

KNB CORPORATION

2014

**Submersible  
Motor**



KNB is a professional pump & motor manufacturer and provides different kinds of submersible pumps and motors. We guarantees high quality, reliability, cost-effective pumping systems, maximizing efficiency in order to satisfy customer's needs at best.

KNB submersible pumps cover many applications from water to wastewater treatment. This innovation confirms KNB to be utilising best material to achieve excellence and guaranteed performances.

Our goal is very clear - to serve you better, to provide you quality products with cheap price. You will find everything you need to help you better enjoy your business. Here we can bring you great customer care that you've expected.



# KNB

4" Submersible Encapsulated Motors, manufactured in ISO-9001 certified facilities. These motors are built for operation in 4" diameter or larger water wells. They are fitted with water lubricated radial and thrust bearings for maintenance-free operation. A special diaphragm ensures pressure compensation inside the motor.

## Specifications

- 4" NEMA flange
- Max starts: 20/hr
- Insulation Class: H
- Ambient temp.: 30°C
- Degree of protection: IP 68
- Max operating depth: 300m
- Motor protection: Integrated
- Mounting: vertical / horizontal
- Cooling flow: minimum 0.3 m/s
- Voltage tolerance:  $\pm 10\%$  of nominal U
- Standard motor cable: 3\*2.0 mm<sup>2</sup> ; 1.5 m

## 2-wire motor

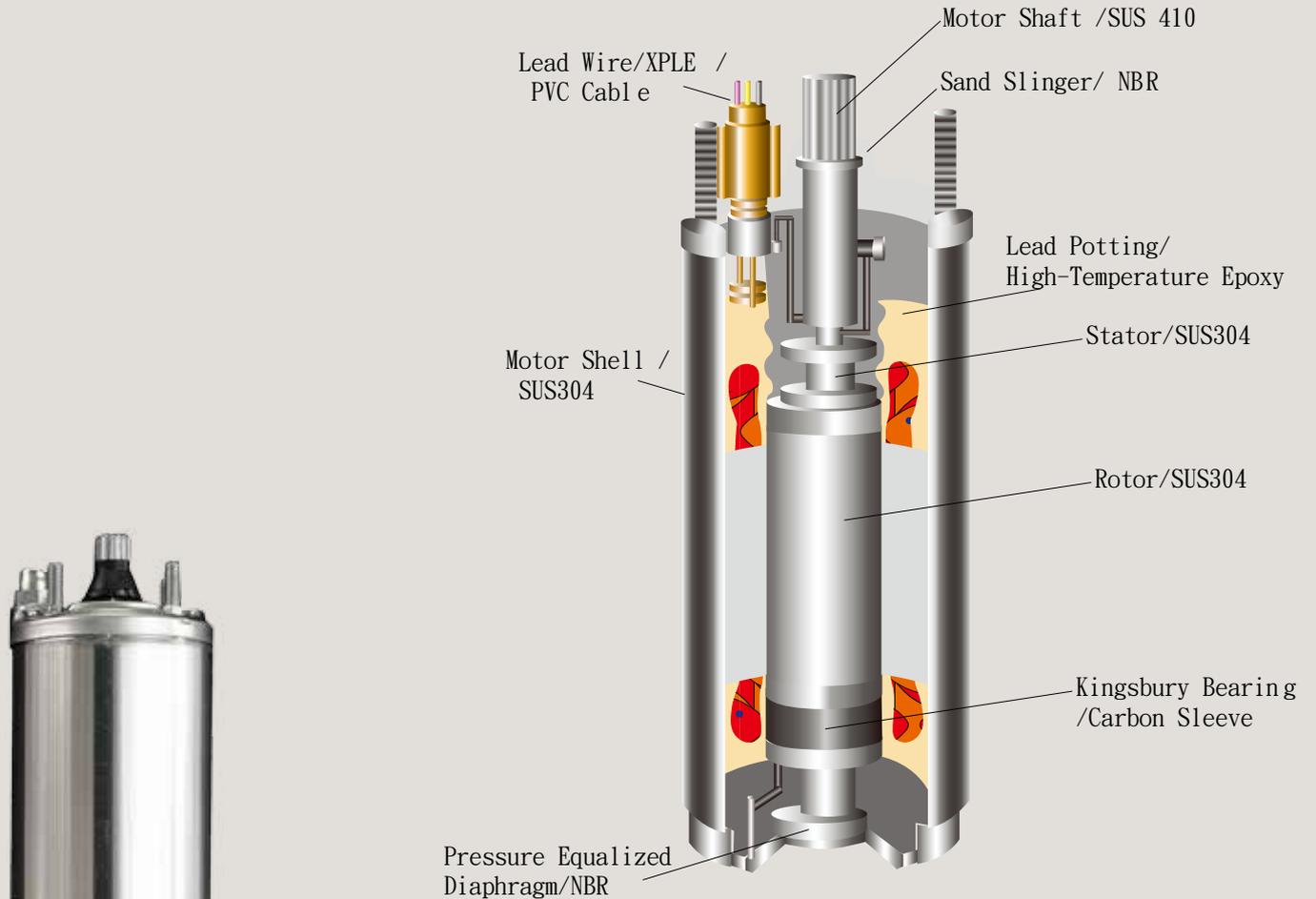
The 2-wire motor is a single-phase motor for operation with run capacitor. The motor is connected to only one capacitor which works permanently as start and run capacitor.

## 3-wire motor

The 3-wire motor is a single-phase, capacitor start-capacitor run (CSCR) motor optimised for operation with our Control Box. This design features the highest starting torque within the single phase motor range.



## 4 INCH ENCAPSULATED MOTOR FEATURES & CONSTRUCTIONS



### Product Features

- Canned type
- Water lubrication
- Filter check valve
- Stainless steel splined shaft
- Kingsbury-type thrust bearing
- Pressure equalizing diaphragm
- Hermetically-sealed stator windings
- All stainless steel SUS 304 exterior construction
- Self healing stator resin prevents motor burn out

# Product Range

## Single Phase - 2-Wire (50Hz)

HP	kW	VOLTS	S.F	Downward Thrust Rating	
0.5	0.37	220	1	300 LBS	
0.75	0.55			(1500 N)	
1	0.75			230	650 LBS
1.5	1.1			3000 N)	

## Single Phase - 3-Wire (50Hz)

HP	kW	VOLTS	S.F	Downward Thrust Rating	
0.5	0.37	220	1	300 LBS	
1	0.75			(1500 N)	
1.5	1.1			230	650 LBS
2	1.5			(3000 N)	
3	2.2			900 LBS	
5	3.7	(4000 N)			

## Three Phase (50Hz)

HP	kW	VOLTS	S.F	Downward Thrust Rating		
0.5	0.37	220	1	300 LBS		
0.75	0.55			(1500 N)		
1	0.75			380	650 LBS	
1.5	1.1					(3000 N)
2	1.5					230
3	2.2	380	900 LBS			
4	3	415				
5	3.7	460		(4000 N)		
5.5	4	460	1.15	900 LBS		
7.5	5.5					
10	7.5					

## Single Phase - 2-Wire (60Hz)

HP	kW	VOLTS	S.F	Downward Thrust Rating	
0.5	0.37	220	1.6	300 LBS (1500 N)	
0.75	0.55			230	650 LBS (3000 N)
1	0.75				
1.5	1.1				

## Single Phase - 3-Wire (60Hz)

HP	kW	VOLTS	S.F	Downward Thrust Rating	
0.5	0.37	220	1.6	300 LBS (1500 N)	
0.75	0.55			1.5	
1	0.75			1.4	
1.5	1.1			230	650 LBS (3000 N)
2	1.5			1.3	
3	2.2	1.15	900 LBS		
5	3.7			(4000 N)	

## Three Phase (60Hz)

HP	kW	VOLTS	S.F	Downward Thrust Rating	
0.5	0.37	220	1.6	300 LBS (1500 N)	
0.75	0.55			1.5	
1	0.75			1.4	
1.5	1.1			230	650 LBS (3000 N)
2	1.5			380	
3	2.2	415	900 LBS		
5	3.7	460			
5.5	4	1.15		(4000 N)	
7.5	5.5	460	1.15	900 LBS	
10	7.5				

## Single Phase - 2-Wire

HP	kW	Length		Shipping Weight		CABLE	
		(in)	(mm)	LBS	KG	mm <sup>2</sup>	M
0.5	0.37	11.50	292	20	9	3X2.0	1.2
0.75	0.55	12.63	321	23	10.3		
1	0.75	13.72	348	25	11.3		
1.5	1.1	15.59	396	31	14		

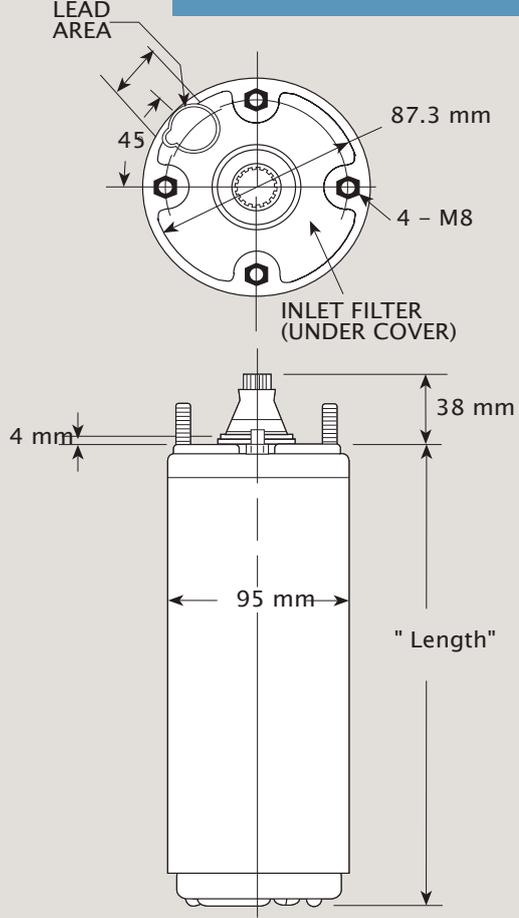
## Single Phase - 3-Wire

HP	kW	Length		Shipping Weight		CABLE	
		(in)	(mm)	LBS	KG	mm <sup>2</sup>	M
0.5	0.37	9.53	242	18	8.1	4X2.0	1.2
0.75	0.55	10.66	271	21	9.5		
1	0.75	11.75	298	23	10.4		
1.5	1.1	13.62	346	29	13.2		
2	1.5	15.12	384	32	14.6		
3	2.2	22.44	570	51	23	4X2.0	1.5
5	3.7	28.44	722	66	30		

## Three Phase

HP	kW	Length		Shipping Weight		CABLE	
		(in)	(mm)	LBS	KG	mm <sup>2</sup>	M
0.5	0.37	8.78	223	16	7.2	4X2.0	1.2
0.75	0.55	9.53	242	18	8.1		
1	0.75	10.66	271	20	9		
1.5	1.1	11.75	298	23	10.4		
2	1.5	13.62	346	29	13.2		
3	2.2	15.12	384	32	14.6	4X2.0	1.5
4	3	15.28	388	35	16		
5	3.7	22.44	570	51	23		
5.5	4	22.54	573	53	24	4X2.0	1.7
7.5	5.5	28.44	722	66	30		
10	7.5	31.20	792	75	34		

# Dimensions & Weights



# 4 INCH ENCAPSULATED MOTOR PRODUCT RANGE & DIMENSIONS

# 4 Inch Encapsulated Motor- 50Hz

## Specifications

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### Single Phase - 2-Wire (50Hz)

HP	kW	VOLTS	S.F.	FULL LOAD		EFFICIENCY (%)			POWER FACTOR (%)			LOCKED ROTOR AMPS
				A	W	F.L.	3/4	1/2	F.L.	3/4	1/2	
0.5	0.37	230	1	3.3	660	56	53	45	92	89	82	18
0.75	0.55			4.7	998	58	54	46	92	90	82	24
1	0.75			5.6	1132	65	60	51	93	90	83	28
1.5	1.1			8	1648	68	63	50	93	90	85	38

### Single Phase - 3-Wire (50Hz)

HP	kW	VOLTS	S.F.	FULL LOAD		EFFICIENCY (%)			POWER FACTOR (%)			LOCKED ROTOR AMPS
				A	W	F.L.	3/4	1/2	F.L.	3/4	1/2	
0.5	0.37	230	1	4.3	655	55	53	43	72	64	53	15
0.75	0.55			6.5	955	58	55	47	69	60	50	23
1	0.75			7.6	1200	62	59	52	73	67	53	29
1.5	1.1			9.4	1712	65	59	50	87	83	79	46
2	1.5			11	2173	68	66	60	88	83	75	53
3	2.2			16	3488	64	63	58	96	96	94	68
5	3.7	26	5934	63	60	51	98	96	97	100		

### Three Phase (50Hz)

HP	kW	VOLTS	S.F.	FULL LOAD		Line to Line Resistance (Ohms)	EFFICIENCY (%)			POWER FACTOR (%)			LOCKED ROTOR AMPS
				A	W		F.L.	3/4	1/2	F.L.	3/4	1/2	
0.5	0.37	220	1	1.8	560	16.4-20.0	66	64	59	78	70	57	7.4
		380-415		1.1		55.3-67.5	66	64	59	78	70	57	4.3
0.75	0.55	220	1	2.6	830	11.2-13.8	66	65	60	80	72	60	10
		380-415		1.5		37.6-46.0	66	65	60	80	72	60	6.5
1	0.75	220	1	3.5	1050	8.5-10.4	67	66	61	81	72	60	15
		380-415		2		25.9-31.7	67	66	61	81	72	60	8.7
1.5	1.1	220	1	5.2	1470	4.2-5.1	70	69	63	79	70	57	25
		380-415		3		13.4-16.3	70	69	63	79	70	57	14
2	1.5	220	1	6.9	2120	3.3-4.1	75	75	72	83	75	62	36
		380-415		4		9.1-11.1	75	75	72	83	75	62	21
3	2.2	220	1	10.4	3100	2.4-2.9	71	71	67	84	77	65	48
		380-415		6		7.2-8.8	76	76	72	83	76	63	28
4	3	220	1	12.4	4000	1.5-1.8	72	73	71	85	78	65	73
		380-415		7.3		4.5-5.5	76	77	74	85	78	65	42
5	3.7	220	1	15.5	5030	1.3-1.6	75	74	71	84	77	65	80
		380-415		9		4.0-4.9	75	74	71	84	77	65	46
5.5	4	220	1	17	5370	1.0-1.3	74	75	71	86	79	67	102
		380-415		10.4		2.9-3.6	76	77	75	84	77	64	60
7.5	5.5	220	1	22.8	7430	0.8-1.0	77	76	72	83	76	60	120
		380-415		13		2.5-3.1	75	76	73	86	79	66	70
10	7.5	380-415	1	18.7	9720	1.6-2.0	76	76	73	82	74	61	100

# 4 Inch Encapsulated Motor-60Hz

## Single Phase - 2-Wire (60Hz)

HP	kW	VOLTS	S.F.	FULL LOAD		EFFICIENCY (%)			POWER FACTOR (%)			LOCKED ROTOR AMPS
				A	W	F.L.	3/4	1/2	F.L.	3/4	1/2	
0.5	0.37	115	1.6	8.7	743	10	995	60	50	84	72	39
		230		3.4	730	4.3	960	62	51	97	92	18
0.75	0.55	230	1.5	4.7	998	5.8	1300	61	56	95	92	25
1	0.75	230	1.4	6.2	1306	7.5	1650	63	57	95	91	33
1.5	1.1	230	1.3	9	1931	10.5	2300	65	62	97	95	45

## Single Phase - 3-Wire (60Hz)

HP	kW	VOLTS	S.F.	FULL LOAD		EFFICIENCY (%)			POWER FACTOR (%)			LOCKED ROTOR AMPS
				A	W	F.L.	3/4	1/2	F.L.	3/4	1/2	
0.5	0.37	115	1.6	Y10.6	796	Y12.6	1120	54	50	76	62	46
				B10.6		B12.6						
				R0		R0						
0.5	0.37	230	1.6	Y5.3	796	Y6.3	1120	54	50	76	62	23
				B5.3		B6.3						
				R0		R0						
0.75	0.55	230	1.5	Y6.9	1141	Y8.3	1550	61	56	75	64	32
				B6.9		B8.3						
				R0		R0						
1	0.75	230	1.4	Y9.8	1412	Y10.7	1825	63	57	73	62	39
				B9.8		B10.7						
				R0		R0						
1.5	1.1	230	1.3	Y10.8	1994	Y12.3	2390	65	62	82	75	46
				B10.4		B12						
				R0.8		R1						
2	1.5	230	1.15	Y10.8	2236	Y13.2	2453	70	66	93	96	54
				B10.5		B12						
				R2.8		R2.8						
3	2.25	230	1.15	Y15	3530	Y17.8	4035	64	64	97	97	85
				B11.5		B13						
				R6.5		R7						
5	3.75	230	1.15	Y24.5	5770	Y28	6634	65	65	98	98	120
				B16		B19						
				R11		R11						

## Three Phase (60Hz)

HP	kW	VOLTS	S.F.	FULL LOAD		MAXIMUM (S.F. LOAD)		Line to Line Resistance (Ohms)	EFFICIENCY%		LOCKED ROTOR AMPS
				A	W	A	W		S.F.	F.L.	
0.5	0.37	230	1.6	2.5	590	3	870	9.5-11	68	63	15.5
		380		1.5	590	2.2	870	23-28	68	63	9.7
		460		1.3	590	1.6	870	38-44	68	63	7.5
0.75	0.55	230	1.5	3.2	825	3.9	1170	6.8-7.8	70	68	20
		380		2	825	2.6	1170	16.5-20	70	68	12
		460		1.7	825	2	1170	27-31	70	68	11
1	0.75	230	1.4	4	1100	4.8	1460	4.9-5.6	71	71	26.9
		380		2.4	1100	2.9	1460	12.2-14.9	71	71	16.5
		460		2	1100	2.5	1460	20-23	71	71	13.5
1.5	1.1	230	1.3	5	1490	6	1910	3-4	74	74	34
		380		3	1490	3.7	1910	8.5-10.5	74	74	20
		460		2.5	1490	3.2	1910	13-16	74	74	16.8
2	1.5	575	1.25	2	1490	2.4	1910	20-25	74	74	13.5
		230		6.8	2180	8.2	2720	2.3-3	68	68	45
		380		4.1	2180	5	2720	6.6-8.2	68	68	28.5
3	2.2	460	1.15	3.4	2180	4.2	2720	9-12	68	68	23.5
		575		2.7	2180	3.2	2720	14.5-18.7	68	68	18.5
		230		9.5	3010	11	3450	1.8-2.2	74	74	62
5	3.7	380	1.15	5.9	3010	6.8	3450	4.7-6.0	74	74	38
		460		4.9	3010	5.6	3450	7.2-8.9	74	74	32
		575		3.8	3010	4.5	3450	11.5-14	74	74	25
7.5	5.5	230	1.15	16	5100	18	5830	1.0-1.2	73	73	105
		380		9.8	5100	11	5830	2.9-3.6	73	73	65
		460		8	5100	9	5830	4.0-4.9	73	73	55
10	7.5	575	1.15	6.5	5100	7.3	5830	6.4-7.8	73	73	45
		230		23	7400	26.8	8460	.61-.75	75	75	165
		380		14	7400	16	8460	1.6-2.0	75	75	98
10	7.5	460	1.15	11.5	7400	13.5	8460	2.5-3.1	75	75	80
		575		9.3	7400	10.8	8460	4.0-5.0	75	75	65
		380		19.5	10000	21.2	11500	1.2-1.6	75	74	140
10	7.5	460	1.15	16	10000	17.4	11500	1.8-2.3	75	74	115
		575		12.6	10000	13.7	11500	2.8-3.5	75	74	94

# KNB

4" Submersible Oil-filled Motors, manufactured in ISO-9001 certified facilities. These motors are built for operation in 4" diameter or larger water wells. They are fitted with water lubricated radial and thrust bearings for maintenance-free operation. A special diaphragm ensures pressure compensation inside the motor.

## Specifications

- 4" NEMA flange
- Max starts: 20/hr
- Insulation Class: H
- Ambient temp.: 30°C
- Degree of protection: IP 68
- Max operating depth: 300m
- Motor protection: Integrated
- Mounting: vertical / horizontal
- Cooling flow: minimum 0.3 m/s
- Voltage tolerance:  $\pm 10\%$  of nominal U
- Standard motor cable: 3\*2.0 mm<sup>2</sup> ; 1.5 m

## 2-wire motor

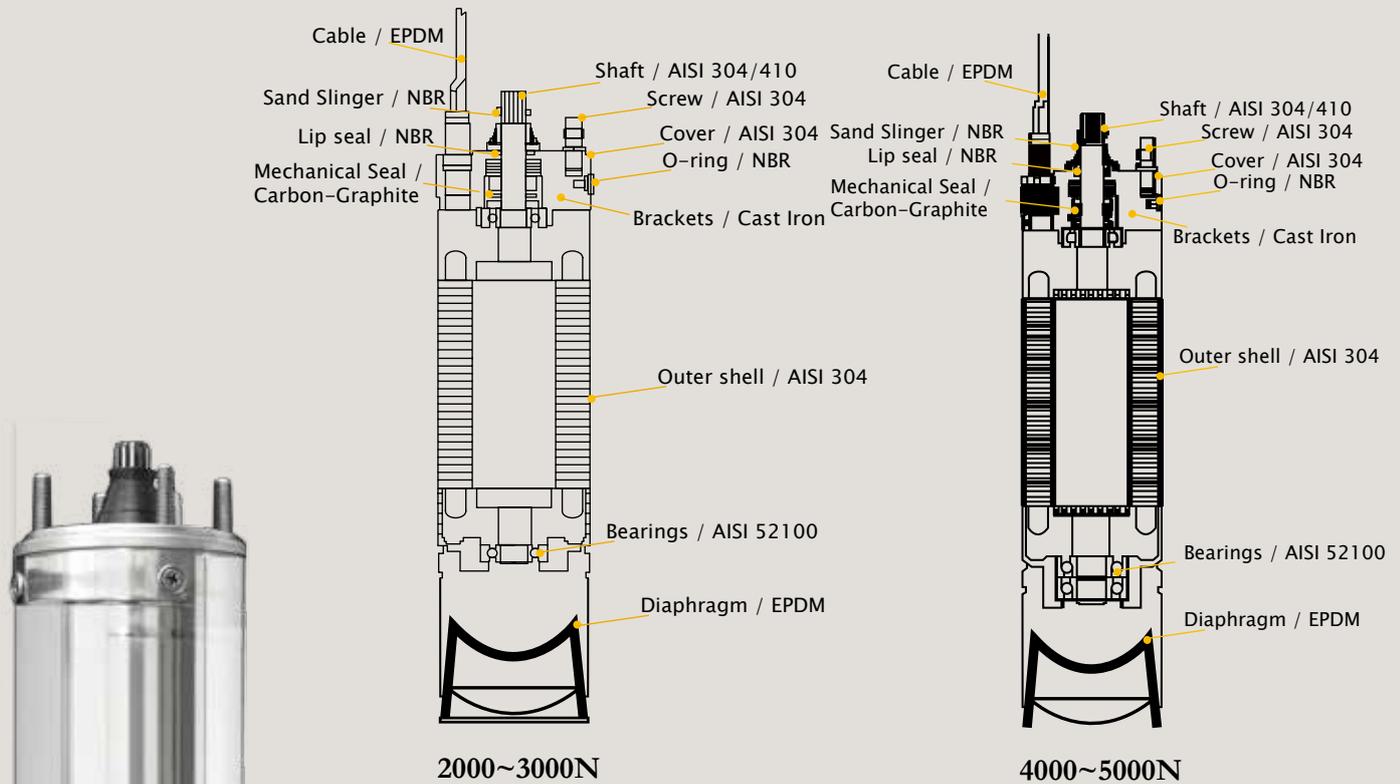
The 2-wire motor is a single-phase motor for operation with run capacitor. The motor is connected to only one capacitor which works permanently as start and run capacitor.

## 3-wire motor

The 3-wire motor is a single-phase, capacitor start-capacitor run (CSCR) motor optimised for operation with our Control Box. This design features the highest starting torque within the single phase motor range.



# 4 INCH OIL-FILLED MOTOR FEATURES & CONSTRUCTIONS



## Product Features

- Canned type
- Filter check valve
- Food oil lubrication
- Ball bearing design
- Stainless steel splined shaft
- Pressure equalizing diaphragm
- Hermetically-sealed stator windings
- All stainless steel SUS304 exterior construction
- Self healing stator resin prevents motor burn out



# Product Range

## Single Phase - 2-Wire (50Hz)

HP	kW	VOLTS	S.F.	Downward Thrust Rating
0.5	0.37			
0.75	0.55			
1	0.75	220	1	2000 N
1.5	1.1	230		
2	1.5			3000 N

## Single Phase - 3-Wire (50Hz)

HP	kW	VOLTS	S.F.	Downward Thrust Rating
0.5	0.37			
0.75	0.55			
1	0.75			2000 N
1.5	1.1	220	1	
2	1.5	230		
3	2.2			3000 N
5	3.7			4000 N

## Three Phase (50Hz)

HP	kW	VOLTS	S.F.	Downward Thrust Rating
0.5	0.37			
0.75	0.55			
1	0.75			2000 N
1.5	1.1	220		
2	1.5	230	1	
3	2.2	380		3000 N
4	3	415		
5	3.7	460		4000 N
5.5	4			
7.5	5.5			5000 N
10	7.5			

## Single Phase - 2-Wire (60Hz)

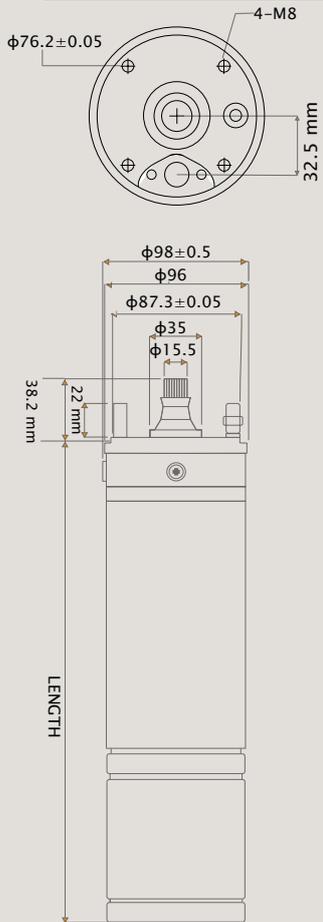
HP	kW	VOLTS	S.F.	Downward Thrust Rating
0.5	0.37			
0.75	0.55			
1	0.75	220		2000 N
1.5	1.1	230		
2	1.5		1.25	3000 N

## Single Phase - 3-Wire (60Hz)

HP	kW	VOLTS	S.F.	Downward Thrust Rating
0.5	0.37			
0.75	0.55			
1	0.75			2000 N
1.5	1.1	220		
2	1.5	230		
3	2.2			3000 N
5	3.7			4000 N

## Three Phase (60Hz)

HP	kW	VOLTS	S.F.	Downward Thrust Rating
0.5	0.37			
0.75	0.55			
1	0.75			2000 N
1.5	1.1	220		
2	1.5	230	1.25	
3	2.2	380		3000 N
4	3	415		
5	3.7	460		4000 N
5.5	4		1.15	
7.5	5.5			5000 N
10	7.5			



# Dimensions & Weights

## Single Phase

HP	kW	Length		Shipping Weight		CABLE	
		(in)	(mm)	LBS	KG	mm <sup>2</sup>	M
0.5	0.37	12.28	312	17	7.5		
0.75	0.55	12.87	327	19	8.5		
1	0.75	14.06	357	22	10		1.2
1.5	1.1	15.63	397	25	11.5	4X2.0	
2	1.5	16.81	427	29	13		1.5
3	2.2	18.39	467	33	15		
5	3.7	25.87	657	54	24.5		2

## Three Phase

HP	kW	Length		Shipping Weight		CABLE	
		(in)	(mm)	LBS	KG	mm <sup>2</sup>	M
0.5	0.37	11.69	297	14	6.5		
0.75	0.55	12.28	312	17	7.5		
1	0.75	12.87	327	19	8.5		1.2
1.5	1.1	14.06	357	22	10		
2	1.5	15.63	397	25	11.5		
3	2.2	16.81	427	29	13	4X2.0	1.5
4	3	18.39	467	33	15		
5	3.7	21.34	542	43	19.5		1.7
5.5	4	22.32	567	45	20.5		
7.5	5.5	25.87	657	54	24.5		2
10	7.5	29.80	757	64	29		2.5

# 4 INCH OIL-FILLED MOTOR PRODUCT RANGE & DIMENSIONS

# 4 Inch Oil-filled Motor- 50Hz

## Specifications

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### Single Phase - 3-Wire (50Hz)

HP	kW	VOLTS	FULL LOAD					LOCKED ROTOR AMPS
			A	W	RPM	EFF%	P.F%	
0.5	0.37	230	3.2	760	2860	53	97	15
0.75	0.55		4.5	980	2855	61	95	20
1	0.75		5.8	1200	2850	63	94	25
1.5	1.1		8.2	1800	2840	65	96	35
2	1.5		10.7	2250	2840	66	95	40
3	2.2		15	3160	2830	69	97	60

### Three Phase (50Hz)

HP	kW	VOLTS	FULL LOAD					LOCKED ROTOR AMPS
			A	W	RPM	EFF %	P.F %	
0.5	0.37	230	2.3	560	2820	57	80	9
0.75	0.55		2.8	840	2820	67	80	13
1	0.75		3.8	1080	2830	70	79	18
1.5	1.1		5.3	1500	2830	73	86	27
2	1.5		7.2	2100	2830	71	84	38
3	2.2		10.3	3200	2820	72	85	58
4	3		13.5	4000	2840	74	84	75
5	3.7		16.7	5000	2820	74	85	90
5.5	4		17.6	5300	2830	75	83	95
7.5	5.5		22.4	7400	2830	75	86	120
0.5	0.37	400	1.2	560	2820	57	80	4.5
0.75	0.55		1.6	840	2820	67	80	6
1	0.75		2.2	1080	2830	70	79	9
1.5	1.1		2.8	1500	2830	73	86	14
2	1.5		3.9	2100	2830	71	84	20
3	2.2		5.6	3200	2820	72	85	27
4	3		7.3	4000	2840	74	84	42
5	3.7		8.6	5000	2820	74	85	46
5.5	4		10.2	5300	2830	75	83	58
7.5	5.5		13.2	7400	2830	75	86	70
10	7.5	18.5	9600	2830	76	86	100	

# 4 Inch Oil-Filled Motor-60Hz

## Single Phase - 2-Wire (60Hz)

HP	kW	VOLTS	S.F.	FULL LOAD		MAXIMUM (S.F. LOAD)		EFFICIENCY%		POWER FACTOR%		RPM	LOCKED ROTOR AMPS
				A	W	A	W	S.F	F.L	S.F	F.L		
0.5	0.37	110/115	1.6	6/7	700	8.5	980	54	54	98	96	3480	26
		220/230		3.2/3.4	730	4.3	960	58	51	97	92	3460	13
0.75	0.55	220/230	1.5	4.6/4.8	995	5.8	1300	61	56	95	92	3460	18
1	0.75		1.4	5.8/6.2	1300	7.5	1650	63	57	95	91	3450	26
1.5	1.1		1.3	7.2/7.7	1930	10.5	2300	65	62	97	95	3450	34
2	1.5		1.25	10.2/10.6	2236	13.2	2453	66	62	97	95	3450	48

## Single Phase - 3-Wire (60Hz)

HP	kW	VOLTS	S.F.	FULL LOAD		MAXIMUM (S.F. LOAD)		EFFICIENCY%		POWER FACTOR%		RPM	LOCKED ROTOR AMPS
				A	W	A	W	S.F	F.L	S.F	F.L		
0.5	0.37	110/115	1.6	3.9/7.1	700	8.5	980	54	50	76	62	3480	46
		220/230	1.6	3.2/3.4	730	4.3	960	58	51			3460	23
0.75	0.55	220/230	1.5	4.6/4.8	995	5.8	1300	61	56	75	64	3460	32
1	0.75		1.4	5.8/6.2	1300	7.5	1650	63	57	73	62	3450	39
1.5	1.1		1.3	7.2/7.7	1930	10.5	2300	65	62	82	75	3450	46
2	1.5		1.2	10.2/10.6	2236	13.2	2453	70	66	93	96	3450	54
3	2.25		1.1	15.5/16	3390	17.5	4000	66	66	93	92	3440	65
5	3.75		1.1	24.5/25	5454	28	6000	68	68	94	94	3450	100

## Three Phase (60Hz)

HP	kW	VOLTS	S.F.	FULL LOAD		MAXIMUM (S.F. LOAD)		Line to Line Resistance (Ohms)	EFFICIENCY%		RPM	LOCKED ROTOR AMPS
				A	W	A	W		S.F	F.L		
0.5	0.37	200	1.6	3	590	3.6	870	6.6-8.4	68	63	3450	17.8
		230		2.5		3		9.5-11				15.5
		380		1.5		2.2		23-28				9.7
		460		1.3		1.6		38-44				7.5
0.75	0.55	200	1.5	3.6	825	4.5	1170	4.5-5.9	70	68	3450	24
		230		3.2		3.9		6.8-7.8				20
		380		2		2.6		16.5-20				12
		460		1.7		2		27-31				11
1	0.75	200	1.4	4.6	1100	5.5	1460	3.8-4.5	71	71	3450	31
		230		4		4.8		4.9-5.6				26.9
		380		2.4		2.9		12.2-14.9				16.5
		460		2		2.5		20-23				13.5
1.5	1.1	200	1.3	5.8	1490	6.9	1910	2.5-3	74	74	3450	39
		230		5		6		3-4				34
		380		3		3.7		8.5-10.5				20
		460		2.5		3.2		13-16				16.8
2	1.5	575	1.25	2	2180	2.4	2720	20-25	68	68	3450	13.5
		200		7.8		9.4		1.8-2.5				54
		230		6.8		8.2		2.3-3				45
		380		4.1		5		6.6-8.2				28.5
3	2.2	460	1.15	3.4	3010	4.2	3450	9-12	74	74	3450	23.5
		575		2.7		3.2		14.5-18.7				18.5
		200		11		12.7		1.3-1.7				72
		230		9.5		11		1.8-2.2				62
5	3.7	380	1.15	5.9	5100	6.8	5830	4.7-6.0	77	77	3450	38
		460		4.9		5.6		7.2-8.9				32
		575		3.8		4.5		11.5-14				25
		200		18.5		20.7		.74-.91				125
7.5	5.5	230	1.15	16	7400	18	8460	1.0-1.2	78	77	3450	105
		380		9.8		11		2.9-3.6				65
		460		8		9		4.0-4.9				55
		575		6.5		7.3		6.4-7.8				45
10	7.5	200	1.15	26.5	10000	31	11500	.46-.57	77	77	3450	185
		230		23		26.8		.61-.75				165
		380		14		16		1.6-2.0				98
		460		11.5		13.5		2.5-3.1				80
10	7.5	575	1.15	9.3	10000	10.8	11500	4.0-5.0	77	77	3450	65
		380		19.5		21.2		1.2-1.6				140
		460		16		17.4		1.8-2.3				115
		575		12.6		13.7		2.8-3.5				94

# KNB

6" & 8" rewindable water-filled submersible motors are all easy to rewind. The windings of the stator are made of a special water-proof wire of pure electrolytic copper sheathed with special non-hydroscopic thermoplastic material. The fine dielectric properties of this material allow direct contact between the windings and the liquid for efficient cooling of the windings.

## Specifications

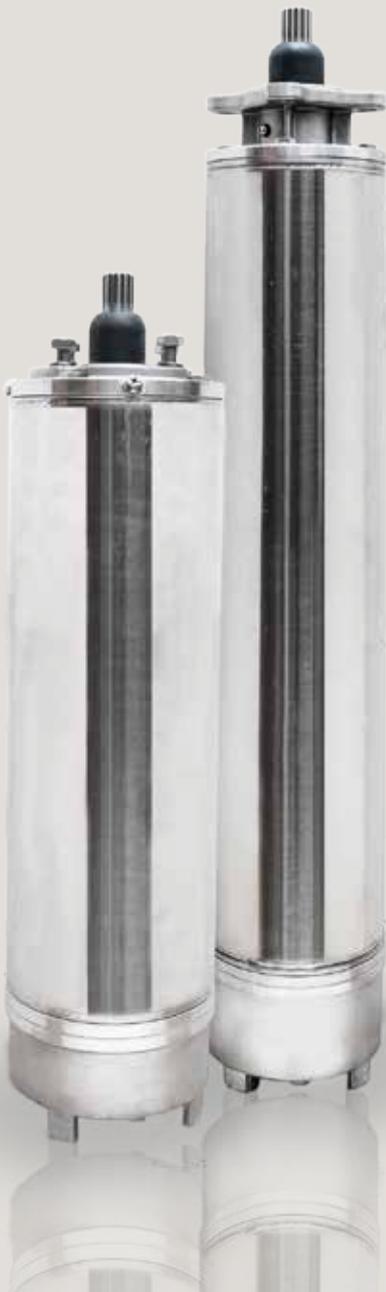
- 5 up to 120 HP
- 6" and 8" NEMA standard
- Max starts: 20/hr
- Insulation Class: B
- Ambient temp.: 30°C
- Degree of protection: IP 68
- Mounting: vertical / horizontal
- Cooling flow: minimum 16cm/sec
- 6" Max operating depth: 300m
- 8" Max operating depth: 350m
- Motor Lead in 4m length
- Standard voltage: 380-415V/ 50Hz , 220V/380V/440V/460V/ 60Hz
- Voltage tolerance:  $\pm 10\%$  of nominal U

## Options

- Other voltages
- Special lead lengths up to 50m



## 6 & 8 INCH REWINDABLE WATER-FILLED MOTOR



### Specifications

- 5 up to 120 HP
- 6" and 8" NEMA standard
- Max starts: 20/hr
- Insulation Class: B
- Ambient temp.: 30°C
- Degree of protection: IP 68
- Mounting: vertical / horizontal
- Cooling flow: minimum 16cm/sec
- 6" Max operating depth: 300m
- 8" Max operating depth: 350m
- Motor Lead in 4m length
- Standard voltage: 380-415V/ 50Hz , 220V/380V/440V/460V/ 60Hz
- Voltage tolerance:  $\pm 10\%$  of nominal U



Stainless steel shaft



Water lubrication



Pressure equalizing diaphragm



Kingsbury-type thrust bearing



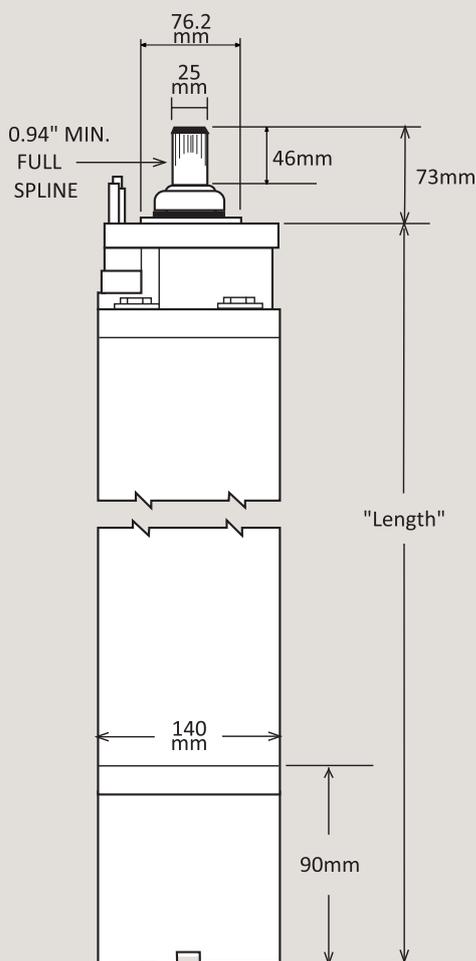
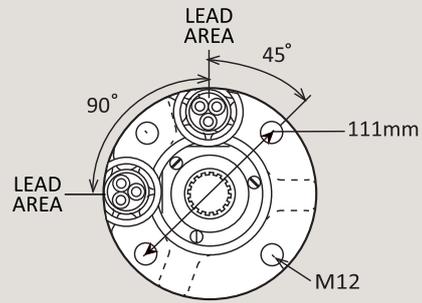
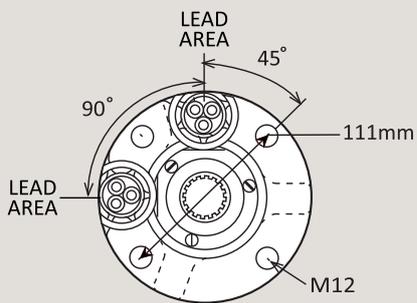
Filter check valve



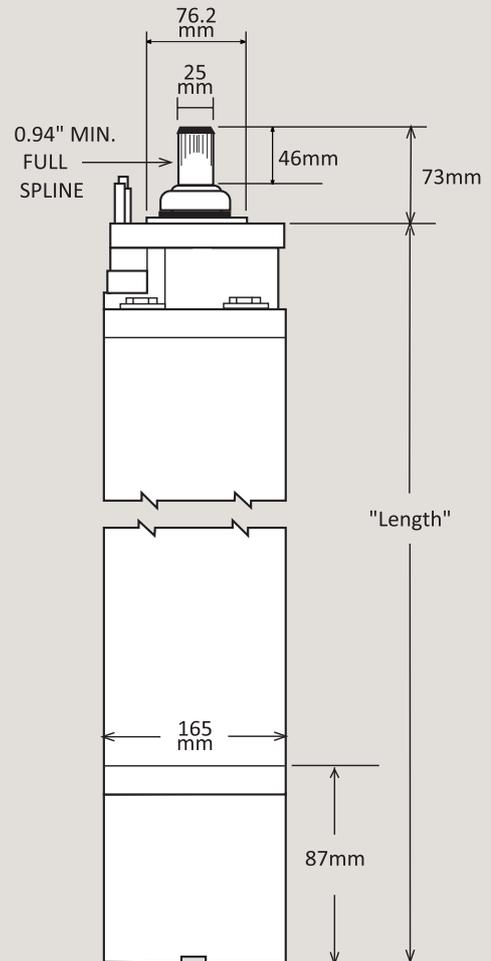
All stainless steel SUS 304 exterior construction

## 6 & 8 INCH REWINDABLE WATER-FILLED MOTOR FEATURES

# 6 INCH REWINDABLE WATER-FILLED MOTOR DIMENSIONS & TOP DESIGN

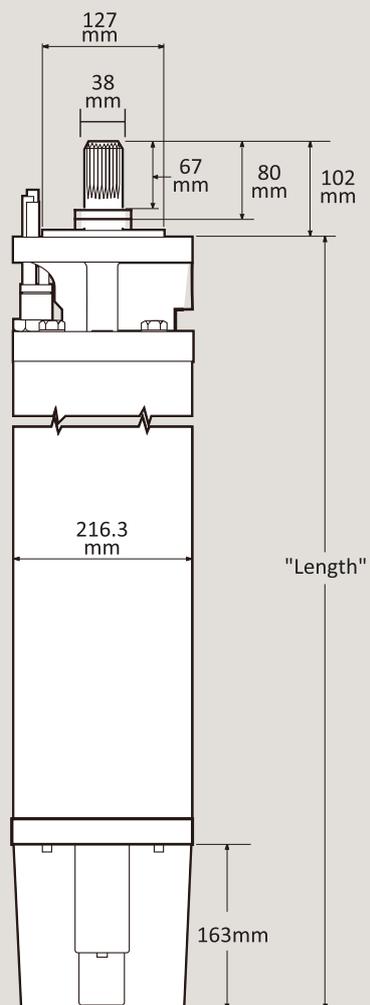
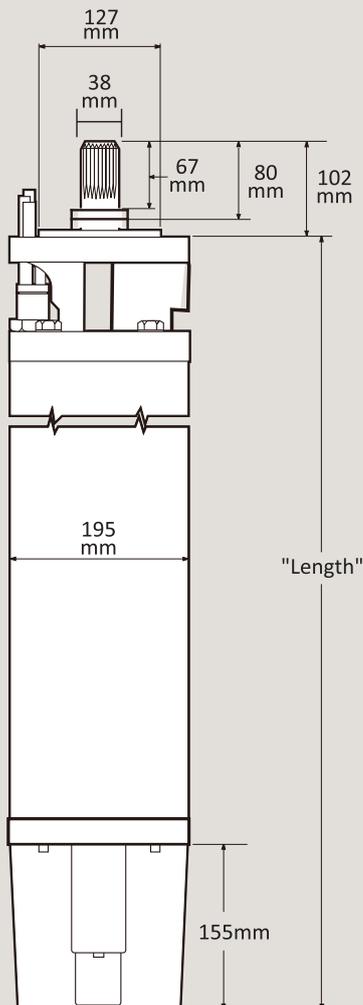
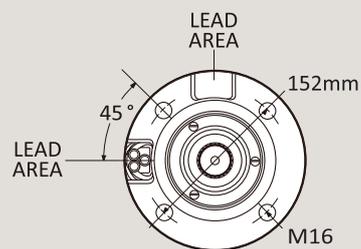
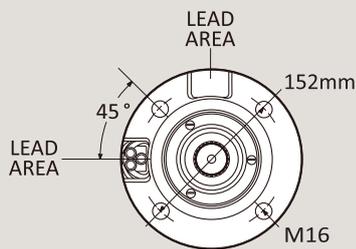


6D



8D

# 8 INCH REWINDABLE WATER-FILLED MOTOR DIMENSIONS & TOP DESIGN



9D

10D

# 6 Inch Rewindable Water-Filled Motor- 50Hz

## Specifications

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### Product Range - 6 inch (50Hz)

Model	Suitable Well	Diameter	HP	kW	VOLTS	S.F	Downward Thrust Rating
6D	6"	140mm	5	3.7	380	1	6500 N
			7.5	5.5			
			10	7.5			
			15	11			
8D	8"	165mm	5	3.7	415	1	6500 N
			7.5	5.5			
			10	7.5			
			15	11			
			20	15	15500 N		
			25	18.5			
			30	22			
			35	26			

### Dimensions & Weights - 6 inch (50Hz)

Model	Diameter	HP	kW	Length		Shipping Weight		CABLE		LENGTH M
				in	mm	LBS	KG	THICKNESS *WIDTH (mm)		
								220V	380V	
6D	140mm	5	3.7	20.47	520	75	34	7.5*14.2	7.5*14.2	4
		7.5	5.5	23.43	595	93	42	8.8*18.6	8.8*18.6	
		10	7.5	26.18	665	110	50	8.8*18.6	8.8*18.6	
		15	11	29.92	760	130	59	10.6*22	8.8*18.6	
8D	165mm	5	3.7	17.91	455	77	35	7.5*14.2	7.5*14.2	4
		7.5	5.5	19.09	485	88	40	8.8*18.6	8.8*18.6	
		10	7.5	22.64	575	110	50	7.5*14.2	8.8*18.6	
		15	11	24.61	625	128	58	8.8*18.6	8.8*18.6	
		20	15	26.97	685	150	68	10.6*22	10.6*22	
		25	18.5	29.72	755	170	77	10.6*22	10.6*22	
		30	22	31.50	800	179	81	10.6*22	10.8*27.8	
		35	26	34.45	875	203	92	10.6*22	10.8*27.8	

### Performance - 6 inch (50Hz)

Model	Diameter	HP	kW	VOLTS	S.F.	FULL LOAD	EFFICIENCY (%)			LOCKED ROTOR AMPS
						A	1/2	3/4	F.L	
6D	140mm	5	3.7	380	1	8.73	72	76	77	42
		7.5	5.5			12.71	75	79	80	61
		10	7.5			16.54	80	83	83	83
		15	11			26.58	80	82	81	126
8D	165mm	5	3.7	380	1	8.73	72	76	77	42
		7.5	5.5			12.71	75	79	80	61
		10	7.5			16.54	80	83	83	83
		15	11			26.58	80	82	81	126
		20	15	415	30.80	82	84	84	174	
		25	18.5	33.69	85	86	85	197		
		30	22	47.21	82	83	83	255		
		35	26	64.15	83	84	83	362		

# 6 Inch Rewindable Water-Filled Motor-60Hz

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Specifications

## Product Range - 6 inch (60Hz)

Model	Suitable Well	Diameter	HP	kW	VOLTS	S.F	Downward Thrust Rating
6D	6"	140mm	5	3.7			6500 N
			7.5	5.5			
			10	7.5			
			15	11			
8D	8"	165mm	5	3.7	220	1.15	6500 N
			7.5	5.5	380		
			10	7.5	440		
			15	11	460		
			20	15	15500 N		
			25	18.5			
			30	22			
			35	26			

## Dimensions & Weights - 6 inch (60Hz)

Model	Diameter	HP	kW	Length		Shipping Weight		CABLE		LENGTH M
				in	mm	LBS	KG	THICKNESS *WIDTH (mm)		
								220V	380V	
6D	140mm	5	3.7	20.47	520	75	34	7.5*14.2	7.5*14.2	4
		7.5	5.5	23.43	595	93	42	8.8*18.6	8.8*18.6	
		10	7.5	26.18	665	110	50	8.8*18.6	8.8*18.6	
		15	11	29.92	760	130	59	10.6*22	8.8*18.6	
8D	165mm	5	3.7	17.91	455	77	35	7.5*14.2	7.5*14.2	
		7.5	5.5	19.09	485	88	40	8.8*18.6	8.8*18.6	
		10	7.5	22.64	575	110	50	7.5*14.2	8.8*18.6	
		15	11	24.61	625	128	58	8.8*18.6	8.8*18.6	
		20	15	26.97	685	150	68	10.6*22	10.6*22	
		25	18.5	29.72	755	170	77	10.6*22	10.6*22	
		30	22	31.50	800	179	81	10.6*22	10.8*27.8	
		35	26	34.45	875	203	92	10.6*22	10.8*27.8	

## Performance - 6 inch (60Hz)

Model	Diameter	HP	kW	VOLTS	S.F.	FULL LOAD A	EFFICIENCY (%)			LOCKED ROTOR AMPS
							1/2	3/4	F.L	
6D	140mm	5	3.7	220	1.15	9.1	68.3	74.4	77.1	52
		7.5	5.5	380		13.4	72.4	77.8	80.1	79
		10	7.5	440		17.02	74.2	78.7	80.2	104
		15	11	460		25.8	79	82.2	82.7	161
8D	165mm	5	3.7	220	1.15	9.1	68.3	74.4	77.1	52
		7.5	5.5			13.4	72.4	77.8	80.1	79
		10	7.5			17.02	74.2	78.7	80.2	104
		15	11			25.8	79	82.2	82.7	161
		20	15			33	82.1	83.8	83.2	219
		25	18.5			41.1	84.4	85	83.4	291
		30	22			48.63	82.9	84.2	83.4	317
		35	26			56.5	84.6	85.1	83	397

# 8 Inch Rewindable Water-Filled Motor- 50Hz

## Specifications

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### Product Range - 8 inch (50Hz)

Model	Suitable Well	Diameter	HP	kW	VOLTS	S.F	Downward Thrust Rating
9D	10"	195mm	30	22	380 415	1	27500 N
			35	26			
			40	30			
			50	37.5			
			60	45			
			75	55			
10D	12"	216.3mm	40	30			
			50	37.5			
			60	45			
			75	55			
			90	67			
			100	75			
			120	90			

### Dimensions & Weights - 8 inch (50Hz)

Model	Diameter	HP	kW	Length		Shipping Weight		CABLE		LENGTH M
				in	mm	LBS	KG	THICKNESS * WIDTH (mm)		
								220V	380V	
9D	195mm	20	15	33.46	850	223	101	10.8*27.8	10.8*27.8	4
		25	18.5	34.84	885	243	110			
		30	22	37.01	940	265	120			
		35	26	38.58	980	280	127			
		40	30	40.94	1040	309	140			
		50	37.5	43.70	1110	331	150			
		60	45	46.85	1190	386	175	13.4*34.4	13.4*34.4	
75	55	50.79	1290	445	202					
10D	216.3mm	40	30	37.40	950	342	155	10.8*27.8	10.8*27.8	
		50	37.5	38.58	980	357	162			
		60	45	41.34	1050	397	180			
		75	55	44.49	1130	441	200			
		90	67	48.43	1230	494	224	13.4*34.4	13.4*34.4	
		100	75	51.18	1300	551	250			
		120	90	56.30	1430	606	275			

### Performance - 8 inch (50Hz)

Model	Diameter	HP	kW	VOLTS	S.F.	FULL LOAD	EFFICIENCY (%)				LOCKED ROTOR
							A	1/2	3/4	F.L	
9D	195mm	30	22	380	1	47.00	82	83	82	255	
		35	26			64.60	84	83	83	362	
		40	30			61.17	85	86	85	397	
		50	37.5			77.19	86	87	86	507	
		60	45			92.80	86	87	86	612	
		75	55			113.87	87	88	87	819	
10D	216.3mm	40	30	380	1	61.17	85	86	85	397	
		50	37.5			77.19	86	87	86	507	
		60	45			92.80	86	87	86	612	
		75	55			113.87	87	88	87	819	
		90	67			138.25	86	88	87	989	
		100	75			148.15	86	88	87	1099	
		120	90	415		194.00	85	87	87	1265	

# 8 Inch Rewindable Water-Filled Motor-60Hz

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Specifications

## Product Range - 8 inch (60Hz)

Model	Suitable Well	Diameter	HP	kW	VOLTS	S.F	Downward Thrust Rating
9D	10"	195mm	30	22	220	1.15	27500 N
			35	26			
			40	30			
			50	37.5			
			60	45			
			75	55			
10D	12"	216.3mm	40	30	380	1.15	27500 N
			50	37.5	440		
			60	45	460		
			75	55			
			90	67			
			100	75			
			120	90			

## Dimensions & Weights - 8 inch (60Hz)

Model	Diameter	HP	kW	Length		Shipping Weight		CABLE		
				in	mm	LBS	KG	THICKNESS		LENGTH
								* WIDTH (mm)		
9D	195mm	20	15	33.46	850	223	101	10.8*27.8	10.8*27.8	4
		25	18.5	34.84	885	243	110			
		30	22	37.01	940	265	120			
		35	26	38.58	980	280	127			
		40	30	40.94	1040	309	140	13.4*34.4	13.4*34.4	
		50	37.5	43.70	1110	331	150			
		60	45	46.85	1190	386	175			
		75	55	50.79	1290	445	202			
10D	216.3mm	40	30	37.40	950	342	155	10.8*27.8	10.8*27.8	4
		50	37.5	38.58	980	357	162			
		60	45	41.34	1050	397	180	13.4*34.4	13.4*34.4	
		75	55	44.49	1130	441	200			
		90	67	48.43	1230	494	224			
		100	75	51.18	1300	551	250			
		120	90	56.30	1430	606	275			

## Performance - 8 inch (60Hz)

Model	Diameter	HP	kW	VOLTS	S.F.	FULL LOAD	EFFICIENCY (%)				LOCKED ROTOR
						A	1/2	3/4	F.L		
9D	195mm	30	22	220	1.15	48.63	82.9	84.2	83.4	317	
		35	26			56.5	84.6	85.1	83	397	
		40	30			64.56	79.1	82.9	84	479	
		50	37.5			79.51	82.2	84.5	84.4	656	
		60	45			95.75	83.7	86.2	86.6	797	
		75	55			114.55	83.8	86.3	86.7	1060	
10D	216.3mm	40	30	220	1.15	64.56	79.1	82.9	84	479	
		50	37.5			79.51	82.2	84.5	84.4	656	
		60	45			95.75	83.7	86.2	86.6	797	
		75	55			114.55	83.8	86.3	86.7	1060	
		90	67			146.23	83.4	86	86.5	1385	
		100	75			134.12	84.3	87.2	88	1433	
		120	90			174.7	86.6	88.7	89.1	1576	



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