Franklin Electric

4" REWINDABLE OIL FILLED MOTORS

NBS4 SERIES

COVERCO®

MENU

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MENU

4" REWINDABLE OIL FILLED MOTORS

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: 0.37 - 7.5 kW
- 4" NEMA mounting design
- Reliable operation in wells with diameters of ≥ 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 output filter)
- Voltage: Single-phase: 210-220-230 V / 50 Hz - 220-230 V / 60 Hz
  Three-phase: 220 - 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 x 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: 1500 N, 2500 N; High Thrust 4500 N

* Ball bearings have a theoretical service life.

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PERFORMANCE DATA - SINGLE-PHASE

210-220-230 V 50 Hz

Type/Code	Power 50Hz [kW]	Power 50Hz [HP]	Thrust F [N]	Voltage [V]	I_N [Amp]	LRC/I_N	RPM [Min^{-1}]	FLT [Nm]	LRT/FLT	BDT/FLT	Efficiency η% 50	Efficiency η% 75	Efficiency η% 100	Power factor cos φ 50	Power factor cos φ 75	Power factor cos φ 100	Capacitor [µF]
NBS4 050 M 275 846 1042	0.37	0.5	1500	210	3,4	3,1	2850	1,2	0,69	1,90	39	49	55	0,92	0,96	0,98	20
				220	3,3	3,3	2865	1,2	0,75	2,23	37	48	55	0,88	0,94	0,97	
				230	3,4	3,3	2880	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	1500	210	4,8	2,6	2810	1,9	0,57	1,70	44	54	59	0,92	0,96	0,98	25
				220	4,6	2,9	2840	1,9	0,63	1,87	41	52	59	0,87	0,94	0,97	
				230	4,8	2,9	2850	1,9	0,69	2,04	37	48	56	0,81	0,89	0,95	
NBS4 100 M 275 848 1042	0.75	1	1500	210	5,8	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	0,90	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	1500	210	8,5	3,0	2790	3,8	0,55	1,66	51	61	65	0,93	0,98	0,99	40
				220	8,3	3,2	2815	3,8	0,61	1,82	47	59	65	0,86	0,93	0,97	
				230	8,6	3,2	2825	3,8	0,66	1,99	43	55	62	0,78	0,87	0,94	
NBS4 200 M 275 851 1042	1.5	2	2500	210	11,1	3,2	2790	5,1	0,57	1,71	53	62	66	0,98	0,99	0,99	50
				220	10,8	3,4	2815	5,1	0,63	1,87	51	61	65	0,93	0,98	0,99	
				230	10,8	3,6	2830	5,0	0,68	2,05	47	58	64	0,85	0,93	0,97	
NBS4 300 M 275 852 1042	2.2	3	2500	210	16,3	3,0	2775	7,7	0,56	1,68	55	64	67	0,97	0,99	0,99	76
				220	15,5	3,3	2815	7,6	0,61	1,84	53	63	68	0,90	0,96	0,99	
				230	15,8	3,4	2830	7,5	0,67	2,01	48	60	66	0,80	0,90	0,96	

220-230 V 60 Hz

Type/Code	Power 60Hz [kW]	Power 60Hz [HP]	Thrust F [N]	Voltage [V]	I_N [Amp]	LRC/I_N	RPM [Min^{-1}]	FLT [Nm]	LRT/FLT	BDT/FLT	Efficiency η% 50	Efficiency η% 75	Efficiency η% 100	Power factor cos φ 50	Power factor cos φ 75	Power factor cos φ 100	Capacitor [µF]	SF A	SF
NBS4 050 M 275 825 1042	0.37	0.5	1500	220	3,6	4,3	3480	1,0	1,00	3,09	31	41	49	0,90	0,94	0,96	20	4,8	1.6
				230	3,9	4,1	3490	1,0	1,00	3,43	29	39	46	0,81	0,87	0,91		4,8	
NBS4 075 M 275 827 1042	0.55	0.75	1500	220	5,3	4,0	3470	1,5	1,09	2,94	31	41	49	0,93	0,96	0,98	31,5	6,7	1.5
				230	5,6	3,8	3475	1,5	1,17	3,21	28	39	46	0,86	0,91	0,94		6,7	
NBS4 150 M 275 829 1042	1.1	1.5	1500	220	5,9	4,2	3460	2,1	0,79	2,57	41	52	59	0,93	0,97	0,99	31,5	7,6	1.4
				230	6,0	4,3	3470	2,1	0,87	2,81	38	49	57	0,85	0,91	0,95		7,4	
NBS4 200 M 275 830 1042	1.5	2	2500	220	8,3	4,1	3445	3,1	0,72	2,30	45	55	62	0,95	0,98	0,99	40	10,4	1.3
				230	8,4	4,1	3460	3,1	0,80	2,54	42	53	60	0,87	0,93	0,97		10,1	
NBS4 200 M 275 830 1042	1.5	2	2500	220	10,3	4,6	3450	4,1	0,66	2,38	51	61	66	0,96	0,99	0,99	50	12,8	1.25
				230	10,0	4,8	3465	4,1	0,71	2,69	49	60	67	0,89	0,94	0,97		12,0	
NBS4 300 M 275 831 1042	2.2	3	2500	220	14,6	4,2	3425	6,2	0,61	2,16	56	66	71	0,95	0,98	0,99	76	16,9	1.15
				230	14,5	4,4	3440	6,2	0,67	2,37	53	64	69	0,90	0,95	0,98		16,5	

LEGEND	
LRC	Locked Rotor Current (A)
I_N	Nominal Amps
LRT	Locked Rotor Torque
BDT	Maximum torque
FLT	Full Load Torque
SF	Service Factor

PERFORMANCE DATA - SINGLE-PHASE (HIGH THRUST)

210-220-230 V 50 Hz

Type/Code	Power 50 Hz		Thrust F	Voltage	I_N	LRC/I_N	RPM	FLT	LRT/FLT	BDT/FLT	Efficiency η%			Power factor cos φ			Capacitor
	[kW]	[HP]	[N]	[V]	[Amp]		[Min^{-1}]	[Nm]			50	75	100	50	75	100	[µF]
NBS4K 400 M 275 849 4042	3.0	4.0	4500	210	19,2	3,7	2850	10,0	1,01	1,40	68	76	76	0,97	0,99	0,99	100+178
				220	17,8	4,2	2875	9,9	1,11	1,54	66	75	78	0,96	0,99	0,99	
				230	17,3	4,5	2890	9,8	1,22	1,68	63	73	78	0,89	0,95	0,98	
NBS4K 550 M 275 854 4042	4.0	5.5	4500	210	26,4	3,6	2865	13,7	0,56	1,44	69	76	77	0,96	0,98	0,99	130+178
				220	24,6	4,1	2890	13,5	0,62	1,58	67	75	78	0,94	0,98	0,99	
				230	24,2	4,4	2900	13,5	0,67	1,72	62	72	77	0,85	0,93	0,98	

220-230 V 60 Hz

Type/Code	Power 60 Hz		Thrust F	Voltage	I_N	LRC/I_N	RPM	FLT	LRT/ FLT	BDT/ FLT	Efficiency η%			Power factor cos φ			Capacitor	SF	SF
	[kW]	[HP]	[N]	[V]	[Amp]		[Min^{-1}]	[Nm]			50	75	100	50	75	100	[µF]	[Amp]	
NBS4K 400 M 275 870 4042	3.0	4.0	4500	220	19	4.5	3495	8.2	1.31	2.19	60	70	75	0.85	0.91	0.95	125+178	21.4	1.15
				230	18.5	4.8	3505	8.1	1.44	2.41	58	68	74	0.86	0.91	0.95		20.8	
NBS4K 550 M 275 806 4042	4.0	5.5	4500	220	24.8	5.4	3510	11.2	0.98	2.4	64	73	78	0.9	0.95	0.97	150+178	28.4	1.15
				230	24.4	5.8	3520	11.1	1.08	2.64	62	71	77	0.92	0.95	0.97		27.4	

LEGEND	
LRC	Locked Rotor Current (A)
I_N	Nominal Amps
LRT	Locked Rotor Torque
BDT	Maximum torque
FLT	Full Load Torque
SF	Service Factor

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PERFORMANCE DATA - THREE-PHASE

220-230 V 50 Hz

Type/Code	Power 50 Hz [kW]	Power 50 Hz [HP]	Thrust F [N]	Voltage [V]	I_N [Amp]	LRC/I_N	RPM [Min^{-1}]	FLT [Nm]	LRT/FLT	BDT/FLT	Efficiency η% 50	Efficiency η% 75	Efficiency η% 100	Power factor cos φ 50	Power factor cos φ 75	Power factor cos φ 100
NBS4 050 T 274 751 1042	0.37	0.5	1500	220	2,3	4,38	2845	1,25	2,44	2,73	50	57	61	0,59	0,69	0,76
				230	2,3	4,61	2865	1,24	2,72	3,05	49	57	61	0,54	0,64	0,72
NBS4 075 T 274 752 1042	0.55	0.75	1500	220	3,1	4,39	2840	1,88	2,41	2,71	54	61	64	0,57	0,68	0,77
				230	3,3	4,38	2860	1,87	2,69	3,02	51	59	63	0,51	0,62	0,71
NBS4 100 T 274 753 1042	0.75	1	1500	220	3,8	4,77	2835	2,51	2,57	2,71	60	66	69	0,57	0,69	0,78
				230	4,0	4,80	2855	2,49	2,87	3,02	57	65	68	0,50	0,62	0,71
NBS4 150 T 274 754 1042	1.1	1.5	1500	220	5,4	4,74	2835	3,77	2,49	2,53	66	71	73	0,57	0,70	0,79
				230	5,6	4,83	2855	3,74	2,78	2,82	63	69	72	0,50	0,62	0,72
NBS4 200 T 274 755 1042	1.5	2	2500	220	6,6	4,68	2825	5,04	2,26	2,43	70	74	74	0,63	0,76	0,83
				230	6,8	4,80	2845	5,01	2,52	2,71	67	72	74	0,55	0,68	0,77
NBS4 300 T 274 756 1042	2.2	3	2500	220	9,9	4,56	2810	7,60	2,38	2,35	73	76	76	0,55	0,70	0,80
				230	10,6	4,49	2830	7,55	2,66	2,62	69	74	75	0,48	0,62	0,73

380-400-415 V 50 Hz

Type/Code	Power 50 Hz [kW]	Power 50 Hz [HP]	Thrust F [N]	Voltage [V]	I_N [Amp]	LRC/I_N	RPM [Min^{-1}]	FLT [Nm]	LRT/FLT	BDT/FLT	Efficiency η% 50	Efficiency η% 75	Efficiency η% 100	Power factor cos φ 50	Power factor cos φ 75	Power factor cos φ 100
NBS4 050 T 274 761 1042	0.37	0.5	1500	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	3,30	48	56	61	0,50	0,60	0,68
NBS4 075 T 274 762 1042	0.55	0.75	1500	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	2,90	3,27	49	58	63	0,47	0,57	0,66
NBS4 100 T 274 763 1042	0.75	1	1500	380	2,2	4,77	2835	2,51	2,57	2,71	60	66	69	0,57	0,69	0,78
				400	2,3	4,80	2855	2,49	2,87	3,02	57	65	68	0,50	0,62	0,71
				415	2,4	4,78	2865	2,49	3,10	3,27	55	63	67	0,45	0,56	0,66
NBS4 150 T 274 724 1042	1.1	1.5	1500	380	3,1	4,74	2835	3,77	2,49	2,53	66	71	73	0,57	0,70	0,79
				400	3,2	4,83	2855	3,74	2,78	2,82	63	69	72	0,50	0,62	0,72
				415	3,4	4,72	2865	3,73	3,00	3,05	61	68	71	0,44	0,57	0,67
NBS4 200 T 274 725 1042	1.5	2	2500	380	3,8	4,68	2825	5,04	2,26	2,43	70	74	74	0,63	0,76	0,83
				400	3,9	4,80	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	2500	380	5,7	4,56	2810	7,60	2,38	2,35	73	76	76	0,55	0,70	0,80
				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

PERFORMANCE DATA - THREE-PHASE

220-230 V 60 Hz

Type/Code	Power 60 Hz [kW]	Power 60 Hz [HP]	Thrust F [N]	Voltage [V]	I_N [Amp]	LRC/I_N	RPM [Min^{-1}]	FLT [Nm]	LRT/FLT	BDT/FLT	Efficiency η% 50	Efficiency η% 75	Efficiency η% 100	Power factor cos φ 50	Power factor cos φ 75	Power factor cos φ 100	SF [Amp]	SF
NBS4 050 T 274 711 1042	0.37	0.5	1500	220	2,5	5,23	3480	1,0	2,84	3,80	44	53	58	0,55	0,64	0,71	3,1	1,6
				230	2,5	5,47	3495	1,0	3,12	4,17	43	52	58	0,50	0,59	0,67	3,1	
NBS4 075 T 274 712 1042	0.55	0.75	1500	220	3,5	5,10	3470	1,5	2,97	3,63	50	59	63	0,52	0,63	0,71	4,1	1,5
				230	3,5	5,33	3485	1,5	3,26	3,98	49	58	63	0,47	0,57	0,66	4,1	
NBS4 100 T 274 713 1042	0.75	1	1500	220	4,1	5,48	3460	2,1	2,91	3,33	58	65	68	0,54	0,65	0,73	5,0	1,4
				230	4,1	5,73	3475	2,0	3,19	3,66	56	64	68	0,49	0,60	0,69	5,0	
NBS4 150 T 274 714 1042	1.1	1.5	1500	220	5,6	5,51	3455	3,1	3,24	3,20	67	72	74	0,54	0,67	0,75	6,3	1,3
				230	5,6	5,76	3470	3,1	3,56	3,51	68	71	74	0,47	0,61	0,71	6,3	
NBS4 200 T 274 715 1042	1.5	2	2500	220	7,1	5,29	3445	4,1	2,82	2,97	68	73	75	0,56	0,69	0,77	8,1	1,25
				230	7,1	5,53	3465	4,1	3,10	3,27	66	72	75	0,51	0,63	0,73	8,1	
NBS4 300 T 274 716 1042	2.2	3	2500	220	9,9	4,97	3425	6,2	2,53	2,72	71	76	77	0,59	0,72	0,80	10,9	1,15
				230	9,9	5,20	3445	6,2	2,78	2,99	70	75	77	0,53	0,67	0,76	10,9	

380 V 60 Hz

Type/Code	Power 60 Hz [kW]	Power 60 Hz [HP]	Thrust F [N]	Voltage [V]	I_N [Amp]	LRC/I_N	RPM [Min^{-1}]	FLT [Nm]	LRT/FLT	BDT/FLT	Efficiency η% 50	Efficiency η% 75	Efficiency η% 100	Power factor cos φ 50	Power factor cos φ 75	Power factor cos φ 100	SF [Amp]	SF
NBS4 050 T 274 741 1042	0.37	0.5	1500	380	1,5	5,47	3495	1,0	3,12	4,17	43	52	58	0,50	0,59	0,67	1,9	1,6
NBS4 075 T 274 742 1042	0.55	0.75	1500	380	2,1	5,33	3485	1,5	3,26	3,98	49	58	63	0,47	0,57	0,66	2,5	1,5
NBS4 100 T 274 743 1042	0.75	1	1500	380	2,5	5,73	3475	2,0	3,19	3,66	56	64	68	0,49	0,60	0,69	3,0	1,4
NBS4 150 T 274 744 1042	1.1	1.5	1500	380	3,4	5,76	3470	3,1	3,56	3,51	68	71	74	0,47	0,61	0,71	3,8	1,3
NBS4 200 T 274 745 1042	1.5	2	2500	380	4,3	5,53	3465	4,1	3,10	3,27	66	72	75	0,51	0,63	0,73	4,9	1,25
NBS4 300 T 274 746 1042	2.2	3	2500	380	6,0	5,20	3445	6,2	2,78	2,99	70	75	77	0,53	0,67	0,76	6,6	1,15

460 V 60 Hz

Type/Code	Power 60 Hz [kW]	Power 60 Hz [HP]	Thrust F [N]	Voltage [V]	I_N [Amp]	LRC/I_N	RPM [Min^{-1}]	FLT [Nm]	LRT/FLT	BDT/FLT	Efficiency η% 50	Efficiency η% 75	Efficiency η% 100	Power factor cos φ 50	Power factor cos φ 75	Power factor cos φ 100	SF [Amp]	SF
NBS4 050 T 264 761 1042	0.37	0.50	1500	460	1,2	4,90	3470	1,0	2,69	3,59	44	53	58	0,57	0,66	0,73	1,6	1,6
NBS4 075 T 264 762 1042	0.55	0.75	1500	460	1,7	4,83	3460	1,5	2,87	3,51	51	59	63	0,54	0,64	0,72	2,1	1,5
NBS4 100 T 274 763 1042	0.75	1.0	1500	460	2,1	5,73	3475	2,0	3,19	3,66	56	64	68	0,49	0,60	0,69	2,5	1,4
NBS4 150 T 274 724 1042	1.1	1.5	1500	460	2,8	5,76	3470	3,1	3,56	3,51	68	71	74	0,47	0,61	0,71	3,1	1,3
NBS4 200 T 274 725 1042	1.5	2.0	2500	460	3,6	5,53	3465	4,1	3,10	3,27	66	72	75	0,51	0,63	0,73	4,0	1,25
NBS4 300 T 274 726 1042	2.2	3.0	2500	460	5,3	5,18	3455	6,2	2,97	3,19	67	73	76	0,48	0,61	0,71	5,8	1,15

LEGEND	
LRC	Locked Rotor Current (A)
I_N	Nominal Amps
LRT	Locked Rotor Torque
BDT	Maximum torque
FLT	Full Load Torque
SF	Service Factor

COVERCO®

PERFORMANCE DATA - THREE-PHASE (HIGH THRUST)

220-230 V 50 HZ

Type/Code	Power 50 Hz		Thrust F	Voltage	I_N	LRC/I_N	RPM	FLT	LRT/FLT	BDT/FLT	Efficiency η%			Power factor cos φ		
	[kW]	[HP]	[N]	[V]	[Amp]		[Min^{-1}]	[Nm]			50	75	100	50	75	100
NBS4K 400 T 274 766 4042	3.0	4.0	4500	220	13,0	4,56	2815	10,12	2,42	2,31	74	77	77	0,58	0,72	0,81
				230	13,7	4,56	2835	10,05	2,70	2,58	70	75	76	0,50	0,64	0,74
NBS4K 550 T 274 767 4042	4.0	5.5	4500	220	17,7	5,03	2820	13,89	2,78	2,49	75	78	78	0,57	0,72	0,81
				230	18,7	5,00	2840	13,79	3,10	2,78	71	75	77	0,49	0,63	0,74
NBS4K 750 T 274 758 4042	5.5	7.5	4500	220	23,2	5,05	2835	18,84	2,42	2,47	77	80	79	0,59	0,73	0,82
				230	23,9	5,20	2855	18,70	2,70	2,76	75	78	79	0,51	0,65	0,76
NBS4K 1000 T 274 759 4042	7.5	10	4500	220	31,7	5,70	2850	24,98	2,66	2,88	76	80	79	0,56	0,71	0,81
				230	33,6	5,66	2865	24,85	2,96	3,21	72	77	78	0,48	0,63	0,73

380-415 V 50 HZ

Type/Code	Power 50 Hz		Thrust F	Voltage	I_N	LRC/I_N	RPM	FLT	LRT/FLT	BDT/FLT	Efficiency η%			Power factor cos φ		
	[kW]	[HP]	[N]	[V]	[Amp]		[Min^{-1}]	[Nm]			50	75	100	50	75	100
NBS4K 400 T 274 764 4042	3.0	4.0	4500	380	7,5	4,56	2815	10,12	2,42	2,31	74	77	77	0,58	0,72	0,81
				400	7,9	4,56	2835	10,05	2,70	2,58	70	75	76	0,50	0,64	0,74
				415	8,2	4,55	2850	9,99	2,92	2,79	67	73	75	0,44	0,58	0,69
NBS4K 550 T 274 765 4042	4.0	5.5	4500	380	10,2	5,03	2820	13,89	2,78	2,49	75	78	78	0,57	0,72	0,81
				400	10,8	5,00	2840	13,79	3,10	2,78	71	75	77	0,49	0,63	0,74
				415	11,3	4,96	2855	13,72	3,36	3,01	68	74	76	0,44	0,57	0,68
NBS4K 750 T 274 728 4042	5.5	7.5	4500	380	13,2	5,05	2830	18,87	2,42	2,47	78	80	79	0,62	0,76	0,84
				400	13,5	5,20	2850	18,74	2,70	2,76	76	79	79	0,54	0,68	0,78
				415	13,8	5,28	2865	18,64	2,92	2,98	74	78	79	0,48	0,62	0,74
NBS4K 1000 T 274 729 4042	7.5	10.0	4500	380	16.9	5.1	2810	25.50	2.4	2.5	80	80	80	0.65	0.79	0.87
				400	16.9	5.3	2835	25.26	2.6	2.6	78	80	80	0.57	0.72	0.83
				415	17.3	5.3	2850	25.05	2.7	2.7	75	79	79	0.51	0.66	0.77

PERFORMANCE DATA - THREE-PHASE (HIGH THRUST)

220-230 V 60 HZ

Type/Code	Power 60Hz		Thrust F	Voltage	I_N	LRC/I_N	RPM	FLT	LRT/FLT	BDT/FLT	Efficiency η%			Power factor cos φ			SF	SF
	[kW]	[HP]	[N]	[V]	[Amp]		[Min^{-1}]	[Nm]			50	75	100	50	75	100	[Amp]	
NBS4K 400 T 274 776 4042	3.0	4.0	4500	220	12,9	5,36	3430	8,3	2,82	2,65	74	78	79	0,60	0,72	0,80	14,0	1,15
				230	12,9	5,60	3450	8,3	3,10	2,91	73	78	79	0,54	0,67	0,76	14,0	
NBS4K 550 T 274 777 4042	4.0	5.5	4500	220	17,8	6,27	3460	11,3	3,44	3,35	73	78	79	0,52	0,66	0,75	19,4	1,15
				230	19,7	5,92	3470	11,3	3,77	3,67	69	75	78	0,44	0,57	0,67	20,9	
NBS4K 750 T 274 718 4042	5.5	7.5	4500	220	22,2	6,78	3465	15,4	3,26	3,27	76	80	81	0,60	0,73	0,81	24,6	1,15
				230	24,3	6,48	3480	15,3	3,58	3,59	73	78	80	0,49	0,62	0,72	26,2	
NBS4K 1000 T 274 719 4042	7.5	10	4500	220	32,1	6,67	3470	20,5	2,81	3,45	76	80	81	0,52	0,66	0,76	36,0	1,15
				230	33,9	6,59	3480	20,4	3,07	3,77	73	78	80	0,45	0,59	0,69	37,3	

380 V 60 HZ

Type/Code	Power 60Hz		Thrust F	Voltage	I_N	LRC/I_N	RPM	FLT	LRT/FLT	BDT/FLT	Efficiency η%			Power factor cos φ			SF	SF
	[kW]	[HP]	[N]	[V]	[Amp]		[Min^{-1}]	[Nm]			50	75	100	50	75	100	[Amp]	
NBS4K 400 T 274 774 4042	3.0	4.0	4500	380	7,8	5,60	3450	8,3	3,10	2,91	73	78	79	0,54	0,67	0,76	8.5	1.15
NBS4K 550 T 274 775 4042	4.0	5.5	4500	380	10,8	6,27	3460	11,3	3,44	3,35	73	78	79	0,52	0,66	0,75	11.7	1.15
NBS4K 750 T 274 748 4042	5.5	7.5	4500	380	13,4	6,78	3465	15,4	3,26	3,21	76	80	81	0,60	0,73	0,81	14.9	1.15
NBS4K 1000 T 274 749 4042	7.5	10	4500	380	17,9	6,61	3470	20,5	2,68	3,29	77	81	81	0,58	0,72	0,80	19.8	1.15

460 V 60 HZ

Type/Code	Power 60Hz		Thrust F	Voltage	I_N	LRC/I_N	RPM	FLT	LRT/FLT	BDT/FLT	Efficiency η%			Power factor cos φ			SF	SF
	[kW]	[HP]	[N]	[V]	[Amp]		[Min^{-1}]	[Nm]			50	75	100	50	75	100	[Amp]	
NBS4K 400 T 274 764 4042	3.0	4.0	4500	460	6,7	5,67	3455	8,2	3,27	3,07	71	76	78	0,49	0,62	0,72	7,4	1,15
NBS4K 550 T 274 765 4042	4.0	5.5	4500	460	9,2	6,34	3460	11,3	3,59	3,49	71	76	79	0,48	0,61	0,71	10,2	1,15
NBS4K 750 T 274 728 4042	5.5	7.5	4500	460	11,5	7,01	3470	15,4	3,51	3,46	75	79	80	0,53	0,67	0,76	12,9	1,15
NBS4K 1000 T 274 729 4042	7.5	10	4500	460	14.5	5.1	3470	20.6	2.4	2.5	80	80	80	0.65	0.76	0.80	15.9	1.15

LEGEND	
LRC	Locked Rotor Current (A)
I_N	Nominal Amps
LRT	Locked Rotor Torque
BDT	Maximum torque
FLT	Full Load Torque
SF	Service Factor

MENU

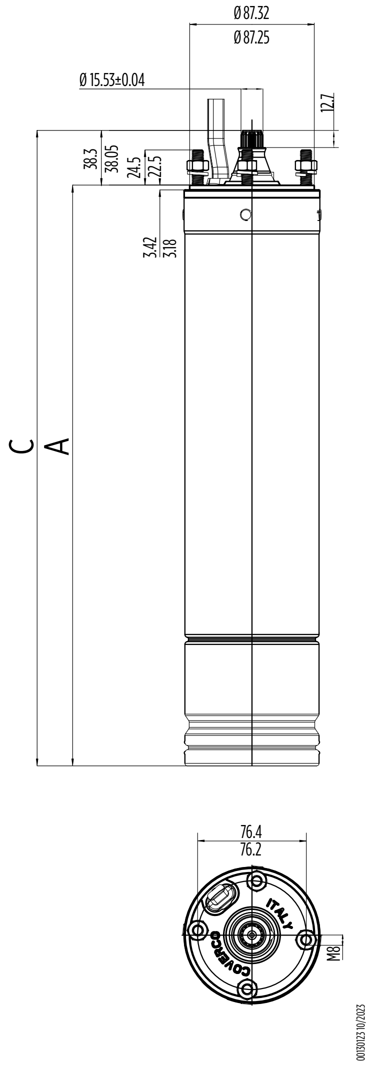
DIMENSIONAL DATA AND DRAWINGS

SINGLE-PHASE MOTORS 50/60 HZ

Type	Axial thrust	[kW]	A [mm]	C [mm]	Weight [kg]	Oil [kg]
NBS4 050 M	1500N/150 Kg.	0.37	326	364	7.1	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 400 M	4500N/450 Kg.	3.00	541	580	17	0,76
NBS4K 550 M	4500N/450 Kg.	4.00	636	674	22,7	0,94

THREE-PHASE MOTORS 50/60 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
NBS4K 400 T	4500N/450 Kg.	3.0	475.7	514	14.1	0.74
NBS4K 550 T	4500N/450 Kg.	4.0	541.7	580	17	0.76
NBS4K 750 T	4500N/450 Kg.	5.5	635.7	674	22.6	0.94
NBS4K 1000 T	4500N/450 Kg.	7.5	744.7	783	28	1.1

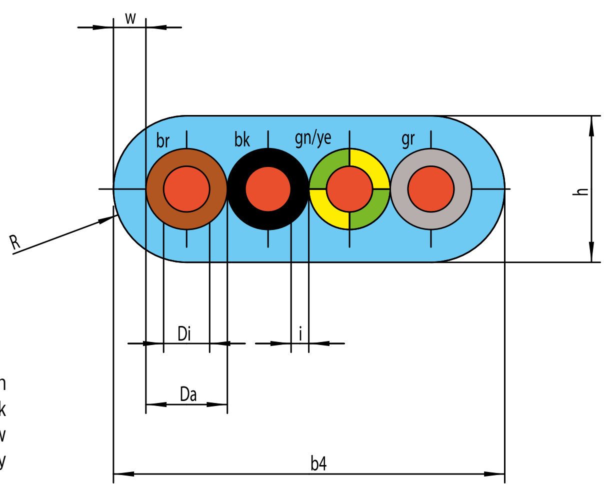


MOTOR LEADS

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

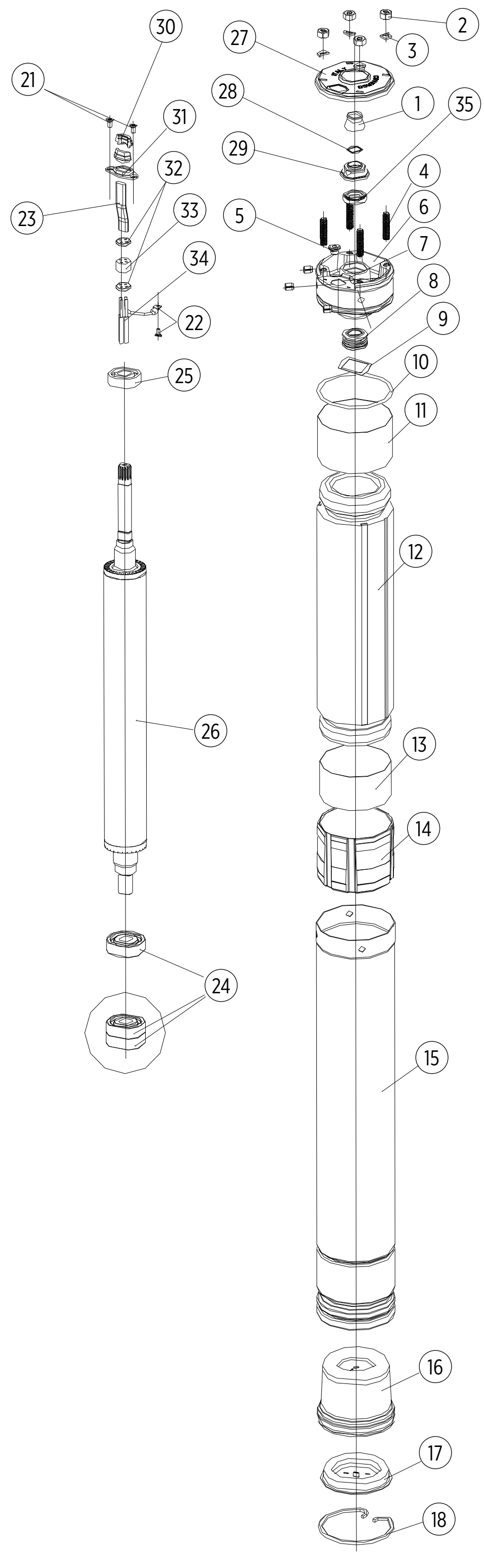
Standard cable	Lead length [m]
0.37 - 2.2 kW	1.5
3.0 - 5.5 kW	2.5
7.5 kW	3.5



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

MATERIALS

Pos.	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



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MENU

CONTROL BOXES

In line with its spirit of constant product research, Coverco has completed its range with a series of control boxes that assists the operation of its submersible motors. The range ensures a base protection with single-phase control boxes for PSC motor types (permanent split capacitor) from 0.37 kW (0.5 HP) up to 2.2 kW (3.0 HP).

The range of products is completed by a series of three-phase control boxes from 0.37 kW (0.5 HP) up to 7.5 kW (10 HP), mostly suitable for 4" motors.

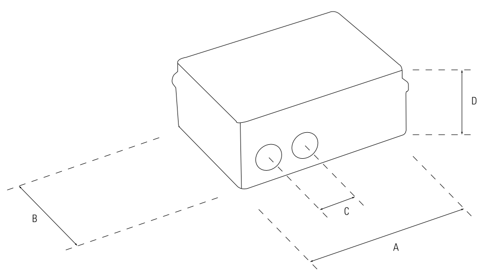
COV-BOX M SERIES

Control box for single phase submersible motors 220-240 V 50-60 Hz in conformity with IEC EN 60439-1 rules.

These control boxes are simple in their construction, very effective and reliable. They are equipped with connection details, a run capacitor, protection overload and relay which protect the motor from overload.

- **Technical features:**
  - Ratings: 0.37 kW (0.5 HP) up to 2.2 kW (3.0 HP)
  - Protection: IP50
  - Plastic box
  - Run capacitor
  - Thermal overload circuit brake with manual reset
  - Connection terminal board
  - Wiring diagram
  - Switch ON-OFF
  - Pilot lamp
  - Floating switch connection on switchboard (optional not supplied)

Type/ Code	Rating		Overload Protector Amp		Run Capacitor [mF]		Type Box
	[KW]	[HP]	50 Hz	60 Hz	50 Hz	60 Hz	
COV-BOX M50 050AF000C501	0.37	0.50	5	6	20	20	M
COV-BOX M75 050AG000C501	0.55	0.75	6	8	25	31.5	M
COV-BOX M100 050AH000C501	0.75	1.00	8	10	36	31.5	M
COV-BOX M150 050AL000C501	1.10	1.50	10	13	40	40	M
COV-BOX M200 050AM000C501	1.50	2.00	13	16	50	50	M
COV-BOX M300 050AP000C501	2.20	3.00	18	18	76	76	L



DIMENSIONS				
BOX	A	B	C	D
M	160	120	40	75
L	200	150	40	75

CONTROL BOXES

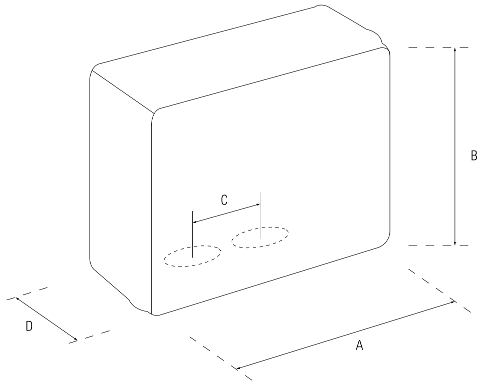
QC-AV/E SERIES

Control box for single phase submersible motors 220-240 v 50-60 Hz in conformity with IEC EN 60439-1 rules.

This type of single phase control boxes which has been producing since various years, ensure a total protection to the motor and at the same time, they support the starting thanks to their standard equipment based on a starting + run capacitors, and an overload protector. When compared to the base control box version of Coverco, the COV-BOX M, these boxes can enable the motor to start under low voltage or voltage drops.

- **Technical features:**
  - Ratings: 0.37 kW (0.5 HP) up to 2.2 kW (3.0 HP)
  - Protection: IP50
  - Plastic box
  - Electronic start capacitor / Disconnecting run capacitor
  - Thermal overload circuit brake with manual reset
  - Terminal board connections
  - Wiring diagram

Type/ Code	Rating		Overload Protector Amp		Run Capacitor [mF]		Start Capacitor [mF]		Type Box
	[KW]	[HP]	50 Hz	60 Hz	50 Hz	60 Hz	50 Hz	60 Hz	
QCAV/E 50 058AF000C501	0.37	0.50	5	6	20	20	43 ÷ 52		M
QCAV/E 75 058AG000C501	0.55	0.75	6	8	25	31.5			M
QCAV/E 100 058AH000C501	0.75	1.00	8	10	36	31.5			M
QCAV/E 150 058AL000C501	1.10	1.50	10	13	40	40			M
QCAV/E 200 058AM000C501	1.50	2.00	13	16	50	50			M
QCAV/E 300 058AP000C501	2.20	3.00	18	18	76	76	88 ÷ 106		L



DIMENSIONS				
BOX	A	B	C	D
M	200	150	40	75
L	255	200	40	100

MENU

COVERCO®

CONTROL BOXES

QC-AV SERIES

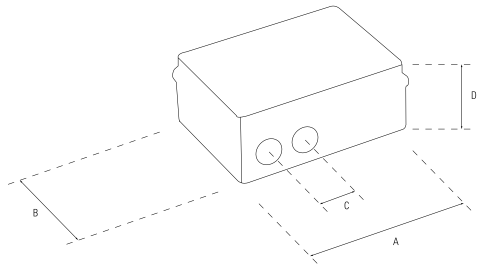
Control box for single phase submersible motors 220-240 v 50-60 Hz in conformity with IEC EN 60439-1 rules.

This type of single phase control boxes which has been producing since various years, ensure a total protection to the motor and at the same time, they support the starting thanks to their standard equipment based on a starting + run capacitors, an overload protector and a voltmetric relay. When compared to the base control box version of Coverco, the COV-BOX M, these boxes can enable the motor to start under low voltage or voltage drops.

- **Technical features:**
  - Ratings: from 3.0 kW (4.0 HP) up to 4.0 kW (5.5 HP).
  - Protection: IP50
  - Plastic box
  - Start electrolytic capacitor / Disconnecting relay / Potential relay / Run capacitor
  - Thermal overload circuit brake with manual reset
  - Connection terminal board
  - Wiring diagram
  - Pilot lamp / Switch ON-OFF

Type/ Code	Rating		Overload Protector Amp		Run Capacitor [mF]		Start Capacitor [mF]		Type Box
	[KW]	[HP]	50 Hz	60 Hz	50 Hz	60 Hz	50 Hz	60 Hz	
QC-AV 050 (on request)	0.37	0.50	5	6	20	20	20	20	M
QC-AV 075 (on request)	0.55	0.75	6	8	25	31.5	25	25	M
QC-AV 100 (on request)	0.75	1.00	8	10	36	31.5	40	40	M
QC-AV 150 (on request)	1.10	1.50	10	13	40	40	50	50	M
QC-AV 200 (on request)	1.50	2.00	13	16	50	50	50	50	M
QC-AV 300 (on request)	2.20	3.00	18	18	76	76	100 - 125	100 - 125	L
QC-AV 400 059AR000C501	3.00	4.00	25	25	100	125	156 - 200	156 - 200	XL
QC-AV 500 059AS000C501	3.70	5.00	30	30	130	150	156 - 200	156 - 200	XL
QC-AV 550 059AR000C501	4.00	5.50	30	35	130	150	156 - 200	156 - 200	XL

* on request



DIMENSIONS				
BOX	A	B	C	D
M	200	150	40	75
L	255	200	40	100
XL	315	235	40	125

CONTROL BOXES

COV-BOX T SERIES

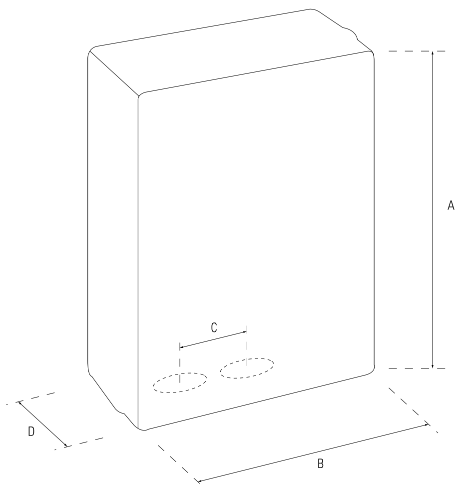
Control box for three phase submersible motors 380-415 v 50 Hz in conformity with IEC EN 60439-1 rules.

These are specific control boxes born to control and protect the three-phase Coverco 4" motors during their operation from 0.37 kW up to 7.5 kW. They are built with top quality materials and are recognized to be very researched by professional customers who want to have the best to protect their motors from misfunction.

- **Technical features:**
  - Ratings: 0.37 kW (0.50 HP) up to 7.5 kW (10 HP)
  - Protection: IP50
  - Plastic white box (240x190x110)
  - Metal zinc coated plate for grounding
  - General isolating switch with locking door
  - Line counter with thermal relay + adjustable scale and internal set
  - Protection cutout (fuses) for motor and auxiliary circuits
  - Green lamp indicating motor running
  - Floating switch connection (optional not supplied) on switchboard

Type/ Code	Rating		Ampèremeter Protection	Fuses for motor starting	Type Box
	[KW]	[HP]	50 Hz	50 Hz	
COV-BOX T050 (on request)	0.37	0.50	1.0 - 1.6	2	XL
COV-BOX T075 (on request)	0.55	0.75	1.8 - 2.7	2	XL
COV-BOX T100 (on request)	0.75	1.00	1.8 - 2.7	4	XL
COV-BOX T150 048AL000E501	1.10	1.50	2.7 - 4.0	4	XL
COV-BOX T200 048AM000E501	1.50	2.00	4.0 - 6.0	6	XL
COV-BOX T300 048AP000E501	2.20	3.00	6.0 - 9.0	8	XL
COV-BOX T400 048AR000E501	3.00	4.00	6.0 - 9.0	10	XL
COV-BOX T550 048AS000E501	4.00	5.50	9.0 - 12.5	12	XL
COV-BOX T750 048AT000E501	5.50	7.50	12.5 - 17.5	16	XL
COV-BOX T1000 048AU000E501	7.50	10.00	16.0 - 24.0	20	XL

* on request



DIMENSIONS				
BOX	A	B	C	D
XL	240	190	40	110

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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
02	Update of model numbers and technical data of High Thrust motors	5 - 11
03	update perf. Data 7,5kW High Thrust Motors 380-415V 50Hz und 460V/60Hz	7/8

WATCH THE YOUTUBE VIDEOS

4" Rewindable oil filled motors

NOTES

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