

OIL FILLED SUBMERSIBLE MOTORS

Deepstar

'L' Series Motors

These oil filled motors are one among the proven & successful products from the house of C.R.I. These motors are developed with due diligence complying with all safety standards and giving importance to the customers' need. All the components that are in contact with water are made of AISI 304 stainless steel and the motor is pre-filled with edible grade oil, which acts as coolant media as well as lubricant. The freezing point of the oil used is -10°C .

Ball bearings are used to withstand the high axial load and the lower ball bearings are of angular contact type.

High quality carbon/ceramic mechanical seal and oil seal made of Nitrile rubber are used to ensure better sealing system. Pressure equalizing rubber diaphragm is provided to balance the pressure and volume variations due to thermal expansion of the oil 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 prevent. 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

- High operating efficiency and lesser power consumption
- Extremely hardwearing ball & angular contact bearings
- Corrosive resistance stainless steel body
- Filled with non-toxic oil
- Can be easily dismantled and repaired

Applications

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

- Residential
- Industrial water supply
- Ponds
- Irrigation
- Sprinkler systems
- Mining
- Fountains
- Pressure boosting units
- CBM (coal bed methane)
- Gardens



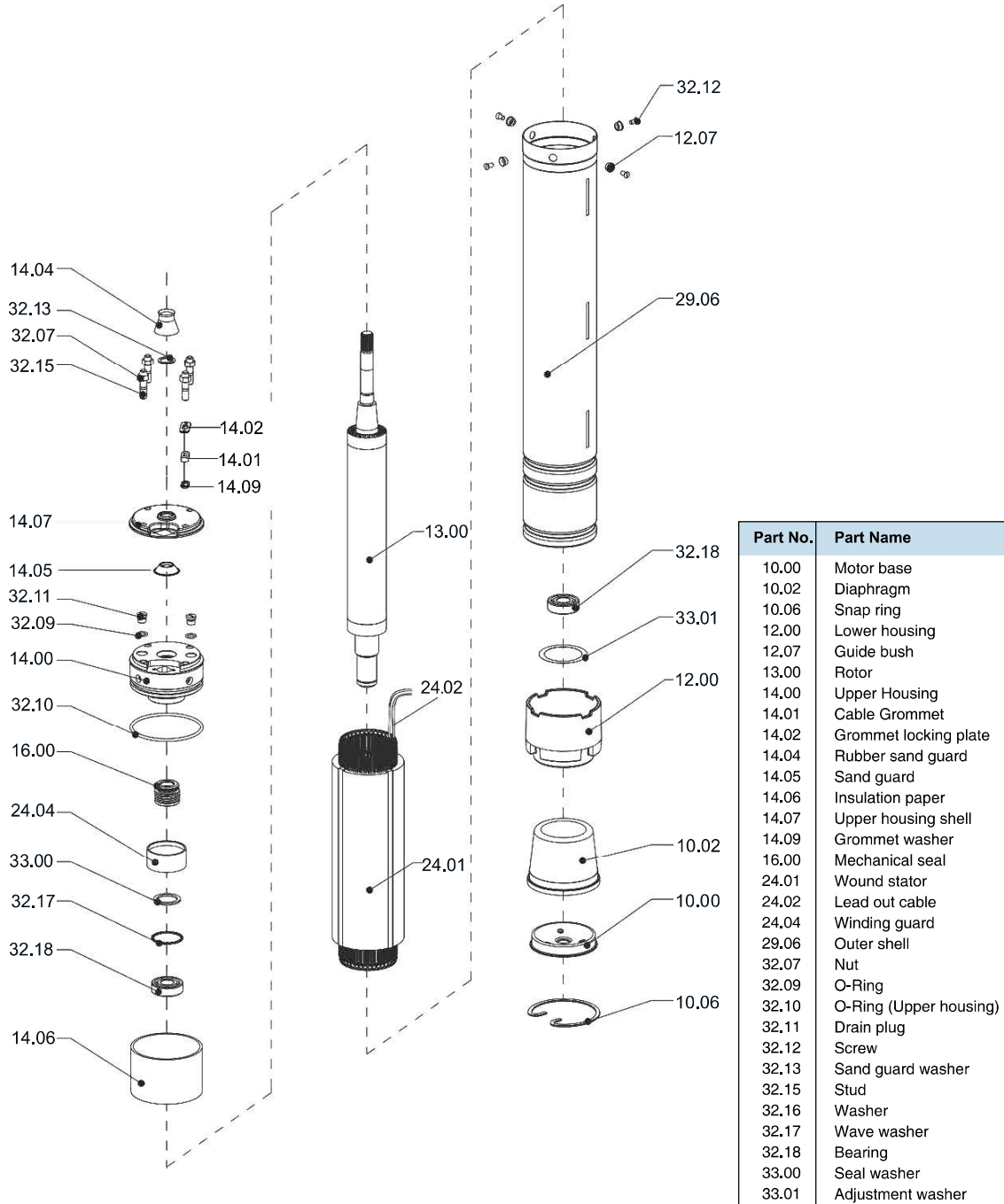
OIL FILLED SUBMERSIBLE MOTORS

Nominal Diameter : 4"

"L" Series

Deepstar

Exploded View



OIL FILLED SUBMERSIBLE MOTORS

Nominal Diameter : **4"**

"L" Series

Deepstar

Specifications

Nominal Dia	4" (100mm)
Maximum Outer Diameter	95 mm
Power Range	0.37 kW to 2.2 kW - Single Phase
	0.37 kW to 7.5 kW - Three Phase
Speed	2900 rpm
Version	Single Phase - 230 V, 50 Hz, A.C Supply
	Three Phase - 380 V & 415 V, 50 Hz, A.C Supply
Class of Insulation	F
Degree of Protection	IP 68
Direction of Rotation	CCW - Single Phase
	Electrically Reversible - Three Phase
Type of Duty	S1 (Continuous)
Down Thrust Load	0.37 kW to 0.75 kW - 1500 N
	1.1 kW to 4.0 kW - 2500 N
	5.5 kW to 7.5 kW - 4500 N
Minimum Cooling Flow Along the Motor	0.15 m/sec
Maximum Liquid Temperature	33°C
Maximum Immersion Depth	150 m
Starts per Hour	30 Times
Shaft Type	Splined as per NEMA Standard
Mounting Standard	NEMA Standard
Method of Starting	Single Phase - Permanent Split Capacitor (PSC)
	Three Phase - Direct On Line (DOL)
Cable Lead out	3 Wire Permanent Type TPE/EPDM Rubber Flat Cable



Type - A

Materials of Construction

Part Name	Type - A
Outer Shell	SS - 304
Motor Base	SS - 304
Shaft Extension	SS - 420
'O' Ring	High Nitrile Rubber
Mechanical Seal	Carbon / Ceramic
Diaphragm	High Nitrile Rubber
Cable	TPE / EPDM

OIL FILLED SUBMERSIBLE MOTORS

Nominal Diameter : 4"

"L" Series

Deepstar

Technical Data

SINGLE PHASE, 230V

Model	kW	HP	F.L. Current (A)	Starting Current (A)	Efficiency (%)	Power Factor	Capacitor (MFD)	Thrust Load (N)
L4A-03N	0.37	0.5	3.6	10.4	53	0.88	15	1500
L4A-05N	0.55	0.75	4.8	13.6	58	0.89	20	1500
L4A-07N	0.75	1	6.3	17.6	60	0.90	30	1500
L4A-11N	1.1	1.5	8.6	21.1	64	0.90	40	2500
L4A-15N	1.5	2	10	26.4	70	0.94	50	2500
L4A-22N	2.2	3	14	39.9	74	0.96	60	2500

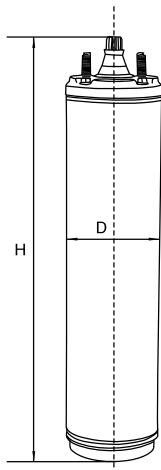
THREE PHASE, 380V

Model	kW	HP	F.L. Current (A)	Starting Current (A)	Efficiency (%)	Power Factor	Thrust Load (N)
L4A-03T	0.37	0.5	1.07	5.2	63	0.80	1500
L4A-05T	0.5	0.75	1.9	9.3	63	0.80	1500
L4A-07T	0.75	1	2.4	11.1	64	0.81	1500
L4A-11T	1.1	1.5	3.15	13	68	0.82	2500
L4A-15T	1.5	2	4.2	19.5	72	0.82	2500
L4A-22T	2.2	3	6	28	72	0.83	2500
L4A-30T	3	4	7.8	40.2	75	0.83	2500
L4A-37T	3.7	5	9.6	48	75	0.83	2500
L4A-40T	4	5.5	10	51	77	0.83	2500
L4A-55T	5.5	7.5	13.6	71.1	78	0.85	4500
L4A-75T	7.5	10	17.6	87.8	79	0.85	4500

THREE PHASE, 415V

Model	kW	HP	F.L. Current (A)	Starting Current (A)	Efficiency (%)	Power Factor	Thrust Load (N)
L4A-03T	0.37	0.5	1.3	7	63	0.74	1500
L4A-05T	0.55	0.75	2.1	11.2	66	0.73	1500
L4A-07T	0.75	1	2.7	13.8	71	0.75	1500
L4A-11T	1.1	1.5	3.7	19	72	0.72	2500
L4A-15T	1.5	2	4.9	25	73	0.72	2500
L4A-22T	2.2	3	6.1	30	73	0.73	2500
L4A-30T	3	4	8	41	73	0.73	2500
L4A-37T	3.7	5	9.9	49	74	0.73	4500
L4A-40T	4	5.5	10.5	56	75	0.73	4500
L4A-55T	5.5	7.5	14.5	73	75	0.74	4500

DIMENSIONS AND WEIGHT



Model	kW	HP	Phase	Dia (mm) D	Height (mm) H	Weight (kg)	Cable Leadouts	
							Cable Size (Sq mm)	Cable Length (m)
L4A-03N	0.37	0.5	Single	95	357	8	1.5	1.5
L4A-05N	0.55	0.75	Single	95	377	8	1.5	1.5
L4A-07N	0.75	1	Single	95	402	9	1.5	1.5
L4A-11N	1.1	1.5	Single	95	432	11	1.5	1.5
L4A-15N	1.5	2	Single	95	475	12	2	1.5
L4N-22N	2.2	3	Single	95	520	14	2.3	2
L4A-03T	0.37	0.5	Three	95	392	8	1.5	1.5
L4A-05T	0.55	0.75	Three	95	407	8	1.5	1.5
L4A-07T	0.75	1	Three	95	427	9	1.5	1.5
L4A-11T	1.1	1.5	Three	95	447	10	1.5	1.5
L4A-15T	1.5	2	Three	95	482	11	1.5	1.5
L4A-22T	2.2	3	Three	95	542	14	1.5	2
L4A-30T	3	4	Three	95	602	19	2	2
L4A-37T	3.7	5	Three	95	602	19	2	2
L4A-40T	4	5.5	Three	95	642	21	2	2
L4A-55T	5.5	7.5	Three	95	762	25	2.3	3
L4A-75T	7.5	10	Three	95	882	31	2.3	3

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

OIL FILLED SUBMERSIBLE MOTORS

Nominal Diameter : **6"**

"L" Series

Specifications

Nominal Dia	6" (150mm)
Maximum Outer Diameter	144 mm
Power Range	5.5 kW to 45 kW - Three Phase
Speed	2880 rpm
Version	Three Phase - 380 V - 415 V, 50 Hz, A.C Supply
Class of Insulation	F
Degree of Protection	IP 68
Direction of Rotation	Electrically Reversible
Type of Duty	S1 (Continuous)
Down Thrust Load	5.5 kW to 15 kW - 15500 N
	18.5 kW to 45 kW - 30000 N
Minimum Cooling Flow Along the Motor	0.16 m/sec
Maximum Liquid Temperature	30°C
Starts per Hour	20 Times
Shaft Type	Splined as per NEMA Standard
Mounting Standard	NEMA Standard
Method of Starting	Three Phase - Direct On Line (DOL)
Cable Lead out	3 Wire Permanent Type EPDM Rubber Flat Cable



Materials of Construction

Part Name	Type - A	Type - B
Outer Shell	SS - 304	SS - 304
Motor Base	SS - 304	Cast Iron
Shaft Extension	SS - 420	SS - 420
'O' Ring	Nitrile Rubber (NBR)	Nitrile Rubber (NBR)
Mechanical Seal	Carbon / Ceramic	Carbon / Ceramic
Diaphragm	Nitrile Rubber (NBR)	Nitrile Rubber (NBR)
Cable	EPDM	EPDM

OIL FILLED SUBMERSIBLE MOTORS

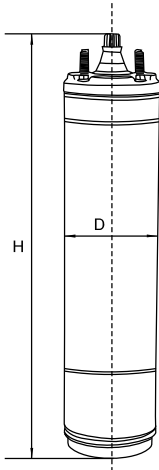
Nominal Diameter : **6"**

"L" Series

Technical Data

THREE PHASE, 380 - 415V

Model	kW	HP	F.L. Current (A)	Starting Current (A)	Efficiency (%)	Power Factor	Speed rpm	Max. Down Thrust Load (N)
L6A-55T	5.5	7.5	12.9	58	76	0.83	2850	15500
L6A-75T	7.5	10	16.5	76	76.5	0.85	2850	15500
L6A-93T	9.3	12.5	19.5	105	77	0.87	2850	15500
L6A-110T	11	15	23	138	78	0.87	2860	15500
L6A-130T	13	17.5	26.3	145	79.5	0.88	2860	15500
L6A-150T	15	20	29.5	200	81	0.88	2860	15500
L6B-185T	18.5	25	36.3	230	82	0.89	2860	30000
L6B-220T	22	30	43.1	275	82.5	0.89	2860	30000
L6B-260T	26	35	50.2	326	82.5	0.90	2860	30000
L6B-330T	30	40	57.4	366	83	0.90	2860	30000
L6B-370T	37	50	70.7	440	83.5	0.91	2860	30000
L6B-450T	45	60	86	522	84	0.91	2860	30000



DIMENSIONS AND WEIGHT

Model	kW	HP	Dia (mm) D	Height (mm) H	Weight (kg)	Cable Leadouts	
						Cable Size (Sq mm)	Cable Length (m)
L6A-55T	5.5	7.5	192	580	31	6	2
L6A-75T	7.5	10	192	620	34.4	6	2
L6A-93T	9.3	12.5	192	655	38	6	2
L6A-110T	11	15	192	685	41.4	6	2.1
L6A-130T	13	17.5	192	715	44	6	2.2
L6A-150T	15	20	192	755	58.3	6	2.3
L6B-185T	18.5	25	192	820	61.4	6	2.5
L6B-220T	22	30	192	880	69	6	2.8
L6B-260T	26	35	192	930	77	6	4.2
L6B-330T	30	40	192	980	84	6	4.2
L6B-370T	37	50	192	1118	92	10	5
L6B-450T	45	60	192	1178	100	10	5