

SULZER

LENNTECH
WATER TREATMENT Solutions

PRE and PRE-LF ISO 13709 (API 610) type OH2 single stage end suction process pumps



Main applications

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

PRE and PRE-LF are commonly found in hydrocarbon processing facilities producing

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

The PRE and PRE-LF 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 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

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)
- PRE-LF 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

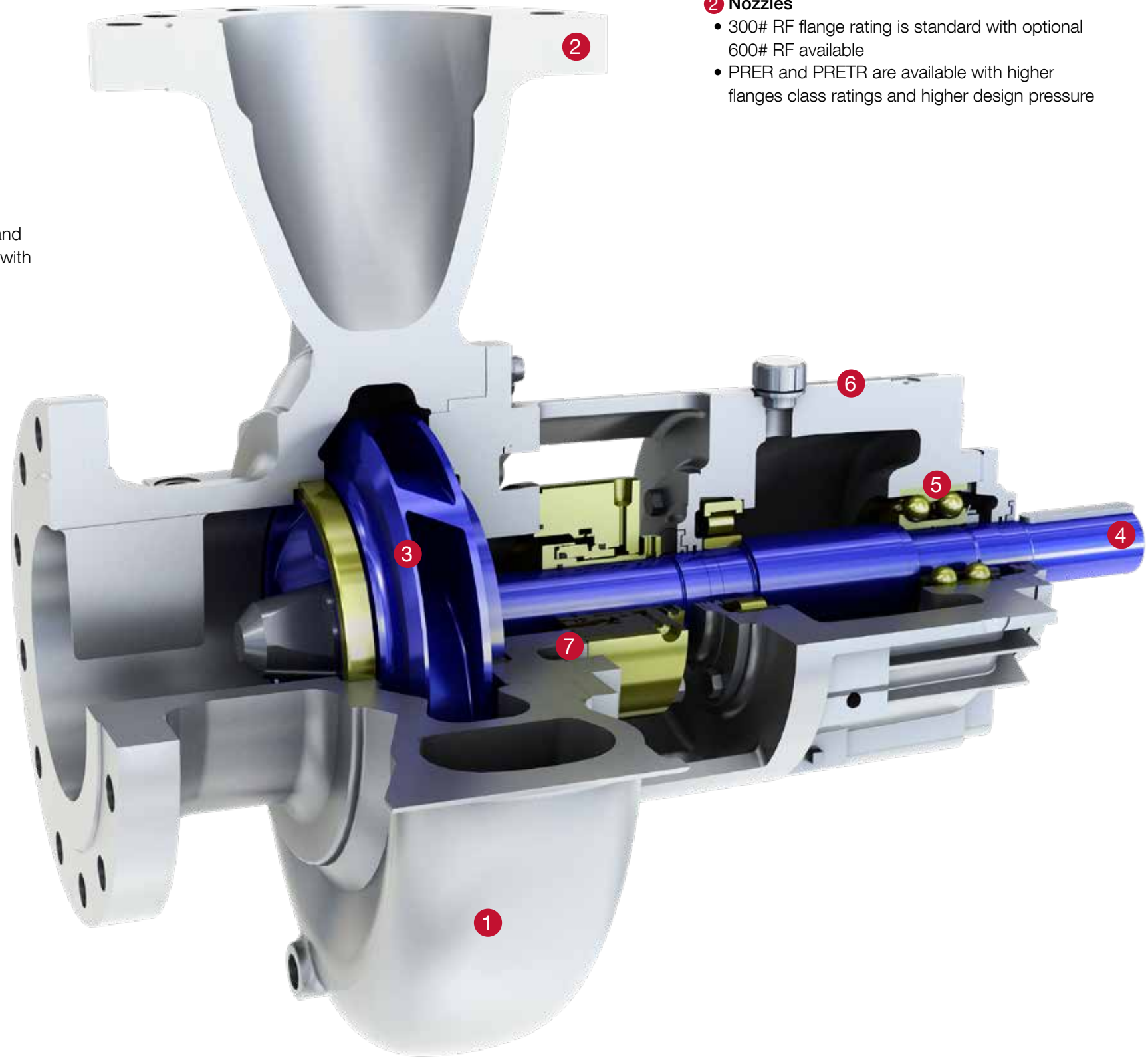
- Standard 7300 series 40° duplex angular contact thrust bearings with machined brass cages, and heavy duty roller radial bearings are standard

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:

PRE-K / PRE-SF

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



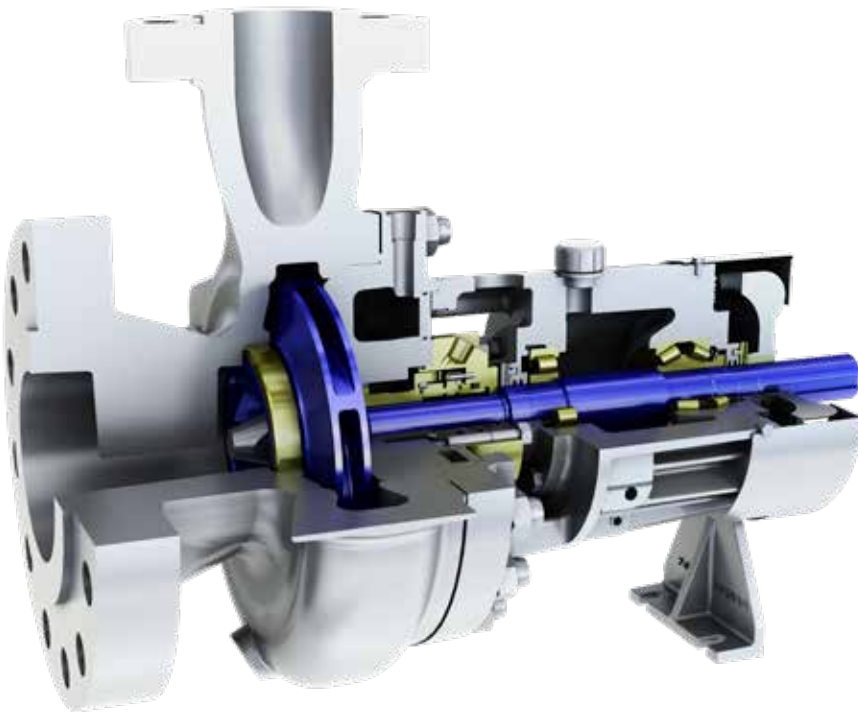
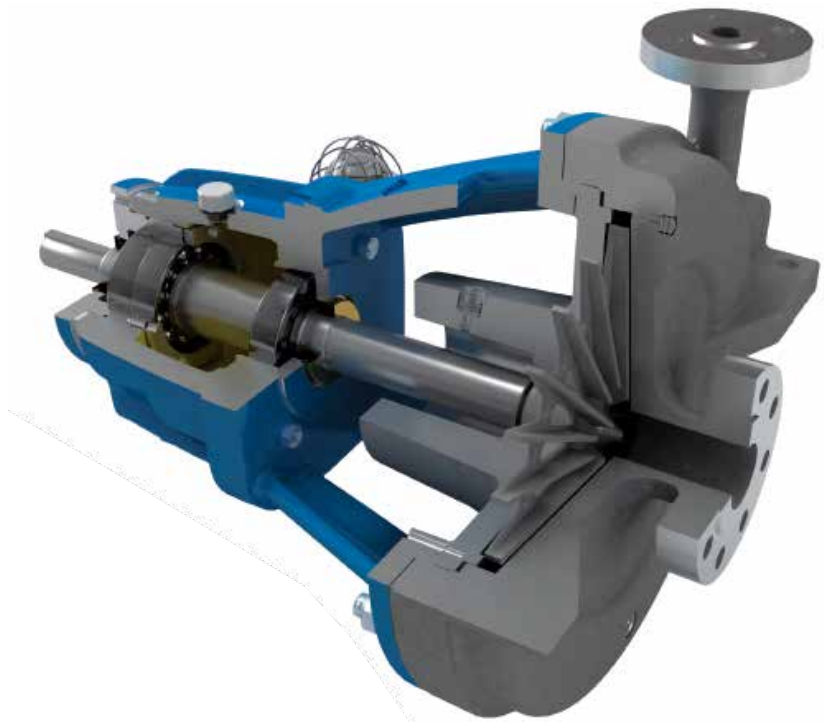
PRE-CF

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

Design variants

PRE-LF

- Barske 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 m³/hr (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 1500 flanges
- Other sizes available on request

PRE and PRE-LF process pumps

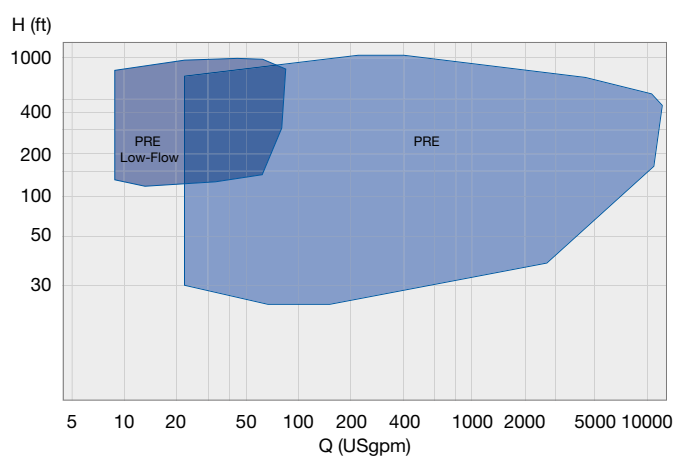
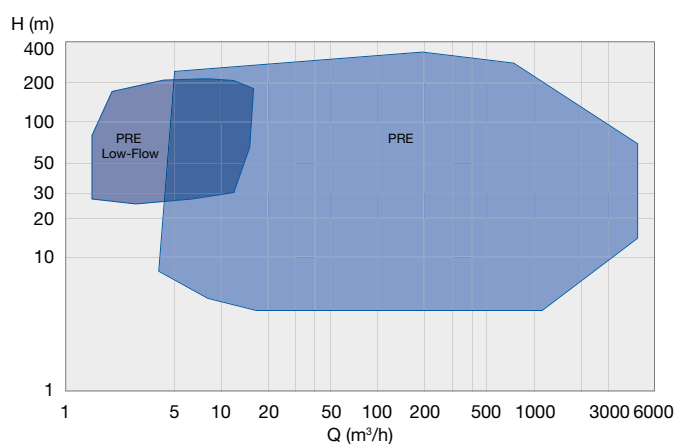


Operating data

50 HZ		60 HZ
up to 4'500 m ³ /h	Capacities	up to 19'800 USgpm
up to 320 m	Heads	up to 1'050 ft
up to 60 bar*	Pressures	up to 1'100 psi*
from -90 to 400°C	Temperatures	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



Materials

API 610 material codes
S-4, S-5, S-6, S-8, S-9, C-6, A-8, D-1, D-2, 317L
Other materials available on request

We do what we say



Operational excellence

We continuously strive to
be faster and better.



Customer partnership

Together, we win.

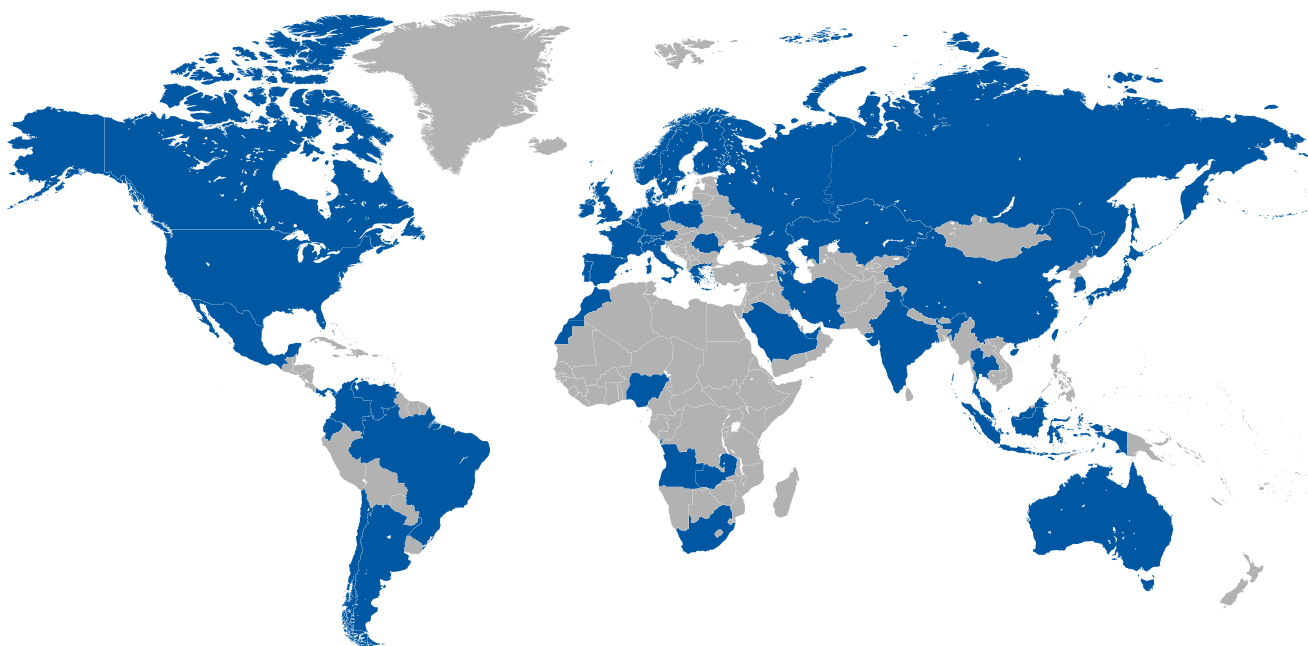


Committed people

We build on the strengths
and diversity of our people.

A global specialist at your doorstep

Sulzer serves clients worldwide through a network of over 150 production and service sites and has a strong footprint in emerging markets.





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