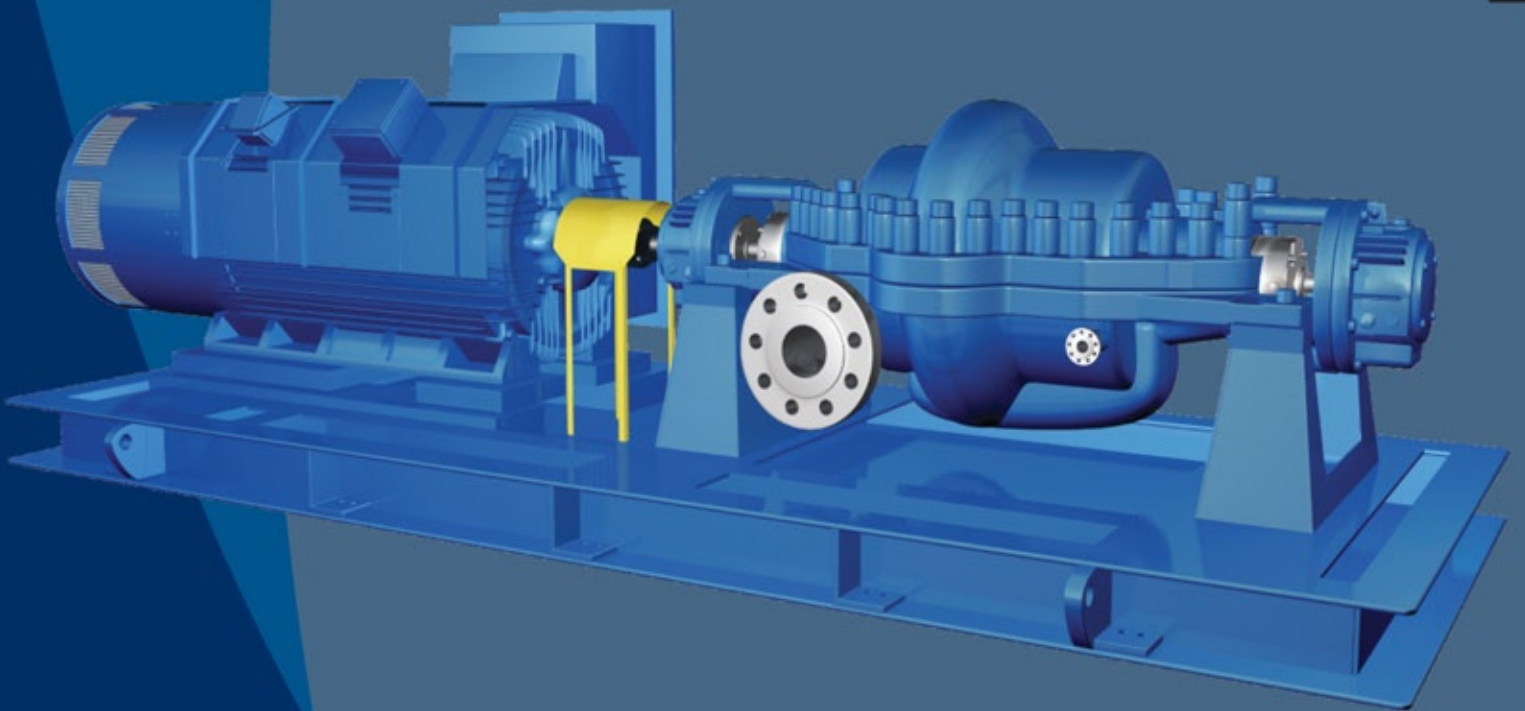


API 610 10th ed. Multi Stage Turbine Pump(BB3)

# TSMMP

## Series

API 610 10th ed. Multi-Stage Turbine Pump (BB3)



**TRUFLO**  
QUALITY • VALUE • SERVICE

# TSMPSERIES

API 610 10th ed. Multi-Stage Turbine Pump (BB3)

- Max.Capacity:  
1000m<sup>3</sup>/h (4400GPM)
- Max.Head: 1200m (3930ft)
- Temperature: 200°C (392°F)
- Allowed Pressure:  
120kg/cm<sup>2</sup> (1710psi)
- Power: 1600kw (2140HP)
- Material: DCI, WCB, CF8, CF8M, CD4M, CF3  
CN7M, HASTELLOY B&C, CA6NM
- Axially split casing for easy maintenance.
- Low vibration design.
- Dual volute design to extend seal/bearing life
- Individual impellers are kept balanced for smooth operation.

## THE TRUFLO IS THE DRIVING FORCE IN THE PUMP INDUSTRY.

Between-bearing, axially-split, multistage pumps (TSMP) are designed for high-head/high capacity services. The TRUFLO BB3 pump meets requirements of API 610 10th edition.

Engineered features make the TRUFLO TSMP pump an extremely reliable, high performance pump well suited to a wide range of services.

The TRUFLO TSMP pumps assure stable performance and high efficiency levels for high temperature and pressure.

## APPLICATION

- Refineries
- Injection offshore platforms
- Remote pipeline
- Boiler feed in mid-range cogeneration
- Descaling
- Mine dewatering
- Process transfer

BEARING HOUSING

M/SEAL

IMPELLER

UPPER CASING

THROAT BUSH

BEARING

DEFLECTOR-IN

SHAFT

LOWER CASING

SUCTION

CENTER-LINE MOUNTED

### SINGLE ROW BOLTING

All nuts located on top for easy maintenance.

### DYNAMICALLY BALANCED IMPELLERS AND ASSEMBLED ROTATING ELEMENT

For smooth, vibration-free operation. Impellers staggered on shaft to minimize vane-pass vibration.

### HEAVY DUTY BEARINGS

Oil lubricated ball radial and duplex thrust standard; sleeve radial/ball thrust also available or pressure lubricated sleeve radial and tilt pad thrust.

### COMPACT CROSSOVERS

For streamlined fluid flow – minimum friction loss, and maximum efficiency.

### API-610 SEAL CHAMBERS

Accept wide range of sealing options including seals conforming to API-610, packing, cartridge, and conventional mechanical seals.

### PRECISION CAST IMPELLERS

Investment cast impellers yield smooth, dimensionally consistent hydraulic passages which maximize efficiency; double suction first stage available for low NPSH applications. POSITIVELY DRIVEN

### IMPELLERS

Key driven with shrink fit and secured against axial movement in both directions. Allows precise balancing of rotating element.

### OPPOSED IMPELLER ARRANGEMENT

Provides permanent hydraulic axial balance, impellers staggered on shaft to minimize vibration due to vane pass.

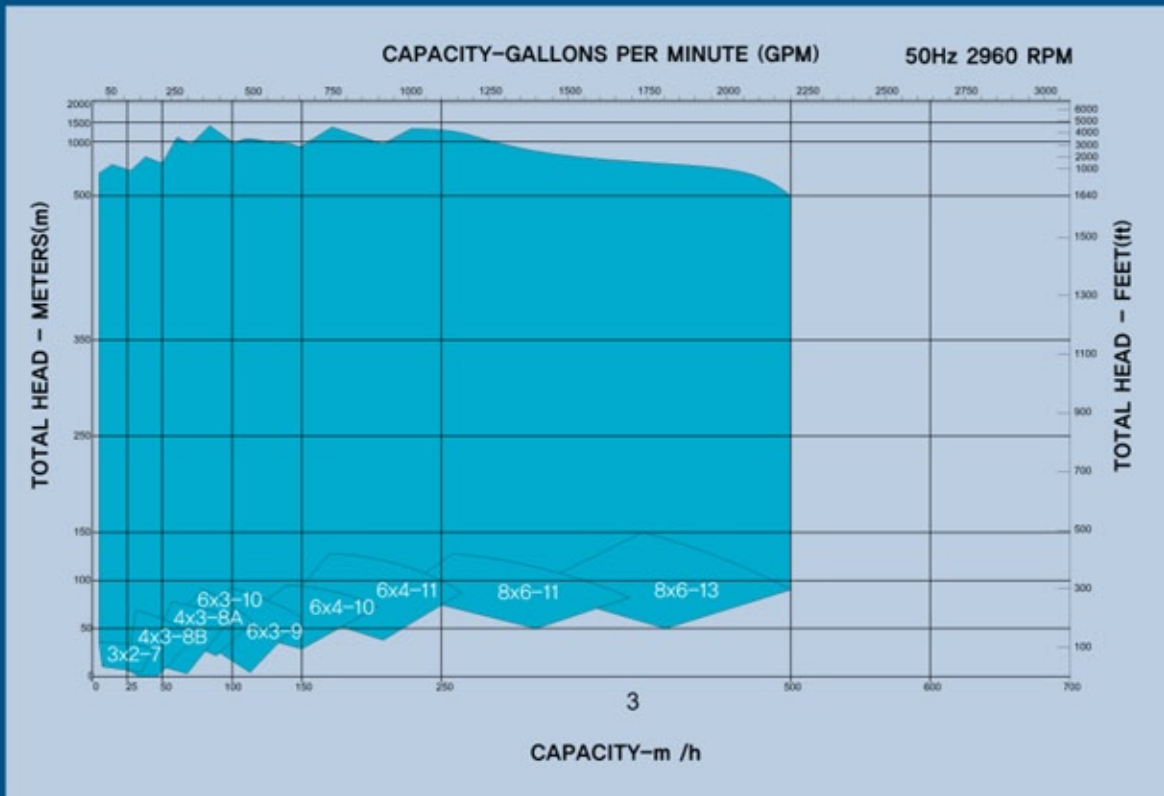
### HEAVY DUTY SUCTION/DISCHARGE FLANGES

Class 900/600/300 RF

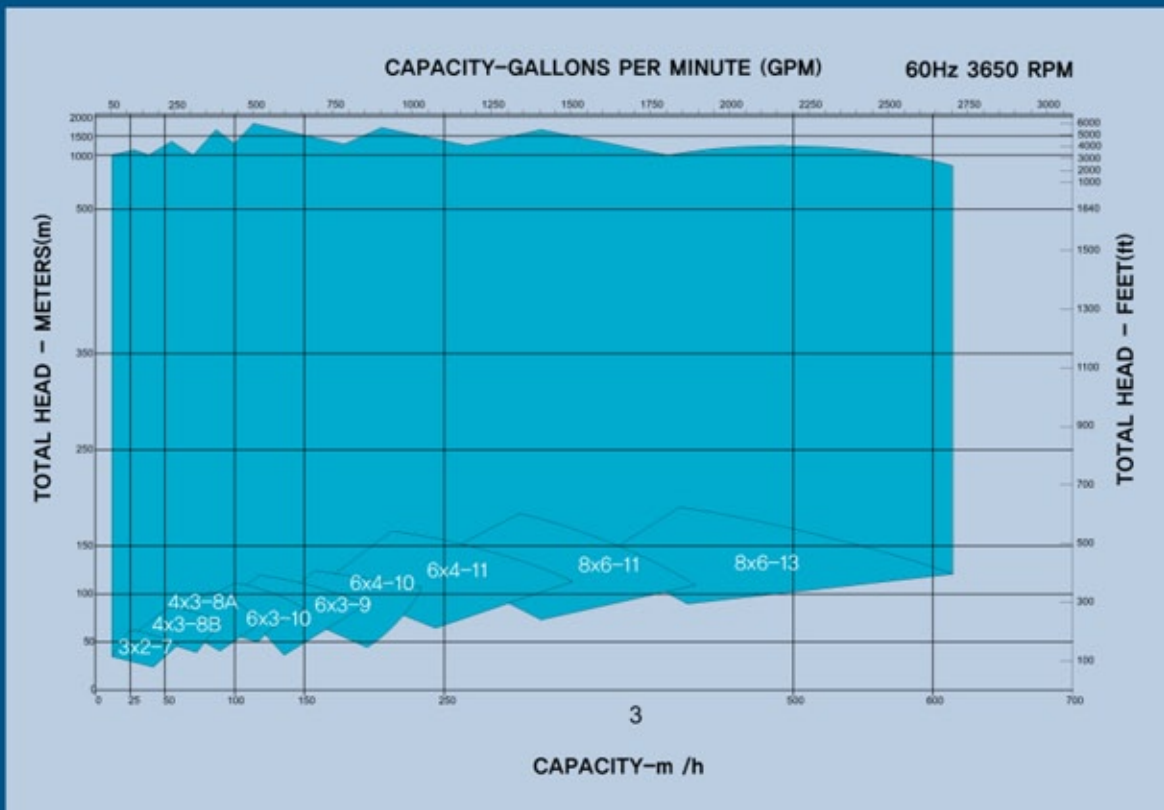
# API 610 10th ed. Multi Stage Turbine Pump (BB3)

# PUMP SELECTION GUIDE

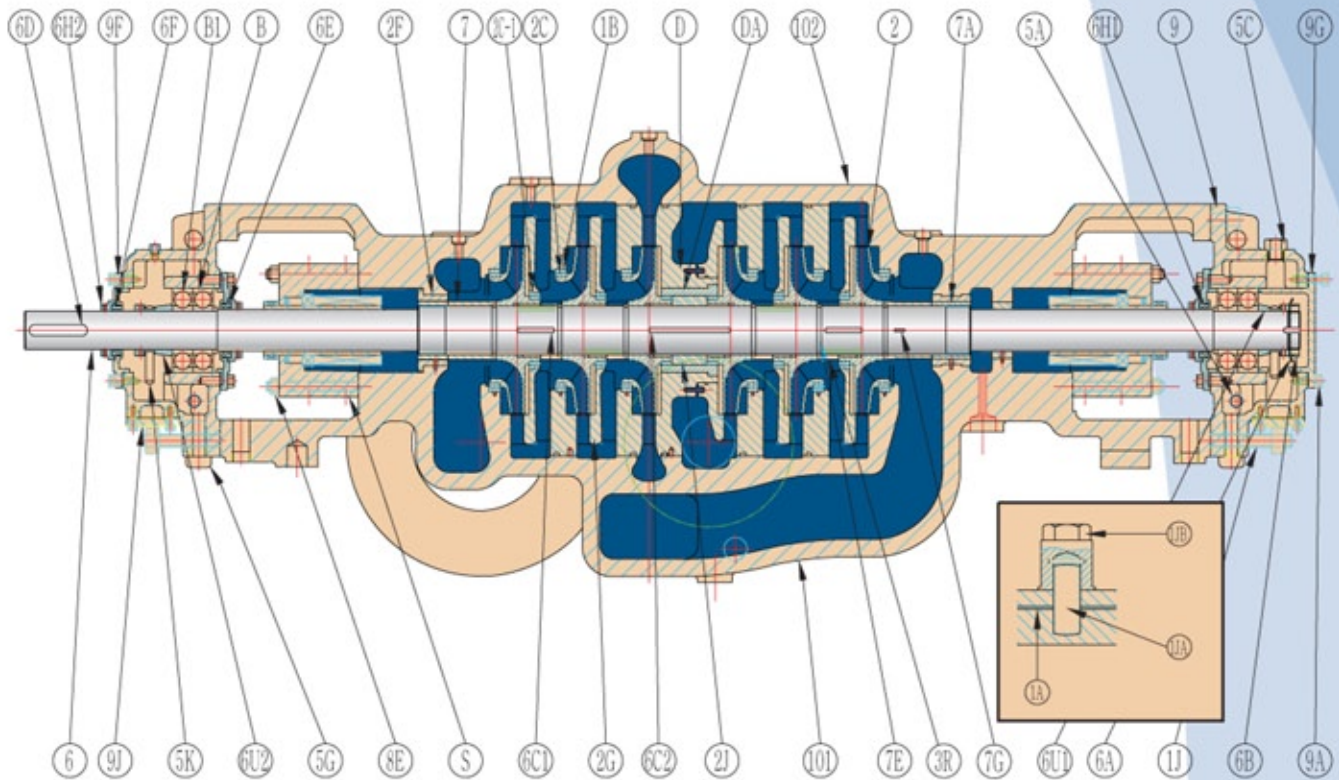
## 2960 RPM (50Hz)



## 3650 RPM (60Hz)



# SECTIONAL



NO	PART NAME
101	LOWER CASING
102	UPPER CASING
1A	GASKET (CASING)
1B	WEARING (CASING)
1J	STUD (CASING)
1JA	STUD (UPPER CASING)
1JB	NUT (UPPER CASING)
2	IMPELLER
2C-1	WEARING (IMPELLER)
2C	WEARING (IMPELLER)
2F	THROAT BUSH
2G	GUIDE VANE
2J	SPACER SLEEVE (IMPELLER)
3R	SPACER RING
5A	OILER

NO	PART NAME
5C	OIL CAP
5G	OIL DRAIN PLUG
5K	OIL RING
6	SHAFT
6A	LOCK WASHER
6B	LOCK NUT
6C1	IMPELLER KEY
6C2	IMPELLER KEY (CENTER)
6D	COUPLING KEY
6E	LABYRINTH SEAL-IN
6F	LABYRINTH SEAL-OUT
6H1	DEFLECTOR-IN
6H2	DEFLECTOR-OUT
6U1	RELEASE COLLER-CLOSE
6U2	RELEASE COLLER-OPEN

NO	PART NAME
7	SLEEVE (STAGE)
7A	SLEEVE NUT
7E	SPLIT RING
7G	SLEEVE KEY
8E	STUD (SEAL COVER)
9	BEARING HOUSING
9A	HEXBOLT
9F	BEARING COVER-OPEN
9G	BEARING COVER-CLOSE
9J	JACKET (BHOUSING)
B1	BEARING OUT
B	BEARING
D	DIAPHRAGM
DA	DIAPHRAGM BUSH
S	MECHANICAL SEAL