

# Solartive<sup>®</sup>

## CATALOGUE

### STAINLESS STEEL SUBMERSIBLE PUMPS



## ABOUT US

**Solartive Techno Industries Pvt. Ltd.** is a leading manufacturer and solutions provider in the field of water pumping solutions. With a strong focus on submersible pumps, we combine advanced technology, reliable engineering, and sustainable innovation to provide all types of stainless steel fabricated submersible pumps to export market as well as empower farmers, rural communities, and water supply projects across the globe.

Established with a mission to provide clean, affordable, and energy-efficient water pumping solutions, Solartive has grown into one of India's most trusted names in the pump industry.

## OUR EXPERTISE

Our submersible pumps are designed to operate in deep water levels, making them ideal for:

Agriculture & Irrigation

Drinking Water Supply

Rural Water Projects

Borewell-based Groundwater Extraction

Industrial Applications

We manufacture pumps in a range of capacities from 1 HP to 50 HP, designed to operate efficiently even in low/high voltage conditions.

Highly Efficient Motors (AC): Built for maximum power output and lower energy loss

Corrosion-Resistant Stainless Steel Body

Optimal power usage

Minimum Operational Cost due to energy efficient pumps

ISI & BIS Approved products

## OUR STRENGTH

Highly Skilled R&D staff along with R&D Lab.

Backed by experienced engineers and 25+ years of combined domain expertise.

Experienced Staff and Operators.

Fully Automated testing set up.

Separate Quality Lab for material inspection and testing.

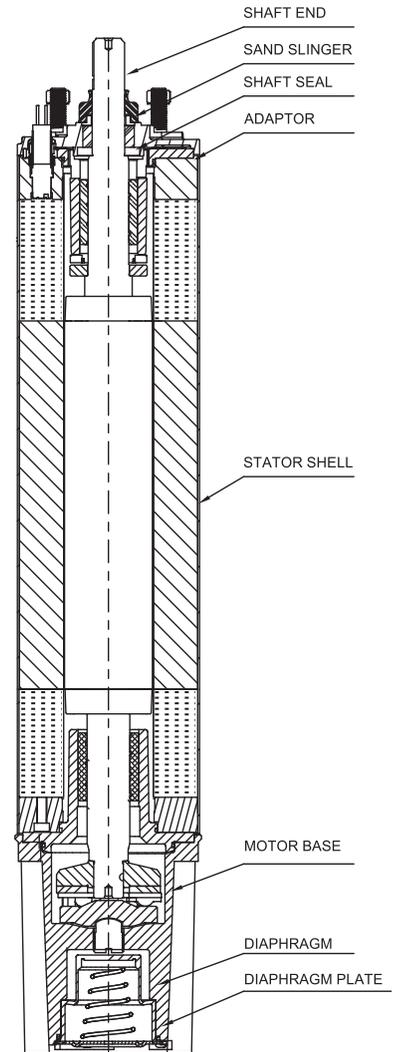
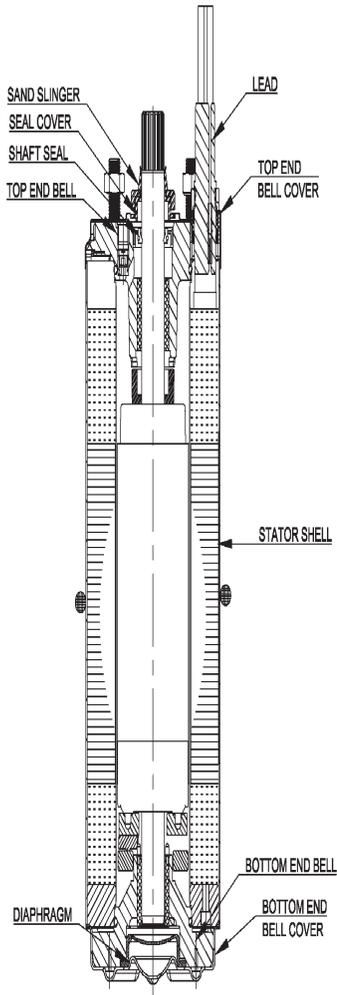
Turnkey EPC capabilities: from survey to installation & after-sales support.



## SECTIONAL VIEW OF 4" PREMIUM

## CI MOTOR

## SECTIONAL VIEW OF 6" PREMIUM



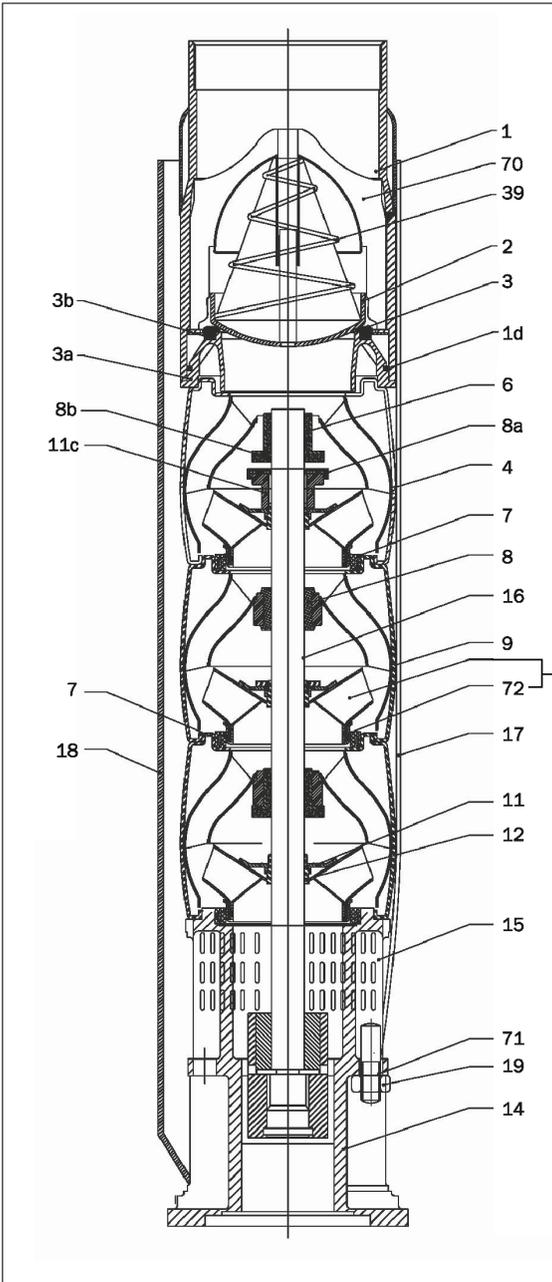
PART	MATERIAL	
	AISI SS 304	AISI SS 316
SHAFT END	DUPLEX	DUPLEX
SAND SLINGER	NBR	NBR
SEAL COVER	AISI SS 304	AISI SS 316
TOP END BELL COVER	AISI SS 304	AISI SS 316
TOP END BELL	CAST IRON POWDER COATED	CAST IRON POWDER COATED
SEALS	NBR	NBR
STATOR SHELL	AISI SS 304	AISI SS 316
SHAFT SEAL	EPDM+AISI SS 304	EPDM+AISI SS 316
BOTTOM END BELL	CAST IRON POWDER COATED	CAST IRON POWDER COATED
BOTTOM END BELL COVER	AISI SS 304	AISI SS 316
DIAPHRAGM	EPDM	EPDM
LEAD	XLPE	XLPE

### LIST OF MATERIAL

PART	MATERIAL
ADAPTOR	AISI SS 304
STATOR SHELL	AISI SS 304
SEALS	NBR
SAND SLINGER	NBR
SHAFT END	DUPLEX
SHAFT SEAL	EPDM + AISI SS 304
MOTOR BASE	AISI SS 304
DIAPHRAGM	EPDM
DIAPHRAGM PLATE	AISI SS 304
LEAD	EPR

## EXAMPLE PUMP : ST - 77

## MATERIAL SPECIFICATION

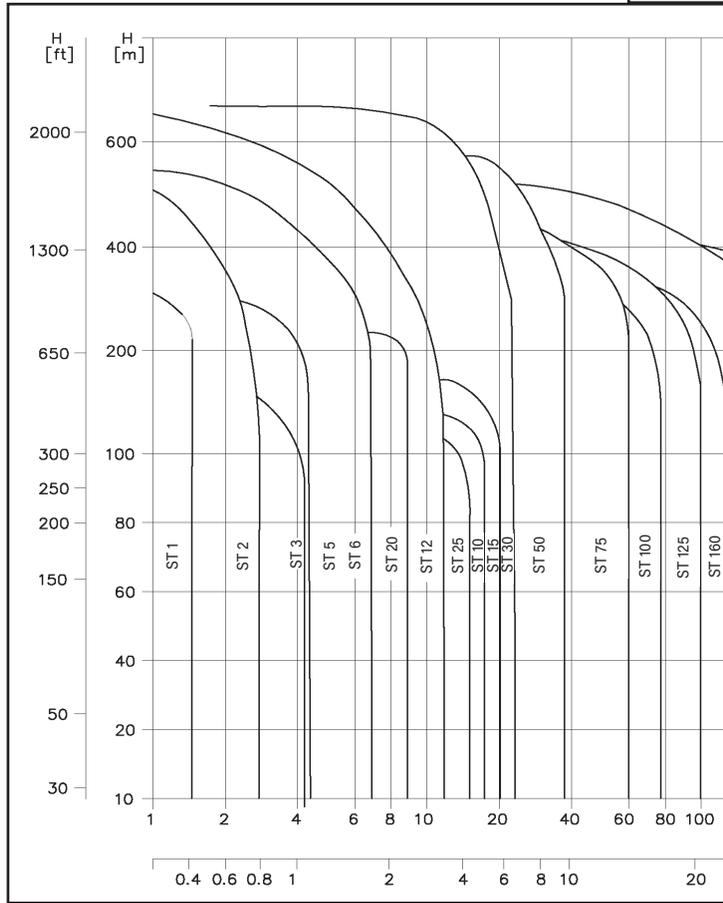


POS.	DESCRIPTION	MATERIAL	STANDARD
1	TOP END BELL	STAINLESS STEEL	304
1d	O-RING	NBR	
2	VALVE CAP	STAINLESS STEEL	304
3	VALVE SEAT	STAINLESS STEEL	304
3a	LOWER VALVE SEAT RETAINER	STAINLESS STEEL	304
3b	UPEER VALVE SEAT RETAINER	STAINLESS STEEL	304
4	TOP CHAMBER CUP	STAINLESS STEEL	304
6	UPPER BEARING	STAINLESS STEEL	304
7	NECKRING	NBR/PPS	
8	BEARING	NBR	
8a	WASHER FOR STOP RING	CARBON/GRAPHITE HY22 IN PTFE MASS	
8b	STOP RING	STAINLESS STEEL	304
9	CHAMBER	STAINLESS STEEL	304
11	SPLIT CONE NUT	STAINLESS STEEL	304
11c	NUT FOR STOP RING	STAINLESS STEEL	304
12	SPLIT CONE	STAINLESS STEEL	304
13	IMPELLER	STAINLESS STEEL	304
14	SUCTION INTERCONNECTOR	STAINLESS STEEL	304
15	STRAINER	STAINLESS STEEL	304
16	SHAFT COMPLETE	STAINLESS STEEL	304
17	STRAP	STAINLESS STEEL	304
18	CABLE GAURD	STAINLESS STEEL	304
19	NUT FOR STRAP	STAINLESS STEEL	304
39	SPRING FOR VALVE CUP	STAINLESS STEEL	304
70	VALVE GUIDE	STAINLESS STEEL	304
71	WASHER	STAINLESS STEEL	304
72	WEAR RING	STAINLESS STEEL	304



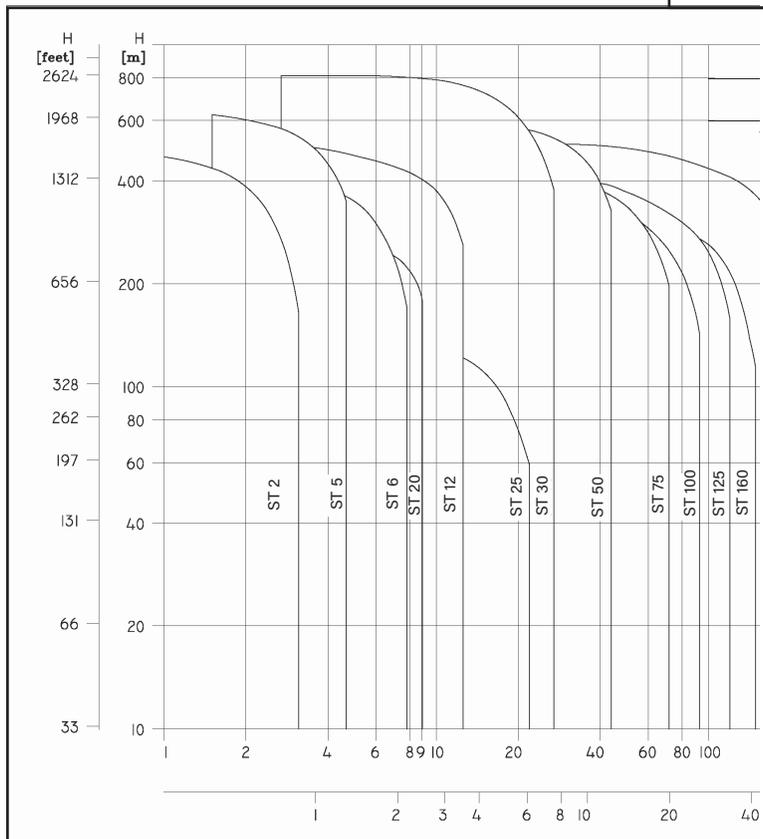
**SUBMERSIBLE PUMP  
PERFORMANCE RANGE**

**50 Hz**



**SUBMERSIBLE PUMP  
PERFORMANCE RANGE**

**60 Hz**



## SUBMERSIBLE PUMP

### PUMP RANGE

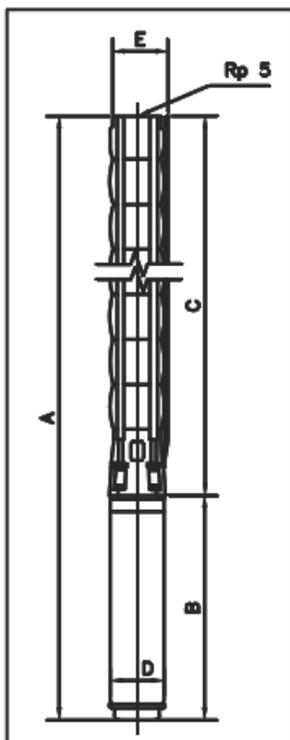
Type	ST 2	ST 5	ST 6	ST 12	ST 20	ST 25	ST 30	ST 50	ST 75	ST 100	ST 125	ST 160
Steel: AISI SS 304	+	+	+	+	+	+	+	+	+	+	+	+
Connection: Rp (Inches) BSP Thread	1 <sup>1</sup> / <sub>4</sub>	1 <sup>1</sup> / <sub>4</sub>	1 <sup>1</sup> / <sub>2</sub>	2	2	2	2 <sup>1</sup> / <sub>2</sub>	3	3 <sup>3</sup> / <sub>4</sub>	3 <sup>3</sup> / <sub>4</sub>	5	5
NPT Thread	1 <sup>1</sup> / <sub>4</sub>	1 <sup>1</sup> / <sub>4</sub>	1 <sup>1</sup> / <sub>2</sub>	2	2	2	3	3	3 <sup>3</sup> / <sub>4</sub>	3 <sup>3</sup> / <sub>4</sub>	5	5
Flange Connection											5"	5"

## SUBMERSIBLE PUMP

### MOTOR RANGE

MOTOR OUTPUT [KW]	0.37	0.55	0.75	1.1	1.5	2.2	3.0	4.0	5.5	7.5	9.2	11	13	15	18.5	22	26	30	37	45	55	
Single Phase	+	+	+	+	+	+	+	+														
Three Phase	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+
Rewindable Motor	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+
Steel: AISI 304	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+
Steel: AISI 304 & Cast Iron	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+

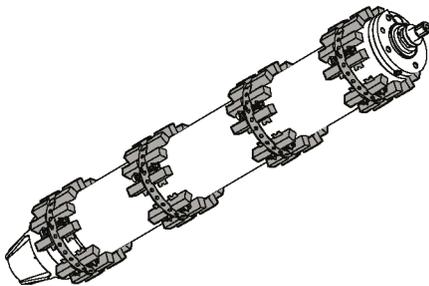
### DIMENSIONS AND WEIGHTS



## APPLICATIONS

Cathodic protection by means of zinc can be used for corrosion protection of ST pumps in chloride-containing liquids, such as brackish water and seawater.

Sacrificial anodes are placed on the outside of the pump and motor as protection against corrosion.



Submersible motor fitted with anode strings

The number of anodes required depends on the pump and motor in question.

## FLOW SLEEVES

Solartive Pumps offers a complete range of stainless-steel flow sleeves for both vertical and horizontal operation. Flow sleeves are recommended for all applications in which motor cooling is insufficient. The result is a general extension of motor life. Flow sleeves are to be fitted in these cases:

- If the submersible pump is exposed to high thermal load such as current unbalance, dry running, overload, high ambient temperature and bad cooling conditions.
- If aggressive liquids are pumped, since corrosion is doubled for every 10 °C the temperature rises.
- If sedimentation or deposits occur around and/or on the motor.

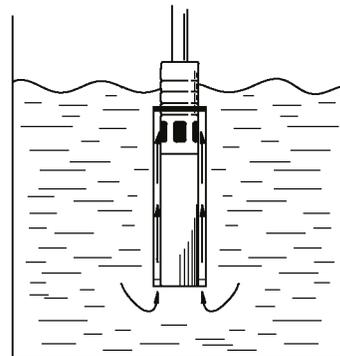
See example

**Note:** More information about flow sleeves is available on request.



## Example of calculated flow sleeve

The flow sleeve is fitted to the submersible motor so that the liquid passes close by the motor on its way towards the pump suction interconnector, thus ensuring optimum cooling of the motor. See fig.



Flow sleeve function

The flow sleeve is designed so that the flow velocity past the motor is minimum 0.5 m/s and maximum 3 m/s to ensure optimum pump operating conditions.

Use this formula to calculate flow velocity:

$$V = \frac{Q \times 353}{D^2 - d^2} \text{ [m/s]}$$

Q	m <sup>3</sup> /h	Flow rate
D	mm	Sleeve diameter
d	mm	Pump diameter

# Solartive®



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