

# IEC FRAME MOTORS

Stock and Custom Horizontal AC Motors  
Fully Compliant with IEC Standards



## Specifications

**Power:** 0.75 - 300 kW

**Speed Range:** 2 - 12 Pole

**Design Voltages:** 190 - 690 V

**Agency:** UL, CSA, CE

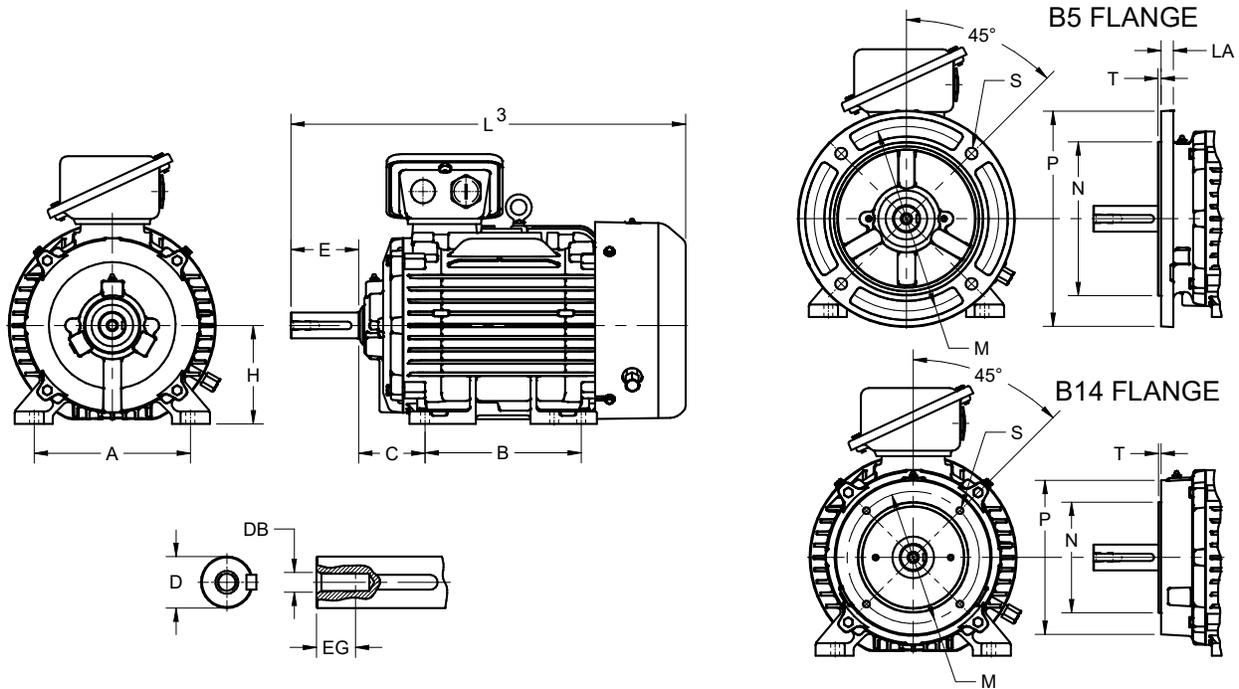
**Efficiency Level:** IE3

## Product Overview

U.S. MOTORS® brand true IEC (International Electrotechnical Commission) motors are built to withstand a variety of severe duty applications. These motors are designed to fully meet IEC standards. Our IEC product lines are assembled in the United States or Mexico. With the U.S. MOTORS brand pedigree dating back over 100 years, we're well-versed in producing motors that are efficient, reliable and compliant.

Product Line	Application	Frames	Enclosures
IEC World Motor® HOSTILE DUTY®	Constant speed severe industrial	90-280	IC411 (TEFC)
IEC World Motor® INVERTER DUTY™	Variable speed severe industrial	90-280	IC411 (TEFC)

Electromechanical Features:	Reliability Features:	Available Custom Design Options:
<ul style="list-style-type: none"> <li>Rated Class B rise at 1.0 service factor with full Class F or better insulating materials</li> <li>Wye Delta Connection</li> <li>Zone 2 rating (Group IIA, IIB, IIC)</li> <li>IEC 60079-15 EX-nA (Non-Sparking)</li> <li>Ingress Protection rating</li> <li>IM B3 Mounting (top mount outlet box, rotatable in 90-degree increments)</li> <li>IP55 Ingress Protection</li> <li>Suitable for shaft up or shaft down mounting (90-280)</li> <li>Stainless steel nameplate and hardware to allow for use in hostile and severe environments mounting (90-280)</li> </ul>	<ul style="list-style-type: none"> <li>100% solid polyester varnish on wound stator</li> <li>External corrosion-resistant mill and chemical duty paint</li> <li>Oxide primer coating on bracket and frame surfaces</li> <li>Non-braided, no wicking leads with a compression type ground lug in the conduit box</li> <li>Terminal Block in the conduit box with metric hardware included</li> <li>These motors fully comply with IEC 60034, 60038, 60072 standards in IE2 and IE3 classes.</li> </ul>	<ul style="list-style-type: none"> <li>Special voltages</li> <li>Winding thermal protection</li> <li>Vacuum Pressure Impregnation (VPI) available on 180 frame &amp; larger</li> <li>Shaft grounding</li> <li>High altitude or ambient</li> <li>Horizontal or vertical mounting</li> <li>Roller bearings</li> <li>Bearing thermal protection (200 frame and above)</li> <li>B5 and B14 flanges</li> <li>Special shafts</li> <li>Oil mist lubrication</li> <li>B3, B3L or B3R</li> <li>More options available in the Nidec Motor Corporation catalogs</li> </ul>



FOOT MOUNTING

FRAME	A	B	C	H
90S	140	100	56	90
90L	140	125	56	90
112S	190	114	70	112
112M	190	140	70	112
132S	216	140	89	132
132M	216	178	89	132
160M	254	210	108	160
160L	254	254	108	160
180M	279	241	121	180
180L	279	279	121	180
200M	318	267	133	200
200L	318	305	133	200
225S (2 pole)	356	286	149	225
225M (2 pole)	356	311	149	225
225S	356	286	149	225
225M	356	311	149	225
250S (2 pole)	406	311	168	250
250M (2 pole)	406	349	168	250
250S	406	311	168	250
250M	406	349	168	250
280S (2 pole)	457	368	190	280
280M (2 pole)	457	419	190	280
280S	457	368	190	280
280M	457	419	190	280

SHAFT

D	E	DB	EG
24	50	M8	17.5
24	50	M8	17.5
28	60	M10	20.6
28	60	M10	20.6
38	80	M12	25.4
38	80	M12	25.4
42	110	M16	31.8
42	110	M16	31.8
48	110	M16	31.8
48	110	M16	31.8
55	110	M20	44.5
55	110	M20	44.5
55	110	M20	44.5
55	110	M20	44.5
60	140	M20	44.5
60	140	M20	44.5
60	140	M20	44.5
60	140	M20	44.5
65	140	M20	44.5
65	140	M20	44.5
65	140	M20	44.5
65	140	M20	44.5
75	140	M20	44.5
75	140	M20	44.5

B5 FLANGE

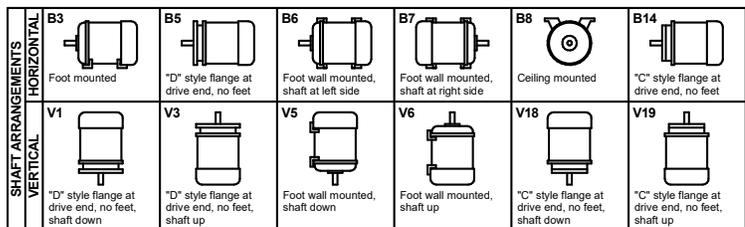
LA	M	N	P	S	T
13	165	130	200	12	3.5
13	165	130	200	12	3.5
13.2	215	180	250	14	4
13.2	215	180	250	14	4
13.2	265	230	300	14	4
13.2	265	230	300	14	4
20	300	250	350	19	5
20	300	250	350	19	5
20	300	250	350	19	5
20	300	250	350	19	5
20	350	300	400	19	5
20	350	300	400	19	5
20	400	350	450	19	5
20	400	350	450	19	5
20	400	350	450	19	5
20	400	350	450	19	5
25	500	450	550	19	5
25	500	450	550	19	5
25	500	450	550	19	5
25	500	450	550	19	5
25	500	450	550	19	5
25	500	450	550	19	5
25	500	450	550	19	5
25	500	450	550	19	5

B14 FLANGE

M	N	P	S	T	BRG NO.
115	95	140	M8	3	6205/6203
115	95	140	M8	3	6205/6203
130	110	160	M8	3.5	6206/6205
130	110	160	M8	3.5	6208/6206
165	130	200	M10	3.5	6208/6206
165	130	200	M10	3.5	6205/6203
215	180	250	M12	4	6309/6209
215	180	250	M12	4	6309/6209
					6310/6210
					6310/6210
					6311/6211
					6311/6211
					6313/6213
					6313/6213
					6313/6213
					6313/6213
					6316/6216
					6316/6216
					6316/6216
					6316/6216
					6313/6313
					6313/6313
					6318/6313
					6318/6313

DIMENSIONS (mm)

- STANDARD B3 ASSEMBLY POSITION IS SHOWN.
- FRAME SIZE 225, 250 AND 280 B5 FLANGE HAS QUANTITY 8 "S" MOUNTING HOLES STARTING AT 22.5° ANGLE.
- CONTACT YOUR LOCAL NIDEC OFFICE FOR "L" DIMENSION.



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