WATER FILLED REWINDABLE SUBMERSIBLE MOTORS

Nominal Diameter : **4"**

"W" Series
(0.37 kW - 7.5 kW)

Technical Specifications

Nominal Dia	**4"**
Maximum Outer Diameter	98 mm
Power Range	0.37 - 2.2 kW - Single Phase (Incorporated with Thermal Overload Protector)
	0.37 - 7.5 kW - Three Phase
Speed	2900 rpm
Version	Single Phase - 230V, 50Hz, A.C Supply
	Three Phase - 380-415V, 50Hz, A.C Supply
Class of Insulation	Y
Degree of Protection	IP58
Direction of Rotation	CCW - When viewed from driving end - Single Phase
	Electrically Reversible - Three Phase
Type of Duty	S1 (Continuous)
Down Thrust Load	0.37 - 1.5 kW - 3000 N
	2.2 - 7.5 kW - 6500 N
Minimum Cooling Flow Along the Motor	0.15 m/sec
Maximum Liquid Temperature	35°C
Max. Starts per Hour	20 Times
Shaft End	Splines
Mounting Standard	4" NEMA
Method of Starting	Single Phase - Capacitor Start & Capacitor Run (CSCR)
	Three Phase - Direct On Line (DOL)
Cable Lead out	Permanently connected and sealed 3/4 core EPDM flat cable

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Material of Construction

PART NAME	W4A - Single Phase (0.37 - 1.5kW) W4A - Three Phase (0.37 - 1.5kW)		
	EUROPEAN	DIN	AISI / SAE
Upper & Lower Housing	Cast Iron - EN-GJL-200 (X5CrNi 18 9 claded)	GG20 (1.4301 claded)	ASTM A48 Class 30B (ASTM A240 AISI 304 claded)
Housing Pipe	NA	NA	NA
Motor Base & Upper Housing Shell	X5CrNi 18 9	1.4301	ASTM A240 AISI 304
Thrust Pad	Cast Iron - EN-GJL-250 or X12Cr14 with Graphite Carbon	GG25 or 1.4008 with Graphite Carbon	ASTM A48 Class 30B or ASTM A743 CA15 with Graphite Carbon
Thrust Base	X6CrNI 18 9 Base with X20Cr14 Segment	1.4308 Base with 1.4027 Segment	ASTM A743 CF8 Base with ASTM A743 CA40 Segment
Bush Bearing	CB495K	G-CuPb10Sn	ASTM C93700
Sand guard, O Ring & Oil Seal	NBR (Buna - N)	NBR (Buna - N)	NBR (Buna - N)
Diaphragm	HNBR (ASTM -D2000)	HNBR (ASTM -D2000)	HNBR (ASTM -D2000)
Stator Shell	X5CrNi 18 9	1.4301	ASTM A240 AISI 304
Shaft	EN8D with X12Cr13 Shaft	CK45 (1.1191) with 1.4006 Shaft	ASTM A29 AISI 1045 with ASTM A276 AISI 410 Sleeve
Shaft extention	X5CrNiCuNb 16 4	1.4542	ASTM A693 AISI 630 (UNS S17400)

PART NAME	W4A - Single Phase (2.2kW) W4A - Three Phase (2.2 - 7.5kW)		
	EUROPEAN	DIN	AISI / SAE
Upper & Lower Housing	Cast Iron - EN-GJL-200 (X5CrNi 18 9 claded)	GG20 (1.4301 claded)	ASTM A48 Class 30B (ASTM A240 AISI 304 claded)
Housing Pipe	Cast Iron - EN-GJL-250	GG20 (1.4301 claded)	ASTM A48 Class 30B (ASTM A240 AISI 304 claded)
Motor Base & Upper Housing Shell	X5CrNi 18 9	1.4301	ASTM A240 AISI 304
Thrust Pad	Cast Iron - EN-GJL-250 or X12 Cr14 with Graphite Carbon	GG25 or 1.4008 with Graphite Carbon	ASTM A48 Class 30B or ASTM A743 CA15 with Graphite Carbon
Thrust Base	Cast Iron - EN-GJL-250 Base with X20Cr14 Segment	GG25 Base with 1.4027 Segment	ASTM A48 Class 30B Base with ASTM A743 CA40 Segment
Bush Bearing	CB495K	G-CuPb10Sn	ASTM C93700
Diaphragm	HNBR (ASTM - D2000)	HNBR (ASTM - D2000)	HNBR (ASTM - D2000)
Sand guard, O Ring & Oil Seal	NBR (Buna - N)	NBR (Buna - N)	NBR (Buna - N)
Stator Shell	X5CrNi 18 9	1.4301	ASTM A240 AISI 304
Shaft	EN8D with X12Cr13 Sleeve	CK45 (1.1191) with 1.4006 sleeve	ASTM A29 AISI 1045 with ASTM A276 AISI 410
Shaft extension	X5CrNiCuNb 16 4	1.4542	ASTM A693 AISI 630 (UNS S17400)

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Material of Construction

PART NAME	W4N - Single Phase (0.37 - 1.5kW) W4N - Three Phase (0.37 - 1.5kW)		
	EUROPEAN	DIN	AISI / SAE
Upper & Lower Housing	Cast Iron - EN-GJL-200 (X5CrNiMo 18 10 claded)	GG20 (1.4401 claded)	ASTM A48 Class 30B (ASTM A240 AISI 316 claded)
Housing Pipe	NA	NA	NA
Motor Base & Upper Housing Shell	X5CrNiMo 18 10	1.4401	ASTM A240 AISI 316
Thrust Pad	Cast Iron - EN-GJL-250 or X12Cr14 with Graphite Carbon	GG25 or 1.4008 with Graphite Carbon	ASTM A48 Class 30B or ASTM A743 CA15 with Graphite Carbon
Thrust Base	X6CrNI 18 9 Base with X20Cr14 Segment	1.4308 Base with 1.4027 Segment	ASTM A743 CF8 Base with ASTM A743 CA40 Segment
Bush Bearing	CB495K	G-CuPb10Sn	ASTM C93700
Diaphragm	HNBR (ASTM -D2000)	HNBR (ASTM -D2000)	HNBR (ASTM -D2000)
Sand guard, O Ring & Oil Seal	NBR (Buna - N)	NBR (Buna - N)	NBR (Buna - N)
Stator Shell	X5CrNiMo 18 10	1.4401	ASTM A240 AISI 316
Shaft	EN8D with X12Cr13 Sleeve	CK45 (1.1191) with 1.4006 Sleeve	ASTM A29 AISI 1045 with ASTM A276 AISI 410 Sleeve
Sand Extension	X5CrNiCuNb 16 4	1.4542	ASTM A693 AISI 630 (UNS S17400)

PART NAME	W4N - Single Phase (2.2kW) W4N - Three Phase (2.2 - 7.5kW)		
	EUROPEAN	DIN	AISI / SAE
Upper & Lower Housing	Cast Iron - EN-GJL-200 (X5CrNiMo 18 10 claded)	GG20 (1.4401 claded)	ASTM A48 Class 30 B (ASTM A240 AISI 316 claded)
Housing Pipe	Cast Iron - EN-GJL-250	GG25 (1.4401 claded)	ASTM A48 Class 30 B (ASTM A240 AISI 316 Claded)
Motor Base & Upper Housing Shell	X5CrNiMo 18 10	1.4401	ASTM A240 AISI 316
Thrust Pad	Cast Iron - EN-GJL-250 or X12 Cr14 with Graphite Carbon	GG25 or 1.4008 with Graphite Carbon	ASTM A48 Class 30 B or ASTM A743 CA15 with Graphite Carbon
Thrust Base	Cast Iron - EN-GJL-250 Base with X20Cr14 Segment	GG25 Base with 1.4027 Segment	ASTM A48 Class 30 B Base with ASTM A743 CA40 Segment
Bush Bearing	CB495K	G-CuPb10Sn	ASTM C93700
Diaphragm	HNBR (ASTM - D2000)	HNBR (ASTM - D2000)	HNBR (ASTM - D2000)
Sand guard, O Ring & Oil Seal	NBR (Buna - N)	NBR (Buna - N)	NBR (Buna - N)
Stator Shell	X5CrNiMo 18 10	1.4401	ASTM A240 AISI 316
Shaft	EN8D with X12Cr13 Sleeve	CK45 (1.1191) with 1.4006 sleeve	ASTM A29 AISI 1045 with ASTM A276 AISI 410 Sleeve
Sand extention	X5CrNiCuNb 16 4	1.4542	ASTM A693 AISI 630 (UNS S17400)

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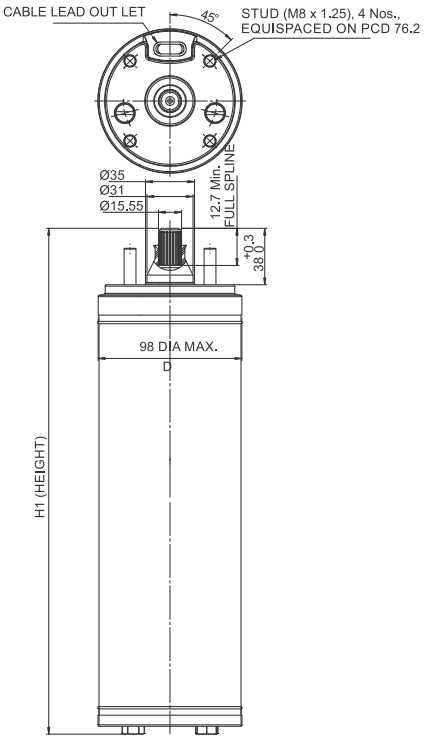
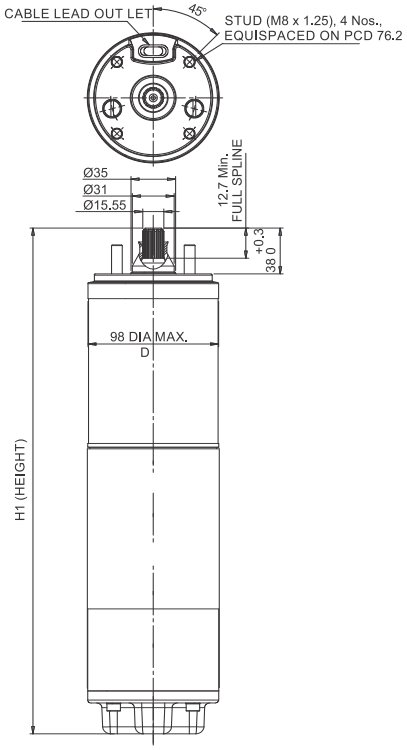
General Arrangement Drawing (GAD)

0.37 - 1.1kW



1.5 - 7.5kW



ALL DIMENSIONS ARE IN mm

SPLINED SHAFT : 14 TEETH - MODULE 1.5875
PRESSURE ANGLE 30°, A.N.S.I. B-92-1-1970 COUPLING CLASS 5

Electrical Data

4" SINGLE PHASE 230V 3 WIRE MOTORS

Model	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	1.2
W4A-05S	0.55	0.75	6	21	52	0.9	3000	2.9	1.8
W4A-07S	0.75	1	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	12	48	60	0.95	3000	8.3	4.9
W4A-22S	2.2	3	16.5	66	62	0.95	6500	13.3	7.4

4" THREE PHASE 380-415V D.O.L MOTORS

Model	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	1.9	5	48	0.74	3000	2.2	1.2
W4A-05T	0.55	0.75	2.4	7	57	0.72	3000	3.4	1.9
W4A-07T	0.75	1	2.8	9	64	0.66	3000	4.5	2.5
W4A-11T	1.1	1.5	3.9	15	67	0.67	3000	6.7	3.7
W4A-15T	1.5	2	4.7	19	68	0.78	3000	9	5
W4A-22T	2.2	3	7.1	32	70	0.77	6500	14.1	7.5
W4A-30T	3	4	9.1	42	72	0.76	6500	19	10
W4A-37T	3.7	5	10.1	50	71	0.78	6500	22	12.4
W4A-40T	4	5.5	10.3	52	69	0.78	6500	23	12.4
W4A-55T	5.5	7.5	14.2	71	71	0.70	6500	33.7	18.7
W4A-75T	7.5	10	18.2	93	72	0.80	6500	45.2	25.1

DIMENSIONS AND WEIGHT DATA

Model	Power		*Method of Starting	Dimension (mm)		Net Weight (kg)	Cable leadout	
	kW	HP		D	H1		Cable Size (Sq.mm)	Cable Length (m)
W4A-03S	0.37	0.5	S	98	410	11.6	1.5	1.5
W4A-05S	0.55	0.75	S	98	430	12.6	1.5	1.5
W4A-07S	0.75	1	S	98	455	13.8	1.5	1.5
W4A-11S	1.1	1.5	S	98	495	15.7	2.5	1.5
W4A-15S	1.5	2	S	98	545	17.7	2.5	1.5
W4A-22S	2.2	3	S	98	845	33.4	2.5	2
W4A-03T	0.37	0.5	T	98	410	11.7	1.5	1.5
W4A-05T	0.55	0.75	T	98	455	13.3	1.5	1.5
W4A-07T	0.75	1	T	98	475	15.2	1.5	1.5
W4A-11T	1.1	1.5	T	98	525	16.6	1.5	1.5
W4A-15T	1.5	2	T	98	545	17.1	1.5	1.5
W4A-22T	2.2	3	T	98	725	27.6	1.5	2
W4A-30T	3	4	T	98	750	29.5	1.5	2
W4A-37T	3.7	5	T	98	840	32.9	2.5	2
W4A-40T	4	5.5	T	98	865	32.9	2.5	2
W4A-55T	5.5	7.5	T	98	900	38.3	2.5	3
W4A-75T	7.5	10	T	98	1085	44.8	2.5	3

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