

EASY WELDING SOLUTIONS WITH CO-BOT

The DOBOT CR and CRA series consist of 13 different models with 7 varying payload capacities: 3 kg, 5 kg, 10 kg, 12 kg, 16 kg, and 20 kg, all offering repeatability between ± 0.02 mm and ± 0.04 mm. Thanks to their high repeatability, they ensure precision and quality in welding operations without the need for interruptions. They are designed to work in direct collaboration with humans (collaborative nature) and do not require additional safety modules or fencing, which reduces setup costs and allows for a more optimal use of space in production.

COMPONENTS OF THE UNIT CELL

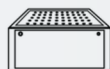
Robot



Welding machine



Welding table



Torch



Teach pendant



Robot protective suit

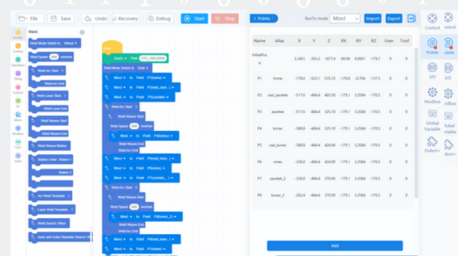


VERSATILE CONTROL OPTIONS

Dobot offers a variety of control options, allowing easy management via computer, tablet, mobile phone, or Teaching Pendant, providing maximum convenience and adaptability for various applications and work scenarios.

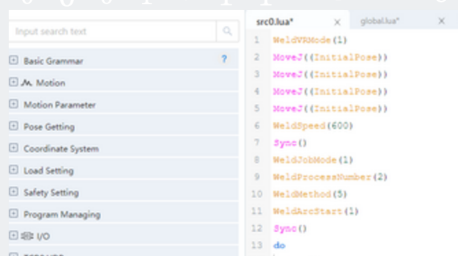


EASY WAYS TO PROGRAM AND CONTROL



Blockly Programming Language

A user-friendly and visually appealing programming method. Blockly does not require traditional text-based coding, making it ideal for beginners looking to learn the basics of programming.



LUA Programming Language

A lightweight and versatile programming language that allows for easy extension with custom libraries and modules. Developers can effortlessly add new functionalities and adapt the language to the specific needs of their applications.



Drag mode

This innovative method enables the physical guidance of the robot through desired motions. For intermediate and advanced users, graphical and advanced scripting languages are available.

CONNECTIVITY WITH OTC – WELBEE SERIES WELDING MACHINES

Digital communication between the Welbee welding machine series and the Dobot robot controller ensures reliable and synchronized data transfer between both devices. This communication enables complete management and configuration of welding processes and parameters on the welding machine via an easily connectable OTC welding plugin.

The screenshot shows the 'Welder Config' window with the 'Weld Params' tab selected. It includes settings for Weld Mode (Synergic), Arc Stop, Water Cooled Torch, Voltage (0V), and various time and current parameters like Arc Start Current (200 A), Arc Stop Current, Arc Start Voltage, Arc Stop Voltage, Arc Start Time (400 ms), Arc Stop Time (500 ms), Arc Current, Arc Voltage, Pre-flow Time (0.3 s), Post-flow Time (0.5 s), Weld Method (DC Wave...), Gas (100%CO₂), Material (Carbon St...), Wire Diameter (1.2), Wave Frequency (0.5 Hz), Arc Dynamic (0), Penetration, Weld Speed, Non Weld Speed, and Virtual Welding (OFF). A 'Save' button is at the bottom right.



PROCES

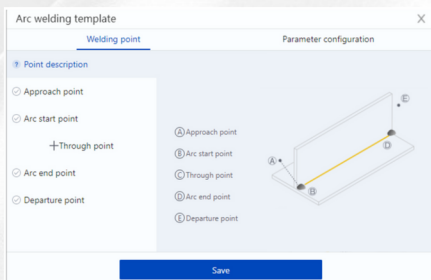
MIG/MAG

- DC
- DC PULSE
- DC WAVE PULSE
- DC LOW SPATTER
- AC PULSE (AC-MIG)
- AC WAVE PULSE (AC-MIG)

TYPES OF TORCH WEAVING

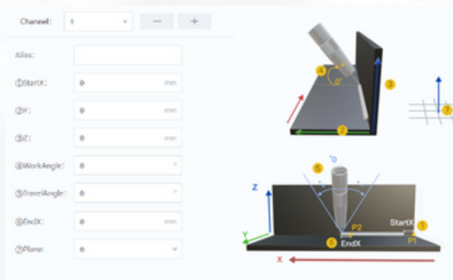
- Line
- Triangle
- Spiral
- Trapezoid
- Sine
- Crescent pendulum

Dobot's professional welding package enables easy integration of arc and laser welding, designed specifically for use with OTC Welbee welding machines. It offers a wide range of welding patterns, including triangles, spirals, trapezoids, sine waves and crescents, providing a flexible and reliable solution. This makes it an ideal choice for various welding processes in metalworking.



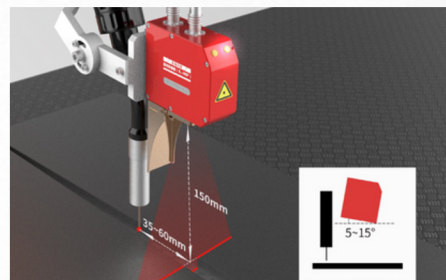
WELDING BY ARC TEMPLATE

The template displays a graphical representation of each point. Points can be selected from the current list and set as the robot's current position, or the robot can be manually moved to the chosen point.



MULTIPASS WELDING

The multi-pass welding function allows users to set the first pass and then establish an offset for each subsequent pass based on the first, significantly reducing programming time.



LASER POSITIONING AND TRACKING

This function scans the position of the weld seam on the workpiece using a laser sensor mounted at the end of the robot. It simultaneously enables real-time scanning and correction of the robot's path.

OTHER APPLICATIONS

Loading / Unloading



Assembly



Bin Picking



Insertion



Quality Inspection



Polishing



Palletizing



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