

# First in the world! Electrically coupled / uncoupled automatic tool changer

## QCE-40

QCE-40 is an auto tool changer that does not require air pressure. End-effectors can be changed at factories and production cells without air pressure lines installed. Additionally, since electricity is required only for coupling and uncoupling, electricity consumption is reduced, leading to energy savings.

### Compact Body

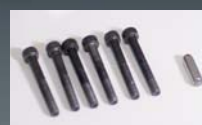
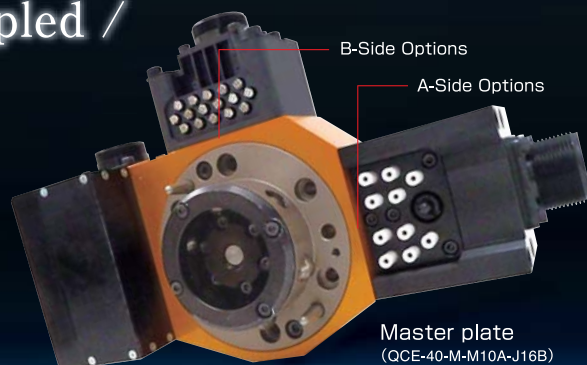
Although an electric drive motor has been added to our conventional Flex-40A model, the thickness when coupled was kept to only about a 23% increase.

### Adoption of the ball lock mechanism

A ball lock mechanism, with proven reliability in our conventional models, has been adopted. The QCE-40 is also equipped with a conventional fail safe mechanism, and a brake which is activated with the loss of power in the drive part. These two features double the prevention of tool drops.

### Energy saving production lines

Conventional models require constant air pressure supply with the use of generators. The QCE-40 only needs electric supply when coupling or uncoupling, which reduces energy consumption and achieves energy savings.



Master plate accessories  
·6 bolts (M5 x 45)  
·1 locating pin

## Specifications

Main body		
Load capacity	392N (40kg)	
Positional repeatability	±0.015mm	
Allowable dynamic moment	Bending directions (Tx, Ty)	314N·m (32kgf·m)
	Twisting direction (Tz)	430N·m (44kgf·m)
Coupling force ※1	4,000N (408kgf)	
Material	Frame	Aluminum alloy
	Lock/Unlock mechanical section	Stainless steel
Overall dimensions (when coupled)	W144xD111xH70mm	
Weight (Main Body)	Master plate	2.0kg
	Tool plate	0.5kg
Lock/Unlock mechanism	Ball-locking mechanism	
Coupling/uncoupling time	Within 1 second	
Control input and output	JM connector ※3	Control input and output
	Power supply	DC24V±10%, MAX5A (Ripple noise 500mVp-p Following)
	Control input	Two points (Coupling, Uncoupling)
	Control output	Notice: Two points (Coupling completion, Uncoupling completion) Error: Three points (Motor over-current, Timeout, Mechanism failure) 30mA MAX/1point. The open collector output of 0VCOM (Active low) Error developmental time is automatically stopped by the QC side control part.
Allowable temperature and humidity range	0~55°C, 0~95% (Non-Condensing)	

Options			
Utilities	D15A D15B	Electrical signals Max.3A DC50V Probe contact	3A×15(D sub connector) ※2
	J16A J16B	Electrical signals Max.5A DC / AC200V Probe contact	5A×16(JM connector) ※3 ※4
	M10A M10B	Electrical signals Max.13A DC250V / AC200V Insertion contact	13A×10(MS connector) ※3 ※5
	A16A A16B	Electrical signals Max.5A DC / AC200V Probe contact	Approach sensor + 5A×16(JM connector) ※3 ※4
	A08A A08B	Electrical signals Max.13A DC250V / AC200V Insertion contact	Approach sensor + 13A×8(MS connector) ※3 ※5

Cautions: QCE-40 is not compatible with our conventional model, Flex-40A. Do not use in areas with exposure to water or oil, or in dusty environments.

## Ordering Information

Master plate	<b>QCE-40</b>	-M-	A-Side Options □ □ □ □ □	-	B-Side Options □ □ □ □ □
Tool plate	<b>QCE-40</b>	-T-	A-Side Options □ □ □ □ □	-	B-Side Options □ □ □ □ □

Code	Description
XXXX	No option
D15A	Electrical signals 3A×15 ※2
J16A	Electrical signals 5A×16 ※3 ※4
M10A	Electrical signals 13A×10 ※3 ※5
A16A	Approach sensor +Electrical signals 5A×16 ※3 ※4
A08A	Approach sensor +Electrical signals 13A×8 ※3 ※5

Code	Description
XXXXB	No option
D15B	Electrical signals 3A×15 ※2
J16B	Electrical signals 5A×16 ※3 ※4
M10B	Electrical signals 13A×10 ※3 ※5
A16B	Approach sensor +Electrical signals 5A×16 ※3 ※4
A08B	Approach sensor +Electrical signals 13A×8 ※3 ※5