

# Submersible Rewindable Motor

# 4" OF Standard

## Quality for your borewell :

These motors are rewindable oil filled submersible motors which are designed and sized for installation in 4" diameter or larger water wells. They are also available in complete stainless steel construction.

## Product Features :

- 4" Oil filled submersible motor.
- Completely rewindable.
- Cooling and lubrication by non toxic fluid.
- Stainless steel outer shell and shaft.
- Maintenance free lubricated ball bearings.
- Mechanical shaft seal (Carbon/Ceramic) provided.
- High efficiency electrical design (lower operating cost).
- Tropicalized design (lower winding temperature).
- All single phase motors will require control box.
- 4" NEMA coupling flange.
- Pressure compensation diaphragm.

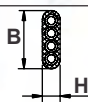
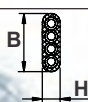
## Specifications :

- Ratings: Single phase - 0.37 to 4 kW  
Three phase - 0.37 to 7.5 kW
- Supply voltages (Tolerance +6% / -10%):  
50 Hz, 1 phase, 220 V, 230 V  
50 Hz, 3 phase, 380 V, 400 V, 415 V  
60 Hz, 1 phase, 115 V, 230 V  
60 Hz, 3 phase, 230 V, 380 V, 460 V
- Insulation class: F
- Degree of protection: IP 68
- Continuous duty
- Ambient temperature: 45°C
- Rotation: Single phase - CCW  
Three phase - CCW and CW
- Maximum nos. of starts/hour:  
0.37 to 2.2 kW - 30  
3 to 7.5 kW - 20
- Water pH: 6.5 - 8
- Minimum cooling flow along the motor: 8 cm/sec
- Motor protection: Select thermal overload protection with trip time < 10 sec. at 5 x I<sub>n</sub>
- Maximum submerged depth: 350 metres
- Mounting: vertical / horizontal.

## On Request :

- AISI 304/316 stainless steel construction.
- Special voltages.

## Cable Data :

HP	Type of start	Cable x Leads x Size (mm <sup>2</sup> )	Length [m]	H x B [mm]	
<b>Single phase</b>					
0.5 to 5.5	DOL	1 x 4 x 1.5	2.5	6 x 15.8	
<b>Three phase</b>					
0.5 to 5.5	DOL	1 x 4 x 1.5	2.5	6 x 15.8	
7.5 to 10		1 x 4 x 2.5	2.5	6.5 x 18	



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Motors that are top class in Performance & Reliability

## Cable

Cable safe for drinking water.

## Earth cable

Outside earth cable provided.

## Windings

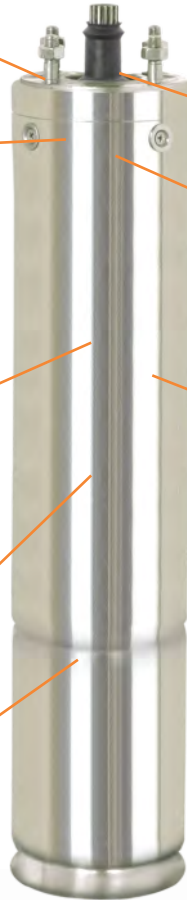
Rewindable motor construction allows for low – cost motor repair that can be done locally.

## Efficiency

High efficiency provides energy saving.

## Thrust

Thrust bearing is larger than the competition and is rated to take much more thrust load than what would be subjected by the pump.



## Shaft Extension

Stainless steel splined shaft extension to NEMA

## Shaft seal

Carbon v/s ceramic Mech. Shaft seal is standard. Available with high sand resistance sic/sic mechanical shaft seal.

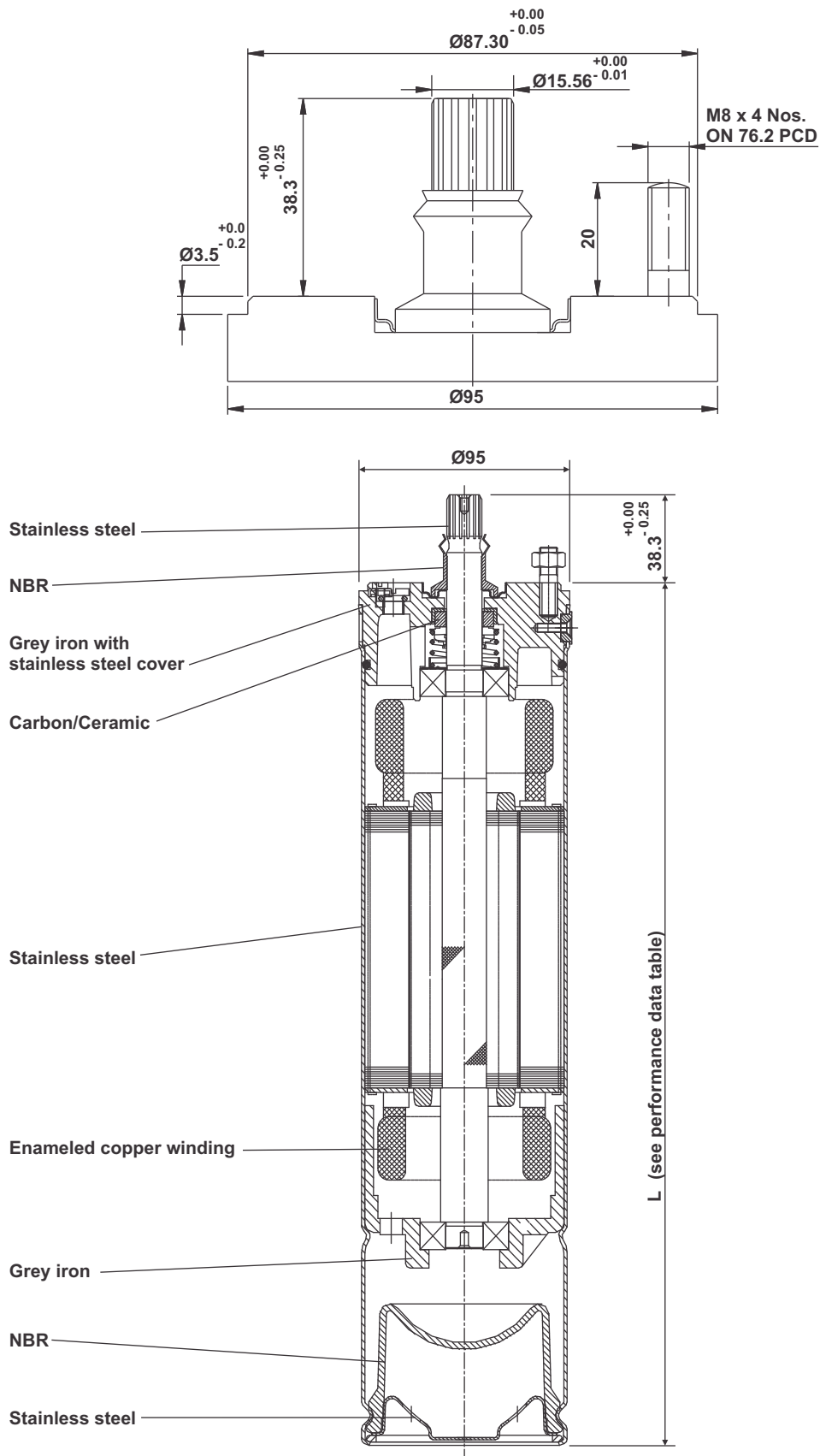
## Easy Maintenance

Designed for easy disassembly & repair



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## Shaft :

Spline shaft: 14 teeth, 24/48 pitch, 30° pressure angle, coupling tolerance 5 as per ANSI B.92.1, confirming with NEMA 4".

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## 4" Submersible Rewindable Motor Performance Data 50 Hz

### Performance data

Motor type	Pn		Ka [N]	Un [V]	In [A]	Ist/In	n [min <sup>-1</sup> ]	η [%]			COS φ			Tn [Nm]	L [mm]	Gross weight [kg]	Gross volume [m <sup>3</sup> ]
	kW	HP						50%	75%	100%	50%	75%	100%				
<b>Single phase</b>																	
H4505	0.37	0.50	1500	220	4.50	3.25	2850	53.0	54.0	56.0	0.79	0.81	0.83	1.24	301	8.9	0.0094
				230	4.60	3.30	2850	53.0	54.0	56.0	0.80	0.82	0.84	1.24			
H4507	0.55	0.75	1500	220	4.90	3.45	2850	55.0	59.0	61.0	0.81	0.82	0.84	1.84	331	10.5	0.0094
				230	5.00	3.40	2850	55.0	59.0	61.0	0.82	0.83	0.85	1.84			
H4510	0.75	1.00	1500	220	5.90	3.48	2850	57.0	61.0	63.0	0.82	0.84	0.85	2.51	346	11.0	0.0094
				230	6.02	3.50	2850	57.0	61.0	63.0	0.83	0.85	0.86	2.51			
H4515	1.10	1.50	3000	220	7.90	3.52	2850	60.0	65.0	67.0	0.83	0.86	0.87	3.67	381	12.6	0.0094
				230	8.00	3.55	2850	60.0	65.0	67.0	0.84	0.87	0.88	3.67			
H4520	1.50	2.00	3000	220	10.90	3.50	2850	63.0	68.0	70.0	0.85	0.88	0.89	5.01	421	14.2	0.0094
				230	11.00	3.60	2850	63.0	68.0	70.0	0.86	0.89	0.90	5.01			
H4530	2.20	3.00	3000	220	14.90	3.65	2850	66.0	70.0	72.0	0.87	0.89	0.91	7.38	481	19.6	0.0094
				230	15.00	3.70	2850	66.0	70.0	72.0	0.88	0.90	0.92	7.38			
H4555	4.00	5.50	5000	220	24.50	3.65	2850	67.0	71.0	73.0	0.88	0.90	0.91	7.10	665	22.5	0.0147
				230	24.60	3.70	2850	67.0	71.0	73.0	0.89	0.91	0.92	7.10			
<b>Three phase</b>																	
H4505-T	0.37	0.50	1500	380	1.17	4.28	2840	59.0	62.0	65.0	0.67	0.72	0.74	1.23	301	9.1	0.0094
				415	1.03	4.30	2840	60.0	63.0	66.0	0.70	0.74	0.76	1.23			
H4507-T	0.55	0.75	1500	380	2.04	4.35	2840	60.0	65.0	67.0	0.68	0.73	0.75	1.84	316	10.0	0.0094
				415	1.84	4.42	2840	62.0	66.0	68.0	0.70	0.75	0.77	1.84			
H4510-T	0.75	1.00	1500	380	2.30	4.56	2840	63.0	67.0	69.0	0.72	0.76	0.78	2.51	331	10.8	0.0094
				415	2.12	4.60	2840	62.0	66.0	68.0	0.72	0.76	0.79	2.51			
H4515-T	1.10	1.50	1500	380	3.68	4.66	2850	65.0	70.0	72.0	0.73	0.77	0.79	3.68	351	12.0	0.0094
				415	3.40	4.72	2850	65.0	70.0	73.0	0.73	0.75	0.80	3.68			
H4520-T	1.50	2.00	3000	380	5.19	4.70	2840	66.0	70.0	73.0	0.71	0.75	0.79	5.01	371	13.8	0.0094
				415	4.77	4.78	2840	68.0	72.0	74.0	0.71	0.75	0.80	5.01			
H4530-T	2.20	3.00	3000	380	6.30	4.74	2830	71.0	76.0	75.0	0.72	0.76	0.81	7.38	431	17.2	0.0094
				415	6.20	4.82	2830	72.0	76.0	76.0	0.74	0.80	0.82	7.38			
H4540-T	3.00	4.00	4400	380	7.21	4.85	2820	71.0	76.0	78.0	0.74	0.80	0.81	10.02	481	18.5	0.0094
				415	6.61	4.95	2820	72.0	76.0	78.0	0.74	0.80	0.81	10.02			
H4555-T	4.00	5.50	4400	380	10.0	5.00	2820	72.0	76.0	78.0	0.73	0.79	0.82	13.46	615	21.4	0.0117
				415	9.80	5.12	2820	73.0	76.0	78.0	0.75	0.80	0.82	13.46			
H4575-T	5.50	7.50	4400	380	12.91	5.10	2820	72.0	76.0	78.0	0.74	0.81	0.83	18.50	705	26.5	0.0147
				415	11.82	5.25	2820	73.0	76.0	78.0	0.76	0.81	0.83	18.50			
H45100-T	7.50	10.0	6500	380	20.40	5.10	2800	72.0	76.0	78.0	0.74	0.80	0.81	22.10	805	31.6	0.0147
				415	18.90	5.25	2800	73.0	76.0	78.0	0.76	0.80	0.81	22.10			

Pn: Rated output  
 Ka: Thrust load  
 Un: Rated voltage  
 In: Rated current  
 Ist/In: Locked rotor current/Rated amperage  
 n: Rated speed  
 η: Efficiency  
 cos φ: Power factor  
 Tn: Rated torque  
 L: Motor length

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## 4" Submersible Rewindable Motor Performance Data 60 Hz

### Performance data

Motor type	Pn		Ka [N]	Un [V]	In [A]	Ist/In	n [min <sup>-1</sup> ]	η [%]			COS φ			Tn [Nm]	L [mm]	Gross weight [kg]	Gross volume [m <sup>3</sup> ]
	kW	HP						50%	75%	100%	50%	75%	100%				
<b>Single phase</b>																	
H4605	0.37	0.50	1500	115	6.40	3.25	3400	52.0	53.0	53.0	0.81	0.86	0.89	1.24	385	10.0	0.0094
				230	3.20	3.30	3460	53.0	54.0	54.0	0.82	0.87	0.90	1.24			
H4607	0.55	0.75	1500	115	9.00	3.45	3410	54.0	56.0	58.0	0.81	0.86	0.89	1.84	410	11.0	0.0094
				230	4.50	3.40	3460	55.0	57.0	59.0	0.82	0.87	0.90	1.84			
H4610	0.75	1.00	1500	115	11.60	3.48	3410	56.0	60.0	62.0	0.81	0.86	0.89	2.51	425	12.0	0.0094
				230	5.75	3.50	3460	57.0	61.0	63.0	0.82	0.87	0.90	2.51			
H4615	1.10	1.50	3000	230	7.84	3.55	3450	60.0	65.0	67.0	0.84	0.87	0.91	3.67	465	13.4	0.0094
H4620	1.50	2.00	3000	230	10.42	3.60	3450	61.0	66.0	68.0	0.86	0.89	0.92	5.01	505	15.5	0.0117
H4630	2.20	3.00	5000	230	15.23	3.70	3450	63.0	68.0	69.0	0.85	0.88	0.91	7.38	565	20.0	0.0117
H4655	4.00	5.50	5000	230	23.95	3.70	3440	67.0	71.0	73.0	0.89	0.91	0.92	7.10	665	22.5	0.0147
<b>Three phase</b>																	
H4605-T	0.37	0.50	1500	230	2.04	4.28	3440	60.0	63.0	66.0	0.63	0.66	0.69	1.23	375	9.9	0.0094
				380	1.22	4.30	3440	60.0	63.0	66.0	0.64	0.67	0.70	1.23			
				460	1.02	4.30	3440	60.0	63.0	66.0	0.63	0.66	0.69	1.23			
H4607-T	0.55	0.75	1500	230	2.90	4.35	3440	62.0	65.0	67.0	0.67	0.68	0.71	1.84	395	10.5	0.0094
				380	1.73	4.40	3440	62.0	65.0	67.0	0.68	0.69	0.72	1.84			
				460	1.45	4.42	3440	62.0	65.0	67.0	0.67	0.68	0.71	1.84			
H4610-T	0.75	1.00	1500	230	3.85	4.56	3440	62.0	66.0	68.0	0.68	0.70	0.72	2.51	410	11.0	0.0094
				380	2.30	4.60	3440	62.0	66.0	68.0	0.69	0.71	0.73	2.51			
				460	1.92	4.60	3440	62.0	66.0	68.0	0.68	0.70	0.72	2.51			
H4615-T	1.10	1.50	1500	230	5.25	4.66	3450	65.0	69.0	72.0	0.68	0.71	0.73	3.68	425	12.0	0.0094
				380	3.01	4.70	3450	65.0	69.0	72.0	0.70	0.74	0.77	3.68			
				460	2.63	4.72	3450	65.0	69.0	72.0	0.68	0.71	0.73	3.68			
H4620-T	1.50	2.00	3000	230	7.16	4.70	3440	66.0	69.0	72.0	0.69	0.70	0.73	5.01	465	14.6	0.0094
				380	4.25	5.00	3440	66.0	69.0	73.0	0.70	0.72	0.75	5.01			
				460	3.58	4.78	3440	66.0	69.0	72.0	0.69	0.70	0.73	5.01			
H4630-T	2.20	3.00	3000	230	9.82	4.74	3420	69.0	72.0	75.0	0.71	0.72	0.75	7.38	505	16.2	0.0117
				380	5.40	4.80	3420	70.0	73.0	76.0	0.73	0.74	0.77	7.38			
				460	4.91	4.82	3420	69.0	72.0	75.0	0.71	0.72	0.75	7.38			
H4640-T	3.00	4.00	5000	230	13.04	4.85	3420	71.0	76.0	76.0	0.74	0.75	0.76	10.02	565	19.3	0.0117
				380	7.00	4.90	3420	72.0	75.0	77.0	0.74	0.75	0.76	10.02			
				460	6.52	4.95	3420	72.0	74.0	76.0	0.74	0.75	0.76	10.02			
H4655-T	4.00	5.50	5000	230	17.50	5.00	3430	70.0	74.0	76.0	0.71	0.76	0.78	13.46	615	21.4	0.0117
				380	9.50	5.10	3430	70.0	74.0	76.0	0.72	0.76	0.78	13.46			
				460	8.58	5.12	3430	70.0	74.0	76.0	0.71	0.75	0.77	13.46			
H4675-T	5.50	7.50	5000	230	23.90	5.10	3430	70.0	74.0	76.0	0.71	0.74	0.76	18.50	665	24.8	0.0147
				380	13.70	5.20	3430	70.0	74.0	76.0	0.72	0.75	0.77	18.50			
				460	11.95	5.25	3430	70.0	74.0	76.0	0.71	0.74	0.76	18.50			
H46100-T	7.50	10.0	6500	230	33.47	5.10	3430	73.0	74.0	75.0	0.72	0.73	0.75	22.10	805	31.6	0.0147
				380	18.50	5.20	3430	73.0	74.0	75.0	0.73	0.74	0.76	22.10			
				460	16.74	5.25	3430	73.0	74.0	75.0	0.72	0.73	0.75	22.10			

Pn: Rated output  
 Ka: Thrust load  
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