Jinbo Marine

Marine & Offshore Equipment Datasheet

PRODUCT DATASHEET

MARINE ELECTRIC MOTOR

YVF2-H Series Variable Frequency Adjustable Speed Marine

ISO9001 Supplier

Class Certificate

Export Supply

Introduction YVF2-H Series Variable Frequency Adjustable Speed Marine use Three Phase Induction Motor is AC high-efficiency and energy-saving adjustable speed motor. Equipped with the frequency converter, it is a n...

Key Highlights

Category	Marine Electric Motor
Standard	DIN
Material	YVF2-H series are designed according to IEC60034-1《Rotating electrical m...
Weight / Size	YVF2-H series are designed according to IEC60034-1《Rotating electrical m...
Certificate	CCS/LR/DNV/KR

We can supply according to your requirement, drawings, class certificate needs, and delivery schedule.

Technical Specifications

Category	Marine Electric Motor	**Model / SKU**	YVF2-H-Series-Variable-Frequency-Adjustable-Speed-Marine
Standard	DIN	**Material**	YVF2-H series are designed according to IEC60034-1 《Rotating electrical machines—Rating and Performance》and the existing 《Rules for the construction of sea-going steel ships》The motors are also complied with the relevant requirements of the following standards and specifications. IEC60034 Rotating electrical machines IEC60068 Environmental testing IEC60072 Dimensions and output ratings for rotating electrical machines IEC60092 marine electric accessories The motors are also in conformity with some parts of the following Ship Classification Societies:
Weight / Size	YVF2-H series are designed according to IEC60034-1 《Rotating electrical machines—Rating and Performance》and the existing 《Rules for the construction of sea-going steel ships》The motors are also complied with the relevant requirements of the following standards and specifications. IEC60034 Rotating electrical machines IEC60068 Environmental testing IEC60072 Dimensions and output ratings for rotating electrical machines IEC60092 marine electric accessories The motors are also in conformity with some parts of the following Ship Classification Societies:	**Certificate**	CCS/LR/DNV/KR
Warranty	12 Months unless specified otherwise	**Origin**	China

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Introduction

YVF2-H Series Variable Frequency Adjustable Speed Marine use Three Phase Induction Motor is AC high-efficiency and energy-saving adjustable speed motor. Equipped with the frequency converter, it is a new product for speed regulation of mechanical integration. It offer such features as low noise and vibration, high starting torque, small starting current, simple construction, reliable working, convenient maintenance and wide usage scope etc. Flat and step less speed regulation can be done in 3(5)~100Hz or more. It is equipped with an independent forced cooling fan. Best cooling effort has been got at any speed. It is suitable for driving various machines on ships such as pumps, blowers, separators, hydraulic engines and other auxiliary equipment.

YVF2-H series are designed according to IEC60034-1《Rotating electrical machines—Rating and Performance》and the existing 《Rules for the construction of sea-going steel ships》The motors are also complied with the relevant requirements of the following standards and specifications.

IEC60034 Rotating electrical machines

IEC60068 Environmental testing

IEC60072 Dimensions and output ratings for rotating electrical machines

IEC60092 marine electric accessories

The motors are also in conformity with some parts of the following Ship Classification Societies:

LR Lloyd’s Register of Shipping

GL Germanischer Lloyd

NK Nippon Kaiji Kyokai

BV Bureau Veritas

KR Korea Register of shipping

RINA Registro Italiano Navale

ABS American Bureau of Shipping

Type Designation

The type designation is consisted of several letters and digits

Bearing

The type and size of bearings used in these motors are given in table 1.

Table 1

Frame Size	No. of Poles	Bearings		
		Driving end		Non-Driving end
		B3、B5、B35	VI	
80	4.6	6204-2RS/C3		6204-2RS/C3
90	4.6	6205-2RS/C3		6205-2RS/C3
100	4.6	6206-2RZ/C3		6206-2RZ/C3
112	4, 6, 8	6206-2RZ/C3		6206-2RZ/C3
132	4, 6, 8	6208-2RZ/C3		6208-2RZ/C3
160	4, 6, 8	6309-2RZ/C3		6309-2RZ/C3
180	4, 6, 8	6311/C3		6311/C3
200	4, 6, 8	6312/C3		6312/C3
225	4, 6, 8	6313/C3		6312/C3
250	4, 6, 8	6314/C3		6313/C3
280	4, 6, 8	6317/C3		6314/C3
315	4, 6, 8	6319/Z2	7319ACJ	6319/Z2
355	4, 6, 8	6322/Z2	7322ACJ	6322/Z2

Ambient Temperature: 0℃ ~45℃

Altitude: 0m

Relative humidity ≤ 95%

Frozen Dew:Exist

Salt mist:Exist

Oil mist: Exist

Fungus :Exist

Shock :Exist

Vibration: Exist

Inclination and Swing:±22.5°

Voltage and Frequency

Rated voltage: 380V

Rated frequency: 50Hz

Range of Frequency

The frame of motors from 80 to 225 that permanent torque range of frequency is 5~50Hz, and the permanent power range of frequency is 50~100Hz. The frame of motors from 250 to 355 that permanent torque range of frequency is 3~50Hz, and the permanent power range of frequency is 50~100Hz.

Duty type

（S1）Continuous

Insulation, Temperature Rise

Insulation F

Temperature Rise of winding (Resistance method): 100K

Allowable working temperature of bearing: 90℃

Noise

When using Frequency converter as power supply, the noise limits (A sound power level) of the motors measured at the no-load conditions are given in Table 2

Table 2

Power kW	Synchronous Speed r/min		
	1500	1000	750
	Sound Power Level dB(A)		
0. 55	79	79	79
0.75			
1.1			
1.5	83	83	83
2.2			
3	87	87	87
4			
5.5	91	91	91
7.5			
11	93	93	93
15			
18.5			
22	98	98	98
30	101	101	101
37			

45	103	103	103
55			
75	105	105	105
90			
110	107	107	107
132			
160	109	109	109
200			
250	111	——	——
315			
355	113	113	113

Vibration

When using Frequency converter as power supply, the effective values of vibration intensity bound which measured at no-load conditions, do not exceed those given in table 3.

Table 3

Frame size	≤ 132	> 132 ～225	> 225 ～500
Vibration intensity bound mm/s	1.8	2.8	3.5

Mounting arrangements

Mounting arrangements are available for various frame sizes shown in Table 4. According to the customer’s requirements, we can also provide other mounting type s of motors.

B3 Horizontal, foot-mounted

B5 Horizontal flange-mounted

B35 Horizontal, foot and flange mounted

V1 Vertical, flange mounted

Frame size	(IM) Mounting Arrangements
80 ～280	B3, B5, B35, VI
315 ～355	B3, B35, VI

Technical Data

Technical data for motors are given in table5 ~ 7，According to the customer’s special request, our company can produce even poles motor.

Table 5 (4 poles)

Frame size	Rated power (kW)	Rated Current(A)	Rated torque(N • m)	Max torque / Rated torque	Permanent torque range of frequency (Hz)	Permanent power range of frequency (Hz)

YVF2-80M1-4-H	0. 55	1.5	3.5	2.3	5~50	50 ～100
YVF2-80M2-4-H	0.75	2.1	4.7			
YVF2-90S-4-H	1.1	2.7	7.0			
YVF2-90L-4-H	1.5	3.6	9.5			
YVF2-100Lr4-H	2.2	5.0	14.0			
YVF2-100L2-4-H	3	6.8	19.0			
YVF2-112M-4-H	4	8.9	25.4			
YVF2-132S-4-H	5.5	11.7	35.0			
YVF2-132M-4-H	7.5	15.4	47.7			
YVF2-160M-4-H	11	22.6	70.0			
YVF2-160L-4-H	15	30.5	95.5			
YVF2-180M-4-H	18.5	35.9	117.1			
YVF2-180L-4-H	22	42.2	140.9			
YVF2-200L-4-H	30	57.3	190.9			
YVF2-225S-4-H	37	70.2	235.5			
YVF2-225M-4-H	45	84.0	286.4			
YVF2-250M-4-H	55	104	350.1		3~50	
YVF2-280S-4-H	75	139	477.7			
YVF2-280M-4-H	90	164	572.9			
YVF2-315S-4-H	110	201	700.2	2.2		
YVF2-315M-4-H	132	240	840.3			
YVF2-315Lr4-H	160	289	1018			
YVF2-315L2-4-H	200	361	1273			
YVF2-355M-4-H	250	464	1592			
YVF2-355L-4-H	315	582	2005			

Table 6 (6 poles)

Frame size	Rated power (kW)	Rated Current(A)	Rated torque(N • m)	Max torque/ Rated torque	Permanent torque range of frequency (Hz)	Permanent power range of frequency (Hz)

YVF2-90S-6-H	0.75	2.2	7.2	2.1	5~50	50 ～100
YVF2-90L-6-H	1.1	3.2	10.5			
YVF2-100L-6-H	1.5	4.0	14.3			
YVF2-112M-6-H	2.2	5.8	21.0			
YVF2-132S-6-H	3	7.2	28.7			
YVF2-132M1-6-H	4	9.5	38.2			
YVF2-132M2-6-H	5.5	12.5	52.5			
YVF2-160M-6-H	7.5	17.1	71.6			
YVF2-160L-6-H	11	25.0	105.1			
YVF2-180L-6-H	15	33.0	143.2			
YVF2-200L16-H	18.5	37.6	176.7			
YVF2-200L2-6-H	22	44.7	210.1			
YVF2-225M-6-H	30	61.1	286.5			
YVF2-250M-6-H	37	71.0	353.4		3~50	
YVF2-280S-6-H	45	86.4	429.8	2.0		
YVF2-280M-6-H	55	103	525.3			
YVF2-315S-6-H	75	141	716.3	2.0	3~50	50 ～100
YVF2-315M-6-H	90	169	859.5			
YVF2-315L1-6-H	110	205	1051			
YVF2-315L2-6-H	132	246	1261			
YVF2-355M1-6-H	160	302	1528			
YVF2-355M2-6-H	200	377	1910			
YVF2-355L-6-H	250	469	2388			

Table 7 (8 poles)

Frame size	Rated power (kW)	Rated Current(A)	Rated torque (N • m)	Max torque/ Rated torque	Permanent torque range of frequency (Hz)	Permanent power range of frequency (Hz)

YVF2-132S-8-H	2.2	5.8	28.0	2.0	5~50	50 ～100
YVF2-132M-8-H	3	7.6	38.2			
YVF2-160M1-8-H	4	10.5	50.9			
YVF2-160M2-8-H	5.5	13.4	70.0			
YVF2-160L-8-H	7.5	17.7	95.5			
YVF2-180L-8-H	11	25.6	140.1			
YVF2-200L-8-H	15	33.3	191.0			
YVF2-225S-8-H	18.5	40.3	235.6			
YVF2-225M-8-H	22	47.4	278.1			
YVF2-250M-8-H	30	64.7	382.0		3~50	
YVF2-280S-8-H	37	79.8	471.1			
YVF2-280M-8-H	45	94.8	573.0			
YVF2-315S-8-H	55	114	700.3			
YVF2-315M-8-H	75	152	955.0			
YVF2-315L1-8-H	90	179	1146			
YVF2-315L2-8-H	110	218	1400			
YVF2-355M1-8-H	132	265	1681			
YVF2-355M2-8-H	160	320	2037			
YVF2-355L-8-H	200	399	2547			

Mounting and Overall Dimensions

Various mounting types and overall dimensions are shown respectively in Table.8 to 11

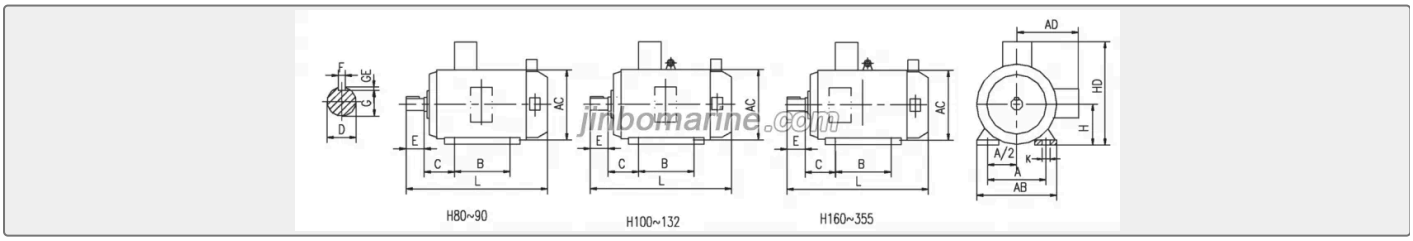

Table 8 foot-mounted without flange（IMB3）

Frame Size	Mounting Dimensions									Overall Dimensions				
	A	B	C	D	E	F	G	H	K	AB	AC	AD	HD	L
	Basic dimension	Basic dimension	Basic dimension	Basic dimension	Basic dimension	Basic dimension	Basic dimension	Basic dimension	Basic dimension					
80M	125	100	50	19	40	6	15.5	80	10	165	165	145	220	370
90S	140		56	24	50	8	20	90		180	195	155	250	400
90L		125												430
100L	160	140	63	28	60		24	100	12	205	215	180	270	465
112M	190		70			10		112		230	240	190	300	490
132S	216		89	38	80		33	132		270	275	210	345	530
132M		178												575
160M	254	210	108	42	110	12	37	160	15	320	330	255	420	660
160L		254												715
180M	279	241	121	48		14	42.5	180		355	380	280	455	810
180L		279												850

200L	318	305	133	55		16	49	200	19	395	420	305	505	890
225S	356	286	149	60	140	18	53	225		435	470	335	560	930
225M		311				18								970
250M	406	349	168	65			58	250	24	490	510	370	615	10500
280S	457	368	190	75		20	67.5	280		550	580	410	680	11000
280M		419				20	71							11800
315S	508	406	216	80	170	22	71	315	28	635	645	530	845	13300
315M		457												13900
315L		508												14800
355M	610	560	254	95	170	25	86	355		730	730	655	1100	17500
355L		630												18000

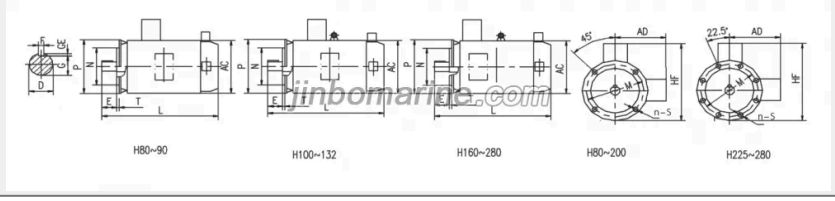

Table 9 Flange-mounted without foot（IMB5）

Frame Size	Mounting Dimensions										Overall Dimensions			
	D	E	F	G	M	N	P	S	T	n	AC	AD	HF	L
	Basic dimension	Basic dimension	Basic dimension	Basic dimension		Basic dimension		Basic dimension	Basic dimension					
80M	19	40	6	15.5	165	130	200	12	3.5	4	175	145	185	370
90S	24	50	8	20							195	155	195	400
90L														430
100L	28	60		24	215	180	250	15	4.0		215	180	245	465
112M											240	190	265	490
132S	38	80	10	33	265	230	300				275	210	315	530
132M														575

160M	42	110	12	37	300	250	350	19	5.0		330	255	385	660
160L														715
180M	48		14	42.5							380	280	430	810
180L														850
200L	55		16	49	350	300	400				420	305	480	890
225S	60	140	18	53	400	350	450			8	470	335	535	930
225M														970
250M	65			58	500	450	550				510	370	595	10060
280S	75		20	67.5							580	410	650	11000
280M														11180

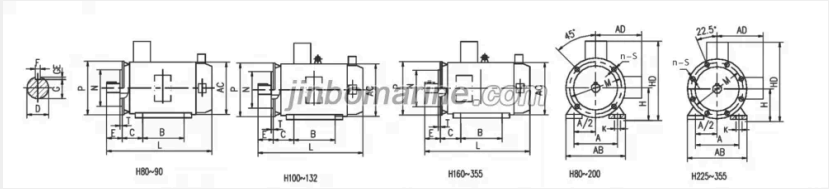

Table 10 Flange-mounted without foot（IMB35）

Frame Size	Mounting Dimensions															Overall Dimensions				
	A	B	C	D	E	F	G	H	K	M	N	P	S	T	n	AB	AC	AD	HD	L
	Basic dimension	Basic dimension	Basic dimension	Basic dimension	Basic dimension	Basic dimension	Basic dimension	Basic dimension	Basic dimension		Basic dimension		Basic dimension	Basic dimension						

80M	125	100	50	19	40	6	15.5	80	10	165	130	200	12	3.5	4	165	175	145	220	370
90S	140		56	24	50	8	20	90								180	195	155	250	400
90L		125																		430
100L	160	140	63	28	60		24	100	12	215	180	250	15	4.0		205	215	180	270	465
112M	190		70					112								230	240	190	300	490
132S	216		89	38	80	10	33	132		265	230	300				270	275	210	345	530
132M		178																		575

160M	254	210	108	42	110	12	37	160	15	300	250	350	19	5.0		330	330	255	420	660
160L		254																		715
180M	279	241	121	48		14	42.5	180								355	380	280	455	810
180L		279																		850
200L	318	305	133	55		16	49	200	19	350	300	400				395	420	305	505	890
225S	356	286	149	60	140	18	53	225		400	350	450			8	435	470	335	560	930
225M		311																		970
250M	406	349	168	65			58	250	24	500	450	550				490	510	370	615	10550
280S	457	368	190	75		20	67.5	280								550	580	410	680	11000
280M		419																		11800

315S	508	406	216	80	170	22	71	315	28	600	550	660	24	6.0		635	645	530	845	1330
315M		457																		1390
315L		508																		1480
355M	610	560	254	95		25	86	355	28	740	680	800	24	6.0	8	730	710	655	1100	1750
355L		630																		1800

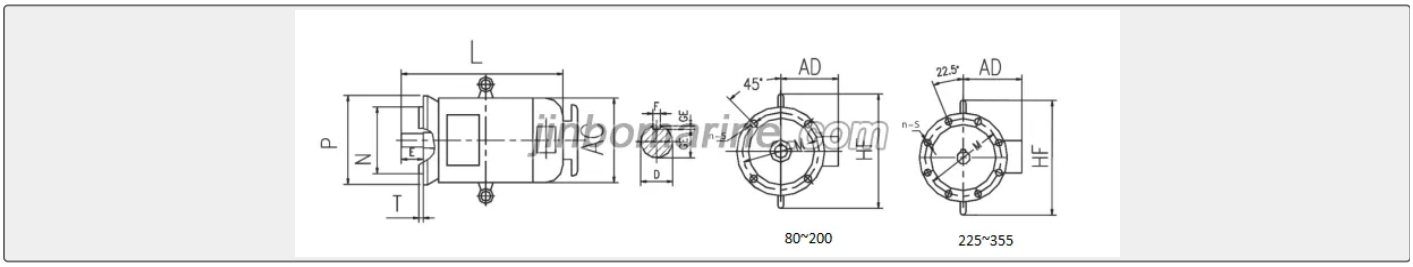

Table 11 Vertical, flange mounted (through hole) (IMV1)

Frame Size	Mounting Dimensions										Overall Dimensions			
	D	E	F	G	M	N	P	S	T	n	AC	AD	HF	L
	Basic dimension	Basic dimension	Basic dimension	Basic dimension		Basic dimension		Basic dimension	Basic dimension					

80	19	40	6	15.5	165	130	200	12	3.5	4	165	175	260	370
90S	24	50	8	20							180	180	270	400
90L														430
100L	28	60		24	215	180	250	15	4.0		205	195	300	465
112M											230	205	320	490
132S	38	80	10	33	265	230	300				270	265	380	530
132M														575

160M	38	110	12	37	300	250	350	19	5.0	325	270	450	660
160L													715
180M	48		14	42.5						380	280	500	788
180L													820
200L	55		16	49	350	300	400			420	305	550	960

225S	60	140	18	53	400	350	450			8	470	335	610	10200
225M														10600
250M	65			58	500	450	550				510	370	650	11600
280S	75		20	67.5							580	410	720	12200
280M														13000
315S	80	170	22	71	600	550	660	24	6.0		645	530	900	15300
315M														15200
315L														16100
355M	95	170	25	86	740	680	800				710	655	1100	18900
355L														19400