

## VACUUM INSULATED CRYOGENIC CONNECTIONS

# BAYONET CONNECTIONS



### APPLICATIONS

- New Vacuum Jacketed Piping Systems
- Storage Vessels, Tanks & Dewars
- Transports & Trailers
- Transfer Hose & Fill Systems
- Expansion of Existing Systems & Modifications to Current Designs
- Complete Line of Vacuum Jacketed Valves and Filters
- Bayonets Available for LNG Service
- Consult Factory for Special Applications



### FEATURES

- Many Bayonet Styles Available
- Commercial Style & Close Tolerance Style now Available from Stock
- Constructed of Material that is Suitable for Cryogenic Service
- But Weld and Socket Weld Ends for Simple Fabrication into your System
- Thermally Efficient with Inner & Outer Weldment for Vacuum Jacketed Systems

#### Service:

Argon, Helium, Hydrogen, Nitrogen, and Oxygen



#### Valve Size:

Available in 3/4" F to 1" F



### OPTIONS

- Buna N Silicone O-ring and/or Graphite Face Seals (Determined by Application)
- UHP or Standard Configuration
- Electro-polished and Special Cleaning Available
- Complete Design, Testing & Qualifications



### OPERATING RANGES

Temperature..... -456° F to +200° F  
 (-269° C to +93° C)

Max. Operating Pressure 275 PSIG



### TECHNICAL DATA

#### Materials of Construction:

|                        |                                          |
|------------------------|------------------------------------------|
| Metal Components ..... | 304 & 316<br>Stainless Steel             |
| Soft Goods .....       | Buna N, Graphite,<br>Silicone or Teflon® |

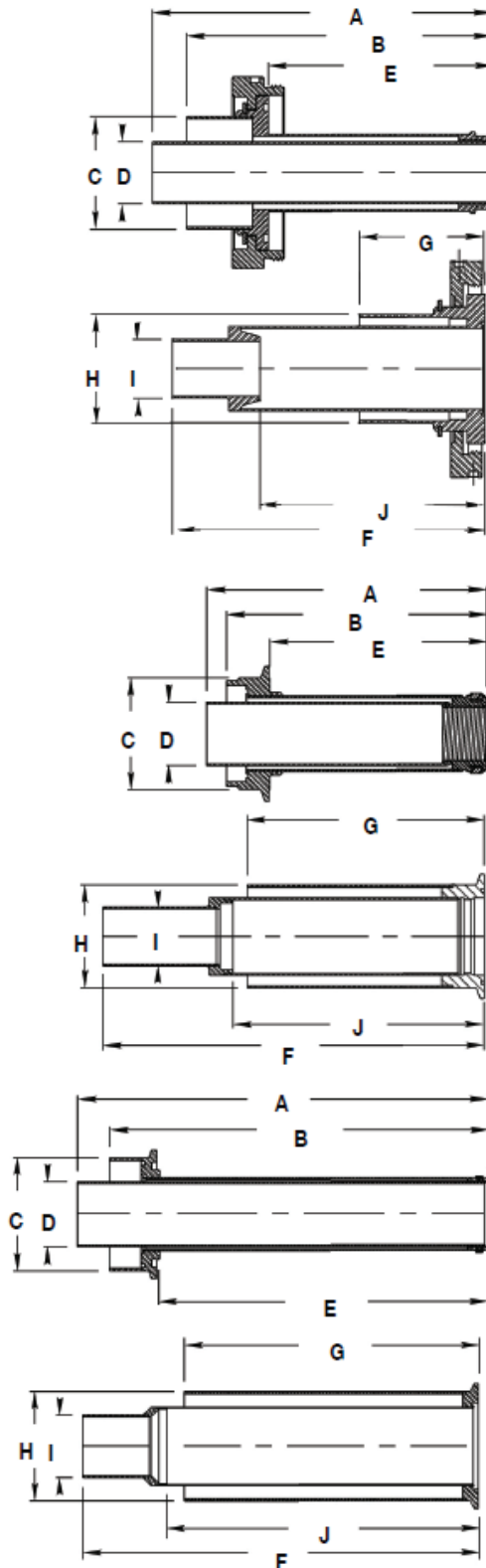
#### Testing:

|                    |                                                 |
|--------------------|-------------------------------------------------|
| Seat Leakage ..... | Mass spec. to<br>1x10 <sup>-9</sup> scc GHe/sec |
|--------------------|-------------------------------------------------|

# BAYONET CONNECTIONS

## COMMERCIAL BAYONETS VACUUM JACKETED FOR HYDROGEN & HELIUM

For Hoses, Tankers and Storage Vessels.



Dimensions are shown for reference only.

### MALE AIR FORCE HYDROGEN SERVICE\*

Temp. -423°F MAWP 200 PSIG

| Size       | P/N         | A     | B    | C    | D    | E    | Inner Line          |
|------------|-------------|-------|------|------|------|------|---------------------|
| 1-1/2" PS  | F-BMAFPS12X | 10.6" | 9.6" | 3.5" | 1.9" | 7.0" | 1-1/2" Sch. 5 Pipe  |
| 1-1/2" ODT | F-BMAFTS12X | 10.6" | 9.6" | 3.5" | 1.5" | 7.0" | 1-1/2" x .065" Tube |

\*Shipped with nose seal and o-ring.

### FEMALE AIR FORCE HYDROGEN SERVICE

Temp. -423°F MAWP 200 PSIG

| Size       | P/N         | F     | G    | H    | I    | J    | Inner Line          |
|------------|-------------|-------|------|------|------|------|---------------------|
| 1-1/2" PS  | F-BFAFPS12X | 10.0" | 4.0" | 3.5" | 1.9" | 7.2" | 1-1/2" Sch. 5 Pipe  |
| 1-1/2" ODT | F-BFAFTS12X | 10.0" | 4.0" | 3.5" | 1.5" | 7.2" | 1-1/2" x .065" Tube |
| 1" PS      | F-BFAFPS08X | 10.0" | 4.0" | 3.5" | 1.3" | 7.2" | 1" Sch. 5 Pipe      |
| 1" ODT     | F-BFAFTS08X | 10.0" | 4.0" | 3.5" | 1.0" | 7.2" | 1" x .065" Tube     |

### MALE LINDE TYPE HYDROGEN SERVICE\*

Temp. -423°F MAWP 200 PSIG

| Size       | P/N         | A    | B    | C    | D    | E    | Inner Line          |
|------------|-------------|------|------|------|------|------|---------------------|
| 2" ODT     | F-BMLTTS16X | 8.8" | 8.2" | 3.5" | 2.0" | 6.8" | 2" x .065" Tube     |
| 1-1/2" ODT | F-BMLTTS12X | 8.8" | 8.2" | 3.5" | 1.5" | 6.8" | 1-1/2" x .065" Tube |

\*Shipped with nose seal and energizer. V-Band clamp required for installation.

### FEMALE LINDE TYPE HYDROGEN SERVICE\*

Temp. -423°F MAWP 200 PSIG

| Size       | P/N         | F     | G    | H    | I     | J    | Inner Line          |
|------------|-------------|-------|------|------|-------|------|---------------------|
| 2" PS      | F-BFLTTS16X | 13.0" | 8.1" | 3.5" | 2.38" | 8.6" | 2" Sch. 5 Pipe      |
| 2" ODT     | F-BFLTTS16X | 13.0" | 8.1" | 3.5" | 2.00" | 8.6" | 2" x .065" Tube     |
| 1-1/2" PS  | F-BFLTTS12X | 13.0" | 8.1" | 3.5" | 1.30" | 8.6" | 1-1/2" Sch. 5 Pipe  |
| 1-1/2" ODT | F-BFLTTS12X | 13.0" | 8.1" | 3.5" | 1.00" | 8.6" | 1-1/2" x .065" Tube |

### MALE HELIUM SERVICE\*

Temp. -456°F MAWP 200 PSIG

| Size   | P/N         | A     | B     | C    | D    | E     | Inner Line      |
|--------|-------------|-------|-------|------|------|-------|-----------------|
| 2" ODT | F-BMCYTS16X | 17.5" | 16.5" | 3.5" | 2.0" | 15.0" | 2" x .065" Tube |

\*Shipped with nose seal and o-ring. V-Band Clamp required for installation.

### FEMALE HELIUM SERVICE\*

Temp. -456°F MAWP 200 PSIG

| Size   | P/N         | F      | G      | H    | I    | J     | Inner Line      |
|--------|-------------|--------|--------|------|------|-------|-----------------|
| 2" ODT | F-BFCYTS16X | 17.38" | 15.38" | 3.5" | 2.0" | 14.7" | 2" x .065" Tube |

### V-BAND CLAMP

| Model                      | P/N    |
|----------------------------|--------|
| Linde Type w/HandWheel     | F-1575 |
| Helium Service w/HandWheel | F-1585 |
| Helium Service             | F-1600 |

## COMMERCIAL BAYONETS - ASSEMBLY KITS & OPTIONS

### AIR FORCE TYPE BAYONETS\*

P/N F-BPAFxxxx K

|                  | Description          | Material        | Letter |
|------------------|----------------------|-----------------|--------|
| <b>Kit:</b>      | O-Ring               | Buna N          | O      |
|                  | Nose Seal            | TFE             | N      |
| <b>Optional:</b> | Dust Cap             | Aluminum        | D      |
|                  | Pressure Cap, Female | Stainless Steel | S      |

\*The Air Force Type Bayonet is a threaded connection which uses a Teflon® nose seal and Buna N O-Ring on the male Bayonet. An assembly kit is required for each pair.

### LINDE TYPE BAYONETS\*

P/N F-BPLTxxxx K

|                  | Description          | Material        | Letter |
|------------------|----------------------|-----------------|--------|
| <b>Kit:</b>      | O-Ring               | PCTFE           | O      |
|                  | Energizer            | Stainless Steel | E      |
|                  | Nose Seal            | TFE             | N      |
| <b>Optional:</b> | Dust Cap             | Aluminum        | D      |
|                  | Pressure Cap, Female | Stainless Steel | S      |

\*The Linde Type Bayonet is a V-band connection which uses a Teflon® nose seal and an energizer on the male Bayonet and a Kel-F O-Ring on the female Bayonet. An assembly kit is required for each pair and a V-Band Clamp is required for installation.

### HELIUM SERVICE BAYONET\*

P/N F-BPCYxxxx K

|                  | Description          | Material        | Letter |
|------------------|----------------------|-----------------|--------|
| <b>Kit:</b>      | O-Ring               | Buna N          | O      |
|                  | Nose Seal            | TFE             | N      |
| <b>Optional:</b> | Dust Cap             | Aluminum        | D      |
|                  | Pressure Cap, Female | Stainless Steel | S      |

\*The Helium Bayonet is a V-band connection which uses a Teflon® nose seal and Buna N O-Ring on the male Bayonet. An assembly kit is required for each pair and a V-Band Clamp is required for installation.

## SPARE ASSEMBLY KITS

| Type      | Part Number    |
|-----------|----------------|
| Air Force | F-B P AFxxxx K |
| Linde     | F-B P LTxxxx K |
| Helium    | F-B P CYxxxx K |

## SAMPLE KIT NUMBER:

**F-B P CYXXXX K**

When ordering parts for male and female Bayonets change the "K" in the Kit Number above to the identification letter for the connection type shown below:

P = Pair  
M = Male  
F = Female

To order Optional or Kit items change the "K" at the end of the Kit Number above to the identification letter for the kit description as shown below:

O = O-Ring  
N = Nose Seal  
E = Energizer for Linde Type  
Nose Seal  
K = Complete Assembly Kits  
as described above  
D = Aluminum Dust Cap  
S = Stainless Steel Pressure  
Cap



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