

# Cincom



## Cincom Evolution Line

Sliding Headstock Type Automatic CNC Lathe

# B12/16E

# B



Cincom's B series 'best seller' model has been enhanced to expand the machining range up to Ø 16 mm. And the cost has been substantially reduced.



The B series, which has sold well worldwide for a long time, has been enhanced as part of the Cincom Evolution Line, with a significant price revision. The B16E can handle diameters up to Ø 16 mm, so the range of target workpieces has been expanded. The B series is renowned for its speed, accuracy and high reliability at extremely low running costs. This 4<sup>th</sup> generation model retains the same tool layout which provides high-accuracy machining. The rigidity of the back headstock has been improved. Preprocessing, for shortest cycle time is supported by an on-machine program check function for easy prove-out. The standard specifications include a comprehensive range of NC functions.



**Program processed before operation – Preprocessing**

Running the calculations in NC programs in advance shortens the processing time during operation, which helps to reduce cycle times.

**Tool post configuration factoring in thermal expansion – Tool layout compensating for thermal displacement**

Virtual XY axis control is used to achieve a tool layout that is not too focused on the ball screw axis. This suppresses the effects of thermal displacement and makes it possible to maintain high accuracy during continuous machining.

**Achieving smooth setup changes – on-machine program check function**

This is for running a program in the forward or reverse direction using the manual pulse handle while checking the machine operations. NC programs can be checked intuitively and in an easy-to-understand manner.

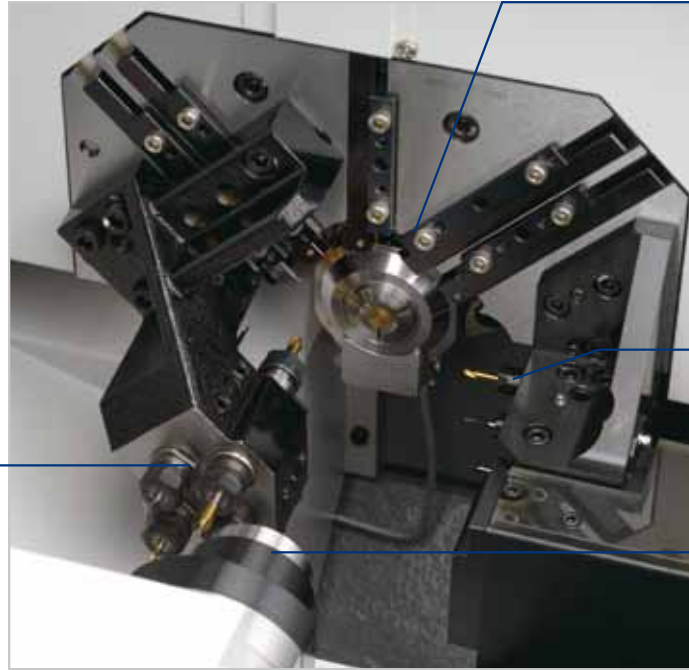
**Comprehensive standard specifications – full NC functions**

A wealth of functions generally treated as options, like canned cycle drilling, direct input of drawing dimensions, and user macros, are featured as standard NC functions.

**Flexible support according to the application – a range of optional accessories**

The wide range of optional accessories available, including the shaft processing unit and the long workpiece unit means that you can change the specifications according to your needs.

## Tooling Example B12/16E Type VI



### Drill Sleeve Holder

This holder can mount four drilling tools as standard.  $\varnothing 19.05^{DP}$  and  $\varnothing 20$  gauges are available.

### Front Spindle

#### B12E

Max. spindle speed: 12,000 min<sup>-1</sup>  
When using an RGB: 8,000 min<sup>-1</sup>

#### B16E

Max. spindle speed: 10,000 min<sup>-1</sup>  
When using an RGB: 8,000 min<sup>-1</sup>  
Max. drilling diameter:  $\varnothing 6$  mm

### Rotary Tools

Max. spindle speed: 4,500 min<sup>-1</sup>  
Max. drilling diameter:  $\varnothing 5$  mm

### Back Spindle

Max. spindle speed: 6,000 min<sup>-1</sup>  
Max. drilling diameter:  $\varnothing 5$  mm

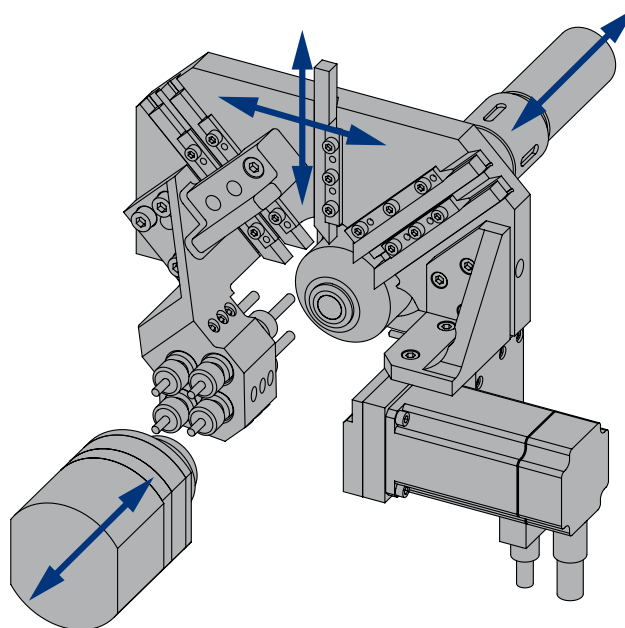
## Tooling Patterns B12/16E Type VI

Turning tools: 5  $\square^{10}$

Rotary tools on the  
gang tool post: 3

Front drilling tools: 4

Back drilling tools: 4



### Program input/output

NC programs can be input and output by using the PC card slot or the USB terminal. Support for RS-232C is also available as an option.



### Product chute

The back spindle retracts and ejects the workpiece into the chute, which drops it to the product receiver box. By reversing the product receiver box, it can be used as an oil bath.



### Chip receiver box

The chip receiver box is easily drawn out for efficient cleaning.



### Coolant tank

The coolant tank has a large capacity of 117 liters and can be moved easily when carrying out maintenance.

# Machine Specifications

Items	Cincom B12E	Cincom B16E
<b>Maximum machining diameter</b>	Ø 12 mm	Ø 16 mm
Maximum machining length	135 mm/1 chucking (57 mm/1 chucking with RGB)	135 mm/1 chucking (57 mm/1 chucking with RGB)
Maximum front drilling diameter	Ø 6 mm	Ø 6 mm
Maximum front tapping diameter	M6	M6
Spindle through-hole diameter	Ø 20 mm	Ø 20 mm
Main spindle speed	12,000 min <sup>-1</sup> (8,000 min <sup>-1</sup> with RGB)	10,000 min <sup>-1</sup> (8,000 min <sup>-1</sup> with RGB)
Maximum drilling diameter for the gang rotary tool	Ø 5 mm	Ø 5 mm
Maximum tapping diameter for the gang rotary tool	M4	M4
Spindle speed of the gang rotary tool	4,500 min <sup>-1</sup>	4,500 min <sup>-1</sup>
Maximum machining diameter on back spindle	Ø 12 mm	Ø 16 mm
Maximum protrusion length of the back spindle workpiece	30 mm	30 mm
Maximum protrusion length	80 mm	80 mm
Maximum drilling diameter on back spindle	Ø 5 mm	Ø 5 mm
Maximum tapping diameter on back spindle	M3	M3
Back spindle speed	6,000 min <sup>-1</sup>	6,000 min <sup>-1</sup>
<b>Number of tools to be mounted</b>	16	16
Turning tools	5	5
Cross rotary tools	3	3
Tools for front drilling	4	4
Tools for back drilling	4	4
<b>Tool size turning tools</b>	10 mm	10 mm
Sleeve diameter	Ø 20 mm	Ø 20 mm
<b>Cuck and bushing</b>		
Main spindle collet chuck	1212E/40.012	138E/40.004
Back spindle collet chuck	1212E/40.012	138E/40.004
Rotary tool collet chuck	ER8	ER8
Guide bushing (Neukomm)	166.001	61.002
<b>Rapif feed rate</b>		
X-, Y-axes	21 m/min	21 m/min
Z-, A2-axes	15 m/min	15 m/min
<b>Motor power</b>		
Main spindle speed	2.2/3.7 kW	2.2/3.7 kW
Tool spindle	0.5 kW	0.5 kW
Back spindle	1.0 kW	1.0 kW
Coolant pump	0.18 kW	0.18 kW
<b>Center height</b>	1,000 mm	1,000 mm
Air pressure/air flow rate	6 bar/30 NI/min (max. 50 NI/min)	6 bar/30 NI/min (max. 50 NI/min)
Weight	1,150 kg	1,150 kg

## Standard accessories

- Main spindle chucking device
- Back spindle chucking device
- Gang rotary tool driving device
- Coolant device (with level detector)
- Lubricating oil supply unit (with level detector)
- Machine relocation detector
- Door lock function
- Cut-off tool breakage detector
- Lighting
- Rotary guide bushing device
- Pneumatic device for air sealing
- 3-color signal tower

## Special Accessories

- Chip conveyor
- Option for long parts
- High pressure unit

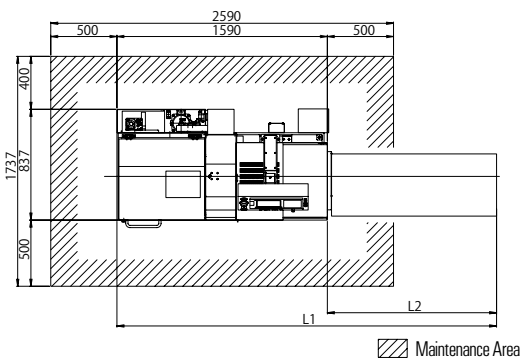
## Standard NC functions

- Tool nose radius compensation
- NC unit: Fanuc 0i-TD
- 8.4 inch LCD color
- Multiple repetitive cycle
- Canned cycle for drilling
- Constant surface speed control
- Corner chamfer and R function
- Customer macro
- Hobbing/polygon machining (B)
- Spindle speed fluctuation detection
- Spindle synchronization function
- Tool life management function (I)
- Synchronous tapping function
- Spindle 1 degree indexing
- Drawing dimension direct input
- B-Code function

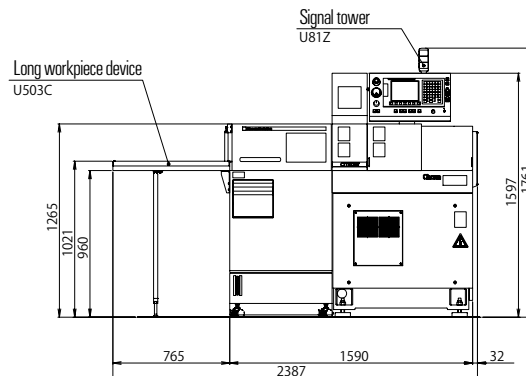
## Special NC functions

- Tool life management function (II)
- Sub microns command

B12/16 Standard machine layout



B12/16E Option-installed machine



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