

## **OCV and OCVL API 610 Type VS4 Sump Pumps**



## Main Applications

Vertically suspended pumps are used in many applications where mounting of the driver and discharge piping is well above the liquid level, or where floor space is limited. The OCV and OCVL API 610 VS4 sump pump can be applied to any sump application with moderate solid content.

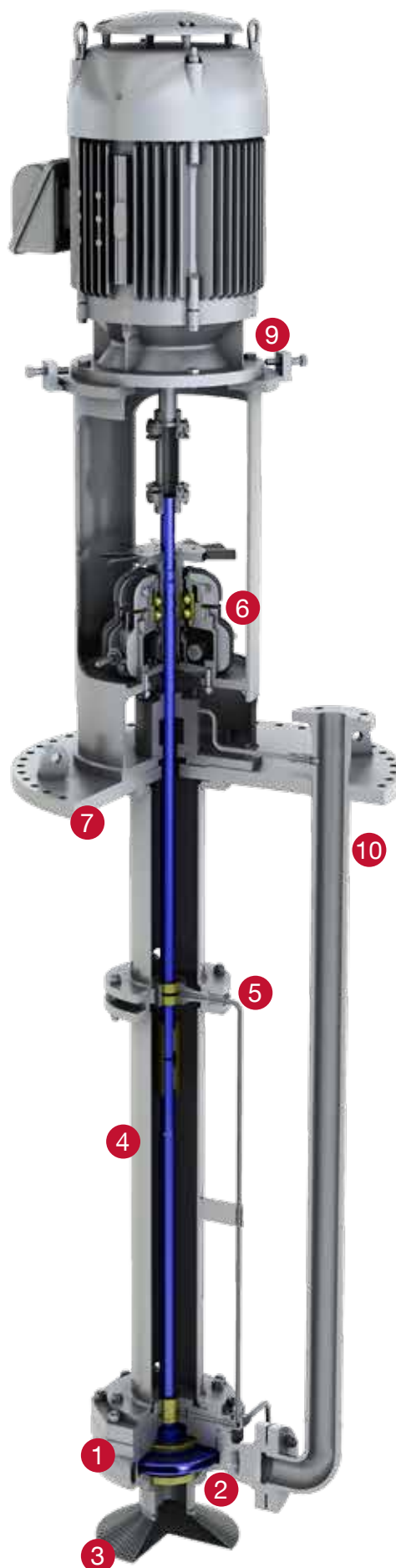
Sump pumps are mounted on sumps or tanks and are typically controlled by a level switch to pump down the sump or tank and shutoff until the level rises again. Other applications may pump continuously. OCV-OCVL pumps are utilized in refining, oil and gas production, petrochem, and other heavy duty applications.

Typical applications include:

- Drainage sumps
- Oily water sumps
- Lube oil supply
- Tank transfer

## Features and Benefits

- 1 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
- 2 Key driven impeller**
  - API 610 mandatory requirement
  - Enclosed OHH impeller for normal flow
  - Barske type OHHL impeller for low flow
- 3 Suction strainer**
  - Stainless steel suction strainer to help prevent excessive solids entering impeller
- 4 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



### 5 Column bearings and lubrication

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

### 6 Thrust bearing

- Unlike most sump pumps the OCV/OCVL's 7300 series thrust bearing is oil lubricated
- Purge mist or grease lube are optional
- Carbon steel thrust bearing housing with AES or Inpro isolators



### 7 Mounting plate and driver support

- Rectangular epoxy coated carbon steel mounting plate is standard, round mounting plate is optional
- To reduce emissions, API 610 seal chamber and API 682 mechanical seals are optional
- Epoxy coated CS driver stand supports driver and allows height for mechanical seal when specified

### 8 Instrumentation

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

### 9 Drivers and couplings

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

### 10 Discharge pipe

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

## Materials

Material code	Material
S-6	Carbon steel casing, 12% chrome impeller, lineshaft and wear parts. CS column and discharge pipe, epoxy coated CS mounting plate and driver stand, carbon lineshaft bearings.
S-8	Carbon steel casing, 316L SS impeller, shaft and HF 316SS wear parts. CS column and discharge pipe, epoxy coated CS mounting plate and driver stand, carbon lineshaft bearings.
A-8	316L SS casing, impeller, shaft, column and discharge pipe. HF 316 SS wear parts. Epoxy coated CS driver stand and mounting plate, carbon lineshaft bearings.
D-1	Duplex SS casing, impeller, lineshaft, column and discharge pipe. Duplex SS vs HF duplex SS wear parts. Epoxy coated CS driver stand and mounting plate, carbon lineshaft bearings.
D-2	Super duplex SS casing, impeller, lineshaft, column and discharge pipe. HF super duplex SS vs super duplex SS wearparts. Epoxy coated CS driver stand and mounting plate, carbon lineshaft bearings.

# OCV and OCVL VS4 Sump Pumps



Oil and gas



Hydrocarbon processing



Power generation



Pulp, paper and board



General industry



Chemical process industry

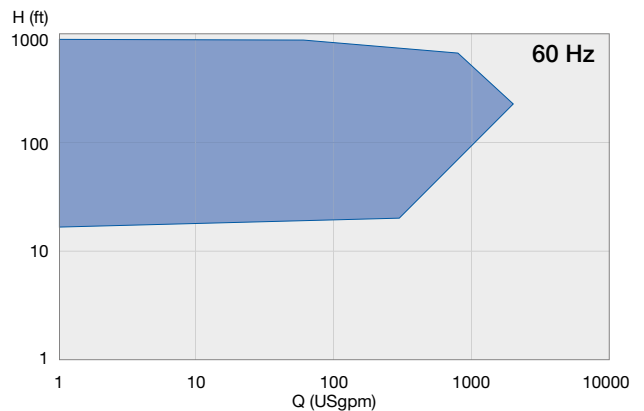
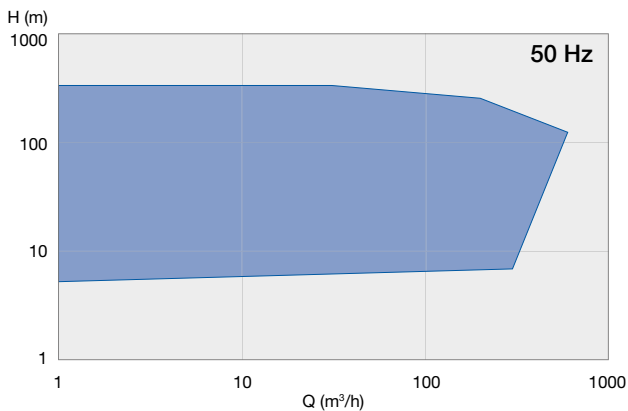


Water and wastewater

## Operating data

50 Hz		60 Hz
50 to 200 mm	Pump sizes	2 to 8 in
up to 500 m <sup>3</sup> /h	Capacities	up to 2,200 USgpm
up to 270 m	Heads	up to 880 ft
up to 40 bar	Pressures	up to 580 psi
-46 to 204°C	Temperatures	-50 to 400°F

## Performance ranges



# We Do What We Say

## Customer partnership

- We are a **reliable partner**
- We provide a **high level of service**
- We **make our customers more competitive**



## Committed people

- We drive **accountability**
- We are **open and transparent**
- We are **team players**



## Operational excellence

- We **focus on results**
- We take **initiative** and work within **established processes**
- We **act safely**



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Winterthur, Switzerland



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