



Franklin Electric

4" REWINDABLE OIL FILLED MOTORS

NBS4 SERIES



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NBS4 Series Technical details



NEW DESIGN OF COVERCO 4" REWINDABLE OIL-FILLED MOTOR

The design has been further developed to make it even more reliable and resilient. The motor is more compact with excellent performance.

- ✓ Reliable and resilient construction
- ✓ New modernized winding design
- ✓ Robust mechanical design
- ✓ Excellent performance
- ✓ Reduction of plastic parts
- ✓ Suitable for VFD operation
- ✓ Flexibility of power supply, even at low voltages

Cable material compliant with drinking water standards

Sand protection / Mechanical seal

allow optimal operation even in the presence of sand in the well

Rewindable oil-filled submersible motors

Motors are pre-filled with a dielectric fluid (known as „white oil“), approved by the FDA and other international pharmacological institutes

Single-phase / Three phase

The motors can be powered with single-phase and three-phase power supply.

Axial and radial oil lubricated bearings

allow maintenance-free operation. *



TECHNICAL DATA

- Ratings: Low Thrust 0.37 – 2.2 kW
- 4" NEMA mounting design
- Reliable operation in wells with diameters of $\geq 4"$ for water up to 30 °C
- Protection IP68, Insulation class F
- Frequency of starts: 30 starts/ hour
- Vertical or horizontal operation
- Excellent efficiency and low operating costs
- Suitable for VFD operation (230 V, without filter)
- Voltage: Single-phase: 210-220-230 V / 50 Hz - 220-230 V / 60 Hz
Three-phase: 230-230 V / 50 Hz - 380-415 V / 50 Hz - 460 V / 60 Hz - 220-230 V / 60 Hz - 380 V / 60 Hz
- Voltage tolerance U_N : -10% / +6%
- Motor protection: thermal relays in compliance with EN 60947-4-1, trip class 10 or 10 A, trip time < 10 s. at $5 \times I_N$
- Nominal ambient temperature: 30 °C with 0.08 m/s cooling flow
- Cable dimensions: 4 x 1.5 mm²
- Water pH: 6.5 - 8
- Thrust load: Low Thrust 1500 N, 2500 N

PERFORMANCE DATA - SINGLE-PHASE

210-220-230 V 50 Hz

Type/Code	Power		[Hz]	Voltage [V]	I _N	LRC/I _N	RPM [Min ⁻¹]	FLT [Nm]	LRT/FLT	BDT/FLT	Efficiency η%			Power factor cos φ			Capacitor μF
	[kW]	[HP]									50	75	100	50	75	100	
NBS4 050 M 275 846 1042	0.37	0.5	50	210	3.3	3.1	2806	1.3	0.69	1.91	39	49	55	0.92	0.96	0.98	20
				220	3.2	3.3	2835	1.3	0.75	2.09	37	48	55	0.88	0.94	0.97	
				230	3.3	3.3	2850	1.2	0.82	2.29	34	45	53	0.82	0.89	0.94	
NBS4 075 M 275 847 1042	0.55	0.75	50	210	4.7	2.7	2776	1.9	0.57	1.7	44	54	59	0.92	0.96	0.98	25
				220	4.5	3	2811	1.9	0.63	1.87	41	52	59	0.87	0.94	0.97	
				230	4.6	3	2822	1.9	0.69	2.04	37	48	56	0.81	0.89	0.95	
NBS4 100 M 275 848 1042	0.75	1	50	210	5.9	3.3	2835	2.5	0.62	1.94	46	56	63	0.88	0.94	0.97	36
				220	5.8	3.5	2855	2.5	0.68	2.13	44	55	61	0.81	0.9	0.96	
				230	6.2	3.4	2865	2.5	0.74	2.32	42	52	59	0.74	0.84	0.91	
NBS4 150 M 275 850 1042	1.1	1.5	50	210	8.2	3.1	2791	3.8	0.55	1.66	51	61	65	0.93	0.98	0.99	40
				220	8.1	3.3	2815	3.8	0.61	1.82	47	59	65	0.86	0.93	0.98	
				230	8.3	3.3	2826	3.8	0.66	1.99	43	55	62	0.78	0.87	0.94	
NBS4 200 M 275 851 1042	1.5	2	50	210	10.8	3.3	2793	5.1	0.57	1.71	53	62	66	0.98	1	1	50
				220	10.5	3.5	2815	5.1	0.63	1.87	51	61	65	0.93	0.98	0.99	
				230	10.5	3.7	2833	5	0.68	2.05	47	58	64	0.85	0.93	0.97	
NBS4 300 M 275 852 1042	2.2	3	50	210	15.9	3.1	2778	7.7	0.56	1.68	55	64	67	0.97	0.99	1	76
				220	15.1	3.4	2816	7.6	0.61	1.84	53	63	68	0.9	0.96	0.99	
				230	15.4	3.5	2831	7.5	0.67	2.01	48	60	66	0.8	0.9	0.96	

220-230 V 60 Hz

Type/Code	Power		[Hz]	Voltage [V]	I _N	LRC/I _N	RPM [Min ⁻¹]	FLT [Nm]	LRT/FLT	BDT/FLT	Efficiency η%			Power factor cos φ			Capacitor μF	SF A
	[kW]	[HP]									50	75	100	50	75	100		
NBS4 050 M 275 825 1042	0.37	0.5	60	220	3.6	4.3	3480	1	1	3.09	31	41	49	0.9	0.94	0.96	20	4.6
				230	3.9	4.1	3488	1	1	3.43	29	39	46	0.81	0.87	0.91		
NBS4 075 M 275 827 1042	0.55	0.75	60	220	5.3	4	3468	1.5	1.09	2.94	31	41	49	0.93	0.96	0.98	31.5	6.5
				230	5.6	3.8	3476	1.5	1.17	3.21	28	39	46	0.86	0.91	0.94		
NBS4 100 M 275 828 1042	0.75	1	60	220	5.9	4.2	3457	2.1	0.79	2.57	41	52	59	0.93	0.97	0.99	31.5	7.4
				230	6	4.3	3470	2.1	0.87	2.81	38	49	57	0.85	0.91	0.95		
NBS4 150 M 275 829 1042	1.1	1.5	60	220	8.3	4.1	3444	3.1	0.72	2.3	45	55	62	0.95	0.98	1	40	10.1
				230	8.4	4.1	3457	3.1	0.8	2.54	42	53	60	0.87	0.93	0.97		
NBS4 200 M 275 830 1042	1.5	2	60	220	10.3	4.6	3447	4.1	0.66	2.38	51	61	66	0.96	0.99	0.99	50	12.4
				230	10	4.8	3465	4.1	0.71	2.69	49	60	67	0.89	0.94	0.97		
NBS4 300 M 275 831 1042	2.2	3	60	220	16.5	3.8	3424	6.2	0.75	2.23	46	56	62	0.97	0.98	0.99	76	18.3
				230	15.9	4	3445	6.2	0.8	2.42	44	55	62	0.94	0.97	0.99		

LEGENDA

LRC	Locked Rotor Current ^(A)
I _N	Nominal Amps
LRT	Locked Rotor Torque
BDT	Breakdown Torque
FLT	Full Load Torque
SF	Service Factor

PERFORMANCE DATA - SINGLE-PHASE (HIGH THRUST)

210-220-230 V 50 Hz

Type/Code	Power		[Hz]	Voltage [V]	I _N	LRC/I _N	RPM [Min ⁻¹]	FLT [Nm]	LRT/FLT	BDT/FLT	Efficiency η%			Power factor cos φ			Capacitor μF
	[kW]	[HP]									50	75	100	50	75	100	
NBS4K 300 M 275 852 1140	2.2	3.0	50	210	15.0	4.5	2790	7.52	0.60	2.09	60	68	72	0.96	0.98	0.99	76
				220	14.8	5.5	2810	7.49	0.67	2.20	57	67	71	0.91	0.96	0.98	
				230	14.5	5.5	2830	7.42	0.73	2.33	54	64	70	0.82	0.91	0.96	
NBS4K 400 M 275 849 4040	3.0	4.0	50	210	19.5	4.9	2910	9.84	1.13	2.22	62	71	75	0.94	0.97	0.98	100+178
				220	19.2	5.1	2920	9.82	1.24	2.43	61	70	74	0.85	0.93	0.96	
				230	19.7	5.1	2930	9.78	1.37	2.68	56	66	73	0.73	0.84	0.92	
NBS4K 550 M 275 854 4040	4.0	5.5	50	210	25.1	4.1	2890	13.2	0.83	1.83	66	74	77	0.93	0.97	0.98	130+178
				220	24.6	4.2	2900	13.1	0.92	2.17	62	72	76	0.85	0.93	0.97	
				230	25.1	4.3	2910	13.1	0.99	2.28	55	67	74	0.75	0.87	0.94	

220-230 V 60 Hz

Type/Code	Power		[Hz]	Voltage [V]	I _N	LRC/I _N	RPM [Min ⁻¹]	FLT [Nm]	LRT/FLT	BDT/FLT	Efficiency η%			Power factor cos φ			Capacitor μF	SF A
	[kW]	[HP]									50	75	100	50	75	100		
NBS4K 400 M 275 870 4040	3.0	4.0	60	220	19.5	6.5	3540	8.10	1.5	3.1	54	65	71	0.96	0.97	0.98	120+(156-200)	21.8
				230	19.5	6.6	3550	8.10	1.6	3.2	52	61	69	0.95	0.96	0.97		21.0
NBS4K 550 M 275 806 4040	4.0	5.5	60	220	26.0	4.9	3530	10.80	1.11	2.3	57	68	73	0.94	0.95	0.96	150+(156-200)	29.0
				230	25.5	5.1	3540	10.80	1.22	2.7	54	65	72	0.94	0.95	0.96		28.5

LEGENDA

LRC	Locked Rotor Current ^(A)
I _N	Nominal Amps
LRT	Locked Rotor Torque
BDT	Breakdown Torque
FLT	Full Load Torque
SF	Service Factor

PERFORMANCE DATA - THREE-PHASE

220-230 V 50 Hz

Type/Code	Power		[Hz]	Voltage [V]	I _N	LRC/I _N	RPM [Min ⁻¹]	FLT [Nm]	LRT/FLT	BDT/FLT	Efficiency η%			Power factor cos φ		
	[kW]	[HP]									50	75	100	50	75	100
274 752 1042	0.55	0.75	50	220	3.11	4.39	2840	1.88	2.41	2.71	54	61	64	0.57	0.68	0.77
				230	3.3	4.35	2860	1.87	2.69	3.02	51	59	63	0.51	0.62	0.71
274 753 1042	0.75	1	50	220	3.8	4.77	2835	2.51	2.57	2.71	60	66	69	0.57	0.69	0.78
				230	4	4.77	2855	2.49	2.87	3.02	57	65	68	0.5	0.62	0.71
274 754 1042	1.1	1.5	50	220	5.35	4.74	2835	3.77	2.49	2.53	66	71	73	0.57	0.7	0.79
				230	5.57	4.8	2855	3.74	2.78	2.53	63	69	72	0.5	0.62	0.72
274 755 1042	1.5	2	50	220	6.56	4.68	2825	5.04	2.26	2.43	70	74	74	0.63	0.76	0.83
				230	6.78	4.77	2845	5.01	2.52	2.82	67	72	74	0.55	0.68	0.77
274 756 1042	2.2	3	50	220	9.85	4.56	2810	7.6	2.38	2.35	73	76	76	0.55	0.7	0.8
				230	10.61	4.45	2830	7.55	2.66	2.43	69	74	75	0.48	0.62	0.73

380-400-415 V 50 Hz

Type/Code	Power		[Hz]	Voltage [V]	I _N	LRC/I _N	RPM [Min ⁻¹]	FLT [Nm]	LRT/FLT	BDT/FLT	Efficiency η%			Power factor cos φ		
	[kW]	[HP]									50	75	100	50	75	100
NBS4 050 T 274 761 1042	0.37	0.5	50	380	1.3	4.38	2845	1.25	2.44	2.73	50	57	61	0.59	0.69	0.76
				400	1.3	4.61	2865	1.24	2.72	3.05	49	57	61	0.54	0.64	0.72
				415	1.3	4.78	2880	1.24	2.95	3.3	48	56	61	0.5	0.6	0.68
NBS4 075 T 274 762 1042	0.55	0.75	50	380	1.8	4.39	2840	1.88	2.41	2.71	54	61	64	0.57	0.68	0.77
				400	1.9	4.38	2860	1.87	2.69	3.02	51	59	63	0.51	0.62	0.71
				415	1.9	4.54	2870	1.86	2.9	3.27	49	58	63	0.47	0.57	0.66
NBS4 100 T 274 763 1042	0.75	1	50	380	2.2	4.77	2835	2.51	2.57	2.71	60	66	69	0.57	0.69	0.78
				400	2.3	4.8	2855	2.49	2.87	3.02	57	65	68	0.5	0.62	0.71
				415	2.4	4.78	2865	2.49	3.1	3.27	55	63	67	0.45	0.56	0.66
NBS4 150 T 274 724 1042	1.1	1.5	50	380	3.1	4.74	2835	3.77	2.49	2.53	66	71	73	0.57	0.7	0.79
				400	3.2	4.83	2855	3.74	2.78	2.82	63	69	72	0.5	0.62	0.72
				415	3.4	4.72	2865	3.73	3	3.05	61	68	71	0.44	0.57	0.67
NBS4 200 T 274 725 1042	1.5	2	50	380	3.8	4.68	2825	5.04	2.26	2.43	70	74	74	0.63	0.76	0.83
				400	3.9	4.8	2845	5.01	2.52	2.71	67	72	74	0.55	0.68	0.77
				415	4.1	4.74	2860	4.98	2.73	2.93	64	71	73	0.48	0.62	0.72
NBS4 300 T 274 726 1042	2.2	3	50	380	5.7	4.56	2810	7.6	2.38	2.35	73	76	76	0.55	0.7	0.8
				400	6.1	4.49	2830	7.55	2.66	2.62	69	74	75	0.48	0.62	0.73
				415	6.4	4.44	2845	7.51	2.87	2.84	66	72	75	0.43	0.56	0.67
NBS4 400 T 274 764 4140	3.0	4.0	50	380	7.40	4.5	2780	10.30	2.5	2.8	73	74	75	0.59	0.73	0.83
				400	7.50	4.6	2810	10.18	2.7	3.2	69	73	74	0.51	0.66	0.78
				415	7.90	4.8	2825	10.16	3.0	3.4	66	72	73	0.47	0.60	0.72
NBS4 550 T 274 765 4140	4.0	5.5	50	380	9.60	5.1	2800	13.62	2.8	2.9	77	79	79	0.57	0.72	0.82
				400	9.80	5.1	2820	13.53	3.1	3.1	74	78	78	0.50	0.64	0.77
				415	10.30	5.1	2835	13.48	3.4	3.2	70	76	77	0.45	0.59	0.71
NBS4 750 T 274 728 4140	5.5	7.5	50	380	12.60	5.2	2825	18.60	2.5	2.7	79	80	80	0.63	0.77	0.86
				400	12.50	5.4	2845	18.44	2.7	2.8	77	80	80	0.55	0.71	0.82
				415	12.80	5.4	2860	18.37	2.9	3.0	74	79	79	0.50	0.65	0.78

PERFORMANCE DATA - THREE-PHASE

380 V 60 Hz

Type/Code	Power		[Hz]	Voltage [V]	I _N	LRC/I _N	RPM [Min ⁻¹]	FLT [Nm]	LRT/FLT	BDT/FLT	Efficiency η%			Power factor cos φ			SF A	SF
	[kW]	[HP]									50	75	100	50	75	100		
NBS4 050 T 274 741 1042	0.37	0.5	60	380	1.5	5.47	3495	1	3.12	4.17	43	52	58	0.5	0.59	0.67	1.9	1.27
NBS4 075 T 274 742 1042	0.55	0.75	60	380	2.1	5.33	3485	1.5	3.26	3.98	49	58	63	0.47	0.57	0.66	2.5	1.19
NBS4 100 T 274 743 1042	0.75	1	60	380	2.5	5.73	3475	2	3.19	3.66	56	64	68	0.49	0.6	0.69	3	1.2
NBS4 150 T 274 744 1042	1.1	1.5	60	380	3.4	5.76	3470	3.1	3.56	3.51	68	71	74	0.47	0.61	0.71	3.8	1.12
NBS4 200 T 274 745 1042	1.5	2	60	380	4.3	5.53	3465	4.1	3.1	3.27	66	72	75	0.51	0.63	0.73	4.9	1.14
NBS4 300 T 274 746 1042	2.2	3	60	380	6	5.2	3445	6.2	2.78	2.99	70	75	77	0.53	0.67	0.76	6.6	1.1
NBS4 400 T 274 774 4140	3.0	4.0	60	380	8.2	6.0	3470	8.24	3.5	4.3	70	75	77	0.50	0.63	0.73	8.7	-
NBS4 550 T 274 775 4140	4.0	5.5	60	380	10.2	6.3	3450	11.0	3.5	4.0	74	78	80	0.54	0.67	0.76	11.4	-
NBS4 750 T 274 748 4140	5.5	7.5	60	380	13.0	6.5	3490	15.0	3.1	3.8	78	81	83	0.55	0.69	0.78	14.5	-

220-230 V 60 Hz

Type/Code	Power		[Hz]	Voltage [V]	I _N	LRC/I _N	RPM [Min ⁻¹]	FLT [Nm]	LRT/FLT	BDT/FLT	Efficiency η%			Power factor cos φ			SF A	SF
	[kW]	[HP]									50	75	100	50	75	100		
NBS4 050 T 274 711 1042	0.37	0.5	60	220	2.5	5.23	3480	1	2.84	3.8	44	53	58	0.55	0.64	0.71	3.1	1.24
				230	2.5	5.47	3495	1	3.12	4.17	43	52	58	0.5	0.59	0.67	3.1	1.24
NBS4 075 T 274 712 1042	0.55	0.75	60	220	3.5	5.1	3470	1.5	2.97	3.63	50	59	63	0.52	0.63	0.71	4.1	1.17
				230	3.5	5.33	3485	1.5	3.26	3.98	49	58	63	0.47	0.57	0.66	4.1	1.17
NBS4 100 T 274 713 1042	0.75	1	60	220	4.1	5.48	3460	2.1	2.91	3.33	58	65	68	0.54	0.65	0.73	5	1.22
				230	4.1	5.73	3475	2	3.19	3.66	56	64	68	0.49	0.6	0.69	5	1.22
NBS4 150 T 274 714 1042	1.1	1.5	60	220	5.6	5.51	3455	3.1	3.24	3.2	67	72	74	0.54	0.67	0.75	6.3	1.13
				230	5.6	5.76	3470	3.1	3.56	3.51	68	71	74	0.47	0.61	0.71	6.3	1.13
NBS4 200 T 274 715 1042	1.5	2	60	220	7.1	5.29	3445	4.1	2.82	2.97	68	73	75	0.56	0.69	0.77	8.1	1.14
				230	7.1	5.53	3465	4.1	3.1	3.27	66	72	75	0.51	0.63	0.73	8.1	1.14
NBS4 300 T 274 716 1042	2.2	3	60	220	9.9	4.97	3425	6.2	2.53	2.72	71	76	77	0.59	0.72	0.8	10.9	1.1
				230	9.9	5.2	3445	6.2	2.78	2.99	70	75	77	0.53	0.67	0.76	10.9	1.1
NBS4 400 T 274 776 4140	3.0	4.0	60	220	14.2	6.0	3470	8.25	3.4	4.3	70	76	77	0.50	0.63	0.73	15.1	-
				230	15.1	6.2	3490	8.25	3.6	4.5	69	75	76	0.47	0.60	0.66	15.7	-
NBS4 550 T 274 777 4140	4.0	5.5	60	220	16.8	6.4	3450	11.1	3.1	3.4	76	79	80	0.58	0.71	0.79	18.5	-
				230	17.0	6.3	3460	11.0	3.3	3.6	73	78	80	0.51	0.64	0.75	18.6	-
NBS4 750 T 274 718 4140	5.5	7.5	60	220	21.0	6.4	3470	15.1	2.6	3.0	78	81	82	0.63	0.76	0.84	23.8	-
				230	21.1	6.4	3485	15.1	2.7	3.2	78	81	82	0.56	0.70	0.79	23.6	-

PERFORMANCE DATA - THREE-PHASE

460 V 60 Hz

Type/Code	Power		[Hz]	Voltage [V]	I _N	LRC/I _N	RPM [Min ⁻¹]	FLT [Nm]	LRT/FLT	BDT/FLT	Efficiency η%			Power factor cos φ			SF A	SF
	[kW]	[HP]									50	75	100	50	75	100		
NBS4 050 T 264 761 1042	0.37	0.50	60	460	1.2	4.9	3470	1	2.69	3.59	44	53	58	0.57	0.66	0.73	1.6	1.27
NBS4 075 T 264 762 1042	0.55	0.75	60	460	1.7	4.83	3460	1.5	2.87	3.51	51	59	63	0.54	0.64	0.72	2.1	1.19
NBS4 100 T 274 763 1042	0.75	1.0	60	460	2.1	5.73	3475	2	3.19	3.66	56	64	68	0.49	0.6	0.69	2.5	1.2
NBS4 150 T 274 724 1042	1.1	1.5	60	460	2.8	5.76	3470	3.1	3.56	3.51	68	71	74	0.47	0.61	0.71	3.1	1.12
NBS4 200 T 274 725 1042	1.5	2.0	60	460	3.6	5.53	3465	4.1	3.1	3.27	66	72	75	0.51	0.63	0.73	4	1.14
NBS4 300 T 274 726 1042	2.2	3.0	60	460	5.3	5.18	3455	6.2	2.97	3.19	67	73	76	0.48	0.61	0.71	5.8	1.09
NBS4 400 T 274 764 4140	3.0	4.0	60	460	6.4	4.5	3450	8.24	2.5	2.8	73	75	78	0.59	0.72	0.75	7.0	-
NBS4 550 T 274 765 4140	4.0	5.5	60	460	8.3	5.1	3460	11.0	2.8	2.9	77	78	80	0.57	0.70	0.74	9.1	-
NBS4 750 T 274 728 4140	5.5	7.5	60	460	10.8	5.2	3480	15.0	2.5	2.7	79	80	81	0.63	0.76	0.80	12.0	-

LEGENDA	
LRC	Locked Rotor Current ^(A)
I _N	Nominal Amps
LRT	Locked Rotor Torque
BDT	Breakdown Torque
FLT	Full Load Torque
SF	Service Factor

PERFORMANCE DATA - THREE-PHASE (HIGH THRUST)

380-415 V 50 Hz

Type/Code	Power		[Hz]	Voltage [V]	I _N	LRC/I _N	RPM [Min ⁻¹]	FLT [Nm]	LRT/FLT	BDT/FLT	Efficiency η%			Power factor cos φ		
	[kW]	[HP]									50	75	100	50	75	100
NBS4K 300 T 274 726 1140	2.2	3.0	50	380	5.50	4.9	2800	7.51	2.4	2.9	70	73	74	0.63	0.76	0.83
				400	5.60	5.0	2825	7.44	2.8	3.1	68	73	74	0.56	0.69	0.78
				415	5.70	5.1	2840	7.39	3.0	3.3	66	72	73	0.50	0.64	0.73
NBS4K 400 T 274 764 4040	3.0	4.0	50	380	7.40	4.5	2780	10.30	2.5	2.8	73	74	75	0.59	0.73	0.83
				400	7.50	4.6	2810	10.18	2.7	3.2	69	73	74	0.51	0.66	0.78
				415	7.90	4.8	2825	10.16	3.0	3.4	66	72	73	0.47	0.60	0.72
NBS4K 550 T 274 765 4040	4.0	5.5	50	380	9.60	5.1	2800	13.62	2.8	2.9	77	79	79	0.57	0.72	0.82
				400	9.80	5.1	2820	13.53	3.1	3.1	74	78	78	0.50	0.64	0.77
				415	10.30	5.1	2835	13.48	3.4	3.2	70	76	77	0.45	0.59	0.71
NBS4K 750 T 274 728 4040	5.5	7.5	50	380	12.60	5.2	2825	18.60	2.5	2.7	79	80	80	0.63	0.77	0.86
				400	12.50	5.4	2845	18.44	2.7	2.8	77	80	80	0.55	0.71	0.82
				415	12.80	5.4	2860	18.37	2.9	3.0	74	79	79	0.50	0.65	0.78
NBS4K 1000 T 274 729 4040	7.5	10.0	50	380	16.90	5.1	2810	25.50	2.4	2.5	80	80	80	0.65	0.79	0.87
				400	16.90	5.3	2835	25.26	2.6	2.6	78	80	80	0.57	0.72	0.83
				415	17.30	5.3	2850	25.05	2.7	2.7	75	79	79	0.51	0.66	0.77

220-230 V 60 Hz

Type/Code	Power		[Hz]	Voltage [V]	I _N	LRC/I _N	RPM [Min ⁻¹]	FLT [Nm]	LRT/FLT	BDT/FLT	Efficiency η%			Power factor cos φ			SF A
	[kW]	[HP]									50	75	100	50	75	100	
NBS4K 1000 T 274 719 4040	7.5	10	60	220	29.0	5.9	3440	20.8	2.6	2.6	78	79	80	0.64	0.78	0.85	32.6
				230	29.0	6.0	3460	20.7	2.8	2.8	76	79	80	0.58	0.72	0.81	32.0

380 V 60 Hz

Type/Code	Power		[Hz]	Voltage [V]	I _N	LRC/I _N	RPM [Min ⁻¹]	FLT [Nm]	LRT/FLT	BDT/FLT	Efficiency η%			Power factor cos φ			SF A
	[kW]	[HP]									50	75	100	50	75	100	
NBS4K 1000 T 274 749 4040	7.5	10	60	380	17.8	6.5	3480	20.6	2.9	3.3	77	80	81	0.57	0.71	0.80	19.4

460 V 60 Hz

Type/Code	Power		[Hz]	Voltage [V]	I _N	LRC/I _N	RPM [Min ⁻¹]	FLT [Nm]	LRT/FLT	BDT/FLT	Efficiency η%			Power factor cos φ			SF A
	[kW]	[HP]									50	75	100	50	75	100	
NBS4K 1000 T 274 729 4040	7.5	10	60	460	14.5	5.1	3470	20.6	2.4	2.5	80	80	80	0.65	0.76	0.80	15.9

LEGENDA

LRC	Locked Rotor Current ^(A)
I _N	Nominal Amps
LRT	Locked Rotor Torque
BDT	Breakdown Torque
FLT	Full Load Torque
SF	Service Factor

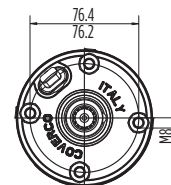
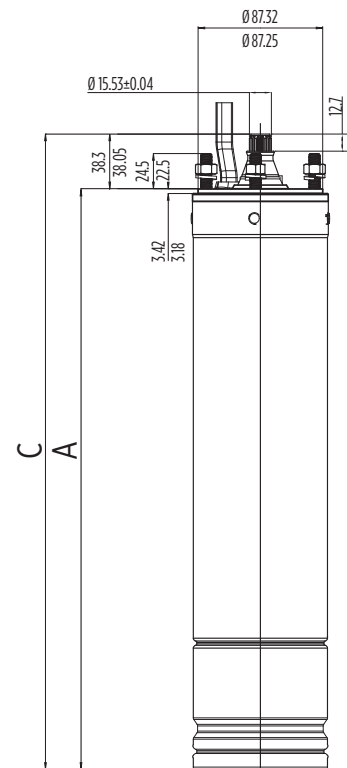
DIMENSIONAL DATA AND DRAWINGS

SINGLE-PHASE MOTORS 50 Hz

Type	Axial thrust	[kW]	A [mm]	C [mm]	Weight [kg]	Oil [kg]
NBS4 050 M	1500N/150 Kg.	0.37	326	364	7.1	0.72
NBS4 075 M	1500N/150 Kg.	0.55	335	373	7.5	0.74
NBS4 100 M	1500N/150 Kg.	0.75	356	394	8.5	0.76
NBS4 150 M	1500N/150 Kg.	1.10	380	418	9.6	0.81
NBS4 200 M	2500N/250 Kg.	1.50	425	463	11.8	0.85
NBS4 300 M	2500N/250 Kg.	2.20	474	512	14.1	0.93
NBS4K 300 M	4500N/450 Kg.	2.20	565	603	17.4	0.84
NBS4K 400 M	4500N/450 Kg.	3.00	680	718	24.1	0.90
NBS4K 550 M	4500N/450 Kg.	4.00	680	718	24.1	0.93

THREE-PHASE MOTORS 50 Hz

Type	Axial thrust	[kW]	A [mm]	C [mm]	Weight [kg]	Oil [kg]
NBS4 050 T	1500N/150 Kg.	0.37	326	364	7.1	0.7
NBS4 075 T	1500N/150 Kg.	0.55	335	373	7.5	0.73
NBS4 100 T	1500N/150 Kg.	0.75	345	383	7.9	0.74
NBS4 150 T	1500N/150 Kg.	1.10	367	405	8.9	0.81
NBS4 200 T	2500N/250 Kg.	1.50	387	425	9.9	0.85
NBS4 300 T	2500N/250 Kg.	2.20	425	463	11.6	0.88
NBS4 400 T	2500N/250 Kg.	3.0	522	560	15.0	0.80
NBS4 550 T	2500N/250 Kg.	4.0	587	625	18.3	0.82
NBS4 750 T	2500N/250 Kg.	5.5	687	725	24.3	0.86
NBS4K 300 T	4500N/450 Kg.	2.2	467	505	12.5	0.78
NBS4K 400 T	4500N/450 Kg.	3.0	522	560	15.0	0.80
NBS4K 550 T	4500N/450 Kg.	4.0	587	625	18.3	0.82
NBS4K 750 T	4500N/450 Kg.	5.5	687	725	24.3	0.86
NBS4K 1000 T	4500N/450 Kg.	7.5	768	806	28.3	1.09



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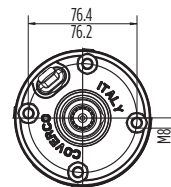
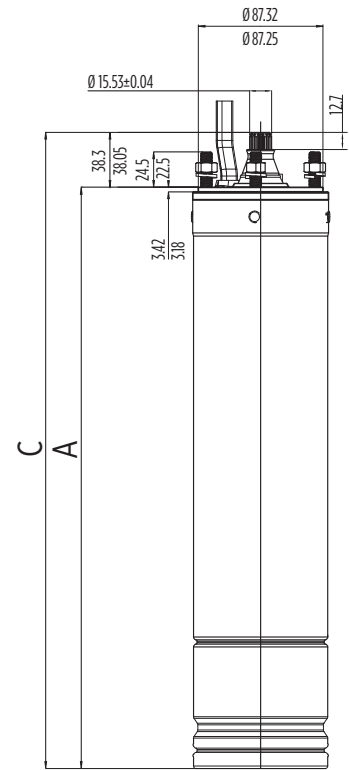
DIMENSIONAL DATA AND DRAWINGS

SINGLE-PHASE MOTORS 60 Hz

Type	Axial thrust	[kW]	A [mm]	C [mm]	Weight [kg]	Oil [kg]
NBS4 050 M	1500N/150 Kg.	0.37	326	364	7.2	0.72
NBS4 075 M	1500N/150 Kg.	0.55	335	373	7.6	0.74
NBS4 100 M	1500N/150 Kg.	0.75	356	394	8.5	0.76
NBS4 150 M	1500N/150 Kg.	1.10	380	418	9.7	0.81
NBS4 200 M	2500N/250 Kg.	1.50	425	463	11.8	0.85
NBS4 300 M	2500N/250 Kg.	2.20	474	512	14.1	0.88
NBS4K 400 M	4500N/450 Kg.	3.00	680	718	24.1	0.90
NBS4K 550 M	4500N/450 Kg.	4.00	680	718	24.1	0.93

THREE-PHASE MOTORS 60 Hz

Type	Axial thrust	[kW]	A [mm]	C [mm]	Weight [kg]	Oil [kg]
NBS4 050 T	1500N/150 Kg.	0.37	326	364	7.1	0.7
NBS4 075 T	1500N/150 Kg.	0.55	335	373	7.5	0.73
NBS4 100 T	1500N/150 Kg.	0.75	345	383	7.9	0.74
NBS4 150 T	1500N/150 Kg.	1.10	367	405	8.9	0.81
NBS4 200 T	2500N/250 Kg.	1.50	387	425	9.9	0.85
NBS4 300 T	2500N/250 Kg.	2.20	425	463	11.6	0.88
NBS4 400 T	2500N/250 Kg.	3.0	522	560	15.0	0.80
NBS4 550 T	2500N/250 Kg.	4.0	587	625	18.3	0.82
NBS4 750 T	2500N/250 Kg.	5.5	687	725	24.3	0.86
NBS4K 300 T	4500N/450 Kg.	2.2	467	505	12.5	0.78
NBS4K 400 T	4500N/450 Kg.	3.0	522	560	15.0	0.80
NBS4K 550 T	4500N/450 Kg.	4.0	587	625	18.3	0.82
NBS4K 750 T	4500N/450 Kg.	5.5	687	725	24.3	0.86
NBS4K 1000 T	4500N/450 Kg.	7.5	768	806	28.3	1.09

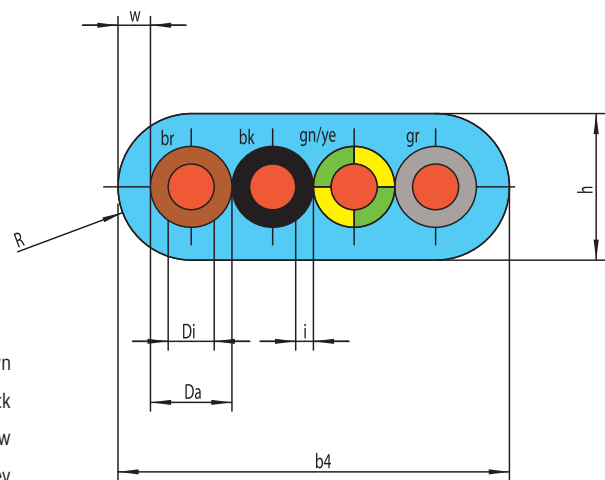


MOTOR LEADS

Type	Di [mm²]	i [mm]	Da [mm]	w [mm]	R [mm]	b4 [mm]	h [mm]
4x1.5	1.5	0.6	2.7	1.9	2.5	14.6	5.1

DIMENSIONS

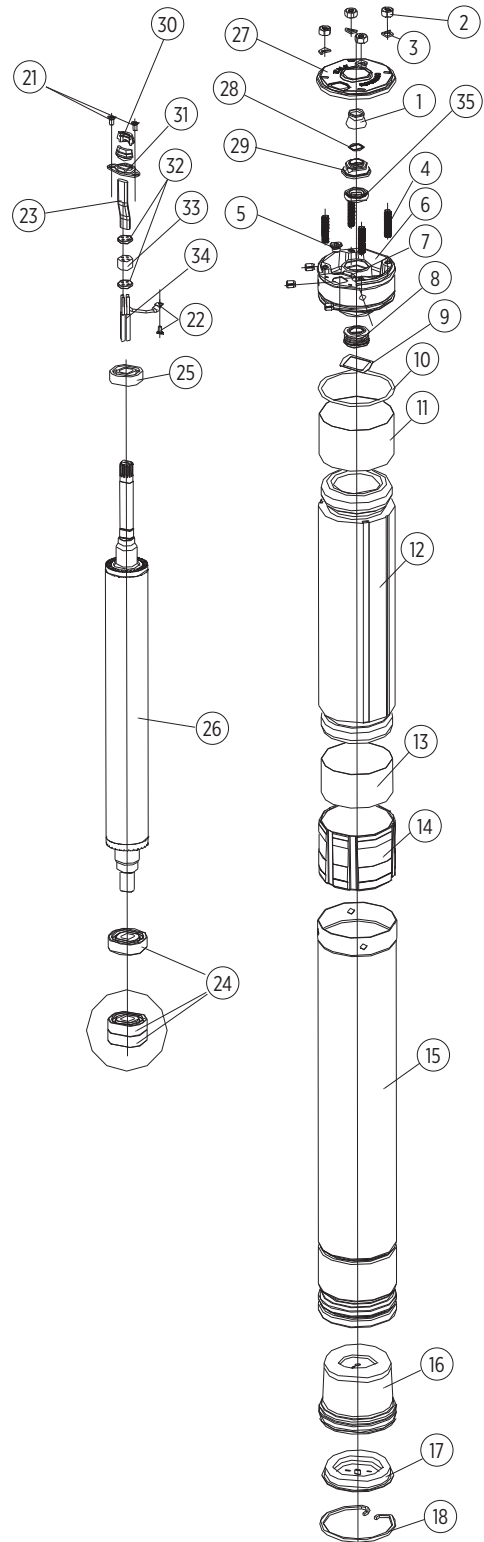
Standard cable	Length [m]
0,37 kW - 2,2 kW	1.5
3,0 kW - 5,5 kW	2.5
7,5 kW	3.5



br = Brown
 bk = Black
 gn/ye = Green / Yellow
 gr = Grey

SPARE PART LIST AND SECTIONAL DRAWINGS

#	Parts description	Quantity	Material
1	Sand slinger	1	NBR
2	Nut	4	304 SS
3	Washer	4	304 SS
4	Stud	4	304 SS
5	Oil fill plug	1	Brass
6	Top end bracket	1	Powder coated cast-iron
7	Lock pins	4	304 SS
8	Mechanical shaft seal	1	Nitrile-Carbon and ceramic face seal
9	Wavy spring	1	High carbon steel (C70)
10	O-ring gasket for top end bell	1	NBR
11	Insulation roll up	1	Mylar A
13			Mylar A
12	Wound stator	1	Copper wire
14	Bottom end bell	1	Aluminium
15	Motor outer shell	1	304 SS
16	Pressure equalization Diaphragm	1	Buna N
17	Cover Diaphragm	1	304 SS
18	Snap ring	1	304 SS
21	Screw for lead clamp	2	304 SS
22	Grounding screw	1	Steel+zinc
	Lock washer	1	
23	Lead	1	VPE+EPR
24	Lower ball bearing	1/2	Stainless steel
25	Upper ball bearing	1	Stainless steel
26	Rotor with shaft	1	Steel / 304 SS / AL / Cu
27	Top end bell cover	1	304 SS
28	Washer	1	304 SS
29	Sand slinger base	1	Polyacetal (POM)
30	Lead seal bushing	2	Nylon
32	Lead pressure disk	2	Polyamid
33	Lead fix rubber	1	NBR
31	Lead Clamp	1	304 SS
34	Parallel connectors	3	CuZn+Sn
35	Lip seal	1	NBR
-	Filling non-toxic oil	Kg.	Tigroil White M82
-	Instruction sticker	1	-
-	Lead jacket G6	4	-



0003014-10/2023

CATALOG REVISION CHANGES NOTICE

Rev. No.	Changes	Page
01	"Marcol 152" changed with "Tigroil White M82" in "Spare part list and sectional drawings" table.	13





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