

Streamlined version

# METALSELF.COM

YOUR TRUSTED SUPPLIER



Innovation tailored for your  
industry

YOUR INNOVATIVE LINE OF COLLABORATIVE ROBOTS FOR WELDING AND AUTOMATION

[www.metalself.com](http://www.metalself.com)

# THE ADAPTABLE PARTNER FOR YOUR PRODUCTION

In the contemporary manufacturing landscape, sustaining elevated production rates necessitates prompt solutions. Metalsef's CI Series is engineered for adaptable manufacturing and intelligent industries, featuring models that encompass over 15 sectors, including automotive, 3C, metalworking, logistics, and packaging, along with more than 200 application scenarios.



# THE METALSELF ADVANTAGE: SECURITY AND SWIFT INTEGRATION



**Flexible and Swift Installation:** Due to their compact design, our cobots can be integrated into diverse production lines and deployed in approximately one hour, all while maintaining the continuity of existing line operations.

**Certification and Absolute Safety:** The system operates in close proximity to operators without the necessity for perimeter fencing, featuring collision detection sensors and five safety configurations that adhere to the EN ISO 13849-1:2008 PLd standard, along with CE and CNAS certifications.

**"Plug & Play" engineering:** We ensure complete compliance with European and American markets. The module is delivered to your workshop fully prepared for integration.

# ADVANCED PROGRAMMING, IMMEDIATE CONFIGURATION

**Complete Range (from 2 to 30 kg):** A collection of seven models designed to seamlessly adapt to any requirement, from micro-assemblies to the transportation of heavy loads.

**Multiple Programming Languages:** In addition to graphical programming through the Teaching Pendant and Handheld PAD, the system is accessible to developers by supporting LUA, C/C++, Python scripts, SDK libraries, and ROS systems.

**Intuitive Learning:** The Drag to Teach feature and automatic trajectory playback significantly reduce programming time, enabling even novice personnel to train the robot in a matter of minutes.

**Total Industrial Connectivity:**

Controller featuring 100Mbit TCP/IP interfaces, Modbus TCP, and RS-485 communication, along with an extensive integrated I/O panel comprising 16 digital inputs, 16 digital outputs, 4 analog inputs, Four analog outputs to interface with any PLC or line sensor.



# B2B INDUSTRIAL APPLICATIONS

**Automated Laser Welding:** Addresses the welder shortage by guaranteeing uniform, consistent joints across various shifts.

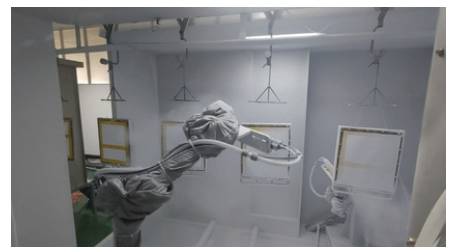
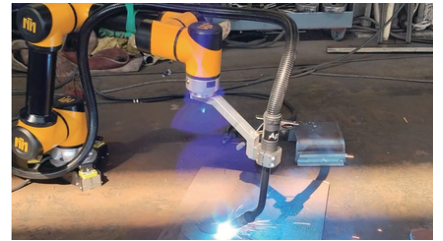
**CNC Machine Tending:** Automates the loading and unloading of metal or plastic components on numerically controlled machines, presses, and lathes.

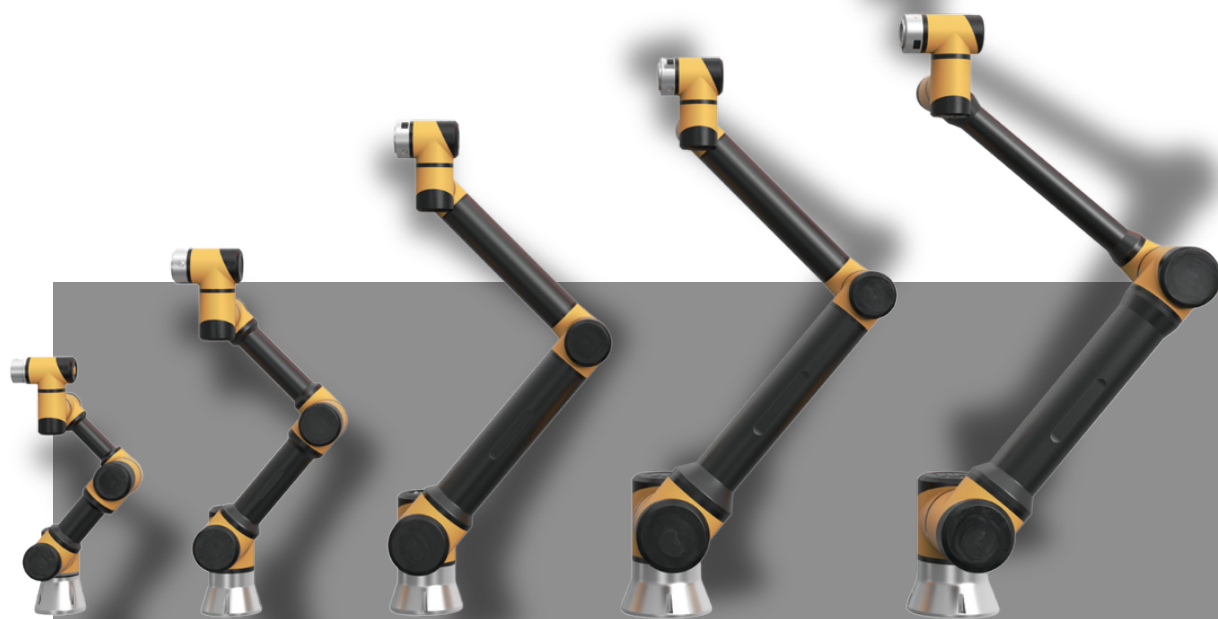
**Screwdriving and Visual Assembly:** Robotic systems designed for screw tightening and precision assembly in 3C (electronics) and automotive component production lines, enhanced by artificial vision technologies.

**Painting and Material Spraying:** Oversight of painting operations on workpieces, guaranteeing consistent coverage while minimizing operator exposure to hazardous fumes.

**Inspection and Quality:** Automated monitoring of electronic or mechanical products to ensure compliance at the end of the production line.

**Palletizing and Packaging:** The CI-20 and CI-30 models facilitate continuous 24/7 processes for packaging management, material transfer, and end-of-line box stacking.





|  | CI-03 | CI-05 | CI-10 | CI-16 | CI-20 |
|--|-------|-------|-------|-------|-------|
|--|-------|-------|-------|-------|-------|

|                  |             |             |            |             |             |
|------------------|-------------|-------------|------------|-------------|-------------|
| Raggio di lavoro | 600 mm      | 900 mm      | 1300       | 1000        | 1650        |
| Carico utile max | 3 kg        | 5 kg        | 10 kg      | 16 k        | 20 kg       |
| Precisione       | +/- 0.02 mm | +/- 0.02 mm | +/- 0.05mm | +/- 0.05 mm | +/- 0.05 mm |
| Peso braccio     | 13 kg       | 21 kg       | 38 kg      | 37 kg       | 63 kg       |

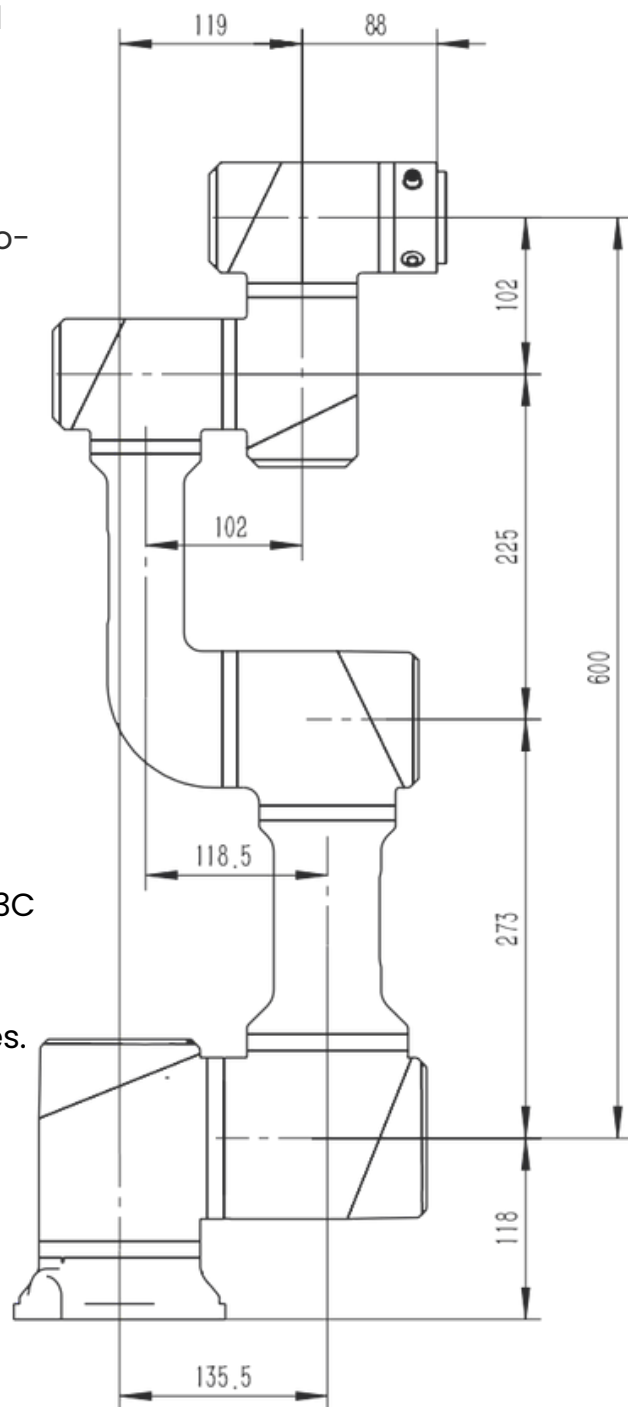
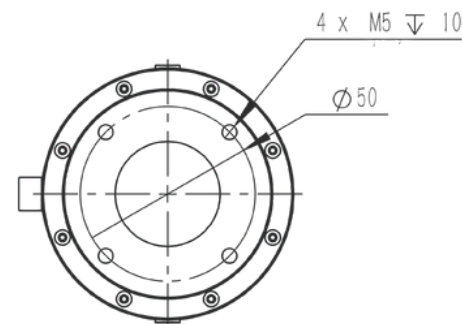
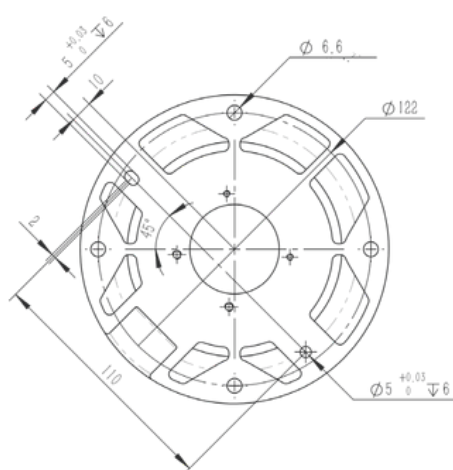
MetalSelf provides an extensive array of collaborative robots, meticulously engineered to seamlessly align with your unique requirements and diverse processes. With us, you will discover the perfect partner to facilitate optimal integration into your production.

# CI-03

## The Ultra-Compact for Micro-Precision Applications

The Metalself CI-03 module is meticulously engineered for industrial applications in confined spaces that demand precise accuracy. Merging a lightweight design with exceptional motion sensitivity, it serves as the optimal "Plug & Play" solution for micro-welding and the assembly of fragile components, functioning safely in close proximity to personnel.

- **Elective Industrial Applications:**
- Precision assembly and management
- Visual quality assessment of small components and 3C products.
- Welding of micro-components with precise tolerances.

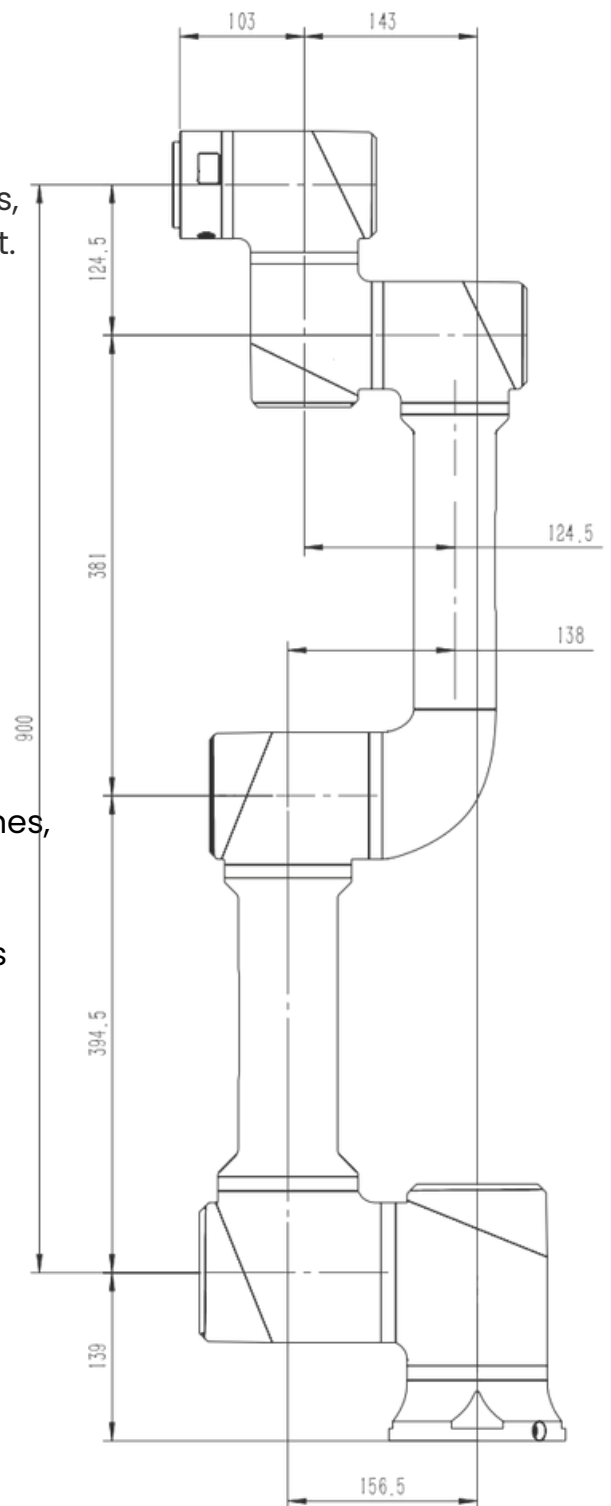
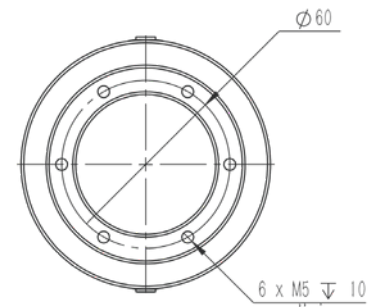
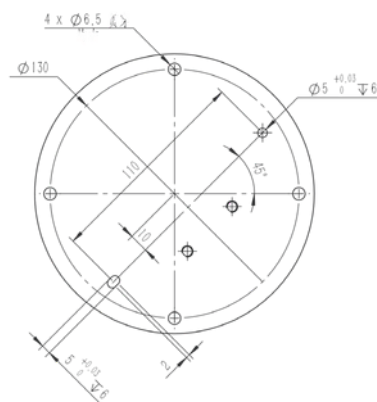


# CI-05

## Flexibility and Agility in Service Delivery

The Metalself CI-05 exemplifies the ideal equilibrium between compactness and dynamic functionality for contemporary workshops. Engineered to eliminate manual intervention in repetitive tasks, it ensures a swift return on investment. It integrates effortlessly with existing systems through TCP/IP and Modbus communication.

- **Elective Industrial Applications:**
- Servo control of numerically controlled (CNC) machines, presses, and finishing equipment.
- Automated application of paint and spray on casings and metal components.
- Accelerated welding of lightweight carpentry.



# CI-10

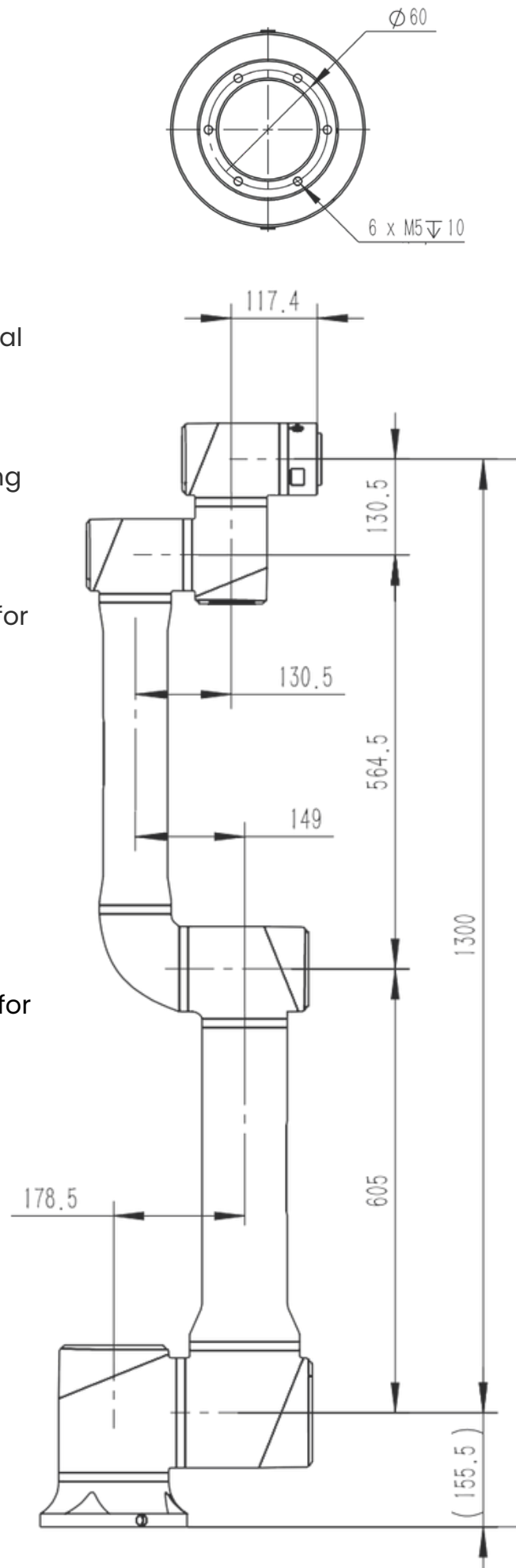
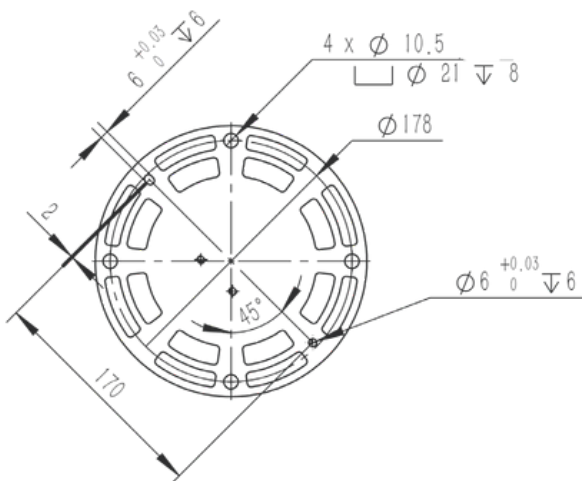
## The Revised Flexible Workshop Standard

Robust, versatile, and engineered to endure the most challenging industrial environments, the Metasef CI-10 serves as the flagship model of the series. It offers an optimal blend of strength and reach for scaling welding and part handling operations, establishing it as the perfect ally for metalworking enterprises. Like the entire series, the system is designed for "Plug & Play" functionality.

- **Elective Industrial Applications:**

High-penetration robotic welding (MIG/MAG, TIG, Laser) for medium to large production runs.

- Management and transfer of medium loads.
- Compact end-of-line packaging and palletization



## Maximum Power, Minimal Size





| Parametro Tecnico          | CI-03                        | CI-05                        | CI-10                        | CI-16                        | CI-20                        |
|----------------------------|------------------------------|------------------------------|------------------------------|------------------------------|------------------------------|
| Carico utile max (Payload) | 3 kg                         | 5 kg                         | 10 kg                        | 16 kg                        | 20 kg                        |
| Raggio di lavoro (Reach)   | 600 mm                       | 900 mm                       | 1300 mm                      | 1000 mm                      | 1650 mm                      |
| Precisione (Ripetibilità)  | ± 0.02 mm                    | ± 0.02 mm                    | ± 0.05 mm                    | ± 0.05 mm                    | ± 0.05 mm                    |
| Velocità massima           | 2 m/s                        | 2.5 m/s                      | 3 m/s                        | 2.5 m/s                      | 4 m/s                        |
| Peso braccio               | 13 kg                        | 21 kg                        | 38 kg                        | 37 kg                        | 63 kg                        |
| Gradi di Libertà           | 6 Assi (± 360°)              | 6 Assi (± 360°)              | 6 Assi (± 360°)              | 6 Assi (± 360°)              | 6 Assi (± 360°)              |
| Grado di protezione        | IP54                         | IP54                         | IP54                         | IP54                         | IP54                         |
| Alimentazione              | 100-240VAC<br>50/60Hz        | 100-240VAC<br>50/60Hz        | 100-240VAC<br>50/60Hz        | 100-240VAC<br>50/60Hz        | 100-240VAC<br>50/60Hz        |
| Potenza                    | 200W                         | 300W                         | 500W                         | 500W                         | Med 1200W -<br>Max 3000W     |
| Dimensioni Controller (mm) | 420x260x215.7                | 420x260x215.7                | 420x260x215.7                | 440x290x282.7                | 440x290x282.7                |
| Interfaccia I/O Controller | 16 DI/DO - 4<br>AI/AO        | 16 DI/DO - 4<br>AI/AO        | 16 DI/DO - 4<br>AI/AO        | 16 DI/DO - 4<br>AI/AO        | 16 DI/DO - 4<br>AI/AO        |
| Sicurezza e Certificazione | CE / EN<br>ISO13849-1<br>PLd | CE / EN<br>ISO13849-1<br>PLd | CE / EN<br>ISO13849-1<br>PLd | CE / EN<br>ISO13849-1<br>PLd | CE / EN<br>ISO13849-1<br>PLd |

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Together, let us  
cultivate innovation!