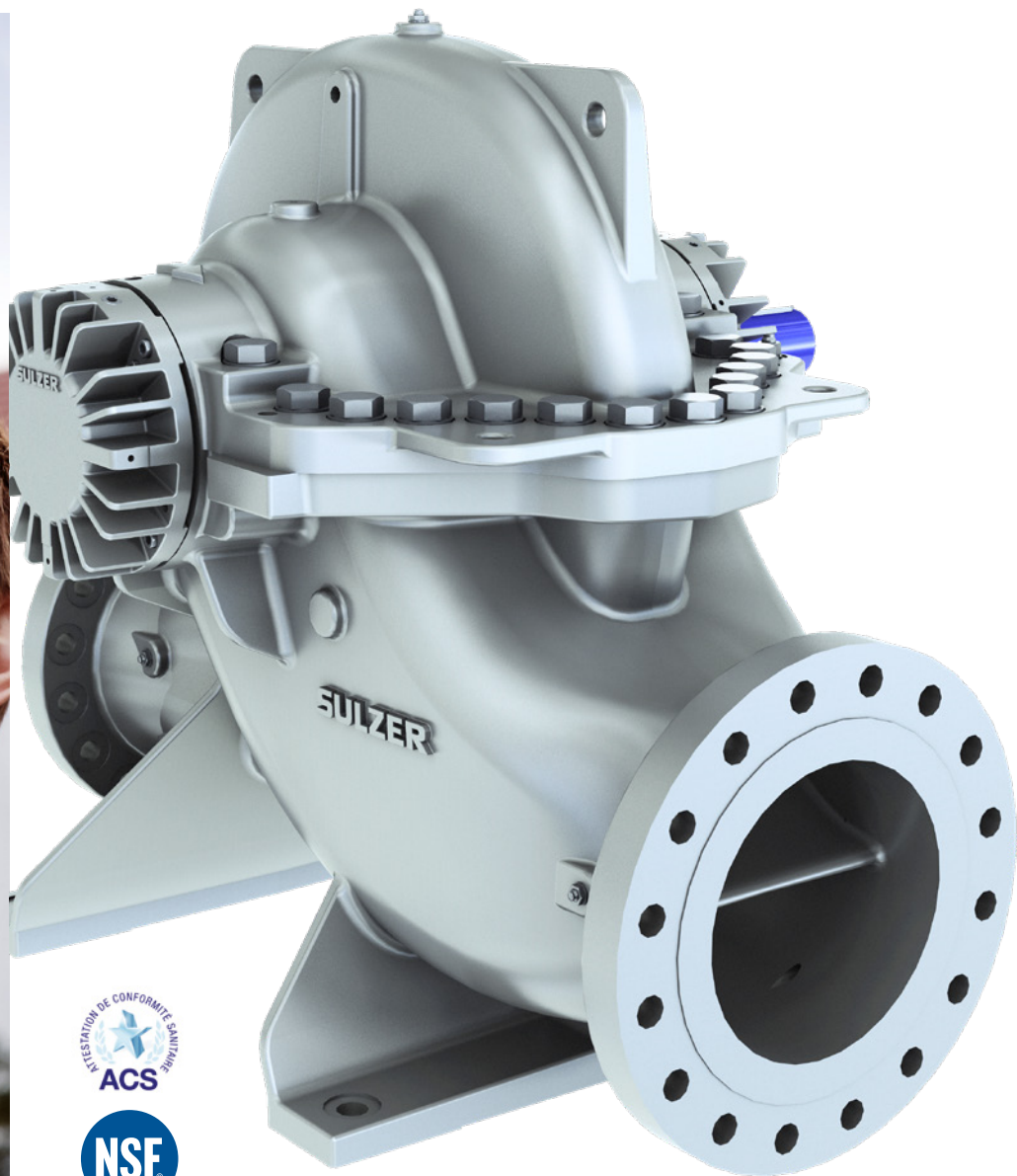


# SULZER

Pumps and pumping systems

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## SMD axially split casing, double suction pump





# Main industries and applications

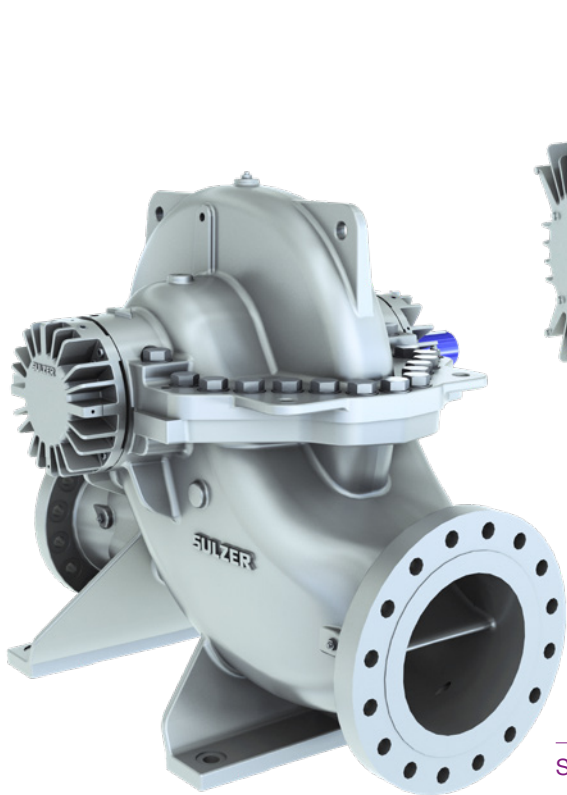
SMD single stage, double suction, axial split casing pumps are designed to meet the needs of the water market for a wide range of raw, clean, sea and brackish water applications:

- Water abstraction
- Water transport
- Desalination
- Water treatment
- Water supply and distribution
- Irrigation, drainage and flood control
- District cooling/heating

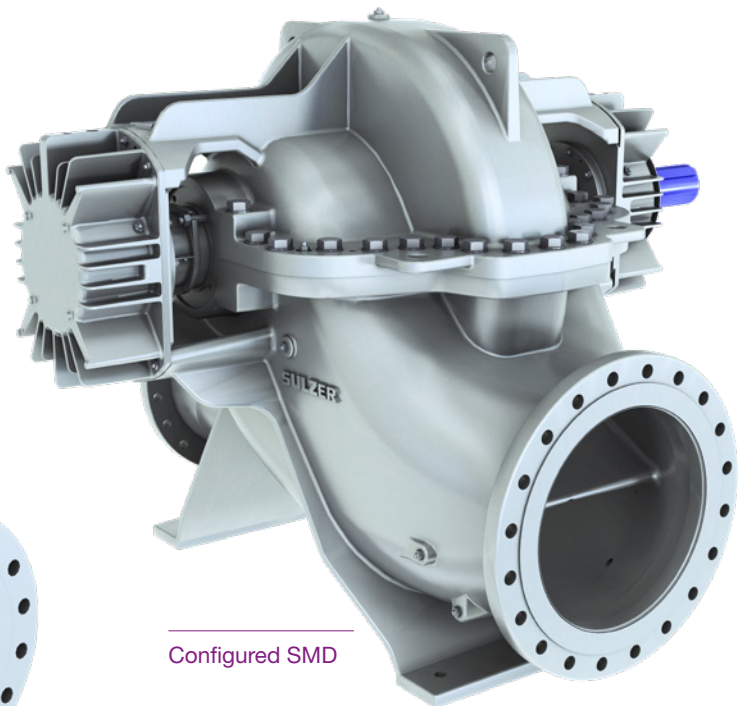
Suitable for drinking water applications. ACS and NSF 61 certificates available.

To meet the demands of the individual applications, the SMD benefits from a best-in-class hydraulic design that is combined with two specific mechanical envelopes:

- Standard SMD, focused on municipal water treatment, supply and distribution where typically a higher level of standardization is required, allowing the most cost effective solutions and shortest lead times.
- Configured SMD combines standardization and modularization to offer a number of configurable options to meet the most common requirements of the water abstraction, transport and desalination industries.



Standard SMD

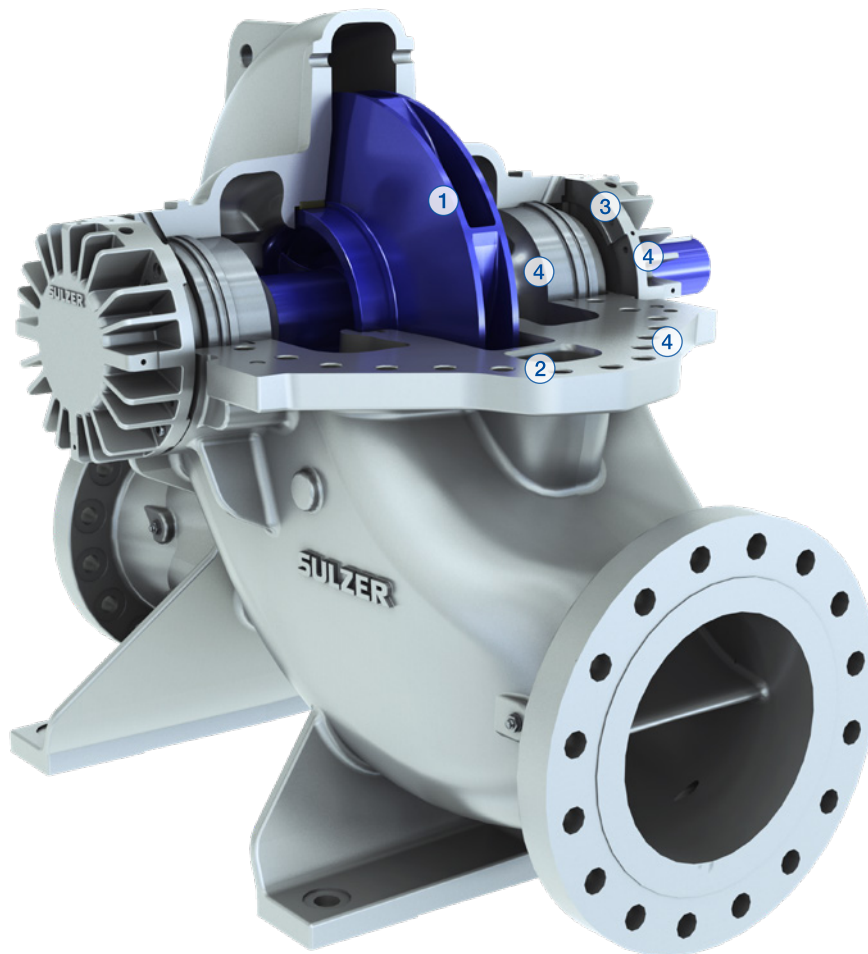


Configured SMD

# Features and benefits

## Standard SMD

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### 1 Double suction impeller

- With inherent hydraulic balance of axial thrust
- Exceptional efficiency over a wide range of flows
- Excellent Net Positive Suction Head Required (NPSHR) also in flow run out conditions

### 2 Double volute casing

- Radial load balancing
- Innovative cut-water design for minimum radial load pulses and reduced vibrations
- Self-draining
- Compact dimensions for reduced bearing span and improved shaft stiffness

### 3 Ball bearings

- 360° fixation for enhanced stiffness
- Greased for life, deep groove single ball bearings at both drive and non-drive ends
- Maintenance free bearing for three years of continuous operation

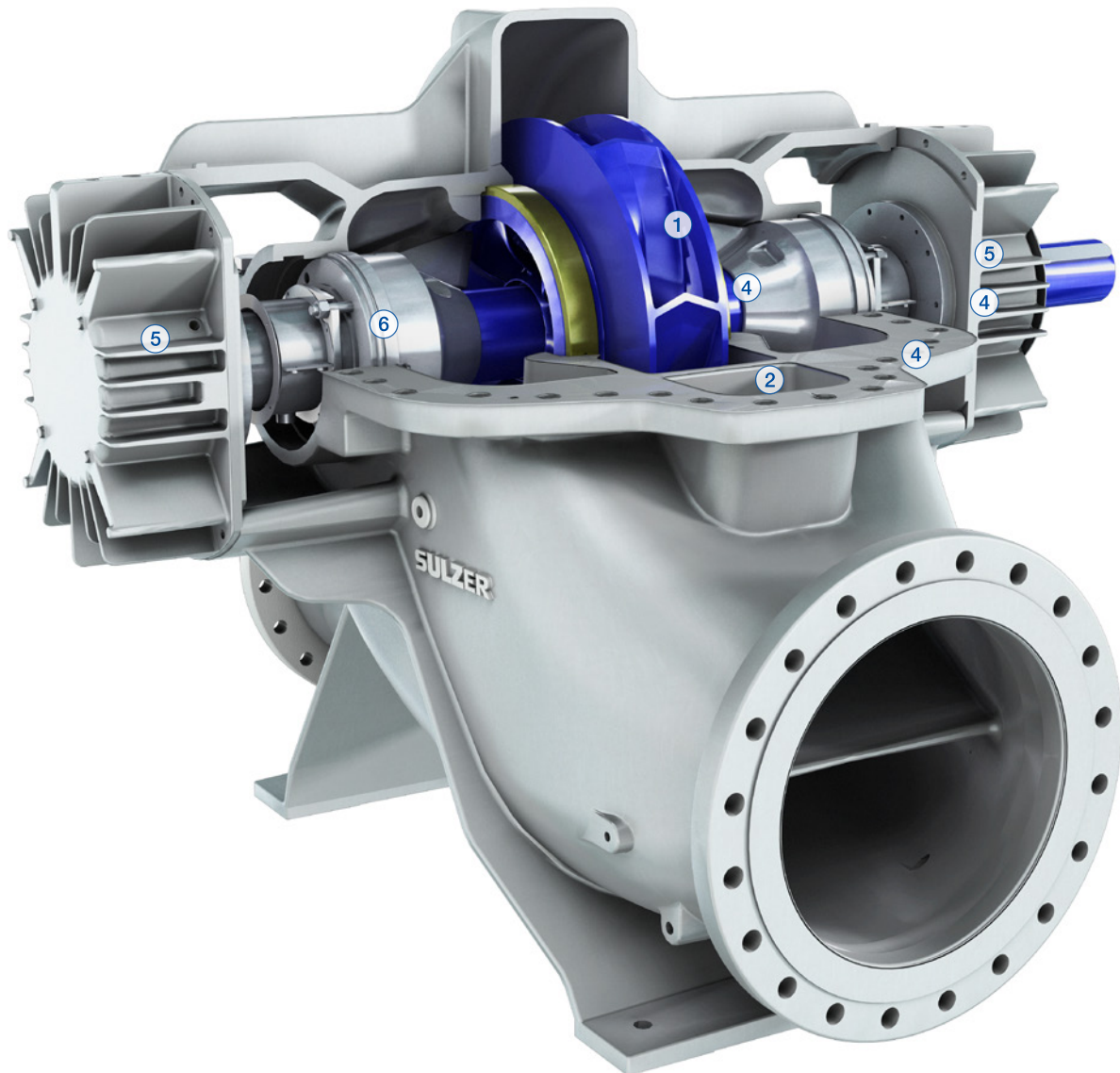
### 4 Easy maintenance

- Single, balanced mechanical seal as standard shaft sealing
- Dowel pins for alignment of the casing halves
- Precision register fits, adjustment of rotor assembly in the casing is not needed
- Bearings, bearing nuts, bearing isolators, mechanical seal, shaft seal sleeves are replaceable without removing the upper casing

# Features and benefits

## Configured SMD

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### 5 Heavy duty bearing design

- For higher power requirements, typically in large water transport applications
- Generously sized for life cycle up to 100'000 hours
- With angular contact, double ball bearing at drive end and single radial ball bearing at the non-drive end
- Grease or oil lubricated bearings available

### 6 Shaft sealing

- Gland packing available as an option
- Other mechanical seal configurations available upon request

# Optional features

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## Vertical arrangement

- With grease lubricated thrust bearing at the drive end and product lubricated proven design bearing at the non-drive end
- Interchangeable casing with the horizontal arrangement

## Bearings

- Cooling fan in thrust bearing for heavy duty applications such as high speed, high ambient temperature, provides effective cooling without need of cooling water
- Connection for temperature and vibration monitoring instruments

## Impeller wear ring

- Shrink fit and axially secured
- Offers additional impeller protection
- Reduced maintenance cost in heavy duty applications

## Seal plan options

- Plan 11 as standard
- Plan 31 with cyclone separator as option
- Plan 32 with external flushing source as option



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Standard SMD  
in vertical arrangement (SMDV)



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Configured SMD  
in vertical arrangement (SMDV)

# Specifications

## Materials

Pump part	Material combination						
	1c	1e	1d **	2b **	3	4a	4b
Casing	Ductile iron			Carbon steel	Duplex	Super duplex	
Impeller	Duplex		Carbon steel		Duplex	Super duplex	
Shaft	Chromium steel				Duplex		Super duplex
Stationary ring	Aluminum bronze	Duplex	Aluminum bronze		Duplex	Super duplex	
Impeller ring *	Duplex	Duplex + hard face coating	Carbon steel		Duplex + hard face coating	Super duplex + hard face coating	

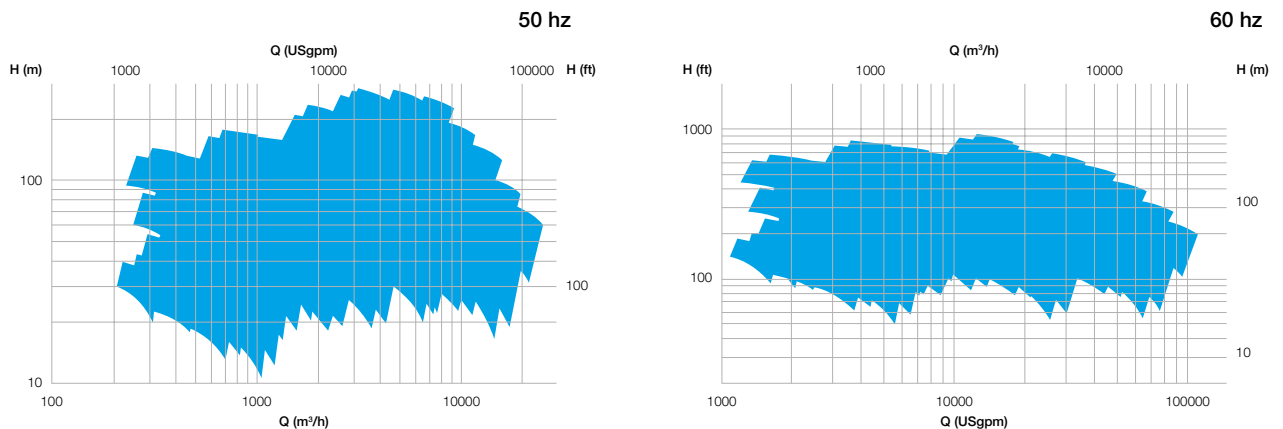
\* optional

\*\* available only for configured SMD

## Operating data

	50 Hz	60 Hz
Pump sizes	150 to 1'000 mm	6 to 40 in.
Capacities	200 to 25'000 m <sup>3</sup> /h	1'100 to 110'000 USgpm
Heads	up to 260 m	up to 850 ft.
Pressures	up to 34 bar	up to 490 psi
Temperatures	up to 140°C	up to 280°F

## 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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