



The solution for fast, economical production

The Cincom L20 series has been specially developed for high-precision manufacture of simple and complex parts in medium to large batch sizes. It offers all-round versatility with flexible options and extremely short set-up times. All axis movements including opening and closing of collets are implemented by servo motors. As a result, actuation times are reduced by around 50% in comparison with conventional CNC lathes which rely on hydraulics/pneumatics for auxiliary functions.

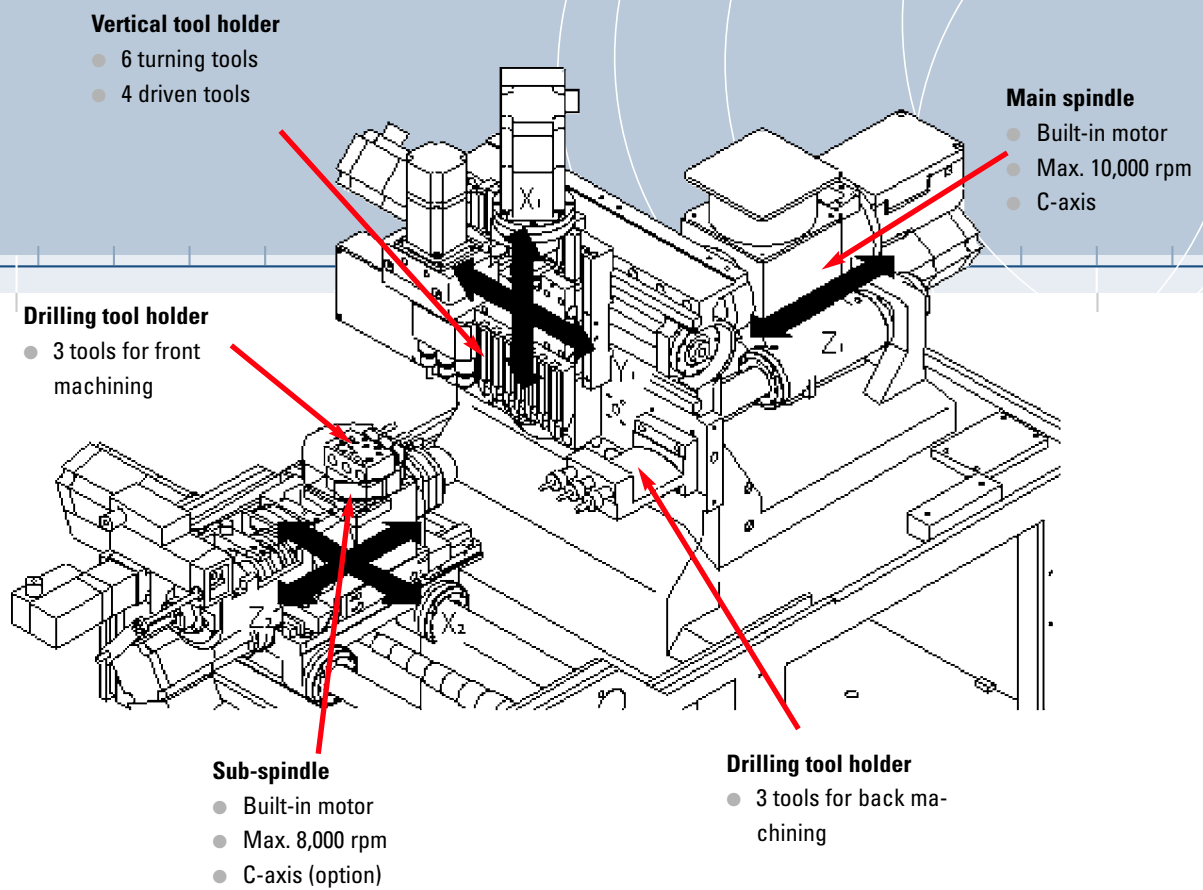
Built-in servo motors require less space and minimise the occurrence of faults.

Special features

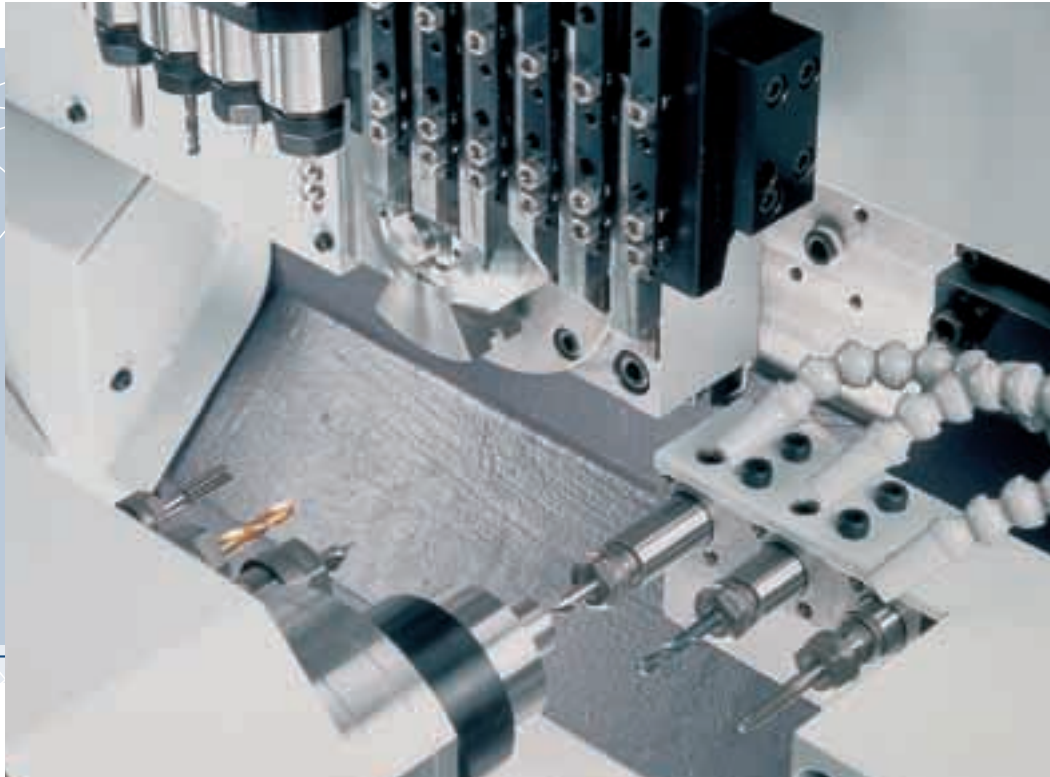
- All-round CNC sliding head turning centre for up to 20 mm diameter
- Maximum stability and operational life
- Fully CNC servo controlled, eliminating hydraulics and pneumatics
- Fast cycle times with considerably reduced set-up times
- Maximum production with low capital input for a rapid return on investment
- Good swarf disposal
- Y axis as standard

Mainline options:

- Tool system with many options
- Long parts adaptor
- Parts conveyor



Tool system

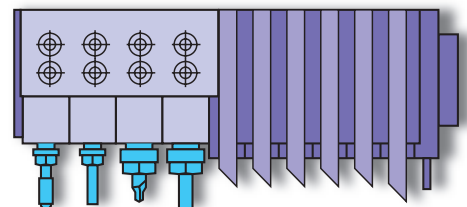


For complex external machining there are 6 turning tools with 12 x 12 mm tool shank available. In addition, there are 4 driven tools and 3 tools for front machining. The L20-VII is equipped with sub spindle and a drilling tool post with 3 stations. Numerous other tool combinations are available as options, so that for example, even eccentric drilling and milling operations on the front or on the back side of workpiece are possible.

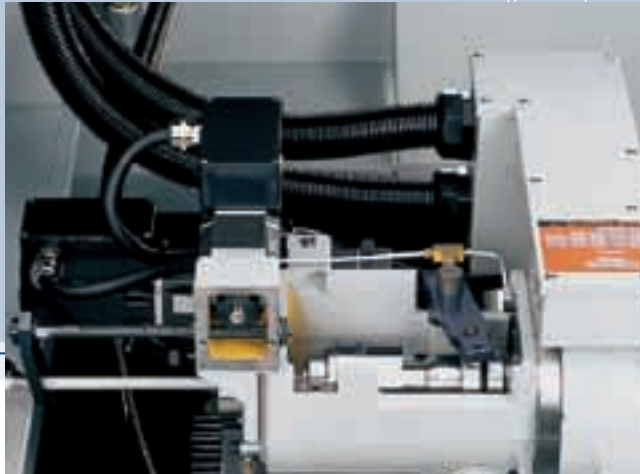
This configuration, which includes a "Y" axis on the main tool platen as standard, makes the L20-VII an extremely versatile and powerful machine tool

The L 20-VII provides a total of 16 tools

- 6 (7) turning tools
- 4 driven tools
- 3 tools for front machining
- 3 tools for back machining



Standard tool holder L20-VII



The main and sub spindle drives are equipped with highly dynamic built-in motors. The main drive, for example, accelerates to the maximum speed of 10,000 rpm in less than 1 second. This is an extremely important advantage when positioning the spindle for milling or when changing the direction of rotation for threading.

All movements, including chucking, are carried out by means of intelligent, digital AC servos. Elimination of hydraulics and pneumatics dramatically increases reliability and minimises maintenance requirements.

Due to the extremely compact design of the drive technology, no additional electrical cabinet is required. All components are integrated into the machine.

By incorporating this advanced technology, limit switches are no longer required and it is not necessary to zero return axes when switching on the machine.

CNC System



The CNC control MITSUBISHI M6 with 64 bit-processor (Windows 95®) was specifically developed for the Cincom L20-VII.

The storage capacity for the present workpiece program is normally 8 kB (optional upgrade to 16/32 kB). The complete control system is integrated into the swivelling operation panel. A 10,4" LCD colour display provides for a well structured and visible monitor picture. The patented superimposed control permits the simultaneous internal and external machining on the main spindle with different feed rates.

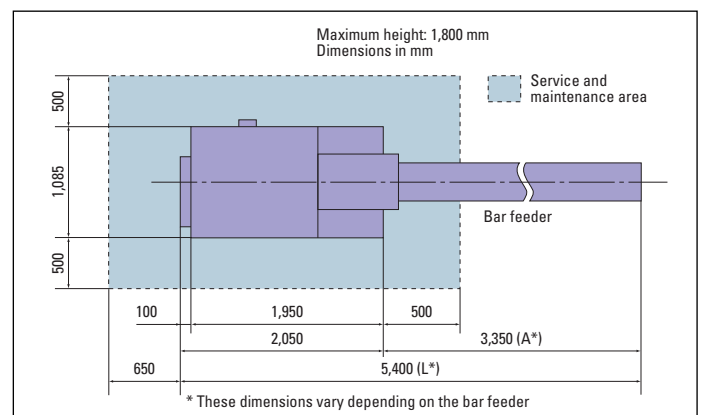
The fitted hand wheel enables safe and easy program prove out. Potential collision points can be recognised and avoided, and all movements can be optimised.

Through the Windows user interface and the extensive range of functions, programming is simplified to enable a fast-track learning curve even for first time users.

Specification Cincom L20-VII

Technical data	Cincom L20-VII
Main spindle	
Max. machining diameter [mm]	20
Max. machining length without re-chucking [mm]	200
Max. machining length with option for long workpieces [mm]	800
Drive rating [kW]	3,7
Spindle speed range (stepless) [rpm]	200–10000
Spindle through hole [mm]	24
C-axis [°]	0.001
Sub spindle	
Max. workpiece diameter [mm]	20
Max. workpiece length [mm]	80
Max. workpiece length with option for long workpieces [mm]	600
Drive rating [kW]	1.5
Spindle speed range (stepless) [rpm]	200–8000
Spindle indexing (C-axis is option) [°]	1
Tools/clamping	
Turning (external)	6
Driven tools (transverse)	4
Front machining (drilling)	3 (optional 2 driven tools)
Back machining (drilling)	3 (optional 2 driven tools)
Tool size [mm]	12 x 12
Collet for main and sub spindles	F25
Guide bush (Neukomm)	22.001
Rotary tool drive	
Speed range (stepless) [rpm]	200–5000
AC-Servo motor [kW]	0.75
Max. collet diameter [mm]	10
Machine dimensions	
Space requirement (without barfeeder) L x W [mm]	2050 x 1085
Machine weight [kg]	1800

Our ongoing research and development effort mean that some of the technical information provided here may have already been overtaken by advancements. The illustrations have been selected for their informative content. They may contain special equipment which is not included in the standard scope of supply.



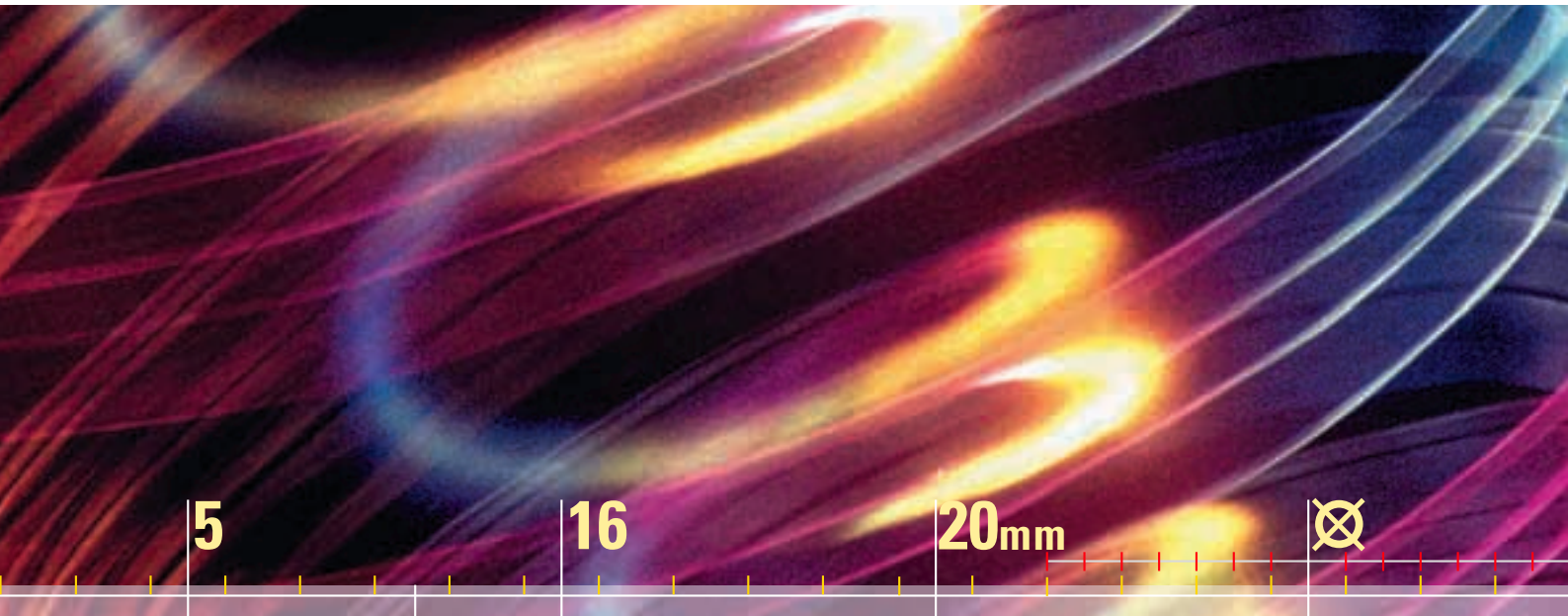
Machine layout-plan



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5

Axis

16

Tools

20mm

Bar diameter

⊗

Sub-spindle

Cincom **L20-VII**
CNC-Sliding Head Lathe

The solution for fast
economical production

CITIZEN