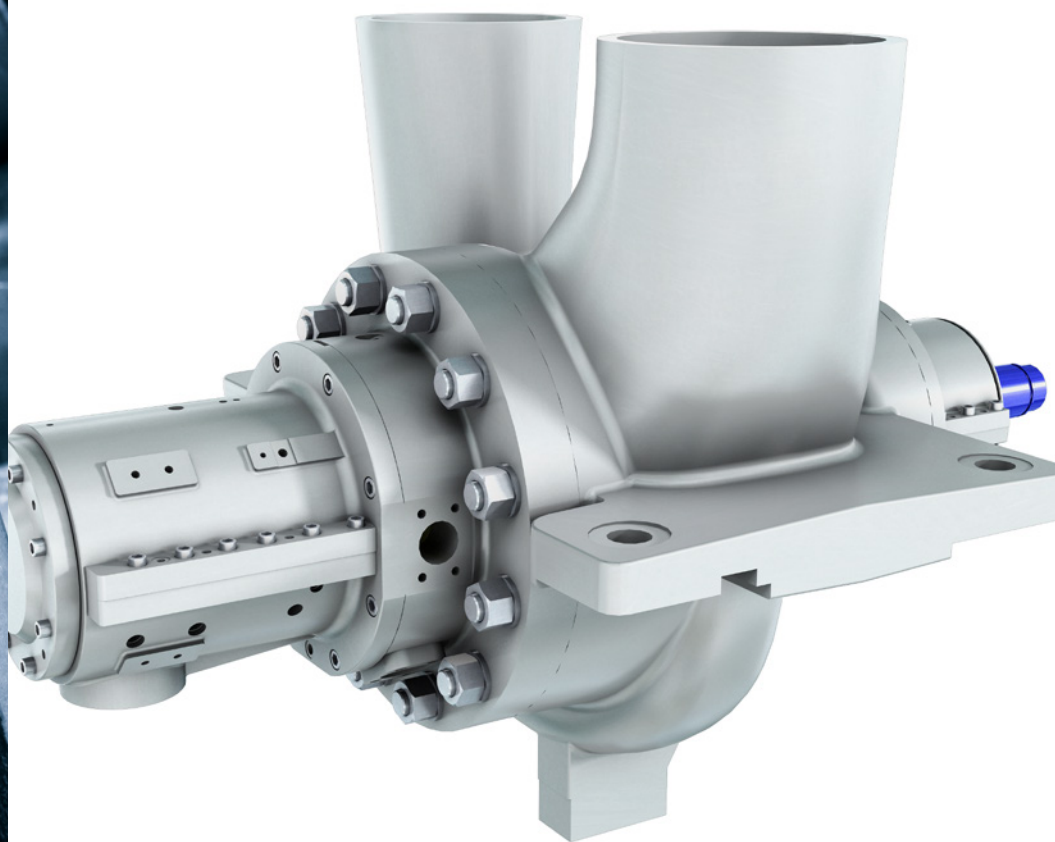
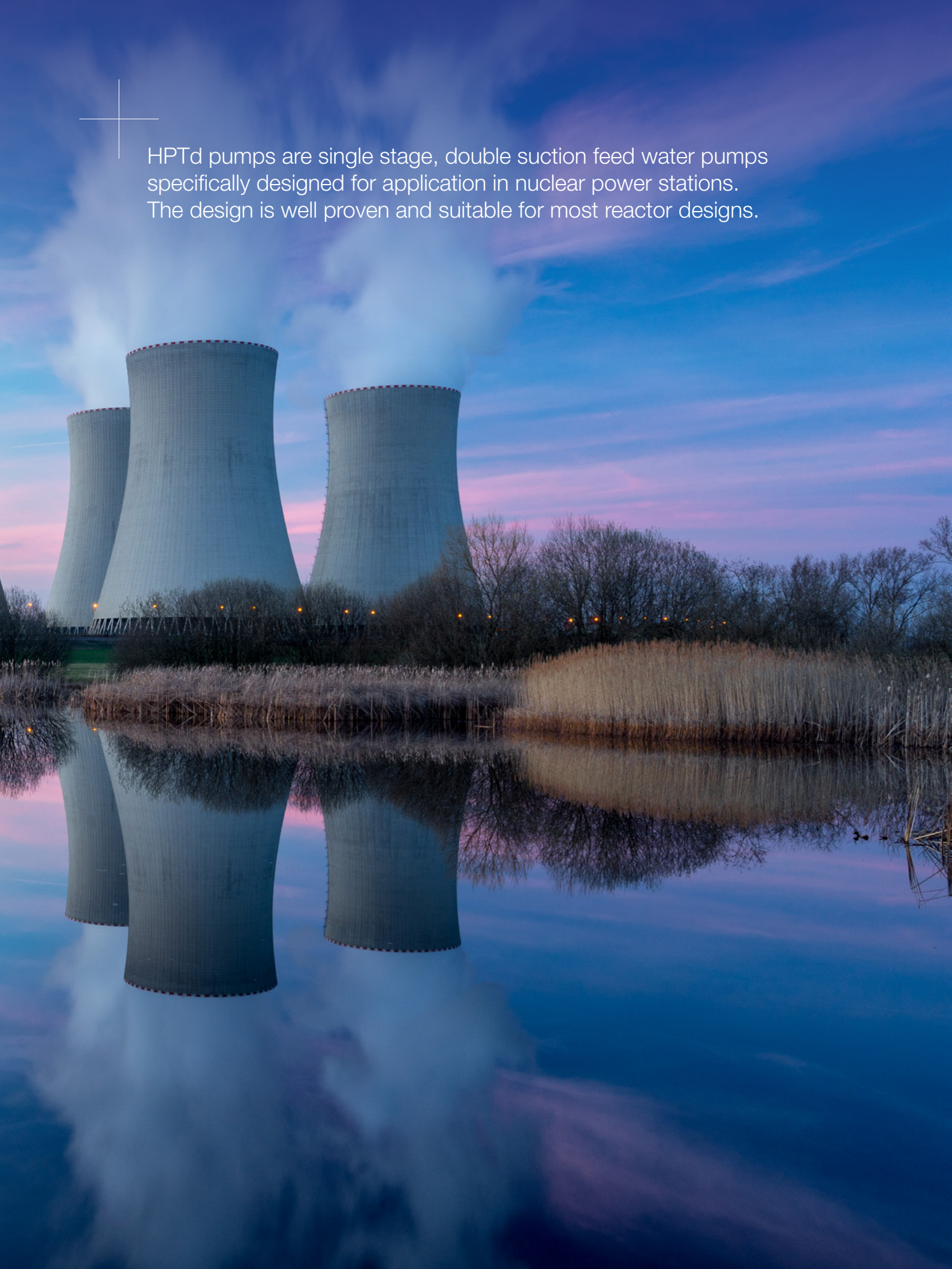


SULZER

Flow Equipment

HPTd single stage double suction feed water pump





HPTd pumps are single stage, double suction feed water pumps specifically designed for application in nuclear power stations. The design is well proven and suitable for most reactor designs.

Features and benefits

1 Casing

- Cast construction
- Optimized per FEM
- Single cover design to reduce overhaul times
- Robust design to accept high piping loads

2 Double volute construction

- Low minimum continuous stable flow (MCSF)
- Good vibrational behavior at part load operation

3 Diffuser plus single volute construction

- Allowable for duplications or on customer request
- Provides flexibility in setting best operation condition in case of refurbishment or power increase

4 Impeller

- Low specific speed to ensure a stable head curve and a wide operating range
- Staggered vanes for low pressure pulsation

5 Serrated stationary wear rings

- Optimized labyrinths for close running clearances
- Higher pump efficiency
- High rotor dynamic stability

6 Casing support

- Centerline mounted on base plate for high temperatures
- Guiding system of bottom dead center reduces displacement at coupling due to thermal elongation

7 Static seal

- Pure graphite seal ring allowing for fully confined gasket, metal to metal face and low gasket seating load

8 Journal and thrust bearing NDE / journal bearing DE

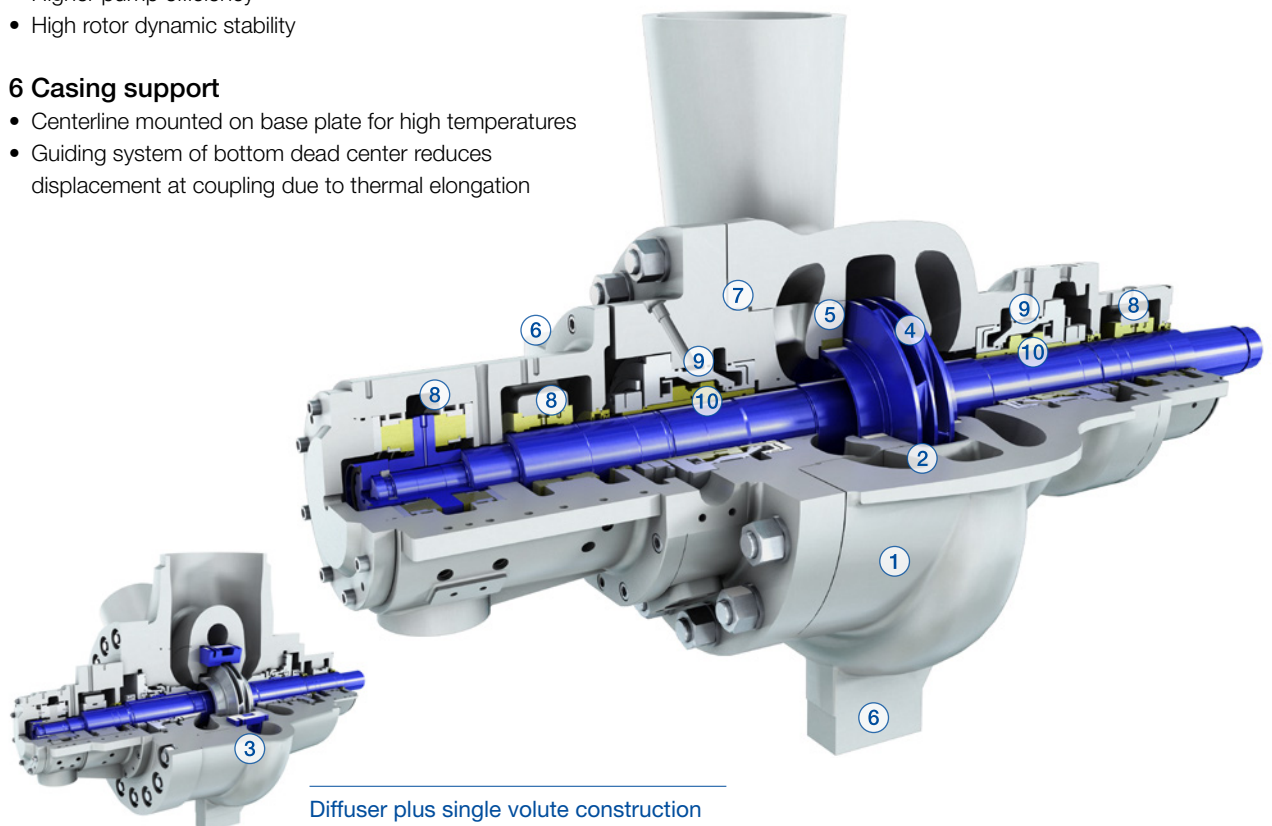
- Multi-lobed, high damping radial bearings for rotor dynamic stability
- Non-contacting oil seal (INPRO)
- Split bearing housing allows bearing inspection without pump disassembly

9 Shaft seal chamber

- Air barrier and thermo-sleeve insulate hot and cool area thus reducing thermal stratification
- Design avoids shaft bending due to stratification
- Cooling jacket keeps elastomeric seals cool during stand still

10 Single mechanical seal

- Provides higher pump efficiency
- Seal flush plan 23



Diffuser plus single volute construction

Specifications

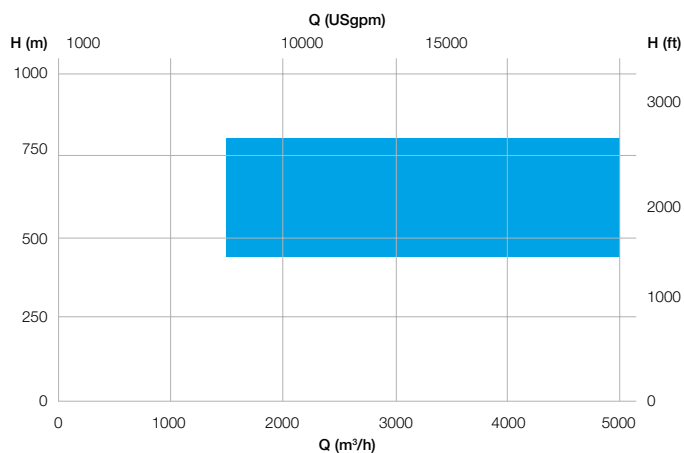
Materials

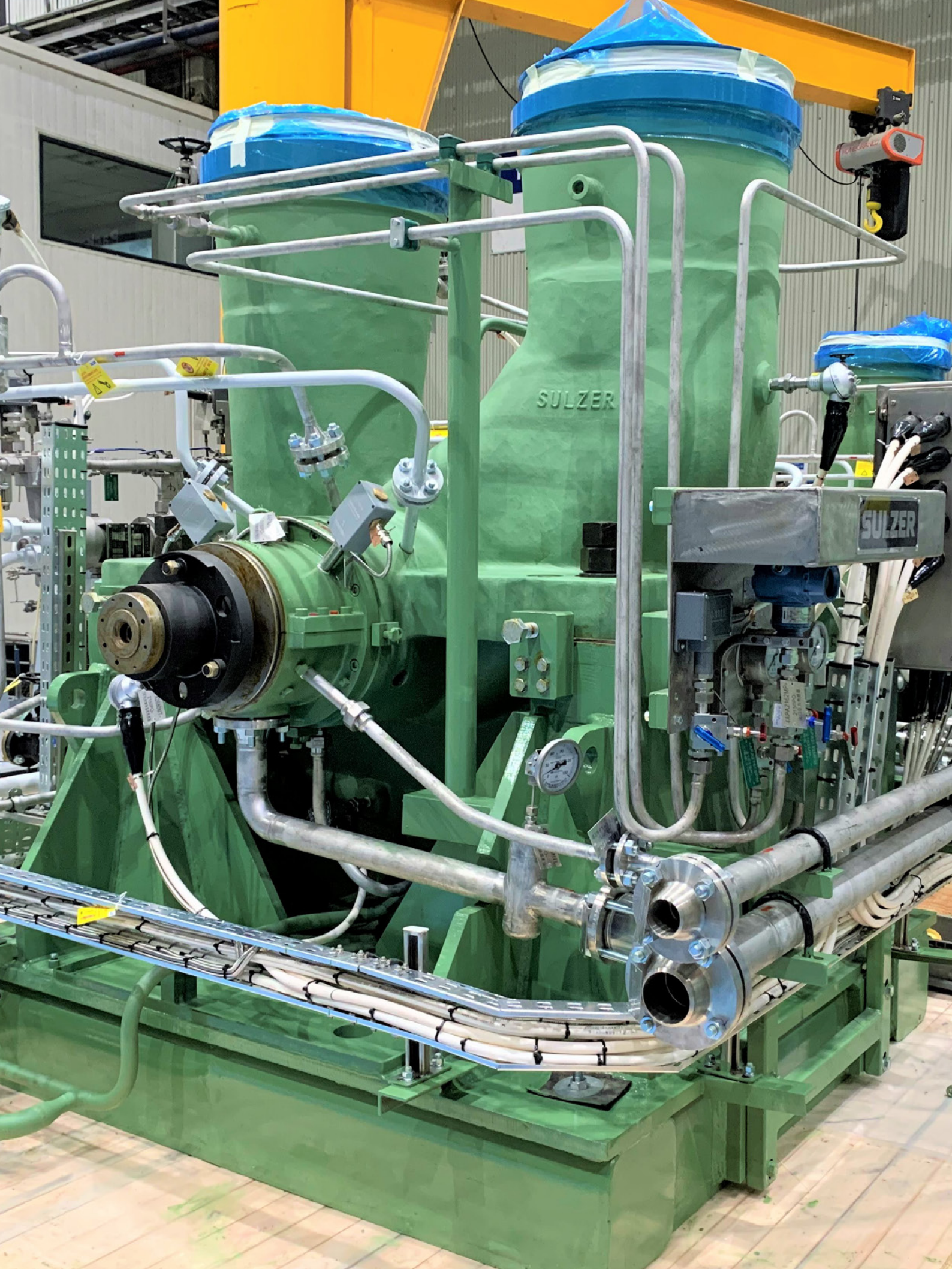
Pump part	Material
Casing, delivery cover	Chrome steel (A487, Gr CA-6NM or 1.4317+QT)
Impeller, diffuser	Chrome steel (1.4317+QT2)
Shaft	Chrome steel forged (A473, S41500+NT)
Stationary wear ring	Chrome steel (A276, Type 431)
Stud	Carbon steel (A193, Gr B7)
Static seals	Pure graphite

Operating data

	Metric units	US units
Capacities	up to 5'000 m ³ /h	up to 22'000 USgpm
Heads	up to 800 m	up to 2'625 ft.
Pressures	up to 150 bar	up to 2'175 psi
Temperatures	up to 220°C	up to 428°F

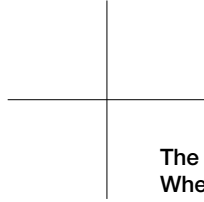
Performance range





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

The Flow Equipment 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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