

YPF 系列 (IP44)、YPF2 系列 (IP54) 变频调速三相异步电动机

YPF SERIES(IP44)、YPF2 SERIES(IP54) FREQUENCY-CONVERTING MULTI-SPEED THREE-PHASE INDUCTION MOTORS (H80-H355)



◎安装方式:

- H80-H355 IMB3、B35、V1;
- H80-H280 IMB5;
- H80-H112 IMB14、B34、V18;
- H80-H160 IMB6、B7、B8、V3、V5、V6、V36.

产品概述:

随着电子技术的高速发展,以“变频器+变频高速电机”的交流调速方式将取代传统的调速方法,其应用将会越来越广泛,应用变频调速方式将会给各行业在生产上带来优越的技术性能和显著的经济效益:节约能源、提高生产效率、提高机械的自动化程度。

由于变频器供电的特殊性,一般用途的电动机远不能满足高速或低速时运行、快速动态响应的要求,因此,应用变频调速必须使用专用的变频调速电动机,永发机电有限公司根据变频器和变频调速的特殊要求,在电动机的电磁、绝缘及通风冷却等方面进行了研究,结合变频调速特性,运用CAD软件进行精心设计,推出了YPF、YPF2系列变频调速电动机供广大用户选用。

YPF、YPF2系列电动机能与各类SPWM变频装置相配套,构成“变频器+变频调速电机”调速系统,调整范围宽、振动小、噪声低,频率 $<50\text{Hz}$ 时具有恒转矩调速特性,频率 $>50\text{Hz}$ 时输出恒功率特性,电动机调速平稳,无转矩脉动现象,并具有较高的起动转矩及较小的起动电流;可使用于各种需要调速的传动装置中,如轻工、纺织、冶金、化工、印刷、包装、食品、机床、风机、水泵、输送线等。

YPF、YPF2系列电动机是全封闭、笼型三相异步电动机,功率等级和安装尺寸与Y系列(IP44)、Y2系列(IP54)三相异步电动机相同,电动机的额定电压为380V、额定频率为50Hz、防护等级为IP44、IP54、冷却方式为IC416,环境温度不超过 $+40^{\circ}\text{C}$ 、最低温度为 -15°C 、海拔不超过1000m,工作方式为连续(S1),功率在55kW以下为Y接,55kW以上为 Δ 接。

YPF 系列 (IP44)、YPF2 系列 (IP54) 变频调速三相异步电动机 YPF SERIES(IP44)、YPF2 SERIES(IP54) FREQUENCY-CONVERTING MULTI-SPEED THREE-PHASE INDUCTION MOTORS (H80-H355)



©Basic mounting type of series YPF have :

- H80-H355 IMB3、B35、V1;
- H80-H280 IMB5;
- H80-H112 IMB14、B34、V18;
- H80-H160 IMB6、B7、B8、V3、V5、V6、V36.

General:

With the development of power electronic technology, a new method of speed regulation with the combination of the converter and the frequency-converting multi-speed motor is widely used to replace the traditional method of speed regulation. It can bring excellent technical performance and significant economic benefits to various industry line, and also can save energy, improve productive efficiency and automation degree.

Because of the particularity of converter supply, general purpose motors can not meet the requirements of running at high speed or low speed and fast dynamic response. So the special frequency-converting multi-speed motor must be used in this case. Zhejiang Yongfa Electromechanics has done many research works on electromagnetism, insulation and Ventilation according to the particularity of converter supply with the application of CAD, and marketed YPF series、YPF2 series frequency-converting multi-speed motors.

With the features of lower noise, lower vibration, and wider speed range, YPF series、YPF2 series motors can be matched with various kinds of SPWM frequency converting devices. The motors can keep the constant torque for the frequency up to 50Hz, and keep the constant output power for 50Hz upwards.

They are distinguished by the stable speed regulation without torque ripple, high start torque, low start current, and therefore widely applied to various driving machine for speed regulation, such as light industry, textile, chemical industry, metallurgy, print, packing, food, machine tools, blowers, pumps and transportation lines.

YPF series、YPF2 series motors are totally enclosed fan cooled three-phase cage induction motors, and have the same power grade and mounting dimensions as that of Y series (IP44)、Y2 series (IP54) three-phase induction motors. The motors are rated at 380V, 50Hz, IP54 degree of protection, Ic416 method of cooling, Y-connection for motors up to 55KW-connection for 55KW upwards.

The ambient air temperature shall be not less than -15°C and not exceed 40°C The altitude shall not exceed 1000m above sea level, and the duty type is continuous S1.

主要技术数据

Main technical data

YPF 系列(IP44)、YPF2 系列(IP54)变频调速三相异步电动机

YPF Series(IP44)、YPF2 Series(IP54) Frequency-converting Multi-speed Three-phase Induction Motors (H80~H355)

机座号 Frame Size	4极			6极		
	标称功率 Nominal Power (kW)	额定转矩 Rated Torque (N·m)	标称电流 Nominal Current (A)	标称功率 Nominal Power (kW)	额定转矩 Rated Torque (N·m)	标称电流 Nominal Current (A)
80M1	0.55	3.5	1.6	—	—	—
80M2	0.75	4.7	2.1	—	—	—
90S	1.1	7.0	2.9	0.75	7.1	2.5
90L	1.5	9.5	3.7	1.1	10.5	3.5
100L1	2.2	14.0	5.2	1.5	14.3	4.4
100L2	3	19.0	6.8			
112M	4	25.4	9.3	2.2	21.0	6.1
132S	5.5	35.0	11.8	3	28.6	7.5
132M1	7.5	47.7	15.5	4	38.2	9.5
132M2				5.5	52.5	12.8
160M	11	70.0	23.7	7.5	71.6	18
160L	15	95.5	30	11	105.0	26
180M	18.5	117.1	36.5	—	—	—
180L	22	140.9	43.5	15	143.0	34
200L1	30	190.9	58	18.5	176.0	38
200L2				22	210.0	45
225S	37	235.5	70	—	—	—
225M	45	286.4	85	30	286.0	60
250M	55	350.1	104	37	353.0	72
280S	75	477.7	139	45	429.0	85
280M	90	572.9	167	55	525.0	104
315S	110	700.2	201	75	716.1	140
315M1	132	840.3	241	90	859.4	168
315M2				110	1050.3	205
315L1	160	1018.5	292	132	1260.5	245
315L2	200	1273.2	365			
355M1	250	1591.5	425	160	1527.8	284
355M2				200	1909.8	354
355L	315	2005.4	552	250	2387.3	449

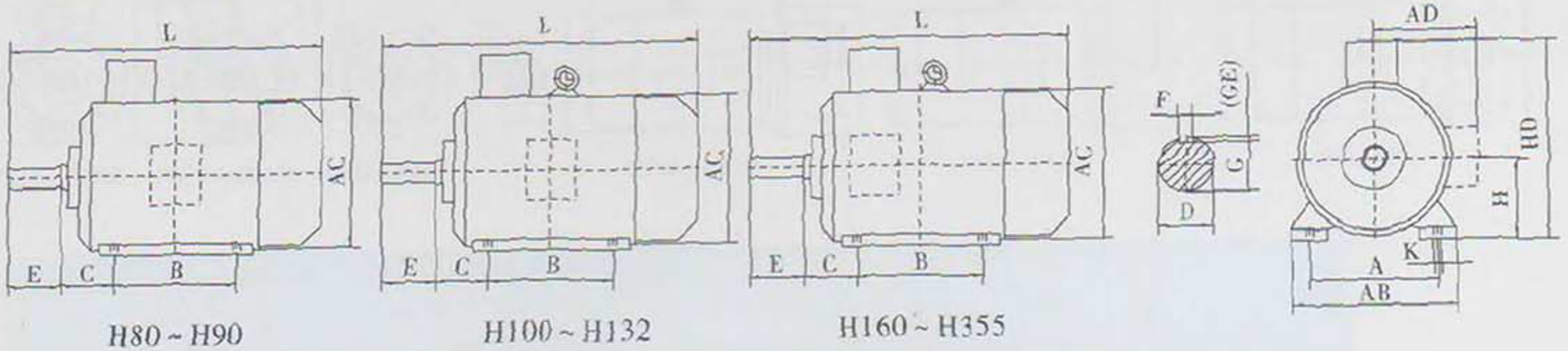
配套冷却风机参数见下表
Parameters of the auxiliary are shown in Table

电机机座号 Frame Size	80	90	100	112	132	160	180	200	225	250	280	315	355
风机功率 Blower Power (W)	30	42	52	60	40	80	80	150	200	230	320	370	600
风机电压 Blower Voltage (V)	三相 Three-phase 380V												

安装尺寸及外形尺寸图

Mounting dimensions and Overall dimensions

机座带底脚、端盖无凸缘
Frame with foot, endshield without flange



Y2、YPF2安装尺寸及外形尺寸

Y2、YPF2 Mounting dimensions and Overall dimensions

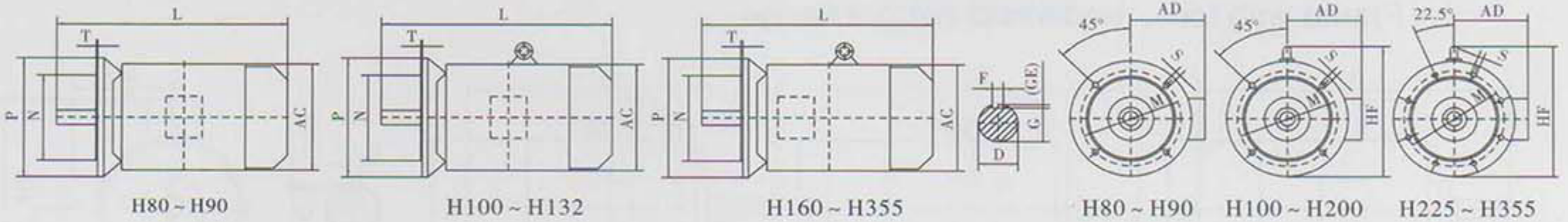
机座号 Frame size	极数 Poles	安装尺寸 Mounting dimensions (mm)									外形尺寸 Overall dimensions (mm)					
		A	B	C	D	E	F	G	H	K	AB	AC	AD	HD	L	
		Y2	YPF2													
80	2.4.6.8	125	100	50	19	40	6	15.5	80	10	165	175	145	220	295	345
90S	2.4.6.8	140	100	56	24	50	8	20	90	10	180	195	155	250	320	385
90L	2.4.6.8	140	125	56	24	50	8	20	90	10	180	195	155	250	345	410
100L	2.4.6.8	160	140	63	28	60	8	24	100	12	205	215	180	270	385	450
112M	2.4.6.8	190	140	70	28	60	8	24	112	12	230	240	190	300	400	445
132S	2.4.6.8	216	140	89	38	80	10	33	132	12	270	275	210	345	470	520
132M	2.4.6.8	216	178	89	38	80	10	33	132	12	270	275	210	345	510	560
160M	2.4.6.8	254	210	108	42	110	12	37	160	14.5	320	330	255	420	615	660
160L	2.4.6.8	254	254	108	42	110	12	37	160	14.5	320	330	255	420	670	715
180M	2.4.6.8	279	241	121	48	110	14	42.5	180	14.5	355	380	280	455	700	720
180L	2.4.6.8	279	279	121	48	110	14	42.5	180	14.5	355	380	280	455	740	760
200L	2.4.6.8	318	305	133	55	110	16	49	200	18.5	395	420	305	505	770	840
225S	4.8	356	286	149	60	140	18	53	225	18.5	435	470	335	560	815	895
225M	2	356	311	149	55	110	16	49	225	18.5	435	470	335	560	820	—
	4.6.8	356	311	149	60	140	18	53	225	18.5	435	470	335	560	845	925
250M	2	406	349	168	60	140	18	53	250	24	490	510	370	615	910	—
	4.6.8	406	349	168	65	140	18	58	250	24	490	510	370	615	910	990
280S	2	457	368	190	65	140	18	58	280	24	550	580	410	680	985	—
	4.6.8	457	368	190	75	140	20	67.5	280	24	550	580	410	680	985	1110
280M	2	457	419	190	65	140	18	58	280	24	550	580	410	680	1035	—
	4.6.8	457	419	190	75	140	20	67.5	280	24	550	580	410	680	1035	1160
315S	2	508	406	216	65	140	18	58	315	28	635	645	530	845	1160	—
	4.6.8.10	508	406	216	80	170	22	71	315	28	635	645	530	845	1270	1330
315M	2	508	457	216	65	140	18	58	315	28	635	645	530	845	1190	—
	4.6.8.10	508	457	216	80	170	22	71	315	28	635	645	530	845	1300	1390
315L	2	508	508	216	65	140	18	58	315	28	635	645	530	845	1190	—
	4.6.8.10	508	508	216	80	170	22	71	315	28	635	645	530	845	1300	1390
355M	2	610	560	254	75	140	20	67.5	355	28	730	710	655	1010	1500	—
	4.6.8.10	610	560	254	95	170	25	86	355	28	730	710	655	1010	1530	1630
355L	2	610	630	254	75	140	20	67.5	355	28	730	710	655	1010	1500	—
	4.6.8.10	610	630	254	95	170	25	86	355	28	730	710	655	1010	1530	1630

安装尺寸及外形尺寸图

Mounting dimensions and Overall dimensions

机座无底脚、端盖有凸缘

Frame without foot, endshield with flange

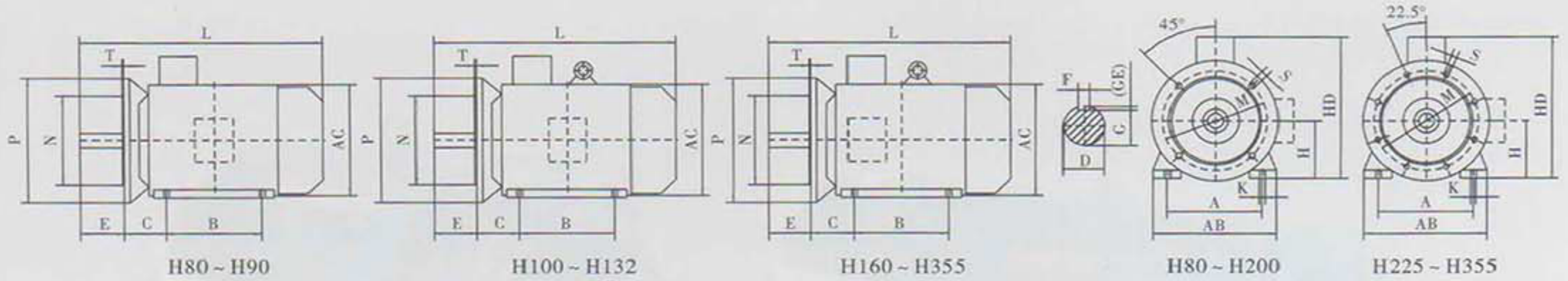


Y2、YPF2 安装尺寸及外形尺寸

Y2、YPF2 Mounting dimensions and Overall dimensions

机座号 Frame size	凸缘号 Flange size	极数 Poles	安装尺寸 Mounting dimensions (mm)										外形尺寸 Overall dimensions (mm)				
			D	E	F	G	M	N	P	R	S	T	AC	AD	HF	L	
																Y2	YPF2
80	FF165	2.4.6.8	19	40	6	15.5	165	130	200	0	4-Φ12	3.5	175	145	185	295	345
90S		2.4.6.8	24	50	8	20	165	130	200	0	4-Φ12	3.5	195	155	195	320	385
90L		2.4.6.8	24	50	8	20	165	130	200	0	4-Φ12	3.5	195	155	195	345	410
100L	FF215	2.4.6.8	28	60	8	24	215	180	250	0	4-Φ14.5	4	215	180	245	385	450
112M		2.4.6.8	28	60	8	24	215	180	250	0	4-Φ14.5	4	240	190	265	400	445
132S	FF265	2.4.6.8	38	80	10	33	265	230	300	0	4-Φ14.5	4	275	210	315	470	520
132M		2.4.6.8	38	80	10	33	265	230	300	0	4-Φ14.5	4	275	210	315	510	560
160M	FF300	2.4.6.8	42	110	12	37	300	250	350	0	4-Φ18.5	5	330	255	455	615	660
160L		2.4.6.8	42	110	12	37	300	250	350	0	4-Φ18.5	5	330	255	455	670	715
180M		2.4.6.8	48	110	14	42.5	300	250	350	0	4-Φ18.5	5	380	280	500	700	720
180L		2.4.6.8	48	110	14	42.5	300	250	350	0	4-Φ18.5	5	380	280	500	740	760
200L	FF350	2.4.6.8	55	110	16	49	350	300	400	0	4-Φ18.5	5	420	305	550	770	840
225S	FF400	4.8	60	140	18	53	400	350	450	0	8-Φ18.5	5	470	335	610	815	895
225M		2	55	110	16	49	400	350	450	0	8-Φ18.5	5	470	335	610	820	—
		4.6.8	60	140	18	53	400	350	450	0	8-Φ18.5	5	470	335	610	845	925
250M	FF500	2	60	140	18	53	500	450	550	0	8-Φ18.5	5	510	370	650	910	—
		4.6.8	65	140	18	58	500	450	550	0	8-Φ18.5	5	510	370	650	910	990
280S		2	65	140	18	58	500	450	550	0	8-Φ18.5	5	580	410	720	985	—
		4.6.8	75	140	20	67.5	500	450	550	0	8-Φ18.5	5	580	410	720	985	1110
280M	2	65	140	18	58	500	450	550	0	8-Φ18.5	5	580	410	720	1035	—	
	4.6.8	75	140	20	67.5	500	450	550	0	8-Φ18.5	5	580	410	720	1035	1160	
315S	FF600	2	65	140	18	58	600	550	660	0	8-Φ24	6	645	530	900	1160	—
		4.6.8.10	80	170	22	71	600	550	660	0	8-Φ24	6	645	530	900	1270	1330
315M		2	65	140	18	58	600	550	660	0	8-Φ24	6	645	530	900	1190	—
		4.6.8.10	80	170	22	71	600	550	660	0	8-Φ24	6	645	530	900	1300	1390
315L		2	65	140	18	58	600	550	660	0	8-Φ24	6	645	530	900	1190	—
		4.6.8.10	80	170	22	71	600	550	660	0	8-Φ24	6	645	530	900	1300	1390
355M	FF740	2	75	140	20	67.5	740	680	800	0	8-Φ24	6	710	655	1010	1500	—
		4.6.8.10	95	170	25	86	740	680	800	0	8-Φ24	6	710	655	1010	1530	1630
355L		2	75	140	20	67.5	740	680	800	0	8-Φ24	6	710	655	1010	1500	—
		4.6.8.10	95	170	25	86	740	680	800	0	8-Φ24	6	710	655	1010	1530	1630

机座带底脚、端盖有凸缘
Frame with foot, endshield with flange



Y2、YPF2 安装尺寸及外形尺寸
Y2、YPF Mounting dimensions and Overall dimensions

机座号 Frame size	凸缘号 Flange size	极数 Poles	安装尺寸 Mounting dimensions (mm)														外形尺寸 Overall dimensions (mm)						
			A	B	C	D	E	F	G	H	K	M	N	P	R	S	T	AB	AC	AD	HD	L	
			Y2	YPF2																			
80	FF165	2.4.6.8	125	100	50	19	40	6	15.5	80	10	165	130	200	0	4-Φ12	3.5	165	175	145	220	295	345
90S		2.4.6.8	140	100	56	24	50	8	20	90	10	165	130	200	0	4-Φ12	3.5	180	195	155	250	325	385
90L		2.4.6.8	140	125	56	24	50	8	20	90	10	165	130	200	0	4-Φ12	3.5	180	195	155	250	345	410
100L	FF215	2.4.6.8	160	140	63	28	60	8	24	100	12	215	180	250	0	4-Φ14.5	4	205	215	180	270	385	450
112M		2.4.6.8	190	140	70	28	60	8	24	112	12	215	180	250	0	4-Φ14.5	4	230	240	190	300	400	445
132S	FF265	2.4.6.8	216	140	89	38	80	10	33	132	12	265	230	300	0	4-Φ14.5	4	270	275	210	345	470	520
132M		2.4.6.8	216	178	89	38	80	10	33	132	12	265	230	300	0	4-Φ14.5	4	270	275	210	345	510	560
160M	FF300	2.4.6.8	254	210	108	42	110	12	37	160	14.5	300	250	350	0	4-Φ18.5	5	320	330	255	420	615	660
160L		2.4.6.8	254	254	108	42	110	12	37	160	14.5	300	250	350	0	4-Φ18.5	5	320	330	255	420	670	715
180M		2.4.6.8	279	241	121	48	110	14	42.5	180	14.5	300	250	350	0	4-Φ18.5	5	355	380	280	455	700	720
180L		2.4.6.8	279	279	121	48	110	14	42.5	180	14.5	300	250	350	0	4-Φ18.5	5	355	380	280	455	740	760
200L	FF350	2.4.6.8	318	305	133	55	110	16	49	200	18.5	350	300	400	0	4-Φ18.5	5	395	420	305	505	770	840
225S	FF400	4.8	356	286	149	60	140	18	53	225	18.5	400	350	450	0	8-Φ18.5	5	435	470	335	560	815	895
225M		2	356	311	149	55	110	16	49	225	18.5	400	350	450	0	8-Φ18.5	5	435	470	335	560	820	—
		4.6.8	356	311	149	60	140	18	53	225	18.5	400	350	450	0	8-Φ18.5	5	435	470	335	560	845	925
250M	FF500	2	406	349	168	60	140	18	53	250	24	500	450	550	0	8-Φ18.5	5	490	510	370	615	910	—
280S		4.6.8	406	349	168	65	140	18	58	250	24	500	450	550	0	8-Φ18.5	5	490	510	370	615	910	990
		2	457	368	190	65	140	18	58	280	24	500	450	550	0	8-Φ18.5	5	550	580	410	680	985	—
280M		4.6.8	457	368	190	75	140	20	67.5	280	24	500	450	550	0	8-Φ18.5	5	550	580	410	680	985	1110
		2	457	419	190	65	140	18	58	280	24	500	450	550	0	8-Φ18.5	5	550	580	410	680	1035	—
315S	FF600	4.6.8	508	406	216	80	170	22	71	315	28	600	550	660	0	8-Φ24	6	635	645	530	845	1270	1330
		2	508	457	216	65	140	18	58	315	28	600	550	660	0	8-Φ24	6	635	645	530	845	1190	—
4.6.8.10		508	457	216	80	170	22	71	315	28	600	550	660	0	8-Φ24	6	635	645	530	845	1300	1390	
2		508	508	216	65	140	18	58	315	28	600	550	660	0	8-Φ24	6	635	645	530	845	1190	—	
4.6.8.10		508	508	216	80	170	22	71	315	28	600	550	660	0	8-Φ24	6	635	645	530	845	1300	1390	
355M	FF740	2	610	560	254	75	140	20	67.5	355	28	740	680	800	0	8-Φ24	6	730	710	655	1010	1500	—
		4.6.8.10	610	560	254	95	170	25	86	355	28	740	680	800	0	8-Φ24	6	730	710	655	1010	1530	1630
2		610	630	254	75	140	20	67.5	355	28	740	680	800	0	8-Φ24	6	730	710	655	1010	1500	—	
355L		4.6.8.10	610	630	254	95	170	25	86	355	28	740	680	800	0	8-Φ24	6	730	710	655	1010	1530	1630