STAR refines SR-16/20 with the latest high technology, strengthens its versatility and adds "environmental-conscious" capabilities. The new upgraded "SR-16/20R" is now available.

Refined "R"



Friendly

Versatile 🔵

CNC SWISS TYPE AUTOMATIC LATHE

Photo : SR-20 no CE conformed

star

20



Speedy

Speedy Production Friendly to Humans and the environment Versatile Machining



Refined for higher productivity. greater user-friendliness and increased machining versatility.

SR-16/20R is an up-graded successor of SR-16/20 that has been very popular on the world market with its "user-friendly operation" and "high productivity". The relation of people and machines, and of machines and the environment has been carefully considered. Furthermore, to respond to diversifying and advancing machining needs with high productivity, we have thoroughly "refined" the SR Series. Through this we have realized the best balance of productivity, operability and safety. Recently an insufficiently of skilled workers has become more apparent at production plants, and the position of corporations in respect to environment protection has been questioned. That is why the SR-16/20R in the design concept "Friendly to Humans and the Environment" is a machine that meets what you need.

Tool-post configuration and tooling High-speed machining gang tool post.

1 Gang Tool Post	
Turning Tool Front / Cross Working Driven Tool End Working Stationary Tool	6 tools 4 to 6 tools 4 tools
2 4-Spindle Back Working Unit	
Stationary Tool	4 tools
or	
Power-driven Tool	4 tools (op. *)

Tool post structure separates main and sub spindle machining therefore overlapping opportunities increase and cycle times can be reduced.





For reducing machining time.

Advanced CNC unit for faster production

High speed-program processing by the latest CNC unit.



Free overlap machining

Machining of HEAD1 and HEAD2 are completely independent. Therefore, overlapped machining is possible without being influenced each other. This also realizes rational machining process for shortening cycle time.



High-speed rapid traverse

Faster slide positioning time achieved by 20m/min. rapid traverse.

Servo motor for tool selection

Quick tool selection using the servomotor also greatly contributes to reducing idle time.

New mechanism for collet open / close

Collet opening / closing is possible during main spindle rotating in high speed.



For comfortable and safe work environment.

Maintenance free selflubrication unit

Self-lubrication of the Linear Guides reduces maintenance and eliminates waste oil from the coolant.



Easy and quick preparation

Set up skills are reduced by the new automatic adjusting function which controls the collet gripping force (main and sub spindle) and the clearance between the guide bush and bar material.

Free position operation panel

With movement combining rotation and sliding, the control panel can be positioned to best suit the needs of the setter.



Absolute position detection

Absolute position detection is standard giving instant zero return when power is turned on.

Back 4-spindles machining

The photograph shows a German made tool, which is available for inner/outer diameter machining on the back side.

Water-soluble coolant oil

Water-soluble coolant oils can be used to reduce heat at the tool and donate towards a cleaner environment.

SR-16/20R

GO speed down function

In the event that guards are opened when machine is working the rapid traverse rates are dropped to 25% (on CE machines this applies only when guard interlock key is in "off" position).

CE marking specifications

CE making specifications, EMC and low voltage directives are standard in Europe and available elsewhere.

Built-in motor drive

The main spindle of the built-in motor drive increases the torque in the low-speed rotation regions.



Large capacity of chip tank





Versatility



% The * mark indicates an option.

The polygon machining function can also be selected as an option.



Secondary machining possibilities are furthered by combining main / sub spindle controls with the two-axis control of the tool post.



Cross rigid tapping





CNC SWISS TYPE RUTOMATIC LATHE









3 Main / sub spindle rigid tapping

Note : * Option

OP:Option

Standard Machine Specifications

	Item	SR-16R	SR-20R	
Max. turning d	iameter	\$\$\phi 16mm(5/8in)\$\$	¢ 20mm(25/32in)	
Max. headstock	Standard	205m	n(8in)	
stroke	with Gripping unit	195mm(7	-11/16in)	
Max.drilling	Stationary tool	¢ 10mm	(25/64in)	
capability	Power-driven tool	∳ 8mm	(5/16in)	
Max. tapping	Stationary tool	M8×	P1.25	
capability	Power-driven tool	M6×	P1.0	
Max. milling ca	apability	¢ 10mm	(25/64in)	
Max. die cuttin	ig capability	M8×1	P1.25	
Max. slotting c	apability	Width 1.5mm×depth	a 4mm for one cutter	
Main spindle s	peed	12,000min ⁻¹	10,000min ⁻¹	
Main spindle n	nin. indexing angle	0.01 [°] (C-a	0.01° (C-axis control)	
Main spindle n	notor	2.2Kw(continuous) / 3.7Kw(15min/50%ED)		
Number of too	ls	6-turning, 4-end working, 4-cross	6-turning, 4-end working, 4-cross working (6-cross working : OP)	
Tool shank		□12×135mm or	12.7×135mm	
Power-driven	Spindle speed	Max.8,0	00min ⁻¹	
tool	Motor	0.9kw		
Dimension(Length×Width×Height)		2,207×1,080×1,700mm(Including leveling pads)		
Main spindle h	eight	1,060	Dmm	
Weight	it 2,000kg		0kg	
Coolant tank capacity		145 l		
Coolant pump motor		0.25	0.25kw	
Working coolant		Non-water soluble coola	Non-water soluble coolant, water soluble coolant	
Hydraulic tank	nk capacity 10 l		l	
Hydraulic pump motor		0.75	0.75kw	
Power consumption		6.0k	6.0KVA	

Note)

The above machining capacities apply to S45C (AISI 1045, DIN C45) material. The machining capacities may differ from listed values depending on the machining conditions, such as the material to be machined or the tools to be used.

*Design features, specifications and technical execution are subject to change without prior notice.

 $\%\,{\rm This}$ machine is controlled under foreign exchange and foreign trade control law .

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OP:Option

Backworking Specifications

	Item	SR-16R	SR-20R
Max. chucking	diameter	∮ 16mm(5/8in)	φ 20mm(25/32in)
Max. length for front ejection		80mm(3-5/32in)	
Max. parts projection length		30mm(1-3/16in)	
	Number of tools		4 tools
4-spindle unit for backworking	Max. drilling	Stationary tool	nm(5/16in)
	capability	Power-driven tool ϕ 5m	m(17/32in)
	Max. tapping	Stationary tool M8	×P1.25
	capability	Power-driven tool M4×	P0.7 : OP
	Max. milling capability	φ 5m	m(17/32in)
Sub spindle motor		1.5kw(continuous) / 2.2kw(15min/50%ED)	
Sub spindle min. indexing angle		15° (24 divisions) / 1° (360 divisions) :OP	
Sub spindle speed		8,000min-1	

Standard Accessories

1. Hydraulic unit
2. Pneumatic unit
3. Stand alone type coolant tank
4. Coolant oil level detector (lower limit)
5. Door interlock unit
6. Main spindle C-axis control unit
7. Revolving guide bushing
8. Backworking attachment
9. Sub spindle 15° index unit
10. 6-turning tools holder
11. 4-end working tools holder
12. Drive system for 4-cross working tool spindles
13. Leveling bolts and pads
14. Work and headstock area lights
15. Sub spindle air blow unit
16. Automatic barfeeder interface
17. Broken cut-off tool detector
18. Parts ejection detector

Special Accessories

 Transformer CE marking specifications Parts conveyor Parts separator Parts stopper (for long parts ejection) Barstock gripping unit Tool setter Main spindle inner tube 11.7mm specifications Main spindle inner tube 6.0mm specifications Main spindle 1° indexing unit Drive system for power-driven attachment B Coolant oil flow sensor Long parts ejector with guide tube 2-spindle front drilling unit Polygon machining unit / function. 	
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	14. Polygon machining unit / function.

