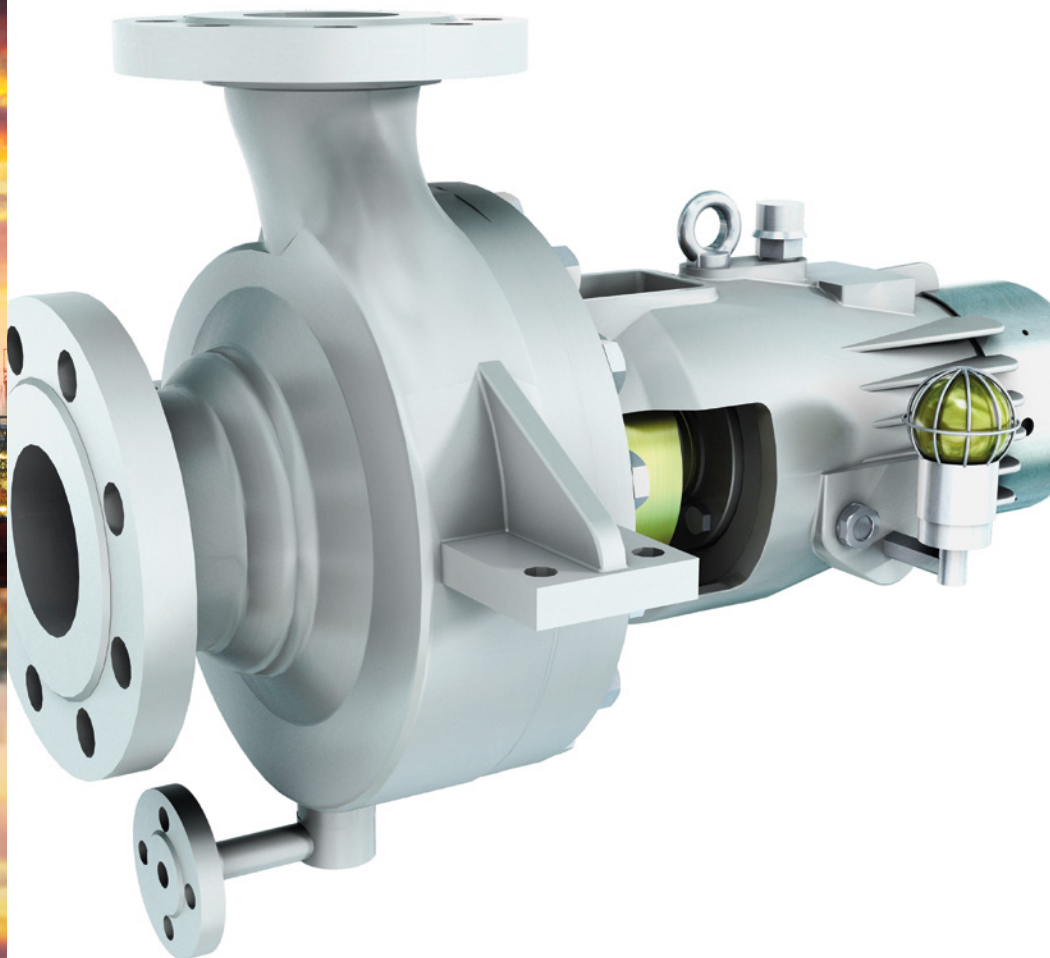


# SULZER

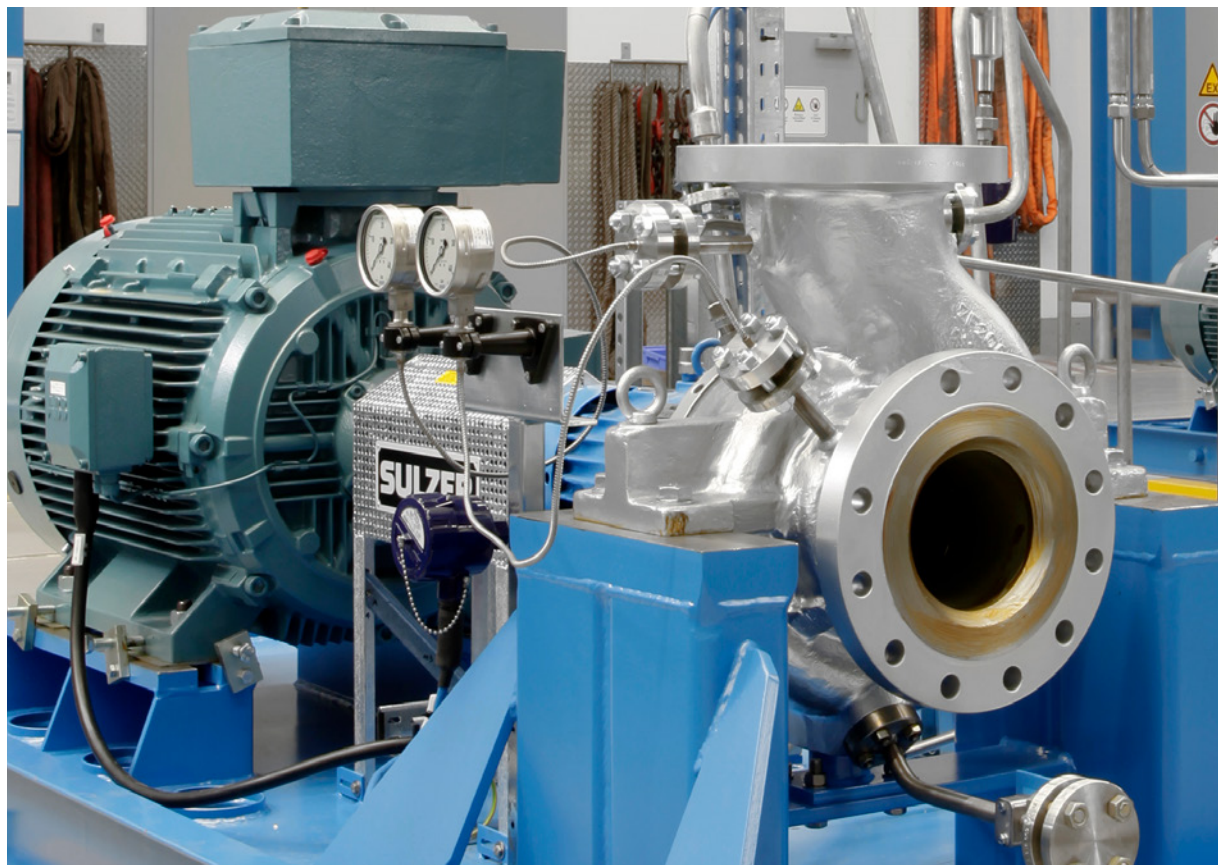
Flow Equipment

## ZE/ZF process pump API 610



# Main industries and applications

The ZE/ZF is widely used in API 610 / ISO 13709 applications for oil production, pipeline boosting, refining, petrochemical, and chemical industries. They can be found in critical services for fossil and nuclear power plants. The ZE/ZF range also provides efficient, reliable performance for desalination plants in selected services.



# Features and benefits

## 1 Flanges

- 300# and 600# or DIN flanges available
- Wide range of Maximum Allowable Working Pressure (MAWP); can be used on boiler circulation and energy recovery booster services

## 2 Pressure boundary

- MAWP up to 100 bar (1'440 psi)
- Self venting casings with double volutes on larger sizes

## 3 Enclosed dynamically balanced impeller

- Lowers Net Positive Suction Head required (NPSH3)
- Reduces vibration
- Maximizes bearing and seal life

## 4 Heavy duty radial and thrust bearings

- Long thrust bearing and radial bearing life in tough services
- Roller radial bearings handle more loads
- Ball radial bearing can be supplied when specified

## 5 Bearing housing

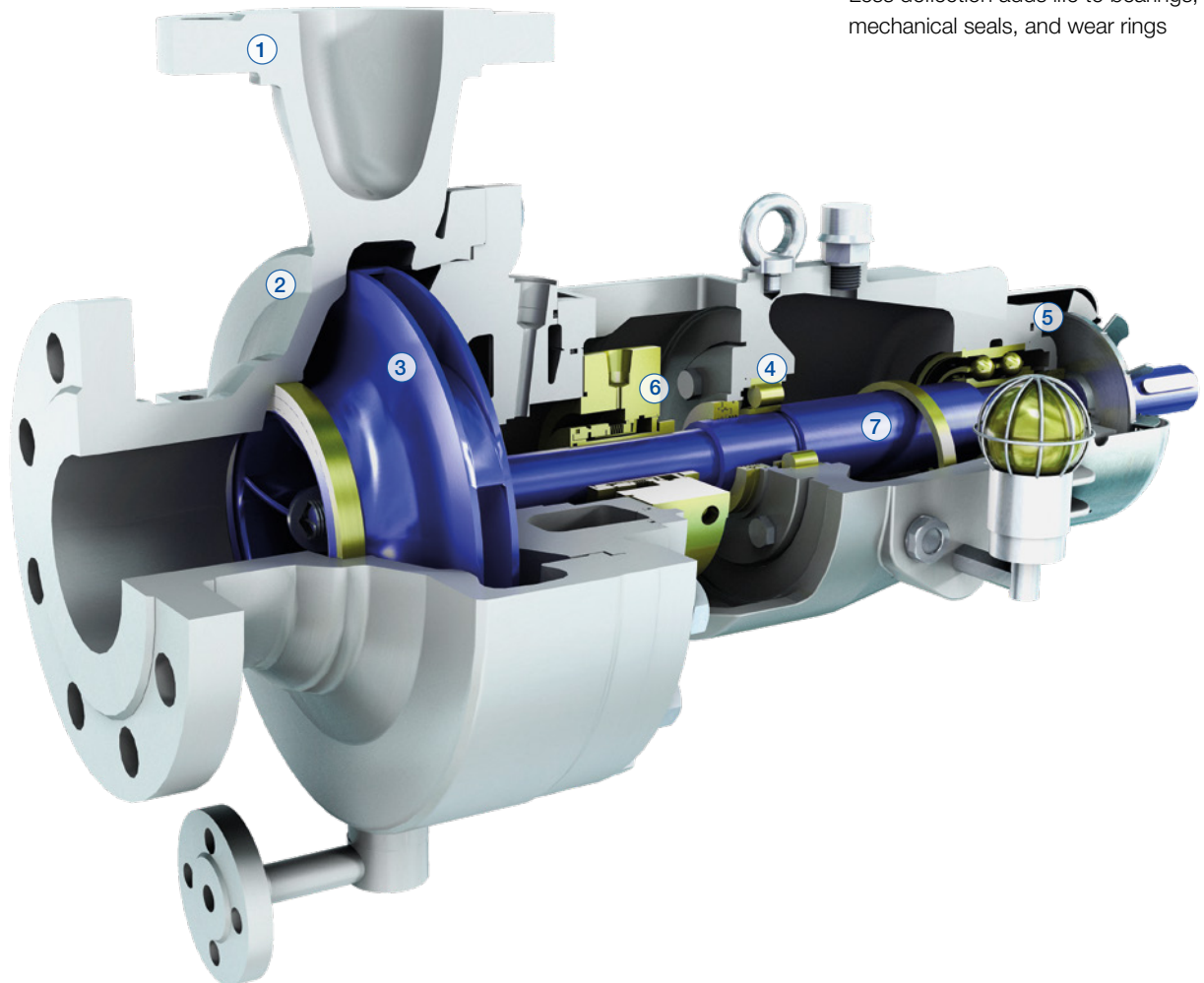
- Maximum interchangeability
- Water cooling not required when fan supplied
- Bearing isolators to match customer needs
- Pure or purge oil mist prolongs bearing life

## 6 Mechanical seals

- Cartridge type API 682 seals normally supplied
- Other types of seals to meet customer specifications

## 7 Heavy duty shaft

- Less deflection adds life to bearings, mechanical seals, and wear rings



# Specifications

## Materials

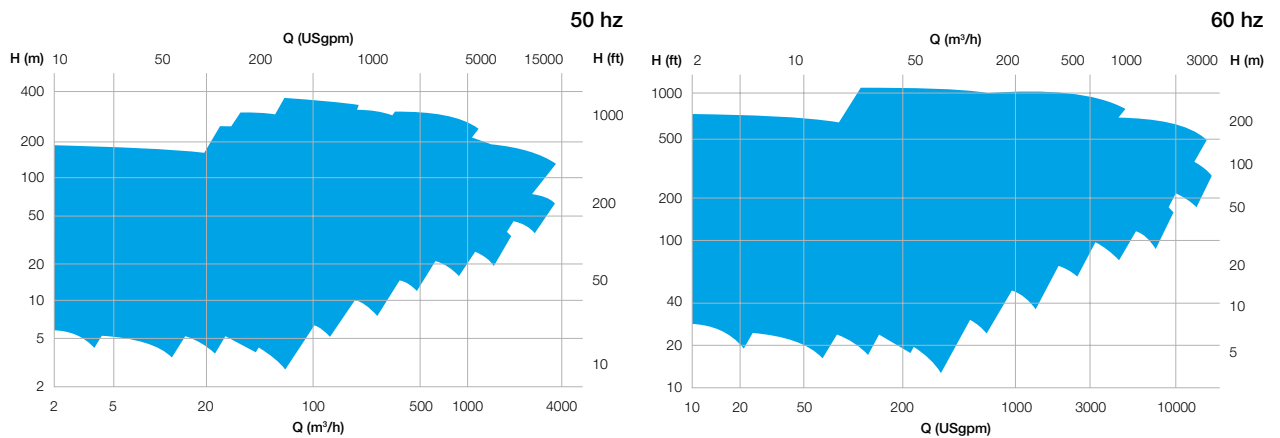
Pump part	Material
Casing	Carbon steel, chrome steel, 316 SS, duplex, superduplex
Impeller	Chrome steel, 316 SS, duplex, superduplex
Shaft	Stainless steel, duplex, superduplex

API 610 material codes S-5, S-6, S-8, C-6, A-8, D-1, D-2

## Operating data

	50 Hz	60 Hz
Pump sizes	up to 400 mm	up to 16 in.
Capacities	up to 2'600 m <sup>3</sup> /h	up to 11'440 USgpm
Heads	up to 300 m	up 1'000 ft.
Pressures	up to 100 bar	up to 1'450 psi
Temperatures	up to 425°C	up to 800°F

## Performance range





# We keep your processes flowing

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Wherever fluids are treated, pumped, or mixed, we deliver highly innovative and reliable solutions for the most demanding applications.

## Our offer

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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.



### Pumps

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As one of the world's leading pump manufacturers, Sulzer provides a wide range of products for engineered, configured, and standard pumping solutions as well as essential auxiliary equipment. We are renowned for our state-of-the-art products, performance reliability and efficient solutions.



### Agitators and dynamic mixers

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Sulzer mixing and agitation technology offers a wide range of products for industrial applications. Side-mounted horizontal and top-mounted vertical agitators, dynamic chemical mixers, and tower and tank flow management products guarantee effective mixing and agitating processes.



### Compressors and aeration

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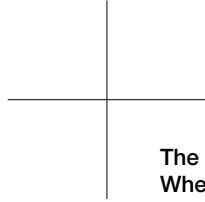
Sulzer's state of the art offering for municipal and industrial wastewater treatment includes turbocompressors, aeration systems and mechanical aerators. Our application and process know-how combined with our unique product portfolio give us the means to provide customers with reliable and efficient solutions.



### Submersible mixers

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Sulzer's energy efficient submersible mixers are suitable for a wide range of applications in industry and municipal treatment plants. They provide the right solution to match mixing tasks for agitating, blending, mixing, dissolving and suspension of solids in industry and municipal treatment plants.



**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.**

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