

Synchronous motors

Main spindle motors for SINAMICS S120

2SP1 motor spindles, standard type

Water cooling

Selection and ordering data

Spindle diameter	Rated power Star/delta for duty type		Rated torque Star/delta for duty type		Rated speed Star/delta	Maximum speed	2SP1 motor spindles Standard type
	P_{rated} S1	S6-40 %	M_{rated} S1	S6-40 %	n_{rated}	n_{max}	
mm (in)	kW (HP)	kW (HP)	Nm (lb _f -in)	Nm (lb _f -in)	rpm	rpm	Order No.
Synchronous – Water cooling							
200	12.0/- (16.1/-)	12.0/- (16.1/-)	42/- (372/-)	55/- (487/-)	2700/-	15000	2SP1202-1HA ■ ■ -1D ■ ■
	15.5/- (20.8/-)	15.5/- (20.8/-)	42/- (372/-)	55/- (487/-)	3500/-	18000	2SP1202-1HB ■ ■ -2D ■ ■
	26.4/- (35.4/-)	26.4/- (35.4/-)	84/- (744/-)	110/- (974/-)	3000/-	15000	2SP1204-1HA ■ ■ -1D ■ ■
	35.0/- (46.9/-)	35.0/- (46.9/-)	78/- (690/-)	110/- (974/-)	4300/-	18000	2SP1204-1HB ■ ■ -2D ■ ■
Asynchronous – Water cooling							
250	13.2/13.2 (17.7/17.7)	18.9/18.9 (25.3/25.3)	70/32 (620/283)	100/45 (885/398)	1800/4000	10000	2SP1253-8HA 0 ■ -0 ■ ■ 2
	13.2/13.2 (17.7/17.7)	18.9/18.9 (25.3/25.3)	70/32 (620/283)	100/45 (885/398)	1800/4000	15000	2SP1253-8HA 0 ■ -1D ■ 2
	11.7/11.7 (15.7/15.7)	16.7/16.7 (22.4/22.4)	140/62 (1239/549)	200/89 (1170/788)	800/1800	10000	2SP1255-8HA 0 ■ -0 ■ ■ 2
	11.7/11.7 (15.7/15.7)	16.7/16.7 (22.4/22.4)	140/62 (1239/549)	200/89 (1170/788)	800/1800	15000	2SP1255-8HA 0 ■ -1D ■ 2
Synchronous – Water cooling							
250	26.0/- (34.9/-)	29.0/- (38.9/-)	100/- (885/-)	130/- (1151/-)	2500/-	10000	2SP1253-1HA 0 ■ -0 ■ ■ 2
	35.0/- (46.9/-)	38.0/- (50.9/-)	100/- (885/-)	130/- (1151/-)	3300/-	15000	2SP1253-1HB 0 ■ -1D ■ 2
	46.3/- (62.1/-)	55.0/- (73.7/-)	170/- (1505/-)	236/- (2089/-)	2600/-	10000	2SP1255-1HA 0 ■ -0 ■ ■ 2
	53.4/- (71.6/-)	64.0/- (85.8/-)	170/- (1505/-)	236/- (2089/-)	3000/-	15000	2SP1255-1HB 0 ■ -1D ■ 2
Tool clamping and release mechanism:							
Pneumatic (Only for 2SP125)							0
Pneumatic (Only for 2SP120)							2
Hydraulic (Only for 2SP120)							3
Cooling:							
Closed cooling jacket							1
Closed cooling jacket and internal tool cooling							3
Closed cooling jacket and ring for external tool cooling (Only for 2SP120)							4
Closed cooling jacket, internal tool cooling and ring for external tool cooling (Only for 2SP120)							5
Tool interfaces:							
Tool interface SK 40							A
Tool interface BT 40 45°							B
Tool interface CAT 40							C
Tool interface HSK A63							D
Tool interface BT 40 30°							E
Tool interface HSK A63, latching (Only for 2SP120)							R
Sensors:							
Sensor: Tool clamped/Draw-bar in the release position/Clamped without tool							D
As with D + Sensor: Position of release piston (Only for 2SP120)							F
Type of connection:							
(Permanently connected cable, sensor cable with signal connector, length: 1.5 m (4.92 ft))							2 6
Power cable with exposed core ends							
Power cable with connector (2SP1202: Connector size 1.5/2SP1204: Connector size 3)							

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Motor type (repeated)	Moment of inertia J kgm ² (lb _r -in-s ²)	Weight, ¹⁾ approx. m kg (lb)	Rated current Star/delta for duty type		Voltage Protection Module	SINAMICS S120 Motor Module	
			I_{rated} S1	S6-40 % A		Required rated current for S1 duty I_{rated} A	Booksizе format For additional versions and components, see SINAMICS S120 drive system Order No.
Synchronous – Water cooling							
2SP1202-1HA...	0.015 (0.1327)	83 (183)	30/-	43/-	VPM 120	30	6SL312 -1TE23-0AA3
2SP1202-1HB...	0.015 (0.1327)	83 (183)	42/-	60/-	VPM 120	45	6SL312 -1TE24-5AA3
2SP1204-1HA...	0.023 (0.2035)	101 (223)	60/-	85/-	VPM 120	60	6SL312 -1TE26-0AA3
2SP1204-1HB...	0.023 (0.2035)	101 (223)	79/-	120/-	VPM 120	85	6SL312 -1TE28-5AA3
Asynchronous – Water cooling							
2SP1253-8HA0.-0...	0.037 (0.3274)	130 (287)	28/29	39/39	–	30	6SL312 -1TE23-0AA3
2SP1253-8HA0.-1...	0.037 (0.3274)	130 (287)	28/29	39/39	–	30	6SL312 -1TE23-0AA3
2SP1255-8HA0.-0...	0.055 (0.4867)	165 (364)	30/29	40/37	–	30	6SL312 -1TE23-0AA3
2SP1255-8HA0.-1...	0.055 (0.4867)	165 (364)	30/29	40/37	–	30	6SL312 -1TE23-0AA3
Synchronous – Water cooling							
2SP1253-1HA...	0.037 (0.3274)	130 (287)	53/-	75/-	VPM 120	60	6SL312 -1TE26-0AA3
2SP1253-1HB...	0.037 (0.3274)	130 (287)	68/-	98/-	VPM 120	85	6SL312 -1TE28-5AA3
2SP1255-1HA...	0.055 (0.4867)	165 (364)	95/-	135/-	VPM 120	132	6SL312 -1TE31-3AA3
2SP1255-1HB...	0.055 (0.4867)	165 (364)	120/-	180/-	VPM 200	132	6SL312 -1TE31-3AA3

Cooling:	
Internal air cooling	0
External air cooling	1
Motor Module:	
Single Motor Module	1

¹⁾ No options included.
Internal tool cooling: + 1 kg (2.21 lb)
External tool cooling: + 8 kg (17.6 lb).