

CITIZEN

# Cincom

## M16

Sliding Headstock Type CNC Automatic Lathe



# Machine Specification

Item	M16		
	V (M16-4M5)	VII(M16-4M7)	VIII(M16-4M8)
Max. machining diameter (D)	6mm		
Max. machining length (L)	200mm/1 chucking		
Max. front drilling diameter	10mm dia.		
Max. front tapping diameter (tap, die)	M8 (tap), M6 (die)		
Spindle through-hole diameter	20mm dia.		
Main spindle speed	Max.12,000 min <sup>-1</sup>		
Max. chuck diameter of the back spindle	16 mm dia.		
Max. protrusion length	125 mm		
Max. protrusion length of the back spindle workpiece	30 mm		
Max. drilling diameter for the back spindle	8 mm dia.		
Max. tapping diameter for the back spindle	M6		
Back spindle speed	Max.12,000 min <sup>-1</sup>		
Gang rotary tool			
Max. drilling diameter	5 mm dia.		
Max. tapping diameter	M5		
Spindle speed	Max.12,000 min <sup>-1</sup> (Rating 3,600 min <sup>-1</sup> )		
Turret rotary tool			
Max. drilling diameter	5mm dia.		
Max. tapping diameter	M5		
Spindle speed	Max.12,000 min <sup>-1</sup> (Rating 3,500 min <sup>-1</sup> )		
Back tool post rotary tool			
Max. drilling diameter	N/A	5 mm dia.	
Max. tapping diameter	N/A	M5	
Spindle speed	N/A	Max.8,000 min <sup>-1</sup> (Rating 4,500 min <sup>-1</sup> )	
Number of tools to be mounted	32 with a few extra		36 with a few extra
Gang turning tool	5		
Gang rotary tool	5 to 12 (including back 4 tools)		
Turret	10 with a few extra		
Back tool post	5	9	
Tool size			
Tool (turning tool)	10 mm sq.		
Sleeve	19.05 mm dia.		
Main spindle collet chuck	FC261-M		
Guide bushing	FC261-M-K		
Back spindle collet chuck	WFG660-M		
Rapid feed rate			
All axes (except X2, Y2, Y3 & B axes)	32 m/ min		
X2 axis	16 m/ min		
Y2 axis	8 m/ min		
Y3 axis	N/A	32m/min	
Motors			
Spindle drive	2.2/ 3.7 kW		
Gang tool post rotary tool drive	0.69 kW		
Turret rotary tool drive	0.69 kW		
Back spindle drive	0.75/ 1.5 kW		
Back tool post rotary tool drive	N/A	0.75kW	
Coolant oil	0.4 kW		
Center height	1,150 mm		
Rated power consumption	7.9 kVA		
Load operation average power	5.4 kVA		
Full-load current	28 A		
Main breaker capacity	40 A		
Air pressure and air flow rate for pneumatic devices	0.5 MPa, 84 NL/ min (normal)/ 220 NL/ min(blow)		
Weight	2,900 kg	2,950 kg	

Standard accessories	
Main spindle chucking unit	Air-driven knock-out device for back machining
Rotary guide bushing unit	Workpiece separator
Back spindle chucking unit	Machine relocation detector
Gang rotary tool driving unit	Door lock
Coolant unit (with level detector)	Lighting
Lubricating oil supply unit (with level detector)	

Special accessories	
Cut-off tool breakage detector	Motor-driven knock-out device for back machining
Knock-out jig for through-hole workpiece	Workpiece conveyor
Long workpiece unit	Chip conveyor
Product unloader	Signal lamp
Coolant flow rate detector	3-color signal tower
Medium-pressure coolant unit	

Standard NC functions	
NC unit dedicated to the L12 (M730LPC-4VS)	Automatic power-off function
10.4 inch color liquid crystal display (LCD)	On-machine program check function
Program storage capacity : 40 m (approx.16KB)	Nose radius compensation
Tool offset pairs : 40	Chamfering, corner R
Product counter indication (up to 8 digits)	Format check function
Operating time display function	Alarm block display function
Spindle speed change detector	Eco display
Constant surface speed control function	Machine operation information display
Spindle C-axis function	

Special NC functions	
Variable lead thread cutting	Program storage capacity : 1200 m (approx.480KB)
Arc threading function	Tool offset pairs : 80
Geometric function	Tool life management I
Spindle synchronized function	Tool life management II
Milling interpolation	External memory program driving
Back spindl 1° indexing function	Network I/O function
Back spindle C-axis function	Submicron commands
Back spindle chasing function	User macros
Canned cycle drilling	Helical interpolation function
Rigid tapping function	Inclined helical interpolation function
High speed Rigid tapping function	Hob function
Rigid tapping phase adjustment function	Polygon function
Differential speed rotary tool function	Inch command
Optional block skip (9 sets)	Sub inch command
Back machining program skip function	3D camfering function
LFV mode1, mode2	LFV mode3

# Environmental Information

Basic Information	Energy usage	Power supply voltage	
		Rated power consumption <sup>*1</sup>	AC 200 V
Environmental Performance Information	Power consumption	Load operation average power <sup>*2</sup>	7.9 kVA
		Required pneumatic pressure	5.4 kVA
	Air consumption	0.5 MPa	
	Lubricant consumption	0.448 kW	
	Noise level	0.0133 kWh/ cycle	
	Recycling	6.15 g/ cycle	
	Environmental management	84NL/min (max. 220 NL/min., during air blow)	
Approach to Environmental Issues	Environmental management	Value measured based on JIS	2.5 cc/60min
		Indication of the material names of plastic parts	80 dB
		Covered in the instruction manual <sup>*7</sup>	
		We are ISO14001 accredited.	
		We pursue "Green Procurement", whereby we make our purchases while prioritizing goods and services that show consideration for the environment.	

\*1 This is the power consumption when the machine is operation at full capacity.

\*2 This is the standard power consumption during machine operation. The actual power consumption varies depending on the cutting conditions and other conditions.

\*3 This is the standby power in the idle stop mode (a function that turns servomotor excitation off when it is not necessary, for example during program editing).

\*4 This is the power consumption 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.

\*5 The average cycle time is 55 sec with the standard test workpiece of our company.

\*6 This is the value converted in accordance with the CHUBU Electric Power CO2 emissions coefficient for 2009 as published by the Ministry of the Environment.

\*7 If polyvinyl chloride (PVC) and fluoroc resin are not processed correctly they can generate harmful gases. When recycling these materials, commission a contractor that is capable of processing them appropriately.

## CITIZEN MACHINERY CO., LTD.

# CITIZEN

<b>JAPAN</b>	CITIZEN MACHINERY CO.,LTD. 4107-6 Miyota, Miyota-machi, Kitasaku-gun, Nagano-ken, 389-0206, JAPAN	TEL. 81-267-32-5901
<b>SOUTH ASIA / KOREA</b>	CITIZEN MACHINERY CO.,LTD. 4107-6 Miyota, Miyota-machi, Kitasaku-gun, Nagano-ken, 389-0206, JAPAN	TEL. 81-267-32-5901
<b>TAIWAN</b>	CINCOM MIYANO TAIWAN CO.,LTD. 10FL, No.174, Fuh Sing N. Rd., Taipei, TAIWAN	TEL. 886-2-2715-0598
<b>CHINA</b>	CITIZEN (CHINA) PRECISION MACHINERY CO.,LTD. 10058, XINHUA ROAD OF ZHOUCUN, ZIBO, SHANDONG, P.R. CHINA	TEL. 86-533-6150560
<b>GERMANY</b>	CITIZEN MACHINERY EUROPE GmbH Mettinger Strasse 11, D-73728 Esslingen, GERMANY	TEL. 49-711-3906-100
<b>UK</b>	CITIZEN MACHINERY UK LTD 1 Park Avenue, Bushey, WD23 2DA, UK	TEL. 44-1923-691500
<b>ITALIA</b>	CITIZEN MACCHINE ITALIA s.r.l. Via Guglielmo Marconi 47 24040 Comun Nuovo (BG), ITALY	TEL. 39-035-877738
<b>FRANCE</b>	HESTIKA FRANCE S.A.S. 1385 Avenue du Môle Z.A.E des Lacs 3, 74130 AYZE, FRANCE	TEL. 33-4-5098-5269
<b>SPAIN</b>	EGASCA, S.A. Poligono Industrial Erisono 2, 20600 Eibar (Gipuzkoa), SPAIN	TEL. 33-4-5098-5269
<b>AMERICA</b>	MARUBENI CITIZEN-CINCOM INC. 40 Borline Road Allendale, NJ 07401, U.S.A.	TEL. 1-201-818-0100

URL: <https://cmj.citizen.co.jp/>

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