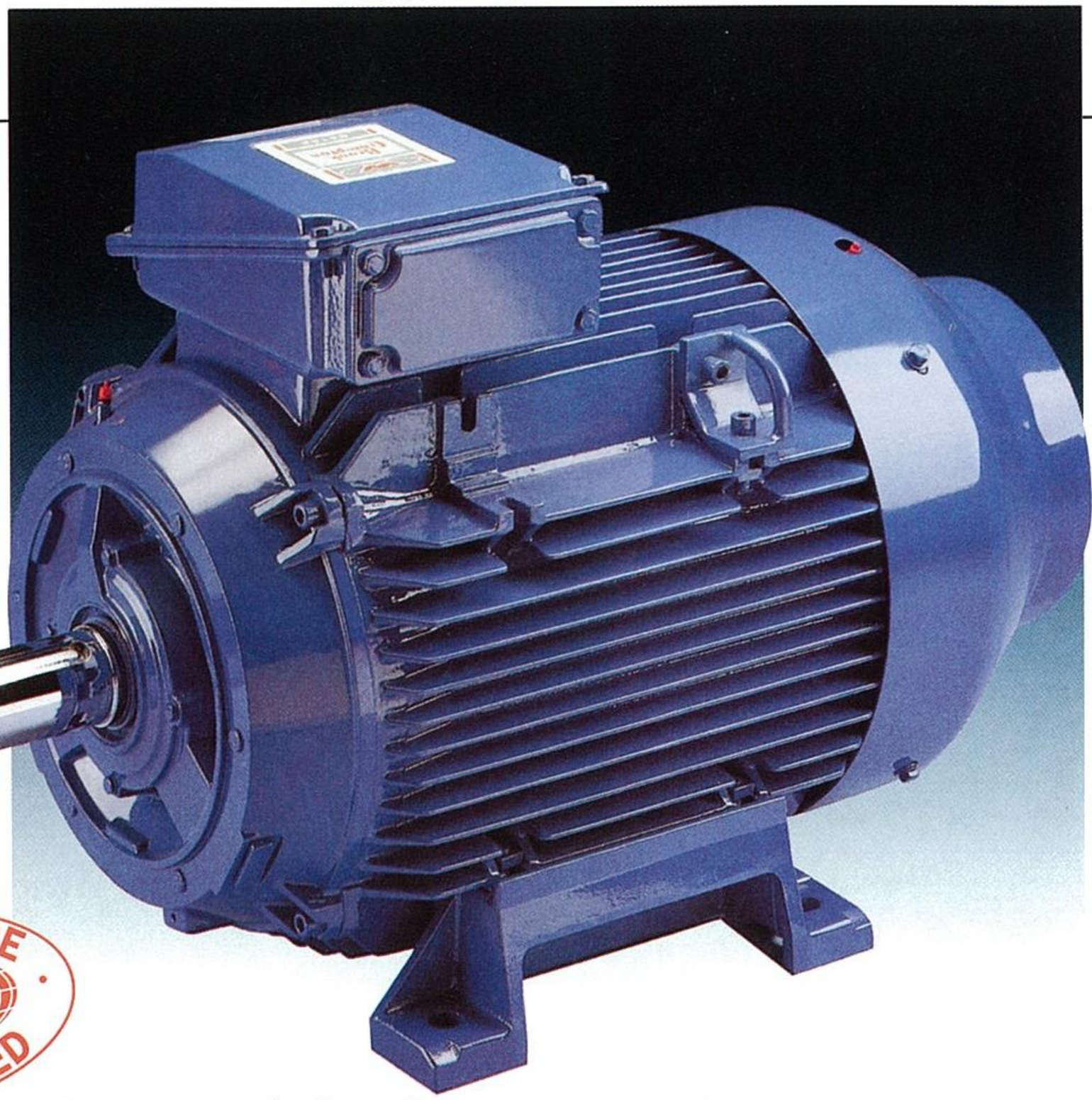
Brook Crompton
T range motors
Frame sizes T-DA63 to TU-DF315

9816E



PERFORMANCE GUARANTEED

A world class motor range

PERFORMANCE GUARANTEED

A wide range of benefits you can rely upon.

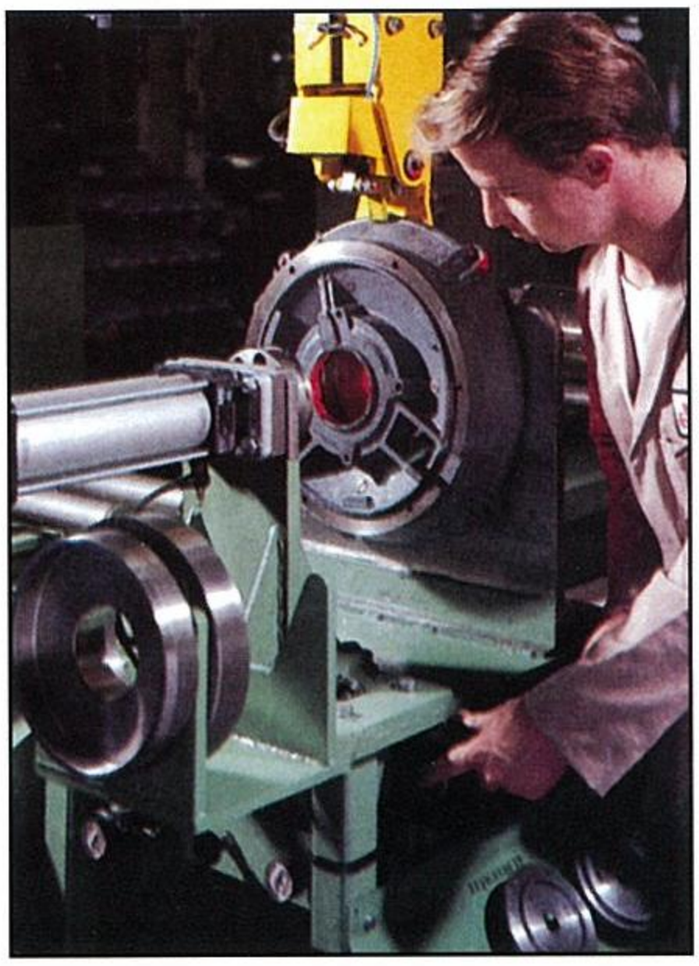
High efficiency - ***guaranteed***
Optimised designs ensure guaranteed efficiencies across all loads reducing running costs.

Low noise levels - ***guaranteed***
Radical design of the cooling circuit guarantees low noise levels, achieving quiet environments.

High power factor - ***guaranteed***
High power factors guarantee reduced off load running costs and good performance on 'over voltage' applications.

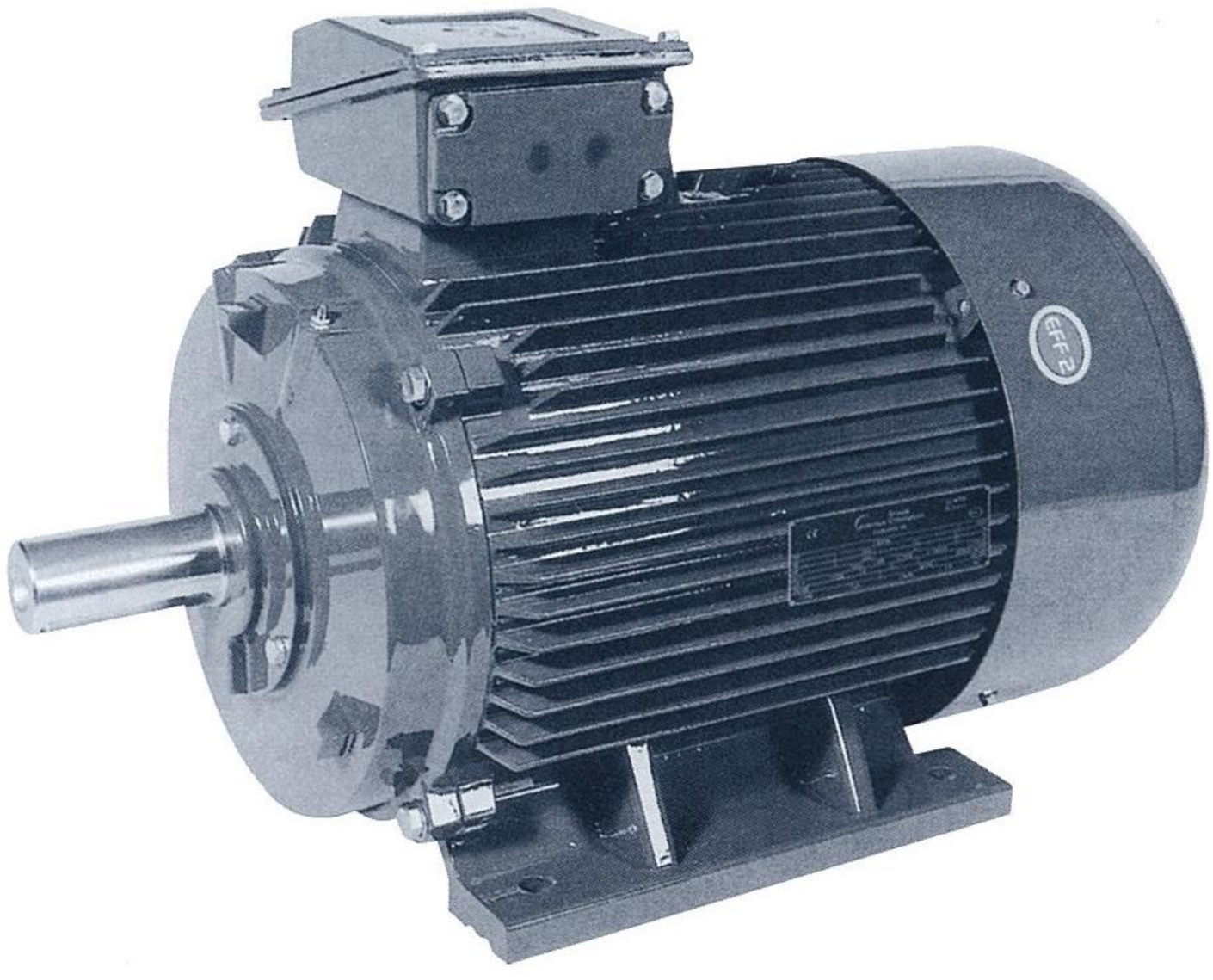
Low starting current - ***guaranteed***
Highly researched rotor designs guarantee low starting currents in star or delta without limiting the torque available.

High starting torque - ***guaranteed***
Maximum torque in star or delta guarantees good acceleration of drives.



BROOK CROMPTON

Standard three-phase induction motors



Brook Crompton

Brook Crompton is a leading manufacturer of electric motors for the global industrial market. Our products are used in every industrial activity and are sold chiefly to OEMs-notably manufacturers of fans, pumps, compressors, mechanical handling and process machinery. Sales are also made directly to users.

We have manufacturing facilities in 5 countries and sales and service outlets in a further 15. 4,000 employees world-wide, backed by a network of distributors, provide strong customer support.

T range

The Brook Crompton 'T' range is a high quality standard range of electric motors with a specification suitable for most industrial applications. It is manufactured in ISO 9001 approved factories and stocked in strategic locations in major markets for metric motors.

Quality assurance

Stringent quality procedures are observed from first design to finished product in accordance with the ISO9001 documented quality systems.

Our factories have been assessed to meet these requirements, a further assurance that only the highest possible standards of quality are accepted.

Benefits include:

- full output range to meet your requirements
- where applicable, efficiency outputs are within the EFF 2 band
- robust construction for long life
- mountings: foot, flange, face or combination
- eurovoltage: up to 3kW 230/400V; 4kW and above 400/690V
- optional 220/440V dual wound
- frequency 50 or 60Hz
- class F insulation with class B temperature rise
- IP55
- balance to grade N
- shaft key supplied on standard extensions
- sheet metal fan cover
- metric entries - glands fitted on frames 180 and below
- stock locations throughout the world

Performance data

3000 min^{-1} *(2 pole)*

Rated power P_N kW	hp	Full load speed in revolutions per minute n min^{-1}	Frame reference and size Type Cast iron	Aluminium	Full load current at rated voltage I_N 230 V A	380 V A	400 V A	415 V A	Efficiency η 1.0 P_N	Power factor Cos Ø 1.0 P_N	Direct on line starting torque ratio $\frac{M_A}{M_N}$	Direct on line starting current ratio $\frac{I_A}{I_N}$	Direct on line pull up torque $\frac{M_K}{M_N}$	Rotor inertia WK^2 J kgm^2
0.25	0.33	2725		**T-DA63MB**	1.19	0.72	0.68	0.65	66	0.80	2.2	3.5	2.2	0.0002
0.37	0.5	2730		**T-DA71MA**	1.56	0.94	0.90	0.85	70	0.85	2.3	4.1	2.4	0.0004
0.55	0.75	2765		**T-DA71MB**	2.30	1.39	1.32	1.26	75	0.80	2.8	4.8	2.6	0.0005
0.75	1.0	2770		**T-DA80MA**	3.0	1.8	1.72	1.65	75	0.84	2.4	5.0	2.4	0.0008
1.1	1.5	2770		**T-DA80MB**	4.25	2.6	2.45	2.35	78	0.83	2.6	5.5	2.7	0.0009
1.5	2.0	2840		**T-DA90SA**	5.7	3.5	3.3	3.1	78.5	0.84	2.5	5.6	2.6	0.0019
2.2	3.0	2845		**T-DA90LA**	8.0	4.8	4.6	4.4	81.5	0.85	2.9	6.3	3.0	0.0021
3.0	4.0	2895		**T-DA100LA**	10.4	6.3	6.0	5.7	83.5	0.87	2.5	7.0	2.9	0.005
4.0	5.5	2915		**T-DA112MA**	-	8.2	7.8	7.4	85	0.87	2.2	7.4	2.7	0.0088
5.5	7.5	2925		**T-DA132SA**	-	10.9	10.3	9.8	86.5	0.89	2.4	7.5	2.8	0.017
7.5	10	2925		**T-DA132SB**	-	14.5	13.7	13.1	87.5	0.90	2.5	7.7	2.8	0.02
11	15	2935	**T-DF160MA**		-	21.1	20.2	19.2	88.5	0.89	2.7	8.3	3.4	0.025
15	20	2930	**T-DF160MB**		-	28.1	26.7	25.5	90	0.90	1.8	8.0	2.8	0.039
18.5	25	2940	**T-DF160LA**		-	33.9	32.2	30.7	91	0.91	2.3	9.2	2.6	0.063
22	30	2935	**T-DF180MA**		-	40.4	38.3	36.5	91	0.91	2.3	8.3	2.6	0.072
30	40	2945	**T-DF200LA**		-	56.0	53.2	51.3	91.5	0.89	2.3	6.5	1.8	0.124
37	50	2951	**T-DF200LB**		-	67.7	54.4	62.0	92.2	0.90	2.5	7	1.7	0.139
45	60	2953	**TU-DF225MA**		-	81.0	76.9	74.1	92.8	0.91	2.5	6.9	2.5	0.233
55	75	2956	**TU-DF250MA**		-	101.7	96.6	93.1	92.3	0.89	2.6	7.6	1.9	0.312
75	100	2974	**TU-DF280SA**		-	135.0	128.2	123.5	93.8	0.90	2.2	7	1.7	0.597
90	125	2970	**TU-DF280MA**		-	158.0	150.1	144.6	94.1	0.92	2.1	6.8	1.9	0.675
110	150	2959	**TU-DF315SA**		-	194.3	184.6	178.0	94.5	0.91	2.4	6	2	1.18
132	175	2983	**TU-DF315MA**		-	230.0	218.5	210.6	94.8	0.92	2.4	7.3	2	1.55
160	215	2978	**TU-DF315LA**		-	277.0	263.1	253.5	95.4	0.92	2.7	7.8	1.8	1.76
200	270	2971	**TU-DF315LB**		-	348.0	330.6	318.7	94.9	0.92	2.7	7.5	2	2.02
250	335	2984	**TU-DF355M**		-	482.2	458.1	441.6	94.9	0.83	1.8	6.7	1.5	3.56
315	420	2986	**TU-DF355L**		-	595.4	565.6	545.1	95.7	0.84	1.8	6.2	1.5	4.16

Notes

For typical speed and current curves see page 15

Performance figures are subject to IEC tolerances

Performance figures are based on a 400V winding

$$J\ (WK^2 \text{ or } WR^2) = \frac{GD^2}{4}$$

$$J \text{ in lb ft}^2 = \frac{kgm^2}{0.042}$$

Performance data

1500 min^{-1} *(4 pole)*

P_N			Type		I_N										
kW	hp	n	Cast iron	Aluminium	230 V	380 V	400 V	415 V	η	Cos Ø	M_A/M_N	I_A/I_N	M_K/M_N	J
		min^{-1}			A	A	A	A	1.0 P_N	1.0 P_N				kgm^2
0.18	0.25	1370		**T-DA63MB**	1.07	0.65	0.62	0.59	62	0.68	2.1	3.0	2.1	0.0004
0.25	0.33	1350		**T-DA71MA**	1.23	0.75	0.71	0.68	66	0.77	1.9	3.3	1.9	0.0006
0.37	0.5	1380		**T-DA71MB**	1.7	1.03	0.98	0.93	71	0.77	2.1	3.7	2.2	0.0008
0.55	0.75	1390		**T-DA80MA**	2.5	1.60	1.51	1.45	70	0.75	2.2	4.0	2.4	0.0013
0.75	1.0	1385		**T-DA80MB**	3.1	1.95	1.88	1.8	74	0.78	2.3	4.3	2.6	0.0019
1.1	1.5	1415		**T-DA90SA**	4.7	2.8	2.6	2.5	76.2	0.80	2.1	4.7	2.4	0.0032
1.5	2.0	1420		**T-DA90LA**	6.0	3.6	3.4	3.3	78.5	0.80	2.4	5.3	2.7	0.0038
2.2	3.0	1420		**T-DA100LA**	8.3	5.0	4.8	4.6	81	0.82	2.2	5.5	2.6	0.0067
3.0	4.0	1415		**T-DA100LB**	11.2	6.8	6.5	6.2	82.7	0.81	2.6	6.0	3.0	0.0079
4.0	5.5	1445		**T-DA112MA**	-	8.6	8.1	7.7	84.5	0.84	2.3	7.2	2.7	0.0197
5.5	7.5	1450		**T-DA132SA**	-	11.4	10.9	10.3	86	0.85	2.3	7.0	2.9	0.026
7.5	10	1455		**T-DA132MA**	-	15.1	14.4	13.7	87.5	0.86	2.4	7.5	3.1	0.035
11	15	1460	**T-DF160MA**	-	21.7	20.6	19.6	88.5	0.87	2.3	7.5	2.5	0.045	
15	20	1460	**T-DF160LA**	-	28.5	27	25.7	90	0.89	2.3	7.6	2.8	0.074	
18.5	25	1460	**T-DF180MA**	-	33.9	32.2	30.7	91	0.91	2.0	7.7	2.6	0.12	
22	30	1455	**T-DF180LA**	-	39.9	37.9	36.1	91	0.92	2.3	8.1	2.9	0.232	
30	40	1472	**T-DF200LA**	-	56.0	53.2	51.3	91.4	0.89	1.9	6.5	1.9	0.262	
37	50	1476	**TU-DF225SA**	-	70.9	67.4	64.9	92.2	0.86	1.6	6.5	1.6	0.406	
45	60	1477	**TU-DF225MA**	-	85.0	80.7	77.8	92.5	0.87	1.8	6.8	1.8	0.469	
55	75	1475	**TU-DF250MA**	-	103.3	98.1	94.6	93.0	0.87	1.8	6.4	1.8	0.66	
75	100	1482	**TU-DF280SA**	-	136.8	129.9	125.3	93.6	0.89	1.7	5.9	1.7	1.12	
90	125	1484	**TU-DF280MA**	-	163.1	154.9	149.3	93.9	0.87	1.6	6.4	1.6	1.46	
110	150	1483	**TU-DF315SA**	-	200.8	190.7	183.8	94.6	0.88	1.6	5.9	1.6	3.11	
132	175	1485	**TU-DF315MA**	-	246.3	233.9	225.5	94.7	0.86	1.6	7	1.6	3.29	
160	215	1487	**TU-DF315LA**	-	298.8	283.9	273.5	95.7	0.85	1.7	5.8	1.7	3.79	
200	270	1485	**TU-DF315LB**	-	359.3	341.4	329.0	96.1	0.88	1.9	4.8	1.9	4.49	
250	335	1485	**TU-DF355M**	-	443.8	421.6	406.4	95.1	0.9	1.7	6.5	1.7	5.67	
315	420	1485	**TU-DF355L**	-	550.7	523.2	504.3	95.5	0.91	1.5	6.1	1.5	6.66	

Notes

For typical speed and current curves see page 15

Performance figures are subject to IEC tolerances

Performance figures are based on a 400V winding

$$J\ (WK^2 \text{ or } WR^2) = \frac{GD^2}{4}$$

$$J \text{ in lb ft}^2 = \frac{kgm^2}{0.042}$$

Performance data

1000 min^{-1} *(6 pole)*

Rated power		Full load speed in revolutions per minute	Frame reference and size		Full load current at rated voltage				Efficiency	Power factor	Direct on line starting torque ratio	Direct on line starting current ratio	Direct on line pull up torque	Rotor inertia WK^2
P_N			Type		I_N									
kW	hp	n min^{-1}	Cast iron	Aluminium	230 V A	380 V A	400 V A	415 V A	η 1.0 P_N	Cos Ø 1.0 P_N	$\frac{M_A}{M_N}$	$\frac{I_A}{I_N}$	$\frac{M_K}{M_N}$	J kgm^2
0.37	0.5	905		**T-DA80MA**	2.1	1.25	1.2	1.15	64	0.69	1.9	3.2	1.9	0.0013
0.55	0.75	900		**T-DA80MB**	2.9	1.75	1.67	1.6	67	0.71	2.0	3.3	2.3	0.0025
0.75	1.0	920		**T-DA90SA**	3.6	2.2	2.1	2.0	71	0.74	2.0	3.9	2.2	0.0036
1.1	1.5	925		**T-DA90LA**	5.1	3.1	2.9	2.8	73	0.74	2.2	4.0	2.3	0.0042
1.5	2.0	945		**T-DA100LA**	6.6	4.0	3.8	3.6	75	0.76	2.0	4.5	2.3	0.0089
2.2	3.0	955		**T-DA112MA**	9.3	5.6	5.4	5.1	79	0.75	2.1	5.0	2.5	0.0181
3.0	4.0	960		**T-DA132SA**	11.9	7.5	6.9	6.8	82	0.77	2.0	5.2	2.5	0.024
4.0	5.5	965		**T-DA132MA**	-	9.6	9.1	8.7	83.5	0.76	2.2	5.8	2.7	0.03
5.5	7.5	965		**T-DA132MB**	-	12.6	12	11.4	85	0.78	2.3	6.2	2.7	0.04
7.5	10	960	**T-DF160MA**		-	16.2	15.4	14.6	88	0.80	2.0	6.2	2.5	0.046
11	15	970	**T-DF160LA**		-	23.3	22.2	21.1	89.5	0.80	2.2	6.5	2.5	0.094
15	20	970	**T-DF180LA**		-	31.3	29.7	28.3	90	0.81	2.1	6.3	2.3	0.141
18.5	25	979	**T-DF200LA**		-	38.2	36.3	35.0	89.7	0.82	2.1	6.1	1.7	0.315
22	30	974	**T-DF200LB**		-	43.7	41.6	40.1	89.9	0.85	2.1	6	1.4	0.36
30	40	983	**TU-DF225MA**		-	59.9	56.9	54.8	91.7	0.83	2.5	5.4	1.4	0.547
37	50	980	**TU-DF250MA**		-	70.0	66.5	64.1	92.3	0.87	2.1	6.7	1.8	0.834
45	60	987	**TU-DF280SA**		-	85.5	81.2	78.3	91.9	0.87	2.4	6.6	1.6	1.39
55	75	984	**TU-DF280MA**		-	102.7	97.5	94.0	92.5	0.88	2.2	6.6	1.5	1.65
75	100	986	**TU-DF315SA**		-	142.0	134.9	130.0	94.4	0.85	2.1	5.9	1.7	4.11
90	125	985	**TU-DF315MA**		-	170.4	161.9	156.0	94.4	0.85	2.2	6.1	1.5	4.28
110	150	987	**TU-DF315LA**		-	207.4	197.0	189.9	94.8	0.85	2.2	6	1.7	5.45
132	175	990	**TU-DF315LB**		-	243.9	231.7	223.4	94.5	0.87	2.3	6.6	1.4	6.12
160	215	991	**TU-DF355M**		-	290.8	276.2	266.3	95	0.88	1.8	6.8	1.3	8.85
200	270	990	**TU-DF355M**		-	359.7	341.7	329.4	96	0.88	2	6.5	1.5	9.55
250	335	991	**TU-DF355L**		-	439.6	417.6	402.5	96	0.90	1.8	5.8	1.4	10.63

Notes

For typical speed and current curves see page 15

Performance figures are subject to IEC tolerances

Performance figures are based on a 400V winding

$J\ (WK^2 \text{ or } WR^2) = \frac{GD^2}{4}$

$J \text{ in lb ft}^2 = \frac{kgm^2}{0.042}$

Performance data

750 min^{-1} *(8 pole)*

P_N kW	P_N hp	n min^{-1}	Type: Cast iron	Type: Aluminium	I_N 230 V A	I_N 380 V A	I_N 400 V A	I_N 415 V A	η 1.0 P_N	Cos Ø 1.0 P_N	M_A/M_N	I_A/I_N	M_K/M_N	J kgm^2
0.18	0.25	680		**T-DA80MA**	1.3	0.77	0.75	0.71	59	0.60	1.5	3.0	1.7	0.0013
0.25	0.33	685		**T-DA80MB**	1.70	1.0	1.0	0.95	61	0.60	1.6	2.7	2.0	0.0025
0.37	0.5	680		**T-DA90SA**	2.4	1.5	1.4	1.35	59	0.65	1.6	2.8	1.8	0.0031
0.55	0.75	680		**T-DA90LA**	3.4	2.1	2.0	1.9	62	0.65	1.6	3.0	1.8	0.0034
0.75	1.0	710		**T-DA100LA**	3.9	2.4	2.2	2.15	72	0.67	1.7	3.5	2.1	0.0089
1.1	1.5	710		**T-DA100LB**	5.7	3.5	3.3	3.1	72	0.67	1.7	3.5	2.2	0.011
1.5	2.0	710		**T-DA112MA**	7.3	4.4	4.2	4.0	75	0.69	1.8	4.2	2.1	0.0181
2.2	3.0	720		**T-DA132SA**	9.3	5.7	5.4	5.1	81	0.73	2.0	4.7	2.3	0.03
3.0	4.0	720		**T-DA132MA**	12.4	7.5	7.1	6.8	82	0.74	2.0	5.0	2.4	0.04
4.0	5.5	735	**T-DF160MA**		-	10.7	10.2	9.7	87	0.65	2.2	6.3	2.5	0.058
5.5	7.5	730	**T-DF160MB**		-	14.7	14	13.3	86	0.66	1.9	5.6	2.1	0.078
7.5	10	725	**T-DF160LA**		-	19.5	18.6	17.7	87	0.67	2.0	5.7	2.2	0.098
11	15	725	**T-DF180LA**		-	26.4	25.1	23.9	88	0.72	1.9	5.6	2.2	0.141
15	20	729	**T-DF200LA**		-	33.6	31.9	30.7	89.3	0.76	2.2	5.6	1.8	0.339
18.5	25	731	**TU-DF225 SA**		-	42.3	40.2	38.7	89.8	0.74	2	6	1.7	0.491
22	30	729	**TU-DF225MA**		-	48.0	45.6	44.0	90.4	0.77	2.1	3.2	1.8	0.547
30	40	734	**TU-DF250MA**		-	63.0	59.9	57.7	90.4	0.8	2.2	5.7	2.1	0.83
37	50	737	**TU-DF280SA**		-	75.8	72.1	69.5	91.5	0.81	2.2	5.6	1.8	1.39
45	60	737	**TU-DF280MA**		-	90.7	86.2	83.1	91.9	0.82	2.1	5.3	2	1.65
55	75	738	**TU-DF315SA**		-	109.0	103.5	99.8	93.5	0.82	1.8	5.6	1.6	4.79
75	100	740	**TU-DF315MA**		-	146.5	139.2	134.2	93.7	0.83	2.1	6.1	1.3	5.58
90	125	739	**TU-DF315LA**		-	178.0	169.1	163.0	93.7	0.82	2.4	6.4	1.7	6.37
110	150	739	**TU-DF315LB**		-	216.6	205.8	198.3	94.1	0.82	2.3	6.2	2	7.23
132	175	743	**TU-DF355M**		-	250.8	238.3	229.6	95.2	0.84	1.7	5.9	1	10.55
160	215	743	**TU-DF335M**		-	307.7	292.3	281.7	95.2	0.83	1.5	5.3	1.1	11.73
200	270	743	**TU-DF355L**		-	369.2	350.8	338.1	95.7	0.86	1.3	5.2	1.2	12.86

Notes
For typical speed and current curves see page 15
Performance figures are subject to IEC tolerances
Performance figures are based on a 400V winding

$$J\ (WK^2 \text{ or } WR^2) = \frac{GD^2}{4}$$

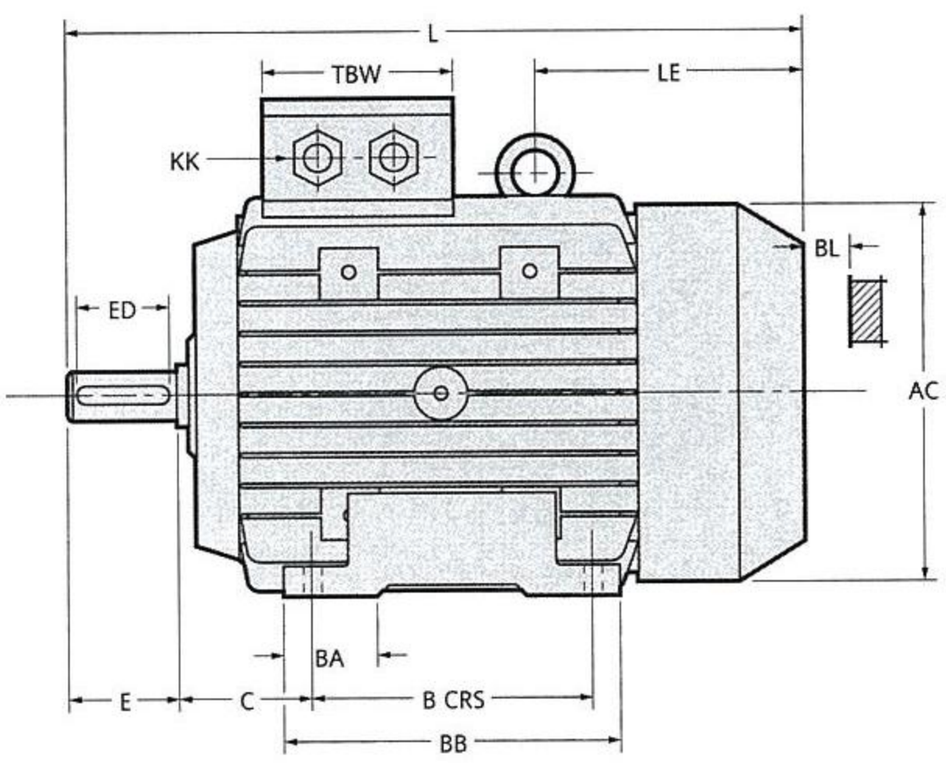
$$J \text{ in lb ft}^2 = \frac{kgm^2}{0.042}$$

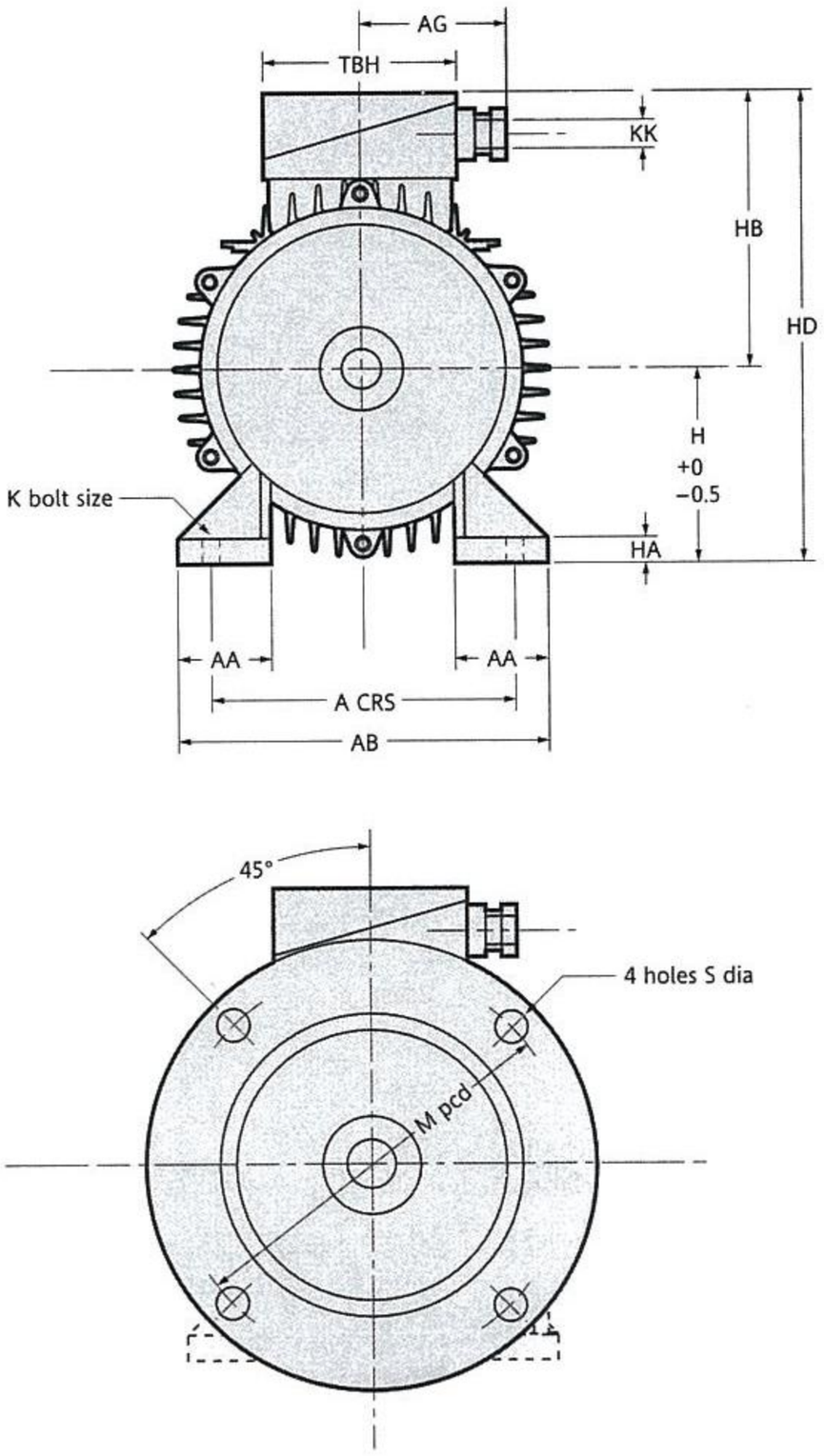
Dimensions

Foot, flange and face mounting *Frame sizes 63 to 180*

IM B3
IM 1001

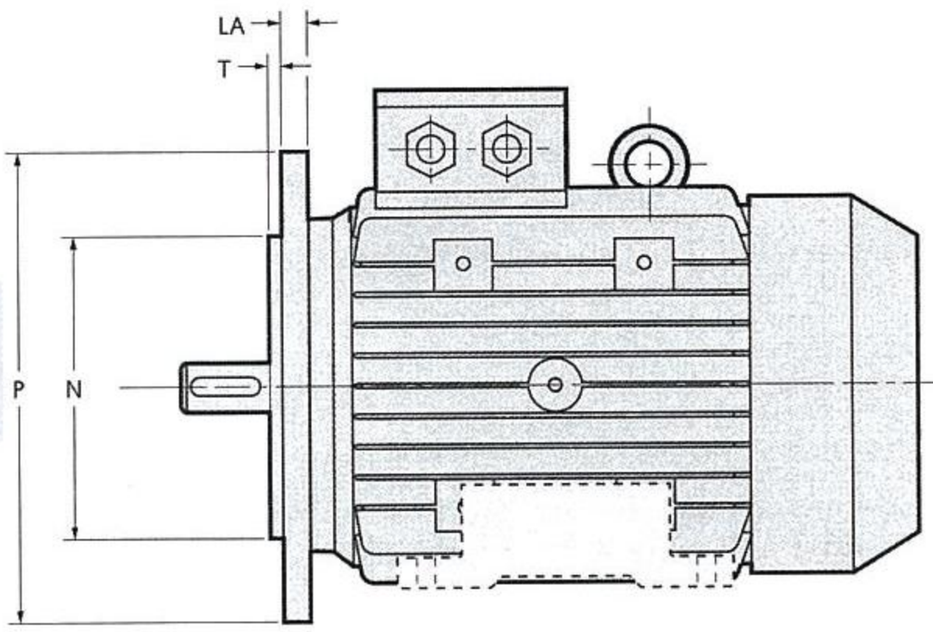
Mounting options





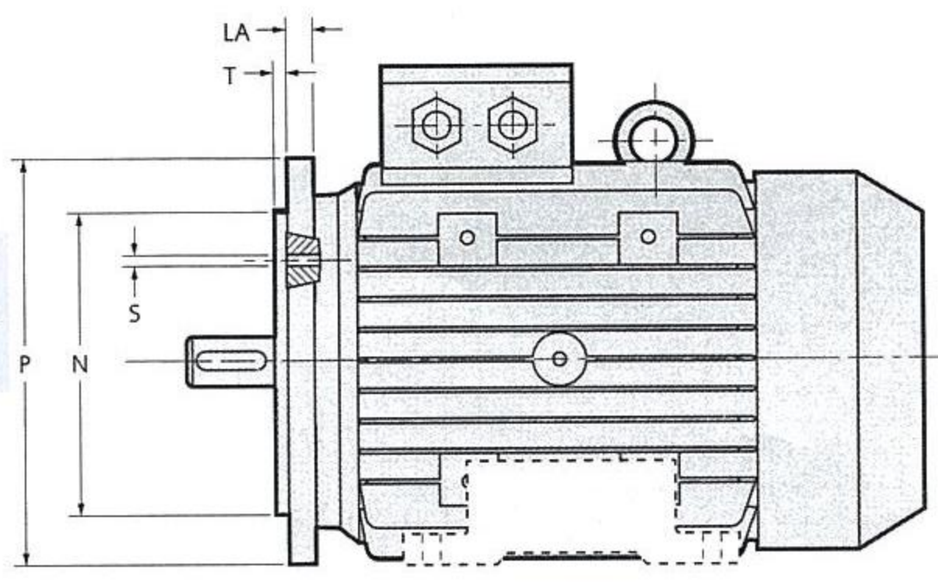
IM B5/IM B35
IM 3001/IM 2001

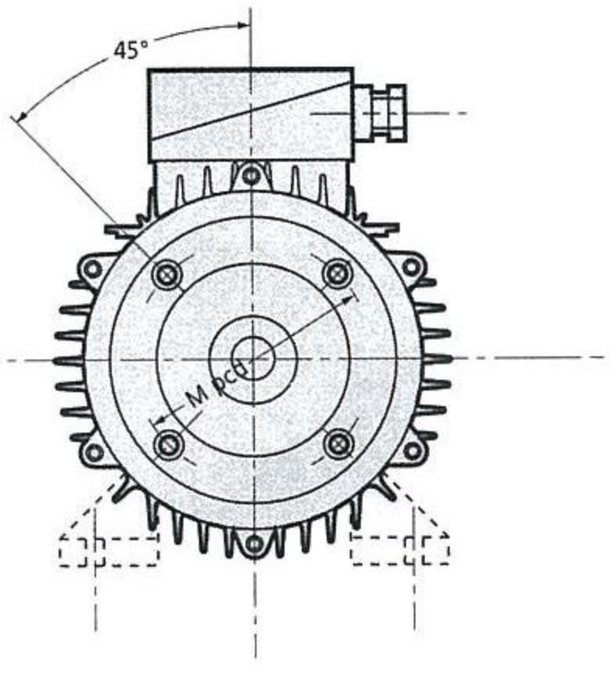
Mounting options



IM B14/IM B34
IM 3601/IM 2101

Mounting options





B3,B5/B35, B14/B34
IM 1001, IM 3001/IM 2001, IM 3601/IM2901

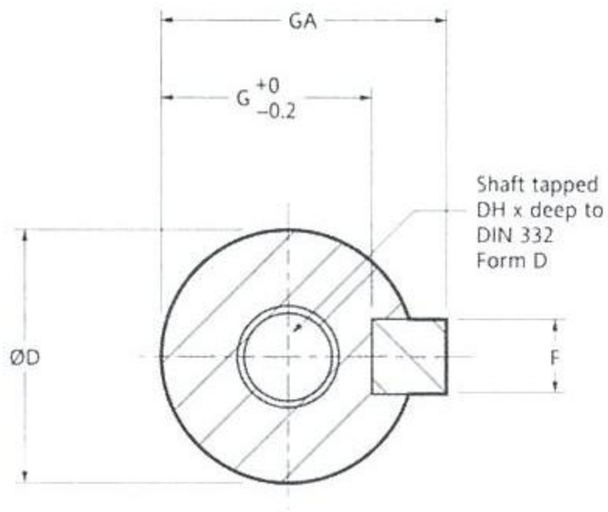
Cast iron	*Aluminium*	*General*																		
		A	*B*	*BL*	*C*	*H*	*K*	*KK*	*L*	*AA*	*AB*	*AC*	*AG*	*BA*	*BB*	*HA*	*HB*	*HD*	*LE*	*TBW*	*TBH*
	T-DA63M	100	80	12	40	63	M6	1 x M20	212	30	121	128	63	30	96	7	92	155	-	80	74
	T-DA71M	112	90	12	45	71	M6	1 x M20	240	27	136	143	58	25	108	9	109	180	-	82	82
	T-DA80M	125	100	15	50	80	M8	1 x M20	280	30	155	163	58	27	125	9	118	197.5	-	82	82
	T-DA90S	140	100	15	56	90	M8	1 x M20	306	45 57*	170 192*	180	91	38 45.5*	126 131*	10 15*	142 145*	232 235*	-	109	125
	T-DA90L	140	125	15	56	90	M8	1 x M20	331	45 57*	170 192*	180	91	43 48*	151 156*	10 15*	142 145*	232 235*	-	109	125
	T-DA100L	160	140	15	63	100	M10	2 x M20	374	32 60*	188 214*	206	91	40 60*	170 169*	4 16*	155	255	133	109	125
	T-DA112M	190	140	30	70	112	M10	2 x M25	383	33 66*	220 246*	233	93	40 56*	170 172*	4 16*	168 169*	280 281*	135 116*	109	125
	T-DA132S	216	140	30	89	132	M10	2 x M25	440	35 71*	244 274*	263	93	71 63*	210 180*	5 18*	181	313	138 152*	109	125
	T-DA132SB[1]	216	140	30	89	132	M10	2 x M25	480	35 71*	244 274*	263	93	71 63*	210 180*	5 18*	181	313	178 192*	109	125
	T-DA132M	216	178	30	89	132	M10	2 x M25	480	35 71*	244 274*	263	93	71 79*	210 218*	5 18*	181	313	178 192*	109	125
T-DF160M		254	210	40	108	160	M12	2 x M32	547	60	300	324	97	67	256	20	230	390	220	130	130
T-DF160L		254	254	40	108	160	M12	2 x M32	587	60	300	324	97	67	300	20	230	390	220	130	130
T-DF180M		279	241	40	121	180	M12	2 x M32	627	70	340	324	97	70	300	24	230	410	230	130	130
T-DF180L		279	279	40	121	180	M12	2 x M32	664	70	340	324	97	70	320	24	230	410	267	130	130

** Cast iron*
[1] 2 pole 7.5kW rated power

Cast iron	*Aluminium*	*B5 mounting*							*B14 mounting*							
			M	*N*	*P*	*LA*	*S*	*T*			*M*	*N*	*P*	*LA*	*S*	*T*
	T-DA63	FF115	115	95	140	10	10	3	FT75	(C90)[2]	75	60	90	11	M5	2.5
	T-DA71	FF130	130	110	160	10	10	3.5	FT85	(C105)[2]	85	70	105	12	M6	2.5
									FT115	(C140)[3]	115	95	140	14	M8	3.0
	T-DA80	FF165	165	130	200	11	12	3.5	FT100	(C120)[2]	100	80	120	12	M6	3.0
									FT130	(C160)[3]	130	110	160	14	M8	3.5
	T-DA90	FF165	165	130	200	10	12	3.5	FT115	(C140)[2]	115	95	140	10	M8	3.0
									FT130	(C160)[3]	130	110	160	10	M8	3.5
	T-DA100L	FF215	215	180	250	11	14.5	4.0	FT130	(C160)[2]	130	110	160	10	M8	3.5
									FT165	(C200)[3]	165	130	200	12	M10	3.5
	T-DA112M	FF215	215	180	250	11	14.5	4.0	FT130	(C160)[2]	130	110	160	12	M8	3.5
									FT165	(C200)[3]	165	130	200	14	M10	3.5
	T-DA132	FF265	265	230	300	13	14.5	4.0	FT165	(C200)[2]	165	130	200	16	M10	3.5
									FT215	(C250)[3]	215	180	250	16	M12	4.0
T-DF160		FF300	300	250	350	14	18.5	5.0	-	-	-	-	-	-	-	-
									-	-	-	-	-	-	-	-
T-DF180		FF300	300	250	350	15	18.5	5.0	-	-	-	-	-	-	-	-
									-	-	-	-	-	-	-	-

[2] - Standard
[3] - Alternative

Type	*Shaft drive end*							*Bearing drive end*	*Bearing non-drive end*
	D	*DH*	*F*	*E*	*G*	*GA*	*ED*		
T-DA63	11 j6	M4	4 h9	23	8.5	12.5	10	6202 ZZ	6202 ZZ
T-DA71	14 j6	M5	5 h9	30	11	16	20	6203 ZZ	6203 ZZ
T-DA80	19 j6	M6	6 h9	40	15.5	21.5	32	6204 ZZ	6204 ZZ
T-DF90/DA90	24 j6	M8	8 h9	50	20	27	40	6205 ZZ	6205 ZZ
T-DF100/DA100	28 j6	M10	8 h9	60	24	31	50	6206 ZZ	6206 ZZ
T-DF112M/DA112M	28 j6	M10	8 h9	60	24	31	50	6306 ZZ	6306 ZZ
T-DF132/DA132	38 k6	M12	10 h9	80	33	41	63	6308 ZZ	6308 ZZ
T-DF160M	42 k6	M16	12 h9	110	37	45	94	6309 ZZ	6309 ZZ
T-DF160L	42 k6	M16	12 h9	110	37	45	94	6309 ZZ	6309 ZZ
T-DF180	48 k6	M16	14 h9	110	42.5	51.5	94	6311 ZZ	6309 ZZ



For notes see page 15

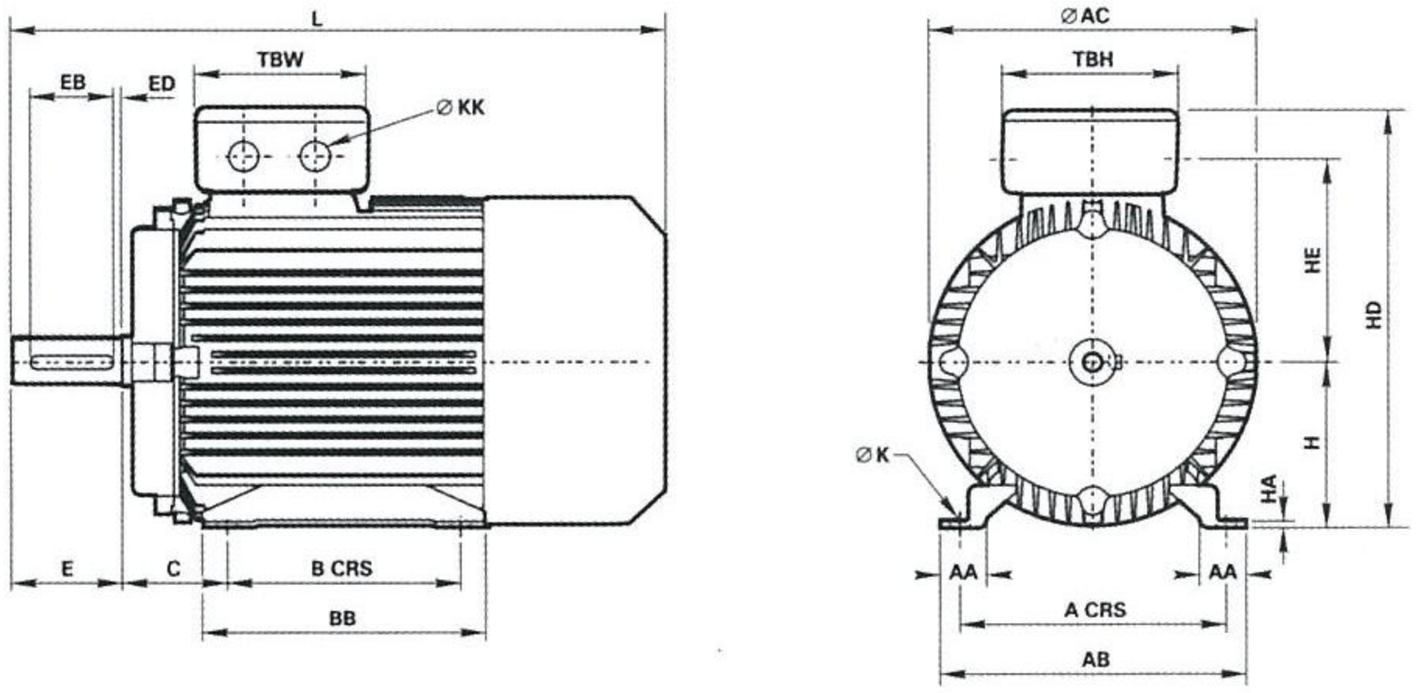
Dimensions

Foot and flange mounting frame sizes 200 to 355 cast iron

T-DF 200L-TU-DF315L

IM B3
IM 1001

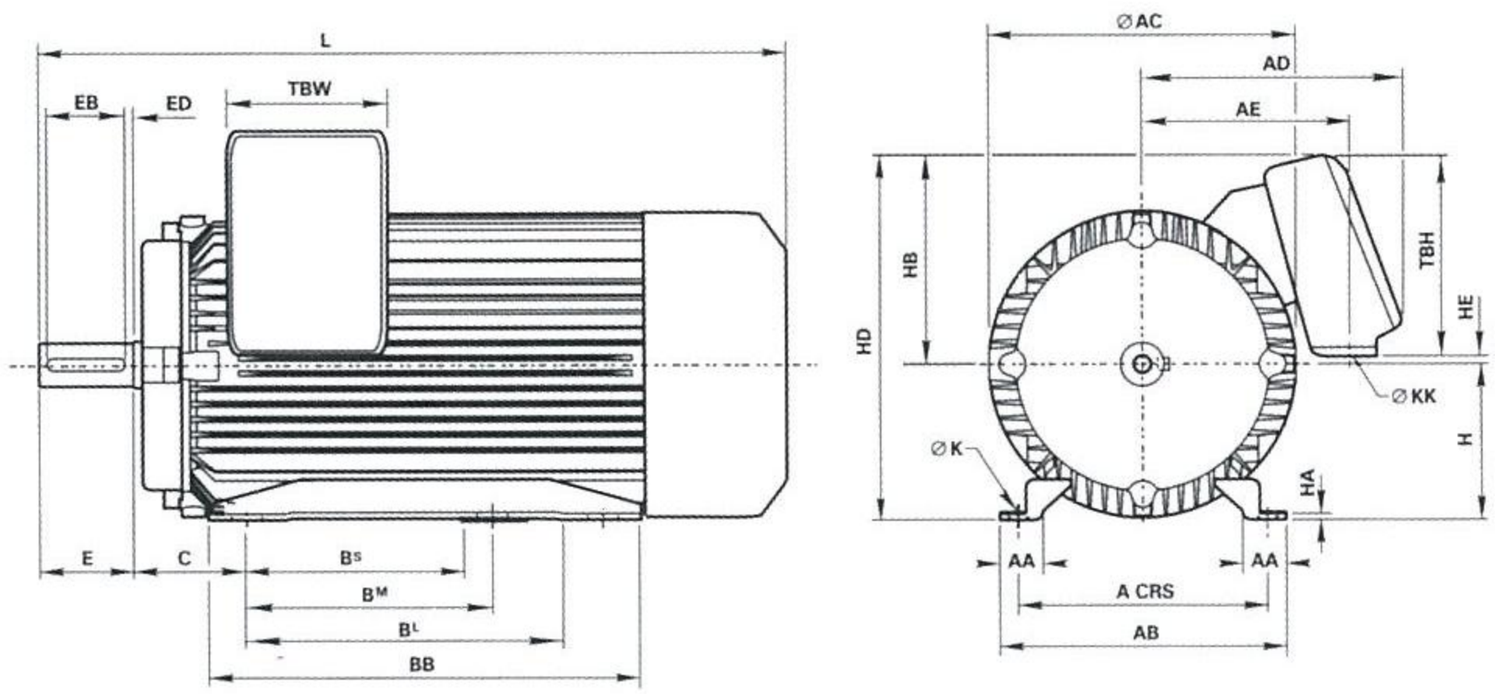
Mounting options



TU-DF335M-TU-DF 335L

IM B3
IM 1001

Mounting options



Frame	A	AA	AB	AC	AD	AE	B*	B_M	B_L	BB	C	D	DH	E	ED	F	G	H	HA	HC	HD	HE	K	KK	L	LL
T-DF 200	318	85	388	415	166	148	305	N/A	N/A	377	133	55	M20x42	110	90	16	49	200	25	407	520	245	19	2-M50x1.5	780	52
TU-DF 225S(A-8P)	356	85	441	460	166	148	286	N/A	N/A	433	149	60	M20x42	140	110	18	53	225	28	455	570	268	19	2-M50x1.5	865	30
TU-DF 225M(2P)	356	85	441	460	166	148	311	N/A	N/A	433	149	55	M20x42	110	90	16	49	225	28	455	570	268	19	2-M50x1.5	865	30
TU-DF 225M(4-8P)	356	85	441	460	166	148	311	N/A	N/A	433	149	60	M20x42	140	110	18	53	225	28	455	570	268	19	2-M50x1.5	865	30
TU-DF 250M (2P)	406	100	486	512	190	166	349	N/A	N/A	500	168	60	M20x42	140	110	18	53	250	33	505	625	306	24	2-M63x1.5	945	26
TU-DF 250M (4-8P)	406	100	486	512	190	166	349	N/A	N/A	500	168	65	M20x42	140	110	18	58	250	33	505	625	306	24	2-M63x1.5	945	26
TU-DF 280S(2P)	457	115	550	570	190	166	368	N/A	N/A	480	190	65	M20x42	140	110	18	58	280	35	560	690	332	24	2-M63x1.5	970	35
TU-DF 280S(4-8P)	457	115	550	570	190	166	368	N/A	N/A	480	190	75	M20x42	140	110	20	67.5	280	35	560	690	332	24	2-M63x1.5	970	35
TU-DF 280M(2P)	457	115	550	570	190	166	419	N/A	N/A	530	190	65	M20x42	140	110	18	58	280	35	560	690	332	24	2-M63x1.5	1020	35
TU-DF 280M1 (4-8P)	457	115	550	570	190	166	419	N/A	N/A	530	190	75	M20x42	140	110	20	67.5	280	35	560	690	332	24	2-M63x1.5	1020	35
TU-DF 315 (2P)	508	120	635	645	330	304	406	457	508	670	216	65	M20x42	140	125	18	58	315	45	629	875	435	28	up to 110	1345	20
TU-DF 315S/M (4P)	508	120	635	645	330	304	406	457	508	670	216	80	M20x42	170	160	22	71	315	45	629	875	435	28	up to 110	1375	20
TU-DF 315L (4P)	508	120	635	645	330	304	406	457	508	670	216	80	M20x42	170	160	22	71	315	45	629	875	435	28	up to 110	1375	20
												90	M24x50			25	81									
TU-DF 315 (6/8P)	508	120	635	645	330	304	406	457	503	670	216	80	M20x42	170	160	22	71	315	45	629	875	435	28	up to 110	1375	20
TU-DF 355M/L(2P)	610	140	750	770	670	565	560	630	875	1045	254	75	M20x42	140	110	20	67.5	355	49	750	920	10	28	up to 110	1790	78
TU-DF 355M/L(4-8P)	610	140	750	770	670	565	560	630	875	1045	254	100	M20x42	210	160	28	90	355	49	750	920	10	28	up to 110	1860	78

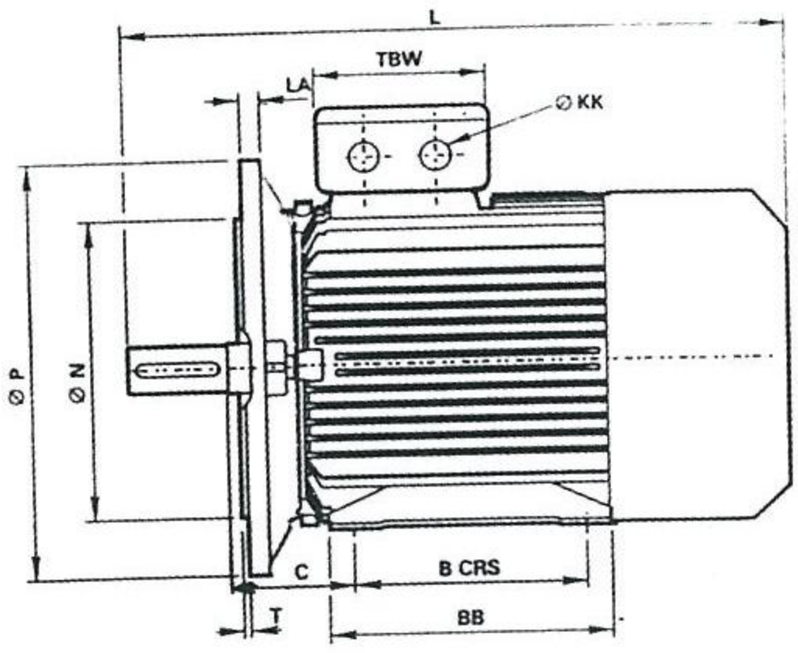
Dimensions

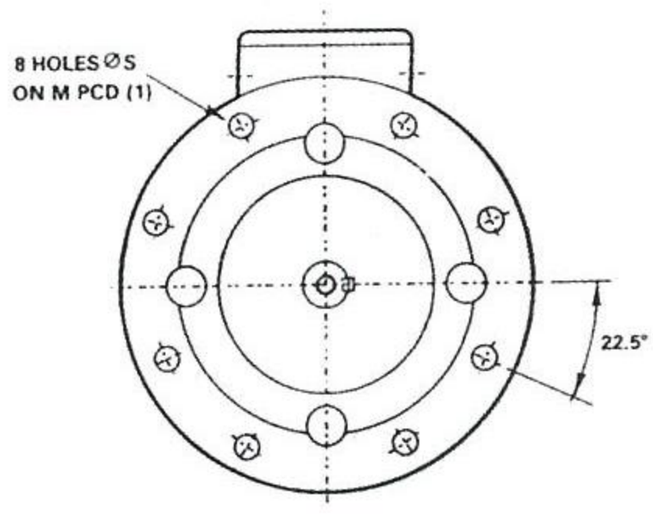
Foot and flange mounting frame sizes 200 to 355 cast iron B5, V1

T-DF 200L-TU-DF 315L

IM B5/IM 835
IM 3001/IM 2001

Mounting options

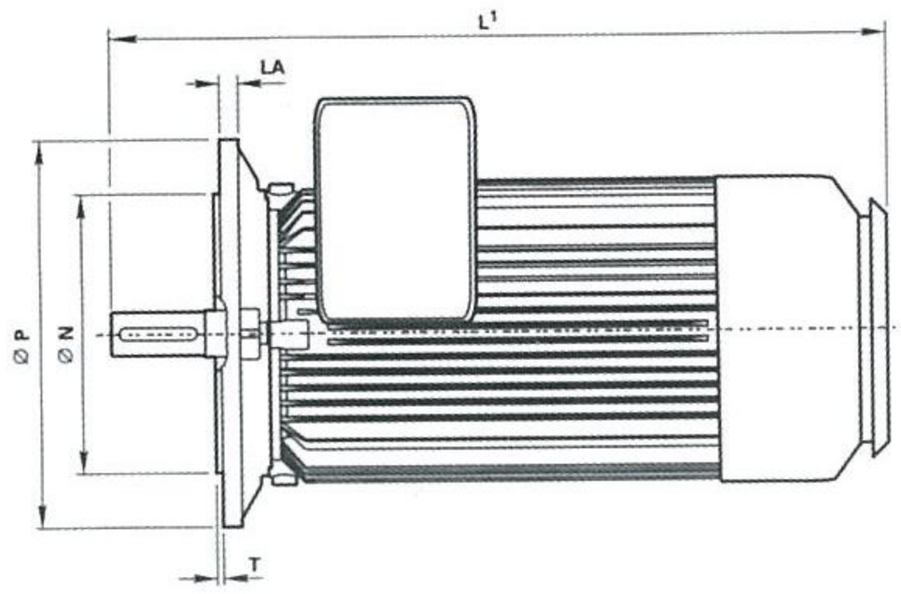


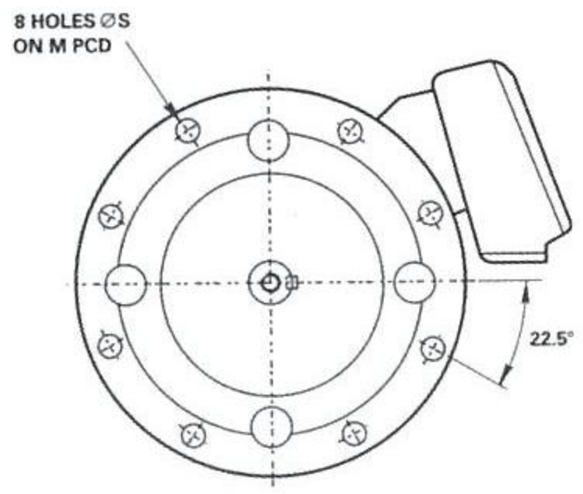


TU-DF355M-TU-DF 355L

IM V1
IM 3011

Mounting options





Frame	AC	AD	AE	D	DH	E	ED	F	G	HB	HE	KK	L	LA	LD	M	N	P	R	S	T
T-DF 200	415	166	148	55	M20x42	110	90	16	49	320	245	2-M50x1.5	780	20	185	350	300	400	0	4x19	5
TU-DF 225(A-8P)	460	166	148	60	M20x42	140	110	18	53	345	268	2-M50x1.5	865	20	179	400	350	450	0	8x19	5
TU-DF 225M(2P)	460	166	148	55	M20x42	110	90	16	49	345	268	2-M50x1.5	865	20	179	400	350	450	0	8x19	5
TU-DF 250M(2P)	512	190	166	60	M20x42	140	110	18	53	375	306	2-M63x1.5	945	22	194	500	450	550	0	8x19	5
TU-DF 250M(4-8P)	512	190	166	65	M20x42	140	110	18	58	375	306	2-M63x1.5	945	22	194	500	450	550	0	8x19	5
TU-DF 280S(2P)	570	190	166	65	M20x42	140	110	18	58	310	332	2-M63x1.5	970	23	225	500	450	550	0	8x19	5
TU-DF 280S(4-8P)	570	190	166	75	M20x42	140	110	20	67.5	310	332	2-M63x1.5	970	23	225	500	450	550	0	8x19	5
TU-DF 280M(2P)	570	190	166	65	M20x42	140	110	18	58	310	332	2-M63x1.5	1020	23	225	500	450	550	0	8x19	5
TU-DF 280M1(4-8P)	570	190	166	75	M20x42	140	110	20	67.5	310	332	2-M63x1.5	1020	23	225	500	450	550	0	8x19	5
TU-DF 315(2P)	645	330	304	65	M20x42	140	125	18	58	560	435	up to 110	1345	24	236	600	550	660	0	8x24	6
TU-DF 315(4-8P)	645	330	304	80	M20x42	170	160	22	71	560	435	up to 110	1375	24	236	600	550	660	0	8x24	6
TU-DF 315L(4P)	645	330	304	90	M24x50	170	160	25	81	560	435	up to 110	1375	24	236	600	550	660	0	8x24	6
TU-DF 355M/L(2P)	770	670	565	75	M20x42	140	110	20	67.5	565	10	up to 110	1790	25	332	740	680	800		8x24	6
TU-DF 355M/L(4/8P)	770	670	565	100	M20x42	210	160	28	90	565	10	up to 110	1860	25	332	740	680	800		8x24	6

Directives

The 'T' range complies with European Directives in the following manner:

Compliance with European Directives

Directive	*Low voltage (LV)*	*Machinery (MD)*	*Electromagnetic compatability (EMC)*
Reference numbers	73/23/EEC 93/68/EEC	89/392/EEC 91/368/EEC 93/44/EEC	89/336/EEC 92/31/EEC 93/68/EEC
Motor CE marked	Yes	No	No
Standards	EN 40034	Not applicable	EN 50081 Parts 1 and 2 Emissions EN 50082 Parts 1 and 2 Immunity
Documentation for customers' technical file	Declaration of conformity	Certificate of incorporation	Statement*
Safety instructions with every motor	Yes	Yes	Yes
Comment	Relevant electrical equipment operating between 50 to 1000 volts AC	Component	Component

** Motors operating from a correctly applied, sinusoidal (AC) supply meet the requirements of the EMC directive and are within the limits specified in standards EN 50081 and EN 50082 for industrial, (Part 2) and residential, commercial and light industrial environments (Part1)*

Standards

The 'T' range is based on IEC standards thus:

Standards

Performance	IEC 60034-1
Dimensions	IEC 60072-1
Mounting	IEC 60034-7
Enclosure protection	IEC 60034-5
Vibration	IEC 60034-14 (grade N)

Alternative outputs are offered in accordance with BS5000 Pt 10 Appendix A. With flange hole position in accordance with BS4999 Pt 141

Specification

Specification

	Standard product	*Option*
Frame material	63-80 aluminium	-
	90-132 aluminium	cast iron
	160-315 cast iron	-
Fan cover	steel with 8 mm grid	-
Enclosure	IP55	-
Voltage	3 kW and below 220-240/380-415	spot voltage in the range
	4 kW and above380-415/660-720	110 to 500 V
Frequency	50 Hz	60 Hz
Lubrication	63-180 double-shielded bearings	-
	200-315 through greasing	-
Insulation	class F	-
Temperature rise	class B	class F
Paint colour	water blue (RAL 5021)	-
Drain holes	63-180-none	-
	200-315-provided	-
Bearing location	drive end	-
Thermistor protection in windings	200-315	80-180

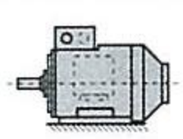
Other options

Options

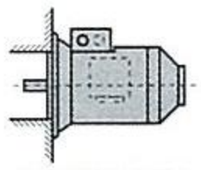
Anti-condensation heaters (80-315)
Mounting options in conjunction with foot, flange and face (see page 14)
For other options, please enquire

Mounting options

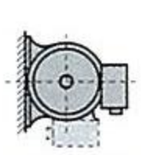
Horizontal shaft



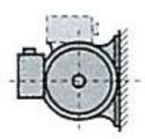
B3 IM 1001
foot mounted



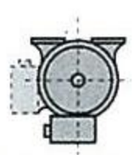
B5 IM 3001
flange at DE
no feet



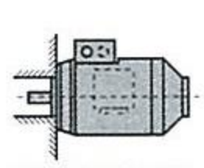
B6 IM 1051
foot wall mounted with
feet on left-hand side
when viewed from DE



B7 IM 1061
foot wall mounted with
feet on right-hand side
when viwed from DE

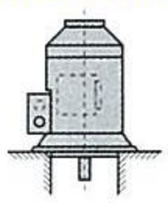


B8 IM 1071
ceiling mounted
with feet
above motor

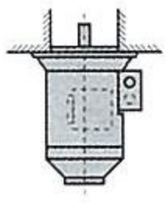


B14 IM 3601
face at DE
no feet

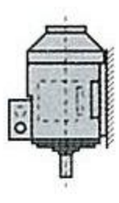
Vertical shaft:



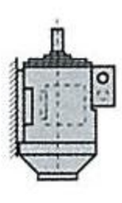
V1 IM 3011
flange at DE
shaft down
no feet



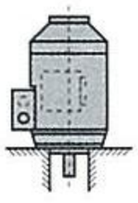
V3 IM 3031
flange at DE
shaft up
no feet



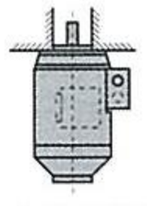
V5 IM 1011
vertical foot
wall mounted
shaft down



V6 IM 1031
vertical foot
wall mounted
shaft up



V18 IM 3611
face at DE
shaft down
no feet



V19 IM 3631
face at DE
shaft up
no feet

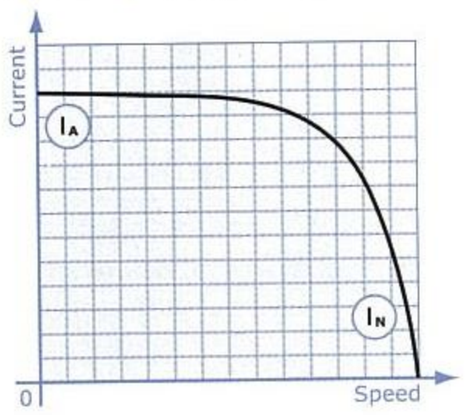
Approx shipping specifications

Frame		*Net weight kg*		*Gross weight kg*			*Quantity per pallet*	
		Cast iron	*Aluminium*	*Cast iron*	*Aluminium*	*Cubage m^3*	*B3*	*B5*
	T-DA63	-	3.9	-	4.4	0.01	50	40
	T-DA71	-	7.8	-	8.6	0.01	80	60
	T-DA80	-	11.6	-	12.4	0.01	80	60
T-DF90S/L	**T-DA90S/L**	22.5	17.0	23.5	18	0.02	50	50
T-DF100L	**T-DA100L**	31.5	24.5	33	26	0.03	24	24
T-DF112M	**T-DA112M**	39.5	33.5	41	35	0.04	18	18
T-DF132S/M	**T-DA132S/M**	65.5	53.5	72	60	0.09	12	12
T-DF160M/L		135	-	142	-	0.10	8	8
T-DF180M		142	-	152	-	0.13	6	6
T-DF200L		270	-	290	-	0.3	-	-
TU-DF225S	**T-DF225S**	280	-	300	-	0.4	-	-
TU-DF225M	**T-DF225M**	320	-	340	-	0.4	-	-
TU-DF250S/M	**T-DF250S/M**	420	-	460	-	0.5	-	-
TU-DF280S		560	-	620	-	0.7	-	-
TU-DF280M	**T-DF280S/M**	670	-	740	-	0.7	-	-
TU-DF315S		1000	-	1100	-	1.2	-	-
TU-DF315M	**T-DF315S**	1100	-	1200	-	1.3	-	-
TU-DF315L	**T-DF315M/L**	1270	-	1370	-	1.4	-	-

Performance data-notes

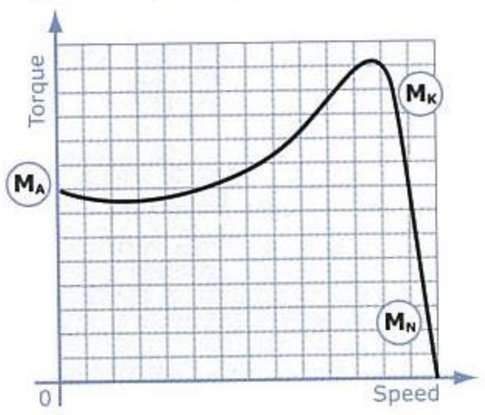
DOL starting
(IEC 60034-12)

Typical speed/current curve



(I_A) Starting current
(I_N) Full load current

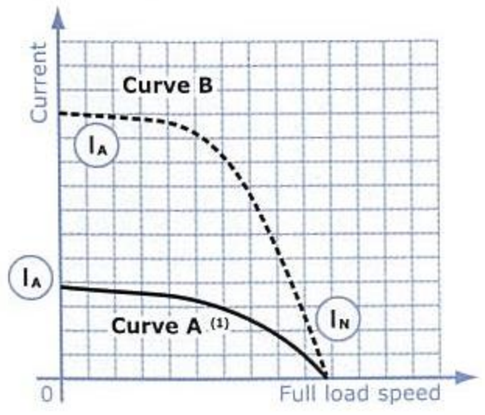
Typical speed/torque curve



(M_A) Starting torque or locked rotor torque
(M_K) Pull out torque or breakdown torque
(M_N) Full load torque
Torque/speed curves for specific motors can be supplied on request

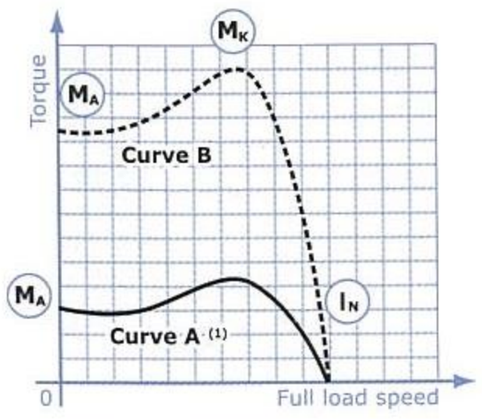
Star delta starting
(IEC 60034-12 Design NY)

Typical speed/current curve



Curve A - star connected (1)
Curve B - delta connected
(I_A) Starting current
(I_N) Full load current

Typical speed/torque curve



Curve A-star connected (1)
Curve B-delta connected
(M_A) Starting torque or locked rotor torque
(M_K) Pull out torque or breakdown torque
(M_N) Full load torque
Torque/speed curves for specific motors can be supplied on request

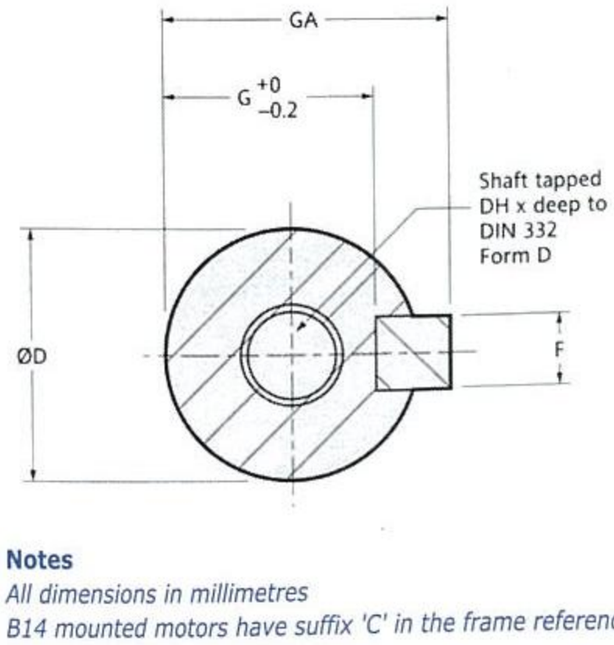
(1) During the run up period in star, there must be an adequate excess of motor torque over the load torque. The change to delta must not occur until the motor is near the operating speed.Refer to Brook Crompton for running up against a load in excess of 70% full load during star/delta starting.

Dimensions - Notes

Shaft		
Dim D	*Tol*	*Limits*
14	j6	+0.008 - 0.003
19 to 28	j6	+0.009 - 0.004
38 to 48	k6	+0.018 +0.002
55 to 80	m6	+0.030 +0.011
85 to 110	m6	+0.035 +0.013

Face		
Dim N	*Tol*	*Limits*
70 and 80	j6	+0.012 - 0.007
95 and 110	j6	+0.013 - 0.009
130	j6	+0.014 - 0.011
230	j6	+0.016 - 0.013

Flange		
Dim N	*Tol*	*Limits*
110	j6	+0.013 - 0.009
130	j6	+0.014 - 0.011
230 to 250	j6	+0.016 - 0.013
300	j6	+0.016 - 0.016
350	j6	+0.018 - 0.018
450	j6	+0.020 - 0.020
550	js6	+0.022 - 0.022



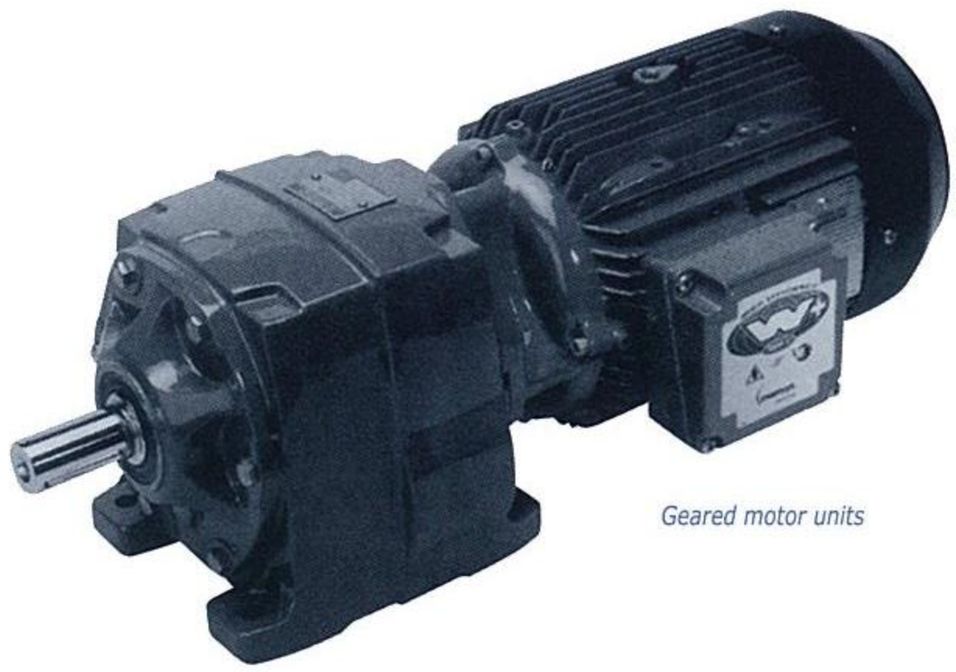
Notes

All dimensions in millimetres
B14 mounted motors have suffix 'C' in the frame reference

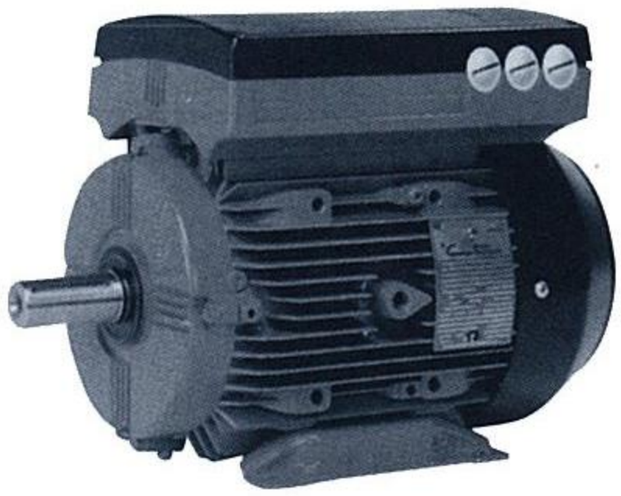
Dimensions should not be used for installation purposes unless specially endorsed

Tolerances indicated are to IEC 60072

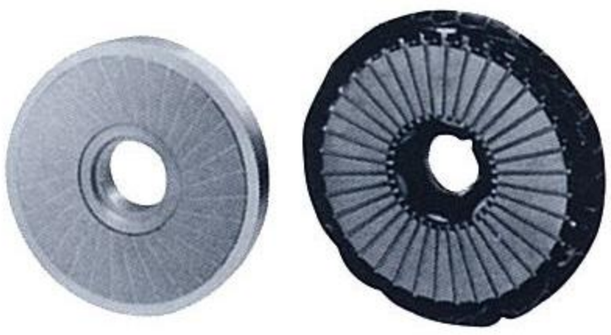
Other products



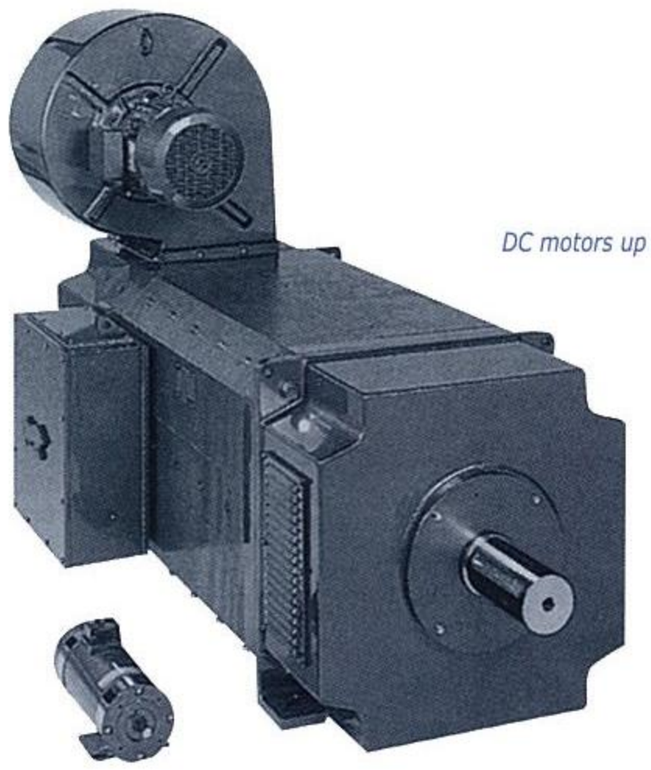
Geared motor units



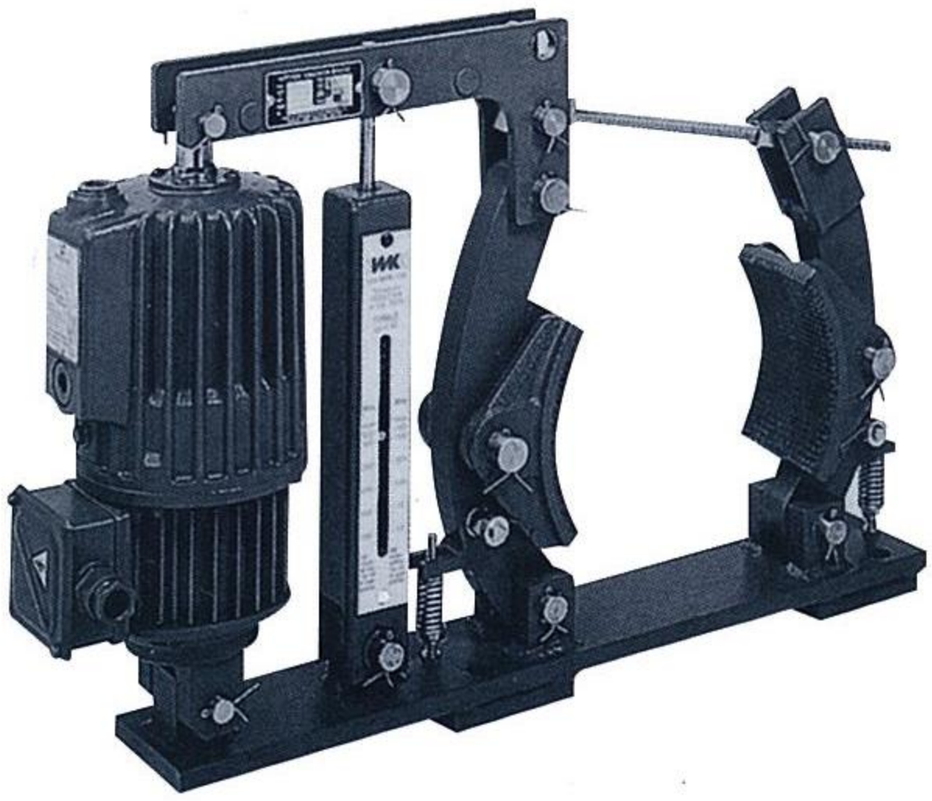
Variable speed motor (VSM)



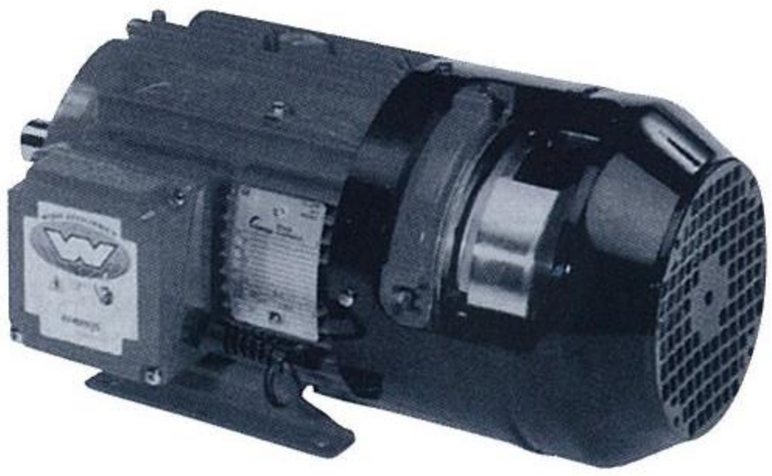
Customised AC motors - axial airgap



DC motors up to 750 kW



Electro- magnetic and thrustor brake units



Brake motors

Full range of motor starters

Full information on these and other products within the group available on request

WP premium efficiency motors 80 to 355L

Brook Crompton

Brook Crompton is made up of many well-known names including Brook Motors, Crompton Parkinson, Electrodrives, Newman, Bull Electric and Hawker Siddeley Electric Motors. With its pioneering 'W' range of energy efficient products, Brook Crompton offers motor solutions which benefit a wide range of customers.

WP premium efficiency motors

The Brook Crompton WP motor range covers products with outputs from as little as 0.75 kW to 400kW in frame sizes 80 to 355L. They are suitable for use within a diverse range of applications from food and drink to china clay production. From roller table drives to refrigeration. Many applications often have adverse operating conditions including repeated starting and occasional overloading; the 'WP' range is well suited to these situations. A virtual 'go anywhere' motor, this cast iron range has a full 1-year guarantee.

Motor efficiency

All applicable motors fall within the EFFI band of the European efficiency labelling scheme, laid down by CEMEP and endorsed by the European Commission. The aim of the scheme is to help reduce the consumption of electricity and therefore reduce the harmful emissions from power stations.

Brook Crompton are an approved manufacturer of ac electric motors within the UK Government's Enhanced Capital Allowance (ECA) scheme.

A wide range of single and multi-speed motors are included on the UK Energy Technology List. Please check the ECA scheme website: www.eca.gov.uk at time of purchase for current listing.

Benefits include:

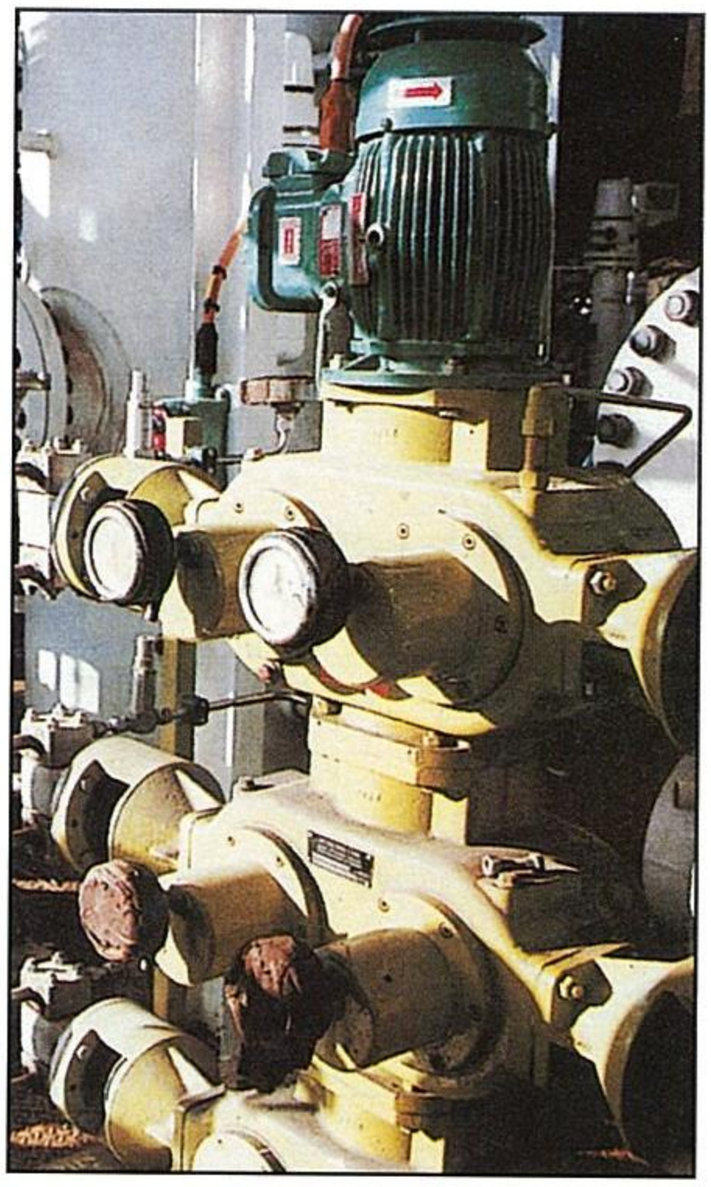
- high efficiency for low running costs
- high reliability for long life
- low noise levels
- cool running for long insulation life
- Eurovoltage: 400V ± 10%
- dual frequency: 50Hz and 60Hz
- high power factors
- high torque with smooth acceleration and low current
- ease of maintenance
- IP55 protection
- 4-position cable entry

Quality assurance

Stringent quality procedures are observed from first design to finished product in accordance with the ISO9001 documented quality systems.

Our factories have been assessed to meet these requirements, a further assurance that only the highest possible standards of quality are accepted.

ELECTRIC MOTORS FOR HAZARDOUS LOCATIONS



Commissioning of Flameproof Motors on Oil Platform.

Electric Motors for Hazardous Locations.

Natural Gas Exploration W. Australia.
A Shell photograph.

BP Forties. Photograph by British Petroleum.

Conoco Humberside Refinery - New Module.

EExd/de flameproof
motors

Food processing

Brook Crompton motor technology...

Pulp and paper

Cooling towers

Petro chemicals

Material handling

Water treatment

Marine duty

Wind energy

... the driving force around the world