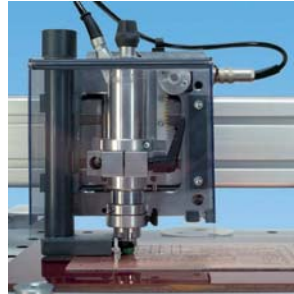


CNC Production Centre

1	700-008	Auto Tool Change CNC
1	700-010-5	Compressor for Auto Tool Change CNC
1	700-003-1	CCD Serial Black Box and Route Pro 2000
1	700-013-4	CCD Floor Standing Enclosure
2	&JWSPEC	50 assorted 3.175mm drill bits
20	13-111050	Router 30 degree tip for fine isolation routing
20	700-013-8	Router 60 degree tip for isolation routing
2	&JWSPEC	10 assorted routers, SC/FT and RP series
30	400-260	18 Micron Double Sided Laminate 12" X 18" sheet
30	400-266	1.5mm Drill Exit Board (Aluminium.) 12" X 18" sheet
30	400-265	0.8mm Entry Board 12" x 18"



Auto Tool Change CNC

The first part of the process in making a through hole plated circuit board is drill the required hole pattern in a piece of copper laminate. Due to the number of holes required and that there is not a guide to the position of the holes manual drilling is not suitable so a CNC drill has to be used.

The Mega Auto Tool Change CNC has a maximum working area of approximately 324 X 495 mm. This high speed, accurate machines will drill PCBs, manufacture isolation routed prototype boards (with ISOCAM), and engrave a whole range of substrates.

The machine will automatically select and change the tool required from the 15 tool rack fitted. The tool will also be automatically checked for breakage and rejected if necessary.

For PCBs the machine will accept the drilling files created by most CAD software packages and will drill several boards in a stack. As with the CCD2 it is also possible to produce prototype PCBs without the use of etching chemicals, the method of production known as isolation routing. A special piece of software is available, called IsoCam, which uses the data from the GERBER files to generate the corresponding outline shape.

Used in conjunction with a Windows Black Box drilling and routing can be performed 'real time' in Windows. The high speed and precision of these machines, together with a range of specifically designed sophisticated features (e.g. mechanical depth limitation) make this method of production highly accurate and efficient.

All that is required to operate the machine is a standard PC. The machine is equipped with a high frequency spindle and comes complete with a control unit, vacuum suction device for clearing swarf and the driver software for drilling and milling.

- Accuracy $\pm 0.001''$, Repeatability $\pm 0.0004''$
- Machine bed with universal fixture system, suitable for both clamps and ref. pins
- KaVo high speed spindle motor, 150 Watt, including 1 / 8" (3.175 mm) chuck
- Software controlled spindle speed up to 60000 rpm
- Heavy duty stepper motor on Z-axis for true milling capability and correct tool speed
- Standard travel area: 325 x 495 x 30 mm 3 (max. available 500 x 600 x 45 mm 3)
- Fully automatic tool change. Required compressor quoted for.
- Smallest drill diameter: 0.3 mm
- Integral depth limiting device for (isolation) milling and engraving on uneven surfaces
- Stand alone control unit (19" rack) connects to all standard PC's with 1 free serial port
- Driver software for Excellon, Sieb & Meyer or HP/GL data.
- All machine parameters software controlled and configurable
- IsoCam Isolation Routing software. A sophisticated software package which along with its many editing facilities enables Gerber files to be manipulated to a suitable format for 'Isolation Routing'. A Windows Black Box must be used with this software.
- Windows Black Box enables routing to be performed 'real time' in a Windows environment.
- Step definition: 1 mil (=0.0254 mm), precision +/- 1 step
- Maximum speed per axis: 93 mm/s (=5.6 m/min) Drill speed: 5 hits/s (=18000 holes per hour)
- Power supply: 220-240 V, 50 Hz, approx. 250 VA.
- Required desktop size: approx. 120 x 80 cm 2 Weight: approx. 32 kg

Other accessories quoted

Compressor

This is required to enable the automatic chuck to open and close when tools are selected.

CCD Serial Black Box and Route Pro 2000

Enables drilling and routing to be performed real time in Windows.

Floor Standing Enclosure

A self-contained floor standing enclosure featuring a hinged transparent lid covering a work platform for the CNC. Below is a storage area for items such as the controller and supplied vacuum swarf removal unit.

CNC Bits and board materials

50 assorted drill bits are supplied all with 3.175mm shank for use with the CNC machine.

20 x 30° fine Isolation routing Bits

20 x 60° Isolation routing

10 x assorted general routing bits

30 x 18 Micron D/S FR4 boards 12" x 18"

30 x 1.5mm Aluminium Drill Exit boards 12" x 18"

30 x 0.8mm Drill Entry Boards 12" x 18"

We reserve the right to amend specification without notice.



MEGA ELECTRONICS LIMITED.,

Mega House, Grip Industrial Estate, Linton, Cambridge, CB1 6NR

Telephone: +44 (0) 1223 893900 Fax: +44 (0) 1223 893894 email: sales@megaug.com web: www.megaug.com