OCV range of API 610 type VS4 sump pumps

Features and benefits

API 610 pump casing and impeller

- Casing cover, impeller and wear parts are interchangeable with Sulzer OHH/OHHL API 610 OH2 pumps
- Minimizes spare part inventory

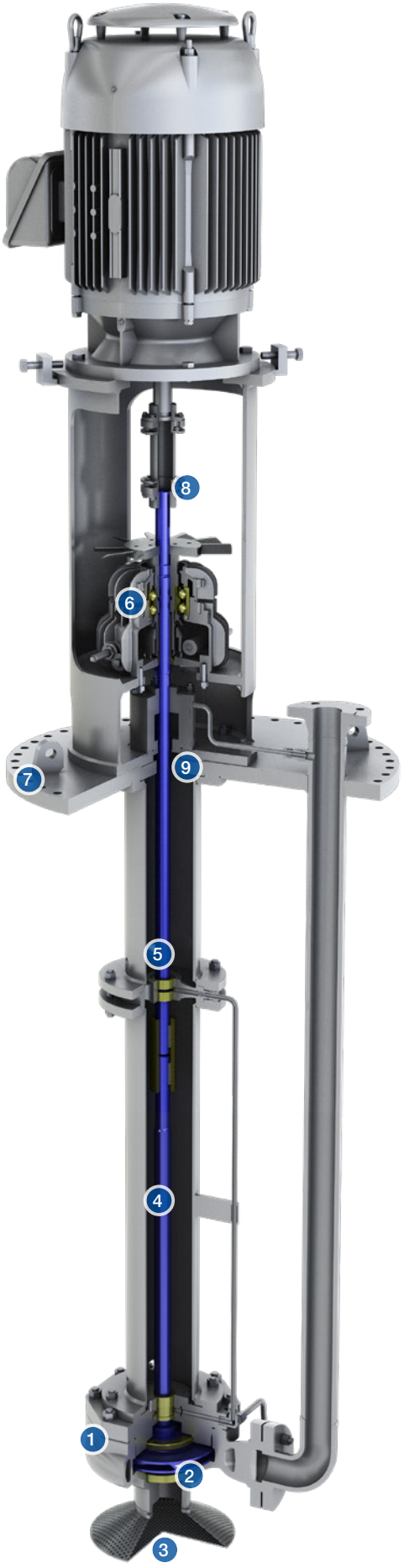
Key driven impeller

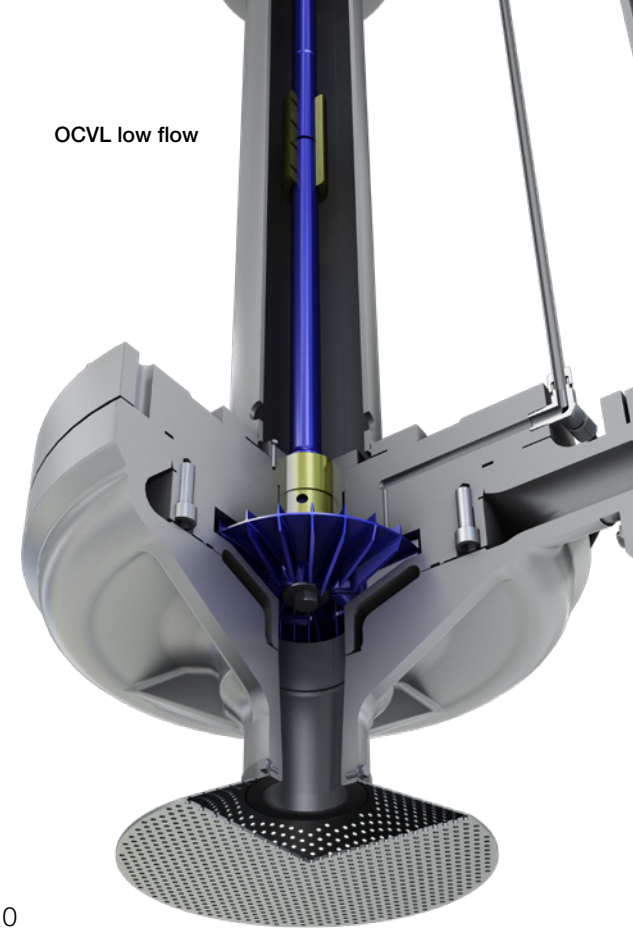
- API 610 mandatory requirement
- Enclosed OHH impeller for normal flow
- Barske type OHHL impeller for low flow

Suction strainer

- Stainless steel suction strainer to help prevent excessive solids entering impeller

1. Casing
2. Impeller
3. Strainer
4. Shaft
5. Lineshaft bearing
6. Thrust bearing
7. Mounting flange
8. Motor coupling
9. Mechanical seal





OCVL low flow

Conservative shaft and bearing design

- Bearing spacing follows API 610 to assure that first critical speed of shaft system is well above operating speed
- Carbon bearings are standard, other bearing materials are optional
- Heavy duty, high torque shaft may be single piece, or coupled with stud and keyed shaft coupling for ease of maintenance

Column bearings and lubrication

- Internal lube standard
- Grease or external bearing flush is optional
- Replaceable bearing spiders

Thrust bearing

- Unlike most sump pumps, OCV/OCVL features oil lubricated 7300 series bearings with machined brass cages as required by API 610
- Purge mist or grease lube are optional
- Carbon steel thrust bearing housing with AES or Inpro isolators

Sealing options

- Single or dual API 682 mechanical seal at mounting plate with API 610 seal chamber
- Gas seals available with plan 72/74 support systems

Mounting plate

- Rectangular epoxy coated carbon steel mounting plate is standard, round mounting plate is optional
- Four point lift allows vertically installation and compensates for pump center of gravity being off center
- Additional rigid coupling option for inspection or replacement of mechanical seal without removal of thrust bearing

Instrumentation

- A variety of level switches, level transducers and other instrumentation is available to meet specifications

Drivers and couplings

- NEMA or IEC vertical motors can be supplied
- API 610 non-lubricated couplings are standard, others are optional

Discharge pipe

- Buttwelded and hydrotested discharge pipe capable of 3X API 610 nozzle loads is standard

OCVSF for molten sulfur

OCVSF pump is designed specifically for transferring clean or light contaminated molten sulfur, meet both the challenging pumping requirements of molten sulfur while maintaining full compliance to API 610 specification and design principles to maintain aligned rotating equipment standards within the plant.

API 610 pump casing and impeller

- API 610 casing with bypass (spill back) option for minimum continuous flow protection
- Special open impeller with free draining features for handing molten sulfur
- API 610 key driven impeller to avoid loose impeller during reverse flow

Heating jacket

- Column and discharge pipe fully jacketed to maintain sulfur in molten state
- Buttwelded and hydrotested discharge pipe capable of 3X API 610 nozzle loads

Column bearings and lubrication

- Iron graphalloy shaft bearings lubricated by filtered product
- Hard coated journal option
- Replaceable bearing spiders

Conservative shaft and bearing design

- Bearing spacing follows API 610 to assure that first critical speed of shaft system is well above operating speed
- Finned carbon steel bearing housing with fan cooling as standard
- API 610 non-lubricated flexible metal couplings as standard

Thrust bearing

- OCVSF features oil lubricated 7300 series bearings with machined brass cages as required by API 610
- Fan cooling is standard and additional water cooling is an optional
- Finned carbon steel thrust bearing housing with isolators acc. API 610

Sealing options

- API 682 mechanical seal at mounting plate with API 610 seal chamber
- Gas seals available with plan 72/74 support systems
- Optional packed gland

Mounting plate

- Rectangular epoxy coated carbon steel mounting plate is standard, round mounting plate is optional
- Four-point lift allows adjustment for installation vertically

OCV product family

SJD-API

vertically suspended API 610 type VS6/VS7

Features and benefits

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

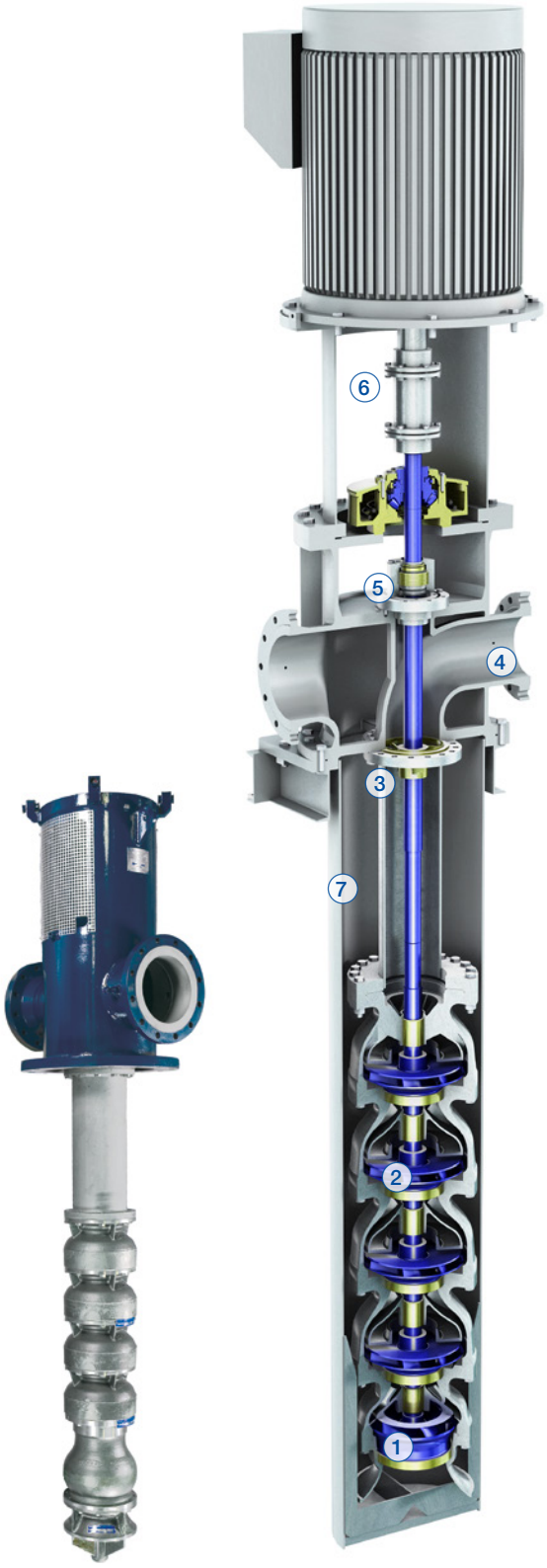
3 Column bearings
- Mounted in a reversible bearing spider that may be flipped to run a new bearing on a different shaft surface

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



SJT-API

vertically suspended API 610 type VS1/VS2

Features and benefits

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
- VS1 for sump or tank