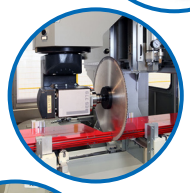
INT MACHINERY INC.



CNC Profile Machining Center MECAL GEOS-5

The Mecal "Geos" CNC machining centre is a 5 axis CNC and features a 12 kW electro-spindle, 18 tools magazine and automatic clamp positioning system. The "Geos" has been designed for the heavy duty work on long aluminum, light alloys extrusions and light gage steel. It is the perfect solution for the production of big size curtain walls and other complex aluminum extrusion processing.

Two machining zones can be used independently (pendular mode) so that loading/unloading times are masked and machining length is used efficiently.

GENERAL

Mecal Geos-5 is a gantry type vertical spindle 5 axis aluminum CNC machining centre. The machine can work with extruded aluminum, light alloy and light steel materials. It has a 10 kW, 24000 rpm electro-spindle with HSK-F63 tool holder system. Main rotary tool magazine has 18 slots. A separate blade holder for the main 500mm saw blade is located at the back of the gantry.

CNC unit allows linear and circular interpolation on 3 axes. A and C axes are the spindle rotation axes. A axis is the spindle tilt and range ±120°. C axis is spindle rotation around Z-axis within ±220°.

Using a drill, milling bit or a tap, it is possible to work on 5 sides of the profile. Machine can perform end-milling operations by using milling cutter and compound miter cuts by using a saw blade.

The machine can work in two independent zones (pendular mode) that allows the operator to load and unload workpieces safely while the machine is still processing in the other zone.

The 2 pneumatically operated reference stops are standard and located on each end of the machine. Intermediate reference stops are available as a pair in order to have 4 zones for machining 4 parts in the same cycle or 2 pairs in pendulum mode.

CLAMPING

The Geos 5 axis aluminum CNC machine can be equipped with self motorized (MMI) or self motorized cut-and-separate (MDT) clamps. Both type of clamps are capable to go to calculated positions independently, simultaneously and rapidly. The clamps can change position during the cycle (MAM). This may be necessary in for machining dense parts. The MAM feature is OPTIONAL on the "Geos MMI", while is standard on the "Geos MDT".

PROGRAMMING

Programming both with Mecal ISO programming language or Mecal CAD3D graphic CAD/CAM software are standard. Optional STEP/IGES driver CADLink is available for companies prefer to work with a third party 3D design software. For more demanding industrial applications, Geos 5 axis CNC aluminum machining centre can be equipped with Mitsubishi CNC controller that allows all standard ISO functions.