

Machine Specification

Item	L12 type VII
Maximum machining diameter (D)	φ12mm
Maximum machining length (L)	GB:135mm/1 chuck GBL:30mm/1 chuck
Maximum front drilling diameter	φ8mm
Maximum front tapping diameter (tap, die)	M6
Spindle through-hole diameter	φ20mm
Main spindle speed	Max.15,000min ⁻¹
Max. chuck diameter of the back spindle	φ12mm
Max. protrusion length	80mm
Max. protrusion length of the back spindle workpiece	30mm
Max. drilling diameter for the back spindle	φ6mm
Max. tapping diameter for the back spindle	M5
Back spindle speed	Max.10,000min ⁻¹
Gang rotary tool	
Maximum drilling diameter	φ5mm
Maximum tapping diameter	M4
Spindle speed	Max.10,000min ⁻¹
Back tool post rotary tool ^{Option}	
Maximum drilling diameter	φ5mm
Maximum tapping diameter	M4
Spindle speed	Max.9,000min ⁻¹
Number of tools to be mounted	27
Gang tool post	6
Gang rotary tool	4~9
Gang drilling tool	Front 4, Back 4
Back tool post	4
Tool size	
Tool	□10mm
Sleeve	φ19.05mm
Main spindle collet chuck	FC096-M
Guide bushing	WFG541-M
Back spindle collet chuck	FC096-M-K
Rapid feed rate(All axes)	35m/min
Motors	
Spindle drive	2.2/3.7kW
Gang tool post rotary tool drive	0.75kW
Back spindle drive	0.4/0.75kW
Back tool post rotary tool drive ^{Option}	0.5kW
Lubricating oil	0.25kW
Center height	1,000mm
Input power capacity	8kVA
Air pressure and air flow rate for pneumatic devices	0.5MPa, 60NI
Weight	1,500kg

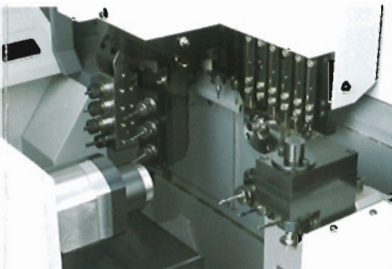
Standard accessories	
Main spindle chucking device	Machine relocation detector
Back spindle chucking device	Door lock
Gang rotary tool driving devices	Workpiece separator
Coolant device (with level detector)	Lighting
Lubricating oil supply unit (with level detector)	Rotary guide bushing drive device

Special Accessories	
Rotary guide bushing device	Medium-pressure coolant device
Cut-off tool breakage detector	Coolant flow rate detector
Knock-out jig for through-hole workpiece	Signal lamp
Workpiece conveyor	3-color signal tower
Chip conveyor	

Standard NC functions	
NC unit dedicated to the L20	Constant surface speed control function
8.4 inch color liquid crystal display (LCD)	Automatic power-off function
Program storage capacity : 40m	Main spindle indexing at 1° intervals
Tool offset pairs : 40	On-machine program check function
Product counter indication (up to 8 digits)	Chamfering, corner R
Spindle speed change detector	

Special NC functions	
Variable lead thread cutting	Differential speed rotarytool function
Arc threading function	Tool offset pairs : 80
Geometric function	Tool life management I
Spindle synchronized function	Tool life management II
Spindle C-axis function	Program storage capacity 600m
Milling interpolation	External memory program driving
Back spindle 1°indexing function	Submicrom commands
Back spindle C-axis function	User macros
Back spindle chasing function	Helical interpolation function
Multiple repetitive cycle for turning	Inclined helical interpolation function
Canned cycle drilling	Hob function
Rigid tapping function	Polygon function
High speed Rigid tapping function	Inch command
Rigid tapping phase adjustment function	Sub inch command

Cincom



L12

Sliding Headstock Type Automatic CNC Lathe

Cincom Innovation Line

L12 Standard Machine



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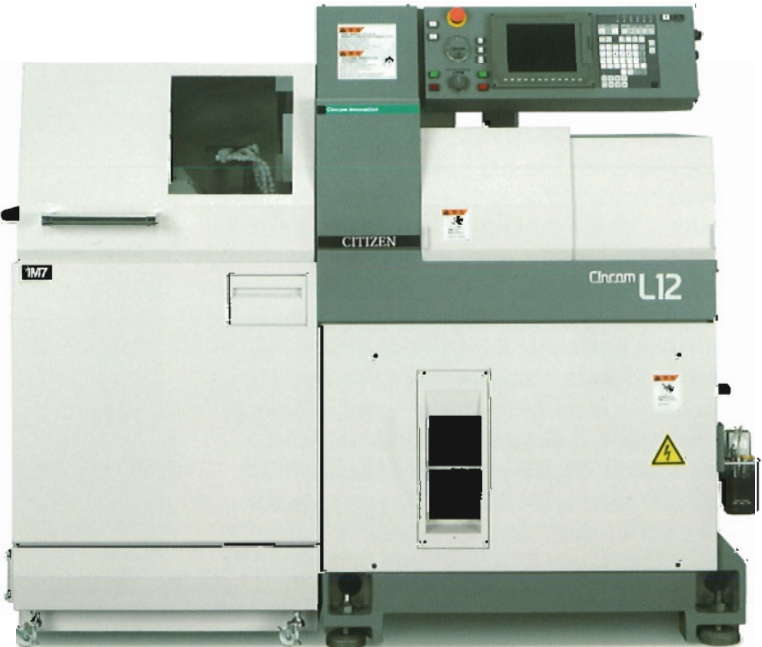
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Cincom Miyano

"Evolution and Innovation" is the Future



The L12: Handling all small-diameter work with 5-axis control

Detachable guide bushing and 15,000min⁻¹ high-speed spindle

Cincom Innovation

Guide bushing-less specifications

Machining using a guide bushing is a useful method for small-diameter workpieces. On the other hand, using a guide bushing with short workpieces leaves a long remnant bar, increasing material costs. The optimum machine configuration differs according to the workpiece to be machined, and up until now a variety of different machines have been required. The L12 solves this problem. It is a simple matter to fit or remove the guide bushing, so the machine configuration can be changed to suit the workpiece to be machined. As an automatic lathe that encompasses two roles in a single unit, it can be used to machine both long and short workpieces effectively. It also shows uncompromising performance as a machine for high-speed, small-diameter applications. It shortens cycle times with a front spindle capable of high-speed rotation of 15,000 min⁻¹ and 10,000 min⁻¹ rotary tools. The L series that has built Cincom's history is now making new functions and performance standard in automatic lathes.



[Two roles in one automatic lathe]

Switching between guide bushing and guide bushing-less specifications

The guide bushing can be fitted and removed simply, so the L12 can be used in accordance with the workpiece to be machined, either as a machine for long workpieces utilizing the guide bushing, or as a guide bushing-less machine able to leave short remnant bars.

[Achieving optimum machining conditions]

High-speed spindle and rotary tools

The maximum speed of the front spindle is 15,000 min⁻¹ even when using a rotary guide bushing (maximum machining length: 135 mm per chuck), and rotary tools are able to reach speeds of 10,000 min⁻¹. This makes it possible to use the optimum machining conditions when machining small-diameter bar material or using small diameter drills or end mills.

[Improved productivity per unit area]

Compact design

The design is only 1,760 mm wide by 820 mm deep. You can introduce a high-productivity, 5-axis machine into the same space as required to install an A12/16 series or B12 machine up until now.

[Handles workpieces with complex shapes]

Comprehensive tooling

A full range of optional tooling is available. Three both-end rotary tools (angle adjustable from 0° to 30°) can be mounted among the rotary tools on the gang tool post. In addition, adopting rotary tool specifications for the back tool post has made it possible to mount end face rotary tools and a slitting spindle for back machining.

[Display of Pertinent Information]

Easy-to-use operation screens

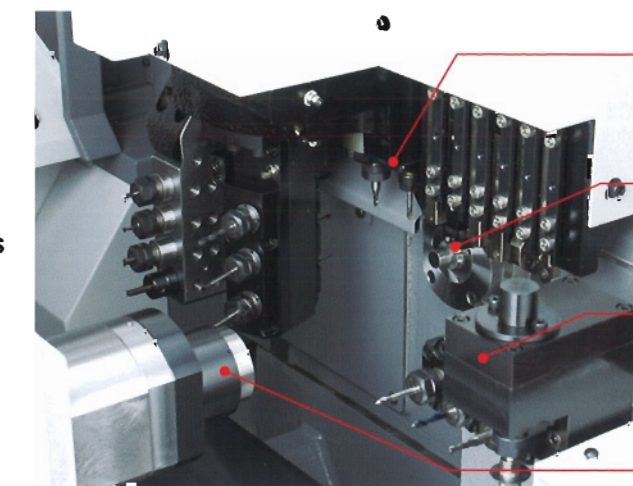
An NC unit that is easy to use, has an established reputation for high-speed arithmetic processing and has an extensive record of use in high-end machines has been adopted. Features like the on-machine check function that is useful when starting the production of a workpiece and the code list display that allows you to check details of G and M codes on the machine's screen, can be used.



Program input/output

NC programs can be input and output by using the PC card slot or the USB terminal.

L12 Type VII Tooling example



Rotary tool

Max. spindle speed
: 10,000 min⁻¹
Motor: 0.75 kW

Front spindle

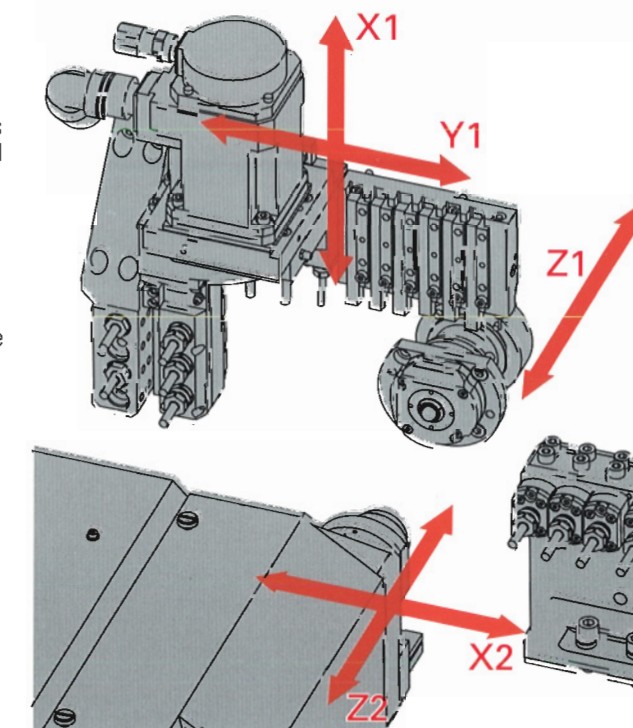
Max. spindle speed
: 15,000 min⁻¹
Motor: 2.2/3.7 kW

Back spindle

Max. spindle speed
: 10,000 min⁻¹
Motor: 0.4/0.75 kW

Back rotary tool (option)

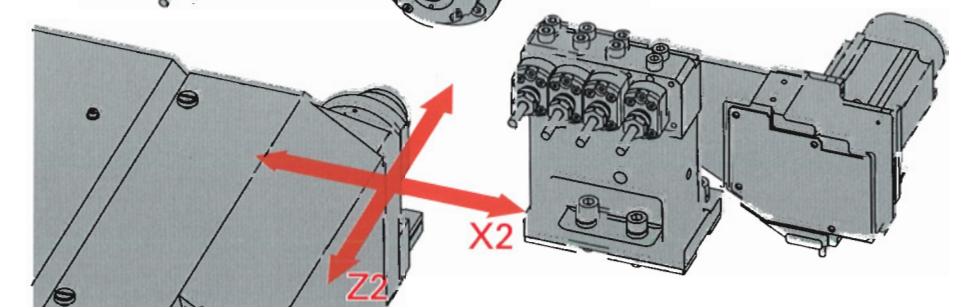
Max. spindle speed
: 9,000 min⁻¹
Motor: 0.5 kW



Tooling system

L12 Type VII

Turning tool
: 6 tools□10
Rotary tool on the
gang tool post
: 4 tools
Front drilling tool
: 4 tools
Back drilling tool
: 4 tools
Tools in back tool post
: 4 tools



Product receiver box

The workpieces consigned into the product chute are accommodated in the product receiver box.

Coolant tank

The coolant tank has a large capacity of 110 liters