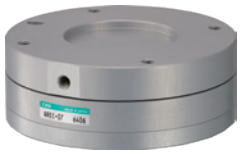
CKD

New Products

Quick Adjuster Slim
QREC Series



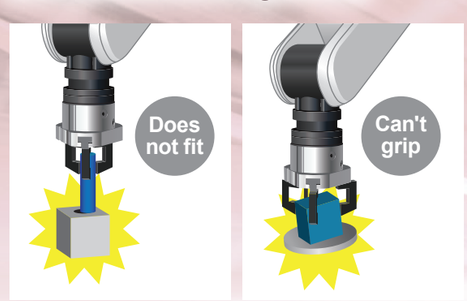
Quick adjustments
Best position
Instantly

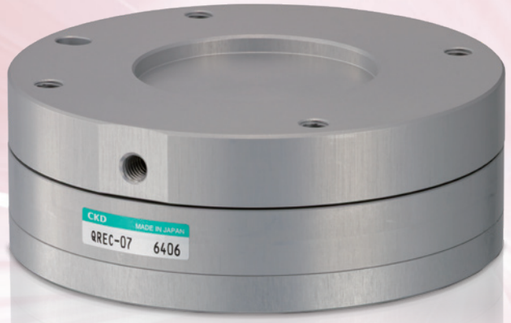
CKD Corporation
CC-1687AA

Quick adjuster
Slim

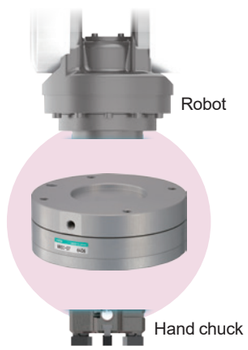
QREC Series

Equipment stoppage due to
robot hand misalignment



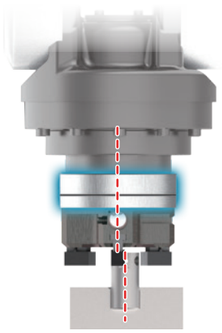


Quick Adjuster is the solution

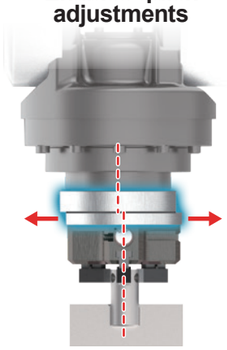


Between robot
and hand chuck,
Quick adjuster

Eccentricity



Enables quick adjustments



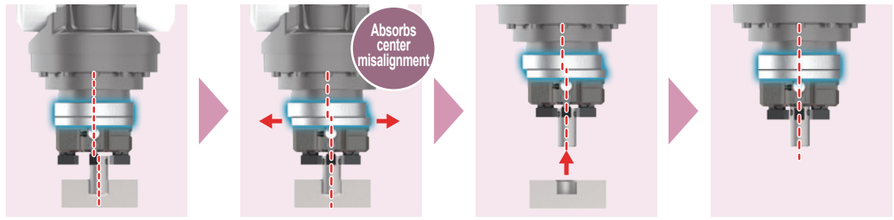
Achieves high-precision assembly, insertion, and press-fitting processes without requiring skilled teaching!

- Low-friction auto-centering mechanism
- Repeatability ±0.02 mm
- sizes for robot payloads from min. 1 kg to max. 25 kg
- Exceptionally lightweight & compact

	QREC-01	QREC-03	QREC-07	QREC-12	QREC-25
Payload kg	1	3	7	12	25
Unit mass kg	0.04	0.16	0.40	0.79	1.50
Product height mm	17.5	23.5	30.0	36.0	40.0

Application examples

Workpiece gripping



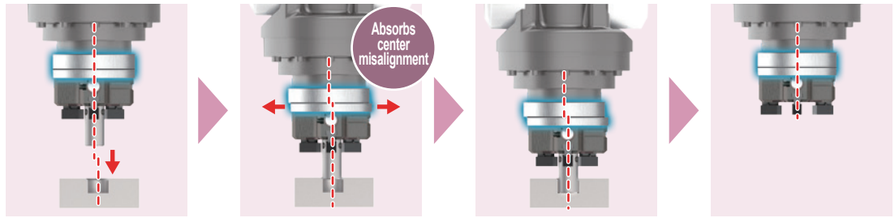
Work and robot arm center misalignment

Absorbs misalignment during gripping.

Removal completion

Supplies air and moves to the center position

Workpiece insertion



Robot arm and hole center misalignment

Absorbs misalignment during insertion.

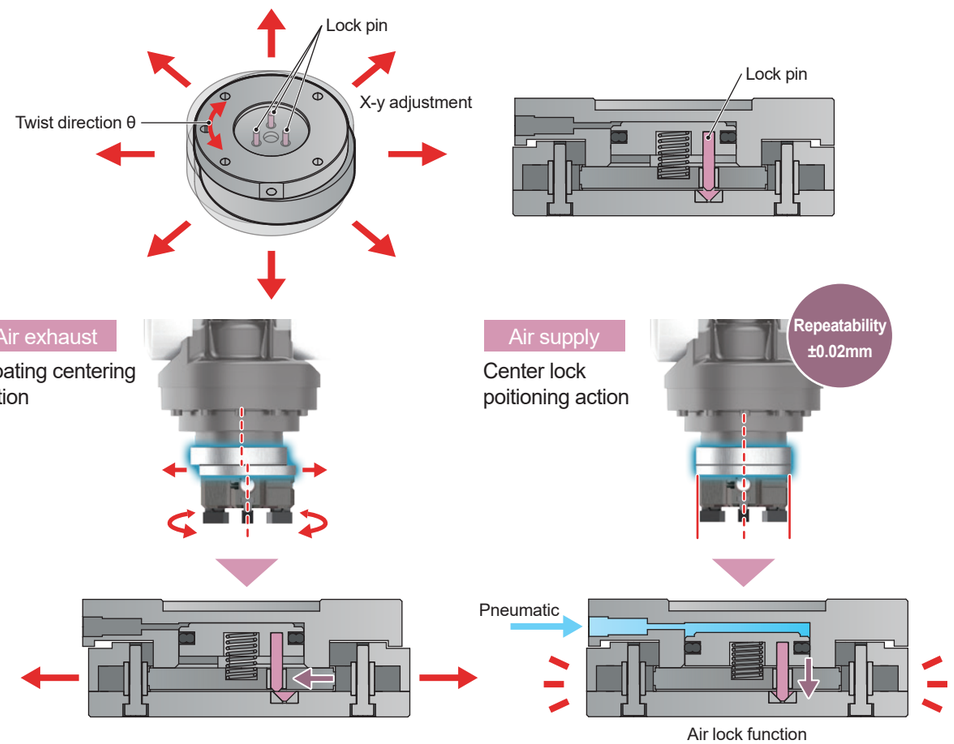
Insertion complete

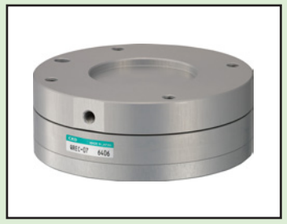
Supplies air and moves to the center position

Quick Adjuster can also be installed on the jig side. Capable of θ-direction movement, enabling handling of rectangular workpieces.

Operation description

Floats during air exhaust with centering in twist direction θ and X-Y axes. Locks at center position when air is supplied.





Quick adjuster Slim

QREC Series

● Payload : 1, 3, 7, 12, 25 kg

RoHS

Model No. Notation

QREC - 01

Model No.

1 Payload

1 Payload

Code	Contents
01	1 kg
03	3 kg
07	7 kg
12	12 kg
25	25 kg

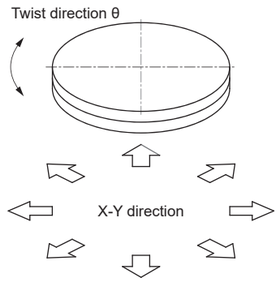
Specifications

Item			QREC-01	QREC-03	QREC-07	QREC-12	QREC-25
Payload		kg	1	3	7	12	25
Fluid used			Compressed air				
Max. operating pressure 8		MPa	0.7				
Min. operating pressure 8		MPa	0.3				
Port size			M3	M5			
Ambient temperature		°C	5 to 60				
Travel range	X-Y direction (*1)	mm	±0.5	±1.5	±2.0	±3.0	±3.0
	Twist direction θ	°	±2.0	±4.0	±4.0	±4.5	±4.0
Repeatability	X-Y direction	mm	±0.02				
	Twist direction θ unidirectional (*2)	°	±0.1				
Payload (*3)	Tension direction	N	1020	1610	3180	5600	8670
	Compression direction	N	1610	4310	7660	11030	22060
	Bending moment 8	N·m	8	22	100	219	497
	Torque N·m	N·m	11	42	88	194	436
Unit mass kg		kg	0.04	0.16	0.40	0.79	1.5
Lubrication			Not required (Use turbine oil ISO VG32 when lubricating)				

*1 : Travel range is equal in all directions.

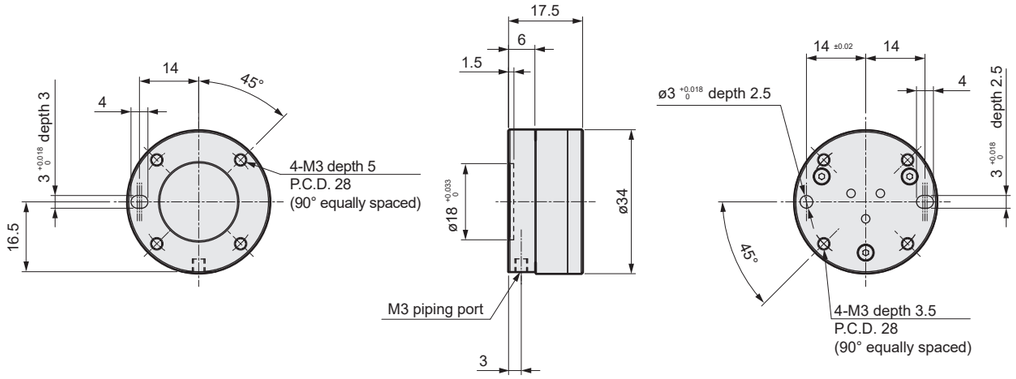
*2 : Value obtained by rotating plate in same direction unpressurized, then applying air (0.5MPa), with ± representing half of maximum angular deviation between fixed and driven parts.

*3 : Maximum load that won't damage the product.

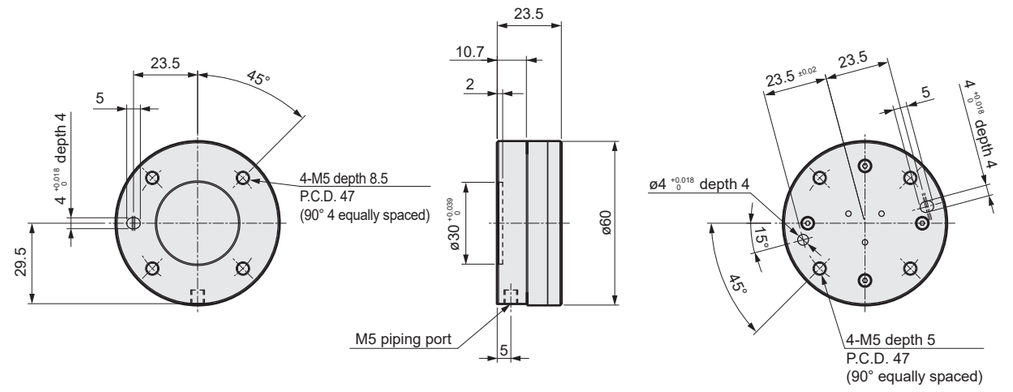


Dimensional Drawings

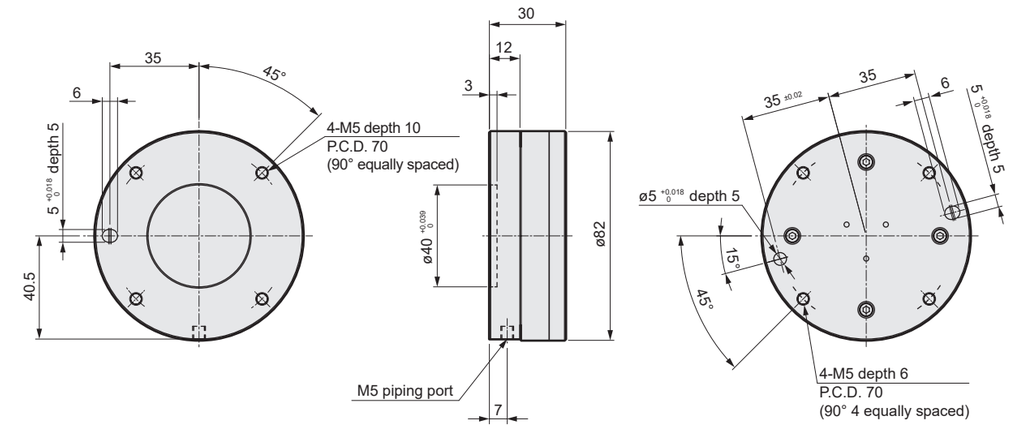
●QREC-01



●QREC-03

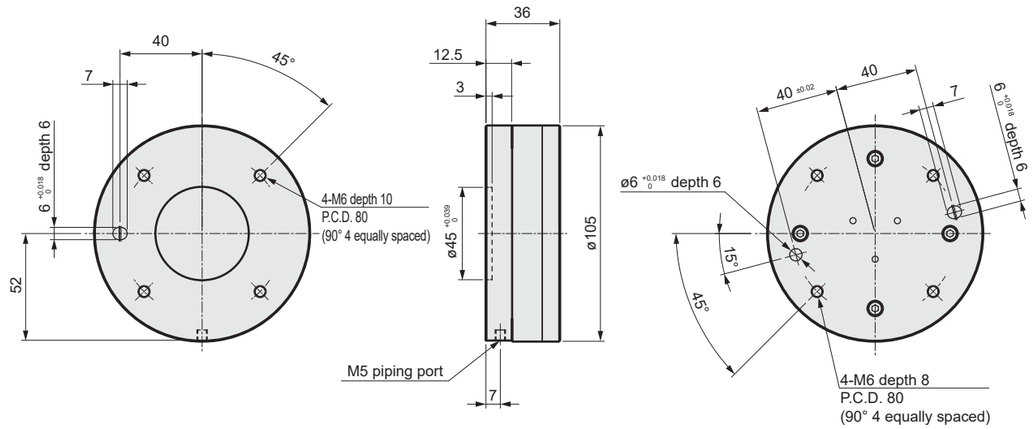


●QREC-07

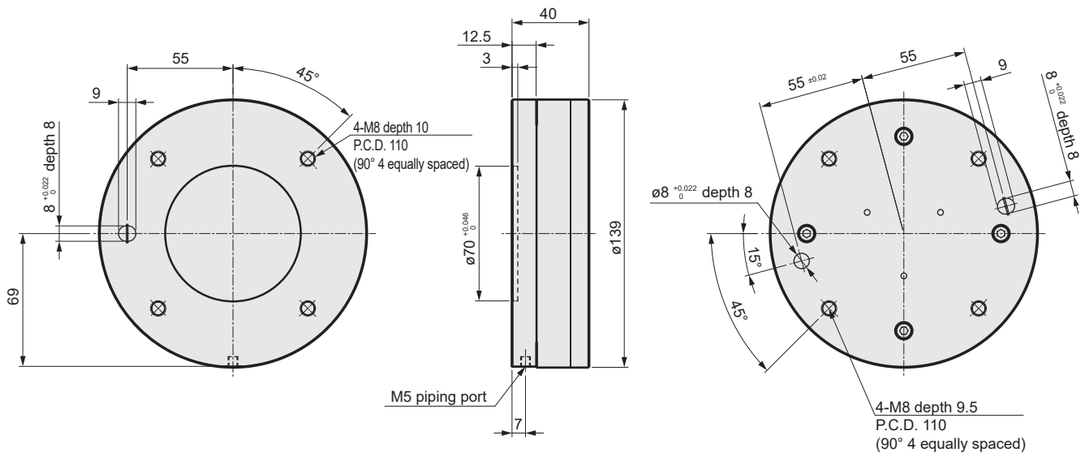


Dimensional Drawings

● QREC-12



● QREC-25



Pneumatic equipment

Read this before use for safe operation.

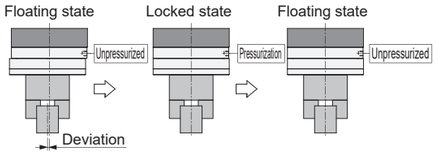
Always read this before use. For general cylinders and cylinder switches, refer to Pneumatic Cylinder ⑤ (Catalog No. RJ-006AA).

Individual precautions : Quick adjuster Slim QREC Series

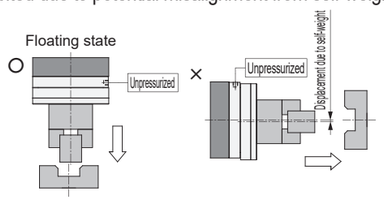
Design / Selection

Caution

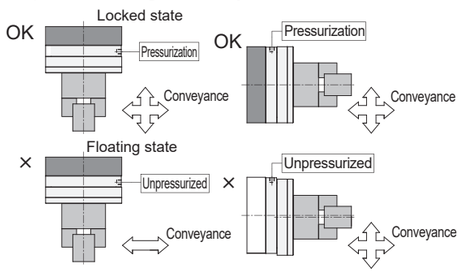
■ As shown in the figure below, applying air pressure will return the plate to the center and lock the Floating function. Releasing the pressure will return it to the Floating state. Note, floating should only be performed with the product facing downward (as shown) or upward. Floating in a horizontal position may cause impact loads due to self-weight dropping, leading to part damage or performance degradation.



■ For press-fitting or insertion work, ensure the product is in an unpressurized Floating state. Horizontal use (lower right figure) is prohibited due to potential misalignment from self-weight.



■ Transport must always be performed in the Locked state. Transporting in Floating state may cause part damage or performance degradation. Additionally, start and stop transport motions as gently as possible. Sudden starts/stops may release the lock and impair centering accuracy.



■ Payload refers to the limit where physical damage does not occur under static load in Locked state (not a guarantee of maintained accuracy). Consider sufficient safety margins if impacts may occur.

■ Mount the load with its center of gravity within the product's outer dimensions. Avoid offset mounting as it may release the lock, causing part damage or performance degradation.

■ When transporting with robots, account for inertial forces from mounted loads that may generate excessive moment. Maintain sufficient margin relative to the product's allowable load.

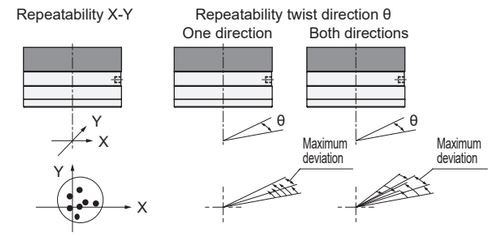
■ Do not disassemble or modify the unit.

■ When mounting hands etc. on the mounting surface, ensure piping / wiring doesn't interfere with Floating operation.

■ External control devices, robot-side flanges, and tool-side flanges must be prepared by the customer.

■ Repeatability

Here, Repeatability refers to the deviation from the reference position when repeatedly pressurizing/depressurizing the quick adjuster under identical conditions (quick adjuster fixed, etc. See below).
Conditions : Workpiece dimensions, shape, weight
· Robot motion
· Air pressure, etc.



Repeatability twist direction θ both directions (reference value)

QREC-01 to 07	QREC-12	QREC-25
±0.5°	±0.4°	±0.2°

■ Operating environment

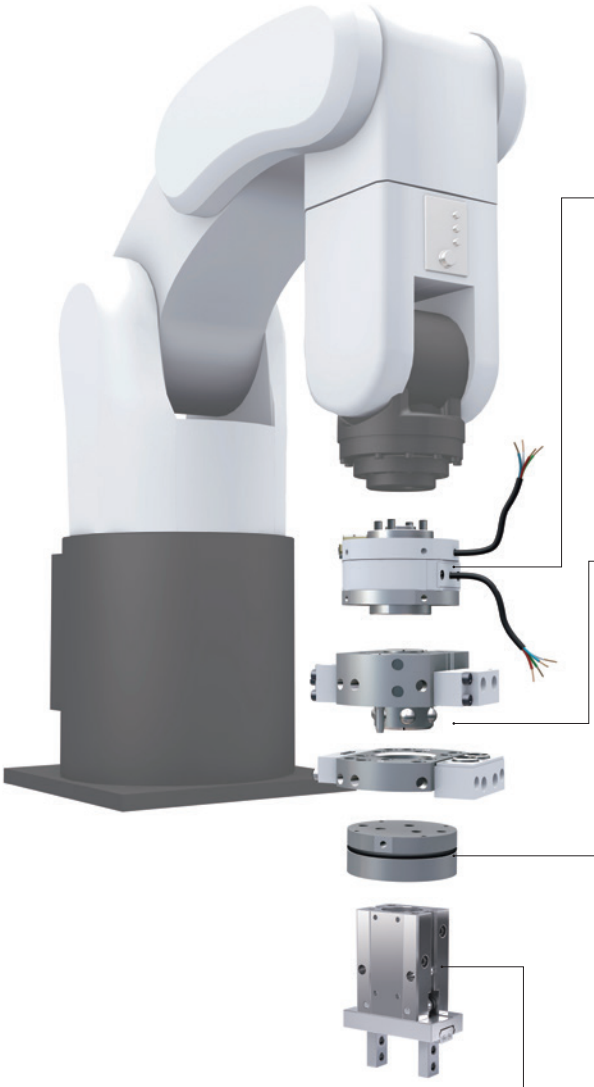
In machining, casting, and welding facilities, cutting fluid, chips, dust, or other foreign matter may enter. Use covers to prevent these as much as possible. Also, do not use in the following environments

- Exposed to cutting fluid (abrasives or grinding debris in the fluid may wear sliding parts)
- Atmosphere contains organic solvents, chemicals, acids, alkalis, kerosene, etc.
- Exposed to water

For installation/setup/adjustment, operation, and maintenance precautions, visit the CKD equipment product site (https://www.ckd.co.jp/kiki/en/) → "Model No." → Instruction Manual.

Total solutions for robot peripheral components

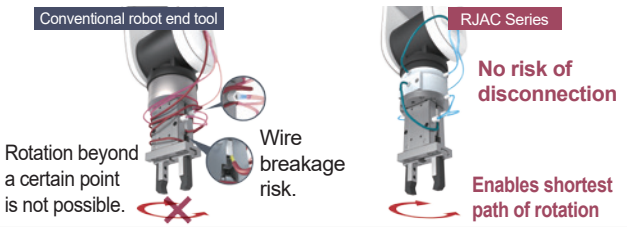
Comprehensive lineup of peripheral equipment designed for ease of use with robots and diverse end effectors. For robot handling, trust CKD.



Robot rotary RJAC Series

Catalog No. CC-1688AA

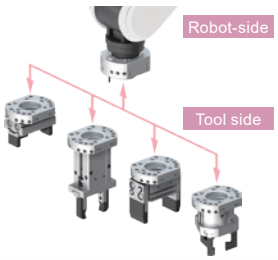
Hybrid rotary joint for air & electrical signals. Eliminates piping, wiring tangling.



Auto Tool Changer KHBC Series

Catalog No. CC-1663AA

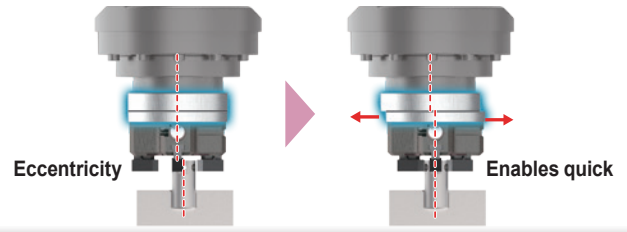
Robot automatically exchanges end tools by itself enabling multi-variety multi-functional robot handling.



Quick Adjuster slim QREC Series

Catalog No. CC-1687AA

Low-friction centering mechanism eliminates robot misalignment issues.



Robot Handling Components Guide

Catalog No. CC-1478AA

Click!

Wide variety of end effectors

Electrically grip, Pneumatically grip, Vacuum suction

Electric gripper | Air hand / Air chuck | Suction pad | Vacuum ejector

If the goods and/or their replicas, the technology and/or software found in this catalog are to be exported from Japan, Japanese laws require the exporter makes sure that they will never be used for the development and/or manufacture of weapons for mass destruction.

CKD Corporation

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