

TRENS

CNC center lathes

SE 320 ➤ SE 520



- These machines combine advantages of universal lathes and CNC lathes. The machine works as an universal lathe, in manual mode, being controlled by the hand wheels. If required, the operation mode can be shifted to the full CNC control. Technological operations of machining can be programmed by simple filling-in the pre-defined cycles or eventually by standard programming. Machines are therefore suitable for piece and small-series production of simple as well as complex shapes of the workpieces from metal and plastic. Geometric accuracy of the machines fulfills norms ISO 1708 and ISO 230-1.



➤ MAIN ADVANTAGES

- Ideal machine for a user switching from universal lathe to CNC controlled machine
- **Easy and comfortable control**
- Long lifetime with focus on keeping high machining accuracy
- **Spindle drive through belts – minimization of vibration level that could negatively influence turning**
- Automatic gear shifting during the working cycle
- **Bearings with lifetime grease filling – low operating costs**
- Annealed machine components for internal stress removal – high accuracy and stability throughout lifetime of the machine
- **Machine covers with reinforced areas – high level of operator protection**
- Wide scope of executions and accessories – hydraulic clamping, hydraulic tailstock control, live tools, wide range of steadies and faceplates

✓ Machine geometry measurement by laser device – exact setting of machine axis parameters

➤ STANDARD

	SE 320	SE 520
Spindle nose BAYONET B8 for $\varnothing$	mm	– 77
Spindle nose BAYONET B5 for $\varnothing$	mm	42 –
Quick change toolpost MultiSuisse with toolholder	B BD25/120	C CD32/170

Fully covered machining area preventing chip from flying and coolant from splashing

- **Automatic front door lock up**
- Machining area illumination
- **Movable control panel**
- Cooling aggregate
- **Central manual lubrication**

- Chip pan
- **Operator's tool kit**
- Operating manual set

OPTIONAL EXECUTIONS

		SE 320	SE 520
Spindle nose CAMLOCK D8 for spindle bore $\varnothing$	mm	–	77
Spindle nose BAYONET B11 for spindle bore $\varnothing$	mm	–	105
Spindle nose CAMLOCK D11 for spindle bore $\varnothing$	mm	–	105
Spindle nose BAYONET B6/CAMLOCK D6 for spindle bore $\varnothing$	mm	57	–

- 4-way quick change turret PARAT 2, 3
- **4-way quick change turret ALGRA 250, 300**
- 8-position turret SAUTER with live tools and spindle brake (SE 520)
- **8-position turret SAUTER without live tools (SE 320, SE 520)**
- Hydraulic tailstock
- **Pneumatic clamping**
- Hydraulic 3-jaw chuck $\varnothing$ 210 mm with non-passing hole – for spindle bore 77 mm (SE 520)
- **Chip conveyor**
- Automatic central lubrication of linear guideways and motion screws
- **Air conditioning**
- Executions for different voltages
- **Warning light**



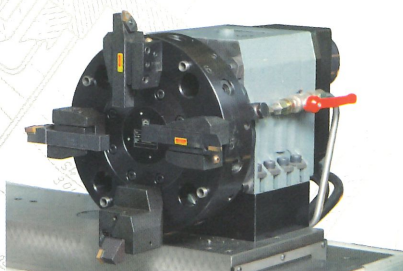
▲ Spindle nose CAMLOCK



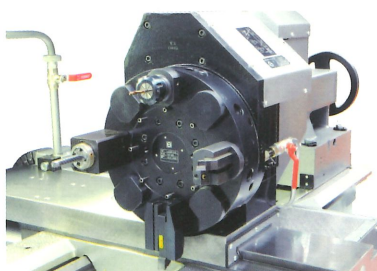
▲ Hydraulic 3-jaw chuck (SE 520)



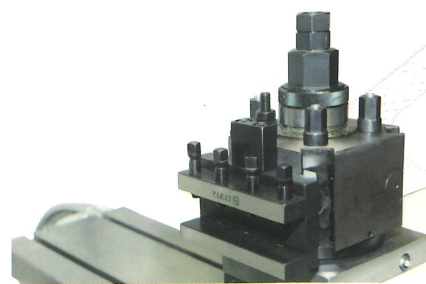
▲ Hydraulic tailstock (SE 520)



▲ 8-position turret SAUTER without live tools



▲ 8-position turret SAUTER with live tools (SE 520)



▲ 4-way quick change turret PARAT

➤ OPTIONAL ACCESSORIES

■ CLAMPING DEVICES



▲ 3 jaw chuck



▲ 4 jaw face-plate



▲ Live centre

■ STEADY RESTS AND ROLLING CONTACT BEARINGS



▲ Steady rest



▲ Follow rest



▲ Large steady rest



▲ Rolling contact bearings

		SE 320	SE 520
Follow rest Ø	mm	10–115	10–115
Steady rest Ø	mm	10–115	10–115
Large steady rest Ø	mm	–	100–205
Large steady rest Ø	mm	–	200–315
3-jaw mechanical chuck Ø	mm	160/200	250/315
4-jaw mechanical chuck Ø	mm	160/200	250/315
4-jaw face-plate Ø	mm	–	250/315
4-jaw face-plate Ø	mm	–	315

- Spare chuck jaws and flanges
- **Spindle reducing sleeves**
- Fixed centre
- **Live centre**

- Tool holders
- **Anchoring material**
- Transporting device
- **Operating manual**

- Contour programming
- **Rest material recognition**
- Language localizations
- **Programming manual**

Machine type	Unit	SE 320	SE 520
--------------	------	--------	--------

Working range

Max. swing over bed	mm	320	520
Max. swing over cross slide	mm	170	290
Distance between centres	mm	750	950/1450*
Height of centres over bed	mm	150	250
Max. bar diameter	mm	41/55*	75/103*

Main spindle

Spindle nose BAJONET (ISO 702-III)		B5/B6*	B8/B11*
Spindle nose CAMLOCK (ISO 702-II)		D6*	D8*/D11*
Spindle bore	mm	42/57*	77/105*
Spindle diameter in front bearing	mm	70/90*	120/150*
Max. spindle speed – 1st gear	min ⁻¹	880	650
Max. spindle speed – 2nd gear	min ⁻¹	3500	2600
Manual clamping	mm	160/200*	250/315*
Hydraulic clamping*	mm	–	200*

Spindle drive

SIEMENS, HEIDENHEIN/FANUC

Main motor output S1	kW	7	11
Main motor output S6	kW	10	15
Torque – 1st gear S1	Nm	210/238	525
Torque – 1st gear S6	Nm	285/350	715
Torque – 2nd gear S1	Nm	52	132
Torque – 2nd gear S6	Nm	70	180

Carriages and drives

X-os

Cross slide feed range	mm.min ⁻¹	1÷3000	1÷3000
Cross-slide rapid traverse	mm.min ⁻¹	3000	3000
Working travel	mm	183	270

Z-os

Longitudinal slide feed range	mm.min ⁻¹	1÷5000	1÷5000
Longitudinal slide rapid traverse	mm.min ⁻¹	10000	5000
Working travel	mm	790	950/1450*

Toolposts

Quick change tool post		MultiSuisse B	MultiSuisse B
Max. tool size	mm	25×25	25×25
Quick change tool post			MultiSuisse C*
Max. tool size	mm		32×32*

Manual tool post systems*

Quick change tool post			Parat RD 2*
Max. tool cross-section	mm		25×25
Quick change tool post			Parat RD 3*
Max. tool cross-section	mm		32×32
Quick change tool post			Algra TGA-R-250*
Max. tool cross-section	mm		25×25
Quick change tool post			Algra TGA-R-300*
Max. tool cross-section	mm		32×32

Automatic turrets*

Axial turret with live tools*

SAUTER*

SAUTER*

No. of tool positions		8*	8*
Tool shank diameter (according to DIN 69880)	mm	20*	30*
Max. tool cross-section	mm	16×16*	20×16*

Machine type	Unit	SE 320	SE 520
Axial turret with live tools*		SAUTER*	SAUTER*
No. of tool positions		–	8*
No. of driven tool positions		–	8*
Tool shank diameter (according to DIN 69880)	mm	–	30*
Coupling		–	B 15x12, DIN 5482*
Max. tool cross-section	mm	–	20x16*
Driven tools motor output	kW	–	4,5*
Max. torque	Nm	–	20*
Max. RPM	min ⁻¹	–	4000*

Tailstock

Tailstock sleeve internal taper		MORSE 4	MORSE 5
Tailstock sleeve diameter	mm	60	80
Tailstock sleeve travel	mm	120	160
Tailstock control		manual	manual
Clamping force range* (optional hydraulic tailstock sleeve travel)	daN	–	80–800*

Machine dimensions

Height	mm	1760	1800
Width	mm	1490	1560
Length with chip pan	mm	2415	2790/3290*
Length with chip conveyor to the right side*	mm	3300*	4110*/4610*

Weight

Weight (without optional accessories)	kg	cca 1600	cca 2700/2900*
---------------------------------------	----	----------	----------------

Control systems

SIEMENS 840D SolutionLine + ShopTurn		yes	yes
FANUC 0iTD + Manual Guide i		yes	yes
HEIDENHAIN MANUAL Plus 620		yes	yes

* optional execution

> **Preloaded ground ball screws** – high dimensional accuracy of workpieces

