

CNC center lathes

SE 820 ➤ SE 1020



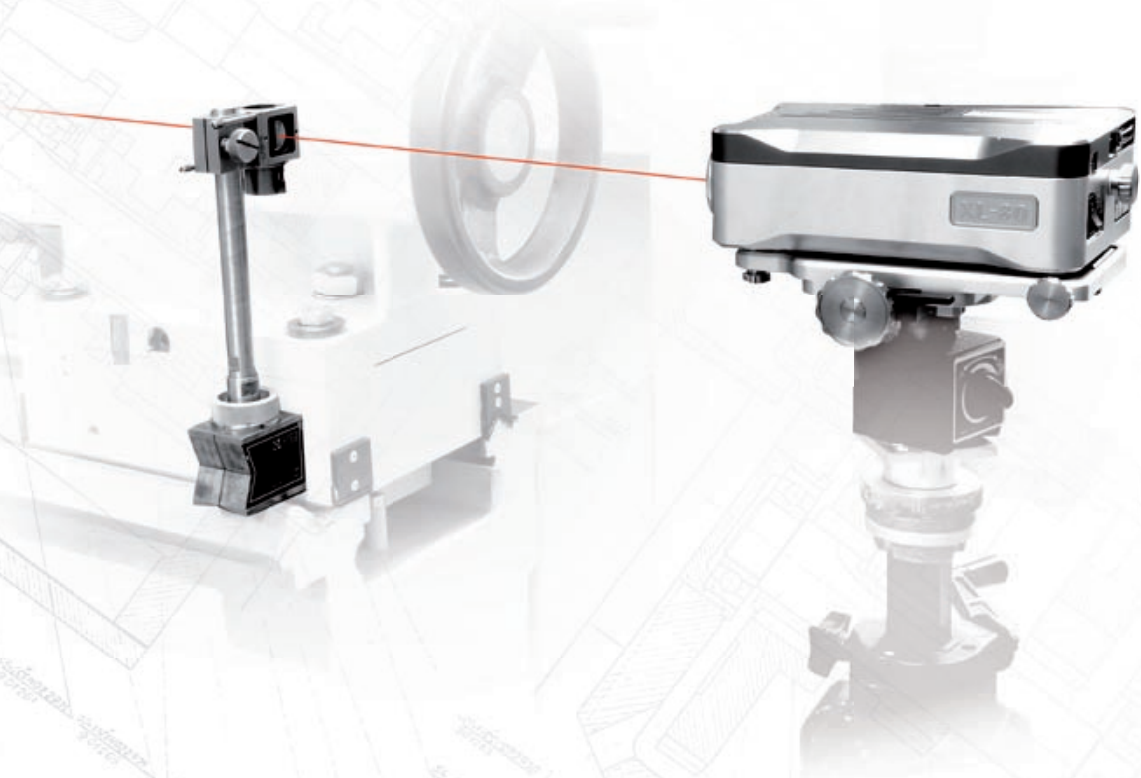
➤ CNC centre lathes SE 820 and SE 1020 are designed for turning large rotational workpieces. They allow turning outer and inner cylindrical, conical and complex shapes and all kinds of threads as well. In combination with drilling and milling they allow machining of complex shapes from bars, forgings and split material. Wide variability in specific turning operations for gas, oil and water industries.



> MAIN ADVANTAGES

- Ideal machine for a user switching from universal centre lathe to CNC controlled machine
- **Easy and comfortable control**
- Long lifetime with focus on keeping high machining accuracy
- **Possibility of big diameter workpiece turning**
- Headstock with 2 speed gearbox
- **Automatic gear shifting during the working cycle**
- Bearings with lifetime grease filling – low operating costs
- **Direct spindle position measurement-high accuracy in out-of-axis machining at big diameters**
- 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**
- Energy recovery
- **Wide selection of optional executions and accessories – hydraulic clamping, hydraulic tailstock control, live tools, C-axis with servomotor, executions with increased distances between centers, wide range of steadies and faceplates**

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



> STANDARD

- Operating system and drives SIEMENS 840D Solution Line
- **Tailstock with an easing apparatus**
- Center distance 2000 mm
- **Quick change tool post:**
 - MultiSuisse with holder D1D 40180 (SE 1020)
 - MultiSuisse C (SE 820)
 - MultiSuisse D (SE 1020)
- Fully covered machining area preventing chip from flying and coolant from splashing
- **Automatic front door lock up**
- Halogen illumination of working area
- **Movable control panel**
- Cooling aggregate
- **Automatic central lubrication of railways and ball screws**
- Chip pan
- **Automatic gear shifting**
- Operator's tool kit
- **Operating manual set**

➤ OPTIONAL EXECUTIONS

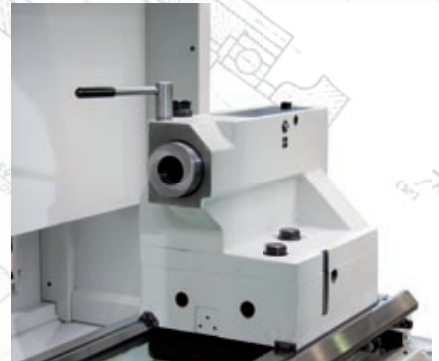
- Machine with centre distance 3000, 4000, 6000, 8000 mm
- **4 position horizontal turret SAUTER**
- 8-position turret SAUTER (VDI50)
- **8-position turret SAUTER with live tools (VDI50)**
- 3 or 4-jaw hydraulic chuck ROEHM 315
- **3 or 4-jaw hydraulic chuck ROEHM 400**
- Collet clamping
- **Rear mechanical chuck for clamping of bars**
- Arresting brake
- **C-axis with independent servomotor**
- Chip conveyor
- **Versions for different voltages**
- Control system – Heidenhain, Fanuc
- **Spindle nose CAMLOCK**
- Tailstock with hydraulic sleeve movement
- **Boring bar holder**



▲ Spindle nose CAMLOCK



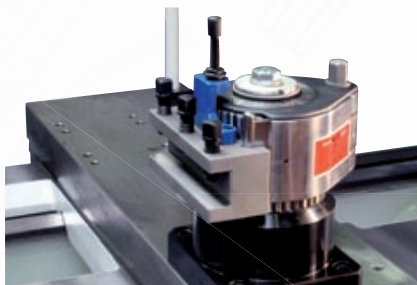
▲ Hydraulic 3-jaw chuck



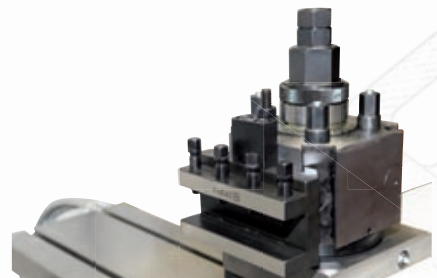
▲ Hydraulic tailstock



▲ 8 position turret SAUTER without live tools



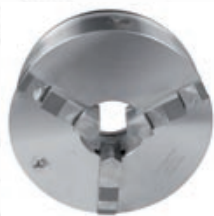
▲ Quick change tool post MultiSuisse C, D



▲ 4-way quick change toolpost PARAT

> OPTIONAL ACCESSORIES

CLAMPING DEVICES



^ 3 jaw chuck



^ 4 jaw face-plate



^ Live centre MK6

STEADY RESTS AND ROLLING CONTACT BEARINGS



^ Steady rest



^ Follow rest



^ Large steady rest



^ Rolling contact bearings

SE 820/1020

Follow rest $\emptyset$	mm	20–180
Steady rest $\emptyset$	mm	20–180, 30–210, 210–370, 365–520
Hydraulic steady rest $\emptyset$	mm	40–240
Hydraulic follow rest $\emptyset$	mm	15–170, 16–101
3-jaw mechanical chuck $\emptyset$	mm	400
4-jaw mechanical chuck $\emptyset$	mm	400
3-jaw mechanical chuck $\emptyset$	mm	500
4-jaw mechanical chuck $\emptyset$	mm	500

- Replacement hard and soft jaw for chucks
- **Plain face-plate**
- 4-jaw face-plate
- **Live centre MK6**
- Tool holders

- **Boring bar holder $\emptyset$ 80 mm**
- Anchoring material
- **Transporting device**
- Remote control panel
- **Contour programming**

- Rest material recognition
- **Language localizations**
- Programming manual for CNC control
- **Operating manual**
- Rolling contact bearings

Machine type	Unit	SE 820	SE 1020
Working range			
Max. swing over bed	mm	800	1020
Max. swing over cross slide	mm	515	740
Distance between centres	mm	2000 / 3000* / 4000* / 6000* / 8000*	2000 / 3000* / 4000* / 6000* / 8000*
Height of centres over bed	mm	394	509
Max. bar diameter	mm	130	130

Main spindle

Spindle nose CAMLOCK (ISO 702-II)		D11*	D11*
Spindle nose A2 (ISO 702-I)		A2-11	A2-11
Spindle bore	mm	133	133
Spindle diameter in front bearing	mm	180	180
Max. spindle speed - 1st gear	min ⁻¹	415	415
Max. spindle speed - 2nd gear	min ⁻¹	1600	1600
Manual clamping	mm	400/500*	400/500*
Hydraulic clamping*	mm	315/400*	315/400*

Spindle drive

		SIEMENS, HEIDENHEIN/FANUC	
Main motor output S1	kW	30	30
Main motor output S6	kW	45	45
Torque – 1st gear S1	Nm	2982	2982
Torque – 1st gear S6	Nm	4473	4473
Torque – 2nd gear S1	Nm	761	761
Torque – 2nd gear S6	Nm	1142	1142

Carriages and drives

X-0s			
Cross slide feed range	mm.min ⁻¹	1÷3000	1÷3000
Cross-slide rapid traverse	mm.min ⁻¹	5000	5000
Working travel	mm	405/550*	550

Z-0s			
Longitudinal slide feed range	mm.min ⁻¹	1÷5000	1÷5000
Longitudinal slide rapid traverse	mm.min ⁻¹	6000/5000*	6000/5000*
Working travel	mm	1925 / 2925* / 3925* / 5925* / 7925*	1925 / 2925* / 3925* / 5925* / 7925*

Toolposts

Quick change tool post		MultiSuisse C	MultiSuisse C
Max. tool size	mm	32×32	32×32
Quick change tool post		MultiSuisse D*	MultiSuisse D*
Max. tool size	mm	40×40*	40×40*

Manual tool post systems*

Quick change tool post		Parat RD 4*	Parat RD 4*
Max. tool cross-section	mm	50×50*	50×50*

Automatic turrets*

4-way turret without live tools*		SAUTER*	SAUTER*
No. of tool positions (DIN 69881)		4*	4*
Max. tool diameter	mm	80*	80*
Max. tool cross-section	mm	32×32*	32×32*

Axial turret without live tools

		SAUTER*	SAUTER*
No. of tool positions		8*	8*
Tool shank diameter (according to DIN 69880)	mm	50*	50*
Max. tool cross-section	mm	32×25*	32×25*

Machine type	Unit	SE 820	SE 1020
Axial turret with live tools*		SAUTER*	SAUTER*
No. of tool positions		8*	8*
No. of driven tool positions		8*	8*
Tool shank diameter (according to DIN 69880)	mm	50*	50*
Max. tool cross-section	mm	32×25*	32×25*
Driven tools motor output	kW	5,7*	5,7*
Max. torque	Nm	35,7*	35,7*
Max. RPM	min ⁻¹	3400*	3400*

Tailstock

Tailstock sleeve internal taper		MORSE 6	MORSE 6
Tailstock sleeve diameter	mm	120	120
Tailstock sleeve travel	mm	210	210
Tailstock control		manual	manual
Clamping force range* (optional hydraulic tailstock sleeve travel)	daN	300/2500	300/2500

Machine dimensions

Height	mm	2115	2115
Width	mm	2325	2325
Length with chip pan	mm	4604 / 5632* / 6660* / 8604* / 10604*	4604 / 5632* / 6660* / 8604* / 10604*
Length with chip conveyor to the right side*	mm	5955* / 6955* / 7955* / 9955* / 11955*	5955* / 6955* / 7955* / 9955* / 11955*

Weight

Weight (without optional accessories)	kg	cca 7000 / 8000* / 9000* / 10000* / 11000*	cca 7000 / 8000* / 9000* / 10000* / 11000*
---------------------------------------	----	--	--

Control systems

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

* optional execution

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

