



東元IE2耐壓隔爆馬達 (IECEX/ ATEX認證)

MODEL : AEHBXZ

FLAMEPROOF MOTOR Ex d
HIGH EFFICIENCY
LOW VOLTAGE SQUIRREL CAGE
FRAME SIZE : 80 ~ 315MC



31057D92128

REV. 09

		SPECIFICATION TABLE	MODEL AEHBXZ
		FLAMEPROOF MOTOR Ex d 3-PHASE HIGH EFFICIENCY LOW VOLTAGE SQUIRREL CAGE	
ITEM		STANDARD SPECIFICATION	
R A T I N G	Kind of Motor	Squirrel Cage Induction Motor (SCIM).	
	Design Standards	BS 4999, EN 60079-0, EN60079-1, EN 60079-7, IEC 60079-0, IEC 60079-1, IEC 60079-7, IEC 60034.	
	Voltages	380V, 400V, 415V, 440V, Up to 690V.	
	Frequency	50Hz.	
	Output Range	0.18 ~ 185kW.	
	R.P.M. (Syn.)	3000 ~ 750 R.P.M. (2 ~ 8 Poles).	
	Time Duty	Continuous. S1, MCR (S.F. 1.0).	
	Frame Size	80 ~ 315MC.	
	Protection Enclosure	Totally Enclosed Fan Cooled , IP 55, IEC Ex / ATEX Explosion Proof.	
	Cooling Method	Self External Fan, Surface Cooling (IC 411).	
Mounting	Horizontal Foot Mounting B3 (IM 1001).		
A P P L I C A T I O N	Environment Conditions	Place : Zone 1 Hazardous, Ambient Temperature : -20°C ~ 50°C For F# 80~280, -20°C~55°C For F# 315, Altitude : Less Than 1,000m.	
	Hazardous Location	Suitable For Zone 1, Ex de Group II C, Ex d Group II B For F# 80~280 Suitable For Zone 1, Ex d Group II C, Ex d Group I For F# 315	
	Power Source Conditions	Voltage : ±10%, Frequency : ±5%, and ±10% of Combined Voltage and Frequency, But Frequency Variation Does Not Exceed ±5%.	
	Method of Starting	Full Voltage Direct On Line or λ - Δ Starting.	
	Operating Conditions	For Belt-Drive Application, However for 2-Pole 22kW and Larger, Direct-Coupling Service Only.	
	Direction of Rotation	Bi - Directional.	
P E R F O R M A N C E	Test Procedure for Explosion Proof	According to EN 60079-0, EN 60079-1, EN 60079-7, IEC 60079-0, IEC 60079-1, IEC 60079-7.	
	Test Procedure	IEC60034-2-1 and Full Voltage Measuring Starting Performance.	
	Winding Temperature Rise	Not to Exceed 80°C Rise By Resistance Method at S.F. 1.0 .	
	External Surface Temperature	Comply with Operating Temperature Code T4 for Sinusoidal Power, and PWM Inverter (Table 2 of IEC 60079-0), Limited by Built-In PTC Thermistor.	
	Over Speed	120% Syn. R.P.M. for 2 Minutes.	
	Over Torque	160% Rated Torque for 15 Sec.	
O T H E R	Certification	For F# 80 ~ 280 1.Ex d II B T4 Ex d II B T3 (When Supplied from a Non-Sinusoidal or Variable Frequency). 2.Ex de II C T4 Ex de II C T3 (When Supplied from a Non-Sinusoidal or Variable Frequency). For F# 315 Ex d II C T4 (with or without VFD supplied).	

SPECIFICATION TABLE

MODEL

AEHBXZ

FLAMEPROOF MOTOR Ex d
3-PHASE HIGH EFFICIENCY
LOW VOLTAGE SQUIRREL CAGE

Certification Marking & Number: Ex d / Ex de

Frame Size	Marking (note 1)		Certificate Numebr		Standard
	ATEX	IECEX-	ATEX	IECEX-	
80	II 2 G Ex d IIB T4	Ex d IIB T4	Baseefa 08ATEX-0298X	IECEX BAS08.0101X	EN 60079-0: 2006
90	II 2 G Ex de IIC T4	Ex de IIC T4	Baseefa 08ATEX-0299X	IECEX BAS08.0096X	EN 60079-1: 2007
100	II 2 G Ex d IIB T4	Ex d IIB T4	Baseefa 08ATEX-0300X	IECEX BAS08.0100X	EN 60079-7: 2007
112	II 2 G Ex de IIC T4	Ex de IIC T4	Baseefa 08ATEX-0301X	IECEX BAS08.0097X	IEC 60079-0: 2004
132	II 2 G Ex d IIB T4	Ex d IIB T4	Baseefa 07ATEX0295X	IECEX BAS09.0066X	IEC 60079-1: 2007
	II 2 G Ex de IIC T4	Ex de IIC T4	Baseefa 07ATEX0296X	IECEX BAS09.0067X	IEC 60079-7: 2006
160	II 2 G Ex d IIB T4	Ex d IIB T4	Baseefa 08ATEX-0302X	IECEX BAS08.0099X	
180	II 2 G Ex de IIC T4	Ex de IIC T4	Baseefa 08ATEX-0303X	IECEX BAS08.0098X	
200	II 2 G Ex d IIB T4	Ex d IIB T4	Baseefa 08ATEX-0113X	IECEX BAS09.0044X	
225	II 2 G Ex de IIC T4	Ex de IIC T4	Baseefa 08ATEX-0114X	IECEX BAS09.0045X	
250	II 2 G Ex d IIB T4	Ex d IIB T4	Baseefa 08ATEX-0115X	IECEX BAS09.0046X	
280	II 2 G Ex de IIC T4	Ex de IIC T4	Baseefa 08ATEX-0116X	IECEX BAS09.0047X	
315	II 2 G Ex db IIC T4 Gb	Ex d IIC T4 Gb	Baseefa 16ATEX-0131X	IECEX BAS16.0061X	EN 60079-0: 2012
	I M2 G Ex db I Mb	Ex d I Mb			EN 60079-1: 2014
					IEC 60079-0: 2011
					IEC 60079-1: 2014

SCHEMATIC DRAWING

MODEL

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FLAMEPROOF MOTOR Ex d
3-PHASE LOW VOLTAGE SQUIRREL CAGE

Main Cable Entries : Single Core Cross Section

Frame Size	Standard(mm ²)	Option (mm ²)	
	6 Terminals	6 Terminals	3 Terminals
80-112	4	—	—
132	6	10	—
160-180	6	10 / 16	—
200	35	50	95
225	35	50	95
250	50	95	185
280	95	—	185
315	185	—	—

Single and Multiply Cable Entry Holes

Frame Size	T-Box Type	M20 or NPT 1/2" Auxiliary Cable Entries Number	Max. Size of Main Cable Entries			
			Single Hole		Two Holes	
80-112	TX-16	0	M40	NPT 1 1/4"	M20	NPT 1/2"
		1	M25	NPT 3/4"	-	-
	TX-25	0	M50	NPT 1 1/2"	M32	NPT 1"
		1	M50	NPT 1 1/2"	M32	NPT 1"
132-180	TX-26	2	M50	NPT 1 1/2"	-	-
		0	M63	NPT 2"	M32	NPT 1"
		1	M50	NPT 1 1/2"	M32	NPT 1"
160-225	TX-46	2	M40	NPT 1 1/4"	M32	NPT 1"
		0	M80	NPT 2 1/2"	M63	NPT 2"
		1	M80	NPT 2 1/2"	M63	NPT 2"
250-280	TX-56	2	M80	NPT 2 1/2"	M63	NPT 2"
		0	M90	NPT 3"	M63	NPT 2"
		1	M90	NPT 3"	M63	NPT 2"
315	TX-76	2	M90	NPT 3"	M63	NPT 2"
		0	M90	NPT 3"	M80	NPT 2 1/2"
		1	M90	NPT 3"	M80	NPT 2 1/2"
		2	M90	NPT 3"	M80	NPT 2 1/2"

PERFORMANCE DATA

MODEL

AEHBXZ

FLAMEPROOF MOTOR Ex d
3-PHASE HIGH EFFICIENCY
LOW VOLTAGE SQUIRREL CAGE

TEFC, CLASS F, -20°C~50°C AMBIENT TEMP.
AS ; BS DESIGN N CONTINUOUS DUTY
380, 400, 415, 440V 50Hz

TYPICAL PERFORMANCE

(415 V)

OUTPUT		FULL LOAD RPM	FRAME SIZE	EFFICIENCY			POWER FACTOR			CURRENT		TORQUE				ROTOR GD ² kg-m ²
				FULL LOAD (%)	3/4 LOAD (%)	1/2 LOAD (%)	FULL LOAD (%)	3/4 LOAD (%)	1/2 LOAD (%)	FULL LOAD (A)	LOCKED ROTOR (A)	FULL LOAD kg-m	LOCKED ROTOR %FLT	PULL UP %FLT	BREAK DOWN %FLT	
HP	KW															
1	0.75	2860	80	82.0	82.0	79.0	85.0	78.5	65.5	1.50	12	0.254	340	340	380	0.006
1	0.75	1420	80	82.5	82.5	80.5	71.0	61.0	47.0	1.78	12	0.511	330	320	330	0.011
1	0.75	940	90S	78.0	78.0	75.0	67.5	58.0	46.0	1.98	12	0.772	200	200	250	0.019
1.5	1.1	2820	80	83.0	84.5	83.0	84.0	77.5	63.5	2.19	16	0.386	305	275	330	0.006
1.5	1.1	1415	90S	84.0	85.0	84.0	80.0	72.5	60.0	2.28	16	0.769	250	215	270	0.017
1.5	1.1	930	90L	79.9	80.0	78.5	69.5	60.5	47.0	2.76	16	1.171	210	210	255	0.025
2	1.5	2855	90S	85.0	85.5	83.0	85.5	80.5	68.0	2.87	23	0.508	330	300	330	0.011
2	1.5	1430	90L	85.0	85.0	83.0	75.0	66.5	53.0	3.27	23	1.015	300	240	310	0.023
2	1.5	935	100L	81.5	81.5	80.0	71.0	63.0	49.5	3.61	20	1.553	220	190	230	0.045
3	2.2	2855	90L	86.0	86.5	85.5	88.0	83.0	72.0	4.04	33	0.763	320	290	330	0.015
3	2.2	1440	100L	86.5	86.5	85.0	82.5	76.0	63.5	4.29	33	1.512	290	250	300	0.041
3	2.2	955	112M	85.0	85.5	85.0	70.0	62.5	50.0	5.14	30	2.280	175	170	235	0.071
4	3	2855	100L	86.7	87.0	86.0	88.5	85.0	75.5	5.44	48	1.017	360	310	340	0.023
4	3	1440	100L	87.4	88.0	87.0	82.5	74.5	60.0	5.79	45	2.016	250	180	300	0.045
4	3	965	132S	88.5	87.5	86.0	81.0	75.0	63.0	5.82	43	3.009	210	170	300	0.154
5.5	4	2895	112M	87.6	89.0	89.0	90.5	87.5	79.5	7.02	60	1.379	250	245	320	0.044
5.5	4	1455	112M	88.3	88.0	87.0	79.5	72.0	59.0	7.93	65	2.744	230	200	345	0.071
5.5	4	970	132M	89.5	89.0	87.0	79.0	72.5	60.0	7.87	60	4.116	210	180	310	0.205
7.5	5.5	2915	132S	91.5	91.5	90.5	88.0	85.0	78.5	9.5	75	1.868	220	190	280	0.076
7.5	5.5	1460	132S	90.5	90.5	89.0	82.5	76.0	63.5	10.2	85	3.729	270	220	320	0.133
7.5	5.5	960	132M	89.0	89.0	89.0	79.5	73.5	61.5	10.8	70	5.671	185	170	270	0.205
10	7.5	2895	132S	91.0	91.0	90.0	87.0	85.0	78.5	13.2	90	2.507	210	180	260	0.076
10	7.5	1455	132M	91.0	91.0	90.0	85.0	80.0	68.5	13.5	110	4.989	270	220	320	0.173
10	7.5	970	160M	91.0	91.0	90.0	81.0	75.0	64.0	14.2	95	7.483	240	200	260	0.484
15	11	2935	160M	92.5	92.5	92.0	91.5	89.0	84.5	18.1	140	3.710	230	200	280	0.183
15	11	1460	160M	92.5	92.5	92.0	87.0	83.5	75.0	19.0	140	7.457	230	180	270	0.367
15	11	975	160L	91.0	90.5	89.0	79.0	72.5	60.0	21.3	160	11.17	280	230	280	0.630
20	15	2935	160M	92.5	92.0	91.5	91.0	88.0	81.0	24.8	195	4.946	240	210	290	0.183
20	15	1460	160L	93.0	93.0	92.5	88.0	84.5	76.5	25.5	185	9.943	230	180	270	0.462
20	15	970	180LC	91.5	92.0	92.0	84.0	79.5	71.5	27.2	165	14.97	230	190	250	1.342
25	18.5	2925	160L	93.0	93.0	93.0	91.5	89.5	84.0	30.2	245	6.204	260	210	300	0.237
25	18.5	1470	180MC	94.0	94.0	93.5	85.0	81.0	72.5	32.2	245	12.34	240	180	270	0.746
25	18.5	975	200LC	93.0	93.5	93.0	81.0	77.5	68.5	34.2	220	18.61	230	200	250	1.835
30	22	2935	180MA	93.5	93.5	92.5	87.5	84.5	76.0	37.4	300	7.419	250	210	300	0.302
30	22	1465	180LC	94.0	94.0	93.5	86.0	82.5	74.0	37.9	270	14.86	230	180	270	0.850
30	22	975	200LC	93.0	93.5	93.5	83.0	80.5	72.5	39.7	260	22.33	215	180	230	2.078
40	30	2955	200LA	94.0	94.0	93.0	89.0	87.5	83.5	49.9	340	9.825	175	150	260	0.605
40	30	1470	200LC	94.5	94.5	94.5	87.0	85.5	78.0	50.8	390	19.75	230	190	270	1.454
40	30	980	225MC	94.0	94.0	93.5	85.5	82.0	75.0	51.9	305	29.63	210	190	230	3.023
50	37	2950	200LA	94.5	94.5	93.5	90.0	88.0	84.5	60.5	400	12.30	155	135	260	0.757
50	37	1475	225SC	95.0	95.0	94.5	85.0	81.0	73.0	63.7	430	24.61	200	180	240	1.896
50	37	985	250SC	94.0	94.5	94.0	87.0	83.5	76.0	62.9	405	36.85	210	200	250	4.194
60	45	2955	225MA	94.5	94.5	93.5	92.0	91.0	88.0	72.0	480	14.74	140	130	230	1.244
60	45	1475	225MC	95.0	95.0	94.5	85.0	81.0	72.5	77.5	495	29.53	200	175	250	1.979
60	45	985	250MC	94.5	95.0	94.5	87.5	85.0	77.5	75.7	530	44.21	230	200	250	5.106

PERFORMANCE DATA

MODEL
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FLAMEPROOF MOTOR Ex d
3-PHASE HIGH EFFICIENCY
LOW VOLTAGE SQUIRREL CAGE

TEFC, CLASS F, -20°C ~50°C AMBIENT TEMP.
AS ; BS DESIGN N CONTINUOUS DUTY
380, 400, 415, 440V 50Hz

TYPICAL PERFORMANCE (415 V)

OUTPUT		FULL LOAD RPM	FRAME SIZE	EFFICIENCY			POWER FACTOR			CURRENT		TORQUE				ROTOR GD ² kg-m ²
				FULL LOAD (%)	3/4 LOAD (%)	1/2 LOAD (%)	FULL LOAD (%)	3/4 LOAD (%)	1/2 LOAD (%)	FULL LOAD (A)	LOCKED ROTOR (A)	FULL LOAD kg-m	LOCKED ROTOR %FLT	PULL UP %FLT	BREAK DOWN %FLT	
HP	KW															
75	55	2960	250SA	95.0	94.5	94.0	89.5	88.0	87.0	90.0	645	18.39	150	130	250	1.547
		1480	250SC	95.5	95.0	94.5	87.0	84.0	77.0	92.1	655	36.78	230	200	260	3.911
		977	280SC	94.5	94.0	91.8	84.1	80.2	74	96.3	616	55.72	146	121	221	7.383
100	75	2960	250MA	95.5	95.5	95.0	91.0	88.0	85.0	120	825	24.52	140	130	250	1.816
		1480	250MC	95.5	95.5	95.0	87.0	84.0	77.0	126	810	49.04	220	180	240	4.490
		978	280MC	95.0	94.2	92.1	85.7	81.5	74.4	128	852	74.22	141	119	220	9.536
		740	315MC	93.0	92.7	91.9	77.0	70.7	60.0	146	860	98.09	120	100	240	20.098
125	90	2970	280SA	95.2	95.0	92.7	89.8	87.6	85.5	146	1024	30.55	133	112	222	2.739
		1480	280SC	95.4	95.1	93.1	87.7	84.2	80.4	150	1022	61.31	145	123	223	7.386
		985	315MC	94.2	94.4	94.0	86.0	78.5	67.5	155	972	92.11	135	110	220	16.407
		740	315MC	93.2	92.5	91.5	85.0	84.0	75.0	158	1056	122.61	125	105	230	25.123
150	110	2970	280MA	95.3	95.1	92.9	90.0	87.8	85.8	178	1192	36.66	122	105	216	3.178
		1483	280MC	95.5	95.4	93.2	88.0	85.9	81.0	182	1190	73.42	128	108	214	8.339
		985	315MC	94.5	94.5	94.0	83.5	79.0	69.0	194	1221	110.54	135	110	220	17.294
175	132	2965	315MA	94.6	93.6	92.1	83.5	80.0	72.0	232	1337	42.84	130	110	210	4.552
		1485	315MC	94.7	94.5	93.0	82.5	72.5	65.0	235	1530	85.54	135	115	240	9.486
		985	315MC	94.6	94.2	94.0	85.0	81.5	72.5	228	1413	128.96	125	105	210	17.737
200	150	2970	315MA	94.8	93.8	92.3	85.0	82.0	76.0	259	2080	48.88	140	120	220	5.459
		1485	315MC	94.9	94.5	92.8	89.5	88.0	81.5	246	2080	97.76	135	115	230	11.934
215	160	2970	315MA	94.8	94.0	92.5	85.0	83.0	76.0	276	2220	52.55	160	140	250	6.027
		1480	315MC	95.2	95.0	91.5	90.0	88.0	81.5	260	2220	105.45	150	130	250	13.464
250	185	2975	315MA	95.0	94.3	92.9	82.5	78.0	67.5	328	2570	61.00	170	150	280	6.027
		1485	315MC	95.3	95.3	94.6	89.5	87.5	82.5	302	2570	122.20	140	120	240	13.464

- NOTE :
1. The above are typical values based on test.
 2. Actual load & full voltage starting : According to BS 4999, AS 1359.
 3. Tolerance according to BS4999, AS1359.
 4. Efficiency, power factor, speed and torque are the same for other voltages.
Current values vary inversely with voltage.
 5. Data subject to change without notice.

PERFORMANCE DATA

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IE2 EFFICIENCY
LOW VOLTAGE SQUIRREL CAGE

TEFC, CLASS F, -20°C~50°C AMBIENT TEMP.
IEC DESIGN N CONTINUOUS DUTY
380, 400, 415, 440V 50Hz

IE2

TYPICAL PERFORMANCE

(415 V)

OUTPUT		FULL LOAD RPM	FRAME SIZE	EFFICIENCY			POWER FACTOR			CURRENT		TORQUE				ROTOR GD ² kg-m ²
				FULL LOAD (%)	3/4 LOAD (%)	1/2 LOAD (%)	FULL LOAD (%)	3/4 LOAD (%)	1/2 LOAD (%)	FULL LOAD (A)	LOCKED ROTOR (A)	FULL LOAD kg-m	LOCKED ROTOR %FLT	PULL UP %FLT	BREAK DOWN %FLT	
HP	KW															
1	0.75	2865	80	82.0	82.0	79.0	82.0	74.0	61.0	1.55	12	0.255	320	290	360	0.006
1	0.75	1435	80	80.0	79.0	75.0	70.0	59.0	45.0	1.86	12	0.509	330	320	370	0.012
1	0.75	940	90S	78.0	78.0	75.0	68.0	59.0	45.0	1.97	10	0.776	200	200	250	0.019
1.5	1.1	2845	80	82.0	82.5	81.5	84.0	77.5	65.5	2.22	16	0.376	305	275	330	0.006
1.5	1.1	1435	90S	82.0	83.0	81.5	79.0	71.0	58.0	2.36	16	0.746	230	200	280	0.017
1.5	1.1	935	90L	79.0	79.5	77.5	69.5	60.5	47.0	2.79	13	1.145	220	210	255	0.025
2	1.5	2875	90S	85.0	85.5	83.0	85.5	78.0	65.0	2.87	20	0.508	270	240	330	0.011
2	1.5	1445	90L	85.0	85.0	83.0	74.0	65.0	51.0	3.32	25	1.010	330	270	370	0.023
2	1.5	935	100L	80.5	81.5	80.0	71.0	63.0	49.5	3.65	20	1.561	240	200	230	0.045
3	2.2	2875	90L	85.0	86.0	85.5	86.0	80.0	68.0	4.19	33	0.745	320	290	330	0.015
3	2.2	1440	100L	85.0	84.5	83.0	80.0	72.0	58.0	4.50	33	1.487	280	250	350	0.041
3	2.2	955	112M	84.5	85.0	84.0	70.0	62.5	50.0	5.17	25	2.241	160	140	240	0.071
4	3	2845	100L	85.5	87.0	86.0	88.5	84.0	75.5	5.52	43	1.026	360	310	370	0.023
4	3	1435	100L	85.5	85.5	84.0	81.0	73.0	59.0	6.03	45	2.034	270	210	330	0.045
4	3	965	132S	88.5	87.5	86.0	81.0	75.0	63.0	5.82	43	3.025	210	170	300	0.154
5.5	4	2860	112M	86.0	88.0	88.5	90.5	87.5	79.5	7.15	55	1.361	270	245	320	0.044
5.5	4	1455	112M	87.0	88.0	87.0	81.0	74.0	62.0	7.90	58	2.675	200	180	310	0.071
5.5	4	970	132M	89.5	89.0	87.0	79.0	72.5	60.0	7.87	60	4.012	210	180	310	0.205
7.5	5.5	2930	132S	90.0	90.5	90.0	86.0	83.5	76.0	9.89	75	1.826	220	190	280	0.076
7.5	5.5	1465	132S	89.0	89.5	88.0	80.0	72.0	58.0	10.7	85	3.653	270	220	350	0.133
7.5	5.5	960	132M	89.0	89.0	89.0	79.5	73.5	61.5	10.8	70	5.574	185	170	270	0.205
10	7.5	2910	132S	90.0	90.5	90.5	87.0	84.0	77.0	13.3	92	2.508	210	180	260	0.076
10	7.5	1465	132M	90.0	90.5	90.0	83.0	77.0	64.0	14.0	118	4.981	300	250	370	0.173
10	7.5	975	160M	90.0	90.5	90.0	81.0	75.0	64.0	14.3	95	7.485	250	200	270	0.484
15	11	2955	160M	92.0	92.5	92.0	90.5	88.0	81.0	18.4	160	3.622	250	200	330	0.183
15	11	1465	160M	91.0	91.5	91.5	86.0	81.0	71.0	19.6	150	7.306	240	180	280	0.367
15	11	970	160L	89.0	89.8	89.0	81.0	75.0	64.0	21.2	155	11.03	280	230	290	0.630
20	15	2945	160M	91.0	91.5	91.5	88.0	85.0	78.0	26.1	205	4.956	260	210	320	0.183
20	15	1465	160L	91.5	92.0	92.5	86.0	82.0	73.0	26.5	200	9.962	240	180	280	0.462
20	15	970	180LC	90.5	91.5	90.0	84.0	80.0	71.5	27.5	170	15.05	230	190	240	1.342
25	18.5	2935	160L	91.5	92.0	92.0	91.5	89.5	84.0	30.7	245	6.133	240	210	300	0.237
25	18.5	1480	180MC	93.0	93.5	93.0	83.0	79.0	70.0	33.3	245	12.16	240	180	280	0.746
25	18.5	975	200LC	91.5	93.0	92.5	81.0	77.0	68.0	34.7	210	18.46	230	200	240	1.835
30	22	2945	180MA	92.5	92.5	92.0	87.5	84.5	76.0	37.8	315	7.269	260	210	330	0.302
30	22	1475	180LC	93.5	93.5	93.0	83.0	79.0	70.0	39.4	280	14.51	230	180	270	0.850
30	22	975	200LC	92.0	93.0	93.0	81.0	77.0	68.0	41.1	260	21.95	220	180	240	2.078
40	30	2955	200LA	93.0	93.0	92.5	90.5	90.0	87.0	49.6	360	9.878	195	150	260	0.605
40	30	1475	200LC	93.5	94.0	94.5	88.0	85.5	79.0	50.7	400	19.79	260	220	290	1.454
40	30	980	225MC	93.0	93.5	93.0	84.0	82.0	73.0	53.4	360	29.79	220	170	220	3.023
50	37	2955	200LA	93.5	94.0	93.5	92.0	91.0	87.5	59.8	480	12.18	190	150	280	0.757
50	37	1475	225SC	94.5	94.5	94.0	85.0	81.0	73.0	64.1	430	24.41	200	180	240	1.896
50	37	985	250SC	93.0	93.5	93.5	86.5	83.0	75.5	64.0	425	36.55	210	190	250	4.194
60	45	2960	225MA	93.5	94.0	93.5	93.0	92.5	90.0	72.0	545	14.79	155	130	280	1.244
60	45	1480	225MC	94.5	94.5	94.0	86.0	83.0	75.5	77.0	540	29.58	190	160	270	1.979
60	45	985	250MC	93.5	94.0	94.0	86.5	83.5	76.0	77.4	580	44.45	230	200	270	5.106

PERFORMANCE DATA

MODEL
AEHBXZ

FLAMEPROOF MOTOR Ex d
IE2 EFFICIENCY
LOW VOLTAGE SQUIRREL CAGE

TEFC, CLASS F, -20°C ~50°C AMBIENT TEMP.
IEC DESIGN N CONTINUOUS DUTY
380, 400, 415, 440V 50Hz

IE2

TYPICAL PERFORMANCE

(415 V)

OUTPUT		FULL LOAD RPM	FRAME SIZE	EFFICIENCY			POWER FACTOR			CURRENT		TORQUE				ROTOR GD ² kg-m ²
				FULL LOAD (%)	3/4 LOAD (%)	1/2 LOAD (%)	FULL LOAD (%)	3/4 LOAD (%)	1/2 LOAD (%)	FULL LOAD (A)	LOCKED ROTOR (A)	FULL LOAD kg-m	LOCKED ROTOR %FLT	PULL UP %FLT	BREAK DOWN %FLT	
HP	KW															
75	55	2970	250SA	93.5	94.0	93.5	91.5	90.0	86.5	89.4	680	18.02	150	120	300	1.547
		1480	250SC	94.5	95.0	94.5	88.0	86.0	80.0	92.0	665	36.16	260	220	270	3.911
		985	280SC	94.0	94.5	94.5	85.0	81.0	70.0	95.8	600	54.33	170	150	220	7.383
100	75	2960	250MA	94.5	95.0	94.5	92.0	91.0	88.0	120	890	24.65	150	140	300	1.816
		1485	250MC	94.5	95.5	95.0	87.0	86.0	81.0	127	883	49.14	250	170	220	4.490
		980	280MC	94.0	94.0	93.5	85.5	81.5	74.0	130	852	74.46	141	119	220	9.536
		740	315MC	92.2	92.2	91.5	77.0	70.7	60.0	147	860	98.09	120	100	240	20.098
125	90	2960	280SA	94.5	94.5	94.0	91.0	90.0	84.0	146	1160	29.58	180	160	300	2.739
		1485	280SC	94.5	94.5	94.0	87.5	85.5	79.0	151	1120	58.97	180	150	230	7.386
		985	315MC	94.0	93.8	93.0	83.5	78.5	67.5	160	972	92.11	135	110	220	16.407
		740	315MC	92.5	92.0	91.5	85.0	84.0	75.0	159	1056	122.61	125	105	230	25.123
150	110	2965	280MA	95.0	95.0	94.5	92.0	90.0	86.0	175	1192	36.10	122	105	216	3.178
		1483	280MC	94.7	94.5	93.5	88.0	84.5	78.5	184	1290	72.17	155	130	230	8.339
		985	315MC	94.3	94.0	93.5	83.5	79.0	69.0	194	1221	110.54	135	110	220	17.294
175	132	2965	315MA	94.6	93.6	92.1	83.5	80.0	72.0	232	1337	42.84	130	110	210	4.552
		1485	315MC	94.7	94.5	93.0	82.5	72.5	65.0	235	1530	85.54	135	115	240	9.486
		985	315MC	94.6	94.2	94.0	85.0	81.5	72.5	228	1413	128.96	125	105	210	17.737
200	150	2970	315MA	94.8	93.8	92.3	85.0	82.0	76.0	259	2080	48.88	140	120	220	5.459
		1485	315MC	94.9	94.5	92.8	89.5	88.0	81.5	246	2080	97.76	135	115	230	11.934
215	160	2970	315MA	94.8	94.0	92.5	85.0	83.0	76.0	276	2220	52.55	160	140	250	6.027
		1480	315MC	94.9	94.5	91.5	90.0	88.0	81.5	261	2220	105.45	150	130	250	13.464
250	185	2975	315MA	95.0	94.3	92.9	82.5	78.0	67.5	328	2570	61.00	170	150	280	6.027
		1485	315MC	95.1	94.9	94.6	89.5	87.5	82.5	302	2570	122.20	140	120	240	13.464

- NOTE :
1. The above are typical values based on test according to IEC 60034-2-1.
 2. Efficiency, power factor, speed and torque are the same for other voltages.
Current values vary inversely with voltage.
 3. Tolerance according to IEC 60034-1.
 4. Data subject to change without notice.

Ex d Converter Operation

MODEL

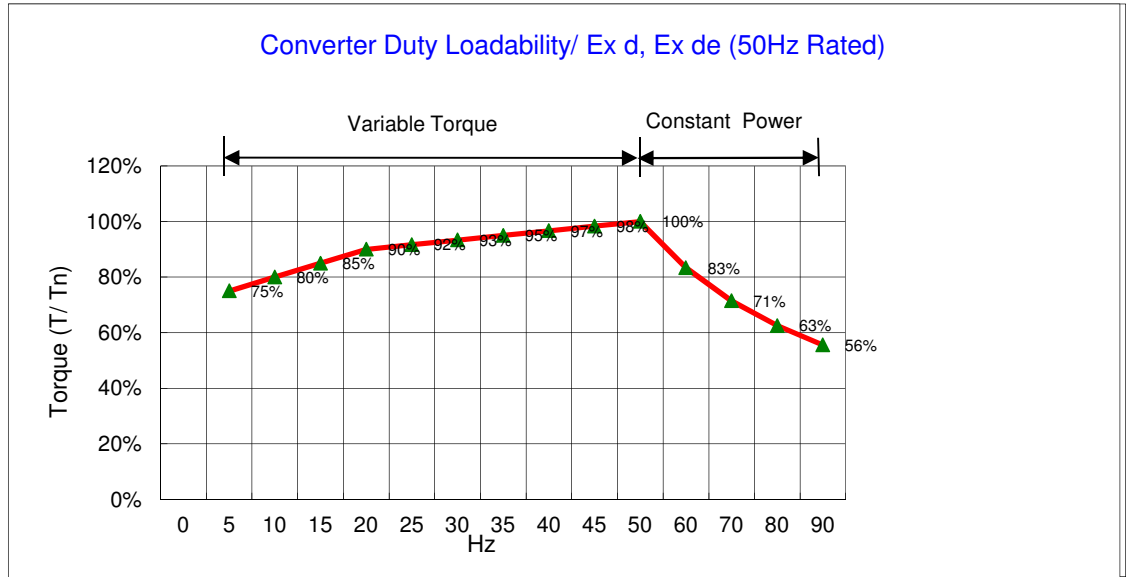
AEHBXZ

FRAME SIZE 80~315MC

Continuous Output Under Converter/ Ex d ,Ex de, Temp. Code T4, TEFC (IC411)

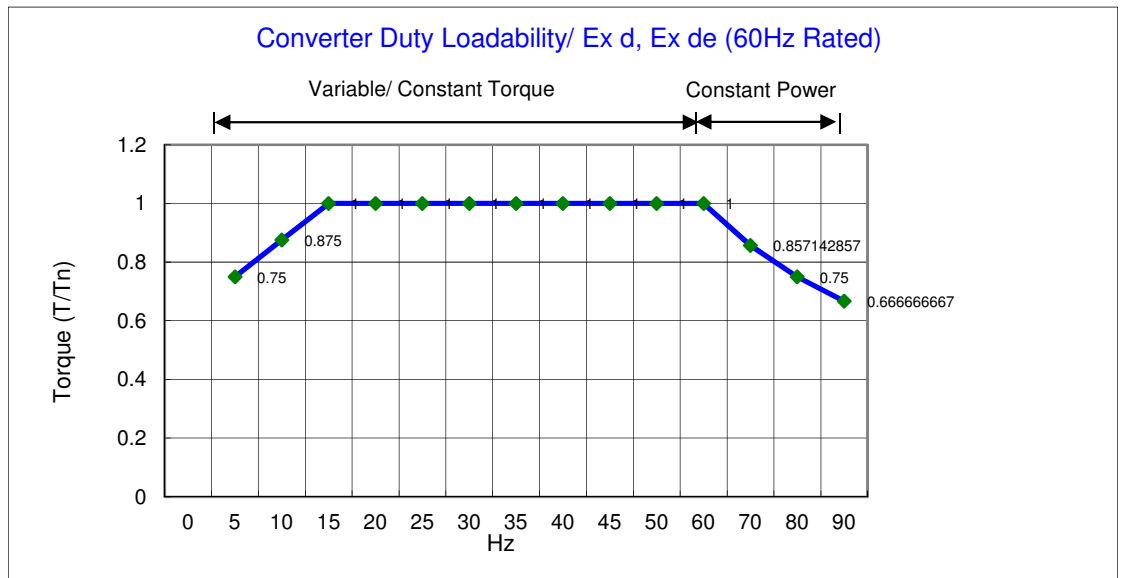
50Hz rated Motor

Output	Torque value
Hz	%
0	
5	75%
10	80%
15	85%
20	90%
25	92%
30	93%
35	95%
40	97%
45	98%
50	100%
60	83%
70	71%
80	63%
90	56%



60Hz rated Motor

Output	Torque value
Hz	%
0	
5	75%
10	88%
15	100%
20	100%
25	100%
30	100%
35	100%
40	100%
45	100%
50	100%
60	100%
70	86%
80	75%
90	67%



Notes:

- 1) Installation: to follow the guidelines detailed in "IEC60034-25:2014 Cage induction MOTOR when fed from converters - Application guide" within the certified Schedule of Variations.
- 2) Maximum safe operating speed:
2p: 3600 (min⁻¹)
4p & 6p & 8p : follow IEC60034-1, Table 17
- 3) With thermistors PTC 150°C (total 3, one per phase)
- 4) Converter operation parameter
 - F carrier(min.) 3kHz
 - IOL=1.5 IN, tOL=10s, tCOOL=10 min. (OL: Over Load)
- 5) Constant power range is not suitable for F#315

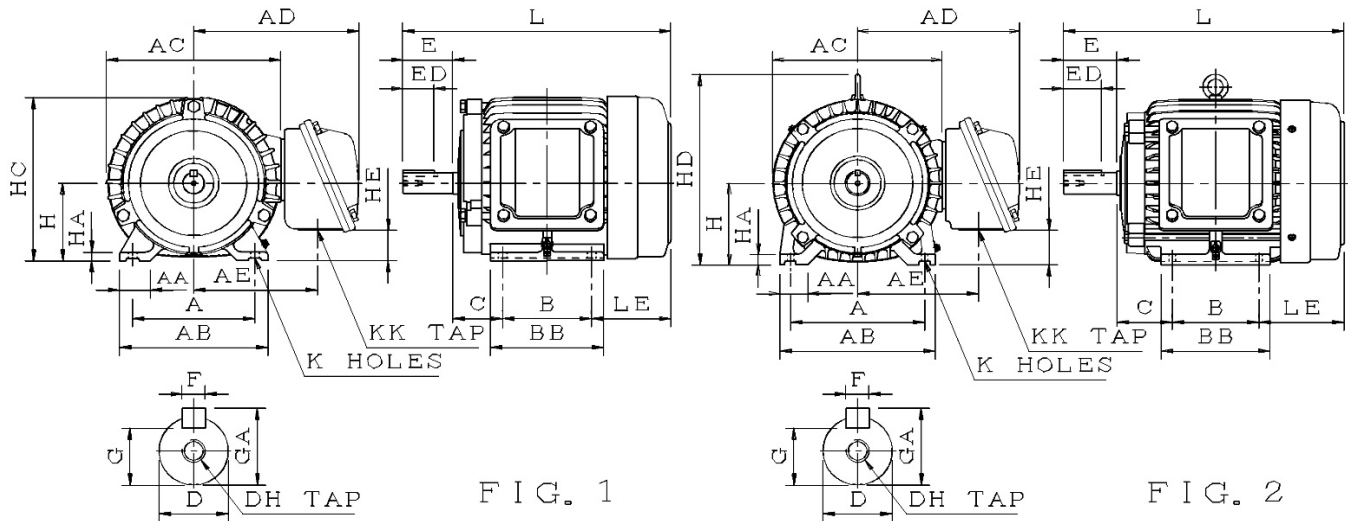
OUTLINE DIMENSION SHEET

FLAMEPROOF MOTOR Ex d
3-PHASE HIGH EFFICIENCY
FRAME SIZE 80~112M

MODEL

AEHBXZ

Totally Enclosed Fan - Cooled Type, Squirrel - Cage Rotor.



Dimension in mm

Output (kW)				FRAME SIZE	FIG. NO.	A	AA	AB	AC	AD	AE	B	BB	C	H	HA	HC	HD
2P	4P	6P	8P															
0.75	0.55	0.37	0.18	80	1	125	35.5	155	177	214	152.0	100	130	50	80	9.0	169	—
1.1	0.75	0.55	0.37	90S		140	35.5	170	200	223	161.0	100	130	56	90	10.0	190	—
2.2	1.5	1.1	0.55	90L		140	35.5	170	200	223	161.0	125	150	56	90	10.0	190	—
3	2.2	1.5	0.75	100L	2	160	45.0	195	219	232	170.5	140	175	63	100	12.5	—	243
4	4	2.2	1.5	112M		190	45.0	224	238	240	178.0	140	175	70	112	14.0	—	265

FRAME SIZE	HE	K	KK	L	LE	SHAFT EXTENSION							BEARING		APPROX. WEIGHT KGS
						D	E	ED	F	G	GA	DH	DRIVE END	OPPOSITE DRIVE END	
80	26.5	10	M20X1.5	282.0	92.0	19	40	25	6	15.5	21.5	M6×12	6204ZZC3	6204ZZC3	23
90S	36.5	10	M20X1.5	309.0	103.0	24	50	32	8	20.0	27.0	M8×16	6205ZZC3	6205ZZC3	33
90L	36.5	10	M20X1.5	337.5	106.5	24	50	32	8	20.0	27.0	M8×16	6205ZZC3	6205ZZC3	35
100L	46.5	12	M20X1.5	374.5	111.5	28	60	40	8	24.0	31.0	M10×20	6206ZZC3	6305ZZC3	45
112M	58.5	12	M20X1.5	391.0	121.0	28	60	40	8	24.0	31.0	M10×20	6306ZZC3	6306ZZC3	56

- Note : 1. Tolerance of shaft end diameter D : $\phi 19 \sim \phi 28 : j6$.
2. Tolerance of shaft center hight H : $+0, -0.5$.

OUTLINE DIMENSION SHEET

MODEL

AEHBXZ

FLAMEPROOF MOTOR Ex d
3-PHASE HIGH EFFICIENCY
FRAME SIZE 132S~180LC

Totally Enclosed Fan - Cooled Type, Squirrel - Cage Rotor.

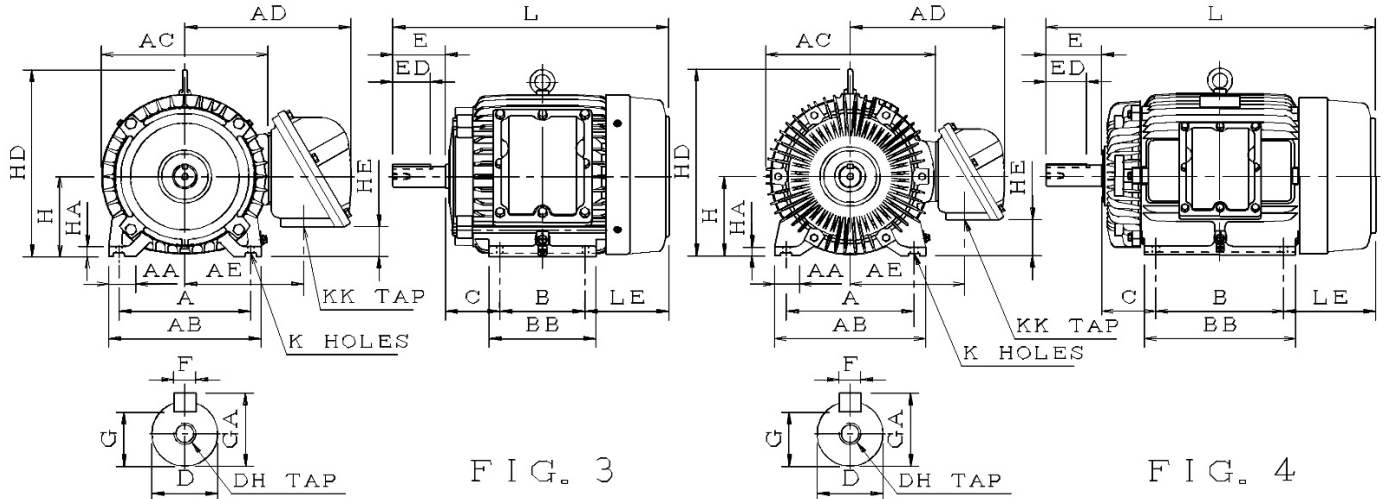


FIG. 3

FIG. 4

Dimension in mm

Output (kW)				FRAME SIZE	FIG. NO.	A	AA	AB	AC	AD	AE	B	BB	C	H	HA	HD	HE
2P	4P	6P	8P															
5.5	5.5	3	2.2	132S	3	216	45	250	274	288	198.5	140	175	89	132	16	310	48
—	7.5	4 5.5	3	132M		216	45	250	274	288	198.5	178	212	89	132	16	310	48
11	11	7.5	4 5.5	160M	4	254	50	300	334	329	237	210	250	108	160	18	378	73
18.5	15	11	7.5	160L		254	50	300	334	329	237	254	300	108	160	18	378	73
22	—	—	—	180MA		279	75	355	382	354	262	241	297	121	180	20	431	93
—	18.5	—	—	180MC		279	75	355	382	354	262	241	297	121	180	20	431	93
—	22	15	11	180LC		279	75	355	382	354	262	279	335	121	180	20	431	93
—	—	—	—	—		—	—	—	—	—	—	—	—	—	—	—	—	—

FRAME SIZE	K	KK	L	LE	SHAFT EXTENSION							BEARING		APPROX. WEIGHT KGS
					D	E	ED	F	G	GA	DH	DRIVE END	OPPOSITE DRIVE END	
132S	12.0	M25X1.5	454	145	38	80	64	10	33.0	41.0	M12X24	6308ZZC3	6306ZZC3	99
132M	12.0	M25X1.5	492	145	38	80	64	10	33.0	41.0	M12x24	6308ZZC3	6306ZZC3	104
160M	14.5	M25X1.5	608	180	42	110	80	12	37.0	45.0	M16x32	6309ZZC3	6307ZZC3	160
160L	14.5	M25X1.5	652	180	42	110	80	12	37.0	45.0	M16x32	6309ZZC3	6307ZZC3	182
180MA	14.5	M32X1.5	672	200	48	110	80	14	42.5	51.5	M16x32	6311ZZC3	6310ZZC3	193
180MC	14.5	M32X1.5	672	200	48	110	80	14	42.5	51.5	M16x32	6311ZZC3	6310ZZC3	194
180LC	14.5	M32X1.5	710	200	48	110	80	14	42.5	51.5	M16x32	6311ZZC3	6310ZZC3	208

Note : 1. Tolerance of shaft end diameter D : $\phi 38 \sim \phi 48 : k6$.

2. Tolerance of shaft center hight H : $+0, -0.5$.

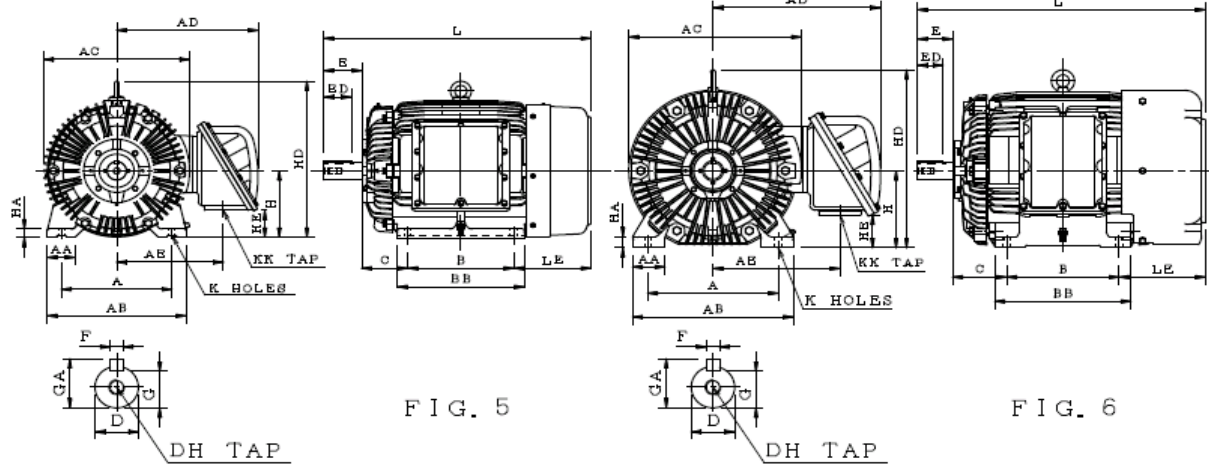
OUTLINE DIMENSION SHEET

MODEL

AEHBXZ

FLAMEPROOF MOTOR Ex d
3-PHASE HIGH EFFICIENCY
FRAME SIZE 200LA~280MC

Totally Enclosed Fan - Cooled Type. Squirrel - Cage Rotor.



Dimension in mm

Output (kW)				FRAME SIZE	FIG. NO.	A	AA	AB	AC	AD	AE	B	BB	C	H	HA	HD	HE
2P	4P	6P	8P															
30	—	—	—	200LA	5	318	80	400	420	424	324	305	365	133	200	25	470	81
—	30	18.5	15	200LC		318	80	400	420	424	324	305	365	133	200	25	470	81
—	37	—	18.5	225SC		356	90	450	458	455	350	286	375	149	225	30	525	116
45	—	—	—	225MA		356	90	450	458	455	350	311	375	149	225	30	525	116
—	45	30	22	225MC		356	90	450	458	455	350	311	375	149	225	30	525	116
55	—	—	—	250SA	6	406	100	500	529	540	408	311	385	168	250	36	598	106
—	55	37	30	250SC		406	100	500	529	540	408	311	385	168	250	36	598	106
75	—	—	—	250MA		406	100	500	529	540	408	349	425	168	250	36	598	106
—	75	45	37	250MC		406	100	500	529	540	408	349	425	168	250	36	598	106
90	—	—	—	280SA		457	110	560	590	567	436	368	445	190	280	40	655	131
—	90	55	45	280SC	457	110	560	590	567	436	368	445	190	280	40	655	131	
110	—	—	—	280MA	6	457	110	560	590	567	436	419	495	190	280	40	655	131
—	110	75	55	280MC		457	110	560	590	567	436	419	495	190	280	40	655	131

FRAME SIZE	K	KK	L	LE	SHAFT EXTENSION							BEARING		APPROX. WEIGHT KGS
					D	E	ED	F	G	GA	DH	DRIVE END	OPPOSITE DRIVE END	
200LA	18.5	M50X1.5	770.0	222.0	55	110	80	16	49.0	59.0	M20×40	6312C3	6212C3	347
200LC	18.5	M50X1.5	770.0	222.0	55	110	80	16	49.0	59.0	M20×40	6312C3	6212C3	347
225SC	18.5	M50X1.5	841.0	266.0	60	140	110	18	53.0	64.0	M20×40	6313C3	6213C3	419
225MA	18.5	M50X1.5	811.0	241.0	55	110	80	16	49.0	59.0	M20×40	6312C3	6212C3	439
225MC	18.5	M50X1.5	841.0	241.0	60	140	110	18	53.0	64.0	M20×40	6313C3	6213C3	445
250SA	24.0	M63X1.5	887.5	268.5	60	140	110	18	53.0	64.0	M20×40	6313C3	6313C3	541
250SC	24.0	M63X1.5	887.5	268.5	70	140	110	20	62.5	74.5	M20×40	6317C3	6313C3	571
250MA	24.0	M63X1.5	925.5	268.5	60	140	110	18	53.0	64.0	M20×40	6313C3	6313C3	601
250MC	24.0	M63X1.5	925.5	268.5	70	140	110	20	62.5	74.5	M20×40	6317C3	6313C3	631
280SA	24.0	M63X1.5	992.0	294.0	65	140	110	18	58.0	69.0	M20×40	6314C3	6313C3	722
280SC	24.0	M63X1.5	1022.0	294.0	80	170	140	22	71.0	85.0	M20×40	NU318C3	6318C3	822
280MA	24.0	M63X1.5	1042.0	293.0	65	140	110	18	58.0	69.0	M20×40	6314C3	6313C3	812
280MC	24.0	M63X1.5	1072.0	293.0	80	170	140	22	71.0	85.0	M20×40	NU318C3	6318C3	837

- Note : 1. Tolerance of shaft end diameter D : $\phi 55 \sim \phi 80$: m6.
2. Tolerance of shaft center height H : 200~250 : +0, -0.5 ; 280 : +0, -1.

OUTLINE DIMENSION SHEET

MODEL

AEHBXZ

FLAMEPROOF MOTOR Ex d
3-PHASE LOW VOLTAGE SQUIRREL CAGE
FRAME SIZE 315MA-315MC

Totally Enclosed Fan - Cooled Type, Squirrel - Cage Rotor.

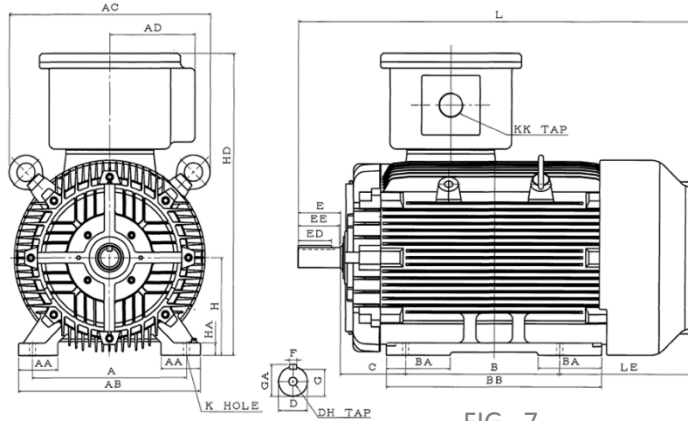


FIG. 7

Dimension in mm

Output (kW)				FRAME SIZE	FIG. NO.	A	AA	AB	AC	AD	B	BA	BB	C	EE	H	HA
2P	4P	6P	8P			508	130	600	662	315	457	210	710	216	134	315	40
132/150/160/185	-	-	-	315MA	7	508	130	600	662	315	457	210	710	216	134	315	40
-	132/150/160/185	90/100/132	75/90	315MB		508	130	600	662	315	457	210	710	216	157	315	40
-	132/150/160/185	90/100/132	75/90	315MC		508	130	600	662	315	457	210	710	216	157	315	40
FRAME SIZE	HD	K	KK	L	LE	SHAFT EXTENSION						BEARING		APPROX. WEIGHT KGS			
						D	E	ED	F	G	GA	DH	DRIVE END		OPPOSITE DRIVE END		
315MA	974	28	M75x1.5	1319	506	65	140	110	18	58	69	M20x40	6316C3	6316C3	1380		
315MB	974	28	M75x1.5	1349	506	85	170	140	22	76	90	M20x40	*6320C3	6316C3	1480		
315MC	974	28	M75x1.5	1349	506	85	170	140	22	76	90	M20x40	NU320	6316C3	1480		

- Note :
1. Tolerance of shaft end diameter D : m6.
 2. Tolerance of shaft center hight H : +0, -1
 3. * For Direct Flexible Coupling