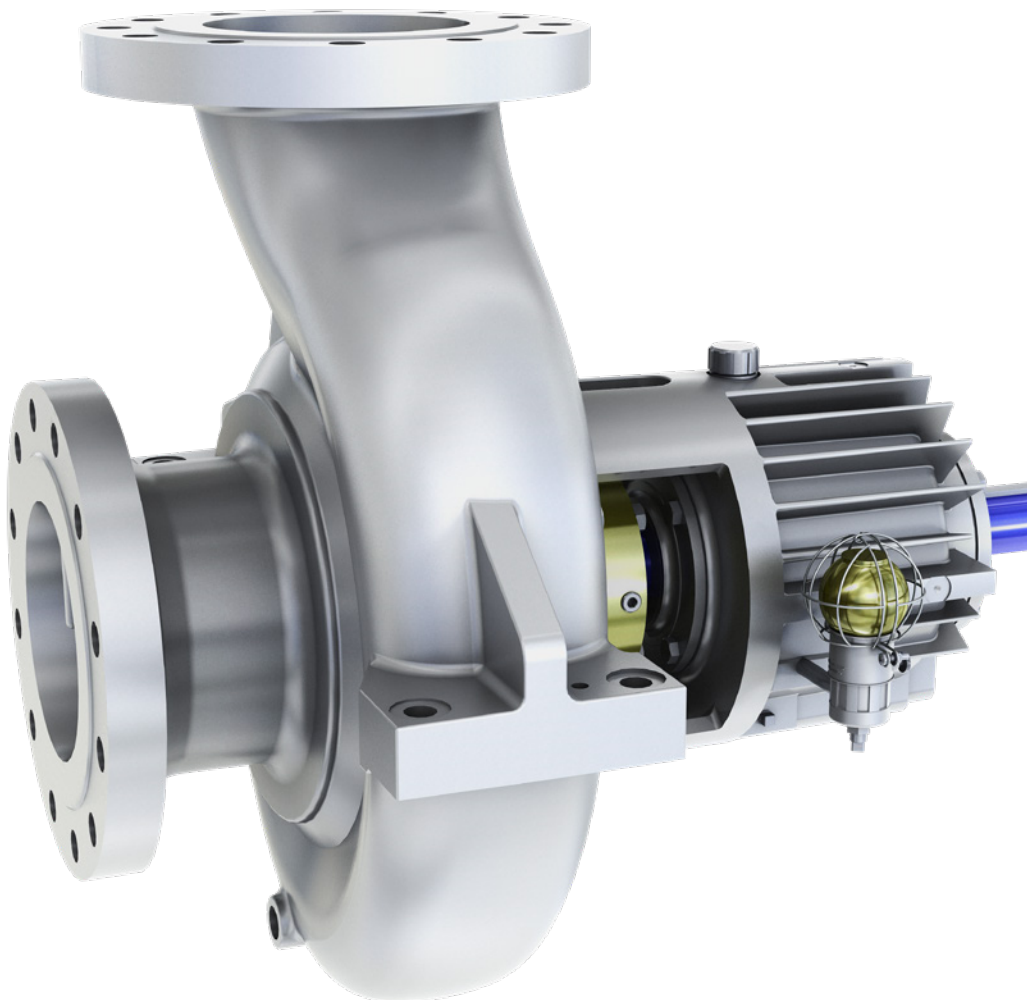


## **PRE and PRELF** **ISO 13709 (API 610)** type OH2 single stage end suction process pumps



# Main industries and applications

The PRE and PRELF are designed to API 610 for a wide variety of process applications.

PRE and PRELF are commonly found in hydrocarbon processing facilities producing

- Synfuels
- Refining
- Gas processing
- Petrochemicals
- Polyolefins
- Nitrogenous fertilizer
- Auxiliary services

The PRE and PRELF are also used for fossil and renewable power plants, and can be supplied with ISO baseplate/packaging.

- Boosters
- Boiler / hot water circulation (PRER, PRETR)
- Heat transfer fluid
- Condensate extraction
- Auxiliary services

The PRE product range utilizes an innovative, high efficiency impeller design manufactured in several configurations to suit the customer's specific process conditions, these options include

- Traditional closed impeller typically used with clean fluids
- Barske type design for optimized performance at low flow
- Open and semi-open with wear plate for slurry applications
- Closed impeller with relief vanes for abrasive applications



# Features and benefits

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## 1 Casing

- Robust pressure casing

## 2 Nozzles

- 300# RF flange rating is standard with optional 600# RF available
- PRER and PRETR are available with higher flanges class ratings and higher design pressure

## 3 Impeller

- Enclosed impeller on standard PRE design for efficiency
- Special designs are available for slurry duty including corrosive and/or abrasive applications in chemical and petrochemicals applications (PE, PP and PTA)
- PRELF utilizes unique semi-open impeller for low flow and high head
- Optional inducer (see next page)

## 4 Shaft

- Extra heavy duty, large diameter shaft
- The standard heavy-duty shaft limits deflection to less than 0.05 mm (0.002 in) at the seal chamber for long seal life

## 5 Bearings

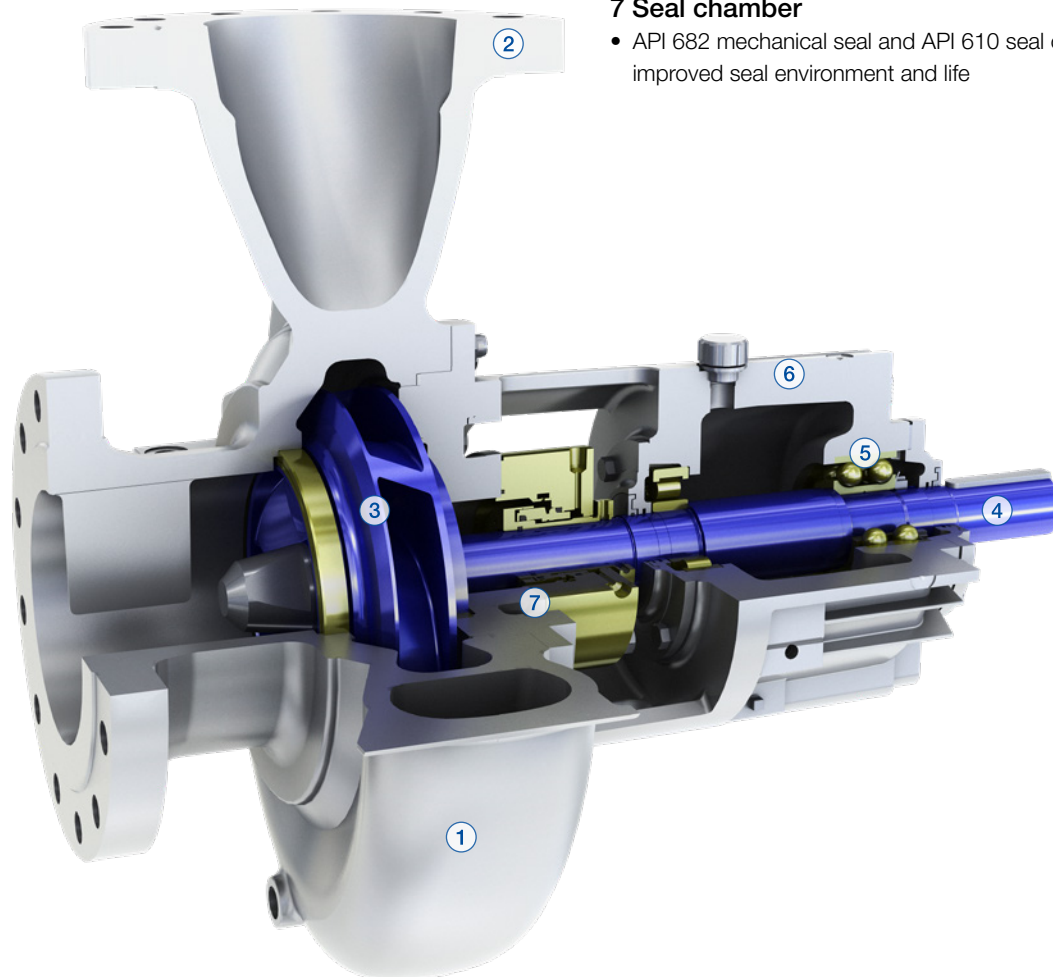
- Standard 7300 series 40° duplex angular contact thrust bearings with machined brass cages, and heavy duty roller radial bearings are standard

## 6 Bearing housing

- Carbon steel construction with cooling fins for improved heat dissipation
- Low noise fan added for high ambient or high product temperatures. Water cooling is optional for special applications.
- Splash oil, ring oil, purge mist or pure mist lubrication options available to suit customer requirements

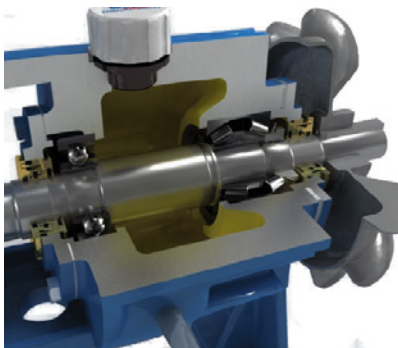
## 7 Seal chamber

- API 682 mechanical seal and API 610 seal chamber for improved seal environment and life



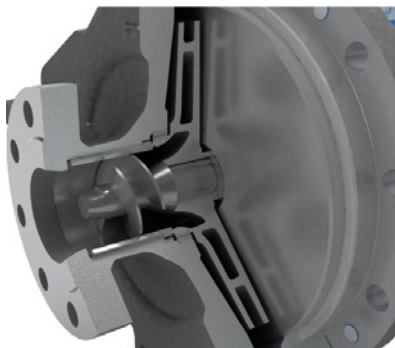


# Optional features



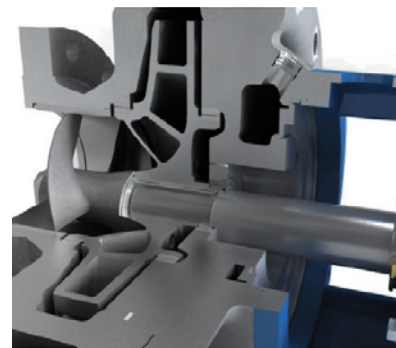
## Bearing options

Tapered roller thrust bearing option for very high suction pressures



## Inducer options

Proven inducer designs provides option to meet low NPSHa requirements



## Case cover options

Cooling / heating chamber in casing cover available for specific applications



The PRE product range utilizes an innovative, high efficiency impeller designs that are manufactured in several configurations to suit the customer's specific process conditions, these options include:

## PREK / PRESF

- Special design for slurry applications
- Suitable for corrosive and/or abrasive applications
- PREK – open impeller for small size pumps
- PRESF – semi-open impeller with wear plate for large size pumps



## PRECF

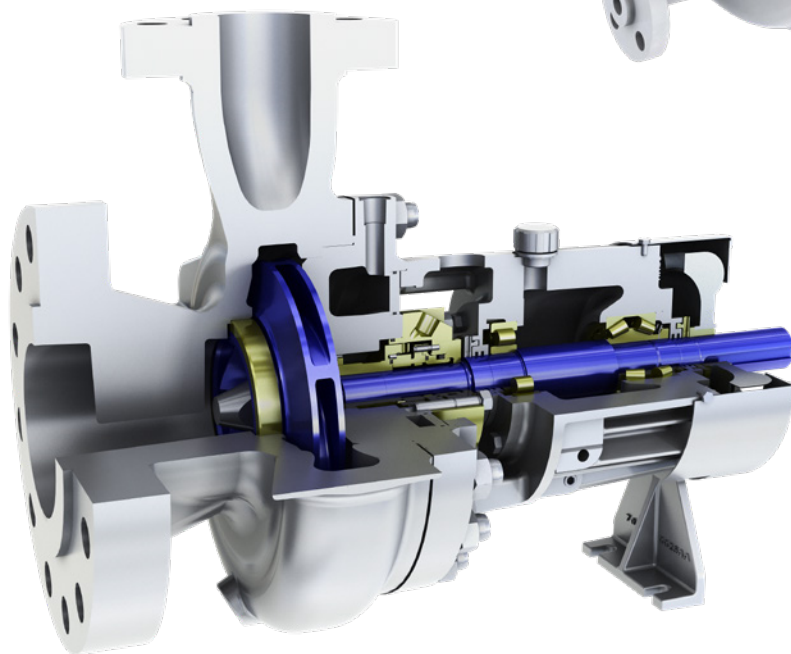
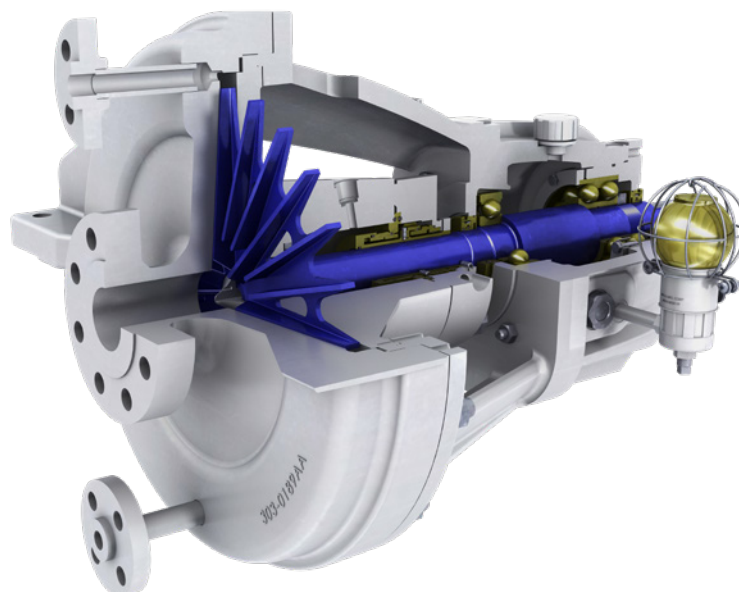
- Special design for slurry applications
- Suitable for corrosive and/or abrasive applications
- HVOF coating option for extended life of severely abrasive services

# Design variants

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## PRELF

- Barske type impeller design for optimized performance at low flow
- Precision impeller and casing machining ensure operation close to the BEP (best efficiency point) with a wide operating range



## PRER / PRETR

- High pressure special design variants using PRE hydraulics but with special reinforcement to suit challenging high-pressure services
- 16 standard sizes available
- Flows to 2'000 m<sup>3</sup>/h (8'800 USgpm)
- Pressure PRER: 100 bar (1'450 psi) Class 600 or 900 flanges
- Pressure PRETR: 200 bar (2'900 psi) Class 900 or 1'500 flanges
- Other sizes available on request

# Specifications

## API 610 material codes

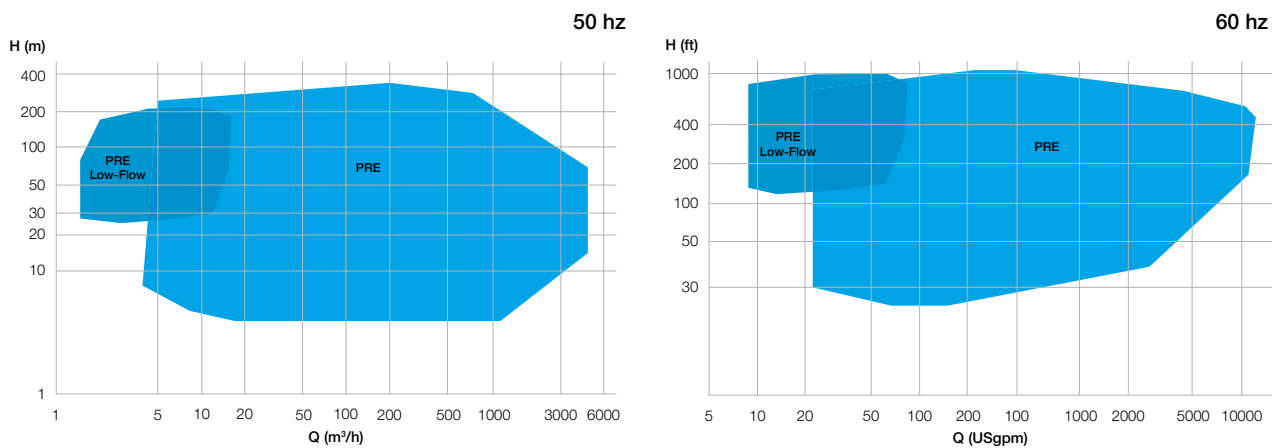
- S-4, S-5, S-6, S-8, S-9, C-6, A-8, D-1, D-2, 317L
- Common alloys available: 625, 825, 254, 20, hastelloy C276, and titanium Gr.3 & Gr.12
- Other special materials are available on request

## Operating data

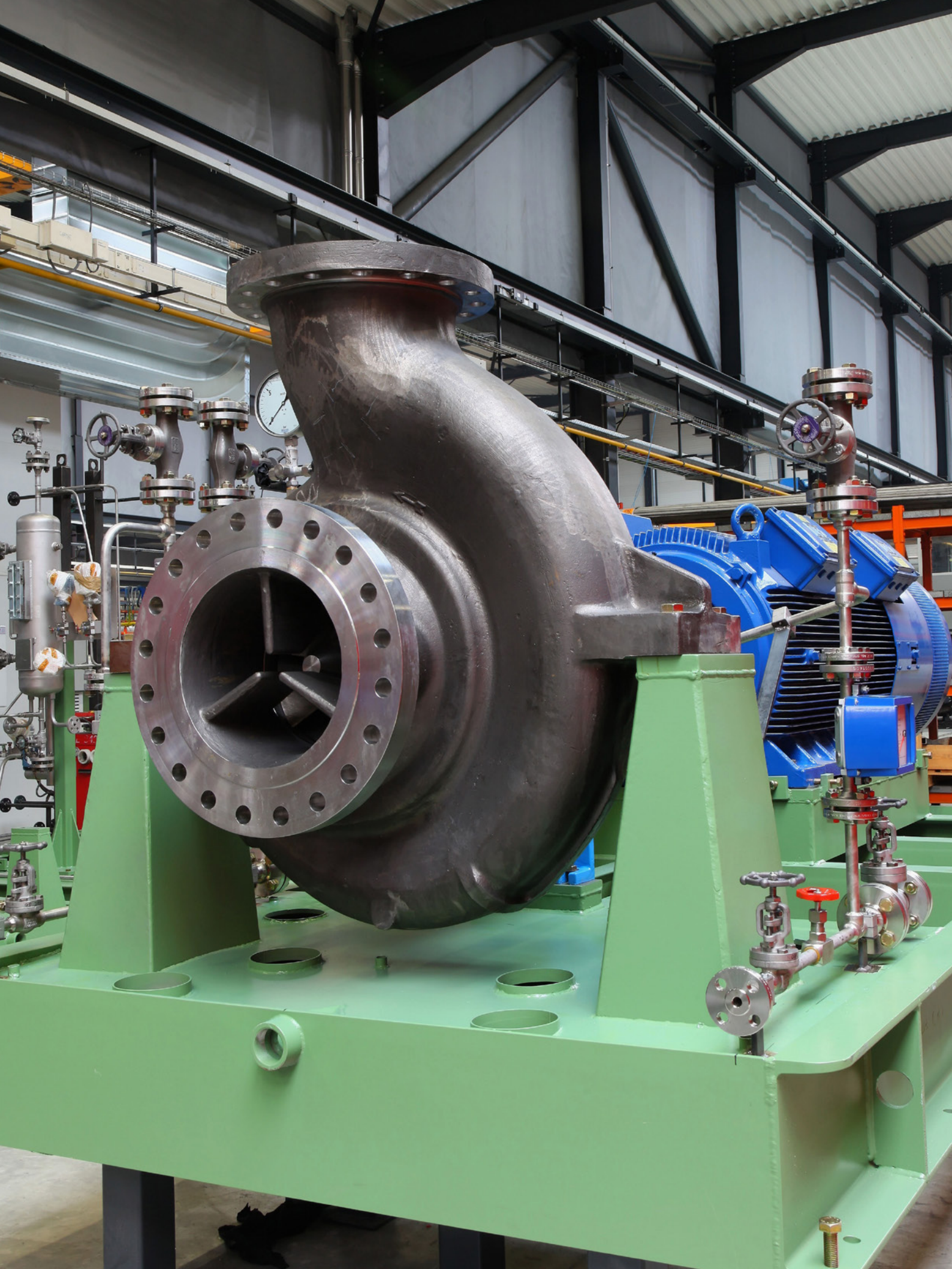
	50 Hz	60 Hz
Capacities	up to 4'500 m <sup>3</sup> /h	up to 19'800 USgpm
Heads	up to 320 m	up to 1'050 ft.
Pressures	up to 51 bar	up to 740 psi
Temperatures	from -90 to 400°C	from -130 to 752°F

PRER and PRETR have the ability to reach higher operating pressures and temperatures, please contact your local sales representative to discuss your application.

## Performance ranges









**The Sulzer Flow division keeps your processes flowing. Wherever fluids are treated, pumped, or mixed, we deliver highly innovative and reliable solutions for the most demanding applications.**

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The Flow division specializes in pumping solutions specifically engineered for the processes of our customers. We provide pumps, agitators, compressors, grinders, screens and filters developed through intensive research and development in fluid dynamics and advanced materials. We are a market leader in pumping solutions for water, oil and gas, power, chemicals and most industrial segments.

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