

Quick changer

- Easy replacement of the EOAT on the robot.
- Suitable also with vacuum ports.
- Avoids mistakes in pneumatic and electrical connections.
- 4, 8, 10 or 12 pneumatic connections.
- 15 electrical connections.
- The two parts (robot side and gripper side) are supplied separately.
- The robot side QCX unit can also cut off the compressed air with a safety air valve.
- The robot side QCY unit cuts off the compressed air automatically during disengagement.
- Optional LOQC lock unit.

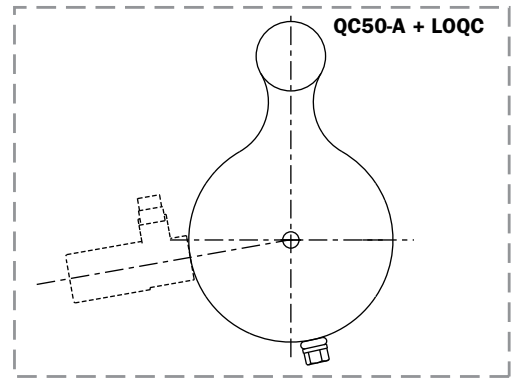
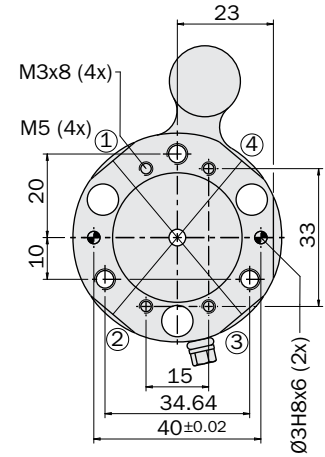
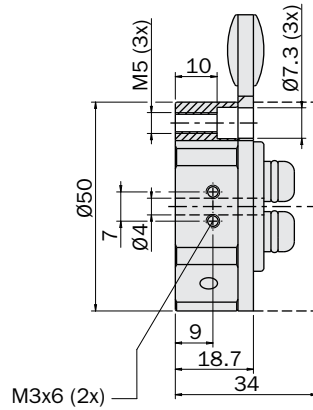
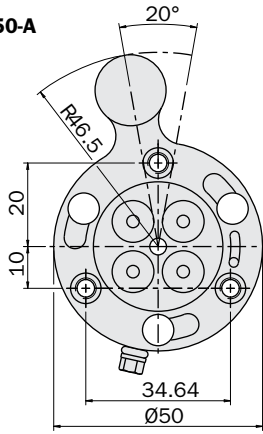


		50	90	150	160	200
Medium		Compressed air in compliance with ISO 8573-1:2010 [7:4:4]				
Pressure range		-1 ÷ 6 bar				
Temperature range		5 ÷ 60 °C				
Robot side quick changer	QC...-A	QC50-A (103 g)	QC90-A (318 g)	QC150-A (1123 g)	QC160-A (1200 g)	QC200-A (2640 g)
Robot side quick changer with safety valve	QCX...-A	-	QCX90-A (595 g)	QCX150-A (2200 g)	QCX160-A (2200 g)	QCX200-A (4900 g)
Robot side quick changer with automatic valve	QCY...-A	QCY50-A (133 g)	QCY90-A (350 g)	QCY150-A (1180 g)	-	QCY200-A (2700 g)
Universal gripper side quick changer	QC...-B	QC50-B (65 g)	QC90-B (227 g)	QC150-B (827 g)	QC160-B (900 g)	QC200-B (1890 g)
Quick changer on gripper side, with flange	QCP...-B	QCP50-B (110 g)	QCP90-B (315 g)	QCP150-B (1090 g)	QCP160-B (1150 g)	QCP200-B (2400 g)
Gripper side quick changer, specific for QCY	QCY...-B	-	-	QCY150-B (862 g)	-	QCY200-B (1875 g)

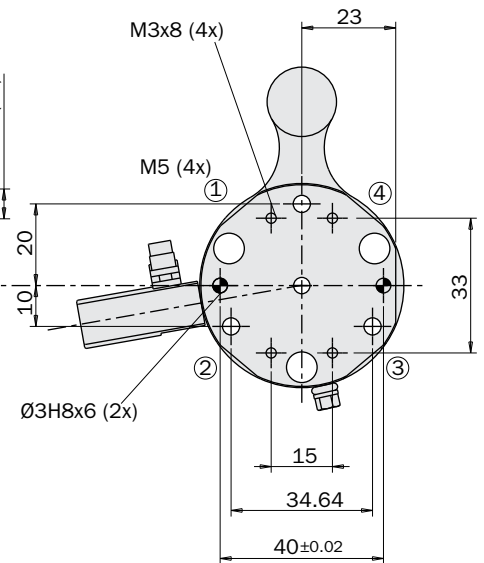
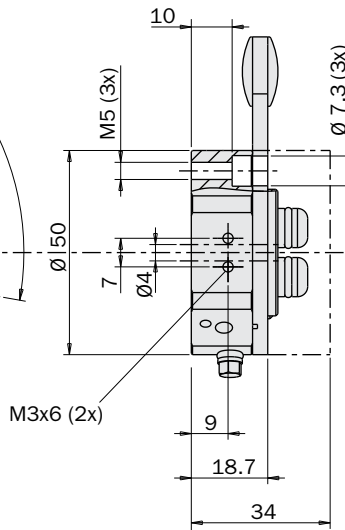
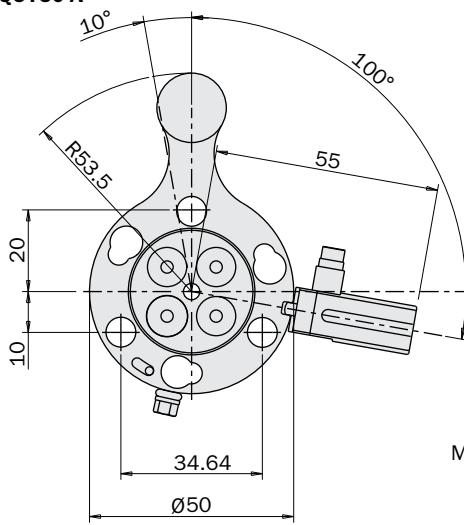
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Dimensions (mm)

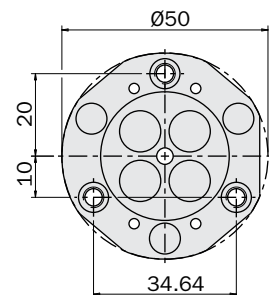
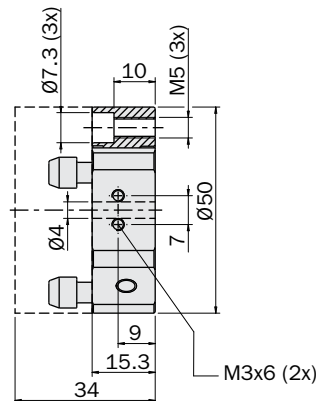
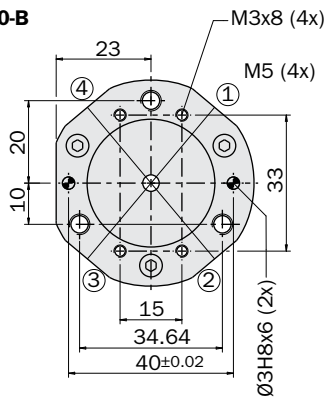
QC50-A



QCY50-A



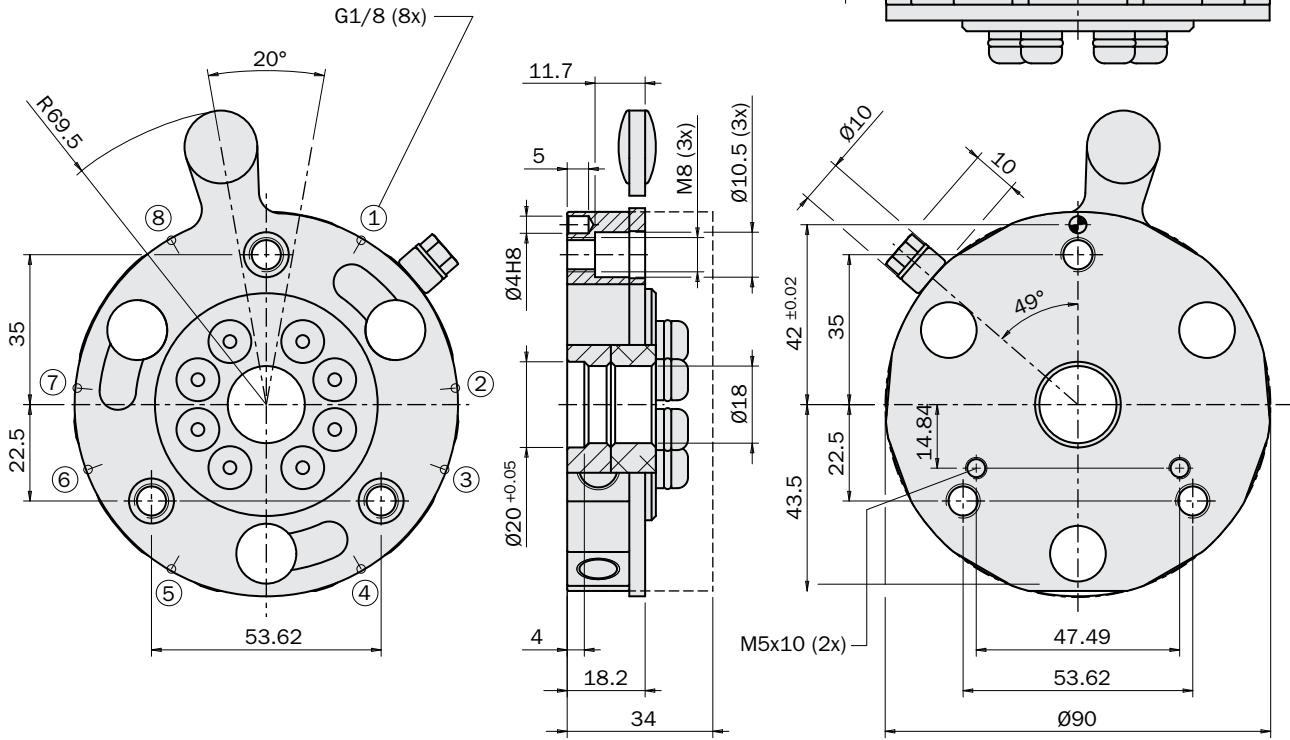
QC50-B



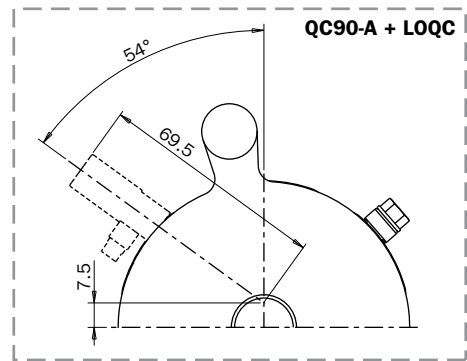
FIRST ANGLE PROJECTION

Dimensions (mm)

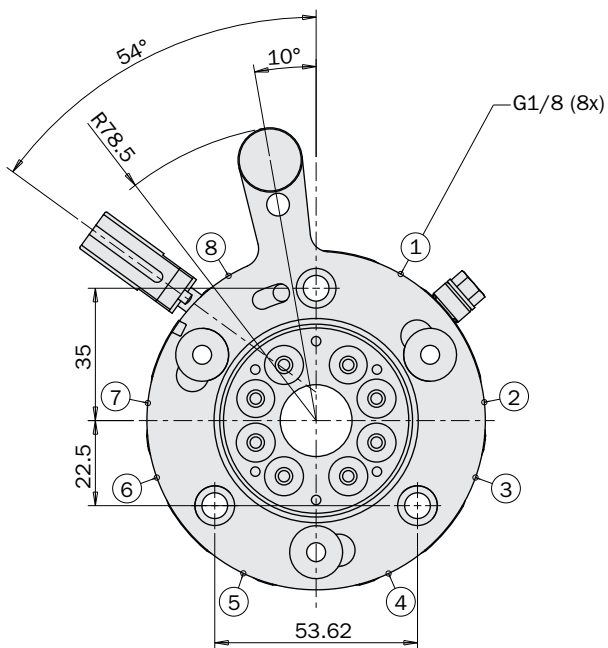
QC90-A



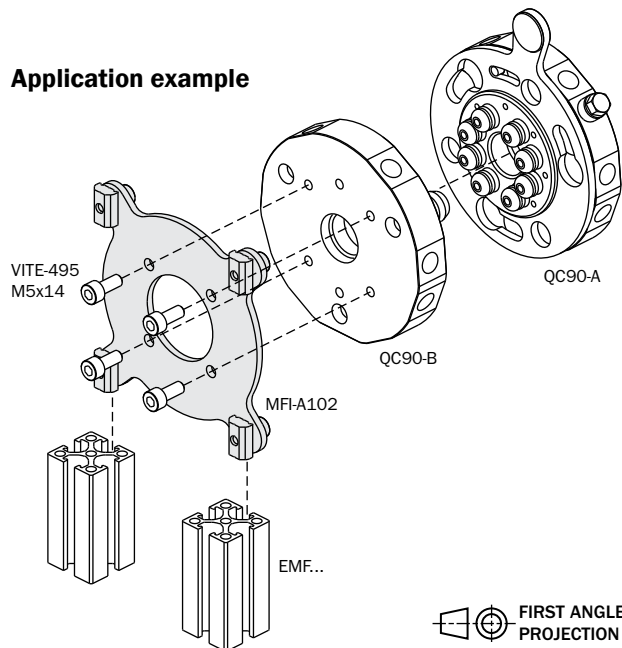
FIRST ANGLE PROJECTION



QCY90-A



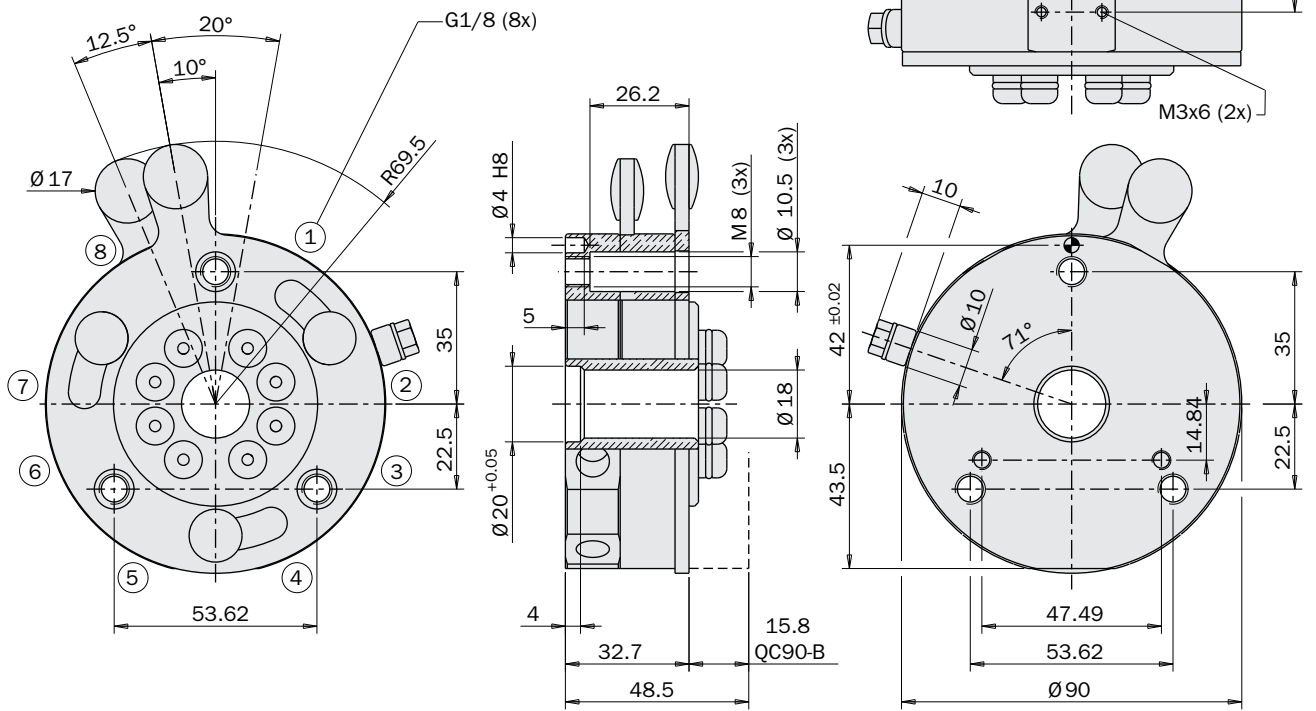
Application example



FIRST ANGLE PROJECTION

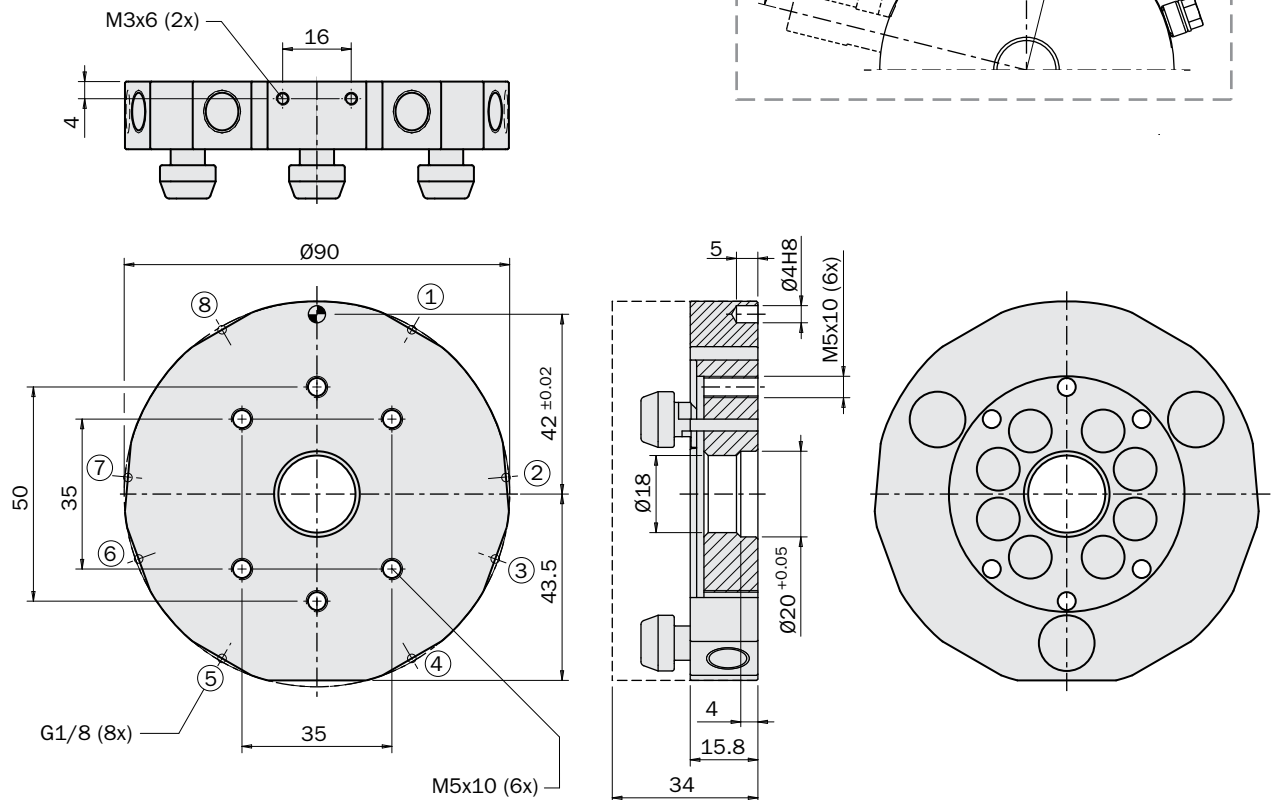
Dimensions (mm)

QCX90-A



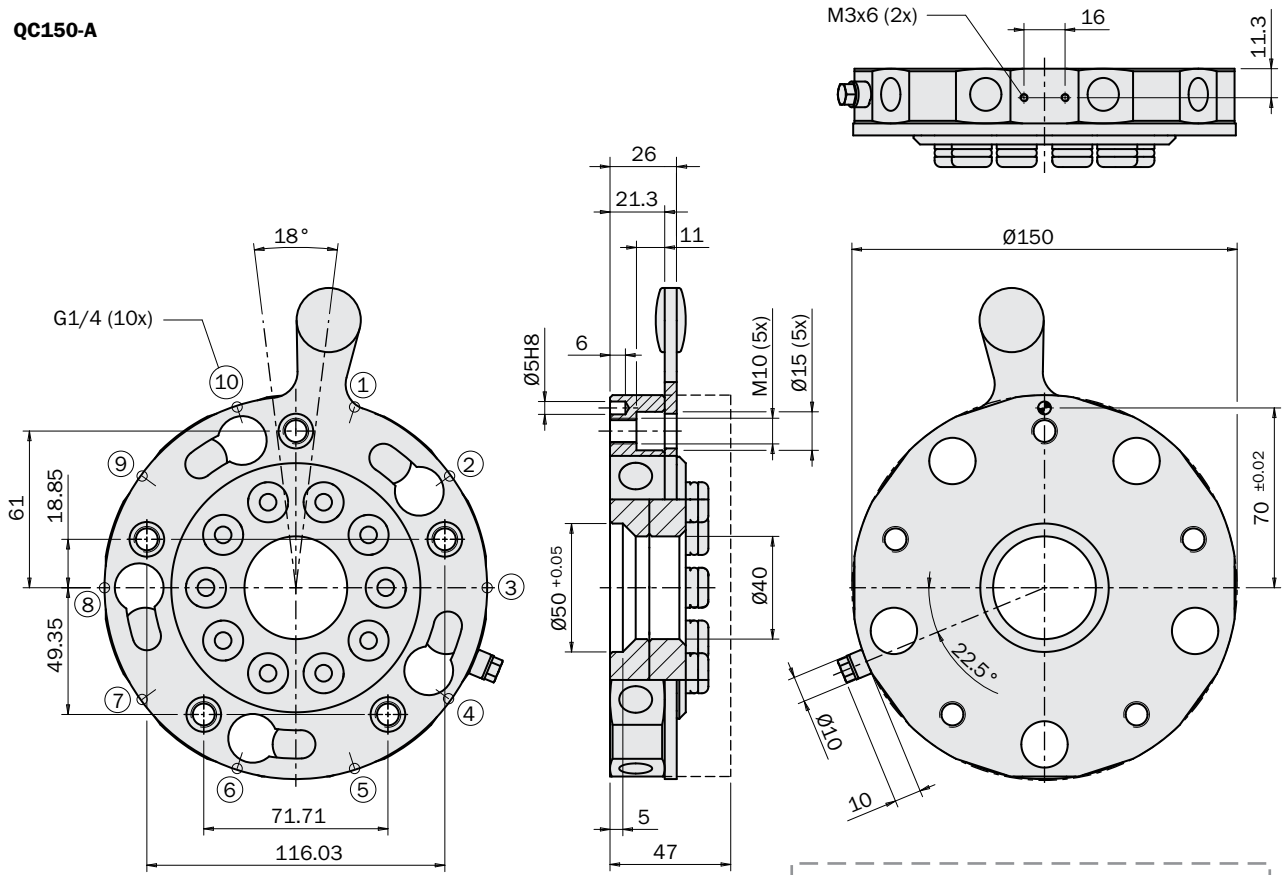
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QC90-B

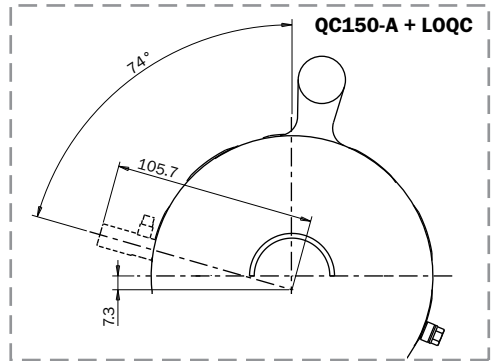
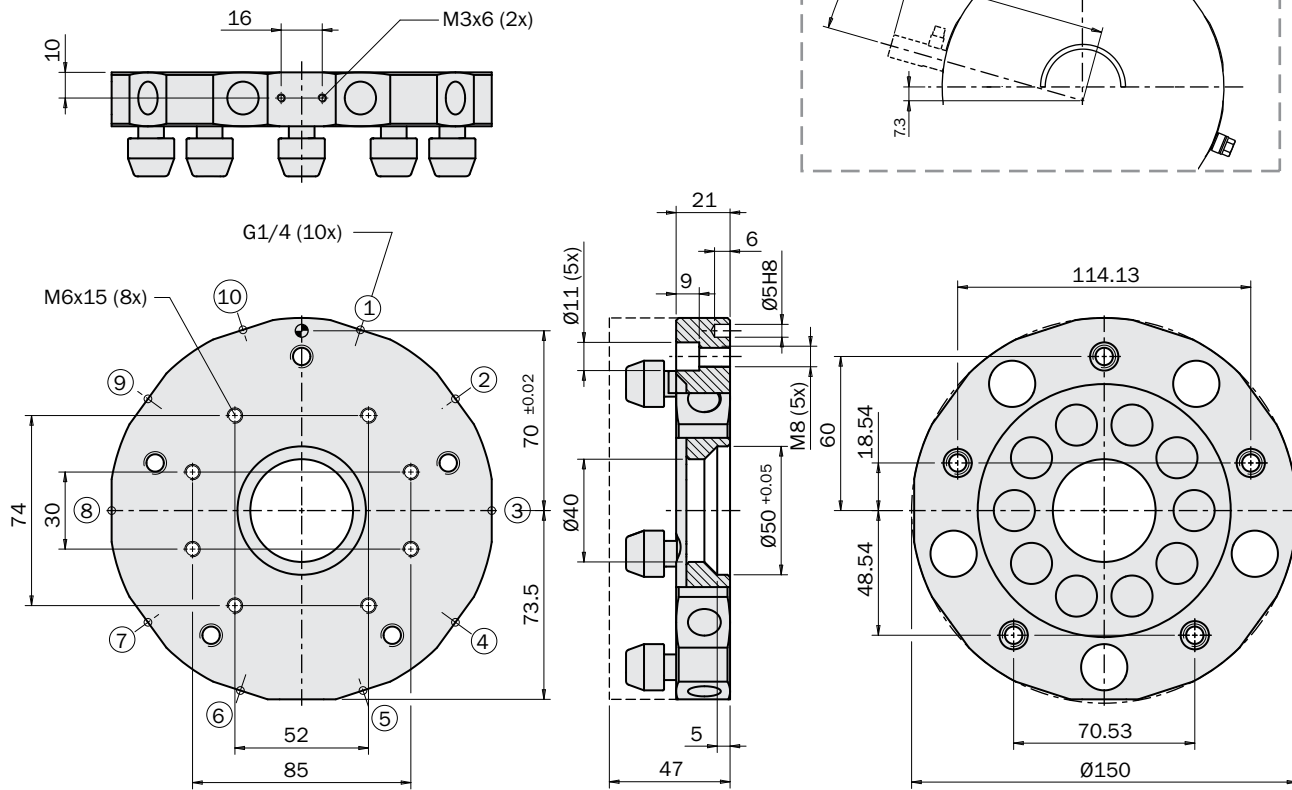


Dimensions (mm)

QC150-A



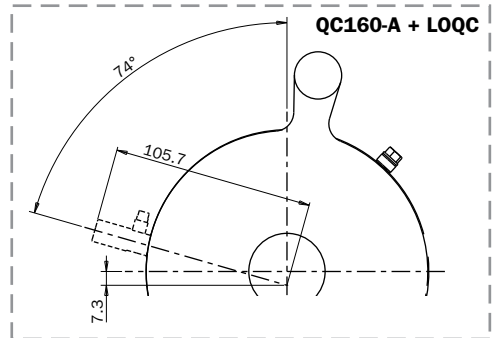
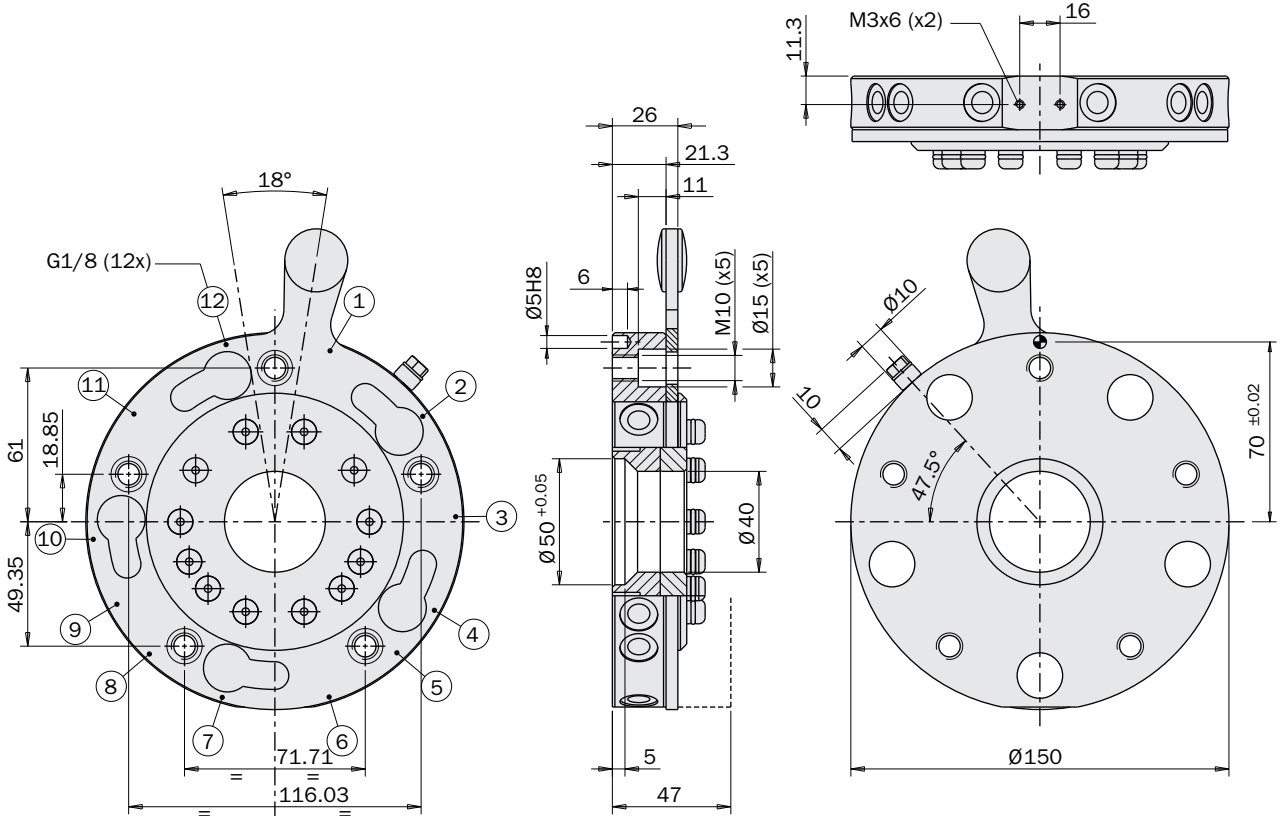
QC150-B / QCY150-B



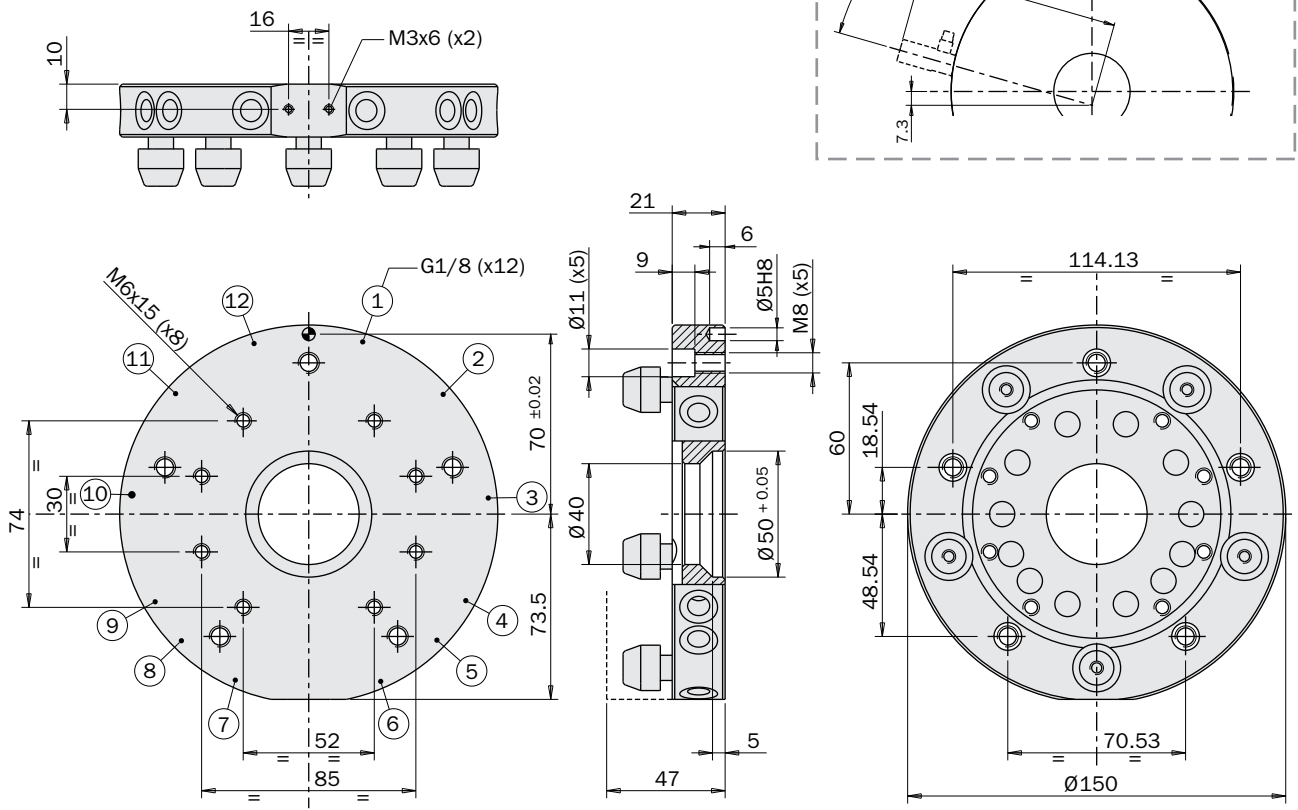
FIRST ANGLE PROJECTION

Dimensions (mm)

QC160-A



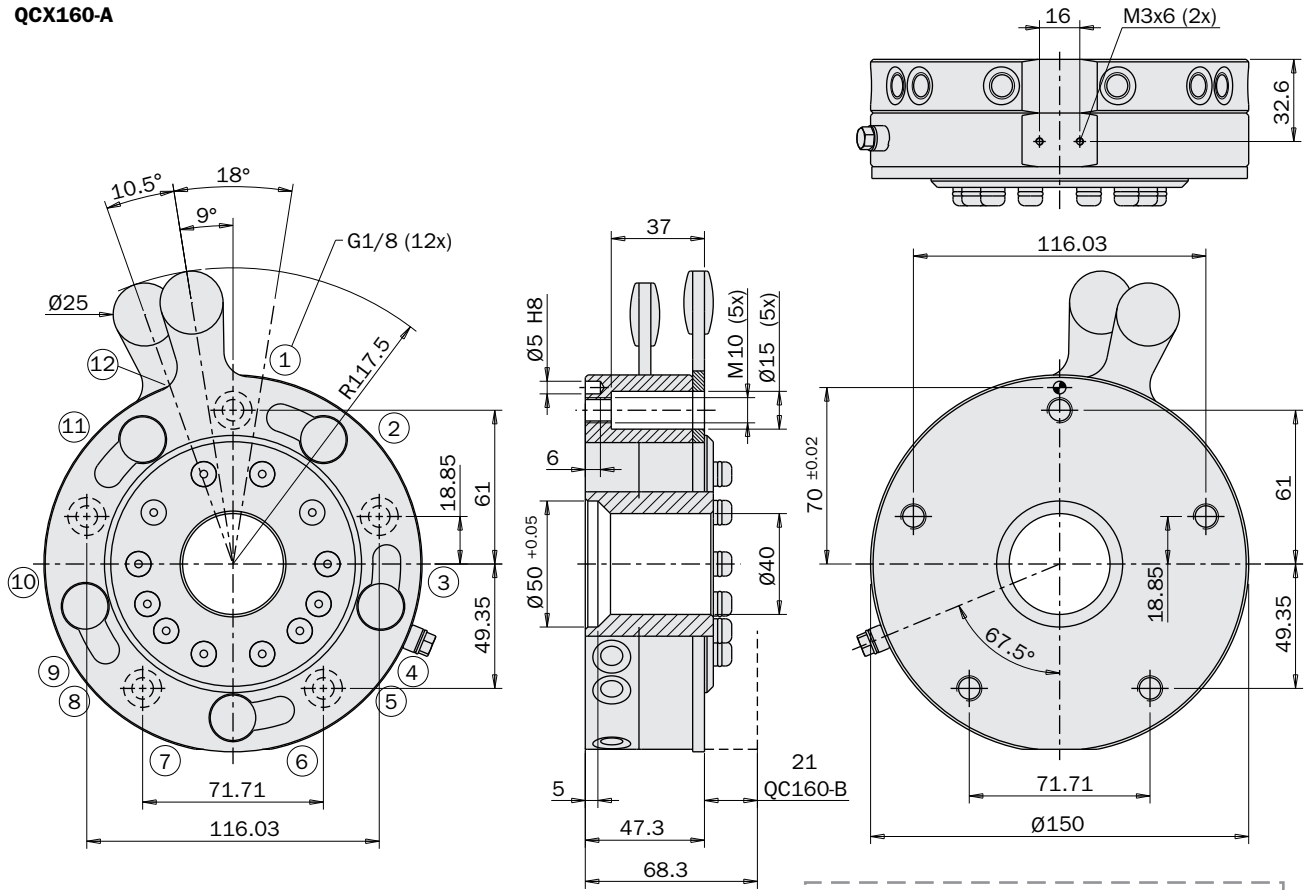
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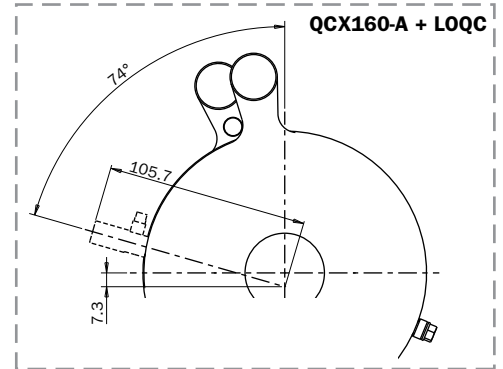
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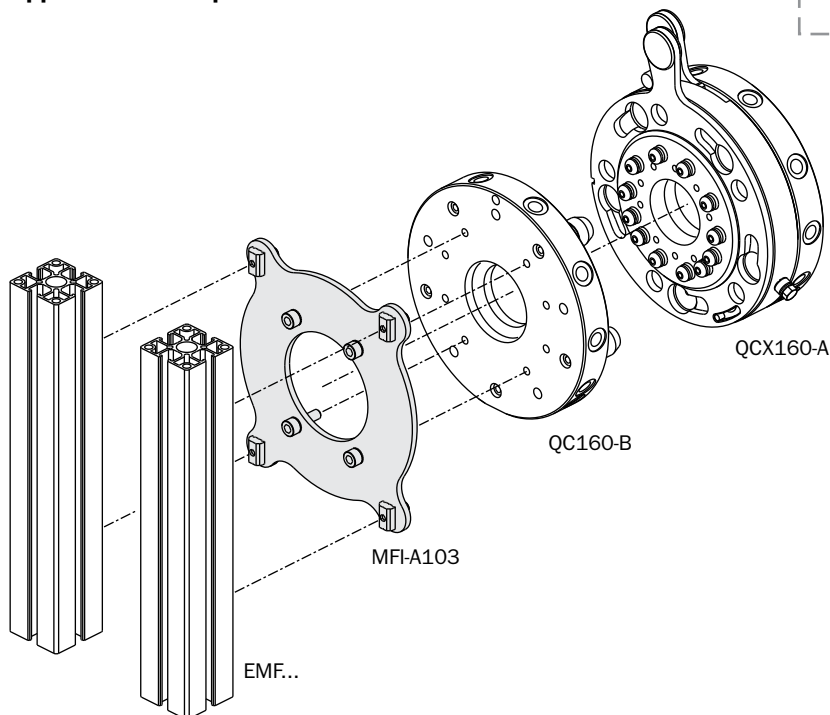
QCX160-A



FIRST ANGLE PROJECTION

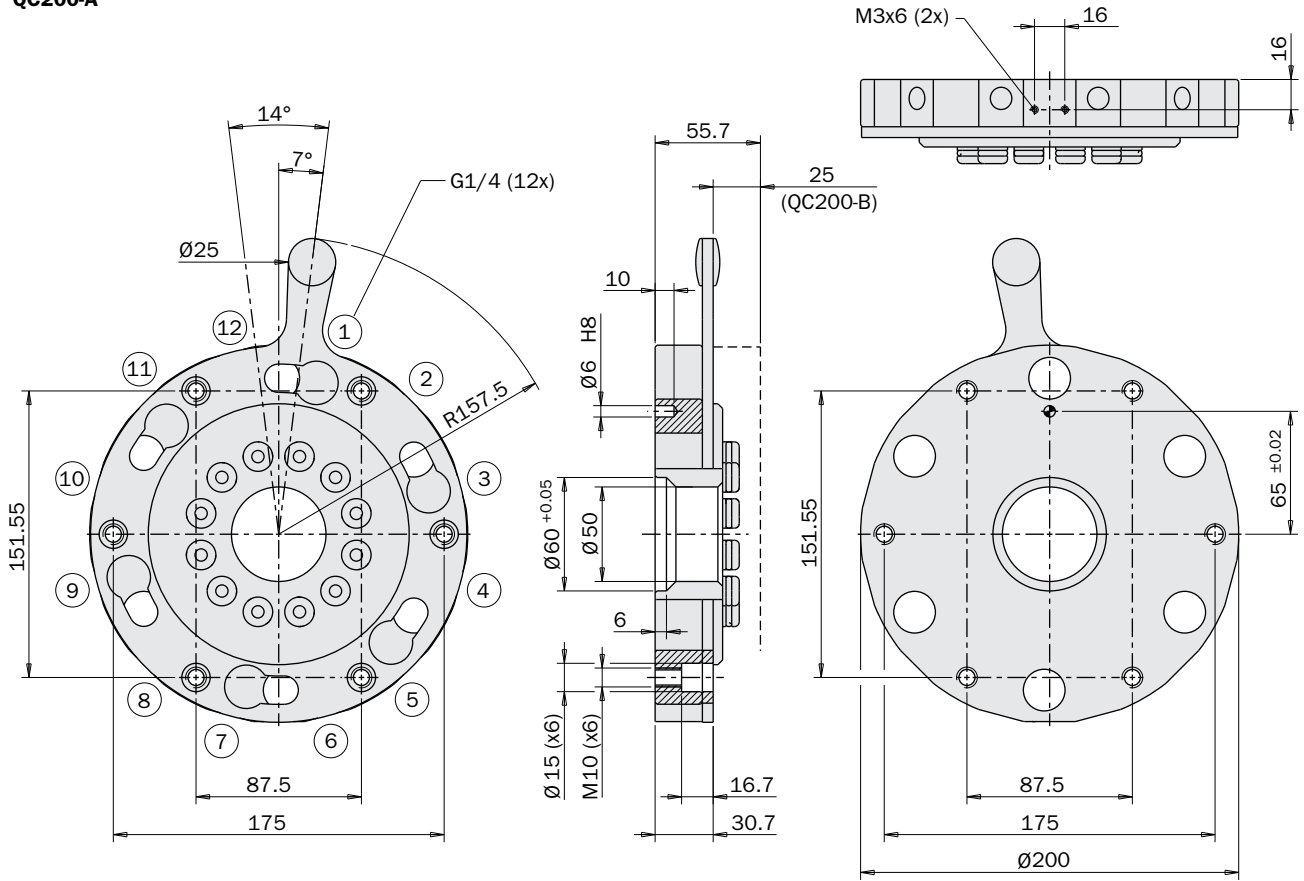


Application example

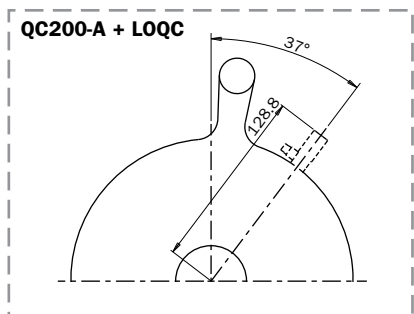
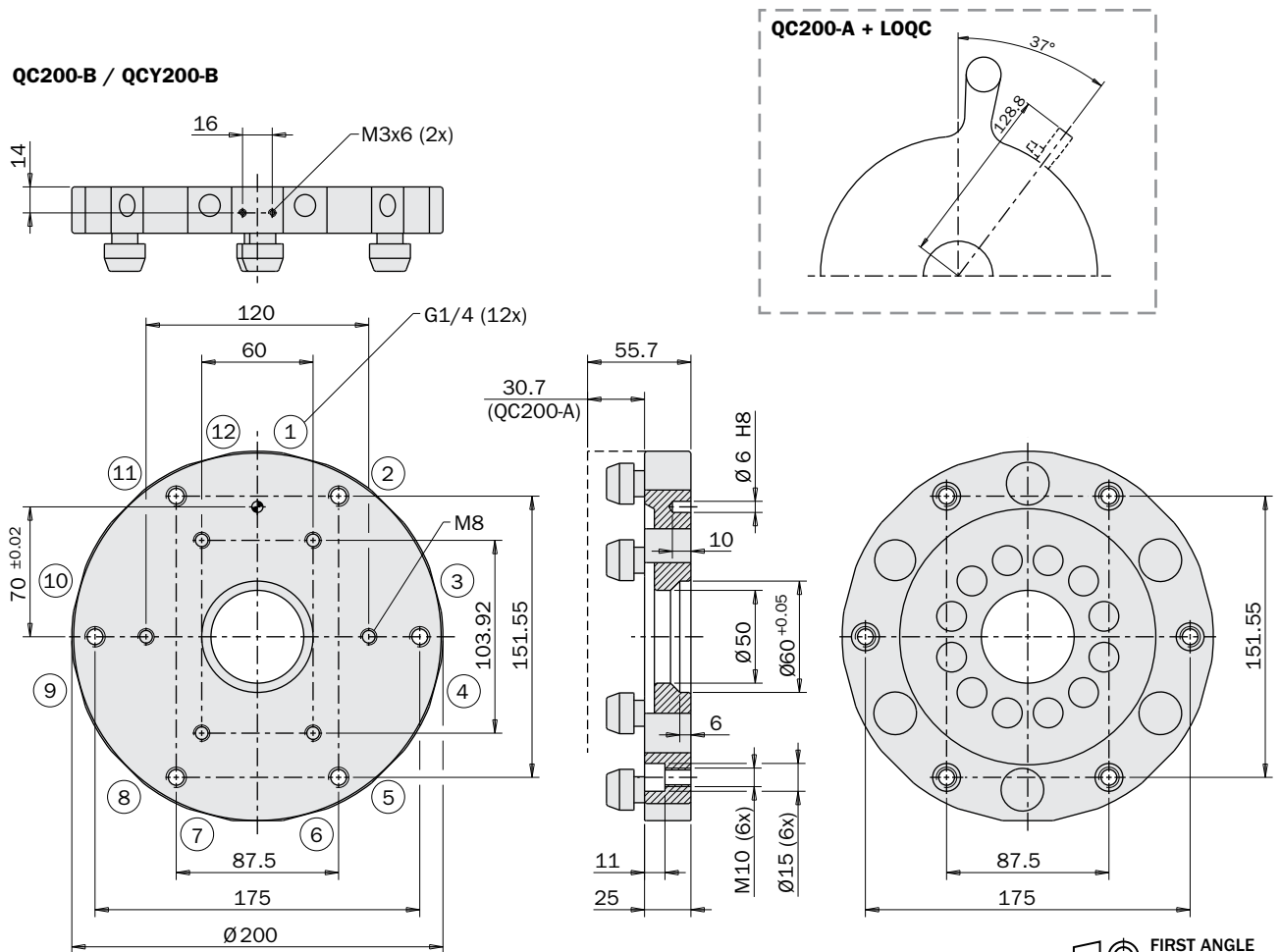


Dimensions (mm)

QC200-A



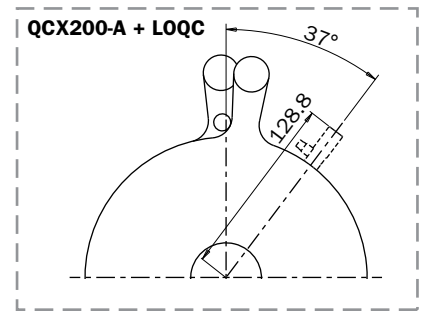
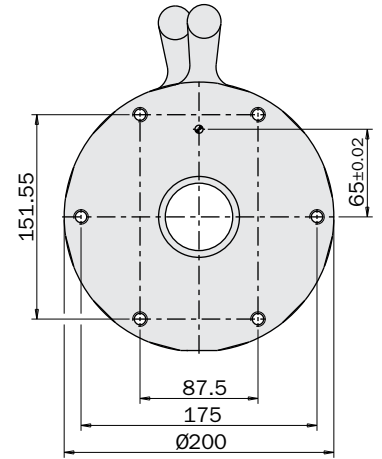
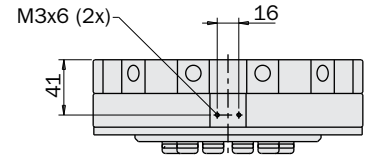
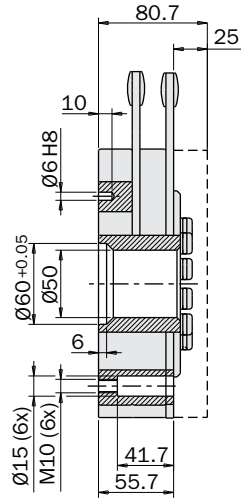
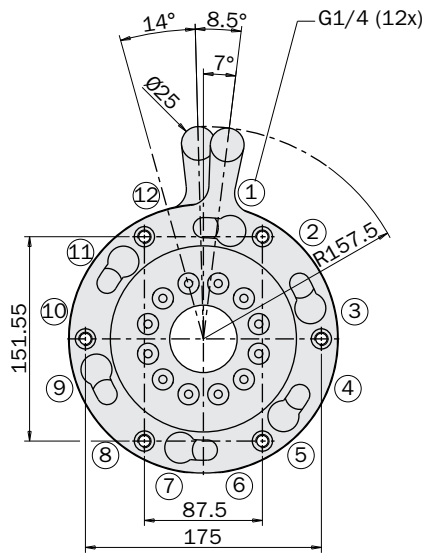
QC200-B / QCY200-B



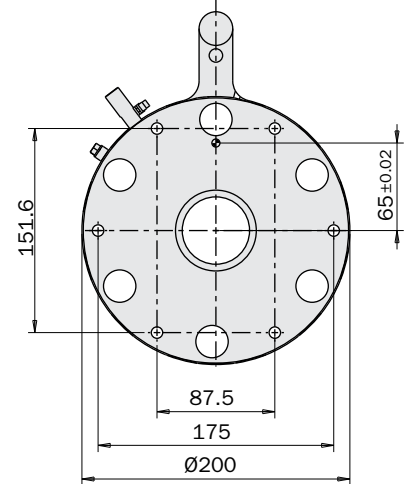
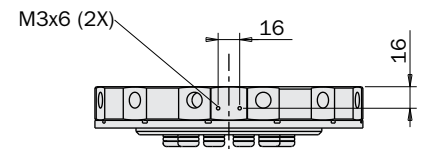
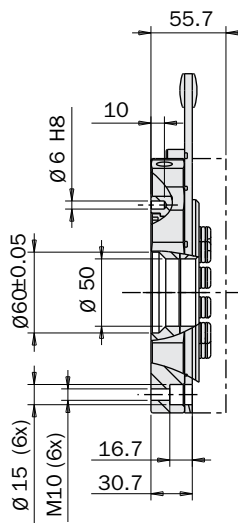
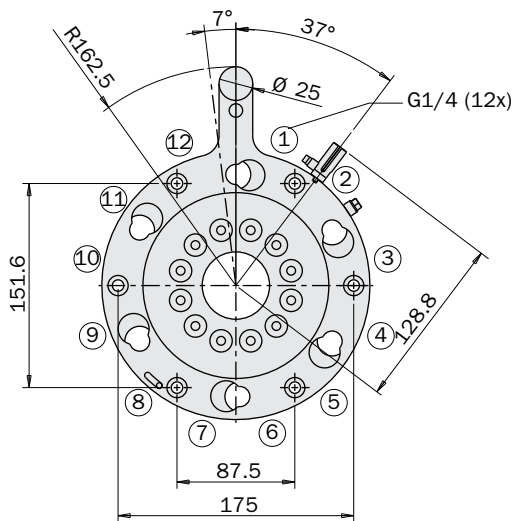
FIRST ANGLE PROJECTION

Dimensions (mm)

QCX200-A



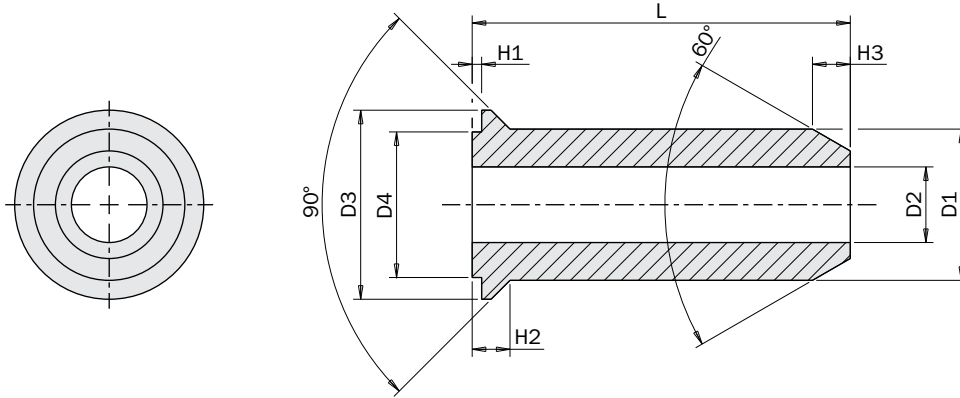
QCY200-A



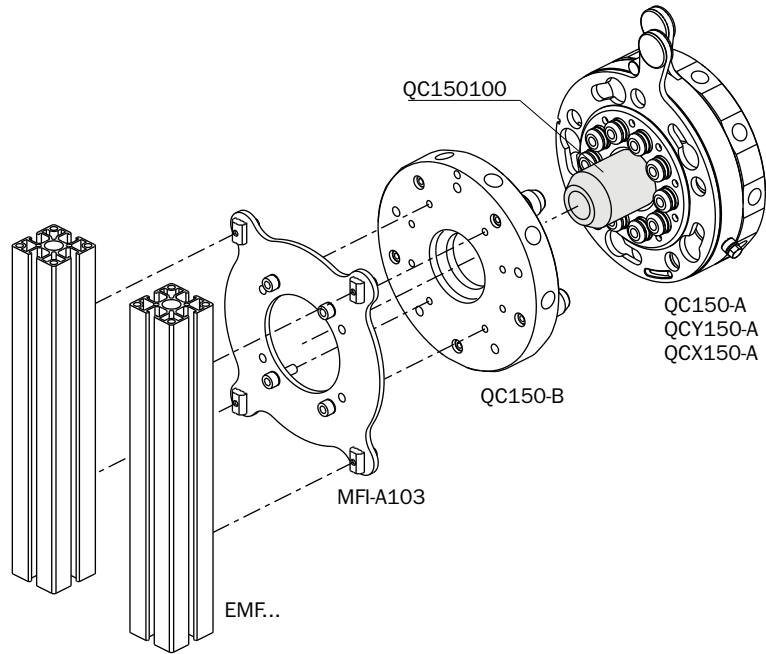
FIRST ANGLE PROJECTION

Centering pin

- To be positioned on the robot side.
- It helps the manual centering of heavy EOATs.

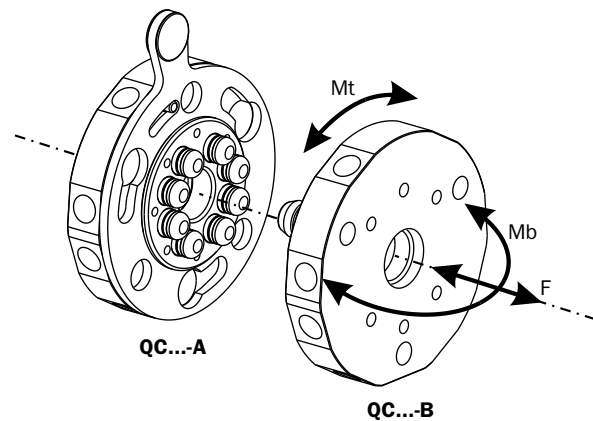


	QC9065	QC150100	QC200120
L	65	100	120
H1	2	2.5	3
H2	5	10	11
H3	5	10	15
D1	Ø18	Ø40	Ø50
D2	Ø8	Ø20	Ø25
D3	Ø20	Ø50	Ø60
D4	Ø14	Ø38.5	Ø43.5



Safety loads

	QC50	QC90	QC150	QC160	QC200
F	350 N	1400 N	3000 N	3000 N	9000 N
Mt	30 Nm	180 Nm	600 Nm	600 Nm	2000 Nm
Mb	15 Nm	100 Nm	350 Nm	350 Nm	1350 Nm
m (*)	5 kg	20 kg	50 kg	50 kg	150 kg

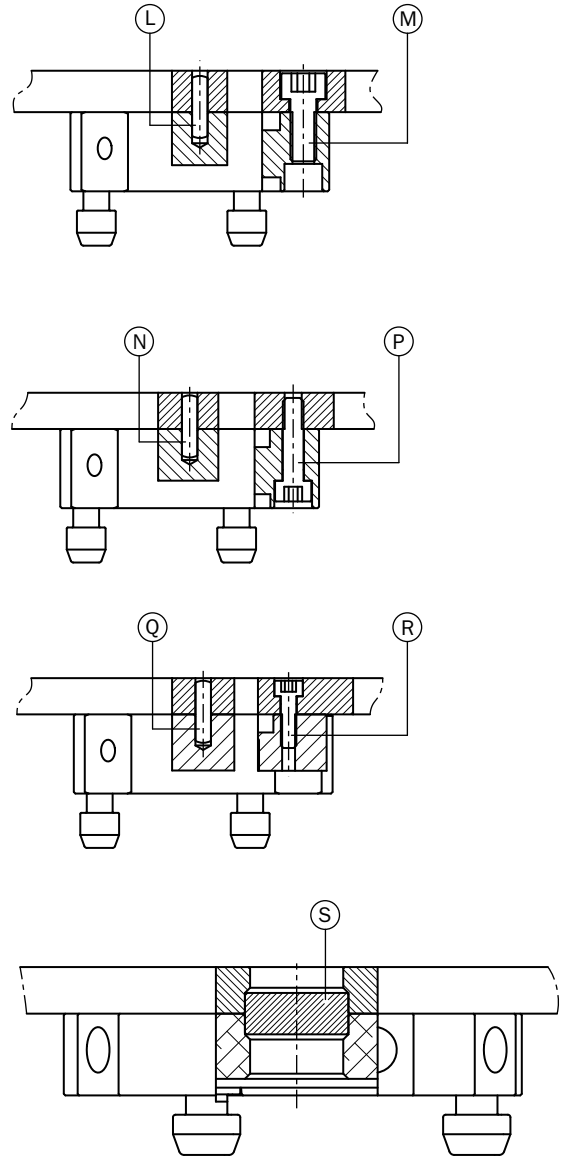
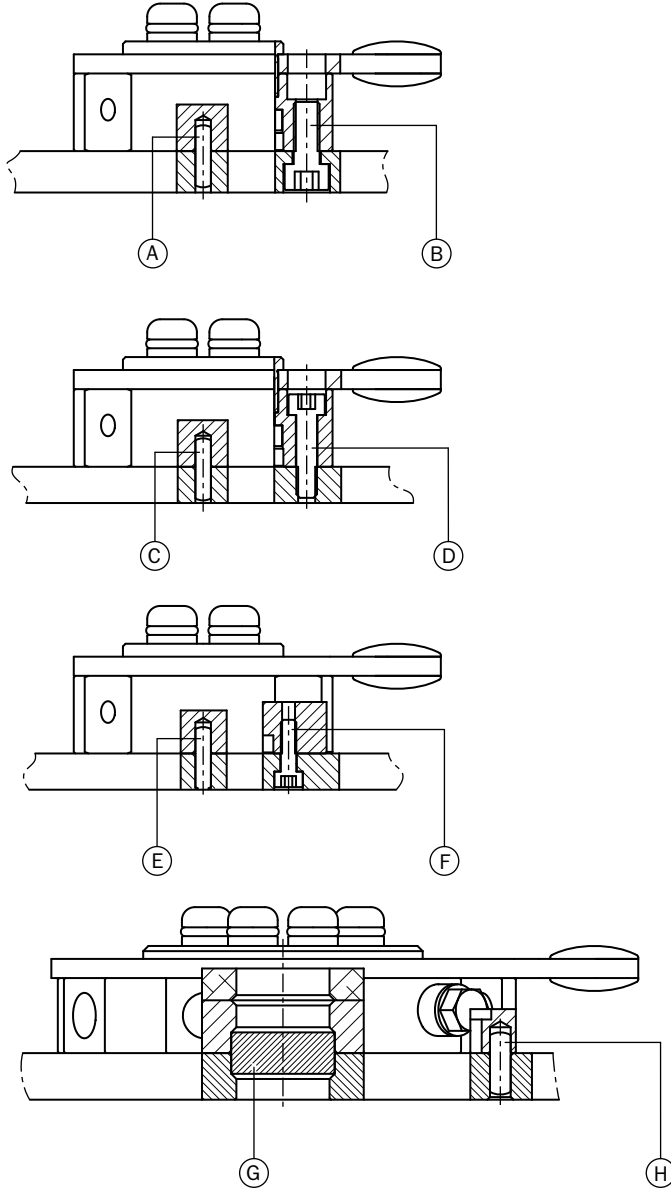


(*) Maximum recommended load

Fastening

Robot side

Gripper side



	QC50-A QCY50-A	QC90-A QCX90-A QCY90-A	QC150-A QCX150-A QCY150-A	QC160-A QCX160-A	QC200-A QCX200-A QCY200-A
A	Ø3 (2x)	-	-	-	-
B	M5 (3x)	M8 (3x)	M10 (5x)	M10 (5x)	M10 (6x)
C	Ø3 (2x)	-	-	-	-
D	M4 (3x)	M6 (3x)	M8 (5x)	M8 (5x)	M8 (6x)
E	Ø3 (2x)	-	-	-	-
F	M3 (4x)	M5 (2x)	-	-	-
G	-	Ø20	Ø50	Ø50	Ø60
H	-	Ø4 (1x)	Ø5 (1x)	-	Ø6 (1x)

	QC50-B	QC90-B	QC150-B QCY150-B	QC160-B	QC200-B QCY200-B
L	Ø3 (2x)	-	-	-	Ø6 (1x)
M	M5 (3x)	-	M8 (5x)	M8 (5x)	M10 (6x)
N	Ø3 (2x)	-	-	-	-
P	M4 (3x)	-	M6 (5x)	M6 (5x)	M8 (6x)
Q	Ø3 (2x)	-	-	-	-
R	M3 (4x)	M5 (6x)	M6 (8x)	M6 (8x)	M8 (6x)
S	-	Ø20	Ø50	Ø50	Ø60

QCX

Robot side quick changer with safety valve

QCX is equipped with an integrated air valve, which automatically closes the compressed air (or vacuum) flow before the system is completely disengaged (4).

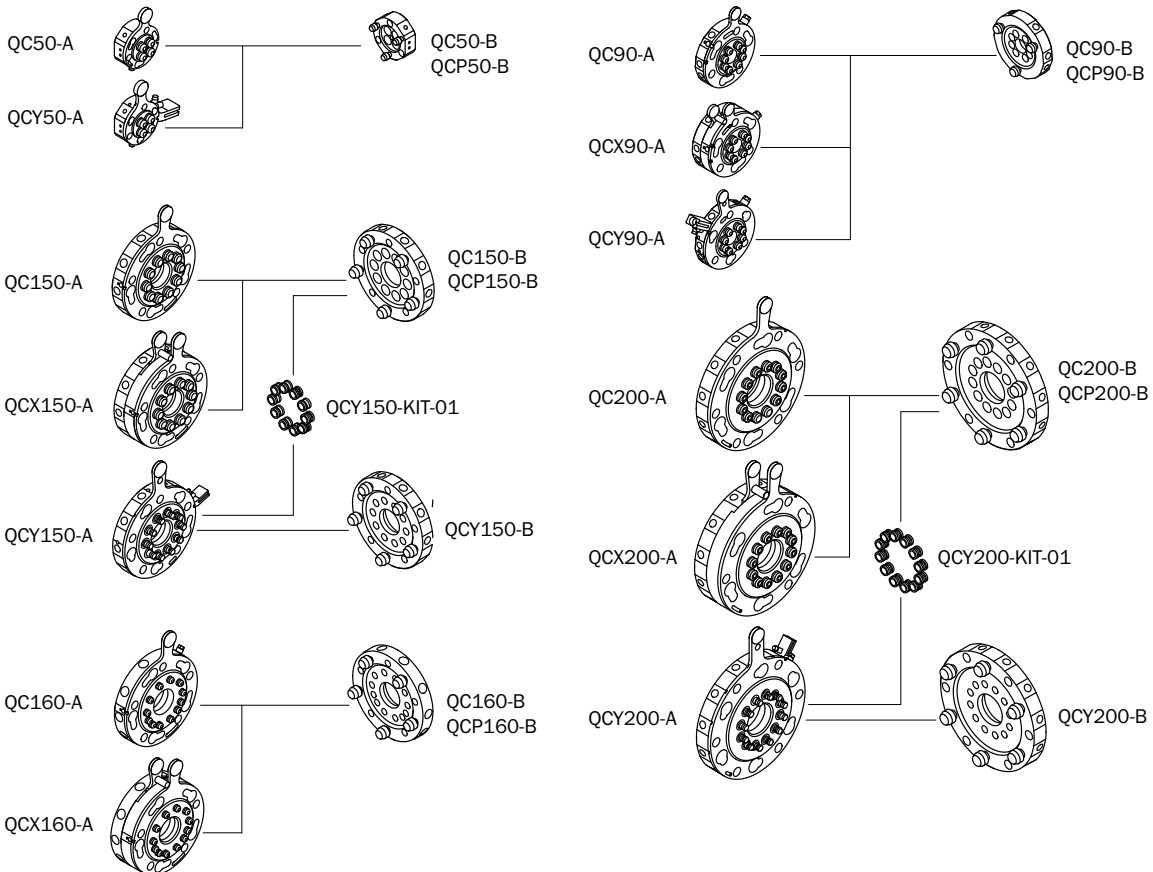
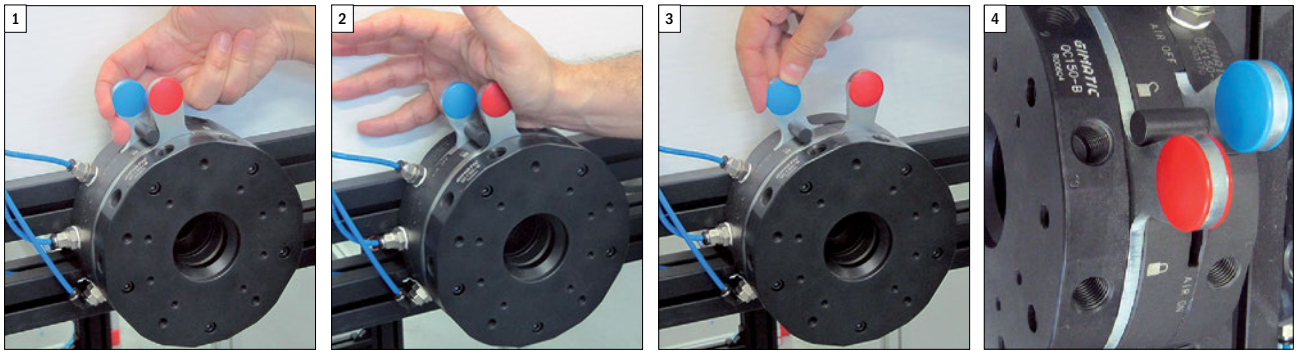
It is not possible to open the air flow, if the flange is not engaged (1).

The red handle disengages the flange, but also move the blue handle by the black pin which closes the air (2).

When engaged the air flow can be controlled (on/off) by the blue handle (3).

This rotating tap valve solves all the problems of ball valve systems: the high pushing force necessary for engaging and the uncontrolled movements of the actuators when disengaging.

QCX perfectly fit with QC...-B and it has the same mounting pattern of a QC...-A, but with a larger thickness.



QCY

Robot side quick changer with automatic valve

The QCY features a built-in air valve, which automatically cuts off the compressed air flow (or vacuum) before the system is completely disengaged.

The opening of the compressed air flow (or vacuum) is also automatic and follows the complete engagement.

Therefore, unlike the QCX, a single handle is sufficient. This reduces the dimensions of the QCY which is interchangeable with the QC...-A and compatible with the QC...-B.

Also this valve is with rotating tap and therefore does not require a high pushing force for the engagement and does not cause uncontrolled movements during the disengagement. An exhaust circuit connects the pneumatic tools on the QC...-B with the external atmosphere before the disengagement is completed.

QCY-KIT

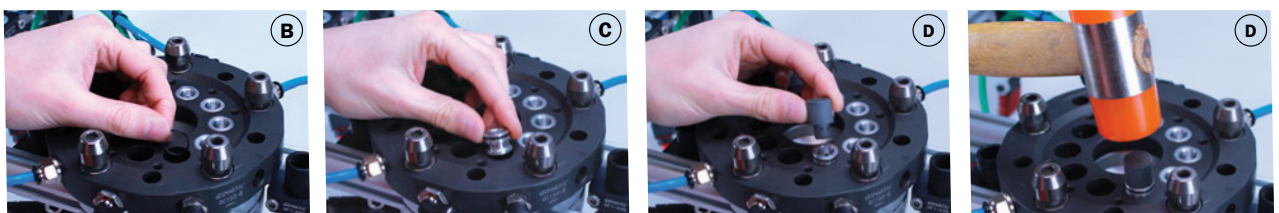
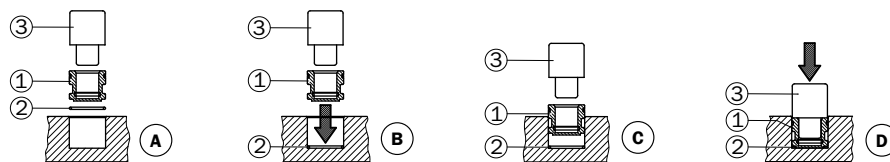
The transformation KIT makes the QC150-B and QC200-B models compatible with the new QCY150-A and QCY200-A quick changers.

ATTENTION: the QC...-B will no longer be compatible with the QC...-A and QCX...-A models after assembling the transformation KIT.

QCY...-A	QC...-B	KIT
QCY150-A	QC150-B, QCP150-B	QCY150-KIT-01
QCY200-A	QC200-B, QCP200-B	QCY200-KIT-01

Assembly procedure:

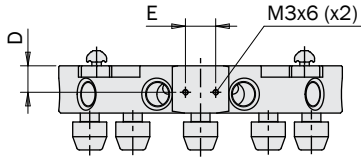
- Place the EOAT on a surface that ensures its stability.
- Clean the holes of the QC...-B from the presence of any grease.
- Introduce the o-rings (2) present in the KIT into each holes of the QC...-B, making sure that they are inserted fully (as shown in the Pic. B).
- Insert the reduction bushing (1) with the open side facing up on the hole of the QC...-B (as shown in the Pic. C).
- Place the insertion pin (3) in the KIT into the reduction bushing.
- Using a plastic hammer, insert the bushing into the QC...-B taking care to keep it perpendicular during the operation (as shown in the Pic. D). An excess portion of the o-ring could be cut off during the operation.
- Make sure that the reduction bushing (1) is in contact with the bottom of the hole: it must not protrude from the plane of the QC...-B.
- Repeat the previous steps to assemble the other reduction bushings in the remaining holes of the QC...-B.



QCP

Gripper side quick changer with integrated flange

- The interface for the aluminum beams is integrated.
- Reduced weight.
- Reduced backlash.
- Same dimensions.

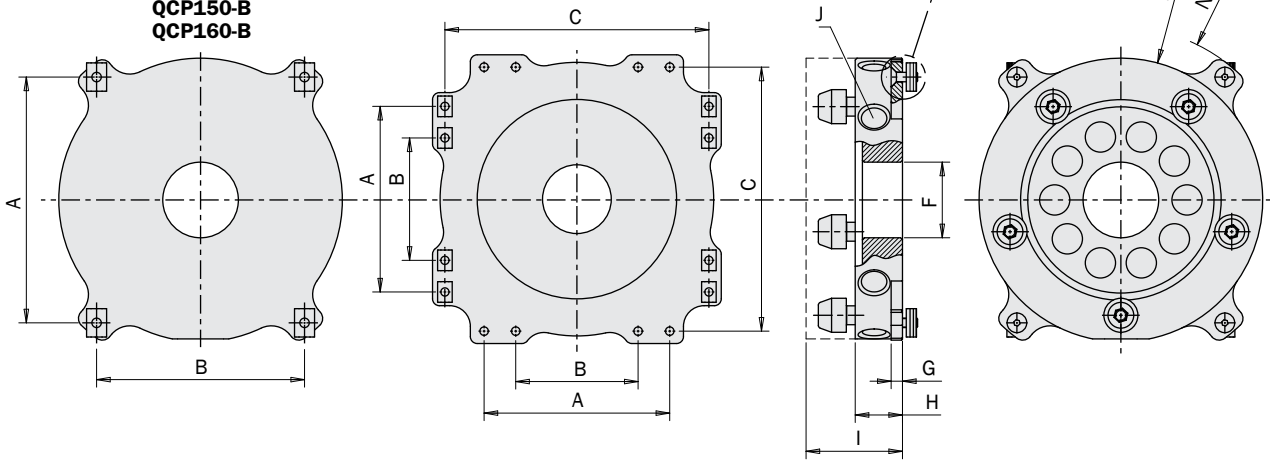


QCP90-B

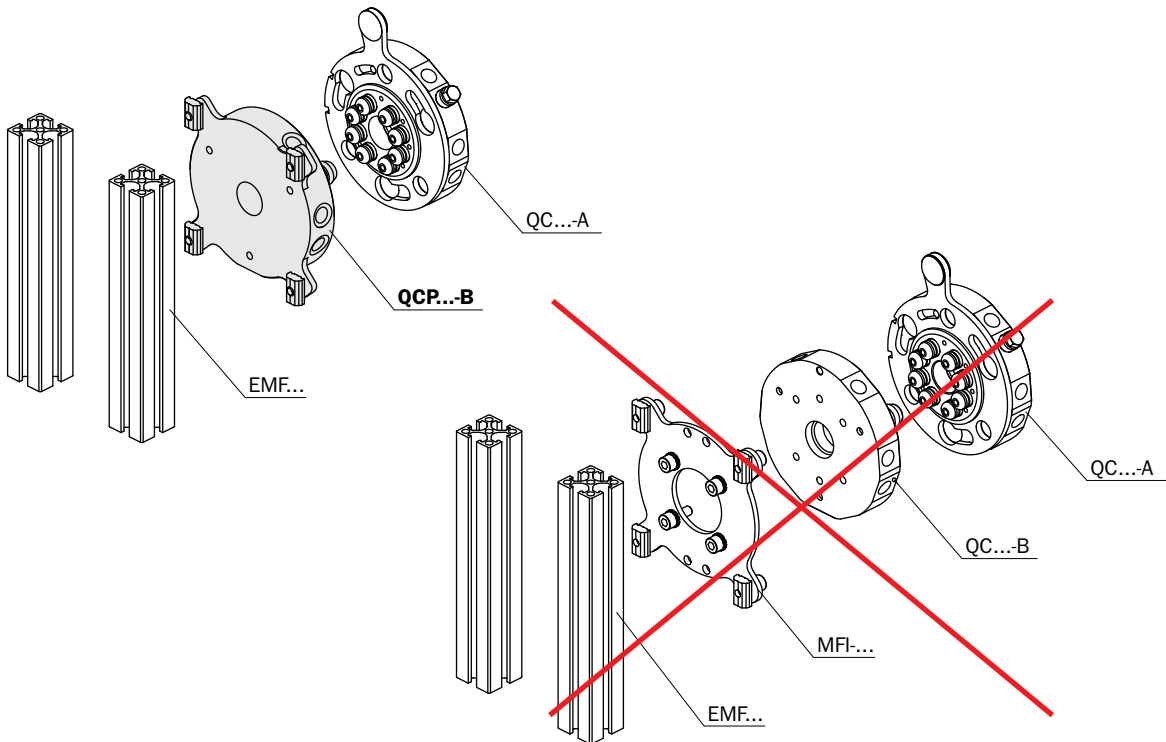


QCP50-B
QCP90-B
QCP150-B
QCP160-B

QCP200-B



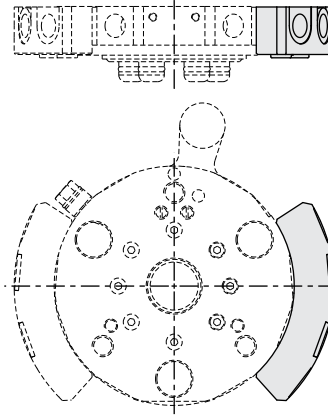
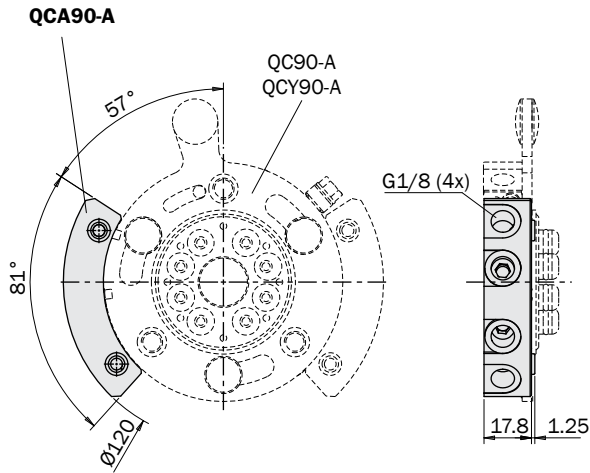
	A	B	C	D	E	F	G	H	I	J	K	L	M	N	Weight
QCP50-B	50	32	-	13	7	Ø4	4	19.3	38	M5 (x4)	M4 (x4)	7.4	Ø50	Ø71.5	110 g
QCP90-B	76	76	-	7	16	Ø18	4	18.8	37	G1/8 (x8)	M5 (x4)	7.4	Ø90	Ø99.5	315 g
QCP150-B	130	110	-	14	16	Ø40	6	25	51	G1/4 (x10)	M5 (x4)	7.4	Ø150	Ø183	1092 g
QCP160-B	130	110	-	14	16	Ø40	6	25	51	G1/8 (x12)	M5 (x4)	7.4	Ø150	Ø183	1150 g
QCP200-B	135	89	192	22	16	Ø50	8	33	64	G1/4 (x12)	M6 (x16)	7.4	Ø200	Ø257	2400 g



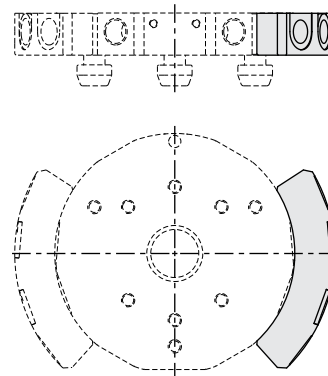
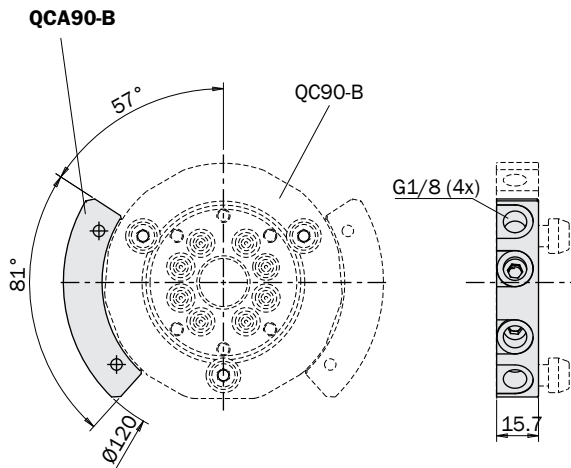
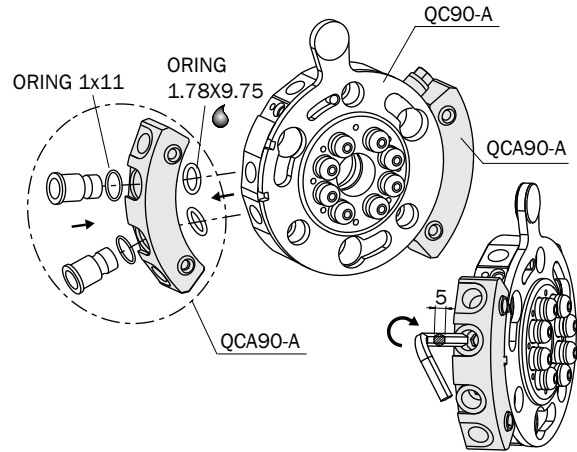
QCA

Additional air ports

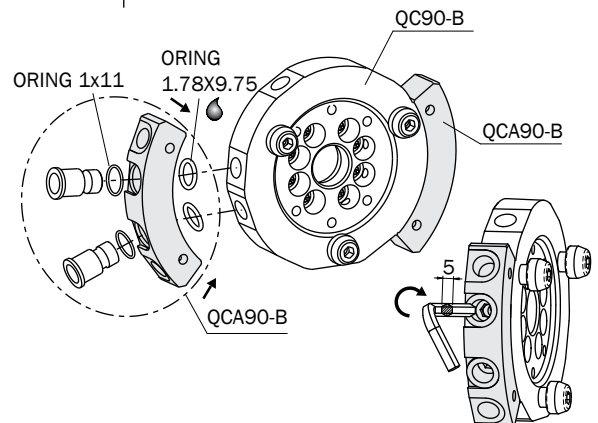
- Accessories for adding 2 or 4 extra air ports.
- The two parts (robot side and gripper side) are supplied separately.
- The accessory can be used on the left or on the right side.
- Suitable for vacuum and compressed air.
- Two high-flow air ports for each accessory.



	QCA90-A
Weight	53 g



	QCA90-B
Weight	53 g

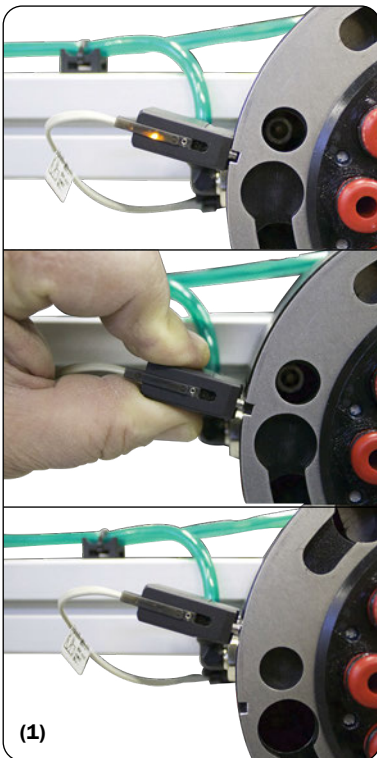


LOQC

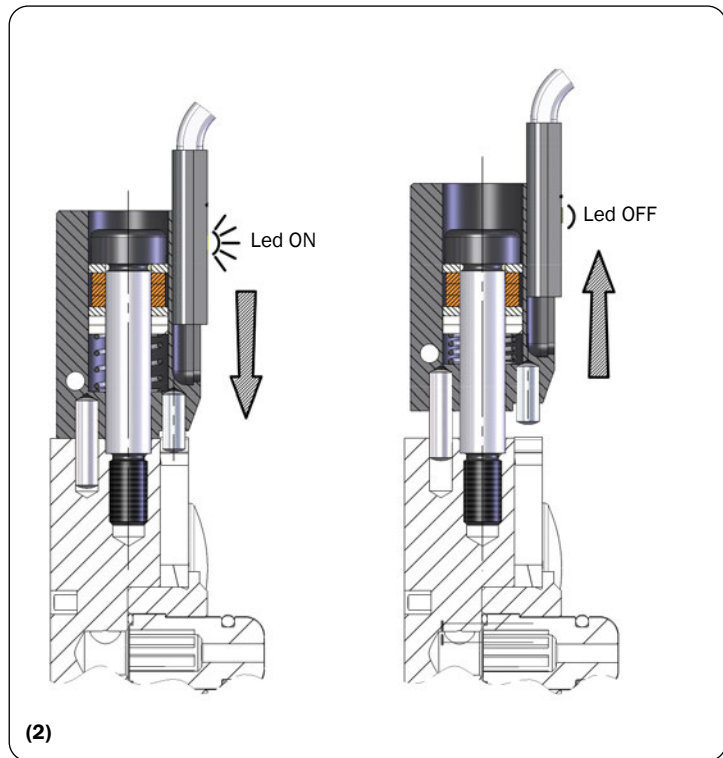
Lock unit for QC quick changers

- Option suitable for QC50-A, QC90-A, QC150-A, QC160-A, QC200-A, QCX90-A, QCX150-A, QCX160-A, QCX200-A.
- Standard on QCY50-A, QCY90-A, QCY150-A, QCY200-A.
- It prevents accidental falling of the EOAT.
- Mechanical safety: it locks the handle of the quick changer, only when correctly engaged (1).
- Electrical safety: it emits an electric signal, only when locked (2). This signal will give the consent to the movement of the robot. In the case of incorrect engagement, or destructive impact on the LOQC, or electrical fault of the sensor, the signal drops out and the robot stops.
- Magnetic (SS type) (3) or inductive (SI type) (4) sensor supplied a part.

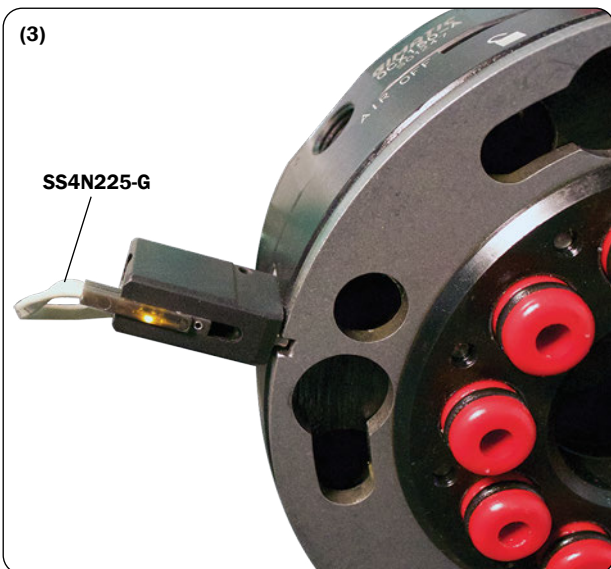
	LOQC
Weight	20 g



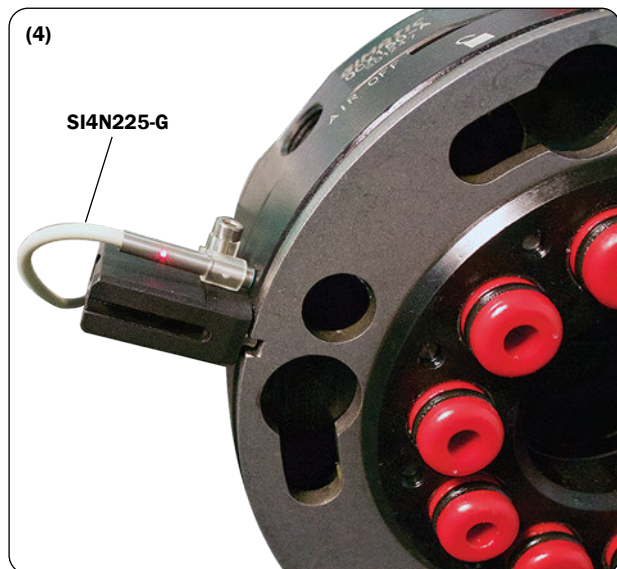
(1)



(2)



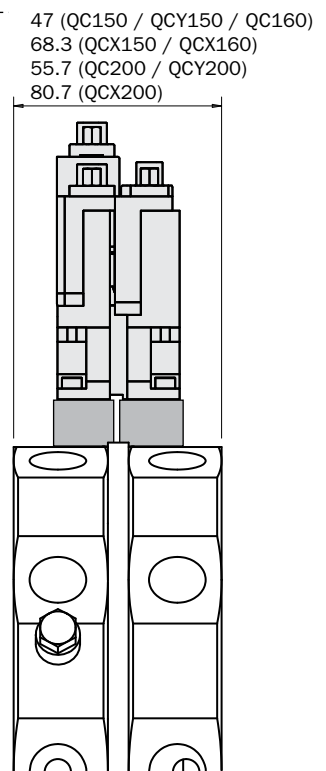
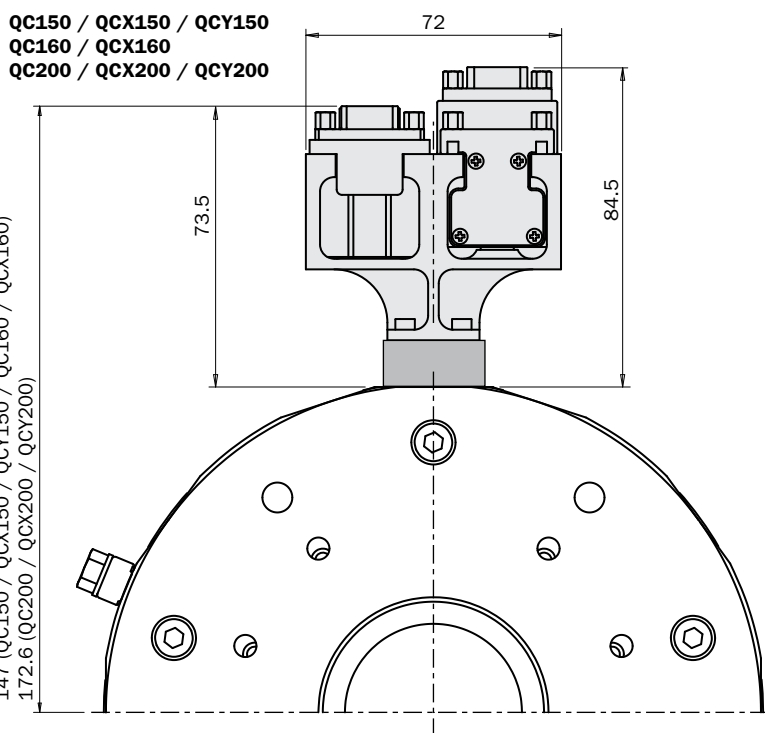
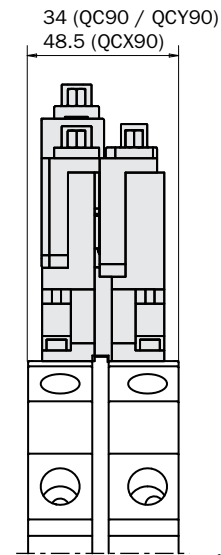
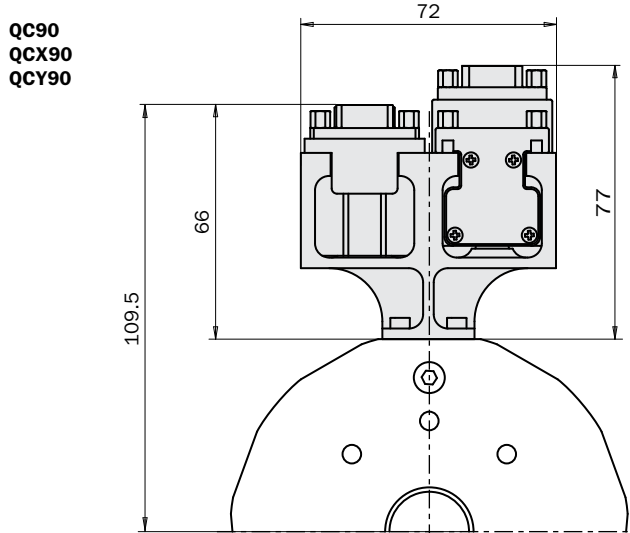
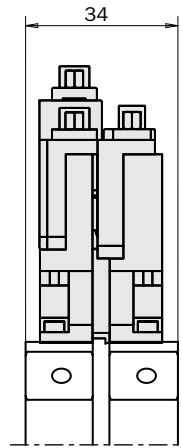
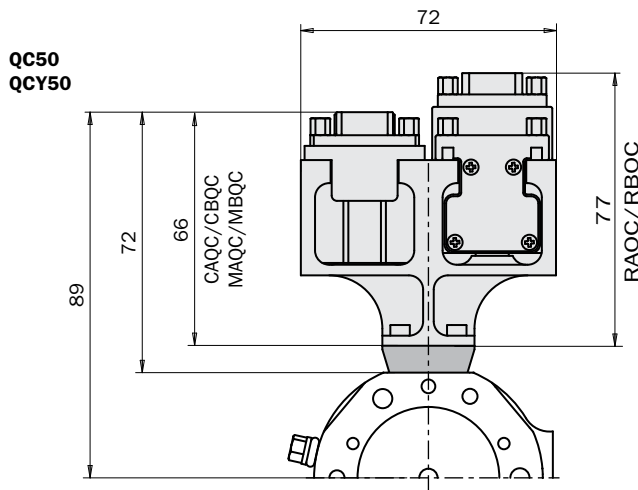
(3)



(4)

Mounting bracket

CQC-012 (robot side).
CQC-013 (gripper side).



Mounting bracket

CQC-017 (robot side).
CQC-013 (gripper side).

Rotary Units

Quick Changer

Profiles and Brackets

Grippers

Linear Actuators

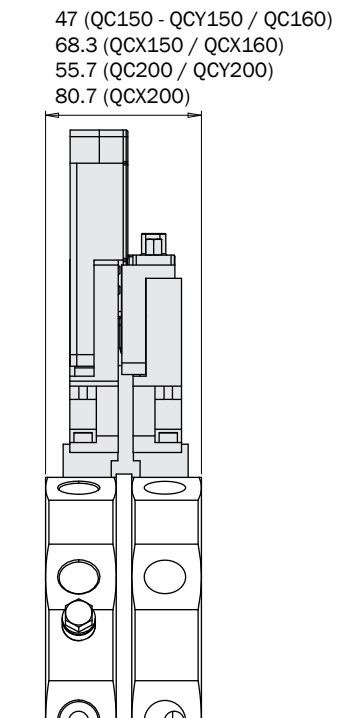
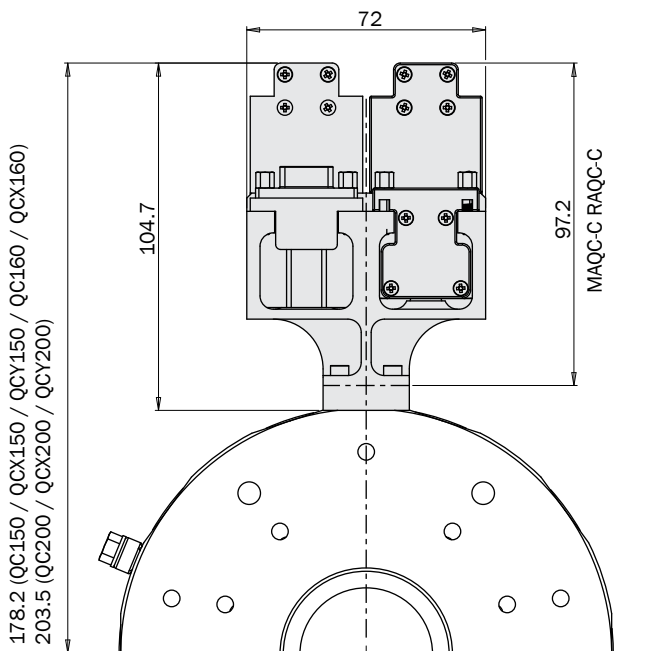
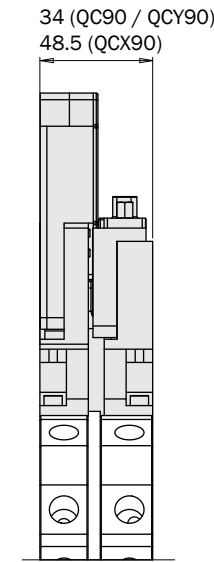
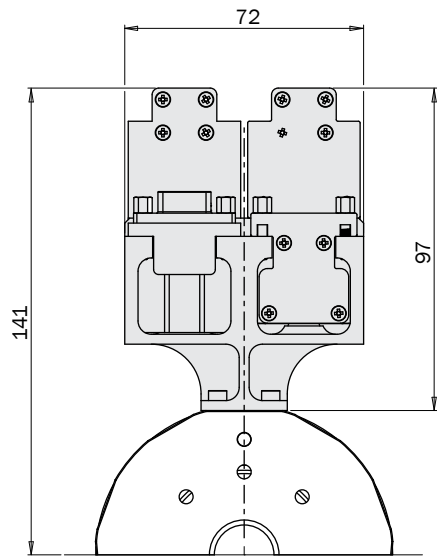
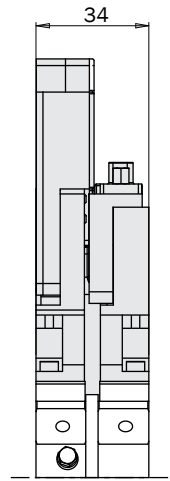
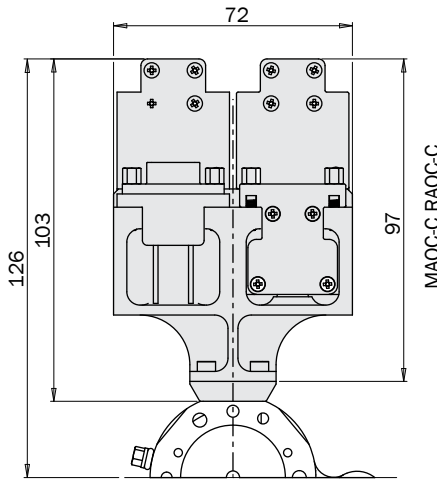
Suspensions

Nippers

Robot Kit

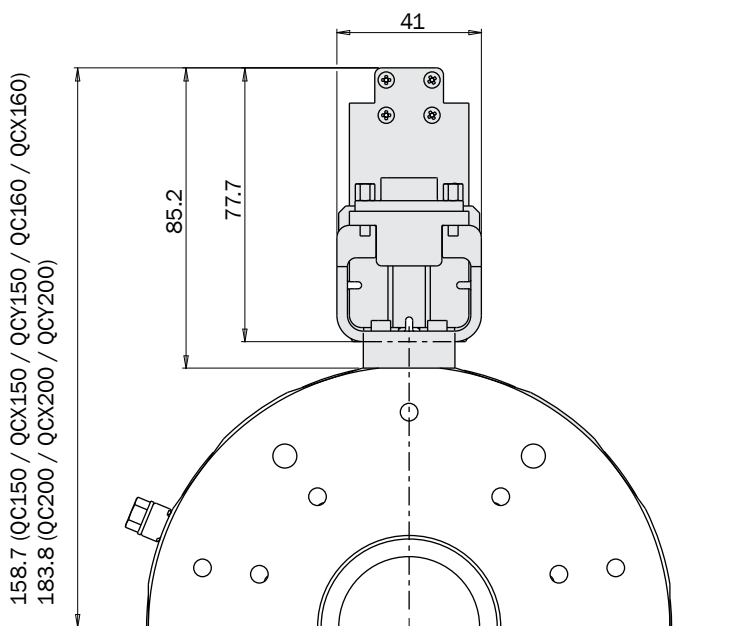
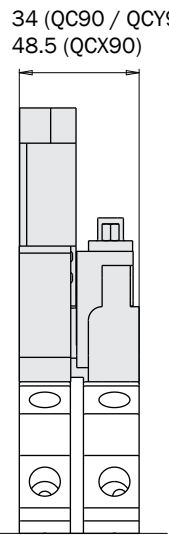
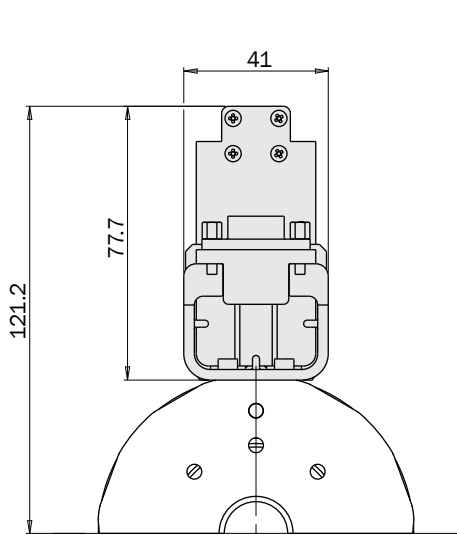
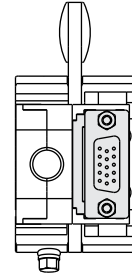
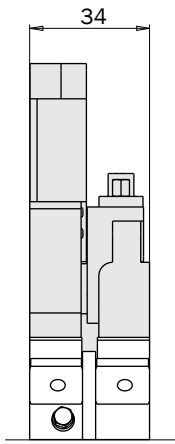
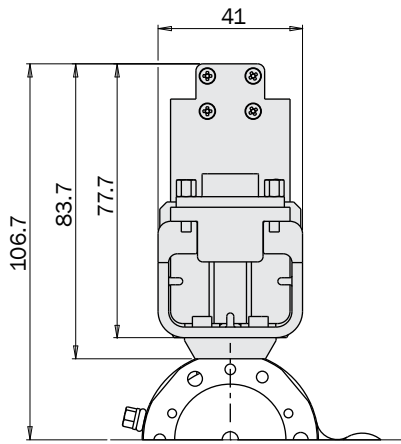
Options

Sensors

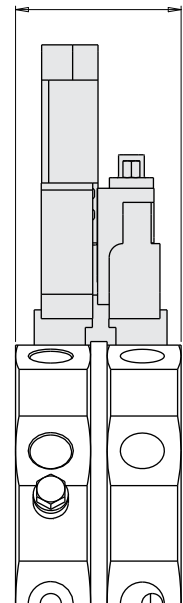


Mounting bracket

CQC-019 (robot side).
CQC-013 (gripper side).



47 (QC150 / QCY150 / QC160)
68.3 (QCX150 / QCX160)
55.7 (QC200 / QCY200)
80.7 (QCX200)



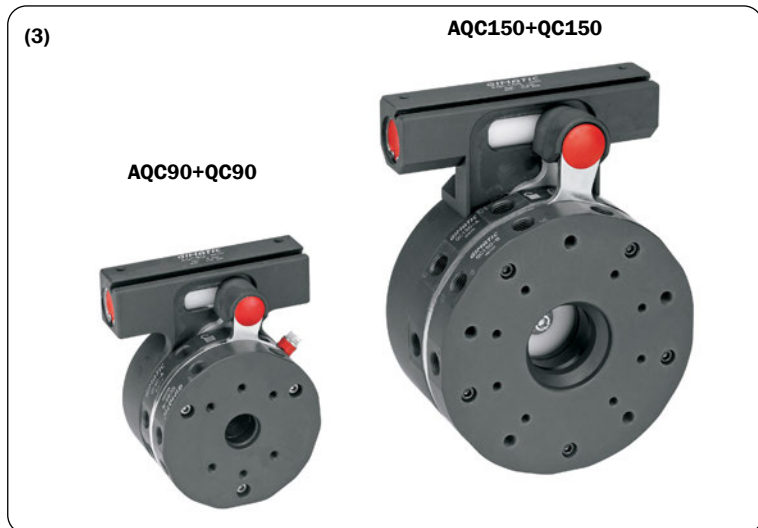
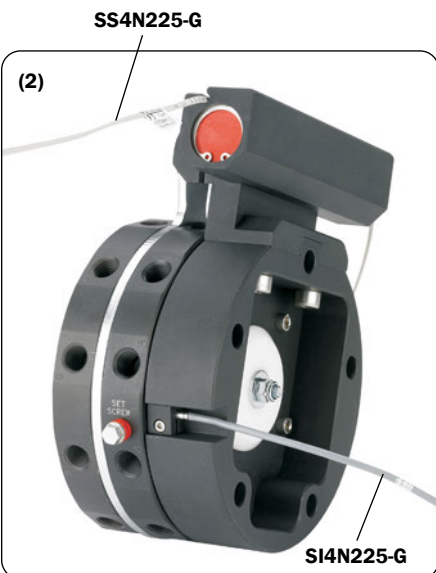
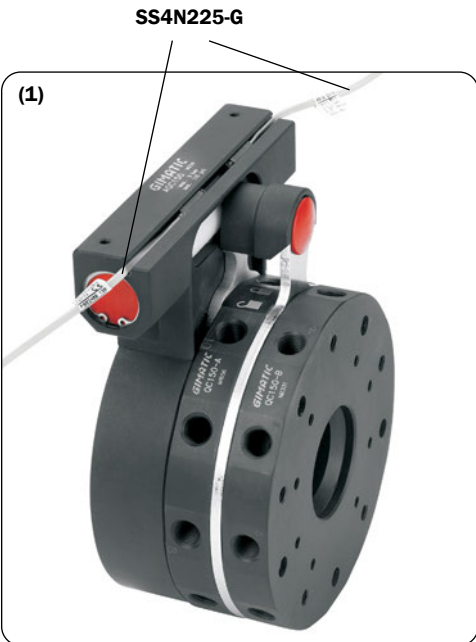
158.7 (QC150 / QCX150 / QCY150 / QC160 / QCX160)
183.8 (QC200 / QCX200 / QCY200)

AQC

Pneumatic actuator for quick changer QC

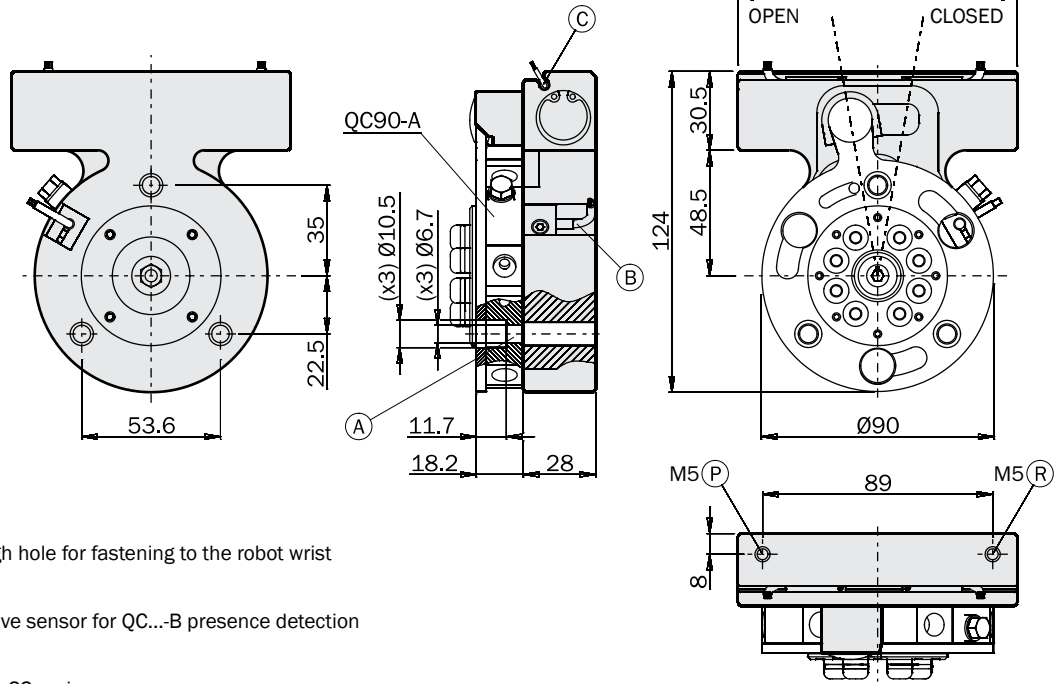
- Optional sensors series SS-G to detect the piston position (1) and optional sensors series SI4 to detect the proximity of the QC...-B gripper side (2).
- Compatible with QC90-A and QC150-A without LOQC (3).

	AQC90	AQC150
Weight	560 g	1480 g



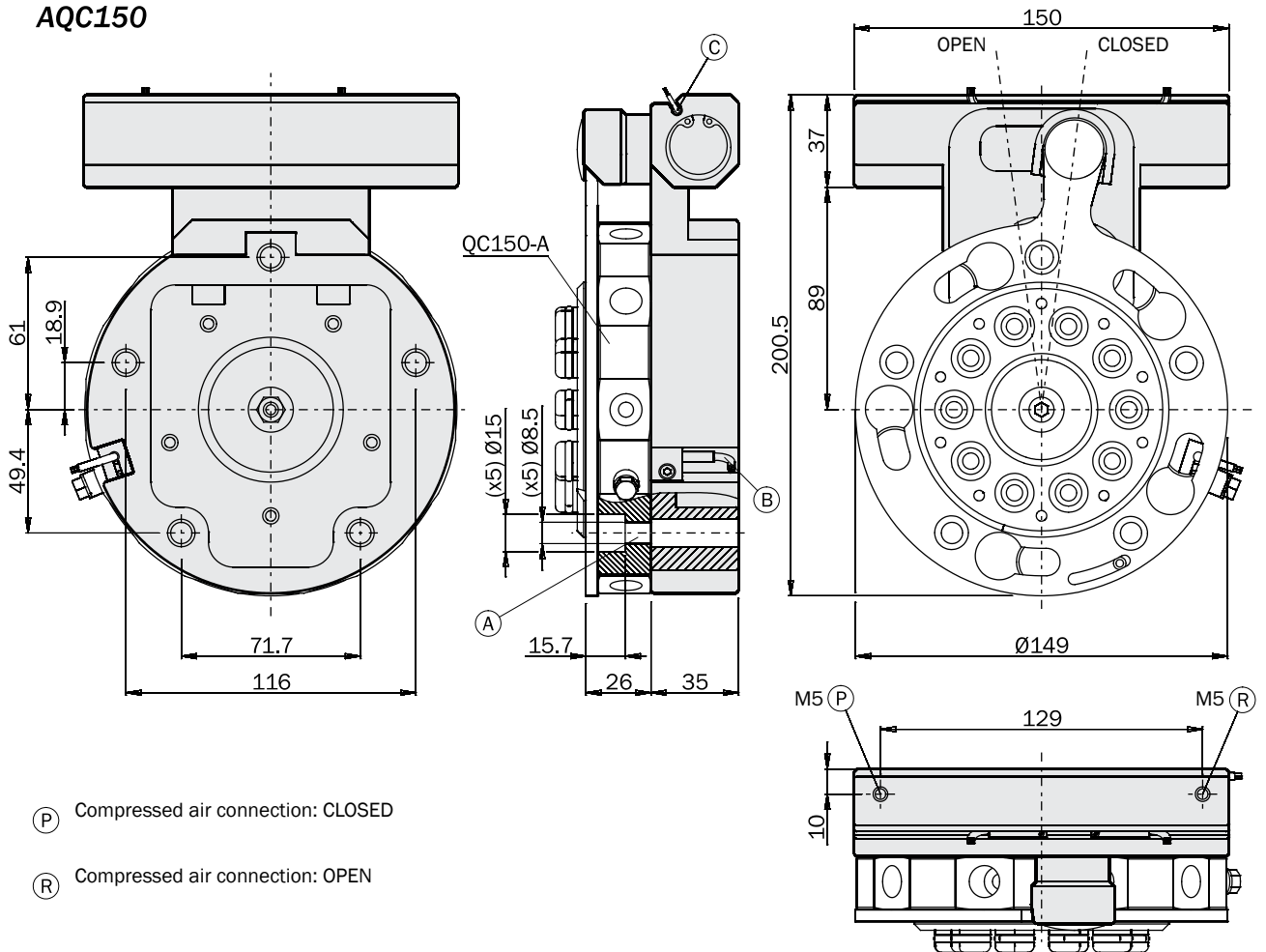
Dimensions (mm)

AQC90



- (A) Through hole for fastening to the robot wrist
- (B) Inductive sensor for QC...-B presence detection
- (C) Slot for SS series sensors

AQC150



- (P) Compressed air connection: CLOSED
- (R) Compressed air connection: OPEN



QC50-B Storage

Rotary Units

Quick Changer

Profiles and Brackets

Grippers

Linear Actuators

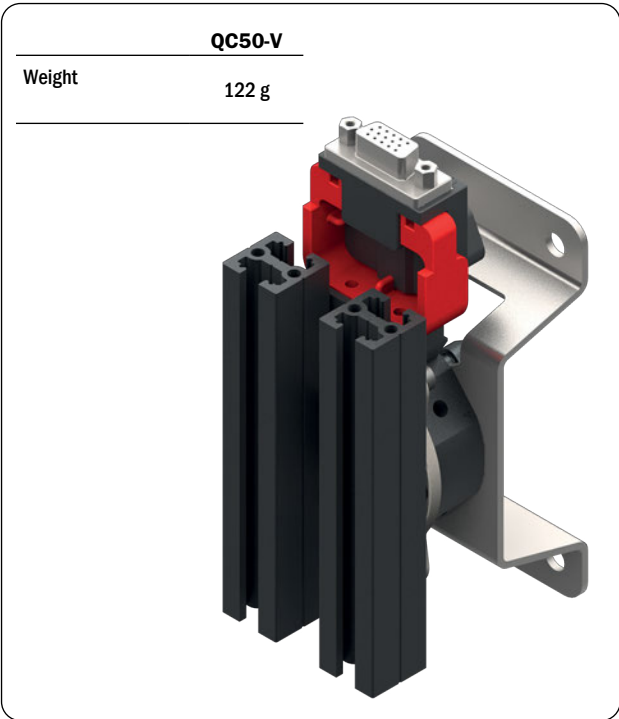
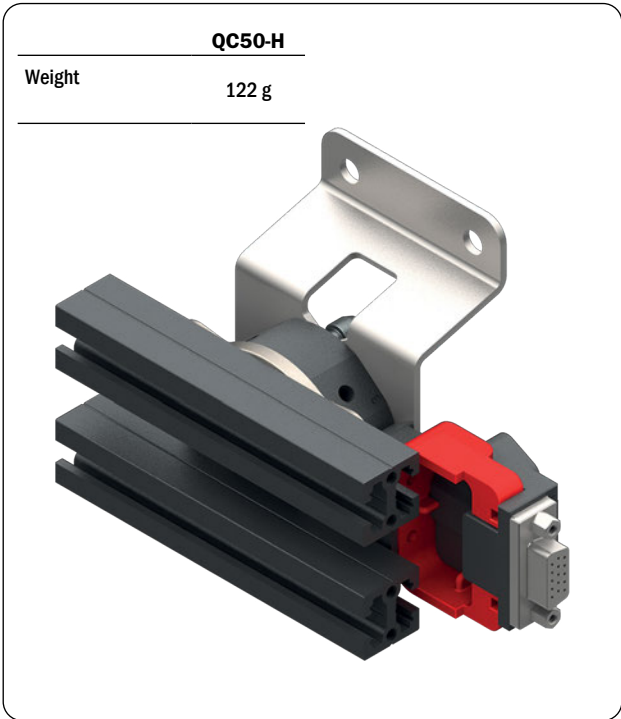
Suspensions

Nippers

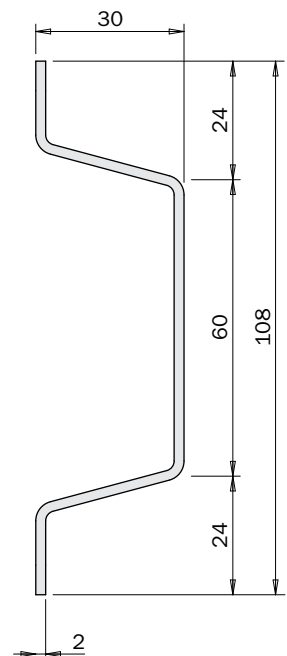
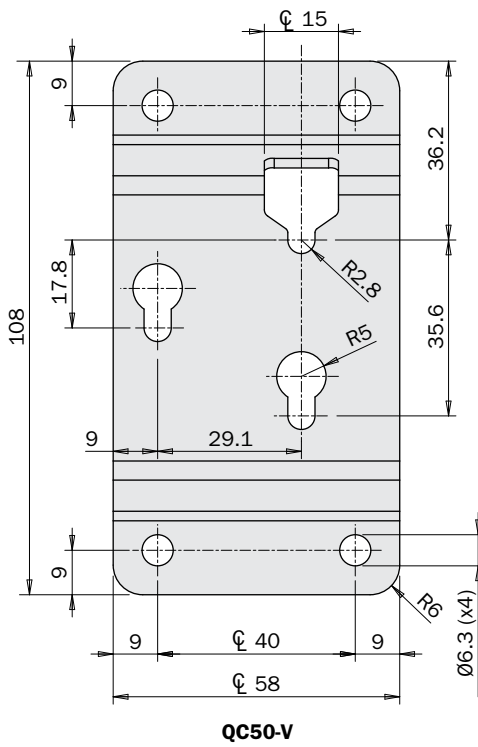
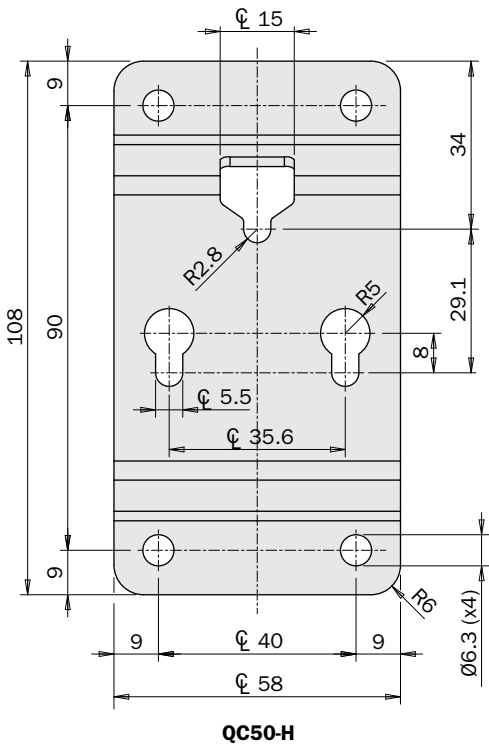
Robot Kit

Options

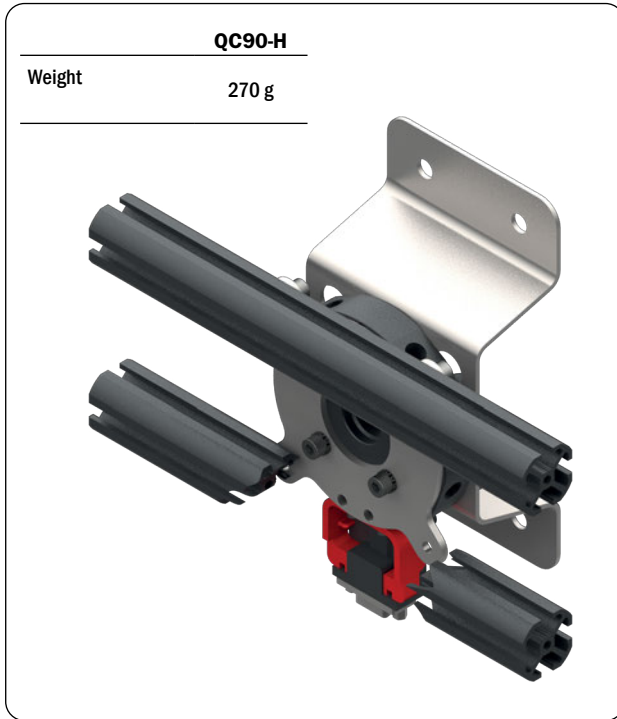
Sensors



Dimensions (mm)

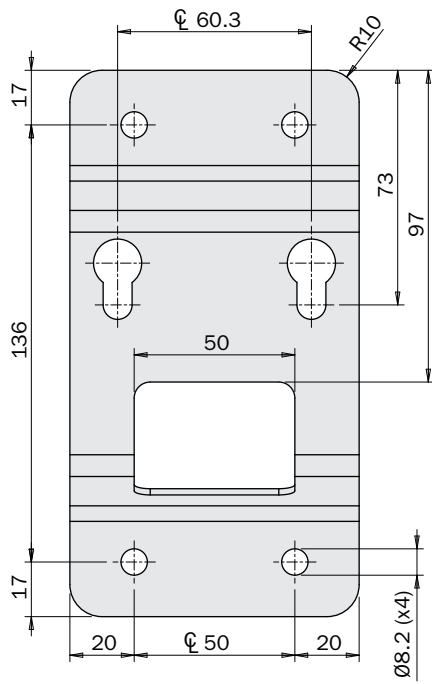


QC90-B Storage

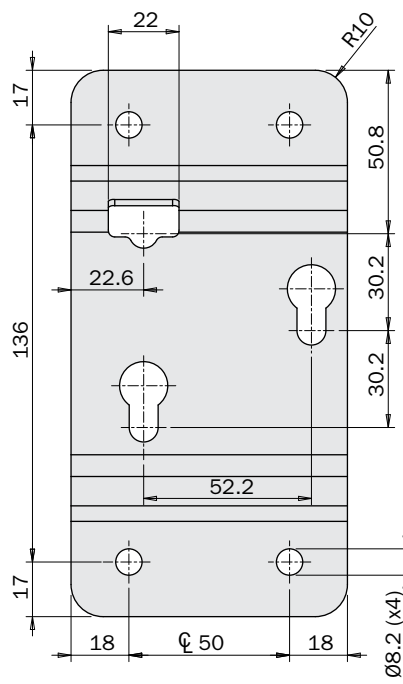


Dimensions (mm)

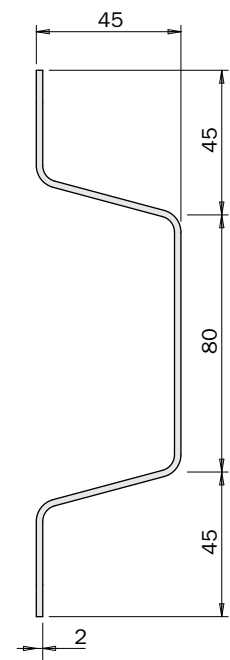
FIRST ANGLE PROJECTION



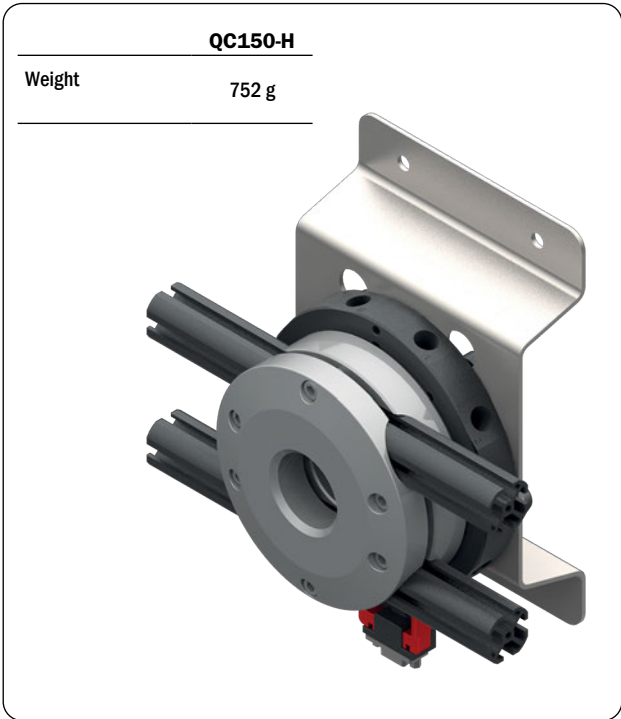
QC90-H



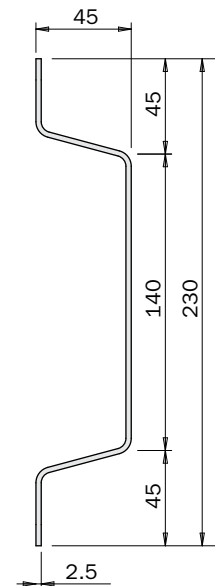
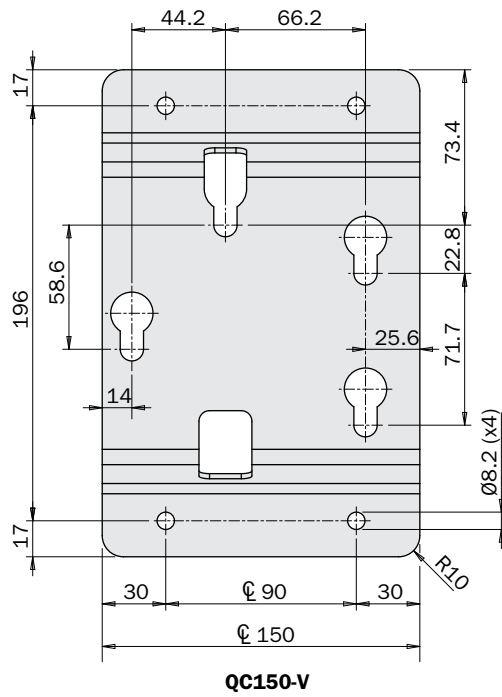
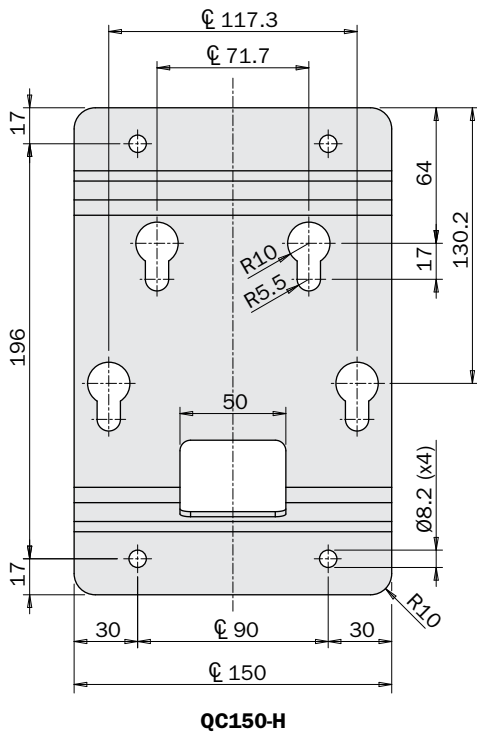
QC90-V



QC150-B/QC160-B Storage



Dimensions (mm)



Electrical connection module

- 15 pins Ø1 mm.
- The two parts are supplied separately:
PMAQC/PAQC/MAQC/CAQC - robot side;
PMBQC/PBQC/MBQC/CBQC - gripper side.

CAQC



CBQC



MAQC

Spring connectors



MBQC

Spring connectors



PAQC

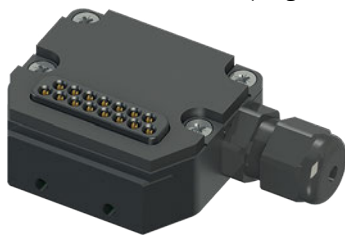


PBQC



PMAQC

Spring connectors



PMBQC

Spring connectors



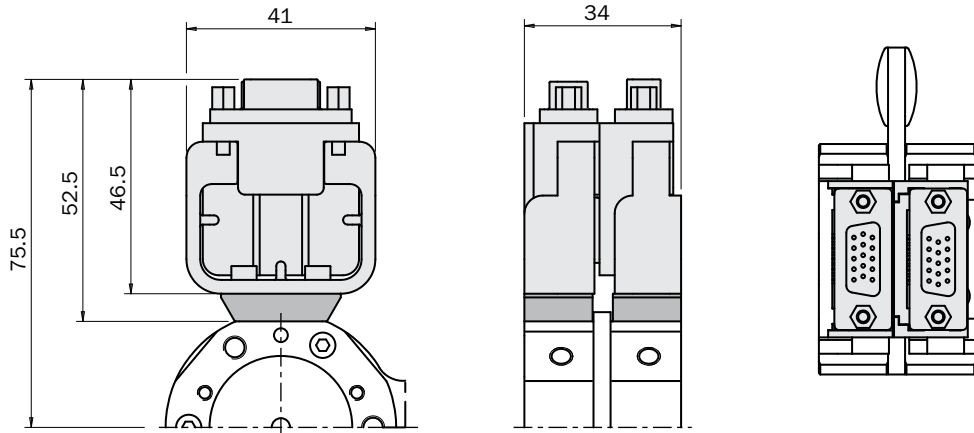
	CAQC	CBQC	MAQC	MBQC	PAQC	PBQC	PMAQC	PMBQC
I/O connection type	15 pins D-SUB - High density connector - VGA type				15 pins			
Working Current	2A (0.5A absolute value with CEQC-A, CEQC-B)				3A		0.5	
Break down voltage	0 ÷ 250 Vac							
Temperature range	-55°C ÷ +105°C							
Contact	Gold plated							
Maximum conductor cross-section					AWG28			
Maximum cable outer diameter					7 mm			

Rotary Units
 Quick Changer
 Profiles and Brackets
 Grippers
 Linear Actuators
 Suspensions
 Nippers
 Robot Kit
 Options
 Sensors

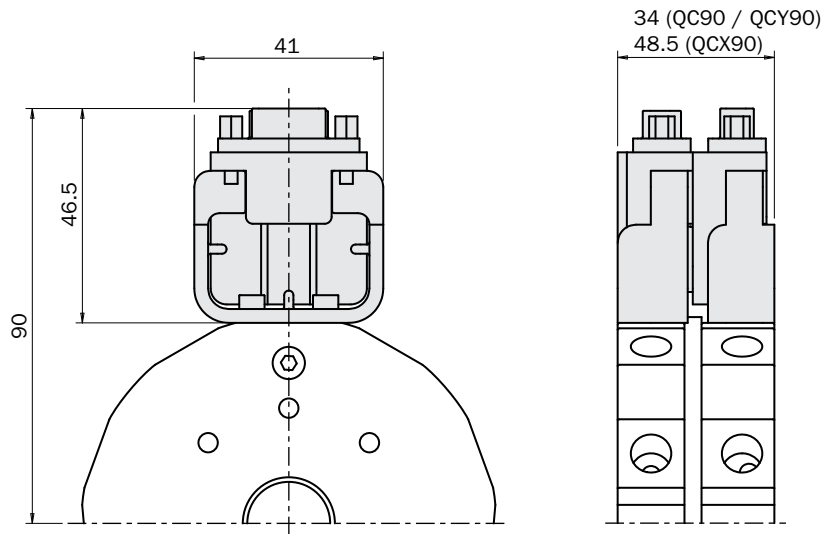
Dimensions (mm)

FIRST ANGLE PROJECTION

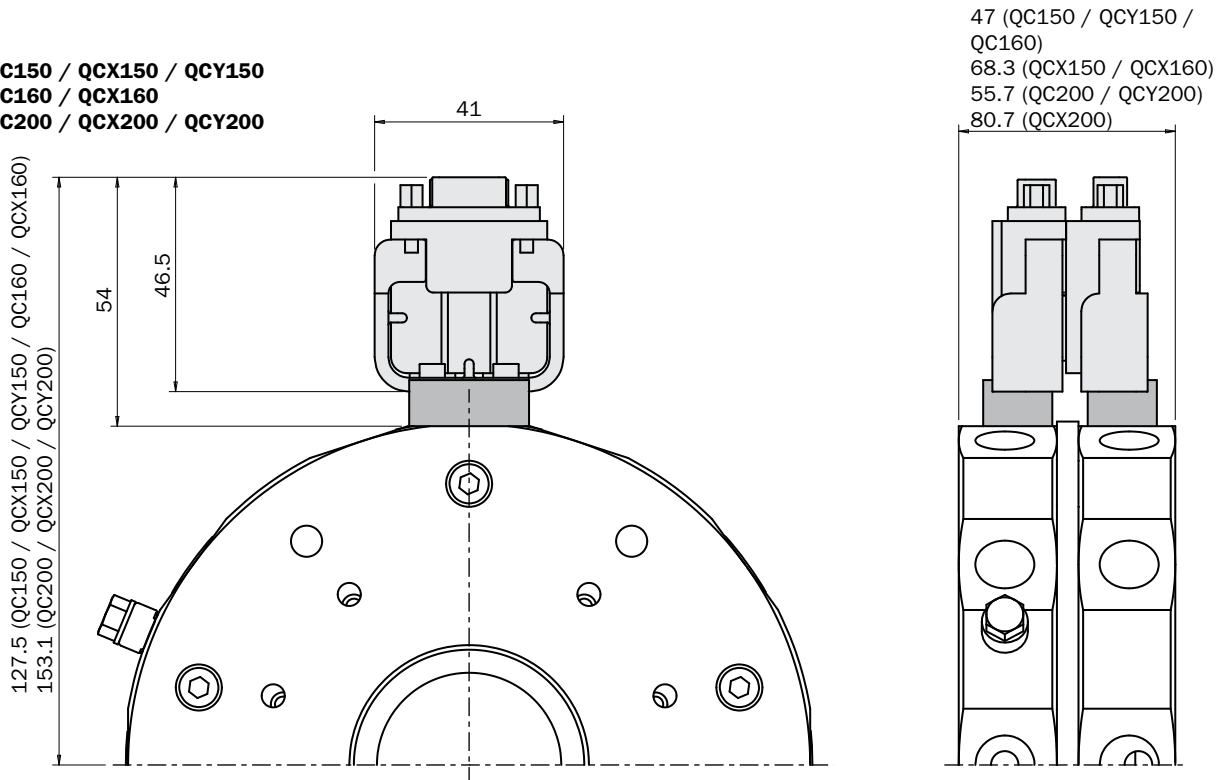
**QC50
QCY50**



**QC90
QCX90
QCY90**



**QC150 / QCX150 / QCY150
QC160 / QCX160
QC200 / QCX200 / QCY200**



Fastening

Rotary Units

Quick Changer

Profiles and Brackets

Grippers

Linear Actuators

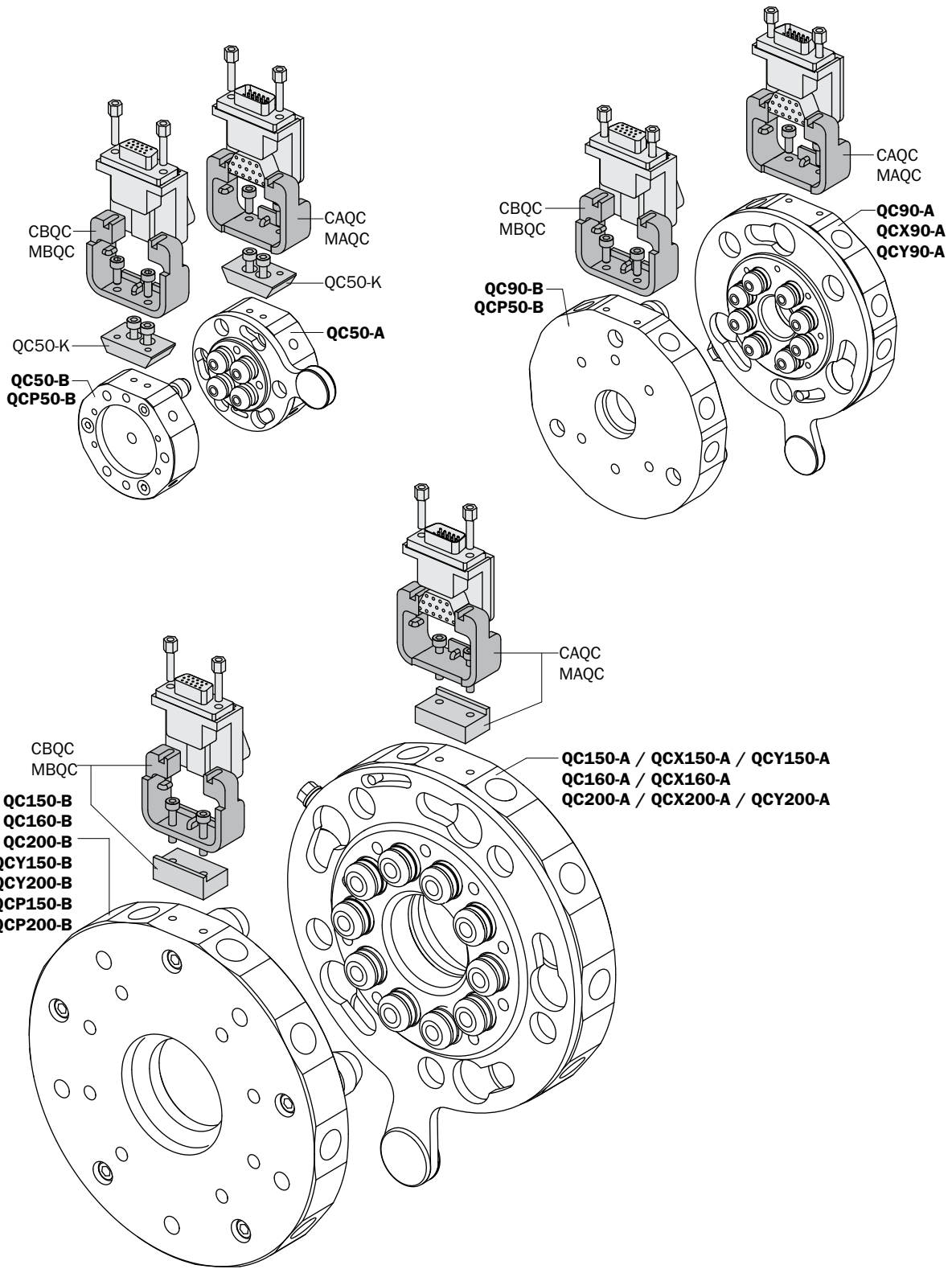
Suspensions

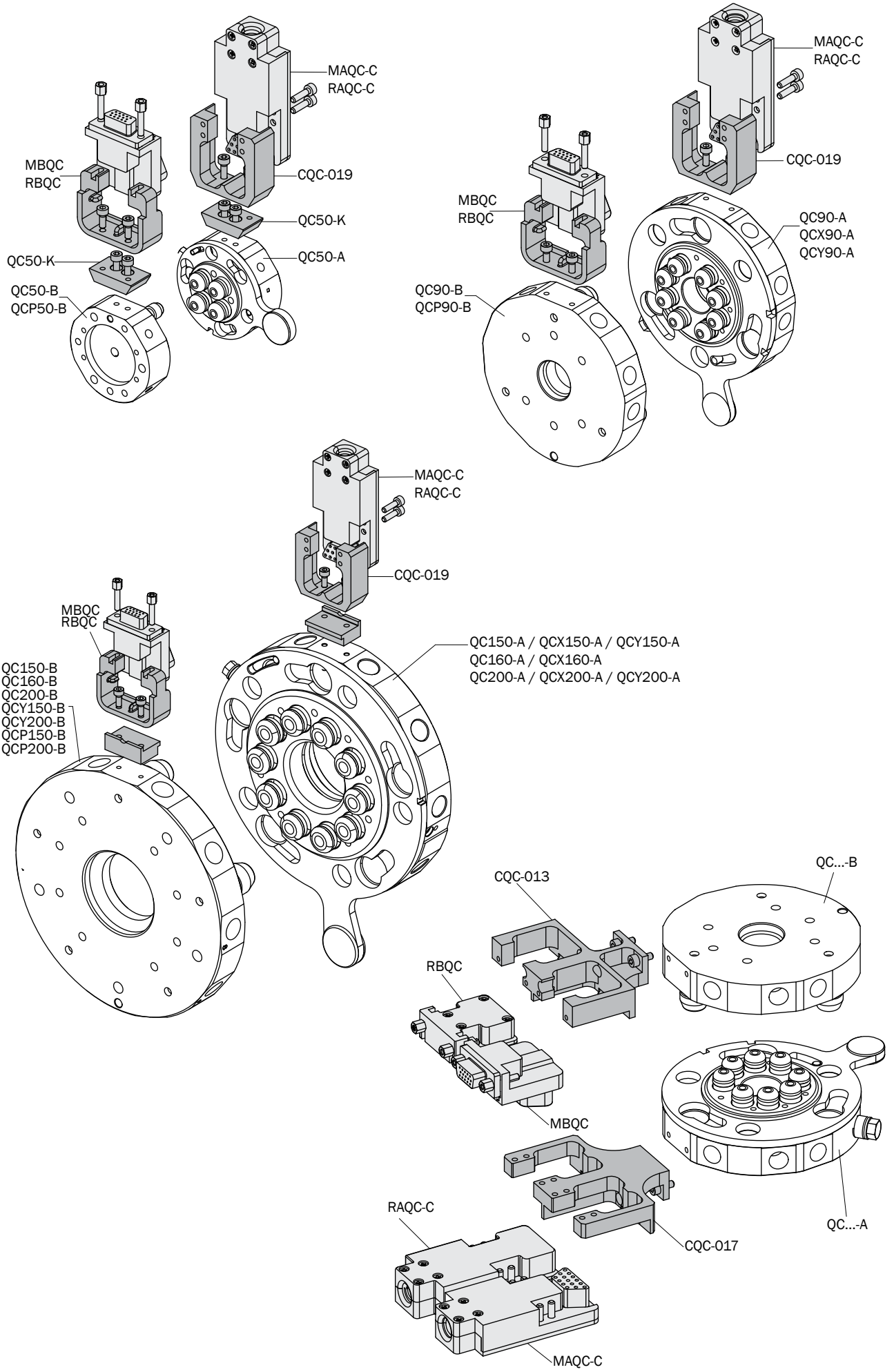
Nippers

Robot Kit

Options

Sensors



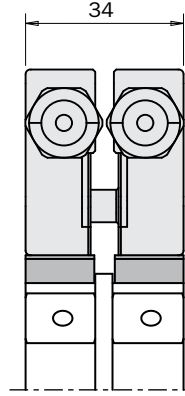
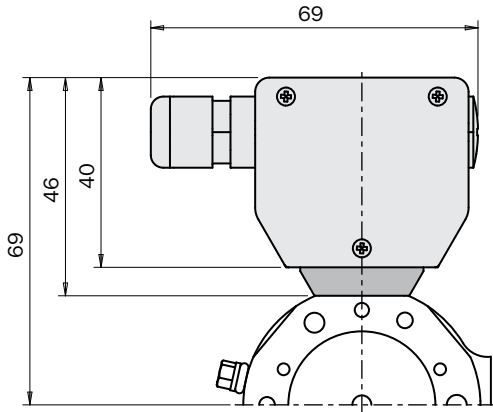


Rotary Units
 Quick Changer
 Profiles and Brackets
 Grippers
 Linear Actuators
 Suspensions
 Nippers
 Robot Kit
 Options
 Sensors

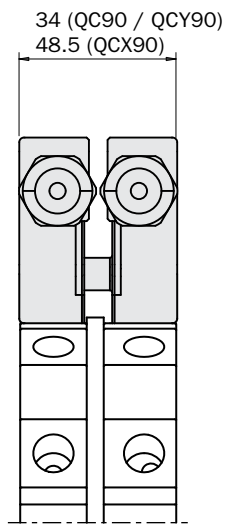
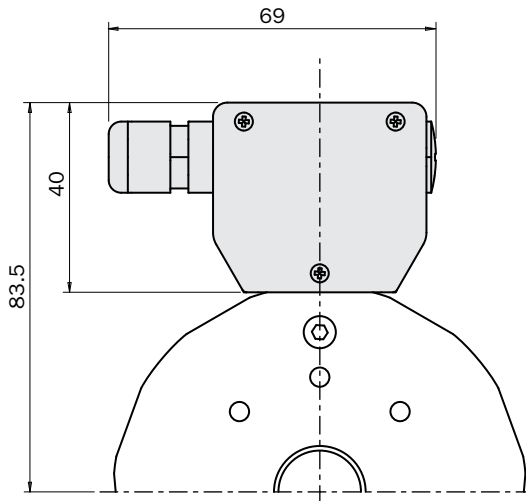
Dimensions (mm)

FIRST ANGLE PROJECTION

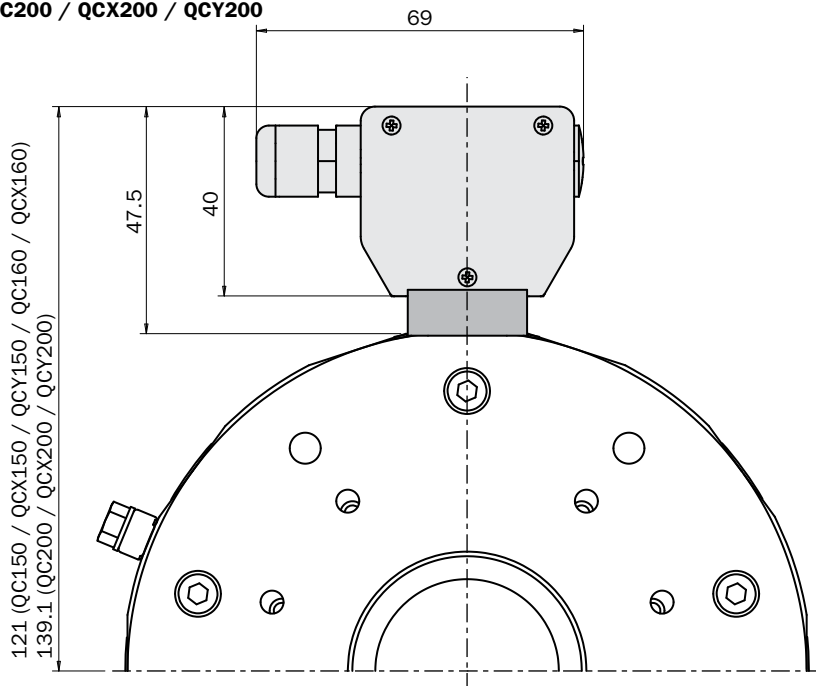
QC50
QCY50



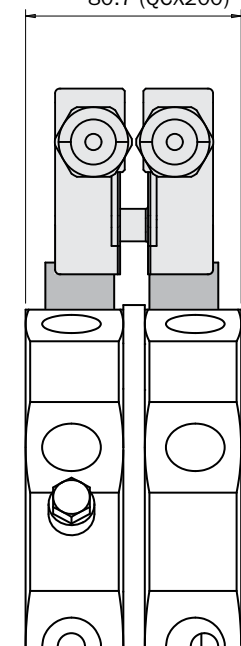
QC90
QCX90
QCY90



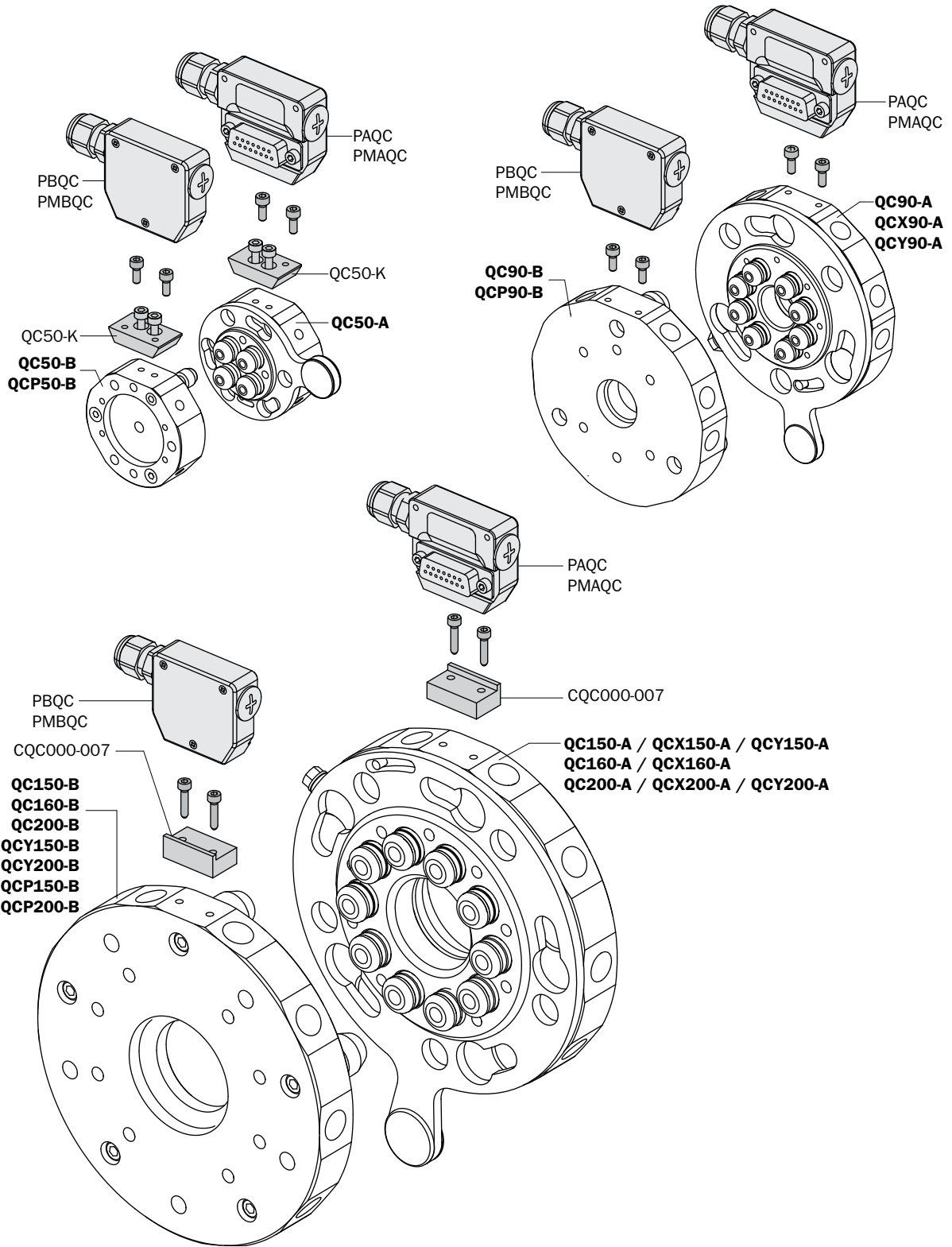
QC150 / QCX150 / QCY150
QC160 / QCX160
QC200 / QCX200 / QCY200



47 (QC150 / QCY150 / QC160)
68.3 (QCX150 / QCX160)
55.7 (QC200 / QCY200)
80.7 (QCX200)

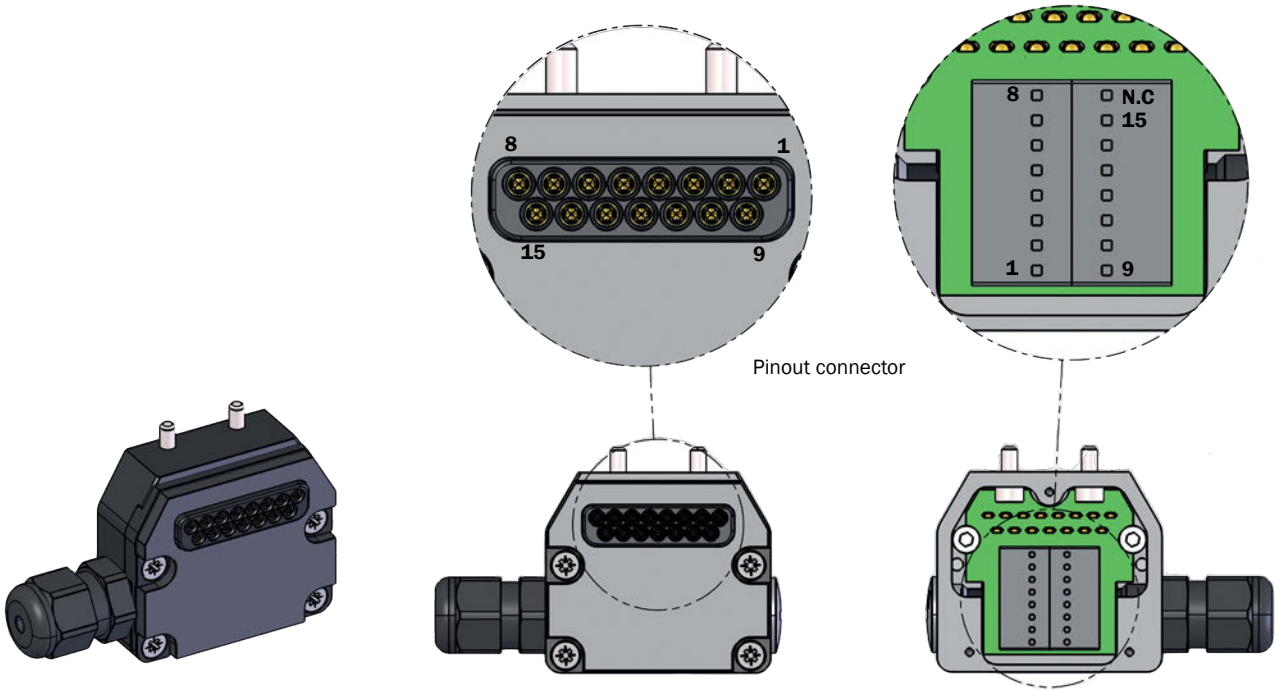


Fastening



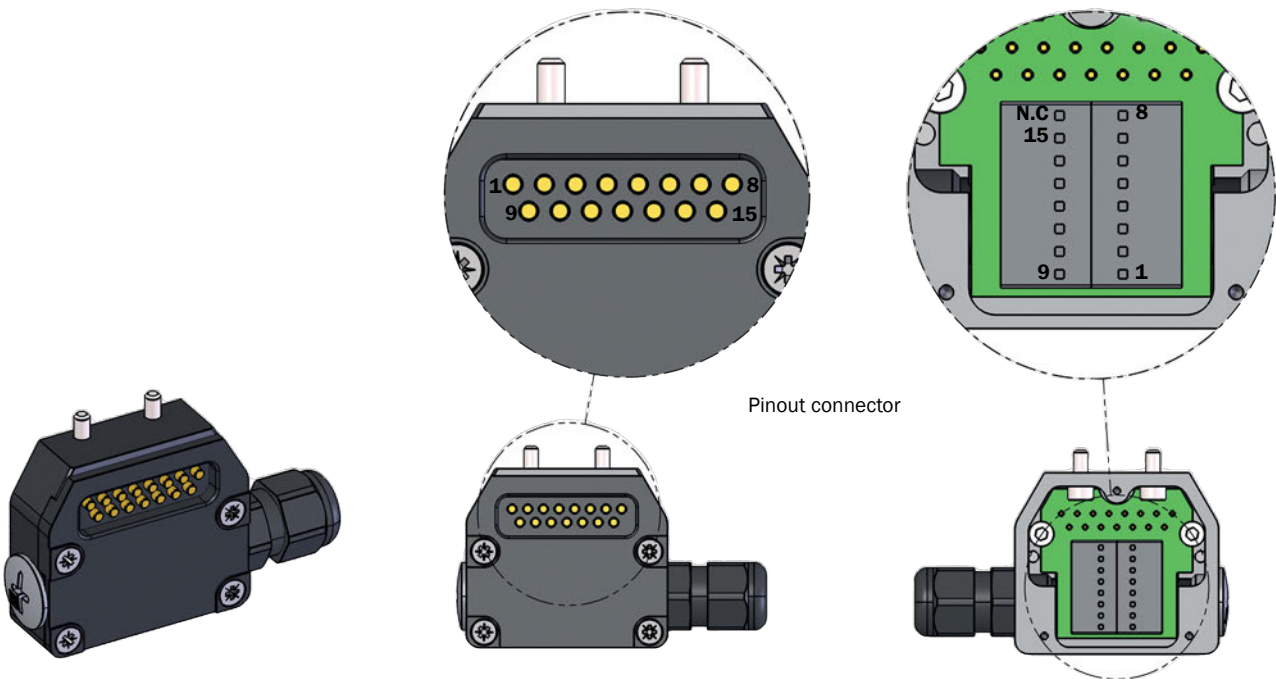
PMAQC

Female electrical connector



PMBQC

Female electrical connector



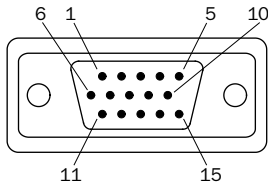
Rotary Units
Quick Changer
Profiles and Brackets
Grippers
Linear Actuators
Suspensions
Nippers
Robot Kit
Options
Sensors

RAQC / RBQC

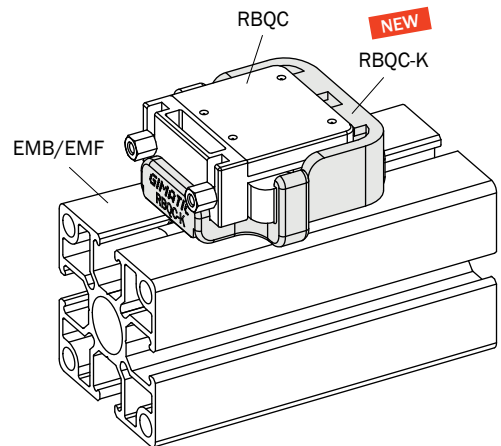
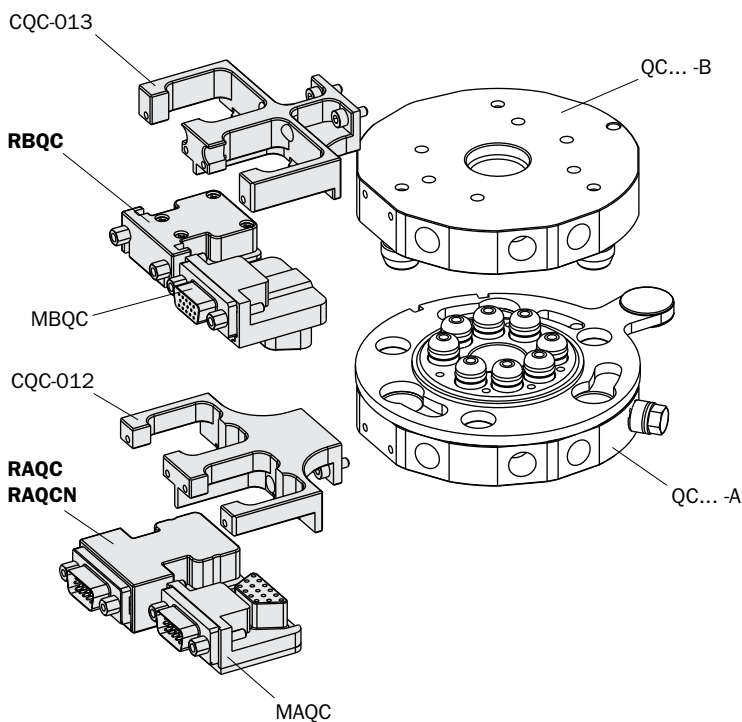
RFID identification modules.

System for automatic recognition of gripping tool composed of a RFID reader (RAQC) and a memory TAG (RBQC).

- Up to 255 identifiable tools.
- Binary coding of tools by means of 8 digital outputs 24 Vdc.
- Digital input to counting tool cycles execution.
- Generation of a maintenance warning signal once the tool reaches the preset number of cycles.
- I/O quick change by VGA connector.
- Memorization of tool technical data.
- User data memory available.
- The two parts are supplied separately:
RAQC - robot side (Reader);
RBQC - tool side (TAG).

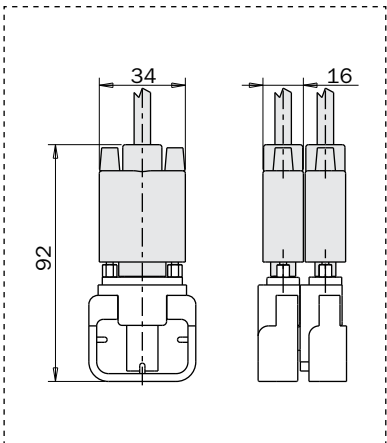
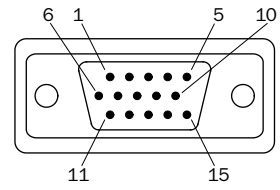
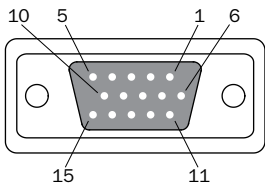
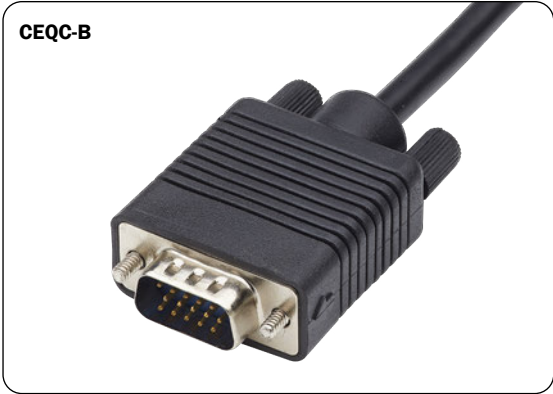


1	DOUT1	6	24 Vdc	11	DOUT5
2	DOUT2	7	DOUT_CNT	12	DOUT6
3	N/C	8	DOUT3	13	DOUT7
4	GND	9	DOUT_FAULT	14	DOUT8
5	N/C	10	DOUT4	15	DIN_COUNT



CEQC-A, CEQC-B

The male and female cables required for the secondary electrical connection are supplied separately.



01	Orange
02	Yellow
03	Deep Green
04	Blue
05	Light Green
06	Brown
07	Brown / White
08	Red

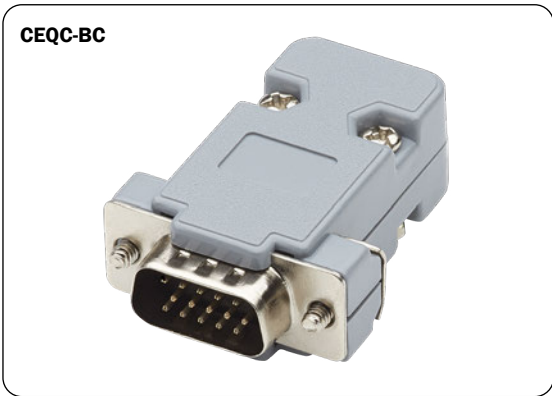
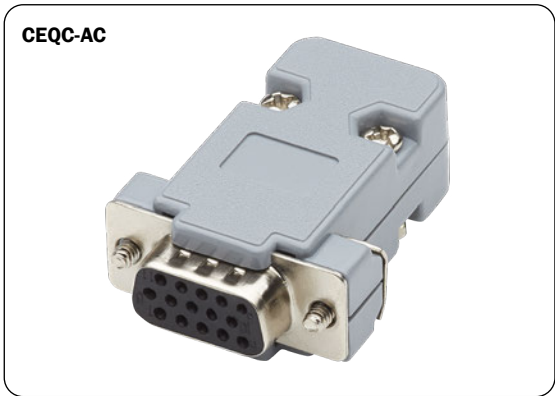
09	Red / White
10	Pink
11	Violet
12	Gray
13	White
14	Black
15	Black / White

	CEQC-A	CEQC-B
I/O connection type	15-pin D-SUB - VGA type	
Cable length	1500 mm	
Insulation	PVC	
Shield	100% aluminum - Mylar foil - 28 to 26 AWG	
Sheath	Black PVC	
Temperature range	-55°C ÷ +105°C	
Voltage range	0 ÷ 250 Vac	
Max current	0.5 A	

Rotary Units
Quick Changer
Profiles and Brackets
Gripters
Linear Actuators
Suspensions
Nippers
Robot Kit
Options
Sensors

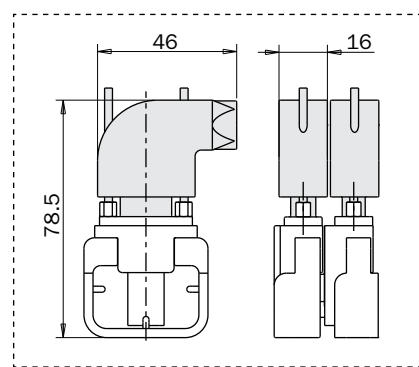
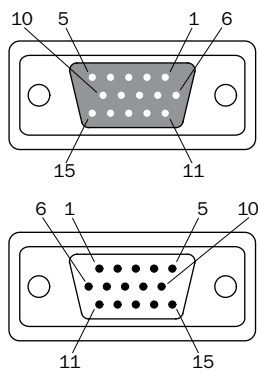
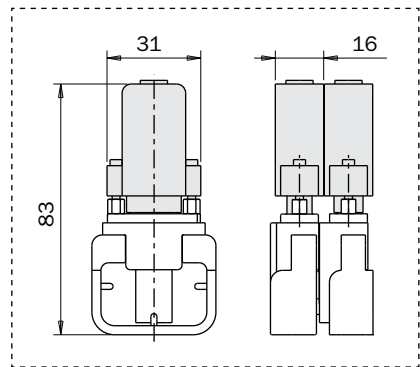
CEQC-AC / CEQC-BC

The male and female solder connectors are supplied separately.



CEQC-ACA / CEQC-BCA

The angular male and female solder connectors are supplied separately.



	CEQC-AC	CEQC-BC	CEQC-ACA	CEQC-BCA
I/O connection type	15-pin D-SUB - VGA type			
Contacts	Copper			
Insulation	Polyester			
Temperature range	-20°C ÷ +80°C			
Voltage range	0 ÷ 300 Vac			
Max current	3A			
Maximum conductor cross-section	AWG28			
Maximum cable outer diameter	7 mm			