



# Bayonet Connections

Close Tolerance Bayonets

Close tolerance with extreme low heat leak, frost and condensation free vacuum insulated bayonet connections, designed for cryogenic systems down to 4 kelvin.



All Bayonet Connections come with CSM renowned customer service, from conceptual design to implementation, and are backed by a one year warranty

## Vacuum Insulated Bayonets

CSM uses a highly efficient cryogenic connection for vacuum insulated piping systems. Constructed in stainless steel, the bayonet connection utilizes an extremely close tolerance design between the male and female bayonet to minimize convective heat transfer. The thin-walled bayonet reduces overall conductive heat transfer compared to other competitive products. This bayonet tube insertion length is increased with better heat barrier to eliminate condensation or frosting at the clamp joints due to high humidity environment. These design features translate to lowest heat leak and preserve liquid cryogen quality..

## Typical Applications

- Vacuum Insulated Rigid Lines.
- Vacuum Insulated Flex Lines.
- Vacuum Jacketed Modular Valve or Fitting components.

## Features and Benefits

- Frost and condensation free connections
- Minimization of heat leak
- Easy to install or disassemble, both at cold and warm condition
- Compatible with hygienic type clamping system for leak free operation
- Can be installed in any orientation
- Bayonets can be assembled much quicker compared to traditional welding joint, significantly lowering your installation costs



Modular Static Vacuum Tee

# Bayonet Specifications

Sizes	Max Design Pressure psi (bar)	Male Weight lbs (kg)	Female Weight lbs (kg)	Bayonet Heat Leak BTU / Hr (W)	Inner & Outer Jacket Pipe Construction
C2	200 (14)	0.45 (0.2)	0.32 (0.15)	4.0 (1.2)	S/S300
C5	200 (14)	0.90 (0.4)	0.64 (0.29)	5.0 (1.5)	S/S300
C10	200 (14)	1.66 (0.75)	1.03 (0.47)	6.0 (1.8)	S/S300
C15	200 (14)	2.55 (1.15)	1.85 (0.84)	12.6 (3.7)	S/S300
B5	200 (14)	1.46 (0.66)	0.83 (0.37)	5.8 (1.7)	S/S300
B10	200 (14)	2.20 (1.00)	1.40 (0.64)	12.0 (3.5)	S/S300
B15	200 (14)	3.85 (1.75)	2.05 (0.93)	13.3 (3.9)	S/S300
B20	200 (14)	5.05 (2.30)	2.67 (1.21)	20.8 (6.1)	S/S300
B30	200 (14)	9.37 (4.25)	4.28 (1.94)	29.3 (8.6)	S/S300

# Bayonet Dimensions

Bayonet Type	Bayonet Size	Inner Pipe Diameter	Ferrule size (Clamp F)	Dimensions	
				B1 (Special)	B2 (Standard)
C2	3/8" ODT	3/8", 1/2" OD (8, 12.7mm)	KF16 / KF25	4 <sup>3</sup> / <sub>16</sub> " (105mm) RIBER 7 <sup>1</sup> / <sub>16</sub> " (155mm) Dr. Eberl	-
C5	1/2" ODT	3/4" OD (19.1mm)	1 1/2" (51mm)	7 <sup>1</sup> / <sub>16</sub> " (180mm)	8-5/8" (220mm)
C10 / B5	1 1/8" ODT / 1/2" PS	1 1/4" OD (29.0mm) 1/2" NB (21.3mm)	2" (64mm)	7 <sup>1</sup> / <sub>16</sub> " (180mm) 8-5/8" (220mm)	10-0" (250mm)
C15 / B10	1 1/2" ODT / 1" PS	1 1/2" OD (38.1mm) 1" NB (33.4mm)	2 1/2" (78mm)	9-5/8" (245mm)	11-13/16" (300mm)
B15	1 1/2" PS	1 1/2" NB (48.3mm)	3" (91mm)	-	14-0" (350mm)
B20	2" PS	2" NB (60.3mm)	4" (119mm)	-	15 3/4" (400mm)
B30	3" PS	3" NB (88.9mm)	5" (145mm)	-	15 3/4" (400mm)

