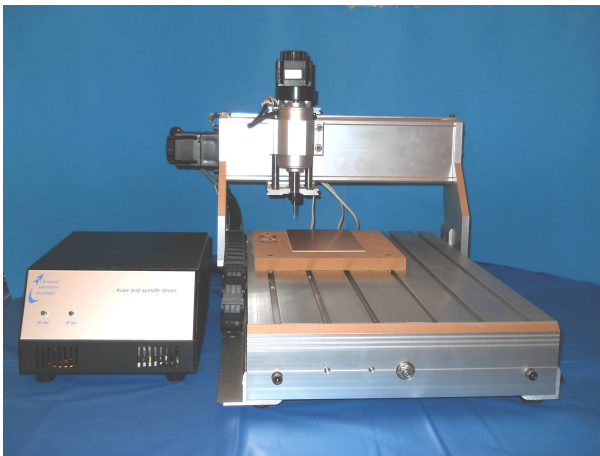


StepTwo

StepTwo is a milling/drilling CNC machine specially oriented, but not only, to PCBs production, one or bi-layer, through hole or surface mount. StepTwo is a “desktop” machine. The chassis (not shown on the picture) with his safety operated door protects the operator while reducing working noise.

Milling technique avoids the use of acids with their danger of “under/over corrosion” of copper: Tracks have constant and well defined section.



StepTwo is the “entry level” in the field of rapid prototyping of PCBs and in small batches productions.

StepTwo is equipped with all necessary to produce PCBs simply and fast: it comes with even the tools to mill PCBs.

All the process, from design/schematic to PCB requires from minutes to a few hours (design complexity dependent!).

The chance to develop in house prototypes allows:

- making corrections and verifications of the design within a few minutes!
- avoiding interactions with external suppliers and related not negligible time and costs.
- keeping in-house reserved designs.

StepTwo consists in the whole mechanics, chuck, control unit, motors, drives and software required to mill copper and create wires and holes into the PCB. Software has context helps and is very user friendly.

Axes are driven by powerful step motors and motion is transmitted through recirculating ball screws with no play. Rails are linear recirculating ball bearings, robust and reliable.

Working speed is calculated by a control circuit DSP based and is constant on the profile to improve performances and to optimize milling. In this way even the tool life is improved.

The chuck is robust and reliable: rotation speed is 11000RPM. Tool change is manual: tool shank diameter is 3.175mm. The motor is balanced and his steel rectified crankshaft is mounted on ball bearings.

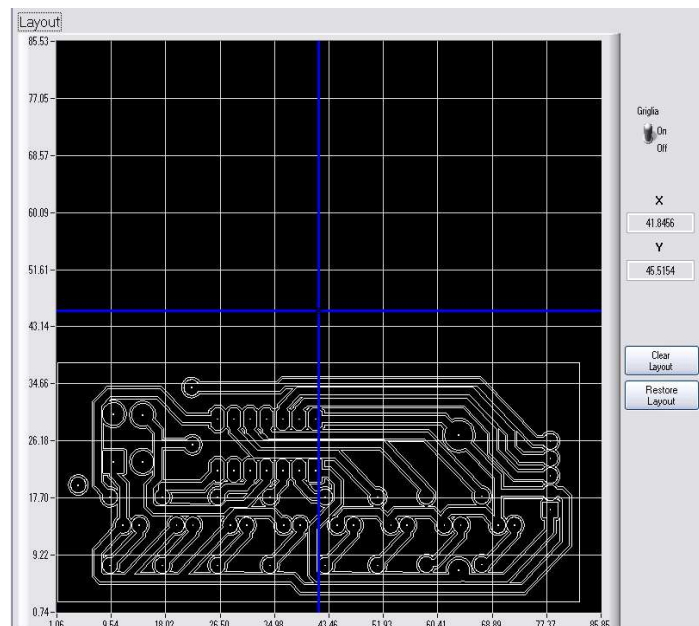
The motion software runs on a PC Windows® standard, through the parallel port.

Technical specifications

Power supply	230V/50-60Hz/350W
External dimensions	h 405mm; d 620mm; w 650mm
Weight	40 Kg
XY working area	390mmx290mm
Z working area	55mm
XY loading area	430mmx300mm
XY resolution	2.5 micron
Z resolution	2.5 micron
Rapid speed	> 20mm/s
Chuck power	230W
Tool shank	3.175mm
Rotation speed	11000RPM

StepTwo "light" software allows to elaborate PCBs with XY areas up to 100mmx80mm and to convert Gerber and DXF files up to 3000 lines. An "extended" version of SW eliminates limitations on XY working area, increasing it up to 390mmx290mm (effective mechanical area).

StepTwo has mechanical parts in motion: his use is reserved to skilled people!
AAC Srl predisposes training courses and trains people in-house on StepTwo use.



With the purpose of a continuous improvement in the performance, reliability, or manufacturability process of his products, AAC Srl reserves the right to change specifications at any time and without notice.

File: StepTwo_0.1_en.doc
Rev. 0.0