

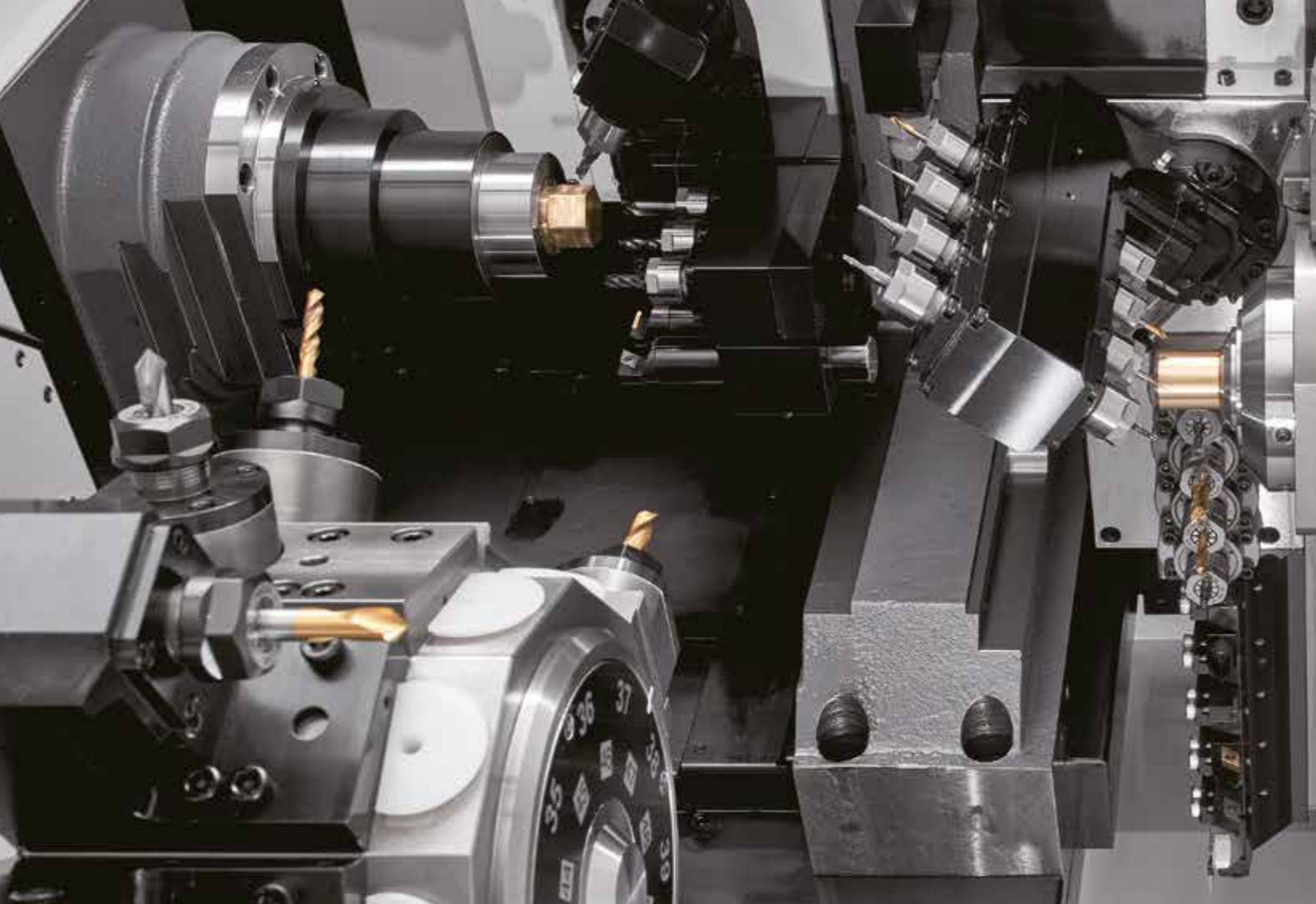
# CITIZEN

# Cincom

## M32

Sliding Headstock Type CNC Automatic Lathe





M32-VIII

## Ultimate Gang + Turret: The M32 is Reborn

Adoption of newly designed covers to provide better access, as well as a new HMI operating panel for the new NC unit. A touch panel provides improved productivity and operation.

Additionally, structural analysis was performed to achieve a highly rigid design that provides an optimal balance between strength and weight to greatly improve the rigidity required during the machining process.

The turret tooling has been completely redesigned with a conversion to single-drive for rotary tools and strengthening of the rotary tools motor. The gang tool post has been equipped with a type VIII B-axis spindle for contouring by using the new five-axis control system. The back tool post has been equipped with adjustable-angle type VII and VIII spindles to provide complex machining in conjunction with the Y axis. Increased back machining capability allows more freedom in choosing the optimum machining process for your components.

A 5.5/7.5 kW high-output spindle motor has been adopted for front and back spindles. You can switch between use and non-use of guide bushings for compatibility with 38-mm oversize specifications.



## Basic Structure

The image shows the type VIII

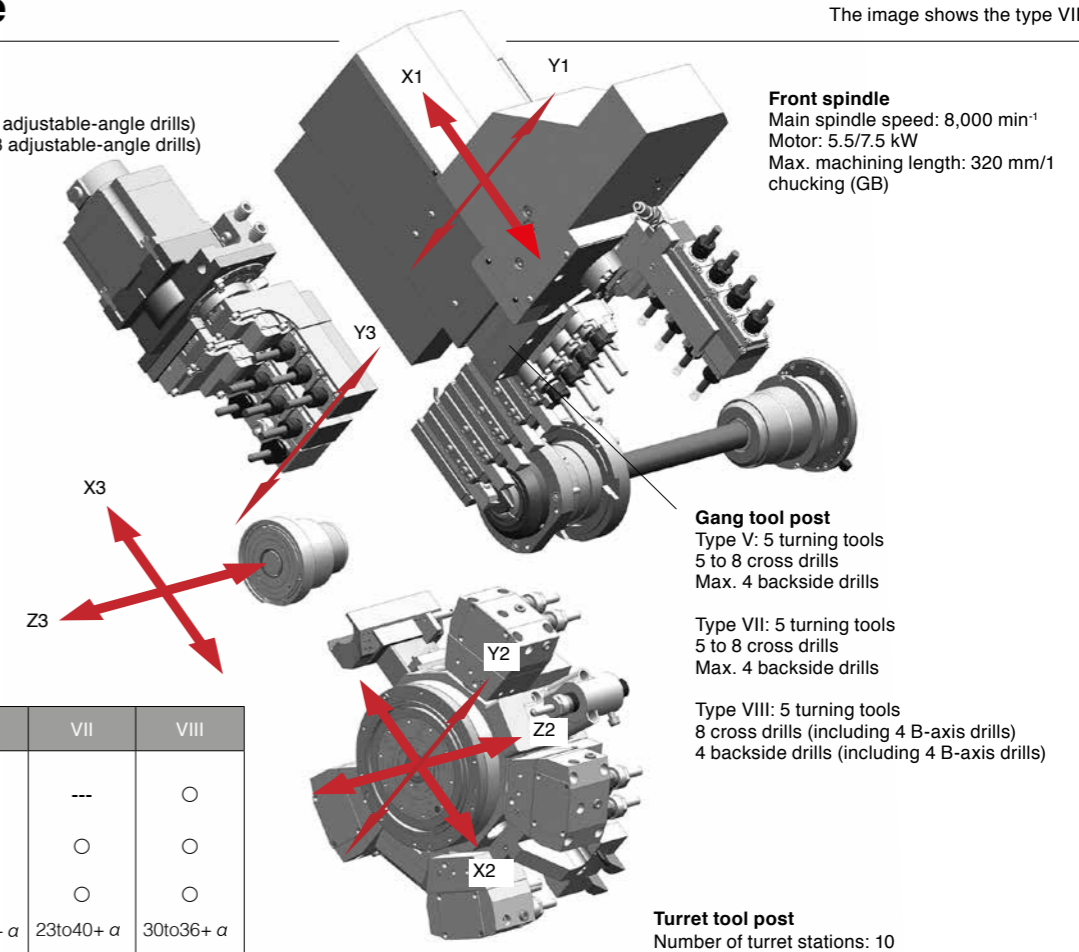
### Back tool post

Type V: 5 drills  
 Type VII: Max. of 9 drills (including 3 adjustable-angle drills)  
 Type VIII: Max. of 9 drills (including 3 adjustable-angle drills)

Back spindle  
 Main spindle speed: 8,000 min<sup>-1</sup>  
 Motor: 5.5/7.5 kW

Machine configuration by type

Type	V	VII	VIII
B axis (gang rotary tools)	---	---	○
Y3 axis (back tool post Y axis)	---	○	○
Spindle speed of the back tool post rotary tool	---	○	○
Total number of tools	25to36+ $\alpha$	23to40+ $\alpha$	30to36+ $\alpha$



**Front spindle**  
 Main spindle speed: 8,000 min<sup>-1</sup>  
 Motor: 5.5/7.5 kW  
 Max. machining length: 320 mm/1 chucking (GB)

**Gang tool post**  
 Type V: 5 turning tools  
 5 to 8 cross drills  
 Max. 4 backside drills

Type VII: 5 turning tools  
 5 to 8 cross drills  
 Max. 4 backside drills

Type VIII: 5 turning tools  
 8 cross drills (including 4 B-axis drills)  
 4 backside drills (including 4 B-axis drills)

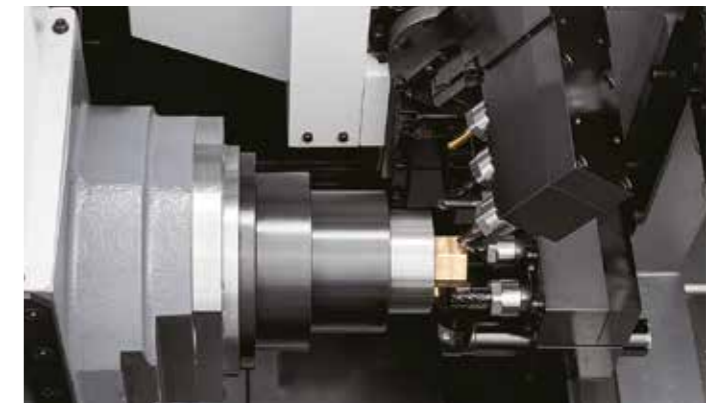
**Turret tool post**  
 Number of turret stations: 10

## Back Machining to Provide Compatibility with even more Complex Shapes

The gang tool post has been equipped with a programmable B axis (45° backside and 105° front side) type VIII. The back tool post has been equipped with three-tool adjustable angle spindles type VII and VIII to provide even more complex machining.



Gang rotary tool B axis



Three-tool adjustable angle type spindle

### New single-drive turret

A single drive that only drives the selected rotary tool has been adopted for the 2.2-kW/22-Nm high-output high-torque milling turret.

This prevents backlash and vibration to provide longer tooling service life.



### New HMI (Human Machine Interface) operating panel

A new HMI-equipped operating panel with a 15-inch touch panel has been adopted. This serves to improve operability. Additionally, universal design has been applied to operating panel colours.



# Machine Specification

Item	M32			Main standard accessories	
	V	VII	VIII		
	M32 - 5M5	M32 - 5M7	M32 - 5M8	Main spindle chucking unit	Back spindle chucking unit
Max. machining diameter (D)	32 mm dia. (38 mm <sup>OP</sup> )			Gang rotary tool driving unit	Back rotary tool driving unit *Types VII, VIII
Max. machining length (L)	320 mm/1 chucking			Rotary guide bushing unit	Knock-out jig for through-hole workpiece
Max. front drilling diameter	12 mm dia.			Coolant unit (with level detector)	Lubricating oil supply unit (with level detector)
Max. tapping diameter for the front spindle	M12 (Cutting tap)			Motor knock-out device for back machining	Motor-driven workpiece separator
Main spindle speed	Max. 8,000 min <sup>-1</sup>			Machine relocation detector	Spindle cooling unit
Max. chuck diameter for the back spindle	32 mm dia. (38 mm <sup>OP</sup> )			Door lock	Machine internal lighting
Max. drilling diameter for the back spindle	12 mm dia.			Cut-off tool breakage detector	Coolant flow rate detector
Max. tapping diameter for the back spindle	M12 (Cutting tap)			Product unloader	3-colour signal tower
Max. length of the back spindle workpiece	145 mm (Standard recovery unit)				
Back spindle speed	Max. 8,000 min <sup>-1</sup>				
Gang rotary tools				<b>Special accessories</b>	
Max. drilling diameter	8 mm dia			Chip conveyor	Long workpiece unit
Max. tapping diameter	M8 (Cutting tap)			High-pressure coolant unit	Workpiece conveyor
Main spindle speed	Max. 9,000 min <sup>-1</sup>			Medium-pressure coolant unit	M32 special tool
Turret rotary tools					
Max. drilling diameter	12 mm dia.			<b>Standard NC functions</b>	
Max. tapping diameter	M12 (Cutting tap)			CINCOM SYSTEM M830W (Mitsubishi Electric) *Types V, VII	CINCOM SYSTEM M850W (Mitsubishi Electric) *Type VIII
Main spindle speed	Max. 6,000 min <sup>-1</sup>			15-inch XGA touch panel	USB slot
Back rotary tools				Program storage capacity: 160m (Approx. 64 KB)	Tool offset pairs: 99
Max. drilling diameter	8 mm dia.			Product counter indication (up to 8 digits)	User-opened disk capacity of 10 MB
Max. tapping diameter	M6 (Cutting tap)			Preparing operation functions	Operating time display function
Main spindle speed	Max. 6,000 min <sup>-1</sup>			Machine operation information display	B-axis control function *Type VIII
Number of tools	25 to 36 + $\alpha$	23 to 40 +	30 to 36 + $\alpha$	Back machining program skip function	Obstruction check
Turning tools	5			Impact detection function	Spindle speed change detector
Cross drills	5 to 8	8 (including 4 B-axis drills)		Constant peripheral speed control function	Automatic power-off function
Gang tool post backside drills	Max. 4		4 (including 4 B-axis drills)	Spindle 1° indexing function	On-machine program check function
Number of turret stations	10			Nose radius compensation	Eco display
Back tool post drills	5	Max. 9		Chamfering/Corner R function	Canned cycle for composite turning
Tool size				Geometric command function	Spindle C-axis function
Turning tool	□ 16mm			Spindle synchronised function	Back spindle 1° indexing function
Sleeve diameter	25.4 mm dia.			Milling interpolation function	Back spindle chasing function
Chuck and bushing				Back spindle C-axis function	Canned cycle for drilling
Main spindle collet chuck	TF37 (TF43, TF48 for 38mm dia. OPT.)			Synchronised tapping function	User macros
Back spindle collet chuck	TF37 (TF43, TF48 for 38mm dia. OPT.)			RS232C connector	
Guide bushings	T229 (STM38 for 38mm dia. OPT.)				
Rapid feed rate				<b>Optional NC functions</b>	
X1, Y1, Z1, Z2, X3, Z3	32 m / min			Variable lead thread cutting	Arc threading function
Y3	---	32 m / min		Differential speed rotary tool function	3D chamfering function
X2	18 m / min			Tool life management I	Synchronised tapping phase adjustment function
Y2	12 m / min			Program storage capacity: 4800 m (1,920 KB)	High-speed synchronised tapping function
B1	-	50 min <sup>-1</sup>		External memory program driving	Optional block skip (9 sets)
Motors				Inclined helical interpolation function	Tool life management II
Front spindle drive	5.5 / 7.5 kW			Polygon function	User-opened disk capacity of 100 MB
Back spindle drive	5.5 / 7.5 kW			Helical interpolation function	Submicron commands
Gang rotary tool drive	2.2 kW			Hob function	Inch command
Turret rotary tool drive	2.2 kW			Sub inch command	Network I/O function
Back rotary tool drive	1.0 kW				
Pneumatic unit: Required pressure and required flowrate	0.5 MPa at 110 NL/min. (When stationary)				
Machine main unit dimensions	(W) 2,860 × (D) 1,465 × (H) 1,900 mm				
Weight	4,250 kg	4,300 kg			
Power supply voltage	AC200V ± 10%				

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