

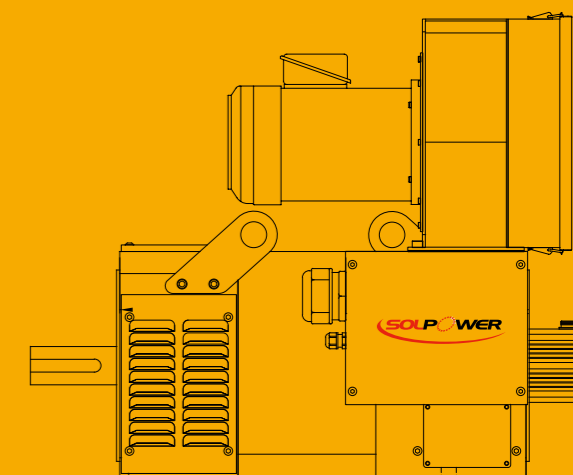


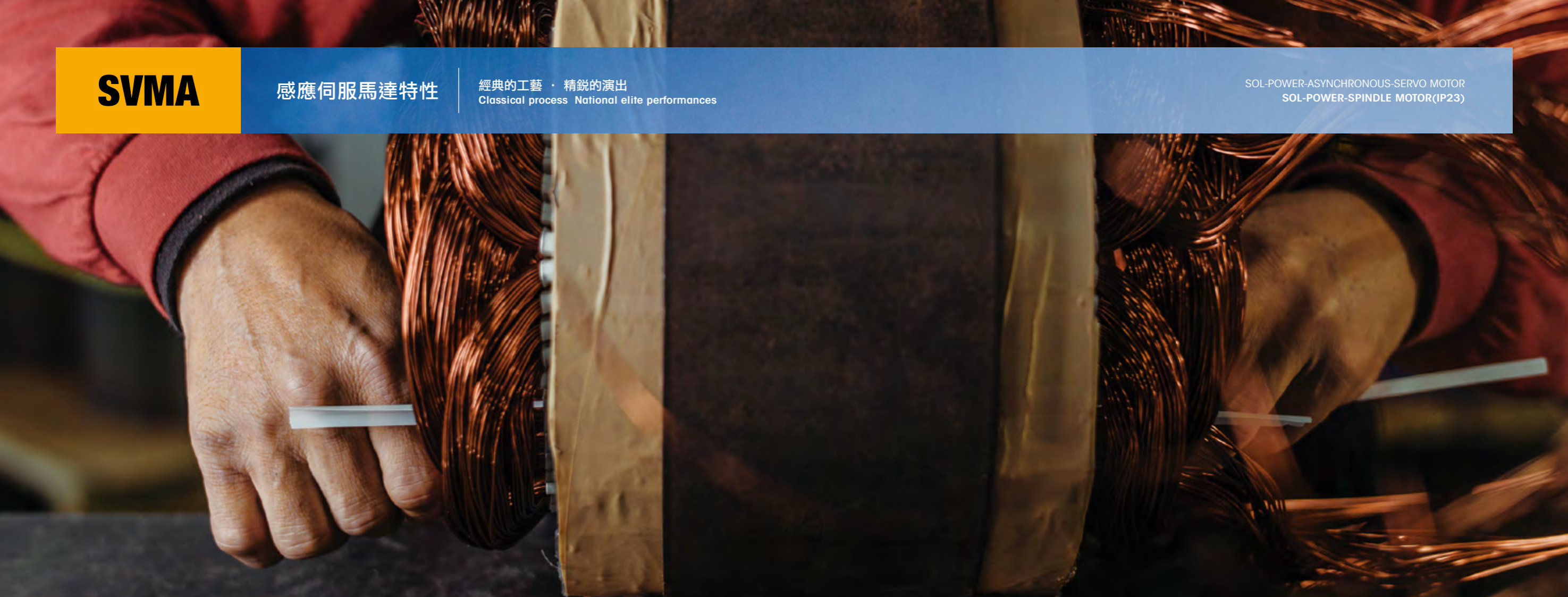
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謙虛的態度、專業的服務

CHENG CHANG MACHINERY

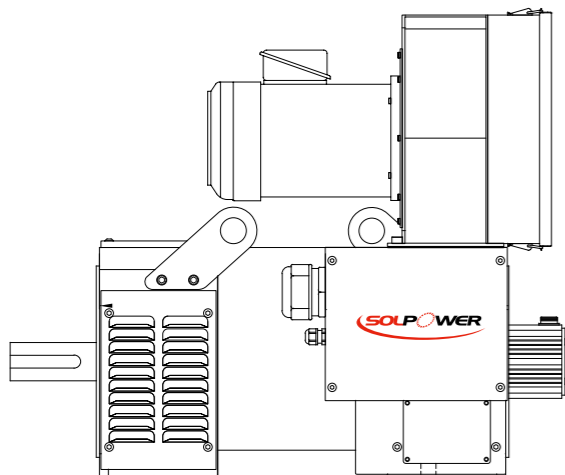
SOL-POWER-ASYNCHRONOUS-SERVO MOTOR
SOL-POWER-SPINDLE MOTOR(IP23)

SVMA





- A. 基底頻率以上，高速運轉維持定馬力輸出，有廣域的定功率輸出特性
- B. 基底頻率以下，低速運轉時保持相當平穩線性的磁場，以維持定轉矩輸出
- C. 特殊繞線設計及絕緣等級，使驅動器做載波伺服控制時不會破壞線圈絕緣
- D. 使用高階矽鋼片，馬達在使用範圍內，維持著線性控制的優良伺服特性
- E. 特殊磁路設計與磁場分析，馬達在使用範圍內不會產生磁場飽和現象大大提高馬達的伺服特性及降低因突波電流對馬達及驅動器的損害
- F. 以先進精密技術為設計規範，伺服馬達有相當高的功率體積比
- G. 良好的轉動慣量設計，使馬達在鋼性攻牙時，能有高度的響應特性
- H. 精密定轉子槽形設計，馬達在定位控制時，快速平滑，不會因突波磁場而產生跳動情形。以上是變頻馬達所沒有的特性





Asynchronous
SVMA-132 SERIES 1~2
Servo motors with 2 pole pairs
Rated power output 22~45kw

Asynchronous
SVMA-160 SERIES 3~4
Servo motors with 2 pole pairs
Rated power output 55~75kw

Asynchronous
SVMA-180 SERIES 5~6
Servo motors with 2 pole pairs
Rated power output 80~130kw

Asynchronous
SVMA-225 SERIES 7~8
Servo motors with 2 pole pairs
Rated power output 150~230kw

Asynchronous
SVMA-280 LOWER INERTIA SERIES 9~10
Servo motor with 2 pole pairs
Rated power output 165~265kw

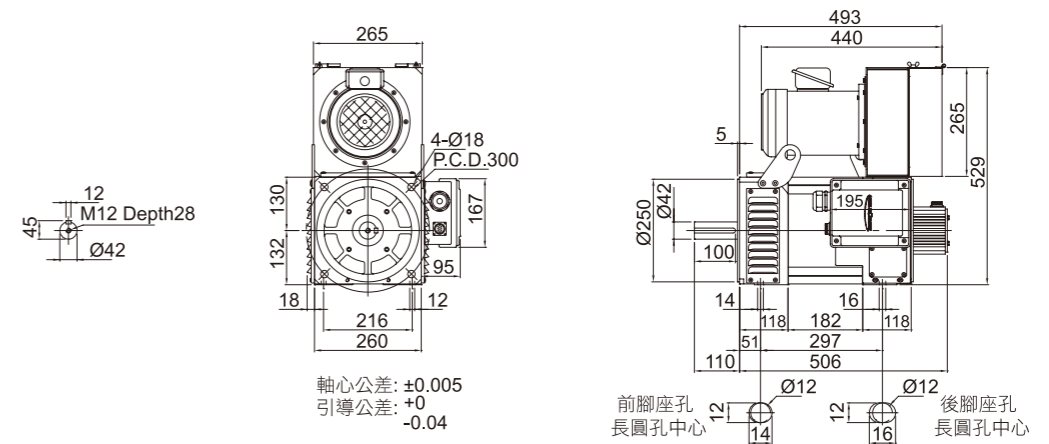
Asynchronous
SVMA-280 MIDDLE INERTIA SERIES 11~12
Servo motor with 2 pole pairs
Rated power output 230~360kw



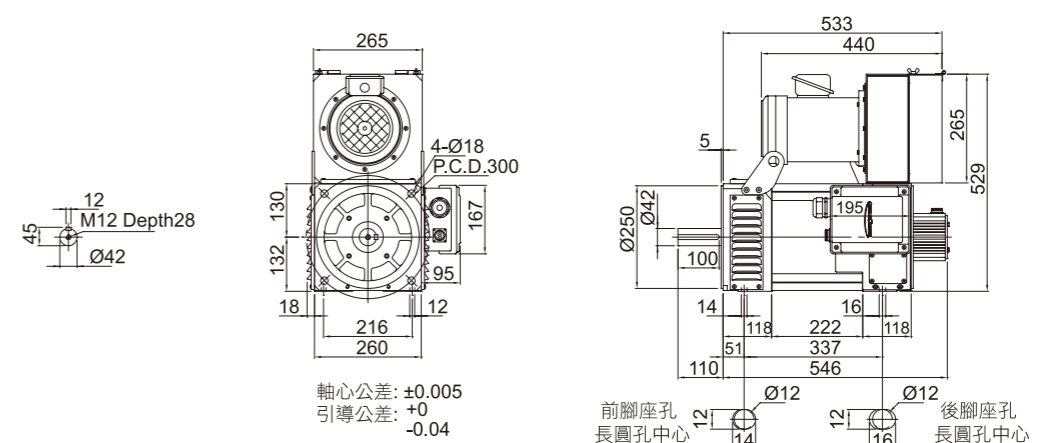
Motor	SVMA-132S	SVMA-132M	SVMA-132L	SVMA-132X
Rated voltage U_N	220 / 380	220 / 380	220 / 380	220 / 380
Rated power output P_N	22kw	30kw	37kw	45kw
Rated speed N_N	1500rpm			
Rated torque M_N	138Nm	189Nm	233Nm	284Nm
Rated current I_N	79.05/45.76	105.94/61.33	130.6/75.4	156.21/90.44
Power factor	0.83	0.835	0.835	0.84
Efficiency	0.88	0.88	0.89	0.9
Max speed N_{max} Standard bearing	5000rpm			
Weight	143kg	159kg	188kg	210kg
Rated inertia J	650kgcm ²	770kgcm ²	1010kgcm ²	1200kgcm ²
Protection	IP23			
Fan Rated voltage UL Rated current Frequency fL	220/380V 2/1.15A 50/60HZ			

Motor	Rated speed	Speed during Field weakening	Rated torque	Rated current (220/380v)	Rated power	Moment of inertia	Weight approx
	M_{rated} rpm	$n1$ rpm	M_{rated} Nm	I_{rated} A	P_{rated} KW	J kg-cm ²	W kg
TYPE	rpm	rpm	Nm	A	KW	kg-cm ²	kg
SVMA-132S-10	1000	2000	142	53.89/31.20	15	650	143
SVMA-132S-15	1500	3000	138	79.05/45.76	22	650	143
SVMA-132S-20	2000	4000	142	105.94/61.33	30	650	143
SVMA-132M-10	1000	2000	208	78.57/45.49	22	770	159
SVMA-132M-15	1500	3000	189.3	105.94/61.33	30	770	159
SVMA-132M-20	2000	4000	175	130.6/75.4	37	770	159
SVMA-132L-10	1000	2000	284	105.94/61.33	30	1010	188
SVMA-132L-15	1500	3000	189	130.6/75.4	37	1010	188
SVMA-132L-20	2000	4000	213	158.91/92.00	45	1010	188
SVMA-132X-10	1000	2000	350	130.6/75.4	37	1200	210
SVMA-132X-15	1500	3000	284	156.21/90.44	45	1200	210
SVMA-132X-20	2000	4000	260	190.92/110.53	55	1200	210

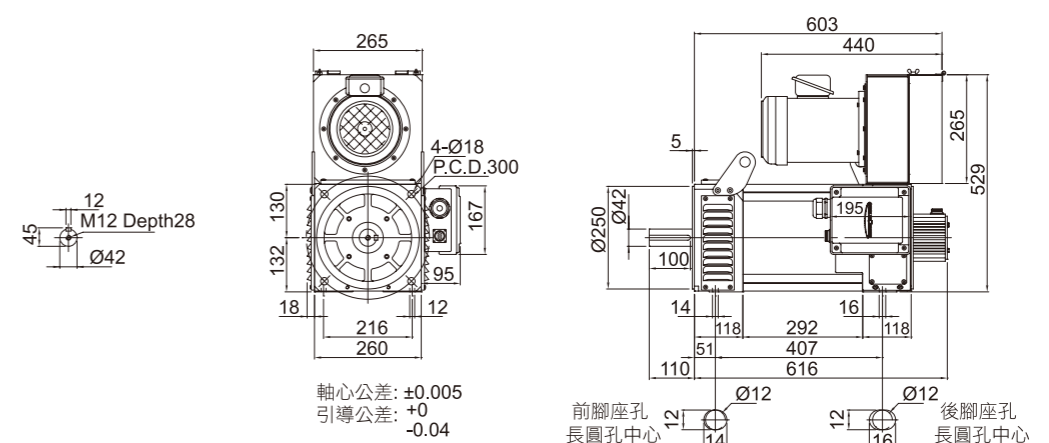
SVMA-132S



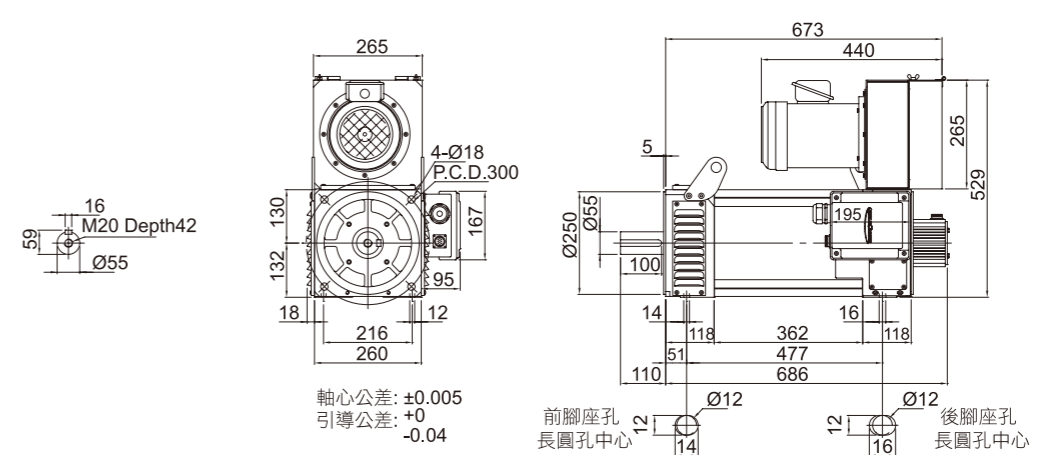
SVMA-132M



SVMA-132L



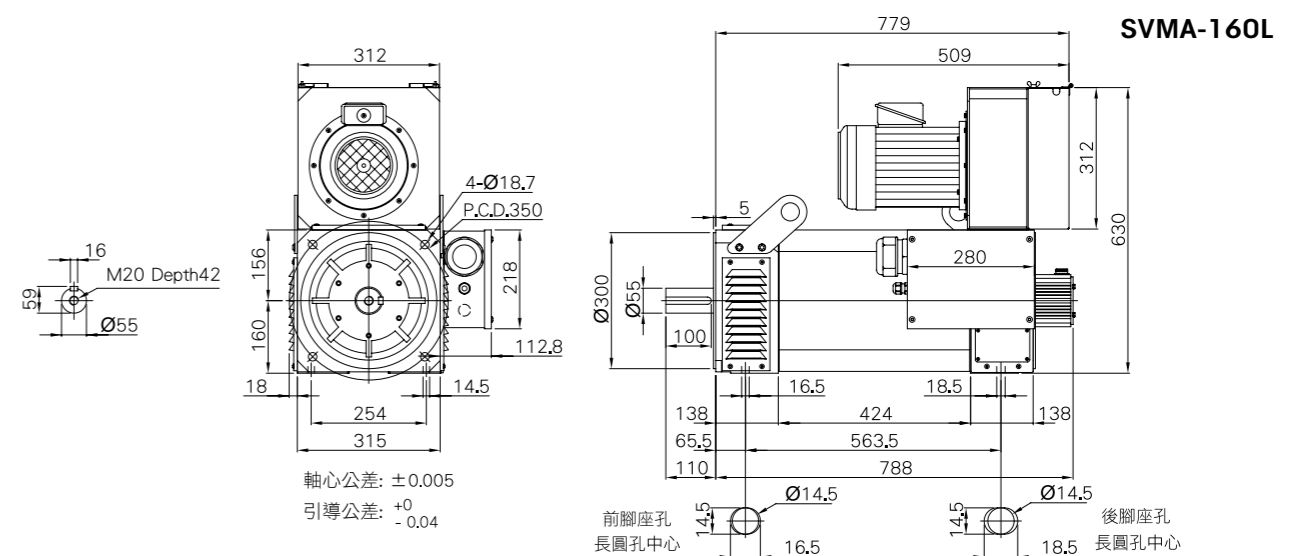
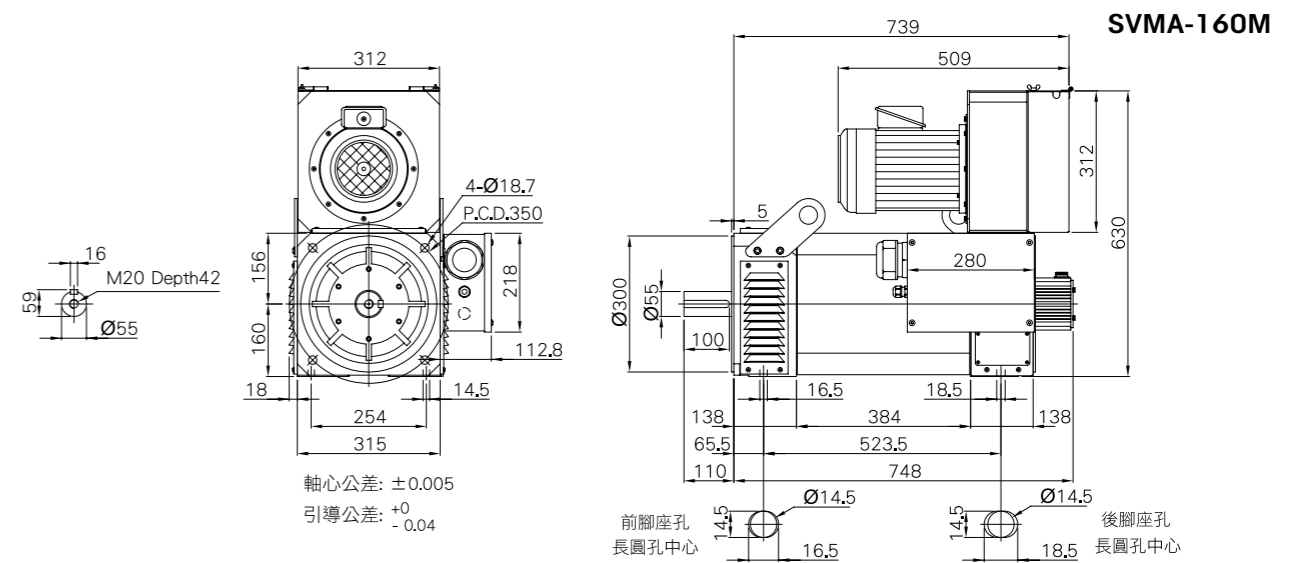
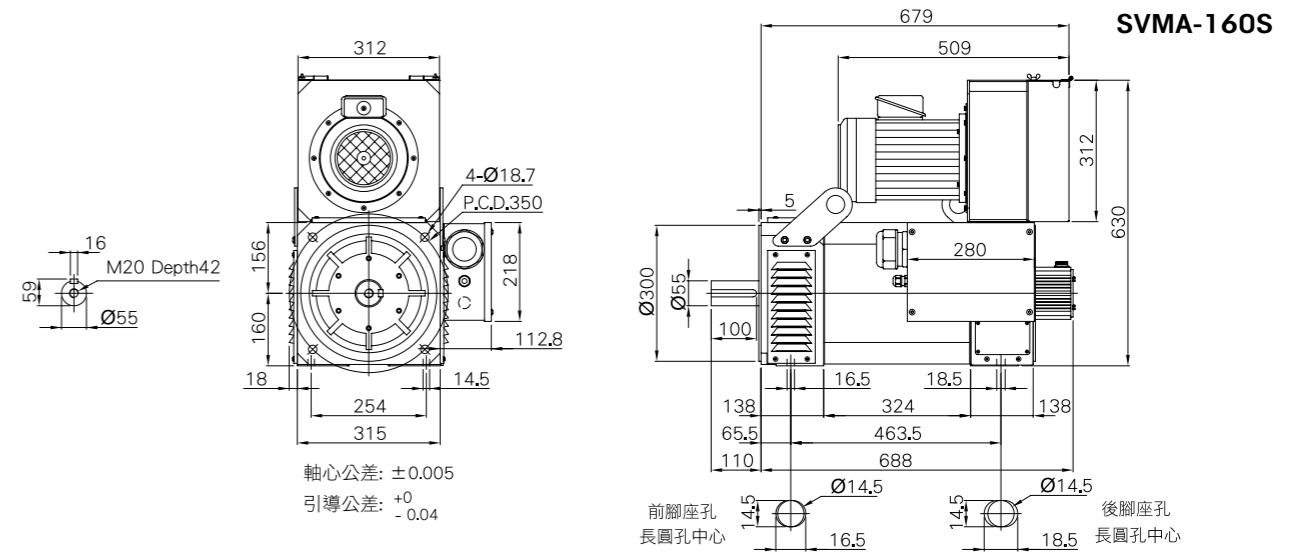
SVMA-132X





Motor	SVMA-160S	SVMA-160M	SVMA-160L
Rated voltage U_N	220 / 380	220 / 380	220 / 380
Rated power output P_N	55kw	65kw	75kw
Rated speed N_N	1500rpm		
Rated torque M_N	350Nm	414Nm	477Nm
Rated current I_N	193.22/111.87	225.85/130.75	257.49/149.07
Power factor	0.83	0.83	0.84
Efficiency	0.9	0.91	0.91
Max speed N_{max} Standard bearing	5000rpm		
Weight	289kg	325kg	350kg
Rated inertia J	1860kgcm ²	2300kgcm ²	2560kgcm ²
Protection	IP23		
Fan Rated voltage UL Rated current Frequency fL	220/380V 4/2.3A 50/60HZ		

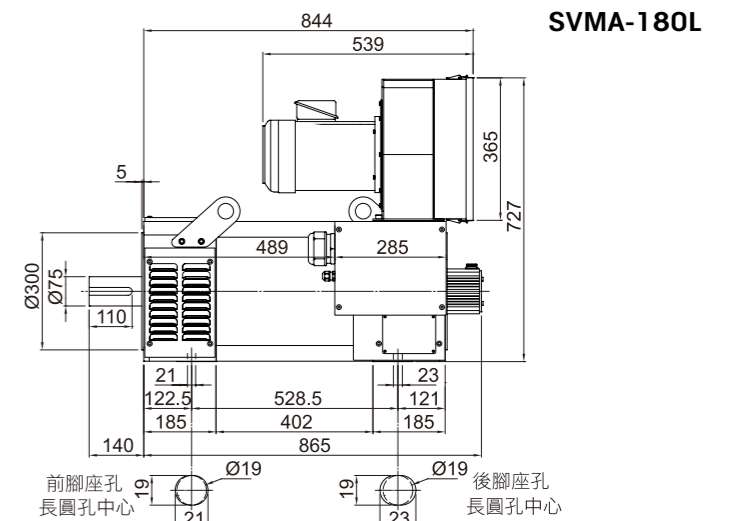
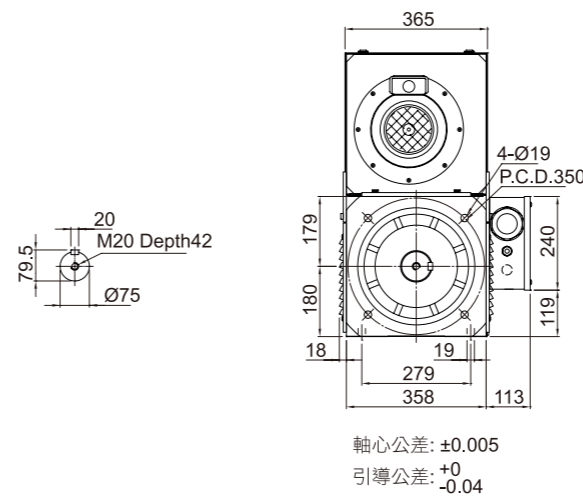
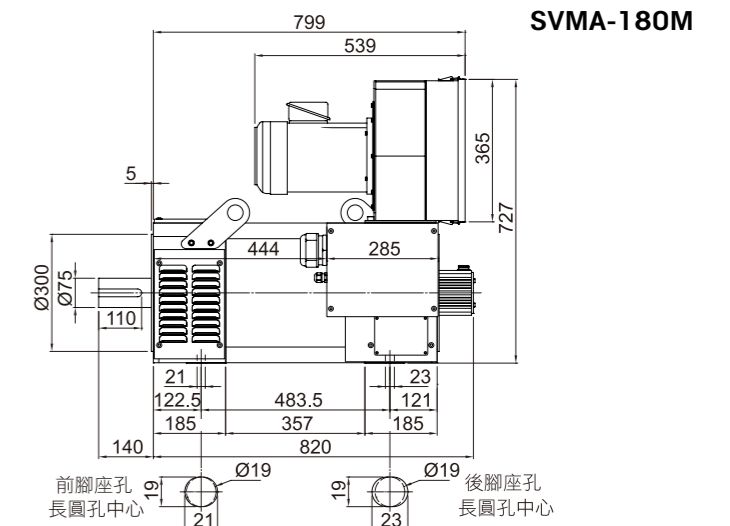
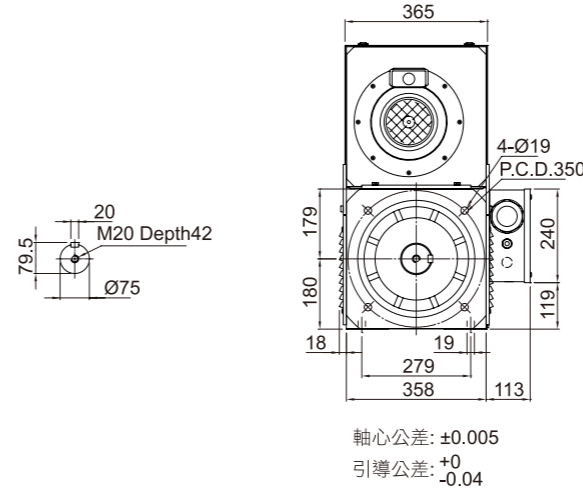
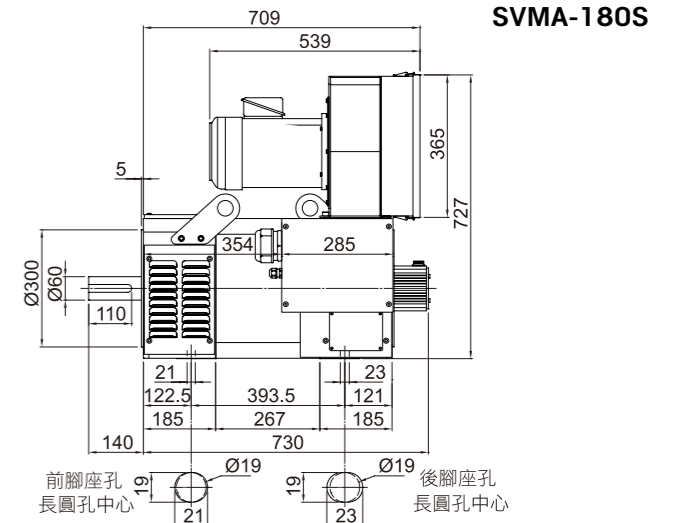
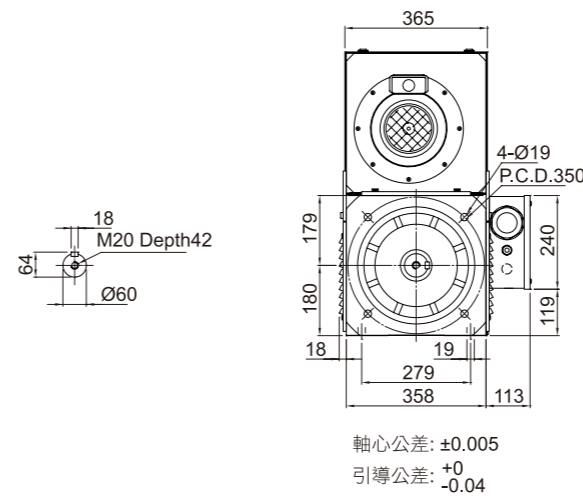
Motor	Rated speed	Speed during Field weakening	Rated torque	Rated current (220/380V)	Rated power	Moment of inertia	Weight approx
	n_{rated}	n_1	M_{rated}	I_{rated}	P_{rated}	J	W
TYPE	rpm	rpm	Nm	A	KW	kg-cm ²	kg
SVMA-160S-10	1000	2000	429	158.09/91.53	45	1860	260
SVMA-160S-15	1500	3000	350	193.22/111.87	55	1860	260
SVMA-160S-20	2000	4000	309	228.35/132.21	65	1860	260
SVMA-160M-10	1000	2000	525	191.10/110.64	55	2300	315
SVMA-160M-15	1500	3000	414	225.85/130.75	65	2300	315
SVMA-160M-20	2000	4000	381	277.96/160.93	80	2300	315
SVMA-160L-10	1000	2000	572	205.99/119.26	60	2560	370
SVMA-160L-15	1500	3000	477	257.49/149.07	75	2560	370
SVMA-160L-20	2000	4000	429	308.99/178.89	90	2560	370





Motor	SVMA-180S	SVMA-180M	SVMA-180L
Rated voltage U _N	220 / 380	220 / 380	220 / 380
Rated power output P _N	80kw	110kw	130kw
Rated speed N _N	1500rpm		
Rated torque M _N	508Nm	699Nm	827Nm
Rated current I _N	271.67/157.28	373.54/216.26	436.71/252.83
Power factor	0.84	0.84	0.84
Efficiency	0.92	0.92	0.93
Max speed N _{max} Standard bearing	5000rpm		
Weight	378kg	450kg	510kg
Rated inertia J	5030kgcm ²	6900kgcm ²	7770kgcm ²
Protection	IP23		
Fan Rated voltage UL Rated current Frequency fL	220/380V 7/4A 50/60HZ		

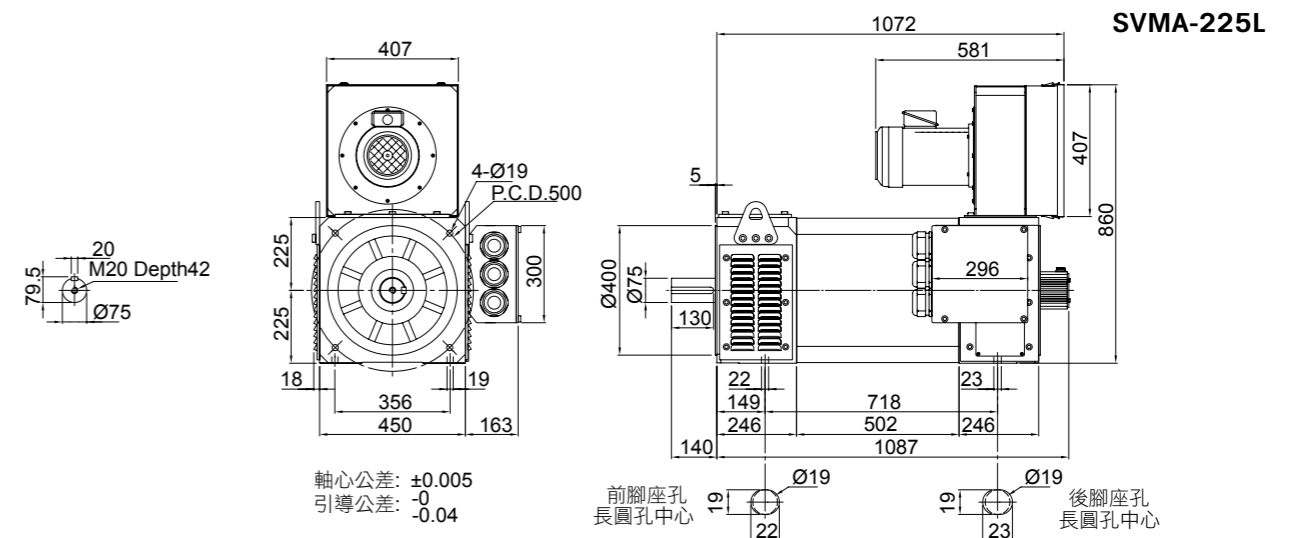
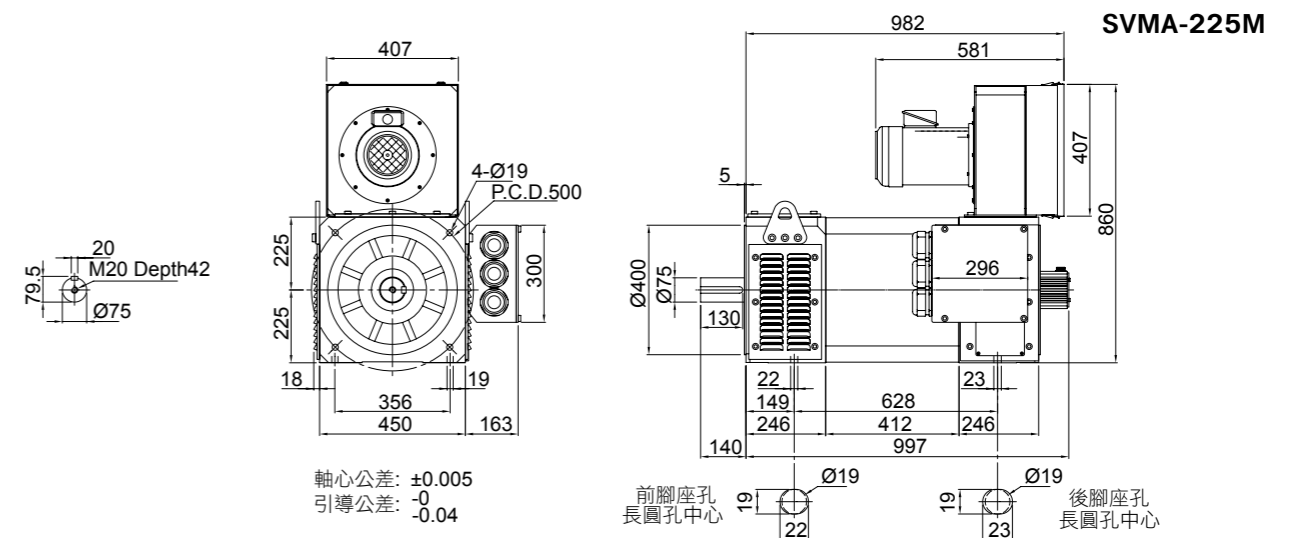
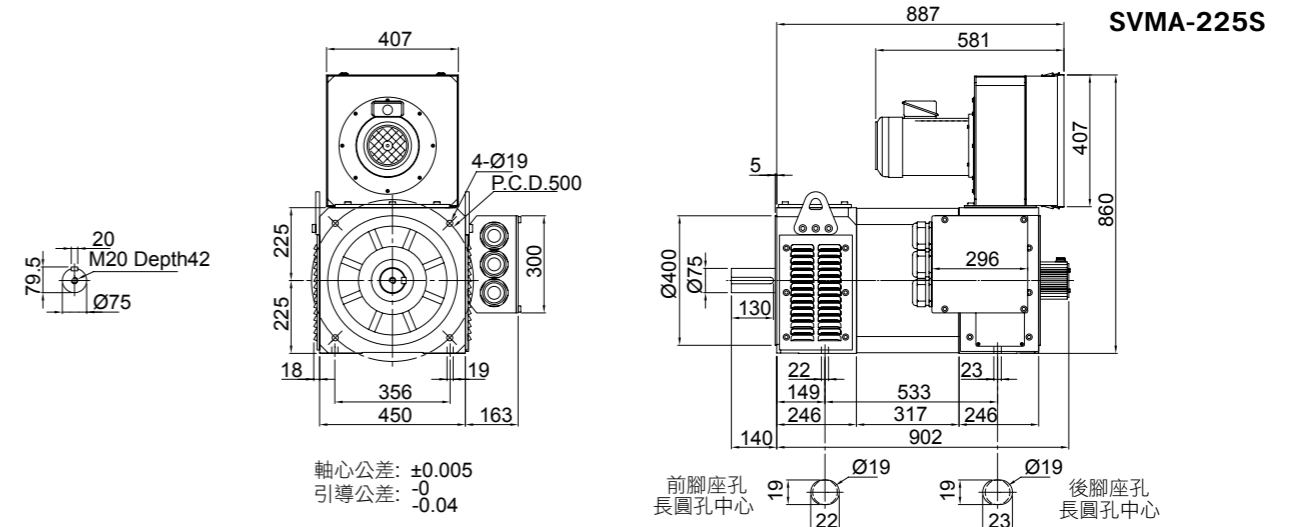
Motor	Rated speed	Speed during Field weakening	Rated torque	Rated current (220/380V)	Rated power	Moment of inertia	Weight approx
	M _{rated}	n1	M _{rated}	I _{rated}	P _{rated}	J	W
TYPE	rpm	rpm	Nm	A	KW	kg-cm ²	kg
SVMA-180S-10	1000	2000	572	203.75/117.96	60	5030	378
SVMA-180S-15	1500	3000	508	271.67/157.28	80	5030	378
SVMA-180S-20	2000	3500	525	373.54/216.26	110	5030	378
SVMA-180M-10	1000	2000	762	271.67/157.28	80	6900	450
SVMA-180M-15	1500	3000	699	373.54/216.26	110	6900	450
SVMA-180M-20	2000	3500	691	492.40/285.07	145	6900	450
SVMA-180L-10	1000	2000	906	319.14/184.76	95	7770	510
SVMA-180L-15	1500	3000	827	436.71/252.83	130	7770	510
SVMA-180L-20	2000	3500	811	571.09/330.63	170	7770	510





Motor	SVMA-225S	SVMA-225M	SVMA-225L
Rated voltage U_N	220 / 380	220 / 380	220 / 380
Rated power output P_N	150kw	190kw	230kw
Rated speed N_N	1500rpm		
Rated torque M_N	1050Nm	1335Nm	1573Nm
Rated current I_N	481.35/278.68	606.48/351.12	741.92/429.53
Power factor	0.87	0.87	0.86
Efficiency	0.94	0.945	0.946
Max speed N_{max} Standard bearing	4500rpm		
Weight	726kg	840kg	960kg
Rated inertia J	1479kgcm ²	1938kgcm ²	2326kgcm ²
Protection	IP23		
Fan Rated voltage UL Rated current Frequency fL	220/380V 7/4A 50/60HZ		

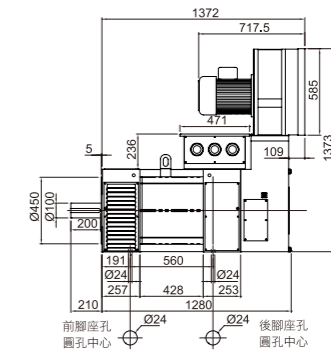
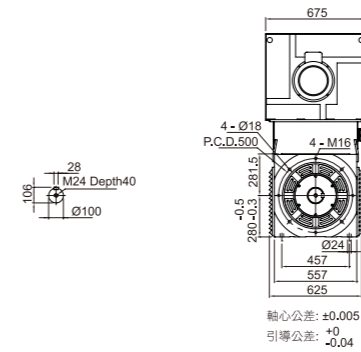
Motor	Rated speed	Speed during Field weakening	Rated torque	Rated current (220/380v)	Rated power	Moment of inertia	Weight approx
	n_{rated}	n_1	M_{rated}	I_{rated}	P_{rated}	J	W
TYPE	rpm	rpm	Nm	A	KW	kg-cm ²	kg
SVMA-225S-10	1000	1800	1050	352.99/204.36	110	1479	726
SVMA-225S-15	1500	2500	954	481.35/278.68	150	1479	726
SVMA-225S-20	2000	3400	834	561.57/325.12	175	1479	726
SVMA-225M-10	1000	1800	1335	446.88/258.72	140	1938	840
SVMA-225M-15	1500	2500	1208	606.48/351.12	190	1938	840
SVMA-225M-20	2000	3400	1168	782.04/452.76	245	1938	840
SVMA-225L-10	1000	1800	1573	532.24/308.14	165	2326	960
SVMA-225L-15	1500	2500	1463	741.92/429.53	230	2326	960
SVMA-225L-20	2000	3400	1374	929.01/537.85	288	2326	960



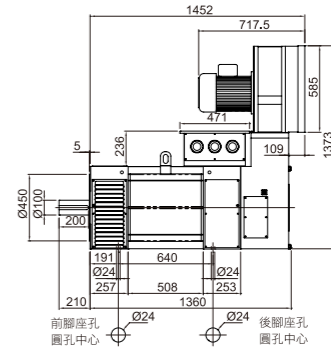
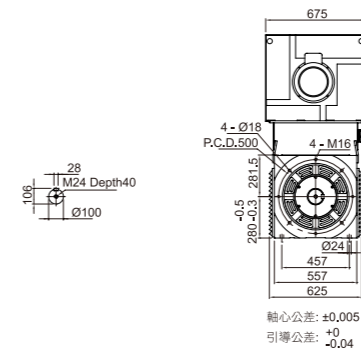


Motor	SVMA-280S	SVMA-280M	SVMA-280L	SVMA-280X	SVMA-280XL
Rated voltage U_N	400V	400V	400V	400V	400V
Rated power output P_N	165kw	199kw	221kw	243kw	265kw
Rated speed N_N	1000rpm				
Rated torque M_N	1580Nm	1980Nm	2200Nm	2323Nm	2534Nm
Rated current I_N	386A	466A	517A	569A	621A
Power factor	0.83	0.84	0.83	0.83	0.84
Max speed N_{max} Standard bearing	2800rpm				
Weight	1350kg	1445kg	1580kg	1650kg	1800kg
Rated inertia J	1370kgm ²	1650kgm ²	1820kgm ²	1970kgm ²	2140kgm ²
Protection	IP23				
Fan Rated voltage U_L Rated current Frequency f_L	400V 13A 50/60HZ				

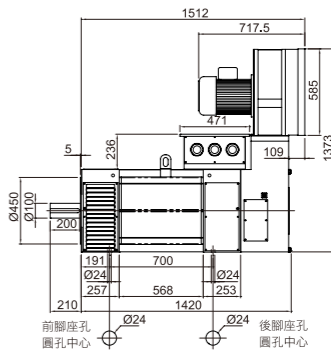
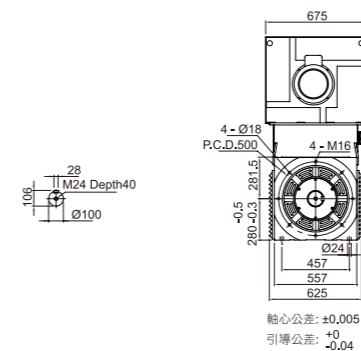
Motor	Rated speed	Speed during Field weakening	Rated torque	Rated current (400v)	Rated power	Moment of inertia	Weight approx
	M_{rated}	$n1$	M_{rated}	I_{rated}	P_{rated}	J	W
TYPE	rpm	rpm	Nm	A	KW	kg·m ²	kg
SVMA-280S-5.8	580	900	1640	224	100	1370	1350
SVMA-280S-6.5	650	1000	1640	250	112	1370	1350
SVMA-280S-10	1000	1500	1574	361	165	1370	1350
SVMA-280M-5.8	580	900	1980	288	120	1650	1445
SVMA-280M-6.5	650	1000	1980	319	135	1650	1445
SVMA-280M-10	1000	1500	1901	466	199	1650	1445
SVMA-280L-5.8	580	900	2200	320	134	1820	1580
SVMA-280L-6.5	650	1000	2200	354	150	1820	1580
SVMA-280L-10	1000	1500	2112	517	221	1820	1580
SVMA-280X-5.8	580	900	2420	352	147	1970	1650
SVMA-280X-6.5	650	1000	2420	390	165	1970	1650
SVMA-280X-10	1000	1500	2323	569	243	1970	1650
SVMA-280XL-5.8	580	900	2640	384	160	2140	1800
SVMA-280XL-6.5	650	1000	2640	425	180	2140	1800
SVMA-280XL-10	1000	1500	2534	621	265	2140	1800



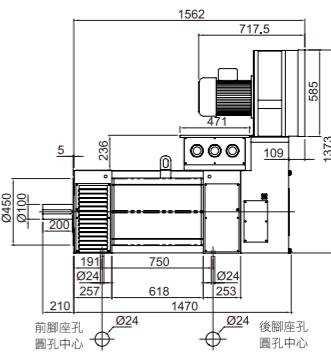
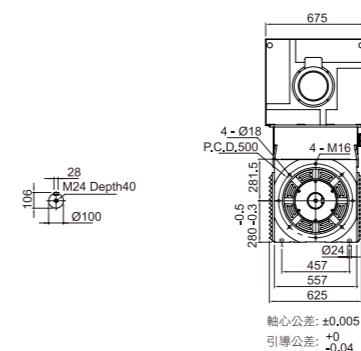
SVMA-280S
LOWER INERTIA



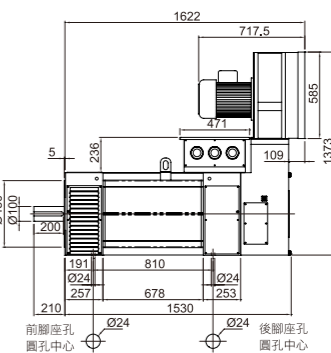
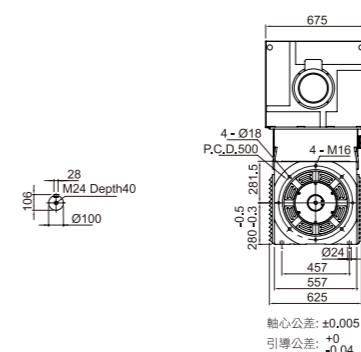
SVMA-280M
LOWER INERTIA



SVMA-280L
LOWER INERTIA



SVMA-280X
LOWER INERTIA

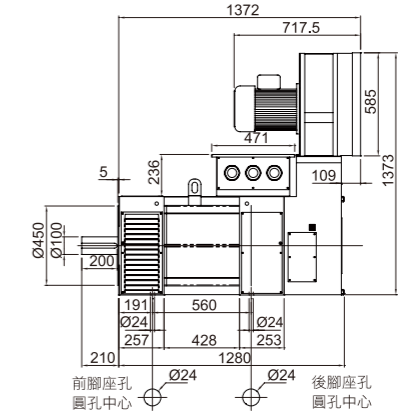
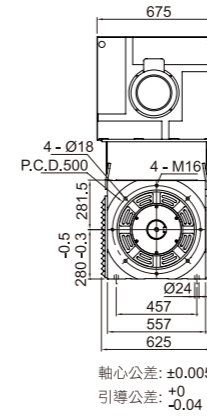
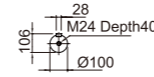


SVMA-280XL
LOWER INERTIA

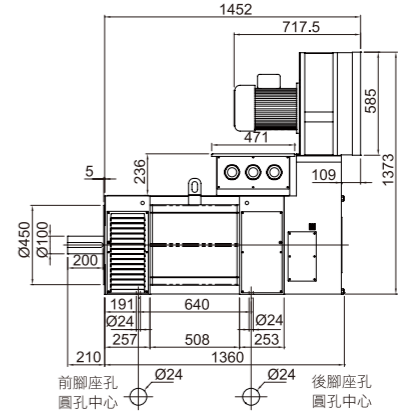
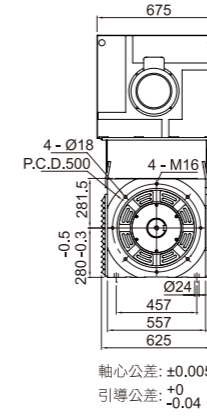
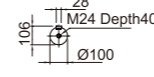


Motor	SVMA-280S	SVMA-280M	SVMA-280L	SVMA-280X
Rated voltage U_N	400V	400V	400V	400V
Rated power output P_N	230kw	280kw	330kw	360kw
Rated speed N_N	1500rpm			
Rated torque M_N	1470Nm	1788Nm	2100Nm	2290Nm
Rated current I_N	415A	502A	590A	644A
Power factor	0.85	0.85	0.85	0.85
Max speed N_{max} Standard bearing	3000rpm			
Weight	1350kg	1445kg	1655kg	1830kg
Rated inertia J	3.68kgm ²	4.34kgm ²	5.25kgm ²	5.75kgm ²
Protection	IP23			
Fan Rated voltage UL Rated current Frequency fL	400V 13A 50/60HZ			

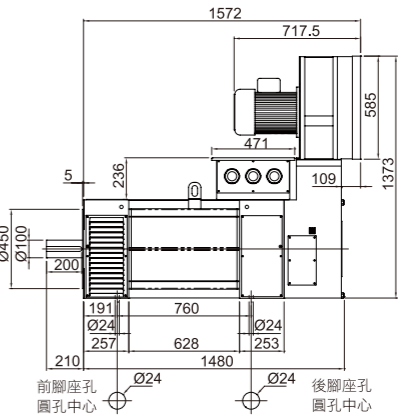
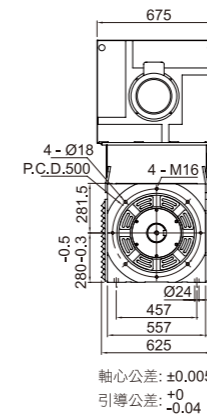
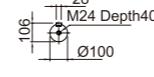
Motor	Rated speed	Speed during Field weakening	Rated torque	Rated current (400v)	Rated power	Moment of inertia	Weight approx
	Mrated	n1	Mrated	Irated	Prated	J	W
TYPE	rpm	rpm	Nm	A	KW	kg-m ²	kg
SVMA-280S-5.8	580	1400	1612	197	98	3.68	1350
SVMA-280S-10	1000	2400	1530	295	161	3.68	1350
SVMA-280S-15	1500	3000	1470	415	230	3.68	1350
SVMA-280M-5.8	580	1400	1960	245	119	4.34	1445
SVMA-280M-10	1000	2400	1875	360	196	4.34	1445
SVMA-280M-15	1500	3000	1788	502	280	4.34	1445
SVMA-280L-5.8	580	1400	2311	286	140	5.25	1655
SVMA-280L-10	1000	2400	2210	426	231	5.25	1655
SVMA-280L-15	1500	3000	2210	590	330	5.25	1655
SVMA-280X-5.8	580	1400	2519	308	153	5.75	1830
SVMA-280X-10	1000	2400	2405	465	252	5.75	1830
SVMA-280X-15	1500	3000	2290	644	360	5.75	1830



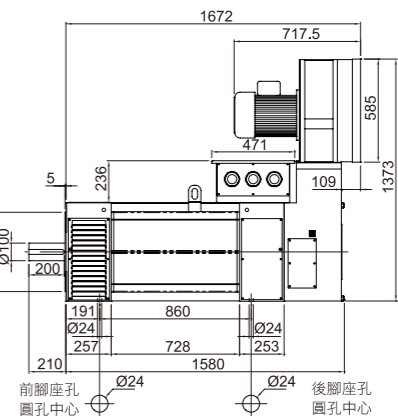
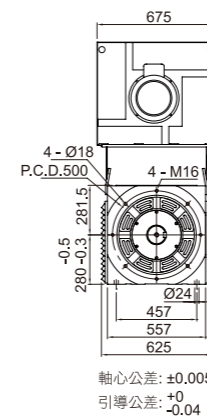
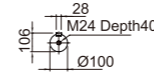
SVMA-280S
MIDDLE INERTIA



SVMA-280M
MIDDLE INERTIA



SVMA-280L
MIDDLE INERTIA

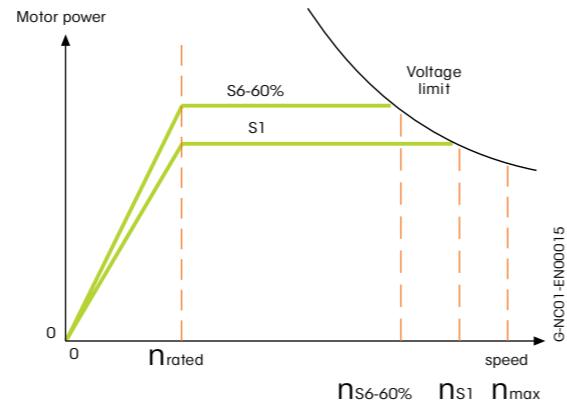


SVMA-280X
MIDDLE INERTIA

Asynchronous Motors
AC SERVO SVMA IP23

Motor	Attainable speed for rated power in duty type in accordance with IEC		
	Rated speed		
	n_{rated}	n_{s1}	n_{max}
TYPEr	rpm	rpm	rpm
SVMA -132S-10	1000	2000	5000
SVMA -132S-15	1500	3000	5000
SVMA -132S-20	2000	4000	5000
SVMA -132M-10	1000	2000	5000
SVMA -132M-15	1500	3000	5000
SVMA -132M-20	2000	4000	5000
SVMA -132L-10	1000	2000	5000
SVMA -132L-15	1500	3000	5000
SVMA -132L-20	2000	4000	5000
SVMA -132X-10	1000	2000	5000
SVMA -132X-15	1500	3000	5000
SVMA -132X-20	2000	4000	5000
SVMA -160S-10	1000	2000	5000
SVMA -160S-15	1500	3000	5000
SVMA -160S-20	2000	4000	5000
SVMA -160M-10	1000	2000	5000
SVMA -160M-15	1500	3000	5000
SVMA -160M-20	2000	4000	5000
SVMA -160L-10	1000	2000	5000
SVMA -160L-15	1500	3000	5000
SVMA -160L-20	2000	4000	5000
SVMA -180S-10	1000	2000	5000
SVMA -180S-15	1500	3000	5000
SVMA -180S-20	2000	3500	5000
SVMA -180M-10	1000	2000	5000
SVMA -180M-15	1500	3000	5000
SVMA -180M-20	2000	3500	5000
SVMA -180L-10	1000	2000	5000
SVMA -180L-15	1500	3000	5000
SVMA -180L-20	2000	3500	5000
SVMA -225S-10	1000	1800	4500
SVMA -225S-15	1500	2500	4500
SVMA -225S-20	2000	3400	4500
SVMA -225M-10	1000	1800	4500
SVMA -225M-15	1500	2500	4500
SVMA -225M-20	2000	3400	4500
SVMA -225L-10	1000	1800	4500
SVMA -225L-15	1500	2500	4500
SVMA -225L-20	2000	3400	4500
SVMA -280S-5.8	580	900	2800
SVMA -280S-6.5	650	1000	2800
SVMA -280S-10	1000	1500	2800
SVMA -280M-5.8	580	900	2800
SVMA -280M-6.5	650	1000	2800
SVMA -280M-10	1000	1500	2800
SVMA -280L-5.8	580	900	2800
SVMA -280L-6.5	650	1000	2800
SVMA -280L-10	1000	1500	2800
SVMA -280X-5.8	580	900	2800
SVMA -280X-6.5	650	1000	2800
SVMA -280X-10	1000	1500	2800
SVMA -280XL-5.8	580	900	2800
SVMA -280XL-6.5	650	1000	2800
SVMA -280XL-10	1000	1500	2800
SVMA -280S-5.8	580	1400	3000
SVMA -280S-10	1000	2400	3000
SVMA -280S-15	1500	3000	3000
SVMA -280M-5.8	580	1400	3000
SVMA -280M-10	1000	2400	3000
SVMA -280M-15	1500	3000	3000
SVMA -280L-5.8	580	1400	3000
SVMA -280L-10	1000	2400	3000
SVMA -280L-15	1500	3000	3000
SVMA -280X-5.8	580	1400	3000
SVMA -280X-10	1000	2400	3000
SVMA -280X-15	1500	3000	3000

Characteristic curves



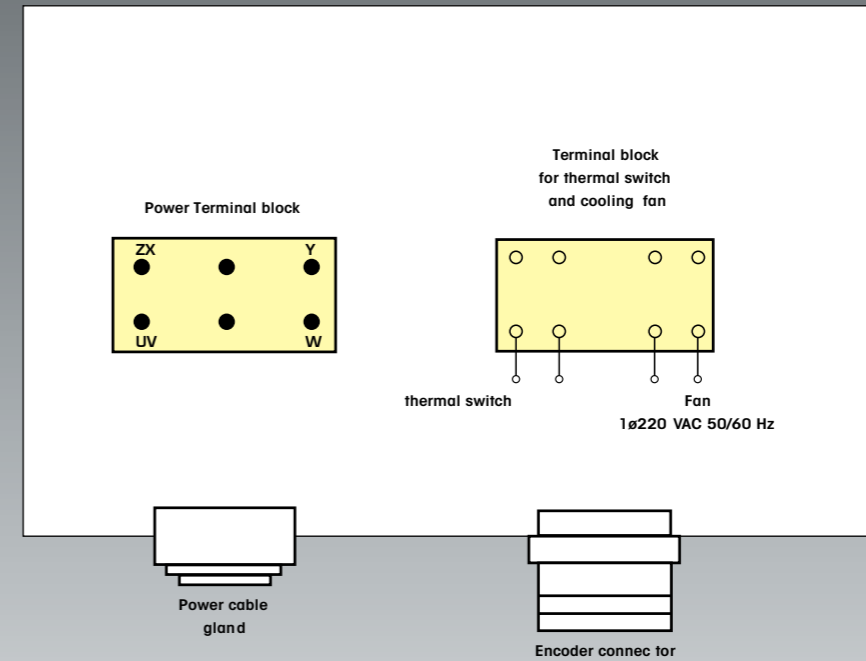
speed/power graph for AC motors 1)

The graph shows the typical relationship between motor speed drive power in SVM motors for the following duty types in accordance with IEC 60034-1

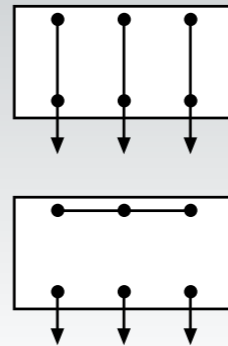
S1 : Continuous duty

S6 : Continuous duty with intermittent loading and a relative duty factor 60%(S6~60%) or 40%(S6~40%) with a maximum duty cycle time of 10 minutes.

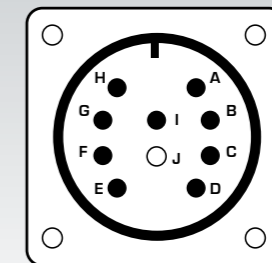
Terminal box



Connection of power block



Description of encoder connector



	Line Driver	push-pull
H	+5V	+Vcc
I	0V	0V
A	A	A
B	A̅	0V
C	B	B
D	B̅	0V
E	Z	Z
F	Z̅	0V
G	Shield	Shield