

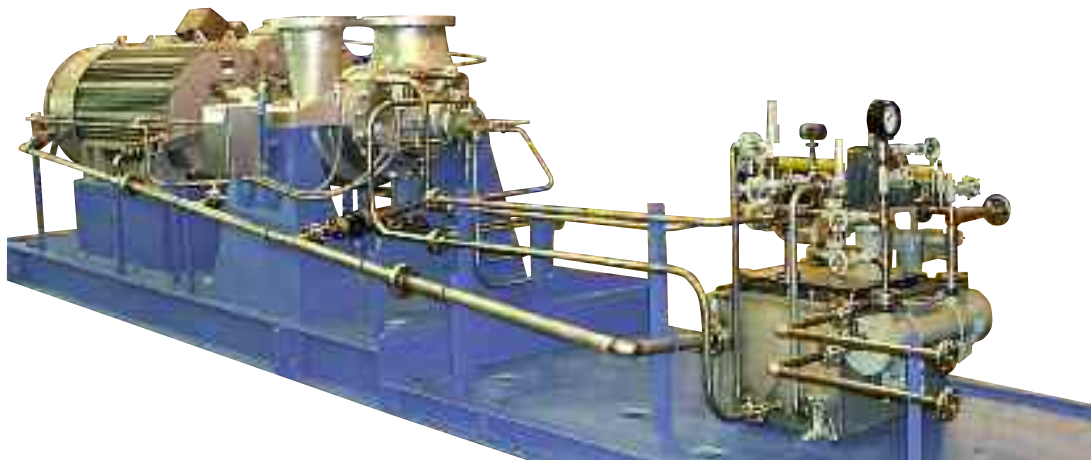


ITT

Goulds Pumps

Goulds 3620

ISO 13709 2nd Edition/API 610 11th Edition
API BB2 Single-Stage, Between-Bearing,
Radially Split



Engineered for life

A Leader in API Engineered Pump Package Solutions...

Proven API Leadership

ITT Goulds Pumps is a proven leader in API Pumps

- ◆ Over 20,000 units installed
 - Over 17,000 OH2/OH3's
 - Over 3,000 BB1/BB2/BB3 pumps
- ◆ 40+ years of API expertise
- ◆ Participating member on API 610 and API 682 committees

Family of API Pumps

ITT Goulds Pumps has a family of proven API pumps

- ◆ Overhung pumps
- ◆ Single and two-stage between-bearing
- ◆ Multistage between-bearing pumps— axially split
- ◆ Barrel Multi-Stage pumps
- ◆ Vertical, double casing pumps
- ◆ Specialty pumps

Global Coverage

ITT Goulds Pumps has the global coverage needed to serve multi-national companies in any region.

Industry Leading Hydraulic Coverage

- ◆ We offer extensive coverage to meet your process needs.
- ◆ Better hydraulic fits can mean improved efficiency and long-term reliability and parts life.



6000 HP / 4600 kW Testing Capability

- ◆ Our expanded test facility can test your pump in the most demanding of conditions.
- ◆ Testing at rated speeds is critical to assess the impact of dynamic conditions including vibration.

API Engineering Expertise

- ◆ We are experts in packaging engineered pumps that meet your demanding applications — with true conformance to the latest API specifications.
- ◆ We have extensive experience in nearly every type of driver, bearing, seal, piping configuration, nozzle configuration, flange and baseplate designs to meet your application needs.
- ◆ ITT is a world leader in technology and engineering including hydraulics, materials science, mechanical design, and fluid dynamics.

Broad Applications

- ◆ Petroleum refining, production, and distribution
- ◆ Petrochemical and demanding chemical processing
- ◆ High temperature applications including boiler circulation
- ◆ General industrial requiring high temperature or high pressures





Goulds Model 3620 between-bearings radially split process pumps are designed for smooth, reliable operation and fully meet the specification requirements of ISO 13709/API-610 to assure extended service life.



Goulds 3620

High Temperature and Pressure Process Pumps that Meet or Exceed ISO 13709 and 610 API 11th Edition

Safety, reliability, and versatility are the key words for our single stage, centerline mounted, between-bearing, radially split API 610 process pump.

Safety and Reliability

We provide engineered solutions with true conformance to the latest API specifications including the stringent emissions containment per API 682.

The result is a safe and rugged API process pump designed for a 20-year life.

Versatility

- ◆ **Capacity** to 20000 GPM (4540 m³/h)
- ◆ **Total Dynamic Head** to 1500 feet (455 m)
- ◆ **Temperature** to 850°F (455°C)
- ◆ **Pressure** to 1000 PSIG (70 Bar)

Materials: Available in a wide range of materials including all API 610 constructions and custom application needs.

Engineered Hydraulics: Dense hydraulic coverage to better match your process for efficiency and reliability. Custom hydraulics are available.

Engineered Packaging with a wide range of drivers, seals, piping, nozzle configurations, flanges, baseplates, and QC testing.

Services

- ◆ **Refinery** — tower bottoms, process feed, column reflux, circulation and pump around, process booster
- ◆ **Power Plant** — boiler feed booster, boiler circulation, ash sluice



Model 3620 (ISO 13709/API BB2) Single Stage Double Suction Between-Bearing Pump Heavy-Duty Design Features for Refinery, Petrochemical and Power Generation Services

CLASS 300 RF FLANGES STANDARD

Other classes and facings optional.

HEAVY DUTY SHAFT

Minimum shaft deflection for extended seal and bearing life. Sized to meet deflection and rotordynamics requirements of ISO 13709/API-610.

RENEWABLE WEAR RINGS

ISO 13709/API-610 clearances. Positively locked. Standard feature.

CENTERLINE MOUNTED CASING

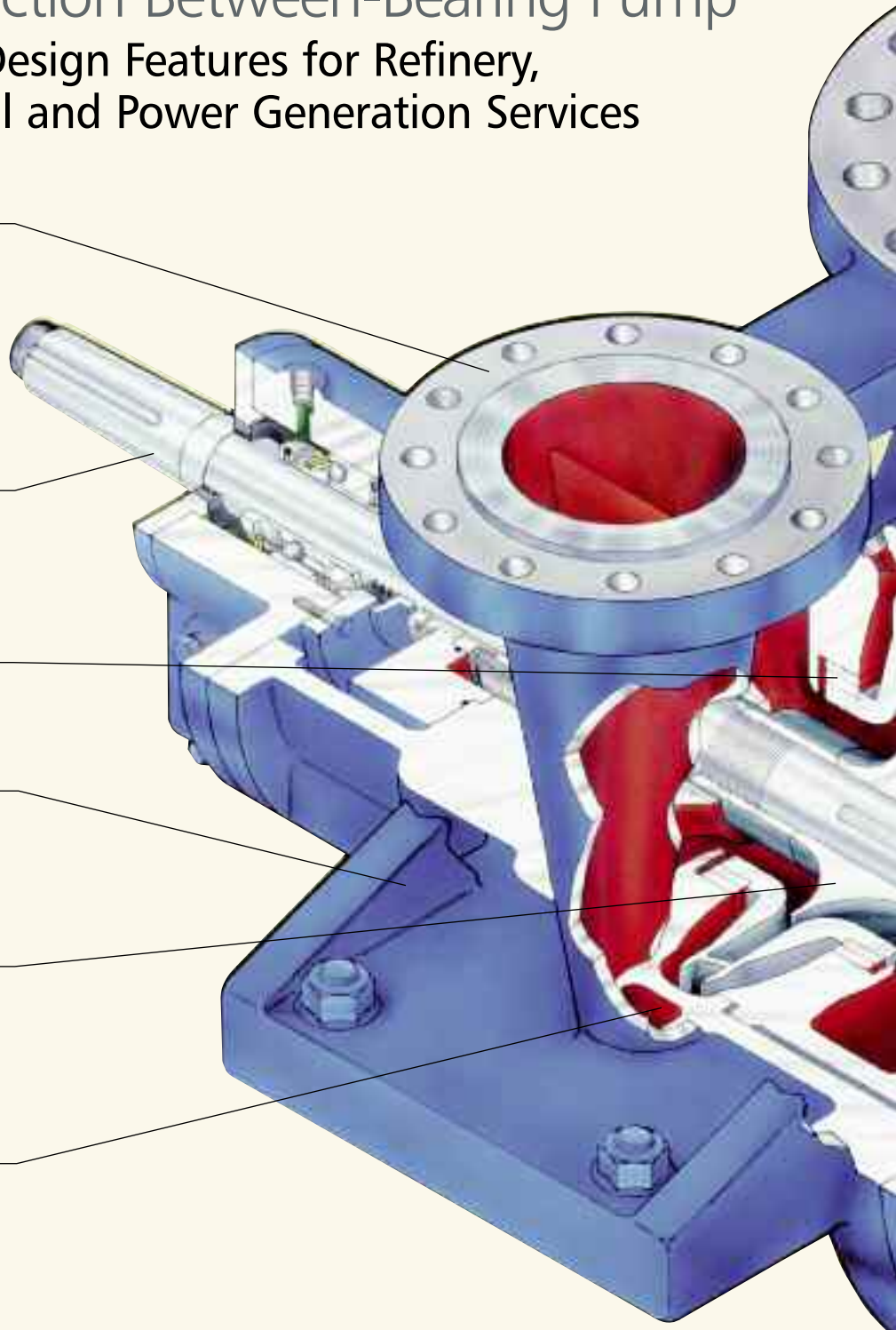
Heavy duty mounting extensions accept ISO 13709/API-610 nozzle loads and maintain pump alignment under extreme service conditions.

DOUBLE SUCTION IMPELLER

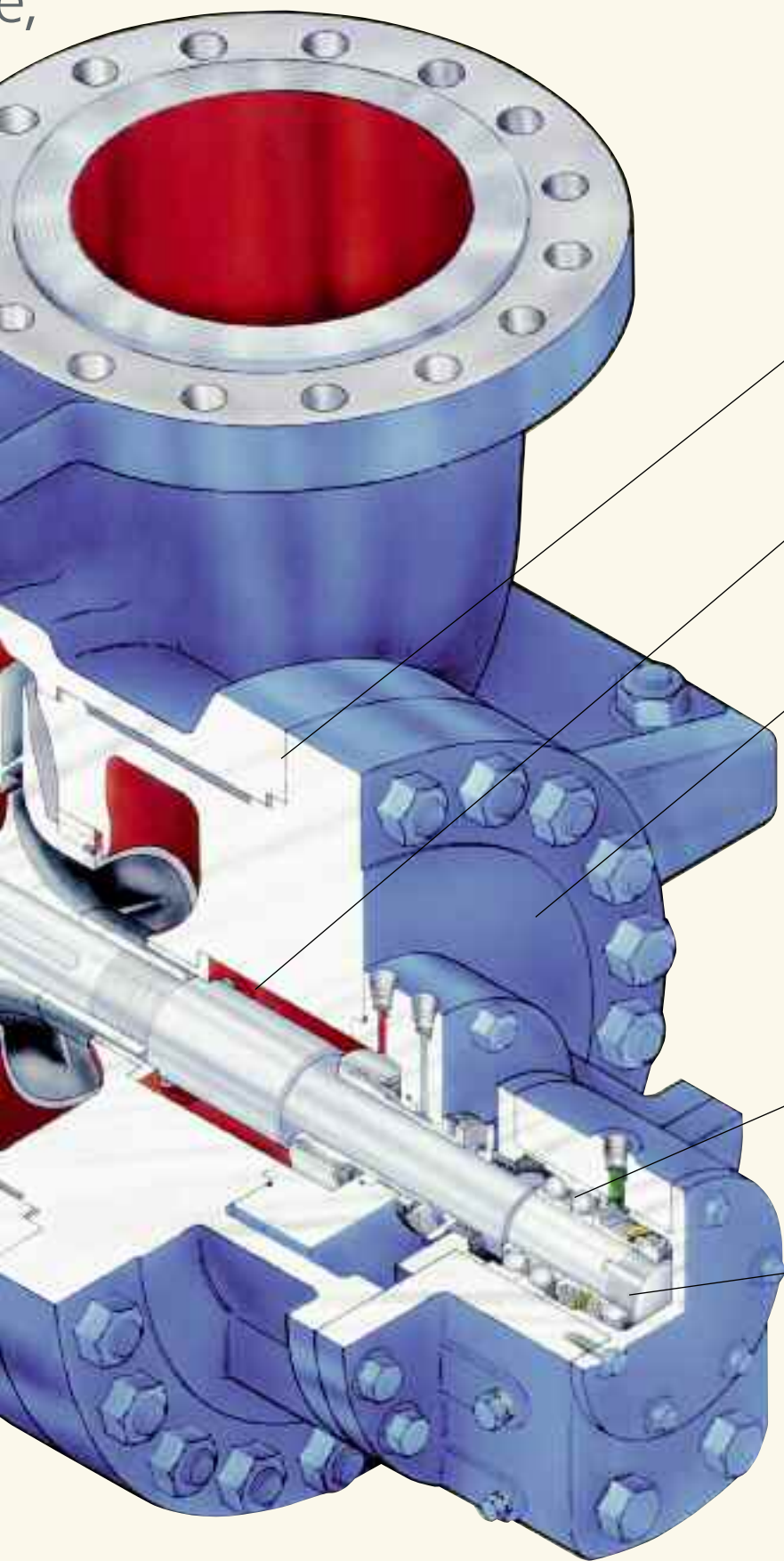
Designed for low NPSH services. Hydraulically designed to balance axial loads for increased bearing life. Rotor and impeller balanced to stringent API grade 1.0.

DUAL VOLUTE CASING

Evenly balances radial forces for minimum shaft deflection, increased bearing and seal life.



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RADIALLY SPLIT CASING

Designed specifically for high pressure/
high temperature services.
Fully confined controlled compression gasket
assures leak-proof sealing.

ENLARGED SEAL CHAMBERS

Conform to ISO 13709/API-610 dimensional
requirements. Allows use of wide range of
API-682/ISO 21049 cartridge mechanical
seals to meet specific service conditions.

**CASING HEAD ON
OUTBOARD END**

Allows removal of rotor without disturbing
driver or suction and discharge piping.

HEAVY DUTY THRUST BEARING

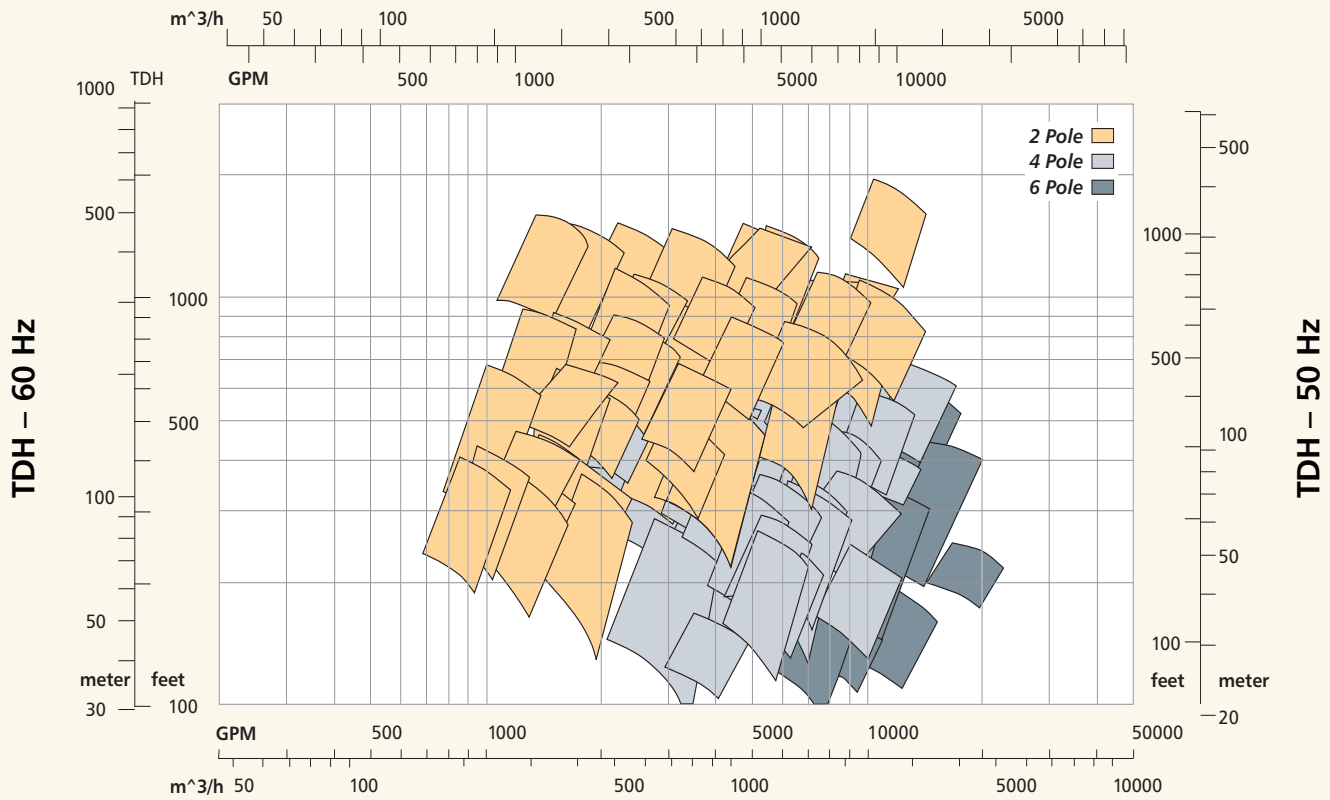
Duplex 40° angular contact thrust bearings
and deep-groove (Conrad) radial bearings
sized for minimum three (3) year bearing life
under most severe operating conditions.
Exceeds ISO 13709/API-610 requirements.

LABYRINTH OIL SEALS

Labyrinth seal design prevents oil
from leaking out and contaminants
from intruding. Made from
non-sparking metal.

Hydraulic Coverage

Flow Capacity – 50 Hz



Note: Hydraulics above represent 80% to 110% of best efficiency point (BEP).

Custom Solutions



Model 3620 6x10-13 custom designed with side-top nozzles for fuel oil service in Saudi Arabia.



PRO Services®
Extending
Equipment Life...

Product Repair

- Service Center Repair
- Turnkey Repair/ Installation
- Field Service
- Emergency Service

Reliability Improvement

- Predictive Condition Monitoring
- Root Cause Failure Analysis
- Machine & System Assessment
- Engineered Upgrades
- Training

Optimization of Assets

- Inventory Management
- Replacement/Exchange
- Maintenance Management
- Contract Maintenance

- All Brands
- Factory Trained Service Personnel
- Quality
- Fast Turnaround
- Emergency Service – 24 hours/day, 7 days/week
- ISO and Safety Certified



PROSMART

Predictive Monitoring Saves Money and Down Time

The **ProSmart** predictive condition monitoring system enables you to **IDENTIFY** and **SOLVE** problems before they impact production.

ProSmart collects and analyzes machine health every 5 seconds, automatically notifying you of changing conditions. Resources are optimized and maintenance activities are **PLANNED** — not **REACTIVE**.

A wireless architecture reduces installation costs and complexity.

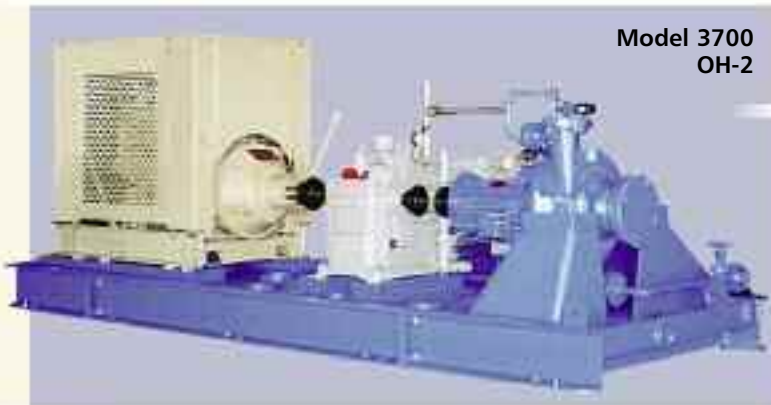
A web-based client eliminates software installation and maintenance costs and also enables multi-site management.

Approved for Class 1, Division 2 hazardous areas.



A Leader in API Engineered Pump Package Solutions

API Family of Pumps



API Type	Goulds Model	Capacity GPM (M ³ /Hour)	TDH Feet (Meters)	Temperature °F (°C)	Pressure PSIG (kg/cm ²)
OH-2	3700	8500 (1930)	1200 (360)	800 (425)	870 (60)
OH-3	3910	6000 (1360)	750 (230)	650 (340)	600 (42)
BB-1	3610	50000 (11355)	700 (215)	300 (150)	300 (21)
BB-2	3640	7500 (1700)	2500 (760)	850 (455)	1130 (75)
BB-2	3620	20000 (4540)	1500 (455)	850 (455)	1000 (70)
BB-3	3600	8500 (1930)	9000 (2740)	400 (205)	4000 (275)
BB-5	7200CB	4000 (910)	9000 (2740)	800 (400)	4000 (275)
VS4	API 3171	3180 (720)	525 (160)	450 (232)	750 (50)
VS1	VIT	70000 (14760)	3500 (1060)	500 (260)	2500 (175)
VS6	VIC	70000 (14760)	3500 (1060)	500 (260)	2500 (175)



Visit our website at www.gouldspumps.com

