

CITIZEN

Cincom

A20

Sliding Headstock Type CNC Automatic Lathe



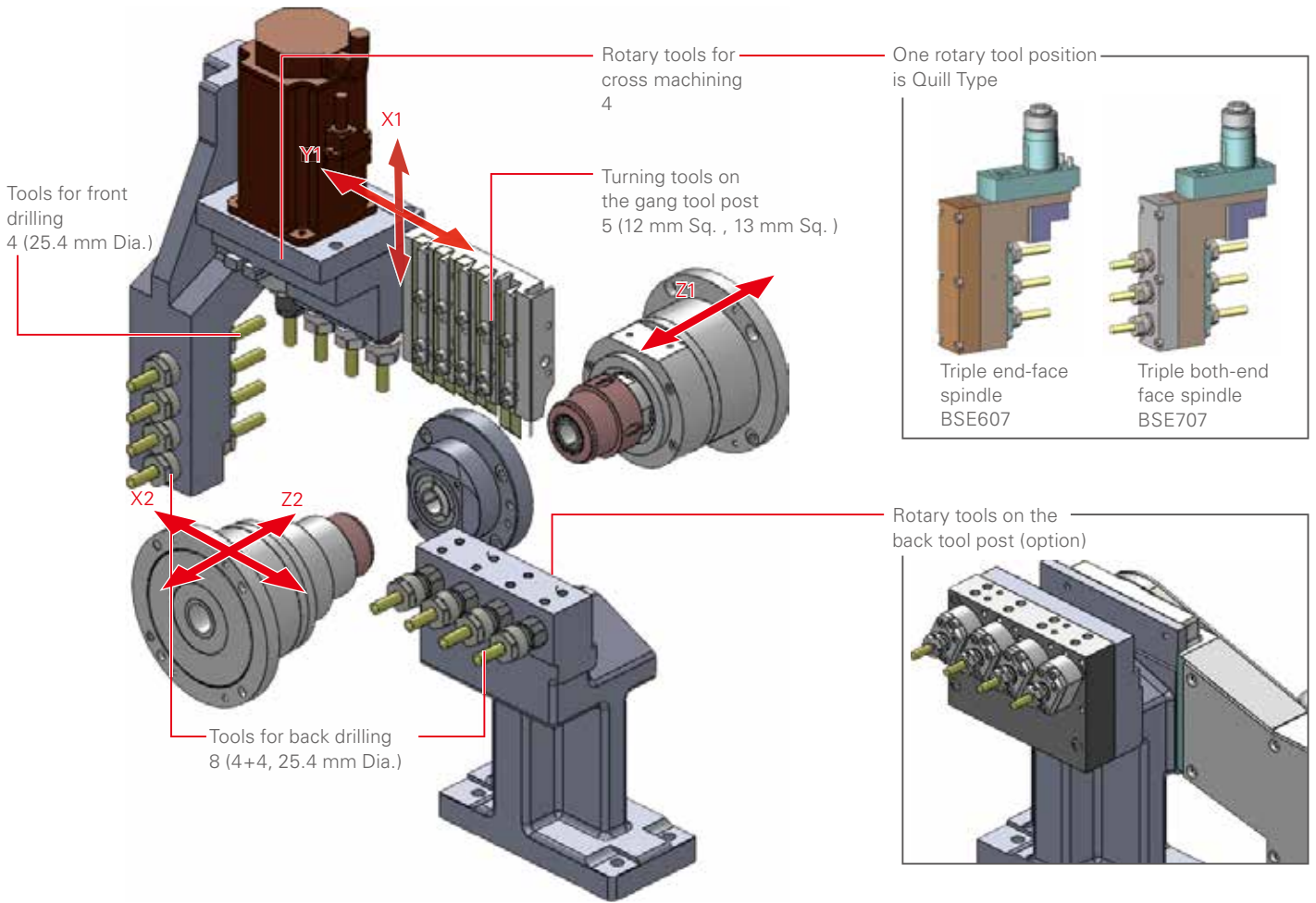
The Citizen A20, an evolving 5-Axis CNC sliding head machine, furthers the quest for cost and performance featuring the ability to switch between guide bush and non-guide bush types.

Acclaimed for its excellent cost to performance ratio, the A20 has evolved as a 5-axis machine for 20 mm diameter applications with the advantage that it can be used with or without a guide bush. It can be used as a regular guide bush automatic lathe when machining long slender workpieces, and without a guide bush for shorter parts with minimal bar end remnants. The guide bush can be quickly and simply mounted and removed.

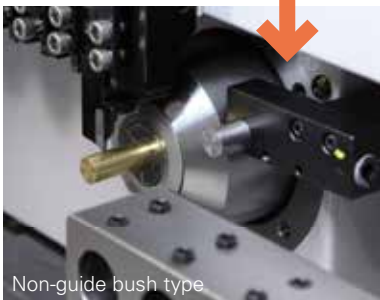
The performance of the machine has been improved too. The high speed 10,000 rpm spindle enables optimised machining operations on smaller diameter bar material. The machining length per chucking is now extended to 200 mm enabling the number of re-chuckings and therefore cycle times to be reduced when machining long workpieces. As an option, bar material of up to 25 mm diameter can also be machined extending the range of workpieces.



Tooling System



Switchable



Along with machine performance, usability

More speed, more stroke, more capacity =

The A20 features a new capability to switch between guide bush and non-guide bush operating modes. The machine's performance, including spindle speed and machining length per chucking, has been increased. It is designed for ease of use and convenience with good chip clearance for fast set-ups.

Maximum spindle speed of 10,000 rpm.

The maximum speed of the front spindle is high at 10,000 rpm enabling optimized machining conditions on small diameter bar material or using small diameter cutting tools.

200 mm/ 1 chucking

A longer 200 mm machining stroke reduces the need for re-chucking workpieces hence reducing cycle time.

Support for stock material up to 25 mm diameter ^(option)

With its spindle through hole diameter of 26 mm, the A20 is capable of machining bar stock up to 25 mm dia. by installing the optional 25 mm size chuck device – enabling a wider range of workpieces to be produced over the standard 20mm machine.



ty has also been upgraded. = improved productivity.



Work light

Low energy illumination is provided as standard in the machining area giving an environment that is bright with ideal visibility.



USB/PC card slot

NC programs can be input and output using the USB slot or PC card slot on the front face of the control panel.



Coolant nozzle

Coolant nozzles are provided at the appropriate locations to ensure that sufficient coolant can be supplied to the point of machining.



Parts collection

The large collection box reduces the frequency of emptying. The optional workpiece conveyor discharges to the left front of the machine.



Coolant tank/chip collection box

A 150-litre coolant tank is standard, enabling extended periods of operation. The chip outlet port has been increased to improve chip removal. Optional chip conveyors are available to suit the type of chip material.



Adjustable operation panel

The pivoting operation panel enables easy operation whilst simultaneously viewing the machining process.

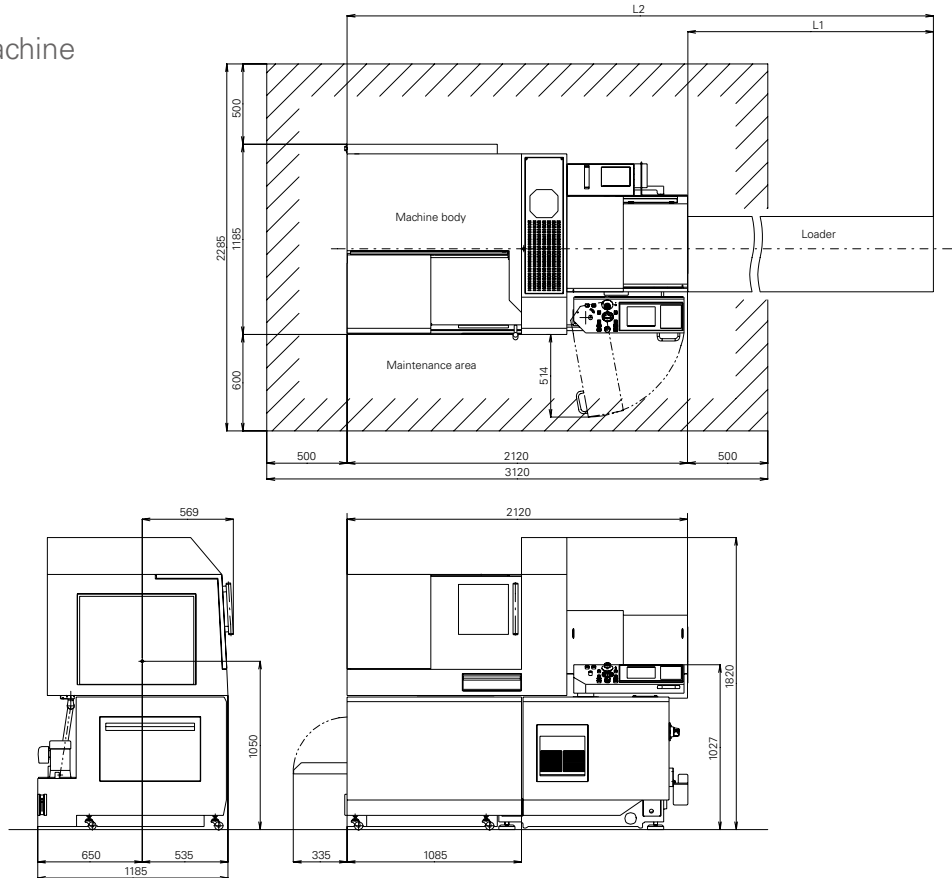
Clear for Anyone

Screen Display is Easy to View and Read

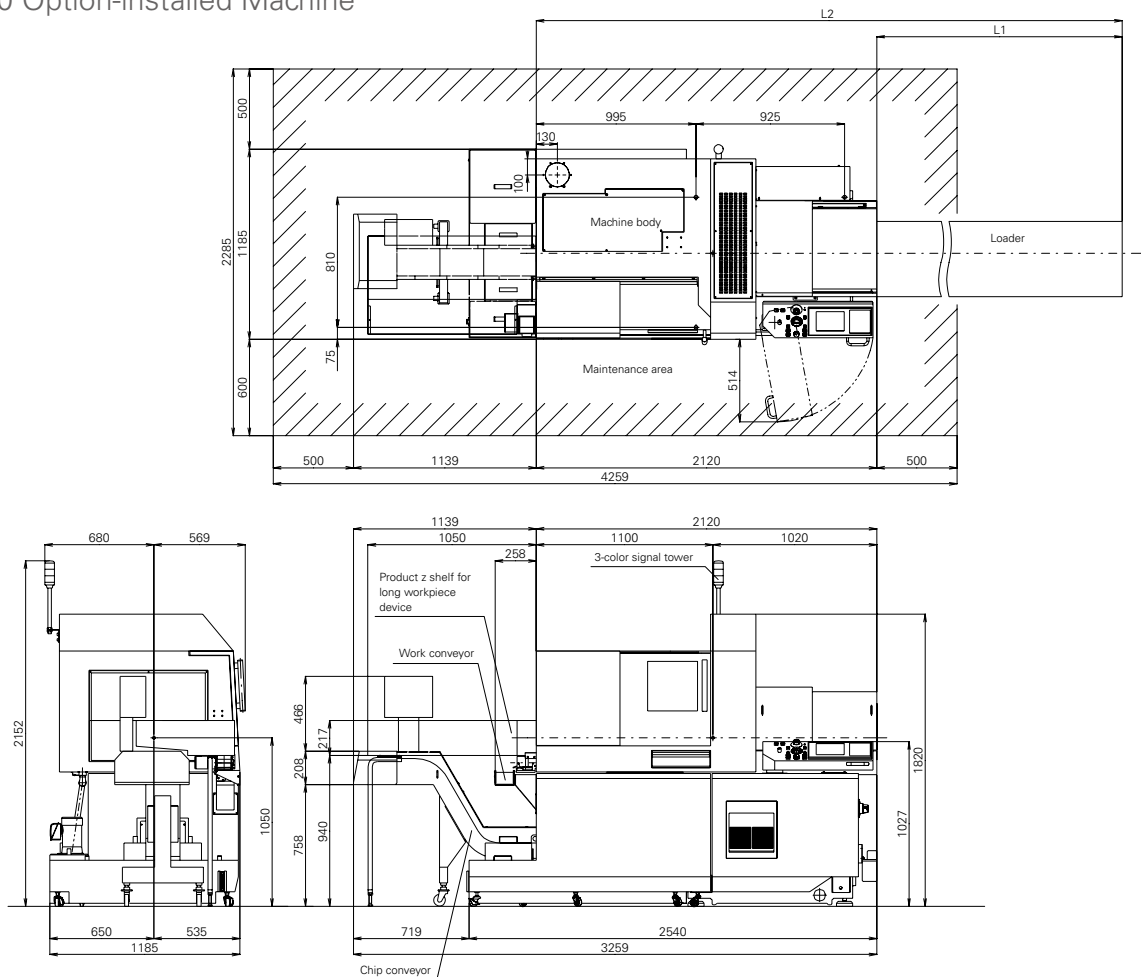


Machine Layout

■ A20 Standard Machine



■ A20 Option-installed Machine



Machine Specification

Item	A20 VII (A20-3F7)
Max. machining diameter (D)	20mm Dia. (25mm Dia. ^{OP})
Max. machining length (L)	GB:200mm/1 chucking(188mm/25mm Dia. spec.) GBL:2.5D
Max. front drilling diameter	10mm Dia.
Max. front tapping diameter (tap, die)	M8
Spindle through-hole diameter	26mm Dia.
Main spindle speed	Max.10,000min ⁻¹
Max. drilling diameter for the gang rotary tool	7mm Dia.
Max. tapping diameter for the gang rotary tool	M6
Spindle speed of the gang rotary tool	Max.6,000min ⁻¹ (Rating 4,500min ⁻¹)
Max. chuck diameter of back spindle	20mm Dia. (25mm Dia. ^{OP})
Max. protrusion length of the back spindle workpiece	50mm
Max. drilling diameter in back machining process	8mm Dia.
Max. tapping diameter in back machining process	M6
Back spindle speed	Max.8,000min ⁻¹
Max. protrusion length	100mm
Number of tools to be mounted	21
Tool size	
Tool (gang tool post)	12mm Sq.x120mm(13mm Sq. ^{OP})
Sleeve	25.4mm Sq.
Chuck and bushing	
Main spindle collet chuck	FC034-M, FC071-M
Back spindle collet chuck	FC034-M-K, FC071-M-K
Rotary tool collet chuck	ER11, ER16
Chuck for drill sleeves	ER11, ER16
Guide bushing	FG206-M / FG521-M
Rapid feed rate	
All axes (except X1)	32m/min
X1 axis	18m/min
Motors	
Spindle drive	2.2/3.7kW
Tool spindle drive	0.75kW
Back spindle drive	1.1/1.5kW
Coolant oil	0.4kW
Lubricating oil	0.003kW
Center height	1,050mm
Rated power consumption	7.1kVA
Full-load current	20.2A
Main breaker capacity	30A
Air pressure and air flow rate for pneumatic devices	0.5Mpa, 47NL
Weight	2,200kg

Standard accessories

Main spindle chucking device	Coolant unit (with level detector)
Back spindle chucking device	Lubricating oil supply unit (with level detector)
Cut-off tool breakage detection	Door lock
Work light (LED)	Pneumatic device for air sealing
Workpiece separator	Machine relocation detector

Special accessories

Rotary guide bushing device	Chip conveyor
Fixed guide bus	Medium-pressure coolant unit
Knock-out jig for through-hole workpiece	Coolant flow rate detector
Callback chute	Signal lamp
Product receiver shelf for long workpiece device	3-color signal tower
Workpiece conveyor	

Standard NC functions

NC unit dedicated to the A20	Program storage capacity : 40m(approx.16KB)
8.4 inch color LCD	Tool offset pairs : 32
On-machine program check function	Product counter indication (up to 8 digits)
Operating time display function	Main spindle indexing at 15° intervals
Preparation function	Automatic power-off function
Spindle speed change detector	Continuous thread cutting function
Nose radius compensation	Program prior analysis function
Constant surface speed control function	

Special NC functions

Program storage capacity 2560m (approx.1MB) Hob/polygon function B	
Tool offset pairs : 49	Spindle 1°indexing function
Submicron commands	Back spindle 1°indexing function
Spindle synchronized function	Front/Back spindle C-axis function
Rigid tapping function	Tool life management I
High speed rigid tapping function	Tool life management II
Chamfering, corner R	Optional block skip (9 sets)
Canned cycle drilling	External memory program driving
Drawing dimension direct input	Network I/O function
Multiple repetitive cycle for turning	Inch command
User macros	Sub/inch Command
Yaxis offset	

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