

## COMAGRAV ECO

### CNC router

### Product information



COMAGRAV ECO is 3D CNC router for cutting and milling operations.

It is designed to cut plastic, aluminum, acrylic, wood, composite panels, MDF, plywood and similar materials.

Thanks to ideal working size 1500 x 2500 mm, professional 2 kW spindle, vacuum worktable, comfort of Windows operation and camera capability makes COMAGRAV ECO perfect first unit for signmakers.

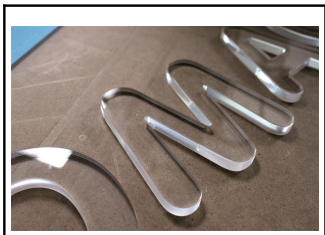

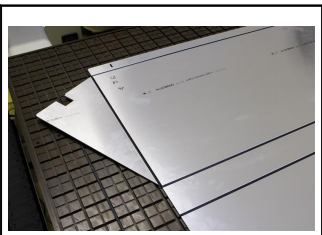

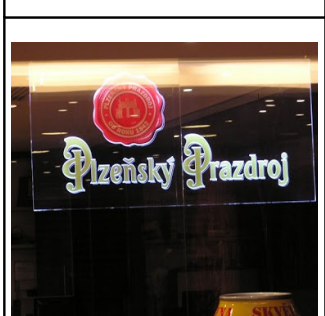
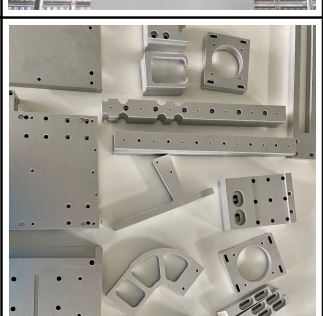
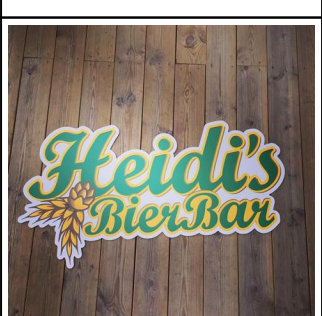
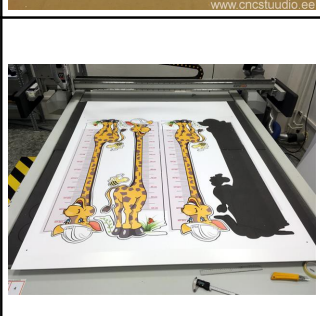
Powerful vacuum worktable is determined for nesting operations.

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COMAGRAV ECO is a great CNC router for  
plastic fabrication - signmakers - aluminium processing - woodworking - composites

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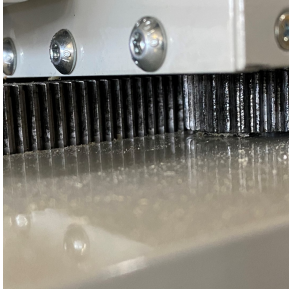
## Materials processed by COMAGRAV ECO

			
Acrylic	Aluminium	Di-bond	PVC
			
MDF	Plywood	Wood	Foam

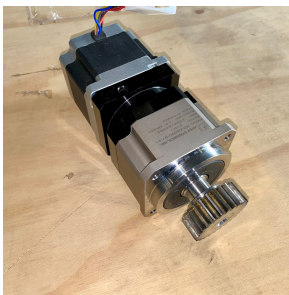
## Mechanical design

The design of machine is characterized by **prefabricated steel** with crossbars. The structure is very smart - it secures less vibration and consumes less material - and is therefore **environmentally friendly**.

COMAGRAV ECO is driven by stepping motors in microstep mode.



For correct motion control are installed racks and pinions.



To ensure accuracy and smooth diagonal movement you will find **planetary gearboxes** in X and Y axis - which is not usual in this price range.



Naturally as every other COMAGRAV machine, there are installed **linear guides with ball bearings** for the best positioning accuracy and quality of the cutting edge



You can choose from **two solutions of the worktable**.

**T-slot** aluminium worktable for manual fixing

The work table is made of precise aluminum profiles and allows clamping into T-slots.



High pressure **vacuum** worktable for automatic fixing

Solid worktable made of phenolic resin together with powerful Becker pump (2,4kW) is perfect and well-proven solution.





For cutting the CNC router is equipped with **professional spindle**. 2kW power is well balanced with machine design and power of vacuum. Maximum speed is 24000 RPM, thanks to double ceramic bearings, hardened shaft, balancing and forced cooling, the spindle can run in such speed for the full shift.



For measuring of tool length. The automatic Z sensor is standard for COMAGRAV ECO.



The machine is equipped with safety elements for emergency stop of the machine.

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### Standard equipment

- 3 axis machine with controller
- Working size 1500x2500mm
- 3D control system PILOT for Windows (hardware + software)
- Two types of worktable
  - Vacuum with high pressure pump (2,4 kW Becker with footswitch)
  - T-slot
- Professional electrospindle with an output of 2 kW, 5.000- 24.000 RPM, frequency inverter
- 6mm collet (ER20), wrenches for tightening
- Z sensor for automatic tool length measuring
- High-speed interface for communication with PC via TCP/IP
- Vectric Cut2D PRO engraving and milling software

### Options

- Control panel with DELL PC and Windows 10 IoT Enterprise
- Camera system
- Dust collector
- Spray cooling system (for aluminium)

## Parameters


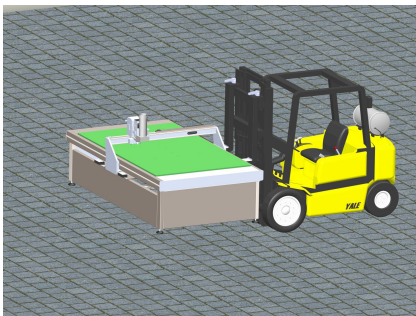
	COMAGRAV ECO
Working size	1500 x 2500 mm
Z axis	130 mm movement 110 mm space under the gantry
Frame	Prefabricated steel structure with crossbars
Drivers	Stepper motors (microstep) in all axes, rack and pinion + planetary gearboxes for XY. Ballscrew for the Z axis.
Z sensor	Automatic Z sensor
Working table	High pressure vacuum (phenolic resin) or T-slot (aluminium)
Vacuum pump	Becker 2.4 kW high pressure Volume 67 m <sup>3</sup> /h Max. pressure 100 mbar abs. With protection motor switch, footswitch, hose.
Spindle	COMAGRAV professional spindle Three phase spindle, hardened balanced shaft, ceramic bearings. Balanced nuts, ER20. Power 2 kW, 1.000-24.000 RPM, freq. inverter, adjustable RPM. Forced air cooling
Tool change	Manual, ER20 collets (1,0 mm - 13,0 mm)
Weight	550 kg (vacuum version) 400 kg (T-slot)
Control software	PILOT
OS	Windows 7/8/10
	OPTIONS
Camera system	HD camera compatible with RIP softwares
Cooling	Spray cooling system with adjustable hose (for aluminium)
Dust collector	Dust collector with 125 mm hose Power 1.1 kW 1560 m <sup>3</sup> /h.
Control PC	DELL Corei3
Control panel	Standalone operator panel for computer and LCD with ON/OFF, E-stop buttons

## Dimensions and weights

Technické parametry / Technische Parameter / Parámetros técnicos / Technical parameters/ Технические характеристики															
Typ	Pracovní plocha Šířka x Hloubka [mm]	Šířka [mm]	Hloubka [mm]	Výška [mm]	Osa Z [mm]	Světlost pod portálem [mm]	Hmotnost [kg]	Rozlišení [mm]	Nejvyšší rychlost obrábění [mm/s]	Nejvyšší rychlost rychloposuvu [mm/s]	Včetně: viz výrobní štítek [kW/RPM]	Max.výkon [kW]	Tlak vzduchu [bar]	Napájení	Příkon [kW]
Typ	Arbeitsfläche [mm]	Breite [mm]	Länge [mm]	Höhe [mm]	Z-Achse [mm]	Lichte Weite unter dem Portal [mm]	Gewicht [kg]	Auflösung [mm]	Maximale Fräsgeschwindig- keit [mm/s]	Maximale Vorschubgeschw- indigkeit [mm/s]	Spindel: siehe Typschild [kW/ RPM]	Max.Leistung [kW]	Druckluft [bar]	Stromversorgun- g	Strombedarf [kW]
Modelo	Superficie de trabajo [mm]	Larghezza [mm]	Lunghezza [mm]	Altezza [mm]	Eje Z [mm]	Luz de paso bajo el portal [mm]	Peso [kg]	Resolución [mm]	Velocidad máxima de fresado [mm/s]	Velocidad máxima de desplazamiento [mm/s]	Motor de corte: ver etiqueta [kW/RPM]	Potencia [kW]	Presión del aire comprimido [bar]	Alimentación	Vatíaje [kW]
Type	Working area [mm]	Width [mm]	Length [mm]	Height [mm]	Z axis [mm]	Clearance under gantry [mm]	Weight [kg]	Resolution [mm]	Maximum milling speed [mm/s]	Maximum moving speed [mm/s]	Spindle: See label [kW/RPM]	Max.power [kW]	Compressed air pressure [bar]	Supply	Power requirement [kW]
Тип	Рабочая зона Ширина x Глубина [мм]	Ширина [мм]	глубина [мм]	Высота [мм]	Ось Z [мм]	Дорожный просвет под портала [мм]	Вес [кг]	Разрешение [мм]	Максимальная скорость обработки [мм / с]	Максимальная скорость быстрого [мм / с]	Стебель: см этикетку продукта [кВт / RPM]	Максимальная мощность [кВт]	Давление воздуха [бар]	мощность	Потребляемая мощность [кВт]
Eco 1525	1500 x 2500	A: 1850 B: 1630	A: 3050 B: 3050	A: 1450 B: 800	130	110	A: 550 B: 400	0,0068720	100	100	MAN 0,73/24000 MAN 2/24000	2	6	3 x 400VAC/50Hz	1,2 kW + spindle power

A: Základní stroj / Machine in basic configuration  
B: Velikost stolu bez portálu (Pro transport) / Table size without gantry (For transport)

## Manipulation

	
with a crane	with a forklift or pallet truck

## PILOT control system and software compatibility

PILOT is compatible with HP-GL and G-code. It is possible to load data from CAM and graphics programs.

PILOT supports work with RIP programs. Expect support for Caldera, Onyx, Colorgate, Flexi, etc.

To install PILOT software, connect PC with MS Windows 7 or higher.

