



Made *Right* in the USA

## PumpWorks 610 Model PWM / PWM-D API 610 BB1 Two-Stage Pump

### Bearing Housing

- Finned design improves heat dissipation for cooler running bearing
- Large bearing housing easily accommodates vibration switches, transmitters and proximity probes
- Optional sleeve bearing designed to handle variety of RTDs

### 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
- Optional water cooled stuffing box for high process temperature application

### 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 900# RF suction & discharge
- Optional 600# RF and 1500# RF

### Nozzles

- Cast integrally in the lower half casing, permitting disassembly without disturbing piping connections

### Renewable Wear Rings

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

### Lifting Eyes

- Designed to carry the entire weight of the pump, simplifying the rigging required to handle

### Double Volute

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

### Center Bushing

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

### Delivery

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

### Crossover Line

- Compact design for streamlined fluid flow
- Sized for minimum friction loss and maximize efficiency

### 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
- Cap nuts located on top half casing parting flange allowing easy case removal for rotor inspection and maintenance

### Integral Flange Connections

- Eliminates case welding and potential failure points

### Quality

- Manufactured and tested in the USA

### Labyrinth Oil Seal

- INPRO™ bearing isolators to provide optimum bearing housing environment

### Bearing Design

- Ball / Ball
- Optional Sleeve / Ball
- Optional Sleeve / Kingsbury

### Bearing Lubrication

- Ring oil lubrication to ensure effective lubrication
- Optional pure or purge mist lubrication

### Casing

- Mounting feet cast integral into the bottom half providing near centerline mounting 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

### ePOD Pump Selector

- Access to end users and specifiers to select your pump online at [www.pumpworks610.com](http://www.pumpworks610.com) – no password or login required

**PumpWorks.** The only pump company to offer a full line of API and Industrial products 100% Made *Right* In the USA.



## The PumpWork Difference

- Manufactured and tested in the United States
- Access for end users and specifiers to select, configure and estimate their pump online at [www.pumpworks610.com](http://www.pumpworks610.com)



### PWH API 610 Process Pump

PWH is the PumpWorks 610 API 610 current edition overhung OH2 process pump in API 610 material classes S-6, S-8, C-6 and A-8. Other materials combinations are available. The pumps are built, assembled and performance tested in full compliance with API 610 in Tyler, Texas USA.

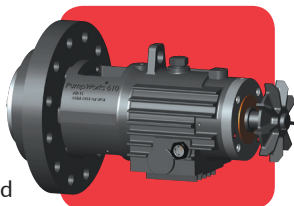


- Shorter lead times than the competition – 16 weeks for API 610 Material Classes S-6, S-8 and C-6

See our PWH API 610 Single Stage OH2 Brochure for more information.

### PW-11 API 610 Upgrade Program

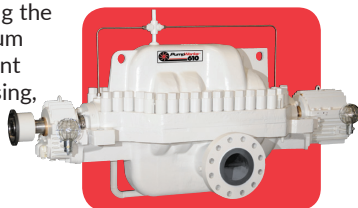
PW-11 is the PumpWorks 610 retrofit upgrade kit that meets API 610 current edition for horizontal single stage OH2 process pumps. The kit ensures petroleum refineries have a fast and cost-effective way to upgrade any brand of existing OH2 process pump and achieve API 610 current edition requirements without expensive changes to the wet end (casing and impeller) and piping.



See our PW-11 API 610 Upgrade Program Brochure for more information.

### PWM API 610 BB3 Multistage Pump

PWM pump is designed for covering the full range of High Pressure petroleum refinery services, petrochemical plant services, gas processing, oil processing, offshore installations (platforms), hydrocarbon and crude oil pipeline and finished products pipeline services.



- Shorter lead times than the competition – 26 weeks for API 610 material class S-4, S-6, S-8, C-6 and A-8

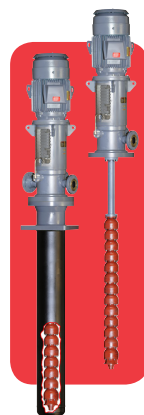
See our PumpWorks 610 Multistage Pump Brochure for more information.

### PWV API 610 Vertical Turbine Pump

PWV is the PumpWorks 610 API 610 current edition VS6 and VS1 vertical turbine pump in API 610 material classes S-1, S-4, S-5, S-8 and A-8. Other material combinations are available. The pumps are built, assembled and performance tested in full compliance with API 610 in Tyler, Texas USA.

- Shorter lead times than the competition – 16 weeks in API 610 Material Class S-1

See our PWV API 610 Vertical Turbine VS6 (Can Type) and VS1 (Sump Type) Brochure for more information.



### PWI-BB API 610 Vertical In-Line Single Stage OH3

The PWI-BB is an API 610, OH3 heavy duty bearing bracketed vertical in-line pump designed to cover a wide range of applications found in petroleum processing facilities, gas processing, petrochemical, offshore installations (platforms), hydrocarbon and crude oil terminal and aviation (jet) fueling applications.

- Shorter lead times than the competition – 16 weeks for API 610 material class S-6, S-8 and C-6

See our PWI-BB 610 Vertical In-Line Single Stage OH3 Brochure for more information.

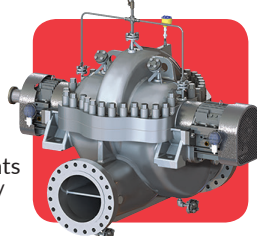


### PWD API 610 BB1 Horizontal Split Single Stage Pump

The robust BB1 PWD is an axially split, single stage, horizontal, between bearing pump. Our heavy duty casing with multiple mounting options for temperature and liquid requirements afford our customers with application specific/ custom hydraulics designed to meet even the aggressive of pumping requirements. The PWD is designed for critical heavy-duty process applications like refining applications that include cooling water, distillation and sulfur recovery. The PWD is a versatile pump for loading, boiler feed boosting, crude oil pipeline, desalination and water transfer.

- The PWD delivers in 28 weeks

See our PWD API 610 BB1 Horizontal Split Single Stage Pump Brochure for more information.



### Online Pump Selection with ePOD

Visit our website at [www.pumpworks610.com](http://www.pumpworks610.com) and specify flow and performance needs and obtain pump selection and performance curve.



**PumpWorks • [www.pumpworks.com](http://www.pumpworks.com)**

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