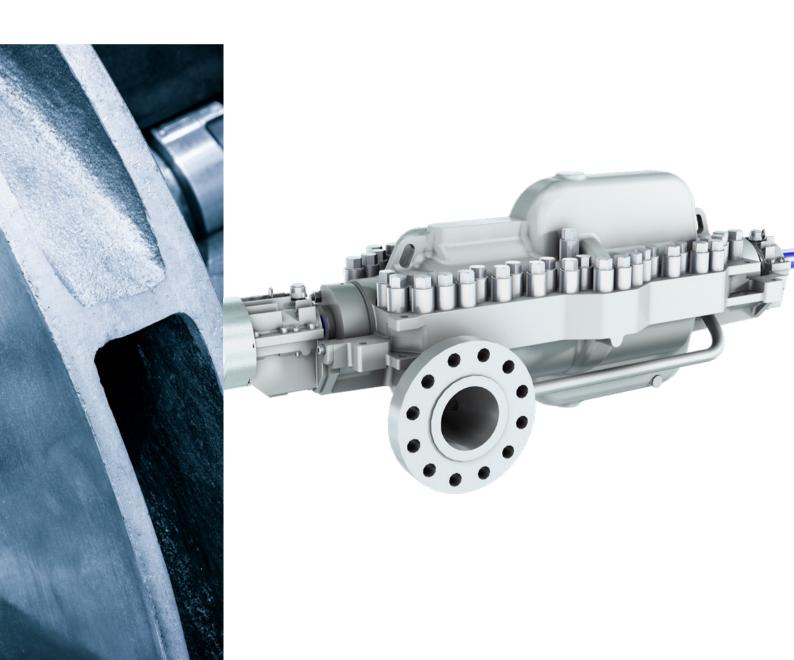


Pumps and pumping systems

# **MSD** axially split multistage pump



# Main industries and applications

- Boiler feed in all industries; auxiliary feed in nuclear power
- Reverse osmosis feed
- Offshore crude oil shipping
- Refined product pipeline
- Supercritical Liquefied Petroleum Gas (LPG), Ethylene and CO<sub>2</sub> compressible services down to 0.25 sp.gr.





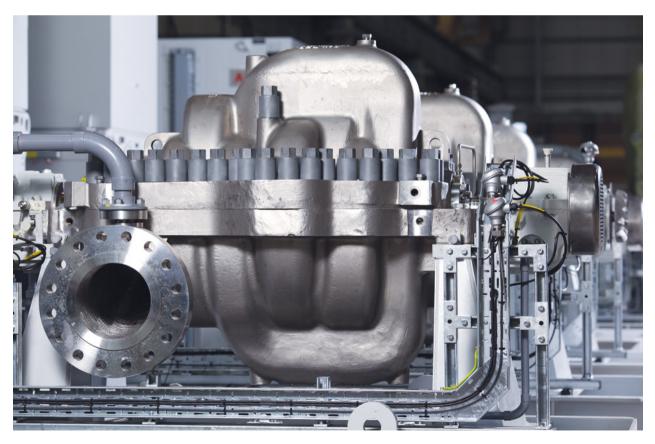












# Features and benefits

#### 1 Impellers

 Shrink fit, precision cast, dynamically balanced and individually secured

#### 2 Axially split casing

- Simplifies rotor balancing, inspection and installation, case passageway inspection and modification, and spare rotor retrofits
- Support is near centerline for alignment
- Full range of design pressures to suit applications

#### 3 Large diameter shaft

- Stepped for ease of assembly
- Sized to satisfy rotor dynamics and power transmission with worn clearances
- Optimized for hydraulic performance

#### 4 Double volute construction

 Minimum radial thrust for less shaft deflection and less bearing loading

#### 5 Bearings

 Ball radial and 7300 series ball thrust bearings are standard; sleeve/ball and sleeve/pivot shoe bearings are optional. INPROTM isolators are standard

#### 6 Seal chambers

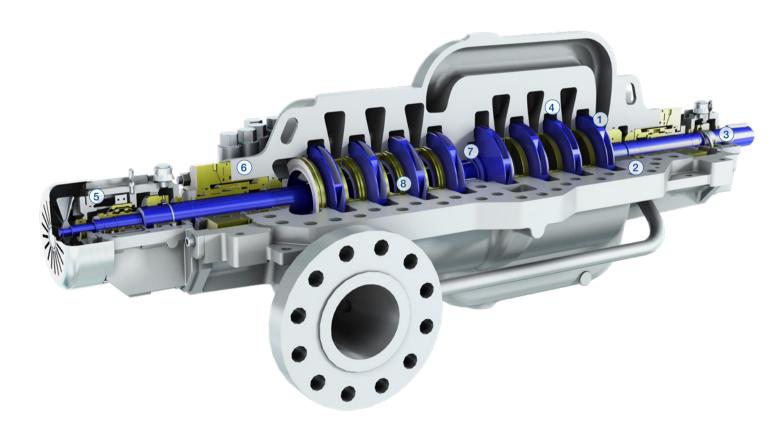
- Easy access for maintenance
- Space for tandem and double mechanical seals
- Compliance with ISO-13709 (API610) dimensions

#### 7 Split center bushing

 Facilitates rotor dynamic balance, inspection, removal and replacement

#### 8 Replaceable wear rings

• Pinned and axially retained impeller and case wear rings are standard



# **Specifications**

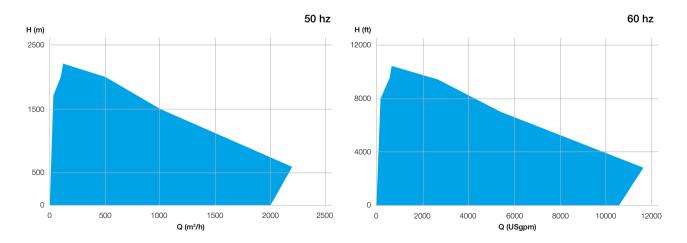
## Material options

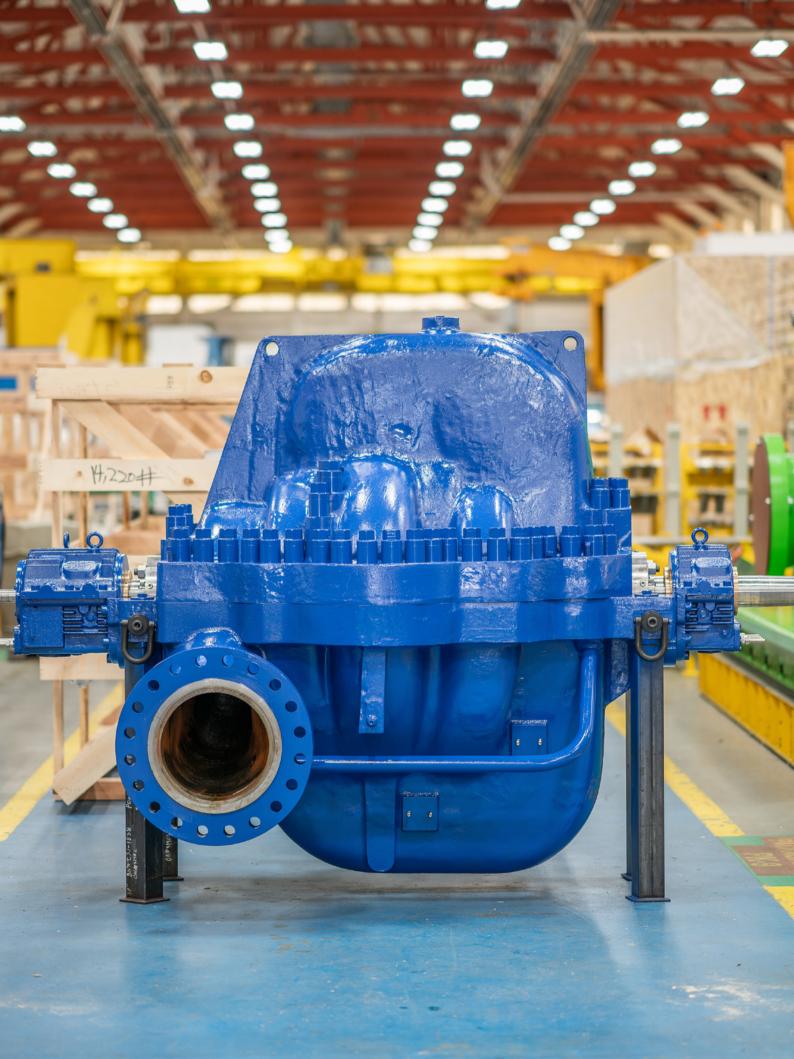
API 610 material codes: S-5, S-6, S-8, C-6, A-8, D-1, D-2

## Operating data

	50 Hz	60 Hz
Pump sizes	80 to 400 mm	3 to 16 in.
Capacities	up to 3'200 m <sup>3</sup> /h	up to 14'000 USgpm
Heads	up to 2'900 m	up to 9'500 ft.
Pressures	up to 300 bar	up to 4'400 psi
Temperatures	up to 205°C	up to 400°F
Max. speed of rotation	over 6'000 rpm	over 6'000 rpm

## Performance range





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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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