

# WRa300 - WRa500



## DESKTOP ROBOT



**WRa** family of cartesian robots, with three and four interpolated axes, combines flexibility, user-friendly programming technology and high precision of the operations.

The mechanical part consists of screw axes with linear and rugged ball bearing guides and the self-bearing structure is made of aluminium profiles.

**WRa** is controlled by a groundbreaking motion control system called **ALPHA**, already installed on all robots. The user-friendly graphic interface, the possibility to import files in .dxf, Gerber or Excel format and **SUB-PROGRAMS** allow you to fulfil extremely complex operations, very quickly.

**WRa** Cartesian robots is the ultimate expression of technology applied in the most diverse production contexts.

### applications



Conformal Coating



Dispensing



Milling



Screwing



Handling

# OPTIONS AVAILABLE

## OPTICAL PROTECTION BARRIER

Health & Safety module pursuant to EC standards. The structure is made of anodized aluminium profiles and polycarbonate. The front opening is protected by optical barriers and safety relays with Class 4 rating.



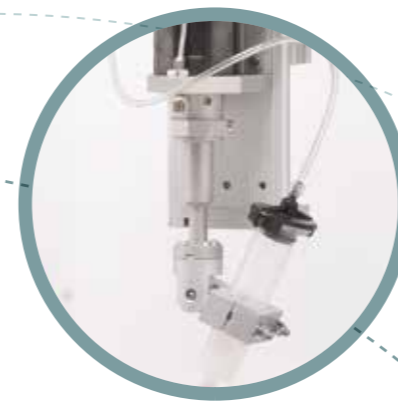
## MECHANICAL PROTECTION BARRIER

Health & Safety module pursuant to EC standards. The structure is made of anodized aluminium profiles and polycarbonate. The front opening is the "up and down" type with safety microswitch. It is ideal for processes that involve the risk of projections of small particles and emissions of smoke or vapour.



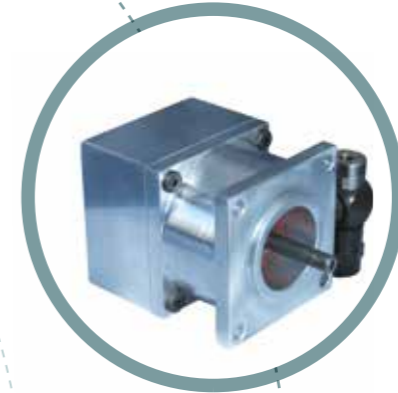
## ANALOGUE OUTPUT

New analogue output card is giving out a 0-10V analogue voltage signal in order to perfectly drive dispensing application like volumetric pumps. This allow to have a perfectly constant amount of dispensing material even if robot speed is variable, and to have high quality dispensing at high speed, with very low cycle time.



## 4TH AXIS WRIST KIT

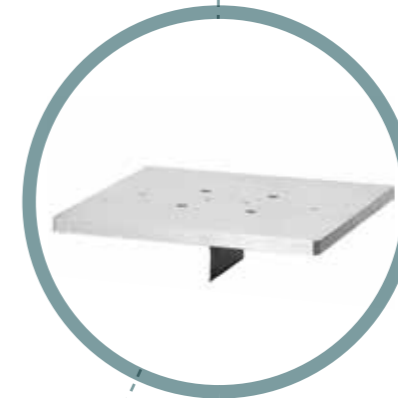
The wrist kit is used to vary the working angle of the tool on the robot's wrist. Thanks to this tool, it is possible to reach awkward processing points and to maintain a correct angle when dispensing rather viscous material. The wrist kit can be fitted on robots WRa300 and WRa500 of Alutec-Group. The system can work interpolated with the other three axes of the robot.



## AIR BRAKE

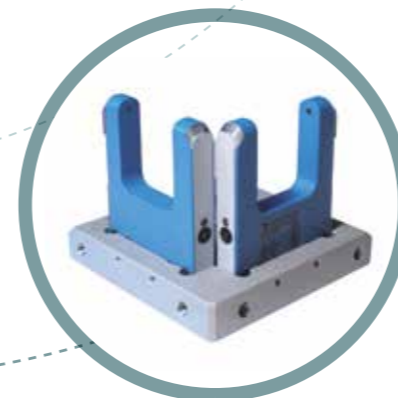
Pneumatic brake with "normally closed" air system to be applied on vertical movements to avoid emergency situations or absence of driving torque. It controls the air via 24V solenoid valve, which can be connected directly to the driver (of the ALPHA series) that moves the vertical axis:

- When the solenoid valve is ON, it provides air to the pneumatic brake, which releases the axis.
- When the solenoid valve is OFF, it cuts off the air from the pneumatic brake, which blocks the axis.



## WORK SURFACE

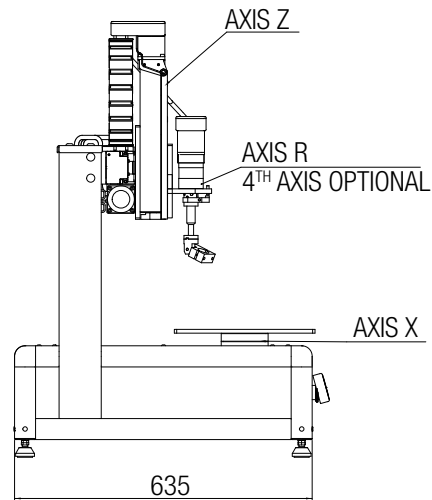
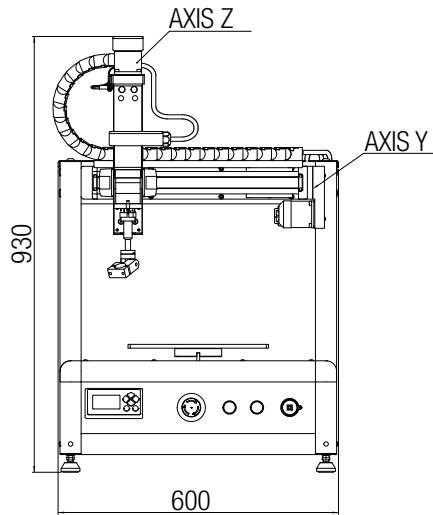
Aluminium work surface with reference pegs for robots of the WRa500 series. Suitable for securing work tools and equipment.  
Aluminium work surface with reference pegs for robots of the WRa300 series. Suitable for securing work tools and equipment.



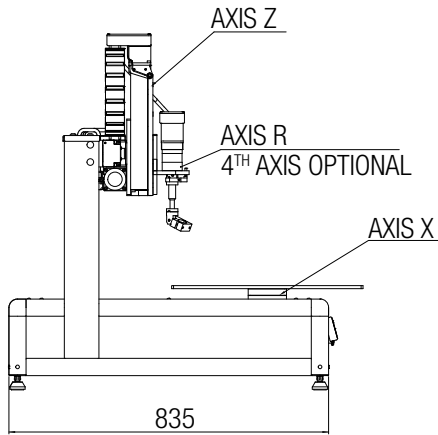
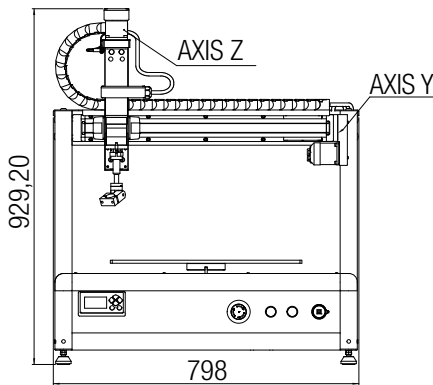
## CALIBRATION SYSTEM

Calibration system of X-Y with laser sensors for the ALPHA system. Connected to the inputs of the ALPHA system, it is able to automatically centre the program along axes X and Y in relation to the tool fitted. Using the ALPHA SW program, it is possible to set how to manage and use the calibration tool at your own pleasure. The system is devised for frequent and rapid tool changes.

## WRa300.



## WRa500.



## TECHNICAL DATA

	WRA300	WRA500
X/Y/Z {R} Work Area (mm)	300 / 300 / 145	500 / 500 / 145
Worktable Load / Tool {R}	10 kg. X / 5 kg.Y (3 kg.) R	
Max. Speed X,Y,Z	400 (mm/sec) MAX with Protection	
Repeatability	0.015 mm/axis	
Resolution	0.004 mm/axis	
Data Memory	100.000 Points / 255 programs	
Drive System	stepper motors	
Interpolation	point to point & continuous path	
Programming Method	Remote mode (self-learning) through PC software	
I/O Signals	16 input / 16 output	
External Interface	USB / RS232 / Analogue output optional	
Power Supply	100-240 VAC, 50/60 Hz 500 Watts	
Dimensions (WxDxH)mm	600x635x930	798x835x930
Weight	49 Kg	62 Kg

ALUTEC S.R.L. engages in research and product improvement new materials and design refinements can be introduced into existing products without notice