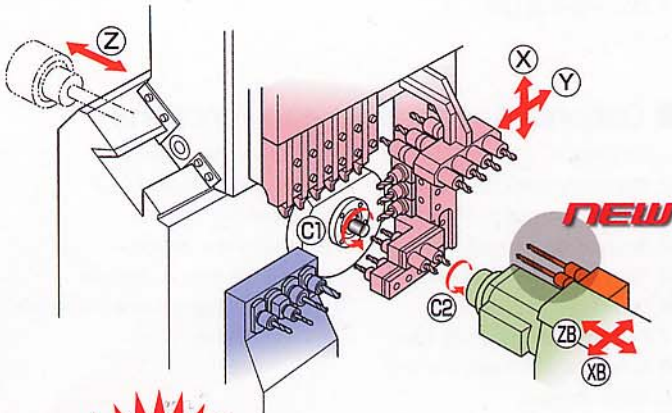


A control system and high-speed feed  
to reduce dramatically non-cutting time

A structure of superb rigidity  
thanks to Star original design

SWISS TYPE AUTOMATIC LATHE equipped with Motion Control System

# SR-20R111



## High Productivity

- Rapid feed rate of 35m/min to minimize non-cutting time
- Reduced non-cutting time achieved by star motion control system that shortens a tool selection path and optimizes timing to process M and S codes
- Direct C-axis indexing function for reducing spindle indexing time

## High Rigidity

- A slanted sliding guideway structure for increased rigidity of the tool post
- A sliding guideway structure of the Z/B axis for increased rigidity of the rear head stock

## High Accuracy

- Reduction of mechanical vibration achieved by rigid machine structure and optimum control of moving part acceleration
- Employment of the spindle cooler unit for controlling thermal stability

## Machining Capability

- Front facing 2-axis drilling attachment for deep-hole drilling capability

## Durability

- Centralized lubrication system for all axes to prolong service life of ball screws and guideways
- Bearing life enhanced by double air purge of the guide bush and back spindle bearing

## Operation Efficiency

- Movable operation panel to ensure flexible operation at the best position
- Enlarged opening of the cutting chamber and manual pulse coder to simplify set-up operation

## Environmentally friendly

- Reduction of power consumption and waste oil through operation without using hydraulic pressure
- Reduction of energy consumption required for each part achieved by high operation efficiency and low power consumption
- Combination of the spindle with built-in cooler unit, high-speed and low-noise bearings, and sealed belt structure reduces noise during operation.

Outstanding Rigidity and Productivity offer exciting  
new possibilities

## Standard Machine Specifications OP : Option

Item	Specifications
Max. machining diameter	φ20mm(25/32in)
Max. headstock stroke	Standard 205mm(8in)
	With RMGB 172mm(6-25/32in)
Tool	Number of tools 6 tools
	Tool shank □12mm×100~135mm, □12.7mm×100~135mm
4-Spindle sleeve holder	Number of tools Front 4 tools : OP Rear 4 tools : OP
	Max. drilling capacity φ10mm(25/64in)
	Max. tapping capacity M8×P1.25
	Max. die cutting capacity M8×P1.25
Power driven att.	Number of tools 3~10 tools : including OP
	Max. drilling capacity φ8mm(5/16in)
	Max. tapping capacity M6×P1.0
	Max. milling capacity φ10mm(25/64in)
	Max. slotting capacity 1.5mm(W)×4mm(D)
Main spindle min. indexing degree	0.01° (C-axis control)
Rapid feed rate	35m/min(X, Y, Z, XB, ZB), 198,000°/min(c)
Main spindle speed	Max. 10,000min <sup>-1</sup>
Main spindle motor	2.2kw(continuous)/3.7kw(15min.)
2-spindle front sleeve holder	Number of tools(sleeve) 2 tools
	Max. drilling capacity φ8mm(5/16in)
Power-driven att. spindle speed	Max. 8,000min <sup>-1</sup>
	Power-driven att. drive motor AC servo motor 1.2kw
Coolant tank capacity	170ℓ
Dimensions (W×D×H)	2,200×1,200×1,700mm
Weight	2,200kg
Power consumption	8.0KVA

## Standard Accessories and Functions

- Pneumatic unit
- Automatic centralized lubrication unit
- C-Axis control (Main spindle/Sub spindle)
- Revolving guide bush unit
- Drive system for power-driven attachment (including the 3 tools for cross-milling unit)
- Back 4-Spindle unit
- Short circuit breaker
- Sub spindle air blow unit
- Parts ejection detector
- Work light
- Coolant level detector (lower limit)
- Spindle clamp unit(Main/Sub spindle)
- 6-station tool holder
- 4-Spindle sleeve holder
- 2-Spindle front sleeve holder (for Deep hole)
- Sub spindle air purge
- Air purge for revolving guide bush
- Broken cutoff tool detector
- Main collet
- Sub collet
- Drive system for power-driven attachment B
- Automatic barfeeder interface

## Optional Accessories and Functions

- Tool setter
- Stationary guide bush unit
- Stationary guide bush sleeve
- Rotary magic guide bush unit
- Parts ejector (Air cylinder type)
- Parts separator unit A
- Parts ejector with guide tube
- Sub spindle 15° indexing unit
- Parts conveyor
- Coolant unit 1.5MPa
- Coolant unit 6.9MPa
- Broken drill detector
- Coolant flow detector
- 3-spindle front drilling unit
- 2-spindle counter-face drilling unit
- Slotting unit

## Backworking Attachment Specifications OP : Option

Item	Specifications
Max. chucking diameter	φ20mm(25/32in)
Max. length for front ejection	80mm(3-5/32in)
Max. parts projection length	30mm(1-3/16in)
Back 4-Spindle unit	Number of tools 4 tools : OP
	Max. drilling capacity Stationary tool φ8mm(5/16in) Power driven tool φ5mm(3/16in)
Sub spindle min. indexing angle	0.01°(C-axis control)/15° : OP
	Sub spindle speed Max. 8,000min <sup>-1</sup>
Sub spindle motor	1.5kw(continuous)/2.2kw(15min.)

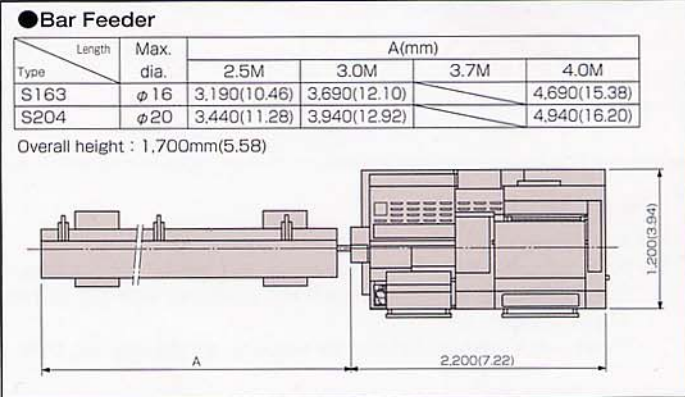
**Note)**

The machining capacities apply to SUS303 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.

※This product is an export control item subject to the foreign exchange and foreign trade laws. Thus, before exporting this product, or taking it overseas, contact your STAR MICRONICS dealer.

## External Dimensions and Floor Space unit : mm(ft)



# STAR MICRONICS CO., LTD.

## Machine Tools Division

1500-34 Kitanoya, Misawa, Kikugawa, Shizuoka, 439-0023 Japan

America, Europe Sales TEL.+81-537-36-5594 FAX.+81-537-36-5607

Asia Sales TEL.+81-537-36-5574 FAX.+81-537-36-5607

### Star CNC Machine Tool Corporation

123 Powerhouse Road, Roslyn Heights, NY 11577, U.S.A.  
TEL.+1-516-484-0500 FAX.+1-516-484-5820

### Star Micronics GB Limited

Chapel Street, Melbourne, Derbyshire DE74 8JF, U.K.  
TEL.+44-1332-86-44-55 FAX.+44-1332-86-40-05

### Star Micronics GmbH

Untere Reute 44, D-75305 Neuenburg, Germany  
TEL.+49-7082-79200 FAX.+49-7082-792020

### Star Micronics AG

Lauetstrasse 3, CH-8112 Otelfingen, Switzerland  
TEL.+41-43-411-60-60 FAX.+41-43-411-60-66

### Star Machine Tool France SAS

55 Avenue du Mont Blanc, F-74950 Scionzier, France  
TEL.+33-450-96-05-97 FAX.+33-450-96-91-54

### Shanghai Xingang Machinery Co., Ltd.

229 Fute Road(N) Waigaoqiao F. T. Z. Shanghai 200131, P.R.China  
TEL.+86-21-5868-2100 FAX.+86-21-5868-2101

### Star Micronics (Thailand) Co., Ltd.

49/30 M.4 Soi Kingkaew 30, Kingkaew RD., T.Rachathewa A Bangplee, Samutprakarn 10540, Thailand  
TEL.+66(0)2-750-4083 FAX.+66(0)2-750-4085

