

API 610 10th ed. Vertical Sump Pump (VS4)

# TVSPP

## Series

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**TRUFLO**  
QUALITY • VALUE • SERVICE

# TVSP SERIES

## API 610 10th ed. Vertical Sump Pump (VS4)

- Max.Capacity: 400m<sup>3</sup>/h (1800GPM)
- Max.Head: 280m (920ft)
- Temperature: 400°C (13500°F)
- Allowed Pressure: 40kg/cm<sup>2</sup> (570psi)
- Power: 360kw (480HP)
- Material: DCI, WCB, CF8, CF8M, CF3, CN7M, ALLOY20, CD4MCU
- Compliant disc coupling balanced to AGMA class 9
- Fully compliant bearing spans
- 300# discharge flanges as standard
- Integral lifting eyes

The TRUFLO TVSP (Vertical Sump Pump) is Designed for a wide Range of Industry Services.

TRUFLO TVSP meets requirements of API 610 (VS4) specifications.

A range of impeller and casing designs allows the pump's hydraulic characteristics to be tailored to service requirements.

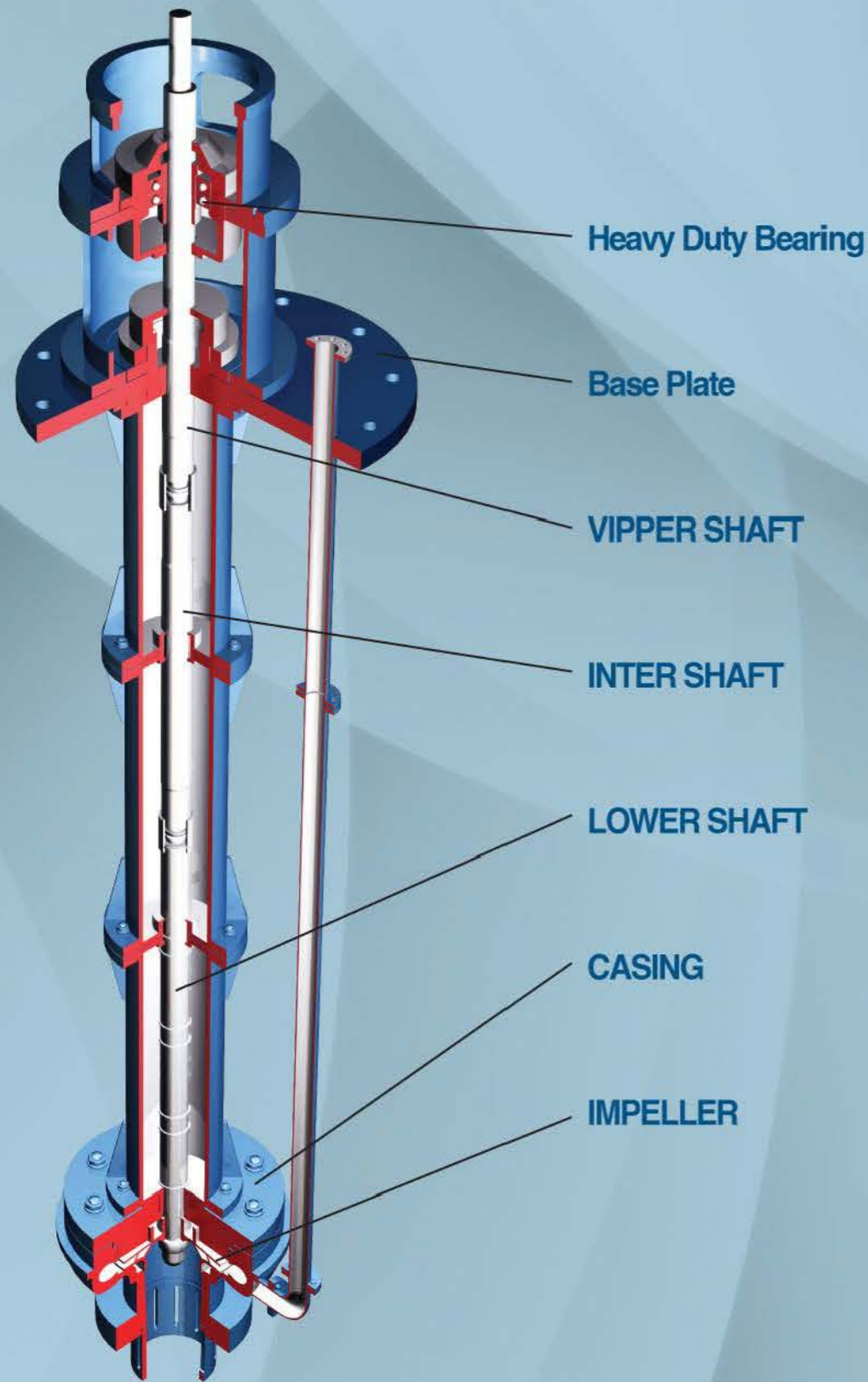
These pumps are the reliable installation system for all sump service

The simple construction of TRUFLO VS4 pump offers easy maintenance and installation.

### APPLICATION

- Petrochemical processing
- Chemical processing
- Refinery offsites
- Drainage
- High temperature transfer
- Gas and coal processing
- Liquid sulfur
- Molten salts
- Slops





### Pump Casing and Cover

features metal to metal fit with fully confined, controlled compression gasket to ensure proper sealing and alignment

### Dynamically Balanced Precision Cast Impeller

limits vibration and ensures smooth operation over a wide flow range. An anti-rotation impeller nut positively locks the impeller to the shaft without exposing its threads to the pumped fluid

### API 682 Seal Chambers

allow for installation of cartridge style single, dual unpressurized and dual pressurized mechanical seals to meet required safety and environmental requirements

### Hydraulic Designs

#### A TYPE

Closed multivane impeller with front and back wear rings

#### B TYPE

Steam jacketed casing

Mandatory for liquid sulfur service

### Heavy Duty Bearing

a thrust pot with API 40° angular contact bearings in back-to-back arrangement. This enables standard (non thrust) electrical motors to be used and fulfills API 610 bearing life criteria. Lineshaft bearings are available in several metallic and non-metallic materials to suit application needs:

- Carbon
- Cast iron (for liquid sulfur service)
- SIC
- PEEK

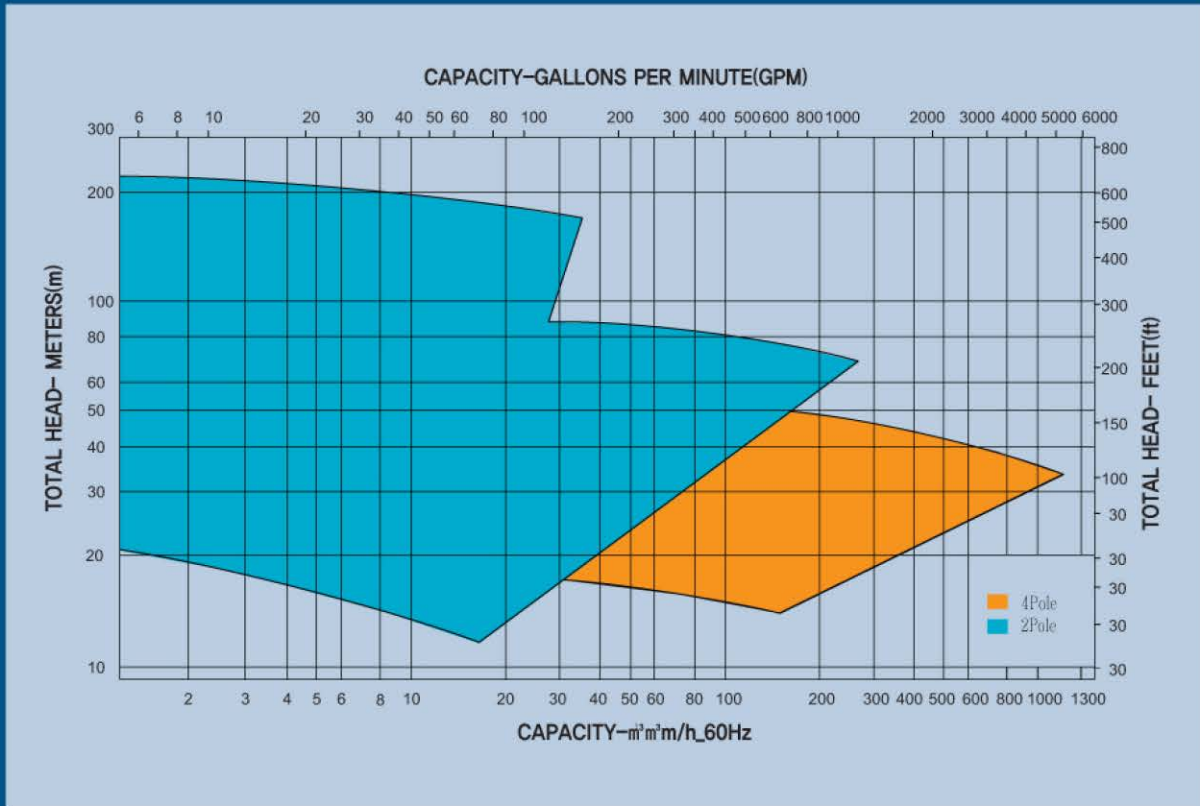
### Available Baseplate Designs

- Rectangular
- Non pressurized
  - Foundation or steel structure mounting
- Circular
  - ANSI 150 lbs
  - ANSI 300 lbs
- Customer specific dimensions

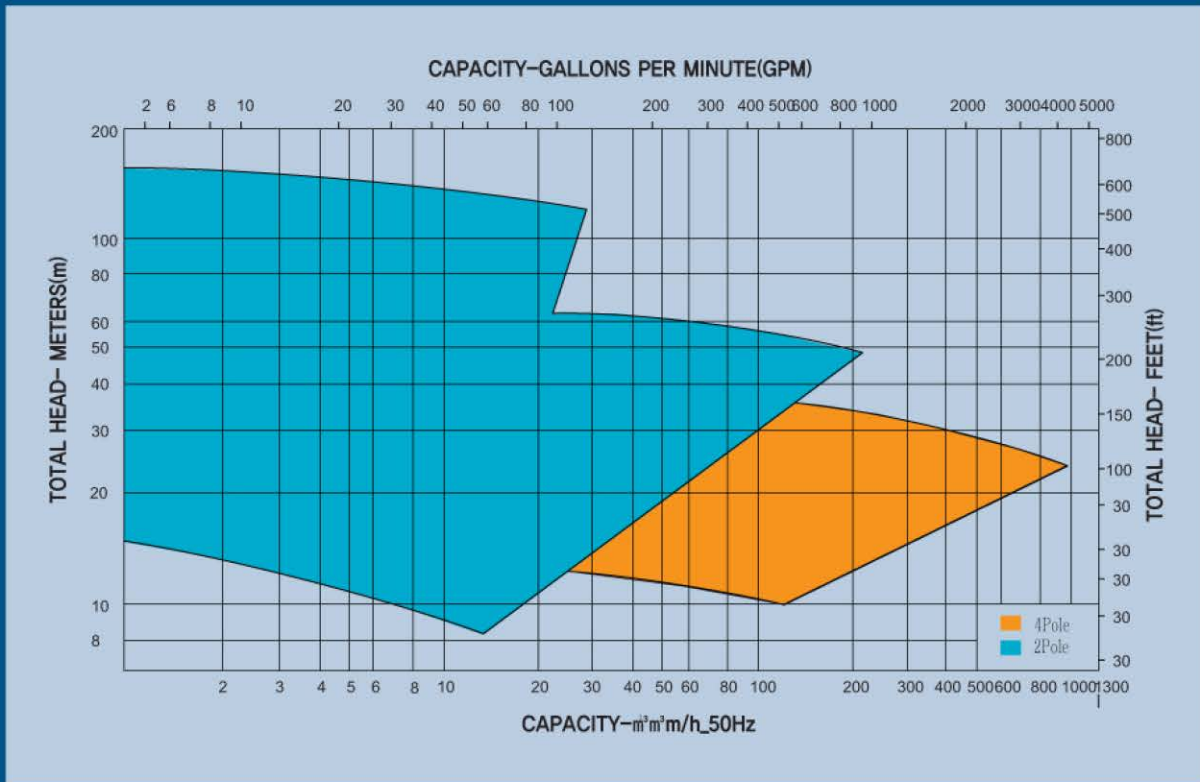
# API 610 10th ed. **Vertical Sump Pump (VS4)**

# PUMP SELECTION GUIDE

## 3500/1750 RPM (60Hz)

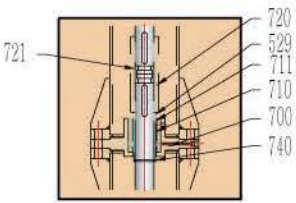
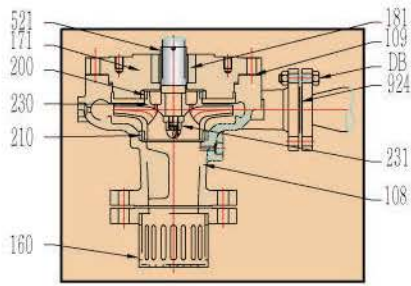
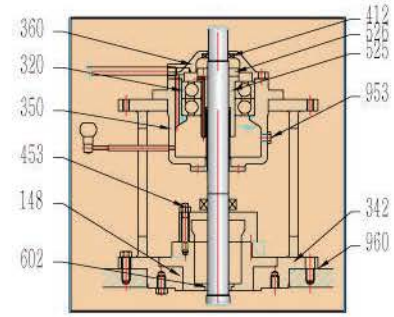
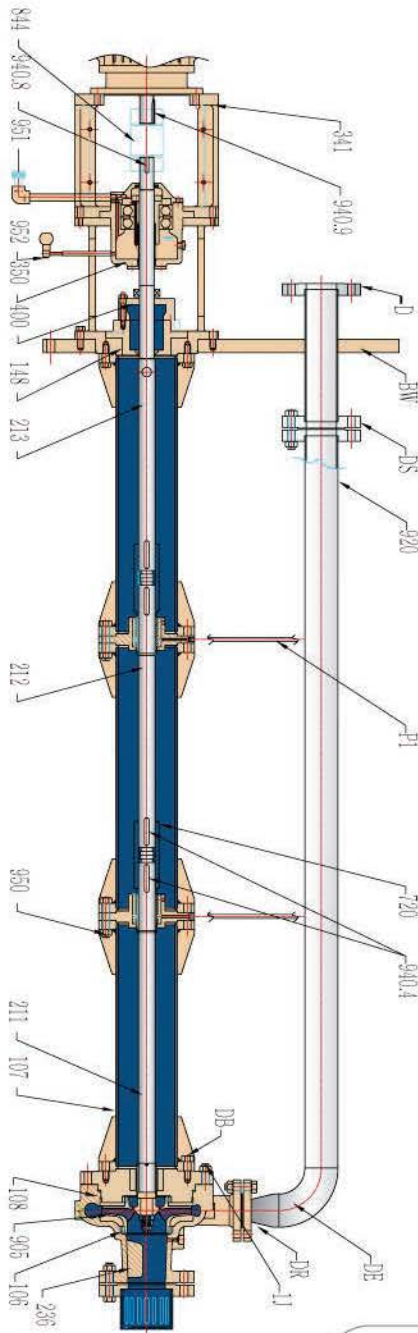


## 2500/1450 RPM (50Hz)

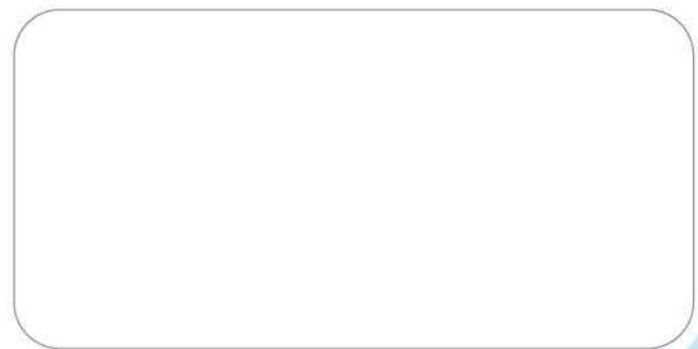




# SECTIONAL



106	WEAR RING
107	COLUMN PIPE
108	CASING
109	GASKET(CASING)
148	STUFFING BOX
160	STRAINER ASS'Y
171	ENDCOVER
181	SLEEVE BEARING(ENDCOVER)
200	WEAR RING(ENDCOVER)
210	WEAR RING(CASING)
211	SHAFT(LOWER)
212	INTER SHAFT
213	SHAFT(UPPER)
230	IMPELLER
231	IMPELLER CAP NUT
320	BEARING
341	ADAPTOR(UPPPER)
342	ADAPTOR(LOWER)
350	BEARING HOUSING
360	BEARING COVER
400	SEAL ASS'Y
412	OIL SEAL
453	STUD BOLT & NUT
526	DEFLECTOR
525	B/R COLLAR
529	SLEEVE (RETAINER)
700	BEARING RETAINER
710	SLEEVE BEARING
720	INTER COUPLING UNIT
721	SPLIT RING
740	SPLIT RING(SLEEVE)
844	COUPLING
920	DISCH. PIPE
924	GASKET (DISCH.)
940.4	INTER COUPLING KEY
940.8	COUPLING KEY(PUMP SIDE)
940.9	COUPLING KEY(MOTOR SIDE)
950	STUD BOLT & NUT
951	OIL FILLING CAP
952	TRICO OILER
953	SIGHT GLASS
960	GASKET (STUFFING BOX)
D	DISCH. FLANGE
DS	DISCH. CONNETION FLANGE
DE	DISCH. ELBOW
DR	DISCH. REDUCER
1J	STUD BOLT & NUT(CASING)
DB	STUD BOLT & NUT
BW	BASE PLATE
P1	TUBE
NO.	PART NAME



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