LAFERT NORTHAMERICA

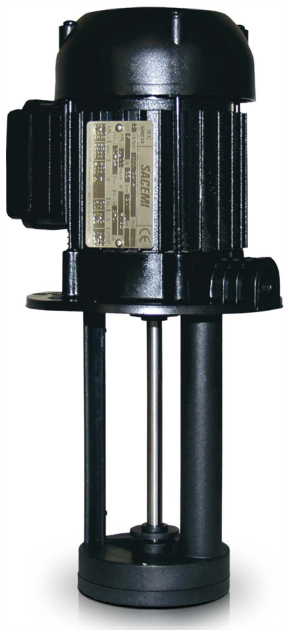
1-800-661-6413

YOUR BEST SOURCE FOR

METRIC MOTORS, GEARBOXES & COOLANT PUMPS



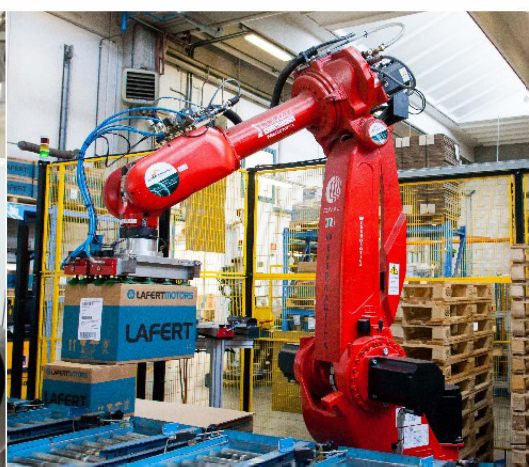












AMPH / LAB - IE3 Premium Efficiency Motors

3-Phase: 60Hz standard



1.15 Service Factor (SF) • Available in 208-230/460V 9 leads • 333/575V 6 leads

Frame sizes 100 and above available in 575/990V 6 leads • Frame sizes 132 and above available in 460/796V 6 leads

TEFC • Threaded hole output shaft is standard • Squirrel Cage • Class F • IP55 • IEC - CEI - UNEL MEC

CSA Energy Verified • Compliant with EISA regulations • AMPH CC#: 046B

AMPH = 6:1 (Constant Torque) Turn Down (cURus approved) • PTC's overload protection included on LAB motors

LAB = 10:1 (Constant Torque) Turn Down (CSA Approved) - cast based/ non removable feet - ExNa - (UL recognized are class 'B')

See pages 4 & 5 for dimensional drawings (frames 80 to 160)
See page 6 for LAB cast iron dimensional drawings (frames 132 to 315)

2 POLE - 3600 RPM

Part Number	Output Power		Speed	Torque	EFF.	Full Load Amps		Weight	List Price
	kW	HP	Min^{-1}	Nm	100%	460 V	575 V	(lbs)	
AMPH 80Z AA2	0.75	1.00	3525	2.0	85.0	1.50	1.2	21	677.00
AMPH 80Z BA2	1.10	1.50	3490	3.0	85.4	2.00	1.6	25	741.00
AMPH 80Z CA2	1.50	2.00	3460	4.1	85.5	2.80	2.2	30	765.00
AMPH 90S AA2 ◉	1.50	2.00	3515	4.1	85.5	2.80	2.2	37	860.00
AMPH 90L BA2 ◉	2.20	3.00	3480	6.0	86.5	3.80	3.0	41	1,127.00
AMPH 90L DA2 ◉	3.00	4.00	3510	8.2	88.5	5.30	4.2	45	1,166.00
AMPH 100L AA2	3.00	4.00	3515	8.2	88.5	4.90	3.9	52	1,239.00
AMPH 100L CA2	4.00	5.50	3530	10.8	88.5	6.70	5.9	59	1,457.00
AMPH 112M BA2	4.00	5.50	3520	10.9	88.5	6.20	5.0	61	1,596.00
AMPH 112M CA2	5.50	7.50	3530	14.9	89.5	8.90	7.1	78	2,003.00
AMPH 112M DA2	7.50	10.00	3530	20.3	90.2	11.90	9.5	81	2,006.00
AMPH 132S ZA2	5.50	7.50	3540	14.8	89.5	8.80	7.0	93	2,101.00
AMPH 132S TA2	7.50	10.00	3540	20.2	90.2	12.00	9.6	106	2,620.00
AMPH 132M TA2	9.20	12.40	3545	24.8	90.2	14.50	11.6	111	2,975.00
AMPH 132M RA2	11.00	15.00	3535	29.7	91.0	17.70	14.2	133	3,208.00
AMPH 132M ZA2	15.00	20.00	3530	40.6	91.0	23.50	18.8	150	3,794.00
AMPH 160M YA2	11.00	15.00	3550	29.6	91.0	17.00	13.6	199	3,329.00
AMPH 160M ZA2	15.00	20.00	3555	40.3	91.0	23.40	18.7	203	4,383.00
AMPH 160L ZA2 *	18.50	25.00	3555	49.7	91.7	31.00	24.8	239	5,185.00
AMPH 160L TA2 *	22.00	30.00	3540	59.3	91.7	35.80	28.6	239	5,678.00
LAB 180M E2	22.00	30.00	3560	60.04	91.7	34.04	27.23	426	4,604.00
LAB 200L D2	30.00	40.00	3570	79.82	92.4	45.04	36.03	527	6,584.00
LAB 200L E2	37.00	50.00	3570	99.78	93.0	55.93	44.75	554	7,183.00
LAB 225M E2	45.00	60.00	3580	119.40	93.6	66.69	53.35	710	8,910.00
LAB 250M E2	55.00	75.00	3580	149.25	93.6	83.36	66.69	904	11,076.00
LAB 280S D2	75.00	100.00	3580	199.00	94.1	110.56	88.45	1210	13,515.00
LAB 280M E2	90.00	125.00	3580	248.75	95.0	136.89	109.51	1334	15,355.00
LAB 315S D2	110.00	150.00	3580	298.50	95.0	164.27	131.42	1850	27,702.00
LAB 315L D2	150.00	200.00	3580	398.01	95.4	218.11	174.49	2154	30,043.00

4 POLE - 1800 RPM

Part Number	Output Power		Speed	Torque	EFF.	Full Load Amps		Weight	List Price
	kW	HP	Min^{-1}	Nm	100%	460 V	575 V	(lbs)	
AMPH 80Z AA4	0.75	1.00	1740	4.1	85.5	1.45	1.2	24	809.00
AMPH 90S AA4 ◉	1.10	1.50	1745	6.0	86.5	2.20	1.8	42	838.00
AMPH 90L BA4 ◉	1.50	2.00	1735	8.3	86.5	2.90	2.3	42	949.00
AMPH 90L CA4 ◉	1.80	2.40	1730	9.9	86.5	3.80	3.0	42	1,080.00
AMPH 100L AA4 +	2.20	3.00	1760	11.9	89.5	3.80	3.0	55	1,258.00
AMPH 100L BA4 +	3.00	4.00	1765	16.2	89.5	5.30	4.2	62	1,442.00
AMPH 112M BA4	4.00	5.50	1760	21.7	89.5	6.90	5.5	79	1,614.00
AMPH 132S ZA4	5.50	7.50	1760	29.9	91.7	9.30	7.4	120	2,258.00
AMPH 132M ZA4	7.50	10.00	1760	40.7	91.7	13.00	10.4	133	2,579.00
AMPH 132M TA4	9.20	12.40	1760	49.9	91.7	17.20	13.8	156	3,056.00
AMPH 160M ZA4	11.00	15.00	1770	59.3	92.4	18.70	15.0	230	3,946.00
AMPH 160L ZA4	15.00	20.00	1765	81.2	93.0	26.30	21.0	272	5,121.00
LAB 180M D4	18.50	25.00	1770	100.63	93.6	29.77	23.82	417	4,494.00
LAB 180L E4	22.00	30.00	1770	120.75	93.6	37.51	30.01	452	4,804.00
LAB 200L D4	30.00	40.00	1770	161.00	94.1	49.75	39.80	564	6,180.00
LAB 225S D4	37.00	50.00	1770	201.25	94.5	57.61	46.09	680	7,578.00
LAB 225M E4	45.00	60.00	1770	241.50	95.0	68.76	55.01	736	9,168.00
LAB 250M E4	55.00	75.00	1770	301.88	95.4	86.60	69.28	913	11,330.00
LAB 280S D4	75.00	100.00	1780	400.24	95.4	115.47	92.38	1277	14,476.00
LAB 280M E4	90.00	125.00	1780	500.30	95.4	142.66	114.13	1400	16,177.00
LAB 315S D4	110.00	150.00	1780	600.36	95.8	174.53	139.63	1880	27,702.00
LAB 315L D4	150.00	200.00	1780	800.48	96.2	231.74	185.40	2220	30,043.00

◉ S/L dual set of holes on base (actual frame is 90L)
+ Special flange required
* △△/△ internal connection

AMPH 9 lead hook up at 230/460V YY/Y connection,
(except for 2 pole 160L - △△/△)

3-Phase: 60Hz standard

1.15 Service Factor (SF) • Available in 208 230/460V 9 leads • 333/575V 6 leads

Frame sizes 100 and above available in 575/990V 6 leads • Frame sizes 132 and above available in 460/796V 6 leads

Threaded hole output shaft is standard • Squirrel Cage • Class F • IP55 • IEC - CEI - UNEL MEC

AMPH motors (cURus approved) - 6.1 CT Turn Down - (UL recognized are class 'B') - CC#: 046B

LAB Motors (CSA Energy Verified) - 10:1 CT Turn Down - cast based/ non removable feet - motors meet ExNa

Compliant with EISA regulations & are NRCAN approved

See pages 4 & 5 for dimensional drawings (frames 90 to 160)
See page 6 for LAB cast iron dimensional drawings (frames 132 to 315)

6 POLE - 1200 RPM

Part Number	Output Power kW	Output Power HP	Speed Min^{-1}	Torque Nm	EFF 100%	Full Load Amps 460 V	Full Load Amps 575 V	Weight (lbs)	List Price $
AMPH 90S AA6 ◉	0.75	1.00	1155	6.2	82.5	2.05	1.65	41	1,104.00
AMPH 100L AA6 +	1.10	1.50	1175	8.9	87.5	2.50	2.00	64	1,592.00
AMPH 112M AA6	1.10	1.50	1180	8.9	87.5	2.50	2.00	78	1,880.00
AMPH 112M BA6	1.50	2.00	1180	12.1	88.5	3.50	2.80	83	2,099.00
AMPH 112M CA6	1.80	2.40	1170	14.7	88.5	3.90	3.10	83	2,657.00
AMPH 132S AA6	2.20	3.00	1175	17.9	89.5	4.70	3.80	105	2,605.00
AMPH 132S BA6	3.00	4.00	1175	24.4	89.5	6.40	5.10	108	2,856.00
AMPH 132M CA6	4.00	5.50	1175	32.5	89.5	7.90	6.30	113	3,295.00
AMPH 160M AA6	5.50	7.50	1180	44.5	91.0	9.80	7.80	189	4,496.00
AMPH 160M BA6	7.50	10.00	1180	60.7	91.0	13.60	10.90	234	5,087.00
AMPH 160L CA6	9.20	12.40	1175	74.8	91.0	16.40	13.10	257	5,852.00

◉ S/L dual set of holes on base (actual frame is 90L)

\+ Special flange required (H4)

AMPH frame sizes from 80 to 160 have removable feet.

Select AMPH sizes are available with dual mounting holes on the base.

9 lead hook up at 230/460V YY/Y connection (except for 2 pole 160L - △△/△).

6 POLE - 1200 RPM

Part Number	Output Power kW	Output Power HP	Speed Min^{-1}	Torque Nm	EFF 100%	Full Load Amps 460 V	Full Load Amps 575 V	Weight (lbs)	List Price $
LAB 180L D6	15.00	20.00	1180	120.75	91.7	25.53	20.42	408	4,834.00
LAB 200L D6	18.50	25.00	1160	153.54	93.0	31.46	25.17	542	6,111.00
LAB 200L E6	22.00	30.00	1160	184.25	93.0	37.76	30.20	565	6,641.00
LAB 225M D6	30.00	40.00	1160	245.67	94.1	49.75	39.80	710	8,620.00
LAB 250M E6	37.00	50.00	1160	307.08	94.1	62.19	49.75	842	10,571.00
LAB 280S D6	45.00	60.00	1160	368.50	94.5	74.31	59.45	1090	13,539.00
LAB 280M E6	55.00	75.00	1190	449.01	94.5	92.89	74.31	1180	15,071.00
LAB 315L D6	110.00	150.00	1170	598.68	95.8	174.70	139.39	2180	32,195.00

8 POLE - 900 RPM

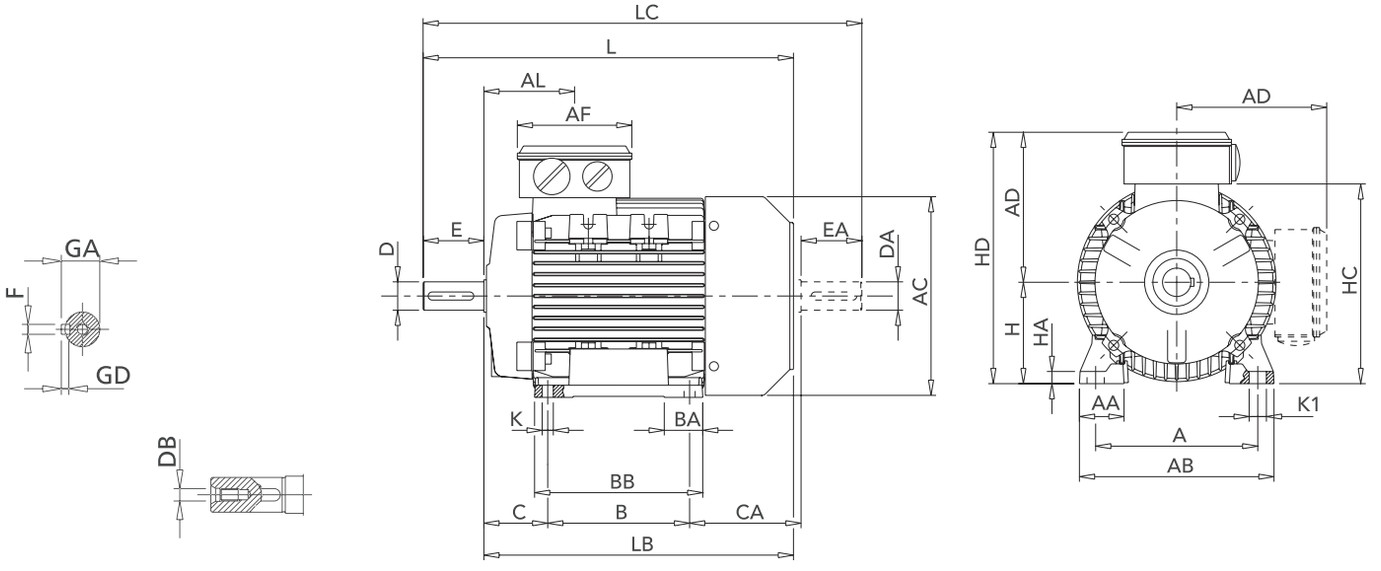
Part Number	Output Power kW	Output Power HP	Speed Min^{-1}	Torque Nm	EFF 100%	Full Load Amps 460 V	Full Load Amps 575 V	Weight (lbs)	List Price $
LAB 132M ZA8	2.20	3.00	870	24.57	85.5	4.63	3.70	128	1,823.00
LAB 132M TA8	3.00	4.00	870	32.76	86.5	6.10	4.88	143	2,272.00
LAB 160M YA8	3.70	5.00	870	40.94	86.5	7.52	6.01	210	3,028.00
LAB 160M ZA8	5.50	7.50	870	61.42	86.5	11.28	9.02	240	3,388.00
LAB 160L ZA8	7.50	10.00	870	81.89	89.5	14.53	11.62	287	3,926.00
LAB 180L E8	11.00	15.00	870	122.83	89.5	21.21	16.97	416	4,761.00
LAB 200L E8	15.00	20.00	870	163.78	90.2	27.68	22.15	443	6,589.00
LAB 200L D8	18.00	25.00	880	202.39	90.2	34.60	27.68	485	7,277.00
LAB 225S E8	22.00	30.00	880	242.87	91.7	40.31	32.24	595	8,769.00
LAB 225M E8	30.00	40.00	880	323.83	91.7	53.74	42.99	815	9,691.00

LAB cast iron construction has non-removable feet.



IM B3 Dimensions (Aluminum Frame)

See page 5 for B14 & B5 f ange dimensions



• F2 (right side) LEAD BOX IS STANDARD

NON-DRIVE END SHAFT IS OPTIONAL LC, EA, DA

IM B3 - AMPH Series

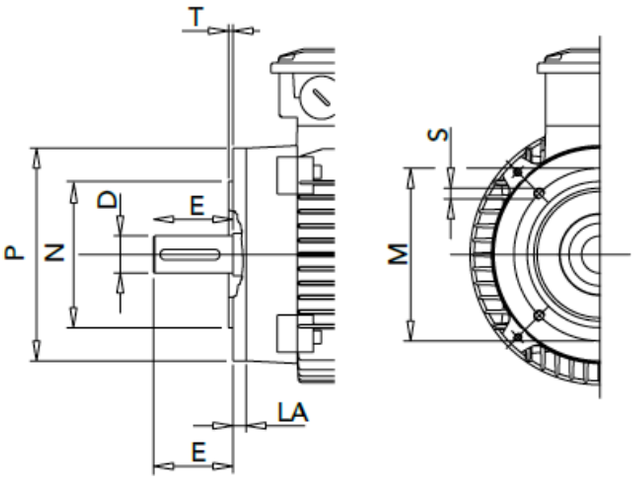
All dimensions in mm

H (Frame)	Pole	HP	A	B	C	K[1]	AB	BB	AD[2]	HD[2]	AC	HC	HA	K1	AL	AF	BA	AA	D/DA	E/EA	F	GD	GA	DB[3]	CA	L	LB	LC
80	2-4	all	125	100	50	10	153	125	140	220	160	162	9.5	14	79	116	28.5	34.5	19	40	6	6	21.5	M6	89	272	232	319
90S	2-4	all	140	100	56	10	170	150	149	239	180	181	11	15	85	116	53	37	24	50	8	7	27	M8	116	317	267	372
90S	6	1.0	140	100	56	10	170	150	149	239	180	181	11	15	85	116	53	37	24	50	8	7	27	M8	116	317	267	372
90L	2	3.0	140	125	56	10	170	150	149	239	180	181	11	15	85	116	53	37	24	50	8	7	27	M8	91	317	267	372
90L	2	4.0	140	125	56	10	170	150	138	239	180	181	11	15	85	116	53	37	24	50	8	7	27	M8	114	340	290	395
90L	4	all	140	125	56	10	170	150	149	239	180	181	11	15	85	116	53	37	24	50	8	7	27	M8	91	317	267	372
100	2	all	160	140	63	11	192	166	156	256	196	198	12	17	100	110	38	44	28	60	8	7	31	M10	110	366	306	433
100	4-6	all	160	140	63	11	192	166	156	256	198	192	12	17	118	118	41	44	28	60	8	7	31	M10	110	366	306	433
112	2	5.5-7.5	190	140	70	12.5	220	176	172	284	225	225	15	19	116	116	46	48	28	60	8	7	31	M10	126	388	328	456
112	2	10.0	190	140	70	12.5	220	176	172	284	225	225	15	19	116	116	46	48	28	60	8	7	31	M10	148	410	350	478
112	4	all	190	140	70	12.5	220	176	172	284	225	225	15	19	116	116	46	48	28	60	8	7	31	M10	126	388	328	456
112	6	1.5	190	140	70	12.5	220	176	172	284	225	225	15	19	116	116	46	48	28	60	8	7	31	M10	126	388	328	456
112	6	2.0-2.4	190	140	70	12.5	220	176	172	284	225	225	15	19	116	116	46	48	28	60	8	7	31	M10	148	410	350	478
132S	2	7.5	216	140	89	12	256	180	194	326	248	261	17	20	133	133	45	59	38	80	10	8	41	M12	134	445	365	523
132S	2	10.0	216	140	89	12	256	180	194	326	248	261	17	20	133	133	45	59	38	80	10	8	41	M12	154	465	385	543
132S	4	7.5	216	140	89	12	256	180	194	326	248	261	17	20	133	133	45	59	38	80	10	8	41	M12	174	485	405	563
132S	6	3.0-4.0	216	140	89	12	256	180	194	326	248	261	17	20	133	133	45	59	38	80	10	8	41	M12	154	465	385	543
132M	2	12.4-15.0	216	178	89	12	256	218	194	326	248	261	17	20	133	133	45	59	38	80	10	8	41	M12	156	505	425	583
132M	2	20.0	216	178	89	12	256	218	194	326	248	261	17	20	133	133	45	59	38	80	10	8	41	M12	207	556	476	640
132M	4	10.0	216	178	89	12	256	218	194	326	248	261	17	20	133	133	45	59	38	80	10	8	41	M12	156	505	425	583
132M	4	12.4	216	178	89	12	256	218	194	326	248	261	17	20	133	133	45	59	38	80	10	8	41	M12	207	556	476	640
132M	6	5.5	216	178	89	12	256	218	194	326	248	261	17	20	133	133	45	59	38	80	10	8	41	M12	136	485	405	563
160M	2-6	all	254	210	108	14	320	270	238	398	317	316	23	18	150	150	65	76	42/28	110/60	12/8	8/7	45	M16	180	608	498	668
160L	2-6	all	254	254	108	14	320	310	238	398	317	316	23	18	150	150	65	76	42/28	110/60	12/8	8/7	45	M16	180	652	542	712

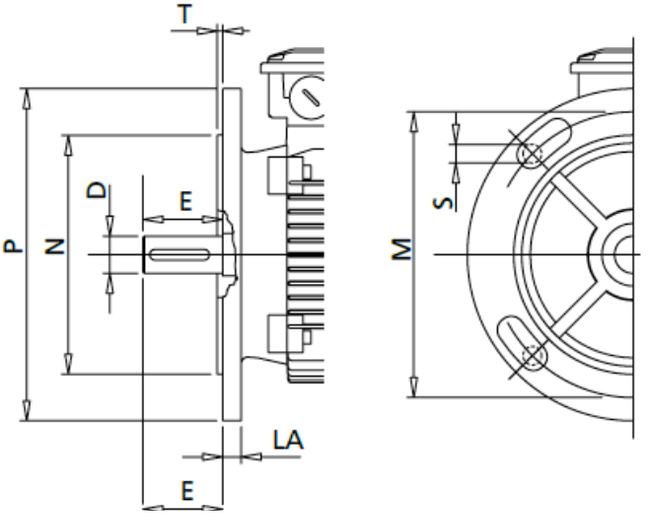
1) Clearance hole for screw 2) Maximum dimension 3) Centering holes in shaft extensions to DIN 332 part 2

IM B14 / IM B5 - Flange Dimensions

IM B14



IM B5



M = Center to center bolt hole circle

N = Spigot diameter

P = Outside diameter

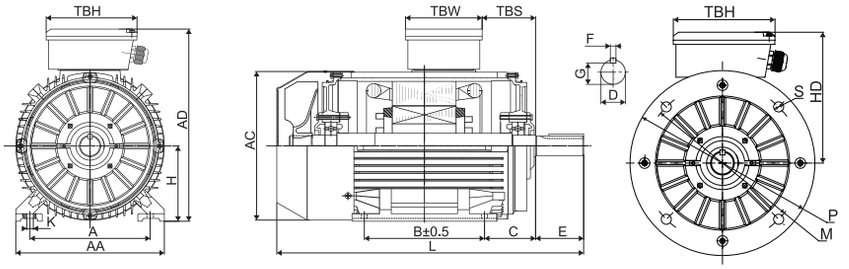
IM B14 - C Flange & IM B5 - D Flange
All dimensions in mm

	B14						B14 Reduced	B14 Increased	B5						B5 Reduced	B5 Increased
Frame	**M**	**N**	**P**	**S**	**T**	**LA**	**Frame**	**Frame**	**M**	**N**	**P**	**S**	**T**	**LA**	**Frame**	**Frame**
56	65	50	80	M5	2.5	8	-	63	100	80	120	7	2.5	7	-	-
63	75	60	90	M5	2.5	8	56	71/80	115	95	140	9.5	3	8	56	71
71	85	70	105	M6	2.5	8	63	80/90	130	110	160	9.5	3.5	10	63/56*	80/90
80	100	80	120	M6	3	9	71/63	90/100	165	130	200	11.5	3.5	10	71/63	-
90	115	95	140	M8	3	9	80/71	100/112	165	130	200	11.5	3.5	12	71*	-
100	130	110	160	M8	3.5	10	90	132	215	180	250	14	4	14	90/80/71*	-
112	130	110	160	M8	3.5	10	90	132	215	180	250	14	4	14	90*/**	-
132	165	130	200	M10	3.5	30	112/100	-	265	230	300	14	4	14	112*	-
160	215	180	250	M12	4	12	132***	-	300	250	350	18	5	15	132***	-

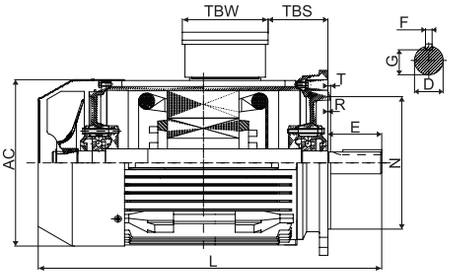
* May require windings pressed at additional cost
** Shaft machining required at additional cost
*** If frame is 160L: shaft extension is required.
If frame is 160M: shaft extension and bearing repositioning is required

Mounting (132-315 Cast Iron Frames) Dimensions

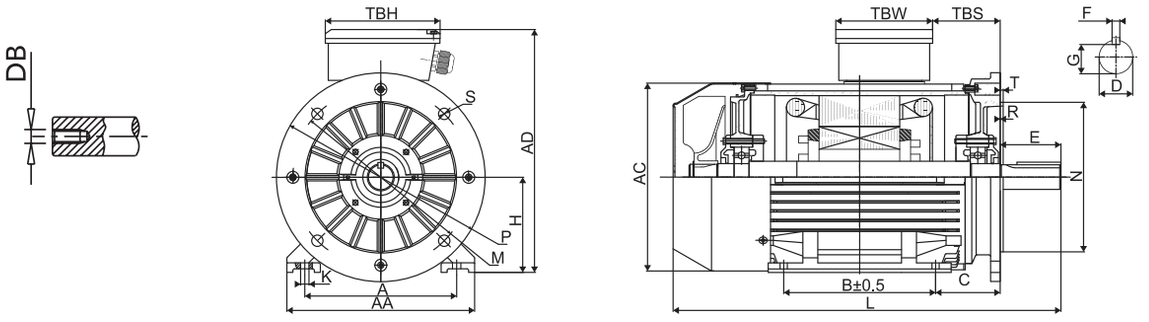
IM B3



IM B5 - D Flange



IM B35



Installation & Overall Dimensions

All dimensions in mm

(Frame) H	Poles	Foot Mounting			Shaft					General						Terminal Box		
		A	B	C	D	E	F	DB	G	K	AA	AD	HD	AC	L	TBS	TBW	TBH
132 M	8	216	178	89	38	80	10	M12	33	12	270	345	210	275	560	48	108	116
160 M/L	2,4,6,8	254	210/254	108	42	110	12	M16	37	15	320	420	255	330	670/700	69	150	160
180 M/L	2,4,6,8	279	241/279	121	48	110	14	M16	42.5	15	348	455	275	380	700/740	81	150	160
200 L	2,4,6,8	318	305	133	55	110	16	M20	49	19	388	505	305	420	770	92	188	208
225 S	4,6,8	356	286	149	60	140	18	M20	53	19	436	560	335	470	815	95	188	208
225 M	2	356	311	149	55	110	16	M20	49	19	436	560	335	470	820	95	188	208
	4,6,8	356	311	149	60	140	18	M20	53	19	436	560	335	470	845	95	188	208
250 M	2	406	349	168	60	140	18	M20	53	24	484	615	365	510	910	99	216	246
	4,6,8	406	349	168	65	140	18	M20	58	24	484	615	365	510	910	99	216	246
280 S/M	2	457	368 /419	190	65	140	18	M20	58	24	557	680	400	580	985/1035	107	216	246
	4,6,8	457	368/419	190	75	140	20	M20	67.5	24	557	680	400	580	985/1035	107	216	246
315 S	2	508	406	216	65	140	18	M20	58	28	630	845	530	645	1270	117	280	320
	4,6,8	508	406	216	80	170	22	M20	71	28	630	845	530	645	1270	117	280	320
315 M/L	2	508	457/508	216	65	140	18	M20	58	28	630	845	530	645	1300	117	280	320
	4,6,8	508	457/508	216	80	170	22	M20	71	28	630	845	530	645	1300	117	280	320

(Frame) H	Poles	Bearings			B5				
		Drive End	Non-Drive End	Cable Gland	M	N	P	S	T
132 M	8	6308 C3	6308 C3	M32x1.5	265	230	300	4-14	4
160 M/L	2,4,6,8	6309 C3	6309 C3	M40x1.5	300	250	350	4-18	5
180 M/L	2,4,6,8	6311 C3	6311 C3	M40x1.5	300	250	350	4-19	5
200 L	2,4,6,8	6312 C3	6312 C3	M40x1.5	350	300	400	4-19	5
225 S/M	2,4,6,8	6313 C3	6313 C3	M50x1.5	400	350	450	8-19	5
250 M	2,4,6	6314 C3	6314 C3	M63x1.5	500	450	550	8-19	5
280 S/M	2	6314 C3	6314 C3	M63x1.5	500	450	550	8-19	5
	4,6	6317 C3	6317 C3	M63x1.5	500	450	550	8-19	5
315 S/L	2	6317 C3	6317 C3	M63x1.5	600	550	660	8-24	6
	4,6	NU319	6319 C3	M63x1.5	600	550	660	8-24	6