4MWP

4" ENCAPSULATED SUBMERSIBLE MOTORS,
SINGLE AND 3 PHASE, 3 WIRE MOTORS

The 4MWP is a 4" asynchronous, two-pole submersible motor.
All components in contact with water are manufactured from AISI 304 stainless steel to ensure excellent corrosion resistance.

The thrust bearing assembly and carbon bearings are lubricated with a water-glycol mixture and supported by a Kingsbury self-centering thrust bearing. Both flanges and the outer shell are constructed from AISI 304L stainless steel for enhanced durability.

The motor lead connection is designed for quick and efficient maintenance. In the single-phase version, the capacitor and manually resettable overload protection are housed in a surface-mounted control box, supplied separately. Adequate overload protection must be provided by the user for both single- and three-phase versions.

General Features

- NEMA 4" flanges
- Power range: 0.5 - 10 hp
- Phase: 1 - 3
- Rated Voltage: 115 / 200 / 230 / 460 V
- Frequency: 60 Hz
- Voltage tolerance: ±10%

Electrical Features

- Insulation Class: F
- Protection IP68
- Suitable for operation with Variable Frequency Drive (30–60 Hz)

Operating Limits

- Max. immersion depth: 984 ft (300 m)
- Min. cooling flow: 1.64 ft/s (0.50 m/s)
- Max. motor starts per hour: 5

Nomenclature

4	M	W	P	15	C	3	6	3
WELL DIAMETER 4 = 4"	MOTOR	TYPE W = Encapsulated	PEARL	POWER 05 = ½ hp 07 = ¾ hp 10 = 1 hp 15 = 1½ hp 20 = 2 hp 30 = 3 hp 50 = 5 hp 75 = 7½ hp 100 = 10 hp	VOLTAGE A = 115V C = 230V D = 460	PHASE 1 = 1 PH 3 = 3 PH	FREQUENCY 6 = 60 Hz	WIRE 3 = 3 wire

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Electrical Data - 60 Hz

4MWP - SINGLE PHASE / 3 WIRE

MODEL	P2		THRUST LOAD		V	SF	In	In-SF	Is/In	Cs/Cn	P1	N	cos φ	η	C [1]	C [2]	Ø	LC	Rm	Rstart
	(hp)	(kW)	(lbf)	(N)	(V)		(A)	(A)			(W)	(rpm)		%	(µF)	(µF)	(AWG)	(ft)	(Ω)	(Ω)
4MWP 05A163	0.5	0.37	450	2000	115	1.6	10	12.6	4	3.2	800	3450	0.71	48	-	250-300	4x14	5 ½	1.2	4.9
4MWP 05C163	0.5	0.37	450	2000	230	1.6	5.5	6.8	4.2	3.9	800	3450	0.62	46	-	59-71	4x14	5 ½	3.9	15.0
4MWP 07C163	0.75	0.55	450	2000	230	1.5	7.4	8.6	4.6	3.6	1100	3450	0.65	53	-	86-103	4x14	5 ½	3	10.8
4MWP 10C163	1	0.75	700	3114	230	1.4	8.0	9.8	5.5	2.9	1350	3450	0.68	58	-	105-126	4x14	5 ½	2.4	9.9
4MWP 15C163	1.5	1.1	700	3114	230	1.3	10	12	6	1.9	1800	3450	0.81	64	10	105-126	4x14	5 ½	1.8	9.1
4MWP 20C163	2	1.5	700	3114	230	1.25	10.5	12.3	5.3	2.3	2200	3450	0.95	69	20	105-126	4x14	5 ½	1.9	5.7
4MWP 30C163	3	2.2	700	3114	230	1.15	14.3	16.2	5.5	2.1	3100	3450	0.97	72	45	208-250	4x14	5 ½	1.2	2.5
4MWP 50C163	5	3.7	1400	6228	230	1.15	22.2	25.5	5.5	1.8	5000	3450	0.99	74	80	270-324	4x14	8 ¾	0.8	1.5

4MWP - 3 PHASE / 3 WIRE

MODEL	P2		THRUST LOAD		V	SF	In	In-SF	Is/In	Cs/Cn	P1	N	cos φ	η	C	Ø	LC	R
	(hp)	(kW)	(lbf)	(N)	(V)		(A)	(A)			(W)	(rpm)		%	(µF)	(AWG)	(ft)	(Ω)
4MWP 05B363	0.5	0.37	450	2000	200	1.6	3.9	4.0	4.8	3.2	870	3450	0.4	42	-	4x14	5 ½	5.8
4MWP 05C363	0.5	0.37	450	2000	230	1.6	3.6	3.7	4.4	3.2	870	3450	0.4	42	-	4x14	5 ½	5.8
4MWP 05D363	0.5	0.37	450	2000	460	1.6	1.6	1.9	5	3.2	870	3450	0.4	42	-	4x14	5 ½	25.6
4MWP 07B362	0.75	0.55	450	2000	200	1.5	5.0	5.0	5.6	3.6	1140	3450	0.47	48	-	4x14	5 ½	3.9
4MWP 07C363	0.75	0.55	450	2000	230	1.5	4.6	4.9	5.2	3.6	1140	3450	0.47	48	-	4x14	5 ½	3.9
4MWP 07D363	0.75	0.55	450	2000	460	1.5	2.2	2.4	5.5	3.6	1140	3450	0.47	48	-	4x14	5 ½	17.3
4MWP 10B362	1	0.75	450	2000	200	1.4	5.1	5.2	6.9	4.2	1260	3450	0.59	59	-	4x14	5 ½	3.7
4MWP 10C363	1	0.75	450	2000	230	1.4	4.7	5.0	6.4	4.2	1260	3450	0.59	59	-	4x14	5 ½	3.7
4MWP 10D363	1	0.75	450	2000	460	1.4	2.6	2.8	5.8	4.2	1260	3450	0.59	59	-	4x14	5 ½	13
4MWP15B362	1.5	1.1	700	3114	200	1.3	8.7	8.9	6.4	4.1	1875	3450	0.53	60	-	4x14	5 ½	2.3
4MWP 15C363	1.5	1.1	700	3114	230	1.3	8.1	8.5	5.9	4.1	1875	3450	0.53	60	-	4x14	5 ½	2.3
4MWP 15D363	1.5	1.1	700	3114	460	1.3	3.6	3.9	6.7	4.1	1875	3450	0.53	60	-	4x14	5 ½	8.9
4MWP 20B362	2	1.5	700	3114	200	1.25	11.0	11.2	6.6	3.8	2230	3450	0.57	67	-	4x14	5 ½	1.6
4MWP 20C363	2	1.5	700	3114	230	1.25	10.2	10.8	6.1	3.8	2230	3450	0.57	67	-	4x14	5 ½	1.6
4MWP 20D363	2	1.5	700	3114	460	1.25	4.6	4.9	6.7	3.8	2230	3450	0.57	67	-	4x14	5 ½	6
4MWP 30B362	3	2.2	700	3114	200	1.15	11.6	11.7	8.1	4.8	3160	3450	0.69	71	-	4x14	5 ½	1.3
4MWP 30C363	3	2.2	700	3114	230	1.15	10.7	11.6	7.5	4.8	3160	3450	0.69	71	-	4x14	5 ½	1.3
4MWP 30D363	3	2.2	700	3114	460	1.15	5.6	6	7.1	4.8	3160	3450	0.69	71	-	4x14	5 ½	5.1
4MWP 50B363	5	4	1400	6228	200	1.15	19.2	19.4	8.0	4	5230	3450	0.7	77	-	4x14	8 ¾	0.83
4MWP 50C363	5	4	1400	6228	230	1.15	17.8	19.2	7.4	4	5230	3450	0.7	77	-	4x14	8 ¾	0.83
4MWP 50D363	5	4	1400	6228	460	1.15	8.9	9.6	7.4	4	5230	3450	0.7	77	-	4x14	8 ¾	3.3
4MWP 75B362	7.5	5.5	1400	6228	200	1.15	27.8	28.1	8.1	3.8	7100	3450	0.71	78	-	4x14	8 ¾	0.6
4MWP 75C363	7.5	5.5	1400	6228	230	1.15	25.7	27.5	7.5	3.8	7100	3450	0.71	78	-	4x14	8 ¾	0.6
4MWP 75D363	7.5	5.5	1400	6228	460	1.15	12	13	7.5	3.8	7100	3450	0.71	78	-	4x14	8 ¾	2.35
4MWP 100D363	10	7.5	1400	6228	460	1.15	15.4	16.6	7.1	3.9	9300	3450	0.78	80	-	4x14	11 ½	2

4MWP

4" ENCAPSULATED SUBMERSIBLE MOTORS,
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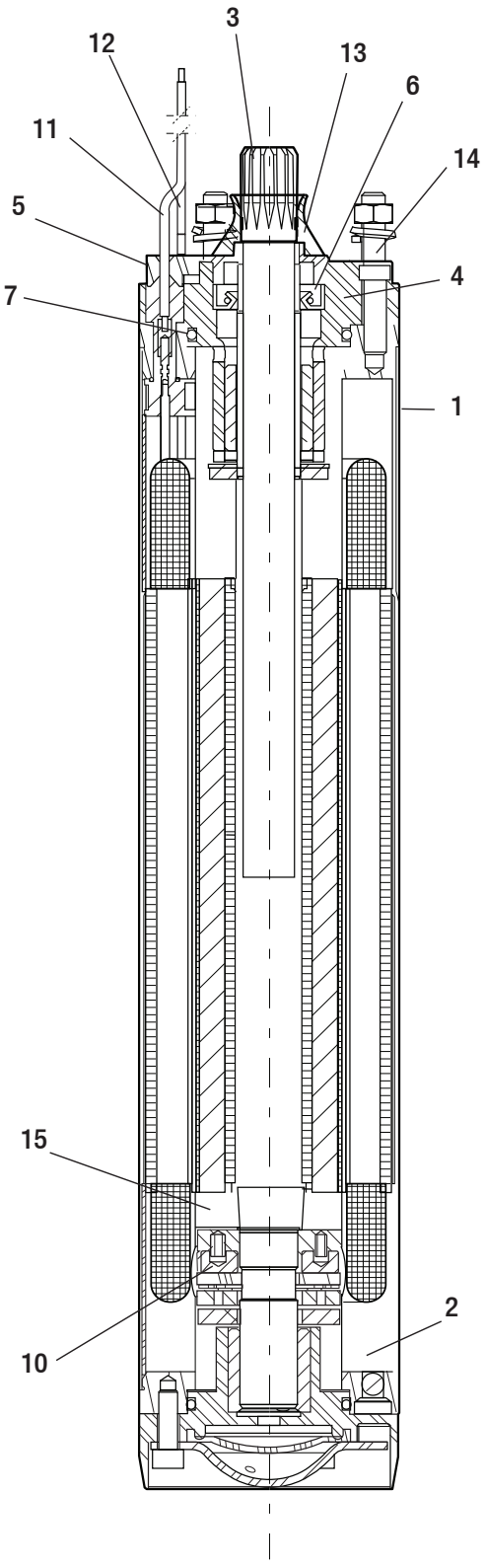

Components

#	PART NAME	MATERIAL
1	External sleeve	AISI 304
2	Stator	AISI 304L
3	Shaft end	AISI 304
4	Upper bracket	CAST IRON
5	Bracket cover	AISI 304
6	Lip seal	NBR
7	Gasket	NBR
8	Lower bracket	CAST IRON
9	Diaphragm	EDPM
10	Thrust bearing	KINGSBURY STAINLESS STEEL- GRAPHITE
11	Cable	EDPM
12	Connecting plug	AISI 316
13	Sand guard	NBR
14	Bolt and screws	AISI 304
15	Cooling liquid	ANTIFREEZE + WATER

The shafts feature end sections constructed from stainless steel AISI 304, incorporating surface hardening and polishing treatment applied to the bearing working area. The squirrel-cage rotor is manufactured from aluminum.

Kingsbury type thrust bearing consisting of tilting pads made of highly resistant stainless-steel pads on a carbon driver.

0.5 - 1.5 hp: 450 lbf / 2,000 N
2 - 3 hp: 674.4 lbf / 3,000 N
4 - 10 hp: 1,349 lbf / 6,000 N

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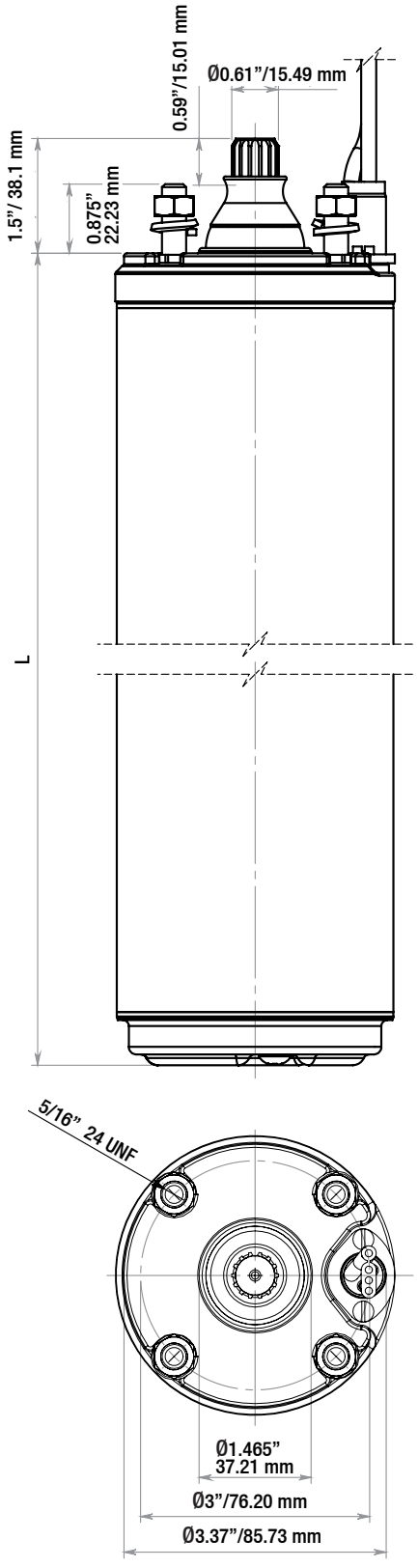

Dimensions

4MWP - SINGLE PHASE / 3 WIRE

MODEL	P2		L		WEIGHT	
	(hp)	(kW)	(in)	(mm)	(lb)	(kg)
4MWP 05	0.5	0.37	10.47	266	19.4	8.80
4MWP 07	0.75	0.55	11.26	286	21.4	9.71
4MWP 10	1	0.75	13.62	346	27.8	12.61
4MWP 15	1.5	1.1	16.18	411	32.5	14.74
4MWP 20	2	1.5	16.18	411	32.7	14.83
4MWP 30	3	2.2	21.42	544	45.2	20.50
4MWP 50	5	3.7	26.93	684	59.8	27.12

4MWP - 3 PHASE / 3 WIRE

MODEL	P2		L		WEIGHT	
	(hp)	(kW)	(in)	(mm)	(lb)	(kg)
4MWP 05	0.5	0.37	9.29	236	16.3	7.39
4MWP 07	0.75	0.55	10.47	266	19.4	8.80
4MWP 10	1	0.75	11.26	286	21.4	9.71
4MWP 15	1.5	1.1	13.62	346	258	117.03
4MWP 20	2	1.5	15.39	391	30.5	13.83
4MWP 30	3	2.2	16.18	504	40.8	18.51
4MWP 50	5	3.7	24.17	614	51.9	23.54
4MWP 75	7.5	5.5	26.92	684	59.8	27.12
4MWP 100	10	7.5	30.08	764	68.7	31.16