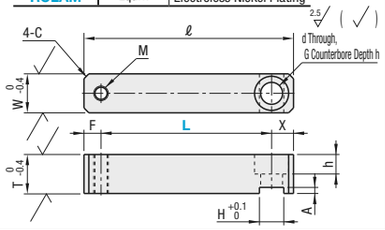
Rotary Clamp Cylinder Arms / Brackets / Guides

■Rotary Clamp Cylinder Arms

Type	Material	Surface Treatment
RCLA	EN 1.0038 Equiv.	-
RCLAB	EN 1.1191 Equiv.	Black Oxide
RCLAM		Electroless Nickel Plating

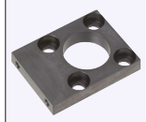
RoHS



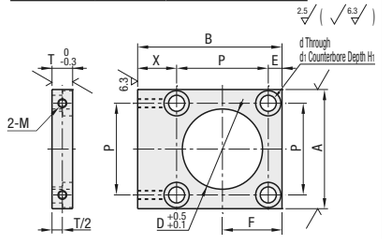
Part Number Type	No.	L 1mm Increment	W	T	H	G	d	h	A	X	M	F	C	ℓ	Unit Price RCLA	RCLAB	RCLAM
RCLA RCLAB RCLAM	20	15~100	16	16	10	14	9	9	3	9	6	7	2	L+16			
	25	15~100	16	16	10	14	9	9	3	9	6	7	2	L+16			
	32	20~160	20	20	14	17.5	11	11	4	12	8	10	2	L+22			
	40	20~160	20	20	14	17.5	11	11	4	12	8	10	2	L+22			
	50	25~200	22	22	17	20	14	13	4	13	10	10	3	L+23			

■Rotary Clamp Cylinder Brackets

Type	Material	Surface Treatment
RCYB	EN 1.0038 Equiv.	-
RCYBB	EN 1.1191 Equiv.	Black Oxide



RoHS



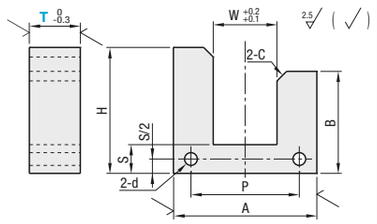
Part Number Type	No.	T	D	A	P	X	B	E	F	M	d	d1	h1	Unit Price RCYB	RCYBB
RCYB RCYBB	20	9	24	38	25.5	18.25	P+E+X	6.25	19	M4	6.5	11	6.5		
	25	9	24	44	28	19	P+E+X	6	20	M4	6.5	11	6.5		
	32	9	30	50	34	18	P+E+X	8	25	M4	6.5	11	6.5		
	40	9	35	60	40	19	P+E+X	10	30	M4	6.5	11	6.5		
	50	12	37	65	50	26.5	P+E+X	7.5	32.5	M6	9	14	9		

No. indicates applicable Rotary Clamp Cylinder Tube I.D.

■Rotary Clamp Cylinder Guides

Type	Material	Surface Treatment
RCYG	EN 1.0038 Equiv.	-
RCYGB	EN 1.1191 Equiv.	Black Oxide

RoHS



Part Number Type	No.	T Selection	W	S	H	B	A	P	C	d	Unit Price RCYG	RCYGB
RCYG RCYGB	20-21	9 12 16	16	9	30	22	38	25.5	3	4.5		
	20-31	9 12 16			40	32						
	25-21	9 12 16	16	9	30	22	44	28				
	25-31	9 12 16			40	32						
	32-25	9 12 16	20	9	33	22	50	34				
	32-35	9 12 16			43	32						
	40-25	9 12 16	20	9	33	21	60	40				
	40-35	9 12 16			43	31						
	50-40	9 12 16	22	12	50	34	65	50	4	6.5		
	50-70	9 12 16			80	64						

No. indicates applicable Rotary Clamp Cylinder Tube I.D / Stroke.

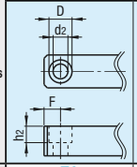
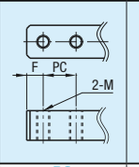
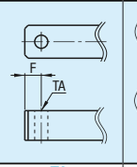
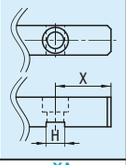
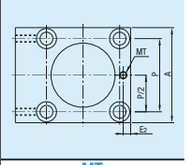
Ordering Example

Part Number	-	L, T
RCLA32	-	100
RCYG40-25	-	12
RCYB32		

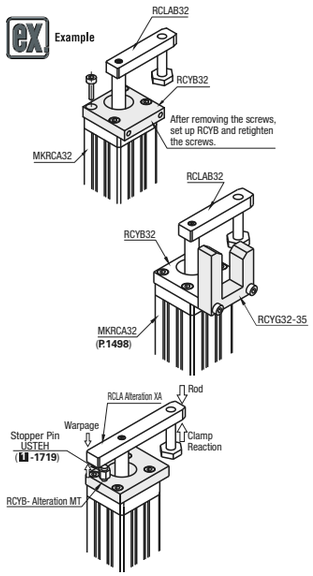
Alterations

Part Number - L - (ZA, PC, TA, XA)
RCLA32 - 100 - ZA6
RCLAM50 - 150 - XA

Part Number - (MT)
RCYB32 - MT4

	Counterbored Hole Change	Mounting Hole Addition	Through Hole Change	X Length Change	Tapped Hole for Stopper
Alterations					
Code	ZA	PC	TA	XA	MT
Spec.	Change from a tapped hole to a counterbored hole. M / ZA / d2 / D / h2 6 / 6 / 6.6 / 11 / 6.6 8 / 8 / 9 / 14 / 9 10 / 10 / 11 / 17.6 / 11 Cannot be combined with Through Hole Change (TA). Ordering Code ZA8 Applicable to Arms (RCLA□) only	A tapped hole to be added. Mx2≤PC≤L-Gx2 1mm Increment Ordering Code PC20 Cannot be combined with Counterbored Hole Change (ZA). If combined with TA, a mounting hole will be added after the change. Applicable to Arms (RCLA□) only	Change from a tapped hole to a through hole. 0.5mm Increment No. / TA 20, 25 / 4.0~12.0 32, 40, 50 / 4.0~14.0 Cannot be combined with Counterbored Hole Change (ZA). Ordering Code TA4.5 Applicable to Arms (RCLA□) only	X dimension to be changed. No. / X 20 / 25 25 / 30 32 / 35 40 / 40 50 / 45 Ordering Code XA Applicable to Arms (RCLA□) only	A tapped hole for the stopper is added. No. / E2 / MT 20 / 3 / M3 M4 25 / 4 / M3 M4 M5 32 / 5 / M3 M4 M5 40 / 6 / M3 M4 M5 M6 50 / 7 / M4 M5 M6 M8 Ordering Code MT4 Applicable to Bracket (RCYB□) only.

Example



Compact Parallel Grippers - Overview

■Compact Parallel Gripper - Features

- These are lightweight and compact, as well as achieving the high-rigidity and high gripping forces
- High gripping repeatability leads to less gripping errors.
- These can be used with the fingers, which are easy-to-select depending on column, cylindrical or square workpiece shape.
- The fingers can be mounted to the main body directly, having more freedom for designing.
- By installing attachments (optional), it can be mounted with the same mounting method with the guide-integrated type Pneumatic Grippers.

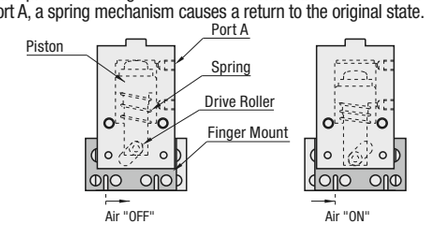
■Selection Guide

- Selection Procedure
  1. Confirmation of Conditions: Confirm the necessary open/close stroke, workpiece weight and shape.
  2. Calculation of Required Gripping Force: The required gripping force should be 10 to 20 times of the workpiece weight. (When high acceleration, deceleration or impact load may occur, higher multiplier should be selected.)
  3. Selection of Types: The gripping forces are different by gripping methods (External Grip / Internal Grip), gripping point distance and operating pressure depending on types. Select the appropriate model from the Gripping Force Chart.
- Precautions for Selection
  - Design the Finger Attachments to be lightweight and short.
  - Set the overhang under the limit of specified value of each product type.
  - Lateral overhang loads will apply torsional moments on the sliding components and it may cause premature wear.

■Open/Close Operation

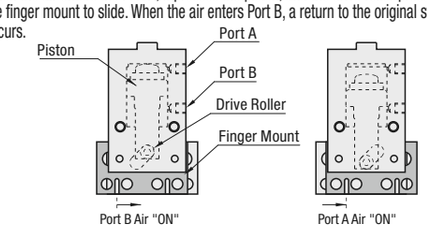
Single Acting Type

When the air enters the Port A, it presses the piston, and the drive roller presses the finger mount to slide. When the air is released from Port A, a spring mechanism causes a return to the original state.

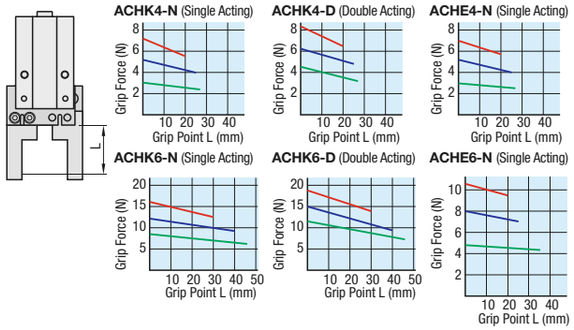


Double Acting Type

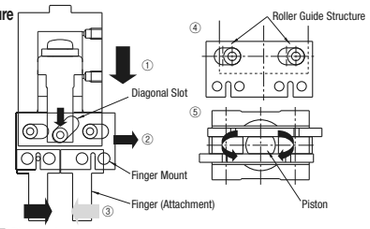
When the air enters the Port A, it presses the piston, and the drive roller presses the finger mount to slide. When the air enters Port B, a return to the original state occurs.



■Gripping Point - Gripping Force Data

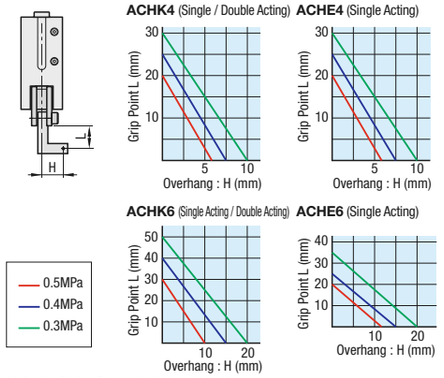


■Product Structure



①Piston descends.
②The diagonal slot moves to the arrow direction.
③Fingers (Attachment) close.
④2 rollers guide the cylinder movement.
⑤The piston rotates when moving forward and back and presses the finger mount onto the inner wall of the cylinder. The clearance will be locked up by this mechanism.

■Gripping Point - Overhang Data



* L for the Spring Clamp should be within 20

■Performance

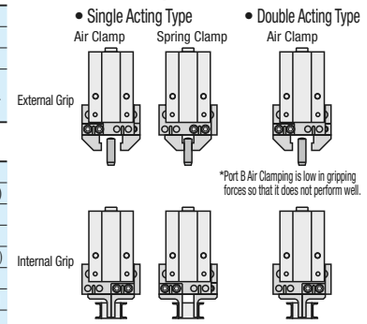
Repeatability	±0.01mm
Non-load Durability Test	100 Million Open/Close Cycles
Stroke Accuracy	0~0.3mm
Gripping Force	Compared to the same size products from other manufacturers: Approx. 2 times - *Comparison between other manufacturers' cylinder with 6mm dia. and ACHK4 (Research by MISUMI)

■Specifications

Operating Method	Single and Double Acting / Parallel Open/Close
Applicable Fluid	Clean Air (Filtered, Compressed Air)
Operating Pressure Range	0.3~0.5MPa
Ambient Temperature	5 ~ 50°C
Lubrication	Non-lubrication (Lithium Grease Applied)
Pneumatic Fitting	M3x0.5 (ACHE: M5x0.8)
Operation Speed (max)	Single Acting 120CPM / Double Acting 180CPM
Repeatability	±0.01mm
Stroke Tolerance	0~+0.3mm

* For ACHE Type, only Single Acting Type is available.
* The operation speed of ACHE Type is Max.180CPM.

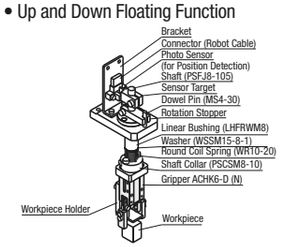
■How to Grip



*Port B Air Clamping is low in gripping forces so that it does not perform well.

■App. Example

- Up and Down Floating Function



■Safety Precautions

Danger

- Do not use the cylinder for the following applications:
  1. Medical Equipment for Sustaining Human Life or Maintaining the Human Body 2. Systems or Machine Equipment for Moving or Transporting Humans. 3. Vital Parts of Machinery These products are not designed to be used for purposes requiring high levels of safety. Loss of human life may result.
- Do not use in locations with dangerous combustible or flammable objects. The objects may ignite or catch fire.
- Never modify the products. It may cause injury, electric shock or fire by abnormal operations.
- Avoid inappropriate dismantling or re-assembling of the products which affect the basic structure, performance or functions.
- Do not splash water on the products. If the products are made wet, washed or used in the water, they may cause injury, electric shock or fire by abnormal operations.