



INCREASED-SAFETY EXPLOSION-PROOF

**LOW VOLTAGE
THREE-PHASE SQUIRREL-CAGE
INDUCTION MOTOR**

Totally-Enclosed Fan-Cooled
Dimensions in accordance to IEC standard

Performance in accordance with
IEC 34, CNS 10919 C3192

Rugged cast-iron constructions
meet the requirements of CNS 9820

Class F Insulation



AEEBXA

INCREASED-SAFETY EXPLOSION-PROOF

Teco Increased-Safety Explosion-Proof Induction Motors are designed for normal operation in hazardous location where the presence of flammable gases, vapors and etc. can cause severe explosion and fire.

During normal operation of induction motors, sparks or arcs must not be produced in the motor. These sparks and arcs when contact with the flammable gases or vapors can cause severe explosion. The enclosed body construction and insulation system of the Increase-Safety Explosion-Proof Motors are specially-designed to operate under such condition.



FEATURES

- High reliability
- Rugged cast-iron construction to CNS 9820
- Specification tested and complies with CNS 10919
- Long life-span. Insulation system of high temperature and corrosion resistant
- Dimensions in accordance to IEC Standard

RATINGS & SPECIFICATIONS

Standard Voltage for 50Hz Systems	: 200V, 220V, 380V, 400V, 415V, 440V
Horsepower	: 1/4 - 60 Hp
Poles	: 2, 4, 6
Service Factor	: 1.0
Insulation	: Class F

APPLICABLE RANGE

Hazardous Location : Division 2
Explosion Classes : eG1, eG2, eG3

Explosion Classes	eG1	eG2	eG3
Ignition Temperature	450 °C & above	300 °C ~ 450 °C	200 °C ~ 300 °C
Max. Permissible Surface Temperature Rise (Based on 40 °C.)	320 °C	200 °C	120 °C

Note: Abbreviation "e" stands for increased safety protection and "G" stands for ignition temperature groups.

DIVISION 2 LOCATION

Division 2 locations are those which are likely to become hazardous under abnormal conditions, ie. where:

- Hazardous volatile liquids, vapors, or gases are normally confined within closed containers or closed systems from which they can escape only in case of accidental rupture or breakdown of such containers or systems, or in case of abnormal operation of equipment.
- Hazardous concentrations are normally prevented by positive mechanical ventilation but might become hazardous through failure or abnormal operation of the ventilating system.
- Areas adjacent to Division 1 locations to which hazardous concentrations of gases or vapors might occasionally be communicated.

TYPICAL PERFORMANCE

MODEL : AEEXA, AEVXA

Class F Insulation, IP54, 50Hz

OUTPUT		FULL LOAD RPM	FRAME SIZE	FULL LOAD					LOCKED ROTOR			BREAK-DOWN TORQUE %FLT	ROTOR GD ² KG-M ²
HP	KW			TORQUE (KG-M)	Eff. (%)	P.F. (%)	CURRENT (AMPS)		TORQUE %FLT	CURRENT (AMPS)			
							380V	415V		380V	415V		
0.25	0.185 (0.2)	2800	63	0.064	60.8	74.0	0.61	0.56	200	2.8	2.5	280	0.0024
		1370	63	0.131	62.0	69.0	0.64	0.59	200	2.7	2.4	260	0.0031
		900	71	0.200	62.0	63.0	0.70	0.64	175	2.5	2.2	200	0.0059
0.5	0.37 (0.4)	2800	71	0.129	75.0	85.0	0.88	0.81	200	6.2	5.4	280	0.0025
		1400	71	0.257	66.0	73.0	1.17	1.07	200	6.0	5.2	250	0.0050
		920	80	0.391	65.0	65.0	1.33	1.22	175	5.7	5.0	210	0.0090
0.75	0.56	2780	71	0.193	73.0	82.0	1.40	1.28	200	9.2	8.0	260	0.0025
		1420	80	0.377	70.0	74.0	1.62	1.48	200	9.2	8.0	250	0.0074
		920	80	0.582	68.0	67.0	1.83	1.68	175	8.6	7.5	220	0.0118
1	0.75	2830	80	0.258	76.5	88.0	1.69	1.55	200	11.5	10.0	250	0.0050
		1420	80	0.514	74.0	77.0	2.00	1.83	200	11.5	10.0	250	0.0090
		920	90S	0.793	73.0	69.0	2.26	2.07	175	11.0	9.5	210	0.0180
1.5	1.12	2820	80	0.380	76.5	88.0	2.49	2.28	200	18.5	16.0	250	0.0060
		1410	90S	0.759	74.0	77.0	2.94	2.69	200	17.3	15.0	240	0.0140
		925	90L	1.157	74.0	69.0	3.28	3.00	175	16.2	14.0	220	0.0240
2	1.5	2860	90S	0.510	81.0	88.0	3.20	2.93	200	24.3	21.0	270	0.0110
		1425	90L	1.020	75.5	79.3	3.81	3.49	200	23.1	20.0	240	0.0180
		925	100L	1.580	75.5	72.0	4.20	3.85	175	23.1	20.0	210	0.0330
3	2.2	2870	90L	0.750	83.0	87.0	4.64	4.25	200	37.0	32.0	270	0.0150
		1425	100L	1.500	81.5	80.8	5.08	4.65	200	34.7	30.0	240	0.0330
		950	112M	2.250	80.8	74.0	5.59	5.12	175	34.7	30.0	220	0.0600
4	3	2875	100L	1.020	84.5	89.5	6.03	5.52	200	46.3	40.0	270	0.0230
		1430	100L	2.040	83.3	81.5	6.72	6.15	200	46.3	40.0	240	0.0470
		955	132S	3.060	83.3	79.0	6.93	6.35	175	46.3	40.0	230	0.1540
5	3.7	2885	112M	1.250	83.0	86.0	7.87	7.21	200	48.6	42.0	270	0.0470
		1440	112M	2.470	84.0	80.0	8.41	7.70	160	44.2	38.2	250	0.0660
		950	132S	3.790	83.0	78.0	8.68	7.95	170	46.0	39.8	240	0.1810
7.5	5.5	2900	132S	1.840	86.5	89.0	10.8	9.95	200	88.0	76	250	0.0650
		1445	132S	3.700	86.0	82.0	11.9	10.9	200	88.0	76	230	0.1060
		960	132M	5.570	84.8	79.0	12.5	11.5	175	88.0	76	230	0.2320
10	7.5	2900	132S	2.520	88.0	89.0	14.7	13.5	200	110	95	240	0.0780
		1445	132M	5.050	88.0	84.0	15.5	14.2	200	110	95	230	0.1460
		965	160M	7.560	86.0	81.0	16.3	15.0	175	110	95	230	0.4080
15	11	2900	160M	3.690	88.5	89.0	21.3	19.5	200	165	143	230	0.1640
		1450	160M	7.380	89.0	88.0	21.3	19.5	200	165	143	230	0.3210
		965	160L	11.09	88.5	83.0	22.7	20.8	175	165	143	220	0.5980
20	15	2910	160M	5.020	90.5	91.0	27.8	25.5	200	221	191	230	0.2170
		1455	160L	10.03	90.0	87.0	29.1	26.7	200	221	191	220	0.3810
		965	180L	15.12	89.5	85.5	30.0	27.5	175	220	190	220	1.2540
25	18.5	2915	160L	6.180	91.0	91.0	33.8	31.0	160	260	225	220	0.2670
		1455	180MC	12.37	91.0	85.5	36.0	33.0	170	260	225	220	0.5710
		965	200L	18.65	91.0	85.0	36.5	33.5	160	260	225	210	1.6380
30	22	2920	180MA	7.330	91.5	90.0	40.6	37.2	160	312	270	220	0.3400
		1455	180L	14.71	91.0	87.0	42.2	38.7	170	312	270	210	0.7620
		965	200L	22.18	92.0	84.0	43.2	39.6	160	312	270	210	1.9520
40	30	2925	200L	9.980	91.0	89.0	56.2	51.5	160	418	361	210	0.5430
		1455	200L	20.06	91.5	87.0	57.3	52.5	170	418	361	210	1.2930
		965	225MC	30.25	91.0	81.5	61.4	56.3	160	418	361	200	2.7200
50	37	2925	200L	12.31	91.5	89.5	68.8	63.0	160	523	452	200	0.6060
		1455	225SC	24.74	91.7	86.5	71.5	65.5	170	523	452	200	2.0100
60	45	2925	225MA	14.97	91.0	91.0	82.5	75.6	125	590	510	200	1.4100
		1455	225MC	30.09	92.4	86.5	85.7	78.5	140	590	510	200	2.2850

Note:

(1) Above performance data are general average values and for reference only. Test values for individual model can be furnished upon request.

(2) Our policy is one of continuous improvement and we reserve the right to alter any details in our products without prior notice.

To calculate Full Load Current on Special Voltages, multiply the Full Load Current at 415 Volts by the following factors:

Voltage	200	220	400	440
Factor	2.08	1.89	1.03	0.94

THREE PHASE INCREASED SAFETY EXPLOSION-PROOF MOTORS

HORIZONTAL FOOT-MOUNTED, TYPE : AEEBXA

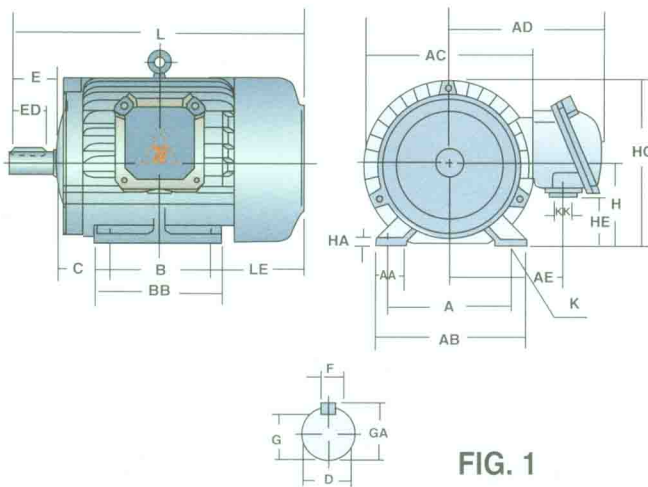


FIG. 1

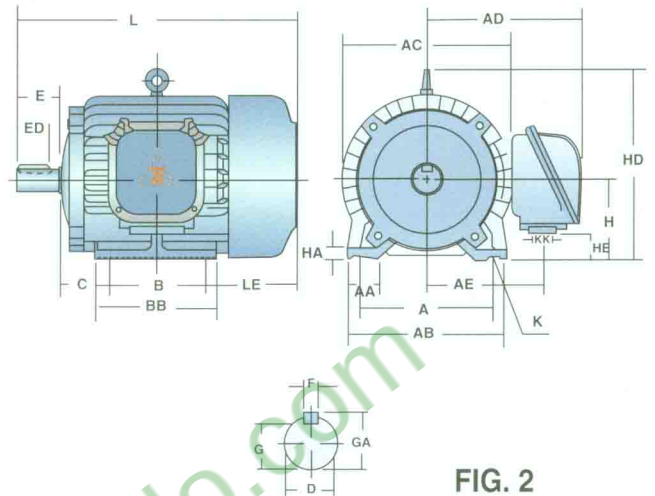


FIG. 2

OUTPUT (HP)			FRAME SIZE	FIG. NO.	A	AA	AB	AC	AD	AE	B	BB	C	H	HA	HC	HD	HE
2P	4P	6P																
1/4	1/4	-	D63	1	100	28	120	144	135	95	80	100	40	63	8	135	-	14
1/2, 3/4	1/2	1/4	D71		112	35.5	140	162	145	105	90	115	45	71	8	152	-	39
1, 1.5	3/4, 1	1/2, 3/4	D80		125	35.5	155	177	186	132	100	130	50	80	9	168	-	-
2	1.5	1	D90S		140	35.5	170	200	199	145	100	130	56	90	10	190	-	7
3	2	1.5	D90L		140	35.5	170	200	199	145	125	150	56	90	10	190	-	7
4	3, 4	2	D100L	2	160	45	195	219	209	155	140	175	63	100	12.5	-	243	17
5, 5.5	5, 5.5	3	D112M		190	45	224	238	218	164	140	175	70	112	14	-	265	29
7.5, 10	7.5	4	D132S		216	45	250	273	260	192	140	175	89	132	16	-	310	28
-	10	5, 5.5, 7.5	D132M		216	45	250	273	260	192	178	212	89	132	16	-	310	28

FRAME SIZE	K	KK	L	LE	SHAFT EXTENSION						BEARINGS		APPROX. WEIGHT KGS.
					D	E	ED	F	G	GA	DRIVE END	NON DRIVE END	
D63	7	PF 0.5"	209	66	11	23	10	4	8.5	12.5	6201ZZ	6201ZZ	9.8
D71	7	PF 0.5"	239	74	14	30	14	5	11	16	6202ZZ	6202ZZ	14
D80	10	PF 0.5"	272	82	19	40	25	6	15.5	21.5	6204ZZ	6204ZZ	18
D90S	10	PF 0.5"	297	91	24	50	32	8	20	27	6205ZZ	6205ZZ	23
D90L	10	PF 0.5"	322	91	24	50	32	8	20	27	6205ZZ	6205ZZ	25
D100L	12	PF 0.5"	363	100	28	60	40	8	24	31	6206ZZ	6305ZZ	33
D112M	12	PF 0.5"	382	112	28	60	40	8	24	31	6306ZZ	6306ZZ	45
D132S	12	PF 1"	446	137	38	80	56	10	33	41	6308ZZ	6306ZZ	70
D132M	12	PF 1"	484	137	38	80	56	10	33	41	6308ZZ	6306ZZ	81

Note:

- (1) All dimensions in millimetres except KK
- (2) Tolerance of shaft end diameter
D : 11mm to 14mm (+0.008, -0.003)
D : 19mm to 28mm (+0.009, -0.004)
D : 32mm to 48mm (+0.018, +0.002)
- (3) Tolerance of shaft centre height H : +0, -0.5

THREE PHASE INCREASED SAFETY EXPLOSION-PROOF MOTORS

HORIZONTAL FOOT-MOUNTED, TYPE : AEEBXA

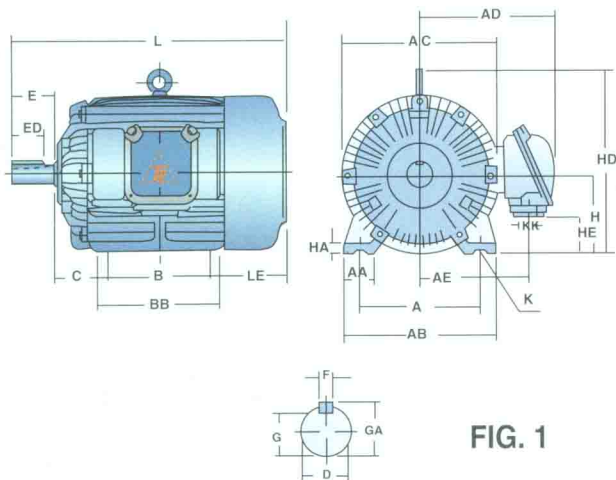


FIG. 1

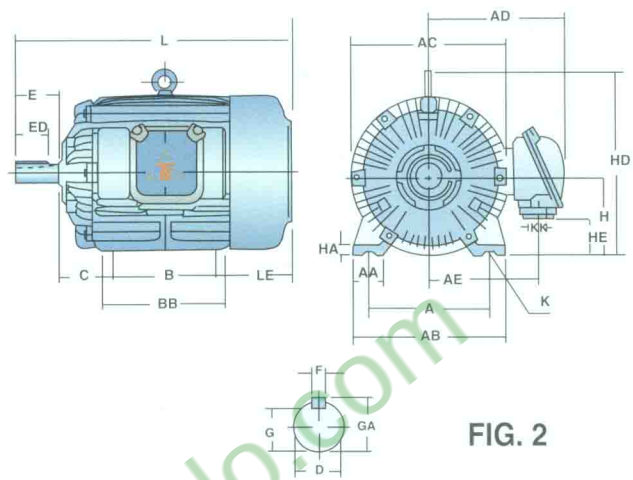


FIG. 2

OUTPUT (HP)			FRAME SIZE	FIG. NO.	A	AA	AB	AC	AD	AE	B	BB	C	H	HA	HD	HE
2P	4P	6P															
15, 20	15	10	D160M	1	254	50	300	334	298	230	210	250	108	160	18	377	53
25	20	15	D160L	1	254	50	300	334	298	230	254	300	108	160	18	377	53
30	-	-	D180MA	2	279	75	355	382	323	255	241	297	121	180	20	421	73
-	25	-	D180MC	1	279	75	355	382	323	255	241	297	121	180	20	421	73
-	30	20	D180LC	1	279	75	355	382	323	255	279	335	121	180	20	421	73
40, 50	-	-	D200LA	2	318	80	400	420	368	280	305	365	133	200	25	469	88
-	40	25, 30	D200LC	2	318	80	400	420	368	280	305	365	133	200	25	469	88
-	50	-	D225SC	2	356	90	450	458	388	300	286	350	149	225	30	524	123
60	-	-	D225MA	2	356	90	450	458	388	300	311	375	149	225	30	524	123
-	60	40	D225MC	2	356	90	450	458	388	300	311	375	149	225	30	524	123

FRAME SIZE	K	KK	L	LE	SHAFT EXTENSION						BEARINGS		APPROX. WEIGHT KGS.
					D	E	ED	F	G	GA	DRIVE END	NON DRIVE END	
D160M	14.5	PF 1"	604	176	42	110	80	12	37	45	6309ZZ	6307ZZ	125
D160L	14.5	PF 1"	648	176	42	110	80	12	37	45	6309ZZ	6307ZZ	163
D180MA	14.5	PF 1.5"	667	195	48	110	80	14	42.5	51.5	6211C3	6211C3	185
D180MC	14.5	PF 1.5"	667	195	48	110	80	14	42.5	51.5	6311ZZ	6310ZZ	170
D180LC	14.5	PF 1.5"	705	195	48	110	80	14	42.5	51.5	6311ZZ	6310ZZ	210
D200LA	18.5	PF 2"	768	220	55	110	80	16	49	59	6312C3	6212C3	287
D200LC	18.5	PF 2"	768	220	55	110	80	16	49	59	6312	6212	287
D225SC	18.5	PF 2"	811	236	60	140	110	18	53	64	6313	6213	329
D225MA	18.5	PF 2"	806	236	55	110	80	16	49	59	6312C3	6212C3	364
D225MC	18.5	PF 2"	836	236	60	140	110	18	53	64	6313	6213	367

Note:

(1) All dimensions in millimetres except KK

(2) Tolerance of shaft end diameter D : 32mm to 48mm (+0.018, +0.002)
D : 55mm to 80mm (+0.030, +0.011)

(3) Tolerance of shaft center height H : +0, -0.5

THREE PHASE INCREASED SAFETY EXPLOSION-PROOF MOTORS

VERTICAL FLANGE MOUNTED, TYPE : AEVBXA

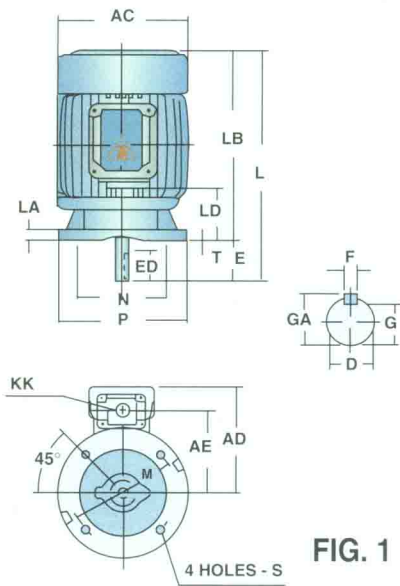


FIG. 1

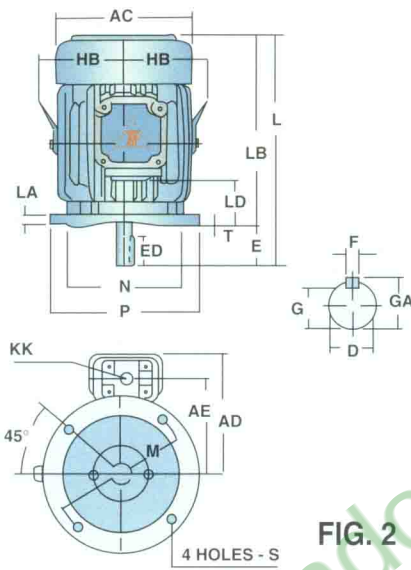


FIG. 2

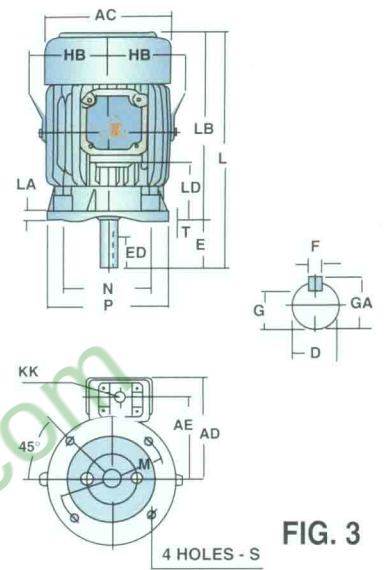


FIG. 3

OUTPUT (HP)			FRAME SIZE	FIG. NO.	AC	AD	AE	HB	KK	L	LA	LB	LD	M	N
2P	4P	6P													
1/4	1/4	-	63	1	144	135	95	-	PF 0.5"	238	9	215	60	115	95
1/2, 3/4	1/2	1/4	71	1	162	145	105	-	PF 0.5"	266	12	236	68	130	110
1, 1.5	3/4, 1	1/2, 3/4	80	2	177	186	132	-	PF 0.5"	272	12	232	-	165	130
2	1.5	1	90S	1	200	199	145	-	PF 0.5"	336	12	286	41.5	165	130
3	2	1.5	90L	1	200	199	145	-	PF 0.5"	361	12	311	41.5	165	130
4	3, 4	2	100L	2	219	209	155	140	PF 0.5"	363	16	303	17	215	180
5, 5.5	5, 5.5	3	112M	3	238	218	164	150	PF 0.5"	422	16	362	64	215	180
7.5, 10	7.5	4	132S	2	273	260	192	169	PF 1"	446	20	366	42	265	230
-	10	5, 5.5, 7.5	132M	2	273	260	192	169	PF 1"	484	20	404	61	265	230

FRAME SIZE	P	S	T	SHAFT EXTENSION						BEARINGS		APPROX. WEIGHT KGS.
				D	E	ED	F	G	GA	DRIVE END	NON DRIVE END	
63	140	10	3	11	23	10	4	8.5	12.5	6201ZZ	6201ZZ	9.8
71	160	10	3.5	14	30	14	5	11	16	6202ZZ	6202ZZ	14
80	200	12	3.5	19	40	25	6	15.5	21.5	6204ZZ	6204ZZ	18
90S	200	12	3.5	24	50	32	8	20	27	6205ZZ	6205ZZ	25.8
90L	200	12	3.5	24	50	32	8	20	27	6205ZZ	6205ZZ	27.8
100L	250	14.5	4	28	60	40	8	24	31	6206ZZ	6305ZZ	37.6
112M	250	14.5	4	28	60	40	8	24	31	6306ZZ	6306ZZ	51
132S	300	14.5	4	38	80	56	10	33	41	6308ZZ	6306ZZ	75
132M	300	14.5	4	38	80	56	10	33	41	6308ZZ	6306ZZ	85

Note:

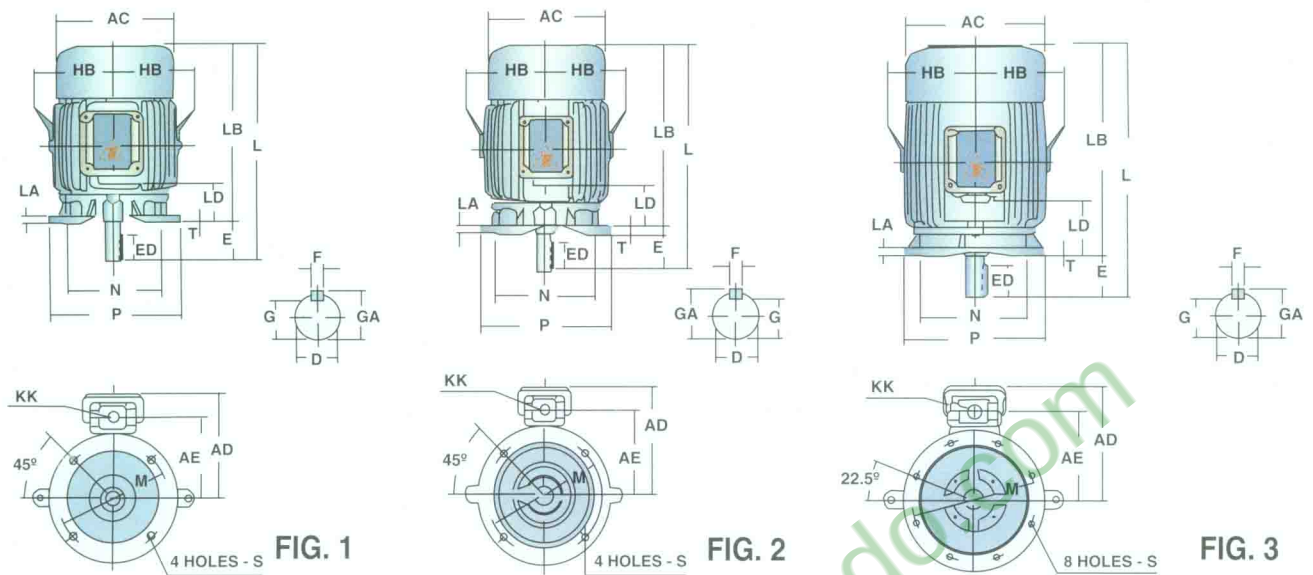
(1) All dimensions in millimetres except KK

(2) Tolerance of shaft end diameter D : 11mm to 14mm (+0.008, -0.003)
D : 19mm to 28mm (+0.009, -0.004)
D : 32mm to 48mm (+0.018, +0.002)

(3) Tolerance of N : h7

THREE PHASE INCREASED SAFETY EXPLOSION-PROOF MOTORS

VERTICAL FLANGE MOUNTED, TYPE : AEBVXA



OUTPUT (HP)			FRAME SIZE	FIG. NO.	AC	AD	AE	HB	KK	L	LA	LB	LD	M	N
2P	4P	6P													
15, 20	15	10	160M	1	334	298	230	217	PF 1"	604	20	494	96	300	250
25	20	15	160L	1	334	298	230	217	PF 1"	648	20	538	118	300	250
30	-	-	180MA	2	382	323	255	241	PF 1.5"	667	20	557	124	300	250
-	25	-	180MC	1	382	323	255	241	PF 1.5"	667	20	557	124	300	250
-	30	20	180LC	1	382	323	255	241	PF 1.5"	705	20	595	143	300	250
40, 50	-	-	200LA	2	420	368	280	260	PF 2"	768	20	658	153	350	300
-	40	25, 30	200LC	2	420	368	280	260	PF 2"	768	20	658	153	350	300
-	50	-	225SC	3	458	388	300	286	PF 2"	811	22	671	172	400	350
60	-	-	225MA	3	458	388	300	286	PF 2"	806	22	696	172	400	350
-	60	40	225MC	3	458	388	300	286	PF 2"	836	22	696	172	400	350

FRAME SIZE	P	S	T	SHAFT EXTENSION						BEARINGS		APPROX. WEIGHT KGS.
				D	E	ED	F	G	GA	DRIVE END	NON DRIVE END	
160M	350	18.5	5	42	110	80	12	37	45	6309ZZ	6307ZZ	133
160L	350	18.5	5	42	110	80	12	37	45	6309ZZ	6307ZZ	171
180MA	350	18.5	5	48	110	80	14	42.5	51.5	6211C3	6211C3	193
180MC	350	18.5	5	48	110	80	14	42.5	51.5	6311ZZ	6310ZZ	178
180LC	350	18.5	5	48	110	80	14	42.5	51.5	6311ZZ	6310ZZ	218
200LA	400	18.5	5	55	110	80	16	49	59	6312C3	6212C3	297
200LC	400	18.5	5	55	110	80	16	49	59	6312	6212	297
225SC	450	18.5	5	60	140	110	18	53	64	6313	6213	344
225MA	450	18.5	5	55	110	80	16	49	59	6312C3	6212C3	383
225MC	450	18.5	5	60	140	110	18	53	64	6313	6213	387

Note:

(1) All dimensions in millimetres except KK

(2) Tolerance of shaft end diameter D : 32mm to 48mm (+0.018, +0.002)
D : 55mm to 80mm (+0.030, +0.011)

(3) Tolerance of N : h7

G1 450 °C & above		G2 300 °C - 450 °C	G3 200 °C - 300 °C
acrylonitrile	styrene	acetylene	isoprene
acetronitrile	toluene	isooctane	octane
acetone	propane	isopentance	cyclohexance
ammonia	benzene	ethanol	methyl ether
carbon monoxide	methanol	ethylene	decane
ethane	marsh gas	ethylene oxide	tetrahydrofuran
o-xylene	water gas	vinyl acetate	butyraldehyde
m-xylene	coal gas	butyl acetate	hexane
p-xylene		propyl acetate	heptane
chlorobenzene		cyclohexanone	pentane
aceticacid		1,2-dichloroethane	hydrogen sulphide
ethyl acetate		butanone	gasoline
methyl acetate		butane	
hydrogen cyanide		furan	
ethyl bromide		propanol	
aiichlore thylene		propylene oxide	
hydrogen		acetic anhydride	

NOTE: Above classification of flammable gases is for reference only.

**We supply a full range of general-purpose induction motors,
and also produce made-to-order ones to answer special needs
upon request ranging up to 30,000 HP**

Featuring

- * Single phase totally enclosed fan cooled induction motors
- * Single phase open protected drip proof induction motors
- * Three phase totally-enclosed fan cooled induction motors
- * Three phase open protected drip proof induction motors
- * Eddy current variable speed motors
- * Brake motors
- * Geared motors
- * Cooling tower motors
- * Crane motors
- * Industrial exhaust fan
- * Pole-change motors
- * Vertical hollow-shaft motors
- * High voltage motors
- * High voltage synchronous motors
- * Mill-use induction motors
- * Slip ring wound rotor induction motors
- * D.C. motors
- * Frequency inverter
- * Air curtain

ORDERING INFORMATION

- * Application
- * Motor type
- * Voltage, frequency, output, number of poles
- * Across-the-line or reduced-voltage starting
- * Direct drive, or V-belt drive (sheave diameter, width and weight, type of V-belts)
- * With or without slide rails or soleplates
- * Type, size and diameter of power lead
- * Indoor or outdoor use
- * Environmental conditions (Ambient temperature, explosive or corrosive gas, if exists)
- * Load inertia GD^2
- * Load characteristics



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