

# QC-150C

## Lock without touching

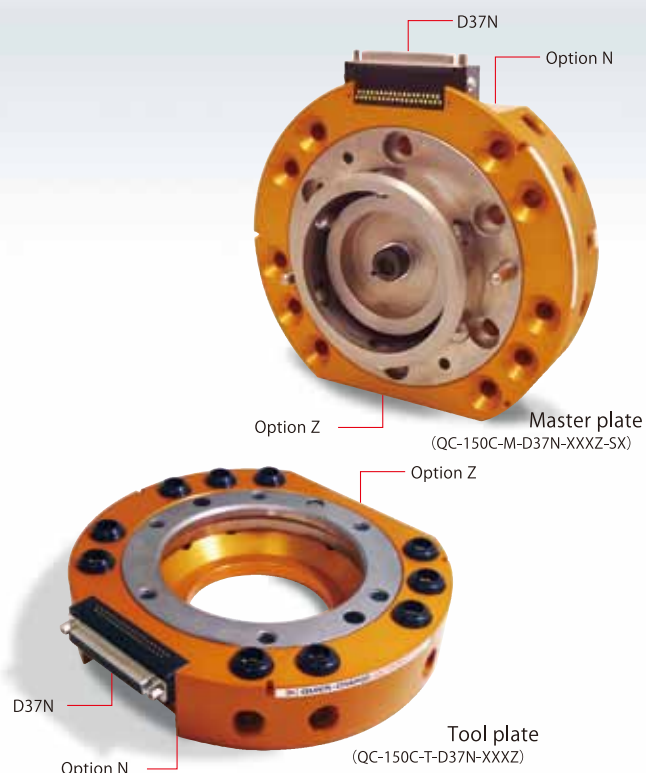
The Master plate can lock onto the Tool plate with a gap between them.

## Superior fail-safe locking mechanism

BL's unique lock/unlock mechanism contains a mechanical fail-safe feature which does not allow the Master and Tool plates to uncouple if the air pressure is shut off.



Master plate Attachments  
 • 6 bolts (M10×60)  
 • 1 locating pin  
 ※ Seal plate, O-ring and screws are pre-assembled.



## Specifications

Main Body			
Load capacity (rated load)		1,470N (150kg)	
Positional repeatability ※1		±0.015mm	
Allowable dynamic moment	Bending direction (Tx, Ty)	1,960N·m (200kgf·m)	
	Twisting direction (Tz)	1,960N·m (200kgf·m)	
Coupling force (with air pressure of 0.49MPa) ※2		14,317N (1,460kgf)	
Materials	Frame	Anodized aluminum	
	Lock/unlock mechanism	Stainless steel	
Overall dimension (when coupled)		φ200×H90mm	
Weight (Main body)	Master plate	5,810g	
	Tool plate	2,860g	
Self-separating mechanism		Ball-Locking mechanism	
Required air pressure		0.39~0.68MPa (4~7kgf/cm <sup>2</sup> )	
Allowable temperature and humidity ranges		0~50°C, 35~90% (Non-condensing)	
Utilities	Electrical signals	3A×37 or none ※3	
	Max3 AC50V Probe contact		
	Pneumatic ports	Rc3/8×10	

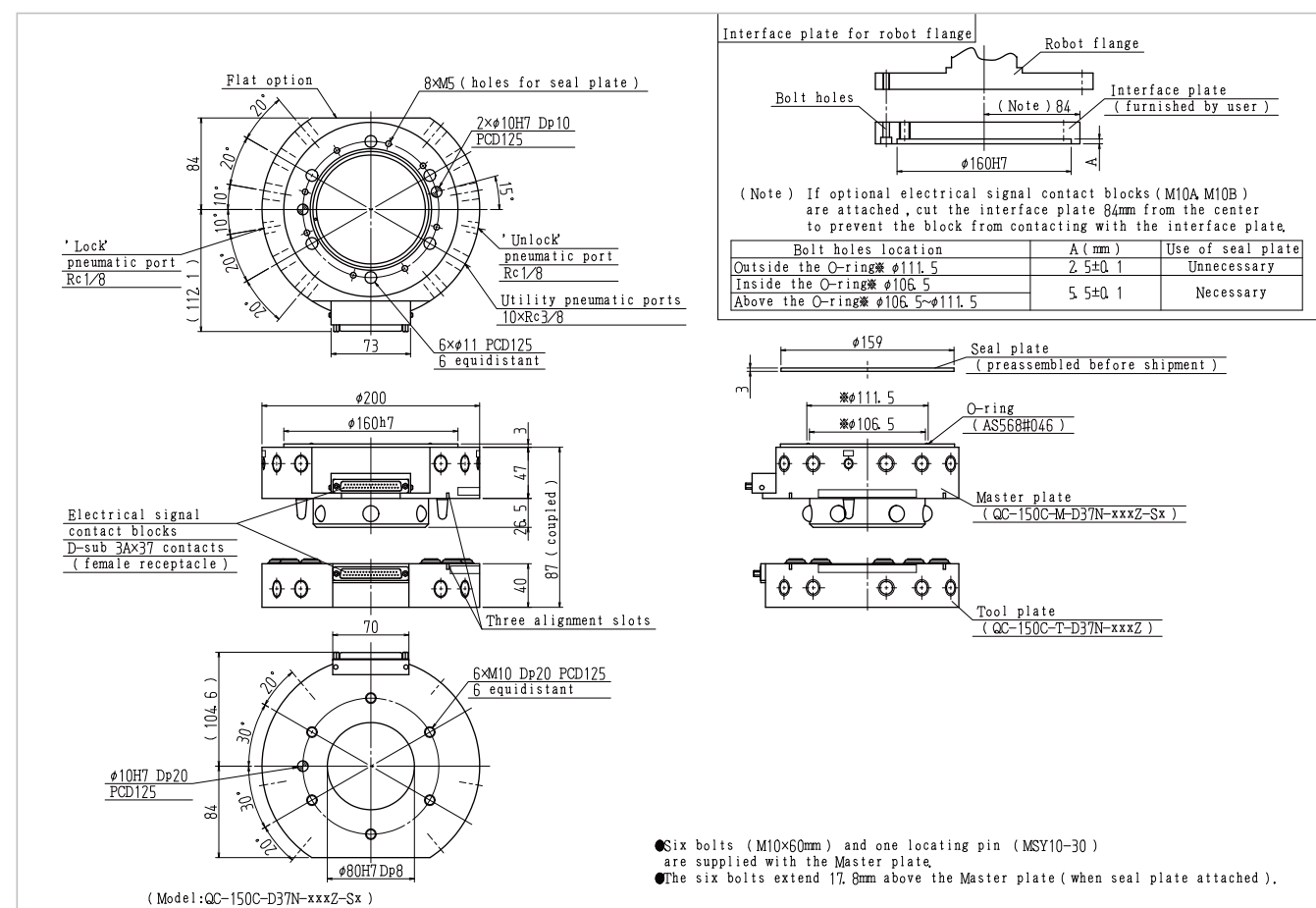
Options			
Utilities	D37Z	Electrical signals	3A×37 ※3
	J16Z	Electrical signals	5A×16 ※4 ※5
	M10Z	Electrical signals	13A×10 ※4 ※6
	M19Z	Electrical signals	13A×19 ※4 ※7
	A16Z	Electrical signals	Approach sensor+5A×16 ※4 ※5
	A08Z	Electrical signals	Approach sensor+13A×8 ※4 ※6
	B15NZ	Electric signals	50mA×15 WEB series connector ※4
	B15PZ	Non-contact system	In Zone 1 IP67
	B15DZ	Electric signals	5mA×15 WEB series connector ※4
		Non-contact system	In Zone 1 IP67
	E50Z	Ground	500A (50% usage) ×1
	P18Z	Pneumatic ports	Rc1/8×4
	P14Z	Pneumatic ports	Rc1/4×2
	P38Z	Pneumatic ports	Rc3/8×4
P3WZ	Pneumatic ports	Rc3/8×2	
Lock/unlock sensor ※7		Two built-in proximity switches	

## QC-150C Ordering Information

Master plate	<b>QC-150C -M-</b>	(Option N)	□□□□	-	(Option Z)	□□□□	-	(lock unlock sensor)	□□
Tool plate	<b>QC-150C -T-</b>	(Option N)	□□□□	-	(Option Z)	□□□□	-		
		DXXN	No electrical signal		XXXZ	No option		SX	No lock/unlock sensor
		D37N	Electrical signals 3A×37※3		D37Z	Electrical signals 3A×37※3		SA	Lock/unlock sensor A-Type (Customer processes the adaptor plate)
					M10Z	Electrical signals 13A×10※4 ※6		SB	Lock/unlock sensor B-Type (BL Autotec processes the adaptor plate)
					M19Z	Electrical signals 13A×19※4 ※7			
					A16Z	Approach sensors +Electrical signals 5A×16※4 ※5			
					A08Z	Approach sensors +Electrical signals 13A×8※4 ※6			
					B15NZ	Non-contact electric signal block Master side NPN output			
					B15PZ	Non-contact electric signal block Master side PNP output			
					B15DZ	Non-contact electric signal block Tool side			
					E50Z	Ground 500A×1			
					P18Z	Pneumatic ports Rc1/8×4			
					P14Z	Pneumatic ports Rc1/4×3			
					P38Z	Pneumatic ports Rc3/8×4			
					P3WZ	Pneumatic ports Rc3/8×2			

(Note) Please provide specifics on the electric signal contact block as follows.  
 (Model D37N-M for master plate, Model D37N-T for Tool plate).

## Main Body Dimensions



## Options

### Electrical signal contact block



<b>D37Z</b> 3A×37 D-sub 37 contacts (female receptacles)※3 ※ Plug side is D04, 17J6-233702 (D8A)-CG or its equivalent.	<b>J16Z</b> 5A×16 (JM connector)※4※5 Use JMR2116M-D for the J16Z Master side Use JMR2116F-D for the J16Z Tool side	<b>M10Z</b> 13A×10 (MS connector)※4※6 Use DIMS3102A18-1P for the M10Z Master side Use DIMS3102A18-1S for the M10Z Tool side	<b>M19Z</b> 13A×19 (MS connector)※4 ※7 Use DIMS3102A22-14P for the M19Z Master side Use DIMS3102A22-14S for the M19Z Tool side	<b>A16Z</b> Approach Sensor 5A×16 (JM connector)※4※5 Use JMR2119M-D for the A16Z Master side Use JMR2119F-D for the A16Z Tool side	<b>A08Z</b> Approach Sensor 13A×8 (MS connector)※4 ※6 Use DIMS3102A18-1P for the A08Z Master side Use DIMS3102A18-1S for the A08Z Tool side
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### Non-contact electric signal block



**B15NZ, B15PZ**  
**B15DZ (Tool side only)**  
 B15NZ NPN output  
 B15PZ PNP output  
 Receptacle connector: W69R-2119S-D for B15NZ and B15PZ  
 Receptacle connector: W69R-2119F-D for B15DZ

### Lock/unlock sensor



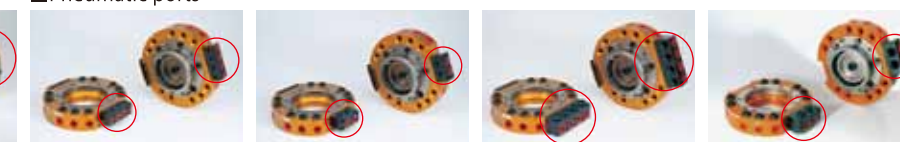
**SA, SB**  
 Two built-in proximity switches verify piston position, thus reliably checking the lock and unlock status.

### Ground



**E50Z**  
 Ground 500A×1

### Pneumatic ports



**P18Z** Rc1/8×4  
**P14Z** Rc1/4×2  
**P38Z** Rc3/8×4  
**P3WZ** Rc3/8×2

Please contact BL Autotec, Ltd. for detailed information on the options.

SA Type...The sensor plate can be used in place of an interface plate with modifications by the user  
 SB Type...The sensor plate can be used in place of an interface plate with modifications by BL Autotec, Ltd.  
 ※ When you order the lock/unlock sensor please provide us with a drawing of the robot flange.

※ 1 Positional repeatability means the accuracy of position between the one master plate and the one tool plate(A) repeat coupled and uncoupled. It is not possible to apply this positional repeatability to different tool plate(B). ※ 2 Coupling force is the force to achieve specified repeatability. Coupling will be maintained until unlock pressure is applied or the device is damaged. ※ 3 Plug connector is not included. Please prepare plug connector type 17J6-23150-02(D8A)-CG or compatible type. ※ 4 Plug connector is not included. Please prepare plug connector by customer. For connector, please see correspondence table on page 46. ※ 5 Allowable current is total 30.4A for connector. ※ 6 Allowable current is total 57.2A for connector. ※ 7 Allowable current is total 88.9AA for connector.