

WVF Series

Three Phase Inverter Duty
Asynchronous Cast Iron Motors

WVF Series

Three Phase Inverter Duty
Asynchronous Cast Iron Motors



General Information:

WVF Series motors are three phase induction motors for inverter duty application, which is one of typical motor applications of energy-saving. Advanced electromagnetic calculation and special insulation system ensure motors to be suitable for inverter power supply system.

Wonder three phase asynchronous motors are widely applied in general machinery and industries such as pumps & water treatment, road machinery, petroleum, chemical & metallurgy, cement and paper making.

Technical Characteristics:

- IP55 protection, class F insulation, B-level temperature rise, S1 duty;
- Rated voltage 400V;
- Rated frequency 50Hz;
- Operation ambient temperature: -20°C~40°C;
- Operation altitude ≤1000m.
- Y-connection for motors up to 3kW,
Δ-connection for 4kW and above.
- Cooling method: IC411/IC416.

Mounting Arrangements:

Types	Basic Type of Construction	Derived Types of Construction				
WVF 80-355	IM B3 IM 1001	IM V5 IM 1011	IM V6 IM 1031	IM B6 IM 1051	IM B7 IM 1061	IM B8 IM 1071
	IM B35 IM 2001	IM V15 IM 2011	IM V36 IM 2031	* IM 2051	* IM 2061	* IM 2071
WVF 80-355	IM B5 IM 3001	IM V1 IM 3011	IM V3 IM 3031			

Basic types of construction may be used in all derived types of construction.

1) "*" means not-defined mounting by IEC 60034-7.

2) for the types of construction IM V6, IM B6, IM B8 inquiry is necessary.

Technical Specifications (1/3)

Frame Size	Nominal Power kW	Rated Current 50Hz 400V A	Rated Torque N·m	Weight kg	
				IC411	IC416
1500r/m (4 Pole) 50Hz					
80	0.55	1.62	3.50	17.00	20.00
80	0.75	2.10	4.80	18.00	21.00
90S	1.10	2.85	7.00	22.00	24.00
90L	1.50	3.70	9.50	28.00	29.00
100L1	2.20	5.23	14.00	34.00	36.00
100L2	3.00	6.75	19.00	38.00	40.00
112M	4.00	8.75	25.50	44.00	48.00
132S	5.50	11.80	35.00	61.00	70.00
132M	7.50	6.10	47.50	73.00	82.00
160M	11.00	22.50	70.00	113	125
160L	15.00	30.00	95.50	133	145
180M	18.50	36.00	117.80	167	187
180L	22.00	42.60	140.00	181	201
200L	30.00	57.50	191.00	232	257
225S	37.00	70.00	235.50	287	317
225M	45.00	85.00	286.50	322	352
250M	55.00	104.00	350.10	381	411
280S	75.00	139.50	477.50	510	545
280M	90.00	166.50	527.90	600	635
315S	110.00	201.00	700.30	921	961
315M	132.00	240.00	840.30	1002	1042
135L1	160.00	288.00	1018.60	1070	1110
315L2	200.00	360.00	1273.20	1181	1221
355M	250.00	442.00	1591.50	1720	1765
355L1	280.00	495.00	1782.50	1850	1895
355L2	315.00	555.00	2005.30	1950	1995

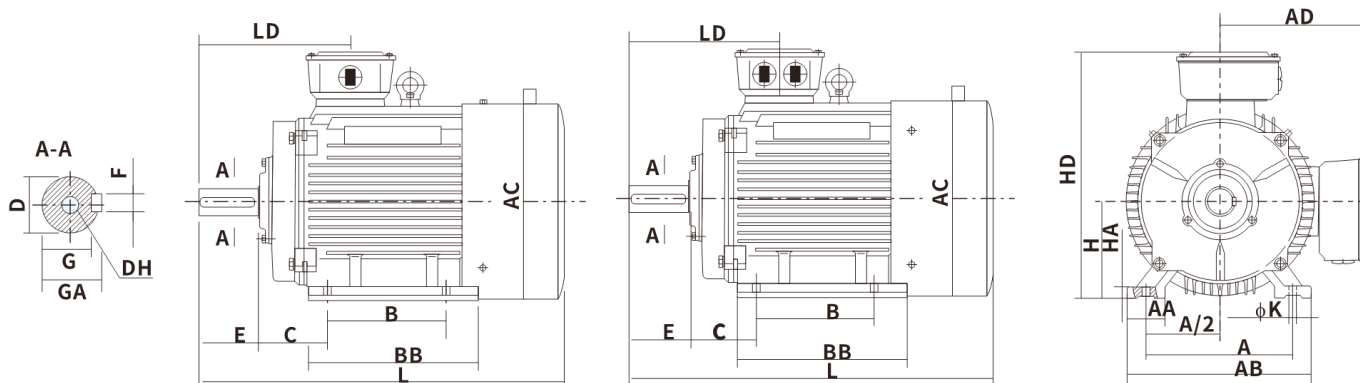
Technical Specifications (2/3)

Frame Size	Nominal Power kW	Rated Current 50Hz 400V A	Rated Torque N·m	Weight kg	
				IC411	IC416
1000r/m (6 Pole) 50Hz					
80	0.37	1.35	3.50	18	16
80	0.55	1.80	5.30	20	18
90S	0.75	2.30	7.20	25	23
90L	1.10	3.30	10.50	29	25
100L	1.50	4.00	14.30	36	33
112M	2.20	5.60	21.00	43	39
132S	3.00	7.40	28.6	64	56
132M1	4.00	9.80	38.2	79	71
132M2	5.50	12.90	52.5	83	75
160M	7.50	17.20	71.6	120	108
180L	11.00	24.50	105.0	143	131
180L	15.00	32.00	143.20	191	171
200L1	18.50	39.00	176.7	246	216
200L2	22.00	45.00	210.1	255	225
225M	30.00	59.50	286.5	322	292
250M	37.00	70.00	353.3	438	408
280S	45.00	85.70	429.7	500	465
280M	55.00	104.40	525.20	575	540
315S	75.00	142.00	716.2	901	861
315M	90.00	169.00	859.4	980	940
135L1	110.00	206.00	1050.4	1150	1110
315L2	132.00	244.00	1260.5	1215	1175
355M1	160.00	292.00	1527.8	1735	1690
355M2	200.00	364.00	1909.80	1915	1870
355L	250.00	455.00	2387.3	2025	1980

Technical Specifications (3/3)

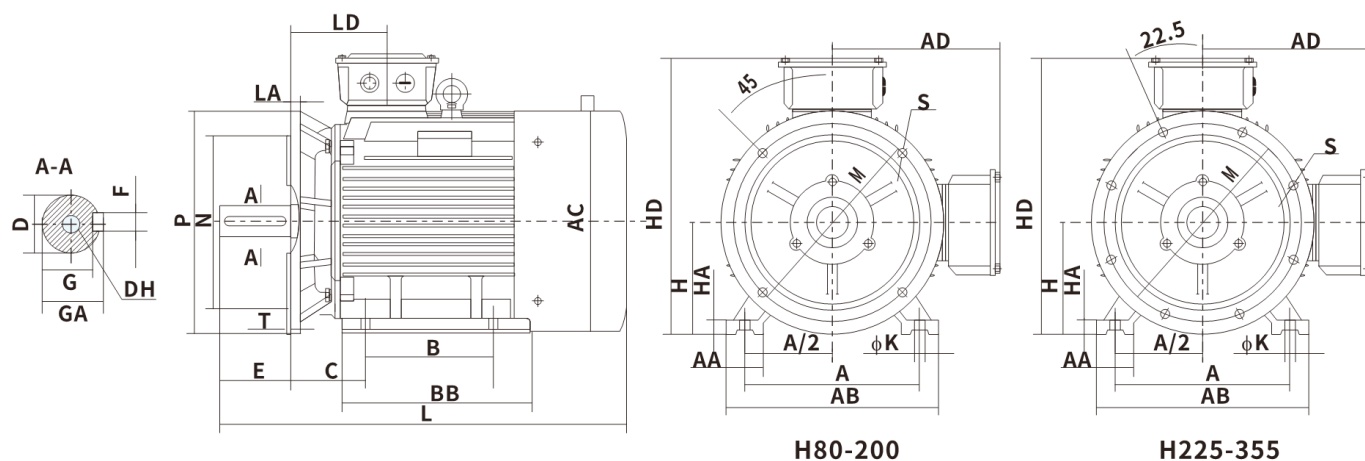
Frame Size	Nominal Power kW	Rated Current 50Hz 400V A	Rated Torque N·m	Weight kg	
				IC411	IC416
750r/m (8 Pole) 50Hz					
80	0.18	0.90	2.30	19.00	17.00
80	0.25	1.15	3.20	20.00	18.00
90S	0.37	1.50	4.70	29.00	25.00
90L	0.55	2.20	7.00	32.00	28.00
100L1	0.75	2.10	9.50	39.00	35.00
100L2	1.10	3.30	14.00	40.00	36.00
112M	1.50	4.40	19.10	45.00	41.00
132S	2.20	6.00	28.00	70.00	62.00
132M	3.00	7.90	38.20	74.00	66.00
160M1	4.00	10.30	50.90	106	94
160M2	5.50	13.60	70.00	118	106
160L	7.50	17.80	95.50	140	128
180L	11.00	25.50	140.00	190	170
200L	15.00	34.00	191.00	255	230
225S	18.50	41.00	235.50	297	272
225M	22.00	47.50	280.10	319	294
250M	30.00	63.30	382.00	395	370
280S	37.00	77.60	471.10	510	475
280M	45.00	94.00	572.90	590	555
315S	55.00	111.00	700.30	945	905
315M	75.00	151.00	954.90	1021	981
135L1	90.00	178.00	1145.90	1141	1071
315L2	110.00	216.00	1400.50	1200	1160
355M1	132.00	261.00	1680.60	1845	1800
355M2	160.00	315.00	2037.10	1935	1890
355L	200.00	386.00	2546.40	2085	2040

B3 Mounting and Overall Dimensions



Frame Size	Mounting and Overall Dimensions (mm)																			
	A	B	C	D	E	F	G	H	K	DH	GA	AA	AB	AC	AD	HD	BB	LD	HA	L
80	125	100	50	19	40	6	15.5	80	10	M6×16	21.5	35	165	175	145	220	130	75	12	340
90S	140	100	56	24	50	8	20.0	90	10	M8×20	27.0	36	180	195	155	250	140	75	12	390
90L	140	125	56	24	50	8	20.0	90	10	M8×20	27.0	36	180	195	155	250	165	75	12	415
100L	160	140	63	28	60	8	24.0	100	12	M10×25	31.0	40	205	215	180	270	175	83	14	450
112M	190	140	70	28	60	8	24.0	112	12	M10×25	31.0	45	230	240	190	300	180	87	15	465
132S	216	140	89	38	80	10	33.0	132	12	M12×30	41.0	55	270	275	210	345	190	102	18	515
132M	216	178	89	38	80	10	33.0	132	12	M12×30	41.0	55	270	275	210	345	230	102	18	555
160M	254	210	108	42	110	12	37.0	160	15	M16×36	45.0	65	320	330	255	420	260	146	20	650
160L	254	254	108	42	110	12	37.0	160	15	M16×36	45.0	65	320	330	255	420	305	146	20	690
180M	279	241	121	48	110	14	42.5	180	15	M16×36	51.5	70	355	380	280	455	315	161	22	720
180L	279	279	121	48	110	14	42.5	180	15	M16×36	51.5	70	355	380	280	455	350	161	22	755
200L	318	305	133	55	110	16	49.0	200	19	M20×42	59.0	70	395	420	305	505	370	186	25	835
225S	356	286	149	60	140	18	53.0	225	19	M20×40	64.0	75	435	470	335	560	370	189	28	895
225M	356	311	149	60	140	18	53.0	225	19	M20×40	64.0	75	435	470	335	560	395	189	28	920
250M	406	349	168	65	140	18	58.0	250	24	M20×42	69.0	80	490	510	370	615	445	207	30	1000
280S	457	368	190	75	140	20	67.5	280	24	M20×42	79.5	85	550	580	410	680	490	215	35	1105
280M	457	419	190	75	140	20	67.5	280	24	M20×42	79.5	85	550	580	410	680	540	215	35	1155
315S	508	406	216	80	170	22	71.0	315	28	M20×46	85.0	120	635	645	530	845	570	257	45	1280
315M	508	457	216	80	170	22	71.0	315	28	M20×46	85.0	120	635	645	530	845	680	257	45	1390
315L	508	508	216	80	170	22	71.0	315	28	M20×46	85.0	120	635	645	530	845	680	257	45	1390
355M	610	560	254	95	170	25	86.0	355	28	M24×56	100.0	120	730	720	655	1010	750	284	52	1570
355L	610	630	254	95	170	25	86.0	355	28	M24×56	100.0	120	730	720	655	1010	750	284	52	1570

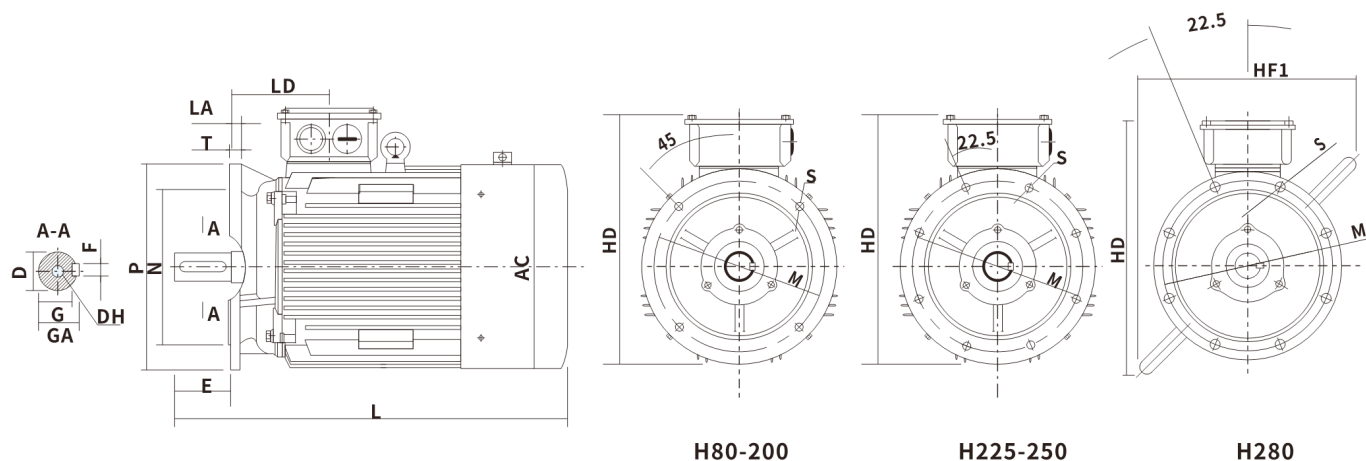
B35 Mounting and Overall Dimensions



Frame Size	Mounting and Overall Dimensions (mm)																									
	A	B	C	D	E	F	G	H	K	M	N	P	R	S	T	DH	GA	AA	AB	AC	AD	HD	BB	LD	HA	L
80	125	100	50	19	40	6	15.5	80	10	165	130	200	0±1.5	4-Φ12	3.5	M6×16	21.5	35	165	175	145	220	130	75	12	340
90S	140	100	56	24	50	8	20.0	90	10	165	130	200	0±1.5	4-Φ12	3.5	M8×20	27.0	36	180	195	155	250	140	75	12	390
90L	140	125	56	24	50	8	20.0	90	10	165	130	200	0±1.5	4-Φ12	3.5	M8×20	27.0	36	180	195	155	250	165	75	12	415
100L	160	140	63	28	60	8	24.0	100	12	215	180	250	0±2.0	4-Φ15	4	M10×25	31.0	40	205	215	180	270	175	83	14	450
112M	190	140	70	28	60	8	24.0	112	12	215	180	250	0±2.0	4-Φ15	4	M10×25	31.0	45	230	240	190	300	180	87	15	465
132S	216	140	89	38	80	10	33.0	132	12	265	230	300	0±2.0	4-Φ15	4	M12×30	41.0	55	270	275	210	345	190	102	18	515
132M	216	178	89	38	80	10	33.0	132	12	265	230	300	0±2.0	4-Φ15	4	M12×30	41.0	55	270	275	210	345	230	102	18	555
160M	254	210	108	42	110	12	37.0	160	15	300	250	350	0±3.0	4-Φ19	5	M16×36	45.0	65	320	330	255	420	260	146	20	650
160L	254	254	108	42	110	12	37.0	160	15	300	250	350	0±3.0	4-Φ19	5	M16×36	45.0	65	320	330	255	420	305	146	20	690
180M	279	241	121	48	110	14	42.5	180	15	300	250	350	0±3.0	4-Φ19	5	M16×36	51.5	70	355	380	280	455	315	161	22	720
180L	279	279	121	48	110	14	42.5	180	15	300	250	350	0±3.0	4-Φ19	5	M16×36	51.5	70	355	380	280	455	350	161	22	755
200L	318	305	133	55	110	16	49.0	200	19	350	300	400	0±3.0	4-Φ19	5	M20×42	59.0	70	395	420	305	505	370	186	25	835
225S	356	286	149	60	140	18	53.0	225	19	400	350	450	0±4.0	8-Φ19	5	M20×40	64.0	75	435	470	335	560	370	189	28	895
225M	356	311	149	60	140	18	53.0	225	19	400	350	450	0±4.0	8-Φ19	5	M20×40	64.0	75	435	470	335	560	395	189	28	920
250M	406	349	168	65	140	18	58.0	250	24	500	450	550	0±4.0	8-Φ19	5	M20×42	69.0	80	490	510	370	615	445	207	30	1000
280S	457	368	190	75	140	20	67.5	280	24	500	450	550	0±4.0	8-Φ19	5	M20×42	79.5	85	550	580	410	680	490	215	35	1105
280M	457	419	190	75	140	20	67.5	280	24	500	450	550	0±4.0	8-Φ19	5	M20×42	79.5	85	550	580	410	680	540	215	35	1155
315S	508	406	216	80	170	22	71.0	315	28	600	550	660	0±4.0	8-Φ24	6	M20×46	85.0	120	635	645	530	845	570	257	45	1280
315M	508	457	216	80	170	22	71.0	315	28	600	550	660	0±4.0	8-Φ24	6	M20×46	85.0	120	635	645	530	845	680	257	45	1390
315L	508	508	216	80	170	22	71.0	315	28	600	550	660	0±4.0	8-Φ24	6	M20×46	85.0	120	635	645	530	845	680	257	45	1390
355M	610	560	254	95	170	25	86.0	355	28	740	680	800	0±4.0	8-Φ24	6	M24×56	100.0	120	730	720	655	1010	750	284	52	1570
355L	610	630	254	95	170	25	86.0	355	28	740	680	800	0±4.0	8-Φ24	6	M24×56	100.0	120	730	720	655	1010	750	284	52	1570

R=0 distance from flange to shaft shoulder

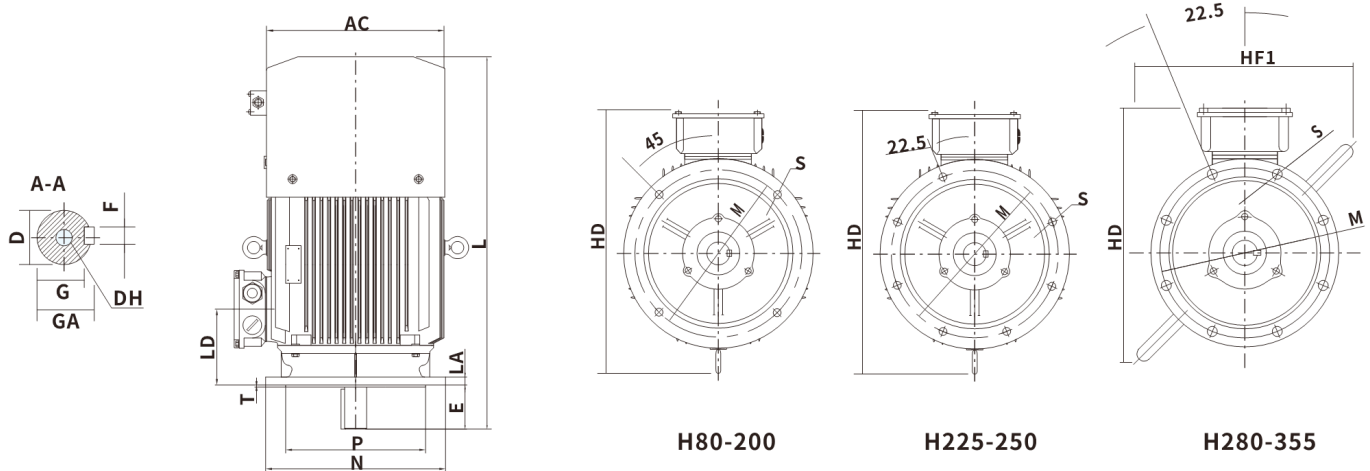
B5 Mounting and Overall Dimensions



Frame Size	Mounting and Overall Dimensions (mm)																	
	D	E	F	G	M	N	P	R	S	T	DH	GA	AC	HD	HF1	LA	LD	L
80	19	40	6	15.5	165	130	200	0±1.5	4-Φ12	3.5	M6×16	21.5	175	220	-	12	75	340
90S	24	50	8	20.0	165	130	200	0±1.5	4-Φ12	3.5	M8×20	27.0	195	245	-	12	75	390
90L	24	50	8	20.0	165	130	200	0±1.5	4-Φ12	3.5	M8×20	27.0	195	245	-	12	75	415
100L	28	60	8	24.0	215	180	250	0±2.0	4-Φ15	4.0	M10×25	31.0	215	270	-	13	83	450
112M	28	60	8	24.0	215	180	250	0±2.0	4-Φ15	4.0	M10×25	31.0	240	305	-	14	87	465
132S	38	80	10	33.0	265	230	300	0±2.0	4-Φ15	4.0	M12×30	41.0	275	345	-	14	102	515
132M	38	80	10	33.0	265	230	300	0±2.0	4-Φ15	4.0	M12×30	41.0	275	345	-	14	102	555
160M	42	110	12	37.0	300	250	350	0±3.0	4-Φ19	5.0	M16×36	45.0	330	420	-	15	146	650
160L	42	110	12	37.0	300	250	350	0±3.0	4-Φ19	5.0	M16×36	45.0	330	420	-	15	146	690
180M	48	110	14	42.5	300	250	350	0±3.0	4-Φ19	5.0	M16×36	51.5	380	455	-	15	161	720
180L	48	110	14	42.5	300	250	350	0±3.0	4-Φ19	5.0	M16×36	51.5	380	455	-	15	161	755
200L	55	110	16	49.0	350	300	400	0±3.0	4-Φ19	5.0	M20×42	59.0	420	515	-	17	186	835
225S	60	140	18	53.0	400	350	450	0±4.0	8-Φ19	5.0	M20×40	64.0	470	560	-	20	189	895
225M	60	140	18	53.0	400	350	450	0±4.0	8-Φ19	5.0	M20×40	64.0	470	560	-	20	189	920
250M	65	140	18	58.0	500	450	550	0±4.0	8-Φ19	5.0	M20×42	69.0	510	645	-	20	207	1000
280S	75	140	20	67.5	500	450	550	0±4.0	8-Φ19	5.0	M20×42	79.5	580	685	585	35	215	1105
280M	75	140	20	67.5	500	450	550	0±4.0	8-Φ19	5.0	M20×42	79.5	580	685	585	35	215	1155

R=0 distance from flange to shaft shoulder

VI Mounting and Overall Dimensions



Frame Size	Mounting and Overall Dimensions (mm)																	
	D	E	F	G	M	N	P	R	S	T	DH	GA	AC	HD	HF1	LA	LD	L
80	19	40	6	15.5	165	130	200	0±1.5	4-Φ12	3.5	M6×16	21.5	175	225	-	12	75	340
90S	24	50	8	20.0	165	130	200	0±1.5	4-Φ12	3.5	M8×20	27.0	195	245	-	12	75	390
90L	24	50	8	20.0	165	130	200	0±1.5	4-Φ12	3.5	M8×20	27.0	195	245	-	12	75	415
100L	28	60	8	24.0	215	180	250	0±2.0	4-Φ15	4	M10×25	31.0	215	320	-	14	83	450
112M	28	60	8	24.0	215	180	250	0±2.0	4-Φ15	4	M10×25	31.0	240	350	-	15	87	465
132S	38	80	10	33.0	265	230	300	0±2.0	4-Φ15	4	M12×30	41.0	275	400	-	18	102	515
132M	38	80	10	33.0	265	230	300	0±2.0	4-Φ15	4	M12×30	41.0	275	400	-	18	102	555
160M	42	110	12	37.0	300	250	350	0±3.0	4-Φ19	5	M16×36	45.0	330	500	-	20	146	650
160L	42	110	12	37.0	300	250	350	0±3.0	4-Φ19	5	M16×36	45.0	330	500	-	20	146	690
180M	48	110	14	42.5	300	250	350	0±3.0	4-Φ19	5	M16×36	51.5	380	530	-	22	161	720
180L	48	110	14	42.5	300	250	350	0±3.0	4-Φ19	5	M16×36	51.5	380	530	-	22	161	755
200L	55	110	16	49.0	350	300	400	0±3.0	4-Φ19	5	M20×42	59.0	420	585	-	25	186	835
225S	60	140	18	53.0	400	350	450	0±4.0	8-Φ19	5	M20×40	64.0	470	630	-	28	189	895
225M	60	140	18	53.0	400	350	450	0±4.0	8-Φ19	5	M20×40	64.0	470	630	-	28	189	920
250M	65	140	18	58.0	500	450	550	0±4.0	8-Φ19	5	M20×42	69.0	510	700	-	30	207	1000
280S	75	140	20	67.5	500	450	550	0±4.0	8-Φ19	5	M20×42	79.5	580	685	585	35	215	1105
280M	75	140	20	67.5	500	450	550	0±4.0	8-Φ19	5	M20×42	79.5	580	685	585	35	215	1155
315S	80	170	22	71.0	600	550	660	0±4.0	8-Φ24	6	M20×46	85.0	645	830	800	45	257	1280
315M/L	80	170	22	71.0	600	550	660	0±4.0	8-Φ24	6	M20×46	85.0	645	830	800	45	257	1390
355M	95	170	25	86.0	740	680	800	0±4.0	8-Φ24	6	M24×56	100.0	720	990	920	52	284	1570
355L	95	170	25	86.0	740	680	800	0±4.0	8-Φ24	6	M24×56	100.0	720	990	920	52	284	1570

R=0 distance from flange to shaft shoulder

Bearings

Frame Size	Driving End 4, 6, 8 Pole	Non-driving End 4, 6, 8 Pole
80	6204 2RS/C3	6204 2RS/C3
90	6205 2RS/C3	6205 2RS/C3
100	6206 2RS/C3	6206 2RS/C3
112	6206 2RS/C3	6206 2RS/C3
132	6208 2RS/C3	6208 2RS/C3
160	6209 2RS/C3	6209 2RS/C3
180	6311/C3	6211/C3
200	6312/C3	6212/C3
225	6313/C3	6312/C3
250	6314/C3	6313/C3
280	6317/C3	6314/C3
315	NU319	6319/C3/7319B(V1)
355	NU322	6322/C3/7322B(V1)

For motors of frame size 315 and above, insulated bearings are recommended.

Insulated bearings are normally mounted on NDE. But sometimes angle-contact bearings at NDE can be mounted on DE.

The motors above (frame size 80–355) can be loaded directly.

In case of high radial force, NU bearings are recommended.

Technical Data of IC416

Frame Size	Fan Type	Voltage V	Power W	Speed r/m	Air Flow M ³ /H	Sound dB(A)
80	WG80A	400	30	2300	330	62
90	WG90A	400	42	2800	500	65
100	WG100A	400	52	2800	660	67
112	WG112A	400	60	2730	900	70
132	WG132A	400	40	1300	780	70
160	WG160A	400	80	1350	1300	70
180	WG180A	400	80	1350	1300	70
200	WG200A	400	150	1350	2400	70
225	WG225A	400	200	1350	4200	74
250	WG250A	400	230	1350	4200	77
280	WG280A	400	450	1400	5000	77
315	WG315A	400	450	1400	6200	82
355	WG355A	400	650	1400	6500	85



Fuzhou Wonder Electric Co., Ltd.

Add: No. 120, Changyang Road, Fuzhou Development Zone, Fujian, China

Website: www.wonderfz.com

Email: wonder@wonderfz.com

Tel: +86-591-83998899

Fax: +86-591-83998666

Wonder Electric Co., Ltd.

Add: No. 239, Xingda Road, Fuan Electrical Machinery and Appliances Zone, Fujian, China

Website: www.wonder-cn.com

Email: wonder@dayu-casting.com

Tel: +86-593-6379666 6379988

Fax: +86-593-6379999

Wonder Electric Motor (M) Sdn. Bhd.

Add: No.11, Jalan Meranti Jaya 16, Taman Meranti Jaya Industrial Park, 47120 Puchong, Selangor, Malaysia

Email: sales@wonderelectric.com.my

Tel: +603-8063-9399

Fax: +603-8060-8399

Wonder Electric Motor (S) Pte. Ltd.

Add: No. 111, Neythal Road, Singapore, 628598

Email: wondersg@singnet.com.sg

Tel: +65-6265-8698

Fax: +65-6265-6589