

Expanding  
Possibility



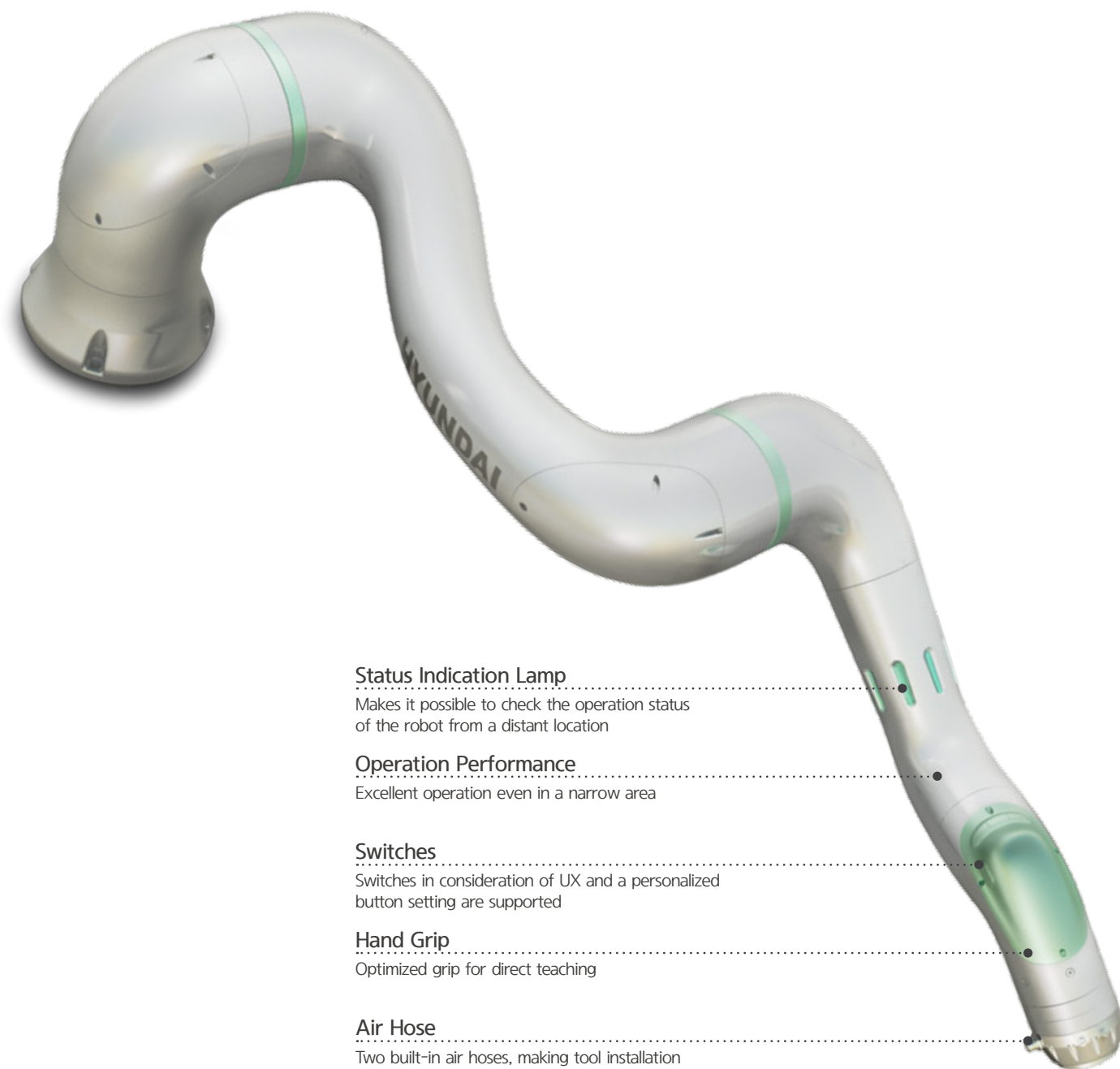
reddot award 2019  
best of the best

# Collaborative Robot

Human-Friendly  
Collaborative Robot



 **HYUNDAI**  
ROBOTICS



#### Status Indication Lamp

Makes it possible to check the operation status of the robot from a distant location

#### Operation Performance

Excellent operation even in a narrow area

#### Switches

Switches in consideration of UX and a personalized button setting are supported

#### Hand Grip

Optimized grip for direct teaching

#### Air Hose

Two built-in air hoses, making tool installation more convenient

12

kg

Payload

1,305

mm

Max. Reach

43

kg

Weight

# Specifications of the Collaborative Robot



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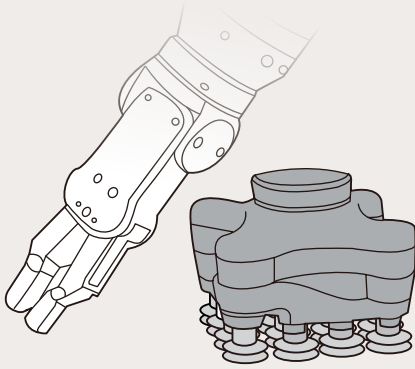


| Model                               |      | YL005                          | YL012                          | YL015                          |
|-------------------------------------|------|--------------------------------|--------------------------------|--------------------------------|
| Payload                             | kg   | 5                              | 12                             | 15                             |
| Operation Radius                    | mm   | 916                            | 1,305                          | 963                            |
| Degree of Freedom                   | Axes | 6                              | 6                              | 6                              |
| Installation Method                 |      | Anywhere(Floor, Ceiling, Wall) | Anywhere(Floor, Ceiling, Wall) | Anywhere(Floor, Ceiling, Wall) |
| Max. Operation Range                | S    | ±180                           | ±180                           | ±180                           |
|                                     | H    | +270 ~ -90                     | +270 ~ -90                     | +270 ~ -90                     |
|                                     | V    | ±180                           | ±180                           | ±180                           |
|                                     | R2   | ±180                           | ±180                           | ±180                           |
|                                     | B    | ±180                           | ±180                           | ±180                           |
| Maximum Speed                       | R1   | ±180                           | ±180                           | ±180                           |
|                                     | S    | 180                            | 180                            | 180                            |
|                                     | H    | 180                            | 125                            | 125                            |
|                                     | V    | 180                            | 180                            | 180                            |
|                                     | R2   | 180                            | 180                            | 180                            |
| Allowable Torque for the Wrist Axis | B    | 180                            | 180                            | 180                            |
|                                     | R1   | 180                            | 180                            | 180                            |
|                                     | R2   | 4.9                            | 5.0                            | 5.0                            |
| Degree of Repeatability             | B    | 2.7                            | 5.6                            | 5.6                            |
|                                     | R1   | 2.8                            | 2.8                            | 2.8                            |
| Degree of Repeatability             | mm   | ±0.1                           | ±0.1                           | ±0.1                           |
| Operating Temperature               | °C   | 0~45                           | 0~45                           | 0~45                           |
| Weight                              | kg   | 27                             | 43                             | 42                             |
| IP Grade                            |      | IP54                           | IP54                           | IP54                           |

## Controller

|                  |         |     |   |
|------------------|---------|-----|---|
| Size             | WxHxD   | mm  | 260 x 490 x 510   |
| Weight           |         | kg  | 27  |
| IP Grade         |         |     | IP20  |
| I/O - flange     | Digital |     | 8 In / 8 Out  |
|                  | Analog  |     | 2 In / 2 Out  |
| I/O Power Supply |         |     | 24 V<br>Max. 2A   |
| Input Power      |         | VAC | 100~240 (50~60Hz)   |
| Fieldbus/UI      |         |     | PROFINET IO, EtherNet/IP, EtherNet(TCP/IP), PROFIBUS, DeviceNet, CANOpen, CC-Link, CC-Link IE Field, EtherCAT, MODBUS/TCP |

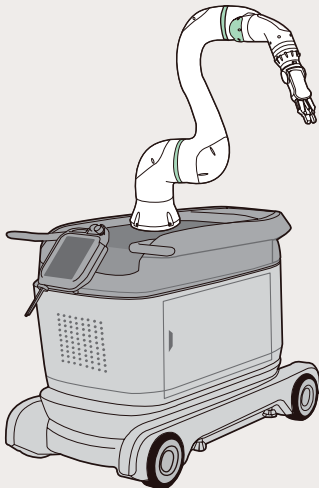
# Cooperative Robot Eco System



## End Effector

- Provides tools of various payloads that can be applied to various applications
- Simple programming and easy installation
- Data for modification will be provided to improve compatibility

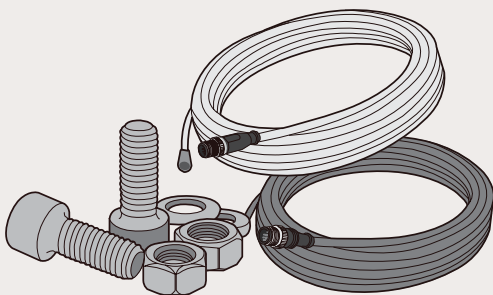
※ Optional item that needs to be purchased additionally



## Mobile Cart

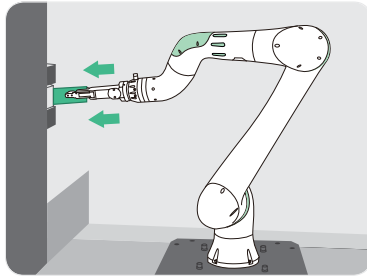
- Makes it unnecessary to perform the base work prior to the installation of the robot and helps secure an operation platform
- Makes it convenient to install and store the controller, T/P, and various peripheral devices
- Makes it simple to rearrange the layout and adjust the height
- Makes it possible to set the T/P position according to the customer's viewing angle, freeing both hands of the operator

※ Optional item that needs to be purchased additionally

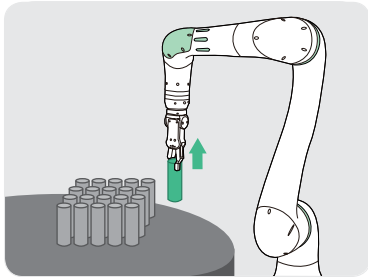


## Starter Kit

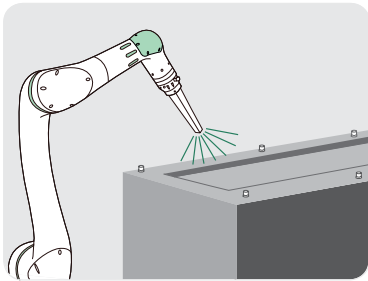
- Basic subsidiary materials necessary for installation will be provided.
- Basic cables (for I/O and EtherCAT) will be provided for interface with the end effector.



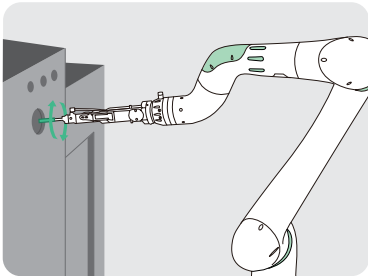
CNC Machine Tending



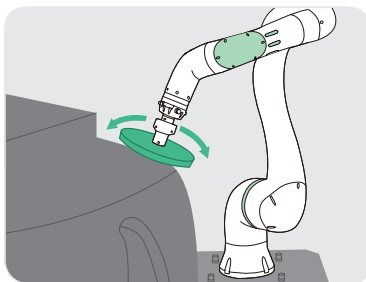
Pick & Place



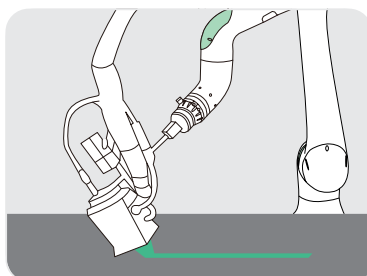
Air Blowing



Assembly (Screw, Gear)

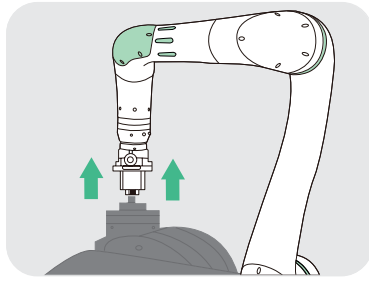


Polishing & Deburring

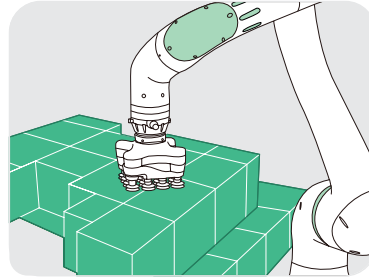


Gluing/Bonding

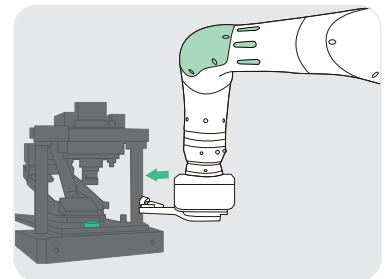




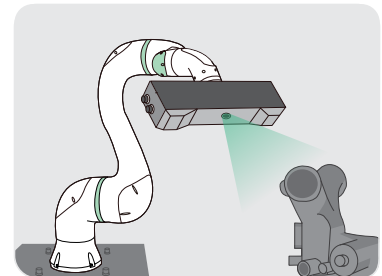
Plastic Injection Assistance



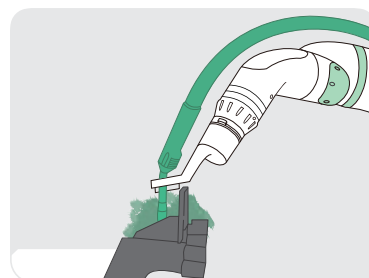
Packaging & Palletizing



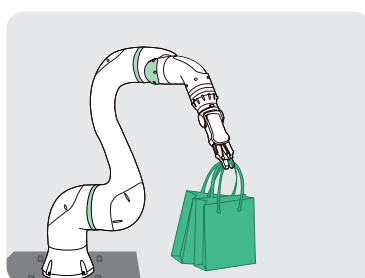
Press Forming Assistance



Inspection

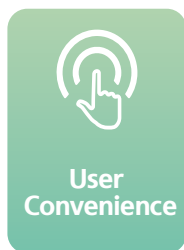


Welding

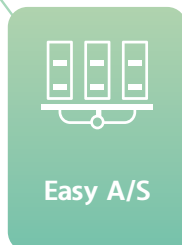


Service

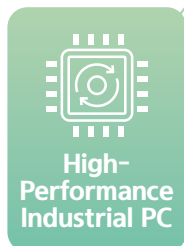
# Features of the Robot



- Touch-type T/P and simple interface
- Two basic air units are provided, making additional wiring unnecessary
- The hand grip switches make it possible to perform direct teaching



- An integrated drive module that can be replaced easily is applied
- A door-type case is applied, making it easy to perform maintenance of the controller



- A buffer for the prevention of data loss because of temporary power instability is embedded
- A high-capacity power module that can be applied to high-payload collaborative robot is applied



- A safety CPU approved by an international certification institute (TÜV SÜD) is applied.
- Optimized response to the “industrial robot safety inspection” and the “collaborative robot workplace safety certification”



- A streamlined design that provides psychological tranquility for the operator
- Outright prevention of the accident of being caught through the application of a curved design


**HYUNDAI ROBOTICS**

|          |   |                |
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