

ISO9001



BONZER®

ENERGY-SAVING THREE PHASE ASYNCHRONOUS MOTOR

HIGH EFFICIENCY / PREMIUM EFFICIENCY

IE1 / IE2 / IE3

LOW NOISE
DURABLE



TROUBLESHOOTING

Although the electric motor has been factory tested, the following information is intended to serve as an aid in locating and eliminating defects and faults.

In some cases, such faults may be caused by the plant or machine to which the electric motor is assembled and hence, the cause and remedy will be described in the Manufacturer's technical documentation for the machine/plant in question.

FAULT	CAUSE	REMEDY
The motor does not start	Power failure	Inspect the cabling and protection devices
	Incorrect connections	Make sure the connections comply with the connection diagram
	Overload	Check the motor rating
	Stator short circuit	This will cause the cut-outs to trip. The motor must be repaired.
	Mechanical fault	Make sure the motor and driven machine rotate freely
The motor takes a long time to accelerate or does not come up to speed	Sudden power supply voltage drop	Check the connections and cross-section of the power cables
	Excessive load applied	Check the motor rating (load inertia and reactive torque)
	The motor is designed for delta connection, but has been connected in a star sequence	Change the connection
	Unsuitable power voltage or frequency	Compare the power supply rating with that of the motor itself
Incorrect direction of rotation	Incorrect connection	Swap two phases
The motor overheats	Overload	Reduce the load
	Insufficient cooling	Make sure the motor is well ventilated and clean the cooling fins
	Ambient temperature too high	Check the ambient conditions
	One motor phase interrupted	Check the connections
	Power voltage out of range or unbalanced phases	Check the power voltage or balance the phases
Protections tripped	Overload	Check the motor's power absorption and reduce load if necessary
	Stator short circuit	The motor must be repaired
	Defective connection	Repair connection
	Phase interrupted	Check power supply
Excessive running noise	Damaged bearings	Replace bearings
	Mechanical contact	Identify the parts in contact
Abnormal vibrations	Motor and driven shafts not properly aligned	Align
	Defective bearings	Replace bearings
	Rotating parts not balanced	Balance the rotating parts using the half key (rotor and coupled components)
Bearings overheated	Incorrect alignment	Align
	Bearings over loaded	Check overhung/thrust loads
	Bearings worn	Replace bearings

Dealer

Product overview

BZC series high efficiency three-phase asynchronous motor (80–355)

The BZC motor is designed to meet the requirements of the national energy saving and market needs research. Send high-efficiency motors, high efficiency, low noise, high torque, good starting performance, structure Compact, easy to use and maintain. This series of motors used in various fields of national economy; such as machine Beds, pumps, fans compressors, etc., can also be used for transport, mixing printing, agricultural, food and other class does not contain flammable, explosive or corrosive gas.



Operating ambient temperature: -15~+40°C

Altitude : not more than 1000 meters (over 1000 meters need special order)

Rated voltage : 380V

Rated frequency : 50Hz

Duty type : S1 (continuous), allows starting with full voltage

Insulation class : F (other class should order)

Protection class : IP55

Type of cooling : IC411

Power 4KW and below the Y connection over Δ connection



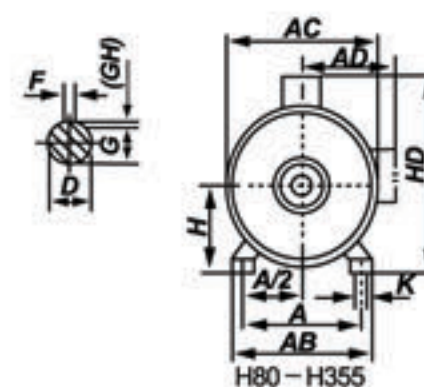
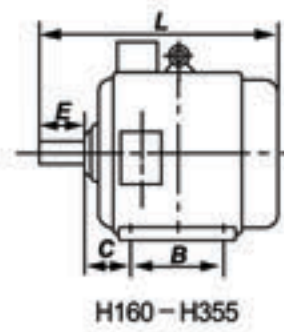
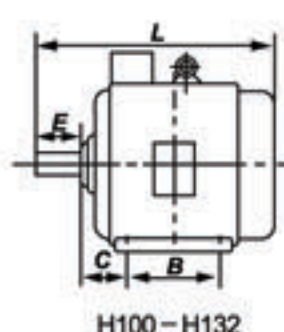
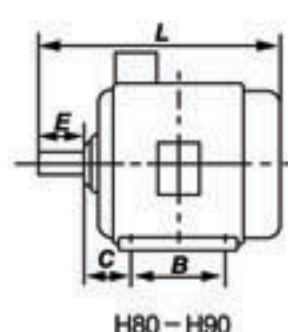
Technical data

Type	Rated Output		Current (A)	Speed (r/min)	Efficiency (%)	Power Factor	Mst	Mmax	Lst	Weight (Kg)
	KW	HP					Mn	Mn	In	
	synchronous speed 3000r/min 50Hz									
BZC-80M1-2	0.75	1.0	1.77	2865	77.4	0.83	2.3	2.3	6.8	14
BZC-80M2-2	1.1	1.5	2.43	2880	79.6	0.83	2.3	2.3	7.3	15
BZC-90S-2	1.5	2.0	3.19	2900	81.3	0.85	2.3	2.3	7.6	21
BZC-90L-2	2.0	3.0	4.59	2890	83.2	0.85	2.3	2.3	7.8	24
BZC-100L-2	3.0	4.0	6.05	2860	84.6	0.87	2.2	2.3	7.8	33
BZC-112M-2	4.0	5.5	7.9	2910	85.8	0.88	2.3	2.3	8.3	45
BZC-132S1-2	5.5	7.5	10.7	2920	87.0	0.88	2.2	2.3	8.3	61
BZC-132S2-2	7.5	10	14.5	2920	88.1	0.88	2.2	2.3	8.3	66
BZC-160M1-2	11	15	20.75	2942	89.4	0.89	2.2	2.3	7.9	107
BZC-160M2-2	15	20	28.05	2942	90.3	0.89	2.2	2.3	7.9	117
BZC-160L-2	18.5	25	34.02	2942	90.9	0.90	2.2	2.3	8.1	137
BZC-180M-2	22	30	40.3	2960	91.3	0.90	2.2	2.3	8.1	170
BZC-200L1-2	30	40	54.5	2965	92.0	0.90	2.2	2.3	7.5	228
BZC-200L2-2	37	50	66.9	2965	92.5	0.90	2.2	2.3	7.5	246
BZC-225M-2	45	60	81.1	2965	92.9	0.90	2.2	2.3	7.6	309
BZC-250M-2	55	75	98	2970	93.2	0.89	2.2	2.3	7.6	392
BZC-280S-2	75	100	132	2975	93.8	0.91	2.0	2.3	6.9	544
BZC-280M-2	90	125	158	2975	94.1	0.91	2.0	2.3	7.0	610
BZC-315S-2	110	150	194	2975	94.3	0.91	1.8	2.2	7.1	925
BZC-315M-2	132	175	231	2975	94.6	0.91	2.0	2.2	7.1	1040
BZC-315L1-2	160	220	280	2975	94.8	0.91	2.0	2.2	7.1	1130
BZC-315L2-2	200	270	350	2975	95.0	0.91	2.0	2.2	7.1	1200
BZC-355M-2	250	340	433	2980	95.0	0.92	1.6	2.2	7.1	1932
BZC-355L-2	315	430	545	2980	95.0	0.92	1.6	2.2	7.1	2135

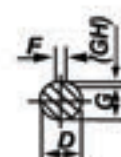
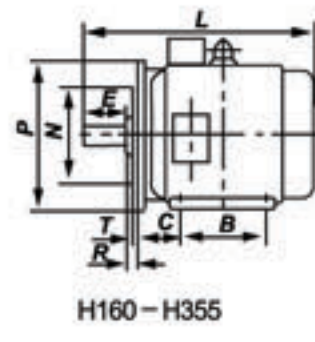
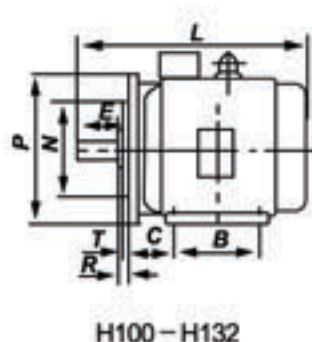
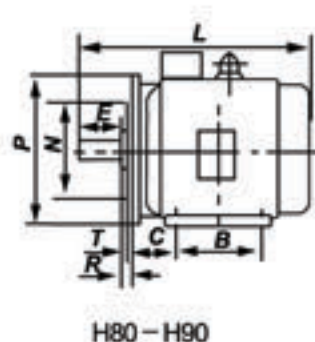
Technical data

Type	Rated Output		Current (A)	Speed (r/min)	Efficiency (%)	Power Factor	Mst Mn	Mmax Mn	Lst In	Weight (Kg)
	KW	HP								
synchronous speed 1500r/min 50Hz										
BZC-80M1-4	0.55	0.75	1.38	1435	79.6	0.75	2.3	2.3	6.3	14
BZC-80M2-4	0.75	1.0	1.85	1435	79.6	0.75	2.3	2.3	6.6	15
BZC-90S-4	1.1	1.5	2.59	1435	81.4	0.77	2.3	2.3	6.8	21
BZC-90L-4	1.5	2.0	3.48	1440	82.8	0.77	2.3	2.3	6.8	24
BZC-100L1-4	2.0	3.0	4.78	1410	84.3	0.81	2.3	2.3	7.4	33
BZC-100L2-4	3.0	4.0	6.37	1410	85.5	0.82	2.3	2.3	7.4	35
BZC-112M-4	4.0	5.5	8.4	1455	86.6	0.82	2.3	2.3	7.5	43
BZC-132S-4	5.5	7.5	11.3	1460	87.7	0.83	2.0	2.3	7.4	63
BZC-132M-4	7.5	10	15.1	1460	88.7	0.84	2.0	2.3	7.4	76
BZC-160M-4	11	15	21.86	1470	89.8	0.84	2.2	2.3	7.5	116
BZC-160L-4	15	20	29.21	1470	90.6	0.85	2.2	2.3	7.5	130
BZC-180M-4	18.5	25	35.4	1475	91.2	0.86	2.2	2.3	7.6	165
BZC-180L-4	22	30	42.0	1475	91.6	0.86	2.2	2.3	7.8	180
BZC-200L-4	30	40	56.8	1475	92.3	0.86	2.2	2.3	7.2	240
BZC-225S-4	37	50	69.1	1480	92.7	0.87	2.2	2.3	7.3	284
BZC-225M-4	45	60	83.7	1480	93.1	0.87	2.2	2.3	7.3	320
BZC-250M-4	55	75	102	1480	93.5	0.87	2.2	2.3	7.4	415
BZC-280S-4	75	100	138	1485	94.0	0.87	2.2	2.3	6.7	562
BZC-280M-4	90	125	165	1485	94.2	0.87	2.2	2.3	6.9	660
BZC-315S-4	110	150	199	1480	94.5	0.88	2.1	2.2	6.9	898
BZC-315M-4	132	175	239	1480	94.7	0.88	2.1	2.2	6.9	96
BZC-315L1-4	160	220	290	1480	94.9	0.88	2.2	2.2	6.9	1160
BZC-315L2-4	200	270	362	1480	95.1	0.88	2.1	2.2	6.9	1270
BZC-355M-4	250	340	442	1490	95.1	0.90	2.1	2.2	6.9	1914
BZC-355L-4	315	430	559	1490	95.1	0.90	2.1	2.2	6.9	2392
synchronous speed 1000r/min 50Hz										
BZC-90S-6	0.75	1.0	2.04	950	75.9	0.72	2.0	2.1	5.9	21
BZC-90L-6	1.1	1.5	2.87	950	78.1	0.73	2.0	2.1	5.9	24
BZC-100L-6	1.5	2.0	3.78	950	79.8	0.74	2.0	2.1	5.5	31
BZC-112M-6	2.2	3.0	5.3	955	81.8	0.76	2.1	2.1	6.2	45
BZC-132S-6	3.0	4.0	7.1	970	83.3	0.76	2.0	2.1	6.8	60
BZC-132M1-6	4.0	5.5	9.3	970	84.6	0.76	2.0	2.1	6.8	71
BZC-132M2-6	5.5	7.5	12.4	970	86.0	0.77	2.0	2.1	6.8	80
BZC-160M-6	7.5	10	16.63	976	87.2	0.77	2.1	2.1	6.7	110
BZC-160L-6	11	15	23.81	976	88.7	0.78	2.1	2.1	6.9	131
BZC-180L-6	15	20	31.0	980	89.7	0.81	2.1	2.1	7.2	173
BZC-200L1-6	18.5	25	37.9	980	90.4	0.81	2.1	2.1	7.2	220
BZC-200L2-6	22	30	43.8	980	91.9	0.83	2.1	2.1	7.5	233
BZC-225M-6	30	40	58.7	985	91.7	0.84	2.0	2.1	7.1	292
BZC-250M-6	37	50	71	980	92.2	0.85	2.1	2.1	7.1	382
BZC-280S-6	45	60	85	990	92.7	0.86	2.1	2.0	7.2	521
BZC-280M-6	55	75	104	990	93.1	0.86	2.1	2.0	7.2	581
BZC-315S-6	75	100	141	990	93.7	0.86	2.0	2.0	6.7	806
BZC-315M-6	90	125	168	990	94.0	0.86	2.0	2.0	6.7	958
BZC-315L1-6	110	150	205	990	94.3	0.86	2.0	2.0	6.7	990
BZC-315L2-6	132	175	242	990	94.6	0.87	2.0	2.0	6.7	1050
BZC-355M1-6	160	220	292	990	94.8	0.88	1.9	2.0	6.8	1518
BZC-355M2-6	200	270	365	990	95.0	0.88	1.9	2.0	6.8	1812
BZC-355L-6	250	340	457	990	95.0	0.88	2.0	2.0	6.8	2070
synchronous speed 750r/min 50Hz										
BZC-90S-8	0.55	0.75	2.17	670	63.0	0.61	1.8	2.0	4.0	28
BZC-90L-8	0.75	1.0	2.39	680	71.0	0.67	1.8	2.0	4.0	30
BZC-100L-8	1.1	1.5	3.32	680	73.0	0.69	1.8	2.0	5.0	32
BZC-112M-8	1.5	2.0	4.40	690	75.0	0.69	1.8	2.0	5.0	40
BZC-132S-8	2.2	3.0	6.00	705	78.0	0.71	1.8	2.0	6.0	58
BZC-132M1-8	3.0	4.0	7.90	705	79.0	0.73	1.8	2.0	6.0	68
BZC-132M2-8	4.0	5.5	10.3	720	81.0	0.73	1.9	2.0	6.0	98
BZC-160M-8	5.5	7.5	13.6	720	83.0	0.74	2.0	2.0	6.0	110
BZC-160L-8	7.5	10	17.8	720	85.5	0.75	2.0	2.0	6.0	132
BZC-180L-8	11	15	25.1	730	87.5	0.76	2.0	2.0	6.6	176
BZC-200L1-8	15	20	34.1	730	88.0	0.76	2.0	2.0	6.6	232
BZC-200L2-8	18.5	25	41.1	730	90.0	0.76	1.9	2.0	6.6	268
BZC-225M-8	22	30	47.4	730	90.5	0.78	1.9	2.0	6.6	288
BZC-250M-8	30	40	63.4	735	91.0	0.79	1.9	2.0	6.6	372
BZC-280S-8	37	50	77.8	735	91.5	0.79	1.9	2.0	6.6	472
BZC-280M-8	45	60	94.0	735	92.0	0.79	1.9	2.0	6.6	530
BZC-315S-8	55	75	111.2	735	92.8	0.81	1.8	2.0	6.6	804
BZC-315M-8	75	100	151.3	735	93.0	0.81	1.8	2.0	6.6	1000
BZC-315L1-8	90	125	177.8	735	93.8	0.82	1.8	2.0	6.6	1018
BZC-315L2-8	110	150	216.8	735	94.0	0.82	1.8	2.0	6.4	1118
BZC-355M1-8	132	175	261.0	740	93.7	0.82	1.8	2.0	6.4	1584
BZC-355M2-8	160	220	314.7	740	94.2	0.82	1.8	2.0	6.4	1734
BZC-355L-8	200	270	387.4	740	94.5	0.73	1.8	2.0	6.4	2250

Dimension drawing



Frame Number	Poles	Mounting Dimension(mm)									Outline Dimension(mm)										
		A	B	C	D	E	F	G	H	K	AB	AC	AD	HD	L						
80M	2/4/6/8	125	100	50	19	40	6	15.5	80	10	165	175	145	220	295						
90S		140	125	56	24	50	8	20	90		180	195	165	260	315						
90L		160		63	28	60		24	100		205	215	180	275	340						
100L		190	70	38	80	33		112	230	240	190	300	400								
112M		216	178		89	38	10	33	132	270	275	210	345	470							
132S		254	210	108	42	110	12	37	160	14.5	320	330	255	420	510						
132M			254												620						
160M		279	241	121	48										14	42.5	180	355	380	280	455
180L		279	279	121	48	110	14	42.5	180	14.5	355	380	280	455	740						
200L			318												305	133	55	16	49	200	395
225S	4	286	149	60	140										18	53	225	18.5	435	470	335
225M	2	356		55	110	16	49	815													
250M	4/6/8	406	349	168	60	140	53	250	24	490	510	370	615	845							
	2				58		280							930							
280S	4/6/8	457	368	190	65	140	20	280	24	550	580	410	680	981							
280M	2				75		18								58	20	67.5	1032			
315S	4/6/8	508	406	216	75	170	20	315	28	635	645	530	845	1185							
	2				80		22							71	1215						
315M	4/6/8	508	457	216	65	140	18	315	28	635	645	530	845	1295							
315L	2				80		22							71	1325						
355M	4/6/8	610	560	254	80	170	22	355	28	730	710	655	1010	1295							
	2				75		20							67.5	1495						
355L	4/6/8	630	560	254	95	170	25	355	28	730	710	655	1010	1525							
	2				95		86							1495							



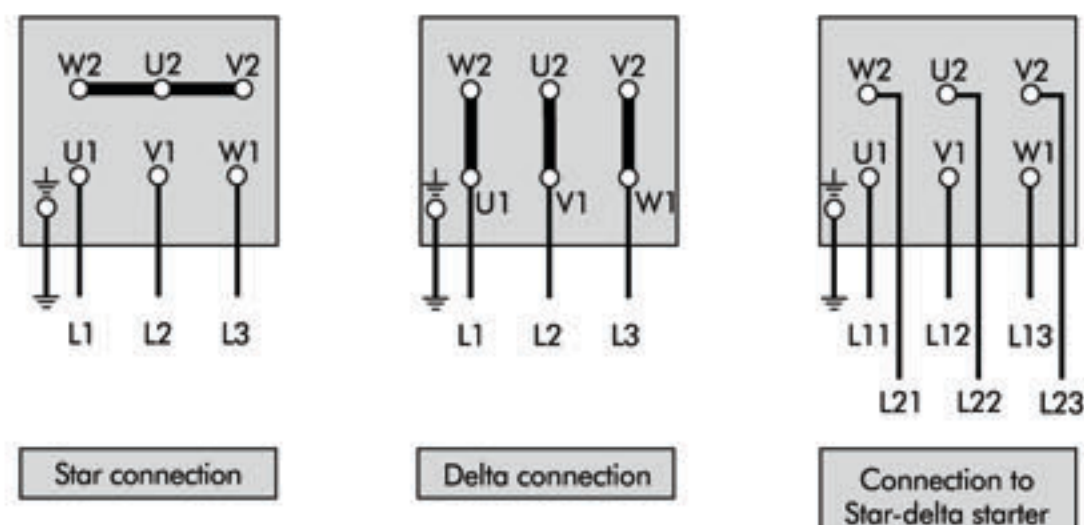
		Poles	(mm)																			
			A	B	C	D	E	F	G	H	K	M	N	P	S	T		AB	AC	AD	HD	L
80M	FF165	2 1/4 6/8	125	100	50	19	40	6	15.5	80	10	165	130	200	12	3.5	4	165	178	145	220	305
90S			140	125	56	24	50	8	20	90								12	215	180	250	14.5
90L			160		63	28	60		24	100	132	265	230	300	18.5	5						
100L	190		140	70	38	80	10	33	112	14.5								300	250	350	18.5	5
112M	216		178	89	42	110	12	37	160		18.5	350	300	400	18.5	5						
132S	254		210	108	48		14	42.5	180	18.5								400	350	450	18.5	5
132M	279		254	121	55	140	16	49	200		18.5	400	350	450	18.5	5						
160M	318		286	133	60		16	53	225	24								500	450	550	18.5	5
160L	2		356	149	55	110	16	49	250		58	280	550	18.5	5	435						
180M	4/6/8		406	349	168	60	140	18		53						280		550	550	18.5	5	490
180L	2		457	368	190	65		20	67.5	315	600	550	660	24	6							550
200L	4/6/8		508	406	216	75	18	58	28							600		550	660	24	6	595
225S	2	508	457	80		170	22	71		355	740	680	800	24	6		635					645
225M	4/6/8	508	508	85	170	22	71	355	740							680	800	24	6	675	690	575
250M	2	610	560	254	95	170	25			86	355	740	680	800	24					6	715	730
280S	4/6/8	630	630		95	170	25	86	355	740						680	800	24	6		755	770
280M	2	630	630	95	170	25	86	355			740	680	800	24	6					795	810	695
315S	4/6/8	630	630	95	170	25	86		355	740						680	800	24	6	835	850	735
315M	2	630	630	95	170	25	86	355			740	680	800	24	6					875	890	775
315L	4/6/8	630	630	95	170	25	86		355	740						680	800	24	6	915	930	815
355M	2	630	630	95	170	25	86	355			740	680	800	24	6					955	970	855
355L	4/6/8	630	630	95	170	25	86		355	740						680	800	24	6	995	1010	895
	2	630	630	95	170	25	86	355			740	680	800	24	6					1035	1050	935
	4/6/8	630	630	95	170	25	86		355	740						680	800	24	6	1075	1090	975
	2	630	630	95	170	25	86	355			740	680	800	24	6					1115	1130	1015
	4/6/8	630	630	95	170	25	86		355	740						680	800	24	6	1155	1170	1055
	2	630	630	95	170	25	86	355			740	680	800	24	6					1195	1210	1095
	4/6/8	630	630	95	170	25	86		355	740						680	800	24	6	1235	1250	1135
	2	630	630	95	170	25	86	355			740	680	800	24	6					1275	1290	1175
	4/6/8	630	630	95	170	25	86		355	740						680	800	24	6	1315	1330	1215
	2	630	630	95	170	25	86	355			740	680	800	24	6					1355	1370	1255
	4/6/8	630	630	95	170	25	86		355	740						680	800	24	6	1395	1410	1295
	2	630	630	95	170	25	86	355			740	680	800	24	6					1435	1450	1335
	4/6/8	630	630	95	170	25	86		355	740						680	800	24	6	1475	1490	1375
	2	630	630	95	170	25	86	355			740	680	800	24	6					1515	1530	1415
	4/6/8	630	630	95	170	25	86		355	740						680	800	24	6	1555	1570	1455
	2	630	630	95	170	25	86	355			740	680	800	24	6					1595	1610	1495
	4/6/8	630	630	95	170	25	86		355	740						680	800	24	6	1635	1650	1535
	2	630	630	95	170	25	86	355			740	680	800	24	6					1675	1690	1575
	4/6/8	630	630	95	170	25	86		355	740						680	800	24	6	1715	1730	1615
	2	630	630	95	170	25	86	355			740	680	800	24	6					1755	1770	1655
	4/6/8	630	630	95	170	25	86		355	740						680	800	24	6	1795	1810	1695
	2	630	630	95	170	25	86	355			740	680	800	24	6					1835	1850	1735
	4/6/8	630	630	95	170	25	86		355	740						680	800	24	6	1875	1890	1775
	2	630	630	95	170	25	86	355			740	680	800	24	6					1915	1930	1815
	4/6/8	630	630	95	170	25	86		355	740						680	800	24	6	1955	1970	1855
	2	630	630	95	170	25	86	355			740	680	800	24	6					1995	2010	1895
	4/6/8	630	630	95	170	25	86		355	740						680	800	24	6	2035	2050	1935
	2	630	630	95	170	25	86	355			740	680	800	24	6					2075	2090	1975
	4/6/8	630	630	95	170	25	86		355	740						680	800	24	6	2115	2130	2015
	2	630	630	95	170	25	86	355			740	680	800	24	6					2155	2170	2055
	4/6/8	630	630	95	170	25	86		355	740						680	800	24	6	2195	2210	2095
	2	630	630	95	170	25	86	355			740	680	800	24	6					2235	2250	2135
	4/6/8	630	630	95	170	25	86		355	740						680	800	24	6	2275	2290	2175
	2	630	630	95	170	25	86	355			740	680	800	24	6					2315	2330	2215
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	2	630	630	95	170	25	86	355			740	680	800	24	6					2395	2410	2295
	4/6/8	630	630	95	170	25	86		355	740						680	800	24	6	2435	2450	2335
	2	630	630	95	170	25	86	355			740	680	800	24	6					2475	2490	2375
	4/6/8	630	630	95	170	25	86		355	740						680	800	24	6	2515	2530	2415
	2	630	630	95	170	25	86	355			740	680	800	24	6					2555	2570	2455
	4/6/8	630	630	95	170	25	86		355	740						680	800	24	6	2595	2610	2495
	2	630	630	95	170	25	86	355			740	680	800	24	6					2635	2650	2535
	4/6/8	630	630	95	170	25	86		355	740						680	800	24	6	2675	2690	2575
	2	630	630	95	170	25	86	355			740	680	800	24	6					2715	2730	2615
	4/6/8	630	630	95	170	25	86		355	740						680	800	24	6	2755	2770	2655
	2	630	630	95	170	25	86	355			740	680	800	24	6					2795	2810	2695
	4/6/8	630	630	95	170	25	86		355	740						680	800	24	6	2835	2850	2735
	2	630	630	95	170	25	86	355			740	680	800	24	6					2875	2890	2775
	4/6/8	630	630	95	170	25	86		355	740						680	800	24	6	2915	2930	2815
	2	630	630	95	170	25	86	355			740	680	800	24	6					2955	2970	2855
	4/6/8	630	630	95	170	25	86		355	740						680	800					

High reliability, Low noise

MOTOR FEATURES

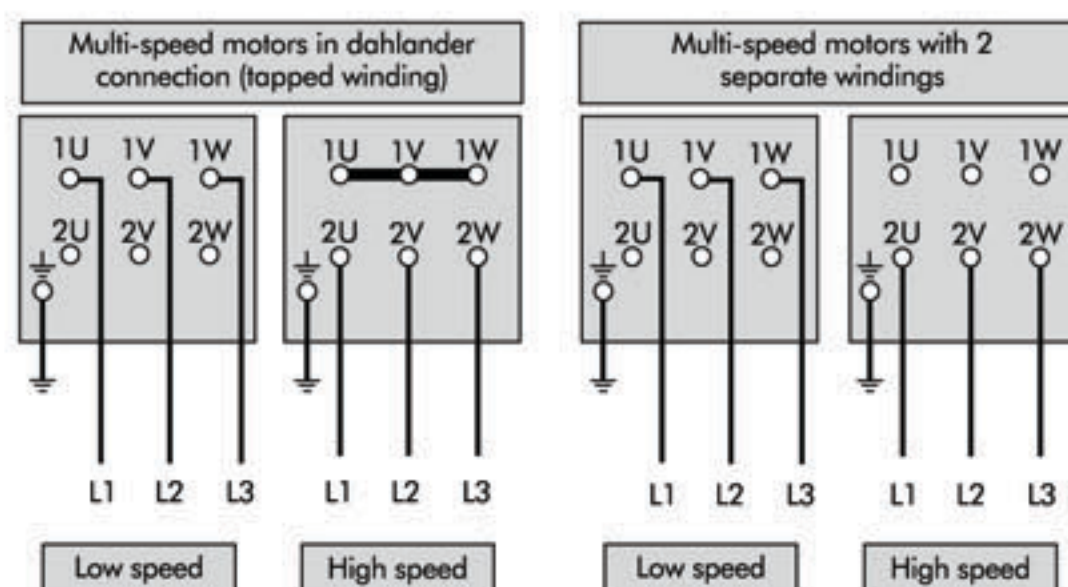
- IP 55 enclosures, others upon request
- Class F insulation. Class H available on request
- 380V-420V/440V-480V. 50/60Hz windings
- High quality copper wire
- Vacuum varnish impregnation for tropic proof insulation
- Continuous S I operation
- Industrial type service factors
- Heavy duty ball bearings
- Strong cast iron housing
- Balanced rotors

CONNECTION DIAGRAMS

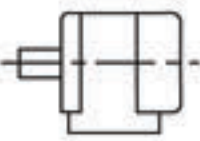
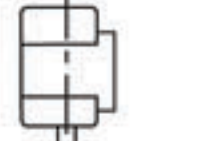
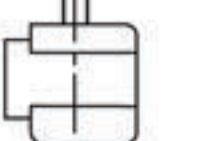


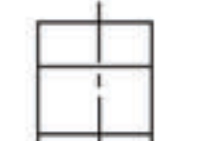
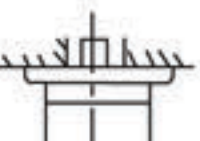
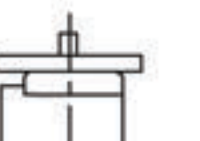
CUSTOMER BENEFITS

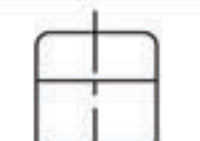
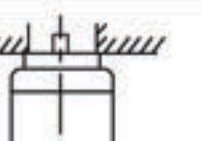
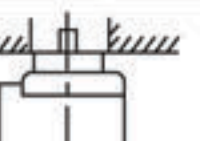
- Water dust and vermin resistant
- Low noise
- Corrosion resistant
- Suitable for most environments
- Very low vibration
- Very low power consumption
- Reliable and longer motor life span



MOUNTING ARRANGEMENTS

Fundamental arrangement	B3					
Mounting arrangement	B3	B6	B7	B8	V5	V6
Diagram						
Range of Manufacture (Frame Size)	63 - 355	63 - 160				

Fundamental arrangement	B5			B35		
Mounting arrangement	B5	V1	V3	B35	V15	V36
Diagram						
Range of Manufacture (Frame Size)	63 - 280	63 - 355	63 - 160	63 - 355	63 - 160	

Fundamental arrangement	B14					
Mounting arrangement	B14	B34	V18	V58	V19	V69
Diagram						
Range of Manufacture (Frame Size)	63 - 132					