



AGRICULTURAL PRODUCT

Catalogue

Edition 4



B-BBEE 2
EMPOWERING SUPPLIER

ISO 9001	Certified
ISO 14001	Certified
ISO 45001	Certified

ABOUT US

Established in 1974 as a single bearing shop in Durban, South Africa; BMG's aggressive growth strategy has included acquisitions, supplemented by a steady organic growth discipline. BMG attracts best-of-breed talent resulting in technical expertise that differentiates BMG in the industry. Staff are truly part of the BMG family and its success.

BMG boasts an accredited in-house technical and commercial training academy which fosters a culture of staff development and career advancement; it's all about sustainability.

The net result, is a company that reliably supplies and supports 70 000 customers in 9 countries with the widest range of industrial engineered products and expert services in Africa via 88 branches.

BMG is positioned to deliver bespoke 360 degree solutions to its customers, and subsequently return on investment to its investors and shareholders. BMG plays a pivotal role in supporting the productivity and production targets of all Industrial, Manufacturing, Mining and Agricultural sectors of the economies in the countries it serves. With an enviable reputation as Africa's largest distributor, manufacturer and service provider of the highest quality engineering consumables and components; including

- Bearings & Seals
- Power Transmission Components
- Drives, Motors and Controllers
- Hydraulics, Pneumatics and Filtration
- Heavy and Light Duty Materials Handling
- Valves and Lubrication
- Fasteners, Gaskets and Tools

BMG is a level 2 BEE contributor with ISO 9001 Quality Assurance certification. Health and safety of its employees and customers is a paramount focus and the company adheres to ISO 45001. BMG is also committed to environmental care and sustainability and strictly follows the ISO 14001 charter.

As a key contributor to the Invicta Holdings stable, BMG has played a major part in Invicta's unique achievement of being rated in South Africa's Top 100 Companies for 21 consecutive years.

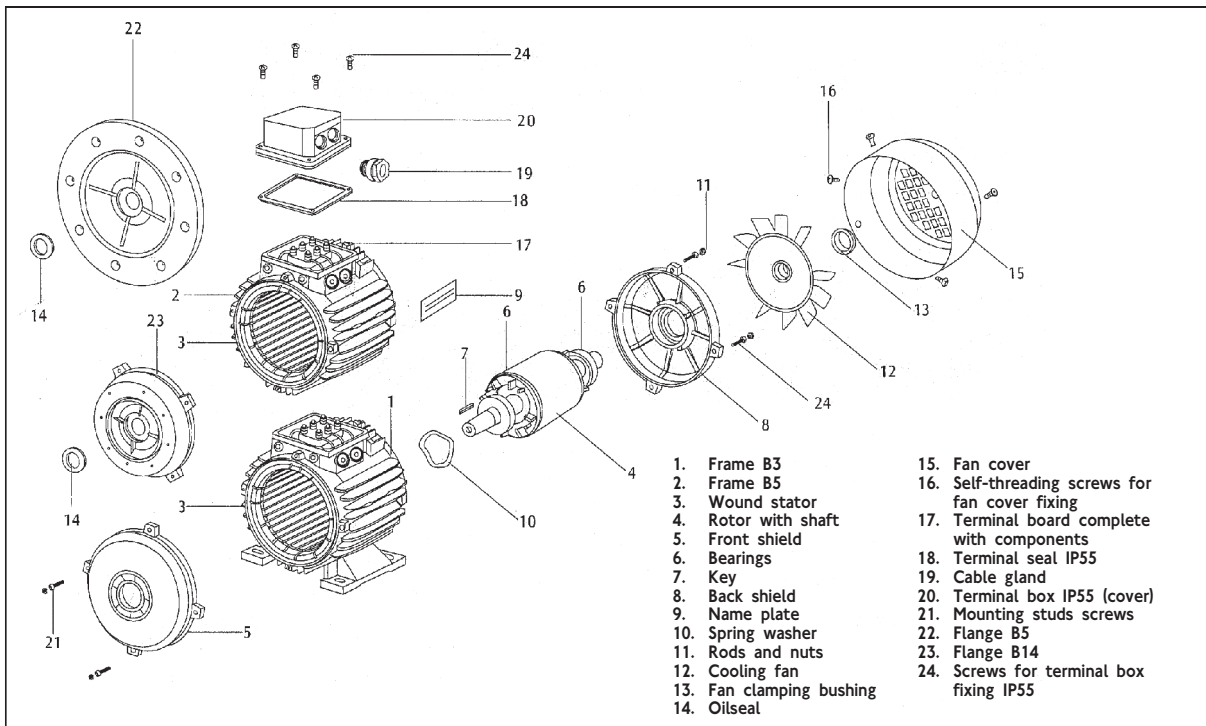


ELECTRIC MOTORS

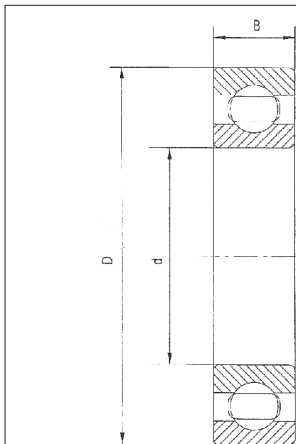
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B3



BEARING DATA



FRAME	DE	DE	d	D	B
Y3-80	6204 ZZ C3	6204 ZZ C3	20	47	14
Y3-90	6205 ZZ C3	6205 ZZ C3	25	52	15
Y3-100	6206 ZZ C3	6206 ZZ C3	30	62	16
Y3-112	6306 ZZ C3	6306 ZZ C3	30	72	19
Y3-132	6308 ZZ C3	6308 ZZ C3	40	90	23
Y3-160	6309 C3	6309 C3	45	100	25
Y3-180	6311 C3	6311 C3	55	120	29
Y3-200	6312 C3	6312 C3	60	130	31
Y3-225	6313 C3	6313 C3	65	140	33
Y3-250 (Horizontal)	6314C3	6314C3	70	150	35
Y3-250 (Vertical)	6314C3	7314	70	150	35
Y3-280 2P (Horizontal)	6314C3	6314C3	70	150	35
Y3-280 2P (Vertical)	6314C3	7314	70	150	35
Y3-280 4-8P (Horizontal)	6317C3	6317C3	85	180	41
Y3-280 4-8P (Vertical)	6317C3	7317	85	180	41
Y3-315 2P (Horizontal)	6316 C3	6316 C3	80	170	39
Y3-315 2P (Vertical)	6316 C3	7316	80	170	39
Y3-315 4-8P (Horizontal)	N319	6319 C3	95	200	45
Y3-315 4-8P (Vertical)	N319	7319	95	200	45
Y3-355 2P (Horizontal)	6319 C3	6319 C3	95	200	45
Y3-355 2P (Vertical)	6319 C3	7319	95	200	45
Y3-355 4-8P (Horizontal)	N322	6322 C3	110	240	50
Y3-355 4-8P (Vertical)	N322	7322	110	240	50

- Y3 motors are equipped with bearings from excellent manufacturers.
- The bearings have C3 clearances.
- Motors of frame sizes 80-132 are fitted with life-lubricated bearings.
- Motors of frame sizes 160-355 are fitted with open bearings and regreasing device. Depending on the useful life of grease, open bearings must be regreased.

FRAME SIZE	DRIVE END BEARING	NON-DRIVE END BEARING	REGREASING PERIOD HOURS FOR OPERATING TEMPERATURES UP TO 70°C			QUANTITY OF GREASE IN BEARING CHAMBER grams
			<3600r/min	<3600r/min	<3600r/min	
Y3-160	6309 C3	6309 C3	6000	12000	18000	13
Y3-180	6311 C3	6311 C3	4000	11000	16000	15
Y3-200	6312 C3	6312 C3	3500	8500	13000	20
Y3-225	6313 C3	6313 C3	3000	6000	9000	22
Y3-250	6314 C3	6314 C3	2000	5000	8000	23
Y3-280 2P	6314 C3	6314 C3	1200	-	-	30
Y3-280 4-8P	6317 C3	6317 C3	-	4000	6000	30
Y3-315 2P	6316 C3	6316 C3	1200	-	-	30
Y3-315 4-8P	N319	6319 C3	-	2000	3000	45
Y3-355 2P	6319 C3	6319 C3	1200	-	-	30
Y3-355 4-8P	N322	6322 C3	-	1400	2200	60

- NOTES: 1. Vertical motors should be greased twice as often as horizontal motors.
2. Regreasing time should be reduced if bearing operating temperature is in excess of 70°C

CAST IRON IE1 PERFORMANCE DATA TO SABS 1804 PARTS 1, 2 & 4

2 POLE - 3000rpm : 50Hz

MOTOR TYPE	RATED OUTPUT kW	RATED SPEED rpm	IFL 380V	IFL 400V	IFL 415V	IST/IFL	EFF. %	POWER FACTOR	RATED TORQUE Nm	T _{ST} /T _{FL}	T _{Max} /T _{FL}	M of J kgm ²	NOISE LEVEL LW db(A)	NET WEIGHT kg
Y3-801-2	0.75	2840	1.8	1.7	1.67	5.5	75.5	0.83	2.5	2.3	2.6	0.0008	67	14
Y3-802-2	1.1	2840	2.6	2.5	2.4	5.6	76.2	0.84	3.7	2.3	2.6	0.0009	67	15
Y3-90S-2	1.5	2850	3.04	3.2	3.1	6.1	79.5	0.85	5	2.5	2.9	0.0012	72	20
Y3-90L-2	2.2	2850	4.8	4.6	4.4	6.1	81.7	0.85	7.4	2.7	2.9	0.0014	72	24
Y3-100L-2	3	2880	6.3	6	5.8	6.5	83.1	0.87	10	2.7	2.9	0.0039	76	30
Y3-112M1-2	4	2880	8.2	7.8	7.6	6.5	84.2	0.88	13.3	2.6	2.9	0.0055	77	38
Y3-112M2-2	5.5	2880	11.1	10.5	10.2	7.7	85.7	0.88	13.3	2.7	3.2	0.0076	78	43
Y3-132S1-2	5.5	2900	11.1	10.5	10.2	6.9	85.9	0.88	18.1	2.3	2.6	0.011	80	57
Y3-132S2-2	7.5	2900	16.9	14.2	13.5	6.9	87.2	0.88	24.5	2.5	2.8	0.013	80	61
Y3-132M-2	11	2910	21.4	20.4	19.7	6.2	88.4	0.88	36.2	2.2	2.4	0.028	83	73
Y3-160M1-2	11	2930	21.1	20.1	19.4	6.7	88.7	0.89	35.8	2.6	2.9	0.038	86	101
Y3-160M2-2	15	2930	28.6	27.2	26.2	6.7	89.5	0.89	48.8	2.6	2.9	0.045	86	111
Y3-160L-2	18.5	2930	34.6	32.9	31.8	6.8	90.2	0.90	60.4	2.5	2.8	0.055	86	126
Y3-180M-2	22	2940	41	38.9	37.6	6.6	90.6	0.90	71.4	2.6	2.8	0.076	89	176
Y3-200L1-2	30	2950	55.4	52.6	50.7	6.5	91.5	0.90	97.2	2.5	2.7	0.124	92	226
Y3-200L2-2	37	2950	67.9	64.5	62.2	6.5	92.0	0.90	119.8	2.4	2.6	0.139	92	245
Y3-225M-2	45	2970	82.1	78	75.3	6.8	92.5	0.90	144.8	2.4	2.6	0.233	92	280
Y3-250M1-2	55	2970	99.6	94.6	91.3	6.8	93.2	0.90	177	2.5	2.8	0.312	93	379
Y3-250M2-2	75	2970	134.1	128.4	123.8	6.5	93.7	0.90	241.3	2.3	3.2	0.412	94	466
Y3-280S-2	75	2970	134.8	128.1	123.5	6.7	93.9	0.90	241.3	2.4	2.7	0.597	94	512
Y3-280M1-2	90	2970	159.5	151.5	146.1	6.7	94.2	0.91	289.5	2.4	2.7	0.675	94	578
Y3-280M2-2	110	2970	194.7	185	178.3	6.5	94.3	0.91	353.9	2	2.5	0.86	96	733
Y3-315S-2	110	2980	194.6	184.9	178.2	6.6	94.4	0.91	352.7	2	2.5	1.18	96	845
Y3-315M-2	132	2980	233	221.4	213.4	6.6	94.6	0.91	423.2	2.1	2.5	1.55	96	942
Y3-315L1-2	160	2980	282.1	270	258.4	6.7	94.7	0.91	513	1.9	2.4	1.76	99	1019
Y3-315L2-2	200	2980	347.7	330.1	318.4	6.7	95.0	0.92	641.2	1.9	2.4	2.02	99	1177
Y3-355M-2	250	2980	432.3	410.8	395.9	6.5	95.5	0.92	801.5	1.6	2.3	3.56	103	1740
Y3-355L-2	315	2980	543	515.9	497.3	6.5	95.8	0.92	1010	1.6	2.3	4.1	103	1920

4 POLE

MOTOR TYPE	RATED OUTPUT kW	RATED SPEED rpm	IFL 380V	IFL 400V	IFL 415V	IST/IFL	EFF. %	POWER FACTOR	RATED TORQUE Nm	T _{ST} /T _{FL}	T _{Max} /T _{FL}	M of J kgm ²	NOISE LEVEL LW db(A)	NET WEIGHT kg
Y3-80M1-4	0.55	1390	1.6	1.5	1.4	5.5	71.4	0.75	3.8	2.2	2.4	0.002	58	13
Y3-80M2-4	0.75	1390	2.1	2	1.9	5.6	73.5	0.76	5.2	2.2	2.4	0.002	58	14
Y3-90S-4	1.1	1400	2.9	2.7	2.6	5.4	76.2	0.77	7.5	2.2	2.5	0.002	61	20
Y3-90L-4	1.5	1400	3.08	3.5	3.4	5.2	78.7	0.78	10.2	2.4	2.6	0.003	61	23
Y3-100L1-4	2.2	1420	5.1	4.9	4.7	6.0	81.0	0.81	14.8	2.3	2.6	0.007	64	29
Y3-100L2-4	3	1420	6.8	6.4	6.2	6.1	82.7	0.82	20.2	2.3	2.7	0.007	64	33
Y3-112M-4	4	1440	8.8	8.4	8.1	6.5	84.5	0.82	26.5	2.3	2.8	0.01	65	40
Y3-132S-4	5.5	1440	11.7	11.2	10.8	6.8	85.7	0.83	36.5	2.3	2.9	0.021	71	59
Y3-132M1-4	7.5	1440	15.6	14.8	14.3	6.5	87.1	0.84	49.8	2.4	3.0	0.03	71	69
Y3-132M2-4	11	1440	22.6	21.4	20.7	6.8	88.4	0.84	73	2.2	2.7	0.057	75	99
Y3-160M-4	11	1460	22.5	21.3	20.6	6.9	88.6	0.84	72	2.3	2.9	0.075	75	109
Y3-160L-4	15	1460	30.3	28.5	27.5	6.8	89.5	0.85	98.2	2.3	2.9	0.092	75	130
Y3-180M-4	18.5	1470	36.2	34.4	33.2	6.4	90.2	0.86	120.2	2.3	2.9	0.139	76	165
Y3-180L-4	22	1470	42.9	40.7	39.3	6.9	90.7	0.86	143	2.3	2.9	0.158	76	180
Y3-200L-4	30	1470	57.5	54.7	52.7	6.8	92.1	0.86	195	2.4	2.9	0.262	79	240
Y3-225S-4	37	1480	69.7	66.2	64.6	6.5	92.7	0.87	238.9	2.2	2.7	0.406	81	278
Y3-225M-4	45	1480	84.5	80.3	77.4	6.3	93.0	0.87	290.5	2.3	2.5	0.469	81	308
Y3-250M1-4	55	1480	103	97.8	94.3	6.4	93.3	0.87	355.1	2.2	2.5	0.66	83	402
Y3-250M2-4	75	1480	138.4	131.4	126.7	6.2	93.6	0.88	483.9	2.3	2.6	0.88	86	488
Y3-280S-4	75	1480	138.1	131.1	126.4	6.8	93.8	0.88	483.9	2.1	2.8	1.12	86	540
Y3-280M1-4	90	1480	165	157	152	6.9	94.1	0.88	580.7	2.2	2.7	1.46	86	615
Y3-280M2-4	110	1480	201	191	184	6.5	94.5	0.89	709.8	2.1	2.3	2.68	93	717
Y3-315S-4	110	1480	200.5	190.5	183.6	6.5	94.7	0.88	709.8	1.9	2.7	3.11	93	870
Y3-315M-4	132	1480	240	228	220	6.8	95.0	0.88	851.8	2.3	3.2	3.29	93	990
Y3-315L1-4	160	1480	287	273	263	6.6	95.2	0.89	1032	2.6	3.0	3.79	97	1053
Y3-315L2-4	200	1480	358	340	328	6.4	95.4	0.89	1290	2.2	2.8	4.49	97	1243
Y3-355M-4	250	1490	441	419	405	6.2	95.6	0.90	1603	1.9	2.9	5.67	101	1745
Y3-355L-4	315	1490	555	527	509	6.1	95.8	0.90	2020	2.1	3.1	6.66	101	1957

CAST IRON IE1 PERFORMANCE DATA TO SABS 1804 PARTS 1, 2 & 4

6 POLE - 1000rpm : 50Hz

MOTOR TYPE	RATED OUTPUT kW	RATED SPEED rpm	IFL 380V	IFL 400V	IFL 415V	IST IFL	EFF. %	POWER FACTOR	RATED TORQUE Nm	T _{ST} T _{FL}	T _{Max} T _{FL}	M of J kgm ²	NOISE LEVEL LW db(A)	NET WEIGHT kg
Y3-80M1-6	0.37	890	1.3	1.2	1.1	4.4	62.5	0.70	4	1.9	2.3	0.002	54	14
Y3-80M2-6	0.55	890	1.8	1.7	1.6	4.5	65.0	0.72	5.9	2.1	2.4	0.003	54	16
Y3-90S-6	0.75	910	2.3	2.2	2.1	4.1	69.1	0.72	7.9	2.3	2.7	0.003	57	20
Y3-90L-6	1.1	910	3.2	3	2.9	4.6	72.0	0.73	11.5	2.3	2.7	0.004	57	23
Y3-100L-6	1.5	920	4.1	3.9	3.7	5	76.0	0.75	15.6	2.4	2.8	0.007	61	29
Y3-112M-6	2.2	940	5.6	5.3	5.1	5.2	79.1	0.76	22.4	2.1	2.5	0.014	65	38
Y3-132S-6	3	960	7.4	7	6.8	5.6	81.3	0.76	29.9	1.9	2.5	0.029	69	54
Y3-132M1-6	4	960	9.7	9.2	8.9	6.2	82.3	0.76	39.8	2.1	2.7	0.036	69	62
Y3-132M2-6	5.5	960	12.8	12.2	11.7	6.5	84.7	0.77	54.7	2.3	2.8	0.045	69	69
Y3-160M-6	7.5	970	17.1	16.2	15.6	5.6	86.6	0.77	73.9	2.0	2.6	0.088	73	103
Y3-160L-6	11	970	24.5	23.2	22.4	5.8	87.6	0.78	108.3	2.1	2.4	0.116	73	121
Y3-180L-6	15	970	31.6	30.1	28.9	5.7	89.0	0.81	147.7	2.0	2.4	0.207	73	173
Y3-200L1-6	18.5	970	39.5	36.6	35.2	6.7	90.2	0.81	182.2	2.2	2.8	0.315	76	221
Y3-200L2-6	22	970	44.7	42.5	40.9	6.6	90.2	0.83	216.7	2.3	2.9	0.36	76	236
Y3-225M-6	30	980	59.3	56.4	54.3	6.8	91.5	0.84	292.5	2.2	2.7	0.547	76	301
Y3-250M-6	37	980	70.1	67.4	64.9	6.2	92.2	0.86	360.7	2.0	2.5	0.834	78	370
Y3-280S-6	45	980	86	82	79	6.1	92.5	0.86	438.7	1.9	2.5	1.39	80	478
Y3-280M1-6	55	980	105	100	96	6.7	92.9	0.86	536.2	2.1	2.7	1.65	80	535
Y3-280M2-6	75	985	140	133	128	5.8	93.6	0.87	727.2	2.1	2.3	3.21	85	682
Y3-315S-6	75	990	142	135	129	6.5	93.7	0.86	723.8	2.0	2.7	4.11	85	790
Y3-315M-6	90	990	170	161	155	6.2	93.9	0.86	868.6	2.0	2.6	4.28	85	880
Y3-315L-6	110	990	206	196	188	6	94.5	0.86	1062	1.9	2.7	5.45	85	997
Y3-315L2-6	132	990	244	232	223	5.8	94.6	0.87	1274	2.0	2.7	6.12	85	1103
Y3-355M1-6	160	990	291	276	266	6.3	95.1	0.88	1544	1.6	2.8	8.85	92	1400
Y3-355M2-6	200	990	362	343	331	6.6	95.4	0.88	1930	2.0	2.9	9.55	92	1780
Y3-355L-6	250	990	451	429	413	6.5	95.7	0.88	2413	1.6	3.0	10.3	92	2050

8 POLE - 750rpm : 50Hz

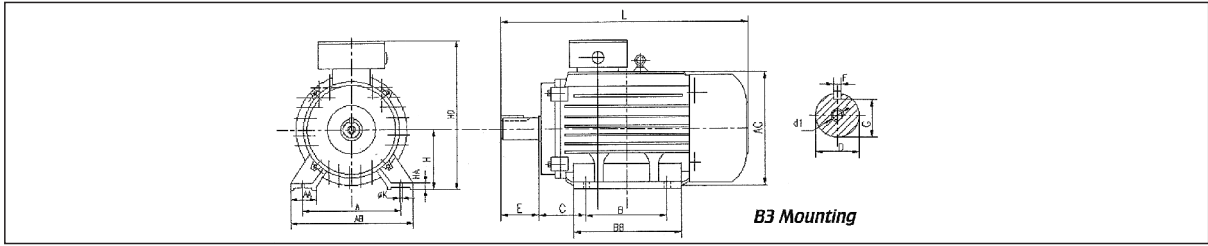
MOTOR TYPE	RATED OUTPUT kW	RATED SPEED rpm	IFL 380V	IFL 400V	IFL 415V	IST IFL	EFF. %	POWER FACTOR	RATED TORQUE Nm	T _{ST} T _{FL}	T _{Max} T _{FL}	M of J kgm ²	NOISE LEVEL LW db(A)	NET WEIGHT kg
Y3-80M1-8	0.18	630	0.88	0.83	0.8	2.9	51.2	0.61	2.8	2	2.2	0.002	52	14
Y3-80M2-8	0.25	640	1.15	1.09	1.05	3	54.2	0.61	3.7	2.1	2.4	0.003	52	16
Y3-90S-8	0.37	660	1.48	1.41	1.36	3.4	62.2	0.61	5.4	2	2.2	0.004	56	20
Y3-90L-8	0.55	660	2.16	2.06	1.98	3.5	63.3	0.61	8	2.1	2.3	0.004	56	23
Y3-100L1-8	0.75	690	2.41	2.29	2.21	3.5	70.5	0.67	10.4	2	2.2	0.008	59	31
Y3-100L2-8	1.1	690	3.35	3.18	3.06	3.6	72.4	0.69	15.2	2.2	2.4	0.01	59	35
Y3-112M-8	1.5	690	4.4	4.2	4	3.9	74.5	0.70	20.8	2.4	2.6	0.017	61	38
Y3-132S-8	2.2	710	5.9	5.6	5.4	4.3	79.3	0.71	29.6	2.3	2.5	0.031	64	52
Y3-132M-8	3	710	7.8	7.4	7.1	4.4	80.1	0.73	40.4	2.2	2.4	0.01	64	61
Y3-160M1-8	4	720	10.2	9.7	9.3	4.4	81.6	0.73	53.1	2.2	2.5	0.075	68	90
Y3-160M2-8	5.5	720	13.6	12.9	12.4	5	83.3	0.74	73	2.2	2.4	0.093	68	102
Y3-160L-8	7.5	720	17.7	16.8	16.2	5.7	85.9	0.75	99.5	2.1	2.3	0.126	68	122
Y3-180L-8	11	730	25.4	24.1	23.2	5.6	87.8	0.75	144	2.3	2.5	0.203	70	150
Y3-200L-8	15	730	34	32.3	31.1	5.5	88.3	0.76	196.3	2.1	2.4	0.339	73	212
Y3-225S-8	18.5	730	41	39	37.5	5.6	90.2	0.76	242.1	2.2	2.6	0.491	73	285
Y3-225M-8	22	740	47.2	44.8	43.2	5.4	90.8	0.78	284	2.1	2.4	0.547	73	385
Y3-250M-8	30	740	63.3	60.1	57.9	5.3	91.2	0.79	387.3	2.2	2.5	0.83	75	378
Y3-280S-8	37	740	77.5	73.6	71	5.6	91.8	0.79	477.7	2.3	2.7	1.39	76	485
Y3-280M-8	45	740	94.1	89.4	86.1	5.2	92.0	0.79	581	2.1	2.8	1.65	76	568
Y3-315S-8	55	740	110.8	105.3	101.5	5.7	93.1	0.81	710.1	1.9	2.5	4.79	82	745
Y3-315M-8	75	740	150.1	142.6	137.5	5.9	93.7	0.81	968.3	2.1	2.8	5.58	82	805
Y3-315L1-8	90	740	177.4	168.5	162.4	6.2	94.0	0.82	1162	2.3	2.9	6.37	82	998
Y3-315L2-8	110	740	216.4	205.6	198.1	6	94.2	0.82	1420	2.2	2.8	7.23	82	1175
Y3-355M1-8	132	740	259.4	246.4	237.5	6.4	94.3	0.82	1704	1.9	2.7	7.55	90	1580
Y3-355M2-8	160	740	313.7	298	287.3	6.3	94.5	0.82	2066	1.7	2.6	11.73	90	1680
Y3-355L-8	200	740	386.2	366.9	353.6	6.5	94.8	0.83	2582	1.8	2.9	12.86	90	1995

■ IFL=full load current ■ IST=locked rotor current ■ TST=locked rotor torque ■ TM=maximum torque ■ TFL=full load torque



DIMENSIONS FOR IE1 CAST IRON INDUCTION MOTORS TO IEC SPECIFICATIONS

B3



FRAME SIZE	A	AA	AB	AC	AD	AG	B	BB	C	D	DH	E	ED	F	G	GD	H	HA	HD	K	KK	L	LG
80M	125	34	160	175	140	51	100	130	50	19	M6X16	40	25	6	15.5	6	80	10	230	10	M25X1.5	295	106
90S	140	36	180	190	150	60	100	135	56	24	M8X19	50	40	8	20	7	90	12.5	260	10	M25X1.5	320	124
90L	140	36	180	190	150	60	125	160	56	24	M8X19	50	40	8	20	7	90	12.5	260	10	M25X1.5	345	124
100L	160	40	200	215	160	60	140	182	63	28	M10X22	60	45	8	24	7	100	14	275	12	M25X1.5	385	140
112M	190	45	230	236	185	75	140	195	70	28	M10X22	60	45	8	24	7	112	14	310	12	M32X1.5	410	145
132S	216	52	265	275	205	75	140	205	89	38	M12X28	80	63	10	33	8	132	16	350	12	M32X1.5	480	169
132M	216	52	265	275	205	75	178	245	89	38	M12X28	80	63	10	33	8	132	16	350	12	M32X1.5	520	169
160M	254	65	320	330	250	95	210	260	108	42	M16X36	110	90	12	37	8	160	19	425	14.5	M40X1.5	610	270
160L	254	65	320	330	250	95	254	305	108	42	M16X36	110	90	12	37	8	160	19	425	14.5	M40X1.5	655	270
180M	279	74	350	380	270	95	241	297	121	48	M16X36	110	90	14	42.5	9	180	22	460	14.5	M40X1.5	680	277
180L	279	74	350	380	270	95	279	327	121	48	M16X36	110	90	14	42.5	9	180	22	460	14.5	M40X1.5	720	277
200L	318	75	395	420	325	120	305	370	133	55	M20X42	110	90	16	49	10	200	25	515	18.5	M50X1.5	760	300
225S/M 2P	356	75	436	465	335	120	286	355	149	55	M20X42	140	110	18	53	11	225	28	560	18.5	M50X1.5	825	340
225S/M4-8	356	75	435	465	335	120	311	380	149	60	M20X42	140	110	18	53	11	225	28	560	18.5	M50X1.5	850	340
250S/M 2P	406	88	495	520	370	160	349	440	168	60	M20X42	140	110	18	53	11	250	33	620	24	M63X1.5	925	353
250S/M 4-8	406	88	495	520	370	160	349	440	168	70	M20X42	140	110	20	62.5	12	250	33	620	24	M63X1.5	935	353
280S/M 2P	457	103	550	570	400	160	368	495	190	65	M20X42	140	110	18	58	11	280	35	685	24	M63X1.5	960	350
280S/M4-8	457	103	550	570	400	160	419	535	190	80	M20X42	170	140	22	71	14	280	35	685	24	M63X1.5	1060	380
315S/M 2P	508	120	630	650	495	195	406	515	216	65	M20X42	140	110	18	58	11	315	45	820	28	M63X1.5	1160	387
*315S/M4-8	508	120	630	650	495	195	457	625	216	90	M20X42	140	110	18	58	11	315	45	820	28	M63X1.5	1270	387
*315S/M 2P	508	120	630	650	495	195	406	515	216	70	M20X42	170	140	22	71	14	315	45	820	28	M63X1.5	1190	417
315S/M4-8	508	120	630	650	495	195	457	625	216	85	M20X42	170	140	22	71	14	315	45	820	28	M63X1.5	1300	417
355M/L 2P	610	125	735	735	640	330	560	775	254	90	M24X50	140	110	20	67.5	12	355	49	1000	28	M63X1.5	1500	420
355S/M/L	610	125	735	735	640	330	630	775	254	100	M24X50	210	160	28	90	16	355	49	1000	28	M63X1.5	1570	490

B3/B5 MOUNTING AND B14 MOUNTING

B3/B5 Mounting

DIMENSIONS OF "FF" FLANGE

FRAME	FLANGE	C	LA	M ϕ	N ϕ	P ϕ	T	S	a	No. OF HOLES
80	FF165	50	12	165	130	200	3.5	12	45...	4
90S/90L	FF165	56	12	165	130	200				
100L	FF215	63	13	215	180	250				
112M	FF215	70	14	215	180	250				
132S/132M	FF265	89	14	265	230	300				
160M/160L	FF300	108	14	300	250	350				
180M/180L	FF300	121	14.5	300	250	350				
200M/200L	FF350	133	16.5	350	300	400				
225S/225M	FF400	149	20	400	350	450				
250S/250M	FF500	168	22	500	450	550				
280S/280M	FF500	190	22	500	450	550				
315S	FF600	216	22	600	550	660				
315M	FF600	216	22	600	550	660				
355M	FF740	254	25	740	680	800				
355L	FF740	254	25	740	680	800				

B14 Mounting

DIMENSIONS OF "FF" FLANGE

FRAME	FLANGE	M ϕ	N ϕ	P ϕ	T	S	No. OF HOLES
80	FT100	100	80	120	120	120	8
90S/90L	FT115	115	95	140	140	140	
100L/112M	FT130	130	110	160	160	160	



TECHNICAL SPECIFICATIONS : 2 POLE - 3000rpm

MOTOR TYPE	RATED OUTPUT POWER kW	CURRENT 380V A	CURRENT 400V A	CURRENT 415V A	RATED SPEED min ⁻¹	FULL-LOAD POWER FACTOR cosφ	FULL-LOAD EFF. η %	LOCKED ROTOR CURRENT Is/In	LOCKED ROTOR TORQUE Ms/Mn	BREAK DOWN TORQUE Ms/Mn	RATED TORQUE N-M	NET WEIGHT kg
MS5612	0.09	0.39	0.37	0.36	2710	0.70	50.0	4.0	1.8	2.0	0.32	3.2
MS5622	0.12	0.47	0.45	0.43	2710	0.70	55.0	4.0	1.8	2.0	0.42	3.4
MS6312	0.18	0.58	0.55	0.53	2720	0.73	65.0	5.5	2.2	2.2	0.63	3.9
MS6322	0.25	0.76	0.72	0.69	2720	0.76	66.0	5.5	2.2	2.2	0.88	4.4
MS7112	0.37	0.99	0.94	0.91	2760	0.81	70.0	6.1	2.2	2.2	1.28	6.2
MS7122	0.55	1.40	1.33	1.28	2820	0.82	73.0	6.1	2.2	2.3	1.86	6.3
MS8012	0.75	1.83	1.74	1.68	2845	0.83	75.0	6.1	2.4	2.5	2.52	8.3
MS8022	1.1	2.58	2.45	2.37	2840	0.84	77.0	7.0	2.5	2.5	3.7	9.0
MS90S2	1.5	3.43	3.26	3.14	2840	0.84	79.0	7.0	2.7	2.8	5.04	12.5
MS90L2	2.2	4.85	4.61	4.45	2840	0.85	81.0	7.0	2.5	2.8	7.4	14.0
MS100L2	3.0	6.31	6.00	5.78	2870	0.87	83.0	7.5	2.2	2.5	9.98	20.5
MS112M2	4.0	8.12	10.50	10.10	2880	0.88	85.0	7.5	2.3	2.3	13.26	26.0
MS132SA2	5.5	11.00	10.50	10.10	2910	0.88	86.0	7.5	2.2	2.5	18.11	40.0
MS132SB2	7.5	14.90	14.10	13.60	2905	0.88	87.0	7.5	2.2	2.4	24.66	44.0










TECHNICAL SPECIFICATIONS : 4 POLE - 1500rpm

MOTOR TYPE	RATED OUTPUT POWER kW	CURRENT 380V A	CURRENT 400V A	CURRENT 415V A	RATED SPEED min ⁻¹	FULL-LOAD POWER FACTOR cosφ	FULL-LOAD EFF. η %	LOCKED ROTOR CURRENT Is/In	LOCKED ROTOR TORQUE Ms/Mn	BREAK DOWN TORQUE Ms/Mn	RATED TORQUE N-M	NET WEIGHT kg
MS5624	0.09	0.37	0.36	0.34	1330	0.73	50.0	4.0	1.8	2.0	0.65	3.4
MS6314	0.12	0.44	0.42	0.41	1340	0.72	57.0	4.4	1.8	2.0	0.86	4.0
MS6324	0.18	0.65	0.61	0.59	1340	0.73	58.0	4.4	1.8	2.0	1.28	4.5
MS7114	0.25	0.79	0.75	0.72	1345	0.74	65.0	5.2	2.1	2.2	1.78	6.1
MS7124	0.37	1.12	1.06	1.02	1340	0.75	67.0	5.2	2.1	2.2	2.64	6.7
MS8014	0.55	1.57	1.49	1.44	1390	0.75	71.0	5.3	2.2	2.5	3.78	8.9
MS8024	0.75	2.05	1.95	1.88	1380	0.76	73.0	5.3	2.3	2.5	5.19	9.6
MS90S4	1.1	2.85	2.71	2.61	1390	0.77	76.2	6.0	2.3	2.5	7.56	12.5
MS90L4	1.5	3.72	3.54	3.41	1390	0.78	78.5	6.0	2.3	2.5	10.31	15.0
MS100L4	2.2	5.03	4.78	4.61	1415	0.82	81.0	7.0	2.3	2.5	14.85	19.2
MS100LB4	3.0	6.73	6.39	6.16	1415	0.82	82.6	7.0	2.3	2.5	20.25	23.0
MS112M4	4.0	8.70	8.26	7.96	1430	0.83	84.2	7.0	2.3	2.5	26.71	29.0
MS132S4	5.5	11.70	10.20	10.80	1445	0.83	85.7	7.0	2.3	2.5	36.35	43.5
MS132M4	7.5	15.60	14.80	14.30	1445	0.84	87.0	7.0	2.3	2.5	49.57	53.5

TECHNICAL SPECIFICATIONS : 6 POLE - 1000rpm

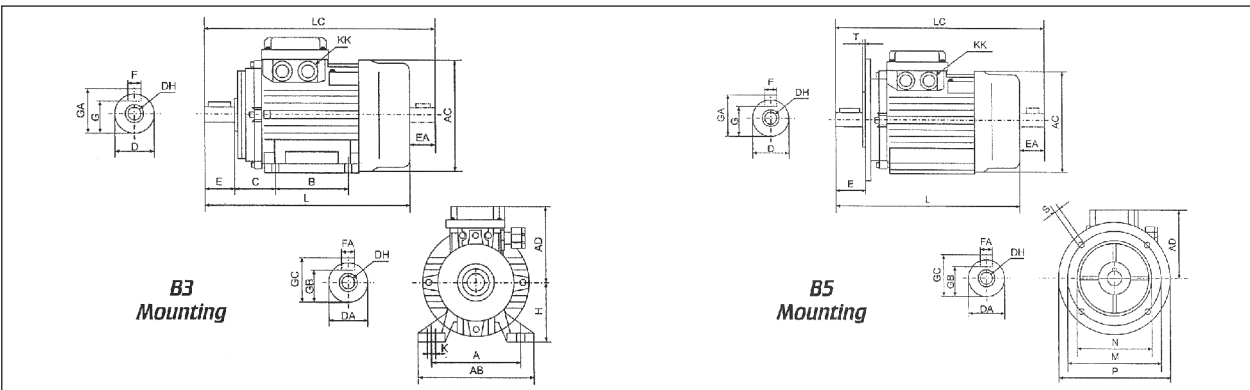
MOTOR TYPE	RATED OUTPUT POWER kW	CURRENT 380V A	CURRENT 400V A	CURRENT 415V A	RATED SPEED min ⁻¹	FULL-LOAD POWER FACTOR cosφ	FULL-LOAD EFF. η %	LOCKED ROTOR CURRENT Is/In	LOCKED ROTOR TORQUE Ms/Mn	BREAK DOWN TORQUE Ms/Mn	RATED TORQUE N-M	NET WEIGHT kg
MS8016	0.37	1.30	1.23	1.19	885	0.70	62.0	4.7	2.0	2.1	3.99	8.5
MS8026	0.55	1.79	1.70	1.63	885	0.72	65.0	4.7	2.0	2.1	5.94	9.2
MS90S6	0.75	2.29	2.18	2.10	915	0.72	69.0	5.5	2.0	2.2	7.83	12.0
MS90L6	1.1	3.18	3.02	2.91	915	0.73	72.0	5.5	2.0	2.2	11.48	14.0
MS100L6	1.5	4.00	3.80	3.66	920	0.75	76.0	5.5	2.1	2.2	15.57	19.5
MS112M6	2.2	5.57	5.29	5.1	935	0.76	79.0	6.5	2.2	2.2	22.47	28.0
MS132S6	3.0	7.40	7.03	6.78	960	0.76	81.0	6.5	2.2	2.8	29.84	38.0
MS132MA6	4.0	9.75	9.26	8.93	960	0.76	82.0	6.5	2.4	2.9	39.79	45.0
MS132MB6	5.5	12.90	12.30	11.80	960	0.77	84.0	6.5	2.4	2.8	54.71	54.0

MOUNTING ARRANGEMENTS

TYPES OF MOUNTING	CODE I	CODE II	AVAILABLE STANDARD TYPES	TYPES OF MOUNTING	CODE I	CODE II	AVAILABLE STANDARD TYPES
	IMB3	IM1001	MS56-132		IMV1	IM3011	MS56-132
	IMB5	IM3001	MS56-132		IMV3	IM3031	MS56-132
	IMB6		MS56-132		IMV5	IM1011	MS56-132
	IMB7		MS56-132		IMV6	IM1031	MS56-132
	IMB8		MS56-132		IMV15	IM2011	MS56-132
	IMB14	IM3601	MS56-132		IMV5	IM2111	MS56-132
	IMB34	IM2101	MS56-132		IMV18	IM3611	MS56-132
	IMB35	IM2001	MS56-132		IMV36	IM2031	MS56-132
			MS56-132			IM2131	MS56-132

DIMENSIONS FOR 3 PHASE ALUMINIUM MOTORS

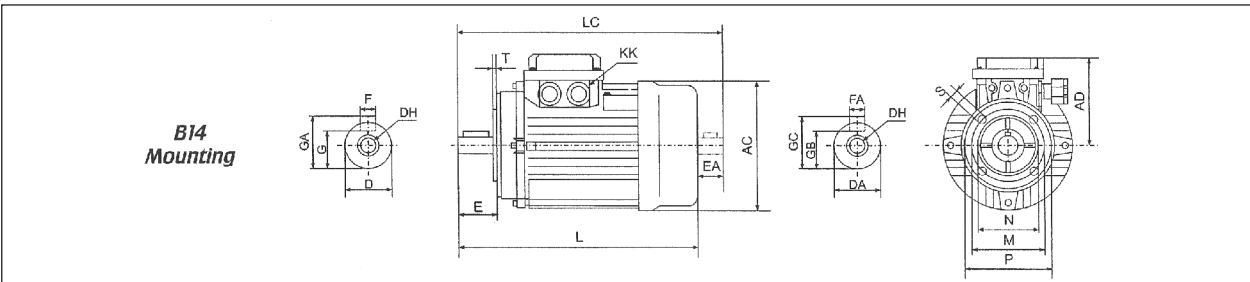
B3 MOUNTING AND B5 MOUNTING



FRAME	A	AB	AC	AD	B	C	D	DH	E	F	G	H	K	KK	L	M	N	P	S	T	DA	EA	GC	GB	GA	FA
MS56	90	110	110	96	71	36	9	M4X12	20	3	7.2	56	12	2-M18X1.5	189	100	80	120	7	3	9	20	10.2	7.2	10.2	3
MS63	100	122	122	99	80	40	11	M4X12	23	4	8.5	63	13	2-M18X1.5	218	115	95	140	9	3	11	23	12.5	8.5	12.5	4
MS71	112	136	138	109	90	45	14	M5X12	30	5	11	71	13	2-M18X1.5	250	130	110	160	9	3.5	14	30	16	11	16	5
MS80	125	154	157	112	100	50	19	M6X16	40	6	15.5	80	13	2-M20X1.5	278	165	130	200	12	3.5	14	30	16	11	21.5	5
MS90S	140	174	175	120	100	56	24	M8X19	50	8	20	90	17	2-M20X1.5	335	165	130	200	12	3.5	19	40	21.5	15.5	27	6
MS90L	140	174	175	120	125	56	24	M8X19	50	8	20	90	17	2-M20X1.5	335	165	130	200	12	3.5	19	40	21.5	15.5	27	6
MS100L	160	194	196	139	140	63	28	M10X22	60	8	24	100	23	2-M20X1.5	377	215	180	250	15	4	28	60	31	24	31	8
MS112M	190	224	220	156	140	70	28	M10X22	60	8	24	112	22	2-M20X1.5	395	215	180	250	15	4	28	60	31	24	31	8
MS132S	216	256	260	185	140	89	38	M12X28	80	10	33	132	21	2-M25X1.5	472	265	230	300	15	4	38	80	41	33	41	10
MS132M	216	256	260	185	178	89	38	M12X28	80	10	33	132	21	2-M25X1.5	510	265	230	300	15	4	38	80	41	33	41	10

*Dimensions, form and technical data are not binding

B14 MOUNTING



FRAME	A	AB	AC	AD	B	C	D	DH	E	F	G	H	K	KK	L	M	N	P	S	T	DA	EA	GC	GB	GA	FA
MS56	90	110	110	96	71	36	9	M4X12	20	3	7.2	56	12	2-M18X1.5	189	65	50	80	M5	3	9	20	10.2	7.2	10.2	3
MS63	100	122	122	99	80	40	11	M4X12	23	4	8.5	63	13	2-M18X1.5	218	75	60	90	M5	3	11	23	12.5	8.5	12.5	4
MS71	112	136	138	109	90	45	14	M5X12	30	5	11	71	13	2-M18X1.5	250	85	70	105	M6	3.5	14	30	16	11	16	5
MS80	125	154	157	112	100	50	19	M6X16	40	6	15.5	80	13	2-M20X1.5	278	100	80	120	M6	3.5	14	30	16	11	21.5	5
MS90S	140	174	175	120	100	56	24	M8X19	50	8	20	90	17	2-M20X1.5	335	115	95	140	M8	3.5	19	40	21.5	15.5	27	6
MS90L	140	174	175	120	125	56	24	M8X19	50	8	20	90	17	2-M20X1.5	335	115	95	140	M8	3.5	19	40	21.5	15.5	27	6
MS100L	160	194	196	139	140	63	28	M10X22	60	8	24	100	23	2-M20X1.5	377	130	110	160	M8	4	28	60	31	24	31	8
MS112M	190	224	220	156	140	70	28	M10X22	60	8	24	112	22	2-M20X1.5	395	130	110	160	M8	4	28	60	31	24	31	8
MS132S	216	256	260	185	140	89	38	M12X28	80	10	33	132	21	2-M25X1.5	472	165	130	200	M10	4	38	80	41	33	41	10
MS132M	216	256	260	185	178	89	38	M12X28	80	10	33	132	21	2-M25X1.5	510	165	130	200	M10	4	38	80	41	33	41	10

*Dimensions, form and technical data are not binding

ELECTRICAL FORMULAE

- 1) active kW = $kVA \times PF$ or $\frac{\text{line amps} \times \text{line volts} \times 1,732}{1000} \times PF$
- 2) rated kW = $kVA \times PF \times \text{eff}$ or $\frac{\text{line amps} \times \text{line volts} \times 1,732 \times PF \times \text{eff}}{1000}$ or HP x 0.746
- 3) rated Hp = $\frac{\text{active kW} \times \text{eff}}{0.746}$ or $\frac{\text{line amps} \times \text{line volts} \times 1,732 \times pf \times \text{eff}}{746}$
- 4) apparent kVA = $\frac{\text{rated kW}}{\text{eff} \times PF}$ or $\frac{HP \times 0.746}{\text{eff} \times PF}$ or $\frac{\text{line amps} \times \text{line volts} \times 1,732}{1000}$
- 5) line amps = $\frac{\text{rated kW} \times 1000}{\text{line volts} \times 1,732 \times PF \times \text{eff}}$ or $\frac{\text{rated HP} \times 746}{\text{line volts} \times 1,732 \times PF \times \text{eff}}$
- 6) rated torque (Nm) = $\frac{9.55 \times \text{rated kW} \times 1000}{\text{rated speed of motor (r/min)}}$
- 7) rated kW = $\frac{\text{rated torque (Nm)} \times \text{rated speed of motor (r/min)}}{9.55 \times 1000}$
- 8) rated slip % = $\frac{\text{synchronous speed minus rated speed}}{\text{synchronous speed}} \times 100$
- 9) starting time (s) = $\frac{\text{total inertia kg m}^2 \text{ (WR2)} \times \text{working speed (r/min)}}{9.55 \times \text{mean acceleration torque (Nm)}}$
- 10) synch. speed (r/min) = $\frac{\text{frequency (Hz)} \times 60}{\text{number of pairs of poles}}$

PF : Power Factor
 eff : Efficiency
 rated kW : mechanical power delivered by motor shaft
 active kW : input power

A large rectangular area containing 28 horizontal lines for writing notes.



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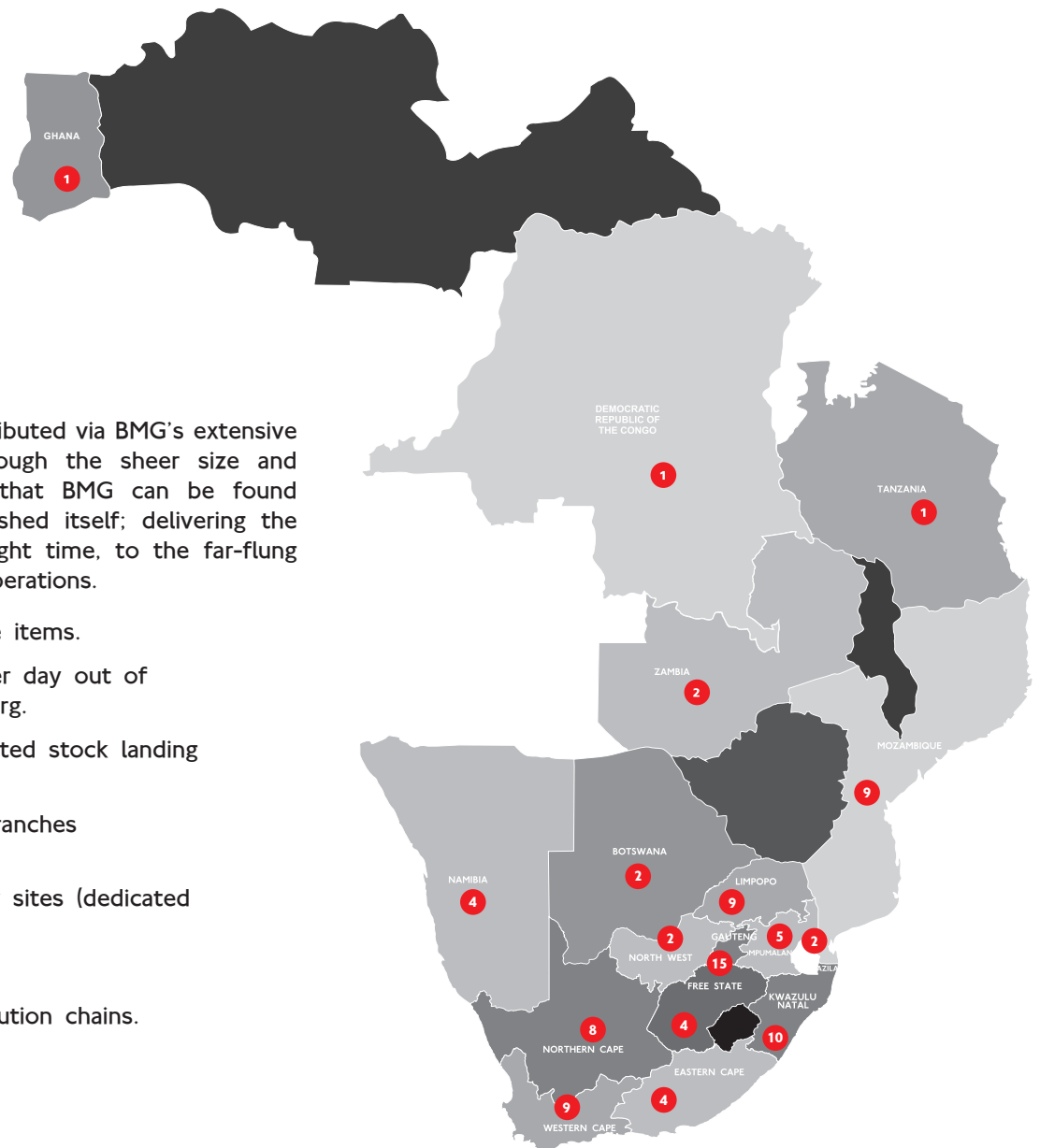
Products are imported from around the globe and brought to BMG's strategically located distribution facilities and regional service centres via the main distribution hub in Johannesburg - BMG World. A world-class facility boasting 308 000m³ of fully stocked warehouse space, an accredited training facility and unlimited engineering capabilities.

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88
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