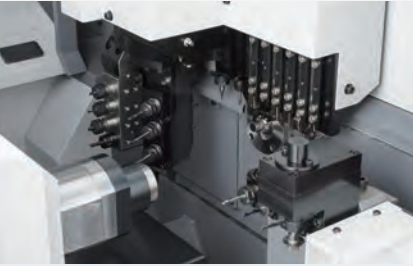


Cincom



L12

Sliding Headstock Type Automatic CNC Lathe

Cincom Innovation Line

L



Cincom **Miyano**

"Evolution and Innovation" is the Future

Automatic 12mm lathe offering 2 machines in 1

Handles both Swiss-type and bar chucker applications

Cincom Innovation



Machining using a guide bushing is a useful method for small diameter workpieces. However, using a guide bushing with short workpieces produces more material waste which increases material costs. The optimum machine configuration differs depending on 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 rpm and 10,000 rpm rotary tools. The L series that has built Cincom's history is now making new functions and performance standard in automatic lathes.

Detachable guide bushing and high-speed 15,000 rpm spindle

Achieving optimum machining conditions

High-speed main spindle and rotary tool spindle

The maximum main spindle speed is 15,000 rpm even with synchronized rotary guide bushing (maximum machining length is 135mm per chuck), and rotary tools are able to reach maximum speeds of 10,000 rpm. This makes it possible to use the optimum machining conditions even for small diameter bar material and drilling or milling tools.

Comprehensive Tooling

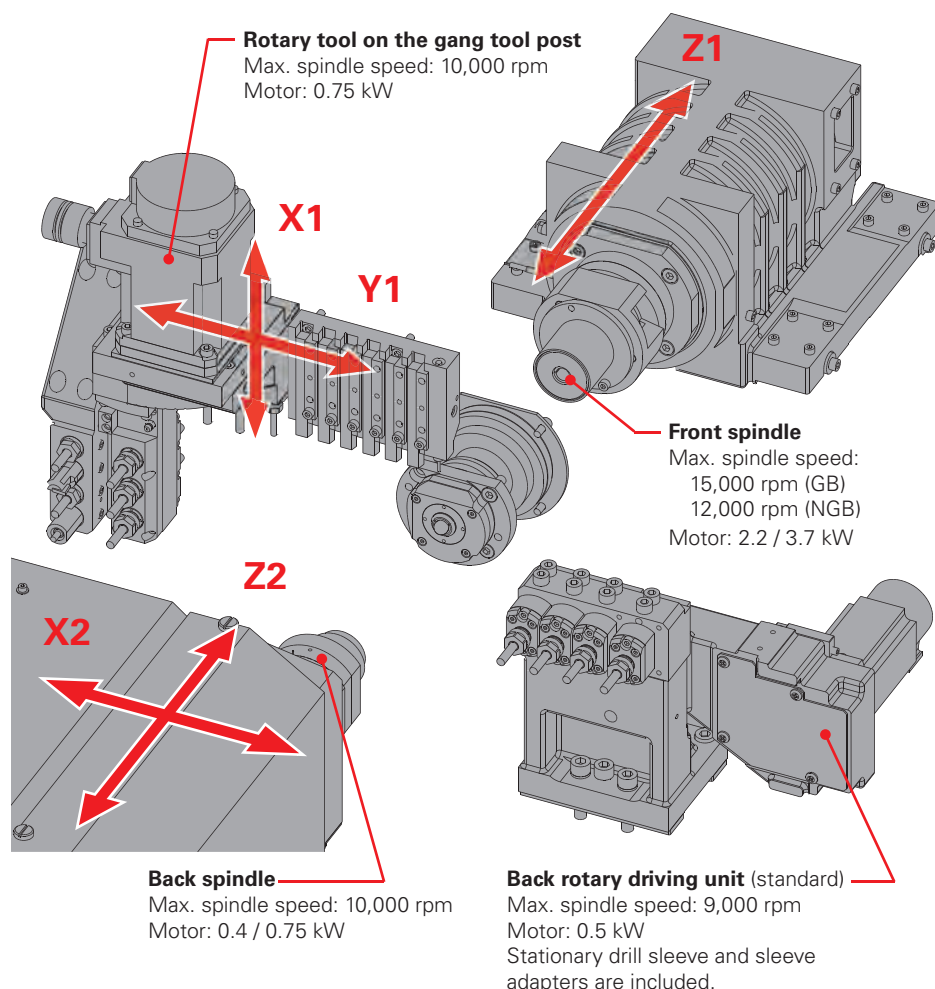
Handles complex workpieces

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.

Compact Design

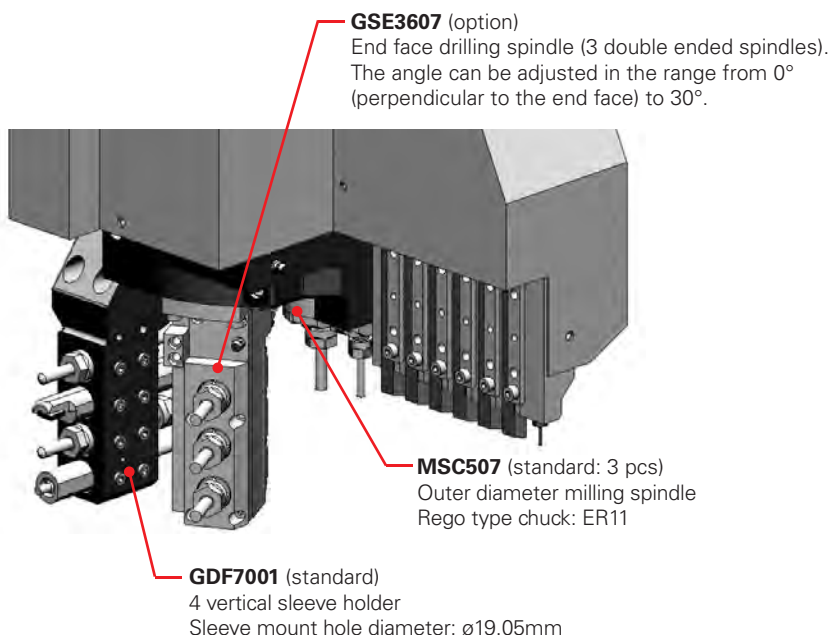
Improved productivity per unit area

The machine size is only 1,780mm (70") wide by 820mm (32.3") deep.

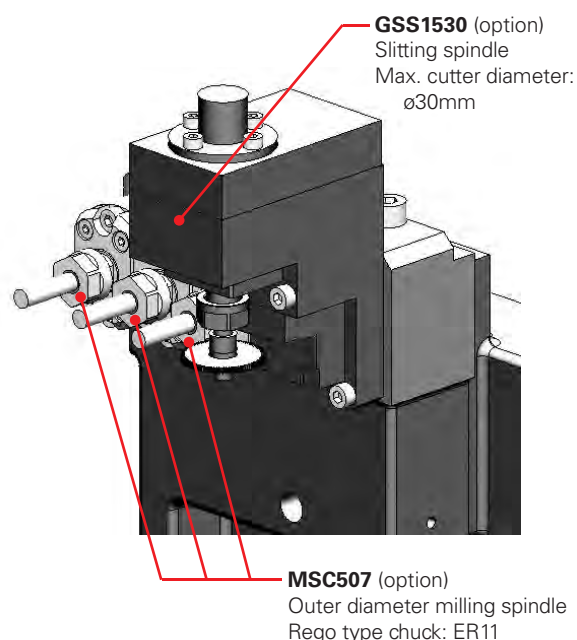


Comprehensive Tooling

Gang tool post



Back tool post Back rotary driving unit (standard)

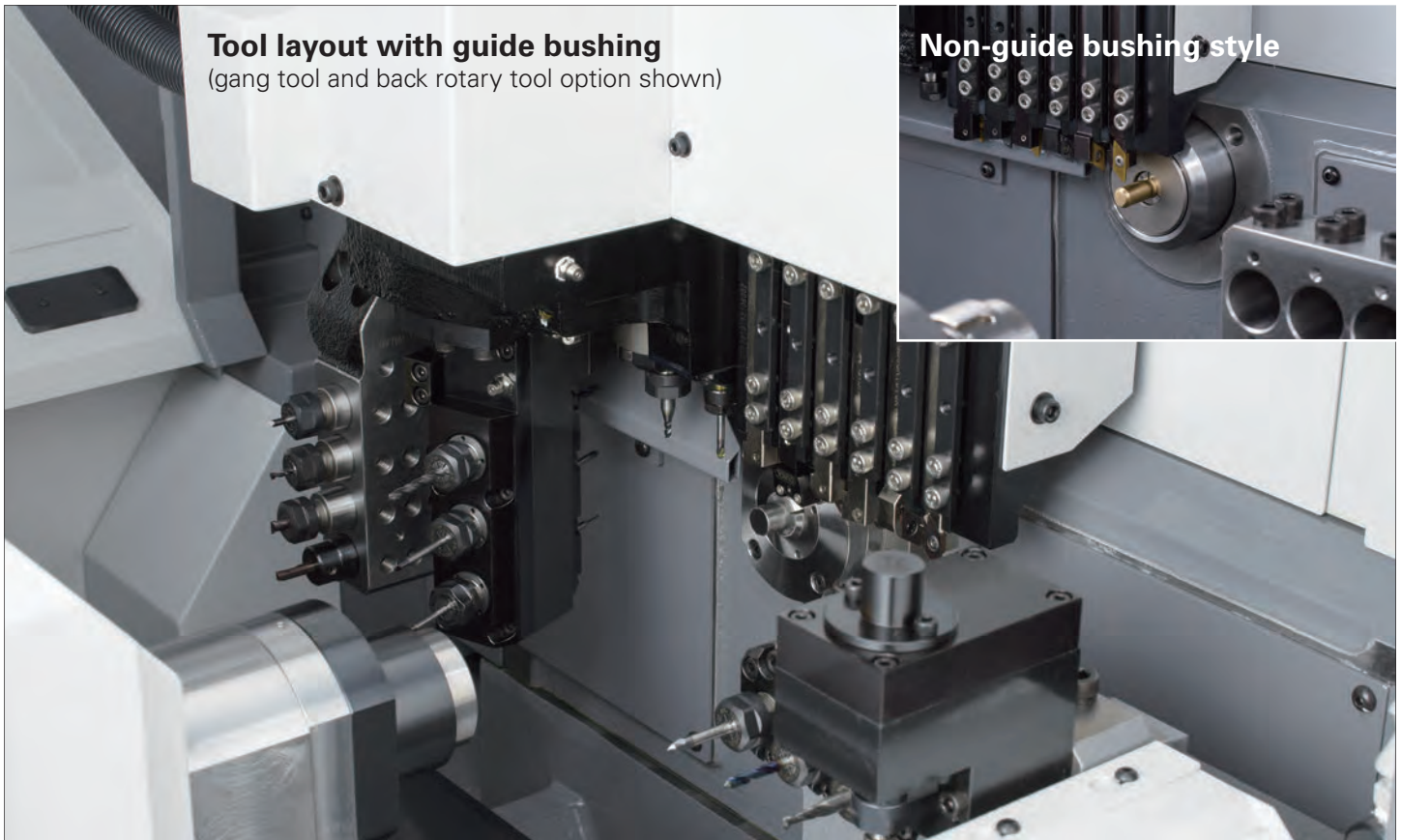


Handles both long and short workpieces with maximum efficiency

Guide bushing system can be quickly removed for efficient machining of shorter parts

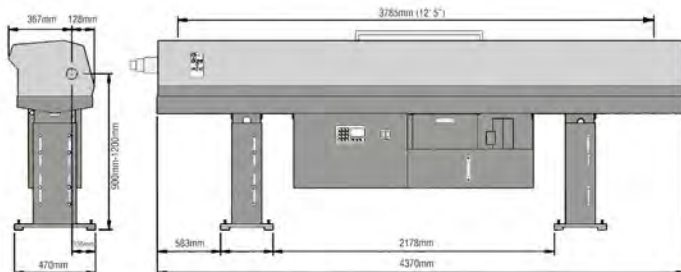
The L12 is equipped with a detachable guide bushing as standard. This is a major and unprecedented feature. The L12 can be used as a regular guide bushing type automatic lathe

for long and small diameter workpieces, and once the guide bushing is removed, it can be used for short workpieces thus minimizing material waste.



C312 Barfeeder (option)

The MCC C312 automatically feeds round, square and hexagonal bar stock into the L12VII in lengths up to 12' and a diameter range of 3 to 12 mm.



Convenient functions for easy operation and improved productivity

Trouble-free operation for fast set-ups — easy to maintain with optional functions for flexibility



Wide operator access

Operability is improved with a lift-up cover that provides a large opening without taking up space at the rear of the machine.



NC program input/output

NC programs can be input and output using a USB memory stick or compact flash card. An RS-232C interface, as featured on previous models, can also be used.



Product receiver box

The workpiece gripped in the back spindle is unloaded into the product chute for collection. Workpiece conveyor is available as an option.



Coolant tank

The coolant tank has a large capacity of 26 gallons (100 liters) and can be easily removed.



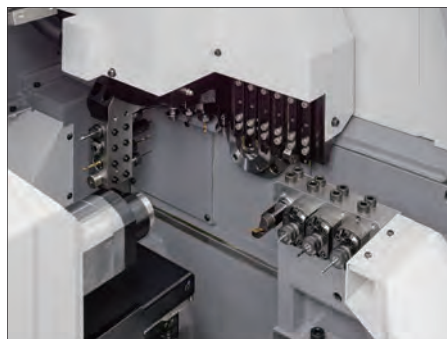
Chip receiver box

With its large opening, the chip collection port is designed for easy cleaning.



Central lubrication device

Supplying lubricating oil to all ball screws improves maintainability.



Up to 28 tools

A maximum of 28 tools can be mounted.



Deep hole drilling

An optional drilling tool (L12-U120B) can be added to the opposite tool post which is effective for deep hole machining.

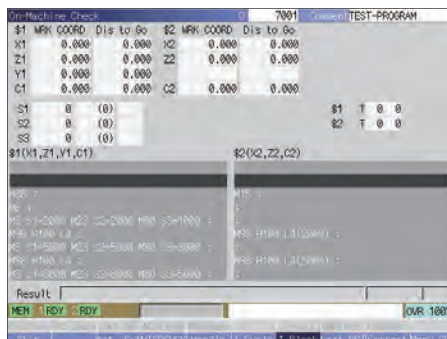
Intuitive screen display is easy to view and read

User-friendly screen designed from the operator's perspective



High-speed NC

The machine is equipped with the latest NC model to drastically reduce the start-up and screen switching time compared to conventional machines with advance functions. This feature provides a stress free operating environment.



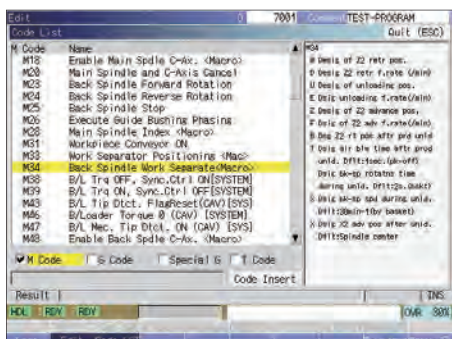
On-machine program check function

Using manual handle feed, this effective aid to smooth programming allows operations to be run in the forward or reverse direction and can be temporarily stopped for editing, then restarted according to the edited program.



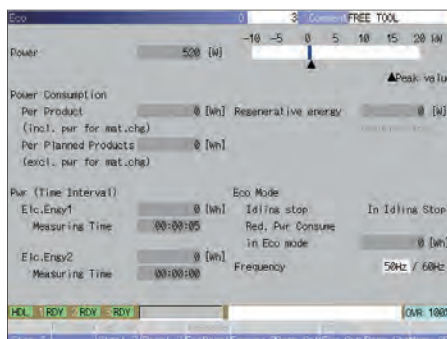
Easy to understand illustrations

In response to the selection of an item, the corresponding illustration is displayed on the screen so that the operator can easily recognize the meaning of the selected item. (The screen shown above displays the machining data).



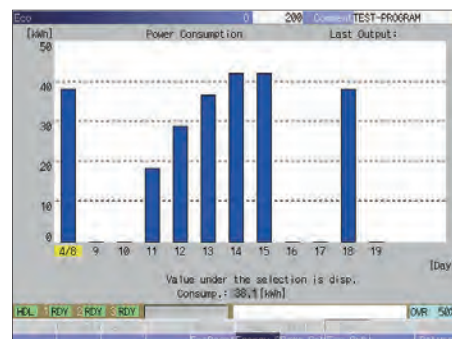
Code list display

The function displays the list of G and M codes including explanations of the arguments to support programming.



Eco screen

The current power consumption is shown along with the maximum power consumption value, the power consumption record, the cumulative power consumption and the power regeneration (generation) status.



Eco screen

The machine's power consumption can also be shown in the form of an easy-to-understand graph. Data can be output as well.

Environmental Information

Basic Information	Energy usage	Power supply voltage	AC200V
		Electrical power requirement (max)	6.1kVA
		Required pneumatic pressure	0.5MPa
Environmental Performance Information	Power consumption	Standby power*1	0.309kW
		Power consumption with model workpiece*2	0.012kWh/cycle
		Power consumption value above converted to a CO2 value*3	5.5g/cycle
	Air consumption	Required air flow rate	46NL (Power ON), maximum 190NL (during Air Blow)
Approach to Environmental Issues	Lubricant consumption	At power ON	2.5cc/60min
	Noise level	Value measured based on JIS	77.9dB
	Environmental load reduction	RoHS Directive / REACH regulations	Compliant
	Recycling	Indication of the material names of plastic parts	Covered in the instruction manual *4
Environmental management		We are ISO 14001 accredited. We pursue "Green Procurement," whereby we make our purchases while prioritizing goods and services that show consideration for the environment.	

*1: In idle stop mode (a function that turns servomotor excitation off when it is not necessary, for example during program editing).

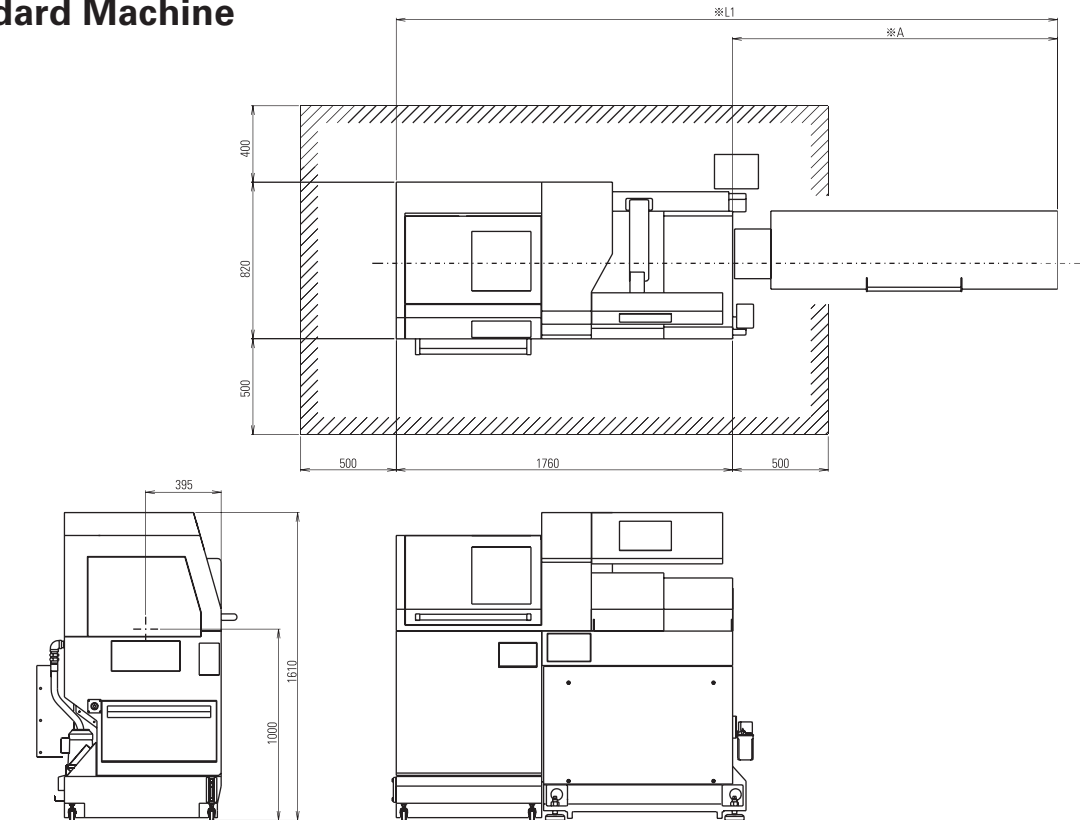
*2: In program operation (when not cutting) for one of our standard test pieces, shown for the purpose of comparing the environmental performance with that of existing models.

*3: Value converted in accordance with the CHUBU Electric Power CO2 emissions coefficient for 2009 as published by the Ministry of the Environment.

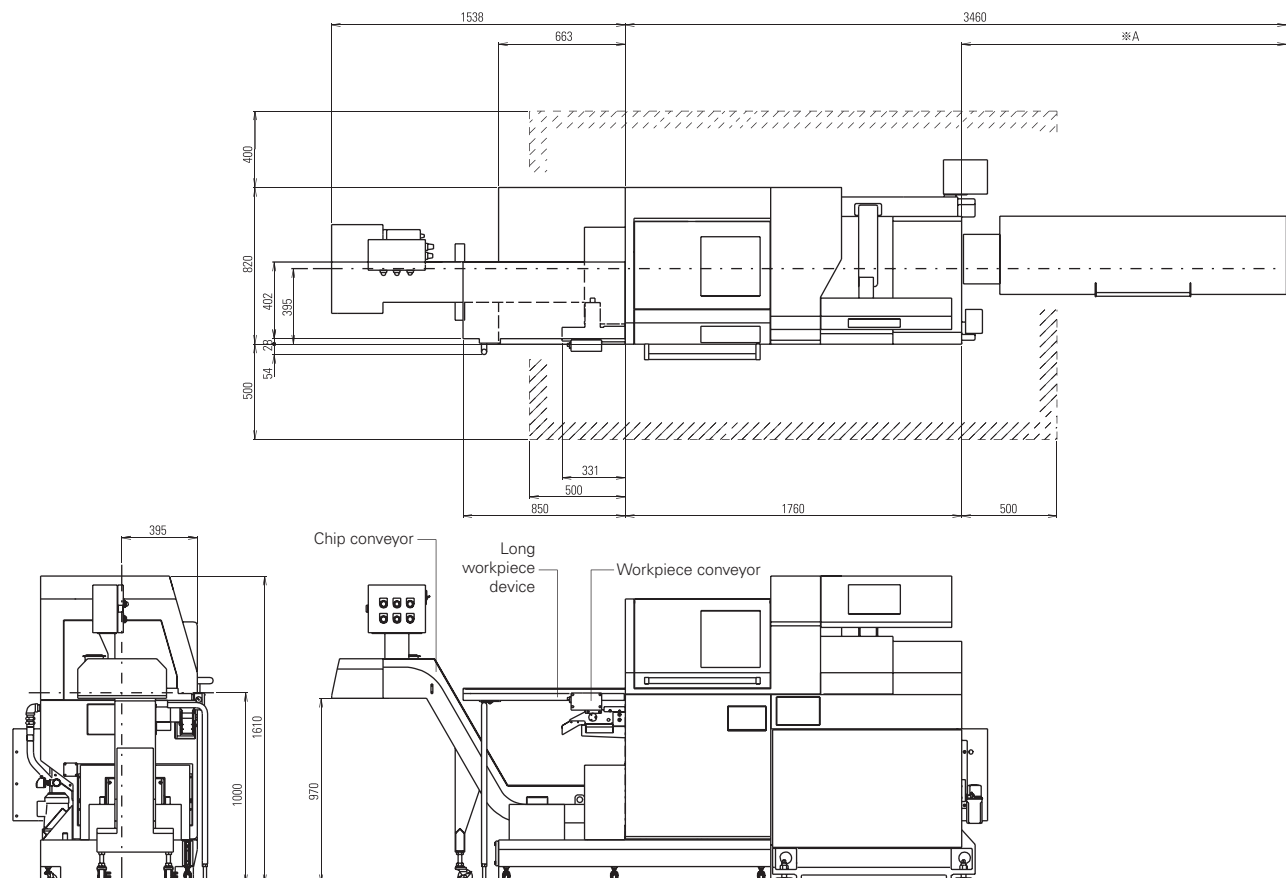
*4: If polyvinyl chloride (PVC) and fluorine resin are not processed correctly they can generate harmful gases. When recycling these materials, commission a contractor that is capable of processing them appropriately.

Machine Layout

L12 Standard Machine



L12 Option-installed Machine



Machine Specifications

Item	L12-1M7 (L12VII)
Maximum machining diameter (D)	Ø12mm
Maximum machining length (L)	GB: 135mm/1 chuck; NGB: 30mm/1 chuck
Maximum front drilling diameter	Ø8mm
Maximum front tapping diameter (tap, die)	M6
Spindle through-hole diameter	Ø20mm
Maximum main spindle speed	GB 15,000 rpm; NGB 12,000 rpm
Max. chuck diameter of back spindle	Ø12mm
Max. part length for front ejection to standard part separator	80mm
Max. protrusion length of back spindle workpiece	30mm
Max. drilling diameter for back spindle	Ø6mm
Max. tapping diameter for back spindle	M5
Back spindle speed	Max. 10,000 rpm
Gang rotary tool	
Maximum drilling diameter	Ø5mm
Maximum tapping diameter	M4
Spindle speed	Max. 10,000 rpm
Back tool post rotary tool	
Maximum drilling diameter	Ø5mm
Maximum tapping diameter	M4
Spindle speed	Max. 9,000 rpm
Number of mountable tools	Maximum 28
Gang tool post	6
Gang rotary tools	4 Stations (1 built-in/3 quill I)
Gang drilling tool	Front 4, Back 4
Back tool post	4
Tool size	
Tool	3/8" square shank
Sleeve	3/4" diameter shank
Main spindle collet chuck	TF16
Guide bushing	SD125R
Back spindle collet chuck	TF16
Rapid feed rate (all axes)	35m/min
Motors	
Spindle drive	2.2 / 3.7 kW
Gang tool post rotary tool drive	0.75 kW
Back spindle drive	0.4 / 0.75 kW
Back tool post rotary tool drive	0.5 kW
Lubricating oil	0.25 kW
Center height	39" (1000 mm)
Input power capacity	6.1 kVA
Air pressure and air flow rate for pneumatic devices	0.5 MPa. 60NL
Weight	3,748 lbs (1700 kg)

Standard Accessories

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

Optional Accessories

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

Standard NC Functions

NC unit dedicated to the L12
8.4" Color LCD
Program storage capacity: 160m
Tool offset pairs: 40
Product counter indication (up to 8 digits)
Spindle speed change detector
Constant surface speed control function
Automatic power-off function
On-machine program check function
Chamfering corner R
Variable lead thread cutting
Arc threading function
Geometric function
Spindle C-axis function
Milling interpolation
Back spindle C-axis function
Back spindle chasing function
Canned cycle drilling
High speed rigid tapping function
Rigid tapping phase adjustment function
Differential speed rotary tool function
Tool Life Management I
Tool Life Management II
External memory program driving
User macros
Helical interpolation function
Inclined helical interpolation function
Hob function
Polygon function
Inch command
Sub inch command

Optional NC functions

Tool offset pairs: 80
Program storage capacity: 600m

Optional Tool Holder

GSE3607: 3 Front / 3 Back rotary tool holder
(0~30 degree adjustable)
GSS1530: Back slitting spindle (up to 30mm diameter cutter)

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