

Townsend Bearings



Inverters and Electric Motors



**Townsend
Bearings**



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*For details of Motor Dimensions 180 - 315, please call or email for more information.



Introduction

The 650 series is a family of AC drives that provide a no-fuss, cost effective solution for the simplest to the most complex open-loop AC motor control applications. The 650 has single key selectable pre-programmed applications so set-up is quick and easy without unnecessary complications.

Powers are available up to 1.5kW on Single Phase 230V supplies, and up to 110kW on Three Phase 400V supplies, and all units are available with integral EMC compliant filters.

Technical Specification

Power Supply: Single Phase Units: 220 - 240Vac +/- 10%; 50 - 60Hz +/- 5%
Three Phase Units: 380 - 460Vac +/- 10%; 50 - 60Hz +/-5%

Ambient: 0 - 40°C

Overload: 150% for 30 Seconds

Output Frequency: 0 - 240Hz

Environmental Protection: IP20

Inputs/Outputs

Analogue Inputs: 2; Speed control (0 - 10V, 4 - 20mA)

Analogue Outputs: 1; User configurable output frequency/load (0 - 10V)

Digital Inputs: 3 (650V 6); User configurable start/stop/direction/pre-set speeds (8)

Digital Inputs/Outputs: 1 (650V 2); User configurable as input or output

Digital Relay Outputs: 1; User configurable relay output (1A @ 240V)

All outputs configurable for : at (not at) speed / at (above) min speed / running (stopped) / healthy (tripped) / above (below) preset load.

Motor Thermistor Input

Integral Programming/Control Module

6 Button password protectable keypad giving control of:

- Start / Stop
- Direction
- Raise / Lower Speed
- Menu Navigation
- Parameter Setting

Backlit LCD giving 4-digit readout of:

- Output Current
- Setpoint Frequency
- Drive Rotating Warning
- Status Alarms (inc. Drive Ready; Overcurrent Trip; Overvoltage Trip; Heatsink Overtemp.; Motor Overtemp. + others)



Single Phase Controllers (230V Nominal)

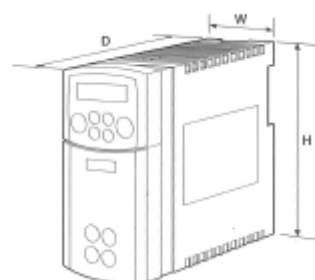
Three Phase Controllers (400V Nominal)

Type	Nominal Power (kW)	Output Current (A)	Package Size	Price (£)
650-002-230-F	0.25	1.5	1	116.10
650-003-230-F	0.37	2.2	1	125.10
650-005-230-F	0.55	3.0	1	136.80
650-007-230-F	0.75	4.0	1	160.20
650-011-230-F	1.1	5.5	2	216.00
650-015-230-F	1.5	7.0	2	229.50

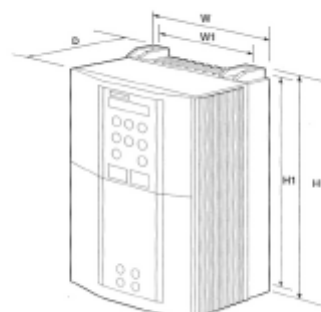
Type	Nominal Power (kW)	Output Current (A)	Package Size	Price (£)
650-003-400-F	0.37	1.5	2	229.50
650-005-400-F	0.55	2.0	2	242.10
650-007-400-F	0.75	2.5	2	255.60
650-011-400-F	1.1	3.5	2	265.50
650-015-400-F	1.5	4.5	2	292.50
650-022-400-F	2.2	5.5	2	355.50
650-030-400-F	3	6.8	3	442.80
650-040-400-F	4	9.0	3	468.90
650-055-400-F	5.5	12	3	560.70
650-075-400-F	7.5	16	3	742.50
650VC-0110-400	11 (15)	23 (31)	C	1030.50
650VC-0150-400	15 (18)	30 (37)	C	1435.50
650VD-0180-400	18 (22)	38 (45)	D	1818.00
650VD-0220-400	22 (30)	45 (59)	D	2119.50
650VD-0300-400	30 (37)	59 (73)	D	2443.50
650VE-0370-400	37 (45)	73 (87)	E	3064.50
650VE-0450-400	45 (55)	87 (105)	E	3501.00
650VE-0550-400	55 (75)	105 (145)	F	4261.50
650VE-0750-400	75 (90)	145 (165)	F	4590.00
650VE-0900-400	90 (110)	180 (205)	F	5476.50

Unit Dimensions

Package Size	Overall Dimensions			Fixing Centre		Weight (kg)
	H	W	D	H1	W1	
1	137	73	142	-	-	-
2	192	73	173	-	-	-
3	257	96	195	-	-	-
B	233	177	181	223	130	4.3
C	348	201	208	335	150	9.3
D	453	252	245	440	150	17.4
E	669	257	312	630	150	32.5
F	720	257	349	700	150	41.0



Package Size 1, 2 & 3



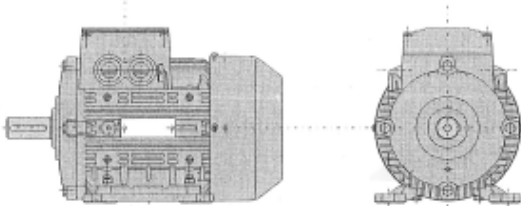
Package Size B, C, D, E & F



Size	Shaft		B5 Flange				B14A Flange				B14B Flange			
	Diameter	Length	PCD	Spigot	Diameter	Hole Dia.	PCD	Spigot	Diameter	Hole	PCD	Spigot	Diameter	Hole
56 Frame	9	20	100	80	120	7	65	50	80	M5	85	70	105	M6
63 Frame	11	23	115	95	140	10	75	60	90	M5	100	80	120	M6
71 Frame	14	30	130	110	160	10	85	70	105	M6	115	95	140	M8
80 Frame	19	40	165	130	200	12	100	80	120	M6	130	110	160	M8
90 Frame	24	50	165	130	200	12	115	95	140	M8	130	110	160	M8
100 Frame	28	60	215	180	250	14.5	130	110	160	M8	165	130	200	M10
112 Frame	28	60	215	180	250	14.5	130	110	160	M8	165	130	200	M10
132 Frame	38	80	265	230	300	14.5	165	130	200	M10	-	-	-	-
160 Frame	42	110	300	250	350	18.5	-	-	-	-	-	-	-	-
180 Frame	48	110	300	250	350	18.5	-	-	-	-	-	-	-	-
200 Frame	55	110	350	300	400	18.5	-	-	-	-	-	-	-	-

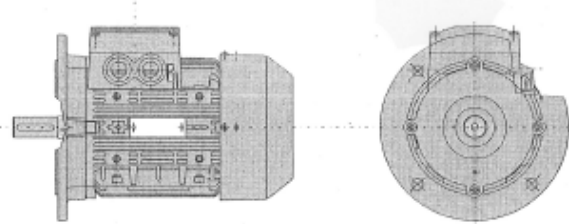
PCD - Pitch Circle Diameter

B3 - foot mounted motor



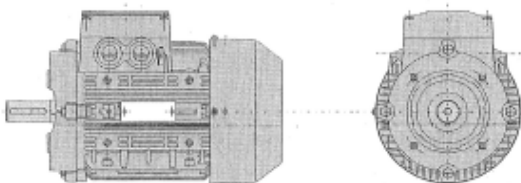
B5 - flange

The flange diameter is bigger than the motor frame diameter.
The holes are not tapped. B5 flanges are available for all motor sizes.



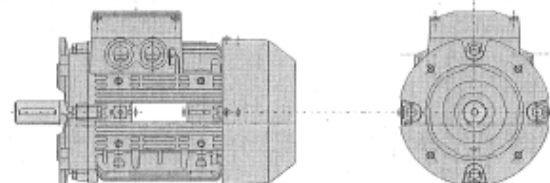
B14A - flange

The flange diameter is smaller than the motor frame diameter.
The holes are tapped. Available for frame sizes 56 to 132 mm.



B14B - flange

The flange diameter is bigger than B14A but smaller than B5 flange.
The holes are tapped. Available for frame sizes 56 to 112 mm.



**3 Phase - 2 Pole
3000 rpm - 50Hz**

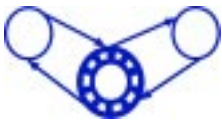


**Townsend
Bearings**

Output kW	Frame Size	Speed rpm	Rated Current (A)			Power Factor (cosφ)	Efficiency			Rated Torque (Nm)	Ratio			Noise Lpa dB(A)	Weight Kg	Product Code
			@380V	@400V	@415V		Class	100% Load (%)	75% Load (%)		Starting Current	Starting Torque	B/down Torque			
0.09	56M	2830	0.26	0.26	0.26	0.81		63	62	0.3	3.7	2.0	2.3	41	3	3PH.09KW2P
0.12		2800	0.32	0.32	0.32	0.83		65	64	0.41	3.7	2.1	2.4	41	3	3PH.12KW2P
0.18	63M	2820	0.52	0.51	0.53	0.82		63	62	0.61	3.7	2.0	2.2	49	3.5	3PH.18KW2P
0.25		2830	0.68	0.68	0.7	0.82		65	65	0.84	4.0	2.0	2.2	49	4.1	3PH.25KW2P
0.37	71M	2740	1.05	1.00	1.02	0.82		66	65	1.3	3.5	2.3	2.3	52	5	3PH.37KW2P
0.55		2800	1.38	1.36	1.41	0.82		71	70	1.9	4.3	2.5	2.6	52	6.6	3PH.55KW2P
0.75	80M	2855	1.75	1.73	1.79	0.86		73	72	2.5	5.6	2.3	2.4	56	8.2	3PH.75KW2P
1.1		2845	2.45	2.40	2.5	0.87	eff2	77	77	3.7	6.1	2.6	2.7	56	9.9	3PH1.1KW2P
1.5	90S	2860	3.40	3.25	3.35	0.85	eff2	79	80	5	5.5	2.4	2.7	60	12.9	3PH1.5KW2P
2.2	90L	2880	4.70	4.55	4.65	0.85	eff2	82	82	7.3	6.3	2.8	3.1	60	15.7	3PH2.2KW2P
3	100L	2890	6.25	6.10	6.15	0.85	eff2	84	84	9.9	6.8	2.8	3.0	62	22	3PH3KW2P
4	112M	2905	8.20	7.80	7.7	0.86	eff2	86	86	13	7.2	2.6	2.9	63	29	3PH4KW2P
6.5		2900	13.6	13.3	13.9	0.83		85	84	21.4	8.6	3.0	3.8	67	36	3PH6.5KW2P
5.5	132S	2925	10.6	10.3	10.4	0.89	eff2	86.5	86.5	18	5.9	2.0	2.8	68	41	3PH5.5KW2P
7.5		2930	14.1	13.8	13.8	0.89	eff2	88	88	24	6.9	2.3	3.0	68	49	3PH7.5KW2P
11	160M	2940	21.0	20.0	20.5	0.88	eff2	89.5	89.5	36	6.5	2.1	2.9	70	69	3PH11KW2P
15		2940	28.0	26.5	26	0.90	eff2	90	90.2	49	6.6	2.2	3.0	70	80	3PH15KW2P
18.5	160L	2940	34.0	32.5	32	0.91	eff2	91	91.2	60	7.0	2.4	3.1	70	93	3PH18.5KW2P
22	180M	2945	42	40.5	40	0.86	eff2	91.4	91.4	71	7.0	2.5	3.4	69	145	Special Order
30	200L	2950	56	54	53	0.88	eff2	91.9	91.5	97	7.0	2.4	3.0	73	205	Special Order
37		2950	69	66	65	0.88	eff2	92.6	92.4	120	7.3	2.5	3.2	73	225	Special Order
45	225M	2955	81	77	75	0.90	eff2	93.4	93.4	145	6.9	2.3	2.7	73	310	Special Order
55	250M	2965	98	93	91	0.91	eff2	94	94	177	6.9	2.1	2.8	75	415	Special Order
75		2970	138	130	128	0.88		94	93.6	241	7.5	2.5	3.5	75	490	Special Order
75	280S	2975	134	128	126	0.90	eff2	94.3	94.2	241	7.0	1.9	2.7	77	570	Special Order
90		2975	158	150	146	0.91		95.1	94.7	289	7.0	2.0	2.7	77	610	Special Order
90	280M	2975	158	150	146	0.91	eff2	95.1	94.7	289	7.0	2.0	2.7	77	610	Special Order
110		2975	190	182	178	0.91		95.8	95.8	353	7.5	2.2	2.9	77	670	Special Order
110	315S	2980	195	186	182	0.90		94.8	94.4	353	7.0	1.8	2.8	79	790	Special Order
132		2980	235	225	220	0.90		95.1	94.8	423	7.0	1.9	2.8	79	850	Special Order
132	315L	2980	235	225	220	0.90		95.1	94.8	423	7.0	1.9	2.8	79	850	Special Order
150		2980	265	250	245	0.91		95.5	95.4	481	7.0	1.8	2.8	79	990	Special Order
160	315L	2980	280	265	260	0.91		95.5	95.1	513	7.0	1.8	2.8	79	990	Special Order
160		2980	280	265	260	0.91		95.5	95.1	513	7.0	1.8	2.8	79	990	Special Order
185	315L	2980	325	305	295	0.92		95.5	95.4	593	7.0	1.9	2.8	79	1100	Special Order
200		2980	345	325	315	0.92		96	95.7	641	7.0	1.9	2.8	79	1100	Special Order
250	315	2979	437	415	400	0.90		96.2	96.2	801	7.0	1.8	2.8	82	1300	Special Order
315		2979	547	520	501	0.91		96.6	96.6	1010	7.0	1.8	2.8	82	1500	Special Order
355	355	2980	621	590	569	0.90		96.6	96.6	1140	6.5	1.7	2.5	77**	1900	Special Order
400		2980	695	660	636	0.91		96.7	96.7	1280	6.5	1.7	2.5	77**	2000	Special Order
500		2982	863	820	790	0.91		97.1	97.1	1600	6.5	1.8	2.6	77**	2200	Special Order
560	400	2985	958	910	877	0.91		97.1	97.1	1790	7.0	1.6	2.8	79**	2800	Special Order
630		2985	1074	1020	983	0.91		97.1	97.1	2020	7.0	1.6	2.8	79**	3000	Special Order
710		2985		670*		0.91		97.3	97.3	2270	7.0	1.7	2.8	79**	3200	Special Order
800	450	2986		760*		0.91		97.2	97.2	2560	7.0	0.9	3.0	81**	4000	Special Order
900		2986		840*		0.92		97.3	97.3	2880	7.0	0.9	2.8	81**	4200	Special Order
1000		2986		920*		0.93		97.4	97.4	3200	7.0	0.9	2.7	81**	4400	Special Order

*Current at 690V

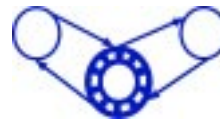
**Uni-Directional Fan



Output kW	Frame Size	Speed rpm	Rated Current (A)			Power Factor (cosφ)	Efficiency			Rated Torque (Nm)	Ratio			Noise Lpa dB(A)	Weight Kg	Product Code
			@380V	@400V	@415V		Class	100% Load (%)	75% Load (%)		Starting Current	Starting Torque	B/down Torque			
0.06 0.09	56M	1350	0.21	0.20	0.21	0.77		56	55	0.42	2.6	1.9	1.9	42	3	3PH.06KW4P
		1350	0.30	0.29	0.31	0.77		58	57	0.63	2.6	1.9	1.9	42	3	3PH.09KW4P
0.12 0.18	63M	1350	0.42	0.42	0.44	0.75		55	54	0.84	2.8	1.9	2.0	42	3.5	3PH.12KW4P
		1350	0.56	0.56	0.57	0.77		60	60	1.3	3.0	1.9	1.9	42	4.1	3PH.18KW4P
0.25 0.37	71M	1350	0.80	0.76	0.77	0.79		60	60	1.8	3.0	1.9	1.9	44	4.8	3PH.25KW4P
		1370	1.07	1.03	1.06	0.80		65	65	2.5	3.3	1.9	2.1	44	6	3PH.37KW4P
0.55 0.75	80M	1395	1.50	1.45	1.50	0.82		67	67	3.7	3.9	2.2	2.2	47	8	3PH.55KW4P
		1395	1.90	1.86	1.92	0.81		72	72	5.1	4.2	2.3	2.3	47	9.4	3PH.75KW4P
1.1 1.5	90S 90L	1415	2.60	2.55	2.60	0.81	eff2	77	77	7.4	4.6	2.3	2.4	48	12.3	3PH1.1KW4P
		1420	3.50	3.40	3.50	0.81	eff2	79	79	10	5.3	2.4	2.6	48	15.6	3PH1.5KW4P
2.2 3	100L	1420	4.80	4.70	4.80	0.82	eff2	82	82.5	15	5.6	2.5	2.8	53	22	3PH2.2KW4P
		1420	6.50	6.40	6.80	0.82	eff2	83	83.5	20	5.6	2.7	3.0	53	25	3PH3KW4P
4	112M	1440	8.40	8.20	8.30	0.83	eff2	85	85.5	27	6.0	2.7	3.0	59.5	31	3PH4KW4P
5.5 7.5	132S 132M	1455	11.4	11.4	11.9	0.81	eff2	86	86	36	6.3	2.5	3.1	62	43	3PH5.5KW4P
		1455	15.4	15.2	15.5	0.82	eff2	87	87.5	49	6.7	2.7	3.2	66	49	3PH7.5KW4P
11 15	160M 160L	1460	22.3	21.5	21.5	0.84	eff2	88.5	89	72	6.2	2.2	2.7	66	68	3PH11KW4P
		1460	29.5	28.5	28.5	0.84	eff2	90	90.2	98	6.5	2.6	3.0	65	93	3PH15KW4P
18.5 22	180M 180L	1465	36	35.0	35	0.84	eff2	90.4	90.6	121	6.8	2.4	3.1	65	140	3PH18.5KW4P
		1465	43	41.5	41	0.84	eff2	90.8	91.3	143	6.9	2.5	3.2	65	155	Special Order
30	200L	1465	58	56	56	0.84	eff2	91.5	91.4	196	7.1	2.9	3.0	65	200	Special Order
37 45	225S 225M	1475	70	67	67	0.86	eff2	92.9	93.1	240	7.0	2.5	3.1	65	300	Special Order
		1475	83	80	80	0.87	eff2	93.4	93.6	292	7.0	2.6	3.2	65	330	Special Order
55 55	250S 250M	1480	102	97	96	0.87		94	94.2	355	6.7	2.6	2.5	65	435	Special Order
		1480	102	97	96	0.87	eff2	94	94.2	355	6.7	2.6	2.5	65	435	Special Order
75		1480	138	132	130	0.87		94.5	94.8	484	7.1	2.7	2.6	65	495	Special Order
75 90	280S	1485	140	134	130	0.86	eff2	94.3	94.3	482	6.7	2.5	2.7	67	610	Special Order
		1485	170	160	160	0.86		95	95.1	579	6.8	2.5	2.8	67	660	Special Order
90 110	280M	1485	170	160	160	0.86	eff2	95	95.1	579	6.8	2.5	2.8	67	660	Special Order
		1485	205	194	192	0.86		95.3	95.2	707	7.5	2.6	3.0	67	730	Special Order
110 132	315S	1486	205	194	192	0.86		94.8	94.7	707	6.7	2.5	2.7	69	830	Special Order
		1486	240	232	232	0.86		95.5	95.4	848	7.2	2.7	3.0	69	910	Special Order
132		1486	240	232	232	0.86		95.5	95.4	848	7.2	2.7	3.0	69	910	Special Order
150	315M	1486	275	260	255	0.87		95.6	95.5	964	7.0	2.6	2.6	69	1060	Special Order
160		1486	290	275	270	0.87		95.8	95.8	1030	7.0	2.6	2.6	69	1060	Special Order
160		1486	290	275	270	0.87		95.8	95.8	1030	7.0	2.6	2.6	69	1060	Special Order
185 200	315L	1488	340	320	315	0.87		96	95.9	1190	7.0	2.7	2.7	69	1200	Special Order
		1488	365	345	340	0.87		96.2	96.1	1280	7.0	2.7	2.7	69	1200	Special Order
250 315	315	1488	447	425	410	0.88		96	96	1600	6.5	1.9	2.8	73	1300	Special Order
		1488	568	540	520	0.88		96.3	96.3	2020	6.8	2.0	2.8	73	1500	Special Order
355 400	355	1488	642	610	588	0.87		96.3	96.3	2280	6.5	2.1	2.6	75	1900	Special Order
		1488	726	690	665	0.87		96.4	96.4	2570	6.5	2.1	2.6	75	2000	Special Order
500		1488	895	850	819	0.88		96.8	96.8	3210	6.5	2.1	2.4	75	2200	Special Order
560 630	400	1492	1000	950	916	0.88		96.8	96.8	3580	6.5	1.9	2.7	78	2800	Special Order
		1492	1116	1060	1022	0.88		97	97	4030	6.8	1.9	2.7	78	3000	Special Order
710		1492		690*		0.89		97	97	4540	6.8	1.9	2.7	78	3200	Special Order
800	450	1492		780*		0.88		97	97	5120	7.00	1.6	2.6	81	4000	Special Order
900		1492		880*		0.88		97.1	97.1	5760	7.00	1.6	2.6	81	4200	Special Order
1000		1492		970*		0.89		97.1	97.1	6400	7.00	1.7	2.6	81	4400	Special Order

*Current at 690V

**3 Phase - 6 Pole
1000 rpm - 50Hz**



**Townsend
Bearings**

Output kW	Frame Size	Speed rpm	Rated Current (A)			Power Factor (cosφ)	Efficiency			Rated Torque (Nm)	Ratio			Noise Lpa dB(A)	Weight Kg	Product Code
			@380V	@400V	@415V		Class	100% Load (%)	75% Load (%)		Starting Current	Starting Torque	B/down Torque			
0.09	63M	850	0.48	0.44	0.50	0.66		45	50	1	2.0	1.8	1.9	39	4.1	3PH.09KW6P
0.12		860	0.53	0.53	0.55	0.65		50	50	1.33	2.2	1.8	1.9	39	4.2	3PH.12KW6P
0.18	71M	835	0.66	0.62	0.64	0.75		56	55	2	2.3	2.1	1.9	39	6.3	3PH.18KW6P
0.25		830	0.80	0.78	0.80	0.76		61	60	2.8	2.7	2.2	2.0	39	6.3	3PH.25KW6P
0.37	80M	920	1.18	1.20	1.25	0.72		62	61	3.9	3.1	1.9	2.1	40	7.5	3PH.37KW6P
0.55		910	1.62	1.60	1.66	0.74		67	66	5.8	3.4	2.1	2.2	40	9.4	3PH.55KW6P
0.75	90S	915	2.10	2.10	2.15	0.76		69	55	7.8	3.7	2.2	2.2	43	12.5	3PH.75KW6P
1.1	90L	915	3.00	3.00	2.95	0.77		72	71	11.5	3.8	2.3	2.3	43	15.7	3PH1.1KW6P
1.5	100L	925	4.00	4.00	4.10	0.75		74	73	15	4.0	2.3	2.3	47	24	3PH1.5KW6P
2.2	112M	940	5.40	5.40	5.30	0.78		78	77	22	4.6	2.2	2.5	52	27	3PH.2.2KW6P
3		940	7.20	7.20	7.00	0.78		80	79	30	4.8	2.4	2.4	57	35	3PH3KW6P
4	132M	950	9.50	9.40	9.70	0.76		80.5	80	40	4.5	2.1	2.4	63	46	3PH4KW6P
5.5		950	13	12.80	13.10	0.76		83	82	55	5.0	2.3	2.6	63	54	3PH5.5KW6P
7.5	160M	960	17.7	17	18.3	0.74		86	85	75	4.6	2.1	2.5	66	76	3PH7.5KW6P
11	160L	960	25.5	24.5	25.9	0.74		87.5	87	109	4.8	2.3	2.6	66	102	3PH11KW6P
15	180L	970	30.5	29.5	29.0	0.83		88.9	90	148	5.5	2.3	2.5	62	150	3PH15KW6P
18.5	200L	975	38	37	36.5	0.80		89.8	90	181	5.8	2.5	2.5	63	195	3PH18.5KW6P
22		975	45	43.5	43	0.81		90.2	90.5	215	6.0	2.6	2.6	63	205	Special Order
30	225M	978	59	56	55	0.84		92	92.5	293	5.7	2.6	2.2	57	305	Special Order
37	250S	980	72	69	67	0.84		92.4	93	361	6.0	2.6	2.1	60	410	Special Order
37	250M	980	72	69	67	0.84		92.4	93	361	6.0	2.6	2.1	60	410	Special Order
45		982	87	83	81	0.84		92.9	93.6	438	6.3	2.7	2.2	60	445	Special Order
45	280S	982	86	81	79	0.86		93	93.7	438	6.0	2.4	2.3	60	540	Special Order
55		984	104	99	96	0.86		93.6	94.1	534	6.2	2.5	2.4	60	580	Special Order
55	280M	984	104	99	96	0.86		93.6	94.1	534	6.2	2.5	2.4	60	580	Special Order
75		984	140	134	132	0.86		93.9	94.1	728	6.5	2.5	2.4	60	660	Special Order
75	315S	988	140	136	134	0.85		93.8	93.6	725	6.2	2.4	2.5	63	770	Special Order
90		988	168	162	158	0.85		94.2	94.4	870	6.2	2.4	2.5	63	830	Special Order
90	315M	988	168	162	158	0.85		94.2	94.4	870	6.2	2.4	2.5	63	830	Special Order
110		988	205	198	192	0.85		94.7	94.7	1065	6.6	2.6	2.5	63	970	Special Order
110	315L	988	205	198	192	0.85		94.7	94.7	1065	6.6	2.6	2.5	63	970	Special Order
132		988	245	235	230	0.86		94.7	94.6	1280	6.6	2.3	2.2	63	1060	Special Order
160		988	295	280	280	0.87		95	94.9	1550	6.6	2.4	2.3	63	1100	Special Order
200	315	989	363	345	333	0.87		95.7	95.7	1930	6.3	2.0	2.5	68	1300	Special Order
250		989	453	430	414	0.87		95.9	95.9	2410	6.3	2.0	2.5	68	1500	Special Order
315	355	993	568	540	520	0.87		96.2	96.2	3030	6.5	2.2	2.8	71	2000	Special Order
400		993	726	690	665	0.87		95.5	96.5	3850	6.5	2.2	2.8	71	2200	Special Order
450	400	992	821	780	752	0.86		96.5	96.5	4330	6.5	2.2	2.8	73	2800	Special Order
500		992	905	860	829	0.87		96.5	96.5	4810	6.5	2.3	2.8	73	3000	Special Order
560		992	1011	960	925	0.87		96.7	96.7	5390	6.5	2.3	2.8	73	3200	Special Order
630	450	993		1100		0.86		96.8	96.8	6060	6.5	2.0	2.6	75	4000	Special Order
710		993		710*		0.87		96.8	96.8	6830	6.5	2.0	2.5	75	4200	Special Order
800		993			790*		0.87		97	97	7690	6.5	2.0	2.5	75	4500

*Current at 690V



Output kW	Frame Size	Speed rpm	Rated Current (A)			Power Factor (cosφ)	Efficiency			Rated Torque (Nm)	Ratio			Noise Lpa dB(A)	Weight Kg	Product Code
			@380V	@400V	@415V		Class	100% Load (%)	75% Load (%)		Starting Current	Starting Torque	B/down Torque			
0.09	71M	630	0.36	0.36	0.36	0.68		53	53	1.4	2.2	1.9	1.7	36	6.3	Special Order
0.12		645	0.51	0.51	0.52	0.64		53	53	1.8	2.2	2.2	2.0	36	6.3	Special Order
0.18	80M	675	0.73	0.75	0.80	0.68		51	51	2.5	2.3	1.7	1.9	41	7.5	Special Order
0.25		685	1.01	1.03	1.10	0.64		55	53	3.5	2.6	2.0	2.2	41	9.4	Special Order
0.37	90S	675	1.15	1.13	1.18	0.75		63	62	6.2	2.9	1.6	1.8	41	10.5	Special Order
0.55	90L	675	1.63	1.58	1.60	0.76		66	65	7.8	3.0	1.7	1.9	41	13.2	Special Order
0.75		675	1.63	1.58	2.00	0.77		70	69	10.5	3.4	1.9	2.1	49.5	14	Special Order
0.75	100L	680	2.06	2.00	2.20	0.76		66	65	11	3.0	1.6	1.9	45	20	Special Order
1.1		680	3.00	2.90	3.00	0.76		72	71	16	3.3	1.8	2.1	45	22	Special Order
1.5	112M	705	4.10	3.90	4.20	0.76		74	73	21	3.7	1.8	2.1	49	24	Special Order
2.2	132S	700	5.90	5.70	6.00	0.74		75	74	30	3.9	1.9	2.3	53	41	Special Order
3	132M	700	7.90	7.60	7.90	0.74		77	76	40	4.1	2.1	2.4	53	49	Special Order
4	160M	715	9.90	10.00	10.60	0.72		80	79	54	4.5	2.2	2.6	63	61	Special Order
5.5		710	13.1	13.00	13.40	0.73		83.5	83	74	4.7	2.3	2.7	63	70	Special Order
7.5	160L	715	18.6	17.6	17.1	0.72		85.5	85	100	5.3	2.7	3.0	63	91	Special Order
11	180L	720	25.5	25.0	25.0	0.73		87.5	88.1	146	4.6	1.8	2.1	67	155	Special Order
15	200L	725	33.0	32.5	32.5	0.76		87.7	88.3	198	5.3	2.0	2.4	63	205	Special Order
18.5	225S	725	40	38	37.5	0.80		88.6	89.9	244	5.0	2.1	2.2	56	300	Special Order
22	225M	725	47	43.5	43.5	0.81		90.1	91.3	290	5.0	2.1	2.2	56	325	Special Order
30	250M	730	61	58	57	0.81		91.6	92.3	392	5.0	2.1	2.1	57	435	Special Order
37		730	76	72	71	0.81		91.9	92.6	484	5.1	2.2	2.2	57	475	Special Order
37	280S	732	72	70	70	0.82		92.7	93.3	483	5.5	2.2	2.2	58	550	Special Order
45		734	88	84	82	0.83		92.8	93.4	585	5.5	2.2	2.2	58	600	Special Order
45	280M	734	88	84	82	0.83		92.8	93.4	585	5.5	2.2	2.2	58	600	Special Order
55		734	106	102	99	0.83		93.2	93.7	716	5.8	2.3	2.3	58	660	Special Order
55	315S	738	106	104	103	0.82		93.1	93.6	712	6.0	2.2	2.4	62	740	Special Order
75		738	144	140	138	0.82		93.6	93.7	970	6.2	2.3	2.5	62	850	Special Order
75	315M	738	144	140	138	0.82		93.6	93.7	970	6.2	2.3	2.5	62	850	Special Order
90		738	174	166	164	0.83		93.8	94.3	1170	6.6	2.3	2.5	62	990	Special Order
110	315L	738	210	205	200	0.83		94	94.5	1420	6.6	2.3	2.5	62	1100	Special Order
132		738	255	245	240	0.82		94	94.6	1710	6.6	2.3	2.5	62	1200	Special Order
160	315	739	311	295	284	0.82		94.9	94.9	2070	6.0	2.1	2.3	65	1300	Special Order
200		739	389	370	357	0.82		95.2	95.2	2580	6.0	2.1	2.3	65	1500	Special Order
250	355	741	484	460	443	0.82		95.7	95.7	3220	6.1	2.1	2.4	67	2000	Special Order
315		741	611	580	559	0.82		96	96	4060	6.1	2.1	2.4	67	2200	Special Order
355	400	742	684	650	627	0.82		96.1	96.1	4570	6.5	2.0	2.6	69	2800	Special Order
400		742	768	730	704	0.82		96.2	96.2	5150	6.5	2.1	2.6	69	3000	Special Order
450		742	863	820	790	0.82		96.3	96.3	4790	6.5	2.1	2.6	69	3200	Special Order
500	450	744		920		0.81		96.4	96.4	6420	6.6	2.0	2.4	71	4000	Special Order
560		744		1040		0.81		96	96	7190	6.6	2.0	2.4	71	4200	Special Order
630		744		1160		0.81		96.6	96.6	8090	6.6	2.0	2.4	71	4500	Special Order



Capacitor Start - Capacitor Run Motors
230V 50Hz Insulation class F/B

Output kW	Frame Size	Speed rpm	Current Amps	Efficiency %	Power Factor (cosφ)	Ratio			Run Capacitor μF/V	Start Capacitor μF/V	Weight Kg	Product Code
						Starting Current	Starting Torque	B/down Torque				
2 Pole - 3000 rpm												
0.18	63	2895	1.3	62	0.94	5.2	1.90	2.50	5/450	25/320	4.1	1PH.18KW2PB3CCM
0.25		2850	1.55	68	0.99	4.6	1.80	1.90	8/450	25/320	4.7	1PH.25KW2PB3CCM
0.37	71	2800	2.55	63	0.96	3.9	1.70	1.66	9/450	40/320	5.4	1PH.37KW2PB3CCM
0.55		2820	3.4	71	0.95	4.0	1.70	1.72	12/450	40/320	7.4	1PH.55KW2PB3CCM
0.75	80	2845	4.5	71	0.98	4.1	1.71	1.60	16/450	60/320	8.8	1PH.75KW2PB3CCM
1.1		2860	6.4	73	0.98	4.4	1.70	1.75	22/450	80/320	10.5	1PH1.1KW2PB3CCM
1.5	90S	2845	8.9	72	0.98	4.5	2.00	2.04	30/450	120/320	13.4	1PH1.5KW2PB3CCM
2.2		2830	12.8	74	0.97	4.8	1.85	2.15	35/450	160/320	16.1	1PH2.2KW2PB3CCM
3	100L	2840	16.7	77	0.97	5.3	2.10	2.50	60/450	160/320	22.3	1PH3KW2PB3CCM
4 Pole - 1500 rpm												
0.12	63	1415	1.0	58	0.90	3.65	1.94	1.57	4/450	16/320	4.1	1PH.12KW4PB3CCM
0.18		1385	1.5	58	0.86	3.7	1.77	1.66	5/450	25/320	4.7	1PH.18KW4PB3CCM
0.25	71	1400	1.8	59	0.99	3.4	1.60	1.58	9/450	25/320	5.4	1PH.25KW4PB3CCM
0.37		1395	2.5	64	0.95	3.2	1.80	1.60	12/450	25/320	6.7	1PH.37KW4PB3CCM
0.55	80	1415	3.4	69	0.98	3.6	1.70	1.70	14/450	40/320	8.8	1PH.55KW4PB3CCM
0.75		1405	4.6	71	0.96	3.9	1.91	1.64	18/450	60/320	10	1PH.75KW4PB3CCM
1.1	90S	1420	6.3	74	0.98	3.8	1.62	1.78	30/450	80/320	12.7	1PH1.1KW4PB3CCM
1.5		1430	8.4	77	0.97	4.3	1.95	1.80	35/450	120/320	15.9	1PH1.5KW4PB3CCM
2.2	100L	1395	12.8	73	0.98	4.4	2.60	1.92	60/450	160/320	25	1PH2.2KW4PB3CCM

Permanent Capacitor Motors
230V 50Hz Insulation class F/B

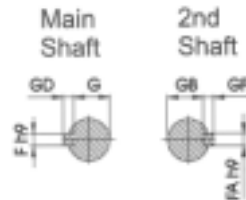
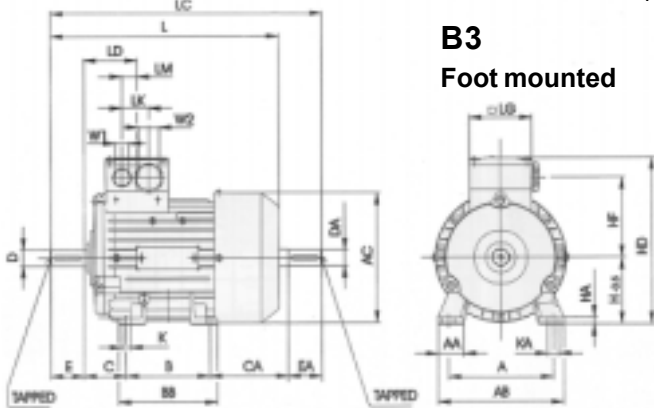
Output kW	Frame Size	Speed rpm	Current Amps	Efficiency %	Power Factor (cosφ)	Ratio			Run Capacitor μF/V	Weight Kg	Product Code
						Starting Current	Starting Torque	B/down Torque			
2 Pole - 3000 rpm											
0.18	63	2895	1.3	62	0.94	4.3	0.51	2.50	5/450	4.3	1PH.18KW2PB3PCM
0.25		2850	1.55	68	0.99	3.8	0.49	1.90	8/450	4.9	1PH.25KW2PB3PCM
0.37	71	2895	2.7	65	0.87	4.2	0.50	2.70	12/450	5.7	1PH.37KW2PB3PCM
0.55		2860	4	65	0.89	4.0	0.42	2.10	14/450	7.7	1PH.55KW2PB3PCM
0.75	80	2905	4.35	74	0.97	5.6	0.32	2.36	14/450	9	1PH.75KW2PB3PCM
1.1		2910	6	78	0.98	6.1	0.35	2.53	22/450	10.8	1PH1.1KW2PB3PCM
1.5	90S	2900	8.7	74	0.97	6.2	0.42	3.14	35/450	13.8	1PH1.5KW2PB3PCM
2.2		90L	2810	13	72	0.98	4.5	0.37	1.75	45/450	16.6
4 Pole - 1500 rpm											
0.12	63	1415	1.0	58	0.90	2.6	0.38	1.57	4/450	4.36	1PH.12KW4PB3PCM
0.18		1385	1.5	58	0.86	2.6	0.54	1.66	5/450	5.1	1PH.18KW4PB3PCM
0.25	71	1400	1.8	59	0.99	2.3	0.54	1.58	9/450	5.7	1PH.25KW4PB3PCM
0.37		1395	2.5	64	0.95	2.6	0.52	1.60	12/450	6.9	1PH.37KW4PB3PCM
0.55	80	1415	3.4	69	0.98	3.0	0.50	1.70	14/450	9.2	1PH.55KW4PB3PCM
0.75		1405	4.6	71	0.96	3.1	0.40	1.64	18/450	10.3	1PH.75KW4PB3PCM
1.1	90S	1420	6.3	74	0.98	3.1	0.37	1.78	30/450	13.1	1PH1.1KW4PB3PCM
1.5		90L	1430	8.4	77	0.97	3.7	0.35	1.80	35/450	16.2



Size	A	AA	AB	AC	B	BB	C	CA	H	HA	HD	HF	HG	K	KA	L	LA	LB	LC	LD	LF	LG	LK	LM	W1	W2
56M	90	25	110	116	71	87	36	53	56	6	157	77.5	101	5.8	9	169	8	149	200	69.5	-	75	32	18	M16	M25
63M	100	27	120	118	80	96	40	66	63	7	164	77.5	101	7	10	202.5	8	179.5	232	69.5	208.5	75	32	18	M16	M25
71M	112	30.5	132	139	90	106	45	83	71	7	182	87.5	111	7	10	240	9	210	278	63.5	239	75	32	18	M16	M25
80M	125	30.5	150	156.5	100	118	50	94	80	8	200	96.5	120	9.5	13.5	273.5	10	233.5	324	63.5	262.5	75	32	18	M16	M25
90S	140	30.5	165	173.6	100	143	56	143	90	10	218	104.5	128	10	14	331	10	281	389	79	333	75	32	18	M16	M25
90L	140	30.5	165	173.6	125	143	56	118	90	10	218	104.5	128	10	14	331	10	281	389	79	333	75	32	18	M16	M25

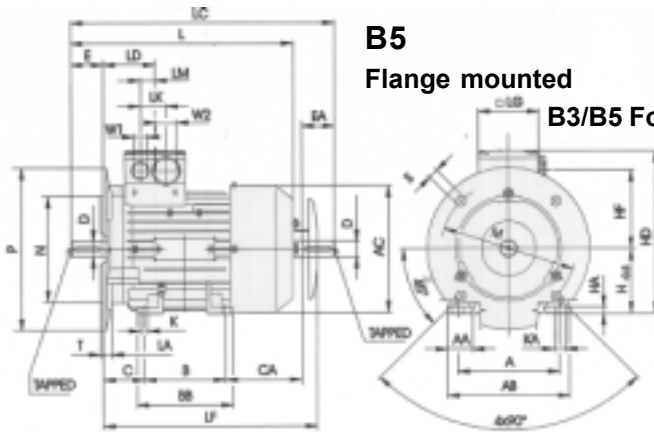
Size	Shaft					B5 Flange					B14A Flange					B14B Flange						
	D	E	F	G	GD	M	N	P	S	T	RA	M	N	P	S	T	RA	M	N	P	S	T
56M	9	20	3	7.2	3	100	80	120	7	3	10	65	50	80	M5	2.5	12	85	70	105	M6	2.5
63M	11	23	4	8.5	4	115	95	140	10	3	10	75	60	90	M5	2.5	12	100	80	120	M6	3
71M	14	30	5	11	5	130	110	160	10	3.5	12	85	70	105	M6	2.5	13	115	95	140	M8	3
80M	19	40	6	13	6	165	130	200	12	3.5	12	100	80	120	M6	3	13	130	111	160	M8	3.5
90S	24	50	8	20	7	165	130	200	12	3.5	18	115	95	140	M8	3	18	130	110	160	M8	3.5
90L	24	50	8	20	7	165	130	200	12	3.5	18	115	95	150	M8	3	18	130	110	160	M8	3.5

RA - depth of tapped hole in flange

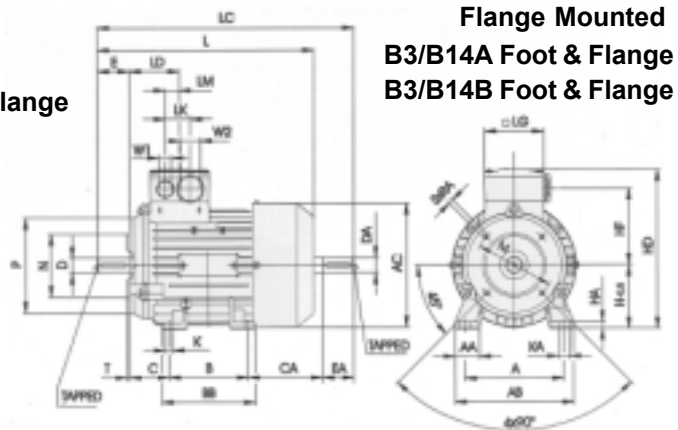


Quality Ball Bearings DE / NDE

56 frame	6201 / 6201 2Z C3
63 frame	6201 / 6201 2Z C3
71 frame	6202 / 6202 2Z C3
80 frame	6004 / 6004 2Z C3
90 frame	6205 / 6004 2Z C3



B3/B5 Foot & Flange



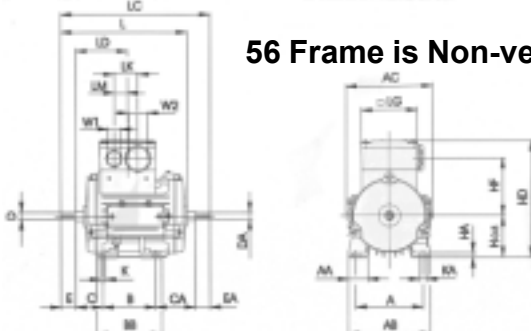
B14A

Flange Mounted B14B

Flange Mounted

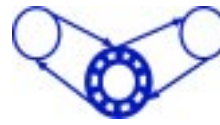
B3/B14A Foot & Flange B3/B14B Foot & Flange

56 Frame is Non-ventilated



56 frame	shaft Ø	9mm - M3 x 9mm
63 frame	shaft Ø	11mm - M4 x 13 mm
71 frame	shaft Ø	14mm - M5 x 12.5mm
80 frame	shaft Ø	19mm - M6 x 16mm
90 frame	shaft Ø	24mm - M8 x 19mm

3 Phase Motor Dimensions 100 - 160 Frame

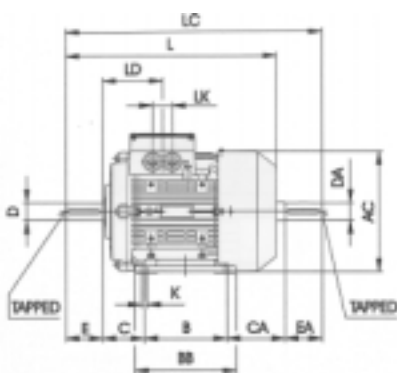


Townsend Bearings

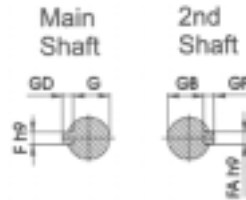
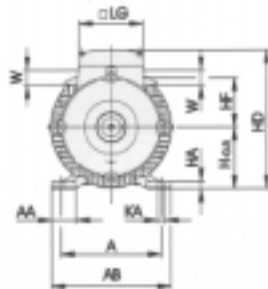
Size	A	AA	AB	AC	B	BB	C	CA	H	HA	HD	HF	HG	K	KA	L	LA	LB	LC	LD	LF	LG	LK	W1	W2
100L	160	42	196	196	140	176	63	125	100	12	235	78	135	12	16	372	11	312	438	102	363	120	42	M32	M32
112M	190	46	226	220	140	176	70	141	112	12	260	91	148	12	16	393	11	333	461	102	385	120	42	M32	M32
112M 2pole 5.5kW	190	46	226	220	140	176	70	179	112	12	260	91	148	12	16	431	11	371	499	102	423	120	42	M32	M32
112M 4pole 5.5kW	190	46	226	220	140	176	70	179	112	12	260	91	148	12	16	431	11	371	499	102	423	120	42	M32	M32
112M 6pole 3kW	190	46	226	220	140	176	70	141	112	12	260	91	148	12	16	393	11	333	461	102	385	120	42	M32	M32
132S	216	53	256	259	140	180	89	163	132	15	299	107	167	12	16	454	12	374	552	128	426	140	42	M32	M32
132M	216	53	256	259	178	218	89	125	132	15	299	107	167	12	16	454	12	374	552	128	426	140	42	M32	M32
132M 2pole 11kW	216	53	256	259	178	218	89	167	132	15	299	107	167	12	16	496	12	416	594	128	468	140	42	M32	M32
160M	254	60	300	314	210	256	108	183	160	18	357	127	197	14.5	19	588	13	478	721	160.5	531	165	54	M40	M40
160L	254	60	300	314	254	300	108	139	160	18	357	127	197	14.5	19	588	13	478	721	160.5	531	165	54	M40	M40

Size	Shaft					B5 Flange					B14A Flange						B14B Flange					
	D	E	F	G	GD	M	N	P	S	T	RA	M	N	P	S	T	RA	M	N	P	S	T
100L	28	60	8	24	7	215	180	250	14.5	4	14	130	110	160	M8	3.5	12	165	130	200	M10	3.5
112M	28	60	8	24	7	215	180	250	14.5	4	14	130	110	160	M8	3.5	14	165	130	200	M10	3.5
112M 2pole 5.5kW	28	60	8	24	7	215	180	250	14.5	4	14	130	110	160	M8	3.5	14	165	130	200	M10	3.5
112M 4pole 5.5kW	28	60	8	24	7	215	180	250	14.5	4	14	130	110	160	M8	3.5	14	165	130	200	M10	3.5
112M 6pole 3kW	28	60	8	24	7	215	180	250	14.5	4	14	130	110	160	M8	3.5	14	165	130	200	M10	3.5
132S	38	80	10	33	8	265	230	300	14.5	4	15	165	130	200	M10	3.5	-	-	-	-	-	-
132M	38	80	10	33	8	265	230	300	14.5	4	15	165	130	200	M10	3.5	-	-	-	-	-	-
132M 2pole 11kW	38	80	10	33	8	265	230	300	14.5	4	15	165	130	200	M10	3.5	-	-	-	-	-	-
160M	42	110	12	37	8	300	250	350	18.5	5	-	-	-	-	-	-	-	-	-	-	-	-
160L	42	110	12	37	8	300	250	350	18.5	5	-	-	-	-	-	-	-	-	-	-	-	-

RA - depth of tapped hole in flange



B3 Foot mounted



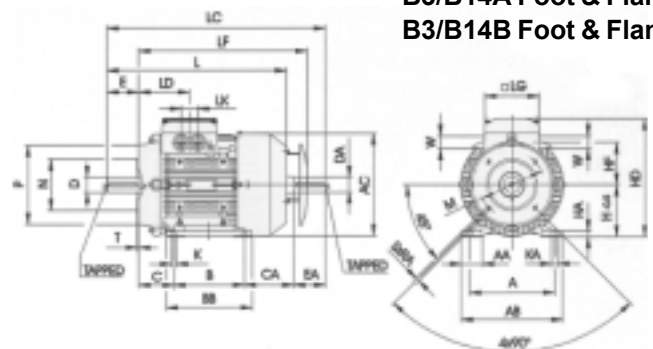
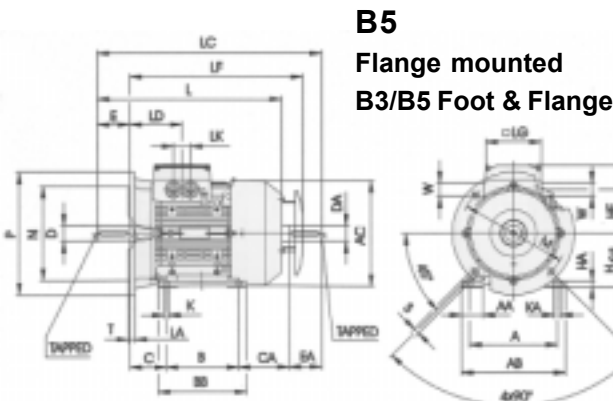
Quality Ball Bearings DE / NDE

100 frame	6206 / 6205 2Z C3
112 frame	6206 / 6205 2Z C3
132 frame	6208 / 6208 2Z C3
160 frame	6209 / 6209 2Z C3

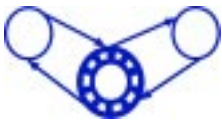
B14A Flange Mounted B14B

Flange Mounted

B3/B14A Foot & Flange B3/B14B Foot & Flange



100 frame	shaft Ø	28mm - M10 x 22mm
112 frame	shaft Ø	28mm - M10 x 22mm
132 frame	shaft Ø	38mm - M12 x 28mm
160 frame	shaft Ø	42mm - M16 x 36mm



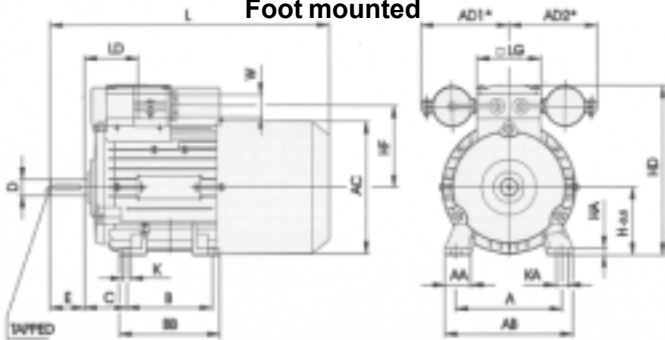
Size	kW	Poles	A	AA	AB	AC	AD1	AD2	B	B1	BB	C	H	HA	HD	HF	K	KA	L	LA	LD	LF	LG	W
63	0.18	2	100	27	120	118	99	94	80	N/A	96	40	63	7	164	77.5	7	10	253.5	8	69.5	259.5	75	M25 x 1.5
63	0.12	4	100	27	120	118	99	94	80	N/A	96	40	63	7	164	77.5	7	10	279.5	8	69.5	285.5	75	M25 x 1.5
71	All Sizes	2	112	30.5	132	139	99	94	90	N/A	106	45	71	7	182	87.5	7	10	291.5	9	63.5	290.5	75	M25 x 1.5
80	All Sizes	2	125	30.5	150	156.5	103.5	103.5	100	N/A	118	50	80	8	200	96.5	9.5	13.5	327.5	10	63.5	316.5	75	M25 x 1.5
90S	All Sizes	2	140	30.5	165	173.6	109	114	100	(125)	143	56	90	10	218	104.5	10	14	382.5	10	79	384.5	75	M25 x 1.5
90L	All Sizes	2	140	30.5	165	173.6	109	114	(100)	125	143	56	90	10	218	104.5	10	14	382.5	10	79	384.5	75	M25 x 1.5
100L	All Sizes	2	160	42	196	196	138	138	140	N/A	176	63	100	12	263	123	12	16	458	11	102	449	120	M32 x 1.5

Size	kW	Poles	Shaft					B5 Flange					B14A Flange					B14B Flange						
			D	E	F	G	GD	M	N	P	S	T	RA	M	N	P	S	T	RA	M	N	P	S	T
63	0.18	2	11	23	4	8.5	4	115	95	140	10	3	10	75	60	90	M5	2.5	12	100	80	120	M6	3
63	0.12	4	11	23	4	8.5	4	115	95	140	10	3	10	75	60	90	M5	2.5	12	100	80	120	M6	3
63	0.25	2	11	23	4	8.5	4	115	95	140	10	3	10	75	60	90	M5	2.5	12	100	80	120	M6	3
63	0.18	4	11	23	4	8.5	4	115	95	140	10	3	10	75	60	90	M5	2.5	12	100	80	120	M6	3
71	All Sizes	2	14	30	5	11	5	130	110	160	10	3.5	12	85	70	105	M6	2.5	13	115	95	140	M8	3
71	All Sizes but*	4	19	40	6	15.6	6	165	130	200	12	3.5	12	100	80	120	M6	3	13	130	111	160	M8	3.5
90S	All Sizes	2	24	50	8	20	7	165	130	200	12	3.5	18	115	95	140	M8	3	18	130	110	160	M8	3.5
90L	All Sizes	2	24	50	8	20	7	165	130	200	12	3.5	18	115	95	140	M8	3	18	130	110	160	M8	3.5
100L	All Sizes	2	28	60	8	24	7	215	180	250	14.5	4	14	130	110	160	M8	3.5	12	165	130	200	M10	3.5

B3

RA - depth of tapped hole in flange

Foot mounted



Quality Ball Bearings DE / NDE

63 frame	6201 / 6201 2Z C3
71 frame	6202 / 6202 2Z C3
80 frame	6004 / 6004 2Z C3
90 frame	6205 / 6004 2Z C3
100 frame	6206 / 6205 2Z C3

B5

Flange mounted

B3/B5 Foot & Flange

63 frame	shaft Ø	11mm - M4 x 13mm
71 frame	shaft Ø	14mm - M5 x 12.5 mm
80 frame	shaft Ø	19mm - M6 x 16mm
90 frame	shaft Ø	24mm - M8 x 19mm
100 frame	shaft Ø	28mm - M10 x 22mm

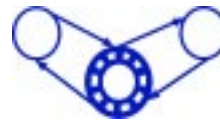
B14A

Flange Mounted B14B

Flange Mounted

B3/B14A Foot & Flange B3/B14B Foot & Flange

Single Phase Motor Dimensions Permanent Capacitor Motors 63 - 90 Frame



Townsend Bearings

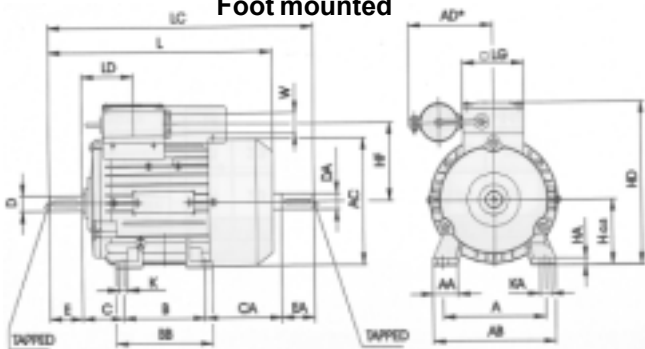
Size	kW	Poles	A	AA	AB	AC	AD	B	B1	BB	C	H	HA	HD	HF	K	KA	L	LA	LD	LF	LG	W
63	0.18	2	100	27	120	118	94	80	N/A	96	40	63	7	164	77.5	7	10	202.5	8	69.5	208.5	75	M25 x 1.5
63	0.12	4																					
63	0.25	2																					
63	0.18	4																					
71	All Sizes		112	30.5	132	139	94	90	N/A	106	45	71	7	182	87.5	7	10	240	9	63.5	239	75	M25 x 1.5
80	All Sizes but*		125	30.5	150	156.5	103.5	100	N/A	118	50	80	8	200	96.5	9.5	13.5	273.5	10	63.5	262.5	75	M25 x 1.5
80*	1.1	2	125	30.5	150	156.5	103.5	100	N/A	118	50	80	8	200	96.5	9.5	13.5	316	10	63.5	305	75	
90S	All Sizes		140	30.5	165	173.6	109	100	(125)	143	56	90	10	218	104.5	10	14	331	10	79	333	75	M25 x 1.5
90L	2.2	2	140	30.5	165	173.6	109	(100)	125	143	56	90	10	218	104.5	10	14	374	10	79	376	75	M25 x 1.5
90L	1.5	4	140	30.5	165	173.6	109	(100)	125	143	56	90	10	218	104.5	10	14	331	10	79	333	75	M25 x 1.5

Size	kW	Poles	Shaft					B5 Flange					B14A Flange					B14B Flange						
			D	E	F	G	GD	M	N	P	S	T	RA	M	N	P	S	T	RA	M	N	P	S	T
63	0.18	2	11	23	4	8.5	4	115	95	140	10	3	10	75	60	90	M5	2.5	12	100	80	120	M6	3
63	0.12	4	11	23	4	8.5	4	115	95	140	10	3	10	75	60	90	M5	2.5	12	100	80	120	M6	3
63	0.25	2	11	23	4	8.5	4	115	95	140	10	3	10	75	60	90	M5	2.5	12	100	80	120	M6	3
63	0.18	4	11	23	4	8.5	4	115	95	140	10	3	10	75	60	90	M5	2.5	12	100	80	120	M6	3
71	All Sizes		14	30	5	11	5	130	110	160	10	3.5	12	85	70	105	M6	2.5	13	115	95	140	M8	3
80	All Sizes but*		19	40	6	15.5	6	165	130	200	12	3.5	12	100	80	120	M6	3	13	130	111	160	M8	3.5
80*	1.1	2	19	40	6	15.5	6	165	130	200	12	3.5	12	100	80	120	M6	3	13	130	111	160	M8	3.5
90S	All Sizes		24	50	8	20	7	165	130	200	12	3.5	18	115	95	140	M8	3	18	130	110	160	M8	3.5
90L	2.2	2	24	50	8	20	7	165	130	200	12	3.5	18	115	95	140	M8	3	18	130	110	160	M8	3.5
90L	1.5	4	24	50	8	20	7	165	130	200	12	3.5	18	115	95	140	M8	3	18	130	110	160	M8	3.5

B3

RA - depth of tapped hole in flange

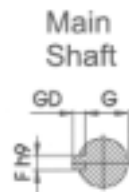
Foot mounted



Quality Ball Bearings

DE / NDE

63 frame	6201 / 6201 2Z C3
71 frame	6202 / 6202 2Z C3
80 frame	6004 / 6004 2Z C3
90 frame	6205 / 6004 2Z C3



B5

Flange mounted

B3/B5 Foot & Flange

63 frame	shaft Ø	11mm - M4 x 13 mm
71 frame	shaft Ø	14mm - M5 x 12.5mm
80 frame	shaft Ø	19mm - M6 x 16mm
90 frame	shaft Ø	24mm - M8 x 19mm

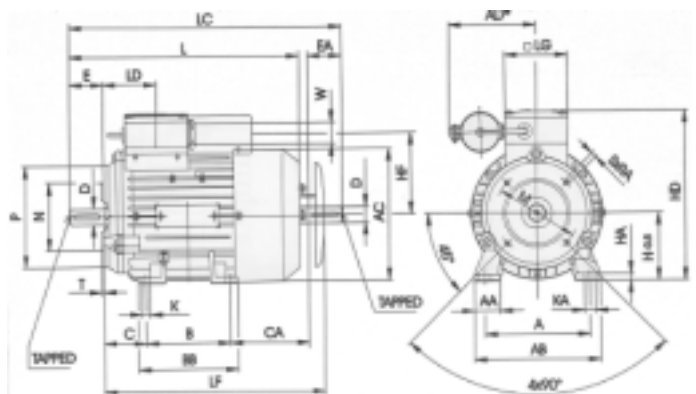
B14A

Flange Mounted

B14B

Flange Mounted

B3/B14A Foot & Flange
B3/B14B Foot & Flange



Townsend Bearings & Transmissions Limited

**Unit 1, St.Andrews Industrial Estate,
Bridport, Dorset. DT6 3EX. England.**

**Tel : 01308 456933 (UK only) +44 1308 456933 (Outside the UK)
Fax : 01308 427913 (UK only) +44 1308 427913 (Outside the UK)**

Email : sales@townsendbearings.co.uk

www.townsendbearings.co.uk