

# SUBMERSIBLE MOTOR

## 5" REWINDABLE MOTORS

### TECHNICAL SPECIFICATIONS:

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- 5" Water Lubricated Submersible Motors are rewindable.
- Coupling dimensions as per NEMA standard.
- Winding wire : Polywrapped / PVC winding available on specific demand
- Degree of protection : Ip68.
- Max water temperature : 35°C.
- Starts per hour : 20 time (Max.).
- Allowable voltage variation : +6% - 10%.
- Motor shaft of Stainless steel.
- Stator shell of Stainless steel.
- Max depth immersion : 350 M.
- Mounting : vertical / horizontal.
- Motor Cable length : 3 Meter / 3 Core with separate earth cable & 4 Core.
- Cooling Flow : V:0.2 M/S.
- Coolant : Clear Water.

### VERSIONS:

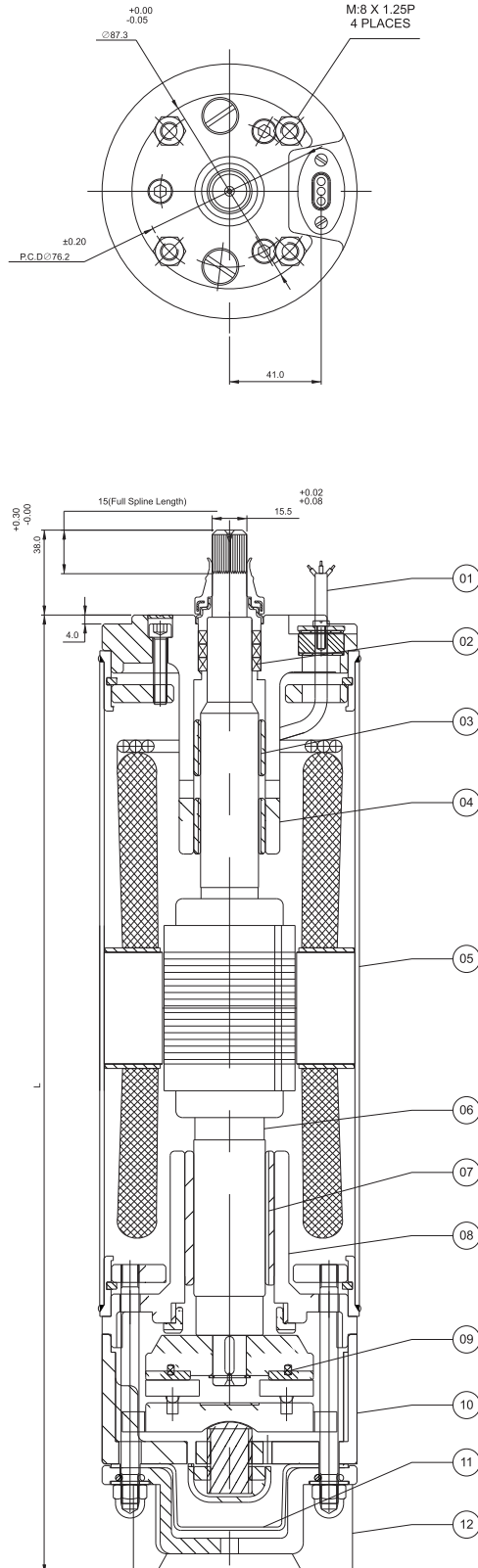
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Three Phase : 1.1 kw to 9.3 kw / 380-415 Volt /50 Hz

2.2 kw to 9.3 kw / 380-460 Volt /60 Hz.

Motor With Other Voltage and frequency ratings are available on specific Demand.

## 5" REWINDABLE MOTOR



| SR.NO. | PARTS NAME          | MATERIAL            |
|--------|---------------------|---------------------|
| 01     | CABLE 3 CORE/4 CORE | EPR                 |
| 02     | OIL SEAL            | N.B.R               |
| 03     | BEARING BUSH        | L.T.B-4 2%Ni        |
| 04     | UPPER HOUSING       | CAST IRON (F.G 200) |
| 05     | MOTOR SHELL         | STAINLESS STEEL     |
| 06     | ROTOR SHAFT         | SS 431              |
| 07     | BEARING BUSH        | L.T.B-4 (2%NI)      |
| 08     | LOWER HOUSING       | CAST IRON (FG-200)  |
| 09     | THRUST BEARING SET  | CARBON / S.S 420    |
| 10     | LOWER PART-2        | CAST IRON (FG-200)  |
| 11     | PRESSURE CUP        | H.B.R               |
| 12     | MOTOR BASE          | CAST IRON (FG-200)  |
| 13     | ALL HARDWARE        | S.S.304             |

| P <sub>N</sub> |               | PW<br>L[mm]<br>C.I | Motor Weight<br>[kg] | Motor Weight<br>(incl.pkg)[kg] |
|----------------|---------------|--------------------|----------------------|--------------------------------|
| [kw]           | [HP]<br>(T.P) |                    |                      |                                |
| 1.10           | 1.50          | 520.00             | 21.9                 | 23.9                           |
| 1.50           | 2.00          | 545.00             | 23.0                 | 25.0                           |
| 2.20           | 3.00          | 565.00             | 23.9                 | 25.9                           |
| 2.94           | 4.00          | 565.00             | 23.9                 | 25.9                           |
| 4.00           | 5.50          | 630.00             | 26.7                 | 28.7                           |
| 5.50           | 7.50          | 695.00             | 29.5                 | 31.5                           |
| 7.50           | 10.00         | 815.00             | 34.6                 | 36.6                           |
| 9.30           | 12.50         | 880.00             | 37.3                 | 39.3                           |

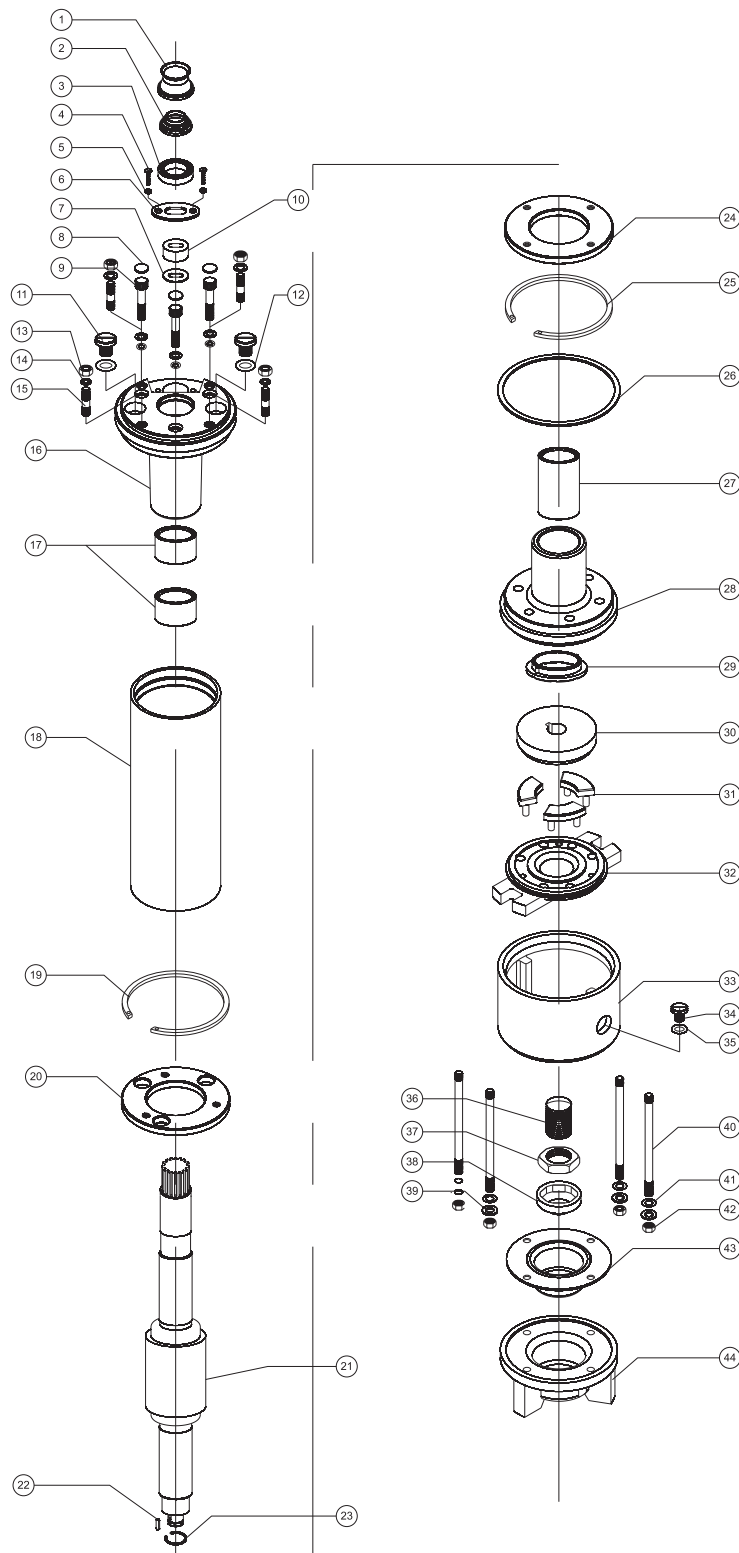
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## Technical Data of 5" Motors / 50 Hz

| PN     |      | Thrust<br>F [N] | UN<br>[V] | nN<br>[min <sup>-1</sup> ] | IN<br>[A] | IA<br>[A] | $\eta$ (Eff.) [%]<br>at % load |    |     | COS $\phi$ (PF)<br>At % load |      |      | TN<br>[Nm] | TA<br>[Nm] |
|--------|------|-----------------|-----------|----------------------------|-----------|-----------|--------------------------------|----|-----|------------------------------|------|------|------------|------------|
| [H.P.] | [kW] |                 |           |                            |           |           | 50                             | 75 | 100 | 50                           | 75   | 100  |            |            |
| 1.50   | 1.10 | 4000            | 380       | 2860                       | 3.20      | 15.0      | 68                             | 71 | 71  | 0.62                         | 0.70 | 0.71 | 3.69       | 9.22       |
|        |      |                 | 400       | 2870                       | 3.30      | 15.7      | 67                             | 71 | 72  | 0.60                         | 0.67 | 0.72 | 3.67       | 9.35       |
|        |      |                 | 415       | 2870                       | 3.40      | 16.3      | 65                             | 70 | 72  | 0.55                         | 0.65 | 0.72 | 3.67       | 9.60       |
| 2.00   | 1.50 | 4000            | 380       | 2860                       | 4.10      | 19.5      | 70                             | 72 | 73  | 0.60                         | 0.70 | 0.78 | 4.91       | 11.80      |
|        |      |                 | 400       | 2865                       | 4.20      | 20.2      | 66                             | 72 | 73  | 0.55                         | 0.66 | 0.77 | 4.90       | 11.85      |
|        |      |                 | 415       | 2870                       | 4.30      | 20.6      | 66                             | 70 | 72  | 0.52                         | 0.62 | 0.75 | 4.89       | 11.93      |
| 3.00   | 2.20 | 15500           | 380       | 2865                       | 6.00      | 21.0      | 68                             | 69 | 72  | 0.66                         | 0.70 | 0.70 | 7.36       | 13.25      |
|        |      |                 | 400       | 2870                       | 6.15      | 21.8      | 67                             | 68 | 71  | 0.65                         | 0.70 | 0.69 | 7.34       | 13.60      |
|        |      |                 | 415       | 2875                       | 6.25      | 22.5      | 66                             | 67 | 70  | 0.64                         | 0.69 | 0.68 | 7.33       | 13.90      |
| 4.00   | 3.00 | 15500           | 380       | 2860                       | 9.00      | 31.5      | 70                             | 70 | 72  | 0.65                         | 0.70 | 0.72 | 9.83       | 17.70      |
|        |      |                 | 400       | 2875                       | 9.20      | 32.8      | 69                             | 70 | 72  | 0.64                         | 0.69 | 0.70 | 9.78       | 18.00      |
|        |      |                 | 415       | 2875                       | 9.30      | 33.6      | 69                             | 68 | 71  | 0.64                         | 0.69 | 0.69 | 9.78       | 18.40      |
| 5.50   | 4.00 | 15500           | 380       | 2870                       | 10.20     | 35.7      | 70                             | 70 | 72  | 0.68                         | 0.70 | 0.73 | 13.47      | 24.90      |
|        |      |                 | 400       | 2875                       | 10.40     | 37.0      | 69                             | 70 | 71  | 0.66                         | 0.69 | 0.71 | 13.44      | 25.00      |
|        |      |                 | 415       | 2875                       | 10.60     | 37.4      | 69                             | 68 | 71  | 0.65                         | 0.70 | 0.71 | 13.44      | 25.54      |
| 7.50   | 5.50 | 15500           | 380       | 2875                       | 13.40     | 46.9      | 71                             | 72 | 73  | 0.70                         | 0.71 | 0.75 | 18.33      | 34.80      |
|        |      |                 | 400       | 2880                       | 13.20     | 46.9      | 70                             | 69 | 72  | 0.69                         | 0.70 | 0.75 | 18.30      | 35.90      |
|        |      |                 | 415       | 2885                       | 13.10     | 47.2      | 70                             | 70 | 72  | 0.69                         | 0.70 | 0.74 | 18.27      | 36.50      |
| 10.0   | 7.50 | 15500           | 380       | 2880                       | 18.10     | 63.4      | 70                             | 72 | 74  | 0.72                         | 0.74 | 0.75 | 24.40      | 46.40      |
|        |      |                 | 400       | 2885                       | 17.50     | 63.9      | 70                             | 73 | 75  | 0.71                         | 0.72 | 0.75 | 24.36      | 46.77      |
|        |      |                 | 415       | 2885                       | 17.50     | 64.0      | 69                             | 70 | 73  | 0.70                         | 0.72 | 0.74 | 24.36      | 47.80      |
| 12.5   | 9.30 | 15500           | 380       | 2880                       | 20.50     | 73.0      | 72                             | 72 | 74  | 0.74                         | 0.74 | 0.75 | 30.50      | 57.90      |
|        |      |                 | 400       | 2885                       | 20.40     | 74.5      | 71                             | 73 | 75  | 0.72                         | 0.72 | 0.75 | 30.45      | 58.50      |
|        |      |                 | 415       | 2885                       | 20.20     | 74.7      | 70                             | 71 | 73  | 0.70                         | 0.71 | 0.74 | 30.45      | 59.40      |

- PN - Rated Output
- UN - Rated Voltage
- nN - RPM
- IN - Full Load Current
- IA - Starting Current
- $\eta$  - Motor Efficiency
- $\cos\phi$  - Power Factor
- TN - Full Load Torque
- TA - Starting Torque
- F[N] - Axial Thrust Load

## Exploded Drawing of 5" Motor



| No. | PARTS NAME              |
|-----|-------------------------|
| 1   | SAND GUARD              |
| 2   | UPPER CAP               |
| 3   | OIL SEAL                |
| 4   | CABLE CLIP SCREW        |
| 5   | CABLE CLIP SCREW WASHER |
| 6   | CABLE CLIP              |
| 7   | CABLE GROMMET WASHER    |
| 8   | ALLEN BOLT CAP          |
| 9   | ALLEN BOLT              |
| 10  | CABLE GROMMET           |
| 11  | DRAIN PLUG              |
| 12  | DRAIN PLUG 'O' RING     |
| 13  | HEX NUT                 |
| 14  | UPPER STUD WASHER       |
| 15  | UPPER STUD              |
| 16  | UPPER HOUSING           |
| 17  | BEARING BUSH            |
| 18  | STATOR BODY             |
| 19  | CIR CLIP                |
| 20  | UPPER FLANGE            |
| 21  | ROTOR                   |
| 22  | ROTOR KEY               |
| 23  | ROTOR CIR CLIP          |
| 24  | LOWER FLANGE            |
| 25  | CIR CLIP                |
| 26  | PAPER GASKET            |
| 27  | BEARING BUSH            |
| 28  | LOWER HOUSING           |
| 29  | C.T BEARING             |
| 30  | CARBON BEARING          |
| 31  | SEGMENT                 |
| 32  | COUNTER                 |
| 33  | LOWER PART-2            |
| 34  | DRAIN PLUG              |
| 35  | DRAIN PLUG 'O' RING     |
| 36  | ROCKER                  |
| 37  | ROCKER LOCK NUT         |
| 38  | ROCKER LOCK NUT CAP     |
| 39  | STUD WASHER             |
| 40  | LOWER STUD              |
| 41  | STUD 'O' RING           |
| 42  | HEX NUT                 |
| 43  | PRESSURE CUP            |
| 44  | MOTOR BASE              |