ABLE®

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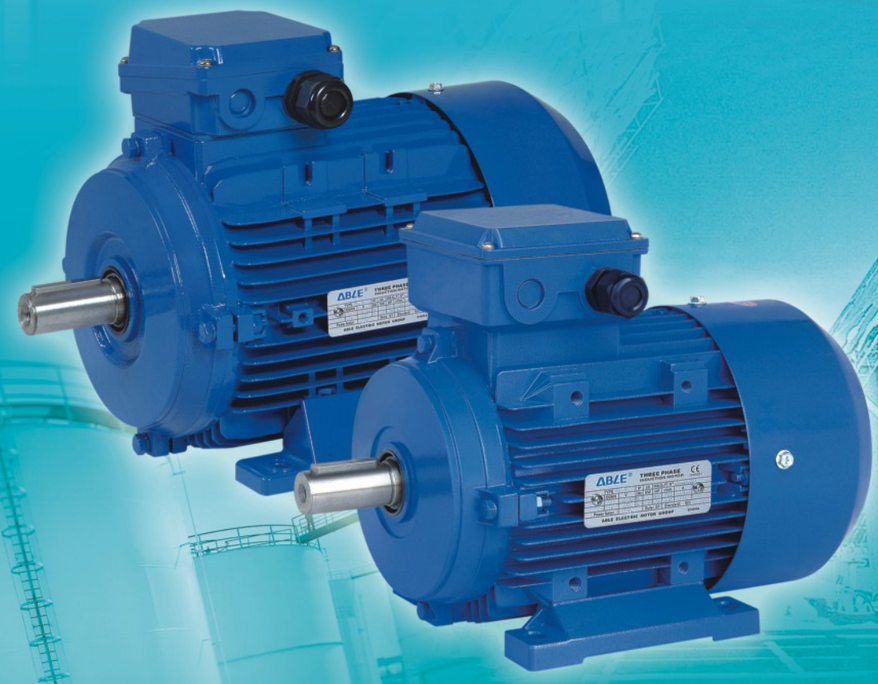
CHINESE WELL-KNOWN TRADEMARK
CERTIFICATE FOR THE EXEMPTION
FROM EXPORT INSPECTION
CERTIFICATE FOR PRODUCT EXEMPTION FROM
QUALITY SURVEILLANCE INSPECTION

ISO9001:2000 ISO14001:2004

2010



ABLE®

ABLE ELECTRIC

ABLE TO BE THE BEST

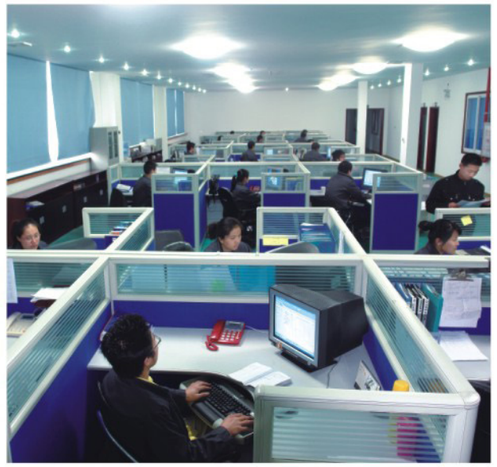
FUJIAN ABLE MOTOR GROUP CO.,LTD.is an enterprise which integrates scientific research, production, and marketing. It has received many honors such as China First Enterprise of Exemption From Export Inspection, National Enterprise of Exemption From Quality Surveillance Inspection, China Motor Industry AAA Credit Enterprise, Famous-Brand Production Enterprise in Fujian Province, Famous Brand Enterprise in Fujian, Example Enterprise For Technical Innovation in Fujian Province, Advanced Enterprise With Quality Control in Fujian Province and so on. Besides all of the above, in March of 2008, ABLE has been designated as Chinese Famous Trademarks by State Administration Of Industry and Commerce. The president Mr. Chen Shaobo once is rewarded as "National Excellent Township Enterprise Manager", "National Quality Control Advanced Talent", "Top 10 New Economical Hero In Western Fujian In 2007", "Top 10 Outstanding Talents In Ningde City".

Till now, its registered Capital is up to 41.16 million RMB. The total sales volume in 2006 is 1/4 billion RMB, 2/5 billion RMB and it's about to 0.5 billion RMB in 2008. We have 4 subsidiaries, ABLE ELECTRIC CO.,LTD., ABLE ELECTRIC (FUZHOU) CO.,LTD., ABLE ELETRIC (NINGDE)CO.,LTD., and Dalles Sci-Tech Trading CO.,LTD. Among them, the Ningde factory occupies 300 acres. Our ABLE is the Technical Center and Innovative enterprise in Fujian Province, which was established in 1993, hiring over 1200 employees, among which 21% is professional technical engineers. What's more, it has powerful technical strength in products researching and developing.

Our main products are motors and pumps. We have more than 10 series motors, covering more than 400 specifications. They are MS SERIES THREE-PHASE ASYNCHRONOUS MOTOR, ML SERIES SINGLE-PHASE DUAL-CAPACITOR ASYNCHRONOUS MOTOR, MC SERIES SINGLE-PHASE CAPACITOR START ASYNCHRONOUS MOTOR,MY SERIES SINGLE-PHASE CAPACITOR RUN ASYNCHRONOUS MOTOR,Y2 SERIES THREE-PHASE ASYNCHRONOUS MOTOR, YC HEAVY DUTY SERIES SINGLE-PHASE CAPACITOR START ASYNCHRONOUS MOTOR and so on. As to pumps, we have SCM SERIES CENTRIFUGAL ELECTRIC WATER PUMP, JET SERIES SELF-PRIMING JET PUMP, QB WATER ELECTRIC PUMP VORTEX PUMP, ASG SERIES STAINLESS STEEL PUMPS, ALUMINUM MOTORS.

We have complete quality control system operating effectively. Besides, we have our unique management modes and product-development abilities for ages. Dating back to 1998, our mid-small series motor is named Famous-Brand in Fujian Province by Fujian Government and so do our AEC SERIES PUMPS. Nowadays, most of our products have passed the Safety Certification From National Work Committee and received CE/GS Certification from European Union. In 2002, we ABLE passed ISO9001(2000) Quality System for Version and meanwhile became the first private enterprise which passes Fujian Province Technical Supervision with the highest standards of measurement assessment in Fu'an. Our Bath Pump Series motor passed the American UL Certification in 2003 and received ISO14000 Environmental Management System Certification in 2006.

With the help and supports of the leaders at all levels and friends coming from home and aboard, we ABLE insist on the goal of "providing our clients with first-class products, offering our employees with developing space and creating the social prosperities hand in hand". We behold the core sense of value: Responsibility creates trust. We also put forward to " leading by the science, developing with quality, pursuiting benefits for the employees ". Under all of the above strategies steps, we believe our ABLE is bound to develop rapidly in future.



So far, ABLE has developed as one of the three main asynchronous motor manufacturers. Its products has widely moved off Italy, Britain, Germany, France, Danmark, Spain, Iraq, Thailand, Malaysia, Singapore and other foreign countries covering more 30 countries and districts. We have very well market occupancy and our ABLE own-brand is popular with our established customers.

Till now, our crucial clients coming from many world-famous enterprises, they are: American PENTAIR, ELECTROLUX, German VILLE, Australian ONGA, Italian CEG.

The goal to 2010 is up to 1.5 billion RMB, striving to the top 10 among China motor manufacturer and we wish to become one of the international famous motor professional manufacturer in the very future.

If you join in with us, you won't feel disappointed. So we're right here waiting for you with our sincerity and strength, our respectful customers, looking forward to be your royal friend!

ABLE ELECTRIC

ABLE TO BE THE BEST


800X1500

ABLE TO BE THE BEST

ABLE ELECTRIC

PEACEFUL TO GREAT AMBITION ABLE ELECTRIC

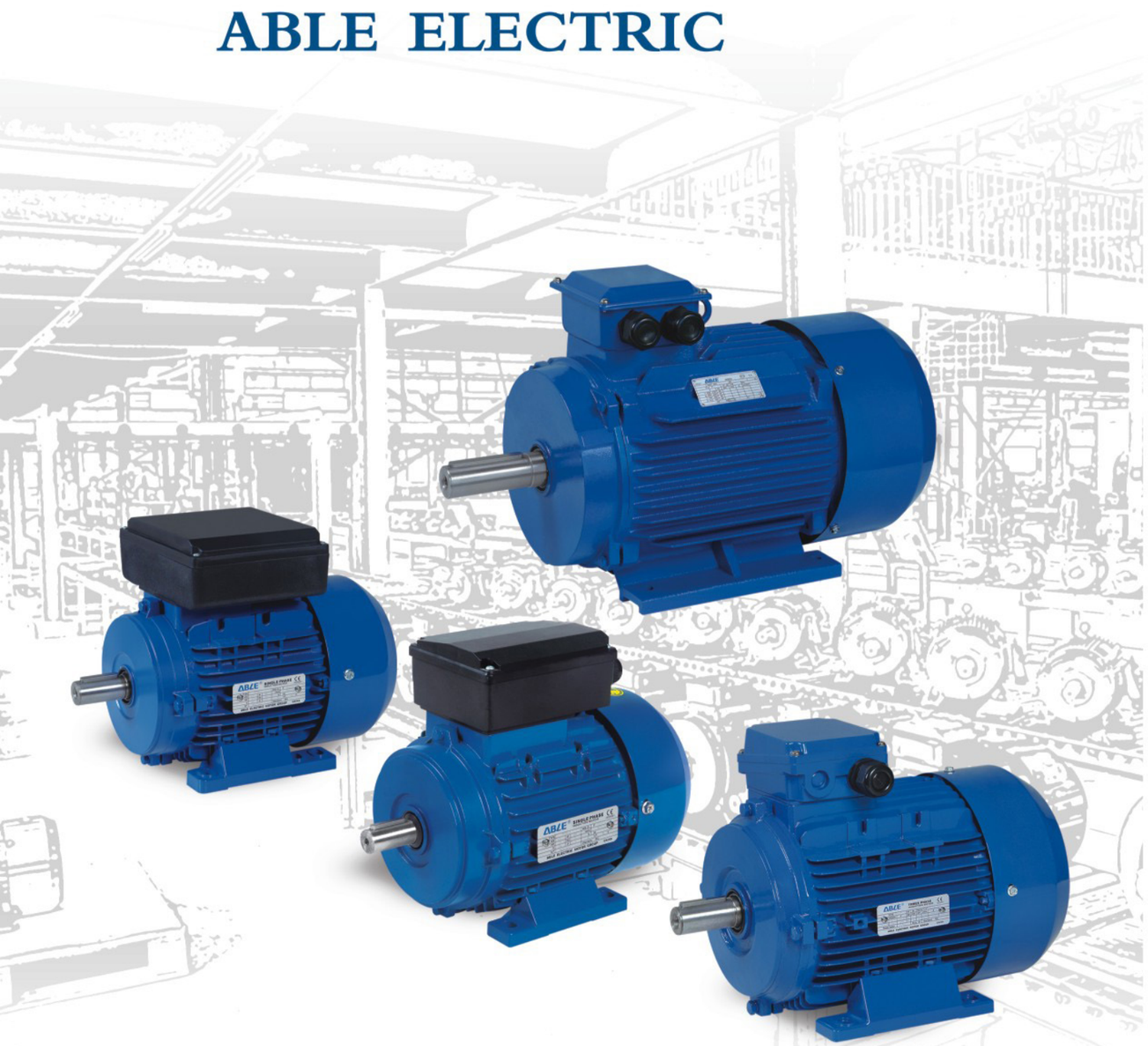
ABLE ELECTRIC

The colour series

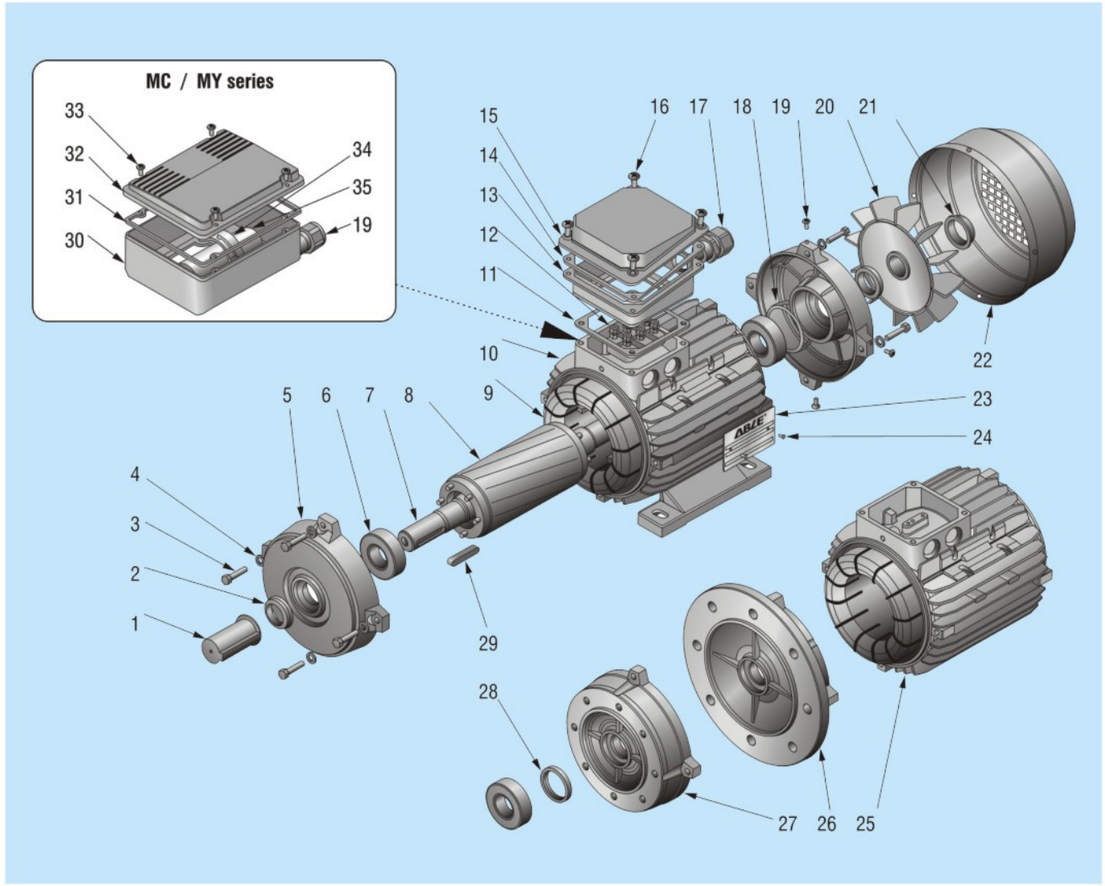
4003 Heather violet	5026 Pearl night blue	6018 Yellow green	1002 Sand yellow	9022 Pearl light grey
4011 Pearl violet	5022 Night blue	6017 May green	1026 Luminous yellow	9007 Grey aluminium
4006 Traffic purple	5013 Cobalt blue	6010 Grass green	1023 Traffic yellow	9006 White aluminium
4008 Signal violet	5002 Ultramarine blue	6001 Emerald green	1018 Zinc yellow	7004 Signal grey
3024 Luminous red	5012 Light blue	6002 Leaf green	1016 Sulfur yellow	7040 Window grey
3018 Strawberry red	5015 Sky blue	6016 Turquoise green	1028 Melon yellow	7042 Traffic grey
3031 Orient red	5017 Traffic blue	6026 Opal green	1007 Daffodil yellow	7011 Iron grey
3027 Raspberry red	5005 Signal blue	6029 Mint green	2000 Yellow orange	7031 Blue grey
3020 Traffic red	5010 Gentian blue	6032 Signal green	2007 Luminous orange	7021 Black grey
3013 Tomato red	5009 Azure blue	6024 Traffic green	2011 Deep orange	9004 Signal black
3000 Flame red	5003 Sapphire blue	6035 Pearl green	2010 Signal orange	9005 Jet black
3001 Signal red	5001 Green blue	6005 Moss green	2009 Traffic orange	9011 Graphite black
3011 Brown red	5000 Violet blue	5021 Water blue	8023 Orange brown	9017 Traffic black

Contents

PEACEFUL TO GREAT AMBITION ABLE ELECTRIC



INSTALLATION DIMENSIONS



N.	Description	N.	Description	N.	Description
1	Shaft cover	13	Terminal block box - base	25	B5 motor casing
2	V-ring	14	IP 65 gasket	26	B5 flange
3	Motor clamping screws	15	Terminal block box - cover	27	B14 flange
4	Spring ring	16	Terminal block box tightening screws	28	Sealing ring
5	Shield	17	Cable inlet bush	29	Shaft key
6	Bearing	18	Compensation ring	30	Capacitor-holder - base vers. MM
7	Motor shaft	19	Fan cover tightening screws	31	IP 55 gasket vers. MM
8	Rotor	20	PVC fan	32	Capacitor-holder - cover vers. MM
9	Wound stator	21	Ring for fan tightening	33	Capacitor-holder tightening screws vers. MM
10	Motor casing B3-BS	22	Fan cover	34	Capacitor clamp vers. MM
11	IP 55 gasket	23	Motor identification plate	35	Capacitor
12	Mains power connection terminal block	24	Motor identification plate tightening screws		

MS

SERIES THREE-PHASE ASYNCHRONOUS MOTOR

ALUMINUM HOUSING

CE

INTRODUCTION :

- Conform to the IEC standard
- Be made of selected quality materials, lastest design in entirety
- Good performance, low noise, little vibration, and safety and reliable operation
- Nice appearance, light weight
- Be maintained very conveniently, simple construction
- Be used for general drive

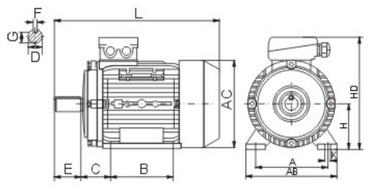
MOTOR FEATURES

- Utilise IP55 enclosures, other requests
- Multiple feet locations
- Aluminium frame, end shields and base
- High strength cable gland
- Shaft key and protector supplied
- Superior paint finish
- Motors made to heavy duty service factors
- Can be made with stainless steel shaft
- Motors made for continuous S1 duty
- Utilise Vacuum impregnated Class B or Class F insulation
- Others insulation on request
- High performance and efficiency

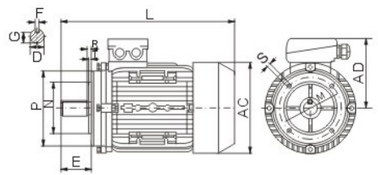
CUSTOMER BENEFITS

- Water dust and vermin resistant
- Quiet operation
- Electricity saving
- Easy installation (bolt on feet or brackets as required)
- Corrosion resistant
- Dependable
- Superior life
- Reliable in country, city or factory environments

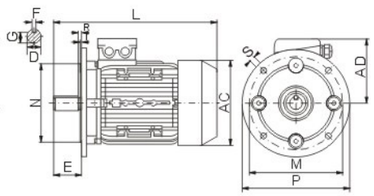
IMB3



IMB14



IMB5



INSTALLATION SIZE AND OVERALL DIMENSION

Frame Size	Mounting Dimensions (mm)																				Frame Dimensions (mm)				
										IMB14						IMB5									
	A	B	C	D	E	F	G	H	K	M	N	P	R	S	T	M	N	P	R	S	T	AB	AC	AD	HD	L
56	90	71	36	9	20	3	7.2	56	5.8	65	50	80	0	M5	2.5	100	80	120	0	7	3	110	120	100	155	195
63	100	80	40	11	23	4	8.5	63	7	75	60	90	0	M5	2.5	115	95	140	0	10	3	125	130	100	165	215
71	112	90	45	14	30	5	11	71	7	85	70	105	0	M6	2.5	130	110	160	0	10	3.5	140	150	110	185	246
80	125	100	50	19	40	6	15.5	80	10	100	80	120	0	M6	3	165	130	200	0	12	3.5	160	170	135	215	285
90S	140	100	56	24	50	8	20	90	10	115	95	140	0	M8	3	165	130	200	0	12	3.5	178	185	137	226	335
90L	140	125	56	24	50	8	20	90	10	115	95	140	0	M8	3	165	130	200	0	12	3.5	178	185	137	226	335
100L	160	140	63	28	60	8	24	100	12	130	110	160	0	M8	3.5	215	180	250	0	15	4	206	206	150	250	376
112M	190	140	70	28	60	8	24	112	12	130	110	160	0	M8	3.5	215	180	250	0	15	4	222	228	170	285	400
132S	216	140	89	38	80	10	33	132	12	165	130	200	0	M10	4	265	230	300	0	15	4	257	267	190	325	460
132M	216	178	89	38	80	10	33	132	12	165	130	200	0	M10	4	265	230	300	0	15	4	257	267	190	325	500
160M	254	210	108	42	110	12	37	160	15	215	180	250	0	M12	4	300	250	350	0	15	5	320	330	255	420	615
160L	254	254	108	42	110	12	37	160	15	215	180	250	0	M12	4	300	250	350	0	15	5	320	330	255	420	675
180M	279	241	121	48	110	14	42.5	180	15	265	230	300	0	M15	4	300	250	350	0	19	5	355	380	280	455	700
180L	279	279	121	48	110	14	42.5	180	15	265	230	300	0	M15	4	300	250	350	0	19	5	355	380	280	455	740

TECHNICAL DATA

Model	Power (kW)	Current (A)				Speed (r.p.m)	Eff (%)	Power factor	Tstart/Tn	Tmax/Tn	Ist/In
		220V	380	400V	690V						
MS5612	0.09	0.56	0.32	0.31	0.18	2758	62	0.68	2.3	2.4	6
MS5622	0.12	0.66	0.38	0.36	0.21	2780	67	0.71	2.3	2.4	6
MS5632	0.18	0.91	0.53	-	-	2780	69	0.75	2.3	2.4	6
MS6312	0.18	0.91	0.53	0.50	0.29	2715	69	0.75	2.2	2.4	6
MS6322	0.25	1.19	0.69	0.65	0.37	2715	68	0.81	2.2	2.4	6
MS6332	0.37	1.71	0.99	-	-	2715	70	0.81	2.5	2.7	6
MS7112	0.37	1.71	0.99	0.90	0.52	2690	70	0.81	2.2	2.4	6
MS7122	0.55	2.41	1.4	1.28	0.74	2715	73	0.82	2.2	2.4	6
MS7132	0.75	3.16	1.83	-	-	2700	75	0.83	2.6	2.9	6
MS8012	0.75	3.16	1.83	1.66	0.96	2730	75	0.83	2.2	2.4	6
MS8022	1.1	4.46	2.58	2.42	1.40	2746	77	0.84	2.2	2.4	6
MS8032	1.5	5.93	3.43	-	-	2770	79	0.84	2.8	3.1	6

TECHNICAL DATA

Model	Power (kW)	Current (A)				Speed (r.p.m)	Eff (%)	Power factor	Tstart/Tn	Tmax/Tn	Ist/In
		220V	380	400V	690V						
MS90S-2	1.5	5.93	3.43	3.65	2.11	2715	79	0.84	2.2	2.4	6
MS90L1-2	2.2	8.39	4.85	-	-	2772	81	0.85	2.2	2.4	6
MS90L2-2	3	10.9	6.31	-	-	2800	83	0.87	3	3.2	6
MS100L1-2	3	10.9	6.31	-	-	2870	83	0.87	2.2	2.3	7
MS100L2-2	4	14.03	8.13	-	-	2880	85	0.88	2.5	2.7	7
MS112M1-2	4	14.03	8.13	-	-	2890	85	0.88	2.5	2.7	7
MS112M2-2	5.5	19.07	11.04	-	-	2900	86	0.88	2.5	2.7	7
MS112M3-2	7.5	25.71	14.88	-	-	2900	87	0.88	2.5	2.7	7.5
MS132S1-2	5.5	19.07	11.04	10.45	6.06	2910	86	0.88	2.5	2.7	7.5
MS132S2-2	7.5	25.71	14.88	14.25	8.26	2900	87	0.88	2.5	2.7	7.5
MS132M1-2	9.2	31	17.95	-	-	2910	87.5	0.89	2.5	2.7	7.5
MS132M2-2	11	36.86	21.34	-	-	2919	88	0.89	2.5	2.7	7.5
MS132M3-2	15	49.98	28.94	-	-	2920	88.5	0.89	2.5	2.7	7.5
MS160M1-2	11	21.3	12.2	20.20	11.73	2930	88	0.88	2	2.2	7
MS160M2-2	15	28.7	16.4	27.27	15.81	2930	89	0.89	2	2.2	7
MS160L-2	18.5	34.6	19.8	32.87	19.06	2930	90	0.9	2	2.2	7
MS180M-2	22	40.9	23.4	-	-	2930	90.5	0.9	2	2.2	7
MS5614	0.06	0.6	0.35	0.27	0.15	1371	46	0.56	2.3	2.4	6
MS5624	0.09	0.83	0.48	0.37	0.21	1350	49	0.56	2.3	2.4	6
MS5634	0.12	0.99	0.58	-	-	1380	50	0.58	2.3	2.4	6
MS6314	0.12	0.89	0.51	0.46	0.26	1350	53	0.64	2.2	2.4	6
MS6324	0.18	1.25	0.73	0.62	0.36	1340	56	0.66	2.2	2.4	6
MS6334	0.25	1.36	0.79	-	-	1350	65	0.74	2.2	2.4	6
MS7114	0.25	1.36	0.79	0.79	0.46	1390	65	0.74	2.2	2.4	6
MS7124	0.37	1.93	1.12	1.06	0.62	1375	67	0.75	2.2	2.4	6
MS7134	0.55	2.71	1.57	-	-	1380	71	0.75	2.2	2.4	6
MS8014	0.55	2.71	1.57	1.48	0.87	1370	71	0.75	2.2	2.4	6
MS8024	0.75	3.55	2.05	1.91	1.11	1380	73	0.76	2.2	2.4	6
MS8034	1.1	5	2.89	-	-	1380	75	0.77	2.3	2.5	6
MS90S-4	1.1	5	2.89	2.61	1.51	1390	75	0.77	2.2	2.4	6
MS90L-4	1.5	6.39	3.7	3.47	2.01	1400	78	0.79	2.2	2.4	6
MS90L1-4	1.85	7.88	4.56	-	-	1400	78	0.79	2.2	2.4	6
MS90L2-4	2.2	8.91	5.16	-	-	1400	80	0.81	2.5	2.7	6
MS100L1-4	2.2	8.91	5.16	4.75	2.75	1430	80	0.81	2.2	2.3	7
MS100L2-4	3	11.71	6.78	6.46	3.74	1430	82	0.82	2.2	2.3	7
MS100L3-4	4	15.24	8.82	-	-	1420	84	0.82	2.5	2.7	7
MS112M-4	4	15.24	8.82	8.36	4.85	1430	84	0.82	2.2	2.3	7
MS112M2-4	5.5	20.46	11.84	-	-	1435	85	0.83	2.7	3	7
MS132S-4	5.5	20.46	11.84	11.4	6.61	1440	85	0.83	2.2	2.2	7
MS132M1-4	7.5	26.93	15.59	-	-	1450	87	0.84	2.2	2.2	7
MS132M2-4	9.2	32.85	19.02	-	-	1460	87.5	0.84	2.7	3	7
MS132M3-4	11	38.59	22.34	-	-	1460	88	0.85	2.5	2.7	7
MS160M-4	11	22.3	12.7	21.19	12.28	1460	88	0.85	2	2.2	7

TECHNICAL DATA

Model	Power (kW)	Current (A)				Speed (r.p.m)	Eff (%)	Power factor	Tstart/Tn	Tmax/Tn	Ist/In
		220V	380	400V	690V						
MS160L-4	15	30	17.1	28.50	16.52	1460	89	0.85	2	2.2	7
MS180M-4	18.5	36.4	20.8	-	-	1470	90.5	0.85	2.2	2.2	7.5
MS180L-4	22	43.1	24.6	-	-	1470	91	0.85	2.2	2.2	7.5
MS6316	0.09	0.93	0.54	-	-	830	38	0.67	2.2	2.4	6
MS6326	0.11	1.06	0.61	-	-	830	40	0.68	2.2	2.4	6
MS7116	0.18	1.27	0.74	-	-	880	59	0.63	2.2	2.4	6
MS7126	0.25	1.64	0.95	-	-	900	59	0.68	2.2	2.4	6
MS7136	0.37	2.24	1.3	-	-	900	62	0.7	2.2	2.4	6
MS8016	0.37	2.24	1.3	-	-	915	62	0.7	2.2	2.4	6
MS8026	0.55	3.08	1.79	-	-	920	65	0.72	2.2	2.4	6
MS90S-6	0.75	3.96	2.29	2.19	1.27	930	69	0.72	2.2	2.2	5.5
MS90L-6	1.1	5.49	3.18	3.04	1.76	930	72	0.73	2.2	2.2	5.5
MS100L-6	1.5	6.91	4	3.80	2.20	945	76	0.75	2.2	2.2	6
MS112M-6	2.2	9.62	5.57	5.32	3.08	945	79	0.76	2.2	2.2	6
MS112M1-6	3	12.79	7.4	-	-	945	81	0.76	2.2	2.2	6
MS132S-6	3	12.79	7.4	6.84	3.97	960	81	0.76	2	2	6.5
MS132M1-6	4	16.84	9.75	8.93	5.18	960	82	0.76	2	2	6.5
MS132M2-6	5.5	22.32	12.92	12.35	7.16	960	84	0.77	2	2	6.5
MS160M-6	7.5	16.5	9.43	15.68	9.09	970	86	0.8	2	2	6.5
MS160L-6	11	24.1	13.8	22.90	13.27	970	87.5	0.79	2	2	6.5
MS180L-6	15	31.5	18	-	-	970	89	0.81	2	2	7
MS7118	0.09	0.88	0.51	-	-	680	49	0.55	2.2	2.4	5.5
MS7128	0.12	1.15	0.66	-	-	690	50	0.55	2.2	2.4	6
MS8018	0.18	1.68	0.98	-	-	680	51	0.55	2.2	2.4	6
MS8028	0.25	1.99	1.15	-	-	680	54	0.61	2.2	2.4	6
MS90S-8	0.37	2.57	1.49	-	-	680	62	0.61	2.2	2.4	6
MS90L-8	0.55	3.76	2.17	-	-	700	63	0.61	2.2	2.4	6
MS100L1-8	0.75	4.14	2.4	-	-	700	71	0.67	2.2	2.3	6
MS100L2-8	1.1	5.73	3.32	-	-	710	73	0.69	2.2	2.3	6
MS112M-8	1.5	7.61	4.4	-	-	710	75	0.69	2.2	2.3	6
MS132S-8	2.2	10.43	6.04	5.51	3.19	720	78	0.71	2	2	6
MS132M-8	3	13.65	7.9	7.32	4.24	720	79	0.73	2	2	5.5
MS160M1-8	4	10.2	5.8	9.69	5.62	720	81	0.73	2	2	6
MS160M2-8	5.5	13.6	7.8	12.92	7.49	720	83	0.74	2	2	6
MS160L-8	7.5	17.7	10.1	16.82	9.75	720	85.5	0.75	2	2	6
MS180L-8	11	25.1	14.3	-	-	730	87.5	0.76	2	2	6.5

MSHE

SERIES THREE-PHASE ASYNCHRONOUS MOTOR

ALUMINUM HOUSING

CE

INTRODUCTION :

- Conform to the IEC standard
- Be made of selected quality materials, lastest design in entirety
- Good performance, low noise, little vibration, and safety and reliable operation
- Nice appearance, light weight
- Be maintained very conveniently, simple construction
- Be used for general drive

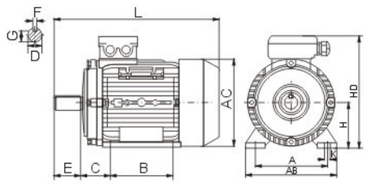
MOTOR FEATURES

- Utilise IP55 enclosures, other requests
- Multiple feet locations
- Aluminium frame, end shields and base
- High strength cable gland
- Shaft key and protector supplied
- Superior paint finish
- Motors made to heavy duty service factors
- Can be made with stainless steel shaft
- Motors made for continuous S1 duty
- Utilise Vacuum impregnated Class B or Class F insulation
- Others insulation on request
- High performance and efficiency

CUSTOMER BENEFITS

- Water dust and vermin resistant
- Quiet operation
- Electricity saving
- Easy installation (bolt on feet or brackets as required)
- Corrosion resistant
- Dependable
- Superior life
- Reliable in country, city or factory environments

IMB3



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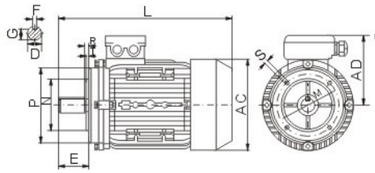

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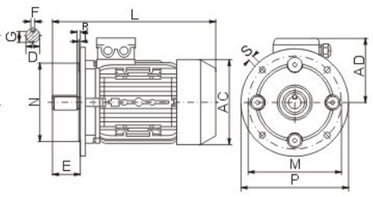
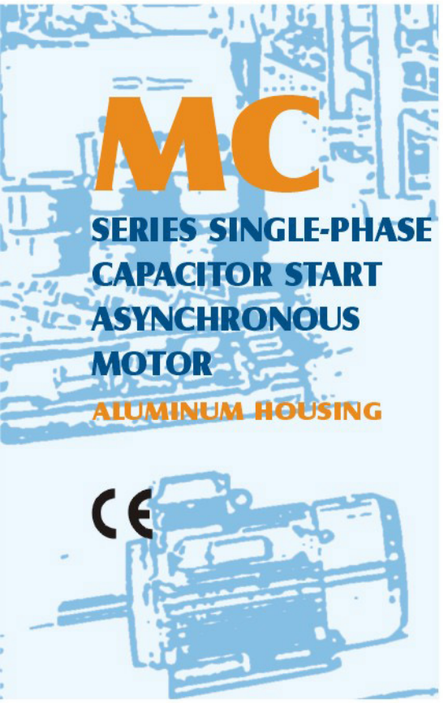


INSTALLATION SIZE AND OVERALL DIMENSION

Frame Size	Mounting Dimensions (mm)																				Frame Dimensions (mm)				
										IMB14						IMB5									
	A	B	C	D	E	F	G	H	K	M	N	P	R	S	T	M	N	P	R	S	T	AB	AC	AD	HD	L
56	90	71	36	9	20	3	7.2	56	5.8	65	50	80	0	M5	2.5	100	80	120	0	7	3	110	120	100	155	195
63	100	80	40	11	23	4	8.5	63	7	75	60	90	0	M5	2.5	115	95	140	0	10	3	125	130	100	165	215
71	112	90	45	14	30	5	11	71	7	85	70	105	0	M6	2.5	130	110	160	0	10	3.5	140	150	110	185	246
80	125	100	50	19	40	6	15.5	80	10	100	80	120	0	M6	3	165	130	200	0	12	3.5	160	170	135	215	285
90S	140	100	56	24	50	8	20	90	10	115	95	140	0	M8	3	165	130	200	0	12	3.5	178	185	137	226	335
90L	140	125	56	24	50	8	20	90	10	115	95	140	0	M8	3	165	130	200	0	12	3.5	178	185	137	226	335
100L	160	140	63	28	60	8	24	100	12	130	110	160	0	M8	3.5	215	180	250	0	15	4	206	206	150	250	400
112M	190	140	70	28	60	8	24	112	12	130	110	160	0	M8	3.5	215	180	250	0	15	4	222	228	170	285	400
132S	216	140	89	38	80	10	33	132	12	165	130	200	0	M10	4	265	230	300	0	15	4	257	267	190	325	460
132M	216	178	89	38	80	10	33	132	12	165	130	200	0	M10	4	265	230	300	0	15	4	257	267	190	325	500

TECHNICAL DATA

Model	Power (kW)	Voltage (V)	Current (A)	Speed (r.p.m)	Eff (%)	Power factor	Tstart/Tn	Tmax/Tn	Start current
MSHE8012	0.75	240/415	1.93	2917	79.11	0.69	2.92	3.65	6.74
MSHE8022	1.1	240/415	2.95	2910	80.79	0.64	3.55	4.03	6.88
MSHE90S2	1.5	240/415	3.27	2920	84.67	0.75	2.97	3.46	7.21
MSHE90L-2	2.2	240/415	4.47	2900	85.27	0.80	2.2	3.45	7.8
MSHE100L-2	3.0	240/415	6.03	2950	87.55	0.8	3.89	4.19	8
MSHE112M-2	4.0	415/720	6.96	2915	88.15	0.91	2.81	3.52	8.5
MSHE132S1-2	5.5	415/720	10.58	2901	87.61	0.83	2.74	3.23	8
MSHE132S2-2	7.5	415/720	14.17	2920	89.27	0.83	3	4.09	7.8
MSHE8014	0.55	240/415	1.45	1440	79.75	0.66	2.36	2.96	5.42
MSHE8024	0.75	240/415	1.89	1440	80.7	0.68	2.48	3.11	5.94
MSHE90S-4	1.1	240/415	2.96	1445	82.76	0.63	2.46	3.16	5.42
MSHE90L-4	1.5	240/415	4.11	1448	85.48	0.6	2.59	3.39	5.74
MSHE100L1-4	2.2	240/415	4.52	1466	87.73	0.78	3.07	3.73	7.8
MSHE100L2-4	3.0	240/415	6.48	1450	86.46	0.74	3.18	3.79	7.6
MSHE112M-4	4.0	415/720	8.45	1450	88.3	0.74	2.78	3.5	7.7
MSHE132S-4	5.5	415/720	11.53	1456	88.63	0.75	2.53	3.4	6.98
MSHE132M-4	7.5	415/720	14.74	1454	89.65	0.79	2.3	3.41	7.4
MSHE100L-6	1.5	240/415	4.32	950	80.25	0.60	2.79	3.43	5.3
MSHE112M-6	2.2	240/415	5.8	960	82.6	0.64	2.51	3.23	5.63
MSHE132S-6	3.0	240/415	7.39	962	84.6	0.67	2.35	3.19	6.35
MSHE132M1-6	4.0	415/720	9.79	963	85.13	0.67	2.69	3.42	6.16
MSHE132M2-6	5.5	415/720	12.8	973	87.39	0.69	2.59	3.8	7.1



INTRODUCTION :

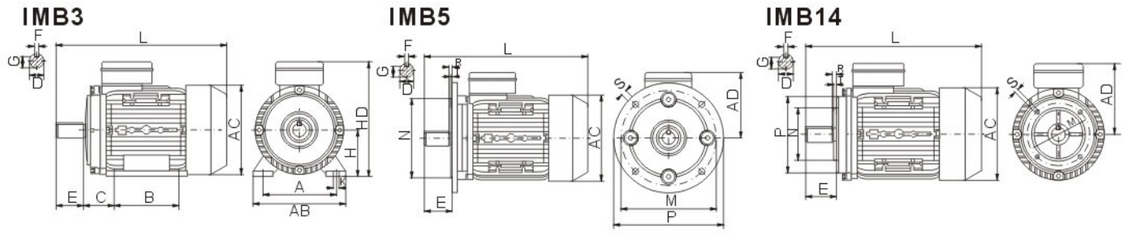
- Conform to the IEC standard
- Be made of selected quality materials, lastest design in entirety
- Good performance, low noise, little vibration, and safety and reliable operation
- Nice appearance, light weight
- Be maintained very conveniently, simple construction
- Higher starting torque, 2.5 times more than the rated torque
- Be used in a multitude of application where the higher starting torque is demanded, such as air-compressors, pumps, refrigerators, medical apparatus, instruments, and many other machines needing full-load start

MOTOR FEATURES

- Utilise IP55 enclosures, other requests
- Multiple feet locations
- Aluminium frame, end shields and base
- High strength cable gland
- Shaft key and protector supplied
- Superior paint finish
- Motors made to heavy duty service factors
- Can be made with stainless steel shaft
- Motors made for continuous S1 duty
- Utilise Vacuum impregnated Class B or Class F insulation
- Others insulation on request
- High performance and efficiency

CUSTOMER BENEFITS

- Water dust and vermin resistant
- Quiet operation
- Electricity saving
- Easy installation (bolt on feet or brackets as required)
- Corrosion resistant
- Dependable
- Superior life
- Reliable in country, city or factory environments



INSTALLATION SIZE AND OVERALL DIMENSION

Frame Size	Mounting Dimension (mm)																			Frame Dimension (mm)				
										IMB14						IMB5										
	A	B	C	D	E	F	G	H	K	M	N	P	R	S	T	M	N	P	R	S	T	AB	AC	AD	HD	L
71	112	90	45	14	30	5	11	71	7	85	70	105	0	M6	2.5	130	110	160	0	10	3.5	145	145	125	205	255
80	125	100	50	19	40	6	15.5	80	10	100	80	120	0	M6	3	165	130	200	0	12	3.5	160	165	135	235	295
90S	140	100	56	24	50	8	20	90	10	115	95	140	0	M8	3	165	130	200	0	12	3.5	180	185	145	265	335
90L	140	125	56	24	50	8	20	90	10	115	95	140	0	M8	3	165	130	200	0	12	3.5	180	185	145	265	360
100L	160	140	63	28	60	8	24	100	12	130	110	160	0	M8	3.5	215	180	250	0	15	4	205	215	170	280	380
112M	190	140	70	28	60	8	24	112	12	130	110	160	0	M8	3.5	215	180	250	0	15	4	245	240	180	310	400

TECHNICAL DATA

Model	Power (kW)	Voltage (V)	Current (A)	Speed (r.p.m)	Eff (%)	Power Factor	Tstart/Tn	Tmax/Tn	Start current (A)	Weight (kg)
MC711-2	0.18	220	1.89	2800	60	0.72	3	1.8	12	6.5
MC712-2	0.25	220	2.40	2800	64	0.74	3	1.8	15	6.8
MC801-2	0.37	220	3.36	2800	65	0.77	2.8	1.8	21	8.3
MC802-2	0.55	220	4.65	2800	68	0.79	2.8	1.8	29	9
MC90S-2	0.75	220	6.09	2800	70	0.80	2.5	1.8	37	12.5
MC90L-2	1.1	220	8.68	2800	72	0.80	2.5	1.8	60	14
MC100L1-2	1.5	220	11.38	2900	74	0.81	2.5	1.8	80	22.5
MC711-4	0.12	220	1.88	1400	50	0.58	3	1.8	9	6.5
MC712-4	0.18	220	2.49	1400	53	0.62	2.8	1.8	12	6.7
MC801-4	0.25	220	3.11	1400	58	0.63	2.8	1.8	15	8.9
MC802-4	0.37	220	4.24	1400	62	0.64	2.8	1.8	21	9.6
MC90S-4	0.55	220	5.49	1400	66	0.69	2.5	1.8	29	12.5
MC90L-4	0.75	220	6.87	1400	68	0.73	2.5	1.8	37	15
MC100L1-4	1.1	220	9.52	1450	71	0.74	2.5	1.8	60	23
MC100L2-4	1.5	220	12.45	1450	73	0.75	2.5	1.8	80	27
MC112M-4	2.2	220	17.78	1450	74	0.76	2.2	1.8	120	35

MY

SERIES SINGLE-PHASE CAPACITOR RUN ASYNCHRONOUS MOTORS

ALUMINUM HOUSING

CE

INTRODUCTION :

- Conform to the IEC standard
- Be made of selected quality materials, lastest design in entirety
- Good performance, low noise, little vibration, and safety and reliable operation
- Nice appearance, light weight
- Be maintained very conveniently, simple construction
- Lower starting torque, 0.3 to 0.7 times more than the rated torque
- Be used in a multitude of application where the lower starting torque is demanded, such as home electric appliances, pumps, fans and recording meters, etc

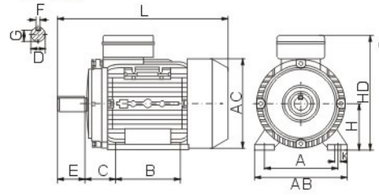
MOTOR FEATURES

- Utilise IP54 enclosures, other requests
- Multiple feet locations
- Aluminium frame, end shields and base
- High strength cable gland
- Shaft key and protector supplied
- Superior paint finish
- Motors made to heavy duty service factors
- Can be made with stainless steel shaft
- Motors made for continuous S1 duty
- Utilise vacuum impregnated Class B or Class F insulation
- Others insulation on request
- High performance and efficiency

CUSTOMER BENEFITS

- Water dust and vermin resistant
- Quiet operation
- Electricity saving
- Easy installation (bolt on feet or brackets as required)
- Corrosion resistant
- Dependable
- Superior life
- Reliable in country, city or factory environments

IMB3



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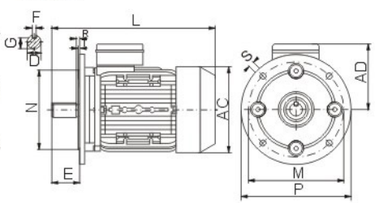

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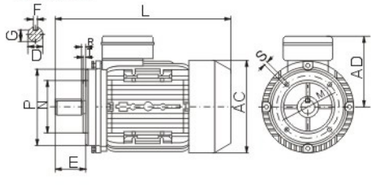


INSTALLATION SIZE AND OVERALL DIMENSION

Frame Size	Mounting Dimension (mm)																				Frame Dimension (mm)				
										IMB5						IMB14									
	A	B	C	D	E	F	G	H	K	M	N	P	R	S	T	M	N	P	R	S	T	AB	AC	AD	HD	L
63	100	80	40	11	23	4	8.5	63	7	115	95	140	0	10	3.0	75	60	90	0	M5	2.5	130	130	115	185	230
71	112	90	45	14	30	5	11	71	7	130	110	160	0	10	3.5	85	70	105	0	M6	2.5	145	145	125	205	250
80	125	100	50	19	40	6	15.5	80	10	165	130	200	0	12	3.5	100	80	120	0	M6	3	160	165	135	235	295
90S	140	100	56	24	50	8	20	90	10	165	130	200	0	12	3.5	115	95	140	0	M8	3	180	185	145	265	335
90L	140	125	56	24	50	8	20	90	10	165	130	200	0	12	3.5	115	95	140	0	M8	3	180	185	145	265	360

TECHNICAL DATA

Model	Power (kW)	Voltage (V)	Current (A)	Speed (r.p.m)	Eff (%)	Power Factor	Tstart/Tn	Tmax/Tn	Start current (A)	Net Weight (kg)
MY631-2	0.18	220	1.48	2800	60	0.92	0.40	1.7	5	3.9
MY632-2	0.25	220	1.96	2800	63	0.92	0.40	1.7	7	4.4
MY711-2	0.37	220	2.73	2800	67	0.92	0.35	1.7	10	6.2
MY712-2	0.55	220	3.88	2800	70	0.92	0.35	1.7	15	6.5
MY801-2	0.75	220	5.15	2800	72	0.92	0.33	1.7	20	8.3
MY802-2	1.10	220	7.02	2800	75	0.95	0.33	1.7	30	9
MY90S-2	1.50	220	9.44	2800	76	0.95	0.3	1.7	45	13
MY90L-2	2.20	220	13.67	2800	77	0.95	0.3	1.7	65	15
MY631-4	0.12	220	1.10	1400	55	0.90	0.4	1.7	3.5	4
MY632-4	0.18	220	1.62	1400	56	0.90	0.4	1.7	5	4.5
MY711-4	0.25	220	2.02	1400	61	0.92	0.35	1.7	7	6.1
MY712-4	0.37	220	2.95	1400	62	0.92	0.35	1.7	10	7
MY801-4	0.55	220	4.25	1400	64	0.92	0.35	1.7	15	9.5
MY802-4	0.75	220	5.45	1400	68	0.92	0.32	1.7	20	10
MY90S-4	1.10	220	7.45	1400	71	0.95	0.32	1.7	30	13
MY90L-4	1.50	220	9.83	1400	73	0.95	0.3	1.7	45	16

MYT

SERIES SINGLE-PHASE CAPACITOR RUN ASYNCHRONOUS MOTOR

ALUMINUM HOUSING

CE

INTRODUCTION :

- Conform to the IEC standard
- Be made of selected quality materials, lastest design in entirety
- Good performance, low noise, little vibration, and safety and reliable operation
- Nice appearance, light weight
- Be maintained very conveniently, simple construction
- Lower starting torque,0.5 to 0.7 times more than the rated torque
- Be used in a multitude of application where the lower starting torque is demanded, such as home electric appliances, pumps, fans and recording meters, etc

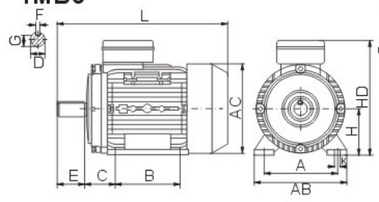
MOTOR FEATURES

- Utilise IP55 enclosures, other requests
- Multiple feet locations
- Aluminium frame, end shields and base
- High strength cable gland
- Shaft key and protector supplied
- Superior paint finish
- Motors made to heavy duty service factors
- Can be made with stainless steel shaft
- Motors made for continuous S1 duty
- Utilise Vacuum impregnated Class B or Class F insulation
- Others insulation on request
- High performance and efficiency

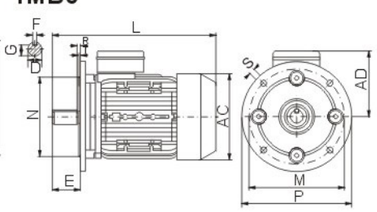
CUSTOMER BENEFITS

- Water dust and vermin resistant
- Quiet operation
- Electricity saving
- Easy installation (bolt on feet or brackets as required)
- Corrosion resistant
- Dependable
- Superior life
- Reliable in country, city or factory environments

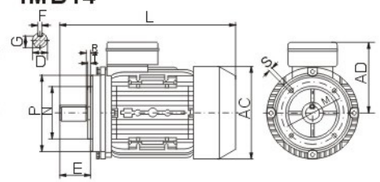
IMB3



IMB5



IMB14



INSTALLATION SIZE AND OVERALL DIMENSION

Frame Size	Mounting Dimension (mm)																				Frame Dimension (mm)				
										IMB14						IMB5									
	A	B	C	D	E	F	G	H	K	M	N	P	R	S	T	M	N	P	R	S	T	AB	AC	AD	HD	L
63	100	80	40	11	23	4	8.5	63	7	75	60	90	0	M5	2.5	115	95	140	0	10	3.0	130	130	115	185	230
71	112	90	45	14	30	5	11	71	7	85	70	105	0	M6	2.5	130	110	160	0	10	3.5	145	145	125	205	255
80	125	100	50	19	40	6	15.5	80	10	100	80	120	0	M6	3	165	130	200	0	12	3.5	160	165	135	235	295
90S	140	100	56	24	50	8	20	90	10	115	95	140	0	M8	3	165	130	200	0	12	3.5	180	185	145	265	335
90L	140	125	56	24	50	8	20	90	10	115	95	140	0	M8	3	165	130	200	0	12	3.5	180	185	145	265	360

TECHNICAL DATA

Model	Power (kW)	Voltage (V)	Current (A)	Speed (r.p.m.)	Eff (%)	Power Factor	Locked rotor torque Rated torque	Max torque Rated torque	Net Weight (kg)
MYT7112	0.37	230	2.8	2650	59	0.95	0.65	1.6	6.2
MYT7122	0.55	230	4.3	2650	59	0.95	0.65	1.6	6.5
MYT7114	0.25	230	1.9	1300	59	0.95	0.65	1.6	6.1
MYT7124	0.37	230	2.85	1300	60	0.95	0.65	1.6	7
MYT8012	0.75	230	5.2	2700	70	0.9	0.6	1.6	8.3
MYT8022	1.1	230	7.4	2700	72	0.9	0.6	1.6	9
MYT8014	0.55	230	4.7	1330	60	0.85	0.65	1.6	9.5
MYT8024	0.75	230	6.2	1350	62	0.85	0.65	1.6	10
MYT90S-4	.1.1	230	7.95	1350	67	0.9	0.6	1.6	13
MYT90L-4	1.5	230	9.4	1300	73	0.95	0.6	1.6	16
MYT90S-2	1.5	230	9.2	2800	75	0.95	0.5	1.6	13
MYT90L-2	2.2	230	13.1	2830	77	0.95	0.5	1.6	15

ML

SERIES SINGLE-PHASE DUAL-CAPACITOR ASYNCHRONOUS MOTORS

ALUMINUM HOUSING

CE

INTRODUCTION :

- Conform to the IEC standard
- Be made of selected quality materials, lastest design in entirety
- Good performance, low noise, little vibration, and safety and reliable operation
- Nice appearance, light weight
- Be maintained very conveniently, simple construction
- Good general performance, 1.8 to 2.5 times more than the rated torque

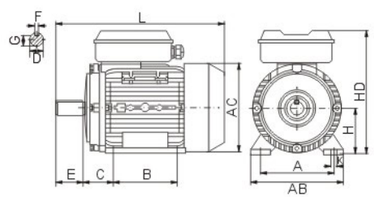
MOTOR FEATURES

- Utilise IP54 enclosures, IP55 on request
- Multiple feet locations
- Aluminium frame, end shields and base
- High strength cable gland
- Shaft key and protector supplied
- Superior paint finish
- Motors made to heavy duty service factors
- Can be made with stainless steel shaft
- Motors made for continuous S1 duty
- Utilise vacuum impregnated Class B or Class F insulation
- Others insulation on request
- High performance and efficiency

CUSTOMER BENEFITS

- Water dust and vermin resistant
- Quiet operation
- Electricity saving
- Easy installation (bolt on feet or brackets as required)
- Corrosion resistant
- Dependable
- Superior life
- Reliable in country, city or factory environments

IMB3



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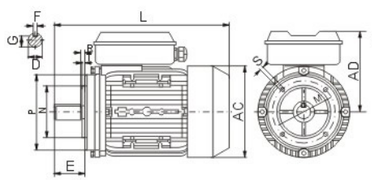

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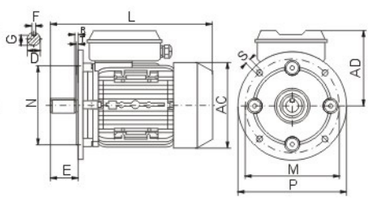


INSTALLATION SIZE AND OVERALL DIMENSION

Frame Size	Mounting Dimension (mm)																					Frame Dimension (mm)				
										IMB14						IMB5										
	A	B	C	D	E	F	G	H	K	M	N	P	R	S	T	M	N	P	R	S	T	AB	AC	AD	HD	L
71	112	90	45	14	30	5	11	71	7	85	70	105	0	M6	2.5	130	110	160	0	10	3.5	145	145	125	210	255
80	125	100	50	19	40	6	15.5	80	10	100	80	120	0	M6	3.0	165	130	200	0	12	3.5	160	165	135	240	295
90S	140	100	56	24	50	8	20	90	10	115	95	140	0	M8	3.0	165	130	200	0	12	3.5	180	185	145	270	335
90L	140	125	56	24	50	8	20	90	10	115	95	140	0	M8	3.0	165	130	200	0	12	3.5	180	185	145	270	360
100L	160	140	63	28	60	8	24	100	12	130	110	160	0	M8	3.5	215	180	250	0	15	4.0	205	215	170	280	380

TECHNICAL DATA

Model	Power (kW)	Voltage (V)	Current (A)	Speed (r.p.m.)	Eff (%)	Power Factor	Tstart/Tn	Tmax/Tn	Start current (A)	Net weight (kg)
ML711-2	0.37	220	2.73	2800	67	0.92	2.3	1.8	16	7
ML712-2	0.55	220	3.88	2800	70	0.92	2.5	1.8	21	8
ML801-2	0.75	220	5.15	2800	72	0.92	2.5	1.8	30	8.5
ML802-2	1.10	220	7.02	2800	75	0.95	2.5	1.8	40	9.5
ML90S-2	1.50	220	9.44	2800	76	0.95	2.5	1.8	55	12.5
ML90L-2	2.20	220	13.67	2800	77	0.95	2.5	1.8	80	14
ML100L-2	3.00	220	18.2	2800	79	0.95	2.5	1.8	110	20.5
ML711-4	0.25	220	1.99	1400	62	0.92	2.5	1.8	12	6.9
ML712-4	0.37	220	2.81	1400	65	0.92	2.5	1.8	16	8.1
ML801-4	0.55	220	4.0	1400	68	0.92	2.5	1.8	21	8.9
ML802-4	0.75	220	5.22	1400	71	0.92	2.5	1.8	30	9.6
ML90S-4	1.10	220	7.2	1400	73	0.95	2.5	1.8	40	13
ML90L-4	1.50	220	9.57	1400	75	0.95	2.5	1.8	55	16
ML100L1-4	2.20	220	13.9	1400	76	0.95	2.5	1.8	80	23

MSEJ

SERIES THREE PHASE SYNCHRONOUS BRAKING MOTOR

ALUMINUM HOUSING

CE

FEATURE

High effciency, energy-saving, big braking force moment, suitable for any frequently started machines, relialbe, safe, and low noise. Easy to maintain, the brake can be uncharged by man.

VOLTAGE, FREQUENCY AND DUTY

- Suitable Frequency: 50Hz, 60Hz
- Rated voltage: 220/380V, 380/660V, other request
- Duty: continuous (S1)
- Insulation Class: B, F
- Protection: IP44, IP54 or IP55
- Cooling: IC 0141
- Connection: Star "Y" for powers below 3KW;
  Delta "△" for 4KW and above
- Ambient temperature: -20° C~ -40° C
- Altitude: below 1000m

CONDITION

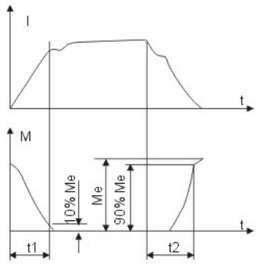
- Altitude: Above seal level, not exceeding 1000m.
- Ambient temperature: it varies with seasons but not exceeding +40

APPLICATION

Suitable for any kind of machine which is required to stop quickly, located accurately, rotating and brake frequently. Such as: machine tools, packing machinery, wood worker, machinery, food processing machinery, chemical engineering machinery, textile machinery, construction machinery, gear reducer and so on.

BRAKE TECHNICAL DATA

FRAME	63	71	80	90	100	112	132	160	180
Rated torque (Nm)	4	5	7.5	15	30	40	75	150	200
Power P20℃(w)	25	25	50	60	80	110	130	150	150
On time T1(ms)	60	63	87	110	140	152	165	214	252
On time T2(ms)	50	55	75	95	120	130	140	180	210
Aperture & max(mm)	0.2	0.2	0.3	0.4	0.4	0.5	0.5	0.6	0.6
Max aperture & max(mm)	0.8	0.8	1	1	1	1	1.2	1.2	1.2
Voltage DC(v)	99	99	99	99	99	170	170	170	170
High speed (r/min)	3000	3000	3000	3000	3000	3000	3000	3000	3000



BRAKE CURVES

TECHNICAL DATA

MODEL	POWER (kW)	Current (A)		Speed (r.p.m)	Eff (%)	Power factor	Static braning torque (Nm)	No-lod brake lag time (S)	Power (w)	Lastar /In	Tstart /In	Tmax /In
		220V (50Hz)	380V (50Hz)									
MSEJ6312	0.18	0.91	0.53	2715	69	0.75	4	0.20	18	5.5	2.2	2.2
MSEJ6322	0.25	1.19	0.69	2715	68	0.81	4	0.20	18	5.5	2.2	2.2
MSEJ7112	0.37	1.71	0.99	2690	70	0.81	4	0.20	18	6.1	2.2	2.2
MSEJ7122	0.55	2.41	1.40	2715	73	0.82	4	0.20	18	6.1	2.2	2.3
MSEJ8012	0.75	3.16	1.83	2730	75	0.83	7.5	0.20	50	6.5	2.2	2.3
MSEJ8022	1.1	4.46	2.58	2746	77	0.84	7.5	0.20	50	7.0	2.2	2.3
MSEJ90S-2	1.5	5.93	3.43	2715	79	0.84	15	0.20	60	7.0	2.2	2.3
MSEJ90L-2	2.2	8.39	4.85	2772	81	0.85	15	0.20	60	7.0	2.2	2.3
MSEJ100L-2	3	10.90	6.31	2870	83	0.87	30	0.20	80	7.0	2.2	2.3
MSEJ112M-2	4	14.03	8.13	2890	85	0.88	40	0.25	110	7.0	2.2	2.3
MSEJ132S1-2	5.5	19.07	11.04	2910	86	0.88	75	0.25	130	7.0	2.0	2.3
MSEJ132S2-2	7.5	25.71	14.88	2900	87	0.88	75	0.25	130	7.0	2.0	2.3
MSEJ160M1-2	11	21.3	12.2	2930	88	0.88	150	0.35	150	7.0	2.0	2.3
MSEJ160M-2	15	28.7	16.4	2930	89	0.89	150	0.35	150	7.0	2.0	2.2
MSEJ160L-2	18.5	34.60	19.80	2930	90	0.9	150	0.35	150	7.0	2.0	2.2
MSEJ180M-2	22.0	40.9	23.4	2970	90.5	0.9	200	0.35	150	7.0	2.0	2.2
MSEJ6314	0.12	0.89	0.51	1350	53	0.64	4	0.20	18	7.0	2.1	2.4
MSEJ6324	0.18	1.25	0.73	1340	56	0.66	4	0.20	18	4.4	2.1	2.4
MSEJ7114	0.25	1.36	0.79	1390	65	0.74	4	0.20	18	4.4	2.1	2.4
MSEJ7124	0.37	1.93	1.12	1375	67	0.75	4	0.20	18	5.2	2.1	2.4
MSEJ8014	0.55	2.71	1.57	1370	71	0.75	7.5	0.20	50	6.0	2.4	2.3
MSEJ8024	0.75	3.55	2.05	1380	73	0.76	7.5	0.20	50	6.0	2.3	2.3
MSEJ90S-4	1.1	5.00	2.89	1390	75	0.77	15	0.20	60	6.5	2.3	2.3
MSEJ90L-4	1.5	6.39	3.70	1400	78	0.79	15	0.20	60	6.5	2.3	2.3
MSEJ100L1-4	2.2	8.91	5.16	1430	80	0.81	30	0.20	80	7.0	2.2	2.3
MSEJ100L2-4	3	11.71	6.78	1430	82	0.82	30	0.20	80	7.0	2.2	2.3
MSEJ112M-4	4	15.24	8.82	1430	84	0.82	40	0.25	110	7.0	2.2	2.3
MSEJ132S-4	5.5	20.46	11.84	1440	85	0.83	75	0.25	130	7.0	2.2	2.3
MSEJ132M-4	7.5	26.93	15.59	1450	87	0.84	75	0.25	130	7.0	2.2	2.3
MSEJ160M-4	11	22.30	12.70	1460	88	0.85	150	0.35	150	7.0	2.2	2.3
MSEJ160L-4	15	30.00	17.10	1460	89	0.85	150	0.35	150	7.0	2.2	2.2
MSEJ180M-4	18.5	36.40	20.80	1470	90.5	0.85	200	0.35	150	7.0	2.0	2.2
MSEJ180L-4	22	43.14	24.60	1470	91	0.85	200	0.35	150	7.0	2.0	2.2
MSEJ90S-6	0.75	3.96	2.29	930	69	0.72	15	0.20	60	5.5	1.9	2.2
MSEJ90L-6	1.1	5.49	3.18	930	72	0.73	15	0.20	60	5.5	1.9	2.2
MSEJ100L-6	1.5	6.91	4.00	945	76	0.75	30	0.20	80	6.0	1.9	2.2
MSEJ112M-6	2.2	9.62	5.57	945	79	0.76	40	0.25	110	6.0	2.0	2.2
MSEJ132S-6	3	12.79	7.40	960	81	0.76	75	0.25	130	6.5	2.0	2.2
MSEJ132M1-6	4	16.84	9.75	960	82	0.76	75	0.25	130	6.5	2.0	2.2
MSEJ132M2-6	5.5	22.32	12.92	960	84	0.77	75	0.35	130	6.5	2.0	2.0
MSEJ160M-6	7.5	16.50	9.43	970	86	0.8	150	0.35	150	6.5	2.0	2.0
MSEJ160L-6	11	24.10	13.80	970	87.5	0.79	150	0.35	150	6.5	1.7	2.0
MSEJ180L-6	15	31.50	18.00	970	87.5	0.79	200	0.35	150	6.5	1.8	2.0
MSEJ132S-8	2.2	10.43	6.04	720	78	0.71	75	0.25	130	5.5	2.0	2.0
MSEJ132M-8	3	13.65	7.90	720	79	0.73	75	0.25	130	5.5	2.0	2.0
MSEJ160M1-8	4	10.20	5.80	720	81	0.73	150	0.35	150	6.0	2.0	2.0
MSEJ160M2-8	5.5	13.60	7.80	720	83	0.74	150	0.35	150	6.0	2.0	2.0
MSEJ160L-8	7.5	17.70	10.10	720	85.5	0.75	150	0.35	150	5.5	2.0	2.0
MSEJ180L-8	11	25.10	14.30	730	87.5	0.76	200	0.35	150	6.0	1.7	2.0

Y2

SERIES THREE-PHASE ASYNCHRONOUS MOTOR

CE

INTRODUCTION :

These three phase motors are made to IEC standards. These are superior motors having excellent power factors, efficiencies and starting torques. These motors are widely used in the agricultural, pumping, manufacturing and building service industries.

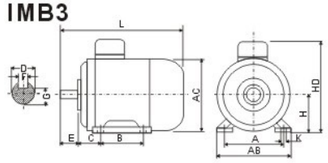
MOTOR FEATURES

- Utilise IP55 enclosures, other requests
- Class F insulation, Class H available on request
- 380/415 Volt 50/60 Hz windings
- High quality magnet wire
- Vacuum varnish impregnation for superior tropic proof insulation
- Continuous SI operation
- Industrial type service factors
- Heavy duty ball bearings
- High strength cast iron frame
- Balanced rotors

CUSTOMER BENEFITS

- Water dust and vermin resistant
- Quiet operation
- Corrosion resistant
- Reliable in country, city or factory environments
- Very low vibration
- Very low power consumption
- Superior life

IMB3



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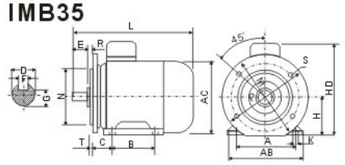

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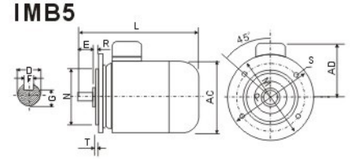


INSTALLATION DIMENSIONS

Frame Size	Mounting Dimensions (mm)																		Frame Dimensions (mm)					
	A	B	C	D 2P	D 4,6,8,10P	E 2P	E 4,6,8,10P	F 2P	F 4,6,8,10P	G 2P	G 4,6,8,10P	H	K	M	N	P	R	S	T	AB	AC	AD	HD	L 2P	L 4,6,8,10P
63	100	80	40		11		23		4		8.5	63	7	115	95	140	0	10	3	135	130	70	180		230
71	112	90	45		14		30		5		11	71	7	130	110	160	0	10	3	150	145	80	195		255
80	125	100	50		19		40		6		15.5	80	10	165	130	200	0	12	3.5	165	175	145	220		295
90S	140	100	56		24		50		8		20	90	10	165	130	200	0	12	3.5	180	195	155	250		320
90L	140	125	56		24		50		8		20	90	10	165	130	200	0	12	3.5	180	195	155	250		345
100L	160	140	63		28		60		8		24	100	12	215	180	250	0	15	4	205	215	180	270		385
112M	190	140	70		28		60		8		24	112	12	215	180	250	0	15	4	230	240	190	300		400
132S	216	140	89		38		80		10		33	132	12	265	230	300	0	15	4	270	275	210	345		470
132M	216	178	89		38		80		10		33	132	12	265	230	300	0	15	4	270	275	210	345		510
160M	254	210	108		42		110		12		37	160	15	300	250	350	0	19	5	320	330	255	420		615
160L	254	254	108		42		110		12		37	160	15	300	250	350	0	19	5	320	330	255	420		670
180M	279	241	121		48		110		14		42.5	180	15	300	250	350	0	19	5	355	380	280	455		700
180L	279	279	121		48		110		14		42.5	180	15	300	250	350	0	19	5	355	380	280	455		740
200L	318	305	133		55		110		16		49	200	19	350	300	400	0	19	5	395	420	305	505		770
225S	356	286	149	-	60	-	140	-	18	-	53	225	19	400	350	450	0	19	5	435	470	335	560	-	820
225M	356	311	149	55	60	110	140	16	18	49	53	225	19	400	350	450	0	19	5	435	470	335	560	815	845
250M	406	349	168	60	65		140		18		53	58	250	24	500	450	550	0	19	5	490	510	370	615		910
280S	457	368	190	65	75		140	18	20	58	67.5	280	24	500	450	550	0	19	5	550	580	410	680		985
280M	457	419	190	65	75		140	18	20	58	67.5	280	24	500	450	550	0	19	5	550	580	410	680		1035
315S	508	406	216	65	80	140	170	18	22	58	71	315	28	600	550	660	0	24	6	635	645	630	845	1185	1215
315M	508	457	216	65	80	140	170	18	22	58	71	315	28	600	550	660	0	24	6	635	645	630	845	1295	1325
315L	508	508	216	65	80	140	170	18	22	58	71	315	28	600	550	660	0	24	6	635	645	630	845	1295	1325
355M	610	560	254	75	95	140	170	20	25	67.5	86	355	28	740	680	800	0	24	6	730	710	655	1010	1500	1530
355L	610	630	254	75	95	140	170	20	25	67.5	86	355	28	740	680	800	0	24	6	730	710	655	1010	1500	1530

TECHNICAL DATA

Model	Power (kW)	Current at 380V (A)	Speed (r.p.m)	Eff. (%)	Power Factor	Locked rotor torque / Rated torque	Locked rotor current / Rated current	Max torque / Rated torque
Synchronous Speed3000r/min (2 Poles)50Hz								
Y2-631-2	0.18	0.52	2825	65	0.80	2.2	5.5	2.2
Y2-632-2	0.25	0.69	2840	68	0.81	2.2	5.1	2.2
Y2-711-2	0.37	0.99	2840	70	0.81	2.2	6.0	2.2
Y2-712-2	0.55	1.4	2880	73	0.82	2.2	6.0	2.2
Y2-801-2	0.75	1.8	2890	75	0.83	2.2	6.0	2.2
Y2-802-2	1.1	2.6	2900	77	0.84	2.2	7.0	2.2
Y2-90S-2	1.5	3.4	2900	79	0.84	2.2	7.0	2.2
Y2-90L-2	2.2	4.8	2930	81	0.85	2.2	7.0	2.2
Y2-100L-2	3.0	6.3	2930	83	0.87	2.2	7.0	2.2
Y2-112M-2	4.0	8.1	2930	85	0.88	2.2	8.0	2.2
Y2-132S1-2	5.5	11	2940	86	0.88	2.2	8.0	2.2
Y2-132S2-2	7.5	15	2950	87	0.88	2.2	8.0	2.2
Y2-160M1-2	11.0	21.3	2950	88	0.88	2.0	8.0	2.2
Y2-160M2-2	15.0	28.7	2970	89	0.89	2.0	8.0	2.2

TECHNICAL DATA

Model	Power (kW)	Current at 380V (A)	Speed (r.p.m)	Eff. (%)	Power Factor	Locked rotor torque Rated torque	Locked rotor current Rated current	Max torque Rated torque
Y2-160L-2	18.5	34.6	2970	90	0.90	2.0	8.0	2.2
Y2-180M-2	22.0	40.9	2970	90.5	0.90	2.0	8.0	2.2
Y2-200L1-2	30.0	55.4	2970	91.2	0.90	2.0	8.0	2.2
Y2-200L2-2	37.0	67.7	2980	92	0.90	2.0	8.0	2.2
Y2-225M-2	45.0	82.3	2980	92.3	0.90	1.8	8.0	2.2
Y2-250M-2	55	101	2980	92.5	0.90	1.8	7.0	2.2
Y2-280S-2	75	134	2980	93.0	0.90	1.8	7.0	2.2
Y2-280M-2	90	160	2980	93.8	0.91	1.8	7.0	2.2
Y2-315S-2	110	195	2980	94.0	0.91	1.8	6.8	2.2
Y2-315M-2	132	233	2980	94.5	0.91	1.8	6.8	2.2
Y2-315L1-2	160	279	2980	94.6	0.92	1.8	6.8	2.2
Y2-315L2-2	200	348	2980	94.8	0.92	1.8	6.8	2.2
Y2-355M-2	250	433	2980	95.3	0.92	1.6	7.0	2.2
Y2-355L-2	315	544	2980	95.6	0.92	1.6	7.0	2.2
Synchronous Speed 1500 r/min (4 Poles)50Hz								
Y2-631-4	0.12	0.44	1400	57	0.72	2.2	4.5	2.2
Y2-632-4	0.18	0.62	1400	60	0.73	2.2	4.5	2.2
Y2-711-4	0.25	0.79	1400	65	0.74	2.2	5.5	2.2
Y2-712-4	0.37	1.12	1400	67	0.75	2.2	5.5	2.2
Y2-801-4	0.55	1.6	1400	71	0.75	2.2	5.5	2.2
Y2-802-4	0.75	2.0	1400	73	0.77	2.2	6.0	2.2
Y2-90S-4	1.1	2.9	1400	75	0.77	2.2	6.0	2.2
Y2-90L-4	1.5	3.7	1400	78	0.79	2.2	6.0	2.2
Y2-100L1-4	2.2	5.1	1420	80	0.81	2.2	7.0	2.2
Y2-100L2-4	3.0	6.8	1420	82	0.82	2.2	7.0	2.2
Y2-112M-4	4.0	8.8	1440	84	0.82	2.2	7.0	2.2
Y2-132S-4	5.5	11.8	1440	85	0.83	2.2	7.0	2.2
Y2-132M-4	7.5	15.5	1440	87	0.84	2.0	7.0	2.0
Y2-160M-4	11.0	22.3	1460	88	0.85	2.0	7.0	2.2
Y2-160L-4	15.0	30	1460	89	0.85	2.0	7.0	2.2
Y2-180M-4	18.5	36.4	1470	90.5	0.85	2.2	7.5	2.2
Y2-180L-4	22.0	43.1	1470	91	0.85	2.2	7.5	2.2
Y2-200L-4	30.0	57.4	1470	92	0.86	2.2	7.5	2.2
Y2-225S-4	37.0	69.9	1480	92.5	0.87	2.2	7.5	2.2
Y2-225M-4	45.0	84.7	1480	92.8	0.87	2.2	7.5	2.2
Y2-250M-4	55	103	1480	93.0	0.89	2.2	7.0	2.2
Y2-280S-4	75	140	1480	93.8	0.86	2.2	7.0	2.2
Y2-280M-4	90	167	1490	94.2	0.86	2.2	7.0	2.2
Y2-315S-4	110	201	1490	94.5	0.87	2.1	6.9	2.2
Y2-315M-4	132	240	1490	94.8	0.87	2.1	6.9	2.2
Y2-315L1-4	160	287	1490	94.9	0.88	2.1	6.9	2.2
Y2-315L2-4	200	359	1490	95.0	0.88	2.3	6.9	2.2
Y2-355M-4	250	443	1485	95.3	0.88	2.3	6.8	2.2
Y2-355L-4	315	556	1485	95.6	0.89	2.2	6.9	2.2
Synchronous Speed 1000r/min (6 Poles)50Hz								
Y2-711-6	0.18	0.74	900	56	0.66	2.2	4.0	2.2
Y2-712-6	0.25	0.94	900	59	0.68	2.0	4.0	2.2
Y2-801-6	0.37	1.3	900	62	0.70	2.0	5.0	2.2
Y2-802-6	0.55	1.8	900	65	0.72	2.0	5.0	2.2
Y2-90S-6	0.75	2.3	910	69	0.72	2.0	5.5	2.2
Y2-90L-6	1.1	3.2	910	72	0.73	2.0	5.5	2.2
Y2-100L-6	1.5	3.9	940	76	0.76	2.0	5.5	2.2
Y2-112M-6	2.2	5.6	940	79	0.76	2.0	6.5	2.2
Y2-132S-6	3.0	7.4	960	81	0.76	2.0	6.5	2.2

TECHNICAL DATA

Model	Power (kW)	Current at 380V (A)	Speed (r.p.m)	Eff. (%)	Power Factor	Locked rotor torque Rated torque	Locked rotor current Rated current	Max torque Rated torque
Y2-132M1-6	4.0	9.7	960	82	0.76	2.0	6.5	2.2
Y2-132M2-6	5.5	12.9	960	84	0.77	2.0	6.5	2.0
Y2-160M	7.5	16.5	970	86	0.80	2.0	6.5	2.0
Y2-160L-6	11.0	24.1	970	87.5	0.79	2.0	6.5	2.0
Y2-180L-6	15.0	31.5	970	89	0.81	2.0	7.0	2.0
Y2-200L1-6	18.5	38.5	970	90	0.81	2.0	7.0	2.0
Y2-200L2-6	22.0	44.6	970	90	0.83	2.0	7.0	2.0
Y2-225M-6	30.0	59.3	980	91.5	0.84	2.0	7.0	2.1
Y2-250M-6	37.0	71.0	980	92.0	0.86	2.0	7.0	2.1
Y2-280S-6	45.0	86.0	980	92.5	0.86	2.0	7.0	2.0
Y2-280M-6	55	105	980	92.8	0.86	2.0	7.0	2.0
Y2-315S-6	75	141	990	93.5	0.86	2.0	7.0	2.0
Y2-315M-6	90	169	990	93.8	0.86	2.0	7.0	2.0
Y2-315L1-6	110	206	990	94.0	0.86	2.0	6.7	2.0
Y2-315L2-6	132	244	990	94.2	0.87	2.0	6.7	2.0
Y2-355M1-6	160	292	990	94.5	0.88	1.9	6.7	2.0
Y2-355M2-6	200	365	990	94.7	0.88	1.9	6.7	2.0
Y2-355L-6	250	455	990	94.9	0.88	1.9	6.7	2.0
Synchronous Speed 750 r/min (8 Poles)50Hz								
Y2-801-8	0.18	0.88	680	51	0.61	1.8	3.3	1.9
Y2-802-8	0.25	1.15	680	54	0.61	1.8	3.3	1.9
Y2-90S-8	0.37	1.5	680	62	0.61	1.8	4.0	1.9
Y2-90L-8	0.55	2.2	700	63	0.61	1.8	4.0	2.0
Y2-100L1-8	0.75	2.4	700	71	0.67	1.8	4.0	2.0
Y2-100L2-8	1.1	3.3	700	73	0.69	1.8	5.0	2.0
Y2-112M-8	1.5	4.5	700	75	0.68	1.8	5.0	2.0
Y2-132S-8	2.2	6.0	710	78	0.71	2.0	6.0	2.0
Y2-132M-8	3.0	7.9	710	79	0.73	2.0	6.0	2.0
Y2-160M1-8	4.0	10.2	720	81	0.73	2.0	6.0	2.0
Y2-160M2-4	5.5	13.6	720	83	0.74	2.0	6.0	2.0
Y2-160L-8	7.5	17.7	720	85.5	0.75	2.0	6.0	2.0
Y2-180L-8	11.0	25.1	730	87.5	0.76	2.0	6.5	2.0
Y2-200L-8	15.0	34.0	730	88	0.76	2.0	6.5	2.0
Y2-225S-8	18.5	40.6	740	90.0	0.76	1.9	6.6	2.0
Y2-225M-8	22.0	47.4	740	90.5	0.78	1.9	6.6	2.0
Y2-250M-8	30.0	64.0	740	91.0	0.79	1.9	6.6	2.0
Y2-280S-8	37.0	78.0	740	91.5	0.79	1.9	6.6	2.0
Y2-280M-4	45.0	94.0	740	92.0	0.79	1.9	6.6	2.0
Y2-315S-8	55	111	740	92.8	0.81	1.8	6.6	2.0
Y2-315M-8	75	151	740	93.0	0.81	1.8	6.6	2.0
Y2-315L1-8	90	178	740	93.8	0.82	1.8	6.6	2.0
Y2-315L2-8	110	217	740	94.0	0.82	1.8	6.4	2.0
Y2-355M1-8	132	261	740	93.7	0.82	1.8	6.4	2.0
Y2-355M2-8	160	313	740	94.2	0.82	1.8	6.4	2.0
Y2-355L-8	200	388	740	94.5	0.83	1.8	6.4	2.0
Synchronous Speed 600r/min (10 Poles)50Hz								
Y2-315S-10	45	100	590	91.5	0.75	1.5	6.2	2.0
Y2-315M-10	55	121	590	92	0.75	1.5	6.2	2.0
Y2-315L1-10	75	162	590	92.5	0.76	1.5	6.2	2.0
Y2-315L2-10	90	191	590	93	0.77	1.5	6.2	2.0
Y2-355M1-10	110	230	590	93.2	0.78	1.3	6.0	2.0
Y2-355M2-10	132	275	590	93.5	0.78	1.3	6.0	2.0
Y2-315L-10	160	334	590	93.5	0.78	1.3	6.0	2.0

Y2E

SERIES THREE-PHASE ASYNCHRONOUS MOTOR

CE

INTRODUCTION :

These three phase motors are made to IEC standards. These are superior motors having excellent power factors efficiencies and starting torques. These motors are widely used in the agricultural, pumping, manufacturing and building service industries.

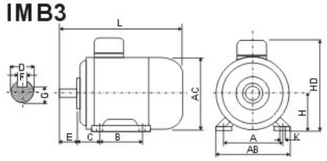
MOTOR FEATURES

- Utilise IP55 enclosures, other requests
- Class F insulation, Class H available on request
- 380/415 Volt 50/60 Hz windings
- High quality magnet wire
- Vacuum varnish for superior tropical proof insulation
- Continuous SI operation
- Industrial type service factors
- Heavy duty ball bearings
- High strength cast iron frame
- Balanced rotors

CUSTOMER BENEFITS

- Water dust and vermin resistant
- Quiet operation
- Corrosion resistant
- Reliable in country, city or factory environments
- Very low vibration
- Very low power consumption
- Superior life

IMB3



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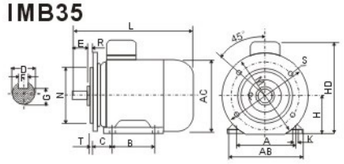

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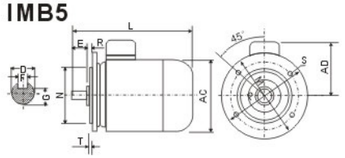

INSTALLATION DIMENSIONS

Frame Size	Mounting Dimensions (mm)															Frame Dimensions (mm)				
	A	B	C	D	E	F	G	H	K	M	N	P	R	S	T	AB	AC	AD	HD	L
63	100	80	40	11	23	4	8.5	63	7	115	95	140	0	10	3	135	130	70	180	230
71	112	90	45	14	30	5	11	71	7	130	110	160	0	10	3	150	145	80	195	255
80	125	100	50	19	40	6	15.5	80	10	165	130	200	0	12	3.5	165	175	145	220	295
90S	140	100	56	24	50	8	20	90	10	165	130	200	0	12	3.5	180	195	155	250	320
90L	140	125	56	24	50	8	20	90	10	165	130	200	0	12	3.5	180	195	155	250	345
100L	160	140	63	28	60	8	24	100	12	215	180	250	0	15	4	205	215	180	270	385
112M	190	140	70	28	60	8	24	112	12	215	180	250	0	15	4	230	240	190	300	400
132S	216	140	89	38	80	10	33	132	12	265	230	300	0	15	4	270	275	210	345	470
132M	216	178	89	38	80	10	33	132	12	265	230	300	0	15	4	270	275	210	345	510
160M	254	210	108	42	110	12	37	160	15	300	250	350	0	19	5	320	330	255	420	615
160L	254	254	108	42	110	12	37	160	15	300	250	350	0	19	5	320	330	255	420	670
180M	279	241	121	48	110	14	42.5	180	15	300	250	350	0	19	5	355	380	280	455	700
180L	279	279	121	48	110	14	42.5	180	15	300	250	350	0	19	5	355	380	280	455	740
200L	318	305	133	55	110	16	49	200	19	350	300	400	0	19	5	395	420	305	505	770

TECHNICAL DATA

Model	Power (kW)	Current at 380 V (A)	Speed (r.p.m)	Eff. (%)	Power Factor	Locked rotor torque Rated torque	Locked rotor current Rated current	Max torque Rated torque
Synchronous Speed3000r/min (2 Poles)50Hz								
Y2-801-2E	0.75	1.8	2825	77	0.83	2.2	7.0	2.2
Y2-802-2E	1.1	2.5	2825	79	0.84	2.2	7.0	2.2
Y2-90S-2E	1.5	3.3	2840	80.5	0.85	2.2	7.0	2.2
Y2-90L-2E	2.2	4.7	2840	82.5	0.85	2.2	7.0	2.2
Y2-100L-2E	3	6.2	2880	84	0.87	2.2	8.0	2.2
Y2-112M-2E	4	7.8	2890	86	0.90	2.2	8.0	2.2
Y2-132S1-2E	5.5	10.5	2900	88	0.90	2.2	8.0	2.2
Y2-132S2-2E	7.5	14.3	2900	88.5	0.90	2.2	8.0	2.2
Y2-160M1-2E	11	20.5	2930	90.5	0.90	2.2	8.0	2.2
Y2-160M2-2E	15	27.5	2930	91	0.90	2.2	8.0	2.2
Y2-160L-2E	18.5	33.8	2930	92	0.90	2.2	8.0	2.2
Y2-180M-2E	22	40.4	2940	91.7	0.90	2.2	8.0	2.2
Y2-200L1-2E	30	54.5	2950	92.7	0.90	2.0	8.0	2.2
Y2-200L2-2E	37	66.8	2950	93.2	0.90	2.0	8.0	2.2
Synchronous Speed 1500 r/min (4Poles)50Hz								
Y2-801-4E	0.55	1.5	1390	73.5	0.75	2.2	6.0	2.2
Y2-802-4E	0.75	2.0	1390	75.5	0.77	2.2	6.0	2.2
Y2-90S-4E	1.1	2.8	1400	76.5	0.78	2.2	6.5	2.2
Y2-90L-4E	1.5	3.7	1400	79.5	0.78	2.2	6.5	2.2
Y2-100L1-4E	2.2	5.0	1420	82	0.81	2.2	7.0	2.2
Y2-100L2-4E	3	6.7	1420	83	0.82	2.2	7.0	2.2
Y2-112M-4E	4	8.6	1440	86	0.82	2.2	7.0	2.2
Y2-132S-4E	5.5	11.5	1440	87	0.83	2.2	7.0	2.2
Y2-132M-4E	7.5	15.2	1440	88	0.85	2.2	7.0	2.2
Y2-160M-4E	11	21.7	1460	90.5	0.85	2.2	7.5	2.2
Y2-160L-4E	15	29.4	1460	91	0.85	2.2	7.5	2.2
Y2-180M-4E	18.5	35.2	1470	92.5	0.86	2.2	7.5	2.2
Y2-180L-4E	22	41.8	1470	92.8	0.86	2.0	7.5	2.0
Y2-200L-4E	30	56.7	1470	93.2	0.86	2.0	7.5	2.2
Synchronous Speed 1000 r/min (6Poles)50Hz								
Y2-90S-6E	0.75	2.2	910	72.5	0.71	2.0	5.5	2.2
Y2-90L-6E	1.1	3.2	910	74.5	0.71	2.0	5.5	2.2
Y2-100L-6E	1.5	3.9	940	78	0.74	2.0	6.5	2.2
Y2-112M-6E	2.2	5.5	940	81	0.75	2.0	6.5	2.2
Y2-132S-6E	3	7.1	960	84	0.76	2.0	6.5	2.2
Y2-132M1-6E	4	9.3	960	85.5	0.76	2.0	7.0	2.2
Y2-132M2-6E	5.5	12.5	960	86.5	0.77	2.0	7.0	2.0
Y2-160M-6E	7.5	16.5	970	88.5	0.78	2.0	7.0	2.0
Y2-160L-6E	11	23.4	970	89	0.80	2.0	7.0	2.0
Y2-180L-6E	15	31.0	970	90.5	0.81	2.0	7.0	2.0
Y2-200L1-6E	18.5	37.8	970	91.5	0.81	2.0	7.0	2.0
Y2-200L2-6E	22	43.6	970	92	0.83	2.0	7.0	2.0

Y3

SERIES THREE-PHASE ASYNCHRONOUS MOTOR

CE

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- Industrial type service factors
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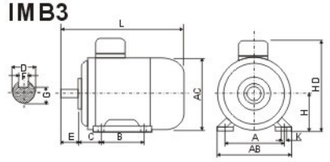
- High strength cast iron frame
- Balanced rotors

CUSTOMER BENEFITS

- Water dust and vermin resistant
- Quiet operation
- Corrosion resistant
- Reliable in country, city or factory environments
- Very low vibration
- Very low power consumption
- Superior life

IMB3



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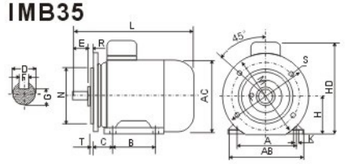

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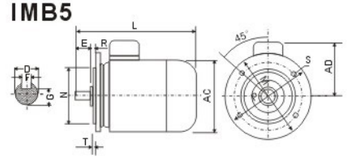


INSTALLATION DIMENSIONS

Frame Size	Mounting Dimensions (mm)																Frame Dimensions (mm)				
	A	B	C	D 2P	D 4,6,8,10P	E 2P	E 4,6,8,10P	F 2P	F 4,6,8,10P	G 2P	G 4,6,8,10P	H	K	M	N	P	R	S	T	AB	AC	AD	HD	L 2P	L 4,6,8,10P
63	100	80	40	11		23		4		8.5		63	7	115	95	140	0	10	3	135	130	70	180	230	
71	112	90	45	14		30		5		11		71	7	130	110	160	0	10	3	150	145	80	195	255	
80	125	100	50	19		40		6		15.5		80	10	165	130	200	0	12	3.5	165	175	145	220	295	
90S	140	100	56	24		50		8		20		90	10	165	130	200	0	12	3.5	180	195	155	250	320	
90L	140	125	56	24		50		8		20		90	10	165	130	200	0	12	3.5	180	195	155	250	345	
100L	160	140	63	28		60		8		24		100	12	215	180	250	0	15	4	205	215	180	270	385	
112M	190	140	70	28		60		8		24		112	12	215	180	250	0	15	4	230	240	190	300	400	
132S	216	140	89	38		80		10		33		132	12	265	230	300	0	15	4	270	275	210	345	470	
132M	216	178	89	38		80		10		33		132	12	265	230	300	0	15	4	270	275	210	345	510	
160M	254	210	108	42		110		12		37		160	15	300	250	350	0	19	5	320	330	255	420	615	
160L	254	254	108	42		110		12		37		160	15	300	250	350	0	19	5	320	330	255	420	670	
180M	279	241	121	48		110		14		42.5		180	15	300	250	350	0	19	5	355	380	280	455	700	
180L	279	279	121	48		110		14		42.5		180	15	300	250	350	0	19	5	355	380	280	455	740	
200L	318	305	133	55		110		16		49		200	19	350	300	400	0	19	5	395	420	305	505	770	
225S	356	286	149	-	60	-	140	-	18	-	53	225	19	400	350	450	0	19	5	435	470	335	560	-	820
225M	356	311	149	55	60	110	140	16	18	49	53	225	19	400	350	450	0	19	5	435	470	335	560	815	845
250M	406	349	168	60	65	140		18		53	58	250	24	500	450	550	0	19	5	490	510	370	615	910	
280S	457	368	190	65	75	140		18	20	58	67.5	280	24	500	450	550	0	19	5	550	580	410	680	985	
280M	457	419	190	65	75	140		18	20	58	67.5	280	24	500	450	550	0	19	5	550	580	410	680	1035	
315S	508	406	216	65	80	140	170	18	22	58	71	315	28	600	550	660	0	24	6	635	645	630	845	1185	1215
315M	508	457	216	65	80	140	170	18	22	58	71	315	28	600	550	660	0	24	6	635	645	630	845	1295	1325
315L	508	508	216	65	80	140	170	18	22	58	71	315	28	600	550	660	0	24	6	635	645	630	845	1295	1325
355M	610	560	254	75	95	140	170	20	25	67.5	86	355	28	740	680	800	0	24	6	730	710	655	1010	1500	1530
355L	610	630	254	75	95	140	170	20	25	67.5	86	355	28	740	680	800	0	24	6	730	710	655	1010	1500	1530

TECHNICAL DATA

Model	Power (kW)	Current at 380V (A)	Speed (r.p.m)	Eff. (%)	Power Factor	Locked rotor torque Rated torque	Locked rotor current Rated current	Max torque Rated torque
Synchronous Speed3000r/min (2 Poles)50Hz								
Y3-631-2	0.18	0.52	2825	65.0	0.80	2.3	5.5	2.2
Y3-632-2	0.25	0.69	2840	68.0	0.81	2.3	5.5	2.2
Y3-711-2	0.37	0.99	2840	69.0	0.81	2.3	6.1	2.2
Y3-712-2	0.55	1.4	2880	74.0	0.82	2.3	6.1	2.3
Y3-801-2	0.75	1.8	2890	75.0	0.83	2.2	6.1	2.3
Y3-802-2	1.1	2.6	2900	76.2	0.84	2.2	6.9	2.3
Y3-90S-2	1.5	3.4	2900	78.5	0.84	2.2	7.0	2.3
Y3-90L-2	2.2	4.8	2930	81.0	0.85	2.2	7.0	2.3
Y3-100L-2	3.0	6.3	2930	82.6	0.87	2.2	7.5	2.3
Y3-112M-2	4.0	8.1	2930	84.2	0.88	2.2	7.5	2.3
Y3-132S1-2	5.5	11	2940	85.7	0.88	2.2	7.5	2.3
Y3-132S2-2	7.5	15	2950	87.0	0.88	2.2	7.5	2.3
Y3-160M1-2	11.0	21.3	2950	88.4	0.89	2.2	7.5	2.3

TECHNICAL DATA

Model	Power (kW)	Current at 380V (A)	Speed (r.p.m)	Eff. (%)	Power Factor	Locked rotor torque Rated torque	Locked rotor current Rated current	Max torque Rated torque
Y3-160M2-2	15.0	28.7	2970	89.4	0.89	2.2	7.5	2.3
Y3-160L-2	18.5	34.6	2970	90.0	0.90	2.2	7.5	2.3
Y3-180M-2	22.0	40.9	2970	90.5	0.90	2	7.5	2.3
Y3-200L1-2	30.0	55.4	2970	91.4	0.90	2	7.5	2.3
Y3-200L2-2	37.0	67.7	2980	92.0	0.90	2	7.5	2.3
Y3-225M-2	45.0	82.3	2980	92.5	0.90	2	7.5	2.3
Y3-250M-2	55	101	2980	93.0	0.90	2	7.5	2.3
Y3-280S-2	75	134	2980	93.6	0.90	2	7.0	2.3
Y3-280M-2	90	160	2980	93.9	0.91	2	7.1	2.3
Y3-315S-2	110	195	2980	94.0	0.91	1.8	7.1	2.2
Y3-315M-2	132	233	2980	94.5	0.91	1.8	7.1	2.2
Y3-315L1-2	160	279	2980	94.6	0.91	1.8	7.1	2.2
Y3-315L2-2	200	348	2980	94.8	0.92	1.8	7.1	2.2
Y3-355M-2	250	433	2980	95.2	0.92	1.6	7.1	2.2
Y3-355L-2	315	544	2980	95.4	0.92	1.6	7.1	2.2
Synchronous Speed 1500 r/min (4 Poles)50Hz								
Y3-631-4	0.12	0.44	1400	57.0	0.72	2.1	4.4	2.2
Y3-632-4	0.18	0.62	1400	60.0	0.73	2.1	4.4	2.2
Y3-711-4	0.25	0.79	1400	65.0	0.74	2.1	5.2	2.2
Y3-712-4	0.37	1.12	1400	67.0	0.75	2.1	5.2	2.2
Y3-801-4	0.55	1.6	1400	71.0	0.75	2.4	5.2	2.3
Y3-802-4	0.75	2.0	1400	73.0	0.76	2.3	6.0	2.3
Y3-90S-4	1.1	2.9	1400	76.2	0.77	2.3	6.0	2.3
Y3-90L-4	1.5	3.7	1400	78.5	0.78	2.3	6.0	2.3
Y3-100L1-4	2.2	5.1	1420	81.0	0.81	2.3	7.0	2.3
Y3-100L2-4	3.0	6.8	1420	82.6	0.82	2.3	7.0	2.3
Y3-112M-4	4.0	8.8	1440	84.2	0.82	2.3	7.0	2.3
Y3-132S-4	5.5	11.8	1440	85.7	0.83	2.3	7.0	2.3
Y3-132M-4	7.5	15.5	1440	87.0	0.84	2.3	7.0	2.3
Y3-160M-4	11.0	22.3	1460	88.4	0.84	2.2	7.0	2.3
Y3-160L-4	15.0	30	1460	89.4	0.85	2.2	7.5	2.3
Y3-180M-4	18.5	36.4	1470	90.0	0.86	2.2	7.5	2.3
Y3-180L-4	22.0	43.1	1470	90.5	0.86	2.2	7.5	2.3
Y3-200L-4	30.0	57.4	1470	91.4	0.86	2.2	7.2	2.3
Y3-225S-4	37.0	69.9	1480	92.0	0.87	2.2	7.2	2.3
Y3-225M-4	45.0	84.7	1480	92.5	0.87	2.2	7.2	2.3
Y3-250M-4	55	103	1480	93.0	0.87	2.2	7.2	2.3
Y3-280S-4	75	140	1480	93.6	0.88	2.2	6.8	2.3
Y3-280M-4	90	167	1490	93.9	0.88	2.2	6.8	2.3
Y3-315S-4	110	201	1490	94.5	0.88	2.1	6.9	2.2
Y3-315M-4	132	240	1490	94.8	0.88	2.1	6.9	2.2
Y3-315L1-4	160	287	1490	94.9	0.89	2.1	6.9	2.2
Y3-315L2-4	200	359	1490	94.9	0.89	2.1	6.9	2.2
Y3-355M-4	250	443	1485	95.2	0.90	2.1	6.9	2.2
Y3-355L-4	315	556	1485	95.2	0.90	2.1	6.9	2.2
Synchronous Speed 1000r/min (6 Poles)50Hz								
Y3-711-6	0.18	0.74	900	56.0	0.66	1.9	4.0	2.0
Y3-712-6	0.25	0.94	900	59.0	0.68	1.9	4.0	2.0
Y3-801-6	0.37	1.3	900	62.0	0.70	1.9	4.7	2.0
Y3-802-6	0.55	1.8	900	65.0	0.72	1.9	4.7	2.1
Y3-90S-6	0.75	2.3	910	69.0	0.72	2.0	5.3	2.1
Y3-90L-6	1.1	3.2	910	72.0	0.73	2.0	5.5	2.1
Y3-100L-6	1.5	3.9	940	76.0	0.75	2.0	5.5	2.1
Y3-112M-6	2.2	5.6	940	79.0	0.76	2.0	6.5	2.1

TECHNICAL DATA

Model	Power (kW)	Current at 380V (A)	Speed (r.p.m)	Eff. (%)	Power Factor	Locked rotor torque Rated torque	Locked rotor current Rated current	Max torque Rated torque
Y3-132S-6	3.0	7.4	960	81.0	0.76	2.1	6.5	2.1
Y3-132M1-6	4.0	9.7	960	82.0	0.76	2.1	6.5	2.1
Y3-132M2-6	5.5	12.9	960	84.0	0.77	2.1	6.5	2.1
Y3-160M	7.5	16.5	970	86.0	0.77	2.0	6.5	2.1
Y3-160L-6	11.0	24.1	970	87.5	0.78	2.0	6.5	2.1
Y3-180L-6	15.0	31.5	970	89.0	0.81	2.0	7.0	2.1
Y3-200L1-6	18.5	38.5	970	90.0	0.81	2.1	7.0	2.1
Y3-200L2-6	22.0	44.6	970	90.0	0.83	2.0	7.0	2.1
Y3-225M-6	30.0	59.3	980	91.5	0.84	2.0	7.0	2.1
Y3-250M-6	37.0	71.0	980	92.0	0.86	2.1	7.0	2.1
Y3-280S-6	45.0	86.0	980	92.5	0.86	2.1	7.0	2.0
Y3-280M-6	55	105	980	92.8	0.86	2.1	7.0	2.0
Y3-315S-6	75	141	990	93.5	0.86	2.0	6.7	2.0
Y3-315M-6	90	169	990	93.8	0.86	2.0	6.7	2.0
Y3-315L1-6	110	206	990	94.0	0.86	2.0	6.7	2.0
Y3-315L2-6	132	244	990	94.2	0.87	2.0	6.7	2.0
Y3-355M1-6	160	292	990	94.5	0.88	1.9	6.7	2.0
Y3-355M2-6	200	365	990	94.5	0.88	1.9	6.7	2.0
Y3-355L-6	250	455	990	94.5	0.88	1.9	6.7	2.0
Synchronous Speed 600 r/min (10Poles)50Hz								
Y3-801-8	0.18	0.88	680	51.0	0.61	1.8	3.3	1.9
Y3-802-8	0.25	1.15	680	54.0	0.61	1.8	3.3	1.9
Y3-90S-8	0.37	1.5	680	62.0	0.61	1.8	4.0	1.9
Y3-90L-8	0.55	2.2	700	63.0	0.61	1.8	4.0	2.0
Y3-100L1-8	0.75	2.4	700	70.0	0.67	1.8	4.0	2.0
Y3-100L2-8	1.1	3.3	700	72.0	0.69	1.8	5.0	2.0
Y3-112M-8	1.5	4.5	700	74.0	0.70	1.8	5.0	2.0
Y3-132S-8	2.2	6.0	710	79.0	0.71	1.8	6.0	2.0
Y3-132M-8	3.0	7.9	710	80.0	0.73	1.8	6.0	2.0
Y3-160M1-8	4.0	10.2	720	81.0	0.73	1.9	6.0	2.0
Y3-160M2-4	5.5	13.6	720	83.0	0.74	1.9	6.0	2.0
Y3-160L-8	7.5	17.7	720	85.5	0.75	1.9	6.0	2.0
Y3-180L-8	11.0	25.1	730	87.5	0.75	2.0	6.5	2.0
Y3-200L-8	15.0	34.0	730	88.0	0.76	2.0	6.6	2.0
Y3-225S-8	18.5	40.6	740	90.0	0.76	1.9	6.6	2.0
Y3-225M-8	22.0	47.4	740	90.5	0.78	1.9	6.6	2.0
Y3-250M-8	30.0	64.0	740	91.0	0.79	1.9	6.5	2.0
Y3-280S-8	37.0	78.0	740	91.5	0.79	1.9	6.6	2.0
Y3-280M-4	45.0	94.0	740	92.0	0.79	1.9	6.6	2.0
Y3-315S-8	55	111	740	92.8	0.81	1.8	6.6	2.0
Y3-315M-8	75	151	740	93.5	0.81	1.8	6.2	2.0
Y3-315L1-8	90	178	740	93.8	0.82	1.8	6.4	2.0
Y3-315L2-8	110	217	740	94.0	0.82	1.8	6.4	2.0
Y3-355M1-8	132	261	740	93.7	0.82	1.8	6.4	2.0
Y3-355M2-8	160	313	740	94.2	0.82	1.8	6.4	2.0
Y3-355L-8	200	388	740	94.5	0.83	1.8	6.4	2.0
Synchronous Speed 750 r/min (8 Poles)50Hz								
Y3-315S-10	45	100	590	91.5	0.75	1.5	6.2	2.0
Y3-315M-10	55	121	590	92.0	0.75	1.5	6.2	2.0
Y3-315L1-10	75	162	590	92.5	0.76	1.5	5.8	2.0
Y3-315L2-10	90	191	590	93.0	0.77	1.5	5.9	2.0
Y3-355M1-10	110	230	590	93.2	0.78	1.3	6.0	2.0
Y3-355M2-10	132	275	590	93.5	0.78	1.3	6.0	2.0
Y3-315L-10	160	334	590	93.5	0.78	1.3	6.0	2.0

Y SERIES THREE-PHASE ASYNCHRONOUS MOTOR

CE

INTRODUCTION :

This range of motors are made to IEC standards and incorporate many fine features. These are superior motors that can be used in a multitude of applications in the commercial industrial building service and water treatment fields where superior service quality and reliability is demanded.

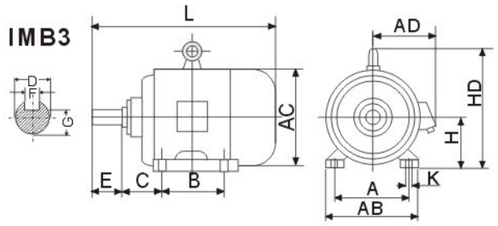
MOTOR FEATURES

- Utilise IP44 enclosure, IP54 and IP55 are available on request
- Class B insulation with class F on request
- Motors are made with IC0141 cooling
- Motors are made for continuous S1 duty
- Motors have high start torque
- Motors have high efficiency
- Y connection to 3 Kw
- ▲ connection from 4 to 315 KW
- Voltages on request (220/380V, 380/660V,
- 220/340V,220/440V, 400/415V)
- Frequency 50 or 60 Hz
- Speed can be single, double or multi speed on request
- Tropic proof motors supplied on request
- Flame proof motor supplied on request

CUSTOMER BENEFITS

- Water dust and vermin resistant
- Quiet operation
- Corrosion resistant
- Reliable in country, city or factory environments
- Very low vibration
- Very low power consumption
- Superior life

IMB3



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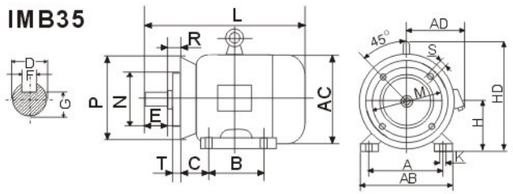

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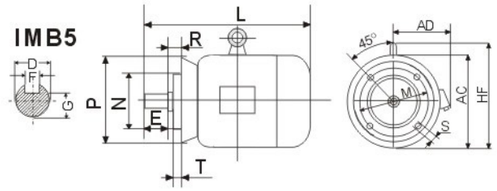


INSTALLATION DIMENSIONS

Frame Size	Mounting Dimensions (mm)																Frame Dimensions (mm)					
	A	B	C	D 2P	D 4,6,8,10P	E 2P	E 4,6,8,10P	F 2P	F 4,6,8,10P	G 2P	G 4,6,8,10P	H	K	M	N	P	R	S	T	AB	AC	AD	HD	L 2P	L 4,6,8,10P
80	125	100	50	19		40		6		15.5		80	10	165	130	200	0	12	3.5	165	175	150	-	285	
90S	140	100	56	24		50		8		20		90	10	165	130	200	0	12	3.5	180	195	160	-	311	
90L	140	125	56	24		50		8		20		90	10	165	130	200	0	12	3.5	180	195	160	-	335	
100L	160	140	63	28		60		8		24		100	12	215	180	250	0	15	4	205	215	180	245	380	
112M	190	140	70	28		60		8		24		112	12	215	180	250	0	15	4	245	240	190	265	400	
132S	216	140	89	38		80		10		33		132	12	265	230	300	0	15	4	280	275	210	315	475	
132M	216	178	89	38		80		10		33		132	12	265	230	300	0	15	4	280	275	210	315	515	
160M	254	210	108	42		110		12		37		160	15	300	250	350	0	19	5	325	325	255	385	600	
160L	254	254	108	42		110		12		37		160	15	300	250	350	0	19	5	325	325	255	385	645	
180M	279	241	121	48		110		14		42.5		180	15	300	250	350	0	19	5	355	360	285	430	670	
180L	279	279	121	48		110		14		42.5		180	15	300	250	350	0	19	5	355	360	285	430	710	
200L	318	305	133	55		110		16		49		200	19	350	300	400	0	19	5	395	420	315	475	775	
225S	356	286	149	-	60	-	140	-	18	-	53	225	19	400	350	450	0	19	5	435	450	345	530	-	820
225M	356	311	149	55	60	110	140	16	18	49	53	225	19	400	350	450	0	19	5	435	450	345	530	815	845
250M	406	349	168	60	65	140		18		53	58	250	24	500	450	550	0	19	5	490	515	385	575	930	
280S	457	368	190	65	75	140		18	20	58	67.5	280	24	500	450	550	0	19	5	550	585	410	640	1100	
280M	457	419	190	65	75	140		18	20	58	67.5	280	24	500	450	550	0	19	5	550	585	410	640	1050	
315S	508	406	216	65	80	140	170	18	22	58	71	315	28	600	550	660	0	24	6	744	645	576	865	1270	
315M	508	457	216	65	80	140	170	18	22	58	71	315	28	600	550	660	0	24	6	744	645	576	865	1340	
315L	508	508	216	65	80	140	170	18	22	58	71	315	28	600	550	660	0	24	6	744	645	576	865	1340	
355M	610	560	254	75	95	140	170	20	25	67.5	86	355	28	740	680	800	0	24	6	730	750	680	860	1515	1545
355L	610	630	254	75	95	140	170	20	25	67.5	86	355	28	740	680	800	0	24	6	730	750	680	860	1515	1545

TECHNICAL DATA

Model	Rated Output		Full Load				Ist/IN Locked current	Tst/TN Locked torque	TM/IN max torque	Net weight (B3) Kg
	kW	HP	Speed (r.p.m)	Current (A)	Eff. (%)	Power factor (cos)	Rated current	Rated current	Rated current	
380V 50Hz synchronous Speed 3000r/min (2 Poles)										
Y-801-2	0.75	1	2830	1.81	75	0.84	6.5	2.2	2.3	17
Y-802-2	1.1	1.5	2830	2.52	77	0.86	7.0	2.2	2.3	18
Y-90S-2	1.5	2	2840	3.44	78	0.85	7.0	2.2	2.3	22
Y-90L-2	2.2	3	2840	4.83	80.5	0.86	7.0	2.2	2.3	26
Y-100L-2	3	4	2870	6.39	82	0.87	7.0	2.2	2.3	35
Y-112M-2	4	5.5	2890	8.17	85.5	0.88	7.0	2.2	2.3	45
Y-132S1-2	5.5	7.5	2900	11.1	85.5	0.88	7.0	2.0	2.3	67
Y-132S2-2	7.5	10	2900	15.0	86.2	0.88	7.0	2.0	2.3	71
Y-160M1-2	11	15	2930	21.8	87.2	0.88	7.0	2.0	2.3	118
Y-160M2-2	15	20	2930	29.4	88.2	0.89	7.0	2.0	2.3	130
Y-160L-2	18.5	25	2930	35.5	89	0.89	7.0	2.0	2.2	150
Y-180M-2	22	30	2940	42.2	89	0.89	7.0	2.0	2.2	175
Y-200L1-2	30	40	2950	56.9	90	0.89	7.0	2.0	2.2	227
Y-200L2-2	37	50	2950	69.8	90.5	0.89	7.0	2.0	2.2	255
Y-225M-2	45	60	2970	83.9	91.5	0.89	7.0	2.0	2.2	320
Y-250M-2	55	75	2970	103	91.5	0.89	7.0	2.0	2.2	389
Y-280S-2	75	100	2970	139	92	0.89	7.0	2.0	2.2	520
Y-280M-2	90	125	2970	166	92.5	0.89	7.0	2.0	2.2	577
Y-315S-2	110	150	2980	203	92.5	0.89	6.8	1.8	2.2	980
Y-315M-2	132	180	2980	242	93	0.89	6.8	1.8	2.2	1080
Y-315L1-2	160	220	2980	292	93.5	0.89	6.8	1.8	2.2	1160
Y-315L2-2	200	270	2980	365	93.5	0.89	6.8	1.8	2.2	1210
Y-355M-2	250	340	2980	444	94.5	0.90	7.0	1.2	2.2	1760
Y-355L-2	315	430	2980	556	95	0.90	7.1	1.2	2.2	1900
380V 50Hz synchronous Speed 1500r/min (4 Poles)										
Y-801-4	0.55	0.75	1390	1.51	73	0.76	6.0	2.4	2.3	17
Y-802-4	0.75	1	1390	2.01	74.5	0.76	6.0	2.3	2.3	18
Y-90S-4	1.1	1.5	1400	2.75	78	0.78	6.5	2.3	2.3	23
Y-90L-4	1.5	2	1400	3.65	79	0.79	6.5	2.3	2.3	27
Y-100L1-4	2.2	3	1430	5.03	81	0.82	7.0	2.2	2.3	35
Y-100L2-4	3	4	1430	6.82	82.5	0.81	7.0	2.2	2.3	38
Y-112M-4	4	5.5	1440	8.77	84.5	0.82	7.0	2.2	2.3	49
Y-132S-4	5.5	7.5	1440	11.6	85.5	0.84	7.0	2.2	2.3	67
Y-132M-4	7.5	10	1440	15.4	87	0.85	7.0	2.2	2.3	80
Y-160M-4	11	15	1460	22.6	88	0.84	7.0	2.2	2.3	124
Y-160L-4	15	20	1460	30.3	88.5	0.85	7.0	2.2	2.3	147
Y-180M-4	18.5	25	1470	35.9	91	0.86	7.0	2.0	2.2	169
Y-180L-4	22	30	1470	42.5	91.5	0.86	7.0	2.0	2.2	184
Y-200L-4	30	40	1470	56.8	92.2	0.87	7.0	2.0	2.2	241
Y-225S-4	37	50	1480	70.4	91.8	0.87	7.0	1.9	2.2	300
Y-225M-4	45	60	1480	84.2	92.3	0.88	7.0	1.9	2.2	330
Y-250M-4	55	75	1480	103	92.6	0.88	7.0	2.0	2.2	400
Y-280S-4	75	100	1480	140	92.7	0.88	7.0	1.9	2.2	546
Y-280M-4	90	125	1480	164	93.5	0.89	6.8	1.9	2.2	620
Y-315S-4	110	150	1480	201	93.5	0.89	6.8	1.8	2.2	1000
Y-315M-4	132	180	1490	240	94	0.89	6.8	1.8	2.2	1100
Y-315L1-4	160	220	1490	289	94.5	0.89	6.8	1.8	2.2	1140
Y-315L2-4	200	270	1490	361	94.5	0.89	6.8	1.8	2.2	1190
Y-355M-4	250	340	1485	459	94.7	0.87	6.8	1.4	2.2	1800
Y-355L-4	315	430	1485	576	95.2	0.87	6.8	1.4	2.2	1940

TECHNICAL DATA

Model	Rated Output		Full Load				Ist/IN Locked current	Tst/TN Locked torque	TM/IN max torque	Net weight (B3) Kg
	kW	HP	Speed (r.p.m)	Current (A)	Eff. (%)	Power factor (cos)	Rated current	Rated current	Rated current	
380V 50Hz synchronous Speed1000r/min (6Poles)										
Y-90S-6	0.75	1	910	2.25	72.5	0.70	5.5	2.0	2.2	23
Y-90L-6	1.1	1.5	910	3.16	73.5	0.72	5.5	2.0	2.2	25
Y-100L-6	1.5	2	940	3.97	77.5	0.74	6.0	2.0	2.2	33
Y-112M-6	2.2	3	940	5.61	80.5	0.74	6.0	2.0	2.2	45
Y-132S-6	3.0	4	960	7.23	83	0.76	6.5	2.0	2.2	63
Y-132M1-6	4.0	5.5	960	9.40	84	0.77	6.5	2.0	2.2	73
Y-132M2-6	5.5	7.5	960	12.6	85.3	0.78	6.5	2.0	2.2	84
Y-160M	7.5	10	970	17.0	86	0.78	6.5	2.0	2.0	119
Y-160L-6	11.0	15	970	24.6	87	0.78	6.5	2.0	2.0	147
Y-180L-6	15.0	20	970	31.4	89.5	0.81	6.5	1.8	2.0	181
Y-200L1-6	18.5	25	970	37.7	89.8	0.83	6.5	1.8	2.0	215
Y-200L2-6	22.0	30	970	44.6	90.2	0.83	6.5	1.8	2.0	235
Y-225M-6	30.0	40	980	59.5	90.2	0.85	6.5	1.7	2.0	294
Y-250M-6	37.0	50	980	72	90.8	0.86	6.5	1.8	2.0	390
Y-280S-6	45.0	60	980	85.4	92	0.87	6.5	1.8	2.0	506
Y-280M-6	55	75	980	104	92	0.87	6.5	1.8	2.0	553
Y-315S-6	75	100	990	141	92.8	0.87	6.5	1.6	2.0	990
Y-315M-6	90	125	990	169	93.2	0.87	6.5	1.6	2.0	1080
Y-315L1-6	110	150	990	206	93.5	0.87	6.5	1.6	2.0	1150
Y-315L2-6	132	180	990	246	93.8	0.87	6.5	1.6	2.0	1210
Y-355M1-6	160	220	990	300	94.1	0.86	6.7	1.3	2.0	1620
Y-355M2-6	200	270	990	374	94.3	0.86	6.7	1.3	2.0	1750
Y-355L-6	250	340	990	465	94.7	0.86	6.7	1.3	2.0	1990
380V 50Hz synchronous Speed 750r/min (8Poles)										
Y-132S-8	2.2	3	710	5.85	80.5	0.71	5.5	2.0	2.0	63
Y-132M-8	3.0	4	710	7.72	82	0.72	5.5	2.0	2.0	79
Y-160M1-8	4.0	5.5	720	9.91	84	0.73	6.0	2.0	2.0	118
Y-160M2-4	5.5	7.5	720	13.3	85	0.74	6.0	2.0	2.0	119
Y-160L-8	7.5	10	720	17.7	86	0.75	5.5	2.0	2.0	145
Y-180L-8	11.0	15	730	24.8	87.5	0.77	6.0	1.7	2.0	172
Y-200L-8	15.0	20	730	34.1	88	0.76	6.0	1.8	2.0	220
Y-225S-8	18.5	25	730	41.3	89.5	0.76	6.0	1.7	2.0	263
Y-225M-8	22.0	30	730	47.6	90	0.78	6.0	1.8	2.0	292
Y-250M-8	30.0	40	740	63.0	90.5	0.80	6.0	1.8	2.0	390
Y-280S-8	37.0	50	740	78.2	91	0.79	6.0	1.8	2.0	508
Y-280M-4	45.0	60	740	93.2	91.7	0.80	6.0	1.8	2.0	533
Y-315S-8	55	75	740	114	92	0.80	6.5	1.6	2.0	1000
Y-315M-8	75	100	740	152	92.5	0.81	6.5	1.6	2.0	1100
Y-315L1-8	90	125	740	179	93	0.82	6.5	1.6	2.0	1160
Y-315L2-8	110	150	740	218	93.3	0.82	6.3	1.6	2.0	1230
Y-355M1-8	132	180	740	260	93.8	0.81	6.3	1.3	2.0	1700
Y-355M2-8	160	220	740	314	94.0	0.81	6.3	1.3	2.0	1780
Y-355L-8	200	270	740	392	94.3	0.81	6.3	1.3	2.0	2000
380V 50Hz synchronous Speed 600 r/min (10Poles)										
Y-315S-10	45	60	590	101	91.5	0.74	6.0	1.4	2.0	990
Y-315M-10	55	75	590	123	92	0.74	6.0	1.4	2.0	1150
Y-315L2-10	75	100	590	164	92.5	0.75	6.0	1.4	2.0	1220
Y-355M1-10	90	120	590	190	93	0.77	6.0	1.2	2.0	1530
Y-355M2-10	110	150	590	230	93.2	0.78	6.0	1.2	2.0	1640
Y-355L-10	132	180	590	275	93.5	0.78	6.0	1.2	2.0	1690

YC/YCL

HEAVY DUTY SERIES SINGLE-PHASE CAPACITOR START ASYNCHRONOUS MOTOR

CE

INTRODUCTION :

These single-phase HEAVY-DUTY capacitor start motors are made to IEC standards.
These are superior motors delivering excellent torque enabling the toughest jobs to be handled with dependable ease. They perform well in high voltage fluctuating regions and are commonly used in the pumping, compressor, agriculture, farming, building service and manufacturing industry.

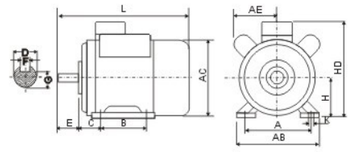
MOTOR FEATURES

- IP44 enclosure
- Class B insulation, Class F available on request
- Low operating temperature
- High quality magnet wire
- Vacuum varnish for superior tropical proof insulation
- Continuous S1 operation
- Industrial type service factors
- Heavy duty ball bearings
- High strength cast iron frame
- Balanced rotors
- Cool running motors

CUSTOMER BENEFITS

- Water dust and vermin resistant
- Quiet operation
- Corrosion resistant
- Reliable in country, city or factory environments
- Very low vibration
- Very low power consumption
- Superior life
- Suitable for hot environments
- Low start current and EMC interference

IMB3



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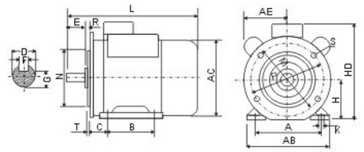

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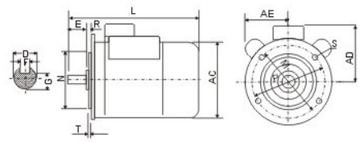


INSTALLATION DIMENSIONS

Frame Size	Mounting Dimensions (mm)															Frame Dimensions (mm)					
	A	B	C	D	E	F	G	H	K	M	N	P	R	S	T	AB	AC	AD	AE	HD	L
80	125	100	50	19	40	6	15.5	80	10	165	130	200	0	12	3.5	160	165	120	110	200	310
90S	140	100	56	24	50	8	20	90	10	165	130	200	0	12	3.5	180	185	140	120	240	355
90L	140	125	56	24	50	8	20	90	10	165	130	200	0	12	3.5	180	185	140	120	240	385
100L	160	140	63	28	60	8	24	100	12	215	180	250	0	15	4	205	220	145	130	260	415
112M	190	140	70	28	60	8	24	112	12	215	180	250	0	15	4	245	250	160	140	300	440
132S	216	140	89	38	80	10	33	132	12	265	230	300	0	15	4	280	262	210	150	350	470

TECHNICAL DATA(220V,50Hz)

Model	Power		Current (A)	Speed (r.p.m.)	Eff. (%)	Power Factor	Starting Torque Rated Torque	Starting Current Rated Current	Max Torque Rated Torque	Net Weight (kg)
	HP	kW								
YC80A-2	1/2	0.37	3.7	2880	62	0.73	2.8	6.5	1.8	10
YC80B-2	3/4	0.55	5.3	2880	65	0.73	2.8	6.5	1.8	11
YC80C-2	1	0.75	6.7	2880	68	0.75	2.4	6.5	1.8	13
YC90S-2	1.5	1.1	7.2	2880	73.2	0.95	2.8	6.0	1.8	17
YC90L-2	2	1.5	8.9	2900	79.2	0.97	2.8	7.0	1.8	22
YC100L-2	3	2.2	13.2	2900	78.8	0.96	3.0	6.5	1.8	29
YC80A-4	1/3	0.25	3.4	1450	56	0.60	2.8	6	1.8	10
YC80B-4	1/2	0.37	4.5	1450	60	0.62	2.8	6	1.8	11
YC80C-4	3/4	0.55	6.0	1450	64	0.65	2.8	6	1.8	13
YC90S-4	1	0.75	5.5	1450	73.3	0.93	2.8	6.5	1.8	17
YC90L-4	1.5	1.1	7.8	1450	71	0.90	2.5	6.0	1.8	22
YC100L-4	2	1.5	9.3	1450	79.4	0.92	2.8	7.0	1.8	29
YC112M1-4	4	3	18.4	1450	78	0.95	2.1	6.0	1.8	40
YC112M2-4	5	3.7	22.4	1450	78	0.95	2.1	6.0	1.8	
YC132SA-4	4	3	25.2	1450	74	0.73	2.1	6.5	1.8	55
YC132SB-4	5	3.7	30	1450	75	0.74	2.1	6.5	1.8	60
YC132M1-4	7.5	5.5	32.5	1450	85	0.90	2.0	6.5	1.8	
YC132M2-4	10	7.5	40	1450	85	0.90	2.0	6.5	1.8	

TECHNICAL DATA(220V,50Hz)

Model	Power		Current (A)	Speed (r.p.m.)	Eff. (%)	Power Factor	Starting Torque Rated Torque	Starting Current Rated Current	Max Torque Rated Torque	Net Weight (kg)
	HP	kW								
YCL90S-2	1.5	1.1	7.2	2880	73.2	0.95	2.8	6.0	1.8	16
YCL90S-2	2	1.5	8.9	2900	79.2	0.97	2.8	7.0	1.8	22
YCL90S-2	3	2.2	13.2	2900	78.8	0.96	3.0	6.5	1.8	29
YCL90S-4	1	0.75	5.5	1450	73.3	0.93	2.8	6.5	1.8	13
YCL90S-4	1.5	1.1	7.8	1450	71	0.90	2.5	6.0	1.8	16
YCL90S-4	2	1.5	9.3	1450	79.4	0.92	2.8	7.0	1.8	24
YCL90S-4	3	2.2	13.6	1450	81.6	0.90	2.3	6.5	1.8	37

YL

SERIES SINGLE-PHASE DUAL-CAPACITOR ASYNCHRONOUS MOTOR

CE

INTRODUCTION :

These single-phase dual capacitor motors are made to IEC standards.
These are superior motors delivering excellent torque enabling the toughest jobs to be handled with dependable ease. They perform well in high voltage fluctuating regions and are commonly used in the pumping, compressor, agriculture, farming, building service and manufacturing industry.

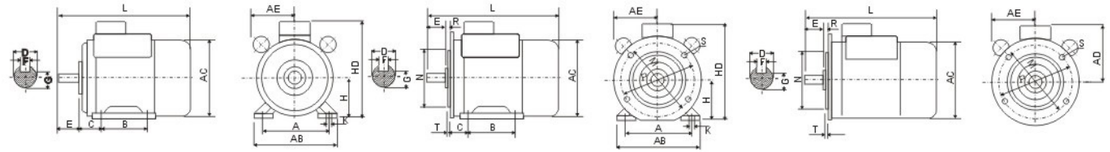
MOTOR FEATURES

- IP44 enclosure
- Class B insulation, Class F available on request
- Low operating temperature
- High quality magnet wire
- Vacuum varnish impregnation for superior tropic proof insulation.
- Continuous S1 operation
- Industrial type service factors
- Heavy duty ball bearings
- Balanced rotors

CUSTOMER BENEFITS

- Water dust and vermin resistant
- Quiet operation
- Corrosion resistant
- Reliable in country, city or factory environments
- Low vibration
- Low power consumption
- Superior life
- High strength cast iron frame

IMB3 IMB35 IMB5



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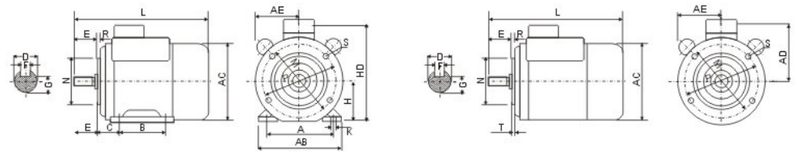
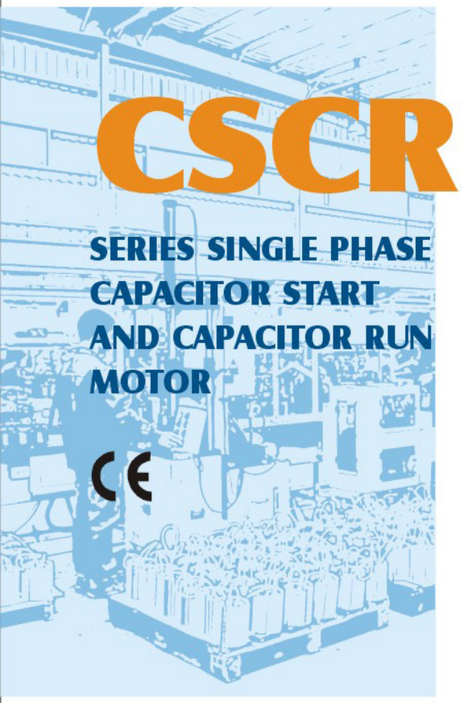


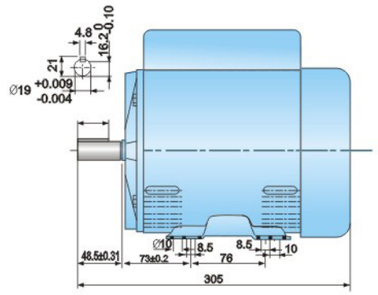
INSTALLATION SIZE AND OVERALL DIMENSION

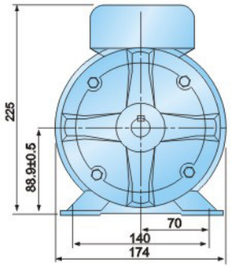
Frame Size	Mounting Dimensions (mm)																					Frame Dimensions (mm)					
										IMB14			IMB34			IMB5			IMB35								
	A	B	C	D	E	F	G	H	K	M	N	P	R	S	T	M	N	P	R	S	T	AB	AC	AD	AE	HD	L
71	112	90	45	14	30	5	11	71	7	85	70	105	0	M6	2.5	-	-	-	-	-	-	145	145	140	105	180	255
80	125	100	50	19	40	6	15.5	80	10	100	80	120	0	M6	2.5	-	-	-	-	-	-	160	165	150	120	200	295
90S	140	100	56	24	50	8	20	90	10	115	95	140	0	M8	3	-	-	-	-	-	-	180	185	160	130	240	370
90L	140	125	56	24	50	8	20	90	10	115	95	140	0	M8	3	-	-	-	-	-	-	180	185	160	130	240	400
100L	160	140	63	28	60	8	24	100	12	-	-	-	-	-	-	215	180	250	0	15	4	205	220	180	130	260	430
112M	190	140	70	28	60	8	24	112	12	-	-	-	-	-	-	215	180	250	0	15	4	245	250	190	140	300	455
132S	216	140	89	38	80	10	33	132	12	-	-	-	-	-	-	265	230	300	0	15	4	280	290	210	155	350	525

TECHNICAL DATA

Model	Power		Volt (V)	Current (A)	Speed (r.p.m)	Eff (%)	Power factor	Starting Torque Rated Torque	Starting Current (A)	Max Torque Rated torque	Net Weight (kg)
	HP	kW									
YL711-2	1/2	0.37	220	2.73	2800	67	0.92	1.8	16	1.8	8
YL712-2	3/4	0.55	220	3.88	2800	70	0.92	1.8	21	1.8	9
YL801-2	1	0.75	220	5.15	2800	72	0.92	1.8	29	1.8	11
YL802-2	1.5	1.1	220	7.02	2800	75	0.95	1.8	40	1.8	12
YL90S-2	2	1.5	220	9.44	2820	76	0.95	1.7	55	1.8	13
YL90L-2	3	2.2	220	13.7	2820	77	0.95	1.7	80	1.8	17
YL711-4	1/3	0.25	220	1.99	1400	62	0.92	1.8	12	1.8	8
YL712-4	1/2	0.37	220	2.81	1400	65	0.92	1.8	16	1.8	9
YL801-4	3/4	0.55	220	4.0	1400	68	0.92	1.8	21	1.8	11
YL802-4	1	0.75	220	5.22	1400	71	0.92	1.8	29	1.8	12
YL90S-4	1.5	1.1	220	7.21	1420	73	0.95	1.7	40	1.8	13
YL90L-4	2	1.5	220	9.57	1420	75	0.95	1.7	55	1.8	17
YL100L1-4	3	2.2	220	13.9	1420	76	0.95	1.7	80	1.8	26
YL100L2-4	4	3.0	220	18.6	1420	77	0.95	1.7	110	1.8	28
YL112M-4	3	2.2	220	13.9	1440	76	0.95	1.7	80	1.8	31
YL112M1-4	4	3.0	220	18.6	1440	77	0.95	1.7	110	1.8	34
YL112M2-4	5	3.7	220	23	1440	78	0.95	1.7	138	1.8	38
YL132SA-4	4	3.0	220	18.6	1440	77	0.95	1.7	110	1.8	55
YL132SB-4	5	3.7	220	23	1440	78	0.95	1.7	138	1.8	60







TECHNICAL DATA

Model	Power (kW)	Voltage (V)	Current (A)	Frequency (Hz)	Speed (r.p.m.)	Eff (%)	Power factor	Net Weight (kg)
CSCR90S-2	1.1	240	6.9	50	2800	75	0.993	10
CSCR90S2-2	1.65	240	10.18	50	2820	76.4	0.884	13.8
CSCR90L1-2	2	240	12.5	50	2850	79.6	0.968	16
CSCR90L-2	2.2	110	24.5	60	3400	83.3	0.98	16
CSCR90L-2	2.2	240	12.5	50	2850	78.6	0.952	16
CSCR90S1-4	0.37	220	2.7	50	1380	63	0.968	13.8
CSCR90L4-4	0.75	240	4.57	50	1400	12.6	0.942	16

INTRODUCE :

CSCR series single phase capacitor start and capacitor run motors are suitable for load requiring high starting torque such as air compressor etc.

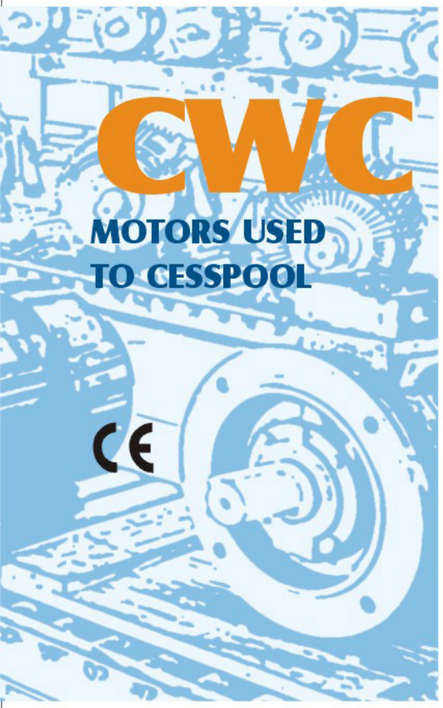
MOTOR FEATURES

- IP22 enclosure
- Class F insulation
- Corrosion resistant
- High quality lamination steel giving very low iron losses
- High quality magnet wire
- Vacuum varnish impregnation for superior tropic proof insulation
- Industrial type service factors
- High temperature heavy duty ball bearings
- Rolled steel motor body
- Aluminium drive and non-drive ends
- Thermal overload protection
- Long life capacitors

CUSTOMER BENEFITS

- Water dust and vermin resistant
- Quiet operation
- Reliable in country, city, or factory environments
- Low vibration
- Superior life
- High strength frame

ABLE has a customer focused factory which can accommodate most Original Equipment Manufacturers requirements. Please enquire with our nearest representative if you are interested in special motors, accessories and control equipment.



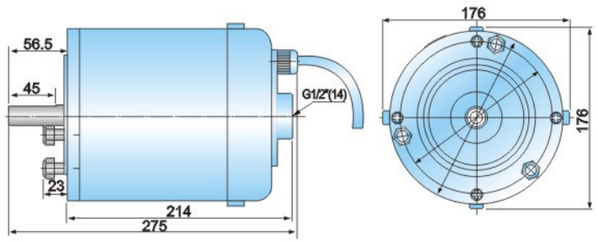
MOTOR SELECTION

To determine the type of motor suitable for any particular single-phase application, it is necessary to know the advantages and disadvantages of each type. Some typical applications and reasons for using a particular type are given below.

DUTY	MOTOR	REASON
Compressor	Cap Start	--High Starting torque
High Inertia Blower	Cap. St. & Run	--Low run-up period
Centrifugal Pumps	Split Phase	--Low starting torque
	Cap. St. & Run	--acceptable & in low HP, shaded pole may be satisfactory. Split-phase is normal. Cap st. Run may be used where stg. Is critical. Use Cap. St. & run if there are objections to C.F. Gear.
Fan	Cap. Start	--Necessary above 370 watt Advantage of lower starting currents than split-phase.
Centrifugal or Axial		
Fan	Shaded Pole	--The remarks above against Centrifugal Pumps apply equally to fans.
Variable Speed	Split-Phase	--See paragraph on Speed Variation.
Geared Units	Cap. St. & Run	--Generally acceptable.
	Cap Start	--Necessary above 370 watts.
Washing Machines	Shaded Pole	--Normally acceptable but high torque or special characteristics sometimes necessary.
	Cap. St. & Run	--Usual on automatics.
Oil Burners	Split-Phase	--Normally acceptable up to 370 watts.
Office Machinery	Cap Start	Capacitor Start above 370 watts.
	Split-Phase	
	Cap. Start Split-Phase Split Phase	

MOTOR FEATURES

- IP55 enclosure
- Class F insulation
- High starting torque
- Rolled steel motor body
- Low temperature rise
- Shaft made of stainless steel tube
- Low vibration
- The capacitor shall be in-built or installed outside



TECHNICAL DATA

Model	Power (kW)	Voltage (V)	Current (A)	Speed (r/mim)	Eff (%)	Power factor	Locked rotor torque Rated torque	Locked rotor current Rated torque	Max torque Rated torque
CWC2435	0.12	240	1.0	2900	60	0.98	2.5	7	2.5

ENCLOSURES I.P. NUMBERS

Designation	1st Numeral	2st Numeral	General Description
	Protection against contact and against ingress of foreign bodies	Protection against water	
I.P.21	Protection against contact by finger with electrically live or moving parts inside the enclosure. Protection against ingress or solid foreign bodies with a diameter greater than 12mm	Dripping water falling vertically	Drip proof
I.P.22		Dripping water falling at an angle up to 15℃ from the vertical	Drip proof
I.P.23		Water falling as spray at an angle up to 60℃ from the vertical	Drip proof
I.P.44	Protection against contact with live or moving parts by tools, wires or other objects of thickness greater than 1 mm. Protection against the ingress of solid foreign bodies with a diameter greater than 1 mm	Water splashed against the machine from any direction shall have no harmful effect	T.E.RV. or T.E.N.V.
I.P.55	Complete protection against contact with live or moving parts. Protection against harmful deposits of dust. The ingress of dust is not totally prevented, but does not accumulate in an amount sufficient to impair operation of the machine	Water projected by a nozzle against the machine from any direction shall have no harmful effect	T.E.RV. or T.E.N.V. Weatherproof or Dustproof or Hoseproof
I.P.56		Machine protected against conditions on a ship's deck	T.E.N.V.Deck Watertight

ENCLOSURES I.P. NUMBERS

Symptom	Possible Causes	Cure
	SYMPTOMS YOU CAN SEE	
1 Motor won't start	Usually power trouble-single-phasing at starter perhaps a fuse blown.	Check source of power supply DON' T merely try to make it go, while motor sits there and "fries" .
	Load too heavy. Disconnect motor to see if it starts with load.	Reduce load-or replace with motor of greater horse power.
	SYMPTOMS YOU CAN HEAR	
2 Excessive hum	Uneven air-gap. Measure with feelers.	Replace bearings-before introduction of scraping noise indicates rotor is rubbing against stator.
	Winding fault, short circuit.	Check, and repair if necessary by electrical rewinder.
	Unbalanced rotor.	Re-balance rotor-dynamically if possible.
3 Regular clicking	Foreign matter in air gap.	Take out rotor, remove matter.
4 Rapid knocking (Oil bearings)	Misalignment - probably causing shoulder of shaft to pound periodically against bearing end. Worn bearing.	Re-align and re-level set until knocking disappears. Fit new bearing.
5 Knocking Rumbling (Ball bearings)	Bearing worn due to lack of lubrication or excessive mechanical overload.	Replace bearings and put in new grease of recommended grade.
	Severe thrust.	(as above) .
	Double location if two ball bearings are fitted.	Check cap spigots and reduce at one end if necessary, so that only one bearing is located to take end thrust.
	Bearings slack in housings.	Fit new end-shield.
	Bearing moving on shaft.	Change bearing for one with tighter bore.
	Foreign matter in grease or bearing housing.	Wash in diesel oil or equal and put in new grease.
(Roller bearings)	Bearing worn due to lack of lubrication. Outer race of bearing scored.	Replace bearing. If old bearing, replace, if bearing is new or recently fitted, check fitting of the race into the end-shield and of the end-shield into the stator.
	SYMPTOMS YOU CAN FEEL	
6 Vibration	Misalignment	Re-align set.
	Vibration in driven machine. Run motor disconnected for check.	Eliminate source in machine, if possible. Change to a flexible belt drive may help.
7 Vibration-following motor repair	Rotor out of balance, due to holes drilled or weights shifted due to new rotor coil or coils.	Re-balance rotor-dynamically if possible.
8 Motor over-heating. (Check with thermometer-do not depend on hand).	Overload. Measure load; compare with nameplate rating.	Check for excessive friction in motor, drive or machine. Reduce load, or replace with motor of greater capacity.
	Dirt in motor. Check flow of ventilating air.	Blow out motor. Use harmless cleaning solvent on wound section if necessary.
	Rotor rubbing on stator.	Replace bearings.
	Shorted star or windings.	Test with ammeter and correct.
	Earth (ground).	Locate with test lamp or insulation tester and repair.
9 Bearing overheating (Ball and roller bearings).	Misalignment of bearing	Check all machined faces for correct seating of bearings.
	Bearing on verge of collapse.	Inspect and replace if necessary.
	Over-greasing of bearings.	Sufficient grease should be placed in the bearing to allow easy running, but not packed so tightly that bearing has to plough through. Avoid packing grease too tightly into motor bearings where speed is 3,000 r.p.m. or higher.
(Oil bearings)	Misalignment	Re-align. In all cases of bearings overheating-keep shaft turning until bearing is cooled... To prevent freezing
	Too much tension in chain or belt drive.	Reduce tension
	Excessive end thrust.	Reduce thrust from drive or machine. (Shaft should be permitted reasonable □axial□ float). Or if motor is off level, shim -up lower end to take thrust off its bearing.

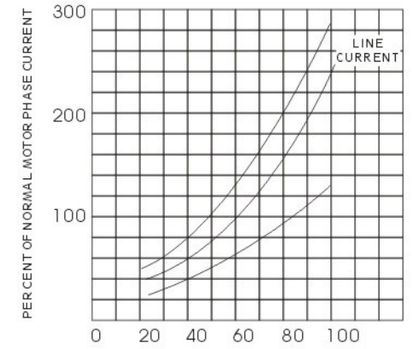
TYPES OF MOTOR BURNOUTS

(1) One coil only of one phase burnt out. This could possibly be a fault in manufacture; the failure occurs within weeks of installation.
(2) One phase completely burnt out. This is the usual failure on a Star-Delta or Delta connected motor and is invariably due to an external fault, for instance, a 'blown' fuse. This is described in detail in the diagram below.
(3) Two phases completely burnt out. This can be traced to the same fault as 2, if the motor is Star connected.
(4) Motor completely burnt out. This is almost invariably due to severe and sustained overload. If the motor is burnt out when stalled, this can be traced by the burning marks which appear on the slots of the rotor.

FLICKERING LIGHTS

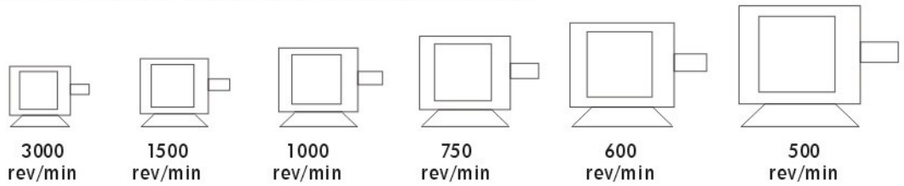
Should a fairly large three-phase motor be connected in the Works, and the lights commence to flicker, suspect the rotor of the motor. The effect of one phase out of circuit on a three-phase motor on load is to generate a frequency different from that of the supply, and this can be easily noted by its effect on the lighting system. A fault on a rotor can usually be traced to one of the following-loose rotor lead, faulty rotor contact, dirty slip ring, or poor connection on short circuiting gear.

MOTOR BURNOUTS



The accompanying diagram shows the circuit conditions in a normal three-phase Star-Delta wound motor, with one phase open, such as could be caused by a 'blown' fuse-this incidentally being the usual cause of a burnout. It will be observed that even at half-loading under these conditions, the circuit 'C' is carrying full load current. Full load with an open phase means that circuit 'C' has to carry nearly three times normal current, and under these conditions would be burnt out in a short time. The two phases 'B' would then be in series and actually carry little more than full load current.

EFFECT OF SPEED ON MOTOR CHARACTARISTICS



Relative sizes of a 4kW motor wound for various synchronous speeds.

Motor Speeds	3000	1500	1000	750	600	500
Frame Size	D112M	D112M	D132M	D160M	D160M	D180M
No. of Poles	2p	4p	6p	8p	10p	12p
Efficiency	82%	83%	83%	82%	81%	80%
Power Factor	86	81	80	74	67	68
Weight	1·0	1·2	1·0	1·9	2·1	3·2

FLICKERING LIGHTS

Electrical design aims at obtaining the optimum performance figures at rated voltage. Changes in voltage affect the following motor characteristics, speed, torque, current, efficiency, power factor and temperature rise. The statutory supply voltage regulations allow the voltage to vary ±6% from the declared voltage. The effects of these changes in voltage on the motor characteristics when operating at the extremes of the voltage are shown in the following table. These figures are quoted for guidance only since they can be affected by the polarity and kW rating of the motor.

Characteristic	Voltage+6%	Voltage-6%
Full Load Speed	0.5% increase	0.75% decrease
Locked Rotor Torque	12% "	11 % "
Locked Rotor Current	6% "	5.5% "
Full Load Current	4% decrease	5% increase
Efficiency ½F.L.	1.5% "	2% "
¾F.L.	1% "	Negligible Change
1/1 F.L.	Negligible Change	1% decrease
Power Factor ½F.L.	4% decrease	4% increase
¾F.L.	3% decrease	2% increase
1/1 F.L.	2% "	1% "
Winding Temp. Rise	4% "	6% "

EFFICIENCY, POWER FACTOR AND FULL LOAD CURRENTS OF A.C. MOTORS

The figures given below are approximate only and based on Four Pole Motors running at 1500 rev/min. As the speed lowers the Power Factor and Efficiency for a given horse power tends to fall also.

The figures given should be easily obtainable on any good commercial machine.

The Efficiency of a well designed Induction Motor is approximately constant between 75 percent and 100 percent of Full Load.

AVOIDING BREAKDOWNS

Electric motors are reliable machines, but the following hints may prove of service. Avoid where possible-

(1) Damp and falling moisture.

(2) Dirt, especially fluff, which may cause blocked ventilation.

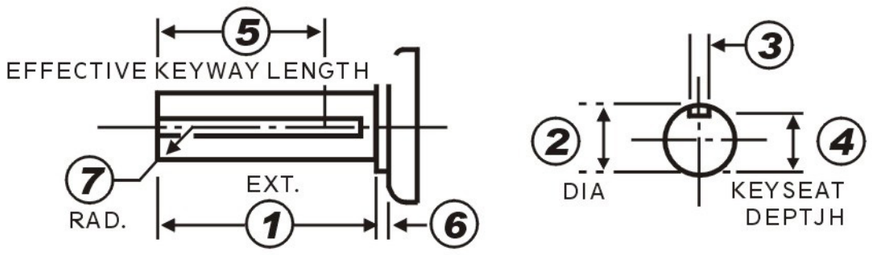
(3) Inaccessible positions in case anything does go wrong.

(4) Excessive heat. The permissible temperature rise of a motor with Class B insulation is 80℃ (measured by resistance). Surrounding air (ambient) temperature must not exceed 40℃. A motor may overheat if it is over-loaded or if it is located in an area where the ambient temperature exceeds 40℃. Other causes of overheating include blocked ventilation and duties which impose frequent or prolonged starting periods.

kW	FULL LOAD AMPS		EFFICIENCY F.L.		POWER FACTOR F.L.	
	3Ph 415V	1 Ph 240 V	3 Phase	1 Phase	3 Phase	1 Phase
0.75	1.93	7.7	77	67	.70	.61
1.1	2.7	10.5	77	70	.74	.63
1.5	3.5	13.0	80	65	.74	.74
2.2	4.9	14.4	80	75	.79	.85
3.0	6.6	18.4	80	78	.79	.87
4.0	8.3	32.0	83	83	.81	.85
5.5	11.0	-	85	-	.82	-
7.5	15.0	-	86	-	.83	-
11.0	21.0	-	88	-	.83	-
15.0	28.0	-	89	-	.83	-
22.0	40.0	-	89	-	.87	-
30.0	54.0	-	91	-	.84	-
37.0	66.0	-	91	-	.85	-
45.0	79.0	-	92	-	.87	-
55.0	96.0	-	92	-	.87	-
75.0	132.0	-	92	-	.87	-
110.0	180.0	-	92.5	-	.92	-
150.0	244.0	-	93	-	.92	-

The current required for any Alternating Current Motor can be obtained from the following equations.

B.S.METRIC MOTORS-SHAFT DIMENSIONS



MILLMETRES												
Frame	1		2		3	4		5	6	7		
	2Pole	4,6,8 P	2Pole	4,6,8 P	2Pole	4,6,8 P	2Pole	4,6,8 P	2Pole	4,6,8 P		
D.71	30		14		5×5		11		14		1.5	1.5875
D.80	40		19		6×6		15.5		25		1.5	1.5875
D.90	50		24		8×7		20.0		32		1.5	1.5875
D.100	60		28		8×7		23.9		40		1.6	1.5875
D.112	60		28		8×7		23.9		40		1.6	1.5875
D.132	80		38		10×8		33.0		56		1.6	1.5875
D.160	110		42		12×8		37.0		80		3.2	1.5875
D.180	110		48		14×9		42.5		80		4.8	1.5875
D.200	110		55		16×10		48.8		80		4.8	1.5875
D.225	110	140	55	60	16×10	18×11	48.8	53	80	110	12.0	1.5875
D.250	140	140	60	70	18×11	20×12	53	62.5	110	110	11.0	1.5875
D.280	140	170	65	80	18×11	20×12	58	71	110	140	3.0	1.5875
D.315S-M	140	170	65	85	18×11	22×14	58	76	110	140	3.0	1.5875
D.315L		170		90		25×14		81		140	3.0	1.5875

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