

Air Grippers for Collaborative Robots

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

Utilization 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%



Select from 3 types of tool changer.

Simple operation
allows for easy
tool changing.

New Clamp type (Manual override)

New One-push type (Manual override)

Auto type

Clamper bolt



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

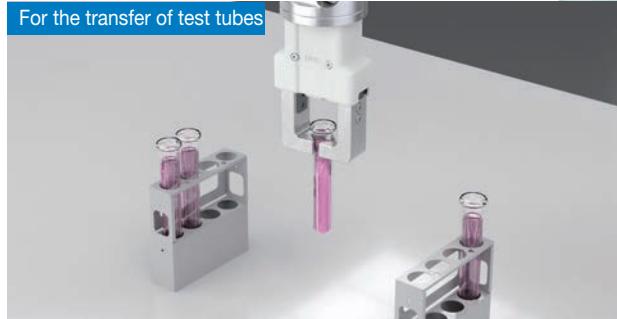
Gripping force*1	External	54.2 N
Effective value per finger	Internal	72.2 N
Opening/Closing stroke (Both sides)		14 mm
Weight		638 g*2

*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)

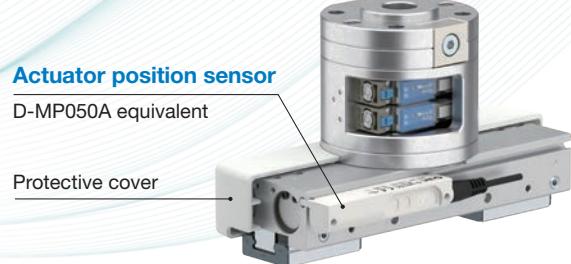
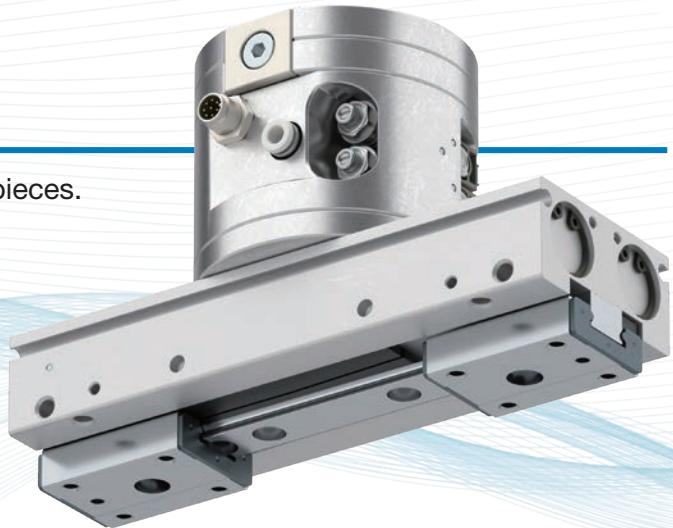
■ Actuator position sensor mountable (Option)

(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

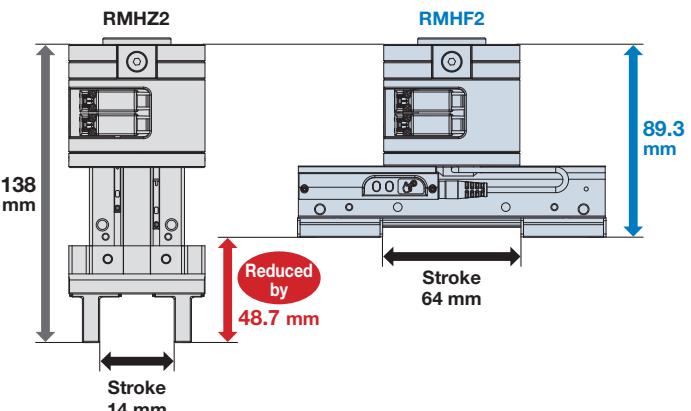


Specifications

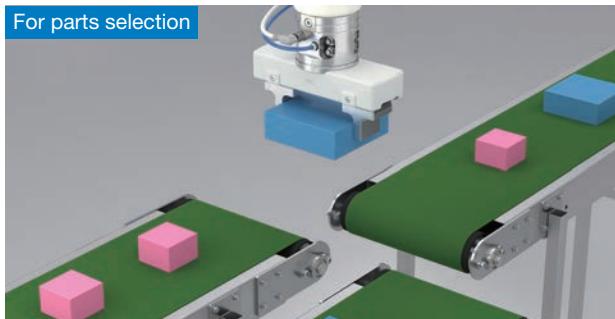
Gripping force*1	90 N
Effective value per finger	
Opening/Closing stroke (Both sides)	64 mm
Weight	945 g*2

*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 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 clamper 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

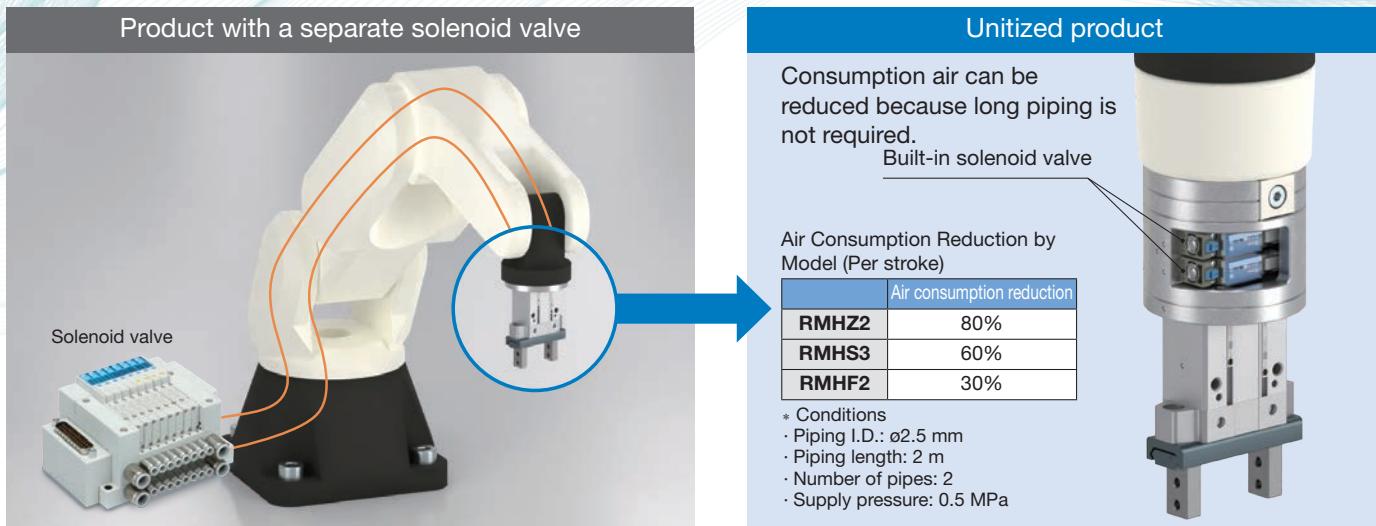
Connector cable



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.



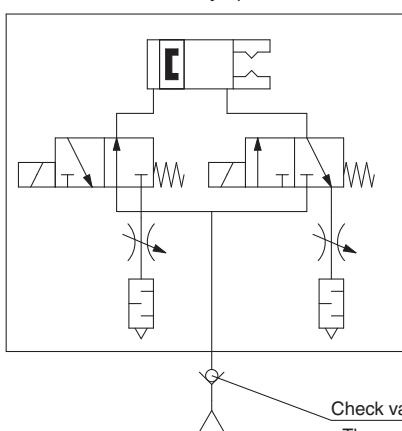
■ Allows for temporary workpiece drop prevention

- Valve option: Normally open, Normally closed

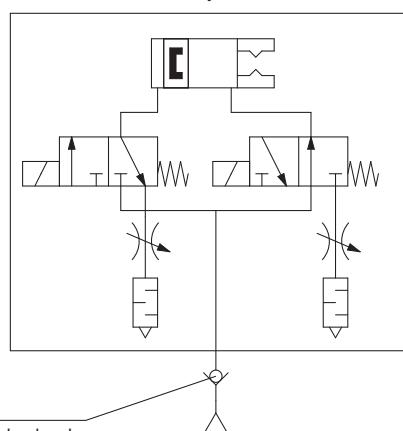
If power to the solenoid valve is cut off while air is being supplied, the finger remains open or closed depending on the valve option. It can be used as a workpiece drop prevention function during transportation when there is a power failure.

- 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.

Normally open



Normally closed



Check valve
 * These circuits have a check valve added on the RMH's symbol.

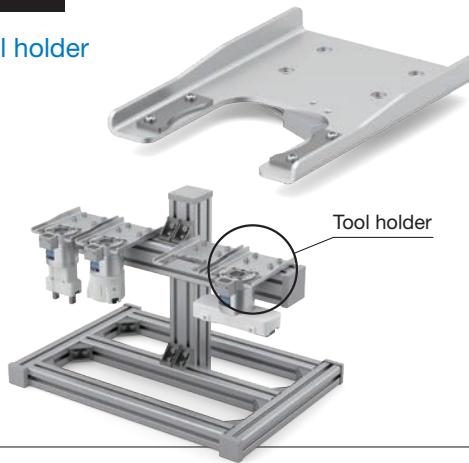
Series Variations

		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

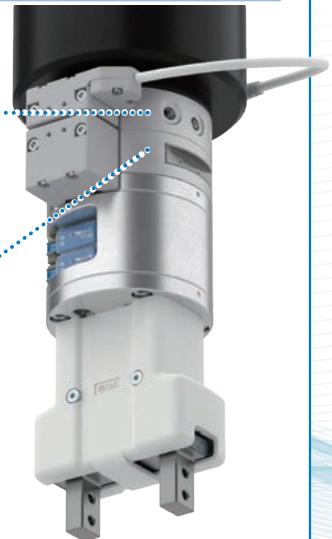


Tool Changer

Auto Type RMTA Series

Robot hand tool automatic exchange

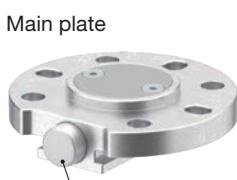
- Work load: 5 kg, 10 kg, 20 kg
- Standards: ISO9409-1 compliant
Support for direct mounting on collaborative robots



One-push Type RMTM1 Series

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

- Work load: 10 kg
- Repeatability: ± 0.01 (Position reproducibility)



Clamp Type RMTM2 Series

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

- Work load: 20 kg
- Repeatability: ± 0.02 (Position reproducibility)



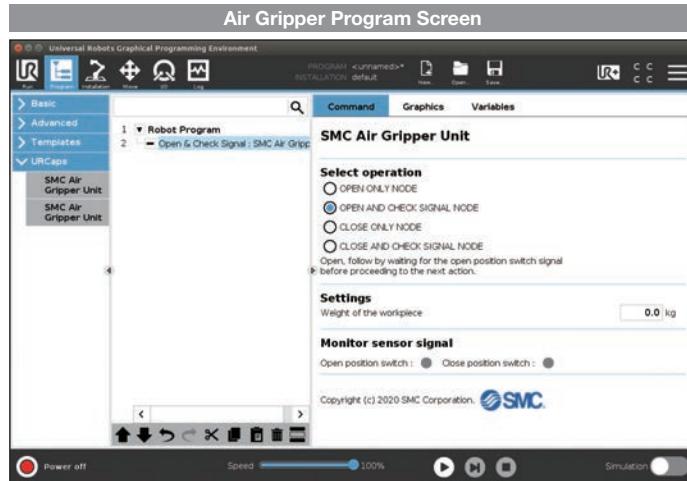
Air Grippers for Collaborative Robots **RMH□ Series**

Plug-in Software

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

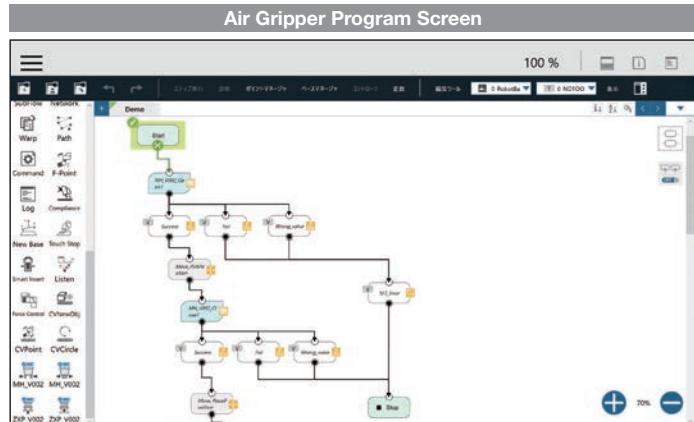
UNIVERSAL ROBOTS

URCap



OMRON/TECHMAN ROBOT

TMComponent



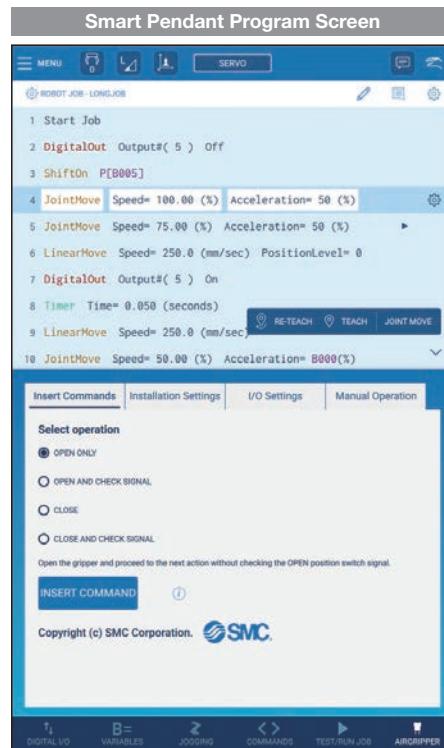
FANUC

CRX Plug-in



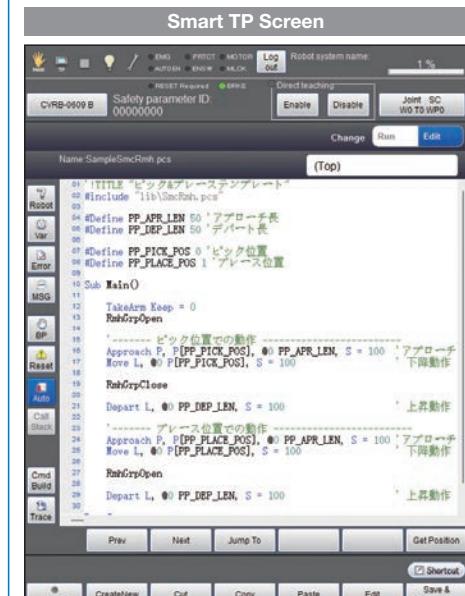
YASKAWA Electric

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

