

**BROEN-LAB
FLOW ADJUSTABLE
QUICK CONNECT 5.0
INSTALLATION AND
USER MANUAL**



BROEN-LAB

BROEN-LAB QUICK CONNECT

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All technical specifications and dimensions are nominal and are subject to change without prior notice.

BROEN-LAB QUICK CONNECT

Datasheet

TECHNICAL SPECIFICATIONS

Standard media¹⁾: Inactive gases
(Air, Vac, O₂, N₂, CO₂, H₂,
Ar & He).

Purity²⁾: 5.0. (99.999%)

Media pressure: -1 to 10 Bar.
-14.5 to 145 psi.

Test pressure: 1.3 x working pressure.

Working temperature: 0° til 60°C.
32° to 140°F.

Inlet: Female 1/4" NPT.

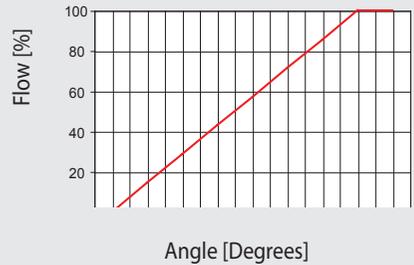
Visible metal parts: Stainless steel & Chemical
nickel plated brass.

Rubber handle: EPDM.

Metals with medium contact: Brass.

Gaskets: FKM.

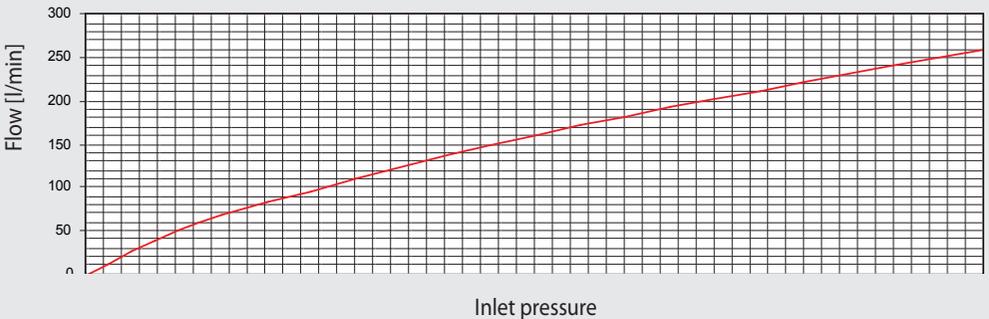
Regulating characteristic



¹⁾ Other media must first be confirmed by BROEN-LAB.

²⁾ Purity 5.0 can only be obtained when the system is purged each time an outlet is connected.

Flow regulation curve



Gas used in test: *Compressed Air*.

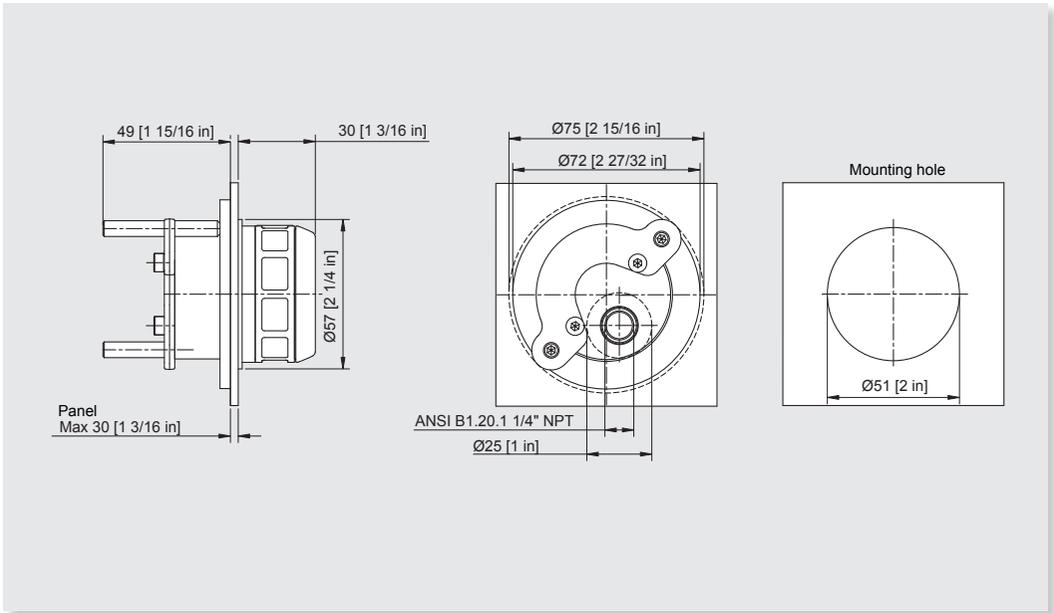
Model used in test: Quick Connect with outlet No. 07 051.00.

BROEN-LAB QUICK CONNECT

Datasheet

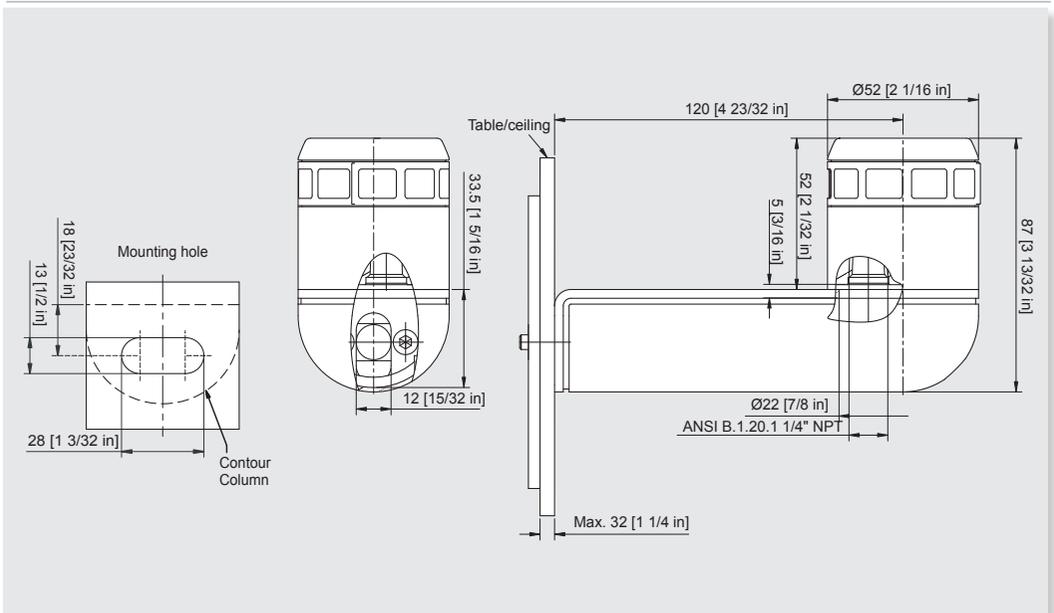
BUILT-IN

Built-in Dimensions



BENCH/SUSPENDED MOUNTING

Built-in Dimensions



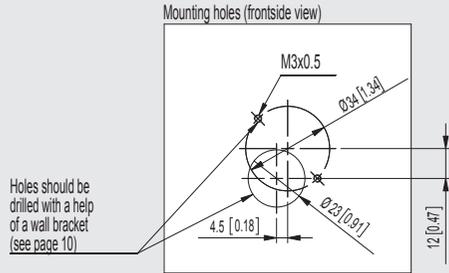
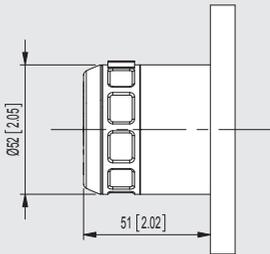
BROEN-LAB QUICK CONNECT

Datasheet

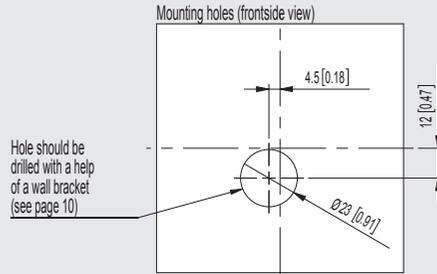
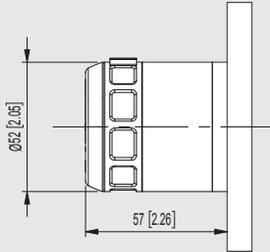
WALL/PANEL MOUNTING, CONCEALED PIPING

Built-in Dimensions

MOUNTED WITHOUT A WALL BRACKET



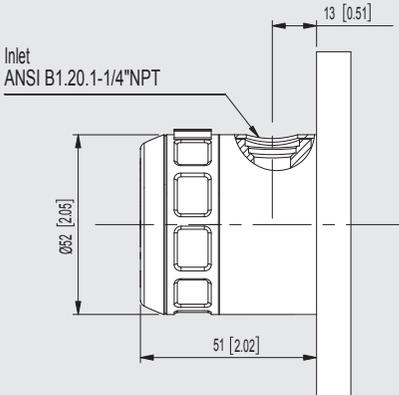
MOUNTED WITH A WALL BRACKET



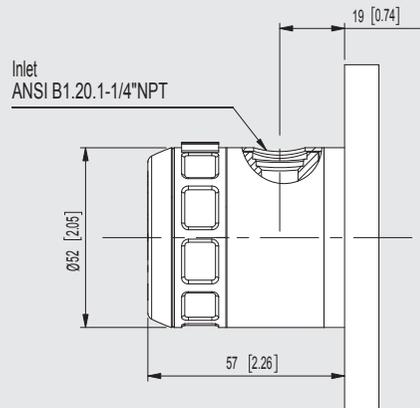
WALL/PANEL MOUNTING, EXPOSED PIPING

Built-in Dimensions

MOUNTED WITHOUT A WALL BRACKET



MOUNTED WITH A WALL BRACKET



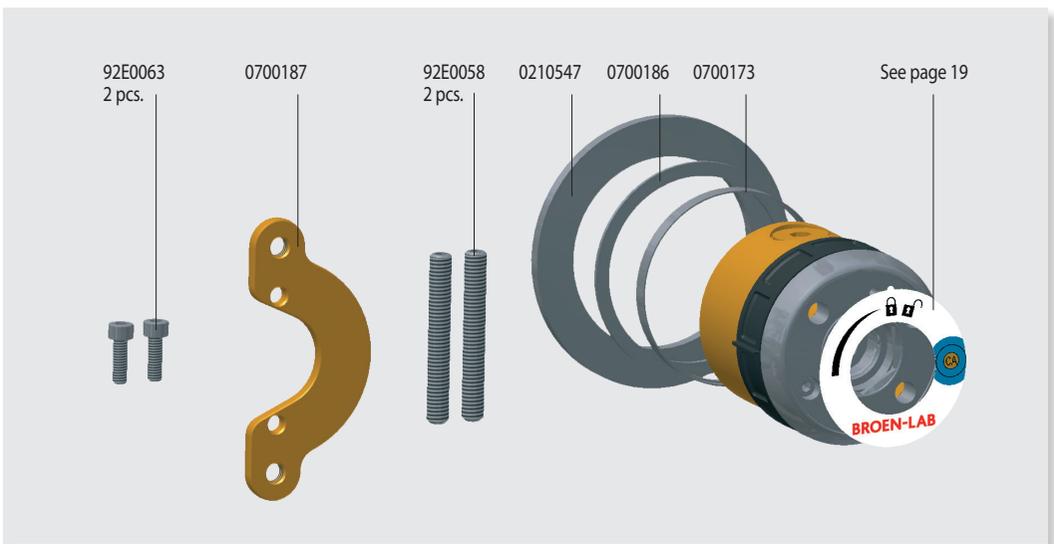
BROEN-LAB QUICK CONNECT

Unwrapping the Quick Connect

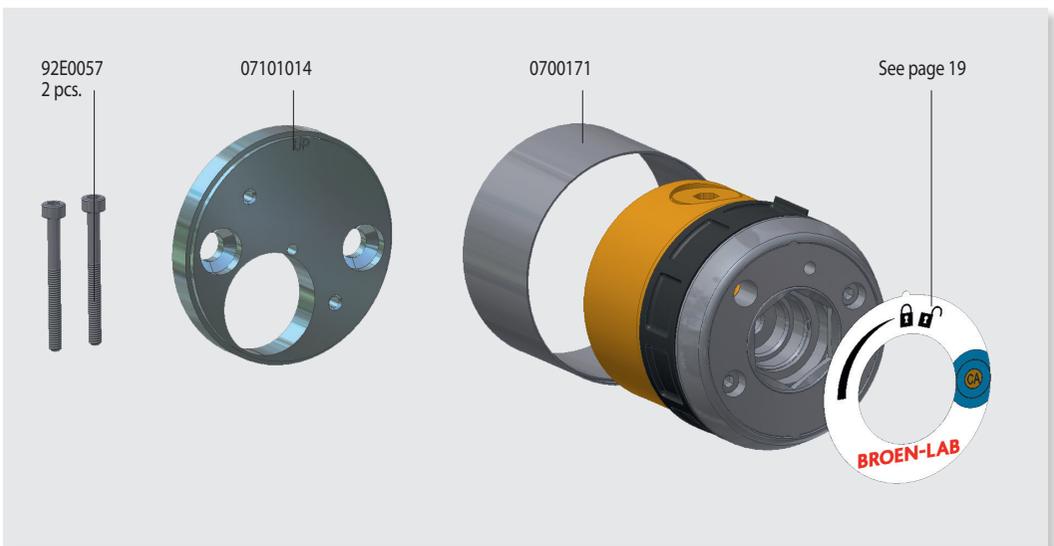
When ordered parts are received, it must be checked that they comply with ordered article.

Illustrations below show the contents of delivered articles:

070XXX1 (BUILT-IN)



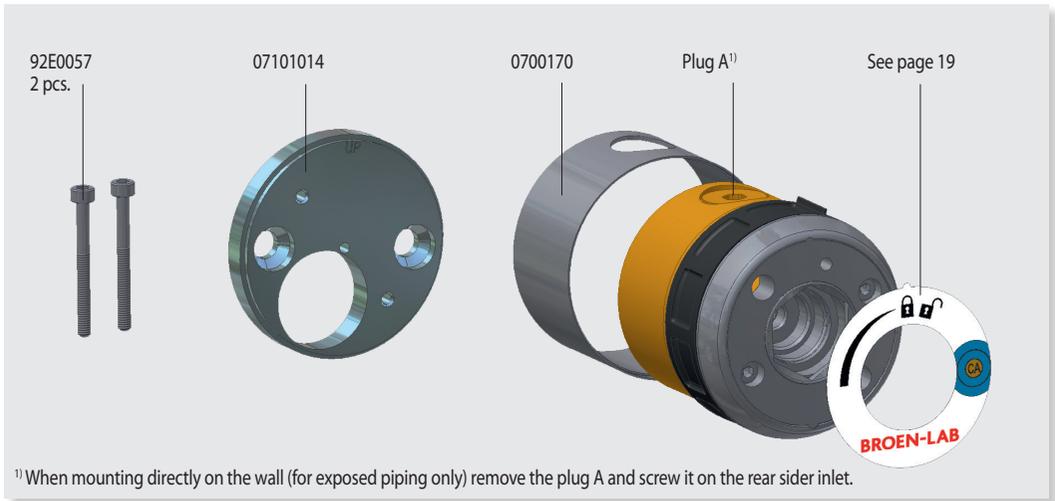
070XXX2 (WALL/PANEL MOUNTING, CONCEALED PIPING)



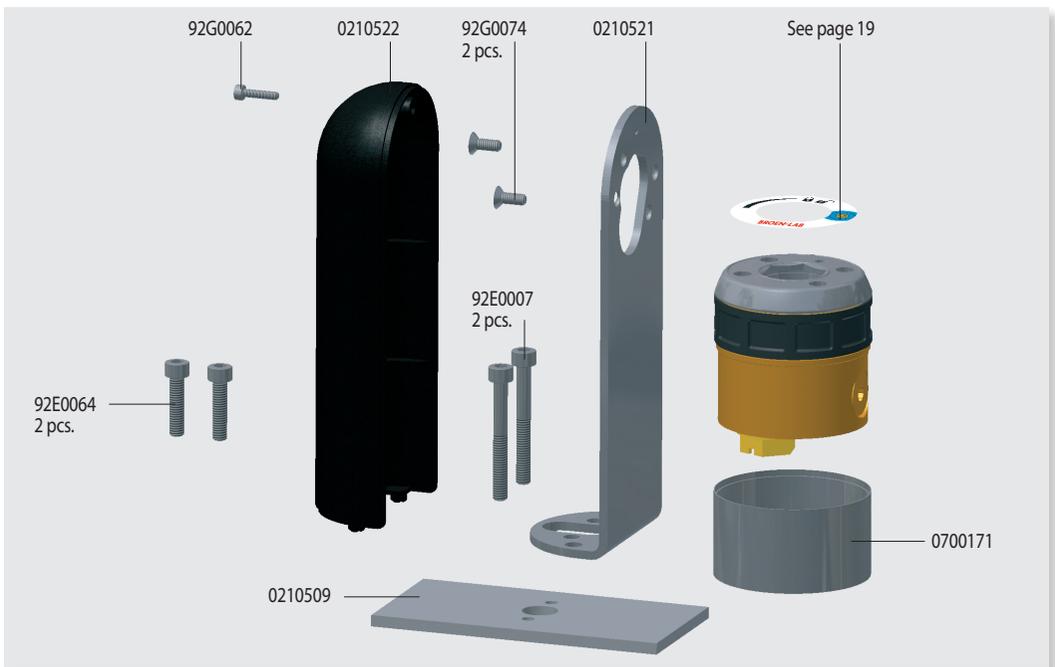
BROEN-LAB QUICK CONNECT

Unwrapping the Quick Connect

070XXX3 (WALL/PANEL MOUNTING, EXPOSED PIPING)



070XXX4 (BENCH/SUSPENDED MOUNTING)



BROEN-LAB QUICK CONNECT

Assembly

SAFETY INSTRUCTIONS

Handling of technical gases requires knowledge of the subject, operation instructions and special safety measures. Always check national and local laws, regulations and procedures regarding the installation and use of this type of equipment.

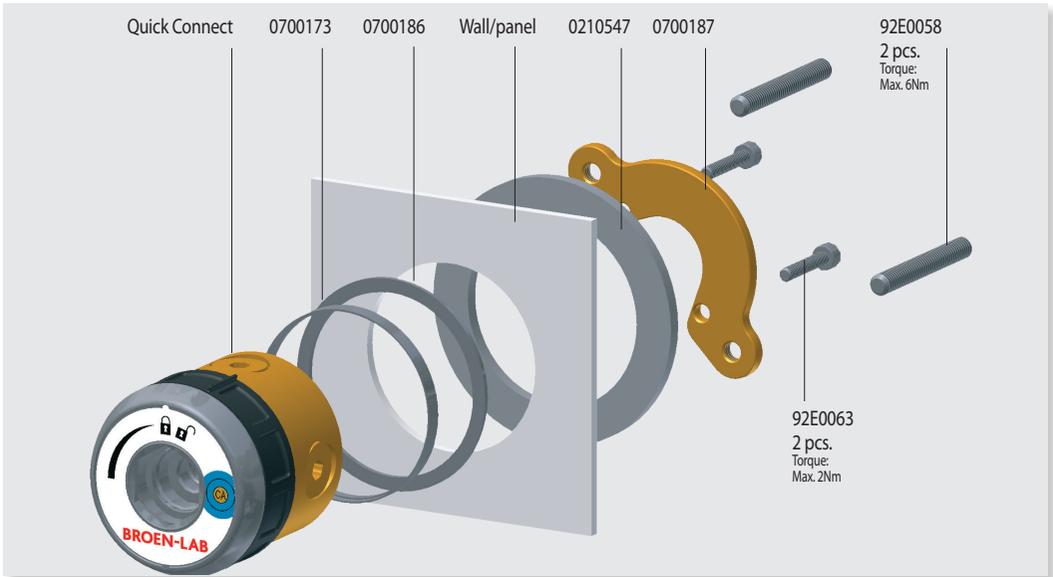
- Changes or modifications are not allowed to be made to the equipment without prior approval from BROEN-LAB .
- Improper handling or use can involve risks for the user and other persons as well as damage of the equipment.
- The equipment can only be used for the gas type it was manufactured and labelled for. Change can be made prior to start of use, provided that the new media is listed in the data sheet, or BROEN-LAB has approved the new media.
- Observe the maximum pressure & temperature ranges.
- The equipment cannot be used for gases in the liquid phase.
- The equipment must not be exposed to impacts, vibrations or other mechanical forces that can damage the equipment.
- The equipment is designed for use in laboratories. The equipment is not designed for installing where there is a possibility of exposure to aggressive media.
- By installation avoid oil and grease contamination (Fire or explosion hazard).
- It is recommended to use a proper leak detection fluid or similar to check for leaks when installing and using the Quick Connect.
- These valves do not contain a relief valve. In case of failure, the outlet pressure may rise above the adjusted value. Any equipment connected to the equipment outlet has to be protected against over-pressure.

BROEN-LAB QUICK CONNECT

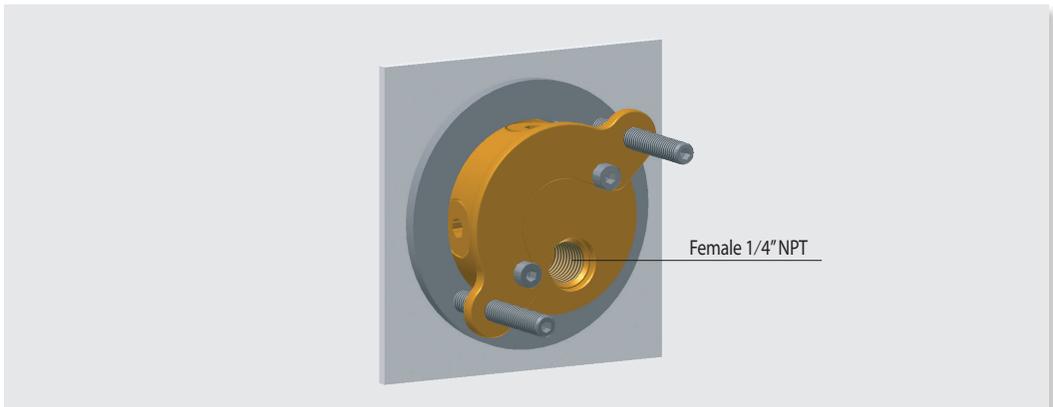
Assembly

BUILT-IN MODEL

Built-in dimensions are shown on page 4.



INLET



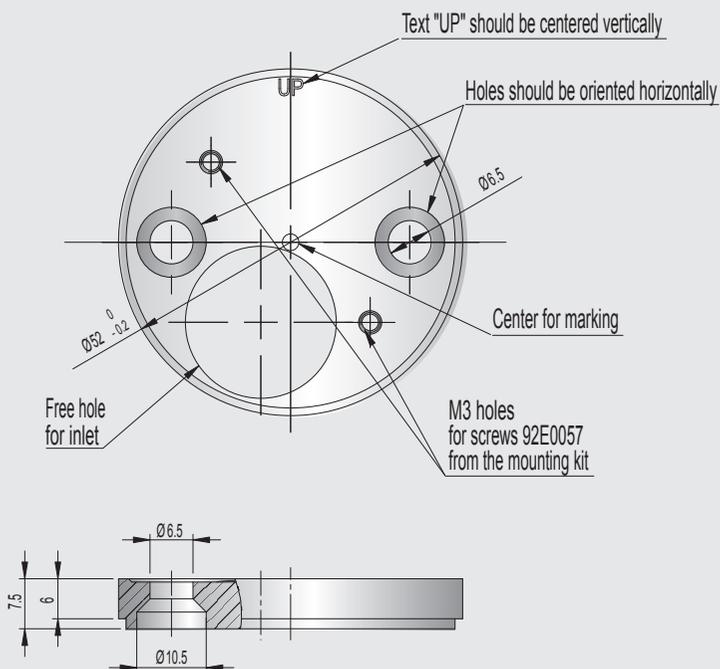
BROEN-LAB QUICK CONNECT

Assembly

WALL BRACKET

Wall bracket 07101014 can be used as a tool for marking up the positions of the holes on the panel when models 070XXX2 and 070XXX3 should be mounted from the front or directly on the wall (see pages 11 and 12 for more information).

DESIGN



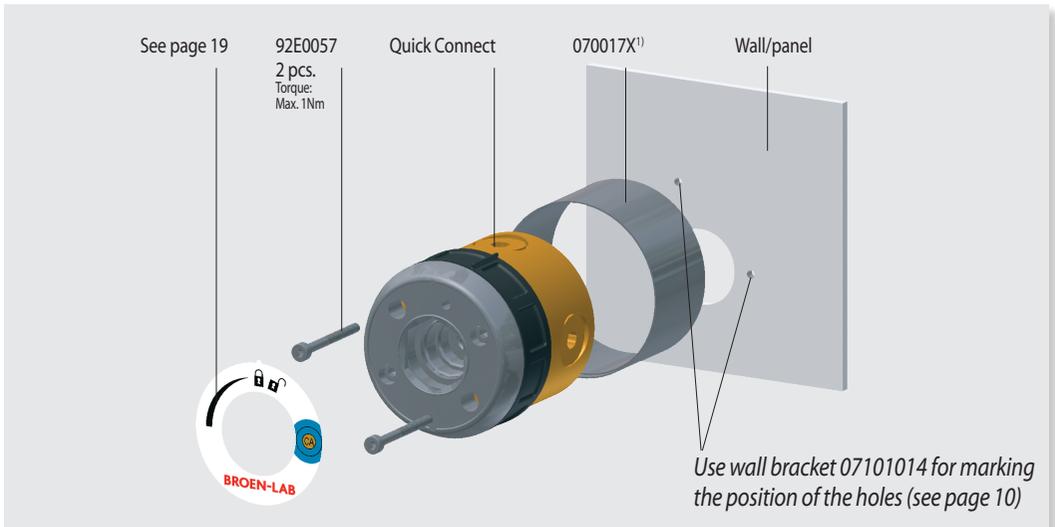
BROEN-LAB QUICK CONNECT

Assembly

WALL/PANEL MOUNTING, CONCEALED & EXPOSED PIPING

(MOUNTING FROM FRONTSIDE WITHOUT WALL BRACKET)

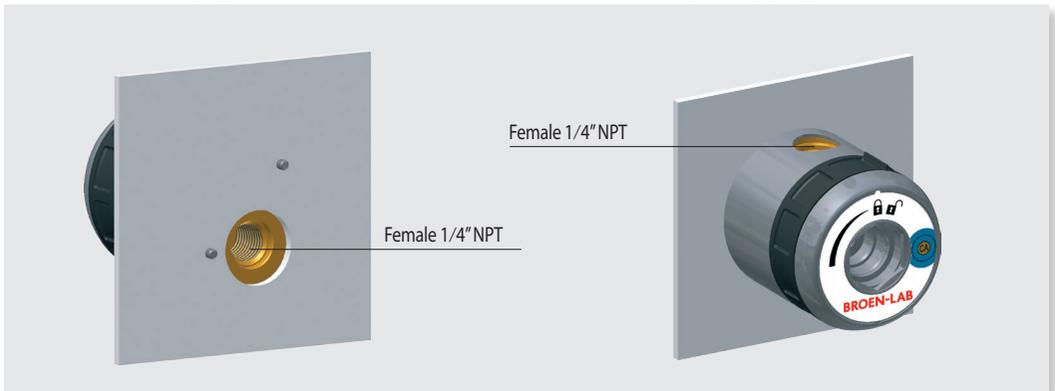
Built-in dimensions are shown on page 5.



¹⁾ **0700171:** For concealed piping.
0700170: For exposed piping.

INLET (concealed piping)

INLET (exposed piping)



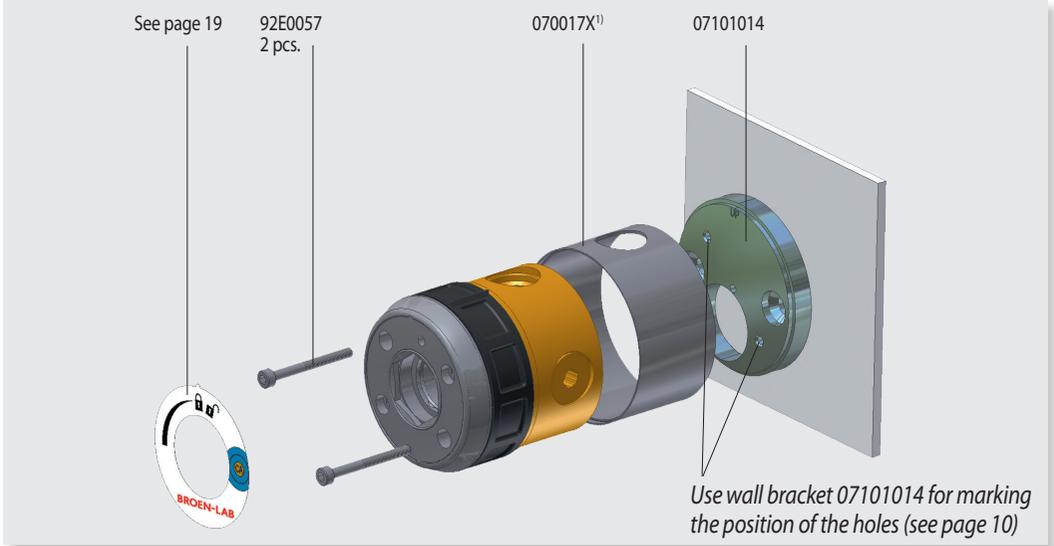
BROEN-LAB QUICK CONNECT

Assembly

WALL/PANEL MOUNTING, CONCEALED & EXPOSED PIPING

(MOUNTING FROM FRONTSIDE WITH WALL BRACKET)

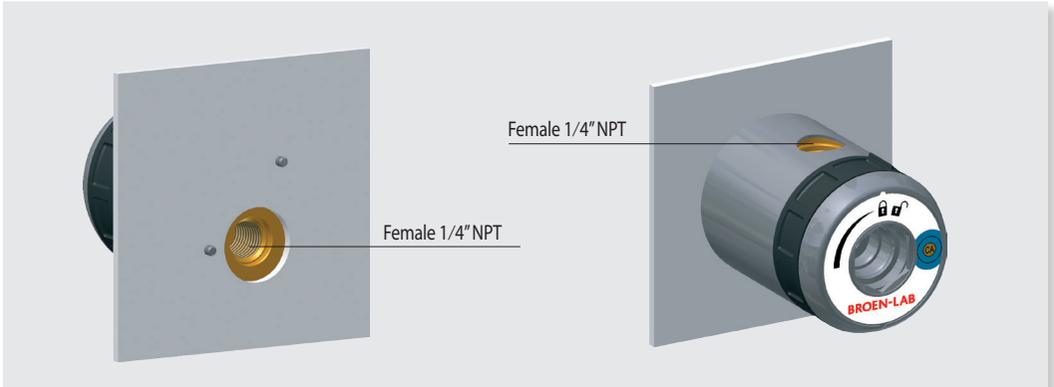
Built-in dimensions are shown on page 5.



¹⁾ **0700171:** For concealed piping.
0700170: For exposed piping.

INLET (concealed piping)

INLET (exposed piping)

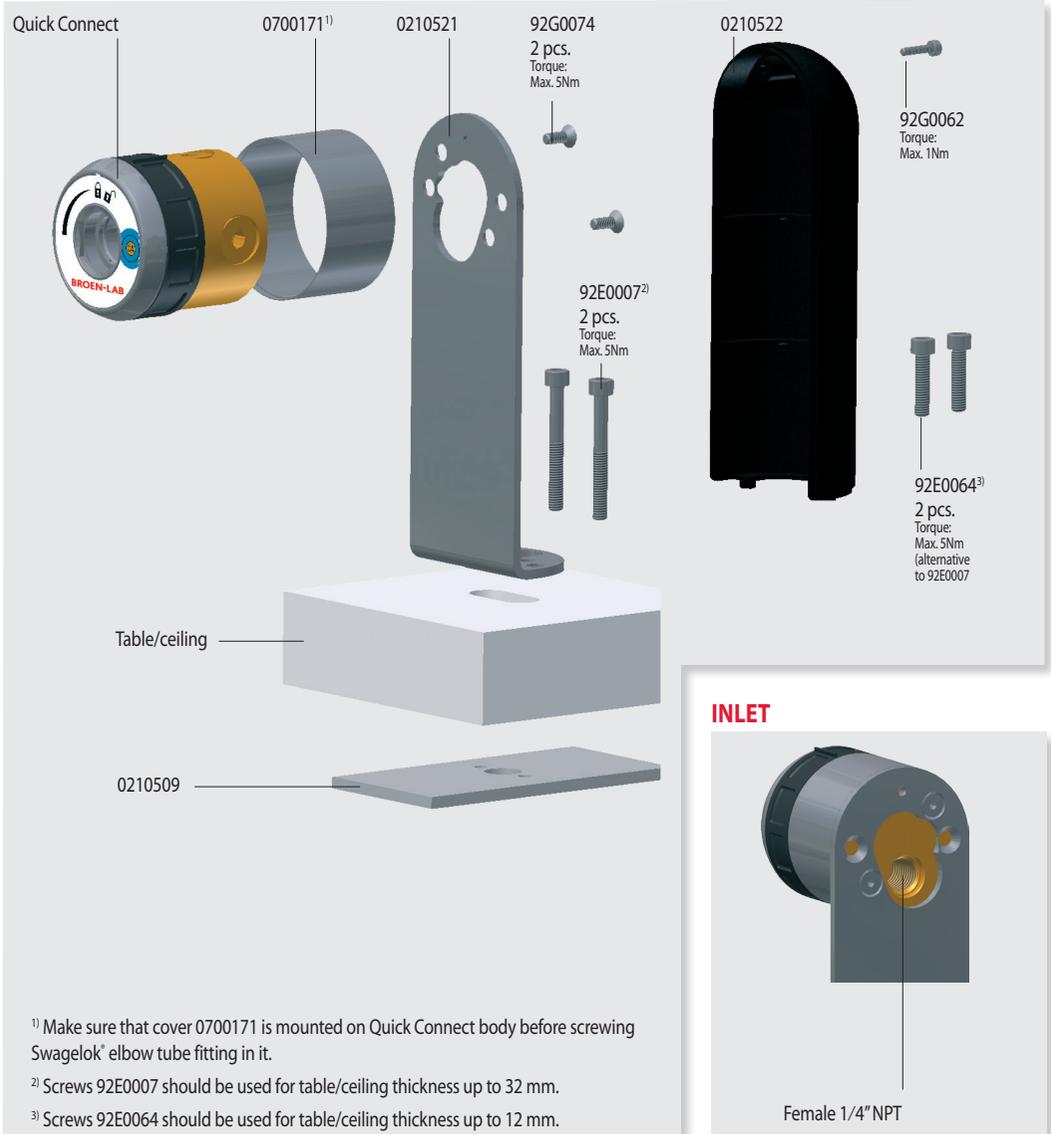


BROEN-LAB QUICK CONNECT

Assembly

BENCH/SUSPENDED MOUNTING

Dimensions are shown on page 4.



BROEN-LAB QUICK CONNECT

Operation

1. Connect outlet and Quick Connect:

- 1.1. Place the outlet in such a way that the first hexagon on the outlet and female hexagon in the Quick Connect fit together. Press the inlet into the Quick Connect until the second hexagon on the outlet touches the Quick Connect.
- 1.2. Turn the outlet until the second hexagon on the outlet and the hexagon in the Quick Connect are aligned.
- 1.3. Press the outlet into the Quick Connect.
- 1.4. The outlet is now locked in the Quick Connect.

2. Open valve:

- 2.1. Turn the handle counterclockwise until the desired flow is achieved.
- 2.2. The regulating area is from 0° to 90° .

3. Close valve:

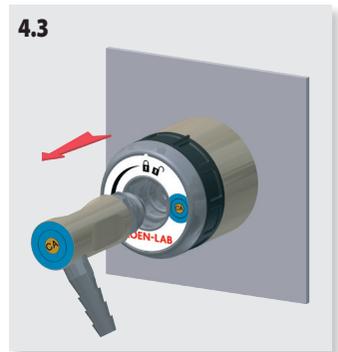
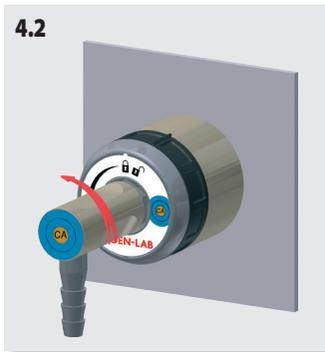
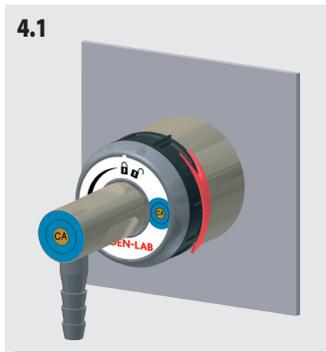
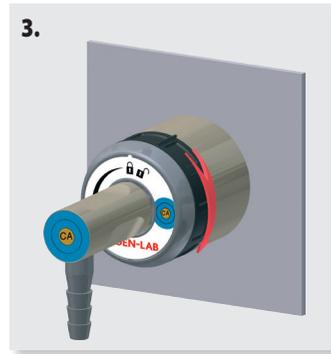
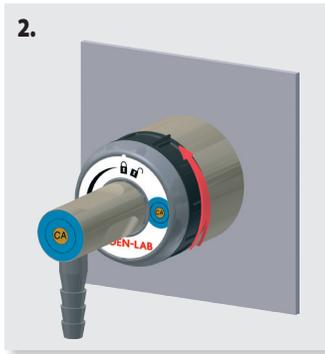
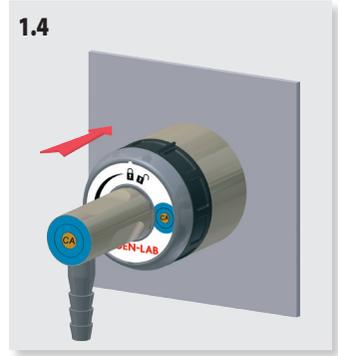
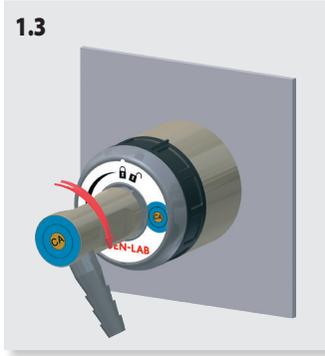
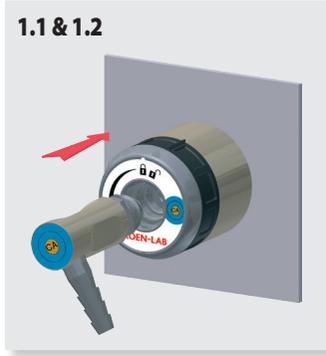
- 3.1. Turn the handle clockwise until the valve is closed.

4. Release outlet:

- 4.1. Turn the handle clockwise until the outlet is released. The outlet is now parked in the Quick Connect.
- 4.2. Turn the outlet until the first hexagon on the outlet and the hexagon in the Quick Connect are aligned.
- 4.3. Remove the outlet.

BROEN-LAB QUICK CONNECT

Operation



BROEN-LAB QUICK CONNECT

Trouble shooting guide

ERROR

CAUSE

ACTION

Quick Connect leaks.
(Outlet is not plugged in).



1. The Quick Connect leaks between the fitting and inlet.



2. The piping leading to the Quick Connect are leaking.



3. There is a leak inside the Quick Connect.



1 & 2. Retighten the fittings.
Apply new sealant to the threads.



3. Replace the Quick Connect with a new one.

The connection between the Quick Connect and the outlet is leaking.



The gasket on the outlet is leaking.



Replace the gasket with a new one.

The outlet is leaking.



There are leaks inside the outlet.



Replace the outlet with a new one.

The handle can be turned without the plug inserted.



The ball lock has been activated by an object other than the outlet.



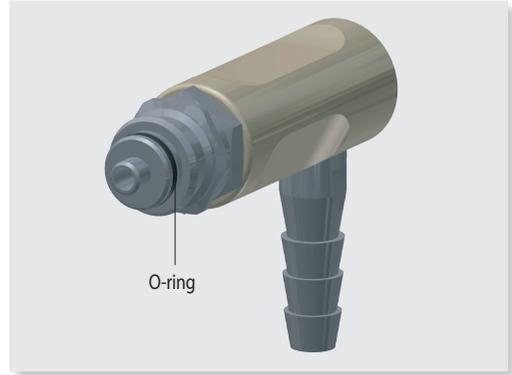
Turn the handle counter clockwise until the ball lock is released.

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Service

REPLACEMENT OF O-RING ON OUTLET

1. Remove O-ring as shown.
2. Refit a new O-ring.
(See spare part list on page 19).



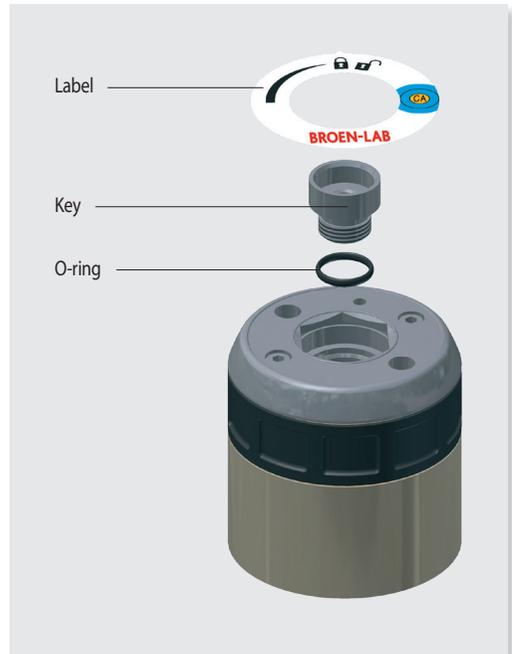
CHANGING THE MEDIA TYPE

In order to be able to change the media type, it is necessary to replace the key and the label.

If the new medium is different from the ones stated on the datasheet, it is necessary to consult BROEN-LAB for confirmation first.

Change of media on a Quick Connect after start of use is not allowed. If the media is changed despite this warning, BROEN-LAB cannot be held responsible for possible accidents!

1. Remove label and key. Remove O-ring.
2. Refit O-ring on the new key.
Refit the new key. Max. Torque: 5Nm.
3. Place the new label.
4. Replace outlet with new ones suitable for the new media.



BROEN-LAB QUICK CONNECT

Spare part list

Description	Product No. (Similar for all media)
Head cap screw M4x12 (mounting kit) 	92E0063
Socket set screw M6x45 (mounting kit) 	92E0058
Head cap screw M3x30 (front side mounting) 	92E0057
Mounting bracket 	0700187
Supporting disk (built-in model) 	0210547
Back plate (built-in model) 	0700186
Cover (built-in model) 	0700173
Cover (exposed piping model) 	0700170
Cover (concealed piping model) 	0700171

Description	Product No. (Similar for all media)
Mounting column bracket (bench/suspended model) 	0210521
Cover for mounting plate (bench/suspended model) 	0210522
Mounting plate (bench/suspended model) 	0210509
Countersunk screw M4x12 (bench/suspended model) 	92G0074
Head cap screw M3x12 (bench/suspended model) 	92G0062
Head cap screw M5x20 (bench/suspended model) 	92E0064
Head cap screw M5x40 (bench/suspended model) 	92E0007
Quick Connect without media key 	0700200B
O-ring for media key 	92A0183

Description	Product No. (Similar for all media)
Stainless Steel braided smooth PTFE hose (1.5m) Connections: Male 1/4"NPT – Female 1/4"NPSM 93C0735 Female 1/4"NPSM – Female 1/4"NPSM 93C0738 	
Swagelok TM elbow pipe fitting Material: Stainless Steel 	9610113
Swagelok TM Tee pipe fitting Material: Stainless Steel 	9610114
Swagelok TM straight pipe fitting Material: Stainless Steel 	9610115
Swagelok TM straight tube fitting Material: Stainless Steel Tube diameter: 3 mm 9610100 4 mm 9610101 6 mm 9610102 1/4" 9610103 1/8" 9610104 	
Swagelok TM elbow tube fitting Material: Stainless Steel Tube diameter: 3 mm 9610106 4 mm 9610107 6 mm 9610108 1/4" 9610109 1/8" 9610110 	

TM Swagelok – TM Swagelok Company

BROEN-LAB QUICK CONNECT

Spare part list

Description	Label	Media / Product No.							
		EN ¹⁾							
	US ²⁾	Air	Vac	O ₂	N ₂	CO ₂	H ₂	Ar	He
 Label	EN ¹⁾	0700130	0700131	0700132	0700133	0700134	0700135	0700136	0700137
	US ²⁾	0700050	0700051	0700052	0700053	0700054	0700055	0700056	0700057
 Key for quick connect		0700110	0700111	0700112	0700113	0700114	0700115	07000116	0700117
 90° outlet, serrated hose nozzle	EN ¹⁾	0705100	0705200	0705300	0705400	0705500	0705600	0705700	0705800
	US ²⁾	0755100	0755200	0755300	0755400	0755500	0755600	0755700	0755800
 90° outlet, female 1/4" NPT.	EN ¹⁾	0705110	0705210	0705310	0705410	0705510	0705610	0705710	0705810
	US ²⁾	0755110	0755210	0755310	0755410	0755510	0755610	0755710	0755810
 90° outlet, female 1/4" NPT.		0707100	0707200	0707300	0707400	0707500	0707600	0707700	0707800
 Flowmeter	EN ¹⁾	070513Y ³⁾	-	070533Y ³⁾	070543Y ³⁾	070553Y ³⁾	070563Y ³⁾	070573Y ³⁾	070583Y ³⁾
	US ²⁾	075513Y ³⁾	-	075533Y ³⁾	075543Y ³⁾	075553Y ³⁾	075563Y ³⁾	075573Y ³⁾	075583Y ³⁾
 Pressure regulator	EN ¹⁾	070512Z ⁴⁾	-	070532Z ⁴⁾	070542Z ⁴⁾	070552Z ⁴⁾	070562Z ⁴⁾	070572Z ⁴⁾	070582Z ⁴⁾
	US ²⁾	075512Z ⁴⁾	-	075532Z ⁴⁾	075542Z ⁴⁾	075552Z ⁴⁾	075562Z ⁴⁾	075572Z ⁴⁾	075582Z ⁴⁾
 O-ring for outlet		92A0183	92A0183	92A0182	92A0182	92A0180	92A0180	92A0180	92A0177

¹⁾ Label according to Standard EN13792:2002

²⁾ Label according to American recommendation

³⁾ **Flowmeter:** Y=1: Capacity: 0-5 l/min. Y=2: Capacity: 0-15 l/min.

⁴⁾ **Pressure regulator:** Z=3: 0-500 kPa / 0-3 bar. Z=4: 0-1000 kPa / 0-10bar.

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