TIEC GROUP | INDUX® Atlas

# SPS
## Submersible Slurry Pump

Mining | Coal Washing | Power Plant | Dredging



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## SPS SUBMERSIBLE SLURRY PUMP

SPS is a single stage, single suction, single casing, submerged overhang shaft centrifugal slurry pump, designed to handle abrasive and corrosive slurries, in applications such as mining and mineral processing, power plants, refining, coal preparation,etc. Providing excellent performance when dealing with corrosive slurries contain crystals.

- Discharge size: 65mm-200mm
- Capacity to: 700m$^3$/h
- Head to: 45m

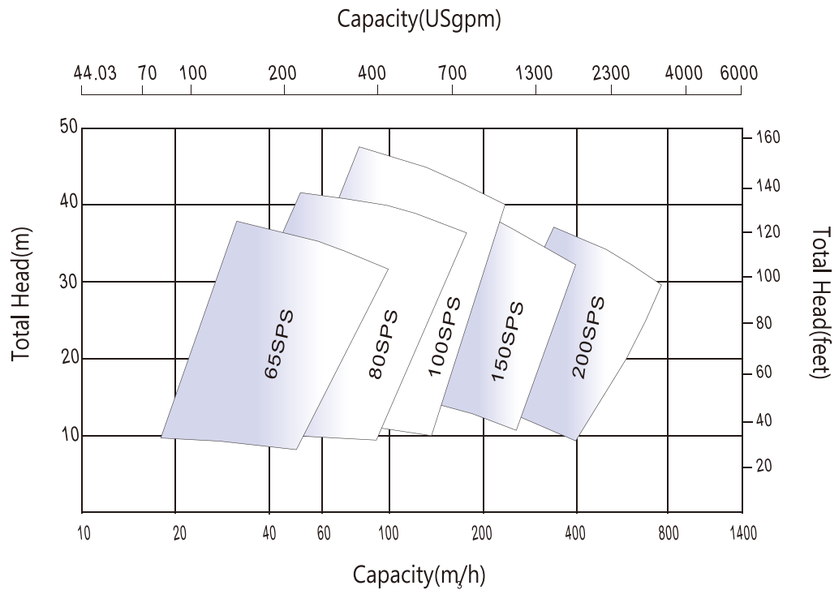
### Model Number Description

200 SPS

- SPS: Submersible slurry pump
- 200: Discharge size in millimeter

## PUMP SELECTION CHART

SPS pump quick selection chart




## TYPICAL APPLICATIONS

- Tailing
- Thickener Drainage
- Slag Mills
- Magnetite Mixing
- Coal
- Steel Plant
- Power Plant

The wet parts of SPS pumps are made of high-chrome iron ( ASTM A532 Class III A) , the high hardness offers excellent wear life, for most slurry handling applications. There is a 316 stainless steel material for the wet end parts as an option.

## CLEAR WATER PERFORMANCE

| Pump Model | Max. Motor Power(KW) | Clear Water Performance | | | |
|---|---|---|---|---|---|
| | | Capacity Q(m$^3$/h) | Head H(m) | Max. Speed n(r/min) | Efficiency η(%) |
| 65SPS | 30 | 15~90 | 8~35 | 1780 | 67 |
| 80SPS | 45 | 30~180 | 10~40 | 1780 | 70 |
| 100SPS | 75 | 50~210 | 10~45 | 1780 | 73 |
| 150SPS | 132 | 100~380 | 14~36 | 1480 | 75 |
| 200SPS | 160 | 250~700 | 10~35 | 1480 | 76 |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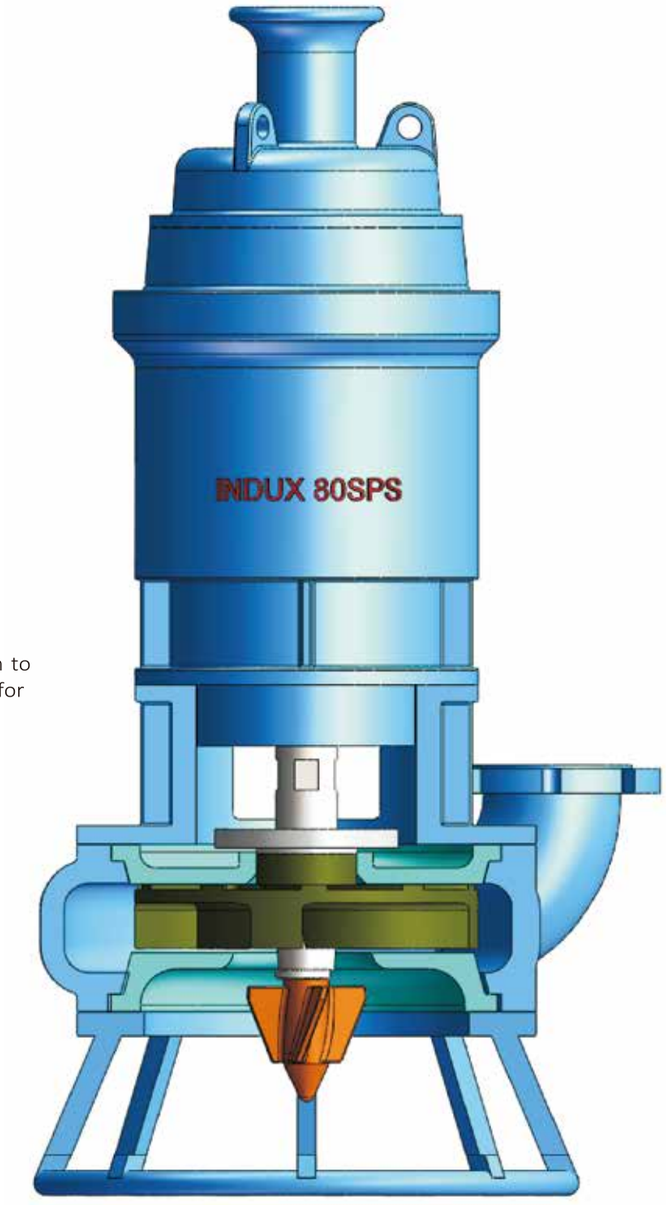
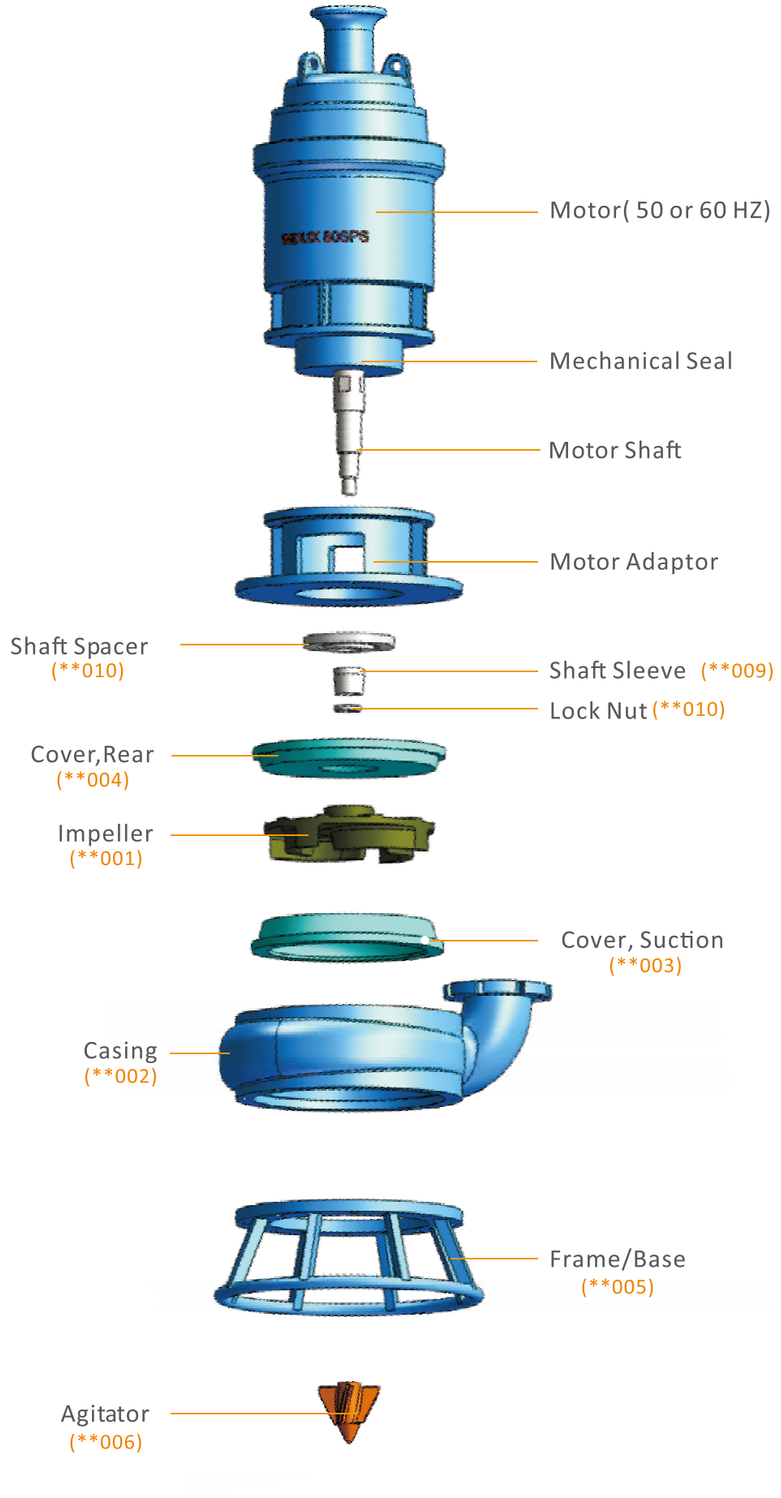
## STRUCTURE & FEATURES

- Pump and motor are one-piece unit, design with the impeller and motor sharing the same shaft, ensuring stable and smooth operation.
- The pump and motor operate in solution, so no priming is required.
- The pump does not request fixed mountings, this allows for non-permanent fittings and can be easily moved as and when required.
- A mechanical seal is used to protect the motor from contamination from the slurry or liquid, so the risk of motor damage is largely decreased.
- Less noise and vibration during running condition due to well-balanced construction.
- Wet parts are made of high-chrome alloy or stainless steel ， excellent performance to resist wear, corrosion and impact.
- Different impeller diameters are available to suit different head requirements.
- The motors are submersible motors and conform to IP68 specification. Please specify or contact TIIEC for special requirements





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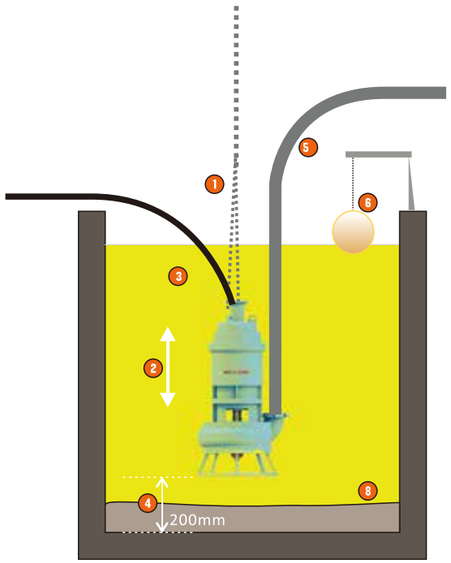
## PUMP INSTALLATION GUIDANCE



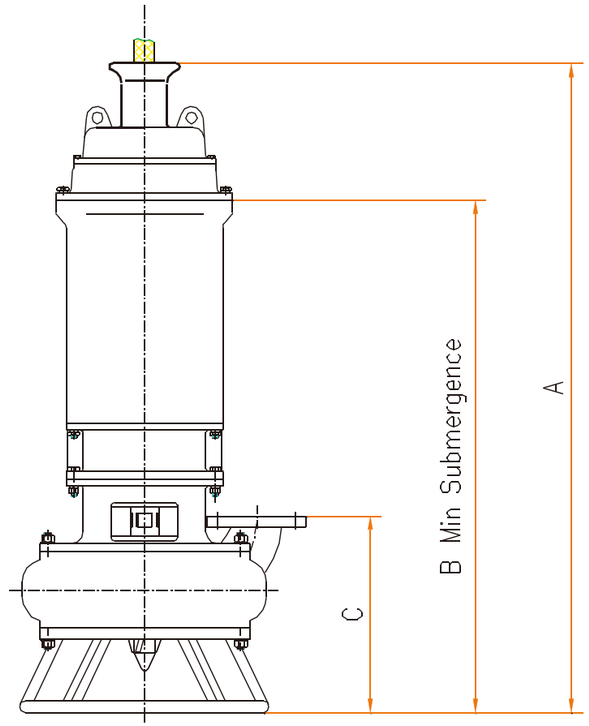

1. Never lift or suspend the pump by the electrical cable.
2. Ensure that the pump is suspended in a vertical position.
3. Always keep the cable away from the rotating inducer.
4. Pumps should be suspended by chains, the minimum distance between the bottom of the frame to the pit bottom is 200mm.
5. Always use appropriate flexible hose for the pump discharge pipe, do not connect the pump directly to a rigid pipe.
6. An automatic switch should be used to turn on and off the motor based on high and low level conditions, float ball or infrared systems are typical.
7. Start frequency should not exceed 20starts/hour.
8. To ensure even distribution and proper flow, a minimum liquid volume should be ensured ,please contact TIIEC for sizing.

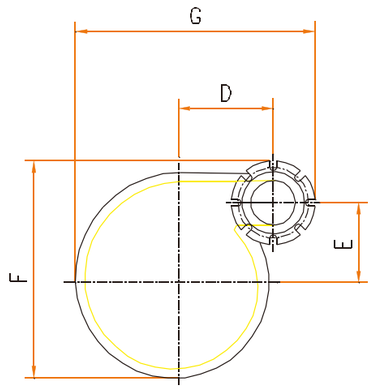
## MATERIAL OPTIONS

### Hard Metals

| Material Code | Material Description | Performance Comparison | | | | Applicable Parts | | Applications |
|---|---|---|---|---|---|---|---|---|
| | | Hardness HRC | Anti-Brush | PH Value 3 7 12 | Max. Particle Size | Impeller | Liner | |
| AT01 | Medium-Cr Martensitic White Iron | ⩾55 | 0.9 | | | ● | ● | Mud & slag applications. |
| AT03 | Ni-Martensitic White Iron | ⩾56 | 0.8 | | | ● | ● | Neutral water-sand slurry or lower impact load. |
| AT05 | 27% Cr White Iron | ⩾56 | 1.0 (Datum) | | | ● | ● | High impact load abrasion PH rate ranging from 5 to 12. |
| AT07 | Chromium/Molybdenum | ⩾58 | 1.2 | | | ● | ● | High impact load abrasion. |
| AT08 | 27% Cr White Iron | ⩾56 | 1.0 | | | ● | ● | Same as AT05, suit for thick wall parts. |
| AT11 | Low Alloy With Iron | 38-42 | 0.7 | | | ● | ● | Fine particles ,light abrasion. |
| AT12 | 30% Cr Hyper eutectic Chromium White Iron | ⩾62 | 1.5 | | | ● | | Highly abrasive ,fine particles. |
| AT33 | 33% Cr Erosions & Corrosion Resistence White Iron | ⩾43 | 0.7 | | | ● | ● | Acidic slurries like Phosphoric. |
| AT49 | 28% Cr Low Carbon White Iron | ⩾45 | 0.7 | | | ● | ● | FGD process in power plant |
| AT530 | Super high-Cr White Iron | 63-68 | 1.8 | | | ● | | Severe abrasive ,fine particles. |

## OUTLINE DIMENSION




| Pump | A | B | C | D | E | F | G | WT.KG |
|---|---|---|---|---|---|---|---|---|
| 65SPS | 845 | 673 | 360 | 224 | 176 | 466 | 522 | 590 |
| 80SPS | 1694 | 1291 | 510 | 395 | 232 | 627 | 773 | 693 |
| 100SPS | 2124 | 1737 | 758 | 550 | 255 | 705 | 910 | 1013 |
| 150SPS | 2410 | 1921 | 758 | 599 | 260 | 745 | 1085 | 2373 |
| 200SPS | 2876 | 2407 | 845 | 656 | 300 | 842 | 1227 | 2767 |

All dimensions are in millimeter (mm)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