

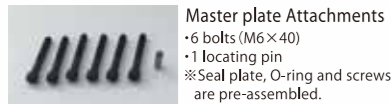
QC-60D

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 (M6×40)
 • 1 locating pin
 ※ Seal plate, O-ring and screws are pre-assembled.



Master plate
(QC-60D-M-D15N-XXX-Y-SX)

Tool plate
(QC-60D-T-D15N-XXX-Y)

Specifications

Main Body		
Load capacity (rated load)		588N (60kg)
Positional repeatability ※1		±0.015mm
Allowable dynamic moment	Bending direction (Tx, Ty)	392N·m (40kgf·m)
	Twisting direction (Tz)	588N·m (60kgf·m)
Coupling force (with air pressure of 0.49MPa)		6,570N (670kgf) ※2
Materials	Frame	Aluminum alloy
	Lock/unlock mechanism	Stainless steel
Overall dimension (when coupled)		φ130xH50mm
Weight (Main body)	Master plate	1,340g
	Tool plate	720g
Self-separating mechanism		Ball-locking mechanism
Required air pressure		0.39~0.68MPa (4~7kgf/cm ²)
Allowable temperature and humidity ranges		0~50°C, 35~90% (Non-condensing)

Main Body		
Utilities	Electrical signals	3A×15 or none ※3
	Max3A DC50V Probe contact	
	Pneumatic ports	Rc1/8×8

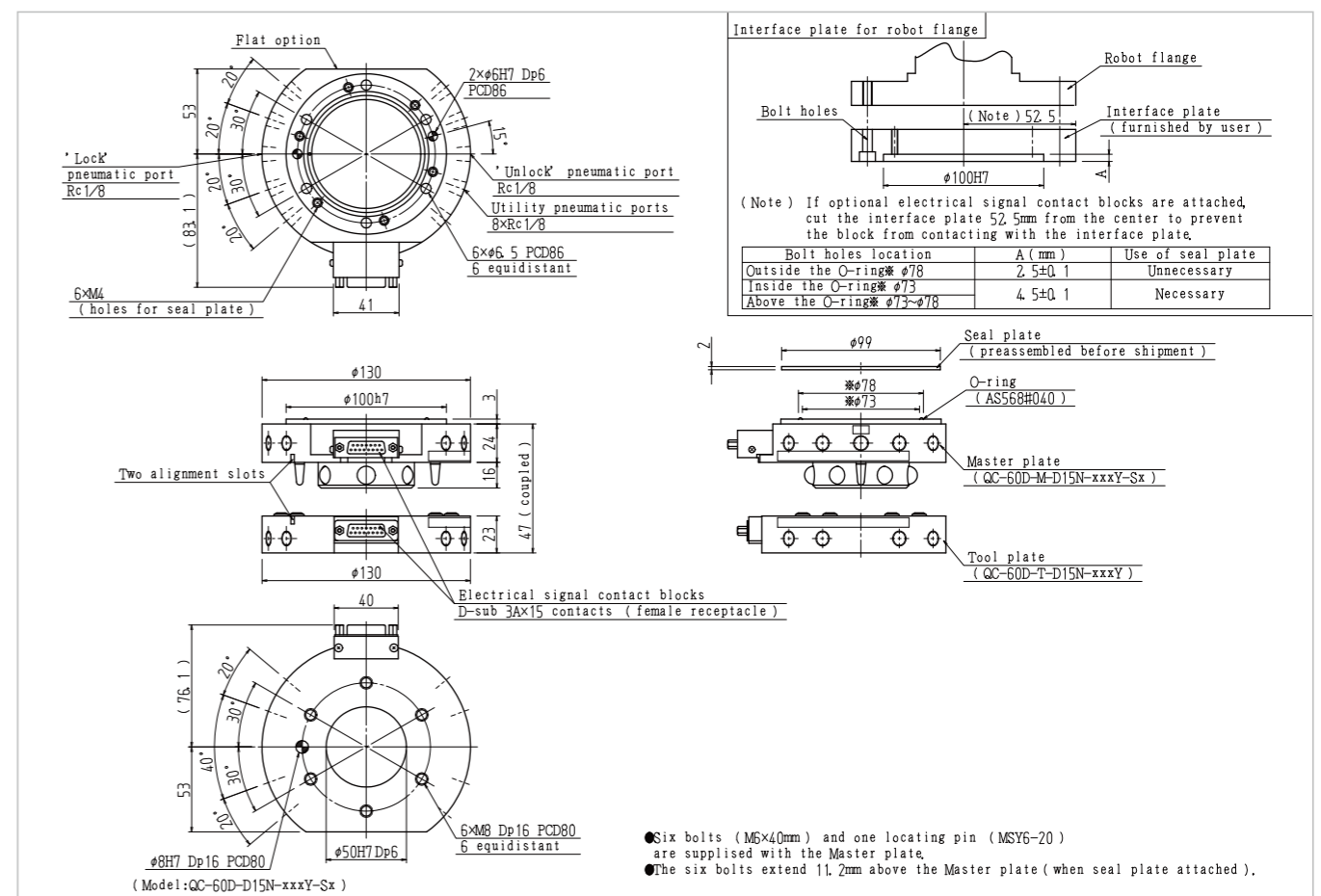
Options			
Utilities	D15Y	Electrical signals	3A×15 ※3
	J16Y	Electrical signals	5A×16 ※4 ※5
	M06Y	Electrical signals	13A×6 ※4 ※6
	M10Y	Electrical signals	13A×10 ※4 ※7
	B15NY	Electric signals	50mA×15
	B15PY	Non-contact system	WEB series connector ※4 In Zone 1 IP67
	B15DY	Electric signals	5mA×15
	P18Y	Pneumatic ports	WEB series connector ※4 IP67
	P14Y	Pneumatic ports	Rc1/4×2
	Lock / unlock sensor ※8		

QC-60D Ordering Information

Master plate	QC-60D	-M-	(Option N)	(Option Y)	(Lock / unlock sensor)
Tool plate	QC-60D	-T-	(Option N)	(Option Y)	
			DXXN No electrical signal	XXXX No option	SX No lock/unlock sensor
			D15N Electrical signals 3A×15※3	D15Y Electrical signals 3A×15※3	SA Lock/unlock sensor A-Type (Customer processes the adaptor plate)
				J16Y Electrical signals 5A×16※4 ※5	SB Lock/unlock sensor B-Type (BL Autotec processes the adaptor plate)
				M06Y Electrical signals 13A×6※4 ※6	
				M10Y Electrical signals 13A×10※4 ※7	
				B15NY Non-contact electric signal block Master side NPN output	
				B15PY Non-contact electric signal block Master side PNP output	
				B15DY Non-contact electric signal block Tool side	
				P18Y pneumatic ports Rc 1/8×4	
				P14Y pneumatic ports Rc 1/4×2	

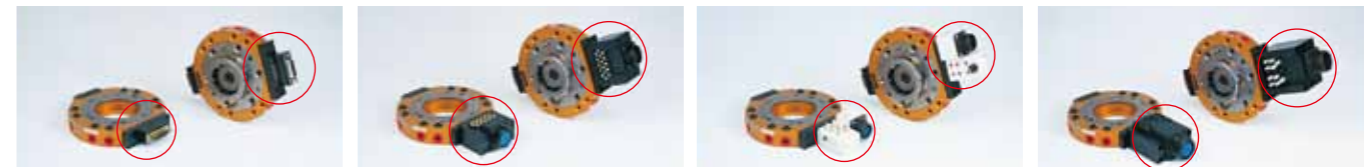
(Note) Electric signal contact block types for QC-60D are shown at follows.
 (Type of electric signal contact block when the Master side is D15N-M: the tool side is D15N-T.)

Main Body Dimensions



Options

Electrical signal contact block



D15Y	3A×15 D-sub 15 contacts (female receptacles)※3 ※ Plug side is DDK, 17 JE-23150-02 (D8A)-CG, or its equivalent.
J16Y	5A×16 (JM connector)※4 ※5 Use JMR2116M-D for the J16Y Master side Use JMR2116F-D for the J16Y Tool side
M06Y	13A×6 (MS connector)※4 ※6 Use D/MS3102A145-6P for the M06Y Master side Use D/MS3102A145-6S for the M06Y Tool side
M10Y	13A×10 (MS connector)※4 ※7 Use D/MS3102A18-1P for the M10Y Master side Use D/MS3102A18-1S for the M10Y Tool side

Non-contact electric signal block



B15NY, B15PY	(Master side only)
B15DY	(Tool side only)
B15NY	NPN output
B15PY	PNP output
Receptacle connector: WEBR-21195-D for B15NY and B15PY Receptacle connector: WEBR-2116F5-D for B15DY	

Pneumatic ports



P18Y	Rc1/8×4
P14Y	Rc1/4×2

Lock/unlock sensor



SA, SB	Two built-in proximity switches verify piston position, thus reliably checking the lock and unlock status.
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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 17JE-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 .
 ※6 Allowable current is total 43.6A for connector.
 ※7 Allowable current is total 57.2A for connector.
 ※8 An option is available on the electric signal contact block (J16Y, M10Y) to connect the Lock/unlock proximity switch signal. Please contact us for additional information.

Next-Generation Robots
 ZEUS
 GIGA
 Automatic Tool Changer
 1kg
 5kg
 10kg
 20kg
 40kg
 60kg
 70kg
 100kg
 150kg
 220kg
 300kg
 Press Handling Specification
 100kg
 Spot-Welding Gun-Changer
 300kg
 Options
 Wire-Saving module / Contact Block
 Non-contact electric signal block
 A mechanical safety valve prevents Toolplate drops
 List
 Product Overview
 Rotary Joint
 PIV-ZERO Series
 Wrist Compliance
 ACCORDANCE WORK-FLEXIBILITY
 Couple Joint
 CJ2