL RIGHTS AND THE CUSTOMER MAY HAVE OTHER RIGHTS THAT VARY FROM JURISDICTION TO JURISDICTION.

9. **Entire Agreement/Governing Law:** The Terms set forth herein together with any amendments, modifications and any different terms or conditions expressly accepted by *SPIR STAR* in writing, shall constitute the entire agreement concerning the products sold to Customer, and there are no oral or other representations or agreements which pertain thereto. This agreement shall be governed in all respects by the law of the State of Texas.

SPIR STAR®

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