



**W - SERIES**

**SUBMERSIBLE MOTORS  
CATALOGUE  
- 50 Hz**

An ISO 9001 Certified Company

(REWINDABLE, WATER FILLED MOTORS)

# Our Ethos

**S**uccess through

**A**dvanced,

**M**anufacturing excellence by

**U**nderstanding our customers &

**D**eveloping sustainable

**R**elationships to create

**A**mazing products and services!

## Vision

To be a global engineering icon  
by putting people first  
& giving back to society.



**SAMUDRA**

## Mission

Delivering exceptional products and services  
by creating long term, sustainable partnerships  
& generating stakeholder value

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## ABOUT US

Samudra is headquartered in Singapore with manufacturing capabilities in Coimbatore, India. With strong roots in industrial design and discreet manufacturing of pumps and motors, Samudra's strength lies in its core management team that has over 250 years of combined technical and commercial experience in the industry.

Samudra's initial strategy is to first launch its agricultural and domestic range to meet the needs of the farmer and the domestic market, through focus on latest technologies

that ensure high pump efficiency, greatest flow rate and ease of installation, maintenance and service. Samudra, is to soon follow this up with a complete range of Industrial and Commercial products; like Back Pull-Out pumps and Hydro Pneumatic Pressure Booster Systems.

We strive to be as innovative as possible, while providing the highest value to our customers. We are not afraid to push boundaries while remaining prudent and careful in our approach.

## SAMUDRA

### W – Series Motors

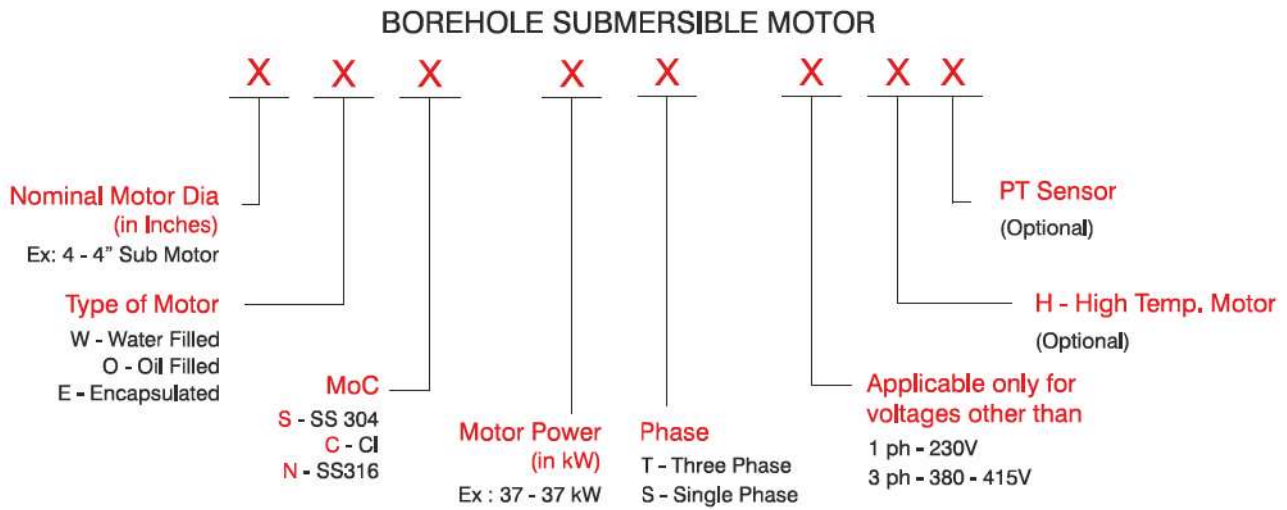


Samudra's **W - Series** motors are Water Filled, Borewell / Borehole / Tubewell submersible motors designed to drive Samudra's borewell pumps or any NEMA standard pumps.. They are available from 4" up to 10" sizes with the power rating of 0.37 kW up to 185 kW [0.5 - 250 HP] as standard range and higher kW can be supplied against requirements.

The motors are 100% rewindable, wet type motors pre-filled with the treated pure water mixed with anti-corrosive agents as cooling & lubricating media. The dynamically balanced rotor ensures enough clearance between Stator & Rotor stamping and ensures smooth run for a long. The windings are made up of EC grade, High conductivity copper protected with materials of excellent insulation and water-proof property. High performance, specially designed, water lubricated thrust bearings are provided to withstand high axial thrust loads exerted by whole bore well water column and pumping systems. The in-built pressure equalizer called Diaphragm made up of NBR balances the pressure variation inside the motor.

The mounting dimensions are as per NEMA Standards and keyway type motors can also be supplied as per customer demand. These motors are available in different types of MoC's like Fully Stainless Steel or Cast Iron constructions.

## Model Identification Code



### Important Notes

- These motors are meant only for clear water applications.
- Electrical performances of the motors remain the same for all types of materials of constructions.
- The given the performances are based on the ideal testing conditions at factory and the actual performance. may vary according to the field parameters.
- The given pictures, diagrams and drawings are only for illustration purpose and the actual product may differ due to our continuous improvisations

These motors should be operated with properly sized control panel of right starting method according to the Hps



### Warnings !!

- Considering these motors are electrical appliances, utmost care shall be taken during installation and commissioning operations / maintenance & servicing.
- Apart from the general guidelines the local regulations shall be adhered strictly.
- Proper Earthing of motor & control panels is mandatory.
- These motors are not for swimming pool applications.

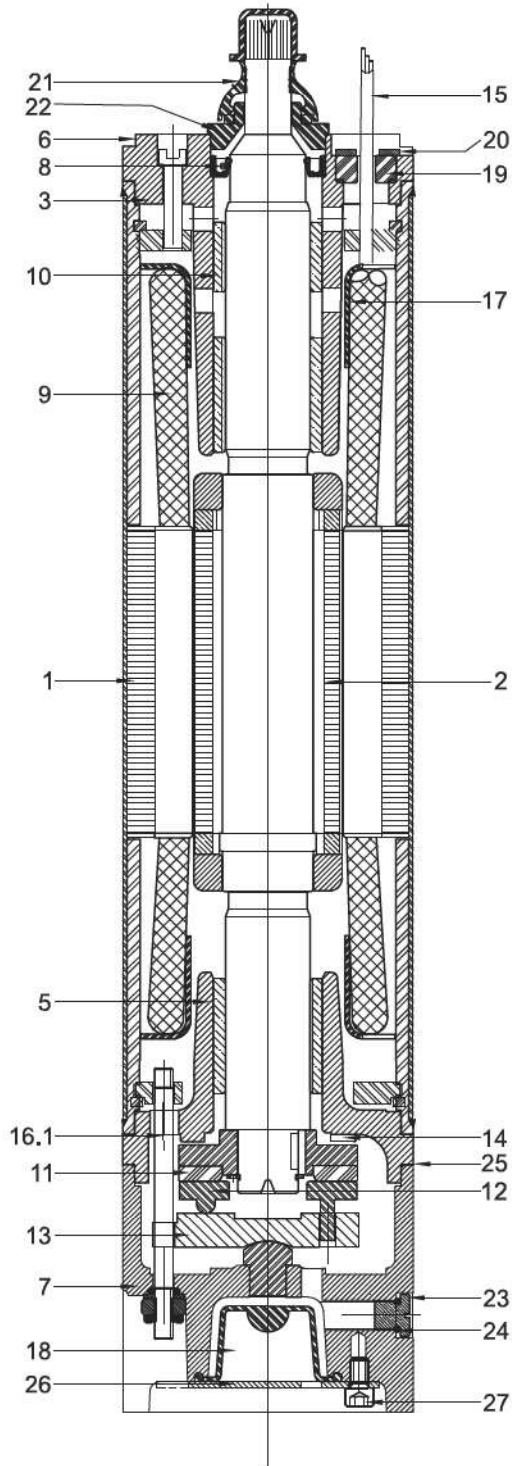
## Materials of Construction

Part No	Part Name	S - Type [SS 304 Fabricated]	C - Type [CI casted]
1	Stator Body	SS 304	SS 304
2	Rotor + Shaft	Silicon steel + SS 431/ 310	Silicon steel + SS 431/ 310
3	Seal Housing	CI	CI
4	Top (Bush) Housing	CI with SS 304 outer shell	CI
5	Bottom (Bush) Housing	CI with SS 304 outer shell	CI
6	Seal Housing Shell	SS 304	NA
7	Motor Base	SS 304	CI
8	Oil Seal / Mechanical Seal	NBR / Ceramic Carbon	NBR / Ceramic Carbon
9	Winding	Polywrap / PVC / PE2-PA / XLPE	Polywrap / PVC / PE2-PA / XLPE
10	Bush	Carbon	Carbon
11	Thrust Pad	Carbon Graphite	Carbon Graphite
12	Thrust Segment	SS 420	SS 420
13	Thrust Base	CI	CI
14	Counter Thrust Pad	Hylam/Nylon/Teflon	Hylam/Nylon/Teflon
15	Lead - out Cable	PVC/Rubber	PVC/Rubber
16	T-Bolt	MS	MS
17	Winding Protector	Nylon	Nylon
18	Diaphragm	NBR	NBR
19	Cable Gland	NBR	NBR
20	Gland Washer	SS 304	SS 304
21	Sand Guard - Rubber	NBR	NBR
22	Sand Guard - Metal	SS 304	SS 304
23	Drain Plug	SS/Brass	SS/Brass
24	O-Ring	NBR	NBR
25	Gasket	CAF	CAF
26	Motor Base plate	SS 304	CI
27	Screw	SS 304	SS 304
28	Doom Nut	SS 304	SS 304
29	Stud	SS 304	SS 304
30	Nut	SS 304	SS 304

## Materials of Construction

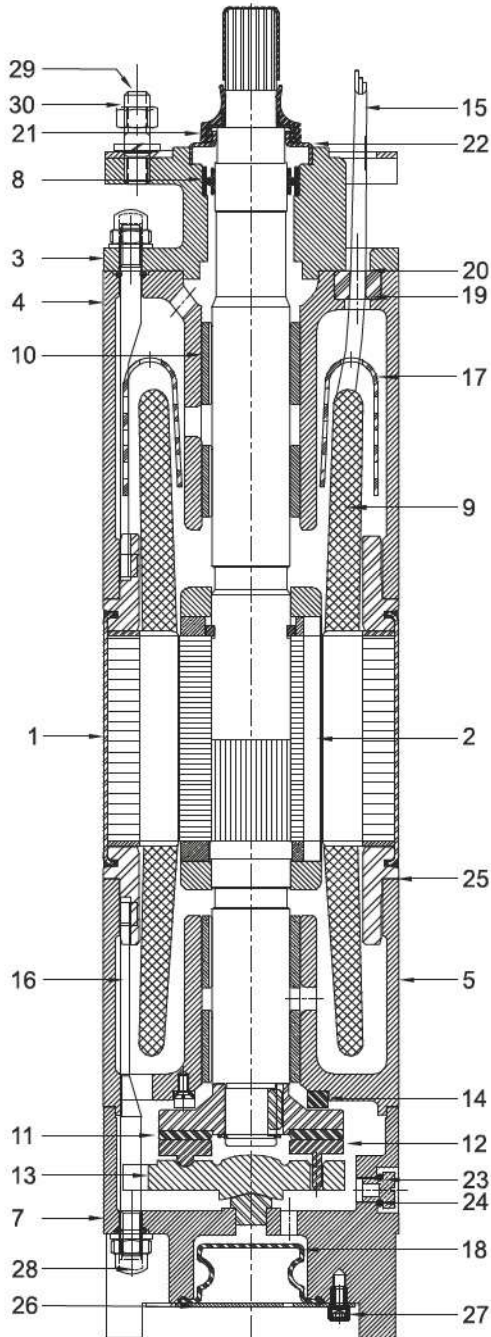
Part No	Part Name	N - Type [SS 316 Fabricated]	T - Type [SS 304 Casted]
1	Stator Body	SS 316	SS 304
2	Rotor + Shaft	Silicon steel + SS 431/ 310	Silicon steel + SS 431/ 310
3	Seal Housing	CI	SS 304 - Casted
4	Top (Bush) Housing	CI with SS 316 outer shell	CI with SS 304 outer shell
5	Bottom (Bush) Housing	CI with SS 316 outer shell	CI with SS 304 outer shell
6	Seal Housing Shell	SS 316	NA
7	Motor Base	SS 316	SS 304 - Casted
8	Oil Seal / Mechanical Seal	NBR / Ceramic Carbon	NBR / Ceramic Carbon
9	Winding	Polywrap / PVC / PE2-PA / XLPE	Polywrap / PVC / PE2-PA / XLPE
10	Bush	Carbon	Carbon
11	Thrust Pad	Carbon Graphite	Carbon Graphite
12	Thrust Segment	SS 420	SS 420
13	Thrust Base	CI	CI
14	Counter Thrust Pad	Hylam/Nylon/Teflon	Hylam/Nylon/Teflon
15	Lead - out Cable	PVC/Rubber	PVC/Rubber
16	T-Bolt	MS	MS
17	Winding Protector	Nylon	Nylon
18	Diaphragm	NBR	NBR
19	Cable Gland	NBR	NBR
20	Gland Washer	SS 316	SS 304
21	Sand Guard - Rubber	NBR	NBR
22	Sand Guard - Metal	SS 316	SS 304
23	Drain Plug	SS/Brass	SS/Brass
24	O-Ring	NBR	NBR
25	Gasket	CAF	CAF
26	Motor Base plate	SS 316	SS 304
27	Screw	SS 316	SS 304
28	Doom Nut	SS 316	SS 304
29	Stud	SS 316	SS 304
30	Nut	SS 316	SS 304

## 4" Water Filled Motor



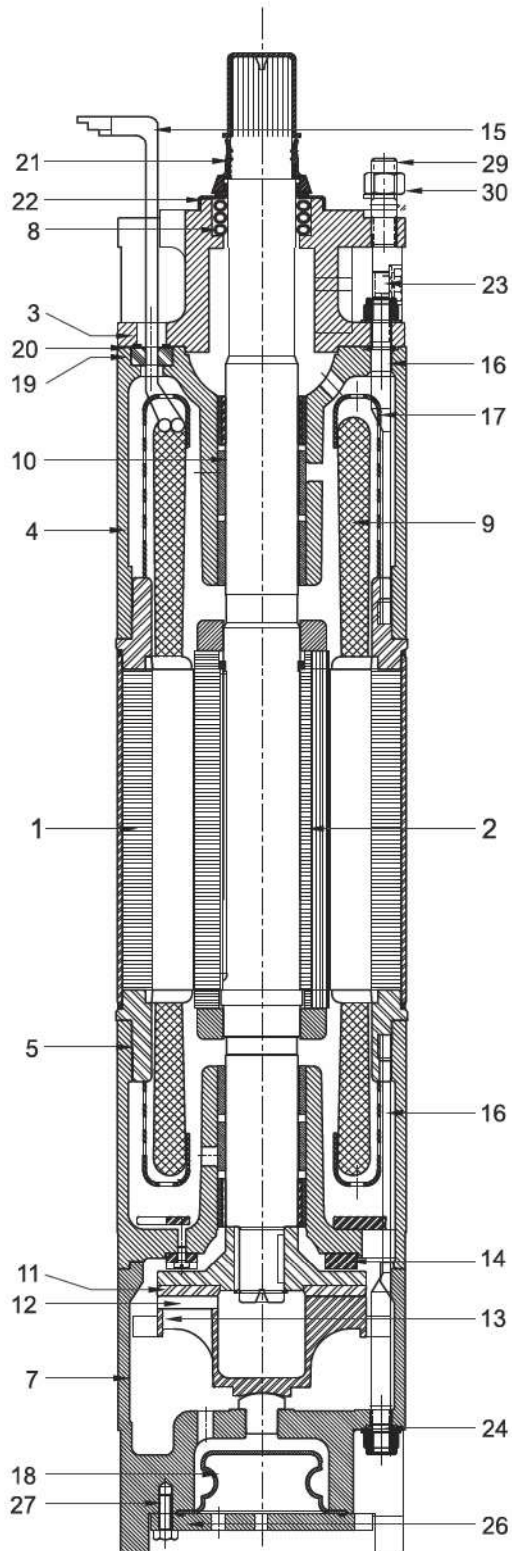
P.NO	PART NAME
1	STATOR BODY
2	ROTOR + SHAFT
3	SEAL HOUSING
5	BOTTOM (BUSH) HOUSING
6	SEAL HOUSING SHELL
7	MOTOR BASE
8	OIL SEAL / MECHANICAL SEAL
9	WINDING
10	BUSH
11	THRUST PAD
12	THRUST SEGMENT
13	THRUST BASE
14	COUNTER THRUST PAD
15	LEAD - OUT CABLE
16.1	T-BOLT
17	WINDING PROTECTOR
18	DIAPHRAGM
19	CABLE GLAND
20	GLAND WASHER
21	SAND GUARD - RUBBER
22	SAND GUARD - METAL
23	DRAIN PLUG
24	O-RING
25	GASKET
26	MOTOR BASE PLATE
27	SCREW

## 6" Water Filled Motor



PNO	PART NAME
1	SAND SLINGER
2	SAND COVER
3	OIL SEAL
4	ADAPTOR
5	FLANGE
6	BEARING BUSH
7	WINDING WIRE
8	ROTOR
9	STATOR
10	LOWER HOUSING
11	STUD
12	THRUST BEARING WITH
13	MOTOR BASE
14	FASTENERS
15	DIAPHRAGM
16	MOTOR BASE PLATE
17	SAND COVER
18	OIL SEAL
19	ADAPTOR
20	FLANGE
21	BEARING BUSH
22	WINDING WIRE
23	ROTOR
24	STATOR
25	LOWER HOUSING
26	STUD
27	THRUST BEARING WITH
28	LOOSE SEGMENT
29	MOTOR BASE
30	FASTENERS

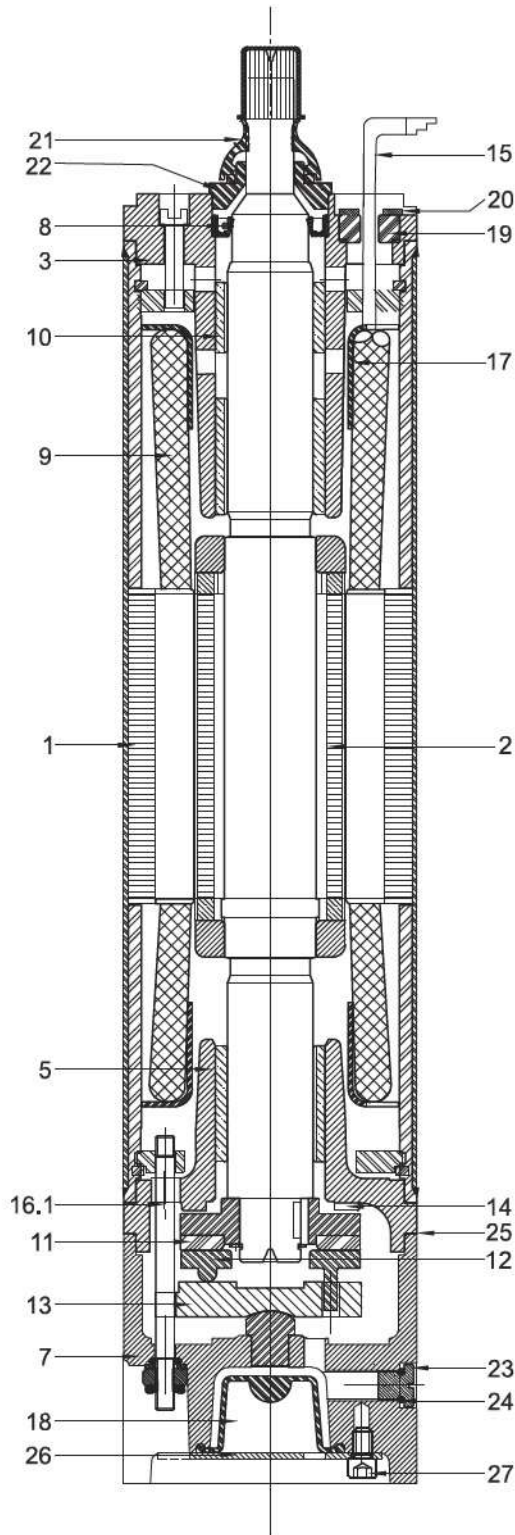
## 8" Water Filled Motor



PNO	PART NAME
1	STATOR BODY
2	ROTOR + SHAFT
3	SEAL HOUSING
4	TOP (BUSH) HOUSING
5	BOTTOM (BUSH) HOUSING
6	SEAL HOUSING SHELL
7	MOTOR BASE
8	OIL SEAL / MECHANICAL SEAL
9	WINDING
10	BUSH
11	THRUST PAD
12	THRUST SEGMENT
13	THRUST BASE
14	COUNTER THRUST PAD
15	LEAD - OUT CABLE
16	T-BOLT
17	WINDING PROTECTOR
18	DIAPHRAGM
19	CABLE GLAND
20	GLAND WASHER
21	SAND GUARD - RUBBER
22	SAND GUARD - METAL
23	DRAIN PLUG
24	O-RING
25	GASKET
26	MOTOR BASE PLATE
27	SCREW
28	DOOM NUT
29	STUD
30	NUT

# Cross-sectional Diagram

6" - 50 & 60 HP | 8" - 100 to 150 HP | 10" - 110 to 250 HP



P.NO	PART NAME
1	STATOR BODY
2	ROTOR + SHAFT
3	SEAL HOUSING
5	BOTTOM (BUSH) HOUSING
7	MOTOR BASE
8	OIL SEAL / MECHANICAL SEAL
9	WINDING
10	BUSH
11	THRUST PAD
12	THRUST SEGMENT
13	THRUST BASE
14	COUNTER THRUST PAD
15	LEAD - OUT CABLE
16.1	T-BOLT
17	WINDING PROTECTOR
18	DIAPHRAGM
19	CABLE GLAND
20	GLAND WASHER
21	SAND GUARD - RUBBER
22	SAND GUARD - METAL
23	DRAIN PLUG
24	O-RING
25	GASKET
26	MOTOR BASE PLATE
27	SCREW

## TECHNICAL DETAILS

Nominal Diameter	4" Motor (100 mm)	
Max. Outer Diameter	3.74" (95 mm)	
Power Range	1Ph	0.37 - 3.7 kW (0.5 - 5.5 HP)
	3Ph	1.1 - 5.5 kW (0.5 - 7.5 HP)
Nominal Speed	2900 rpm	
Voltage range	1Ph	230V, 50Hz, A.C Supply
	3Ph	380 - 415V, 50Hz, A.C Supply
Class of Insulation	F	
Degree of protection	IP 58	

Direction of rotation	Anti-Clock wise
Type of duty	S1 (Continues)
Minimum cooling flow	0.15 m/sec
Max. Liquid temp.	40°C / 104°F
Starts per hour	20 Times
Method of starting	Single Phase - Capacitor Start Capacitor Run
	Three Phase - Direct On Line (DOL)
Cable leadout type	3 Core / 4 Core Flat Cable

## ELECTRICAL DATA : 1 Phase 230V , 50Hz

kW	HP	Full Load Current (A)	Starting Current (A)	Full Load Efficiency %	Full Load Power Factor	Max. Down Thrust Load (N)	Starting Torque (Nm)	Torque (Nm)	Cable Size (sq. mm)	Cable Length (m)	Height (mm)	Net Weight (kg)
0.37	0.5	4.9	12	43	0.90	3000	2.0	1.2	1.5	2.3	481	15.3
0.55	0.75	6	15	50	0.90	3000	2.9	1.8	1.5	2.3	501	16
0.75	1.0	6.7	18	55	0.90	3000	4.1	2.5	2.5	2.3	521	17
1.1	1.5	10	25	60	0.90	3000	6.1	3.7	2.5	2.7	551	19
1.5	2	13	34	63	0.90	3000	8.3	4.9	4	3.1	601	21
2.2	3	18	50	66	0.90	6500	13.3	7.4	4	3.1	671	25
3.7	5	27	63	68	0.90	6500	15.5	8.6	6	3.1	781	31

## ELECTRICAL DATA : 3 Phase 380 - 415V, 50Hz

kW	HP	Full Load Current (A)	Starting Current (A)	Full Load Efficiency %	Full Load Power Factor	Max. Down Thrust Load (N)	Starting Torque (Nm)	Torque (Nm)	Cable Size (sq. mm)	Cable Length (m)	Height (mm)	Net Weight (kg)
0.75	1	2.7	8	65	0.60	3000	4.5	2.5	1.5	2.3	521	17
1.1	1.5	3.9	12	68	0.70	3000	6.7	3.7	1.5	2.7	551	19
1.5	2	4.5	16	70	0.70	3000	9	5	1.5	2.7	601	22
2.2	3	6.6	24	70	0.70	6500	14.1	7.5	2.5	2.7	671	25
3	4	8.2	27	72	0.70	6500	19	10	2.5	2.7	741	28
3.7	5	10	34	72	0.70	6500	22	12.4	2.5	2.7	781	31
5.5	7.5	14.2	46	72	0.70	6500	33.7	18.7	4	3.1	841	34

## TECHNICAL DETAILS

Nominal Diameter	6" Motor (150 mm)		Direction of rotation	Anti-Clock wise
Max. Outer Diameter	5.67" (144 mm)		Type of duty	S1 (Continues)
Power Range	3Ph	5.5 - 45 kW (7.5 - 60 HP)	Minimum cooling flow	0.15 m/sec
Nominal Speed	2900 rpm		Max. Liquid temp.	40°C / 50°C (104°F / 120°F)
Voltage Range	3Ph	380 - 415V, 50Hz, A.C Supply	Starts per hour	20 Times
Class of Insulation	F		Method of starting	5.5 - 45 kW (DOL / Star-Delta)
Degree of protection	IP 68 / 58		Cable lead out type	3 Core / 4 Core Flat Cable

### ELECTRICAL DATA : 1 Phase 230V , 50Hz

kW	HP	Full Load Current (A)	Starting Current (A)	Full Load Efficiency %	Full Load Power Factor	Max. Down Thrust Load (N)	Starting Torque (Nm)	Torque (Nm)	Cable Size (sq. mm)	Cable Length (m)	Height (mm)	Net Weight (kg)
2.2	3	14	35	64	0.85	15500	17	10	4	2.7	617	45
3	4	21	50	64	0.86	15500	19	12	6	2.7	642	46
3.7	5	26	62	65	0.88	15500	20	14	6	2.7	657	47
4.5	6	30	70	66	0.9	15500	21	15	6	2.7	677	50
5.5	7.5	38	87	67	0.9	15500	24	18	8.0	2.7	727	55
7.5	10	47	105	70	0.91	15500	27	25	8.0	2.7	762	60

### ELECTRICAL DATA : 3 Phase 380 - 415V, 50Hz

kW	HP	Full Load Current (A)	Starting Current (A)	Full Load Efficiency %	Full Load Power Factor	Max. Down Thrust Load (N)	Starting Torque (Nm)	Torque (Nm)	Cable Size (sq. mm)	Cable Length (m)	Height (mm)	Net Weight (kg)
2.2	3	6.5	30	74	0.72	15500	17	10	1.5	2.7	617	45
3	4	8	37	76	0.70	15500	19	12	1.5	2.7	642	46
4	5	8.5	39	78	0.73	15500	20	14	2.5	2.7	657	47
4.5	6	11	50	79	0.73	15500	21	15	2.5	2.7	677	50
5.5	7.5	14	62	80	0.74	15500	24	18	2.5	2.7	727	55
7.5	10	18	79	81	0.74	15500	27	25	2.5	2.7	762	60
9.3	12.5	23	99	81.5	0.74	15500	35	31	4.0	2.7	807	65
11	15	27	116	82	0.73	15500	43	37	4.0	2.7	857	70
13	17.5	31	131	82	0.76	15500	51	43	4.0	2.7	877	73
15	20	35	144	82.5	0.72	15500	62	49	4.0	3.15	932	80
18.5	25	42	169	83	0.71	15500	98	61	4.0	3.15	987	89
22	30	52	206	83	0.73	15500	118	74	6.0	3.15	1057	95
26	35	60	231	83.5	0.74	15500	146	84	6.0	3.15	1132	117
30	40	65	245	84	0.81	27500	196	98	8.0	3.15	1237	127
37	50	80	289	84	0.82	27500	196	98	8.0	3.15	1312	138
45	60	87	340	84	0.85	27500	390	150	16.0	4	1347	110

## TECHNICAL DETAILS

Nominal Diameter	8" Motor (200 mm)
Max. Outer Diameter	7.4" (188 mm)
Power Range	3Ph 15 - 110 kW (20 - 150 HP)
Nominal Speed	2900 rpm
Voltage Range	3Ph 380 - 415V, 50Hz, A.C Supply
Class of Insulation	F
Degree of protection	IP 68
Direction of rotation	Anti-Clock wise
Type of duty	S1 (Continues)
Minimum cooling flow	0.15 m/sec
Max. Liquid temp.	40°C / 50°C (104°F / 120°F)
Starts per hour	20 Times
Method of starting	15 - 110 kW (DOL / Star-Delta)
Cable lead out type	3 Core Flat Cable

## ELECTRICAL DATA : 3 Phase 380 - 415V, 50Hz

kW	HP	Full Load Current (A)	Starting Current (A)	Full Load Efficiency %	Full Load Power Factor	Max. Down Thrust Load (N)	Starting Torque (Nm)	Torque (Nm)	Cable Size (sq. mm)	Cable Length (m)	Height (mm)	Net Weight (kg)
22	30	45	160	80	0.81	45500	112	73	6	2.75	1157	136
26	35	54	187	81	0.81	45500	126	86	6	2.75	1187	147
30	40	63	213	81	0.82	45500	141	99	8	2.75	121	160
33.5	45	71	244	82	0.83	45500	167	111	8	3.5	1282	158
37	50	77	262	82	0.84	45500	194	123	10	3.5	1322	166
45	60	91	307	82	0.84	45500	266	150	10	3.5	1437	188
55	75	108	361	83	0.85	45500	321	199	16	4	1517	203
63	85	125	415	83	0.85	45500	377	208	16	4	1577	213
75	100	145	545	85	0.85	45500	476	248	25	4	1370	186
81	110	157	590	86	0.84	45500	588	274	25	4	1400	195
92	125	178	670	86	0.84	45500	679	306	25	4	1480	210
110	150	205	775	86	0.87	45500	822	370	35	4	1610	235



## TECHNICAL DETAILS

Nominal Diameter	10" Motor (250 mm)
Max. Outer Diameter	9.13" (232 mm)
Power Range 3Ph	83 - 185 kW (110 - 250 HP)
Nominal Speed	2900 rpm
Voltage Range 3Ph	380 - 415V, 50Hz, A.C Supply
Class of Insulation	F
Degree of protection	IP 68
Direction of rotation	Anti-Clock wise
Type of duty	S1 (Continues)
Minimum cooling flow	0.5 m/sec
Max. Liquid temp.	40°C / 50°C (104°F / 120°F)
Starts per hour	10 Times
Method of starting	83 - 185 kW (DOL / Star-Delta)
Cable lead out type	3 Core Flat Cable

## ELECTRICAL DATA : 3 Phase 380 - 415V, 50Hz

kW	HP	Full Load Current (A)	Starting Current (A)	Full Load Efficiency %	Full Load Power Factor	Max. Down Thrust Load (N)	Starting Torque (Nm)	Torque (Nm)	Cable Size (sq. mm)	Cable Length (m)	Height (mm)	Net Weight (kg)
83	110	155	575	87	0.85	75000	281	344	25	5	131	230
93	125	176	660	86	0.85	75000	311	391	25	5	1370	256
110	150	214	799	86	0.84	75000	364	472	35	5	1430	284
130	175	243	906	88	0.85	75000	431	601	35	5	1510	311
150	200	276	1030	88	0.85	75000	494	696	35	5	1610	338
165	225	316	1175	87	0.85	75000	558	786	35	5	1740	370
185	250	352	1312	87	0.85	75000	605	1109	35	5	1820	400





 **India Operations :**

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