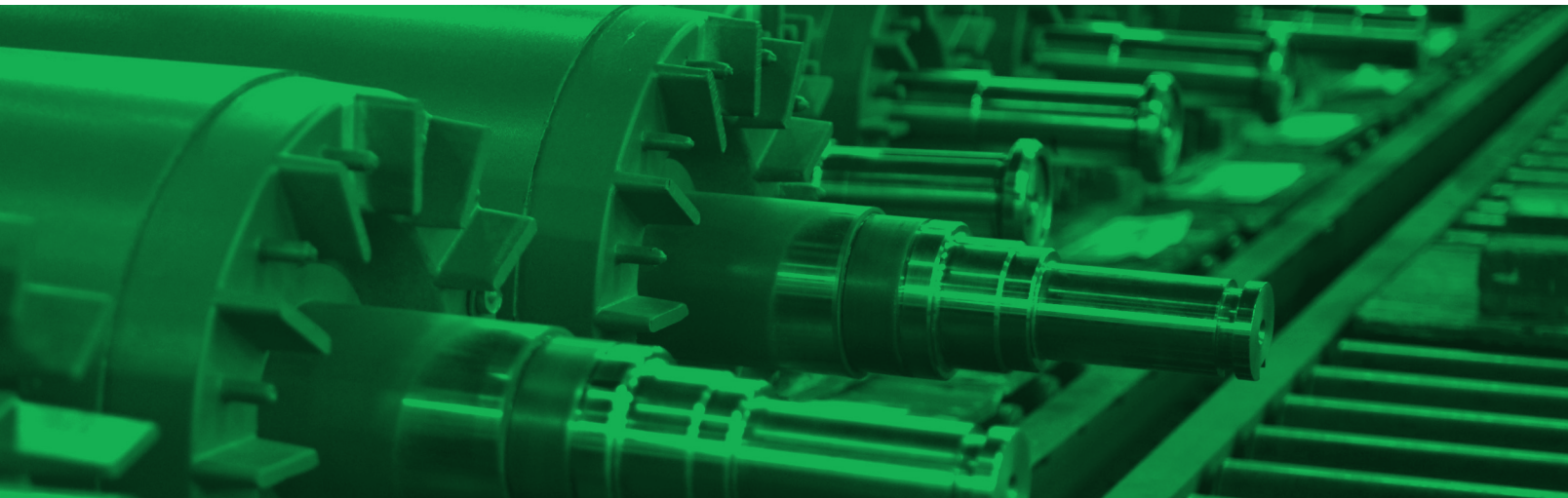


# Metric Premium Line Cast-iron IEC Motors

The Philippines



SPECIFICATION FOR METRIC PREMIUM LINE CAST-IRON (MPLC)  
IEC MOTORS IN THE PHILIPPINES

**Nidec**  
NIDEC MOTOR CORPORATION

## Three Phase, IP55 Cast-iron Frame IE3 Metric Motors @ 40°C Ambient



MPLC

### Motor Specifications for the Philippines

60 Hz

#### Totally Enclosed Three-Phase Induction Motors

Frame : Cast-iron

Motor Type : Metric Premium Line Cast-iron (MPLC)

Manufacturing according to : Standards IEC 60034, 60038 60072

Power Range : from 0.75 to 315kW

Frame Size : 80 to 355mm

Speed : Single 2, 4 or 6 poles

Operating Voltages : 220v / 380v / 440v  $\pm$  10% 60 Hz From 0.75 kW up to 200 kW (Frame 355)

Efficiency : IE3

Frequency : 60 HZ

Insulation Class : F

Temperature Rise : 80°C (K)

Ambient Temperature : 40°C

Altitude : 1000 m

Protection : IP55 by superior sealing and lipseal on the shaft

Varnish Treatment : VPI

Winding Voltages : 220V 2 $\Delta$  /380v 2Y /440V  $\Delta$  / 762V Y

12 Leads connection Y  $\Delta$  with Conduit box suitable for 6 terminals

Starting: Direct on line : All up to 10 kW and 380v

Starting: Wye / Delta and on line : 220v / 440v - 60Hz from 0.75 kW to 200 kW in the complete kW range

Winding Protection : Dandong PTC (1 per phase) from 110KW and above

Hardware : Corrosion Treated

Paint : RAL 7024 Grey

Terminal Box : Cast-iron body and Cast-iron Cover

Mounted on F3 position on the Top of the motor as standard

End Shields : Cast-iron

Bearing Inner Cap : 180 to 355 mm

Regreasable Bearing : 180 to 355 mm

Grease Type : Polyrex-EM

Conversion Kits : FF and FT Flange Kit Available for Field Conversion

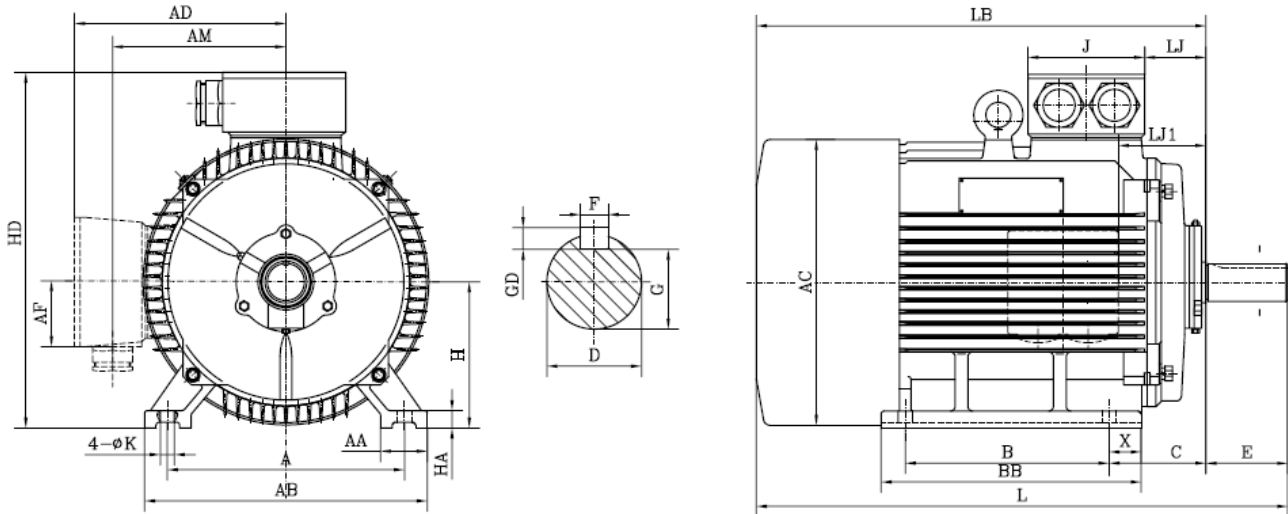




# MPLC-IE3 Cast-iron Mounting and Overall Dimensions

## Foot-Mounted, IM 1001 (IM B3)

### The Philippines



Frame	Mounting Dimensions (Millimeters)												
	A	AA	B	C	D 2p <sub>1</sub> ≥4p	E 2p <sub>1</sub> ≥4p	F 2p <sub>1</sub> ≥4p	G 2p <sub>1</sub> ≥4p	GD	H	K	p	x
80M	125	34	100	50	19	40	6	15.5	6	80	10	/	15
90S	140	36	100	56	24	50	8	20	7	90	10	/	20
90L	140	36	125	56	24	50	8	20	7	90	10	/	20
100L	160	40	140	63	28	60	8	24	7	100	12	/	18
112M	190	45	140	70	28	60	8	24	7	112	12	/	20
132S	216	55	140	89	38	80	10	33	8	132	12	/	23
132M	216	55	178	89	38	80	10	33	8	132	12	/	23
160M	254	65	210	108	42	110	12	37	8	160	15	/	25
160L	254	65	254	108	42	110	12	37	8	160	15	/	25
180M	279	70	241	121	48	110	14	42.5	9	180	15	/	35
180L	279	70	279	121	48	110	14	42.5	9	180	15	/	35
200L	318	70	305	133	55	110	16	49	10	200	19	/	32
225S	356	75	286	149	60	140	18	53	11	225	19	/	45
225M	356	75	311	149	55/60	110/140	16/18	49/53	10/11	225	19	/	45
250M	406	80	349	168	60/65	140	18	53/58	11	250	24	/	55
280S	457	85	368	190	65/75	140	18/20	58/67.5	11/12	280	24	/	68.5
280M	457	85	419	190	65/75	140	18/20	58/67.5	11/12	280	24	/	68.5
315S	508	120	406	216	65/80	140/170	18/22	58/71	11/14	315	28	/	84
315M	508	120	457	216	65/80	140/170	18/22	58/71	11/14	315	28	/	84
315L	508	120	508	216	65/80	140/170	18/22	58/71	11/14	315	28	/	84
355M	610	116	560	254	75/95	140/170	20/25	67.5/86	12/14	355	28	/	68
355L	610	116	630	254	75/95	140/170	20/25	67.5/86	12/14	355	28	/	68
355L	610	116	630	254	75/95	140/170	20/25	67.5/86	12/14	355	28	/	68

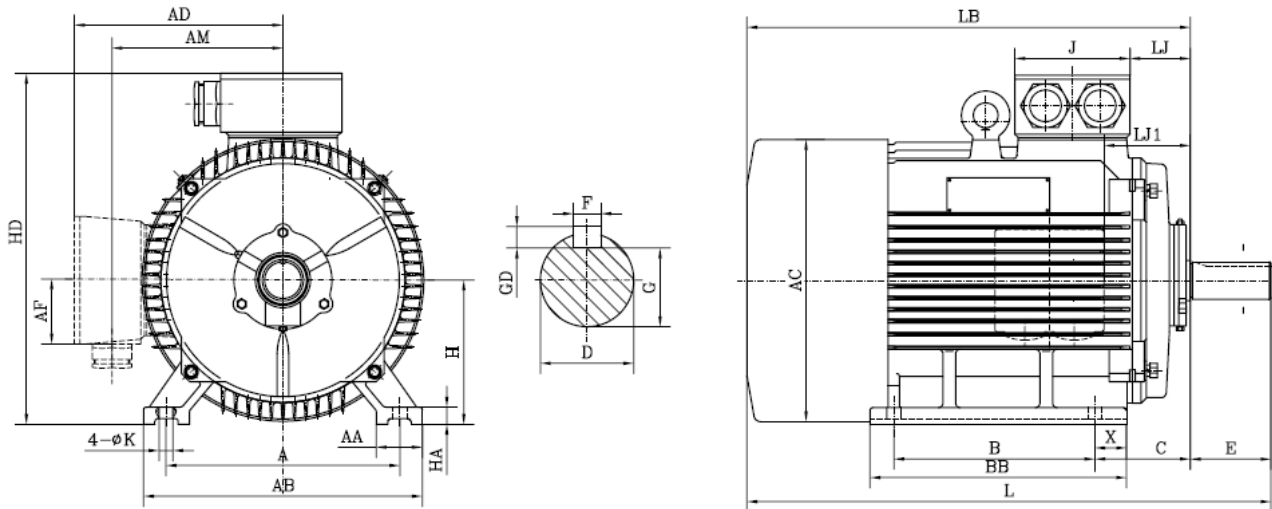
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# MPLC-IE3 Cast-iron Mounting and Overall Dimensions

## Foot-Mounted, IM 1001 (IM B3)

### The Philippines



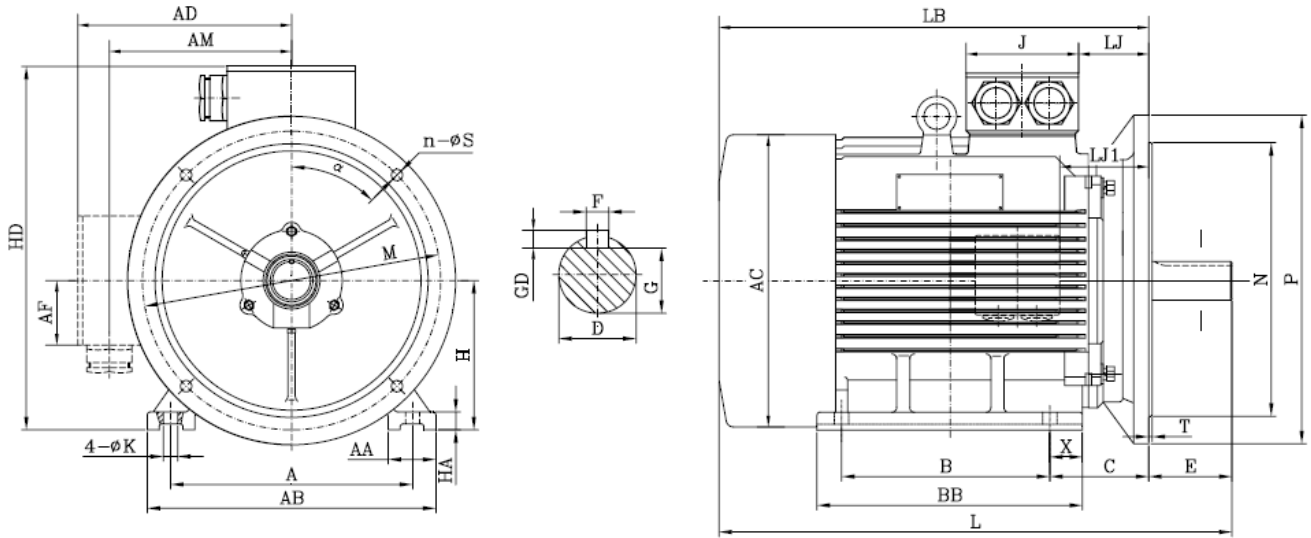
Frame	Overall Dimensions (Millimeters)														Bearing No.	
	AB	AC	AD	AM	AF	BB	HA	HD	L 2p≥4p	LB	LJ	LJ1	J	2p≥4p		
80M	162	168	145	115	35	145	10	223	300	260	21	55	102	6204	6204	
90S	178	184	159	125	39	182	12	245	352	302	20	71	110	6205	6205	
90L	178	184	159	125	39	212	12	245	382	332	20	86	110	6205	6205	
100L	202	208	177	144	38	237	14	273	430	370	28	107	110	6206	6206	
112M	228	222	197	155	55	252	15	300	465	405	27.5	115	119	6206	6206	
132S	265	260	210	173	57	226	18	341	505	425	39.5	99.5	119	6208	6208	
132M	265	260	210	173	57	267	18	341	543	463	39.5	119	119	6208	6208	
160M	316	317	257	213	95	307	20	418	656	546	65.5	65.5	161	6309	6309	
160L	316	317	257	213	95	337	20	418	686	576	65.5	65.5	161	6309	6309	
180M	352	357	270	227	95	351	22	454	720	610	80.5	80.5	161	6311	6311	
180L	352	357	270	227	95	399	22	454	768	658	80.5	80.5	161	6311	6311	
200L	390	400	302	247	122	370	25	505	781\811\781	671\701\671	86	86	200	6212\6312	6212\6312	
225S	432	448	325	272	122	370	28	553	185\1821	171\1681	89	89	200	6312\6313	6312\6313	
225M	432	448	325	272	122	395	28	553	816\876\846	706\736\706	89	89	200	6312\6313	6312\6313	
250M	486	487	362	303	146	447	30	615	914\914	774\774	93	93	228	6313\6314	6313\6314	
280S	544	549	391	332	146	487	35	674	974\974	834\834	101.5	101.5	228	6314\6317	6314\6317	
280M	544	549	391	332	146	538	35	674	1025\1025	885\885	101.5	101.5	228	6314\6317	6314\6317	
315S	630	622	523	441	188	572	45	841	1158\1231	1018\1061	111	111	292	6317\6319	6317\6319	
315M	630	622	523	441	188	682	45	841	1268\1341	1128\1171	111	111	292	6317\6319	6317\6319	
315L	630	622	523	441	188	682	45	841	1268\1341	1128\1171	111	111	292	6317\6319	6317\6319	
355M	728	700	640	550	223	755	52	996	1490\1520	1350\1350	113	113	342	6319\6322	6319\6322	
355L	728	700	640	550	223	755	52	996	1490\1520	1350\1350	113	113	342	6319\6322	6319\6322	
355L	728	700	640	550	223	755	52	996	1490\1520	1350\1350	113	113	342	6319\6322	6319\6322	

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# MPLC-IE3 Cast-iron Mounting and Overall Dimensions

## FF Foot and Plain Hole Mounted IM 2001 (IM B35)

### The Philippines



Frame	FF Symb	Mounting Dimensions (Millimeters)										
		A	AA	B	C	D 2p $\geq$ 4p	E 2p $\geq$ 4p	F 2p $\geq$ 4p	G 2p $\geq$ 4p	GD	H	K
80M	FF165	125	34	100	50	19	40	6	15.5	6	80	10
90S	FF165	140	36	100	56	24	50	8	20	7	90	10
90L	FF165	140	36	125	56	24	50	8	20	7	90	10
100L	FF215	160	40	140	63	28	60	8	24	7	100	12
112M	FF215	190	45	140	70	28	60	8	24	7	112	12
132S	FF265	216	55	140	89	38	80	10	33	8	132	12
132M	FF265	216	55	178	89	38	80	10	33	8	132	12
160M	FF300	254	65	210	108	42	110	12	37	8	160	15
160L	FF300	254	65	254	108	42	110	12	37	8	160	15
180M	FF300	279	70	241	121	48	110	14	42.5	9	180	15
180L	FF300	279	70	279	121	48	110	14	42.5	9	180	15
200L	FF350	318	70	305	133	55	110	16	49	10	200	19
225S	FF400	356	75	286	149	60	140	18	53	11	225	19
225M	FF400	356	75	311	149	55/60	110/140	16/18	49/53	10/11	225	19
250M	FF500	406	80	349	168	60/65	140	18	53/58	11	250	24
280S	FF500	457	85	368	190	65/75	140	18/20	58/67.5	11/12	280	24
280M	FF500	457	85	419	190	65/75	140	18/20	58/67.5	11/12	280	24
315S	FF600	508	120	406	216	65/80	140/170	18/22	58/71	11/14	315	28
315M	FF600	508	120	457	216	65/80	140/170	18/22	58/71	11/14	315	28
315L	FF600	508	120	508	216	65/80	140/170	18/22	58/71	11/14	315	28
355M	FF740	610	116	560	254	75/95	140/170	20/25	67.5/86	12/14	355	28
355L	FF740	610	116	630	254	75/95	140/170	20/25	67.5/86	12/14	355	28
355L	FF740	610	116	630	254	75/95	140/170	20/25	67.5/86	12/14	355	28

Note: IM B35 Dimensions AB, AC, AD, AM, AF, HA, HD, X, L are the same As IM B3

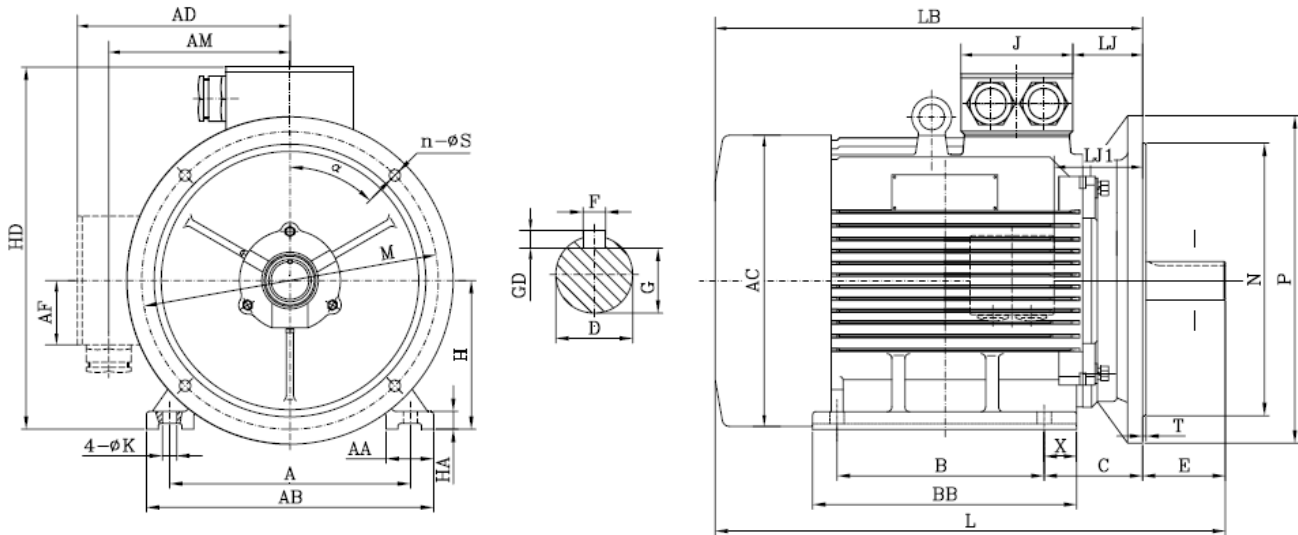
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# MPLC-IE3 Cast-iron Mounting and Overall Dimensions

## FF Foot and Plain Hole Mounted IM 2001 (IM B35)

The Philippines



Frame	Overall Dimensions (Millimeters)												Bearing No 2p≥4p	
	BB	LB	M	N	P	S	n	α	T	LJ	LJ 1	J		
80M	145	260	165	130	200	12	4	45°	3.5	21	55	102	6204	6204
90S	182	302	165	130	200	12	4	45°	3.5	20	71	110	6205	6205
90L	212	332	165	130	200	12	4	45°	3.5	20	86	110	6205	6205
100L	237	370	215	180	250	15	4	45°	4	28	107	110	6206	6206
112M	252	405	215	180	250	15	4	45°	4	27.5	115	119	6206	6206
132S	226	425	265	230	300	15	4	45°	4	39.5	99.5	119	6208	6208
132M	267	463	265	230	300	15	4	45°	4	39.5	119	119	6208	6208
160M	307	546	300	250	350	19	4	45°	5	65.5	65.5	161	6309	6309
160L	337	576	300	250	350	19	4	45°	5	65.5	65.5	161	6309	6309
180M	351	610	300	250	350	19	4	45°	5	80.5	80.5	161	6311	6311
180L	399	658	300	250	350	19	4	45°	5	80.5	80.5	161	6311	6311
200L	370	671 701 671	350	300	400	19	4	45°	5	86	86	200	6212 6312	6212 6312
225S	370	711 681	400	350	450	19	8	22.5°	5	89	89	200	6312 6313	6312 6313
225M	395	706 736 706	400	350	450	19	8	22.5°	5	89	89	200	6312 6313	6312 6313
250M	447	774 774	500	450	550	19	8	22.5°	5	93	93	228	6313 6314	6313 6314
280S	487	834 834	500	450	550	19	8	22.5°	5	101.5	101.5	228	6314 6317	6314 6317
280M	538	885 885	500	450	550	19	8	22.5°	5	101.5	101.5	228	6314 6317	6314 6317
315S	572	1018 1061	600	550	660	24	8	22.5°	6	111	111	292	6317 6319	6317 6319
315M	682	1128 1171	600	550	660	24	8	22.5°	6	111	111	292	6317 6319	6317 6319
315L	682	1128 1171	600	550	660	24	8	22.5°	6	111	111	292	6317 6319	6317 6319
355M	755	1350 1350	740	680	800	24	8	22.5°	6	113	113	342	6319 6322	6319 6322
355L	755	1350 1350	740	680	800	24	8	22.5°	6	113	113	342	6319 6322	6319 6322
355L	755	1350 1350	740	680	800	24	8	22.5°	6	113	113	342	6319 6322	6319 6322

Note: IM B35 Dimensions AB, AC, AD, AM, AF, HA, HD, X, L are the same As IM B3

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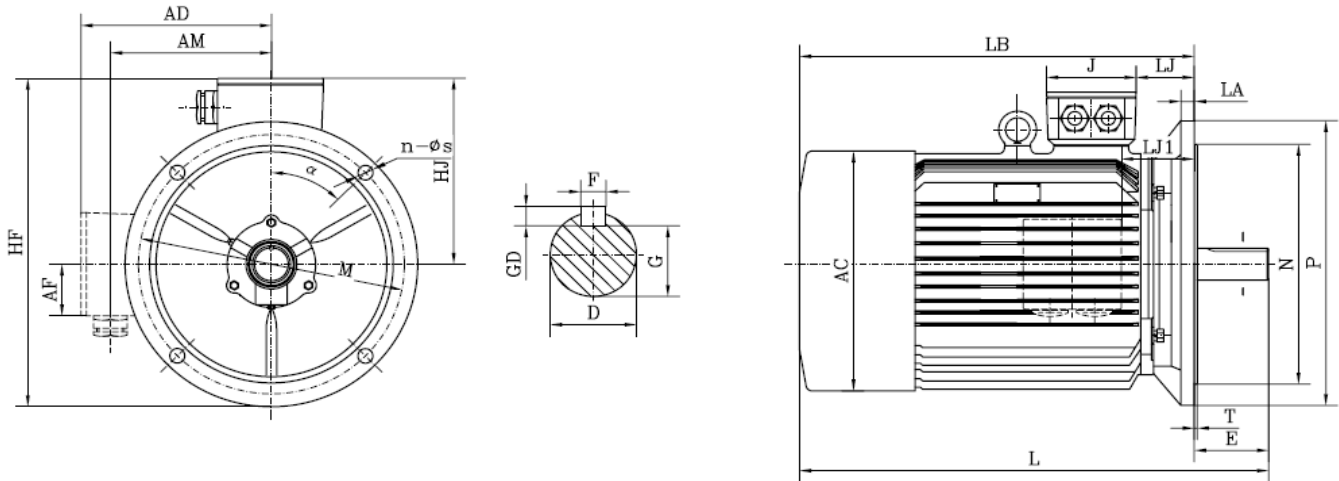




# MPLC-IE3 Cast-iron Mounting and Overall Dimensions

## FF Plain Hole Mounted IM 3001 (IM B5)

### The Philippines



Frame	FF Symb	Mounting Dimensions (Millimeters)											
		D 2p≥4p	E 2p≥4p	F 2p≥4p	G 2p≥4p	GD	M	N	P	S	n	α	T
80M	FF165	19	40	6	15.5	6	165	130	200	12	4	45°	3.5
90S	FF165	24	50	8	20	7	165	130	200	12	4	45°	3.5
90L	FF165	24	50	8	20	7	165	130	200	12	4	45°	3.5
100L	FF215	28	60	8	24	7	215	180	250	15	4	45°	4
112M	FF215	28	60	8	24	7	215	180	250	15	4	45°	4
132S	FF265	38	80	10	33	8	265	230	300	15	4	45°	4
132M	FF265	38	80	10	33	8	265	230	300	15	4	45°	4
160M	FF300	42	110	12	37	8	300	250	350	19	4	45°	5
160L	FF300	42	110	12	37	8	300	250	350	19	4	45°	5
180M	FF300	48	110	14	42.5	9	300	250	350	19	4	45°	5
180L	FF300	48	110	14	42.5	9	300	250	350	19	4	45°	5
200L	FF350	55	110	16	49	10	350	300	400	19	4	45°	5
225S	FF400	60	140	18	53	11	400	350	450	19	8	22.5°	5
225M	FF400	55/60	110/140	16/18	49/53	10/11	400	350	450	19	8	22.5°	5
250M	FF500	60/65	140	18	53/58	11	500	450	550	19	8	22.5°	5
280S	FF500	65/75	140	18/20	58/67.5	11/12	500	450	550	19	8	22.5°	5
280M	FF500	65/75	140	18/20	58/67.5	11/12	500	450	550	19	8	22.5°	5
280M	FF500	65/75	140	18/20	58/67.5	11/12	500	450	550	19	8	22.5°	5

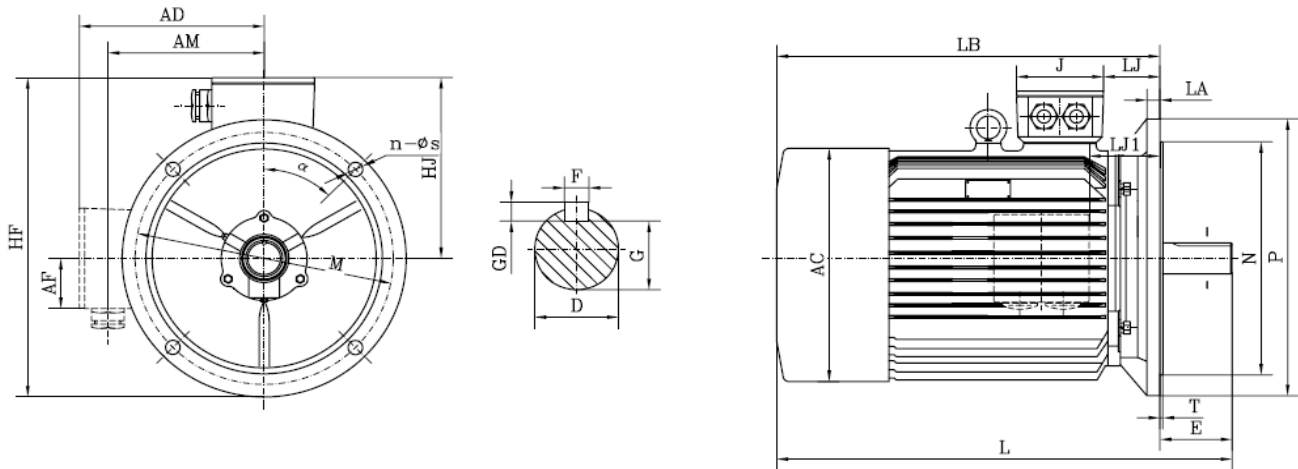
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# MPLC-IE3 Cast-iron Mounting and Overall Dimensions

## FF Plain Hole Mounted IM 3001 (IM B5)

### The Philippines



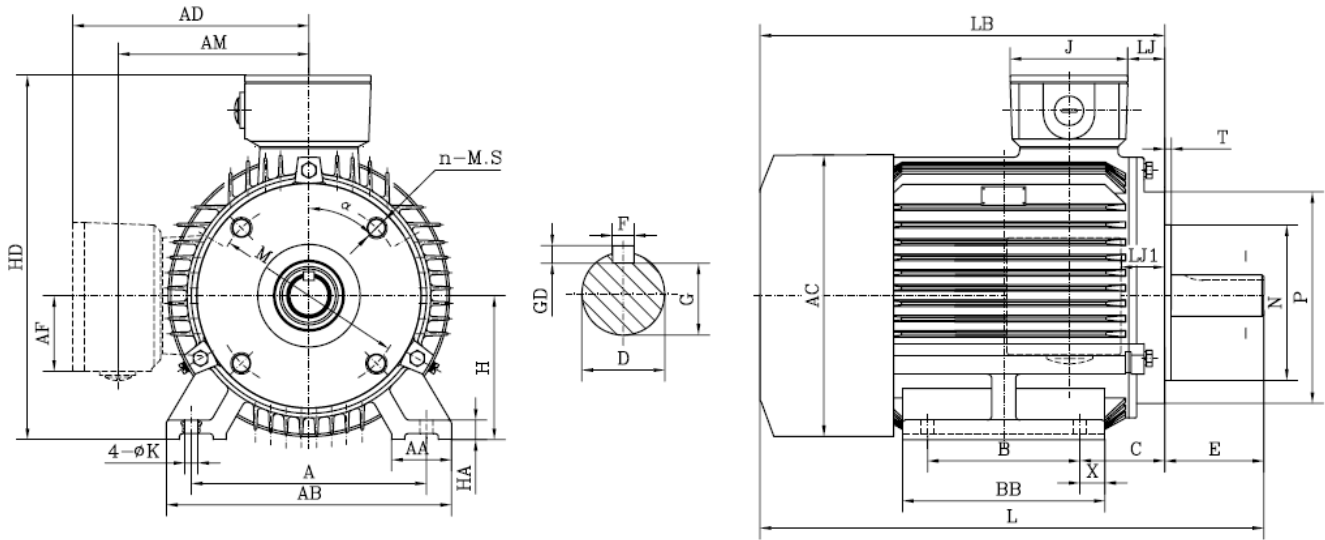
Frame	Overall Dimensions (Millimeters)													
	AC	AD	AM	AF	HF	HJ	L 2p $\geq$ 4p	LA	LB	LJ	LJ 1	J	Bearing No 2p $\geq$ 4p	
80M	168	145	115	35	245	143	300	12	260	21	55	102	6204	6204
90S	184	159	125	39	255	155	352	12	302	20	71	110	6205	6205
90L	184	159	125	39	255	155	382	12	332	20	86	110	6205	6205
100L	208	177	144	38	300	173	430	13	370	28	107	110	6206	6206
112M	222	197	155	55	315	188	465	14	405	27.5	115	119	6206	6206
132S	260	210	173	57	360	210	505	14	425	39.5	99.5	119	6208	6208
132M	260	210	173	57	360	210	543	14	463	39.5	119	119	6208	6208
160M	317	257	213	95	433	258	656	15	546	65.5	65.5	161	6309	6309
160L	317	257	213	95	433	258	686	15	576	65.5	65.5	161	6309	6309
180M	357	270	227	95	450	274	720	15	610	80.5	80.5	161	6311	6311
180L	357	270	227	95	450	274	768	15	658	80.5	80.5	161	6311	6311
200L	400	302	247	122	505	305	781\811\781	17	671\701\671	86	86	200	6212\6312	6212\6312
225S	448	325	272	122	555	328	185\1821	20	711\681	89	89	200	6312\6313	6312\6313
225M	448	325	272	122	555	328	816\876\846	20	706\736\706	89	89	200	6312\6313	6312\6313
250M	487	362	303	146	640	365	914\914	22	774\774	93	93	228	6313\6314	6313\6314
280S	549	391	332	146	670	394	974\974	22	834\834	101.5	101.5	228	6314\6317	6314\6317
280M	549	391	332	146	670	394	1025\1025	22	885\885	101.5	101.5	228	6314\6317	6314\6317
280M	549	391	332	146	670	394	1025\1025	22	885\885	101.5	101.5	228	6314\6317	6314\6317

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# MPLC-IE3 Cast-iron Mounting and Overall Dimensions

## FT Foot and Tapped Hole Mounted IM 2101 (IM B34)

### The Philippines



Frame	FT Symb	Mounting Dimensions (Millimeters)										
		A	AA	B	C	D 2p $\geq$ 4p	E 2p $\geq$ 4p	F 2p $\geq$ 4p	G 2p $\geq$ 4p	GD	H	K
80M	FT100	125	34	100	50	19	40	6	15.5	6	80	10
90S	FT115	140	36	100	56	24	50	8	20	7	90	10
90L	FT115	140	36	125	56	24	50	8	20	7	90	10
100L	FT130	160	40	140	63	28	60	8	24	7	100	12
112M	FT130	190	45	140	70	28	60	8	24	7	112	12

Frame	Overall Dimensions (Millimeters)												
	BB	LB	M	N	P	n-M.S	$\alpha$	T	LJ	LJ1	J	Bearing No 2p $\geq$ 4p	
80M	145	260	100	80	120	4-M6	45°	3	21	55	102	6204	6204
90S	182	302	115	95	140	4-M8	45°	3	20	71	110	6205	6205
90L	212	332	115	95	140	4-M8	45°	3	20	86	110	6205	6205
100L	237	370	130	110	160	4-M8	45°	3.5	28	107	110	6206	6206
112M	252	405	130	110	160	4-M8	45°	3.5	27.5	115	119	6206	6206

Note: IM B34 Dimensions AB, AC, AD, AM, AF, HA, HD, X, L are the same As IM B3

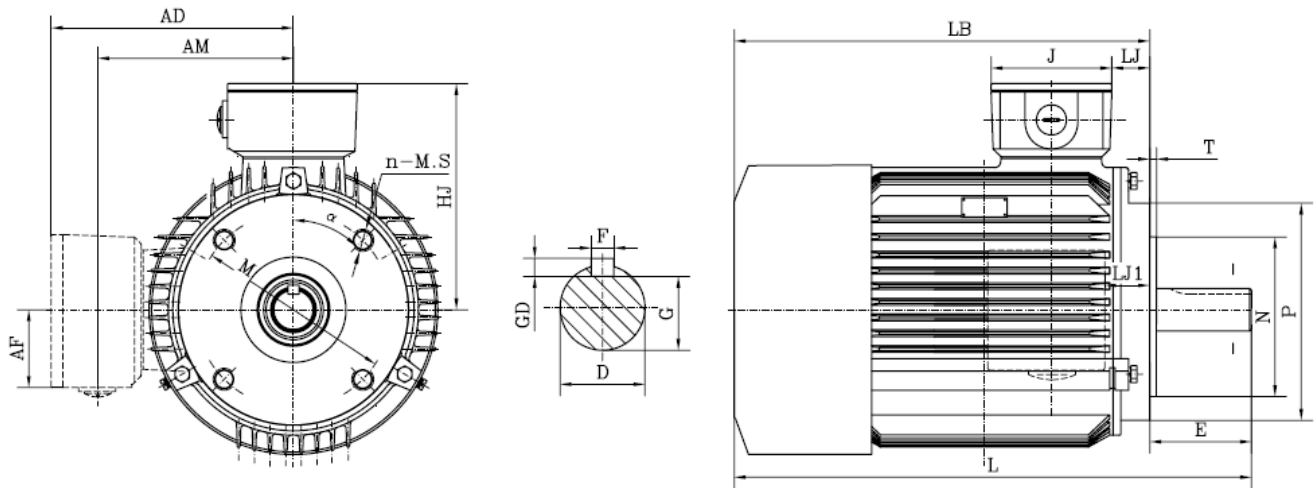
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# MPLC-IE3 Cast-iron Mounting and Overall Dimensions

## FT Tapped Hole Mounted IM 3601 (IM B14)

### The Philippines



Frame	FT Symb	Mounting Dimensions (Millimeters)										
		D 2p $\geq$ 4p	E 2p $\geq$ 4p	F 2p $\geq$ 4p	G 2p $\geq$ 4p	GD	M	N	P	n-M.S	$\alpha$	T
80M	FT100	19	40	6	15.5	6	100	80	120	4-M6	45°	3
90S	FT115	24	50	8	20	7	115	95	140	4-M8	45°	3
90L	FT115	24	50	8	20	7	115	95	140	4-M8	45°	3
100L	FT130	28	60	8	24	7	130	110	160	4-M8	45°	3.5
112M	FT130	28	60	8	24	7	130	110	160	4-M8	45°	3.5

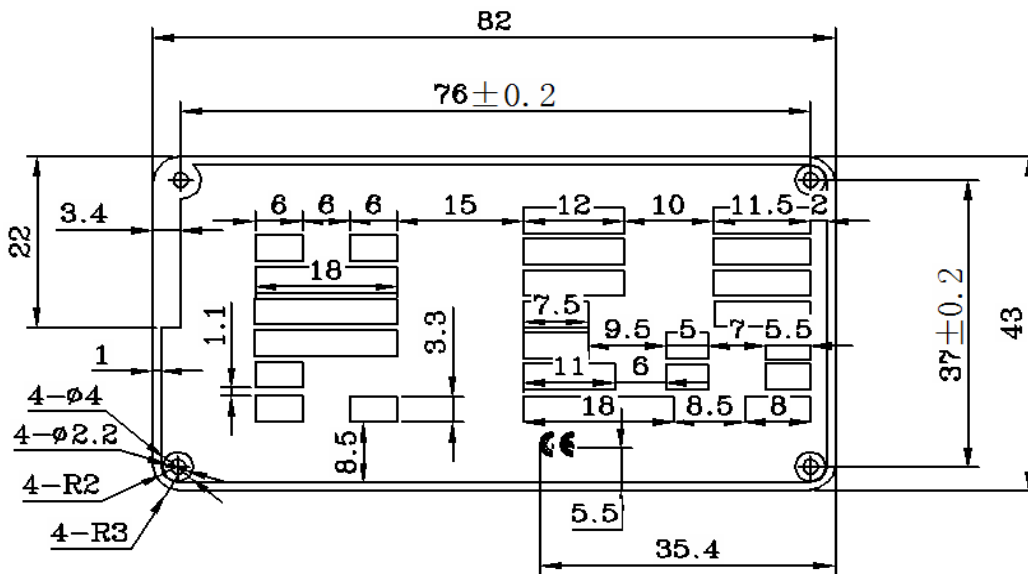
Frame	Overall Dimensions (Millimeters)											
	AC	AD	AM	AF	HJ	L 2p $\geq$ 4p	LB	LJ	LJ 1	J	Bearing No 2p $\geq$ 4p	
80M	168	145	115	35	143	300	260	21	55	102	6204	6204
90S	184	159	125	39	155	352	302	20	71	110	6205	6205
90L	184	159	125	39	155	382	332	20	86	110	6205	6205
100L	208	177	144	38	173	430	370	28	107	110	6206	6206
112M	222	197	155	55	188	465	405	27.5	115	119	6206	6206

† All marks shown within this document are properties of their respective owners.

# Main Nameplate

## Frame 80 to 355

<b>Nidec</b>		<b>U.S. MOTORS™</b>	
Hz	60	Catalog	<input type="text"/>
kW	<input type="text"/>	HP	<input type="text"/>
RPM	<input type="text"/>	Model	<input type="text"/>
V	220/380/440	Serial #	<input type="text"/>
A	<input type="text"/>	Mounting	<input type="text"/>
Eff %	<input type="text"/>	Encl / Cool	IP55/IC411
Cosφ	PF <input type="text"/>	Insul Class	<input type="text"/>
SF	<input type="text"/>	ΔTemp	80°C
DE-ODE Brg	<input type="text"/>	Amb	40°C
Weight	<input type="text"/>	Brg Grease	Polyrex-EM
		Duty	S1
		Ph	3
Suitable for Zone 2, IIA T2B and VFD Operation		CE IEC/EN 60034-1 Made in China	
IEC Motor IE3		www.usmotors.com	



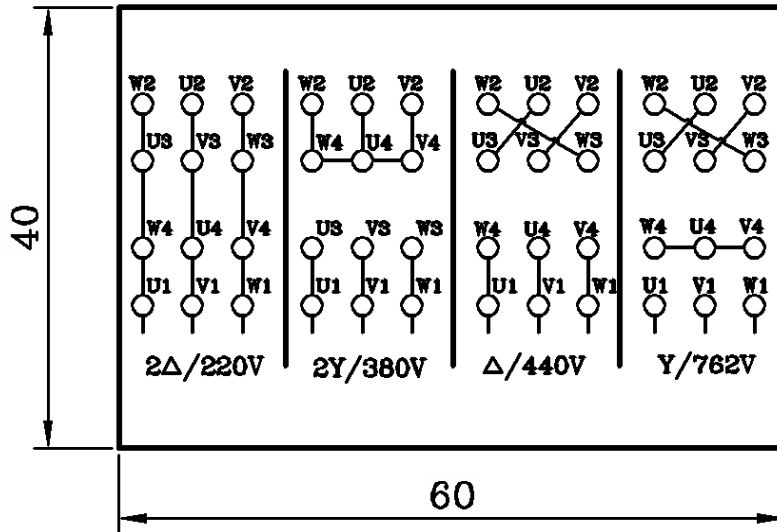
† All marks shown within this document are properties of their respective owners.



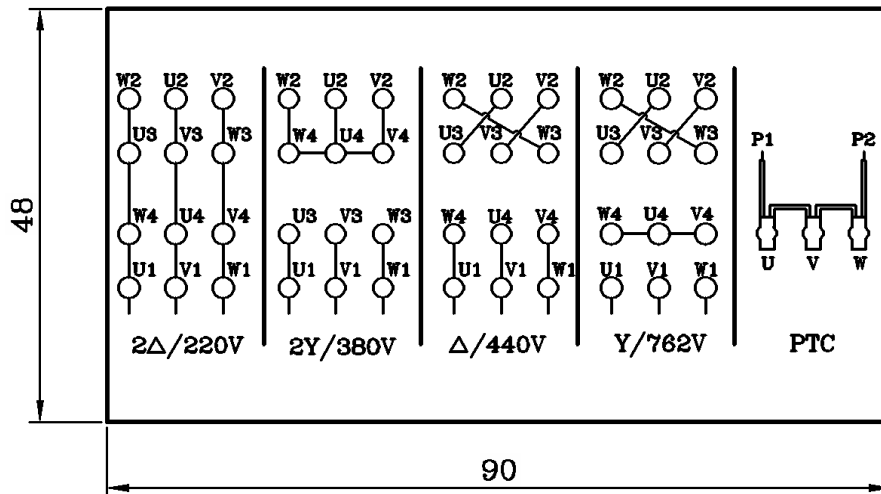
# Connection Nameplate

## Connection Stickers

90Kw and Below







110Kw and Above



† All marks shown within this document are properties of their respective owners.

## Warning Nameplate

	<b>WARNING</b>
Improper installation of this motor may result in fire, explosion, electric shock or other personal injuries. Read operating instructions.	
	Disconnect power before maintenance. Open all circuits before removing conduit box cover. Be sure motor is properly grounded per local and national codes.
	Do not place fingers or objects near openings.
	Do not use eyebolts or lifting hooks to lift anything except the product.
931902	

