

## **SJD-API** vertically suspended API 610 type VS6/VS7



# Main industries and applications

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Sulzer SJD-API VS6/VS7 pumps are specified whenever limited Net Positive Suction Head (NPSH) is available, due to system constraints or liquids operating near their vapor pressure.

Typical applications include:

- LPG (Liquefied Petroleum Gas) boosting
- Tank farm and pipeline boosting
- LNG (Liquefied Natural Gas), cryogenic gas plant, and other cold services
- General refining



# Features and benefits

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## 1 First stage impeller

- Low Net Positive Suction Head Required (NPSHR) allows use of a shorter pump

## 2 Series impellers

- High efficiency
- Optional thrust balanced impellers for reduced thrust load

## 3 Column bearings

- Mounted in a reversible bearing spider that may be flipped to run a new bearing on a different shaft surface

## 4 Discharge heads

- Cast or fabricated for various nozzle, thrust bearing and seal configurations

## 5 Shaft sealing

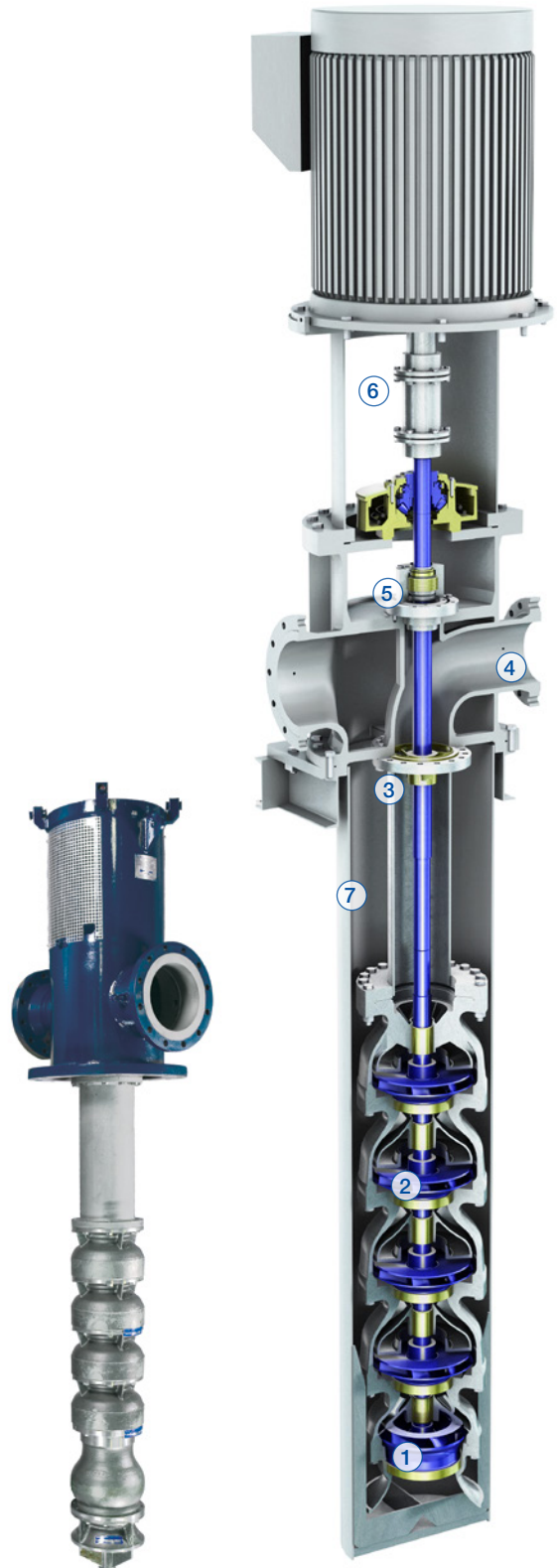
- Accommodates ISO 21049 (API 682) cartridge type mechanical seals

## 6 Rigid adjustable spacer coupling

- Simple mechanical seal maintenance and rotor lift adjustment

## 7 Construction

- Suction can enables the pump to make its own NPSHa for high vapor pressure fluids





# Optional features and benefits

## Driver stand

- Discharge head and driver stand checked for natural frequency coincidence

## Thrust bearing

- Bearings are designed to meet ISO 13709 (API 610) requirements to avoid overheating
- Optional fan, water or pumpage cooled thrust bearing with CS bearing housing and high or extra high thrust bearings

## Mounting plate

- Optional separate mounting plate to allow for through bolting on main flange when required by specification or higher loading for spiral wound gasket compression

## Suction can

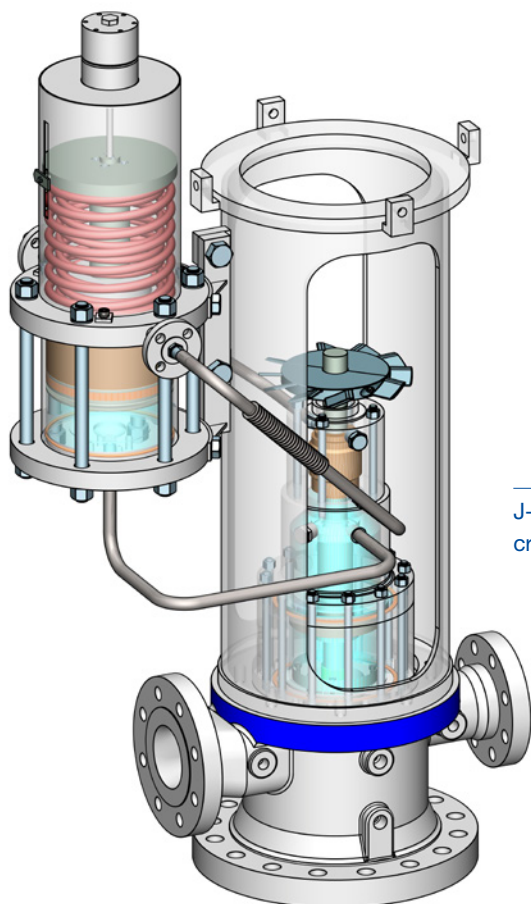
- Specially designed suction cans are available with dished, semi-spherical can bottom, external can drains, below ground suction and many more options

## J-unit for cryogenic services

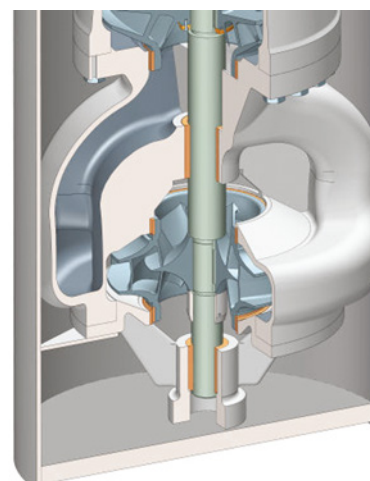
- Isolation chamber separates cold LNG from seals thus allowing the use of standard API 682 dual seals operating near ambient temperature
- Seal oil is held at slightly higher pressure than suction pressure by special Plan 53C. For more information, see separate J-unit brochure.

## Double suction impeller for low Net Positive Suction Head (NPSH)

- Provides nominal 30 % reduction in NPSH required with  $N_{ss} \leq 11,000$
- Impeller mounted between bearings



J-unit for  
cryogenic services



Double suction impeller for low Net  
Positive Suction Head (NPSH)

# Specifications

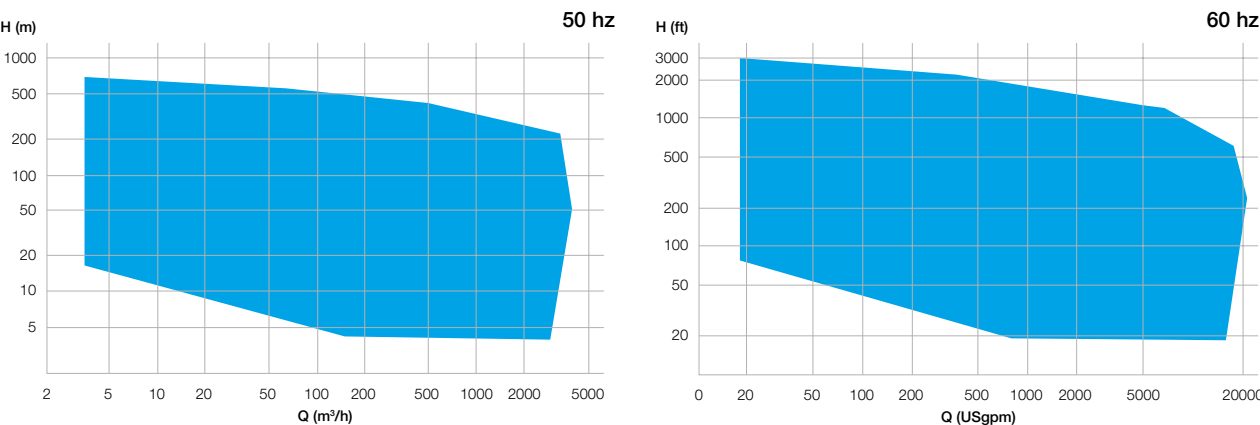
## Material options

ISO 13709 (API 610) material codes: S-5, S-6, S-8, A-8, D-1, D-2

## Operating data

	50 Hz	60 Hz
Discharge size	up to 600 mm	up to 24 in.
Capacities	up to 5'000 m³/h	up to 22'000 USgpm
Heads	up to 900 m	up to 3'000 ft.
Pressures	up to 78 bar	up to 1'130 psi
Temperatures	up to +205°C	up to +400°F
Speeds	up to 3'600 rpm	up to 3'600 rpm

## Performance range



**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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