

VFT Product Catalogue

690 bar to 4,140 bar (10,000 psi to 60,000 psi)

SPIR STAR Druckschläuche AG

Specialists in High Pressure

Hose | Fittings | Adapters | Quick Disconnects | Valves

For more than 25 years, SPIR STAR® have been specialized in manufacturing high-pressure hoses for working pressures ranging from 400 to 3,200 bar (5,800 to 46,400 psi). As a reliable partner of the high-pressure sector SPIR STAR® extend their product portfolio by adding high-pressure valves, adapters, tubes and couplers.

All valves, adapters and tubes (VFT) as well as the couplers have been developed especially for applications with liquid or gaseous media in the Oil & Gas, the Hydraulic or the Waterblast industries. SPIR STAR® VFT products standardly are made of cold-worked stainless steel to cope with the high temperatures and pressures typical for these applications.

SPIR STAR® valves, adapters, tubes and couplers are available with various connection threads and sizes within the pressure range from 690 to 4,140 bar (10,000 to 60,000 psi) in order to meet all customer requirements.

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Nomenclature of V-F-T Products



e.g. **HMF9-HM9**

H = Coupler

MF = Medium Pressure Female

9 = Size 9/16"

HM = High Pressure Male

9 = Size 9/16"

Beside Type M all fittings and adapters begins with letter H. These fittings and adapters start with letter M. All the time female connection is mentioned before male connection like HMF9-HM9 (female x male).

| Abbr. | Description |
|-------|------------------------|
| MJ | JIC Male |
| FJ | JIC Female |
| NM | NPT Male |
| NF | NPT Female |
| MM | Medium Pressure Male |
| MF | Medium Pressure Female |
| MEM | Metric Male |
| MEF | Metric Female |
| HM | High Pressure Male |
| HF | High Pressure Female |
| M | Type M |
| E | Female Elbow |
| T | Female Tee |
| Y | Female Wye |
| CR | Female Cross |
| HC | Female Coupler |

| Abbr. | Description |
|-------|----------------|
| SL | Slimline |
| GN | Gland Nut |
| CLR | Collar |
| AV | Anti-Vibration |
| HD | Heavy Duty |
| LL | Left x Left |
| LR | Left x Right |
| RR | Right x Right |
| V | Needle Valve |
| VB | Ball Valve |
| CV | Check Valve |
| BS | Ball Seat |
| SS | Soft Seat |

| No. | Size |
|-----|-------|
| 1 | 1/16" |
| 2 | 1/8" |
| 4 | 1/4" |
| 6 | 3/8" |
| 8 | 1/2" |
| 9 | 9/16" |
| 12 | 3/4" |
| 14 | 7/8" |
| 16 | 1" |

V-F-T Product Range

Adapters and Fittings

SPIR STAR offers a variety of Adapters and Fittings in multiple thread styles and working pressures up to 4,138 bar / 60,000 psi.

SPC Series Quick Disconnect Couplings

2,068 bar / 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 Couplers

SPIR STAR offers a variety of Quick Disconnect Couplings in multiple thread styles and working pressures up to 2,068 bar / 30,000 psi.

Valves

SPIR STAR offers a large variety of needle, ball, and check valves with several thread variations and working pressures up to 4,138 bar / 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.

Common Description and Additional Information

High Pressure Adapter

SPIR STAR High-Pressure fittings seal with a 60 degree cone and are rated for working pressures up to 4,138 bar / 60,000 psi.



| Common Description | Actual Thread Dimension |
|---------------------|-------------------------------|
| 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 |

Medium Pressure Adapter

SPIR STAR Medium Pressure fittings (sometimes known as "Slimline") seal with a 60 degree cone and are rated for working pressures up to 1,380 bar / 20,000 psi.



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

JIC Adapter

SPIR STAR JIC adapters seal with a 37 degree cone and are rated for working pressures up to 690 bar / 10,000 psi.



| Common Description | Working Pressure |
|--------------------|------------------------|
| #4 #6 #8 | 1,035 bar / 15,000 psi |
| #12 #16 | 690 bar / 10,000 psi |

| Common Description | Actual Thread Dimension |
|--------------------|-------------------------|
| #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 |

NPT Adapter

NPT (National Pipe Taper) fittings have working pressures up to 1,035 bar / 15,000 psi. However, working pressures may be decreased depending upon thread size.



| Common Description | Working Pressure |
|--------------------|------------------------|
| 1/16" - 1/2" NPT | 1,035 bar / 15,000 psi |
| 3/4" - 1" NPT | 690 bar / 10,000 psi |

Type M Adapter

SPIR STAR Type M adapters are for use with Type M swivel hose end fittings. These



| 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 |

Metric Adapters (for o-ring seal)

SPIR STAR metric adapters (for o-rings) seal with a 24 degree cone.



| Common Description | Cone Dimension |
|--------------------|----------------|
| MEM18 MEF18 | M18x1.5 |
| MEM20 MEF20 | M20x1.5 |
| MEM22 MEF22 | M22x1.5 |
| MEM24 MEF24 | M24x1.5 |
| MEM26 MEF26 | M26x1.5 |
| MEM30 MEF30 | M30x2 |
| MEM36 MEF36 | M36x2 |
| MEM42 MEF42 | M42x2 |

BSPP Adapter

SPIR STAR BSPP fittings are available with both internal and external sealing cones. When sealing BSPP adapters with bonded seals rather than on the cone, the working pressure of the fitting may be lower than the stated pressure on the fitting.



| Common Description | Cone Dimension |
|--------------------|----------------------------------|
| Ext | 120 degree external sealing cone |
| Int | 60 degree internal sealing cone |

I.I Fittings and Adapters



High-Pressure Male x Male

| Part Number | Description | Max Working Pressure | |
|-------------|-------------------------------|----------------------|--------|
| | | bar | psi |
| HHM4-HM4 | 1/4" HP Male x 1/4" HP Male | 4.140 | 60.000 |
| HHM4-HM6 | 1/4" HP Male x 3/8" HP Male | 4.140 | 60.000 |
| HHM4-HM9 | 1/4" HP Male x 9/16" HP Male | 4.140 | 60.000 |
| HHM6-HM6 | 3/8" HP Male x 3/8" HP Male | 4.140 | 60.000 |
| HHM6-HM9 | 3/8" HP Male x 9/16" HP Male | 4.140 | 60.000 |
| HHM9-HM9 | 9/16" HP Male x 9/16" HP Male | 4.140 | 60.000 |



High-Pressure Female x High-Pressure Male (UNF) - including Collar and Gland Nut

| Part Number | Description | Max Working Pressure | |
|-------------|---------------------------------|----------------------|--------|
| | | bar | psi |
| HHF4-HM4 | 1/4" HP Female x 1/4" HP Male | 4.140 | 60.000 |
| HHF4-HM6 | 1/4" HP Female x 3/8" HP Male | 4.140 | 60.000 |
| HHF4-HM9 | 1/4" HP Female x 9/16" HP Male | 4.140 | 60.000 |
| HHF6-HM4 | 3/8" HP Female x 1/4" HP Male | 4.140 | 60.000 |
| HHF6-HM6 | 3/8" HP Female x 3/8" HP Male | 4.140 | 60.000 |
| HHF6-HM9 | 3/8" HP Female x 9/16" HP Male | 4.140 | 60.000 |
| HHF9-HM4 | 9/16" HP Female x 1/4" HP Male | 4.140 | 60.000 |
| HHF9-HM6 | 9/16" HP Female x 3/8" HP Male | 4.140 | 60.000 |
| HHF9-HM9 | 9/16" HP Female x 9/16" HP Male | 4.140 | 60.000 |



High-Pressure Heavy Duty Couplers Female (UNF) - including Collars and Gland Nuts

| Part Number | Description | Max Working Pressure | |
|-------------|-----------------------------------|----------------------|--------|
| | | bar | psi |
| HC-HF4 | 1/4" HP Female Coupler | 4.140 | 60.000 |
| HC-HF6 | 3/8" HP Female Coupler | 4.140 | 60.000 |
| HC-HF6-HF4 | 3/8" HP x 1/4" HP Female Coupler | 4.140 | 60.000 |
| HC-HF9 | 9/16" HP Female Coupler | 4.140 | 60.000 |
| HC-HF9-HF4 | 9/16" HP x 1/4" HP Female Coupler | 4.140 | 60.000 |
| HC-HF9-HF6 | 9/16" HP x 3/8" HP Female Coupler | 4.140 | 60.000 |



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 | |
|-------------|---|----------------------|--------|
| | | bar | psi |
| HCSL-HF4-LL | 1/4" HP Female Slimline Coupler Left x Left* 0.445" OD | 2.760 | 40.000 |
| HCSL-HF4-LR | 1/4" HP Female Slimline Coupler Left x Right* 0.445" OD | 2.760 | 40.000 |
| HCSL-HF4-RR | 1/4" HP Female Slimline Coupler Right x Right* 0.445" OD | 2.760 | 40.000 |
| HCSL-HF6-LL | 3/8" HP Female Slimline Coupler Left x Left* 0.562" OD | 2.760 | 40.000 |
| HCSL-HF6-LR | 3/8" HP Female Slimline Coupler Left x Right* 0.562" OD | 2.760 | 40.000 |
| HCSL-HF6-RR | 3/8" HP Female Slimline Coupler Right x Right* 0.562" OD | 2.760 | 40.000 |
| HCSL-HF9-LL | 9/16" HP Female Slimline Coupler Left x Left* 0.750" OD | 2.760 | 40.000 |
| HCSL-HF9-LR | 9/16" HP Female Slimline Coupler Left x Right* 0.750" OD | 2.760 | 40.000 |
| HCSL-HF9-RR | 9/16" HP Female Slimline Coupler Right x Right* 0.750" OD | 2.760 | 40.000 |



* Designates Left Hand Thread or Right Hand Thread

I.1 Fittings and Adapters



High-Pressure Male x Medium Pressure Male

| Part Number | Description | Max Working Pressure | |
|-------------|-------------------------------|----------------------|--------|
| | | bar | psi |
| HHM4-MM4 | 1/4" HP Male x 1/4" MP Male | 1.380 | 20.000 |
| HHM4-MM6 | 1/4" HP Male x 3/8" MP Male | 1.380 | 20.000 |
| HHM4-MM9 | 1/4" HP Male x 9/16" MP Male | 1.380 | 20.000 |
| HHM4-MM12 | 1/4" HP Male x 3/4" MP Male | 1.380 | 20.000 |
| HHM4-MM16 | 1/4" HP Male x 1" MP Male | 1.380 | 20.000 |
| HHM6-MM4 | 3/8" HP Male x 1/4" MP Male | 1.380 | 20.000 |
| HHM6-MM6 | 3/8" HP Male x 3/8" MP Male | 1.380 | 20.000 |
| HHM6-MM9 | 3/8" HP Male x 9/16" MP Male | 1.380 | 20.000 |
| HHM6-MM12 | 3/8" HP Male x 3/4" MP Male | 1.380 | 20.000 |
| HHM6-MM16 | 3/8" HP Male x 1" MP Male | 1.380 | 20.000 |
| HHM9-MM4 | 9/16" HP Male x 1/4" MP Male | 1.380 | 20.000 |
| HHM9-MM6 | 9/16" HP Male x 3/8" MP Male | 1.380 | 20.000 |
| HHM9-MM9 | 9/16" HP Male x 9/16" MP Male | 1.380 | 20.000 |
| HHM9-MM12 | 9/16" HP Male x 3/4" MP Male | 1.380 | 20.000 |
| HHM9-MM16 | 9/16" HP Male x 1" MP Male | 1.380 | 20.000 |



High-Pressure Female x Medium Pressure Male - including Collar and Gland Nut

| Part Number | Description | Max Working Pressure | |
|-------------|---------------------------------|----------------------|--------|
| | | bar | psi |
| HHF4-MM4 | 1/4" HP Female x 1/4" MP Male | 1.380 | 20.000 |
| HHF4-MM6 | 1/4" HP Female x 3/8" MP Male | 1.380 | 20.000 |
| HHF4-MM9 | 1/4" HP Female x 9/16" MP Male | 1.380 | 20.000 |
| HHF6-MM4 | 3/8" HP Female x 1/4" MP Male | 1.380 | 20.000 |
| HHF6-MM6 | 3/8" HP Female x 3/8" MP Male | 1.380 | 20.000 |
| HHF6-MM9 | 3/8" HP Female x 9/16" MP Male | 1.380 | 20.000 |
| HHF6-MM12 | 3/8" HP Female x 3/4" MP Male | 1.380 | 20.000 |
| HHF6-MM16 | 3/8" HP Female x 1" MP Male | 1.380 | 20.000 |
| HHF9-MM4 | 9/16" HP Female x 1/4" MP Male | 1.380 | 20.000 |
| HHF9-MM6 | 9/16" HP Female x 3/8" MP Male | 1.380 | 20.000 |
| HHF9-MM9 | 9/16" HP Female x 9/16" MP Male | 1.380 | 20.000 |
| HHF9-MM12 | 9/16" HP Female x 3/4" MP Male | 1.380 | 20.000 |
| HHF9-MM16 | 9/16" HP Female x 1" MP Male | 1.380 | 20.000 |



High-Pressure Male x Medium Pressure Female - including Collar and Gland Nut

| Part Number | Description | Max Working Pressure | |
|-------------|---------------------------------|----------------------|--------|
| | | bar | psi |
| HMF4-HM4 | 1/4" MP Female x 1/4" HP Male | 1.380 | 20.000 |
| HMF4-HM6 | 1/4" MP Female x 3/8" HP Male | 1.380 | 20.000 |
| HMF4-HM9 | 1/4" MP Female x 9/16" HP Male | 1.380 | 20.000 |
| HMF6-HM4 | 3/8" MP Female x 1/4" HP Male | 1.380 | 20.000 |
| HMF6-HM6 | 3/8" MP Female x 3/8" HP Male | 1.380 | 20.000 |
| HMF6-HM9 | 3/8" MP Female x 9/16" HP Male | 1.380 | 20.000 |
| HMF9-HM4 | 9/16" MP Female x 1/4" HP Male | 1.380 | 20.000 |
| HMF9-HM6 | 9/16" MP Female x 3/8" HP Male | 1.380 | 20.000 |
| HMF9-HM9 | 9/16" MP Female x 9/16" HP Male | 1.380 | 20.000 |
| HMF12-HM4 | 3/4" MP Female x 1/4" HP Male | 1.380 | 20.000 |
| HMF12-HM6 | 3/4" MP Female x 3/8" HP Male | 1.380 | 20.000 |
| HMF12-HM9 | 3/4" MP Female x 9/16" HP Male | 1.380 | 20.000 |
| HMF16-HM4 | 1" MP Female x 1/4" HP Male | 1.380 | 20.000 |
| HMF16-HM6 | 1" MP Female x 3/8" HP Male | 1.380 | 20.000 |
| HMF16-HM9 | 1" MP Female x 9/16" HP Male | 1.380 | 20.000 |



I.1 Fittings and Adapters

High-Pressure Male x NPT Male

| Part Number | Description | Max Working Pressure | |
|-------------|-------------------------------|----------------------|--------|
| | | bar | psi |
| HHM4-NM4 | 1/4" HP Male x 1/4" NPT Male | 1.035 | 15,000 |
| HHM4-NM6 | 1/4" HP Male x 3/8" NPT Male | 1.035 | 15,000 |
| HHM4-NM8 | 1/4" HP Male x 1/2" NPT Male | 1.035 | 15,000 |
| HHM4-NM12 | 1/4" HP Male x 3/4" NPT Male | 690 | 10,000 |
| HHM4-NM16 | 1/4" HP Male x 1" NPT Male | 690 | 10,000 |
| HHM6-NM4 | 3/8" HP Male x 1/4" NPT Male | 1.035 | 15,000 |
| HHM6-NM6 | 3/8" HP Male x 3/8" NPT Male | 1.035 | 15,000 |
| HHM6-NM8 | 3/8" HP Male x 1/2" NPT Male | 1.035 | 15,000 |
| HHM6-NM12 | 3/8" HP Male x 3/4" NPT Male | 690 | 10,000 |
| HHM6-NM16 | 3/8" HP Male x 1" NPT Male | 690 | 10,000 |
| HHM9-NM4 | 9/16" HP Male x 1/4" NPT Male | 1.035 | 15,000 |
| HHM9-NM6 | 9/16" HP Male x 3/8" NPT Male | 1.035 | 15,000 |
| HHM9-NM8 | 9/16" HP Male x 1/2" NPT Male | 1.035 | 15,000 |
| HHM9-NM12 | 9/16" HP Male x 3/4" NPT Male | 690 | 10,000 |
| HHM9-NM16 | 9/16" HP Male x 1" NPT Male | 690 | 10,000 |



High-Pressure Female x NPT Male - including Collar and Gland Nut

| Part Number | Description | Max Working Pressure | |
|-------------|---------------------------------|----------------------|--------|
| | | bar | psi |
| HHF4-NM4 | 1/4" HP Female x 1/4" NPT Male | 1.035 | 15,000 |
| HHF4-NM6 | 1/4" HP Female x 3/8" NPT Male | 1.035 | 15,000 |
| HHF4-NM8 | 1/4" HP Female x 1/2" NPT Male | 1.035 | 15,000 |
| HHF4-NM12 | 1/4" HP Female x 3/4" NPT Male | 690 | 10,000 |
| HHF4-NM16 | 1/4" HP Female x 1" NPT Male | 690 | 10,000 |
| HHF6-NM4 | 3/8" HP Female x 1/4" NPT Male | 1.035 | 15,000 |
| HHF6-NM6 | 3/8" HP Female x 3/8" NPT Male | 1.035 | 15,000 |
| HHF6-NM8 | 3/8" HP Female x 1/2" NPT Male | 1.035 | 15,000 |
| HHF6-NM12 | 3/8" HP Female x 3/4" NPT Male | 690 | 10,000 |
| HHF6-NM16 | 3/8" HP Female x 1" NPT Male | 690 | 10,000 |
| HHF9-NM4 | 9/16" HP Female x 1/4" NPT Male | 1.035 | 15,000 |
| HHF9-NM6 | 9/16" HP Female x 3/8" NPT Male | 1.035 | 15,000 |
| HHF9-NM8 | 9/16" HP Female x 1/2" NPT Male | 1.035 | 15,000 |
| HHF9-NM12 | 9/16" HP Female x 3/4" NPT Male | 690 | 10,000 |
| HHF9-NM16 | 9/16" HP Female x 1" NPT Male | 690 | 10,000 |



I.1 Fittings and Adapters



| Medium Pressure Male x Male | | | |
|-----------------------------|-------------------------------|----------------------|--------|
| Part Number | Description | Max Working Pressure | |
| | | bar | psi |
| HMM4-MM4 | 1/4" MP Male x 1/4" MP Male | 1.380 | 20.000 |
| HMM6-MM4 | 3/8" MP Male x 1/4" MP Male | 1.380 | 20.000 |
| HMM6-MM6 | 3/8" MP Male x 3/8" MP Male | 1.380 | 20.000 |
| HMM6-MM9 | 3/8" MP Male x 9/16" MP Male | 1.380 | 20.000 |
| HMM9-MM4 | 9/16" MP Male x 1/4" MP Male | 1.380 | 20.000 |
| HMM9-MM9 | 9/16" MP Male x 9/16" MP Male | 1.380 | 20.000 |
| HMM9-MM12 | 9/16" MP Male x 3/4" MP Male | 1.380 | 20.000 |
| HMM9-MM16 | 9/16" MP Male x 1" MP Male | 1.380 | 20.000 |
| HMM12-MM4 | 3/4" MP Male x 1/4" MP Male | 1.380 | 20.000 |
| HMM12-MM6 | 3/4" MP Male x 3/8" MP Male | 1.380 | 20.000 |
| HMM12-MM12 | 3/4" MP Male x 3/4" MP Male | 1.380 | 20.000 |
| HMM16-MM4 | 1" MP Male x 1/4" MP Male | 1.380 | 20.000 |
| HMM16-MM6 | 1" MP Male x 3/8" MP Male | 1.380 | 20.000 |
| HMM16-MM12 | 1" MP Male x 3/4" MP Male | 1.380 | 20.000 |
| HMM16-MM16 | 1" MP Male x 1" MP Male | 1.380 | 20.000 |



| Medium Pressure Female x Medium Pressure Male - including Collar and Gland Nut | | | |
|--|--------------------------------|----------------------|--------|
| Part Number | Description | Max Working Pressure | |
| | | bar | psi |
| HMF4-MM6 | 1/4" MP Female x 3/8" MP Male | 1.380 | 20.000 |
| HMF4-MM9 | 1/4" MP Female x 9/16" MP Male | 1.380 | 20.000 |
| HMF4-MM12 | 1/4" MP Female x 3/4" MP Male | 1.380 | 20.000 |
| HMF4-MM16 | 1/4" MP Female x 1" MP Male | 1.380 | 20.000 |
| HMF6-MM12 | 3/8" MP Female x 3/4" MP Male | 1.380 | 20.000 |
| HMF6-MM16 | 3/8" MP Female x 1" MP Male | 1.380 | 20.000 |
| HMF6-MM4 | 3/8" MP Female x 1/4" MP Male | 1.380 | 20.000 |
| HMF6-MM9 | 3/8" MP Female x 9/16" MP Male | 1.380 | 20.000 |
| HMF9-MM4 | 9/16" MP Female x 1/4" MP Male | 1.380 | 20.000 |
| HMF9-MM6 | 9/16" MP Female x 3/8" MP Male | 1.380 | 20.000 |
| HMF9-MM12 | 9/16" MP Female x 3/4" MP Male | 1.380 | 20.000 |
| HMF9-MM16 | 9/16" MP Female x 1" MP Male | 1.380 | 20.000 |
| HMF12-MM4 | 3/4" MP Female x 1/4" MP Male | 1.380 | 20.000 |
| HMF12-MM6 | 3/4" MP Female x 3/8" MP Male | 1.380 | 20.000 |
| HMF12-MM9 | 3/4" MP Female x 9/16" MP Male | 1.380 | 20.000 |
| HMF12-MM16 | 3/4" MP Female x 1" MP Male | 1.380 | 20.000 |
| HMF16-MM4 | 1" MP Female x 1/4" MP Male | 1.380 | 20.000 |
| HMF16-MM6 | 1" MP Female x 3/8" MP Male | 1.380 | 20.000 |
| HMF16-MM9 | 1" MP Female x 9/16" MP Male | 1.380 | 20.000 |
| HMF16-MM12 | 1" MP Female x 3/4" MP Male | 1.380 | 20.000 |



I.I Fittings and Adapters

Medium Pressure Heavy Duty Couplers - including Collars and Gland Nuts

| Part Number | Description | Max Working Pressure | |
|--------------|--|----------------------|--------|
| | | bar | psi |
| HC-MF4 | 1/4" MP Female Coupler | 1.380 | 20,000 |
| HC-MF6-MF4 | 3/8" MP Female x 1/4" MP Female Coupler | 1.380 | 20,000 |
| HC-MF6 | 3/8" MP Female Coupler | 1.380 | 20,000 |
| HC-MF9-MF4 | 9/16" MP Female x 1/4" MP Female Coupler | 1.380 | 20,000 |
| HC-MF9-MF6 | 9/16" MP Female x 3/8" MP Female Coupler | 1.380 | 20,000 |
| HC-MF9 | 9/16" MP Female Coupler | 1.380 | 20,000 |
| HC-MF12-MF4 | 3/4" MP Female x 1/4" MP Female Coupler | 1.380 | 20,000 |
| HC-MF12-MF6 | 3/4" MP Female x 3/8" MP Female Coupler | 1.380 | 20,000 |
| HC-MF12-MF9 | 3/4" MP Female x 9/16" MP Female Coupler | 1.380 | 20,000 |
| HC-MF12 | 3/4" MP Female Coupler | 1.380 | 20,000 |
| HC-MF16-MF4 | 1" MP Female x 1/4" MP Female Coupler | 1.380 | 20,000 |
| HC-MF16-MF6 | 1" MP Female x 3/8" MP Female Coupler | 1.380 | 20,000 |
| HC-MF16-MF9 | 1" MP Female x 9/16" MP Female Coupler | 1.380 | 20,000 |
| HC-MF16-MF12 | 1" MP Female x 3/4" MP Female Coupler | 1.380 | 20,000 |
| HC-MF16 | 1" MP Female Coupler | 1.380 | 20,000 |



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 | |
|-------------|---|----------------------|--------|
| | | bar | psi |
| HCSL-MF4-LL | 1/4" MP Female Slimline Coupler Left x Left* 0.374" OD | 1.380 | 20,000 |
| HCSL-MF4-LR | 1/4" MP Female Slimline Coupler Left x Right* 0.374" OD | 1.380 | 20,000 |
| HCSL-MF4-RR | 1/4" MP Female Slimline Coupler Right x Right* 0.374" OD | 1.380 | 20,000 |
| HCSL-MF6-LL | 3/8" MP Female Slimline Coupler Left x Left* 0.499" OD | 1.380 | 20,000 |
| HCSL-MF6-LR | 3/8" MP Female Slimline Coupler Left x Right* 0.499" OD | 1.380 | 20,000 |
| HCSL-MF6-RR | 3/8" MP Female Slimline Coupler Right x Right* 0.499" OD | 1.380 | 20,000 |
| HCSL-MF9-LL | 9/16" MP Female Slimline Coupler Left x Left* 0.687" OD | 1.380 | 20,000 |
| HCSL-MF9-LR | 9/16" MP Female Slimline Coupler Left x Right* 0.687" OD | 1.380 | 20,000 |
| HCSL-MF9-RR | 9/16" MP Female Slimline Coupler Right x Right* 0.687" OD | 1.380 | 20,000 |



* Designates Left Hand Thread or Right Hand Thread

I.1 Fittings and Adapters



| Medium Pressure Male x NPT Male | | | | |
|---------------------------------|-------------------------------|----------------------|--------|-----|
| Part Number | Description | Max Working Pressure | | |
| | | bar | psi | |
| HMM4-NM4 | 1/4" MP Male x 1/4" NPT Male | 1.035 | 15.000 | psi |
| HMM4-NM6 | 1/4" MP Male x 3/8" NPT Male | 1.035 | 15.000 | psi |
| HMM4-NM8 | 1/4" MP Male x 1/2" NPT Male | 1.035 | 15.000 | psi |
| HMM6-NM4 | 3/8" MP Male x 1/4" NPT Male | 1.035 | 15.000 | psi |
| HMM6-NM6 | 3/8" MP Male x 3/8" NPT Male | 1.035 | 15.000 | psi |
| HMM6-NM8 | 3/8" MP Male x 1/2" NPT Male | 1.035 | 15.000 | psi |
| HMM9-NM4 | 9/16" MP Male x 1/4" NPT Male | 1.035 | 15.000 | psi |
| HMM9-NM6 | 9/16" MP Male x 3/8" NPT Male | 1.035 | 15.000 | psi |
| HMM9-NM8 | 9/16" MP Male x 1/2" NPT Male | 1.035 | 15.000 | psi |
| HMM9-NM12 | 9/16" MP Male x 3/4" NPT Male | 690 | 10.000 | psi |
| HMM9-NM16 | 9/16" MP Male x 1" NPT Male | 690 | 10.000 | psi |
| HMM12-NM4 | 3/4" MP Male x 1/4" NPT Male | 1.035 | 15.000 | psi |
| HMM12-NM8 | 3/4" MP Male x 1/2" NPT Male | 1.035 | 15.000 | psi |
| HMM12-NM12 | 3/4" MP Male x 3/4" NPT Male | 690 | 10.000 | psi |
| HMM12-NM16 | 3/4" MP Male x 1" NPT Male | 690 | 10.000 | psi |
| HMM16-NM4 | 1" MP Male x 1/4" NPT Male | 1.035 | 15.000 | psi |
| HMM16-NM8 | 1" MP Male x 1/2" NPT Male | 1.035 | 15.000 | psi |
| HMM16-NM12 | 1" MP Male x 3/4" NPT Male | 690 | 10.000 | psi |
| HMM16-NM16 | 1" MP Male x 1" NPT Male | 690 | 10.000 | psi |



| Medium Pressure Female x NPT Male - including Collar and Gland Nut | | | | |
|--|---------------------------------|----------------------|--------|-----|
| Part Number | Description | Max Working Pressure | | |
| | | bar | psi | |
| HMF4-NM4 | 1/4" MP Female x 1/4" NPT Male | 1.035 | 15.000 | psi |
| HMF4-NM6 | 1/4" MP Female x 3/8" NPT Male | 1.035 | 15.000 | psi |
| HMF4-NM8 | 1/4" MP Female x 1/2" NPT Male | 1.035 | 15.000 | psi |
| HMF6-NM4 | 3/8" MP Female x 1/4" NPT Male | 1.035 | 15.000 | psi |
| HMF6-NM6 | 3/8" MP Female x 3/8" NPT Male | 1.035 | 15.000 | psi |
| HMF6-NM8 | 3/8" MP Female x 1/2" NPT Male | 1.035 | 15.000 | psi |
| HMF9-NM4 | 9/16" MP Female x 1/4" NPT Male | 1.035 | 15.000 | psi |
| HMF9-NM6 | 9/16" MP Female x 3/8" NPT Male | 1.035 | 15.000 | psi |
| HMF9-NM8 | 9/16" MP Female x 1/2" NPT Male | 1.035 | 15.000 | psi |
| HMF9-NM12 | 9/16" MP Female x 3/4" NPT Male | 690 | 10.000 | psi |
| HMF9-NM16 | 9/16" MP Female x 1" NPT Male | 690 | 10.000 | psi |
| HMF12-NM4 | 3/4" MP Female x 1/4" NPT Male | 1.035 | 15.000 | psi |
| HMF12-NM6 | 3/4" MP Female x 3/8" NPT Male | 1.035 | 15.000 | psi |
| HMF12-NM8 | 3/4" MP Female x 1/2" NPT Male | 1.035 | 15.000 | psi |
| HMF12-NM12 | 3/4" MP Female x 3/4" NPT Male | 690 | 10.000 | psi |
| HMF12-NM16 | 3/4" MP Female x 1" NPT Male | 690 | 10.000 | psi |
| HMF16-NM4 | 1" MP Female x 1/4" NPT Male | 1.035 | 15.000 | psi |
| HMF16-NM6 | 1" MP Female x 3/8" NPT Male | 1.035 | 15.000 | psi |
| HMF16-NM8 | 1" MP Female x 1/2" NPT Male | 1.035 | 15.000 | psi |
| HMF16-NM12 | 1" MP Female x 3/4" NPT Male | 690 | 10.000 | psi |
| HMF16-NM16 | 1" MP Female x 1" NPT Male | 690 | 10.000 | psi |



I.1 Fittings and Adapters

NPT Female x High-Pressure Male

| Part Number | Description | Max Working Pressure | |
|-------------|---------------------------------|----------------------|--------|
| | | bar | psi |
| HNf4-HM4 | 1/4" NPT Female x 1/4" HP Male | 1.035 | 15,000 |
| HNf4-HM6 | 1/4" NPT Female x 3/8" HP Male | 1.035 | 15,000 |
| HNf4-HM9 | 1/4" NPT Female x 9/16" HP Male | 1.035 | 15,000 |
| HNf6-HM4 | 3/8" NPT Female x 1/4" HP Male | 1.035 | 15,000 |
| HNf6-HM6 | 3/8" NPT Female x 3/8" HP Male | 1.035 | 15,000 |
| HNf6-HM9 | 3/8" NPT Female x 9/16" HP Male | 1.035 | 15,000 |
| HNf8-HM4 | 1/2" NPT Female x 1/4" HP Male | 1.035 | 15,000 |
| HNf8-HM6 | 1/2" NPT Female x 3/8" HP Male | 1.035 | 15,000 |
| HNf8-HM9 | 1/2" NPT Female x 9/16" HP Male | 1.035 | 15,000 |
| HNf12-HM6 | 3/4" NPT Female x 3/8" HP Male | 690 | 10,000 |
| HNf12-HM9 | 3/4" NPT Female x 9/16" HP Male | 690 | 10,000 |
| HNf16-HM9 | 1" NPT Female x 9/16" HP Male | 690 | 10,000 |



NPT Female x Medium Pressure Male

| Part Number | Description | Max Working Pressure | |
|-------------|---------------------------------|----------------------|--------|
| | | bar | psi |
| HNf2-MM4 | 1/8" NPT Female x 1/4" MP Male | 1.035 | 15,000 |
| HNf2-MM6 | 1/8" NPT Female x 3/8" MP Male | 1.035 | 15,000 |
| HNf2-MM9 | 1/8" NPT Female x 9/16" MP Male | 1.035 | 15,000 |
| HNf2-MM12 | 1/8" NPT Female x 3/4" MP Male | 1.035 | 15,000 |
| HNf4-MM4 | 1/4" NPT Female x 1/4" MP Male | 1.035 | 15,000 |
| HNf4-MM6 | 1/4" NPT Female x 3/8" MP Male | 1.035 | 15,000 |
| HNf4-MM9 | 1/4" NPT Female x 9/16" MP Male | 1.035 | 15,000 |
| HNf4-MM12 | 1/4" NPT Female x 3/4" MP Male | 1.035 | 15,000 |
| HNf4-MM16 | 1/4" NPT Female x 1" MP Male | 1.035 | 15,000 |
| HNf6-MM4 | 3/8" NPT Female x 1/4" MP Male | 1.035 | 15,000 |
| HNf6-MM6 | 3/8" NPT Female x 3/8" MP Male | 1.035 | 15,000 |
| HNf6-MM9 | 3/8" NPT Female x 9/16" MP Male | 1.035 | 15,000 |
| HNf6-MM12 | 3/8" NPT Female x 3/4" MP Male | 1.035 | 15,000 |
| HNf6-MM16 | 3/8" NPT Female x 1" MP Male | 1.035 | 15,000 |
| HNf8-MM4 | 1/2" NPT Female x 1/4" MP Male | 1.035 | 15,000 |
| HNf8-MM6 | 1/2" NPT Female x 3/8" MP Male | 1.035 | 15,000 |
| HNf8-MM9 | 1/2" NPT Female x 9/16" MP Male | 1.035 | 15,000 |
| HNf8-MM12 | 1/2" NPT Female x 3/4" MP Male | 1.035 | 15,000 |
| HNf8-MM16 | 1/2" NPT Female x 1" MP Male | 1.035 | 15,000 |
| HNf12-MM6 | 3/4" NPT Female x 3/8" MP Male | 690 | 10,000 |
| HNf12-MM9 | 3/4" NPT Female x 9/16" MP Male | 690 | 10,000 |
| HNf12-MM12 | 3/4" NPT Female x 3/4" MP Male | 690 | 10,000 |
| HNf12-MM16 | 3/4" NPT Female x 1" MP Male | 690 | 10,000 |
| HNf16-MM6 | 1" NPT Female x 3/8" MP Male | 690 | 10,000 |
| HNf16-MM9 | 1" NPT Female x 9/16" MP Male | 690 | 10,000 |
| HNf16-MM12 | 1" NPT Female x 3/4" MP Male | 690 | 10,000 |
| HNf16-MM16 | 1" NPT Female x 1" MP Male | 690 | 10,000 |



I.1 Fittings and Adapters



| NPT Male x Male | | | |
|-----------------|-------------------------------|------------------------|------------|
| Part Number | Description | Max Working Pressure | |
| HNM2-NM2 | 1/8" NPT Male x 1/8" NPT Male | 1.035 bar | 15.000 psi |
| HNM4-NM2 | 1/4" NPT Male x 1/8" NPT Male | 1.035 bar | 15.000 psi |
| HNM4-NM4 | 1/4" NPT Male x 1/4" NPT Male | 1.035 bar | 15.000 psi |
| HNM6-NM2 | 3/8" NPT Male x 1/8" NPT Male | 1.035 bar | 15.000 psi |
| HNM6-NM4 | 3/8" NPT Male x 1/4" NPT Male | 1.035 bar | 15.000 psi |
| HNM6-NM6 | 3/8" NPT Male x 3/8" NPT Male | 1.035 bar | 15.000 psi |
| HNM8-NM4 | 1/2" NPT Male x 1/4" NPT Male | 1.035 bar | 15.000 psi |
| HNM8-NM6 | 1/2" NPT Male x 3/8" NPT Male | 1.035 bar | 15.000 psi |
| HNM8-NM8 | 1/2" NPT Male x 1/2" NPT Male | 1.035 bar | 15.000 psi |
| HNMI2-NM4 | 3/4" NPT Male x 1/4" NPT Male | 690 bar | 10.000 psi |
| HNMI2-NM6 | 3/4" NPT Male x 3/8" NPT Male | 690 bar | 10.000 psi |
| HNMI2-NM8 | 3/4" NPT Male x 1/2" NPT Male | 690 bar | 10.000 psi |
| HNMI2-NM12 | 3/4" NPT Male x 3/4" NPT Male | 690 bar | 10.000 psi |
| HNMI6-NM4 | 1" NPT Male x 1/4" NPT Male | 690 bar | 10.000 psi |
| HNMI6-NM6 | 1" NPT Male x 3/8" NPT Male | 690 bar | 10.000 psi |
| HNMI6-NM8 | 1" NPT Male x 1/2" NPT Male | 690 bar <td 10.000 psi | |
| HNMI6-NM12 | 1" NPT Male x 3/4" NPT Male | 690 bar | 10.000 psi |
| HNMI6-NM16 | 1" NPT Male x 1" NPT Male | 690 bar | 10.000 psi |



NPT Female x NPT Male (Bushings)

| Part Number | Description | Max Working Pressure | |
|-------------|----------------------------------|----------------------|--------|
| | | bar | psi |
| HNFI-NM2 | 1/16" NPT Female x 1/8" NPT Male | 1.035 | 15.000 |
| HNFI-NM4 | 1/16" NPT Female x 1/4" NPT Male | 1.035 | 15.000 |
| HNFI-NM6 | 1/16" NPT Female x 3/8" NPT Male | 1.035 | 15.000 |
| HNFI-NM8 | 1/16" NPT Female x 1/2" NPT Male | 1.035 | 15.000 |
| HNFI-NM12 | 1/16" NPT Female x 3/4" NPT Male | 690 | 10.000 |
| HNFI-NM16 | 1/16" NPT Female x 1" NPT Male | 690 | 10.000 |
| HNFI2-NM2 | 1/8" NPT Female x 1/8" NPT Male | 1.035 | 15.000 |
| HNFI2-NM4 | 1/8" NPT Female x 1/4" NPT Male | 1.035 | 15.000 |
| HNFI2-NM6 | 1/8" NPT Female x 3/8" NPT Male | 1.035 | 15.000 |
| HNFI2-NM8 | 1/8" NPT Female x 1/2" NPT Male | 1.035 | 15.000 |
| HNFI2-NM12 | 1/8" NPT Female x 3/4" NPT Male | 690 | 10.000 |
| HNFI2-NM16 | 1/8" NPT Female x 1" NPT Male | 690 | 10.000 |
| HNFI4-NM2 | 1/4" NPT Female x 1/8" NPT Male | 1.035 | 15.000 |
| HNFI4-NM4 | 1/4" NPT Female x 1/4" NPT Male | 1.035 | 15.000 |
| HNFI4-NM6 | 1/4" NPT Female x 3/8" NPT Male | 1.035 | 15.000 |
| HNFI4-NM8 | 1/4" NPT Female x 1/2" NPT Male | 1.035 | 15.000 |
| HNFI4-NM12 | 1/4" NPT Female x 3/4" NPT Male | 690 | 10.000 |
| HNFI4-NM16 | 1/4" NPT Female x 1" NPT Male | 690 | 10.000 |
| HNFI6-NM2 | 3/8" NPT Female x 1/8" NPT Male | 1.035 | 15.000 |
| HNFI6-NM4 | 3/8" NPT Female x 1/4" NPT Male | 1.035 | 15.000 |
| HNFI6-NM6 | 3/8" NPT Female x 3/8" NPT Male | 1.035 | 15.000 |
| HNFI6-NM8 | 3/8" NPT Female x 1/2" NPT Male | 1.035 | 15.000 |
| HNFI6-NM12 | 3/8" NPT Female x 3/4" NPT Male | 690 | 10.000 |
| HNFI6-NM16 | 3/8" NPT Female x 1" NPT Male | 690 | 10.000 |
| HNFI8-NM4 | 1/2" NPT Female x 1/4" NPT Male | 1.035 | 15.000 |
| HNFI8-NM6 | 1/2" NPT Female x 3/8" NPT Male | 1.035 | 15.000 |
| HNFI8-NM8 | 1/2" NPT Female x 1/2" NPT Male | 1.035 | 15.000 |
| HNFI8-NM12 | 1/2" NPT Female x 3/4" NPT Male | 690 | 10.000 |
| HNFI8-NM16 | 1/2" NPT Female x 1" NPT Male | 690 | 10.000 |
| HNFI12-NM4 | 3/4" NPT Female x 1/4" NPT Male | 690 | 10.000 |
| HNFI12-NM8 | 3/4" NPT Female x 1/2" NPT Male | 690 | 10.000 |
| HNFI12-NM12 | 3/4" NPT Female x 3/4" NPT Male | 690 | 10.000 |
| HNFI12-NM16 | 3/4" NPT Female x 1" NPT Male | 690 | 10.000 |
| HNFI16-NM6 | 1" NPT Female x 3/8" NPT Male | 690 | 10.000 |
| HNFI16-NM8 | 1" NPT Female x 1/2" NPT Male | 690 | 10.000 |
| HNFI16-NM12 | 1" NPT Female x 3/4" NPT Male | 690 | 10.000 |



I.1 Fittings and Adapters



NPT Heavy Duty Couplers

| Part Number | Description | Max Working Pressure | |
|-----------------|---|----------------------|--------|
| | | bar | psi |
| HC-NF4 HD | 1/4" NPT Female Coupler | 1.035 | 15,000 |
| HC-NF6-NF4 HD | 3/8" NPT Female x 1/4" NPT Female Coupler | 1.035 | 15,000 |
| HC-NF6 HD | 3/8" NPT Female Coupler | 1.035 | 15,000 |
| HC-NF8-NF4 HD | 1/2" NPT Female x 1/4" NPT Female Coupler | 1.035 | 15,000 |
| HC-NF8-NF6 HD | 1/2" NPT Female x 3/8" NPT Female Coupler | 1.035 | 15,000 |
| HC-NF8 HD | 1/2" NPT Female Coupler | 1.035 | 15,000 |
| HC-NF12-NF4 HD | 3/4" NPT Female x 1/4" NPT Female Couple | 690 | 10,000 |
| HC-NF12-NF6 HD | 3/4" NPT Female x 3/8" NPT Female Couple | 690 | 10,000 |
| HC-NF12-NF8 HD | 3/4" NPT Female x 1/2" NPT Female Couple | 690 | 10,000 |
| HC-NF12 HD | 3/4" NPT Female Coupler | 690 | 10,000 |
| HC-NF16-NF8 HD | 1" NPT Female x 1/2" NPT Female Coupler | 690 | 10,000 |
| HC-NF16-NF12 HD | 1" NPT Female x 3/4" NPT Female Coupler | 690 | 10,000 |
| HC-NF16 HD | 1" NPT Female Coupler | 690 | 10,000 |



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 | |
|---------------|---|----------------------|--------|
| | | bar | psi |
| HCSSL-NF1 | 1/16" NPT Female Slimline Coupler 0.375" OD | 690 | 10,000 |
| HCSSL-NF2-NF1 | 1/8" NPT Female x 1/16" NPT Female Slimline Coupler 0.480" OD | 690 | 10,000 |
| HCSSL-NF2 | 1/8" NPT Female Slimline Coupler 0.480" OD | 690 | 10,000 |
| HCSSL-NF4 | 1/4" NPT Female Slimline Coupler 0.690" OD | 690 | 10,000 |
| HCSSL-NF6 | 3/8" NPT Female Slimline Coupler 0.875" OD | 690 | 10,000 |
| HCSSL-NF8 | 1/2" NPT Female Slimline Coupler 1.130" OD | 690 | 10,000 |



JIC Male x JIC Male

| Part Number | Description | Max Working Pressure | |
|-------------|-------------------------------|----------------------|--------|
| | | bar | psi |
| HMJ4-MJ4 | 1/4" JIC Male x 1/4" JIC Male | 1.035 | 15,000 |
| HMJ4-MJ6 | 1/4" JIC Male x 3/8" JIC Male | 1.035 | 15,000 |
| HMJ4-MJ8 | 1/4" JIC Male x 1/2" JIC Male | 1.035 | 15,000 |
| HMJ6-MJ6 | 3/8" JIC Male x 3/8" JIC Male | 1.035 | 15,000 |
| HMJ6-MJ8 | 3/8" JIC Male x 1/2" JIC Male | 1.035 | 15,000 |
| HMJ8-MJ8 | 1/2" JIC Male x 1/2" JIC Male | 1.035 | 15,000 |
| HMJ16-MJ16 | 1" JIC Male x 1" JIC Male | 690 | 10,000 |



JIC Male x High-Pressure Male

| Part Number | Description | Max Working Pressure | |
|-------------|-------------------------------|----------------------|--------|
| | | bar | psi |
| HMJ4-HM4 | 1/4" JIC Male x 1/4" HP Male | 1.035 | 15,000 |
| HMJ4-HM6 | 1/4" JIC Male x 3/8" HP Male | 1.035 | 15,000 |
| HMJ4-HM9 | 1/4" JIC Male x 9/16" HP Male | 1.035 | 15,000 |
| HMJ6-HM4 | 3/8" JIC Male x 1/4" HP Male | 1.035 | 15,000 |
| HMJ6-HM6 | 3/8" JIC Male x 3/8" HP Male | 1.035 | 15,000 |
| HMJ6-HM9 | 3/8" JIC Male x 9/16" HP Male | 1.035 | 15,000 |
| HMJ8-HM4 | 1/2" JIC Male x 1/4" HP Male | 1.035 | 15,000 |
| HMJ8-HM6 | 1/2" JIC Male x 3/8" HP Male | 1.035 | 15,000 |
| HMJ8-HM9 | 1/2" JIC Male x 9/16" HP Male | 1.035 | 15,000 |



JIC Male x Medium Pressure Male

| Part Number | Description | Max Working Pressure | |
|-------------|-------------------------------|----------------------|--------|
| | | bar | psi |
| HMJ4-MM4 | 1/4" JIC Male x 1/4" MP Male | 1.035 | 15,000 |
| HMJ4-MM6 | 1/4" JIC Male x 3/8" MP Male | 1.035 | 15,000 |
| HMJ4-MM9 | 1/4" JIC Male x 9/16" MP Male | 1.035 | 15,000 |
| HMJ6-MM12 | 3/8" JIC Male x 3/4" MP Male | 1.035 | 15,000 |
| HMJ6-MM4 | 3/8" JIC Male x 1/4" MP Male | 1.035 | 15,000 |
| HMJ6-MM6 | 3/8" JIC Male x 3/8" MP Male | 1.035 | 15,000 |
| HMJ6-MM9 | 3/8" JIC Male x 9/16" MP Male | 1.035 | 15,000 |
| HMJ8-MM12 | 1/2" JIC Male x 3/4" MP Male | 1.035 | 15,000 |
| HMJ8-MM16 | 1/2" JIC Male x 1" MP Male | 1.035 | 15,000 |
| HMJ8-MM4 | 1/2" JIC Male x 1/4" MP Male | 1.035 | 15,000 |
| HMJ8-MM6 | 1/2" JIC Male x 3/8" MP Male | 1.035 | 15,000 |
| HMJ8-MM9 | 1/2" JIC Male x 9/16" MP Male | 1.035 | 15,000 |
| HMJ12-MM9 | 3/4" JIC Male x 9/16" MP Male | 690 | 10,000 |
| HMJ12-MM12 | 3/4" JIC Male x 3/4" MP Male | 690 | 10,000 |
| HMJ12-MM16 | 3/4" JIC Male x 1" MP Male | 690 | 10,000 |
| HMJ16-MM9 | 1" JIC Male x 9/16" MP Male | 690 | 10,000 |
| HMJ16-MM12 | 1" JIC Male x 3/4" MP Male | 690 | 10,000 |
| HMJ16-MM16 | 1" JIC Male x 1" MP Male | 690 | 10,000 |



JIC Male x NPT Male

| Part Number | Description | Max Working Pressure | |
|-------------|-------------------------------|----------------------|--------|
| | | bar | psi |
| HMJ4-NM2 | 1/4" JIC Male x 1/8" NPT Male | 1.035 | 15,000 |
| HMJ4-NM4 | 1/4" JIC Male x 1/4" NPT Male | 1.035 | 15,000 |
| HMJ4-NM6 | 1/4" JIC Male x 3/8" NPT Male | 1.035 | 15,000 |
| HMJ4-NM8 | 1/4" JIC Male x 1/2" NPT Male | 1.035 | 15,000 |
| HMJ6-NM4 | 3/8" JIC Male x 1/4" NPT Male | 1.035 | 15,000 |
| HMJ6-NM6 | 3/8" JIC Male x 3/8" NPT Male | 1.035 | 15,000 |
| HMJ6-NM8 | 3/8" JIC Male x 1/2" NPT Male | 1.035 | 15,000 |
| HMJ6-NM12 | 3/8" JIC Male x 3/4" NPT Male | 690 | 10,000 |
| HMJ8-NM4 | 1/2" JIC Male x 1/4" NPT Male | 1.035 | 15,000 |
| HMJ8-NM6 | 1/2" JIC Male x 3/8" NPT Male | 1.035 | 15,000 |
| HMJ8-NM8 | 1/2" JIC Male x 1/2" NPT Male | 1.035 | 15,000 |
| HMJ8-NM12 | 1/2" JIC Male x 3/4" NPT Male | 690 | 10,000 |
| HMJ8-NM16 | 1/2" JIC Male x 1" NPT Male | 690 | 10,000 |
| HMJ12-NM12 | 3/4" JIC Male x 3/4" NPT Male | 690 | 10,000 |
| HMJ12-NM16 | 3/4" JIC Male x 1" NPT Male | 690 | 10,000 |
| HMJ16-NM12 | 1" JIC Male x 3/4" NPT Male | 690 | 10,000 |
| HMJ16-NM16 | 1" JIC Male x 1" NPT Male | 690 | 10,000 |



I.1 Fittings and Adapters



| Type M Male x Male | | | |
|--------------------|---------------------------------------|----------------------|------------|
| Part Number | Description | Max Working Pressure | |
| M9-M9 | 9/16"-18 Type M x 9/16"-18 Type M | 3.450 bar | 50.000 psi |
| M12-M9 | 3/4"-16 Type M x 9/16"-18 Type M | 2.070 bar | 30.000 psi |
| M12-M12 | 3/4"-16 Type M x 3/4"-16 Type M | 2.070 bar | 30.000 psi |
| M14-M9 | 7/8"-14 Type M x 9/16"-18 Type M | 3.450 bar | 50.000 psi |
| M14-M12 | 7/8"-14 Type M x 3/4"-16 Type M | 2.070 bar | 30.000 psi |
| M14-M14 | 7/8"-14 Type M x 7/8"-14 Type M | 3.450 bar | 50.000 psi |
| M16-M9 | 1"-12 Type M x 9/16"-18 Type M | 2.070 bar | 30.000 psi |
| M16-M12 | 1"-12 Type M x 3/4"-16 Type M | 2.070 bar | 30.000 psi |
| M16-M16 | 1"-12 Type M x 1"-12 Type M | 2.070 bar | 30.000 psi |
| M18-M9 | 1 1/8"-12 Type M x 9/16"-18 Type M | 3.450 bar | 50.000 psi |
| M18-M14 | 1 1/8"-12 Type M x 7/8"-14 Type M | 3.450 bar | 50.000 psi |
| M18-M18 | 1 1/8"-12 Type M x 1 1/8"-12 Type M | 3.450 bar | 50.000 psi |
| M21-M9 | 1 5/16"-12 Type M x 9/16"-18 Type M | 1.380 bar | 20.000 psi |
| M21-M12 | 1 5/16"-12 Type M x 3/4"-16 Type M | 1.380 bar | 20.000 psi |
| M21-M16 | 1 5/16"-12 Type M x 1"-12 Type M | 1.380 bar | 20.000 psi |
| M21-M21 | 1 5/16"-12 Type M x 1 5/16"-12 Type M | 1.380 bar | 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 | 3.450 bar | 50.000 psi |
| M9-HP6 | 9/16"-18 Type M x 3/8" HP Male | 3.450 bar | 50.000 psi |
| M9-HP9 | 9/16"-18 Type M x 9/16" HP Male | 3.450 bar | 50.000 psi |
| M12-HP4 | 3/4"-16 Type M x 1/4" HP Male | 2.070 bar | 30.000 psi |
| M12-HP6 | 3/4"-16 Type M x 3/8" HP Male | 2.070 bar | 30.000 psi |
| M12-HP9 | 3/4"-16 Type M x 9/16" HP Male | 2.070 bar | 30.000 psi |
| M14-HP6 | 7/8"-14 Type M x 3/8" HP Male | 3.450 bar | 50.000 psi |
| M14-HP9 | 7/8"-14 Type M x 9/16" HP Male | 3.450 bar | 50.000 psi |
| M16-HP6 | 1"-12 Type M x 3/8" HP Male | 2.070 bar | 30.000 psi |
| M16-HP9 | 1"-12 Type M x 9/16" HP Male | 2.070 bar | 30.000 psi |
| M18-HP9 | 1 1/8"-12 Type M x 9/16" HP Male | 3.450 bar | 50.000 psi |
| M21-HP9 | 1 5/16"-12 Type M x 9/16" HP Male | 1.380 bar | 20.000 psi |



I.I Fittings and 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 | 1.380 bar | 20.000 psi |
| M9-MP6 | 9/16"-18 Type M x 3/8" MP Male | 1.380 bar | 20.000 psi |
| M9-MP9 | 9/16"-18 Type M x 9/16" MP Male | 1.380 bar | 20.000 psi |
| M9-MP12 | 9/16"-18 Type M x 3/4" MP Male | 1.380 bar | 20.000 psi |
| M9-MP16 | 9/16"-18 Type M x 1" MP Male | 1.380 bar | 20.000 psi |
| M12-MP4 | 3/4"-16 Type M x 1/4" MP Male | 1.380 bar | 20.000 psi |
| M12-MP6 | 3/4"-16 Type M x 3/8" MP Male | 1.380 bar | 20.000 psi |
| M12-MP9 | 3/4"-16 Type M x 9/16" MP Male | 1.380 bar | 20.000 psi |
| M12-MP12 | 3/4"-16 Type M x 3/4" MP Male | 1.380 bar | 20.000 psi |
| M12-MP16 | 3/4"-16 Type M x 1" MP Male | 1.380 bar | 20.000 psi |
| M16-MP4 | 1"-12 Type M x 1/4" MP Male | 1.380 bar | 20.000 psi |
| M16-MP6 | 1"-12 Type M x 3/8" MP Male | 1.380 bar | 20.000 psi |
| M16-MP9 | 1"-12 Type M x 1/2" MP Male | 1.380 bar | 20.000 psi |
| M16-MP12 | 1"-12 Type M x 3/4" MP Male | 1.380 bar | 20.000 psi |
| M16-MP16 | 1"-12 Type M x 1" MP Male | 1.380 bar | 20.000 psi |
| M21-MP9 | 1 5/16" Type M x 1/2" MP Male | 1.380 bar | 20.000 psi |
| M21-MP12 | 1 5/16" Type M x 3/4" MP Male | 1.380 bar | 20.000 psi |
| M21-MP16 | 1 5/16" Type M x 1" MP Male | 1.380 bar | 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 | 1.035 bar | 15.000 psi |
| M9-NM6 | 9/16"-18 Type M x 3/8" NPT Male | 1.035 bar | 15.000 psi |
| M9-NM8 | 9/16"-18 Type M x 1/2" NPT Male | 1.035 bar | 15.000 psi |
| M9-NM12 | 9/16"-18 Type M x 3/4" NPT Male | 690 bar | 10.000 psi |
| M9-NM16 | 9/16"-18 Type M x 1" NPT Male | 690 bar | 10.000 psi |
| M12-NM4 | 3/4"-16 Type M x 1/4" NPT Male | 1.035 bar | 15.000 psi |
| M12-NM6 | 3/4"-16 Type M x 3/8" NPT Male | 1.035 bar | 15.000 psi |
| M12-NM8 | 3/4"-16 Type M x 1/2" NPT Male | 1.035 bar | 15.000 psi |
| M12-NM12 | 3/4"-16 Type M x 3/4" NPT Male | 690 bar | 10.000 psi |
| M12-NM16 | 3/4"-16 Type M x 1" NPT Male | 690 bar | 10.000 psi |
| M16-NM4 | 1"-12 Type M x 1/4" NPT Male | 1.035 bar | 15.000 psi |
| M16-NM6 | 1"-12 Type M x 3/8" NPT Male | 1.035 bar | 15.000 psi |
| M16-NM8 | 1"-12 Type M x 1/2" NPT Male | 1.035 bar | 15.000 psi |
| M16-NM12 | 1"-12 Type M x 3/4" NPT Male | 690 bar | 10.000 psi |
| M16-NM16 | 1"-12 Type M x 1" NPT Male | 690 bar | 10.000 psi |
| M21-NM8 | 1 5/16"-12 Type M x 1/2" NPT Male | 1.035 bar | 15.000 psi |
| M21-NM12 | 1 5/16"-12 Type M x 3/4" NPT Male | 690 bar | 10.000 psi |
| M21-NM16 | 1 5/16"-12 Type M x 1" NPT Male | 690 bar | 10.000 psi |



BSPP Adapters - 60° internal or 120° external sealing cone

| Part Number | Description | Max Working Pressure | |
|--------------|--|----------------------|------------|
| C09-125-1680 | 1/4" MBSPP-Ext. x 1/4" HP Male | 2.070 bar | 30.000 psi |
| C09-125-1681 | 1/4" MBSPP-Ext. x 1/4" MP Male | 1.380 bar | 20.000 psi |
| C19-950-0029 | 1/4" MBSPP-Ext. x 9/16"-18 Type M Male | 2.070 bar | 30.000 psi |
| C19-950-1601 | 1/4" MBSPP-Ext. x 1/4" MBSPP-Ext. | 2.070 bar | 30.000 psi |
| C19-950-1602 | 1/4" MBSPP-Ext. x 1/4" MBSPP-Int. | 2.070 bar | 30.000 psi |
| C19-950-1622 | 1/4" MBSPP-Int. x 1/4" MBSPP-Int. | 2.070 bar | 30.000 psi |

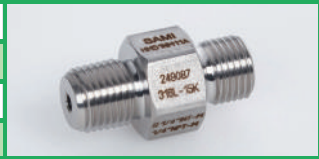


I.1 Fittings and Adapters



BSPP Male x NPT Male

| Part Number | Description | Max Working Pressure | |
|--------------|---------------------------------|----------------------|--------|
| | | bar | psi |
| C19-950-1625 | 1/4" MBSPP-Ext. x 1/4" NPT Male | 1.035 | 15.000 |
| HBM4-NM4 | 1/4" MBSPP-Int. x 1/4" NPT Male | 1.035 | 15.000 |
| HBM4-NM8 | 1/4" MBSPP-Int. x 1/2" NPT Male | 1.035 | 15.000 |



BSPP Male Connectors-int.

| Part Number | Description | Max Working Pressure | |
|-------------|----------------------|----------------------|--------|
| | | bar | psi |
| HBM4-BM4 | G1/4" Male Connector | 2.070 | 30.000 |
| HBM4-BM4-W | G1/4" Male Connector | 3.200 | 46.400 |
| HBM6-BM6 | G3/8" Male Connector | 2.070 | 30.000 |
| HBM8-BM8 | G1/2" Male Connector | 2.070 | 30.000 |
| HBM12-BM12 | G3/4" Male Connector | 2.070 | 30.000 |



USIT-rings for BSPP adapters

| Part Number | Description | Max Working Pressure | |
|--------------|-----------------------|----------------------|--------|
| | | bar | psi |
| C19-950-0062 | 1/4" BSPP Bonded Seal | 1.000 | 14.500 |
| C19-950-0083 | 1/4" BSPP Bonded Seal | 1.500 | 21.750 |

Metric Male x Male

| Part Number | Description | Max Working Pressure | |
|----------------|---------------------------------------|----------------------|--------|
| | | bar | psi |
| HMEM14-MEM14 | M14x1.5 Male Connector | 1.800 | 26.100 |
| HMEM14-MEM14-W | M14x1.5 Male Connector | 3.200 | 46.400 |
| HMEM18-MEM18 | M18x1.5 Male Connector | 1.520 | 22.040 |
| HMEM20-MEM20 | M20x1.5 Male Connector | 1.520 | 22.040 |
| HMEM20-MEM20-W | M20x1.5 Male Connector | 2.500 | 36.250 |
| HMEM22-MEM22 | M22x1.5 Male Connector | 1.920 | 21.750 |
| HMEM22-MEM22-W | M22x1.5 Male Connector | 2.500 | 36.250 |
| HMEM24-MEM22 | M24x1.5 Male x M22x1.5 Male Connector | 1.920 | 27.840 |
| HMEM24-MEM22-W | M24x1.5 Male x M22x1.5 Male Connector | 2.800 | 40.600 |
| HMEM24-MEM24 | M24x1.5 Male Connector | 1.520 | 22.040 |
| HMEM24-MEM24-W | M24x1.5 Male Connector | 3.200 | 46.400 |
| HMEM30-MEM30 | M30x2 Male Connector | 1.040 | 15.080 |
| HMEM30-MEM30-W | M30x2 Male Connector | 1.520 | 22.040 |
| HMEM36-MEM24 | M36x2 Male x M24x1.5 Male Connector | 1.040 | 15.080 |
| HMEM36-MEM24-W | M36x2 Male x M24x1.5 Male Connector | 1.520 | 22.040 |
| HMEM36-MEM36 | M36x2 Male Connector | 1.040 | 15.080 |
| HMEM36-MEM36-W | M36x2 Male Connector | 1.520 | 22.040 |
| HMEM42-MEM36 | M42x2 Male x M36x2 Male Connector | 1.040 | 15.080 |
| HMEM42-MEM36-W | M42x2 Male x M36x2 Male Connector | 1.520 | 22.040 |
| HMEM42-MEM42 | M42x2 Male Connector | 900 | 13.050 |
| HMEM42-MEM42-W | M42x2 Male Connector | 1.400 | 20.300 |



Metric Male (for o-ring seal) x BSPP Male

| Part Number | Description | Max Working Pressure | |
|--------------|--|----------------------|--------|
| | | bar | psi |
| HMEM24-BM4 | M24x1.5 Male x 1/4" BSP Male Connector | 1.800 | 26.100 |
| HMEM24-BM4-W | M24x1.5 Male x 1/4" BSP Male Connector | 3.200 | 46.400 |
| HMEM24-BM6 | M24x1.5 Male x 3/8" BSP Male Connector | 1.500 | 21.750 |



I.1 Fittings and Adapters

Metric Couplers Female - including Collars and Gland Nuts

| Part Number | Description | Max Working Pressure | |
|---------------------|--|----------------------|--------|
| | | bar | psi |
| HC-MEF16-CLR-1/4HP | M16x1.5 Female Coupler (incl. Collar 1/4" HP & Gland Nut M16x1.5) | 4.140 | 60.000 |
| HC-MEF20-CLR-3/8HP | M20x1.5 Female Coupler (incl. Collar 3/8" HP & Gland Nut M20x1.5) | 4.140 | 60.000 |
| HC-MEF26-CLR-9/16HP | M26x1.5 Female Coupler (incl. Collar 9/16" HP & Gland Nut M26x1.5) | 4.140 | 60.000 |
| HC-MEF26-CLR-M14 | M26x1.5 Female Coupler (incl. Collar M14x1.5 & Gland Nut M20x1.5) | 4.140 | 60.000 |
| HC-MEF30-CLR-9/16HP | M30x2 Female Coupler (incl. Collar 9/16" HP & Gland Nut M30x2) | 4.140 | 60.000 |
| HC-MEF30-CLR-M14 | M30x2 Female Coupler (incl. Collar M14x1.5 & Gland Nut M30x2) | 4.140 | 60.000 |
| HC-MEF30-CLR-M18 | M30x2 Female Coupler (incl. Collar M18x1.5 & Gland Nut M30x2) | 4.140 | 60.000 |



I.2 Elbows

High-Pressure Female Elbows (UNF) - including Collars and Gland Nuts

| Part Number | Description | Max Working Pressure | |
|-------------|-----------------------|----------------------|--------|
| | | bar | psi |
| HEHF4 | 1/4" HP Female Elbow | 4.140 | 60.000 |
| HEHF6 | 3/8" HP Female Elbow | 4.140 | 60.000 |
| HEHF9 | 9/16" HP Female Elbow | 4.140 | 60.000 |



Medium Pressure Female Elbows - including Collars and Gland Nuts

| Part Number | Description | Max Working Pressure | |
|-------------|-----------------------|----------------------|--------|
| | | bar | psi |
| HEMF4 | 1/4" MP Female Elbow | 1.380 | 20.000 |
| HEMF6 | 3/8" MP Female Elbow | 1.380 | 20.000 |
| HEMF9 | 9/16" MP Female Elbow | 1.380 | 20.000 |
| HEMF12 | 3/4" MP Female Elbow | 1.380 | 20.000 |
| HEMF16 | 1" MP Female Elbow | 1.380 | 20.000 |



NPT Female Elbows

| Part Number | Description | Max Working Pressure | |
|-------------|-----------------------|----------------------|--------|
| | | bar | psi |
| HENF4 | 1/4" NPT Female Elbow | 1.035 | 15.000 |
| HENF6 | 3/8" NPT Female Elbow | 1.035 | 15.000 |
| HENF8 | 1/2" NPT Female Elbow | 1.035 | 15.000 |
| HENF12 | 3/4" NPT Female Elbow | 690 | 10.000 |
| HENF16 | 1" NPT Female Elbow | 690 | 10.000 |



NPT Street Elbows

| Part Number | Description | Max Working Pressure | |
|-------------|---|----------------------|--------|
| | | bar | psi |
| HSENF4 | 1/4" NPT Male x NPT Female Street Elbow | 1.035 | 15.000 |
| HSENF6 | 3/8" NPT Male x NPT Female Street Elbow | 1.035 | 15.000 |
| HSENF8 | 1/2" NPT Male x NPT Female Street Elbow | 1.035 | 15.000 |



BSPP Elbow

| Part Number | Description | Max Working Pressure | |
|---------------|-----------------------|----------------------|--------|
| | | bar | psi |
| C19-950-HEBM4 | 1/4" MBSPP-Ext. Elbow | 2.070 | 30.000 |



I.3 Tees



High-Pressure Female Tees (UNF) - including Collars and Gland Nuts

| Part Number | Description | Max Working Pressure | |
|-------------|---------------------|----------------------|--------|
| | | bar | psi |
| HTHF4 | 1/4" HP Female Tee | 4.140 | 60.000 |
| HTHF6 | 3/8" HP Female Tee | 4.140 | 60.000 |
| HTHF9 | 9/16" HP Female Tee | 4.140 | 60.000 |



High-Pressure Female Tee (Metric) - including Collars and Gland Nuts

| Part Number | Description | Max Working Pressure | |
|------------------|---|----------------------|--------|
| | | bar | psi |
| HT-MEF30-CLR-M14 | Tee M30x2 female incl. collars M14 and gland nuts | 4.000 | 58.000 |



Medium Pressure Female Tees - including Collars and Gland Nuts

| Part Number | Description | Max Working Pressure | |
|-------------|---------------------|----------------------|--------|
| | | bar | psi |
| HTMF4 | 1/4" MP Female Tee | 1.380 | 20.000 |
| HTMF6 | 3/8" MP Female Tee | 1.380 | 20.000 |
| HTMF9 | 9/16" MP Female Tee | 1.380 | 20.000 |
| HTMF12 | 3/4" MP Female Tee | 1.380 | 20.000 |
| HTMF16 | 1" MP Female Tee | 1.380 | 20.000 |



NPT Female Tees

| Part Number | Description | Max Working Pressure | |
|-------------|---------------------|----------------------|--------|
| | | bar | psi |
| HTNF4 | 1/4" NPT Female Tee | 1.035 | 15.000 |
| HTNF6 | 3/8" NPT Female Tee | 1.035 | 15.000 |
| HTNF8 | 1/2" NPT Female Tee | 1.035 | 15.000 |
| HTNF12 | 3/4" NPT Female Tee | 690 | 10.000 |
| HTNF16 | 1" NPT Female Tee | 690 | 10.000 |



NPT Street Tees

| Part Number | Description | Max Working Pressure | |
|-------------|---------------------------------------|----------------------|--------|
| | | bar | psi |
| HSTNF4 | 1/4" NPT Male x NPT Female Street Tee | 1.035 | 15.000 |
| HSTNF6 | 3/8" NPT Male x NPT Female Street Tee | 1.035 | 15.000 |
| HSTNF8 | 1/2" NPT Male x NPT Female Street Tee | 1.035 | 15.000 |



BSPP Tees

| Part Number | Description | Max Working Pressure | |
|--------------|---------------------------|----------------------|--------|
| | | bar | psi |
| C19-950-1681 | 1/4" BSPP-Ext. Female Tee | 2.070 | 30.000 |



I.4 Y's

Metric Y's

| Part Number | Description | Max Working Pressure | |
|------------------|---|----------------------|--------|
| | | bar | psi |
| HY-MEF30-CLR-M14 | Y M30x2 female incl. collars M14 and gland nuts | 4.000 | 58.000 |



I.5 Crosses

High-Pressure Female Crosses (UNF) - including Collars and Gland Nuts

| Part Number | Description | Max Working Pressure | |
|-------------|-----------------------|----------------------|------------|
| HCRHF4 | 1/4" HP Female Cross | 4.140 bar | 60.000 psi |
| HCRHF6 | 3/8" HP Female Cross | 4.140 bar | 60.000 psi |
| HCRHF9 | 9/16" HP Female Cross | 4.140 bar | 60.000 psi |



Medium Pressure Female Crosses - including Collars and Gland Nuts

| Part Number | Description | Max Working Pressure | |
|-------------|-----------------------|----------------------|------------|
| HCRMF4 | 1/4" MP Female Cross | 1.380 bar | 20.000 psi |
| HCRMF6 | 3/8" MP Female Cross | 1.380 bar | 20.000 psi |
| HCRMF9 | 9/16" MP Female Cross | 1.380 bar | 20.000 psi |
| HCRMF12 | 3/4" MP Female Cross | 1.380 bar | 20.000 psi |
| HCRMF16 | 1" MP Female Cross | 1.380 bar | 20.000 psi |



NPT Female Crosses

| Part Number | Description | Max Working Pressure | |
|-------------|-----------------------|----------------------|------------|
| HCRNF4 | 1/4" NPT Female Cross | 1.035 bar | 15.000 psi |
| HCRNF6 | 3/8" NPT Female Cross | 1.035 bar | 15.000 psi |
| HCRNF8 | 1/2" NPT Female Cross | 1.035 bar | 15.000 psi |
| HCRNF12 | 3/4" NPT Female Cross | 690 bar | 10.000 psi |
| HCRNF16 | 1" NPT Female Cross | 690 bar | 10.000 psi |



BSPP Crosses

| Part Number | Description | Max Working Pressure | |
|--------------|-----------------------------|----------------------|------------|
| C19-950-1680 | 1/4" BSPP-Ext. Female Cross | 2.070 bar | 30.000 psi |



I.6 Bulkheads

High-Pressure Bulkheads (UNF) - including Collars and Gland Nuts

| Part Number | Description | Max Working Pressure | |
|-------------|--------------------------|----------------------|------------|
| HC-HF4-BH | 1/4" HP Female Bulkhead | 4.140 bar | 60.000 psi |
| HC-HF6-BH | 3/8" HP Female Bulkhead | 4.140 bar | 60.000 psi |
| HC-HF9-BH | 9/16" HP Female Bulkhead | 4.140 bar | 60.000 psi |



High-Pressure Bulkheads (Metric) - including Collars and Gland Nuts

| Part Number | Description | Max Working Pressure | |
|---------------------|-------------------------|----------------------|------------|
| HC-MEF30-CLR-M14-BH | Bulkhead coupling M30x2 | 4.000 bar | 58.000 psi |



Medium Pressure Bulkheads - including Collars and Gland Nuts

| Part Number | Description | Max Working Pressure | |
|-------------|--------------------------|----------------------|------------|
| HC-MF4-BH | 1/4" MP Female Bulkhead | 1.380 bar | 20.000 psi |
| HC-MF6-BH | 3/8" MP Female Bulkhead | 1.380 bar | 20.000 psi |
| HC-MF9-BH | 9/16" MP Female Bulkhead | 1.380 bar | 20.000 psi |
| HC-MF12-BH | 3/4" MP Female Bulkhead | 1.380 bar | 20.000 psi |
| HC-MF16-BH | 1" MP Female Bulkhead | 1.380 bar | 20.000 psi |



I.7 Tube Nipples



| High-Pressure Tube Nipples | | | |
|----------------------------|----------------------------|----------------------|--------|
| Part Number | Description | Max Working Pressure | |
| | | bar | psi |
| HHM4-3.00 | 1/4" HP Nipple x 3" Long | 4.140 | 60.000 |
| HHM4-6.00 | 1/4" HP Nipple x 6" Long | 4.140 | 60.000 |
| HHM4-8.00 | 1/4" HP Nipple x 8" Long | 4.140 | 60.000 |
| HHM4-10.00 | 1/4" HP Nipple x 10" Long | 4.140 | 60.000 |
| HHM4-12.00 | 1/4" HP Nipple x 12" Long | 4.140 | 60.000 |
| HHM6-3.00 | 3/8" HP Nipple x 3" Long | 4.140 | 60.000 |
| HHM6-6.00 | 3/8" HP Nipple x 6" Long | 4.140 | 60.000 |
| HHM6-8.00 | 3/8" HP Nipple x 8" Long | 4.140 | 60.000 |
| HHM6-10.00 | 3/8" HP Nipple x 10" Long | 4.140 | 60.000 |
| HHM6-12.00 | 3/8" HP Nipple x 12" Long | 4.140 | 60.000 |
| HHM9-3.00 | 9/16" HP Nipple x 3" Long | 4.140 | 60.000 |
| HHM9-6.00 | 9/16" HP Nipple x 6" Long | 4.140 | 60.000 |
| HHM9-8.00 | 9/16" HP Nipple x 8" Long | 4.140 | 60.000 |
| HHM9-10.00 | 9/16" HP Nipple x 10" Long | 4.140 | 60.000 |
| HHM9-12.00 | 9/16" HP Nipple x 12" Long | 4.140 | 60.000 |



| Medium Pressure Tube Nipples | | | |
|------------------------------|----------------------------|----------------------|--------|
| Part Number | Description | Max Working Pressure | |
| | | bar | psi |
| HMM4-3.00 | 1/4" MP Nipple x 3" Long | 1.380 | 20.000 |
| HMM4-4.00 | 1/4" MP Nipple x 6" Long | 1.380 | 20.000 |
| HMM4-8.00 | 1/4" MP Nipple x 8" Long | 1.380 | 20.000 |
| HMM4-10.00 | 1/4" MP Nipple x 10" Long | 1.380 | 20.000 |
| HMM4-12.00 | 1/4" MP Nipple x 12" Long | 1.380 | 20.000 |
| HMM6-3.00 | 3/8" MP Nipple x 3" Long | 1.380 | 20.000 |
| HMM6-6.00 | 3/8" MP Nipple x 6" Long | 1.380 | 20.000 |
| HMM6-8.00 | 3/8" MP Nipple x 8" Long | 1.380 | 20.000 |
| HMM6-10.00 | 3/8" MP Nipple x 10" Long | 1.380 | 20.000 |
| HMM6-12.00 | 3/8" MP Nipple x 12" Long | 1.380 | 20.000 |
| HMM9-3.00 | 9/16" MP Nipple x 3" Long | 1.380 | 20.000 |
| HMM9-6.00 | 9/16" MP Nipple x 6" Long | 1.380 | 20.000 |
| HMM9-8.00 | 9/16" MP Nipple x 8" Long | 1.380 | 20.000 |
| HMM9-10.00 | 9/16" MP Nipple x 10" Long | 1.380 | 20.000 |
| HMM9-12.00 | 9/16" MP Nipple x 12" Long | 1.380 | 20.000 |



I.7 Tube Nipples

| NPT Pipe Nipples | | | |
|------------------|---------------------------------|----------------------|------------|
| Part Number | Description | Max Working Pressure | |
| HNM4-3.00 | 1/4" NPT Male Nipple x 3" Long | 1.035 bar | 15.000 psi |
| HNM4-6.00 | 1/4" NPT Male Nipple x 6" Long | 1.035 bar | 15.000 psi |
| HNM4-8.00 | 1/4" NPT Male Nipple x 8" Long | 1.035 bar | 15.000 psi |
| HNM4-10.00 | 1/4" NPT Male Nipple x 10" Long | 1.035 bar | 15.000 psi |
| HNM4-12.00 | 1/4" NPT Male Nipple x 12" Long | 1.035 bar | 15.000 psi |
| HNM6-3.00 | 3/8" NPT Male Nipple x 3" Long | 1.035 bar | 15.000 psi |
| HNM6-6.00 | 3/8" NPT Male Nipple x 6" Long | 1.035 bar | 15.000 psi |
| HNM6-8.00 | 3/8" NPT Male Nipple x 8" Long | 1.035 bar | 15.000 psi |
| HNM6-10.00 | 3/8" NPT Male Nipple x 10" Long | 1.035 bar | 15.000 psi |
| HNM6-12.00 | 3/8" NPT Male Nipple x 12" Long | 1.035 bar | 15.000 psi |
| HNM8-3.00 | 1/2" NPT Male Nipple x 3" Long | 1.035 bar | 15.000 psi |
| HNM8-6.00 | 1/2" NPT Male Nipple x 6" Long | 1.035 bar | 15.000 psi |
| HNM8-8.00 | 1/2" NPT Male Nipple x 8" Long | 1.035 bar | 15.000 psi |
| HNM8-10.00 | 1/2" NPT Male Nipple x 10" Long | 1.035 bar | 15.000 psi |
| HNM8-12.00 | 1/2" NPT Male Nipple x 12" Long | 1.035 bar | 15.000 psi |
| HNM12-4.00 | 3/4" NPT Male Nipple x 4" Long | 690 bar | 10.000 psi |
| HNM12-6.00 | 3/4" NPT Male Nipple x 6" Long | 690 bar | 10.000 psi |
| HNM16-4.00 | 1" NPT Male Nipple x 4" Long | 690 bar | 10.000 psi |
| HNM16-6.00 | 1" NPT Male Nipple x 6" Long | 690 bar | 10.000 psi |



I.8 Plugs



High-Pressure Plugs

| Part Number | Description | Max Working Pressure | |
|-------------|---------------|----------------------|--------|
| | | bar | psi |
| HMM4-PLUG | 1/4" HP Plug | 4.140 | 60.000 |
| HMM6-PLUG | 3/8" HP Plug | 4.140 | 60.000 |
| HMM9-PLUG | 9/16" HP Plug | 4.140 | 60.000 |



Medium Pressure Plugs

| Part Number | Description | Max Working Pressure | |
|-------------|---------------|----------------------|--------|
| | | bar | psi |
| HMM4-PLUG | 1/4" MP Plug | 1.380 | 20.000 |
| HMM6-PLUG | 3/8" MP Plug | 1.380 | 20.000 |
| HMM9-PLUG | 9/16" MP Plug | 1.380 | 20.000 |
| HMM12-PLUG | 3/4" MP Plug | 1.380 | 20.000 |
| HMM16-PLUG | 1" MP Plug | 1.380 | 20.000 |



NPT Plugs

| Part Number | Description | Max Working Pressure | |
|-------------|---------------------|----------------------|--------|
| | | bar | psi |
| HNMI-PLUG | 1/16" NPT Male Plug | 1.035 | 15.000 |
| HNM2-PLUG | 1/8" NPT Male Plug | 1.035 | 15.000 |
| HNM4-PLUG | 1/4" NPT Male Plug | 1.035 | 15.000 |
| HNM6-PLUG | 3/8" NPT Male Plug | 1.035 | 15.000 |
| HNM8-PLUG | 1/2" NPT Male Plug | 1.035 | 15.000 |
| HNMI2-PLUG | 3/4" NPT Male Plug | 690 | 10.000 |
| HNMI6-PLUG | 1" NPT Male Plug | 690 | 10.000 |



JIC Plugs

| Part Number | Description | Max Working Pressure | |
|-------------|--------------------|----------------------|--------|
| | | bar | psi |
| HMJ4-PLUG | 1/4" JIC Male Plug | 1.035 | 15.000 |
| HMJ6-PLUG | 3/8" JIC Male Plug | 1.035 | 15.000 |
| HMJ8-PLUG | 1/2" JIC Male Plug | 1.035 | 15.000 |
| HMJ12-PLUG | 3/4" JIC Male Plug | 690 | 10.000 |
| HMJ16-PLUG | 1" JIC Male Plug | 690 | 10.000 |



Type M Plugs

| Part Number | Description | Max Working Pressure | |
|-------------|------------------------|----------------------|--------|
| | | bar | psi |
| M9-PLUG | 9/16"-18 Type M Plug | 3.450 | 50.000 |
| M12-PLUG | 3/4"-16 Type M Plug | 2.070 | 30.000 |
| M14-PLUG | 7/8"-14 Type M Plug | 2.070 | 30.000 |
| M16-PLUG | 1"-12 Type M Plug | 2.070 | 30.000 |
| M18-PLUG | 1 1/8"-12 Type M Plug | 2.070 | 30.000 |
| M21-PLUG | 1 5/16"-12 Type M Plug | 1.380 | 20.000 |



BSPP Plugs - 120° external sealing cone

| Part Number | Description | Max Working Pressure | |
|--------------|----------------------|----------------------|--------|
| | | bar | psi |
| C19-950-PLUG | 1/4" MBSPP-Ext. Plug | 2.070 | 30.000 |



I.9 Collars & Gland Nuts



High-Pressure Gland Nuts & Collars (UNF)

| Part Number | Description | Max Working Pressure | |
|--------------|--|----------------------|--------|
| | | bar | psi |
| CLR-1/4HP | 1/4" HP Collar | 4.140 | 60,000 |
| CLR-3/8HP | 3/8" HP Collar | 4.140 | 60,000 |
| CLR-9/16HP | 9/16" HP Collar | 4.140 | 60,000 |
| GN-1/4HP | 1/4" HP Gland Nut | 4.140 | 60,000 |
| GN-1/4HP-AV | 1/4" HP Collar & Gland Nut Anti-Vibration | 4.140 | 60,000 |
| GN-3/8HP | 3/8" HP Gland Nut | 4.140 | 60,000 |
| GN-3/8HP-AV | 3/8" HP Collar & Gland Nut Anti-Vibration | 4.140 | 60,000 |
| GN-9/16HP | 9/16" HP Gland Nut | 4.140 | 60,000 |
| GN-9/16HP-AV | 9/16" HP Collar & Gland Nut Anti-Vibration | 4.140 | 60,000 |



High-Pressure Gland Nuts & Collars (Metric)

| Part Number | Description | Max Working Pressure | |
|-------------|---|----------------------|--------|
| | | bar | psi |
| CLR-1/4HP | 1/4" HP Collar | 4.140 | 60,000 |
| CLR-3/8HP | 3/8" HP Collar | 4.140 | 60,000 |
| CLR-9/16HP | 9/16" HP Collar | 4.140 | 60,000 |
| CLR-M14 | M14x1.5 LH Collar for M30x2 (GN-M30) | 4.000 | 58,000 |
| CLR-M18 | M18x1.5 LH Collar for M30x2 (GN-M30-M18) | 4.000 | 58,000 |
| GN-M16 | M16x1.5 Gland Nut | 4.000 | 58,000 |
| GN-M20 | M20x1.5 Gland Nut | 4.000 | 58,000 |
| GN-M26 | M26x1.5 Gland Nut | 4.000 | 58,000 |
| GN-M30-M18 | M30x2 Gland Nut for M18x1.5 (CLR-M18-M30) | 4.000 | 58,000 |
| GN-M30 | M30x2 Gland Nut for M14x1.5 LH (CLR-M14) & 9/16"x18UNF LH (CLR-9/16-HP) | 4.000 | 58,000 |



Medium Pressure Gland Nuts & Collars

| Part Number | Description | Max Working Pressure | |
|--------------|--|----------------------|--------|
| | | bar | psi |
| CLR-1/4MP | 1/4" MP Collar | 1.380 | 20,000 |
| CLR-3/8MP | 3/8" MP Collar | 1.380 | 20,000 |
| CLR-9/16MP | 9/16" MP Collar | 1.380 | 20,000 |
| CLR-3/4MP | 3/4" MP Collar | 1.380 | 20,000 |
| CLR-1MP | 1" MP Collar | 1.380 | 20,000 |
| GN-1/4MP | 1/4" MP Gland Nut | 1.380 | 20,000 |
| GN-1/4MP-AV | 1/4" MP Collar & Gland Nut Anti-Vibration | 1.380 | 20,000 |
| GN-3/8MP | 3/8" MP Gland Nut | 1.380 | 20,000 |
| GN-3/8MP-AV | 3/8" MP Collar & Gland Nut Anti-Vibration | 1.380 | 20,000 |
| GN-9/16MP | 9/16" MP Gland Nut | 1.380 | 20,000 |
| GN-9/16MP-AV | 9/16" MP Collar & Gland Nut Anti-Vibration | 1.380 | 20,000 |
| GN-3/4MP | 3/4" MP Gland Nut | 1.380 | 20,000 |
| GN-1MP | 1" MP Gland Nut | 1.380 | 20,000 |



I.10 Caps



High-Pressure Caps (UNF)

| Part Number | Description | Max Working Pressure | |
|-------------|---------------------|----------------------|--------|
| | | bar | psi |
| HHF4-CAP | 1/4" HP Female Cap | 4.140 | 60.000 |
| HHF6-CAP | 3/8" HP Female Cap | 4.140 | 60.000 |
| HHF9-CAP | 9/16" HP Female Cap | 4.140 | 60.000 |



Medium Pressure Caps

| Part Number | Description | Max Working Pressure | |
|-------------|---------------------|----------------------|--------|
| | | bar | psi |
| HMF4-CAP | 1/4" MP Female Cap | 1.380 | 20.000 |
| HMF6-CAP | 3/8" MP Female Cap | 1.380 | 20.000 |
| HMF9-CAP | 9/16" MP Female Cap | 1.380 | 20.000 |
| HMF12-CAP | 3/4" MP Female Cap | 1.380 | 20.000 |
| HMF16-CAP | 1" MP Female Cap | 1.380 | 20.000 |



JIC Caps

| Part Number | Description | Max Working Pressure | |
|-------------|---------------------|----------------------|--------|
| | | bar | psi |
| HFJ4-CAP | 1/4" JIC Female Cap | 1.035 | 15.000 |
| HFJ6-CAP | 3/8" JIC Female Cap | 1.035 | 15.000 |
| HFJ8-CAP | 1/2" JIC Female Cap | 1.035 | 15.000 |
| HFJ12-CAP | 3/4" JIC Female Cap | 690 | 10.000 |
| HFJ16-CAP | 1" JIC Female Cap | 690 | 10.000 |



Type M Caps

| Part Number | Description | Max Working Pressure | |
|-------------|-----------------------|----------------------|--------|
| | | bar | psi |
| M9-CAP | 9/16"-18 Type M Cap | 3.450 | 50.000 |
| M12-CAP | 3/4"-16 Type M Cap | 2.070 | 30.000 |
| M16-CAP | 1"-12 Type M Cap | 2.070 | 30.000 |
| M21-CAP | 1 5/16"-12 Type M Cap | 1.380 | 20.000 |



I.11 Tubing

High-Pressure Tubing

| Part Number | Description | Max Working Pressure | |
|-------------|--------------------------------|----------------------|--------|
| | | bar | psi |
| TU-HP4-60K | HP Tubing 1/4" OD X 0.083" ID | 4.140 | 60.000 |
| TU-HP6-60K | HP Tubing 3/8" OD X 0.125" ID | 4.140 | 60.000 |
| TU-HP9-60K | HP Tubing 9/16" OD X 0.188" ID | 4.140 | 60.000 |



Medium Pressure Tubing

| Part Number | Description | Max Working Pressure | |
|-------------|--------------------------------|----------------------|--------|
| | | bar | psi |
| TU-MP4-20K | MP Tubing 1/4" OD X 0.109" ID | 1.380 | 20.000 |
| TU-MP6-20K | MP Tubing 3/8" OD X 0.203" ID | 1.380 | 20.000 |
| TU-MP9-20K | MP Tubing 9/16" OD X 0.312" ID | 1.380 | 20.000 |
| TU-MP12-20K | MP Tubing 3/4" OD X 0.438" ID | 1.380 | 20.000 |
| TU-MP16-20K | MP Tubing 1" OD X 0.562" ID | 1.380 | 20.000 |



2.1 Needle Valves

Needle Valves - 30K to 60K - including Collars and Gland Nuts

| Part Number | Description | Max Working Pressure | |
|--------------|---|----------------------|--------|
| | | bar | psi |
| HVHF4-30K | 1/4" HP Female Two Way Straight Needle Valve | 2.070 | 30.000 |
| HVHF4-60K | 1/4" HP Female Two Way Straight Needle Valve | 4.140 | 60.000 |
| HVHF4-12-30K | 1/4" HP Female Two Way Angle Needle Valve | 2.070 | 30.000 |
| HVHF4-12-60K | 1/4" HP Female Two Way Angle Needle Valve | 4.140 | 60.000 |
| HVHF4-14-30K | 1/4" HP Female Three Way Angle Needle Valve | 2.070 | 30.000 |
| HVHF4-14-60K | 1/4" HP Female Three Way Angle Needle Valve | 4.140 | 60.000 |
| HVHF6-30K | 3/8" HP Female Two Way Straight Needle Valve | 2.070 | 30.000 |
| HVHF6-60K | 3/8" HP Female Two Way Straight Needle Valve | 4.140 | 60.000 |
| HVHF6-12-30K | 3/8" HP Female Two Way Angle Needle Valve | 2.070 | 30.000 |
| HVHF6-12-60K | 3/8" HP Female Two Way Angle Needle Valve | 4.140 | 60.000 |
| HVHF6-14-30K | 3/8" HP Female Three Way Angle Needle Valve | 2.070 | 30.000 |
| HVHF6-14-60K | 3/8" HP Female Three Way Angle Needle Valve | 4.140 | 60.000 |
| HVHF9-30K | 9/16" HP Female Two Way Straight Needle Valve | 2.070 | 30.000 |
| HVHF9-60K | 9/16" HP Female Two Way Straight Needle Valve | 4.140 | 60.000 |
| HVHF9-12-30K | 9/16" HP Female Two Way Angle Needle Valve | 2.070 | 30.000 |
| HVHF9-12-60K | 9/16" HP Female Two Way Angle Needle Valve | 4.140 | 60.000 |
| HVHF9-14-30K | 9/16" HP Female Three Way Straight Needle Valve | 2.070 | 30.000 |
| HVHF9-14-60K | 9/16" HP Female Three Way Straight Needle Valve | 4.140 | 60.000 |



Needle Valves - 20K - including Collars and Gland Nuts

| Part Number | Description | Max Working Pressure | |
|--------------|---|----------------------|--------|
| | | bar | psi |
| HVMF4-20K | 1/4" MP Female Two Way Straight Needle Valve | 1.380 | 20.000 |
| HVMF4-12-20K | 1/4" MP Female Two Way Angle Needle Valve | 1.380 | 20.000 |
| HVMF4-14-20K | 1/4" MP Female Three Way Straight Needle Valve | 1.380 | 20.000 |
| HVMF6-20K | 3/8" MP Female Two Way Straight Needle Valve | 1.380 | 20.000 |
| HVMF6-12-20K | 3/8" MP Female Two Way Angle Needle Valve | 1.380 | 20.000 |
| HVMF6-14-20K | 3/8" MP Female Three Way Straight Needle Valve | 1.380 | 20.000 |
| HVMF9-20K | 9/16" MP Female Two Way Straight Needle Valve | 1.380 | 20.000 |
| HVMF9-12-20K | 9/16" MP Female Two Way Angle Needle Valve | 1.380 | 20.000 |
| HVMF9-14-20K | 9/16" MP Female Three Way Straight Needle Valve | 1.380 | 20.000 |



Needle Valves - 15K

| Part Number | Description | Max Working Pressure | |
|--------------|---|----------------------|--------|
| | | bar | psi |
| HVNF4-15K | 1/4" NPT Female Two Way Straight Needle Valve | 1.035 | 15.000 |
| HVNF4-12-15K | 1/4" NPT Female Two Way Angle Needle Valve | 1.035 | 15.000 |
| HVNF6-15K | 3/8" NPT Female Two Way Straight Needle Valve | 1.035 | 15.000 |
| HVNF6-12-15K | 3/8" NPT Female Two Way Angle Needle Valve | 1.035 | 15.000 |
| HVNF8-15K | 1/2" NPT Female Two Way Straight Needle Valve | 1.035 | 15.000 |
| HVNF8-12-15K | 1/2" NPT Female Two Way Angle Needle Valve | 1.035 | 15.000 |
| HVNF8NM8-15K | 1/2" NPT Female x 1/2" NPT Male Two Way Straight Needle Valve | 1.035 | 15.000 |



2.2 Ball Valves



Two Way Ball Valves - 20K - including Collars and Gland Nuts

| Part Number | Description | Max Working Pressure | |
|-------------|---|----------------------|--------|
| | | bar | psi |
| HVBMF4-20K | 1/4" MP Female Two Way Straight Ball Valve | 1.380 | 20.000 |
| HVBMF6-20K | 3/8" MP Female Two Way Straight Ball Valve | 1.380 | 20.000 |
| HVBMF9-20K | 9/16" MP Female Two Way Straight Ball Valve | 1.380 | 20.000 |
| HVBMF12-20K | 3/4" MP Female Two Way Straight Ball Valve | 1.380 | 20.000 |



Two Way Ball Valves - 15K

| Part Number | Description | Max Working Pressure | |
|-------------|---|----------------------|--------|
| | | bar | psi |
| HVBNF4-15K | 1/4" NPT Female Two Way Straight Ball Valve | 1.035 | 15.000 |
| HVBNF6-15K | 3/8" NPT Female Two Way Straight Ball Valve | 1.035 | 15.000 |
| HVBNF8-15K | 1/2" NPT Female Two Way Straight Ball Valve | 1.035 | 15.000 |
| HVBNF16-15K | 1" NPT Female Two Way Straight Ball Valve | 1.035 | 15.000 |



2.3 Check Valves

High-Pressure Check Valves - 60K - including Collars and Gland Nuts

| Part Number | Description | Max Working Pressure | |
|-------------|--|----------------------|--------|
| | | bar | psi |
| CV-HF4-BS | 1/4" HP Female Check Valve with ball seat | 4.140 | 60.000 |
| CV-HF4-SS | 1/4" HP Female Check Valve with soft seat | 4.140 | 60.000 |
| CV-HF6-BS | 3/8" HP Female Check Valve with ball seat | 4.140 | 60.000 |
| CV-HF6-SS | 3/8" HP Female Check Valve with soft seat | 4.140 | 60.000 |
| CV-HF9-BS | 9/16" HP Female Check Valve with ball seat | 4.140 | 60.000 |
| CV-HF9-SS | 9/16" HP Female Check Valve with soft seat | 4.140 | 60.000 |



Medium Pressure Check Valves - 20K - including Collars and Gland Nuts

| Part Number | Description | Max Working Pressure | |
|-------------|--|----------------------|--------|
| | | bar | psi |
| CV-MF4-BS | 1/4" MP Female Check Valve with ball seat | 1.380 | 20.000 |
| CV-MF4-SS | 1/4" MP Female Check Valve with soft seat | 1.380 | 20.000 |
| CV-MF6-BS | 3/8" MP Female Check Valve with ball seat | 1.380 | 20.000 |
| CV-MF6-SS | 3/8" MP Female Check Valve with soft seat | 1.380 | 20.000 |
| CV-MF9-BS | 9/16" MP Female Check Valve with ball seat | 1.380 | 20.000 |
| CV-MF9-SS | 9/16" MP Female Check Valve with soft seat | 1.380 | 20.000 |



NPT Check Valves - 15K

| Part Number | Description | Max Working Pressure | |
|-------------|--|----------------------|--------|
| | | bar | psi |
| CV-NF4-BS | 1/4" NPT Female Check Valve with ball seat | 1.035 | 15.000 |
| CV-NF4-SS | 1/4" NPT Female Check Valve with soft seat | 1.035 | 15.000 |
| CV-NF6-BS | 3/8" NPT Female Check Valve with ball seat | 1.035 | 15.000 |
| CV-NF6-SS | 3/8" NPT Female Check Valve with soft seat | 1.035 | 15.000 |
| CV-NF8-BS | 1/2" NPT Female Check Valve with ball seat | 1.035 | 15.000 |
| CV-NF8-SS | 1/2" NPT Female Check Valve with soft seat | 1.035 | 15.000 |



2.4 Relief Valves



Relief Valve - Manual Adjustable

| Part Number | Description | Max Working Pressure | |
|-------------|--|----------------------|------------|
| | | bar | psi |
| HVR-10K-FA | Relief Valve - Manual Adjustable IN: 2x 1/4" NPT Female OUT: 1/4" NPT Female - From 69 to 690 bar working pressure | 690 bar | 10.000 psi |
| HVR-20K-FA | Relief Valve - Manual Adjustable IN: 1/4" HP Female OUT: 1/4" NPT Female - From 690 to 1.380 bar working pressure | 1.380 bar | 20.000 psi |



3.1 Screw Type Quick Disconnects

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

| Part Number | Description | Max Working Pressure | |
|-------------|---|----------------------|------------|
| | | bar | psi |
| CQD-MP9-SET | 9/16" MP Female Screw Together Quick Disconnect Set | 1.380 bar | 20.000 psi |
| CQD-08-SET | 1/2" NPT Female Screw Together Quick Disconnect Set | 1.035 bar | 15.000 psi |



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

| Part Number | Description | Max Working Pressure | |
|-------------------|--|----------------------|------------|
| | | bar | psi |
| C-700-1452 | 1/4" NPT Male Screw Together Quick Disconnect Coupler | 690 bar | 10.000 psi |
| C-700-1452-m-cap | Metal cap male 1/4" NPT | 0 bar | 0 psi |
| C-700-1454 | 3/8" NPT Male Screw Together Quick Disconnect Coupler | 690 bar | 10.000 psi |
| C-700-1454-m-cap | Metal cap male 3/8" NPT | 0 bar | 0 psi |
| C-700-6402 | 1/4" NPT Female Screw Together Quick Disconnect Nipple | 690 bar | 10.000 psi |
| C-700-6402-fm-cap | Metal cap 1/4" NPT female | 0 bar | 0 psi |
| C-700-6404 | 3/8" NPT Female Screw Together Quick Disconnect Nipple | 690 bar | 10.000 psi |
| C-700-6404-fm-cap | Metal cap 3/8" NPT female | 0 bar | 0 psi |



3.3. Push/ Pull Type Quick Disconnects

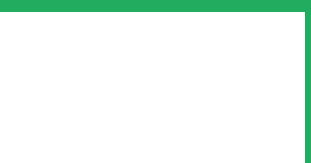
Push/Pull Type Quick Disconnects (no check valve) - Waterblast Service

| Part Number | Description | Max Working Pressure | |
|-------------|--|----------------------|------------|
| | | bar | psi |
| CQD-08-FD-F | 1/2" NPT Female Push/Pull Quick Disconnect Coupler | 690 bar | 10.000 psi |
| CQD-08-FD-M | 1/2" NPT Female Push/Pull Quick Disconnect Nipple | 690 bar | 10.000 psi |



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

| Part Number | Description | Max Working Pressure | |
|--------------|---|----------------------|------------|
| | | bar | psi |
| C10-116-1202 | 1/4" BSP Female Push/Pull Quick Disconnect Coupler | 1.500 bar | 21.750 psi |
| C10-116-6202 | 1/4" BSP Female Push/Pull Quick Disconnect Nipple | 1.500 bar | 21.750 psi |
| C10-116-SET | 1/4" BSP Female Push/Pull Quick Disconnect Coupler and Nipple | 1.500 bar | 21.750 psi |



3.4 SPC Series Quick Disconnects

Quick Disconnect Female Couplers with Check Valve

| Part Number | Description | Max Working Pressure | |
|---------------|--|----------------------|--------|
| | | bar | psi |
| SPC600-0-HP4 | Coupler with Check Valve x 1/4" HP Male | 2.070 | 30.000 |
| SPC600-0-HP6 | Coupler with Check Valve x 3/8" HP Male | 2.070 | 30.000 |
| SPC600-0-HP9 | Coupler with Check Valve x 9/16" HP Male | 2.070 | 30.000 |
| SPC600-0-HF4 | Coupler with Check Valve x 1/4" HP Female | 2.070 | 30.000 |
| SPC600-0-HF6 | Coupler with Check Valve x 3/8" HP Female | 2.070 | 30.000 |
| SPC600-0-MP4 | Coupler with Check Valve x 1/4" MP Male | 1.380 | 20.000 |
| SPC600-0-MP6 | Coupler with Check Valve x 3/8" MP Male | 1.380 | 20.000 |
| SPC600-0-MP9 | Coupler with Check Valve x 9/16" MP Male | 1.380 | 20.000 |
| SPC600-0-MP12 | Coupler with Check Valve x 3/4" MP Male | 1.380 | 20.000 |
| SPC600-0-MP16 | Coupler with Check Valve x 1" MP Male | 1.380 | 20.000 |
| SPC600-0-MF4 | Coupler with Check Valve x 1/4" MP Female | 1.380 | 20.000 |
| SPC600-0-MF6 | Coupler with Check Valve x 3/8" MP Female | 1.380 | 20.000 |
| SPC600-0-MF9 | Coupler with Check Valve x 9/16" MP Female | 1.380 | 20.000 |
| SPC600-0-NM4 | Coupler with Check Valve x 1/4" NPT Male | 1.035 | 15.000 |
| SPC600-0-NM6 | Coupler with Check Valve x 3/8" NPT Male | 1.035 | 15.000 |
| SPC600-0-NM8 | Coupler with Check Valve x 1/2" NPT Male | 1.035 | 15.000 |
| SPC600-0-NF4 | Coupler with Check Valve x 1/4" NPT Female | 1.035 | 15.000 |
| SPC600-0-NF6 | Coupler with Check Valve x 3/8" NPT Female | 1.035 | 15.000 |
| SPC600-0-NF8 | Coupler with Check Valve x 1/2" NPT Female | 1.035 | 15.000 |
| SPC600-0-MJ4 | Coupler with Check Valve x 1/4" JIC Male | 1.035 | 15.000 |
| SPC600-0-MJ6 | Coupler with Check Valve x 3/8" JIC Male | 1.035 | 15.000 |
| SPC600-0-MJ8 | Coupler with Check Valve x 1/2" JIC Male | 1.035 | 15.000 |
| SPC600-0-M9 | Coupler with Check Valve x 9/16"-18 Type M | 2.070 | 30.000 |
| SPC600-0-M12 | Coupler with Check Valve x 3/4"-16 Type M | 2.070 | 30.000 |
| SPC600-0-M14 | Coupler with Check Valve x 7/8"-14 Type M | 2.070 | 30.000 |
| SPC600-0-M16 | Coupler with Check Valve x 1"-12 Type M | 2.070 | 30.000 |



Quick Disconnect Male Nipples with Check Valve

| Part Number | Description | Max Working Pressure | |
|--------------|---|----------------------|--------|
| | | bar | psi |
| SPC600-2-HP4 | Nipple with Check Valve x 1/4" HP Male | 2.070 | 30.000 |
| SPC600-2-HP6 | Nipple with Check Valve x 3/8" HP Male | 2.070 | 30.000 |
| SPC600-2-HP9 | Nipple with Check Valve x 9/16" HP Male | 2.070 | 30.000 |
| SPC600-2-MP4 | Nipple with Check Valve x 1/4" MP Male | 1.380 | 20.000 |
| SPC600-2-MP6 | Nipple with Check Valve x 3/8" MP Male | 1.380 | 20.000 |
| SPC600-2-MP9 | Nipple with Check Valve x 9/16" MP Male | 1.380 | 20.000 |
| SPC600-2-NM4 | Nipple with Check Valve x 1/4" NPT Male | 1.035 | 15.000 |
| SPC600-2-NM6 | Nipple with Check Valve x 3/8" NPT Male | 1.035 | 15.000 |
| SPC600-2-NM8 | Nipple with Check Valve x 1/2" NPT Male | 1.035 | 15.000 |
| SPC600-2-NF4 | Nipple with Check Valve x 1/4" NPT Female | 1.035 | 15.000 |
| SPC600-2-NF6 | Nipple with Check Valve x 3/8" NPT Female | 1.035 | 15.000 |
| SPC600-2-NF8 | Nipple with Check Valve x 1/2" NPT Female | 1.035 | 15.000 |
| SPC600-2-MJ4 | Nipple with Check Valve x 1/4" JIC Male | 1.035 | 15.000 |
| SPC600-2-MJ6 | Nipple with Check Valve x 3/8" JIC Male | 1.035 | 15.000 |
| SPC600-2-MJ8 | Nipple with Check Valve x 1/2" JIC Male | 1.035 | 15.000 |
| SPC600-2-M9 | Nipple with Check Valve x 9/16"-18 Type M | 2.070 | 30.000 |
| SPC600-2-M12 | Nipple with Check Valve x 3/4"-16 Type M | 2.070 | 30.000 |
| SPC600-2-M14 | Nipple with Check Valve x 7/8"-14 Type M | 2.070 | 30.000 |
| SPC600-2-M16 | Nipple with Check Valve x 1"-12 Type M | 2.070 | 30.000 |



3.4 SPC Series Quick Disconnects



| Quick Disconnect Male Nipples without Check Valve | | | |
|---|--|----------------------|------------|
| Part Number | Description | Max Working Pressure | |
| SPC600-1-HP4 | Nipple without Check Valve x 1/4" HP Male | 2.070 bar | 30.000 psi |
| SPC600-1-HP6 | Nipple without Check Valve x 3/8" HP Male | 2.070 bar | 30.000 psi |
| SPC600-1-HP9 | Nipple without Check Valve x 9/16" HP Male | 2.070 bar | 30.000 psi |
| SPC600-1-HF4 | Nipple without Check Valve x 1/4" HP Female | 2.070 bar | 30.000 psi |
| SPC600-1-HF6 | Nipple without Check Valve x 3/8" HP Female | 2.070 bar | 30.000 psi |
| SPC600-1-HF9 | Nipple without Check Valve x 9/16" HP Female | 2.070 bar | 30.000 psi |
| SPC600-1-MP4 | Nipple without Check Valve x 1/4" MP Male | 1.380 bar | 20.000 psi |
| SPC600-1-MP6 | Nipple without Check Valve x 3/8" MP Male | 1.380 bar | 20.000 psi |
| SPC600-1-MP9 | Nipple without Check Valve x 9/16" MP Male | 1.380 bar | 20.000 psi |
| SPC600-1-MP12 | Nipple without Check Valve x 3/4" MP Male | 1.380 bar | 20.000 psi |
| SPC600-1-MP16 | Nipple without Check Valve x 1" MP Male | 1.380 bar | 20.000 psi |
| SPC600-1-MF4 | Nipple without Check Valve x 1/4" MP Female | 1.380 bar | 20.000 psi |
| SPC600-1-MF6 | Nipple without Check Valve x 3/8" MP Female | 1.380 bar | 20.000 psi |
| SPC600-1-MF9 | Nipple without Check Valve x 9/16" MP Female | 1.380 bar | 20.000 psi |
| SPC600-1-NM4 | Nipple without Check Valve x 1/4" NPT Male | 1.035 bar | 15.000 psi |
| SPC600-1-NM6 | Nipple without Check Valve x 3/8" NPT Male | 1.035 bar | 15.000 psi |
| SPC600-1-NM8 | Nipple without Check Valve x 1/2" NPT Male | 1.035 bar | 15.000 psi |
| SPC600-1-NF4 | Nipple without Check Valve x 1/4" NPT Female | 1.035 bar | 15.000 psi |
| SPC600-1-NF6 | Nipple without Check Valve x 3/8" NPT Female | 1.035 bar | 15.000 psi |
| SPC600-1-NF8 | Nipple without Check Valve x 1/2" NPT Female | 1.035 bar | 15.000 psi |
| SPC600-1-MJ4 | Nipple without Check Valve x 1/4" JIC Male | 1.035 bar | 15.000 psi |
| SPC600-1-MJ6 | Nipple without Check Valve x 3/8" JIC Male | 1.035 bar | 15.000 psi |
| SPC600-1-MJ8 | Nipple without Check Valve x 1/2" JIC Male | 1.035 bar | 15.000 psi |
| SPC600-1-M12 | Nipple without Check Valve x 3/4"-16 Type M | 2.070 bar | 30.000 psi |
| SPC600-1-M9 | Nipple without Check Valve x 9/16"-18 Type M | 2.070 bar | 30.000 psi |
| SPC600-1-M16 | Nipple without Check Valve x 1"-12 Type M | 2.070 bar | 30.000 psi |





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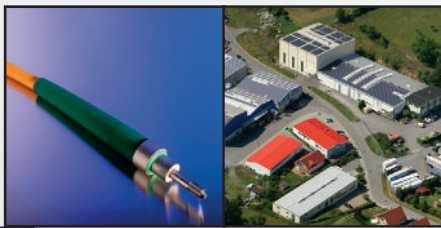
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