

# CUP-BB1

SINGLE / TWO STAGE API 610, AXIALLY SPLIT, BETWEEN BEARINGS PUMPS

## PUMP OVERVIEW

The CUP-BB1 range are heavy duty, axially split, single and two stage designs engineered to maximise efficiency, provide high reliability, and offer the widest performance flexibility over the pump's life cycle. From short term to medium term adjustments to full hydraulic re-rates, the CUP-BB1 features are carefully selected to meet our customers' needs. Typically a combination of features such as volute insert designs, lip chipping, impeller blade and tip modifications, and varying capacity impellers, can be used to provide the highest versatility of pump operation.

The ClydeUnion Pumps CUP-BB1 range encompasses proven design history evolving from our renowned legacy brands; including SB/MG, DB30, DVDS, DVSS, and RBMX models, providing a comprehensive hydraulic coverage, with hundreds of units in operation worldwide.

The CUP-BB1 is designed and manufactured in compliance with the latest API 610 and API 682 standards.

## TYPICAL APPLICATIONS

- Pipeline
- Condensate booster
- Crude oil + hydrocarbons handling
- Gas treatment
- Nuclear + conventional power
- Desalination
- Water distribution
- Utility duties for process industries



## TECHNICAL DATA

**Capacity:** up to 15,000 m<sup>3</sup>/hr / 66,000 USgpm

**Delivery head:** up to 1,000 m / 3,300 ft

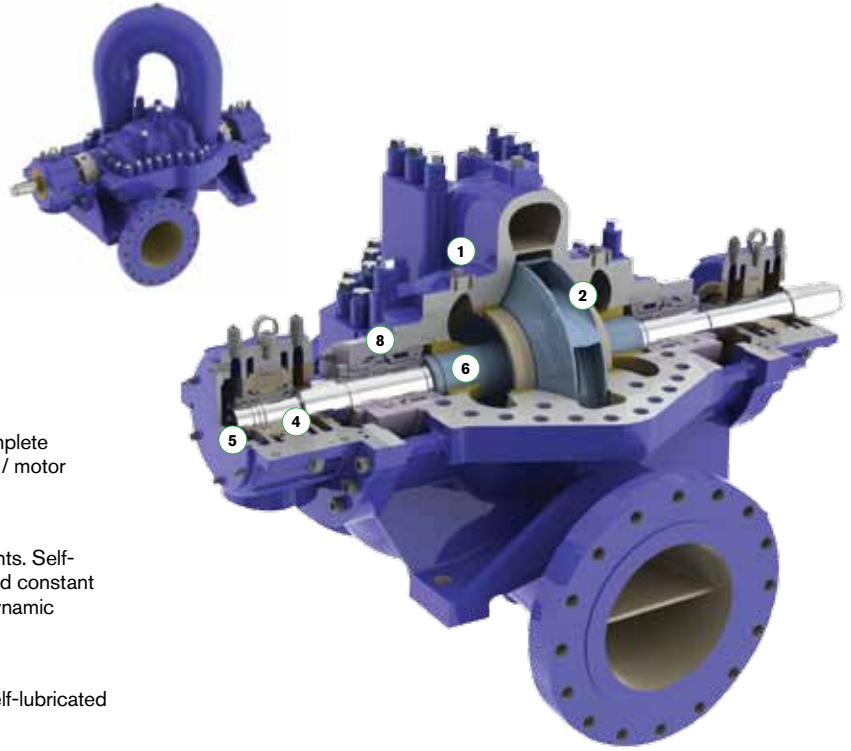
**Temperature:** up to 180 °C / 350 °F

**Speeds:** up to 6,000 rpm

**Flange drilling:** ANSI or BS

## FEATURES + BENEFITS

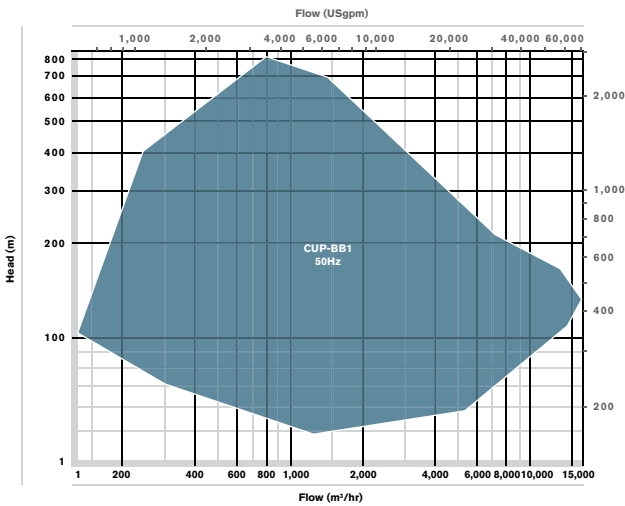
- 1 **Heavy duty pump casing**  
Double volute design enables minimised radial loads. Designed for full MAWP and 2 x API 610 nozzle loads. Various mounting options available
- 2 **Impellers**  
Various single and double entry impeller arrangement options available depending on operating conditions. Precision cast for repeatable performance. Shrink-fitted to shaft and individually axially located. Staggered to optimise vibration performance
- 3 **Ease of maintenance**  
Simple construction offers ease of maintenance and reliability. The axially split casing allows removal of the complete rotating element without disturbing the pipework or pump / motor alignment
- 4 **Bearings**  
Various options available to suit the customer's requirements. Self-contained lubrication options available utilising oil rings and constant level oilers. Forced-fed lubrication as standard for hydrodynamic bearings
- 5 **Bearing housings**  
Designed for high thermal efficiency to maximise use of self-lubricated bearings
- 6 **Robust rotor design**  
Renewable sleeves offer shaft protection against stuffing box wear and are easily replaced reducing maintenance costs. Stiff shaft design ensures high critical speeds and low shaft deflection for maximum reliability, seal and bearing life
- 7 **Advanced metallurgy**  
Material options according to API 610. Materials optimised for service conditions



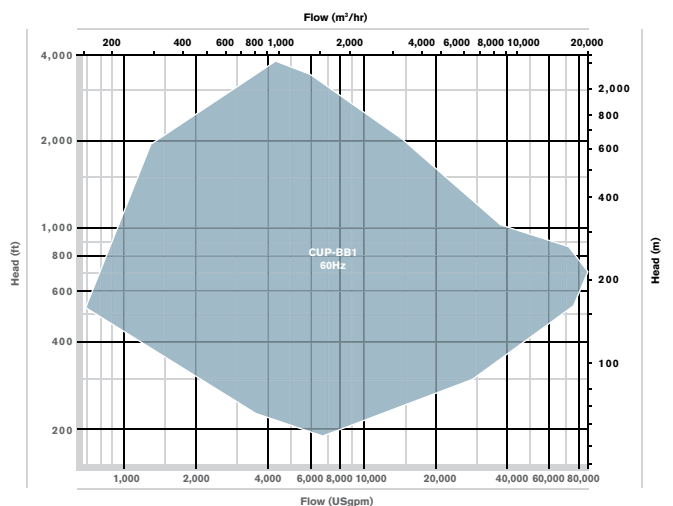
- 8 **Advanced mechanical sealing** (to API 682)  
High reliability cartridge design. Large seal chambers suitable for single or dual mechanical seals
- 9 **Pump healthcare monitoring** (to API 670)  
Temperature and vibration monitoring of critical components. Wired to skid edge junction box or control panel

## RANGE COVERAGE CHARTS

50HZ RANGE CHART



60HZ RANGE CHART



These charts cover the standard pump range. Other engineering designs exist for extreme applications

**SPX**

P: +44 (0)141 637 7141 F: +44 (0)141 633 2399 E: cu.sales@spx.com

For more information about our worldwide locations, approvals, certifications, and local representatives, please visit [www.spx.com](http://www.spx.com).

SPX Corporation reserves the right to incorporate our latest design and material changes without notice or obligation. Design features, materials of construction and dimensional data, as described in this bulletin, are provided for your information only and should not be relied upon unless confirmed in writing.

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