

Spindle Datasheet

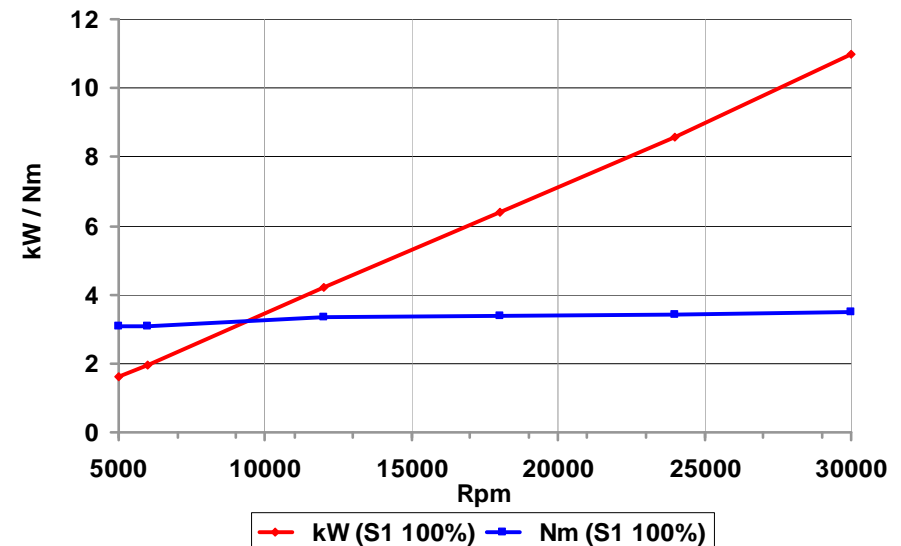
SC 50124



MOTOR	
Speed Range	5,000 – 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	167 - 1,000 Hz
Voltage Range	88 - 400 V
Maximum Amperage	25 A (S 1)
Motor Type	AC asynchronous, 4-pole, 3-phase
SPINDLE DRIVE	
Drive Type	Type PCSP 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
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)
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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SC 50124 Standard Equipment:

SC 50124 spindle Cat. #550390 <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

SC 50124 System Components (ordered separately):

Type PSCP Frequency Converter:



Includes:

- Frequency converter
- Output transformer


Type RCS 2304 Refrigerated Cooling System:



Cat. #330698
(230V, 1-phase, 60 Hz)

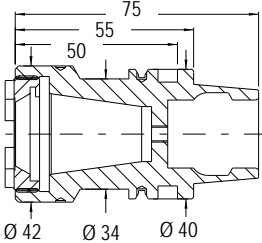
Cat. #330697
(230V, 1-phase, 50 Hz)

Type PPU Pneumatic Preparation Unit:



Cat. #333004

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



Dimensions: 75, 55, 50, Ø42, Ø34, Ø40

SC 50124 Accessories (ordered separately):

Type SRP 25 Ultra-Precision Collets:

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

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




Cat. #412638

Type 9120 Plane Mount:



Cat. #412705

Pigtail Extension Cable Sets (2 cables per set):



Cat. #332833, 3m [9.6 ft]
Cat. #332834, 5m [16 ft]

Base Tubing Kit:

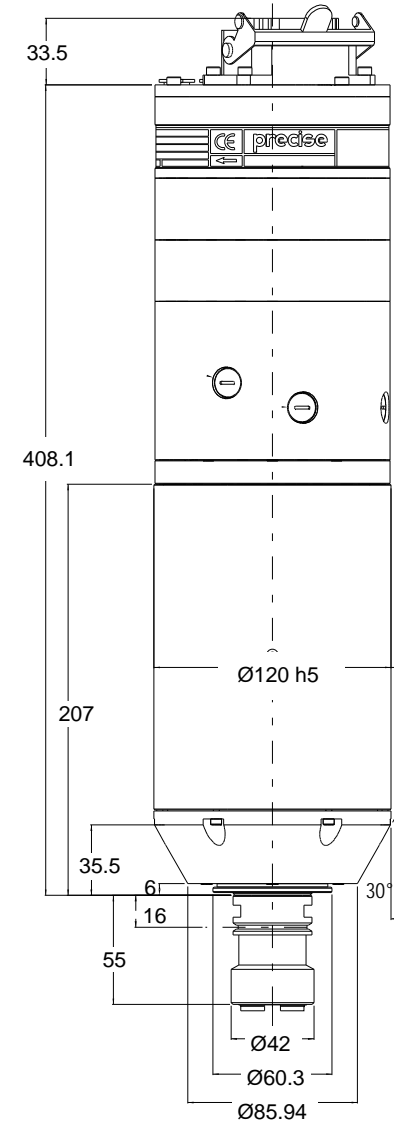
Cat. #411681 (for liquid cooling, and labyrinth air-seal connections)

- 5m Ø6mm tubing (#328853)
- 10m Ø8mm tubing (#328856)
- 1 tubing cutter (#329378)
- 2 adapter fittings (#330629)

ATC Tubing Kit:

Cat. #411682 (for ATC connections)

- 15m Ø6mm tubing (#328853)



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