

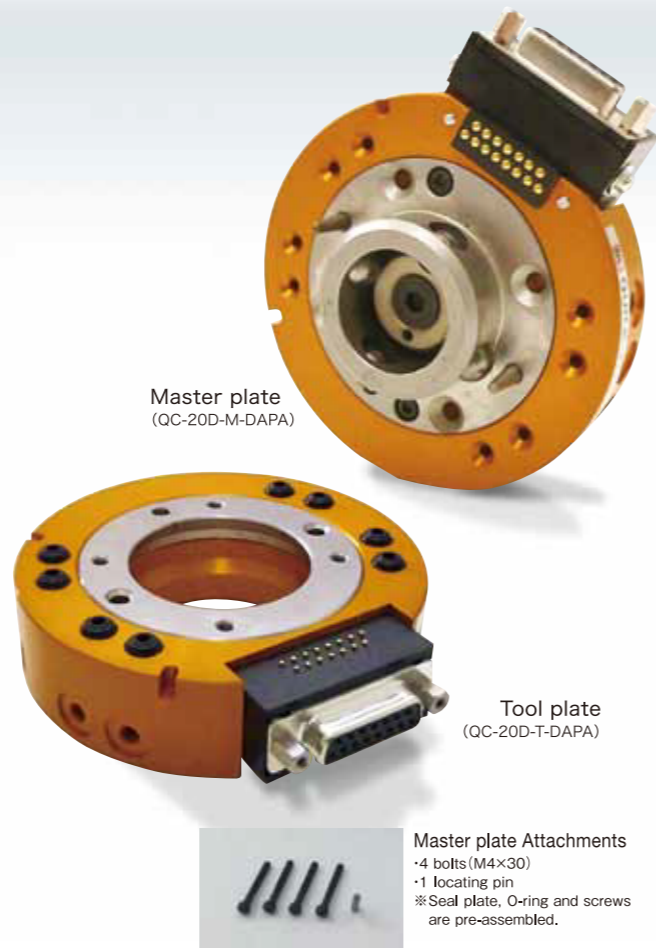
# QC-20D

## 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 (QC-20D-M-DAPA)

Tool plate (QC-20D-T-DAPA)

Master plate Attachments  
 - 4 bolts (M4×30)  
 - 1 locating pin  
 ※ Seal plate, O-ring and screws are pre-assembled.

## Specifications

Main Body		
Load capacity (rated load)		196N(20kg)
Positional repeatability		±0.015mm
Allowable dynamic moment	Bending direction (Tx, Ty)	113.6N·m(1,160kgf·cm)
	Twisting direction (Tz)	156.8N·m(1,600kgf·cm)
Coupling force (with air pressure of 0.49MPa) ※1		2,059N(210kgf)
Materials	Frame	Aluminum alloy
	Lock/unlock mechanism	Stainless steel
Overall dimension (when coupled)		φ90×H45.4mm
Weight (Main body)	Master plate	515g
	Tool plate	355g
Self-separating mechanism		Ball-locking mechanism
Required air pressure		0.39~0.68MPa(4~7kgf/cm <sup>2</sup> )
Allowable temty perature and humidity ranges		0~50°C, 35~90%(Non-condensing)

Types			
Utilities	DXPA	Electrical signals	None
		Pneumatic ports	M5×8
	DXPB	Electrical signals	None
		Pneumatic ports	M5×12
	DAPA	Electrical signals Max3A DC50V Probe contact	3A×15 (D-sub connector) ※2
		Pneumatic ports	M5×8
	DAPB	Electrical signals Max3A DC50V Probe contact	3A×15 (D-sub connector) ※2
		Pneumatic ports	M5×12
	DBPA	Electrical signals Max3A DC50V Probe contact	3A×30 (D-sub connector) ※2
		Pneumatic ports	M5×8

## QC-20D Ordering Information

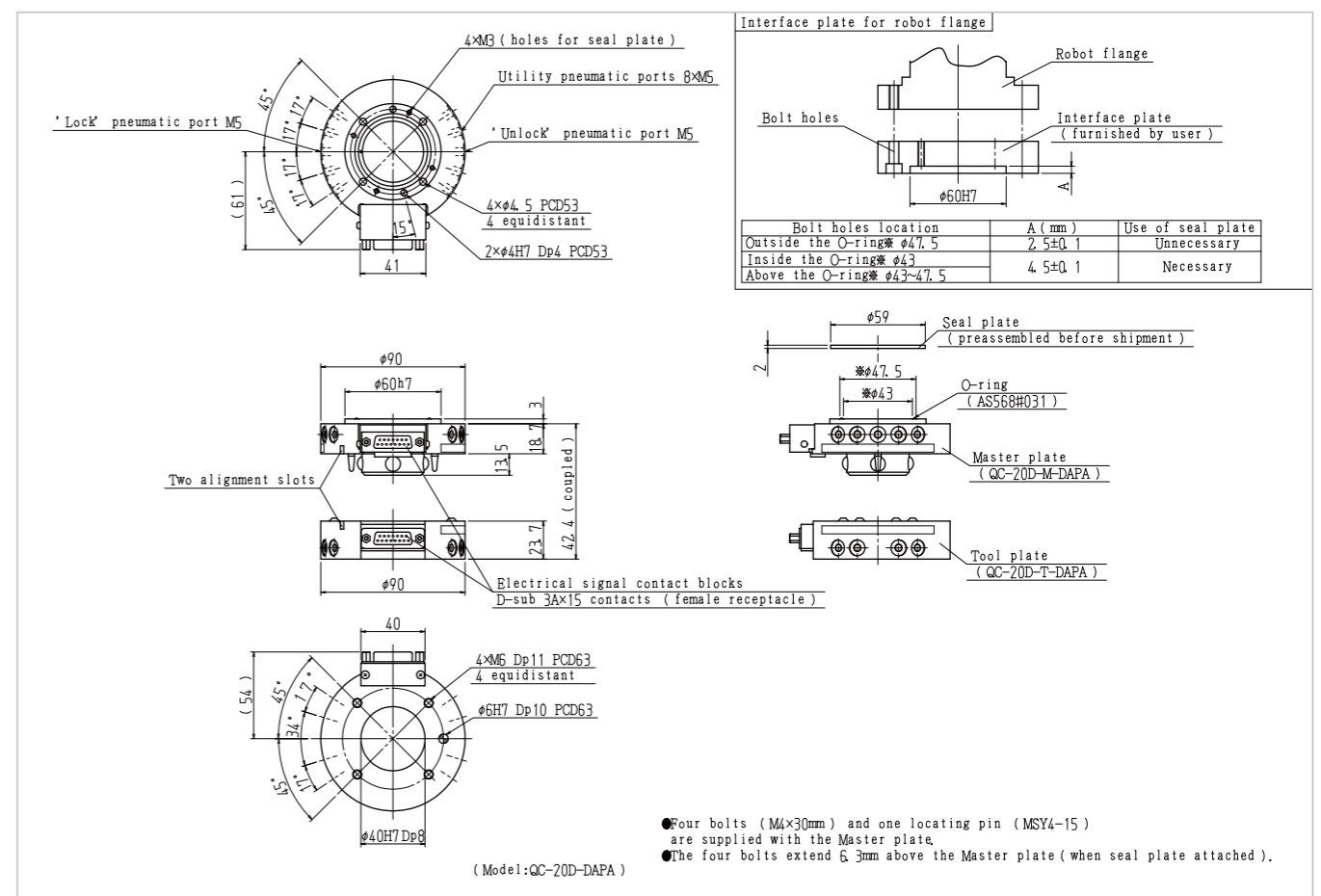
Master plate **QC-20D -M-** (Type)

Tool plate **QC-20D -T-** (Type)

DXPA	No electrical signal	Pneumatic ports M5×8
DXPB	No electrical signal	Pneumatic ports M5×12
DAPA	Electrical signals 3A×15※2	Pneumatic ports M5×8
DAPB	Electrical signals 3A×15※2	Pneumatic ports M5×12
DBPA	Electrical signals 3A×30※2	Pneumatic ports M5×8

(Note) Please order D15N-M for the master side and model D15N-T for the tool side when ordering a contact block replacement.

## Main Body Dimensions



## Types

### No electrical signal



**DXPA**  
Pneumatic ports M5×8



**DXPB**  
Pneumatic ports M5×12

### Electrical signals



**DAPA**  
3A×15 D-Sub 15 contacts (female receptacle)※2  
Pneumatic ports M5×8



**DAPB**  
3A×15 D-Sub 15 contacts (female receptacle)※2  
Pneumatic ports M15×12



**DBPA**  
3A×30 D-Sub 15 contacts (female receptacle)※2  
Pneumatic ports M5×8

※1 The connector plug DDK-17JE-23 150-02 (DBA)-CG, or its equivalent, is user-provided.

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

※1 Coupling force is the force to achieve specified repeatability. Coupling will be maintained until unlock pressure is applied or device is damaged, contacts male screw plug M2.6)  
 ※2. Please provide a 17JE-23150-02(DBA)-CG plug or its equivalent.(D-sub plugs are RoHS.)

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 Tool plate drops  
 Option List  
 Product Overview  
 Rotary Joint  
 PN-ZERO Series  
 Wrist Compliancer  
 FCC DEVICE / LEM-IP FCC DEVICE  
 Couple Joint  
 CJ2