

**Operating Range:**

- Max viscosity 200cSt
- Max system pressure 50BAR (std)
- Flow up to 70 m<sup>3</sup>/h
- Head up to 250m
- Temperature Range from -120 to +350° C (std)
- Electric motors from 1.5 to 150KW
- ATEX II - /2G cbk II C T5



**M PUMPS s.r.l**

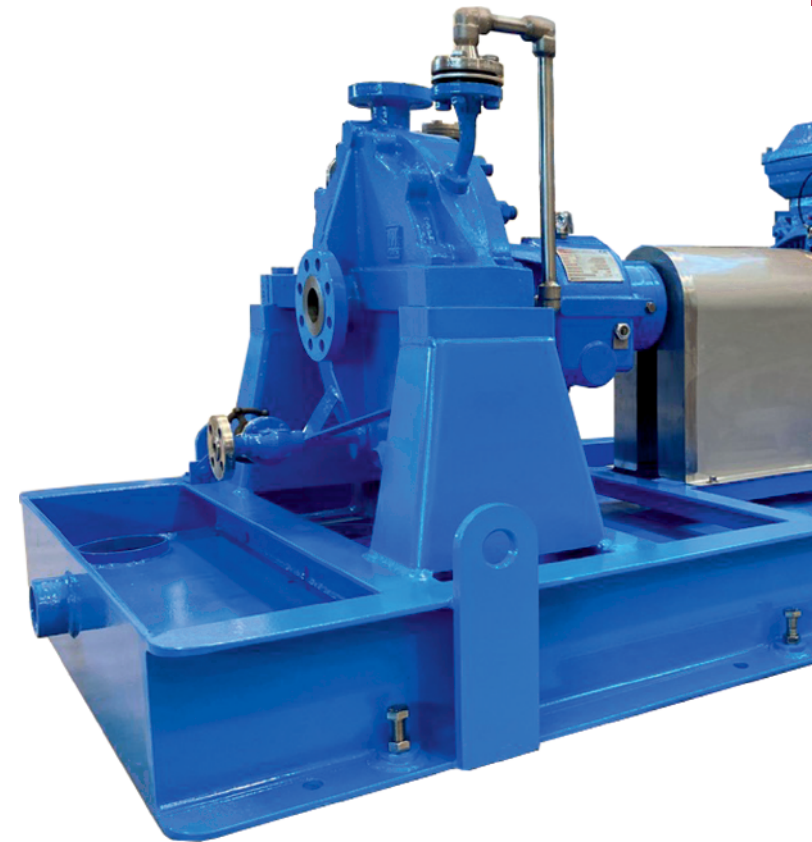
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## CPE SEAL-M

Low flow Centrifugal process pumps according to  
API 610 - XI edition Norms



# Pump Details

## Radial balance

Concentric volute or diffuser to minimize radial loads on larger sizes

## Centerline Mounted Casing

OH2 Heavy duty mounting feet accept ISO 13709/API-610 nozzle loads and maintain pump alignment under hard conditions.

CF8M Pump Casing & Impeller High quality casting components.

Materials:  
- Hastelloy® C276,  
- Incoloy® 825,  
- Duplex,  
- Titanium

## Impeller

Barske design for high delivery heads / low flow.

## Renewable wear rings

Full comply to ISO 13709/API-610 running clearances. Positively locked.

## Mechanical shaft seals

The CPE SEAL-M pumps will be equipped with mechanical seals and sealing systems in accordance with API 682 category 2/3 - ISO 21049. The seal chamber dimensions conform with API 610, paragraph 5.8.3 (Figure 25, Table 6).

## Nozzles

Suction and discharge connections are flanged CLASS 300 RF Other classes and facings on request.

## Self Venting Design

Concentric volute or diffuser to minimize radial loads on larger sizes

## Pump shaft

The pump shaft is sized to transmit the full driver output and is machined by CNC throughout his entire length and has a proper finish on bearing mating surfaces.

To obtain satisfactory seal performance, proper shaft stiffness limits the deflection.

This is the result of the combination between shaft diameter, shaft span or overhang and casing design.

The shaft design guarantees that the first try bending critical speed is at least 20% above the pump's maximum continuous operating speed.

## Labyrinth oil seals

Labyrinth seal design prevents oil leakage out and contaminants from intruding. Material adopted is nonsparking metal.

## Outer ball bearings

The outer magnet shaft is fitted in generously dimensioned antifriction bearings. The bearings are L10 rated for an average life in excess of 5 years. The oil bath is protected against atmosphere by labyrinth oil seal.

The oil level is controlled by a constant level oiler and additionally by a bull's eye sight glass. Oilmist lubrication can be supply.

## Air Cooling

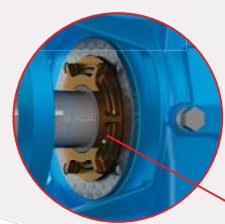
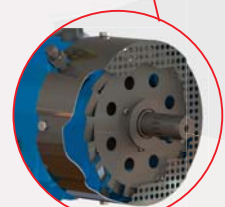
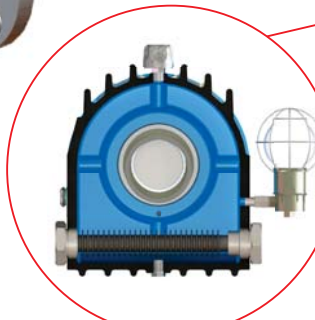
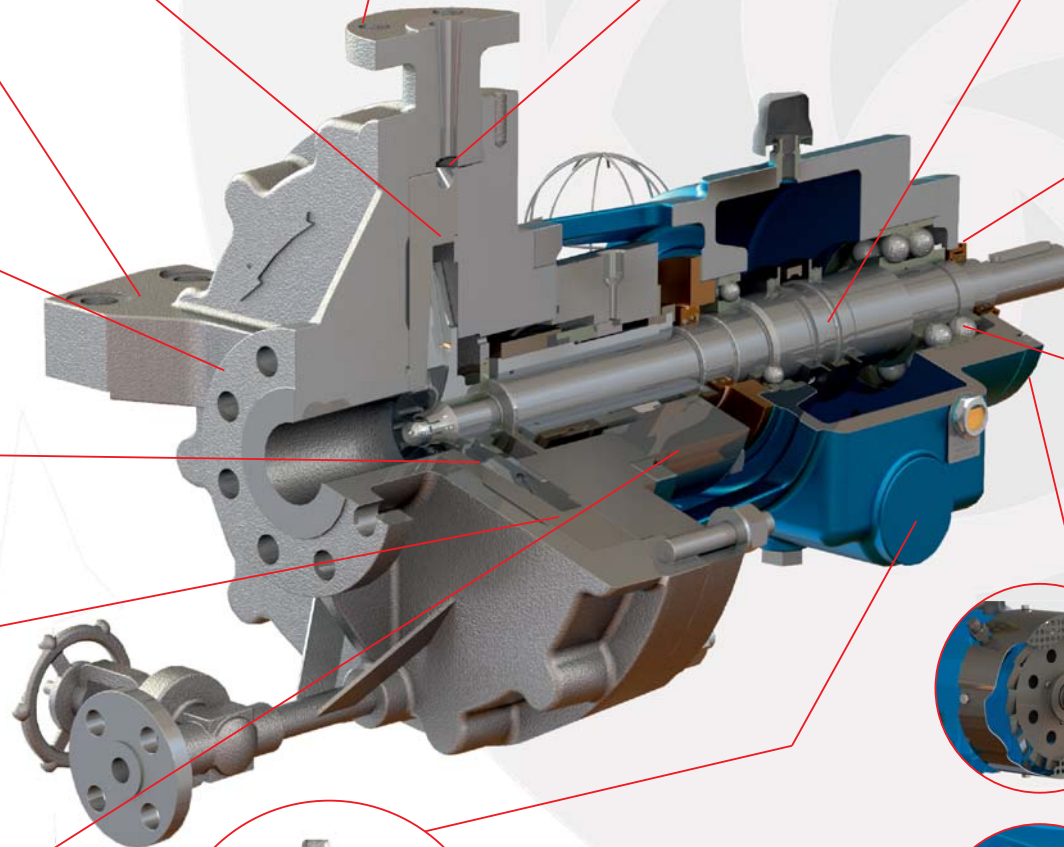
Special designed fan mounted on bearing frame end effectively dissipate heat loading without using cooling water.

## Shaft heat finger

Shaftconducted heat can be effectively removed by a strib air circulation which reduce head buildup on bearing frame.

## Water Cooling Finner

Finned cooled in the oil bath for bearing temperature stabilization under severe conditions



Heat Flinger