

CUP-FWP

SINGLE STAGE FEEDWATER PUMP

PUMP OVERVIEW

The ClydeUnion Pumps main feedwater and booster pumps are world class products designed specifically for the demands of modern nuclear power plants. The CUP-FWP is a reliable, high efficiency, radially split, single stage barrel casing pump, engineered and constructed to withstand specific site conditions and operating criteria.

Our feedwater pump range has been designed to produce an advanced pump with reduced whole life costs.

- Through life efficiency and high availability
- High reliability
- Cartridge withdrawal allows dismantling without disturbing pump alignment
- Extended periods between overhauls
- Inherent axial hydraulic balance
- Can accommodate dry running
- Low wear rates
- No-warm up requirement. Without the need for expensive warming through, the CUP-FWP can accept full thermal shock without damage, hence the pump is always available for start up

This pump arrangement is proven in service, and has been installed in nuclear power plants around the world.

TYPICAL APPLICATIONS

- Steam generator



TECHNICAL DATA

Capacity:	up to 6,000 m ³ /hr / 26,400 USgpm
Delivery head:	up to 1,200 m / 3,990 ft
Temperature:	up to 250 °C / 480 °F
Speeds:	up to 7,000 rpm

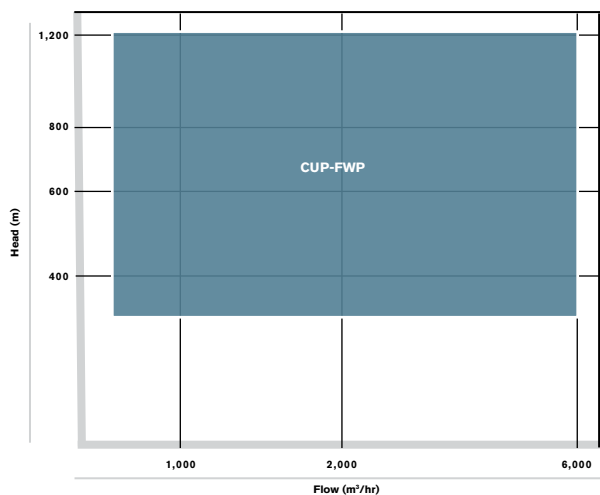
FEATURES + BENEFITS

- 1 **Inner cartridge**
Complete inner cartridge element, pump internals can be withdrawn without disturbing pump alignment or pipework
- 2 **Shaft**
Mechanically stiff shaft with large shaft-to-impeller diameter proportions, short span between bearings
- 3 **Hydraulic performance**
Optimised hydraulic performance with precision cast components and a proven range
- 4 **Mechanical seals**
Cartridge style mechanical seals that require no seal setting, reducing capital cost and extending seal lives. Labyrinth gland sealing available as an option
- 5 **Connection options**
Branch can be flanged or welded and orientation to suit station pipework
- 6 **Wearing parts**
Replaceable wearing parts available for ease of maintenance, casing wear rings material and geometry selected for anti-galling properties
- 7 **Thrust balance**
Hydraulic thrust balance leading to extended pump performance with ability to handle transients and flow changes without wear
- 8 **Balance**
Generously rated hydrodynamic double-acting tilting pad thrust bearing and white metal lined sleeve type journal bearings suitable for force-fed lubrication for optimum rotor stability



CUP-FWP

50HZ RANGE CHART



This chart covers the standard pump range. Other engineering designs exist for extreme applications