

Synchronous motors

Motor spindles for SIMODRIVE 611

2SP1 standard type ECS motor spindles
Water cooling

Selection and Ordering Data

Spindle diameter	Rated power Star/delta		Rated torque Star/delta		Rated speed Star/delta	Maximum speed	2SP1 ECS motor spindles Water cooling
	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. Standard type

Synchronous

200 (7.87)	12.0/- (16.1/-)	12.0/- (16.1/-)	42/- (372/-)	55/- (487/-)	2700/-	15000	2SP1202-1HA ■ ■ -1 D F 2
	15.5/- (20.8/-)	15.5/- (20.8/-)	42/- (372/-)	55/- (487/-)	3500/-	18000	2SP1202-1HB ■ ■ -2 D F 2
	26.4/- (35.4/-)	26.4/- (35.4/-)	84/- (744/-)	110/- (974/-)	3000/-	15000	2SP1204-1HA ■ ■ -1 D F 2
	35.0/- (46.9/-)	35.0/- (46.9/-)	78/- (690/-)	110/- (974/-)	4300/-	18000	2SP1204-1HB ■ ■ -2 D F 2

Asynchronous

250 (9.84)	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 (25.4/25.4)	70/32 (620/283)	100/45 (885/398)	1800/4000	15000	2SP1253-8HA 0 ■ -1 D ■ 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 (1770/788)	800/1800	15000	2SP1255-8HA 0 ■ -1 D ■ 2

Synchronous

250 (9.84)	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 ■ -1 D ■ 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 ■ -1 D ■ 2

Tool clamping and release mechanism:

Pneumatic	0
Hydraulic	1

Cooling:

Closed cooling jacket	1
Closed cooling jacket and internal tool cooling	3
Closed cooling jacket, internal tool cooling and ring for external tool cooling (for 2SP120 only)	5

Tool interfaces:

Tool interface SK 40	A B C D E
Tool interface BT 40 45°	
Tool interface CAT 40	
Tool interface HSK A 63	
Tool interface BT 40 30°	

Sensors:

"Tool clamped" sensor ¹⁾	B C D F
B + "Draw-bar in release position" sensor	
C + "Clamped without tool" sensor	
D + "Position of release piston" sensor (for 2SP120 <u>only</u>)	

¹⁾ For manual tool changing. Additional sensors are required for automatic tool changing.

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Motor type (continued)	Moment of inertia	Weight ¹⁾ approx.	Rated current Star/delta		Voltage Protection Module	SIMODRIVE 611 power module	
	<i>J</i>	<i>m</i>	<i>I</i> _{rated}			Required rated current	Order No.
	kgm ² (lb _f -in-s ²)	kg (lb)	S1 A	S6-40% A		<i>I</i> _{rated} S1 A	
Synchronous							
2SP1202-1HA...	0.015 (0.1327)	83 (183)	30/–	43/–	VPM 120	30	For ordering data, see "Converter systems"
2SP1202-1HB...	0.015 (0.1327)	83 (183)	42/–	60/–	VPM 120	45	
2SP1204-1HA...	0.023 (0.2035)	101 (223)	60/–	85/–	VPM 120	60	
2SP1204-1HB...	0.023 (0.2035)	101 (223)	79/–	120/–	VPM 120	85	
Asynchronous							
2SP1253-8HA0.-0...	0.037 (0.3274)	130 (287)	28/29	39/39	–	30	For ordering data, see "Converter systems"
2SP1253-8HA0.-1...	0.037 (0.3274)	130 (287)	28/29	39/39	–	30	
2SP1255-8HA0.-0...	0.055 (0.4867)	165 (364)	30/29	40/37	–	30	
2SP1255-8HA0.-1...	0.055 (0.4867)	165 (364)	30/29	40/37	–	30	
Synchronous							
2SP1253-1HA...	0.037 (0.3274)	130 (287)	53/–	75/–	VPM 120	60	For ordering data, see "Converter systems"
2SP1253-1HB...	0.037 (0.3274)	130 (287)	68/–	98/–	VPM 120	85	
2SP1255-1HA...	0.055 (0.4867)	165 (364)	95/–	135/–	VPM 120	120	
2SP1255-1HB...	0.055 (0.4867)	165 (364)	120/–	180/–	VPM 120	120	

Integration

The ECS motor spindle can generally be used with:

- SIMODRIVE 611 digital in combination with High-Standard or High-Performance closed-loop control
- SIMODRIVE 611 universal HRS
- SINUMERIK 840D powerline/840Di/802D and SINUMERIK 810D powerline

A VPM 120 must be used with ECS motor spindles in synchronous design, see 1FE1 built-in motors.

More information

Please refer to "Asynchronous motors – Liquid cooling" for a list of heat exchanger manufacturers.

For information about other motor spindles for turning, grinding, milling and drilling, please contact:

Weiss Spindeltechnologie GmbH

– a Siemens Company –
Rudolf-Diesel-Str. 35
97424 SCHWEINFURT, Germany

Phone: +49 (0)97 21 - 77 01 - 10

Fax: +49 (0)97 21 - 77 01 - 13 3

More information is available on the Internet at:



<http://www.weissgmbh.de>

¹⁾No options included.
Internal tool cooling: + 1 kg (2.2 lb)
External tool cooling: + 8 kg (17.6 lb).