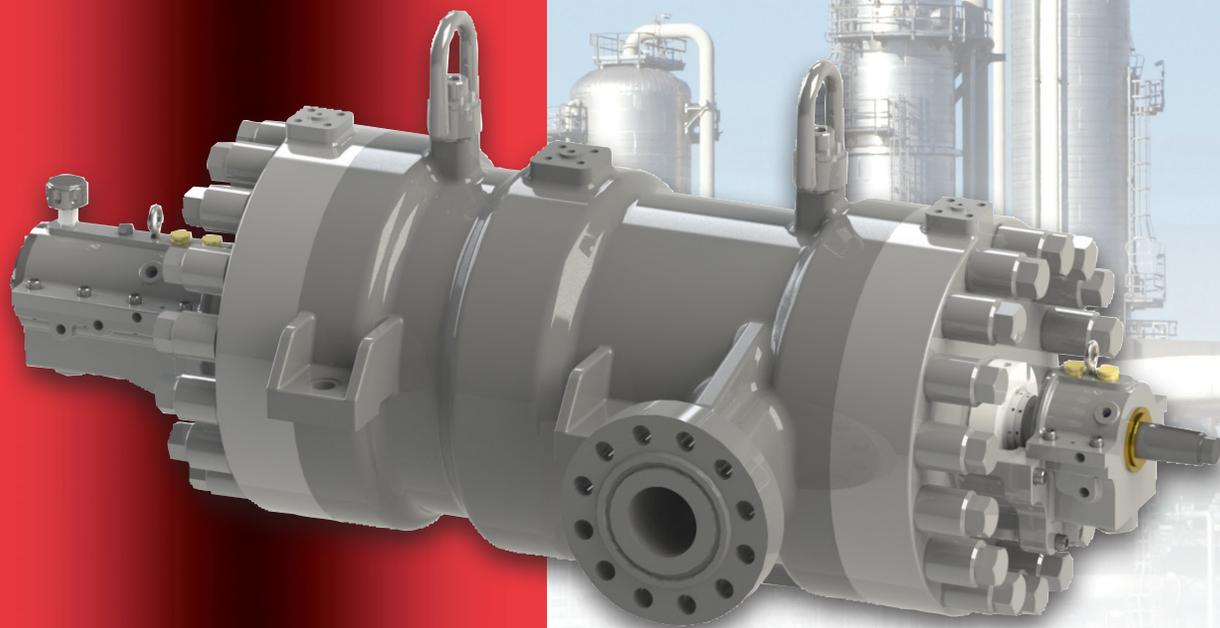




PWB

**API 610 BB5
Barrel Pump**



PWB API 610 BB5 BARREL PUMP

DESIGN FEATURES AND BENEFITS

Bearing Housing

- Finned design improves heat dissipation for cooler running bearing
- Optional KTB bearing housing for higher speed or energy density applications {Shown}
- Large bearing housing easily accommodates vibration switches, transmitters and proximity probes

Seal Chamber

- API 610 seal chamber allows user to install any API 682 cartridge seal to meet process requirements
- Renewable throat bushing for controlled seal chamber environment

Double Volute

- Precision cast hydraulic passageways minimizes radial thrust for less shaft deflection and bearing loading

Renewable Wear Rings

- All wear rings are replaceable permitting re-establishing initial running clearances and efficiency

Quality

- Manufactured and tested in the USA

Impeller

- Precision cast for maximum efficiency
- Dynamically balanced to 4W/N before mounting
- Opposing impeller design to limit axial thrust to maximize thrust bearing life
- Individually keyed, shrunk fit and restrained in the direction of thrust by split ring
- Mounted on shaft with vane tips staggered for reduced pressure pulsation
- Optional double suction large eye first stage impeller for lower NPSH performance

Flanges

- ANSI B16.5 Class 1500# RTJ flanges – standard
- Optional 900# or 2500# flange rating

Nozzles

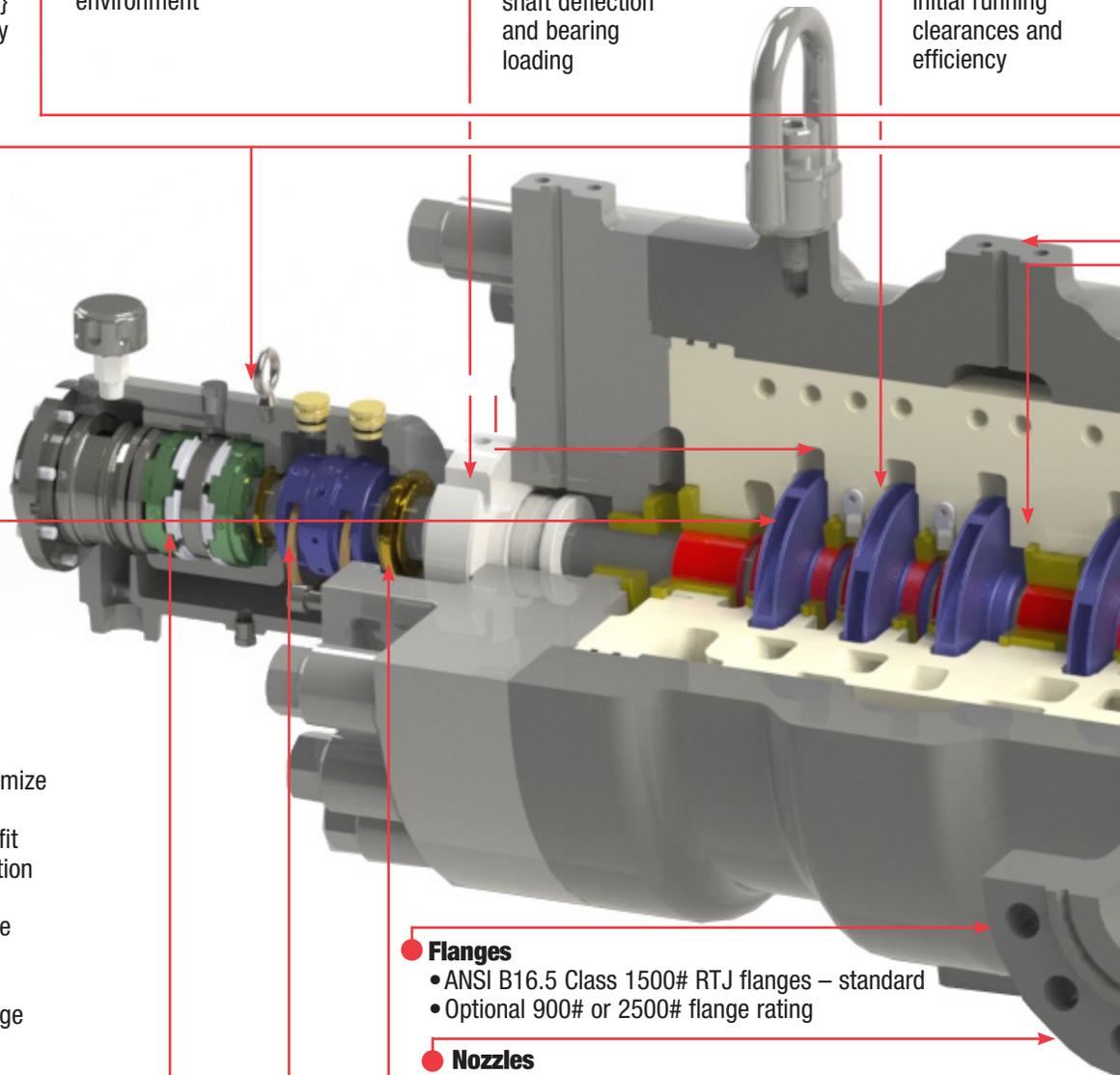
- Cast integrally in the lower half casing, permitting disassembly without disturbing piping connections
- Standard side-side design for pipeline applications
- Optional top-top design available

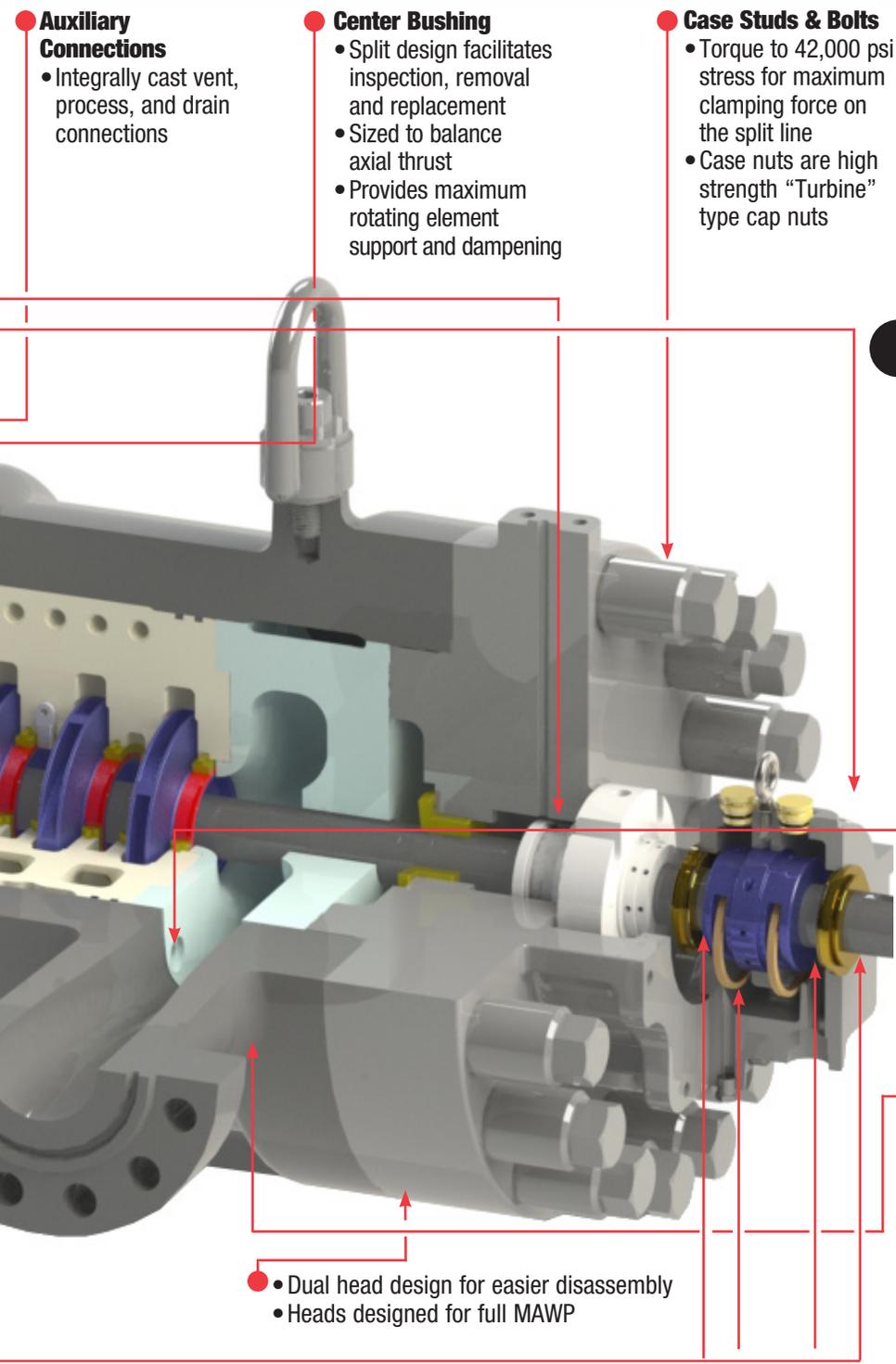
Labyrinth Oil Seal

- ISOMAG™ bearing isolators to provide optimum bearing housing environment

Bearing Lubrication

- Ring oil lubrication to ensure effective lubrication





Auxiliary Connections

- Integrally cast vent, process, and drain connections

Center Bushing

- Split design facilitates inspection, removal and replacement
- Sized to balance axial thrust
- Provides maximum rotating element support and dampening

Case Studs & Bolts

- Torque to 42,000 psi stress for maximum clamping force on the split line
- Case nuts are high strength "Turbine" type cap nuts

Delivery

- 48 weeks for standard design API 610 material class S-4, S-5, S-6, S-8, C-6, & A-8
- Refer to the factory on deliveries for other API material classes and customer specific material combinations

ePOD Pump Selector

- Access to end users and specifiers to select your pump online at www.pumpworks610.com – no password or login required

Balance Line

- Dual internal balance lines in the inner casing maintains equal seal chamber pressure, and proper hydraulic thrust

Casing

- Centerline mounted feet cast integral to case barrel to minimize thermal growth in hot service
- Wide feet design to minimize affects of forces and moments imposed by the system piping
- Hydrostatic test of pressure containing parts to 1.5 MAWP

- Dual head design for easier disassembly
- Heads designed for full MAWP

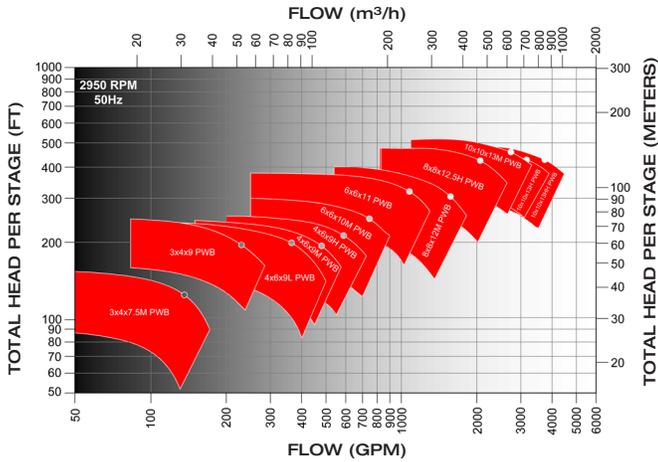
Bearing Design

- Standard - Sleeve / Ball
- Optional - Sleeve / Kingsbury™

PWB API 610 BB5 BARREL PUMP

HYDRAULIC PERFORMANCE COVERAGE

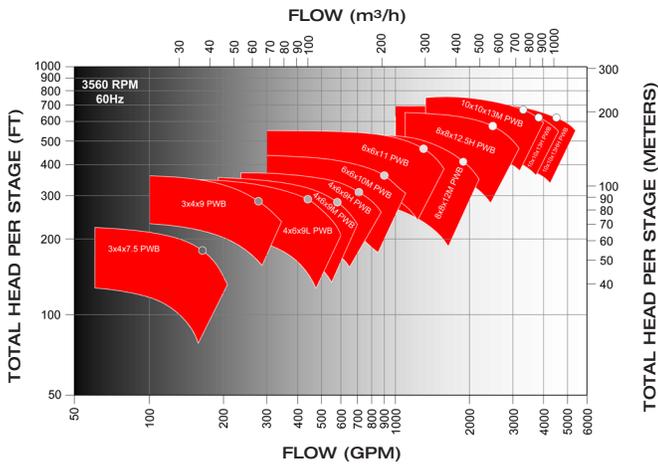
50 Hz Performance Coverage



Capabilities

- Capacities to 5,400 gpm | 1,227 m³/hr
- Heads to 23,000 ft | 7,010 m
- Temperature Range = 800°F | 427°C
- Pressures to 6,250 psig | 431 barg

60 Hz Performance Coverage



Visit our web site at www.pumpworks610.com and specify flow and performance needs and obtain pump selection and performance curve.

Performances shown are nominal and are to be used for preliminary selection only.

STANDARD MATERIALS OF CONSTRUCTION

API MATERIAL CLASS	S-4	S-6	S-8	C-6	A-8
CASING	A-216 GRADE WCB	A216 GRADE WCB	A216 GRADE WCB	A487 GRADE CA6NM	A351 GRADE CF3M
IMPELLER	A-216 GRADE WCB	A487 GRADE CA6NM	A743 GRADE CF3M	A743 GRADE CA6NM	A743 GRADE CF3M
SHAFT	ASTM A276 TYPE 410 SS	ASTM A276 TYPE 410 SS	A479 TYPE XM-19	A276 TYPE 410 SS	A479 TYPE XM-19
BEARING HOUSING	GRADE WCB	A216 GRADE WCB	A216 GRADE WCB	A216 GRADE WCB	A216 GRADE WCB
IMPELLER WEAR RINGS	CAST IRON	410 SS HT; 255-302 BHN	316 SS HARD FACED	410 SS HT; 255-302 BHN	316 SS HARD FACED
CASING WEAR RINGS	CAST IRON	420 SS; 400-450 BHN	316 SS HARD FACED	420 SS; 400-450 BHN	316 SS HARD FACED
THROAT BUSHING	CAST IRON	410 SS HT; 255-302 BHN	316 SS HARD FACED	410 SS HT; 255-302 BHN	316 SS HARD FACED
CASING STUDS	A-193 GRADE B-7	A193 GRADE B-7	A193 GRADE B-7	A193 GRADE B-7	A193 GRADE B-7
CASING NUTS	A-194 GRADE 2H	A194 GRADE 2H	A194 GRADE 2H	A194 GRADE 2H	A194 GRADE 2H

*Other API 610 Material Classes and Combinations are available including D-1 and D-2.



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