



C.R.I. SUBMERSIBLE MOTORS - 50Hz





C.R.I. PUMPS

Pumping trust. Worldwide.

T H E B E G I N N I N G

of C.R.I., way back in 1961, was a resolute attempt to produce a few irrigation equipments using the limited facilities of an in-house foundry. Eventually the founder's dream was coming true as the small production unit he started kept growing rapidly. Now, after more than five eventful decades, it is an enormous, widely reputed organization, which produces more than 1500 varieties of perfectly engineered pumps and motors and sells its products in numerous countries spread across 6 continents.

C . R . I . I S O N E A M O N G

the few pioneers in the world to produce 100% stainless steel submersible pumps. Having achieved a record production capacity of over 1.5 million pumps per annum, today C.R.I. is rubbing its shoulders with the best brands in the world, with advanced technology and safety standards as its hallmarks.

T H E I N F R A S T R U C T U R E

of C.R.I. is pretty comprehensive with state-of-the-art machineries and high potential in-house R&D recognised by the ministry of science and technology, Govt. of India - all within its own covered area of 200,000 square metres. The production environment is accredited with ISO 9001 & 14001 certifications and the products are CE, UR/UL, IEC, TSE & ISI certified. The R&D team always stays in tune with the changing scenario and seldom fails in coming up with outstanding solutions every time.

N E E D L E S S T O S A Y ,

behind this legendary growth lies the untiring, innovative, enthusiastic and dedicated team work. and, of course, a flawlessly maintained value system too. The name C.R.I. itself encapsulates the company's ethos: " Commitment, Reliability, Innovation".





C.R.I. PUMPS

Pumping trust. Worldwide.

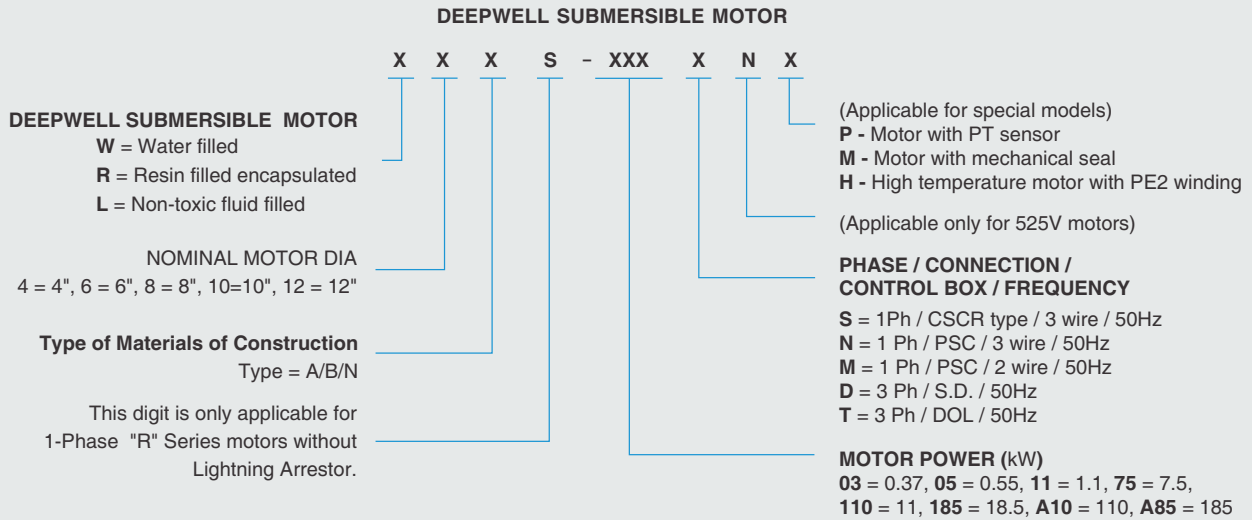
Vision, Mission and values

To be the industry leader providing best - in - class fluid management solutions to individual and institutional customers and societies in our chosen markets.

We will achieve this through our dedicated efforts to enhance the welfare of all our stakeholders and by living by our values of commitment, reliability and Innovation.

GENERAL INFORMATION

MODEL IDENTIFICATION CODE



DEEPWELL SUBMERSIBLE PUMP SET (Pump + Motor)		
PUMP MODEL	+	MOTOR MODEL
S X X - XXX / XX	+	X X X - XXX X
DEEPWELL SUBMERSIBLE PUMP SET (Pump + Motor)		
PUMP MODEL	+	MOTOR MODEL
S6S - 18 / 03	+	W6A - 22 T

WATER FILLED REWINDABLE SUBMERSIBLE MOTORS

“W” Series Motors

These motors are eco-friendly, wet type, water filled and rewindable. The stator windings are of water proof synthetic film insulated copper winding wires. It features water lubricated thrust and journal bearings. Motor is pre-filled with clear, cold, pure, fresh, filtered propylene glycol (anti-freeze agent) mixed water. Before commissioning, ensure the pre-filled level of water inside the motor. If any loss of volume is noticed, refill with clear, cold, pure, fresh, filtered water, through water filling plugs / valves provided in the upper housing. Where the use of anti-freeze agent mixed water is not be allowed for special applications, these motors can also be filled with clear, cold, pure, fresh, filtered water and operated. Dynamically balanced rotors maintains uniform clearance thereby giving better efficiency and increase the life cycle of the water lubricated bush bearings. Specially designed high performance thrust bearings are used to withstand high axial thrust loads and up thrust loads with minimum wear and tear.

The unique design of thrust bearings create a wedge of water between the shoe and the disc, and thereby providing better water lubrication and increases the life cycle of the thrust bearings. Pressure equalizing rubber diaphragm is provided to balance the pressure and volume variations of the water inside the motor. Motor sealing are made by means of ‘O’ rings. Shaft seals and sand guard prevents ingress of well water, sand and fiber particles into the motor. Care should be taken to ensure that the motor does not run when it is not submerged in the water, To prevent the motor from dry running, install water level monitor/dry run preventor. The motor needs a constant flow of water passed over it's body to keep it at correct operating temperature. Ideally the motors should be set just above the final yield point of bore well and when the level is not ascertained, fit a “flow inducer pipe” over the pumpset to ensure adequate cooling. It is mandatory to use C.R.I. Control boxes for all motors with adequate protection & control systems. Mounting dimensions of these motors are in accordance with NEMA standard.

Features

- Water cooled Re-windable motor
- Can be easily dismantled and repaired
- High operating efficiency
- Extremely hardwearing and water lubricated bearings
- Specially designed thrust bearing to withstand high axial loads.
- AISI 630 (17.4 PH) motor shaft extension for longer life.

Applications

These prime mover submersible motors are suitable to couple with deepwell submersible pumpsets used for

- | | | |
|---------------------------|---------------------------|--------------------------|
| • Residential | • Pressure boosting units | • Oil & Gas |
| • Irrigation | • Gardens | • De-watering |
| • Fountains | • Sprinkler systems | • CBM (coal bed methane) |
| • Industrial water supply | • Mining | |

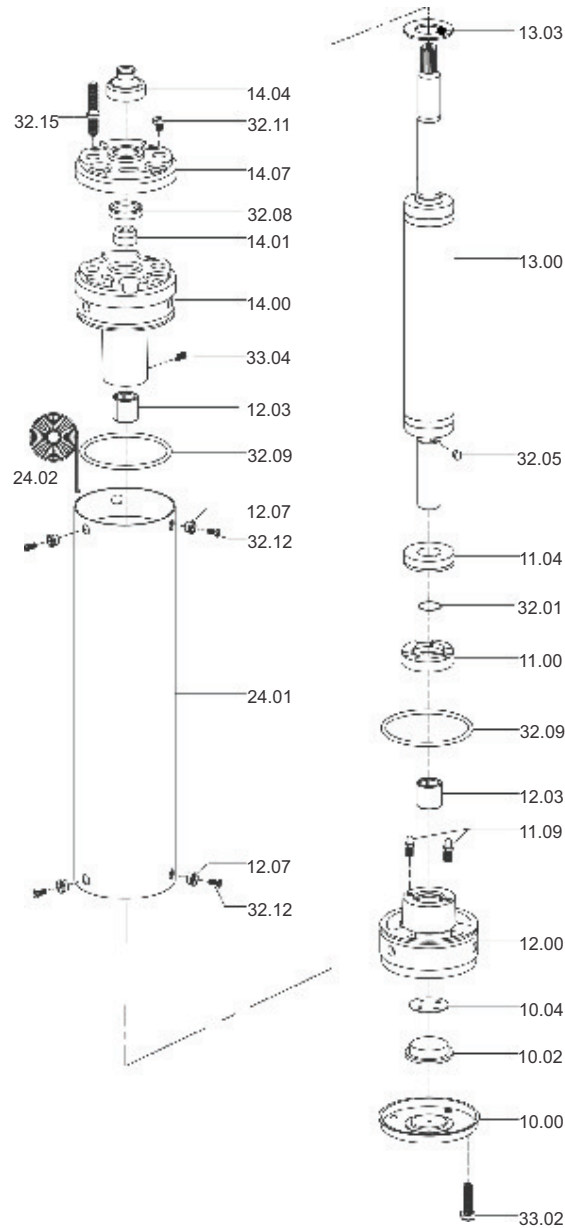


WATER FILLED REWINDABLE SUBMERSIBLE MOTORS

Nominal Diameter : **4"**

"W" Series
(Upto 2 HP)

Exploded view



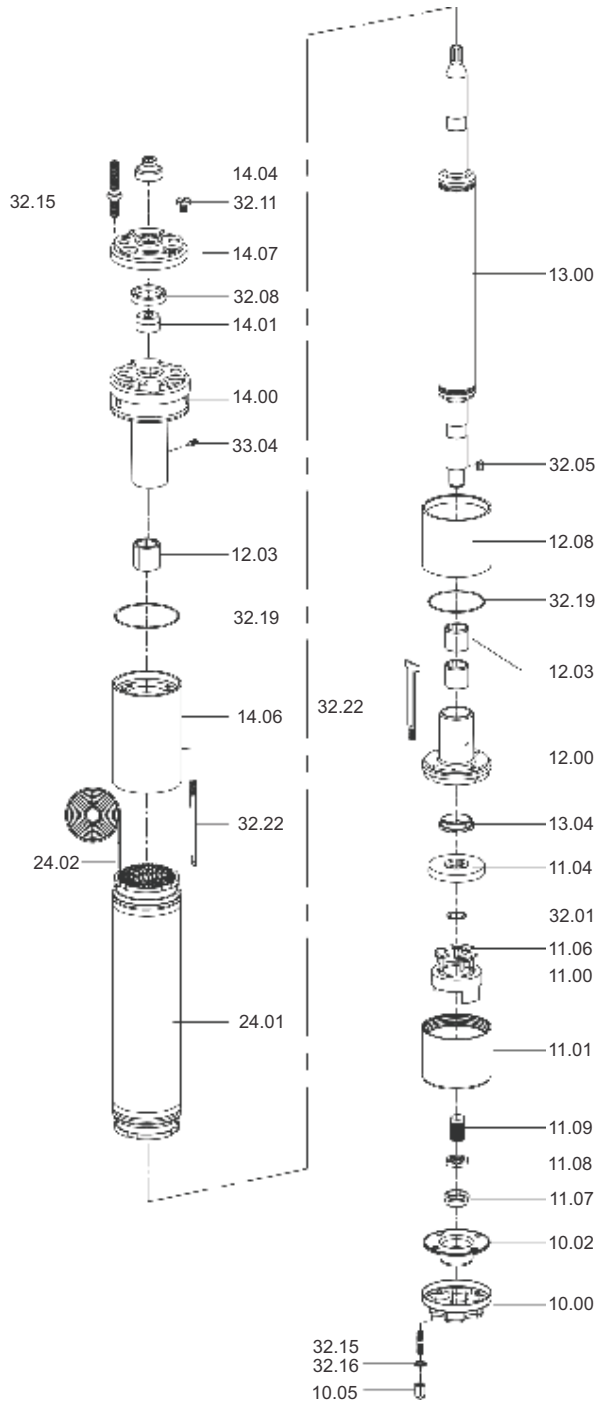
Part No.	Part Name
10.00	Motor Base
10.02	Diaphragm
10.04	Diaphragm guide Plate
11.00	Thrust Base
11.04	Thrust Pad
11.09	Rocker Screw
12.00	Lower Housing
12.03	Bush
12.07	Guide Bush
13.00	Rotor
13.03	Upthrust washer
14.00	Upper Housing
14.01	Cable Grommet
14.04	Rubber Sand Guard
14.07	Upper Housing Shell
24.01	Wound Stator
24.02	Lead out cable
32.01	Circlip
32.05	Pad key
32.08	Oil seal
32.09	O - Ring
32.11	Drain plug
32.12	Screw
32.15	Stud
33.02	Bolt
33.04	Earth screw

WATER FILLED REWINDABLE SUBMERSIBLE MOTORS

Nominal Diameter : 4"

"W" Series
(3HP & above)

Exploded view



Part No.	Part Name
10.00	Motor Base
10.02	Diaphragm
10.05	Doom Nut
11.00	Thrust base
11.01	Thrust base housing
11.04	Thrust Pad
11.06	Thrust segment
11.07	Rocker screw cap
11.08	Rocker screw nut
11.09	Rocker screw
12.00	Lower housing
12.03	Bush
12.08	Lower housing Pipe
13.00	Rotor
13.04	Counter thrust ring
14.00	Upper housing
14.01	Cable grommet
14.04	Rubber sand guard
14.06	Upper housing Pipe
14.07	Upper housing shell
24.01	Wound stator
24.02	Lead out cable
32.01	Circlip
32.05	Pad key
32.08	Oil seal
32.11	Drain plug
32.12	Screw
32.15	Stud
32.16	Washer
32.19	Gasket
32.22	T' bolt
33.04	Earth screw

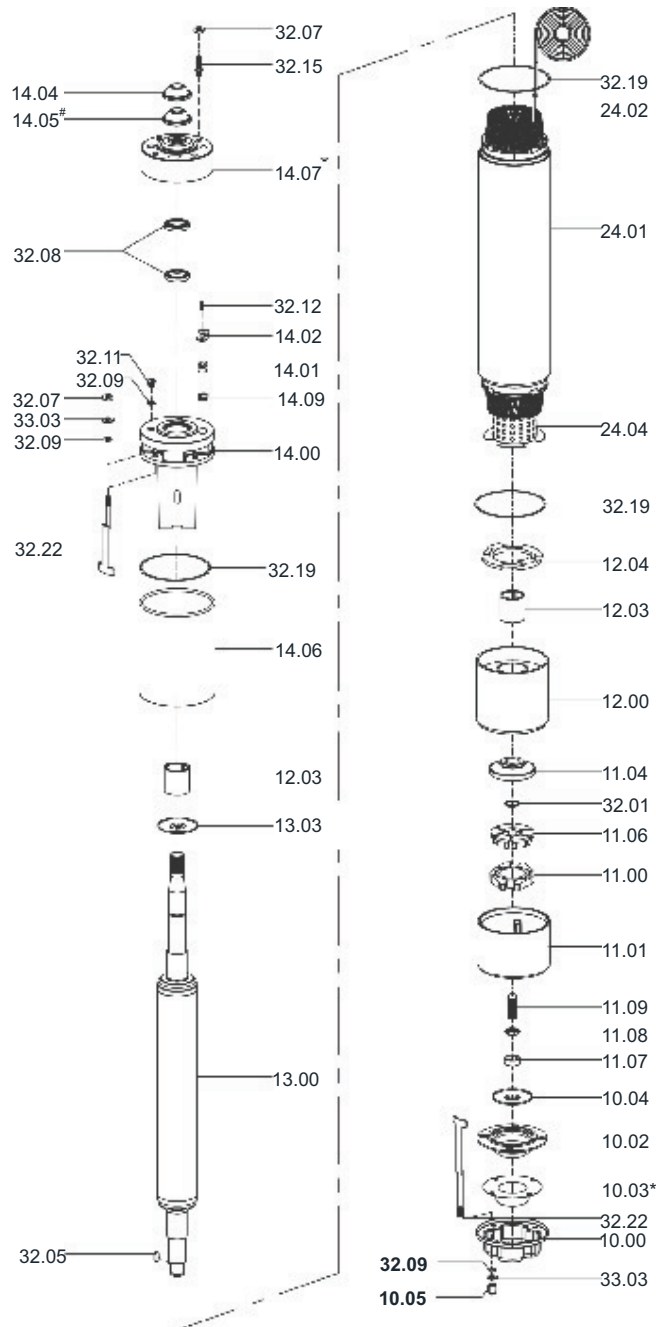
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WATER FILLED REWINDABLE SUBMERSIBLE MOTORS

Nominal Diameter : **6"**

"W" Series

Exploded view



Part No.	Part Name
10.00	Motor base
10.02	Diaphragm
10.03*	Diaphragm bottom plate
10.04	Diaphragm guide plate
10.05	Doom nut
11.00	Thrust Base
11.01	Thrust base housing
11.04	Thrust Pad
11.06	Thrust segment
11.07	Rocker screw cap
11.08	Rocker screw nut
11.09	Rocker screw
12.00	Lower housing
12.03	Bush
12.04	Supporting ring
13.00	Rotor
13.03	Upthrust washer
14.00	Upper housing
14.01	Cable grommet
14.02	Grommet locking plate
14.04	Rubber sand guard
14.05#	Sand guard
14.06	Rubber Sand guard
14.06	Upper housing Pipe
14.07*	Upper housing shell
14.09	Grommet washer
24.01	Wound stator
24.02	lead out cable
24.04	Winding guard
32.01	Circlip
32.05	Pad key
32.07	Nut
32.08	Oil seal
32.09	O - Ring
32.11	Drain plug
32.12	Screw
32.15	Stud
32.16	Washer
32.19	Gasket
32.22	"T" bolt
33.03	Bend washer

Applicable only for Type - B motors

* Applicable only for Type - A motors

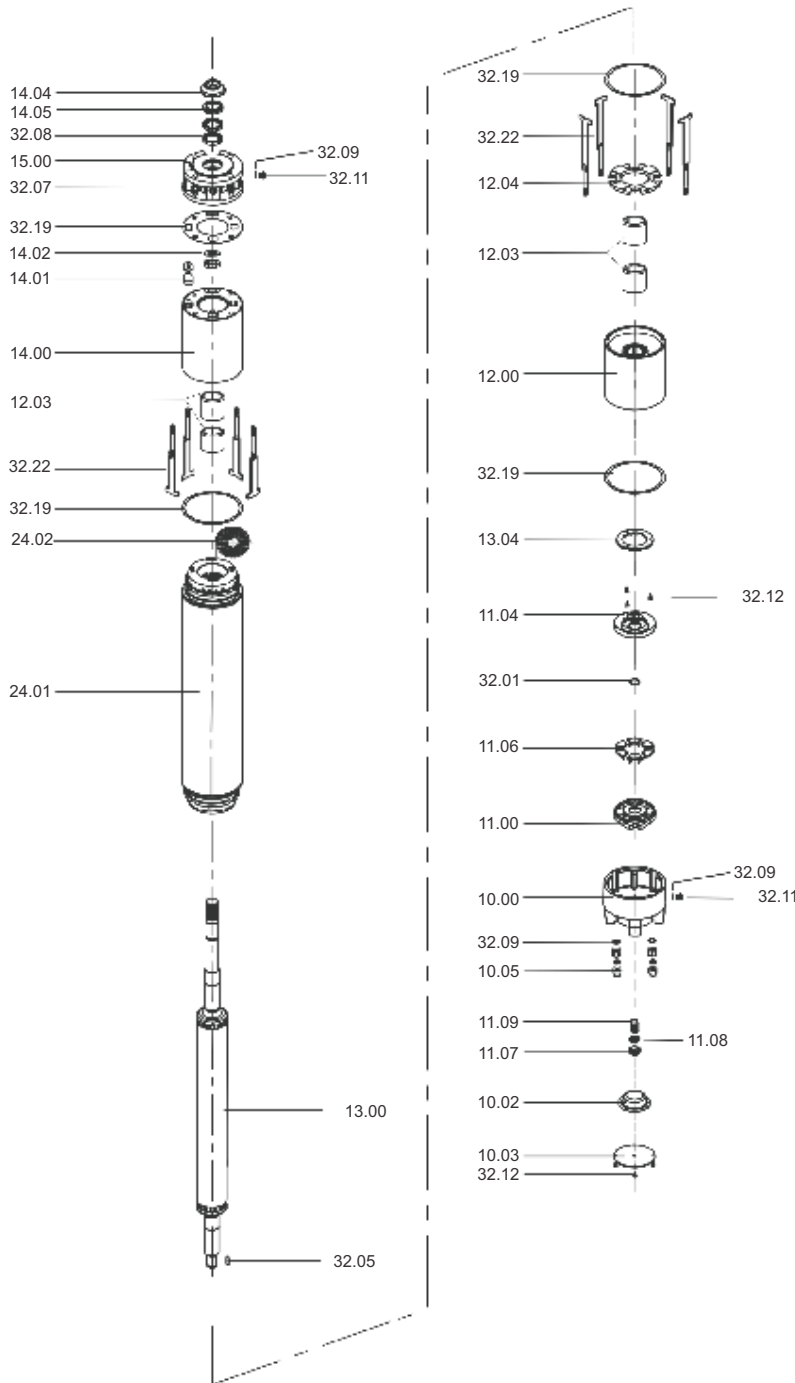
Note : No of bushes various according to the HP of motor

WATER FILLED REWINDABLE SUBMERSIBLE MOTORS

Nominal Diameter : **8"**

"W" Series

Exploded view



Part No.	Part Name
10.00	Motor base
10.02	Diaphragm
10.03	Diaphragm bottom plate
10.05	Doom nut
11.00	Thrust Base
11.04	Thrust Pad
11.06	Thrust segment
11.07	Rocker screw cap
11.08	Rocker screw nut
11.09	Rocker screw
12.00	Lower housing
12.03	Bush
12.04	Supporting ring
13.00	Rotor
13.04	Counter thrust ring
14.00	Upper housing
14.01	Cable grommet
14.02	Grommet locking plate
14.04	Rubber sand guard
14.05	Sand guard
15.00	Oil seal housing
24.01	Wound stator
24.02	lead out cable
32.01	Circlip
32.05	Pad key
32.07	Nut
32.08	Oil seal
32.09	O - Ring
32.11	Drain plug
32.12	Screw
32.19	Gasket
32.22	T' bolt

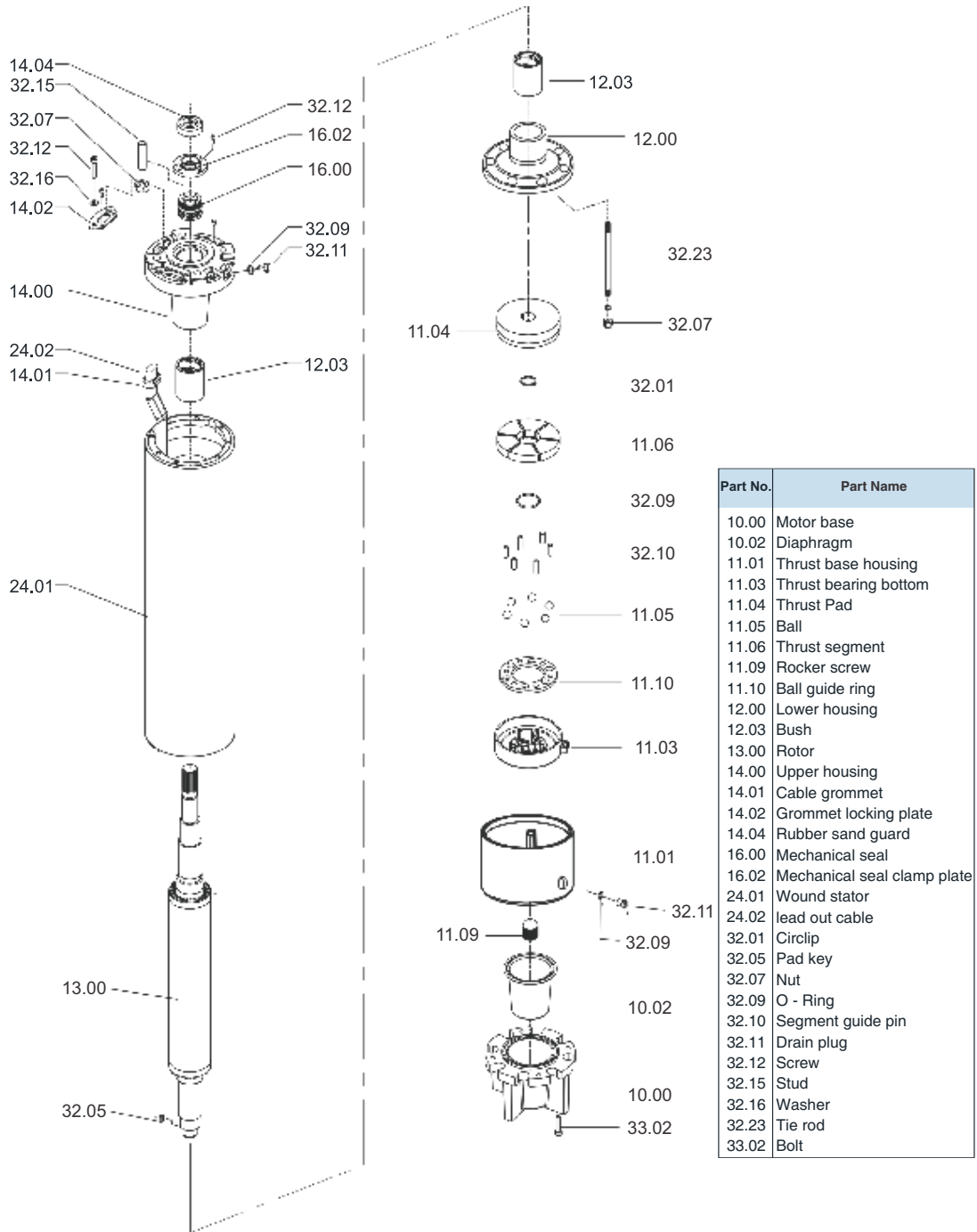
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WATER FILLED REWINDABLE SUBMERSIBLE MOTORS

Nominal Diameter : **10"**

"W" Series

Exploded view



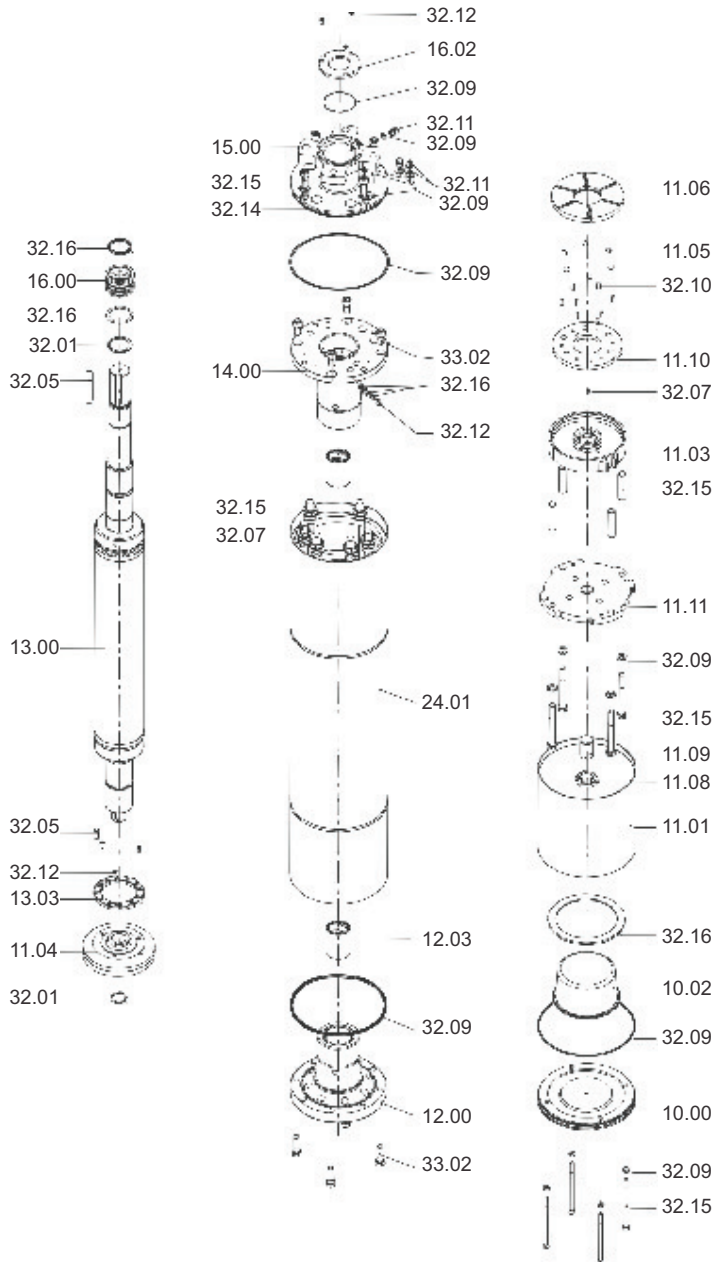
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WATER FILLED REWINDABLE SUBMERSIBLE MOTORS

Nominal Diameter : **12"**

"W" Series

Exploded view



Part No.	Part Name
10.00	Motor base
10.02	Diaphragm
11.01	Thrust base housing
11.03	Thrust bearing bottom
11.04	Thrust Pad
11.05	Ball
11.06	Thrust segment
11.08	Rocker screw nut
11.09	Rocker screw
11.10	Ball guide ring
11.11	Thrust bearing base plate
12.00	Lower housing
12.03	Bush
13.00	Rotor
13.03	Upthrust Washer
14.00	Upper housing
15.00	Seal housing
16.00	Mechanical seal
16.02	Mechanical seal clamp plate
24.01	Wound stator
32.01	Circlip
32.05	Key
32.07	Nut
32.09	O - Ring
32.10	Segment guide pin
32.11	Drain plug
32.12	Screw
32.15	Stud
32.16	Washer
32.23	Tie rod
33.02	Bolt

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WATER FILLED REWINDABLE SUBMERSIBLE MOTORS

Nominal Diameter : **4"**

"W" Series

Specifications

Nominal Dia	4" (100mm)
Maximum Outer Diameter	98 mm
Power Range	0.37 kW to 2.2 kW - Single Phase (Incorporated with Thermal overload Protector) 0.37 kW to 7.5 kW - Three Phase
Speed	2900 rpm
Versions	Single Phase - 230 V, 50 Hz, A.C. Supply Three Phase - 380 - 415 V, 50 Hz, A.C. Supply
Class of Insulation	Y
Degree of Protection	IP 58
Direction of Rotation	CCW - Single Phase Electrically Reversible - Three Phase
Type of Duty	S1 (continuous)
Maximum Down Thrust Load	0.37 kW to 1.5 kW - 650 lbs / 3000N 2.2 kW to 7.5 kW - 1500 lbs / 6500 N
Minimum Temperature of Liquid	0.15 m/sec
Maximum Temperature of Liquid	33°C
Starts per Hour	20 times
Shaft Type	Splined as per NEMA
Mounting Standard	NEMA Standard
Method of Starting	Single Phase - Capacitor Start Capacitor Run (CSCR) Three Phase - Direct On Line (DOL)
Cable Leadout	Permanently Connected and Sealed 3/4 core EPDM rubber Flat Cable



Type - A/N

Materials of Construction

Part Name	Type-A	Type-N
Shaft Seal	NBR	NBR
Housing Sell	SS - 304	SS - 316
Stator Shell	SS - 304	SS - 316
Thrust Pad	Carbon Graphite	Carbon Graphite
Thrust Bearing	SS - 420	SS - 420
Diaphragm	NBR	NBR
Motor Base	SS - 304	SS - 316
Bush	LTB	LTB

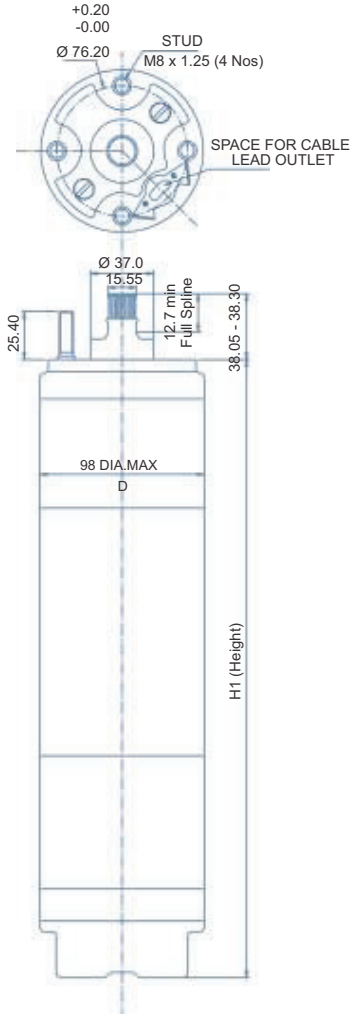


WATER FILLED REWINDABLE SUBMERSIBLE MOTORS

Nominal Diameter : 4"

"W" Series

Technical Data



Dimensional Drawing

All dimensions are in mm

Spined shaft 14 Teeth - module 1.5875
 Pressure angle 30° A.N.S.I.B - 92 - 1 - 1970
 Coupling Class 5

4" SINGLE PHASE 230V 3 WIRE MOTORS

Model	Motor Power		Full Load Max.(A)	Starting Current (A)	Full load		Max. Down Thrust Load (N)	Starting Torque (Nm)	Torque (Nm)
	kW	HP			Eff.%	Power Factor			
W4A-03S	0.37	0.5	5	16	39	0.89	3000	2.0	1.2
W4A-05S	0.55	0.75	6	21	52	0.9	3000	2.9	1.8
W4A-07S	0.75	1.0	7.5	26	54	0.9	3000	4.1	2.5
W4A-11S	1.1	1.5	10	40	57	0.95	3000	6.1	3.7
W4A-15S	1.5	2.0	12.0	48	60	0.95	3000	8.3	4.9
W4A-22S	2.2	3.0	16.5	66	62	0.95	6500	13.3	7.4

4" THREE PHASE 400V D.O.L MOTORS

Model	Motor Power		Full Load Max.(A)	Starting Current (A)	Full load		Max. Down Thrust Load (N)	Starting Torque (Nm)	Torque (Nm)
	kW	HP			Eff. %	Power Factor			
W4A-03T	0.37	0.5	1.8	5	48	0.75	3000	2.2	1.2
W4A-05T	0.55	0.75	2.3	7	57	0.75	3000	3.4	1.9
W4A-07T	0.75	1.0	2.8	9	64	0.75	3000	4.5	2.5
W4A-11T	1.1	1.5	3.8	15	67	0.76	3000	6.7	3.7
W4A-15T	1.5	2.0	4.6	19	69	0.79	3000	9.0	5.0
W4A-22T	2.2	3.0	7	32	70	0.73	6500	14.1	7.5
W4A-30T	3.0	4.0	9	42	72	0.72	6500	19.0	10.0
W4A-37T	3.7	5.0	10	44	71	0.76	6500	22.0	12.4
W4A-40T	4.0	5.5	10.3	47	69	0.76	6500	23.0	12.4
W4A-55T	5.5	7.5	14.0	71	70	0.74	6500	33.7	18.7
W4A-75T	7.5	10.0	18.5	93	73	0.74	6500	45.2	25.1

DIMENSIONS AND WEIGHT

Model	Motor Power		*Method of Starting	Dimension (mm)		Nett Weight (kg) (approx.)	Cable leadouts	
	kW	HP		D	H1		Cable Size (Sq.mm)	Cable Length (m)
W4A-03S	0.37	0.5	S	98	496	11.6	1.5	1.5
W4A-05S	0.55	0.75	S	98	511	12.6	1.5	1.5
W4A-07S	0.75	1.0	S	98	556	13.8	1.5	1.5
W4A-11S	1.1	1.5	S	98	596	15.7	2.5	1.5
W4A-15S	1.5	2.0	S	98	646	17.7	2.5	1.5
W4A-22S	2.2	3.0	S	98	806	33.4	2.5	2
W4A-03T	0.37	0.5	T	98	496	11.7	1.5	1.5
W4A-05T	0.55	0.75	T	98	511	13.3	1.5	1.5
W4A-07T	0.75	1.0	T	98	576	15.2	1.5	1.5
W4A-11T	1.1	1.5	T	98	626	16.6	1.5	1.5
W4A-15T	1.5	2.0	T	98	666	17.1	1.5	1.5
W4A-22T	2.2	3.0	T	98	741	27.6	1.5	2
W4A-30T	3.0	4.0	T	98	806	29.5	1.5	2
W4A-37T	3.7	5.0	T	98	846	32.9	2.5	2
W4A-40T	4.0	5.5	T	98	846	32.9	2.5	2
W4A-55T	5.5	7.5	T	98	970	38.3	2.5	3
W4A-75T	7.5	10	T	98	1210	44.8	2.5	3

* METHOD OF STARTING : S - 1P / CSCR / 3 Wire / 50Hz T - 3P / D.O.L. / 50Hz

WATER FILLED REWINDABLE SUBMERSIBLE MOTORS

Nominal Diameter : **6"**

"W" Series

Specifications

Nominal Dia	6" (150mm)
Maximum Outer Diameter	W6A - 144mm W6B - 141mm
Power Range	4 kW to 45 kW - 3 Phase
Speed	2900 rpm
Versions	3 Phase - 380-415 & 525 V, 50 Hz, A.C. Supply
Class of Insulation	Y
Degree of Protection	IP 58 / IP 68
Direction of Rotation	Electrical Reversible - 3 Phase
Type of Duty	S1 (continuous)
Maximum Down Thrust Load	4 kW to 22 kW - 3500 lbs / 15500 N 26 kW to 45 kW - 6000 lbs / 27500 N
Minimum cooling flow	0.15 m/sec
Maximum Temperature of Liquid	33°C (70°C Optional)
Starts per Hour	20 times
Shaft Type	Splined (NEMA Standard)
Mounting Dimesions	NEMA Standard
Method of Starting	4 kW to 45 kW Direct On Line (D.O.L.) 5.5 kW to 45kW Star Delta (S.D.)
Cable Leadout	Permanently Connected and Sealed 3/4 core EPDM Rubber Flat Cable
Thermal Protection	PT Sensor (Optional)

* On request motors can be supplied with PT sensor and PE2 / PA winding.



Type - A/N Type - B

Materials of Construction

Part Name	Type - A	Type - N	Type - B
Shaft Seal Housing	Cast Iron	SS - 316	Cast Iron
Shaft Seal / Mechanical Seal	NBR Ceramic - Carbon / SiC - SiC	NBR Ceramic - Carbon / SiC - SiC	NBR Ceramic - Carbon / SiC - SiC
Upper & Lower Housings	SS - 304	SS - 316	Cast Iron
Stator Shell	SS - 304	SS - 316	SS - 304
Thrust Pad	Carbon Graphite	Carbon Graphite	Carbon Graphite
Thrust Bearing	SS - 420	SS - 420	SS - 420
Diaphragm	NBR	NBR	NBR
Motor Base	SS - 304	SS - 316	Cast Iron

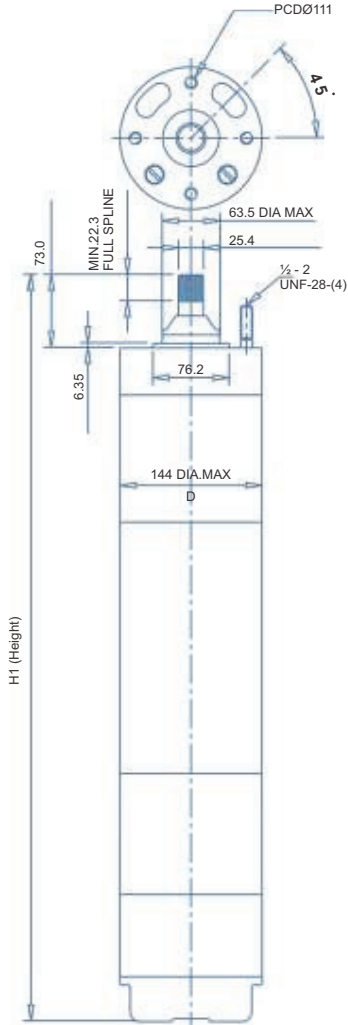


WATER FILLED REWINDABLE SUBMERSIBLE MOTORS

Nominal Diameter : **6"**

"W" Series

Technical Data



Dimensional Drawing

All dimensions are in mm

Splined shaft 15 Teeth - module 1.5875
 Pressure angle 30° A.N.S.I.B - 92 - 1 - 1970
 Coupling Class 5

6" THREE PHASE 380V, D.O.L. & S.D MOTORS

Models		Motor Power		Full Load Max (A)	Starting Current (A)	Eff. %	Power Factor	Max. Down Thrust Load (N)	Starting Torque (Nm)	Torque (Nm)
D.O.L	S.D	kW	HP							
W6A-40T	-	4.0	5.5	11	41	76	0.72	15500N	20	14
W6A-45T	-	4.5	6	12.5	46	76	0.77	15500N	21	15
W6A-55T	W6A-55D	5.5	7.5	13.7	50	78	0.78	15500N	24	18
W6A-75T	W6A-75D	7.5	10	19	67	82	0.76	15500N	27	25
W6A-93T	W6A-93D	9.3	12.5	22	81	82	0.8	15500N	35	31
W6A-110T	W6A-110D	11.0	15	26	99	82	0.81	15500N	43	37
W6A-130T	W6A-130D	13	17.5	30	115	83	0.81	15500N	51	43
W6A-150T	W6A-150D	15	20	34	145	83	0.82	15500N	62	49
W6A-185T	W6A-185D	18.5	25	43	185	83	0.82	15500N	98	61
W6A-220T	W6A-220D	22	30	50	222	83	0.82	15500N	115	73
W6A-260T	W6A-260D	26	35	57	267	83	0.83	27500N	130	85
W6A-300T	W6A-300D	30	40	68	352	83	0.83	27500N	190	97
W6A-370T	W6A-370D	37	50	84	416	82	0.82	27500N	240	122
W6A-450T	W6A-450D	45	60	95	461	82	0.82	27500N	390	150

6" THREE PHASE 50Hz, 400V, D.O.L. & S.D MOTORS

Models		Motor Power		Full Load Max (A)	Starting Current (A)	Eff. %	Power Factor	Max. Down Thrust Load (N)	Starting Torque (Nm)	Torque (Nm)
D.O.L	S.D	kW	HP							
W6A-40T	-	4.0	5.5	10.8	42	76	0.72	15500N	19	13
W6A-45T	-	4.5	6	12.2	47	77	0.77	15500N	20	14
W6A-55T	W6A-55D	5.5	7.5	13.5	51	78	0.78	15500N	23	17
W6A-75T	W6A-75D	7.5	10	18.5	68	83	0.76	15500N	26	24
W6A-93T	W6A-93D	9.3	12.5	21.5	82	83	0.8	15500N	34	30
W6A-110T	W6A-110D	11.0	15	25	100	82	0.81	15500N	42	36
W6A-130T	W6A-130D	13	17.5	29.5	116	83	0.81	15500N	50	42
W6A-150T	W6A-150D	15	20	33.5	146	83	0.82	15500N	61	48
W6A-185T	W6A-185D	18.5	25	42.5	186	83	0.82	15500N	97	60
W6A-220T	W6A-220D	22	30	49.5	223	83	0.82	15500N	115	73
W6A-260T	W6A-260D	26	35	56.5	268	83	0.83	27500N	135	85
W6A-300T	W6A-300D	30	40	67.5	353	83?	0.83	27500N	190	97
W6A-370T	W6A-370D	37	50	83	418	83	0.82	27500N	240	122
W6A-450T	W6A-450D	45	60	94	463	83	0.82	27500N	390	150

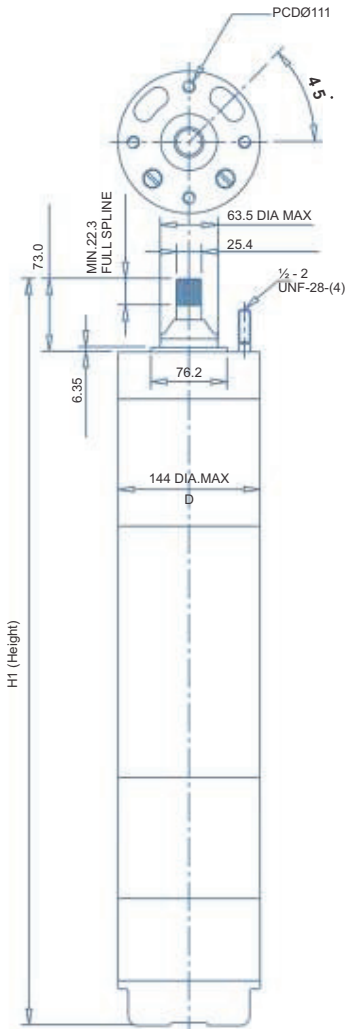
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WATER FILLED REWINDABLE SUBMERSIBLE MOTORS

Nominal Diameter : **6"**

"W" Series

Technical Data



Dimensional Drawing

All dimensions are in mm

Splined shaft 15 Teeth - module 1.5875
Pressure angle 30° A.N.S.I.B - 92 - 1 - 1970
Coupling Class 5

6" THREE PHASE 415V, D.O.L. & S.D MOTORS

Model		Motor Power		Full Load Max (A)	Starting Current (A)	Full load		Max. Down Thrust Load (N)	Starting Torque (Nm)	Torque (Nm)
D.O.L	S.D	(kW)	HP			Eff.%	Power Factor			
W6A-40T	-	4	5.5	10.8	43	76	0.70	15500	20	14
W6A-45T	-	4.5	6.0	12	48	76	0.75	15500	21	15
W6A-55T	W6A-55D	5.5	7.5	13.5	52	78	0.77	15500	24	18
W6A-75T	W6A-75D	7.5	10.0	18.5	70	82	0.75	15500	27	25
W6A-93T	W6A-93D	9.3	12.5	21	84	82	0.79	15500	35	31
W6A-110T	W6A-110D	11	15.0	25	102	82	0.80	15500	43	37
W6A-130T	W6A-130D	13	17.5	29.5	118	83	0.80	15500	51	43
W6A-150T	W6A-150D	15	20.0	33	148	83	0.81	15500	62	49
W6A-185T	W6A-185D	18.5	25.0	42.5	188	83	0.81	15500	98	61
W6A-220T	W6A-220D	22	30.0	49.2	225	83	0.81	15500	118	74
W6A-260T	W6A-260D	26	35.0	56.5	270	83	0.82	27500	138	86
W6A-300T	W6A-300D	30	40.0	67.2	355	83	0.82	27500	196	98
W6A-370T	W6A-370D	37	50.0	83	420	82	0.83	27500	245	123
W6A-450T	W6A-450D	45	60.0	93	465	82	0.83	27500	396	151

6" THREE PHASE 525V, D.O.L. & S.D. MOTORS

Model		Motor Power		Full Load Max (A)	Starting Current (A)	Full load		Max. Down Thrust Load (N)	Starting Torque (Nm)	Torque (Nm)
D.O.L	S.D	(kW)	HP			Eff.%	Power Factor			
W6A-55TN	W6A-55DN	5.5	7.5	11	45	79.3	0.72	15500	24	18.4
W6A-75TN	W6A-75DN	7.5	10	15	60	75	0.81	15500	28	24.5
W6A-93TN	W6A-93DN	9.3	12.5	19.5	85	78.3	0.8	15500	35	30.6
W6A-110TN	W6A-110DN	11	15	20	95	82.5	0.8	15500	43.2	36.7
W6A-130TN	W6A-130DN	13	17.5	22.5	112	83	0.82	15500	51	43
W6A-150TN	W6A-150DN	15	20	27	135	82.5	0.82	15500	61.8	49
W6A-185TN	W6A-185DN	18.5	25	30.5	152	86	0.82	15500	98.1	61.3
W6A-220TN	W6A-220DN	22	30	38	180	83	0.8	15500	118	73.5
W6A-260TN	W6A-260DN	26	35	44	200	83.5	0.83	27500	138.3	85.8
W6A-300TN	W6A-300DN	30	40	51	235	84	0.83	27500	196.1	98.1
W6A-370TN	W6A-370DN	37	50	63	285	85	0.85	27500	245	122.6
W6A-450TN	W6A-450DN	45	60	75	340	85.5	0.85	27500	396	150

DIMENSIONS AND WEIGHT

Model		Motor Power		Method of Starting	Dimension (mm)		Nett Weight (Kg) (Approx.)	Cable leadouts		
D.O.L	S.D	kW	HP		D	H1		Cable Size (Sq.mm)		Cable Length (m)
								D.O.L	S.D	
W6A-40T	-	4	5.5	T	144	727	48.9	2.5	-	3
W6A-45T	-	4.5	6.0	T	144	742	49.8	2.5	-	3
W6A-55T	W6A-55D	5.5	7.5	T / D	144	797	55.9	4.0	2.5	3
W6A-75T	W6A-75D	7.5	10.0	T / D	144	837	60.5	4.0	2.5	3
W6A-93T	W6A-93D	9.3	12.5	T / D	144	867	63.8	6.0	2.5	3
W6A-110T	W6A-110D	11	15.0	T / D	144	897	67.2	6.0	4.0	3
W6A-130T	W6A-130D	13	17.5	T / D	144	937	70.3	6.0	4.0	3
W6A-150T	W6A-150D	15	20.0	T / D	144	982	77.5	10.0	4.0	3
W6A-185T	W6A-185D	18.5	25.0	T / D	144	1047	84.6	10.0	4.0	3.5
W6A-220T	W6A-220D	22	30.0	T / D	144	1152	93.5	10.0	4.0	3.5
W6A-260T	W6A-260D	26	35.0	T / D	144	1192	97.4	10.0	6.0	4.25
W6A-300T	W6A-300D	30	40.0	T / D	144	1227	103.3	10.0	6.0	4.25
W6A-370T	W6A-370D	37	50.0	T / D	144	1302	110.6	16.0	6.0	5.25
W6A-450T	W6A-450D	45	60.0	T / D	144	1377	121.5	16.0	10	5.25

* METHOD OF STARTING : T - 3P / DOL / 50Hz D - 3P / SD / 50Hz

In view of continuous developments, the information / descriptions / specifications / illustrations are subject to change without notice.

WATER FILLED REWINDABLE SUBMERSIBLE MOTORS

Nominal Diameter : **8"**

"W" Series

Specifications

Nominal Diameter	8" (200mm)
Maximum Outer Diameter	W8A / W8N - 195 mm, W8B - 193 mm
Power Range	15 - 93 kW
Speed	2900 rpm
Versions	3 Phase - 380-415 & 525 V 50 Hz, A.C. Supply
Class of Insulation	Y
Degree of Protection	IP 58 / IP 68
Direction of Rotation	Electrically Reversible - 3 Phase
Type of Duty	S1 (continuous)
Maximum Down Thrust Load	15 - 18.5kW - 27000N, 22 - 93kW - 45500N
Minimum cooling flow	0.16 m/sec
Ambient Temperature	33°C (70°C Optional)
Starts per Hour	15 times
Shaft Type	Splined (NEMA Standard)
Mounting Dimensions	NEMA Standard
Method of Starting	D.O.L. / SD
Cable Leadout	Permanently Connected and Sealed 3/4 core Rubber insulated Flat Cable
Thermal Protection	PT Sensor (Optional)

* On request motors can be supplied with PT sensor and PE2 / PA winding.



Type - A/N Type - B

Materials of Construction

Part Name	Type - A	Type - N	Type - B
Shaft Seal Housing	SS - 304	SS - 316	Cast Iron
Shaft Seal / Mechanical Seal	NBR Ceramic - Carbon / SiC - SiC	NBR Ceramic - Carbon / SiC - SiC	NBR Ceramic - Carbon / SiC - SiC
Upper & Lower Housings	SS - 304	SS - 316	Cast Iron
Stator Shell	SS - 304	SS - 316	SS - 304
Thrust Pad	Carbon Graphite	Carbon Graphite	Carbon Graphite
Thrust Bearing	SS - 420	SS - 420	SS - 420
Diaphragm	NBR	NBR	NBR
Motor Base	SS - 304	SS - 316	Cast Iron



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WATER FILLED REWINDABLE SUBMERSIBLE MOTORS

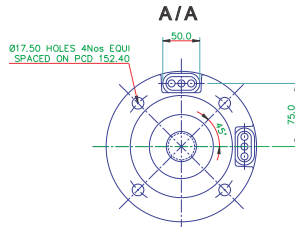
Nominal Diameter : **8"**

"W" Series

Technical Data

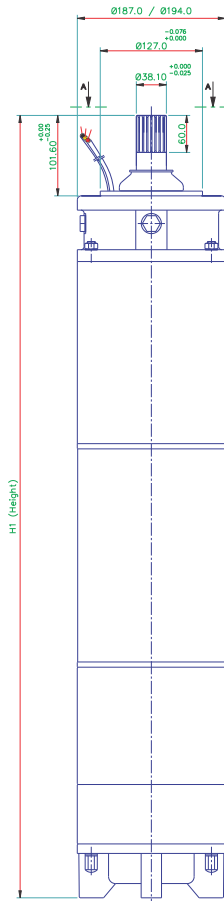
8" THREE PHASE 380V, D.O.L. & S.D MOTORS

Model		Motor Power		Full Load Max (A)	Starting Current (A)	Full load		Max. Down Thrust Load (N)	Starting Torque (Nm)	Torque (Nm)
D.O.L	S.D	kW	HP			Eff. %	Power Factor			
W8B-150T	W8B-150D	15	20	33	126	81.7	0.86	27500	65	50
W8B-185T	W8B-185D	18.5	25	41	160	81.8	0.85	27500	96	61
W8B-220T	W8B-220D	22	30	49	218	82	0.87	45500	112	73
W8B-260T	W8B-260D	26	35	54	285	83.8	0.88	45500	138	86
W8B-300T	W8B-300D	30	40	62	328	84.4	0.87	45500	140	102
W8B-370T	W8B-370D	37	50	69	380	83.6	0.86	45500	160	122
W8B-450T	W8B-450D	45	60	94.5	480	84	0.87	45500	225	148
W8B-550T	W8B-550D	55	75	116	620	84.5	0.87	45500	310	182
W8B-630T	W8B-630D	63	85	130	710	85	0.87	45500	350	208
W8B-750T	W8B-750D	75	100	156	855	85	0.88	45500	420	248
W8B-930T	W8B-930D	93	125	186	1050	87	0.87	45500	570	308



8" THREE PHASE 400V, D.O.L. & S.D MOTORS

Model		Motor Power		Full Load Max (A)	Starting Current (A)	Full load		Max. Down Thrust Load (N)	Starting Torque (Nm)	Torque (Nm)
D.O.L	S.D	kW	HP			Eff. %	Power Factor			
W8B-150T	W8B-150D	15	20	31	128	83.1	0.86	27500	69	50
W8B-185T	W8B-185D	18.5	25	40	170	83.2	0.85	27500	99	61
W8B-220T	W8B-220D	22	30	48	218	83.2	0.87	45500	118	73
W8B-260T	W8B-260D	26	35	53	290	84.6	0.87	45500	142	86
W8B-300T	W8B-300D	30	40	61	340	84.9	0.85	45500	162	102
W8B-370T	W8B-370D	37	50	75	390	84.5	0.85	45500	180	122
W8B-450T	W8B-450D	45	60	90	490	85	0.86	45500	250	148
W8B-550T	W8B-550D	55	75	114	650	85.8	0.86	45500	348	181
W8B-630T	W8B-630D	63	85	127	715	86	0.86	45500	380	207
W8B-750T	W8B-750D	75	100	148	900	85	0.88	45500	480	247
W8B-930T	W8B-930D	93	125	188	1200	87	0.88	45500	660	307



8" THREE PHASE 415V, D.O.L. & S.D MOTORS

Model		Motor Power		Full Load Max (A)	Starting Current (A)	Full load		Max. Down Thrust Load (N)	Starting Torque (Nm)	Torque (Nm)
D.O.L	S.D	kW	HP			Eff. %	Power Factor			
W8B-150T	W8B-150D	15	20	30	120	83.7	0.85	27500	70	50
W8B-185T	W8B-185D	18.5	25	39	160	83.8	0.85	27500	101	61
W8B-220T	W8B-220D	22	30	47	220	84	0.87	45500	120	73
W8B-260T	W8B-260D	26	35	54	280	84.9	0.86	45500	145	86
W8B-300T	W8B-300D	30	40	60	330	85.3	0.84	45500	168	101
W8B-370T	W8B-370D	37	50	80	400	86	0.84	45500	200	122
W8B-450T	W8B-450D	45	60	92	520	85	0.84	45500	268	149
W8B-550T	W8B-550D	55	75	112	660	87	0.84	45500	370	180
W8B-630T	W8B-630D	63	85	126	720	88	0.86	45500	410	206
W8B-750T	W8B-750D	75	100	151	930	89	0.86	45500	520	246
W8B-930T	W8B-930D	93	125	188	1250	88	0.86	45500	680	306

8" THREE PHASE 525V, D.O.L. & S.D MOTORS

Model		Motor Power		Full Load Max (A)	Starting Current (A)	Full load		Max. Down Thrust Load (N)	Starting Torque (Nm)	Torque (Nm)
D.O.L	S.D	kW	HP			Eff. %	Power Factor			
W8B-450TN	W8B-450DN	45	60	80	320	85	0.82	45500	320	154
W8B-550TN	W8B-550DN	55	75	92	365	85	0.84	45500	450	185
W8B-630TN	W8B-630DN	63	85	103	410	86	0.88	45500	500	211
W8B-750TN	W8B-750DN	75	100	118	470	87	0.9	45500	620	251
W8B-930TN	W8B-930DN	93	125	145	580	87	0.88	45500	685	311

DIMENSIONS AND WEIGHT

Model		Motor Power		*Method of Starting	Dimension (mm)		Nett Weight (Kg) (Approx.)	Cable leadouts		
D.O.L	S.D	kW	HP		D	H1		Cable Size (Sq.mm)		Cable Length (m)
								D.O.L	S.D	
W8B-150T	W8B-150D	15	20	T / D	194	979	122	10	4	3
W8B-185T	W8B-185D	18.5	25	T / D	194	1044	132	10	4	3
W8B-220T	W8B-220D	22	30	T / D	194	1119	144	10	4	4
W8B-260T	W8B-260D	26	35	T / D	194	1199	155	10	6	4
W8B-300T	W8B-300D	30	40	T / D	194	1230	167	10	6	4
W8B-370T	W8B-370D	37	50	T / D	194	1248	170	16	10	4
W8B-450T	W8B-450D	45	60	T / D	194	1308	172	16	10	4
W8B-550T	W8B-550D	55	75	T / D	194	1468	196	35	16	5
W8B-630T	W8B-630D	63	85	T / D	194	1650	214	35	16	5
W8B-750T	W8B-750D	75	100	T / D	194	1770	240	35	16	5
W8B-930T	W8B-930D	93	125	T / D	194	1900	274	35	25	5

* METHOD OF STARTING : T - 3P / DOL / 50Hz D - 3P / SD / 50Hz

ALL DIMENSIONS ARE IN mm.
SPLINED SHAFT :
23 TEETH - MODULE 1.5875,
PRESSURE ANGLE 30°, A.N.S.I. B92.1
TOLERANCE CLASS 5

In view of continuous developments, the information / descriptions / specifications / illustrations are subject to change without notice.

WATER FILLED REWINDABLE SUBMERSIBLE MOTORS

Nominal Diameter : **10"**

"W" Series

Specifications

Nominal Diameter	10" (250mm)
Maximum Outer Diameter	231 mm
Power Range	81 to 185 kW - 3 Phase
Speed	2900 rpm
Versions	3 Phase - 380-415 & 525 V 50 Hz, A.C. Supply
Class of Insulation	Y
Degree of Protection	IP 68
Direction of Rotation	Electrically Reversible - 3 Phase
Type of Duty	S1 (continuous)
Maximum Down Thrust Load	75000N
Minimum cooling flow	0.16 m/sec
Ambient Temperature	33°C (70°C Optional)
Starts per Hour	10 times
Shaft Type	Splined (NEMA Standard)
Mounting Dimensions	NEMA Standard
Method of Starting	D.O.L. / SD
Cable Leadout	Permanently Connected and Sealed 3/4 core Rubber insulated Flat Cable
Thermal Protection	PT Sensor (Optional)



* On request motors can be supplied with PT sensor and PE2 / PA winding.

Materials of Construction

Part Name	Type - A	Type - N	Type - B
Shaft Seal Housing	SS - 304	SS - 316	Cast Iron
Shaft Seal / Mechanical Seal	NBR Ceramic - Carbon / SiC - SiC	NBR Ceramic - Carbon / SiC - SiC	NBR Ceramic - Carbon / SiC - SiC
Upper & Lower Housings	SS - 304	SS - 316	Cast Iron
Stator Shell	SS - 304	SS - 316	SS - 304
Thrust Pad	Carbon Graphite	Carbon Graphite	Carbon Graphite
Thrust Bearing	SS - 420	SS - 420	SS - 420
Diaphragm	NBR	NBR	NBR
Motor Base	SS - 304	SS - 316	Cast Iron

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WATER FILLED REWINDABLE SUBMERSIBLE MOTORS

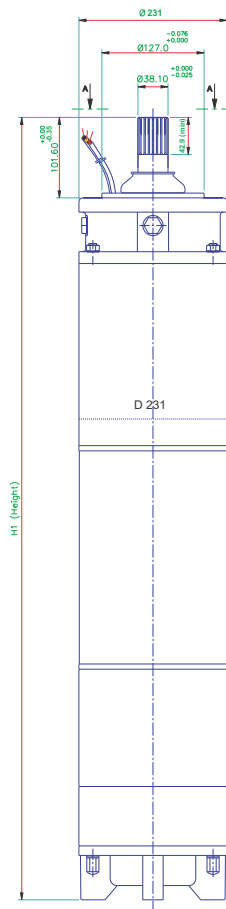
Nominal Diameter : **10"**

"W" Series

Technical Data

10" THREE PHASE - 380 V DOL & SD MOTORS

Model		Motor Power		Full Load Max (A)	Starting Current (A)	Full load		Max. Down Thrust Load (N)	Starting Torque (Nm)	Torque (Nm)
D.O.L	S.D	kW	HP			Eff.%	Power Factor			
W10B-810T	W10B-810D	81	110	160	830	87	0.86	75000	317	270
W10B-930T	W10B-930D	93	125	185	960	87	0.85	75000	360	306
W10B-A10T	W10B-A10D	110	150	223	1160	86	0.85	75000	430	367
W10B-A30T	W10B-A30D	130	175	252	1204	87	0.87	75000	490	429
W10B-A50T	W10B-A450D	150	200	290	1640	86	0.88	75000	570	490
--	W10B-A65D	165	225	325	1880	87	0.87	75000	830	551
--	W10B-A85D	185	250	362	2120	87	0.85	75000	925	616



ALL DIMENSIONS ARE IN mm.

10" THREE PHASE - 400 V DOL & SD MOTORS

Model		Motor Power		Full Load Max (A)	Starting Current (A)	Full load		Max. Down Thrust Load (N)	Starting Torque (Nm)	Torque (Nm)
D.O.L	S.D	kW	HP			Eff.%	Power Factor			
W10B-810T	W10B-810D	81	110	159	825	87	0.85	75000	352	269
W10B-920T	W10B-930D	93	125	186	965	86	0.84	75000	400	305
W10B-A10T	W10B-A10D	110	150	221	1150	86	0.82	75000	480	366
W10B-A29T	W10B-A30D	130	175	250	1375	88	0.86	75000	600	428
W10B-A47T	W10B-A450D	150	200	288	1620	87	0.85	75000	635	489
--	W10B-A65D	165	225	323	1820	87	0.85	75000	940	550
--	W10B-A85D	185	250	360	2000	88	0.82	75000	1045	615

10" THREE PHASE - 415 V DOL & SD MOTORS

Model		Motor Power		Full Load Max (A)	Starting Current (A)	Full load		Max. Down Thrust Load (N)	Starting Torque (Nm)	Torque (Nm)
D.O.L	S.D	kW	HP			Eff.%	Power Factor			
W10B-810T	W10B-810D	81	110	158	820	87	0.85	75000	382	269
W10B-920T	W10B-930D	93	125	187	970	86	0.8	75000	434	305
W10B-A10T	W10B-A10D	110	150	220	1140	86	0.8	75000	520	365
W10B-A29T	W10B-A30D	130	175	250	1372	87	0.84	75000	600	428
W10B-A47T	W10B-A450D	150	200	285	1600	87	0.84	75000	690	488
--	W10B-A65D	165	225	322	1800	88	0.85	75000	1020	550
--	W10B-A85D	185	250	360	2000	86	0.8	75000	1140	615

DIMENSIONS AND WEIGHT

Model		Motor Power		Method of Starting	Dimension (mm)		Nett Weight (Kg) (Approx.)	Cable leadouts		
D.O.L	S.D	kW	HP		D	H1		Cable Size(Sq.mm)		Cable Length (m)
								D.O.L	S.D	
W10B-810T	W10B-810D	81	110	T/D	231	1370	255	25	25	3
W10B-920T	W10B-930D	93	125	T/D	231	1430	274	25	25	3
W10B-A10T	W10B-A10D	110	150	T/D	231	1510	299	25	25	3
W10B-A29T	W10B-A30D	130	175	T/D	231	1610	328	25	25	3
W10B-A47T	W10B-A450D	150	200	T/D	231	1740	368	25	25	3
--	W10B-A65D	165	225	T/D	231	1820	402	25	25	3
--	W10B-A85D	185	250	T/D	231	1820	436	25	25	3

* METHOD OF STARTING : T - 3P / DOL / 50Hz D - 3P / SD / 50Hz

In view of continuous developments, the information / descriptions / specifications / illustrations are subject to change without notice.

WATER FILLED REWINDABLE SUBMERSIBLE MOTORS

Nominal Diameter : **12"**

"W" Series

Specifications

Nominal Diameter	12" (300mm)
Maximum Outer Diameter	273 mm
Power Range	150 to 300 kW - 3 Phase
Speed	2850 rpm
Versions	3 Phase - 380-415 & 525 V 50 Hz, A.C. Supply
Class of Insulation	Y
Degree of Protection	IP 68
Direction of Rotation	Electrically Reversible - 3 Phase
Type of Duty	S1 (continuous)
Maximum Down Thrust Load	60000N
Minimum cooling flow	0.5 m/sec (30°C) 2 m/sec (50°C)
Ambient Temperature	30°C (50°C Optional)
Starts per Hour	10 times
Shaft Type	Key Way Type
Mounting Dimensions	International Standard
Method of Starting	D.O.L. / SD
Cable Leadout	Permanently Connected and Sealed 3/4 core Rubber insulated Flat Cable
Thermal Protection	PT Sensor (Optional)



Type - A/N Type - B

* On request motors can be supplied with PT sensor and XLPE / PA winding.

Materials of Construction

Part Name	Type - A	Type - N	Type - B
Seal Housing	SS - 304	SS - 316	Cast Iron
Mechanical Seal	Ceramic / Carbon SiC - SiC	SiC - SiC	Ceramic / Carbon SiC - SiC
Upper & Lower Housings	SS - 304	SS - 316	Cast Iron
Stator Shell	SS - 304	SS - 316	SS - 304
Thrust Pad	SS / Carbon	SS / Carbon	SS / Carbon
Thrust Bearing	SS / Carbon	SS / Carbon	SS / Carbon
Diaphragm	NBR	NBR	NBR
Motor Base	SS - 304	SS - 316	Cast Iron
Shaft	SS - 304	SS - 316 Ti	SS - 304

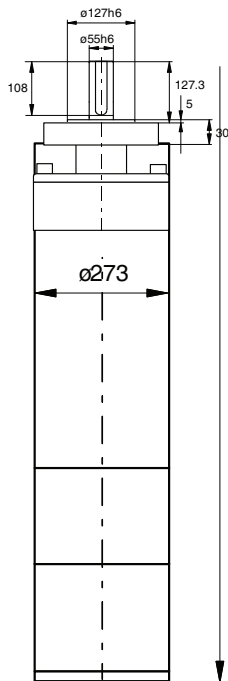
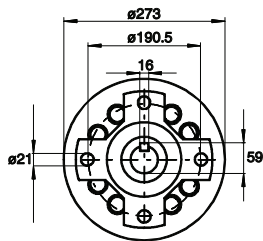
In view of continuous developments, the information / descriptions / specifications / illustrations are subject to change without notice.

WATER FILLED REWINDABLE SUBMERSIBLE MOTORS

Nominal Diameter : **12"**

"W" Series

Technical Data



ALL DIMENSIONS ARE IN mm.

12" THREE PHASE - 380 V DOL & SD MOTORS

Model		Motor Power		Full Load Max (A)	Starting Current (A)	Full load		Max. Down Thrust Load (N)	Torque Ratio Ma/Mn	Torque Ratio Mk/Mn
D.O.L	S.D	kW	HP			Eff.%	Power Factor			
W12B-A50T	-	150	200	308	1571	87	0.85	60000	1.0	2.5
W12B-A85T	-	185	250	380	1862	87	0.85	60000	1.0	2.5
W12B-B25T	-	225	300	462	2217	87	0.85	60000	1.0	2.6
W12B-B60T	W12B-B60D	260	350	540	2700	86	0.85	60000	1.1	2.5
W12B-C00T	W12B-C00D	300	400	624	2995	86	0.85	60000	1.0	2.6

12" THREE PHASE - 400 V DOL & SD MOTORS

Model		Motor Power		Full Load Max (A)	Starting Current (A)	Full load		Max. Down Thrust Load (N)	Torque Ratio Ma/Mn	Torque Ratio Mk/Mn
D.O.L	S.D	kW	HP			Eff.%	Power Factor			
W12B-A50T	-	150	200	295	1505	87	0.85	60000	1.0	2.5
W12B-A85T	-	185	250	365	1789	87	0.85	60000	1.0	2.5
W12B-B25T	-	225	300	440	2112	87	0.85	60000	1.0	2.6
W12B-B60T	W12B-B60D	260	350	515	2575	86	0.85	60000	1.1	2.5
W12B-C00T	W12B-C00D	300	400	595	2856	86	0.85	60000	1.0	2.6

12" THREE PHASE - 415 V DOL & SD MOTORS

Model		Motor Power		Full Load Max (A)	Starting Current (A)	Full load		Max. Down Thrust Load (N)	Torque Ratio Ma/Mn	Torque Ratio Mk/Mn
D.O.L	S.D	kW	HP			Eff.%	Power Factor			
W12B-A50T	-	150	200	282	1438	87	0.85	60000	1.0	2.5
W12B-A85T	-	185	250	348	1705	87	0.85	60000	1.0	2.5
W12B-B25T	-	225	300	423	2030	87	0.85	60000	1.0	2.6
W12B-B60T	W12B-B60D	260	350	495	2475	86	0.85	60000	1.1	2.5
W12B-C00T	W12B-C00D	300	400	571	2741	86	0.85	60000	1.0	2.6

* Ma / Mn - Starting Torque / Rated Torque, Mk / Mn - Breakdown Torque / Rated Torque

DIMENSIONS AND WEIGHT

Model		Motor Power		Method of Starting	Dimension (mm)		Nett Weight (Kg) (Approx.)	Cable leadouts		
D.O.L	S.D	kW	HP		D	H1		Cable Size(Sq.mm)		Cable Length (m)
								D.O.L	S.D	
W12B-A50T	-	150	200	T/D	273	1699	414	3 [#] x 70	-	7
W12B-A85T	-	185	250	T/D	273	1769	449	3 x 95	-	7
W12B-B25T	-	225	300	T/D	273	1859	495	3 x 120	-	7
W12B-B60T	W12B-B60D	260	350	T/D	273	1934	534	6 x 70	70	7
W12B-C00T	W12B-C00D	300	400	T/D	273	2034	585	6 x 70	95	7

* METHOD OF STARTING : T - 3P / DOL / 50Hz D - 3P / SD / 50Hz
NO. OF WIRES

CABLE SELECTION TABLE

FOR SINGLE PHASE 3 WIRE (D.O.L) MOTOR MAXIMUM LENGTH OF COPPER CABLE

Motor Rating			Cable Size in Square Millimetres						MAXIMUM LENGTH IN METRES
VOLTS	kW	HP	1.5	2.5	4	6	10	16	
230 VOLT 50Hz	0.37	0.5	120	200	320	480	810		
	0.55	0.75	80	130	220	320	550		
	0.75	1	60	100	170	250	430		
	1.1	1.5	40	70	120	180	300		
	1.5	2	30	60	90	130	230	360	
	2.2	3		40	60	90	150	230	

FOR THREE PHASE 6WIRE (S/D) MOTOR MAXIMUM LENGTH OF COPPER CABLE

Voltage drop - 3%

Motor Rating			Cable Size in Square Millimetres																		MAXIMUM LENGTH IN METRES			
VOLTS	kW	HP	1.5	2.5	4	6	10	16	25	35	50	70	95	120	150	185	240	300	400	500		630		
380-415 VOLT 50Hz	5.5	7.5	91	143	234	351	572	896	1377	1884														
	7.5	10	65	104	169	260	403	650	974	1338														
	9.3	12.5		91	143	221	364	572	870	1182	1624													
	11	15		78	130	182	299	481	714	974	1377	1832												
	13	17.5			104	143	260	403	611	844	1156	1533												
	15	20			91	130	221	351	533	740	1026	1364	1741											
	18.5	25				104	182	273	429	585	799	1065	1364	1624										
	22	30					156	234	364	494	688	922	1169	1403	1650									
	26	35						130	195	299	403	572	792	1000	1221	1429	1650							
	30	40						117	169	273	364	520	675	870	1013	1208	1390	1624						
	37	50							143	221	299	416	546	701	831	974	1117	1312	1494					
	45	60								182	247	338	468	598	727	870	1013	1208	1377					
	55	75									208	286	377	494	611	714	831	987	1137					
	63	85										188	260	299	442	546	637	740	870	1000				
	75	100											208	286	377	455	533	611	727	831	974			
	93	125												234	299	364	429	494	585	662	779			
	110	150													260	312	377	429	520	598	701	786		
	130	175														221	266	325	377	442	520	598	688	760
	150	200															234	279	325	390	455	539	604	669
	166	225																234	286	338	390	455	520	578
185	250																	260	312	364	429	481	539	
220	300																		247	286	331	372	410	
260	350																			247	286	325	357	
300	400																				214	247	273	312

These are maximum length of cable in METRES from POWER SOURCE to MOTOR. Exceeding these length will void warranty.

CABLE SELECTION TABLE

FOR THREE PHASE 3 WIRE (D.O.L.) MOTOR MAXIMUM LENGHT OF COPPER CABLE

Voltage drop - 3%

Motor Rating			Cable Size in Square Millimetres																			
VOLTS	kW	HP	1.5	2.5	4	6	10	16	25	35	50	70	95	120	150	185	240	300	400	500	630	
380-415 VOLT 50Hz	0.37	0.5	473	788	1260																	
	0.55	0.75	398	660	1050																	
	0.75	1	311	518	825																	
	1.1	1.5	203	338	533	795																
	1.5	2	161	270	428	638																
	2.2	3	113	188	300	450	731															
	3	4	86	143	233	345	566	885														
	3.7	5	71	120	188	285	465	735														
	4	5.5	67	113	176	263	435	683	1043													
	4.5	6	64	105	169	255	420	653	998	1358												
	5.5	7.5	53	83	135	203	330	518	795	1088												
	7.5	10	38	60	98	150	233	375	563	773												
	9.3	12.5		53	83	128	210	330	503	683	938											
	11	15		45	75	105	173	278	413	563	795	1058										
	13	17.5			60	83	150	233	353	488	668	885										
	15	20			53	75	128	203	308	428	593	788	1005									
	18.5	25				60	105	158	248	338	461	615	788	938								
	22	30					90	135	210	285	398	533	675	810	953							
	26	35					75	113	173	233	330	458	578	705	825	953						
	30	40					68	98	158	210	300	390	503	585	698	803	938					
	37	50						83	128	173	240	315	405	480	563	645	758	863				
	45	60							105	143	195	270	345	420	503	585	698	795				
	55	75								120	165	218	285	353	413	480	570	656				
	63	85								109	150	173	255	315	368	428	503	578				
	75	100									120	165	218	263	308	353	420	480	563			
	93	125										135	173	210	248	285	338	383	450			
	110	150											150	180	218	248	300	345	405	454		
	130	175											128	154	188	218	255	300	345	398	439	
	150	200												135	161	188	225	263	311	349	386	
	166	225													135	165	195	225	263	300	334	
185	250														150	180	210	248	278	311		
220	300															143	165	191	215	237		
260	350																143	165	188	206		
300	400																	124	143	158	180	

MAXIMUM LENGTH IN METRES

These are maximum length of cable in METRES from POWER SOURCE to MOTOR. Exceeding these length will void warranty.

In view of continuous developments, the information / descriptions / specifications / illustrations are subject to change without notice.

CONVERSION TABLE

FLOW RATE

litre per second l/s	litre per minute l/min	cubic meter per hour m ³ /h	cubic foot per hour ft ³ /h	cubic foot per minute ft ³ /min	Imp.gallon per minute Imp.gal./min	US gallon per minute Us gal./min	Us barrel per day ls barrel/d (Petroleum)
1	60	3.6	127.133	2.1189	13.2	15.85	543.439
0.017	1	0.06	2.1189	0.0353	0.22	0.264	9.057
0.278	16.667	1	35.3147	0.5886	3.666	4.403	150.955
0.008	0.472	0.0283	1	0.0167	0.104	0.125	4.275
0.472	28.317	1.6990	60	1	6.229	7.480	256.475
0.076	4.546	0.2728	9.6326	0.1605	1	1.201	41.175
0.063	3.785	0.2271	8.0209	0.1337	0.833	1	34.286
0.002	0.110	0.0066	0.2339	0.0039	0.024	0.029	1

LIQUID

Cubic meter m ³	litre l	Milli litre ml	Imp. gallon Imp. Gal	US gallon US gal	cubic foot ft ³
1	1000	1 x 10 ⁶	220	264.2	35.3147
0.001	1	1000	0.22	0.2642	0.0353
1 x 10 ⁻⁶	0.001	1	2.2 X 10 ⁻⁴	2.642 x 10 ⁻⁴	3.53 x 10 ⁻⁶
0.00455	4.546	4546	1	1.201	0.1605
0.00378	3.785	3785	0.8327	1	0.1337
0.0283	28.317	28317	6.2288	7.4805	1

LIQUID HEAD AND PRESSURE

newton per square meter N/m ² (Pa)	kilo pascal kPa	bar	kilogram force per square centimeter Kgf/cm ²	pound force per square inch psi	foot for water ft H ₂ O	meter of water m H ₂ O	millimeter of mercury mm Hg	inch of mercury in Hg
1	0.001	1 x 10 ⁻⁶	1.02 x 10 ⁻⁵	1.45 x 10 ⁻⁴	3.35 x 10 ⁻⁴	1.02 x 10 ⁻⁴	0.0075	2.95 x 10 ⁻⁴
1000	1	0.01	0.0102	0.145	0.335	0.102	7.5	0.295
1 x 10 ⁻⁵	100	1	1.02	14.5	33.52	10.2	750.1	29.53
98,067	98.07	0.981	1	14.22	32.81	10	735.6	28.96
6895	6.895	0.069	0.0703	1	2.31	0.703	51.72	2.036
2984	2.984	0.03	0.0305	0.433	1	0.305	22.42	0.882
9789	9.789	0.098	0.1	1.42	3.28	1	73.42	2.891
133.3	0.133	0.0013	0.0014	0.019	0.045	0.014	1	0.039
3386	3.386	0.0338	0.0345	0.491	1.133	0.0345	25.4	1

LENGTH

millimeter mm	centimeter cm	meter m	inch in	foot ft	yard yd
1	0.1	0.001	0.0394	0.0033	0.0011
10	1	0.01	0.3937	0.0328	0.0109
1000	100	1	39.3701	3.2808	1.0936
25.4	2.54	0.0254	1	0.0833	0.0278
304.8	30.48	0.3048	12	1	0.3333
914.4	91.44	0.9144	36	3	1

1 Kilometer = 1000 metres = 0.62137 miles 1 mile = 1609.37 metres = 1.60934 kilometers

MASS

kilogram kg	pound lb	hundred weight (cwt)	tonne t	ton long tn	short ton sh tn
1	2.205	0.0197	0.001	9.84 x 10 ⁻⁴	0.0011
0.454	1	0.0089	4.54 x 10 ⁻⁴	4.46 x 10 ⁻⁴	5.0 x 10 ⁻⁴
50.802	112	1	0.0508	0.05	0.056
1000	2204.6	19.684	1	0.9842	1.1023
1016	2240	20	1.0161	1	1.102
907.2	2000	17.857	0.9072	0.8929	1

TEMPERATURE

To Convert From	To	Use Formula
Temperature Celsius, tc	Temperature Kelvin, tk	K = tc + 273.15
Temperature Fahrenheit, tf	Temperature Kelvin, tk	K = (tf + 459.67 / 1.8)
Temperature Celsius, tc	Temperature Fahrenheit, tf	F = 1.8 tc + 32
Temperature Fahrenheit, tf	Temperature Celsius, tc	C = (tf - 32) / 1.8
Temperature Kelvin, tk	Temperature Celsius, tc	C = tk - 273.15
Temperature Kelvin, tk	Temperature Fahrenheit, tf	F = 1.8tk - 459.67

W I N N I N G W A Y S

When you have a good thing going it is quite in the fitting of things that recognitions come our way. Several prestigious awards, which decorate our shelf, say it all. These rewards not only acknowledge our position as a leader in the water pump industry but also serve as reminders about what the customer expects from a winner. And we, as ever, have our ears perfectly tuned to customer expectations.



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