

Speedwel®

ELECTRIC MOTORS: 3 PHASE IE2 SAFE AREA

RELIABLE & LONG LASTING



IS:12615



CM/L - 7600162609



Motors suited for all applications i.e. Pumps, Compressors, Fans & Blowers, Conveyors, Screen Vibrators, Centrifuges, Stone Crusher Etc.



The most suitable solutions for extremely harsh and severe applications.



Customized motors designed and manufactured to suit application-specific needs.



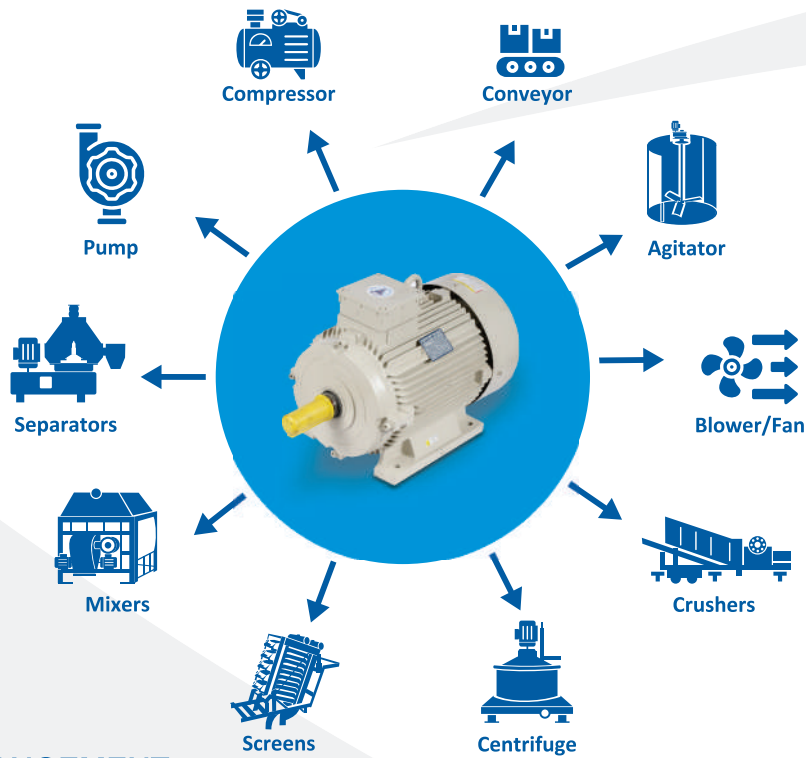
Motors conform to relevant IS/IEC standards.



Rigorous process control and quality assurance.

REFERENCE STANDARDS

IS/IEC 60034-1	Three Phase Induction Motor specifications ("Rotating Electrical Machines - Part 1: Rating & Performance")
IS: 1231	Dimensions of foot mounted A.C Induction Motors
IS: 2223	Dimensions of flange mounted A.C Induction Motors
IS: 4029	Guide for testing of Three Phase Induction Motors (For Standard TEFC SCR Motors)
IS : 12075	Mechanical Vibration of Rotating Electrical Machines
IS:15999 (Part 2/Sec 1)	Standard Methods for determining losses and efficiency from tests (For IE Series Motors)
IS:12615	Line Operated Three Phase A.C.Motor (efficiency Classes & Performance Specification)



MOUNTING ARRANGEMENT

Base refers to baseplate, foundation, slide rails, pedestal, etc. Horizontal Mounting

Horizontal Mounting (B)

Symbol	Schematic Diagram	Frame	Mounting
B3		With feet	Mounted on base
B5		Without feet	Mounted on Type B flange with shaft extension at flange end

Vertical Mounting (V)

V5		With feet	Mounted on base to the wall; shaft downwards
V6		With feet	Mounted on base to the wall; shaft upwards
V1		Without feet	Mounted on Type B flange with shaft extension at flange end; shaft downwards
V3		Without feet	Mounted on Type B flange with shaft extension at flange end; shaft upwards
V18		Without feet	Mounted on Type C flange with shaft extension at flange end; shaft downwards
V19		Without feet	Mounted on Type C flange with shaft extension at flange end; shaft upwards

GENERAL TECHNICAL SPECIFICATIONS

Range

SERIES: 3 Phase Squirrel Cage Induction Motor
IE2 Safe Area Motors

kW Rating: 0.37 to 15

Frame: 71 to 160

Polarity: 2, 4, 6

Speedwel®



Standard Feature

Voltage: 415V

Frequency: 50 Hz

IP44 /IP55

B3 Mounting Ambient :50° c

Altitude: up to 1000 m above mean sea level

Top TB: All frames

Cast Iron Construction: 71 to 160 & Above

Insulation: Class F

Paint Shade: Sealcoat White

Fan Cover: CRC

RE-RATING FACTORS APPLICABLE UNDER DIFFERENT CONDITIONS OF SUPPLY VOLTAGE, FREQUENCY, AMBIENT & ALTITUDE

I.Variation in Supply Voltage & Frequency

Voltage Variation %	Frequency Variation %	Combined Voltage & Frequency %	PERMISSIBLE Output AS % of Rated Value
±10	±5	±10	100

II.Variation in Ambient

Ambient Temperature (°C)	PERMISSIBLE Output AS % of Rated Value
50	100
55	96

III.Variation in Altitude

Altitude Above Mean Sea Level (m)	Permissible Output AS % of Rated Value
1000	100
1500	97
2000	94
2500	90
3000	86
3500	82
4000	77

Starting Current Measurement

Induction Motor starting current is generally 6 to 7 times the rated current of the motor. Starting current measurement may be carried out at reduced voltage due to capacity constraint and then extrapolated to the rated voltage. the starting current measurement is done at reduced voltage as per the table below.

kW Range	Measurement at % of voltage to rated voltage
0.32kW to 5kW	70%

Method of Starting:

kW Rating	Method of Starting	No. of LEADS
Above 3.7kW	Delta	6

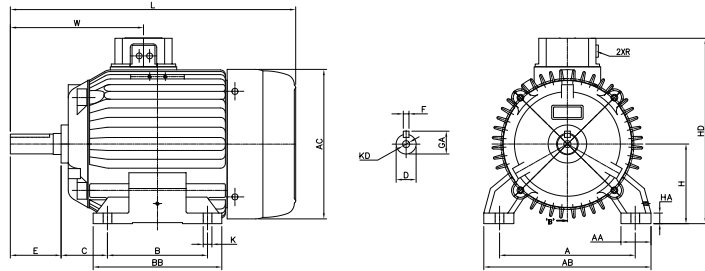
Bearing Chart

Frame Size	Bearings no.	
	D.E	N.D.E
71	6203 2RS	6203 2RS
80	6004 2RS	6004 2RS
90 S/L	6205 2RS	6205 2RS
100L	6206 2RS	6206 2RS
112M	6206 2RS	6206 2RS
132S / M	6208 2Z	6208 2Z
160M/L	6309 2Z	6309 2Z

Performance Dta: IE2 Efficiency Series for Safe Area Application

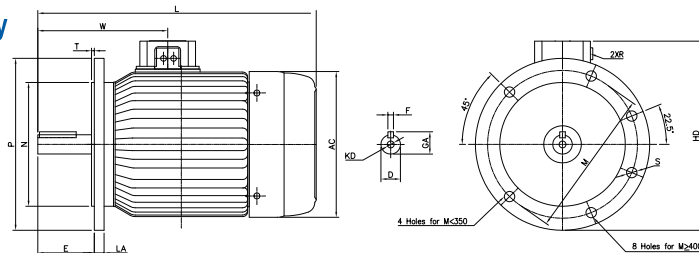
Kw	HP	Frame Size	Rated Speed	Rated Current	Locked Rotor torque in terms of FLT %	Power Factor			Efficiency %		
						50%	75%	100%	50%	75%	100%
0.37	0.5	71	1330	1.4	170	0.6	0.75	0.8	72	72.8	72.7
0.75	1	80	1360	2.2	170	0.63	0.74	0.8	78.5	79.5	79.6
1.1	1.5	90S	1370	2.9	170	0.61	0.73	0.8	83.7	83.3	81.4
1.5	2	90L	1380	3.8	170	0.61	0.73	0.8	82.4	84.61	82.8
2.2	3	100L	1390	5.1	170	0.68	0.78	0.8	85.94	86.05	84.3
3.7	5	112M	1410	8.1	160	0.58	0.7	0.8	86.46	86.96	86.3
5.5	7.5	132S	1420	12	160	0.6	0.72	0.8	85.89	87.77	87.7
7.5	10	132M	1430	15.4	160	0.74	0.81	0.8	87.5	89.13	88.7
9.3	12.5	160M	1430	19.0	160	0.66	0.78	0.8	87.02	87.77	89
11	15	160M	1440	22	160	0.71	0.8	0.8	88.16	89.24	89.8
15	20	160L	1440	30	160	0.84	0.8	0.8	89.02	90.62	90.6

Foot Mounted All Over Dimension For C.I. Body



Frame	Pole	FIXING					GENERAL							T.BOX		SHAFT				
		A	B	C	H	K	AB	BB	AA	HA	HD	L	AC	R	W	D	E	F	GA	KD
GFIM 71	2,4,6	112	90	45	71	7	138	112	30	9	185	234	139	-	98	14	30	5	16	M5
GFIM 80	2,4,6	125	100	50	80	10	160	126	36	10	220	29	159	-	112	19	40	6	21.5	M6
GFIM 90 S	2,4,6	140	100	56	90	10	178	130	36	12	250	32	176	-	130	24	50	8	27	M8
GFIM 90L	2,4,6	140	125	56	90	10	178	155	36	12	250	34	176	-	130	24	50	8	27	M8
GFIM 100L	2,4,6	160	140	63	100	12	200	170	43	15	275	38	196	3/4" BS	138	28	60	8	31	M10
GFIM 112M	2,4,6	190	140	70	112	12	230	180	50	18	300	40	225	3/4" BS	147	28	60	8	31	M10
GFIM 132S	2,4,6	216	140	89	132	12	257	176	60	18	345	47	265	PG 11 (18 TPI)	179	38	80	10	41	M12
GFIM 132M	2,4,6	216	178	89	132	15	257	238	60	18	345	51	260	PG 11 (18 TPI)	179	38	80	10	43	M12
GFIM 160M	2,4,6	254	210	108	160	15	300	290	59	20	420	62	310	PG 11 (18 TPI)	258	42	110	12	48	M16
GFIM 160L	2,4,6	254	254	108	160	15	300	290	59	20	420	66	310	PG 11 (18 TPI)	258	42	110	12	48	M16

Flange Mounted All Over Dimension For C.I. Body



Frame	Pole	FIXING					GENERAL					T.BOX		SHAFT			
		LA	N	T	M	S	L	P	AC	HD	R	W	D	E	F	GA	KD
GFIM 80	2,4,6	12	130	3.5	165	12	290	200	156	240	M20X1.5	112	19	40	6	21.5	M6
GFIM 90 S	2,4,6	12	130	3.5	165	12	325	200	176	260	M20X1.5	130	24	50	8	27	M8
GFIM 90L	2,4,6	12	130	3.5	165	12	345	200	176	260	M20X1.5	130	24	50	8	27	M8
GFIM 100L	2,4,6	14	180	4	215	15	385	250	196	300	M20X1.5	138	28	60	8	31	M10
GFIM 112M	2,4,6	14	180	4	215	15	405	250	220	310	M20X1.5	147	28	60	8	31	M10
GFIM 132S	2,4,6	14	230	4	265	15	475	300	260	360	M20X1.5	179	38	80	10	41	M12
GFIM 132M	2,4,6	14	230	4	265	15	515	300	260	360	M20X1.5	179	38	80	10	41	M12
GFIM 160M	2,4,6	15	250	5	300	19	620	350	315	435	M20X1.5	258	42	110	12	45	M16
GFIM 160L	2,4,6	15	250	5	300	19	660	350	315	435	M20X1.5	258	42	110	12	45	M16

Note: - Subject to Change (2P.6P. will be Offered on Request)

- As per Company Policy of Continuous Improvement, The Specification Given Above are Subject to Change Without Notice

Manufacturer & Exporter (An ISO 9001:2015 Certified Company)

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DEALER

