



## Rewindable Water Filled Submersible Motors

---

Made in India



| Technical Specifications |     | 50 Hz  | 60 Hz  |
|--------------------------|-----|--|--|
| Nominal Dia              |     | 4" Motor (100mm)                                   | 4" Motor (100mm)                                   |
| Max. Outer Dia           |     | 95mm   | 3.74 Inches  |
| Power Range              | 1Ph | 0.37 to 2.2 kW                                     | 0.5 to 3 HP  |
|                          | 3Ph | 0.37 to 7.5 kW                                     | 0.5 to 10 HP                                       |
| Version                  | 1Ph | 220 / 230 V - 50Hz                                 | 220/230V, 60Hz, A.C Supply                         |
|                          | 3Ph | 380 - 415 V - 50Hz                                 | 220/230/380/460V, 60Hz, A.C Supply                 |
| Nominal Speed            |     | 2900 rpm   | 3450 rpm   |
| Class of Insulation      |     | Y / F  | Y / F  |
| Degree of protection     |     | IP 58  | IP 58  |
| Direction of rotation    |     | Counter-clock wise                                 | Counter-clock wise                                 |
| Type of duty             |     | S1 (Continues)                                     | S1 (Continues)                                     |
| Minimum cooling flow     |     | 0.15 m/sec   | 0.5 ft/sec   |
| Max. Liquid temp.        |     | 33° C  | 33° C (91.4°F)                                     |
| starts per hour          |     | 20 Times   | 20 Times   |
| Method of starting       | 1Ph | Capacitor Start Capacitor Run (CSCR)               | Capacitor Start Capacitor Run                      |
|                          | 3Ph | Direct On Line (DOL)                               | (CSCR) Direct On Line (DOL)                        |
| Cable lead-out           |     | Permanently Connected<br>3 / 4 Core PVC Flat Cable | Permanently Connected<br>3 / 4 Core PVC Flat Cable |

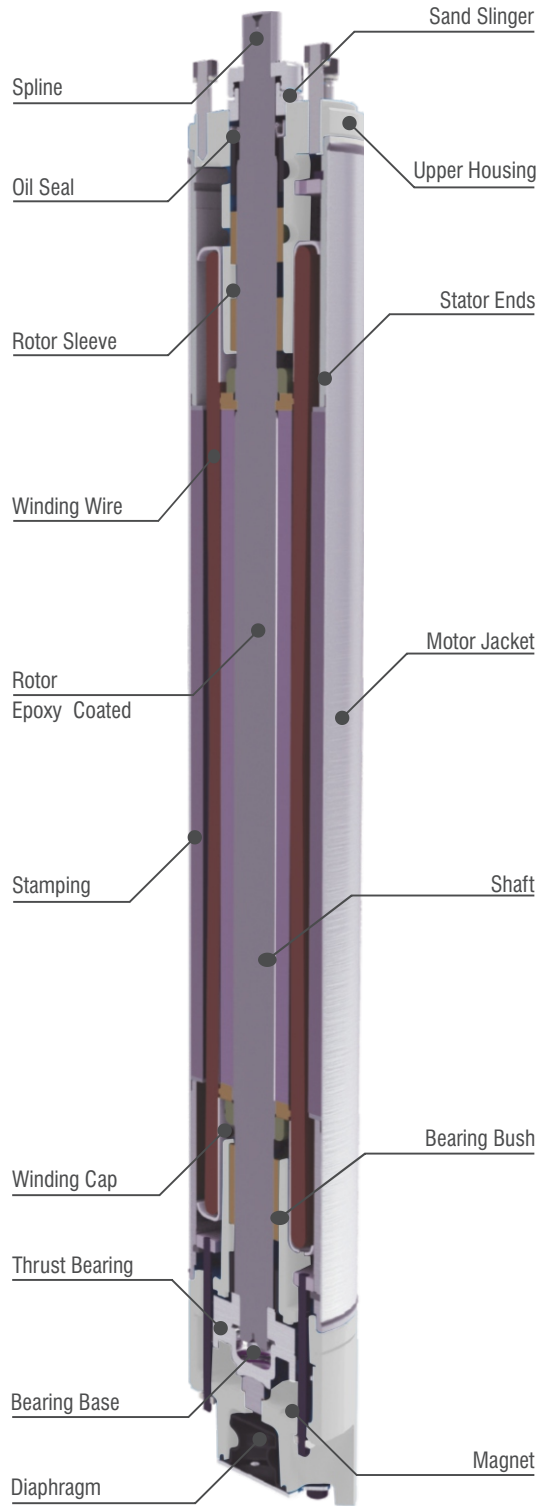
| Materials of Construction | C                  | L               | S               |
|---------------------------|--------------------|-----------------|-----------------|
| Upper & Lower Housing     | Cl, FG 200         | Casted SS 410   | Casted SS 304   |
| Stator Shell              | SS 202             | SS 410          | SS 304          |
| Thrust Pad                | CARBON / TEFLON    | CARBON / TEFLON | CARBON / TEFLON |
| Thrust Bearing            | Cl, FG 200/ SS 420 | SS 410 / SS 420 | SS 304 / SS 420 |
| Diaphragm                 | NITRILE RUBBER     | NITRILE RUBBER  | NITRILE RUBBER  |
| Motor Base                | Cl, FG 200         | SS 410          | SS 304          |
| Upper housing shell       | Cl, FG 200         | SS 410          | SS 304          |
| Shaft                     | SS 420 / 431       | SS 420 / 431    | SS 420 / 431    |
| Sleeve                    | SS 410             | SS 410          | SS 410          |

### Features

- Easy to dismantle & repair
- High Operating Efficiency
- Specially designed 3 layered Insulation (Polyster+2BOPP) winding wire for better thermal protection
- Spl. Magnet provision at motor base to prevent from free metal particles
- Mounting dimensions as per NEMA standard
- Kingsburry type Thrust bearing to withstand high axial loads
- Spring action pressure compensating Diaphragm
- Specially designed forged MS stator end rings
- Low Voltage motors can be supplied, on request



Cross Sectional View



## Technical Details

### 50Hz, Single Phase, 230V Water Filled Motor (CSCR)

| kW   | HP   | Full load Current (A) | Starting Current (A) | Eff. (%) | P.F. cosØ | Max. Down thrust Load (N) | Starting Torque (Nm) | Torque (Nm) |
|------|------|-----------------------|----------------------|----------|-----------|---------------------------|----------------------|-------------|
| 0.37 | 0.5  | 5.3                   | 10.13                | 40       | 0.64      | 3000                      | 2                    | 1.2         |
| 0.55 | 0.75 | 6.2                   | 11.5                 | 42       | 0.65      | 3000                      | 2.9                  | 1.8         |
| 0.75 | 1    | 7.5                   | 14.17                | 46       | 0.65      | 3000                      | 4.1                  | 2.5         |
| 1.1  | 1.5  | 10.5                  | 20.15                | 49       | 0.65      | 3000                      | 6.1                  | 3.7         |
| 1.5  | 2    | 13.8                  | 24.2                 | 52       | 0.66      | 3000                      | 8.3                  | 4.9         |
| 2.2  | 3    | 19.8                  | 34.6                 | 56       | 0.66      | 6500                      | 13.3                 | 7.4         |

### 50Hz, Three Phase, 380 - 415V Water Filled Motor (D.O.L.)

| kW   | HP   | Full load Current (A) | Starting Current (A) | Eff. (%) | P.F. cosØ | Max. Down thrust Load (N) | Starting Torque (Nm) | Torque (Nm) |
|------|------|-----------------------|----------------------|----------|-----------|---------------------------|----------------------|-------------|
| 0.37 | 0.5  | 2.4                   | 5.2                  | 50       | 0.6       | 3000                      | 2.2                  | 1.2         |
| 0.55 | 0.75 | 2.75                  | 9.64                 | 56       | 0.6       | 3000                      | 3.4                  | 1.9         |
| 0.75 | 1    | 3                     | 10.27                | 56       | 0.6       | 3000                      | 4.5                  | 2.5         |
| 1.1  | 1.5  | 4                     | 13.83                | 56       | 0.61      | 3000                      | 6.7                  | 3.7         |
| 1.5  | 2    | 4.8                   | 16.44                | 60       | 0.61      | 3000                      | 9                    | 5           |
| 2.2  | 3    | 6.9                   | 25.06                | 63       | 0.61      | 6500                      | 14.1                 | 7.5         |
| 3    | 4    | 9                     | 31.3                 | 63       | 0.62      | 6500                      | 19                   | 10          |
| 3.7  | 5    | 10.6                  | 36.97                | 64       | 0.62      | 6500                      | 22                   | 12.4        |
| 4    | 5.5  | 12.6                  | 42.61                | 67       | 0.63      | 6500                      | 23                   | 13.1        |
| 5.5  | 7.5  | 14.5                  | 49.8                 | 68       | 0.65      | 6500                      | 33.7                 | 18.7        |
| 7.5  | 10   | 19.8                  | 119                  | 72       | 0.82      | 6500                      | 45.5                 | 25          |

## Dimensional Details

| kW   | HP   | Cable Size (sq.mm) | Cable Length (m) | Height (mm) | Net Weight (kg) |
|------|------|--------------------|------------------|-------------|-----------------|
| 0.37 | 0.5  | 1.5                | 1.5              | 474.5       | 17              |
| 0.55 | 0.75 | 1.5                | 1.5              | 494.5       | 17.5            |
| 0.75 | 1    | 1.5                | 1.5              | 514.5       | 19              |
| 1.1  | 1.5  | 2.5                | 1.5              | 549.5       | 20              |
| 1.5  | 2    | 2.5                | 1.5              | 594.5       | 22              |
| 2.2  | 3    | 2.5                | 2.0              | 664.5       | 25.5            |
| 0.37 | 0.5  | 1.5                | 1.5              | 472.5       | 15.5            |
| 0.55 | 0.75 | 1.5                | 1.5              | 493         | 18              |
| 0.75 | 1    | 1.5                | 1.5              | 514.5       | 19.5            |
| 1.1  | 1.5  | 1.5                | 1.5              | 549.5       | 20.5            |
| 1.5  | 2    | 1.5                | 1.5              | 594.5       | 22.5            |
| 2.2  | 3    | 1.5                | 2.0              | 664.5       | 26              |
| 3    | 4    | 1.5                | 2.0              | 724.5       | 28              |
| 3.7  | 5    | 2.5                | 2.0              | 764.5       | 31              |
| 4    | 5.5  | 2.5                | 2.0              | 852.5       | 36              |
| 5.5  | 7.5  | 4.0                | 3.0              | 855         | 36              |
| 7.5  | 10   | 4.0                | 3.0              | 1120.0      | 43              |



| Technical Specifications |     | 50 Hz  | 60 Hz  |
|--------------------------|-----|--|--|
| Nominal Dia              |     | 6" Motor (150mm)                                   | 6" Motor   |
| Max. Outer Dia           |     | 144mm  | 5.67 Inches  |
| Power Range              |     | 4 to 45 kW   | 5.5 to 50 HP                                       |
| Version                  | 3Ph | 380-415V, 50Hz, A.C. Supply                        | 220/230/380/440/460V, 60 Hz, A.C. Supply           |
| Nominal Speed            |     | 2900 rpm   | 3450 rpm   |
| Class of Insulation      |     | Y / F  | Y / F  |
| Degree of protection     |     | IP58 / IP68  | IP 58 / IP 68                                      |
| Direction of rotation    |     | Counter-clock Wise                                 | Counter-clock Wise                                 |
| Type of duty             |     | S1 (Continues)                                     | S1 (Continues)                                     |
| Minimum cooling flow     |     | 0.15 m/sec   | 0.5 ft/sec   |
| Max. Liquid temp.        |     | 33° C / 70° C (PE2-PA Winding)                     | 33° C (91.4°F) / 70° C (PE2-PA Winding)            |
| starts per hour          |     | 20 Times   | 20 Times   |
| Method of starting       |     | 4.0kW to 45kW Direct On Line (D.O.L.)              | 4.0 kW to 5.5 kW Direct On Line (D.O.L.)           |
|                          |     | 5.5kW to 45kW Star Delta (S.D.)                    | 5.5 kW to 30.0 kW Star Delta ( DOL / S.D.)         |
| Cable leadout type       |     | Permanently Connected<br>3 / 4 Core PVC Flat Cable | Permanently Connected<br>3 / 4 Core PVC Flat Cable |

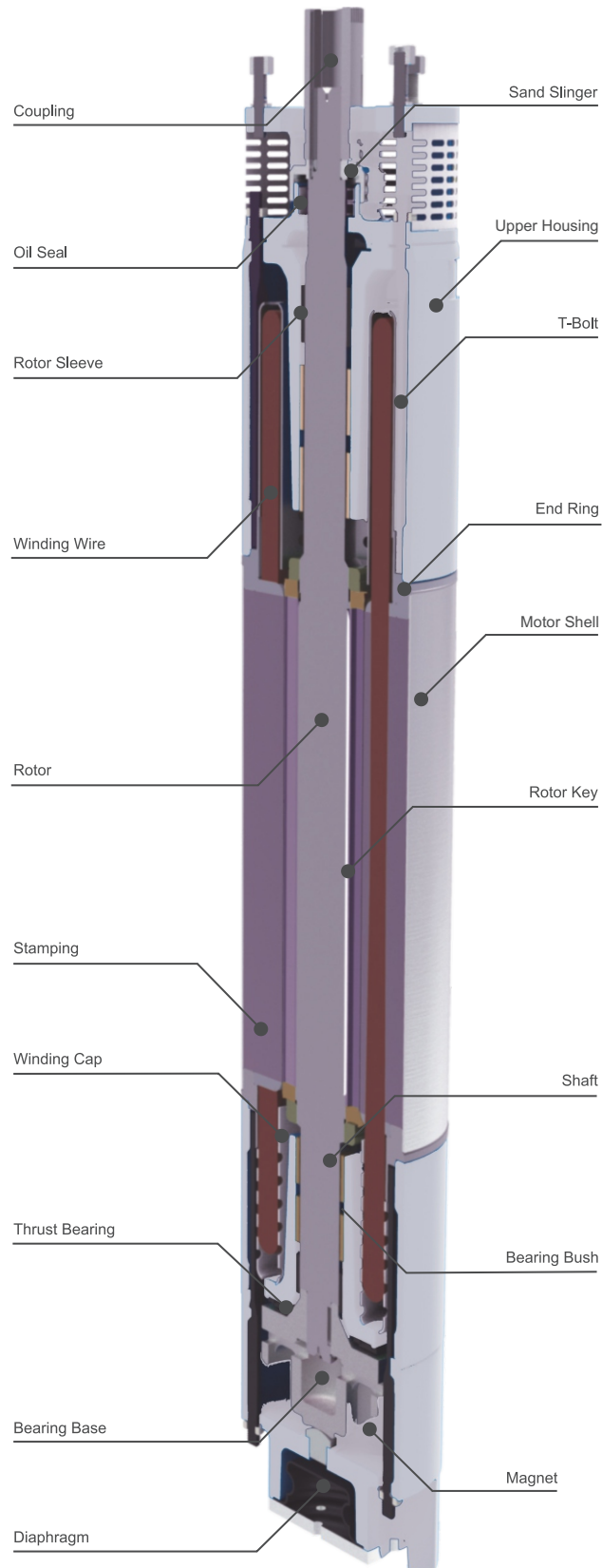
| Materials of Construction | C                  | L               | S               | T               |
|---------------------------|--------------------|-----------------|-----------------|-----------------|
| Upper & Lower Housing     | CI, FG 200 / 260   | Casted SS 410   | Casted SS 304   | Casted SS 316   |
| Stator Shell              | SS 202             | SS 410          | SS 304          | SS 316          |
| Thrust Pad                | CARBON / TEFLON    | CARBON / TEFLON | CARBON / TEFLON | CARBON / TEFLON |
| Thrust Bearing            | CI, FG 200/ SS 420 | SS 410 / SS 420 | SS 304 / SS 420 | SS 316 / SS 420 |
| Diaphragm                 | NITRILE RUBBER     | NITRILE RUBBER  | NITRILE RUBBER  | NITRILE RUBBER  |
| Motor Base                | CI, FG 200/260     | SS 410          | SS 304          | SS 316          |
| Upper Housing Shell       | CI, FG 200/260     | CI, FG 200/260  | CI, FG 200/260  | CI, FG 200/260  |
| Shaft                     | SS 420/431         | SS 420/431      | SS 420/431      | SS 420/431      |
| Sleeve                    | SS 410             | SS 410          | SS 410          | SS 410          |

### Features

- Easy to dismantle & repair
- High Operating Efficiency
- Specially designed 3 layered Insulation (Polyster+2BOPP) winding wire for better thermal protection
- Spl. Magnet provision at motor base to prevent from free metal particles
- Mounting dimensions as per NEMA standard
- Kingsburry type Thrust bearing to withstand high axial loads
- Spring action pressure compensating Diaphragm
- Specially designed forged MS stator end rings
- On request, Motors can be supplied with PE2-PA winding wire for high temp. applications.
- Motors with Mechanical Seal & PT sensors available, on request



Cross Sectional View



## Technical Details

50Hz, Three Phase 380-415V, Water Filled Motor (D.O.L. & S.D.)

| kW   | HP   | Full load Current (A) | Starting Current (A) | Eff. (%) | P.F. cosØ | Max. Down thrust Load (N) | Starting Torque (Nm) | Torque (Nm) |
|------|------|-----------------------|----------------------|----------|-----------|---------------------------|----------------------|-------------|
| 4    | 5.5  | 10                    | 44.69                | 68       | 0.7       | 15500                     | 20                   | 14          |
| 4.5  | 6    | 12                    | 50.97                | 70       | 0.71      | 15500                     | 21                   | 15          |
| 5.5  | 7.5  | 14.5                  | 57.16                | 73       | 0.71      | 15500                     | 24                   | 18          |
| 7.5  | 10   | 19.5                  | 79.51                | 74       | 0.71      | 15500                     | 27                   | 25          |
| 9.3  | 12.5 | 25                    | 94.59                | 75       | 0.72      | 15500                     | 35                   | 31          |
| 11   | 15   | 29                    | 113.12               | 76       | 0.72      | 15500                     | 43                   | 37          |
| 13   | 17.5 | 34                    | 122.4                | 77       | 0.72      | 15500                     | 51                   | 43          |
| 15   | 20   | 39                    | 133.1                | 78       | 0.73      | 15500                     | 62                   | 49          |
| 18.5 | 25   | 45                    | 162.8                | 80       | 0.73      | 15500                     | 98                   | 61          |
| 22   | 30   | 53                    | 189.71               | 80       | 0.75      | 15500                     | 118                  | 74          |
| 26   | 35   | 66                    | 215.2                | 81       | 0.76      | 15500                     | 146                  | 84          |
| 30   | 40   | 68                    | 241.5                | 83       | 0.76      | 27500                     | 196                  | 98          |
| 37   | 50   | 85                    | 420                  | 83       | 0.82      | 27500                     | 242                  | 122         |
| 45   | 60   | 96                    | 464                  | 83       | 0.82      | 27500                     | 393                  | 150         |

## Dimensional Details

| kW   | HP   | Cable Size D.O.L. (sq. mm) | Cable Size S.D. (sq. mm) | Cable Length (m) | Height (mm) | Net Weight (kg) |
|------|------|----------------------------|--------------------------|------------------|-------------|-----------------|
| 4    | 5.5  | 4                          | -                        | 3.0              | 704         | 51              |
| 4.5  | 6    | 4                          | -                        | 3.0              | 719         | 53              |
| 5.5  | 7.5  | 4                          | 2.5                      | 3.0              | 774         | 59              |
| 7.5  | 10   | 4                          | 2.5                      | 3.0              | 819         | 65              |
| 9.3  | 12.5 | 6                          | 2.5                      | 3.0              | 849         | 69              |
| 11   | 15   | 6                          | 4                        | 3.0              | 909         | 76              |
| 13   | 17.5 | 10                         | 4                        | 3.0              | 939         | 79              |
| 15   | 20   | 10                         | 4                        | 3.0              | 989         | 85              |
| 18.5 | 25   | 10                         | 4                        | 4.0              | 1039        | 92              |
| 22   | 30   | 10                         | 4                        | 4.0              | 1129        | 100             |
| 26   | 35   | 10                         | 6                        | 4.0              | 1164        | 118             |
| 30   | 40   | 16                         | 6                        | 4.0              | 1339        | 128             |
| 37   | 50   | 16                         | 6                        | 5.0              | 1312        | 128             |
| 45   | 60   | 16                         | 10                       | 5.0              | 1387        | 128             |



| Technical Specifications | 50 Hz                      | 60 Hz                                 |
|--------------------------|----------------------------|---------------------------------------|
| Nominal Dia              | 8" Motor (200mm)           | 8" Motor                              |
| Max. Outer Dia           | 190mm                      | 7.5 Inches                            |
| Power Range              | 37 to 63 kW                | 50 to 85 HP                           |
| Version                  | 3Ph                        | 380V / 440V / 460V 60 Hz, A.C. Supply |
| Nominal Speed            | 2900 rpm                   | 3450 rpm                              |
| Class of Insulation      | Y / F                      | Y / F                                 |
| Degree of protection     | IP 68                      | IP 68                                 |
| Direction of rotation    | Counter-Clock Wise         | Counter-Clock Wise                    |
| Type of duty             | S1 (Continues)             | S1 (Continues)                        |
| Minimum cooling flow     | 0.5 m/sec                  | 0.5 m/sec                             |
| Max. Liquid temp.        | 33° C                      | 33° C                                 |
| starts per hour          | 10 Times                   | 10 Times                              |
| Method of starting       | 37 kW - 63 kW (DOL & S.D.) | 37.0 kW - 63.0 kW (DOL & S.D.)        |
| Cable leadout type       | 3 / 4 Core PVC Flat Cable  | 3 / 4 Core PVC Flat Cable             |

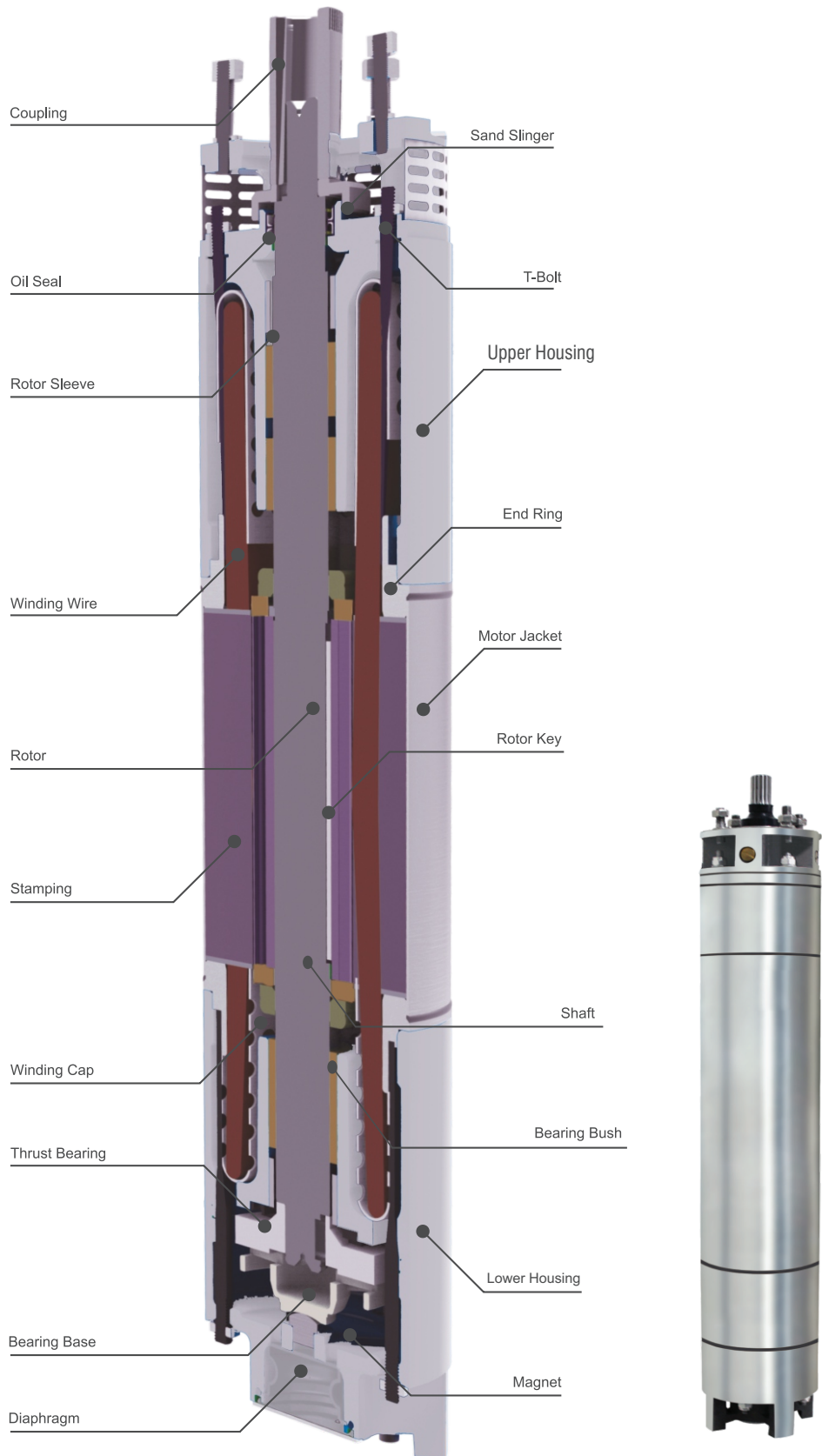
| Materials of Construction | C                  | S               | T               |
|---------------------------|--------------------|-----------------|-----------------|
| Upper & Lower Housing     | CI,FG 200/260      | Casted SS304    | Casted SS316    |
| Stator Shell              | SS 202             | SS304           | SS316           |
| Thrust Pad                | CARBON / TEFLON    | CARBON / TEFLON | CARBON / TEFLON |
| Thrust Bearing            | CI, FG 200/ SS 420 | Ss304 / Ss420   | Ss316 / Ss420   |
| Diaphragm                 | NITRILE RUBBER     | NITRILE RUBBER  | NITRILE RUBBER  |
| Motor Base                | CI, FG 200/260     | SS304           | SS316           |
| upper housing shell       | CI, FG 200/260     | SS304           | SS316           |
| Shaft                     | SS 420/431         | SS 420/431      | SS 420/431      |
| Sleeve                    | SS 410             | SS 410          | SS 410          |

## Features

- Easy to dismantle & repair
- High Operating Efficiency
- Specially designed 3 layered Insulation (Polyster+2BOPP) winding wire for better thermal protection
- Spl. Magnet provision at motor base to prevent from free metal particles
- Mounting dimensions as per NEMA standard
- Kingsbury type Thrust bearing to withstand high axial loads
- Spring action pressure compensating Diaphragm
- Specially designed forged MS stator end rings
- On request, Motors can be supplied with PE2-PA winding wire for high temp. applications.
- Motors with Mechanical Seal & PT sensors available, on request



Cross Sectional View



## Technical Details

### 50Hz, Three Phase, 380-415V Water Filled Motor

| kW | HP | Full load Current (A) | Starting Current (A) | Eff. (%) | P.F. cos $\phi$ | Max. Down thrust Load (N) | Starting Torque (Nm) | Torque (Nm) |
|----|----|-----------------------|----------------------|----------|-----------------|---------------------------|----------------------|-------------|
| 37 | 50 | 85                    | 400                  | 82       | 0.84            | 45500                     | 200                  | 122         |
| 45 | 60 | 100                   | 520                  | 82       | 0.84            | 45500                     | 268                  | 149         |
| 55 | 75 | 120                   | 660                  | 83       | 0.84            | 45500                     | 370                  | 180         |
| 63 | 85 | 135                   | 720                  | 83       | 0.84            | 45500                     | 410                  | 206         |

## Dimensional Details

| kW | HP | Cable Size D.O.L. (sq. mm) | Cable Size S.D. (sq. mm) | Cable Length (m) | Height (mm) | Net Weight (kg) |
|----|----|----------------------------|--------------------------|------------------|-------------|-----------------|
| 37 | 50 | 16.0                       | 10                       | 4.0              | 1236.5      | 166.0           |
| 45 | 60 | 16.0                       | 10                       | 4.0              | 1351.5      | 188.0           |
| 55 | 75 | 35.0                       | 25                       | 5.0              | 1431.5      | 203.0           |
| 63 | 85 | 35.0                       | 25                       | 5.0              | 1491.5      | 213.0           |