



# SD Series

**Electric Submersible Pump**



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## Sea Water Electric Submersible Pump

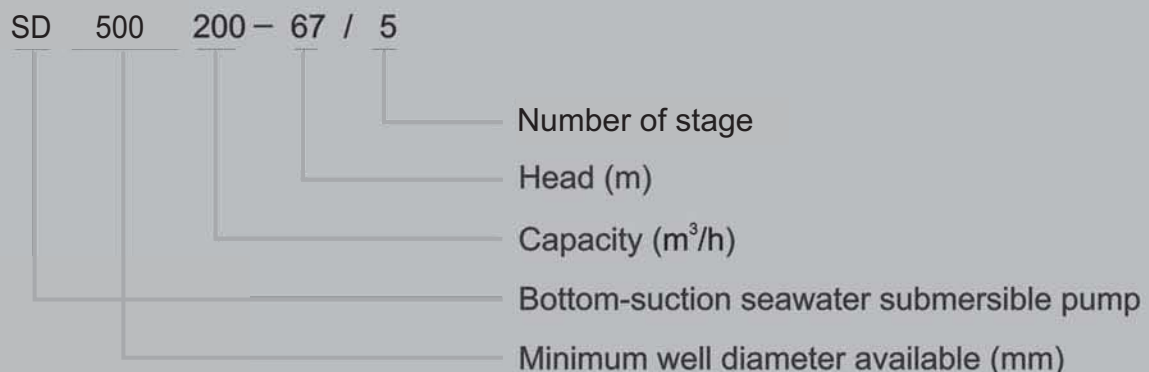
### 1. INTRODUCTION

SD series bottom-suction submersible pump, as multistage pump, shall be specially used in shallow seawater as seawater lift pump or fire pump for lifting water, seawater or similar corrosive liquid, extinguishing agent etc.

The main feature of the pump: the suction inlet is at the bottom of the pump, the electric motor is at the top of the pump as driving device. The liquid enters the column pipe through the motor external water jacket and cools the motor at the same time. There shall be a series of advantages, such as compact structure, corrosion resistant, less land occupation, noiseless and easy to realize auto control, and especially suitable for shallow water working conditions.

Choosing different material, it can be also applied in water works, power station, steelworks, agricultural drainage and irrigation, fire water, municipal construction and so on.

### 2. TYPE DESCRIPTION



### 3. WORKING CONDITIONS

- (1).Medium: water, seawater or similar corrosive liquid.
- (2).Medium temperature:  $\leq 35^{\circ}\text{C}$  or  $90^{\circ}\text{C}$
- (3).Sand content (by weight):  $\leq 2\%$
- (4).Installation mode and location: Pump should be operated vertically, and suction inlet should be submerged in water, the distance of inlet to sea bottom should not be less than 0.5m. The whole set of the pump should be submerged in a depth not exceeding 30 m to sea level.
- (5).The inside of motor must be filled up with clean water, and also with coolant according to need.
- (6).Power supply: 380V / 460V / 660V / 1200V / 3300V, 50Hz / 60Hz, 3Ph.

Note:

When the actual application is beyond the above conditions, please contact with us. We shall adopt associated measures when designing in order to assure electric pump set to satisfy the application condition.

## 4. DESCRIPTION

### (1) Pump

SD series pump is multistage centrifugal pump, which consists of pump shaft, impeller, casing, shaft sleeve, wear ring and other parts etc. According to different working conditions, pump parts separately select relevant material. When using in clean water, the main material is normally cast iron and carbon steel. When using in seawater or similar corrosive liquid, the main material is normally Cu-Ni alloy or stainless steel. In order to extend the life cycle and raise the quality of pump, excepting for choosing the superior materials and precisely fabricating on products, we continuously improve on structure of products and process of technology.

### (2) Motor

The electric motor matched with above pump is PY(H) series electric water (seawater) submersible 3-phase asynchronous motors, which is of wholly sealed construction full of clean water. Stator windings are wound with polyethylene insulation nylon covered winding. According to different working conditions, the external surfaces of motor are all made of relevant corrosion-resistant metal. Motor adopts mechanical seal or oil seal for moving seal. Motor bearings are of self-lubrication, and are lubricated by clean water or coolant. Motor cable is corrosion-resistant and water-resistant flat or round cable with guard sleeve.

## 5. SCOPE OF SUPPLY

It includes pump, motor, cable, operating switchboard, pipeline, lift clamp, well head device, check valve and bio-fouling preventing apparatus.

The above components can be delivered in whole set or on your request, please give us detailed requirements when ordering.

Other special type pumps are available on your request if your conditions are different from those mentioned above.

## 6. GUIDANCE OF SELECTING PUMP

- (1). Settle the pump operating frequency according to the power system.
- (2). Decide the motor speed based on application surroundings and working conditions.
- (3). Select the suitable pump type in the spectrum in the light of required capacity(Q) and head(H).
- (4). Confirm whether or not the max diameter of the selected pump is suitable for the actual requirement.

# SD Series

## Section Drawing

1. Outlet Flange
2. Extension Cable
3. Regulating diaphragm
4. Upper guide bearing
5. Water sleeve
6. Stator
7. Rotor
8. Lower guide bearing
9. Thrust bearing
10. Mechanical seal
11. Coupling
12. Shaft Sleeve
13. Key
14. Bearing shell
15. Seal ring
16. Pump shaft
17. Casing
18. Impeller
19. Suction bell

