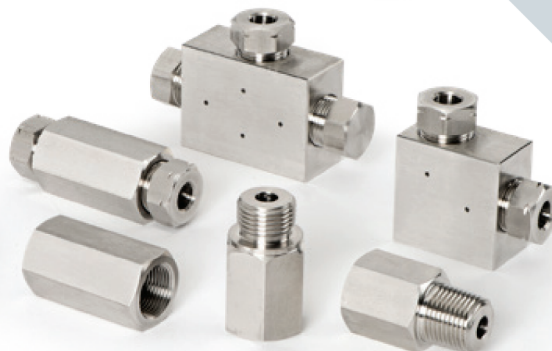


# HAM-LET HIGH PRESSURE

UP TO 60,000 PSI



# HAM-LET HIGH PRESSURE

Ham-Let Group, a worldwide company, has produced high quality fittings, valves, and instrumentation solutions since its establishment in 1950.

Our company standard of research and development, paired with our topnotch engineers has put us at the forefront of development.

We have developed the Ham-let High Pressure line in order to fulfill the rapidly increasing demand for high pressure valves, fittings, tubes and accessories.

The HHP products support the industry standard elevated pressures gas and liquid systems with working pressures up to 60,000 psi, in various industries like Oil & Gas, chemical and petrochemical, laboratories and research, water-jet cleaning and water-jet cutting.

HHP line can be provided in high tensile strength stainless steel and we consistently develop a variety of exotic materials and for sour gas applications.

As with all Ham-Let products, the HHP line is backed by Ham-Let's commitment to the highest quality-control standards and skilled craftsmanship.

HHP offering of a complete range of high quality High-Pressure components:

- High Pressure Valves
- High Pressure Fittings
- High Pressure Tubes
- Tooling and Accessories for high pressure gas and fluid system assembling.

Our HHP products are based on ASME B31.1 and B31.3 formal design



# HIGH PRESSURE UP TO **60,000 PSI** SERVICE

## Fitting and tubing with cone-and-thread connection up to 60,000 PSI

- HHP high pressure line provide wide range of fittings including coupling, elbow, tee and cross with cone and thread connection to pressure rating up to 60,000 PSI and for 1/4", 3/8", 9/16" O.D sizes.
- All fittings body material is from high tensile 316 stainless steel.
- All fittings are supplied with glands and sleeves.

High-pressure connections having an elastic metal-to-metal sealing. A complete connection consists of four parts: a high-pressure tube, a collar, a gland and a female part (fitting, valve or adapter). The tube has a cone point of 58° which is pressed in the 60° cone of the counterpart.

The gland and the collar are identical to the 58°/60° connection. A bleed hole prevents pressure build-up behind the gland in case of a leak. Ham-Let offers a complete range of fittings and adapters for high pressure applications, specially designed to match the performance of our valves and tubing.

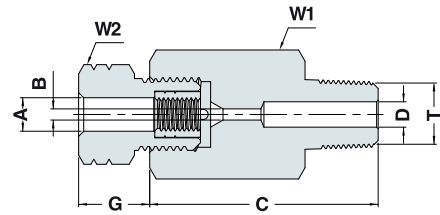
We can supply fittings and adapters for virtually any configuration of systems designed for handling fluids and gases at extreme pressures and temperatures.

All fittings and adapters are marked with Ham-Let logo, ordering code, material specification, pressure rating for which they can be used and material batch number (refers to DIN 3.1.B material certificate).

On request most fittings and adapters are available to NACE MR0175 / ISO 15156 for sour gas service. For pressures up to 7000 bar (100.000 psi) fitting and adapter bodies are made of cold drawn stainless steel, type DIN 1.4404 (AISI 316L); for higher pressures bodies are made of specially treated stainless steel 17-4 PH. The glands are made of stainless steel, type DIN 1.4305 (AISI 303F) and the collars are made of DIN 1.4122.



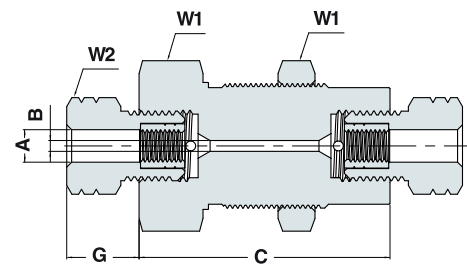
## MEDIUM PRESSURE ADAPTORS



### FEMALE HP - MALE NPT

| Ordering Information                    | A<br>TUBE O.D. |       | T<br>NPT | B    |      | C    |       | D    |      | G    |       | W1<br>Hex<br>Flat | W2<br>Hex<br>Flat |
|-----------------------------------------|----------------|-------|----------|------|------|------|-------|------|------|------|-------|-------------------|-------------------|
|                                         | inch           | mm    |          | inch | mm   | inch | mm    | inch | mm   | inch | mm    | inch              | inch              |
| Medium pressure: 10,000 psi (700 bar)   |                |       |          |      |      |      |       |      |      |      |       |                   |                   |
| HHPFS10-A-HF4NM8                        | 1/4            | 6.35  | 1/2      | 0.09 | 2.20 | 1.97 | 50.00 | 0.31 | 8.00 | 0.59 | 15.09 | 1-1/16            | 11/16             |
| HHPFS10-A-HF6NM8                        | 3/8            | 9.53  | 1/2      | 0.20 | 5.00 | 1.97 | 50.00 | 0.31 | 8.00 | 0.64 | 16.21 | 1-1/16            | 7/8               |
| HHPFS10-A-HF9NM8                        | 9/16           | 14.29 | 1/2      | 0.31 | 8.00 | 2.20 | 56.00 | 0.31 | 8.00 | 0.82 | 20.90 | 1-1/2             | 1-5/16            |
| Medium pressure: 15,000 psi (1,000 bar) |                |       |          |      |      |      |       |      |      |      |       |                   |                   |
| HHPFS15-A-HF4NM6                        | 1/4            | 6.35  | 3/8      | 0.09 | 2.20 | 1.77 | 45.00 | 0.24 | 6.00 | 0.59 | 15.09 | 7/8               | 11/16             |
| HHPFS15-A-HF6NM6                        | 3/8            | 9.53  | 3/8      | 0.20 | 5.00 | 1.97 | 50.00 | 0.24 | 6.00 | 0.64 | 16.21 | 1-1/16            | 7/8               |
| HHPFS15-A-HF9NM6                        | 9/16           | 14.29 | 3/8      | 0.31 | 8.00 | 2.20 | 56.00 | 0.24 | 6.00 | 0.82 | 20.90 | 1-1/2             | 1-5/16            |
| Medium pressure: 23,000 psi (1,600 bar) |                |       |          |      |      |      |       |      |      |      |       |                   |                   |
| HHPFS23-A-HF4NM4                        | 1/4            | 6.35  | 1/4      | 0.09 | 2.20 | 1.77 | 45.00 | 0.20 | 5.00 | 0.59 | 15.09 | 7/8               | 11/16             |
| HHPFS23-A-HF6NM4                        | 3/8            | 9.53  | 1/4      | 0.20 | 5.00 | 1.97 | 50.00 | 0.20 | 5.00 | 0.64 | 16.21 | 1-1/16            | 7/8               |
| HHPFS23-A-HF9NM4                        | 9/16           | 14.29 | 1/4      | 0.31 | 8.00 | 2.20 | 56.00 | 0.20 | 5.00 | 0.82 | 20.90 | 1-1/2             | 1-5/16            |

## HIGH PRESSURE ADAPTORS



### BULKHEAD COUPLING

| Ordering Information                         | A<br>TUBE O.D. |       | B    |      | C    |       | G    |       | W1     | W2     | Panel Hole<br>Size | Max. Panel<br>Thickness |
|----------------------------------------------|----------------|-------|------|------|------|-------|------|-------|--------|--------|--------------------|-------------------------|
|                                              | inch           | mm    | inch | mm   | inch | mm    | inch | mm    | inch   | inch   | inch               | inch                    |
| <b>High pressure: 30,000 psi (2,100 bar)</b> |                |       |      |      |      |       |      |       |        |        |                    |                         |
| HHPFS30-AB-HF6                               | 3/8            | 9.53  | 0.20 | 5.00 | 2.36 | 60.00 | 0.65 | 16.40 | 1-5/8  | 7/8    | 1-21/64            | 0.75                    |
| HHPFS30-AB-HF9                               | 9/16           | 14.29 | 0.31 | 8.00 | 2.72 | 69.00 | 0.84 | 21.27 | 1-7/8  | 1-5/16 | 1-41/64            | 0.75                    |
| <b>High pressure: 60,000 psi (4,200 bar)</b> |                |       |      |      |      |       |      |       |        |        |                    |                         |
| HHPFS60-AB-HF4                               | 1/4            | 6.35  | 0.09 | 2.20 | 2.01 | 51.00 | 0.60 | 15.27 | 1-3/16 | 11/16  | 1-1/64             | 0.66                    |
| HHPFS60-AB-HF6                               | 3/8            | 9.53  | 0.14 | 3.50 | 2.36 | 60.00 | 0.67 | 17.10 | 1-5/8  | 7/8    | 1-21/64            | 0.75                    |
| HHPFS60-AB-HF9                               | 9/16           | 14.29 | 0.20 | 5.00 | 2.72 | 69.00 | 0.81 | 20.67 | 1-7/8  | 1-5/16 | 1-41/64            | 0.75                    |

## Medium and High pressure Fittings and Components

### HOW TO ORDER

| HHPF                  |  | S        |        | 60             |              | A                |               | H               |      | F                |               | 6               |      | H                |               | M               |      | 4                |               |
|-----------------------|--|----------|--------|----------------|--------------|------------------|---------------|-----------------|------|------------------|---------------|-----------------|------|------------------|---------------|-----------------|------|------------------|---------------|
| Fitting Type          |  | Material |        | Component Type |              | Connection Style |               | Connection Size |      | Connection Style |               | Connection Size |      | Connection Style |               | Connection Size |      | Connection Style |               |
| High Pressure Fitting |  | S        | SS 316 | A              | Straight     | H                | High Pressure | 4               | 1/4  | H                | High Pressure | 4               | 1/4  | H                | High Pressure | 4               | 1/4  | H                | High Pressure |
|                       |  | PSI      |        | B              | Bulk Head    | N                | NPT           | 6               | 3/8  | N                | NPT           | 6               | 3/8  | N                | NPT           | 6               | 3/8  | N                | NPT           |
|                       |  | 10       | 10,000 | C              | Cap          | Connection Type  |               | 9               | 9/16 | Connection Type  |               | 9               | 9/16 | Connection Type  |               | 9               | 9/16 | Connection Type  |               |
|                       |  | 15       | 15,000 | G              | Gland        | F                | Female        |                 |      | F                | Female        |                 |      | F                | Female        |                 |      | F                | Female        |
|                       |  | 23       | 23,000 | L              | Elbow        | M                | Male          |                 |      | M                | Male          |                 |      | M                | Male          |                 |      | M                | Male          |
|                       |  | 30       | 30,000 | S              | Collar       |                  |               |                 |      |                  |               |                 |      |                  |               |                 |      |                  |               |
|                       |  | 60       | 60,000 | P              | Plug         |                  |               |                 |      |                  |               |                 |      |                  |               |                 |      |                  |               |
|                       |  |          |        | T              | Tee          |                  |               |                 |      |                  |               |                 |      |                  |               |                 |      |                  |               |
|                       |  |          |        | X              | Cross        |                  |               |                 |      |                  |               |                 |      |                  |               |                 |      |                  |               |
|                       |  |          |        | DX             | Double Cross |                  |               |                 |      |                  |               |                 |      |                  |               |                 |      |                  |               |
|                       |  |          |        | NE             | Nipples      |                  |               |                 |      |                  |               |                 |      |                  |               |                 |      |                  |               |