

# Air Grippers for Collaborative Robots

**New** Tool changers (one-push and auto types) and a tool holder have been added.

## Unitization of the peripheral devices required for gripper driving

Operation is possible simply by connecting 1 air supply tube and 1 electrical cable.

Built-in

Solenoid valve

Exhaust throttle valve with silencer

Auto switch

Fitting

\* The attachment should be ordered separately by the customer.



## 3 types of grippers available for use with a variety of workpieces

Standard Type



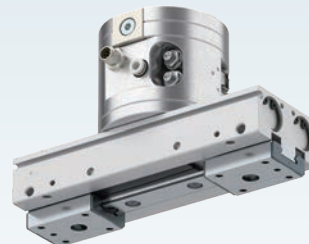
RMHZ2 Series

3-Finger Type



RMHS3 Series

Long Stroke Type



RMHF2 Series

## Can be used with the collaborative robots of 13 companies

UNIVERSAL ROBOTS,  
OMRON/TECHMAN ROBOT, FANUC,  
YASKAWA Electric, Mitsubishi Electric,  
HAN'S ROBOT, KUKA, DOOSAN ROBOTICS, SIASUN,  
JAKA, AUBO, ABB, **New** DENSO WAVE

## Air consumption reduced by up to 80%

Product with a separate solenoid valve



Unitized product

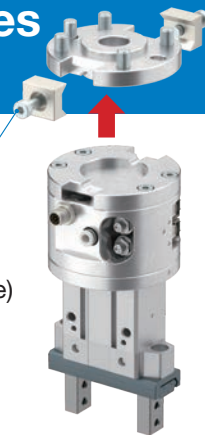


## Select from 3 types of tool changer.

Simple operation allows for easy tool changing.

Clamper bolt

- New** Clamp type (Manual override)
- New** One-push type (Manual override)
- Auto type



## Allows for temporary workpiece drop prevention

When normally open (N.O.) or normally closed (N.C.) is selected for the valve and the power is cut off, the finger remains open or closed, respectively.

**RMH** ☐ Series

## Standard Type **RMHZ2 Series**

- High rigidity and precision are achieved by integrating the guide and finger.
- With high-precision linear guide

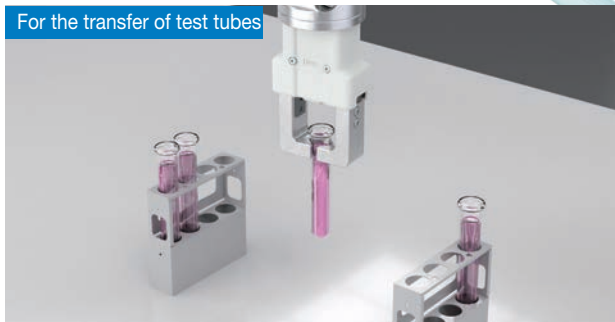
### Specifications

Gripping force*1	External	54.2 N
Effective value per finger	Internal	72.2 N
Opening/Closing stroke (Both sides)		14 mm
Weight		638 g*2

\*1 Gripping force is measured at a pressure of 0.5 MPa.

\*2 This is the value excluding the weights of the protective cover and connector cable.

For the transfer of test tubes



## 3-Finger Type **RMHS3 Series**

- Suitable for axial gripping of cylindrical workpieces

### Specifications

Gripping force*1	External	118 N
Effective value per finger	Internal	130 N
Opening/Closing stroke (Diameter)		8 mm
Weight		776 g*2

\*1 Gripping force is measured at a pressure of 0.5 MPa.

\*2 This is the value excluding the weights of the protective cover and connector cable.

For moving large and small workpieces



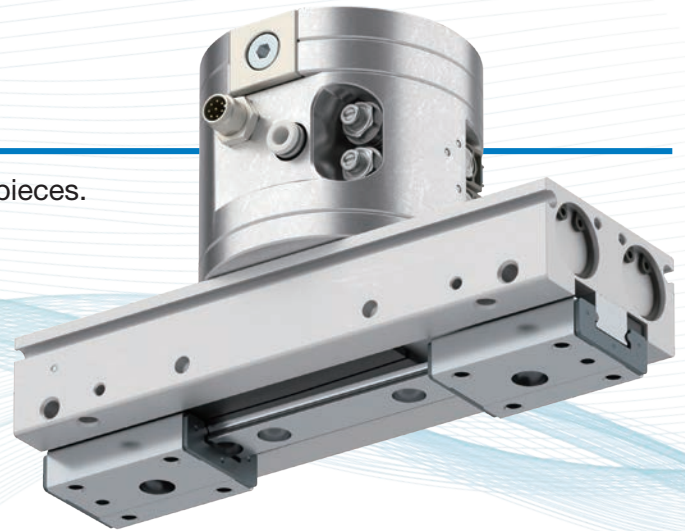
# Long Stroke Type

## RMHF2 Series

- The 64 mm long stroke is ideal for a variety of workpieces.
- Height reduced by approx. 35%  
(Compared with the standard type)
- Actuator position sensor mountable (Option)  
(Collaborative robot manufacturer: Compatible with robots from UNIVERSAL ROBOTS and FANUC CORPORATION, and DENSO WAVE INCORPORATED)

Workpiece length measurement and discrimination can be performed.

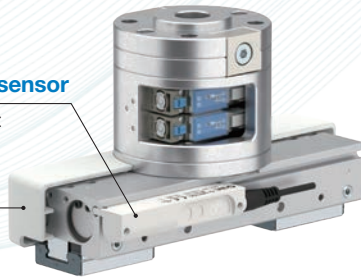
- The stroke position is output with an analog signal.
- Repeatability: 0.1 mm



### Actuator position sensor

D-MP050A equivalent

Protective cover

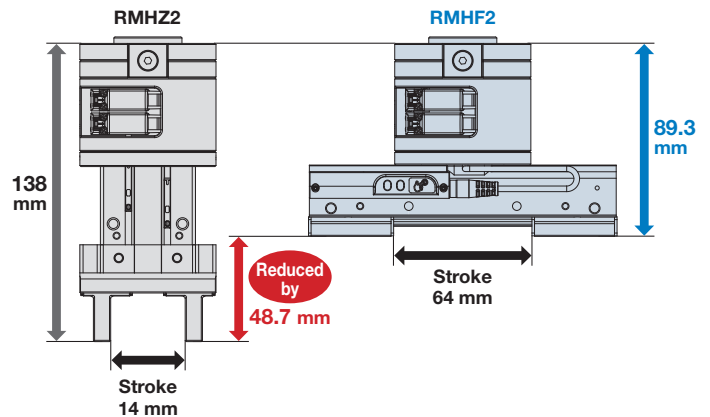


### Specifications

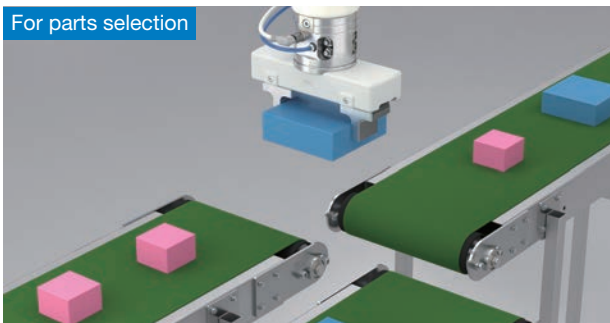
Gripping force* <sup>1</sup> Effective value per finger	90 N
Opening/Closing stroke (Both sides)	64 mm
Weight	945 g* <sup>2</sup>

\*<sup>1</sup> Gripping force is measured at a pressure of 0.5 MPa.

\*<sup>2</sup> This is the value excluding the weights of the protective cover and connector cable.

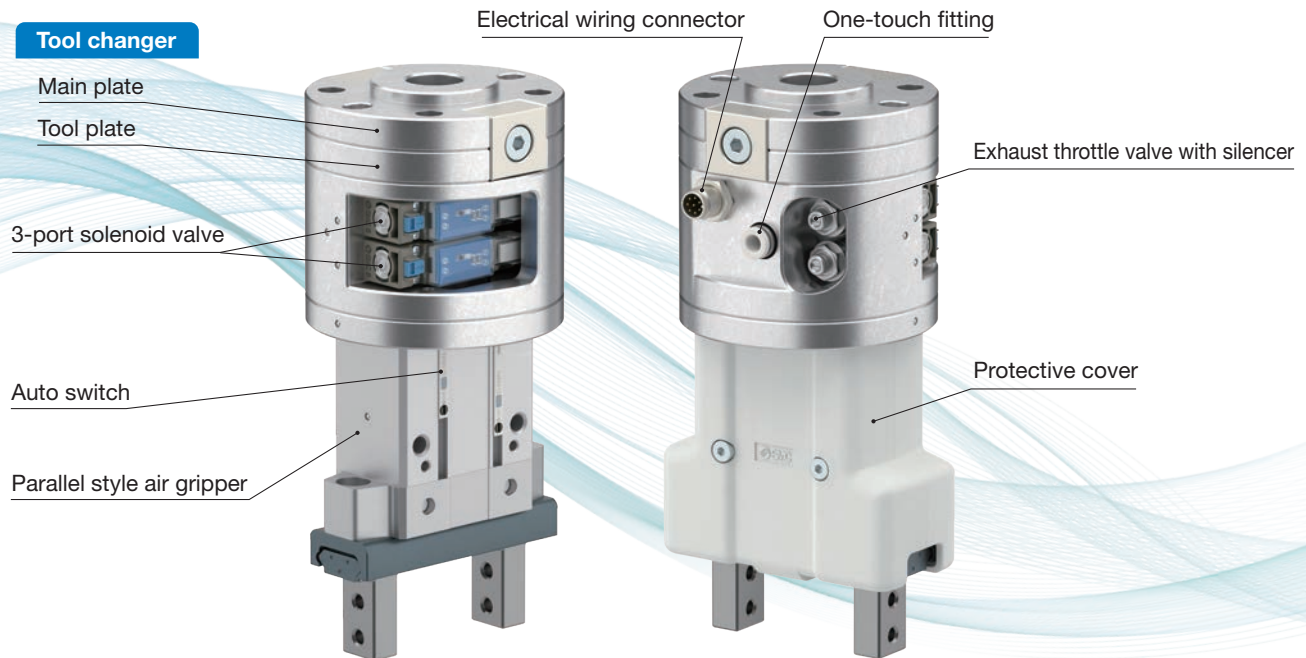


### For parts selection



## ■ Easier mounting and maintenance

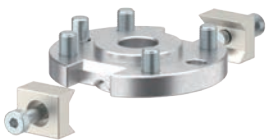
- A split protective cover for easy air gripper maintenance
- Standards: ISO 9409-1-50-4-M6



## ■ Select from 3 types of tool changer. Reduced mounting and maintenance labor

### Clamp Type (Manual override)

Hand tools can be attached/removed by clamber bolts (2 pcs).



### One-push Type (Manual override)

Hand tools can be attached/removed by the push of a button (no tools required).



### Auto Type

Allows for the easy automatic change of hand tools



## Options

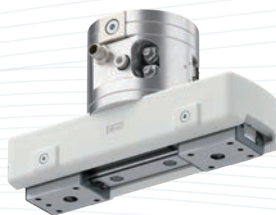
### Protective covers



For RMHZ2



For RMHS3



For RMHF2

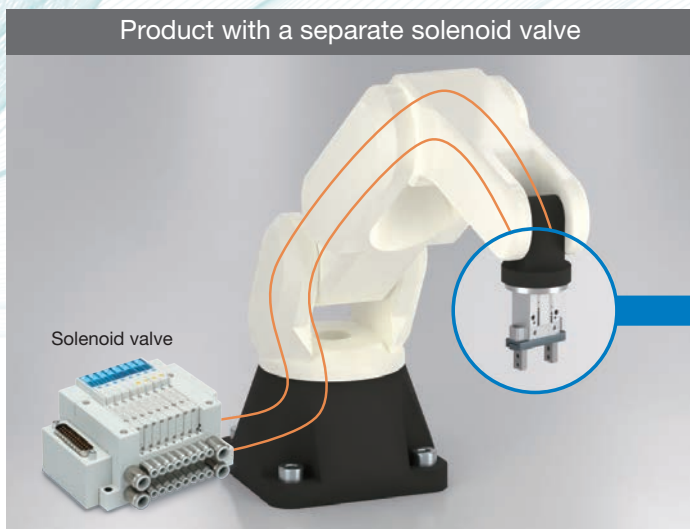
### Connector cable



For applicable robots, refer to page 42.

## Air consumption reduced by up to 80%

- Air consumption is significantly reduced compared to when the solenoid valve is installed separately for the same type of model.



Product with a separate solenoid valve

**Unitized product**

Consumption air can be reduced because long piping is not required.  
Built-in solenoid valve

Air Consumption Reduction by Model (Per stroke)

Model	Air consumption reduction
RMHZ2	80%
RMHS3	60%
RMHF2	30%

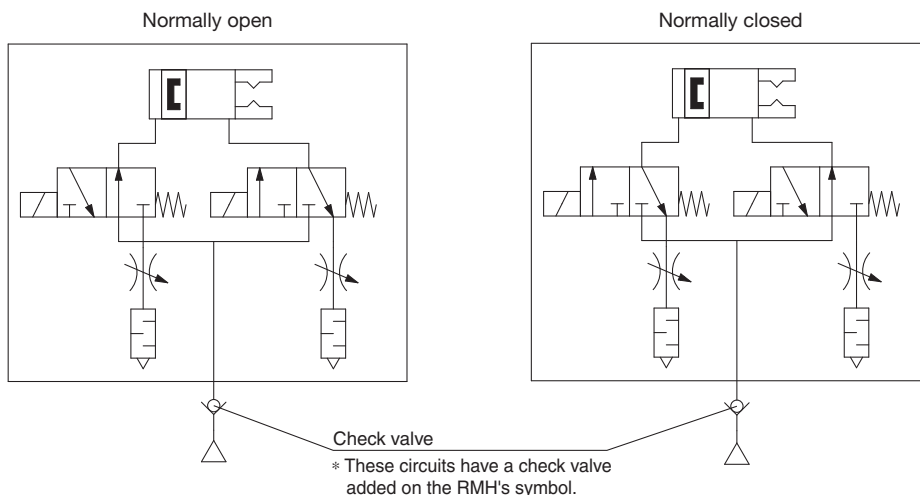
\* Conditions  
 · Piping I.D.: ø2.5 mm  
 · Piping length: 2 m  
 · Number of pipes: 2  
 · Supply pressure: 0.5 MPa

## Allows for temporary workpiece drop prevention

- Valve option: Normally open, Normally closed

If power to the solenoid valve is cut off while air is being supplied, the finger remains open or closed depending on the valve option. It can be used as a workpiece drop prevention function during transportation when there is a power failure.

- \* The customer must install a check valve, etc., so that the air being supplied to the gripper is not exhausted when the power is cut off.
- \* After the power is cut off, the gripper gripping force may gradually decrease the longer it is without power. Therefore, even if the drop prevention function is activated, be sure to quickly move the workpiece to a safe position in the case of an emergency.



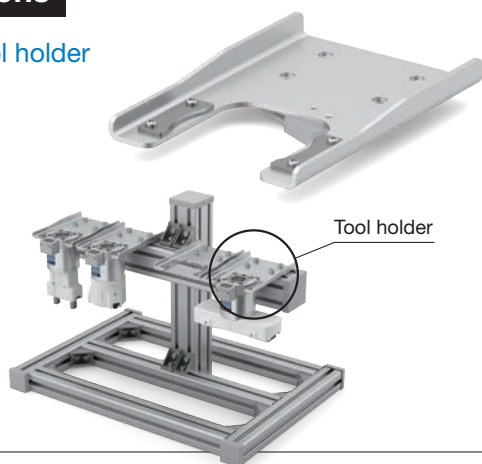
## Series Variations

		Standard Type RMHZ2 Series	3-Finger Type RMHS3 Series	Long Stroke Type RMHF2 Series
Number of fingers		2	3	2
Gripping force	External gripping force [N]	54.2	118	90
	Internal gripping force [N]	72.2	130	90
Opening/Closing stroke (Both sides) [mm]		14	8	64
Piping diameter [mm]		4	4	4
Weight [g]	Clamp type	638	776	945
	One-push type	645	783	952
	Auto type	948	1086	1255
Options	Protective cover	●	●	●
	Connector cable	●	●	●
	Actuator position sensor	—	—	●
	Built-in valve	●	●	●
	Tool changer/Clamp type	●	●	●
	Tool changer/One-push type	●	●	●
	Tool changer/Auto type	●*1	●*1	●*1
	Plug-in software	●	●	●
Compatible robot manufacturer		13 companies	13 companies	13 companies

\*1 Compatible with robots from UNIVERSAL ROBOTS, OMRON Corporation/TECHMAN ROBOT, YASKAWA Electric Corporation DTP Series, FANUC CORPORATION, and DENSO WAVE INCORPORATED

## Options

### ● Tool holder



### ● Robot manufacturer dedicated flanges

YASKAWA Electric, Mitsubishi Electric, OMRON/TECHMAN ROBOT

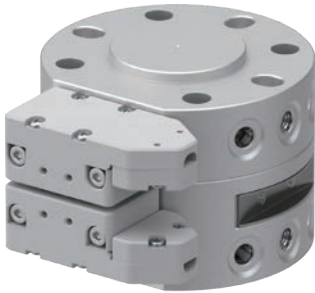


# Tool Changer

## Auto Type *RMTA Series*

### Robot hand tool automatic exchange

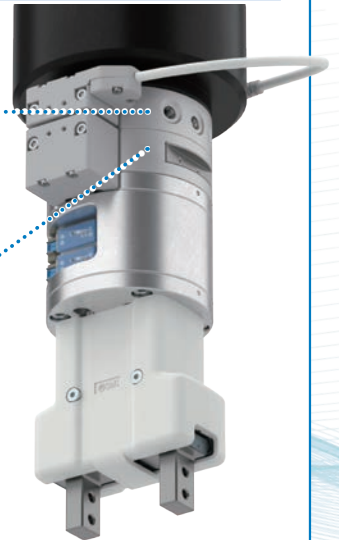
- Work load: 5 kg, 10 kg, 20 kg
- Standards: ISO9409-1 compliant  
Support for direct mounting on collaborative robots



Main plate



Tool plate



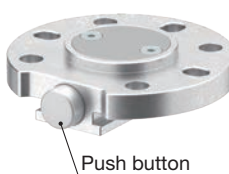
## One-push Type *RMTM1 Series*

### Tools can be attached/removed by the push of a button (no tools required).

- Work load: 10 kg
- Repeatability:  $\pm 0.01$  (Position reproducibility)

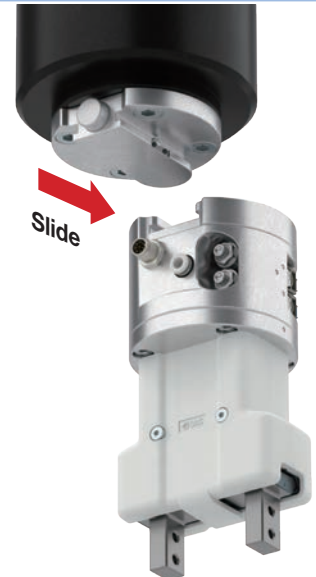


Main plate



Push button

Tool plate



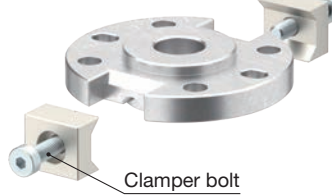
## Clamp Type *RMTM2 Series*

### Tools can be attached/removed by clamber bolts (2 pcs).

- Work load: 20 kg
- Repeatability:  $\pm 0.02$  (Position reproducibility)



Main plate



Clamber bolt

Tool plate



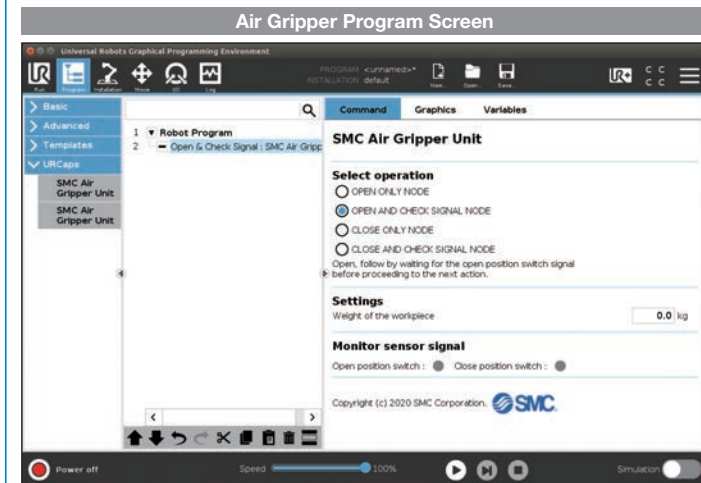
# Air Grippers for Collaborative Robots **RMH□ Series**

## Plug-in Software

Compatible with robots from UNIVERSAL ROBOTS, OMRON Corporation/TECHMAN ROBOT, FANUC CORPORATION, YASKAWA Electric Corporation, and DENSO WAVE INCORPORATED

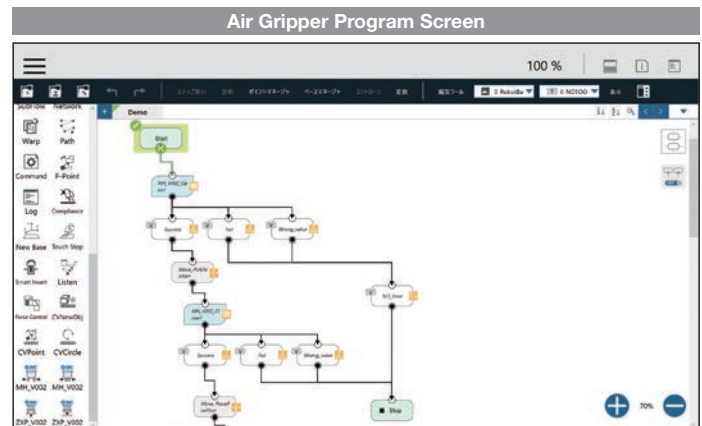
### UNIVERSAL ROBOTS

URCap



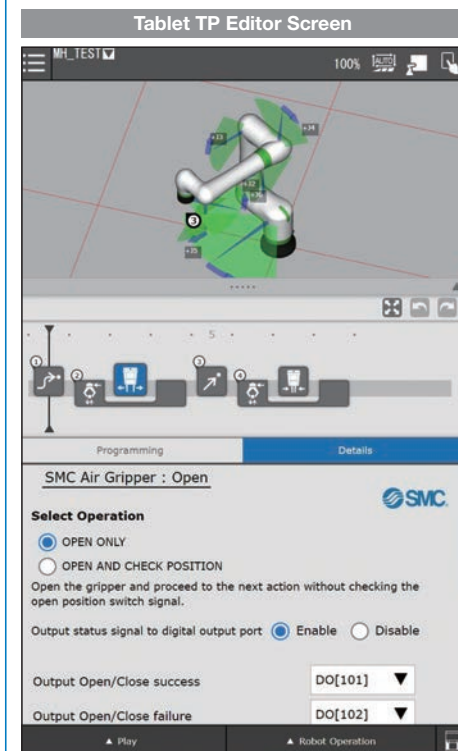
### OMRON/TECHMAN ROBOT

TMComponent



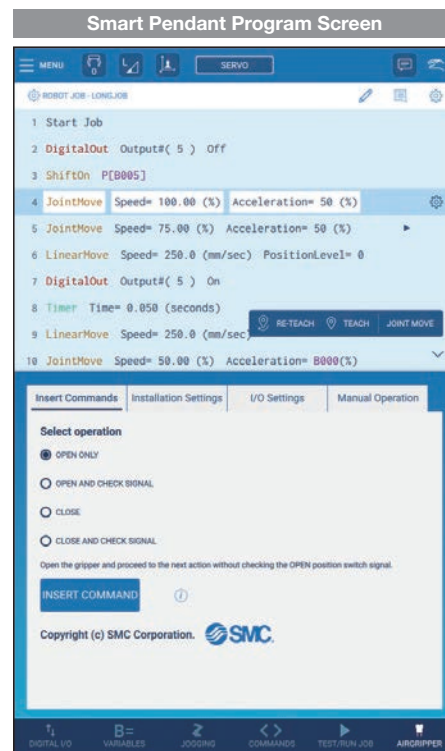
### FANUC

CRX Plug-in



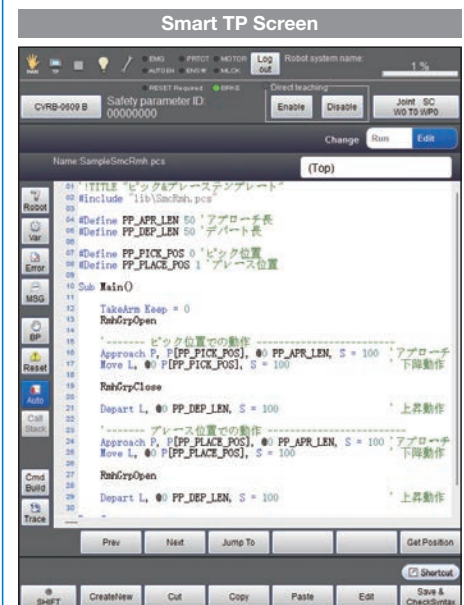
### YASKAWA Electric

YASKAWA Plug and Play Kit



### DENSO WAVE

Library



## Compatible with the robots of 13 robot manufacturers

UNIVERSAL ROBOTS, OMRON/TECHMAN ROBOT, FANUC, YASKAWA Electric, Mitsubishi Electric, HAN'S ROBOT, KUKA, DOOSAN ROBOTICS, SIASUN, JAKA, AUBO, ABB, DENSO WAVE

