

# Servo motor models

## Naming rules

**SV-M M 13-3R0 E-4-1 A 0-XXXX**

①      ②      ③      ④      ⑤      ⑥      ⑦      ⑧      ⑨      ⑩      ⑪

①

Symbol	Product category
SV	Servo system

②

Symbol	Product category
M	M series
C	C series
S	S series

③

Symbol	Inertia level
L	Small inertia
M	Medium inertia
H	Large inertia

④

Symbol	Base no.
04	40 <sup>(1)</sup>
06	60
08	80
11	110
13	130
18	180
20	200
26	263

⑤

Symbol	Rated power
0R1	100W
0R2	200W
0R4	400W
0R7	750W
0R8	800W/850W
1R0	1.0kW
1R2	1.2kW
1R3	1.3kW
1R5	1.5kW
1R8	1.8kW
2R0	2.0kW
3R0	3.0kW
4R4	4.4kW
5R5	5.5kW
7R5	7.5kW
011	11kW
015	15kW
022	22kW
037	37kW
045	45kW
055	55kW
...	...

⑥

Symbol	Rated speed
A	1000rpm <sup>(2)</sup>
B	1500rpm
E	2000rpm
F	2500rpm
G	3000rpm

⑦

Symbol	Voltage class
2	220VAC
4	380VAC

⑧

Symbol	Encoder type
1	2500-PPR standard incremental
4	17-bit multi-turn absolute <sup>(3)</sup>
7	Resolver
9	23-bit multi-turn absolute

⑨

Symbol	Shaft end connection
A	Solid threaded with key (Standard)
B	Solid optical axis <sup>(2)</sup>

⑩

Symbol	Optional parts
0	With oil seal but no brake
1	No oil seal or brake <sup>(2)</sup>
2	With oil seal and permanent magnet brake
3	No oil seal but with permanent magnet brake <sup>(2)</sup>
4	With oil seal and electromagnet brake <sup>(4)</sup>
5	No oil seal but with brake <sup>(2)</sup>

⑪

Symbol	Lot no.
xxxx	Manufacturer's product lot no. <sup>(5)</sup>

Remarks:  
 (1): A motor of base 40 supports only 2500-PPR and 17-bit absolute encoders.  
 (2): For special models, the lead time will be longer than usual.  
 (3): 17-bit multi-turn absolute encoders are applicable only to motors of base 40.  
 (5): No need to fill in when selecting models for the first time.  
 (4): When an electromagnetic brake motor is used, there is a clearance (of < 0.5°) in the rotating direction if the motor brake is closed. Pay attention to this in the vertical axis applications. There is no clearance when a permanent magnetic brake is used.  
 (5): No need to fill in when selecting models for the first time.

# Servo motor technical parameters

## Motor specification (2500-PPR/multi-turn absolute/resolver)

Motor model (2500-PPR/multi-turn absolute/ resolver)	Rated power (kW)	Rated current (A)	Max. momentary current (A)	Rated torque (Nm)	Max. momentary torque (Nm)	Rated speed (rpm)	Max. speed (rpm)	Rotation inertia standard/with brake (kg. cm )	Voltage (V)	Weight standard/with brake (kg)	
<b>ML series with small inertia</b>											
SV-ML04-0R1G-2-□A□	0.1	0.6	1.2	0.32	0.64	3000	5000	0.051/0.055/#	220	0.47/0.67	
SV-ML06-0R2G-2-□A□	0.2	1.5	4.5	0.64	1.92			0.198/0.29/0.21		1.4/1.6	
SV-ML06-0R4G-2-□A□	0.4	2.8	8.4	1.3	3.9			0.33/0.42/0.34		1.8/2.0	
SV-ML08-0R7G-2-□A□	0.75	4.5	13.5	2.4	7.2			1.28/1.51/1.41		3.0/3.5	
SV-ML08-1R0F-2-□A□	1.0	4.3	11.4	4.0	11.4	2500	3500	2.08/2.31/2.21	380	4.8/5.3	
SV-ML08-1R0F-4-□A□	1.0	2.5	7.2	4.0	10.4			2.08/2.31/2.21		4.8/5.3	
<b>MM/SM series with medium inertia</b>											
SV-MM11-0R8E-2-□A□	0.8	3.5	10.5	4	12	2000	3000*	5.4/6.7/#	220	6/7.7	
SV-MM11-1R2E-2-□A□	1.2	4.5	13.5	6	18			7.6/8.9/#		7.9/9.6	
SV-MM11-1R2G-2-□A□	1.2	5	15	4	12			5.4/6.7/#		6/7.7	
SV-MM11-1R5G-2-□A□	1.5	6	18	5	15	3000	4000*	6.3/7.6/#	220	6.8/8.5	
SV-MM11-1R8G-2-□A□	1.8	6	18	6	18			7.6/8.9/#		7.9/9.6	
SV-MM13-1R0E-2-□A□	1	4.8	14.4	4.78	14.3	2000	3000	6.4/8.3/7.19	220	5.8/7.5	
SV-MM13-1R5E-2-□A□	1.5	7.6	22.8	7.16	21.4			9.3/11.2/10.09		7.1/8.8	
SV-MM13-2R0E-2-□A□	2	9.5	28.5	9.55	28.6			12.2/14.1/12.99		8.4/10.1	
SV-MM13-3R0E-2-□A□	3	13.6	40.8	14.3	42			18/19.9/18.79		10.8/12.5	
SV-MM13-2R3B-2-□A□	2.3	8.7	18.9	15	34.5	1500	1800	18/19.9/18.79	380	10.8/12.5	
SV-MM18-3R0B-2-□A□	3	12.4	31	19	47		2000	70.6/84.4/78.3		19.5/27.8	
SV-MM18-4R4B-2-□A□	4.4	16.4	41	28	68	2000	3000	97.7/111.5/104	380	24.2/32.5	
SV-MM13-1R0E-4-□A□	1	2.8	8.4	4.78	14.3			6.4/8.3/7.19		5.8/7.5	
SV-MM13-1R5E-4-□A□	1.5	4.5	13.5	7.16	21.4			9.3/11.2/10.09		7.1/8.8	
SV-MM13-2R0E-4-□A□	2	5.5	16.5	9.55	28.6			12.2/14.1/12.99		8.4/10.1	
SV-MM13-3R0E-4-□A□	3	7.8	23.4	14.3	42			18/19.9/18.79		10.8/12.5	
SV-MM18-3R0B-4-□A□	3	7.5	18.7	19	47			70.6/84.4/78.3		19.5/27.8	
SV-MM18-4R4B-4-□A□	4.4	10.3	25.7	28	68			97.7/111.5/104		24.2/32.5	
SV-MM18-5R5B-4-□A□	5.5	12.8	25.6	35	70			125/138.8/131.2		28.8/37.2	
SV-MM18-7R5B-4-□A□	7.5	20	40	48	96			173.3/187/179.5		40/46.5	
SV-SM18-7R5B-4-□A□	7.5	23.1	46.2	48	96			2500		183.3/197/190	46/52.5
<b>MH/SH series with large inertia</b>											
SV-MH06-0R2G-2-□A□	0.2	1.5	4.5	0.64	1.92	3000	5000	0.42/0.52/0.43	220	1.5/1.7	
SV-MH06-0R4G-2-□A□	0.4	2.8	8.4	1.3	3.9			0.67/0.76/0.68		2.0/2.2	
SV-MH08-0R7G-2-□A□	0.75	4.5	13.5	2.4	7.2			2.5/2.73/2.63		3.3/3.8	
SV-MH13-0R8B-2-□A□	0.85	4.8	13	5.41	14.3	1500	2400	13.9/#/14.7	220	6.6/8.3	
SV-MH13-1R3B-2-□A□	1.3	7.2	18.9	8.27	21.4		19.9/#/20.8	7.95/9.65			
SV-MH13-0R8B-4-□A□	0.85	3.1	7.5	5.41	14.3		2200	13.9/#/14.7		6.6/8.3	
SV-MH13-1R3B-4-□A□	1.3	4.5	11.5	8.27	21.4	1500	1800	19.9/无/20.8	380	7.95/9.65	
SV-MH20-011B-4-□A□	11	22.7	69	70	175		2300	98.3/106.3/#		49/67	
SV-MH20-015B-4-□A□	15	42.5	107	95.5	240		2100	119/127/#		66/86	
SV-SH26-022B-4-□A□	22	61	153	140	350		1800	390/#/412		103/133	
SV-SH26-031B-4-□A□	31	65.3	98	196	294		1800	380/#/402		115/145	
SV-SH26-035C-4-□A□	35	74.6	202	187	468		1800	2500		380/##	118
SV-SH26-044E-4-□A□	44	100	270	210	525		2000	2500*		447/##	121
SV-SH26-055C-4-□A□	55	104.6	285	290	725	1800	1900	728/##	159		
Insulation class	Class F(155°C)										
IP class	IP65(MH20/SH26: IP54)										
Ambient environment	Temperature: -20° C - +40° C (non-frozen); RH: Below 90% (No condensation)										

Remarks:

(\*) Please confirm the corresponding max. speed with the manufacturer.

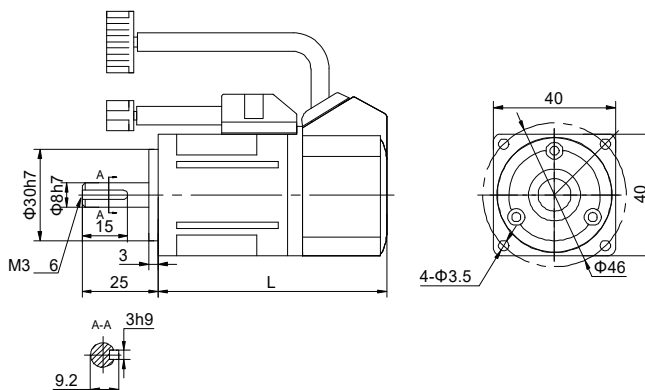
(#) To be developed

# Servo motor installation dimensions

Note: Motor structure dimensions may vary with design modification. If you are sensitive to motor dimensions, contact sales staff before ordering.

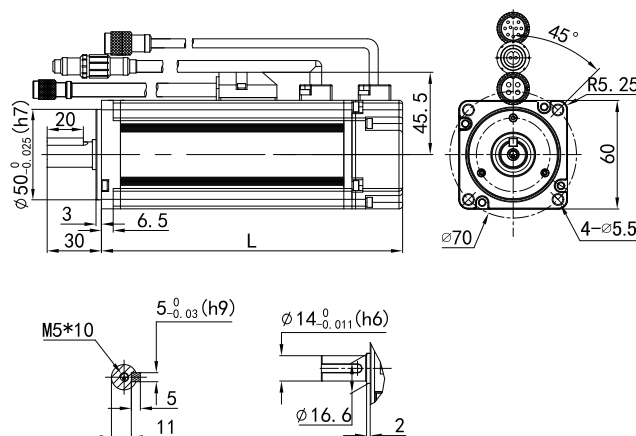
## Base-40 motor outline dimensions (unit: mm)

Motor model 2500-PPR/Multiturn absolute/ Resolver	L(mm)	
	Without brake	With PM brake
SV-ML04-0R1G-2-□A□	90	124



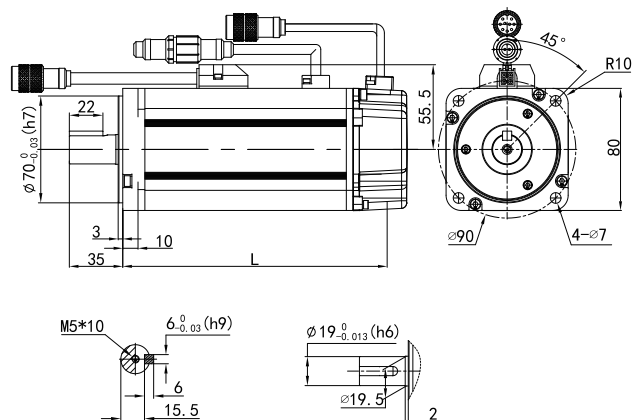
## Base-60 motor outline dimensions (unit: mm)

Motor model 2500-PPR/Multiturn absolute/ Resolver	L(mm)		
	Without brake	With PM brake	With EM brake
SV-ML06-0R2G-2-□A□	115	152	152
SV-ML06-0R4G-2-□A□	139	176	176
SV-MH06-0R4G-2-□A□	147	191.5	191.5
SV-MH06-0R2G-2-□A□	120.5	165.5	165.5



## Base-80 motor outline dimensions (unit: mm)

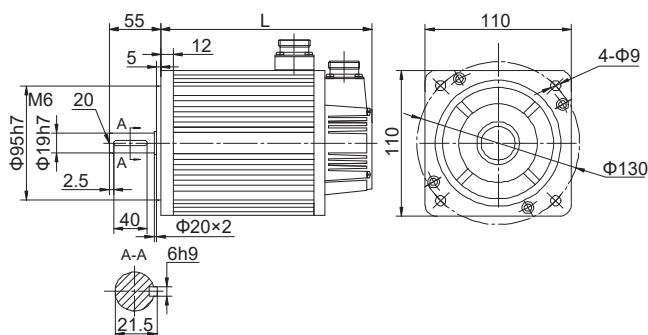
Motor model 2500-PPR/Multiturn absolute/ Resolver	L(mm)		
	Without brake	With PM brake	With EM brake
SV-ML08-0R7G-2-□A□	140	186.5	186.5
SV-MH08-0R7G-2-□A□	151	204.5	204.5
SV-ML08-1R0F-□-□A□	172	218.5	218.5



# Servo motor installation dimensions

## Base-110 motor outline dimensions (unit: mm)

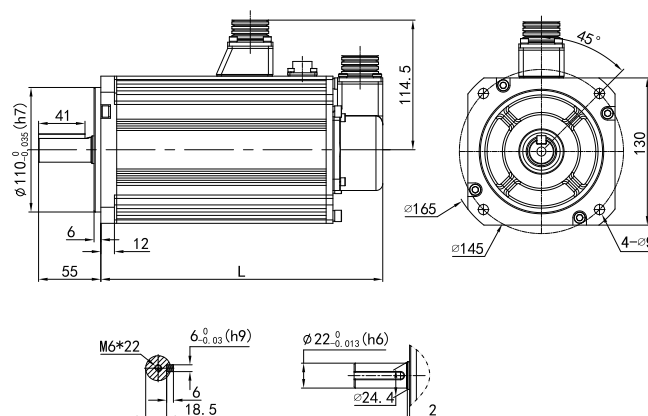
Motor model 2500-PPR/Multiturn absolute/ Resolver	L(mm)		
	Without brake	With PM brake	With EM brake
SV-MM11-0R8E-2-□A□	189	245	263
SV-MM11-1R2G-2-□A□	204	260	278
SV-MM11-1R2E-2-□A□	219	275	293
SV-MM11-1R8G-2-□A□			



Note: Motor structure dimensions may vary with design modification. If you are sensitive to motor dimensions, contact sales staff before ordering.

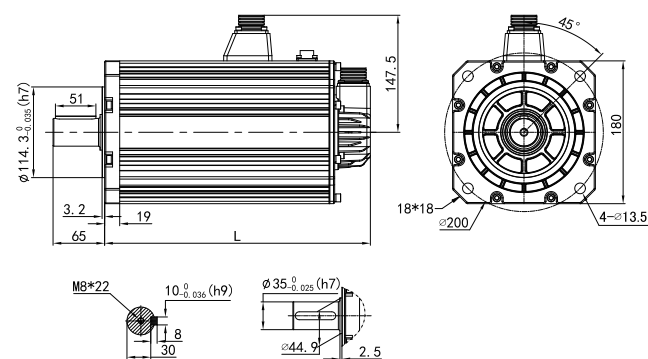
## Base-130 motor outline dimensions (unit: mm)

Motor model 2500-PPR/Multiturn absolute/ Resolver	L(mm)		
	Without brake	With PM brake	With EM brake
SV-MM13-1R0E-□-□A□	143	185	185
SV-MM13-1R5E-□-□A□	159	201	201
SV-MM13-2R0E-□-□A□	175	217	217
SV-MM13-3R0E-□-□A□	207	249	249
SV-MH13-0R8B-□-□A□	167	209	209
SV-MH13-1R3B-□-□A□	202	244	244



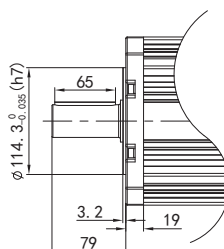
## Base-180 motor outline dimensions (unit: mm)

Motor model 2500-PPR/Multiturn absolute/ Resolver	L(mm)		
	Without brake	With PM brake	With EM brake
SV-MM18-3R0B-□-□A□	230	303	303
SV-MM18-4R4B-□-□A□	260	333	333
SV-MM18-5R5B-4-□A□	290	363	363
SV-MM18-7R5B-4-□A□	345	418	418



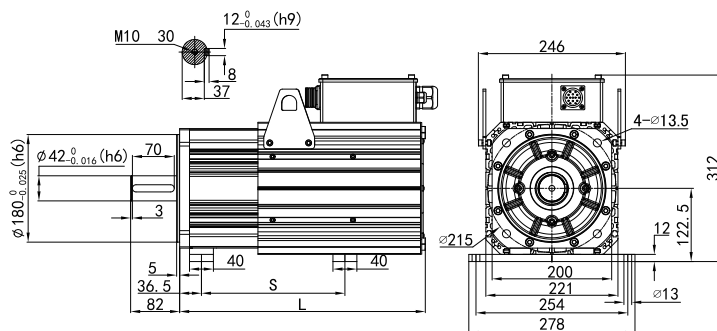
## SV-SM18-7R5B shaft extension dimensions (unit: mm)

Motor model 2500-PPR/Multiturn absolute/ Resolver	L(mm)		
	Without brake	With PM brake	With EM brake
SV-SM18-7R5B-4-□A□	375	448	448



### Base-200 motor outline dimensions (unit: mm)

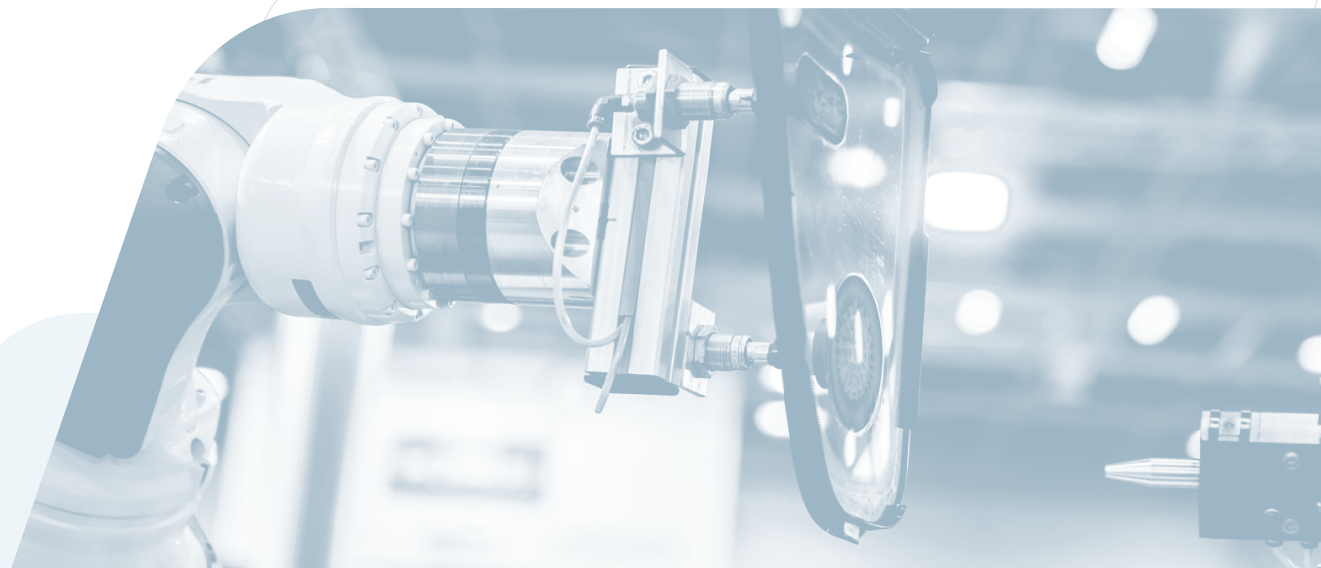
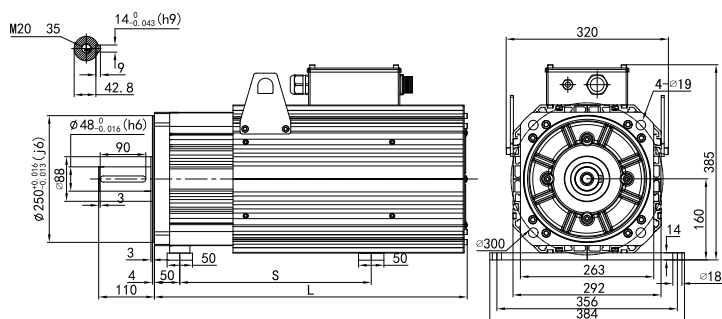
Motor model 2500-PPR/Multiturn absolute/ Resolver	L(mm)	
	Without brake	With EM brake
SV-MH20-011B-4-□A□	411	547
SV-MH20-015B-4-□A□	446	582



### Base-263 motor outline dimensions (unit: mm)

Motor model 2500-PPR/Multiturn absolute/ Resolver	L(mm)	
	Without brake	With EM brake
SV-SH26-022B-4-□A□	537	644
SV-SH26-031B-4-□A□	537	644

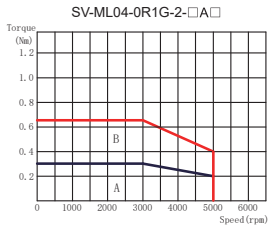
Motor model 2500-PPR/Multiturn absolute/ Resolver	L(mm)	
	Without brake	
SV-SH26-035C-4-□A□	537	
SV-SH26-044E-4-□A□	577	
SV-SH26-055C-4-□A□	620	



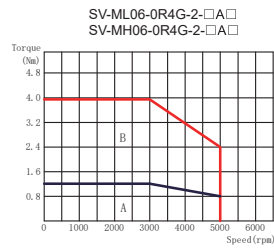
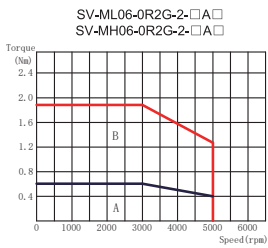
# Servo motor torque-speed characteristic

Note: A is a continuous working area; B is a short-time working area.

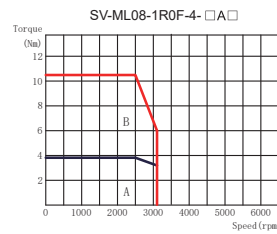
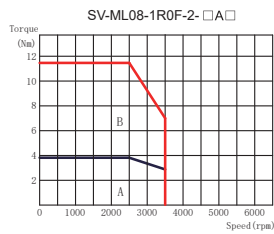
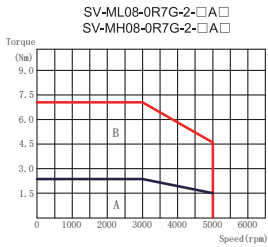
## Base-40 motor



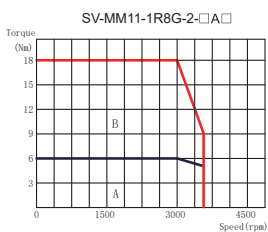
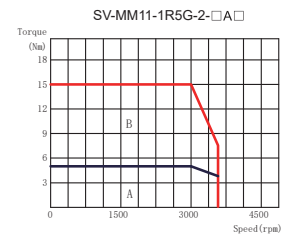
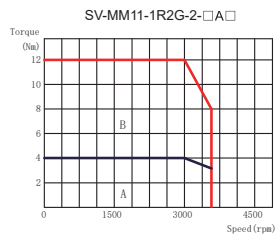
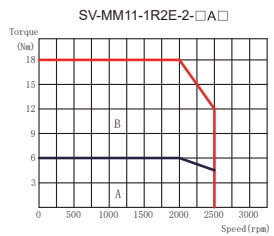
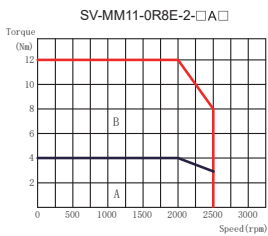
## Base-60 motor



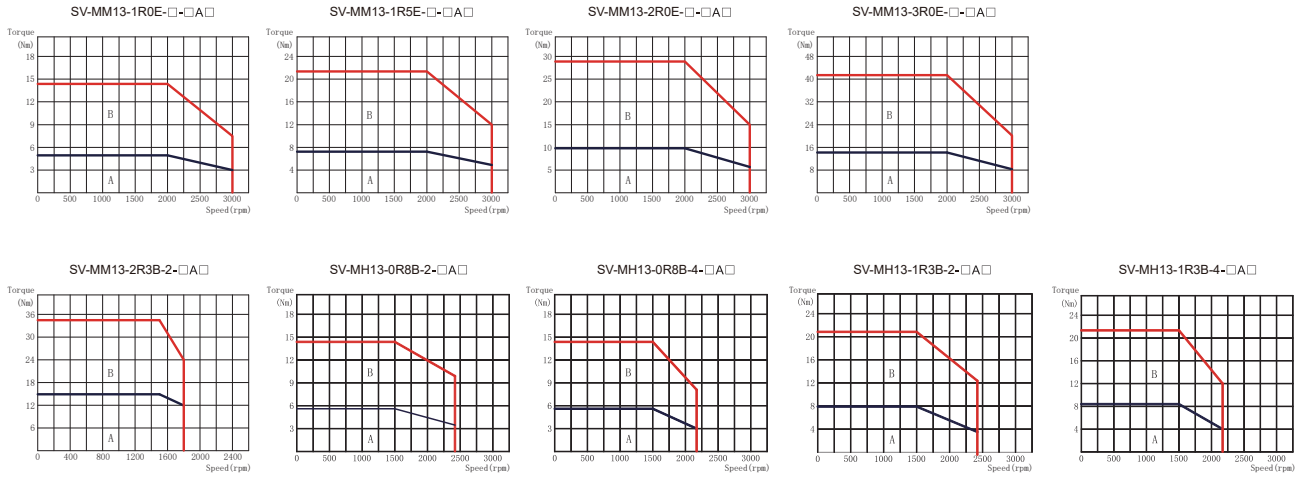
## Base-80 motor



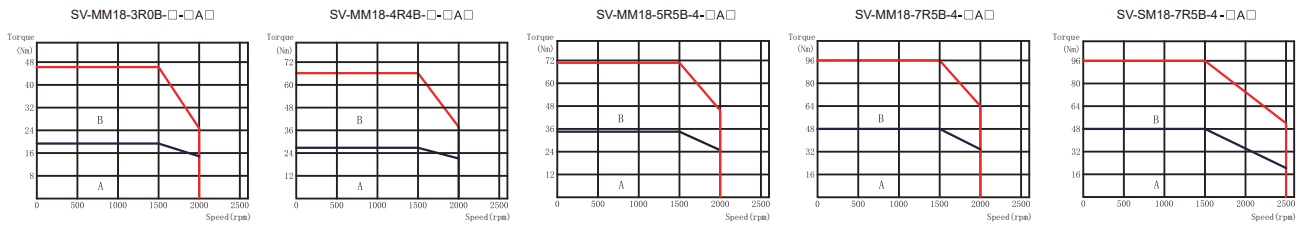
## Base-110 motor



### Base-130 motor



### Base-180 motor



### Base-200/263 motor

