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# B-CON

## Misalignment Ball Connector

The B-CON is designed for piping and pipeline systems where the connector must compensate for misalignment of the pipe. The B-CON significantly reduces the time required to install subsea pipeline connections by providing a leak-tight metal seal with performance characteristics and versatility that exceed those of welded pipe or conventional flanges. While primarily intended for subsea piping operations, the B-CON is a valuable piece of equipment in any application—topside or subsea—where misalignment of the pipeline is a problem.



### FEATURES

**Metal-to-metal seal allows +/-10° of misalignment**

**Meets all applicable codes and standards**

**Sizes range from 4 in to 24 in (NPS)**

Connecting What's Needed with What's Next™

# B-CON

## Misalignment Ball Connector

The unique design of the B-CON connector's metal seal allows for up to  $\pm 10^\circ$  of misalignment in any axial plane from the centerline of the adjoining pipe (20° total misalignment). The metal sealing criteria is the same as specified by ASME for ring-joint flanges. Sealing integrity is maintained at any angle of misalignment, with the seal being resistant to externally applied bending loads at all operating pressures. Tightening the bolts locks the ball member into the socket flange, creating a rigid, static, leak-tight seal.

### Design Parameters

Nominal pipe size (NPS): any API Specification 5L pipe, wall thickness, and grade

Service: Standard (i.e. crude oil, natural gas, hydrocarbons, water or chemical injection, etc.) and sour (i.e. hydrogen sulfide, carbon dioxide, etc.)

Design pressure rating and applicable dimensions: per ASME, MSS, or API

Design temperature range: 25°F to 250°F (-4°C to 121°C)

### Material Specifications

Retaining, RTJ flange and ball: ASTM A694 F52 and F60 weldless forging, normalized or to customer specifications

Metal seal ring: AISI C1008 or 316 stainless steel, cadmium plated

Mating studs and nuts: ASTM A193 B7 studs and ASTM A194 2H heavy hex nuts, all Xylan coated

External coating: Carboline® Carboguard® 890 Marine Epoxy Paint System, Safety Yellow Color

### Applicable Design Codes, Standards, and Specifications (latest editions)

ASME BPVC V (2010): Boiler Pressure Vessel Code, Section V, Nondestructive Examination

ASME BPVC, Section VIII, Division 1 and 2

ASME B16.5 & B16.47, Pipe Flanges and Flanged Fittings

ASME B31.4, Pipeline Transportation Systems for Liquid Hydrocarbons and Other Liquids

API SPEC 5L, Specification for Line Pipe

API SPEC 6A, Specification for Wellhead and Christmas Tree Equipment

API SPEC 6H, Specification on End Closures, Connectors, and Swivels

MSS SP-44, Steel Pipeline Flanges

ASME B18.2.1, Square and Hex Bolts and Screws Inch Series

ASME B16.20, Metallic Gaskets for Pipe Flanges - Ring Joint, Spiral Wound and Jacketed (Latest Edition)

NACE MR0175, Sulfide Stress Cracking Resistant Metallic Materials for Oilfield Equipment

### Certifications

ISO 9001:2008 - World Certification Services Ltd. - Accredited by UKAS Quality Management

EN10204 Section 3.2 (DIN 50049), Inspection Documents for the Delivery of Metallic Products