

Enter  
the **High**  
**Technology**  
Era



## Charlyrobot

### Mini - CNC Lathe Charly4T

### The strenghts

- ISO programming, the standard in industry.
- Allows the main turning operations (trimming, turning grooving, boring, drilling, threading, tapping, elaborated profil follow up).
- Continuous variable spindle speed allowing constant cutting speed.
- Machining at constant feedrate capability.
- 4 tools automatic turret (optional).
- 4 positions tool-sensor for automatic tool measure.
- Reversing of the spindle rotation direction through software.
- Design and ergonomics.
- Compact dimensions.
- Graphical and automatic programming through CAD / CAM software.
- Easy of use and simple implementation for prototyping and small series.
- Turning of soft materials and soft metals (brass, aluminum, ...).
- Quality and industrial performance of Charlyrobot's machines.
- Complies with the European Machinery Directive 98/37/EC and adapted to the future Machinery Directive 2006/42/EC (mandatory from 29/12/2009).

### The simplicity for turning prototypes and small series, the performance of technology.

With its expertise in CNC machines and the wish to answer a need oftently expressed by ist customers, Charlyrobot, innovates and propose charly4T, his Mini CN Lathe, with no equivalence on the market.



Gamme CRL1015/1215



Gamme charlyPRO



Fraiseuses compactes



Logiciels CFAO 3D

CHARLY  robot  
MECANUMERIC Group

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# mini - CNC Lathe charly4T

## Electronics

- Numerical control : Charlyrobot CNR3 V4 3 axis (X, Z and automatic turret).
- Architecture : motherboard + CPU board + drivers for axis + extension board
- Logical testing and control through FPGA and DSP at 150 MHz
- Communication: Ethernet port at 100 Mbits.
- Power: 230V single phase.
- Installed power : 1.5 kW max, depending on version.

## Drive

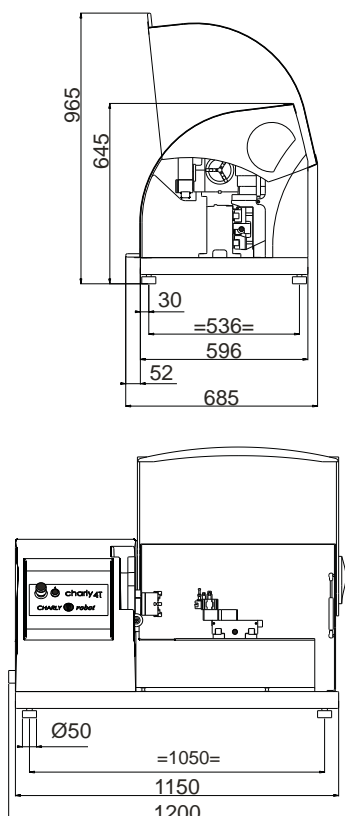
- Stepper motors for X and Z.
- Stepper Motor for automatic turret.
- Ballscrew diameter 16 mm with steps of 5 mm on X and Z, with seals and greasers on ballscrew bushings.
- Guiding by prismatic steel rails with ball recirculation shoe, equipped with seals and greasers.
- AC servo BRUSHLESS spindle motor with continuously variable speed and reversing of the spindle rotation direction controlled by NC.

## Accessories (upon order)

- 1 HSS left tool to turn , trim and profile following up (delivered in standard).
- 1 HSS tool to cut up (delivered in standard).
- HSS right tool to turn, trim and profile following (optional).
- Mandrel holder for drilling tools (optional).
- Centering drill (optional).
- Rotating tail-stock CM2 (optional).
- Threading tool (optional).
- Boring tool (optional).

## Ergonomics and Security

- Complies with the European Machinery Directive 98/37/EC and adapted to the future Directive 2006/42/EC (mandatory from 29/12/09).
- Emergency stop, « punch button » type
- Detection of cover opening.
- Electromagnetic cover locking.
- Transparent hood also improving sound insulation.
- Rocking door access



	charly 4T Standard	charly 4T Pack Pro
<b>FEATURES</b>		
Distance between points	250 mm	250 mm
Distance between points with 80mm Ø mandrel	250 mm	250 mm
Maximum diameter of turnable part on 50 mm	Ø 100 mm	Ø 100 mm
Maximum diameter of turnable part on the entire length	Ø 100 mm	Ø 100 mm
3 jaws chuck diameter	Ø 80 mm	Ø 125 mm
Spindle cones	Mk3	Mk3
Range of spindle speed	0 bis 1500 rpm	0 bis 1500 rpm
	0.4 kW	0.75 kW
Spindle torque	1.3 Nm / 4.8 Nm	2.4 Nm / 7.5 Nm
Stepper Motors	110 Ncm	110 Ncm
Resolution	0.006 mm	0.006 mm
Repeatability	+/- 0.05 mm	+/- 0.05 mm
Maximum travel speed on X and Z	2 m/min	2 m/min
Maximum motion strain on X and Z	1000 N	1000 N
Stroke X Axis	65 mm	65 mm
Stroke Z Axis	250 mm	250 mm
Tool holding turret	2 Positions	4 Positions
Indexing of the turret tool holder	manuel	automatic
Mobile Headstock for CH2 cones	Option	Standard
Length	1200 mm	1200 mm
Depth	685 mm	685 mm
Height / Height with Open Cover	645mm / 945 mm	645mm / 945 mm
Weight	100 kg approx.	110 kg approx.