NIAGARA©
PUMPS THE SMART CHOICE

6"

WF CI Series

6" Rewindable Water-Filled Submersible Motor

**“Experience the Difference,
The Ultimate Choice for Your Water Needs!”**

50/60Hz

6" WF CI Series

NIAGARA 6" WF CI Submersible Motor is specially designed with the latest manufacturing techniques. Years of experience, superior design and better manufacturing have resulted in the development of this range of motors, which are efficient and reliable in operation. Strict quality assurance during the total process assures trouble-free and reliability in operation requiring minimum maintenance.



Applications

Built for coupling with submersible multistage high and low load thrust 6" pumps for clean water deep well.

Technical Features

- 6" WF CI Series submersible Motor are Water Lubricated and easily rewindable.
- Upper/Lower Bracket and motor base are in cast iron.
- Motor shaft is of AISI 420 grade or above.
- Corrosion resistant stainless steel Stator Shell.
- Flange and shaft protrusion as per NEMA standard.
- Water lubricated radial and axial thrust bearing.
- Degree of protection: IP 68.
- Mounting: vertical/horizontal.
- Dynamically balanced rotor ensure smooth running.
- Solid copper bars inserted in to our piece billet rotor offer great rigidity.
- Pressure Compensation diaphragm.
- Continuous duty.
- Motor cable length: 3.5 Meter / 3 Core.

  Easily rewindable (wet wound) induction motor with PE insulated windings Class B.

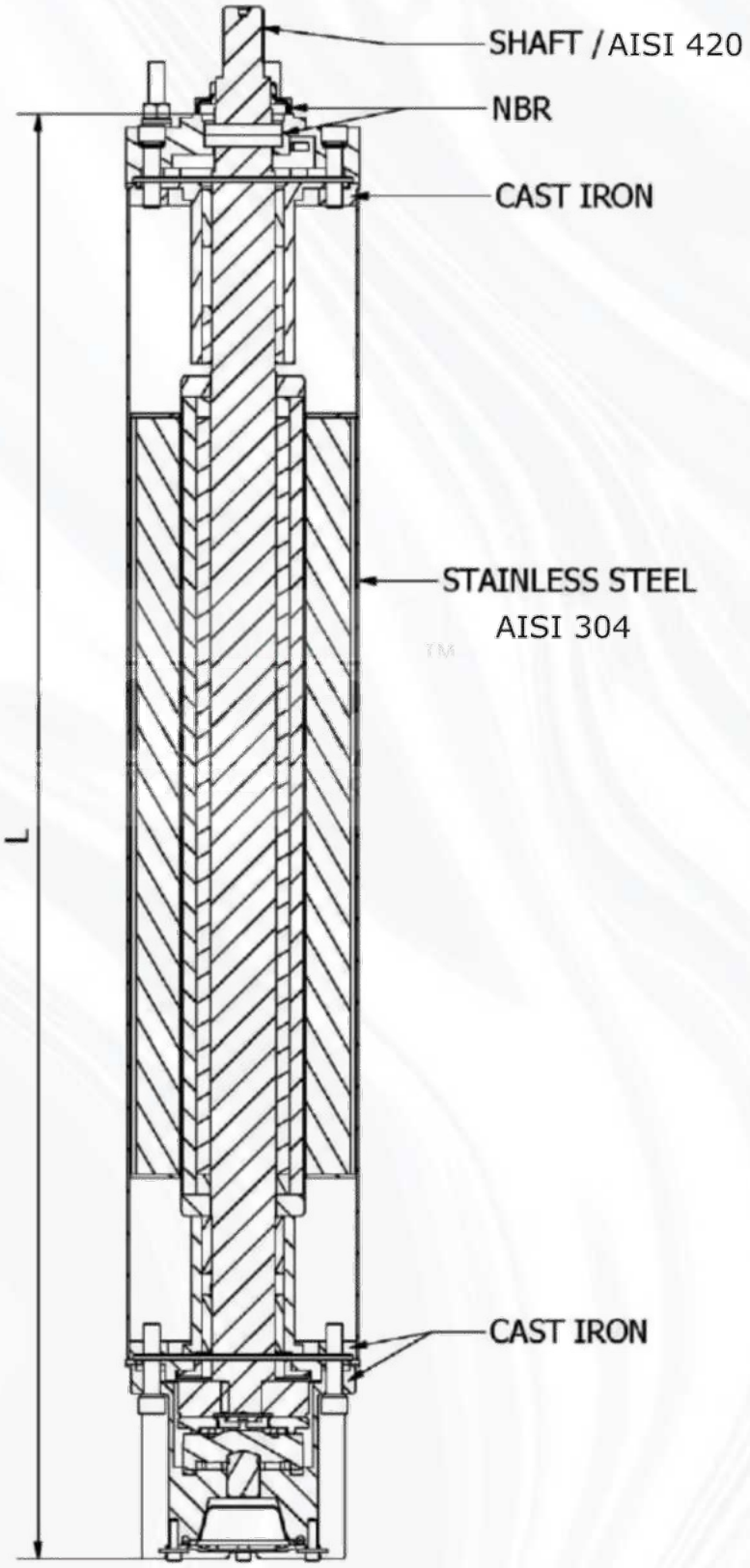
Operating Limits

- Maximum allowable rating voltage fluctuation +6% / -10%.
- Range: 2.2 kW to 22 kW (3 to 30 HP).
- Speed: 2900 RPM 50 Hz / 3500 RPM 60 Hz.
- Maximum liquid temperature: 50° C.
- Rotation: Clockwise when viewed from motor end.

Versions

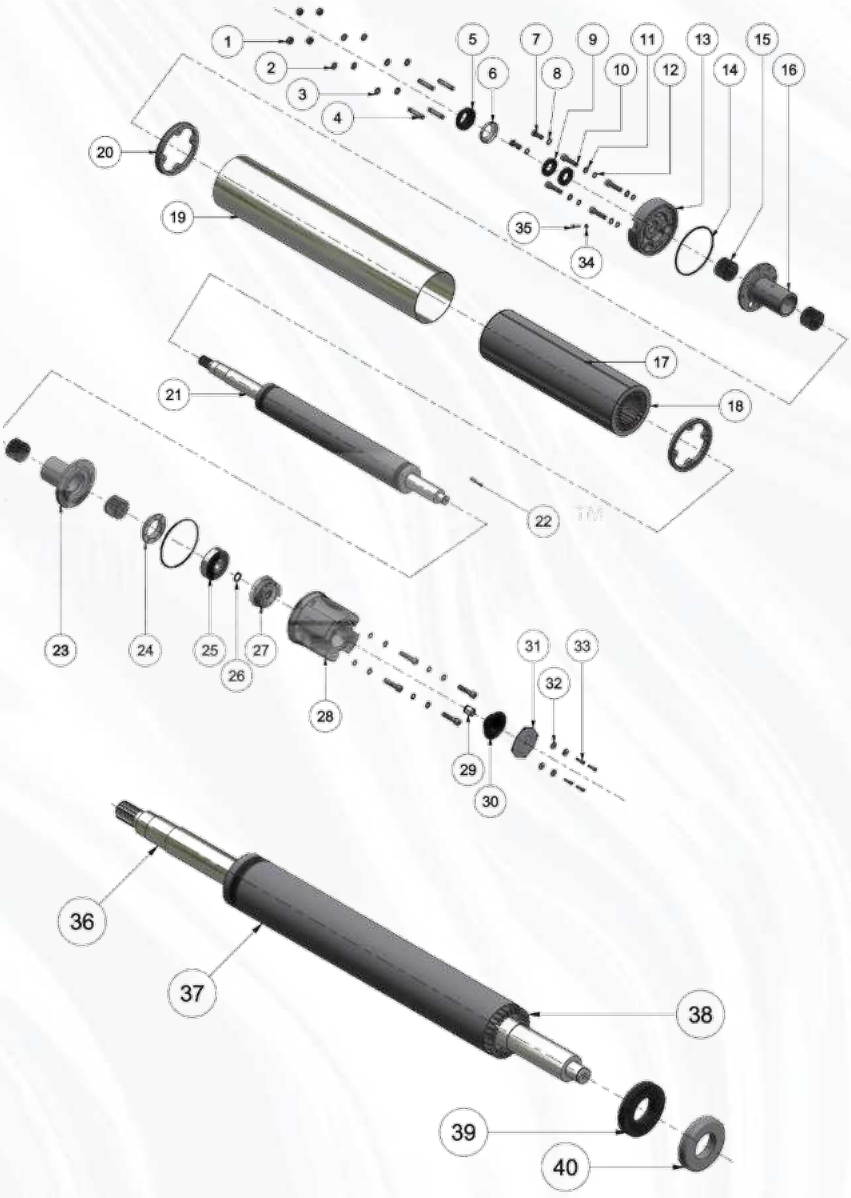
- Three phase 2.2 kW to 22 kW, 380- 400- 415 Volts / 50 Hz.
- Three phase 2.2 kW to 22 kW, 230- 380- 460 Volts / 60 Hz.

6" WF CI MOTOR — CROSS SECTIONAL DRAWING

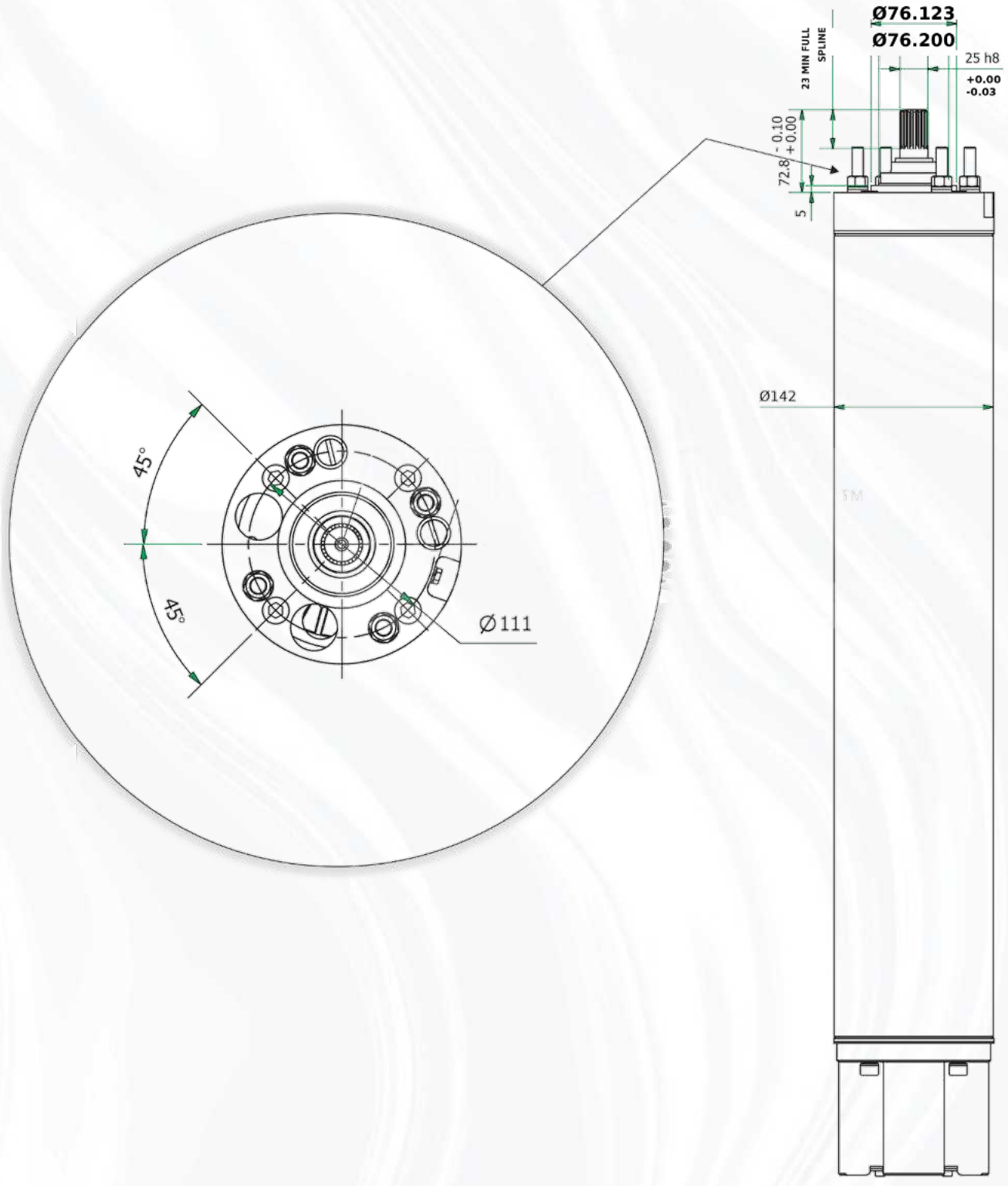


6" WF CI MOTOR — EXPLODED VIEW

Sr. No.	Part Name
1	Nut
2	Plain Washer
3	Spring Washer
4	Stud
5	Rubber Sand Guard
6	S.S. Sand Guard
7	Drain Plug
8	O-Ring
9	Oil Seal
10	Allen Cap
11	Plain Washer
12	O-Ring
13	Connective CI
14	O-Ring
15	Carbon Bearing Bush
16	Upper Housing
17	Stator Stamping
18	End Lamination
19	Stator Shell
20	End Ring
21	Rotor Assembly
22	Key
23	Lower Housing
24	Counter
25	T.B. Plate
26	Circlips
27	Thrust Bearing
28	Motor Base CI
29	Rocker Support
30	Diaphragm with Spring
31	Base Plate
32	Plain Washer
33	Allen Cap
34	Plain Washer
35	Allen Cap
36	Rotor Shaft
37	Rotor Stamping
38	Copper Rod
39	Copper Ring
40	Balance Ring



6" WF CI MOTOR — DIMENSIONAL DRAWING



Submersible Rewindable Motor

6" Submersible Rewindable Motor Performance Data 50 Hz

6" WF CI

6 Inch Water Filled Motor

MOTOR TYPE	PN		Thrust Load (N)	Un (V)	IN	IA	nn min-1	η (Eff.) (%) AT % LOAD			COS Ø (P.F) AT % LOAD			TN (Nm)
	HP	kW			(Amps)			50	75	100	50	75	100	
6" WF CI 55	5.50	4.00	15500	380	8.70	4.10	2890	69.1	72.8	75.1	0.61	0.70	0.78	13.50
				400	8.60	4.00	2900	70.5	74.1	75.5	0.60	0.71	0.78	13.50
				415	8.30	4.10	2910	71.2	74.5	75.6	0.58	0.68	0.75	13.40
6" WF CI 75	7.50	5.50	15500	380	13.20	4.10	2865	71.0	75.0	76.1	0.62	0.75	0.81	18.70
				400	12.70	4.00	2880	72.7	76.1	77.0	0.61	0.73	0.80	18.60
				415	12.80	4.10	2890	73.0	76.4	77.6	0.60	0.72	0.79	18.50
6" WF CI 10	10.00	7.50	15500	380	17.20	5.10	2875	72.8	76.0	77.2	0.64	0.75	0.82	25.50
				400	16.60	4.90	2880	74.1	77.3	78.3	0.62	0.74	0.81	25.40
				415	16.30	4.80	2885	74.7	78.0	79.0	0.60	0.72	0.80	25.30
6" WF CI 12	12.50	9.30	15500	380	21.30	5.10	2860	74.0	77.4	79.3	0.65	0.75	0.81	31.70
				400	20.80	5.00	2870	75.5	78.8	80.1	0.62	0.74	0.80	31.50
				415	20.30	4.90	2880	75.8	79.1	80.4	0.60	0.72	0.76	31.50
6" WF CI 15	15.00	11.00	15500	380	24.80	5.30	2855	75.3	78.4	80.1	0.65	0.75	0.82	37.50
				400	24.50	5.15	2880	76.8	80.2	81.3	0.62	0.74	0.81	37.30
				415	24.30	5.35	2885	77.4	80.7	81.6	0.60	0.72	0.79	37.10
6" WF CI 17	17.50	13.00	15500	380	28.50	5.25	2860	76.5	79.8	81.3	0.64	0.76	0.82	43.80
				400	28.00	5.10	2880	78.0	81.0	82.0	0.63	0.74	0.80	44.00
				415	28.10	5.30	2885	78.6	81.2	82.2	0.60	0.73	0.78	44.00
6" WF CI 20	20.00	15.00	15500	380	32.50	5.20	2865	76.8	80.0	81.5	0.64	0.77	0.82	50.00
				400	31.90	5.10	2880	78.1	81.1	82.3	0.63	0.75	0.80	50.90
				415	31.70	5.25	2890	78.8	81.5	82.5	0.60	0.73	0.78	50.80
6" WF CI 25	25.00	18.50	15500	380	39.90	5.15	2865	77.0	80.3	81.8	0.65	0.79	0.83	63.00
				400	39.40	5.25	2870	78.3	81.5	82.5	0.64	0.77	0.82	62.70
				415	39.20	5.35	2885	78.9	81.7	82.9	0.62	0.73	0.79	62.60

Submersible Rewindable Motor

6" WF CI

6" Submersible Rewindable Motor Performance Data 60 Hz

6 Inch Water Filled Motor

MOTOR TYPE	PN		Thrust Load (N)	Un (V)	IN	IA	nN min-1	η (Eff.) (%) AT % LOAD			COS Ø (P.F) AT % LOAD			TN (Nm)
	HP	kW			(Amps)			50	75	100	50	75	100	
6" WF CI 55	5.50	4.00	15500	230	17.40	4.25	3460	69.0	75.0	76.0	0.62	0.73	0.79	11.20
				380	10.90	4.55	3460	70.2	76.0	77.0	0.64	0.74	0.80	11.20
				460	8.90	4.65	3480	69.3	75.9	76.8	0.63	0.72	0.78	11.10
6" WF CI 75	7.50	5.50	15500	230	27.20	5.32	3460	74.0	76.9	77.9	0.62	0.74	0.80	15.40
				380	15.60	4.90	3460	74.8	78.1	78.8	0.61	0.74	0.81	15.40
				460	13.30	4.75	3480	73.7	76.5	78.0	0.62	0.73	0.79	15.30
6" WF CI 10	10.00	7.50	15500	230	33.80	5.42	3460	74.8	77.8	78.9	0.62	0.74	0.81	21.10
				380	19.60	5.30	3460	75.4	79.4	79.8	0.63	0.76	0.82	21.10
				460	16.80	5.10	3480	73.7	77.7	78.6	0.63	0.75	0.81	20.90
6" WF CI 12	12.50	9.30	15500	230	43.40	5.60	3460	74.9	77.8	78.8	0.63	0.75	0.81	26.10
				380	23.50	4.88	3460	76.5	79.4	80.0	0.65	0.76	0.82	26.10
				460	19.70	4.93	3480	75.7	78.9	79.8	0.64	0.75	0.80	26.00
6" WF CI 15	15.00	11.00	15500	230	48.00	5.62	3460	74.7	78.6	79.8	0.63	0.75	0.82	30.90
				380	27.10	5.25	3460	76.4	79.5	80.0	0.67	0.77	0.83	30.90
				460	22.40	5.28	3480	76.2	79.9	80.9	0.65	0.76	0.81	30.70
6" WF CI 17	17.50	13.00	15500	230	55.80	5.65	3460	75.2	80.3	81.3	0.64	0.76	0.83	35.50
				380	34.10	5.36	3460	77.3	81.2	81.8	0.67	0.78	0.84	35.60
				460	27.50	5.37	3480	76.2	80.5	81.5	0.65	0.76	0.81	35.40
6" WF CI 20	20.00	15.00	15500	230	62.90	5.69	3460	75.6	80.5	81.5	0.64	0.76	0.83	42.20
				380	35.00	5.38	3460	77.5	81.4	82.0	0.67	0.78	0.84	42.20
				460	29.00	5.40	3480	76.5	80.8	81.8	0.66	0.76	0.81	41.90
6" WF CI 25	25.00	18.50	15500	230	80.50	5.70	3460	76.6	81.5	82.6	0.64	0.75	0.82	52.00
				380	45.50	5.70	3460	78.4	83.0	84.0	0.69	0.79	0.84	52.00
				460	37.90	5.72	3480	77.6	82.5	83.7	0.66	0.76	0.82	51.70
6" WF CI 30	30.00	22.00	15500	230	92.80	5.65	3460	77.5	80.5	83.5	0.66	0.78	0.82	61.90
				380	51.70	6.25	3460	79.0	83.4	84.3	0.70	0.79	0.86	61.90
				460	46.00	5.80	3480	78.6	83.5	84.5	0.65	0.77	0.84	61.50

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