

# Hydraulic Decoking System

Rotary Joint

*Under its Worthington<sup>®</sup>, Pacific<sup>®</sup> and IDP<sup>®</sup> heritage names, Flowserve hydraulic decoking systems are installed in more than 150 refineries worldwide.*

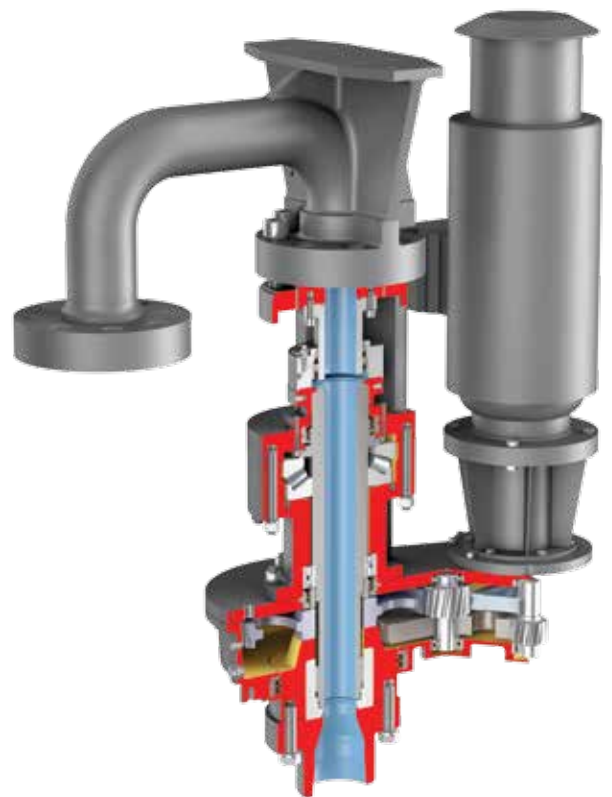


## High-Pressure Rotary Joint

*Flowserve has combined the best features of the Pacific and Worthington rotary joints for its standard offering in decoking systems. A robust, heavy-duty piece of equipment, the rotary joint is designed to support the suspended loads experienced on coking units. Flowserve is continually upgrading its rotary joint to accommodate today's higher cutting pressure requirements.*

The function of the rotary joint is to transmit cutting fluid from the stationary hose connection to the drill stem and provide rotary motion to the drill stem. Additionally, it:

- Carries axial loads of the drill stem and cutting tool
- Seals hydraulic pressure against atmosphere



### Cast Gooseneck

The cast gooseneck features an increased wall thickness and eliminates welds to reduce the wear from abrasive cutting water. This design also reduces the moment acting on the crosshead by shortening the length between the decoking hose and the rotary joint.

### Multiple Flange Sizes

ANSI Class 2500 flanges are standard, with multiple sizes and ratings available to fit any decoking system.

### Standard Dual Seal Cartridge Design

The dual seal feature of the cartridge allows for the safe operation of the rotary joint in the event of a failure of the primary seal, which is indicated by the integral bleed valve. After closing the bleed valve, the secondary seal will engage, giving the seal additional run time and allowing for the planned repair of the cartridge.

The dual seal cartridge is designed for quick replacement in the field and replaces previous seal designs. The new design features upgraded materials that allow for changes in component geometry, resulting in weight reductions that ease installation.

- Four-year seal life design
- 40% less weight
- Bolt-in assembly



### Rotary Joint Drive Options

- Air piston motor
- Hydraulic
- E-motor (with VFD)

### Maintenance

The Flowserve rotary joint is designed to provide reliable service with minimal preventive maintenance. Periodic bearing lubrication inspection assures long mean time between failure (MTBF) and lubricant changes are required only after extended operating times.

### Flowserve Rotary Joint Basic Specifications

Axial load capacity	600 kN (135 000 lbf)
Torque capacity	17 000 Nm (12 540 lb-ft)
Speed	2 to 16 rpm
Pressure	
– Standard	431 bar (6250 psi)
– Optional	205 bar (3000 psi)
Flow	350 m <sup>3</sup> /h (1540 GPM)
Inlet Flange	
– Standard	5 in RTJ 2500 lb
– Optional	5 in RTJ 1500 lb Other by request
Outlet Flange	
– Standard	6 in Compact 2500 lb
– Optional	Other by request
Drive Options	Pneumatic Hydraulic Electric w/VFD

Bulletin PSS-90-6.3a (E/A4) November 2013.

© 2013 Flowserve Corporation

#### To find your local Flowserve representative:

For more information about Flowserve Corporation, visit [www.flowserve.com](http://www.flowserve.com) or call +1 937 890 5839.

#### USA and Canada

Flowserve Corporation  
5215 North O'Connor Blvd.  
Suite 2300  
Irving, Texas 75039-5421 USA  
Telephone: +1 937 890 5839

#### Europe, Middle East, Africa

Flowserve Corporation  
Parallelweg 13  
4878 AH Etten-Leur  
The Netherlands  
Telephone: +31 76 502 8100

#### Latin America

Flowserve Corporation  
Martín Rodríguez 4460  
B1644CGN-Victoria-San Fernando  
Buenos Aires, Argentina  
Telephone: +54 11 4006 8700  
Telefax: +54 11 4714 1610

#### Asia Pacific

Flowserve Pte. Ltd.  
10 Tuas Loop  
Singapore 637345  
Telephone: +65 6771 0600  
Telefax: +65 6862 2329