HELEX

PRECISION BY DESIGN

CNC MACHINING CENTRES

# CNC Nesting Machining Centre

Nesting · Panel furniture · Automatic tool change

Nesting centre for furniture panels up to 2100 x 2800 mm, with a 9 kW spindle and automatic tool change from a 12-position linear magazine.

## MODEL HE 2100 C

| | | | |
|---|---|---|---|
| **2100 x 2800** mm | **9** kW | **24000** rpm | **12** |
| WORKING AREA | SPINDLE POWER | SPINDLE SPEED | TOOL POSITIONS |



## / Application & Use

The HELEX HE 2100 C is a gantry CNC machining centre for panel furniture produced by nesting. The board is laid on the vacuum table and a single nesting programme covers outline cutting, grooves, dowel and hinge holes, pockets and shaped parts. The working area of 2100 x 2800 mm takes standard and oversize boards up to 50 mm thick.

The air-cooled 9 kW spindle runs at up to 24000 rpm with ISO30 tool holders. Tools are changed automatically from a 12-position linear magazine that travels with the gantry, and an automatic sensor measures the tool length after each change. The vacuum table is divided into 7 individually switched zones and is served by an 11 kW water-ring pump; pop-up pins reference the panel and a press roller keeps it flat.

The X and Y axes run on helical racks and linear guides, the Z axis on a ball screw, with servo drives and planetary reducers on all axes. Rapid travel is 70 / 70 / 20 m/min and repeatability ±0.05 mm. The machine is supplied with a 5.5 kW dust collector, a mobile control console with hand-wheel and licensed nesting software. A drilling unit is available as an option.

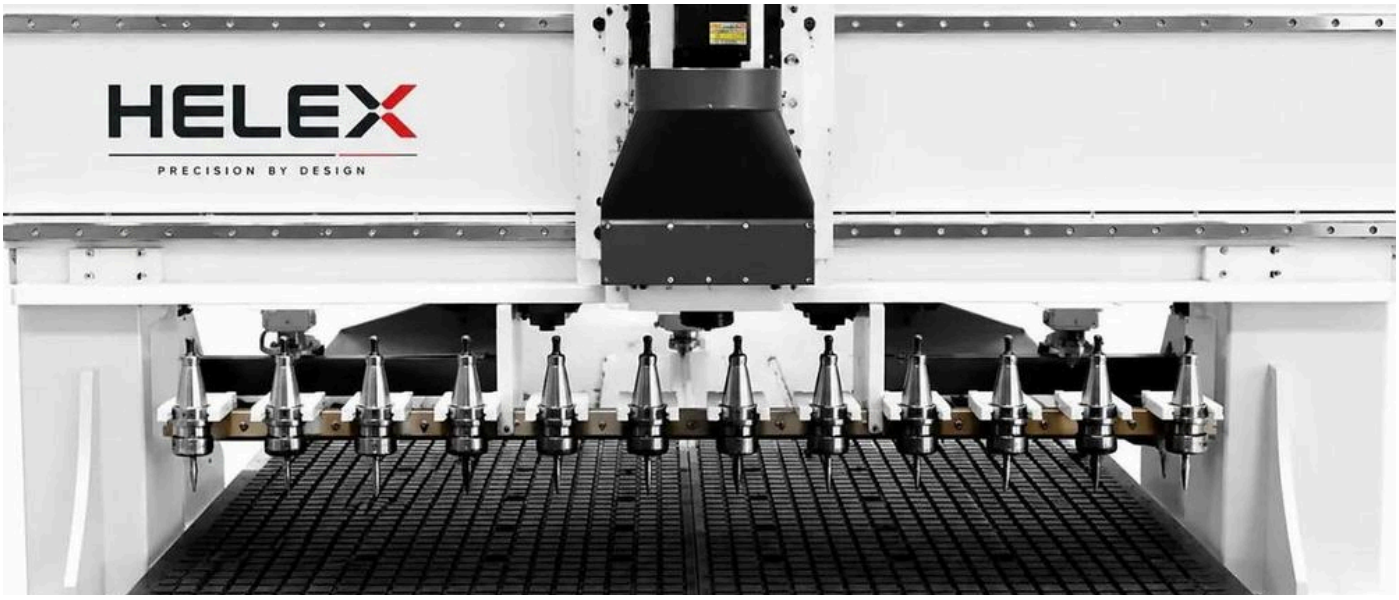
## / Applications & Machining Operations

APPLICATIONS

- Panel furniture produced by nesting
- Standard and oversize boards
- Boards up to 50 mm thick

MACHINING OPERATIONS

- Outline cutting
- Grooves
- Dowel and hinge holes
- Pockets
- Shaped parts




Gantry of the HELEX HE 2100 C with the 12-position linear tool magazine

# / Structure and Configuration

Gantry machining centre with 3 CNC axes:

1. **Gantry and axes**
   X and Y on helical racks and linear guides, Z on ball screw; servo motors and planetary reducers on all axes.
2. **Spindle**
   9 kW, air-cooled, up to 24000 rpm, ISO30 tool holders.
3. **Tool magazine**
   Linear, 12 positions, travelling with the gantry; automatic tool change.
4. **Tool length sensor**
   Measures the tool length after each change.
5. **Vacuum table**
   7 individually switched zones; 11 kW water-ring pump.
6. **Panel positioning**
   Pop-up pins reference the panel; a press roller keeps it flat.
7. **Control and software**
   Industrial CNC control on a mobile console with hand-wheel; licensed nesting software, English version, lifetime licence.
8. **Dust extraction**
   5.5 kW dust collector, double bag, with hood and piping, included.
9. **Drilling unit (optional)**
   Available as an option.



ISO30 tool holders in the linear magazine above the vacuum table




Operator console of the HELEX HE 2100 C with screen, keyboard and hand-wheel

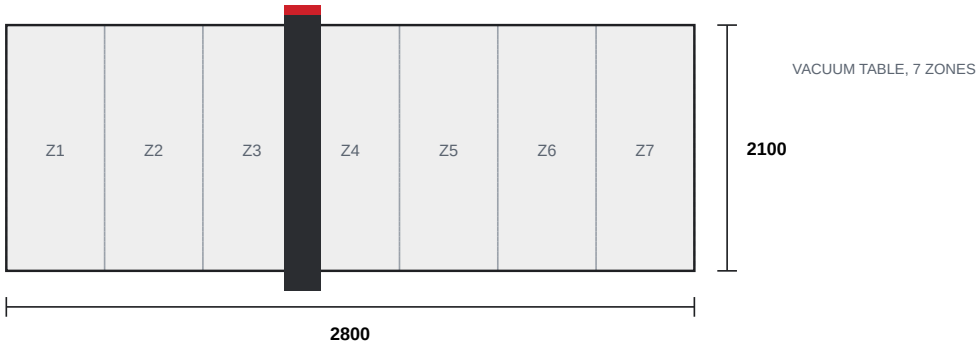
# / Technical Data

| Specification | HE 2100 C |
|---|---|
| Model | **HE 2100 C** |
| Working area | **2100 x 2800 mm** |
| Maximum workpiece thickness | **50 mm** |
| CNC axis configuration | **3 axes** |
| Worktable and workpiece clamping | **vacuum table, 7 zones; pop-up pins, press roller** |
| Main spindle power | **9 kW** |
| Main spindle speed | **24000 rpm** |
| Main spindle cooling | **air-cooled** |
| Tool interface | **ISO30** |
| Tool change | **automatic** |
| Tool magazine | **linear, 12 positions** |
| Drilling unit | **optional** |
| Vacuum pump | **11 kW, water ring** |
| Rapid traverse speed X / Y / Z | **70 / 70 / 20 m/min** |
| Machining feed rate | **0–20 m/min** |
| Positioning repeatability | **±0.05 mm** |
| Axis transmission X / Y / Z | **helical rack / helical rack / ball screw** |
| CNC control system | **industrial CNC control on mobile console with hand-wheel** |
| Software | **licensed nesting software, English version, lifetime licence** |
| Dust extraction | **dust collector included: 5.5 kW, double bag, with hood and piping** |
| Electrical supply | **380 V / 3 ph / 50 Hz** |
| Compressed air requirements | **min. 6.5 kgf/cm²** |

Data according to the technical documentation of the machine. The supplied configuration and the installation requirements are specified in the quotation. Technical changes reserved.

# / Working Area

PLAN VIEW — WORKING AREA




Working area in mm. Schematic drawing, not to scale.

**SUPPLIER**

PROMACH LTD
Str. Kolednitsa 2, et. 1
7002 Ruse, Bulgaria
VAT BG208556296

**CONTACT**

www.promach-machinery.com
contact@promach-machinery.com
BG +359 87 6832151
RO +40 755 023 024