

Spindle Datasheet

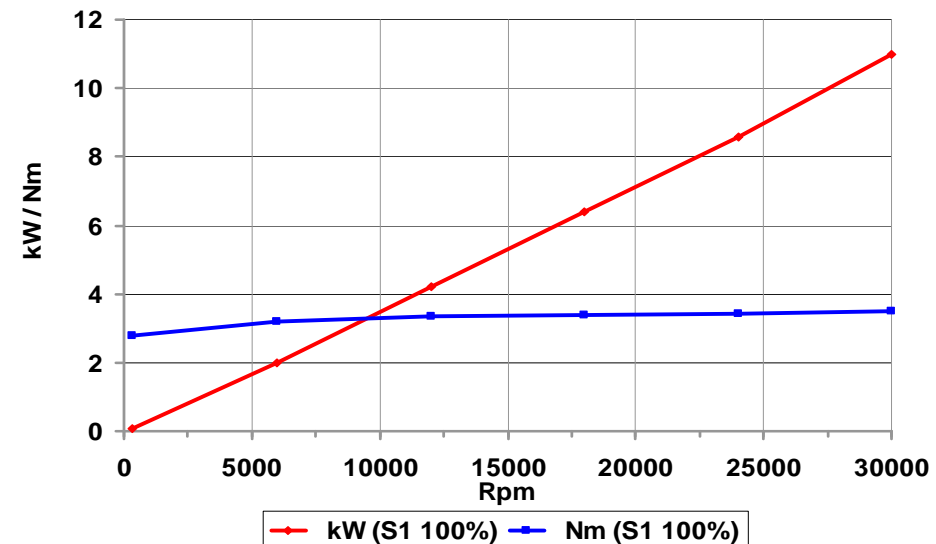
VSC 50124



MOTOR	
Speed Range	300 – 30,000 rpm
Torque (S1-100%)	3.5 N-m [31 in-lbs] (S 1)
Power (S1-100%)	11 kW [14.7 hp] at 30,000 rpm (S 1)
Frequency Range	10 - 1,000 Hz
Voltage	400 V @ 1000 Hz
Maximum Amperage	25 A (S 1)
Motor Type	AC asynchronous, 4-pole, 3-phase
SPINDLE DRIVE	
Drive Type	Type PSS 203 Frequency Converter
BEARINGS	
Bearings	Four (4) angular-contact, hybrid-ceramic bearings, ABEC 7/9 precision
Mounting	Front and rear duplex sets, mounted in "O" arrangement with shaft length compensation to provide constant spring pre-load
Lubrication	Permanent grease lubrication
Labyrinth Air-Seal	0.5 bar [7 psi] positive air pressure at bearing seal
SHAFT DATA	
Stiffness at spindle nose	Axial: 45 N/μm [257,000 lb/in]
	Radial: 90 N/μm [514,000 lb/in]
SPINDLE COOLING	
Cooling	Liquid circulation through spindle housing using Type RCS 2304 Refrigerated Cooling System
TOOL CLAMPING	
Taper	Automatic HSK-E40 taper clamping system with spring-loaded drawbar
Clamping Force	> 8000 N [1,800 lb]
Toolchange	Built-in pneumatic toolholder release cylinder, 5.5 bar [80 psi] minimum air pressure required
Toolholder Type	Type ATC 4-40-25 toolholder (Cat. #411425), HSK-E40 DIN 69893
Taper Purge	0.3 – 0.5 bar [4 – 7 psi] air blast through taper at toolholder release
SENSORS	
Motor Protection	PTC thermistor in stator
Tool-in-position Sensors	Four (4) PNP proximity sensors to detect toolholder position and release-cylinder position
Speed Sensing	Encoder
CONNECTIONS	
	<ul style="list-style-type: none"> • liquid cooling (2 x Ø8mm tubes) • labyrinth air seal (1 x Ø6mm tube) • taper purge (1 x Ø6mm tube) • ATC (2 x Ø6mm tubes) • Power/thermistor Connector (bulkhead) • Sensor Connector (bulkhead) • Encoder Connector (bulkhead)
MOUNTING / WEIGHT	
Housing Diameter	Ø 120 mm h5 (spindle also available with custom mounting flange)
Net Weight	22.5 kg [50 lb]



(spindle shown with optional mounting flange)



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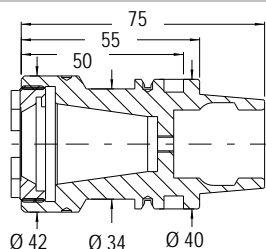
VSC 50124 Standard Equipment:

VSC 50124 spindle Cat. #550391 <ul style="list-style-type: none"> Power/thermistor connector Sensor connector 	Wrenches: <ul style="list-style-type: none"> 1 - 32 mm vise wrench #412576 1 - collet nut wrench #412640
Documentation: <ul style="list-style-type: none"> 1 operating instruction 	Cleaning Kit: <ul style="list-style-type: none"> 1 HSK 40 taper wiper #018009 1 SRP 25 taper wiper #412664 1 round brush #477450 1 straight brush #477451

VSC 50124 System Components (ordered separately):

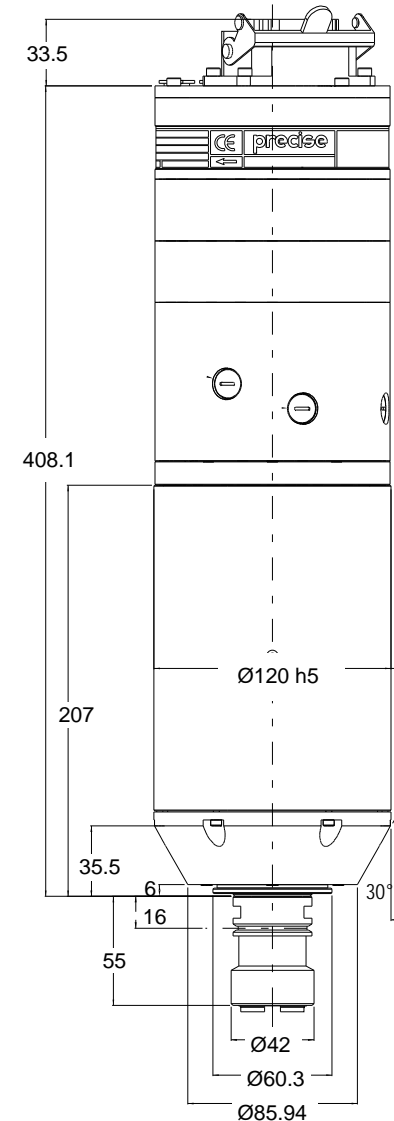
Type PSS 203 Frequency Converter: Includes: - Frequency converter - Input/output chokes - Power Supplies	
Type RCS 2304 Refrigerated Cooling System: Cat. #330698 (230V, 1-phase, 60 Hz) Cat. #330697 (230V, 1-phase, 50 Hz)	
Type PPU Pneumatic Preparation Unit: Cat. #333004	

ATC 4-40-25 Toolholder Assembly (HSK-E40)



VSC 50124 Accessories (ordered separately):

Type SRP 25 Ultra-Precision Collets: <table border="1"> <tr><td>2mm 412722</td><td>10mm 412730</td><td>1/8" 412762</td></tr> <tr><td>3mm 412723</td><td>11mm 412731</td><td>3/16" 412763</td></tr> <tr><td>4mm 412724</td><td>12mm 412732</td><td>1/4" 412764</td></tr> <tr><td>5mm 412725</td><td>13mm 412733</td><td>5/16" 412765</td></tr> <tr><td>6mm 412726</td><td>14mm 412734</td><td>3/8" 412766</td></tr> <tr><td>7mm 412727</td><td>15mm 412735</td><td>7/16" 412767</td></tr> <tr><td>8mm 412728</td><td>16mm 412736</td><td>1/2" 412768</td></tr> <tr><td>9mm 412729</td><td></td><td>5/8" 412770</td></tr> </table>	2mm 412722	10mm 412730	1/8" 412762	3mm 412723	11mm 412731	3/16" 412763	4mm 412724	12mm 412732	1/4" 412764	5mm 412725	13mm 412733	5/16" 412765	6mm 412726	14mm 412734	3/8" 412766	7mm 412727	15mm 412735	7/16" 412767	8mm 412728	16mm 412736	1/2" 412768	9mm 412729		5/8" 412770	
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Type ATC 4-40-25 Toolholder Assembly (HSK-E40): Cat. #412638																									
Type 9120 Plane Mount: Cat. #412705																									
Pigtail Extension Cable Sets (3 cables per set): Cat. #332835, 3m [9.6 ft] Cat. #332836, 5m [16 ft]																									
Base Tubing Kit: Cat. #411681 (for liquid cooling, and labyrinth air-seal connections) <ul style="list-style-type: none"> 5m Ø6mm tubing (#328853) 10m Ø8mm tubing (#328856) 1 tubing cutter (#329378) 2 adapter fittings (#330629) 																									
ATC Tubing Kit: Cat. #411682 (for ATC connections) <ul style="list-style-type: none"> 15m Ø6mm tubing (#328853) 																									



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