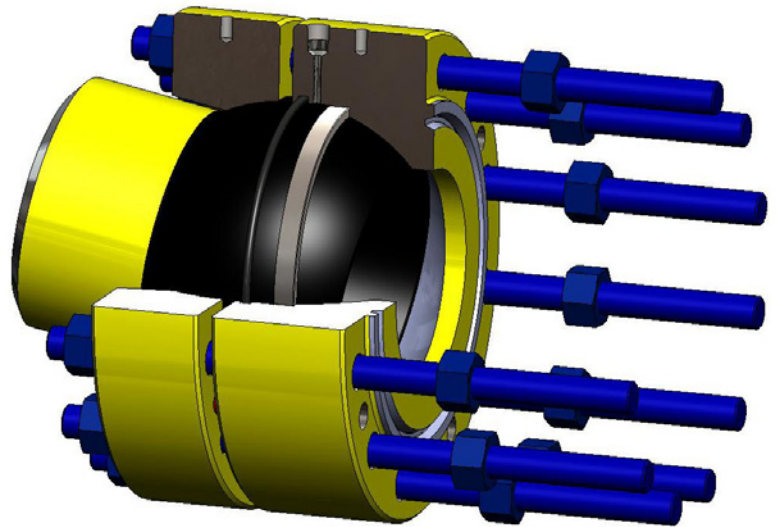


# B-CON MISALIGNMENT BALL CONNECTOR



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 (above or below water) where misalignment of the pipeline is a problem.

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 ( $20^\circ$  total

misalignment). The metal sealing criteria is the same as that specified by ASME for the ring-joint flanges. Sealing integrity is maintained at any angle of misalignment, with the seal being insensitive to externally applied bending loads at all operating pressures. It is actuated by tightening of the bolts. The tightening locks the ball member into the socket flange, creating a rigid, static leak tight seal.

The B-CON meets all Applicable Codes and Standards: ANSI, API, ASME and NACE. It is stocked for pipe sizes ranging from 4-in Nominal Pipe Size (NPS) to 24-in NPS and available in pressure Classes 600 & 900. The B-CON can also be supplied for any pipe size and any pressure rating, upon request.



# B-CON MISALIGNMENT BALL CONNECTOR SPECIFICATIONS



## 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: ASME, MSS or API
- Design Temperature Range: -20°F (-29°C) to 250°F (121°)

## Material Specifications:

- Retaining, RTJ Flange & Ball: ASTM A694 Gr. F52 and Gr. F60 weldless forging, normalized or to Customer specifications
- Metal Seal Ring: AISI C1008 or 316 Stainless Steel, Cadmium Plated
- Mating Studs & Nuts: ASTM A-193 Gr. B7 studs & ASTM A-194 Gr. 2H heavy hex nuts, all XYLAN coated (i.e. PTFE, dark blue)
- External Coating: Carboline 890 Marine Epoxy Paint System, Safety Yellow Color

## Certifications:

- ISO 9001:2008 - World Certification Services Ltd. - Accredited by UKAS Quality Management
- EN10204 Section 3.2 (DIN50049), Inspection Documents for the Delivery of Metallic Products

## Applicable Design Codes, Standards & Specifications (latest editions):

- OIE/PCRS Group B-CON Misalignment Ball Connector Drawings, Bill of Materials (Controlled Copies) and Vendor Supplied Material Test Reports
- OIE ISO 9001:2000 Quality Assurance - Quality Control Procedures & PCRS Operating Procedures
- ASME Boiler Pressure Vessel Code, Section V - Nondestructive Examination
- ASME Boiler Pressure 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

