

**BROEN-LAB
UNIFLEX™
FITTINGS FOR
SPECIAL
WATER**











BROEN-LAB UNIFLEX™ FITTINGS FOR SPECIAL WATER

BROEN-LAB UNIFLEX™ FITTINGS FOR SPECIAL WATER

Polypropylene handle

BROEN-LAB

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BROEN-LAB UNIFLEX™ FITTINGS FOR SPECIAL WATER

THIS IS BROEN-LAB UNIFLEX™

BROEN-LAB UniFlex™ line offers a high quality and durability combined with the complete programme, this adds up to low LCC (Life Cycle Costs).

BROEN-LAB UniFlex™ fittings for special water are designed for laboratory use. The operation and configuration of the fittings are highly adapted to the requirements of a modern laboratory. The fittings are surface treated with BROEN-LAB POLYCOAT powder coating, which is highly resistant to most chemicals, UV light and heat – Please refer to the “BROEN-LAB POLYCOAT” brochure for further information.

All special water fittings are as a standard delivered with a detachable hose nozzle with a loose union nut which offers quick and easy assembly and disassembly even when a hose is attached to the fitting. BROEN-LAB UniFlex™ fittings are as a standard delivered with a polypropylene handle. BROEN-LAB UniFlex™ plastic lined fittings are delivered with LLDPE (Linear Low-Density Polyethylene) inner pipe.

BROEN-LAB UniFlex™ fittings for special water are designed especially to eliminate corrosion problems in connection with use of purified water. Our fittings offer a number of advantages – A.O.:

- Complete line of Stainless Steel fittings
- Complete line of plastic lined fittings
- Recirculating fittings
- Designed to secure maximum purity of the water
- Uniform design with the rest of the BROEN-LAB UniFlex™ programme



WHAT IS SPECIAL WATER?

Special water is water that has been treated to ensure maximum purity of the water. This is important for certain tests in order to avoid contamination of the samples. The water can be cleaned in many different ways – A.O.:

- Demineralisation (Boiling)
- RO – Reverse Osmosis
- UV light
- Ultra Filtration
- Desalination

WHY DO I NEED SPECIAL FITTINGS?

Special water or purified water becomes very aggressive when treated, as a consequence of this normal brass fittings will corrode very quickly if used in connection with these media. Our fittings for special water offer materials that are suitable and tested for use with treated water and all components are selected to ensure maximum corrosion resistance.

In order to secure maximum purity of water our fittings for special water have been designed with special components and technologies to ensure that test samples are not polluted.

OUR SOLUTIONS

Stainless Steel Fittings



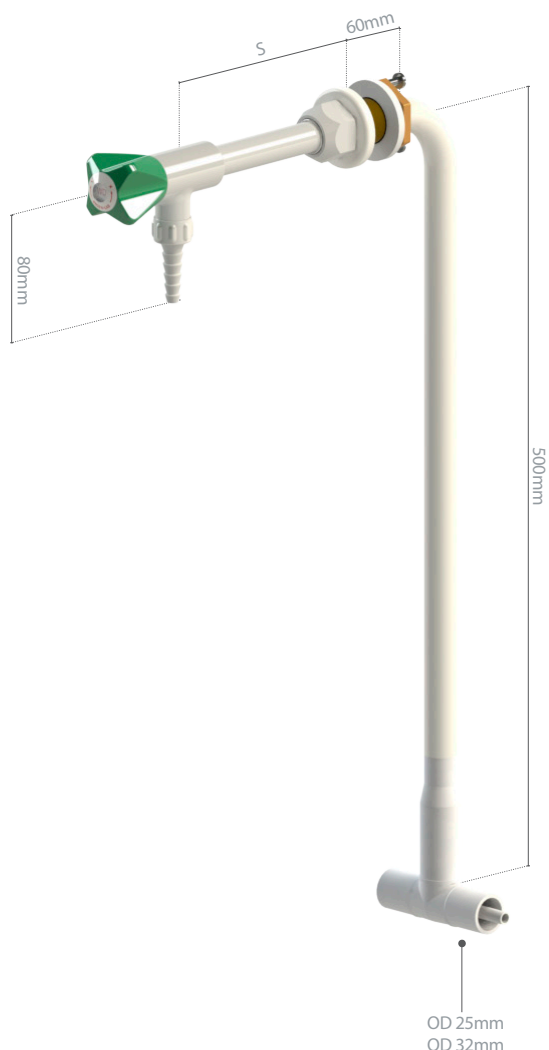
Fittings with Plastic Inner Tube



Recirculating Fittings



WALL MOUNTED FITTING - FULLY RECIRCULATING



SPECIFICATIONS

Handle: Polypropylene

Media indication: according to EN13792

Hose nozzle: Removable polypropylene

Headwork: Diaphragm type

Opening/closing function: 1 1/2 x 360°

Temperature range: 0-65°C

Max. working pressure: 10 bar / 147 psi

Test pressure: 1 x working pressure

Weight: 1.6 kg

For more technical information and jointing methods please refer to page 22.

MATERIALS WITH MEDIA CONTACT

Diaphragm: PTFE



Rubber: EPDM

Plastics: PP, PP-n, PVDF



ORDERING INFORMATION

For standard configuration please refer to the item numbers below.

Model: OD 25mm

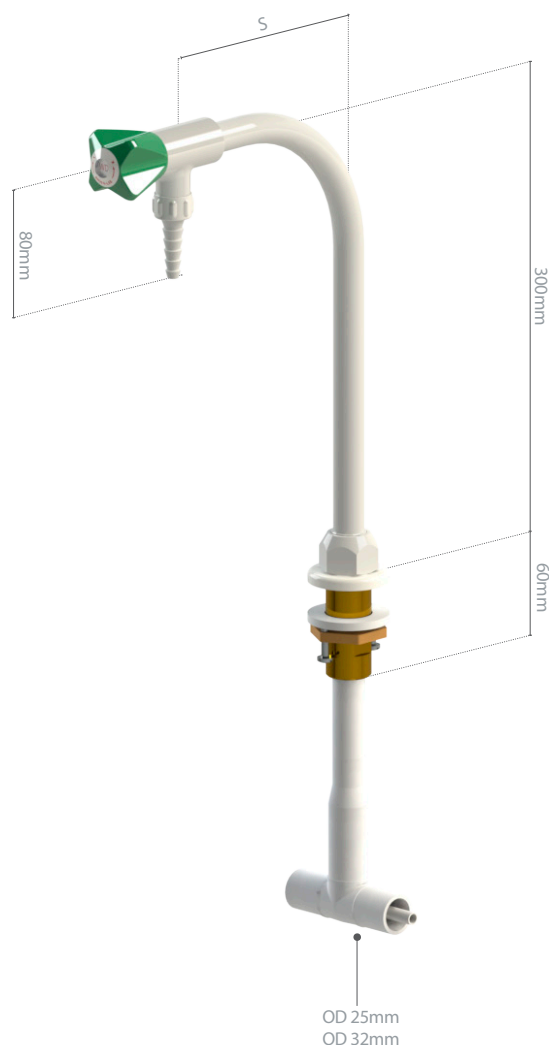
Media	S = 150mm	S = 200mm
 Distilled water	2533 022 1003	2533 118 1003
 Deionized water, cold	2533 022 1036	2533 118 1036

Model: OD 32mm

Media	S = 150mm	S = 200mm
 Distilled water	2533 119 1003	2533 120 1003
 Deionized water, cold	2533 119 1036	2533 120 1036

For further information and mounting instructions please refer to www.BROEN-LAB.com or contact your local BROEN-LAB representative.

BENCH MOUNTED FITTING ON A COLUMN - FULLY RECIRCULATING



SPECIFICATIONS

Handle: Polypropylene

Media indication: according to EN13792

Hose nozzle: Removable polypropylene

Headwork: Diaphragm type

Opening/closing function: 1 1/2 x 360°

Temperature range: 0-65°C

Max. working pressure: 10 bar / 147 psi

Test pressure: 1 x working pressure

Weight: 1.8 kg

For more technical information and jointing methods please refer to page 22.

MATERIALS WITH MEDIA CONTACT

Diaphragm: PTFE

Rubber: EPDM

Plastics: PP, PP-n, PVDF



ORDERING INFORMATION

For standard configuration please refer to the item numbers below.



Other options:

- also available in ABS (1", 1 1/4", 1 1/2")

Model: OD 25mm

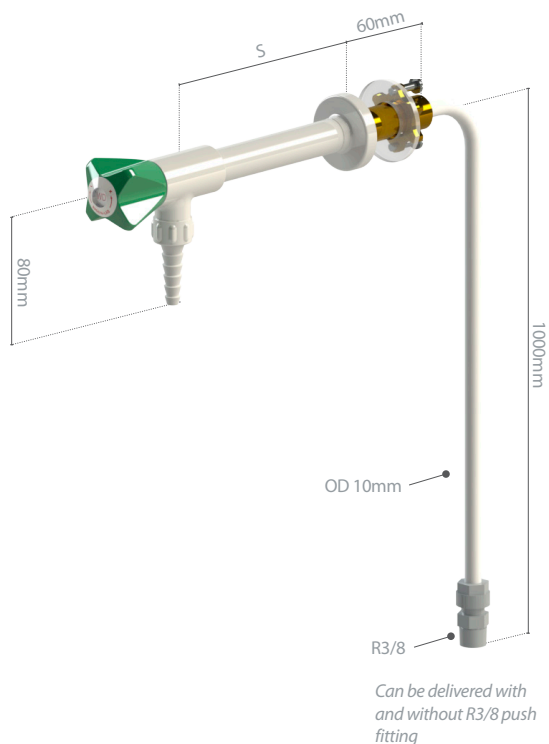
Media	S = 150mm	S = 200mm
 Distilled water	2533 121 1003	2533 021 1003
 Deionized water, cold	2533 121 1036	2533 021 1036

Model: OD 32mm

Media	S = 150mm	S = 200mm
 Distilled water	2533 122 1003	2533 123 1003
 Deionized water, cold	2533 122 1036	2533 123 1036

For further information and mounting instructions please refer to www.BROEN-LAB.com or contact your local BROEN-LAB representative.

WALL MOUNTED FITTING WITH PLASTIC INNER TUBE



SPECIFICATIONS

Handle: Polypropylene

Media indication: according to EN13792

Hose nozzle: Removable polypropylene

Headwork: Diaphragm type

Opening/closing function: 1 1/2 x 360°

Max. working pressure:

10 bar / 147 psi at 20°C

6 bar / 87 psi at 65°C

Test pressure: 1 x working pressure

Weight: 0.7 kg

MATERIALS WITH MEDIA CONTACT

Diaphragm: PTFE

Rubber: EPDM

Plastics: LLDPE, POM, PP, PVDF



ORDERING INFORMATION

For standard configuration please refer to the item numbers below.



Other options:

- different sizes of push-in fittings
- different inlet lengths

Model: With G3/8 push-in fitting

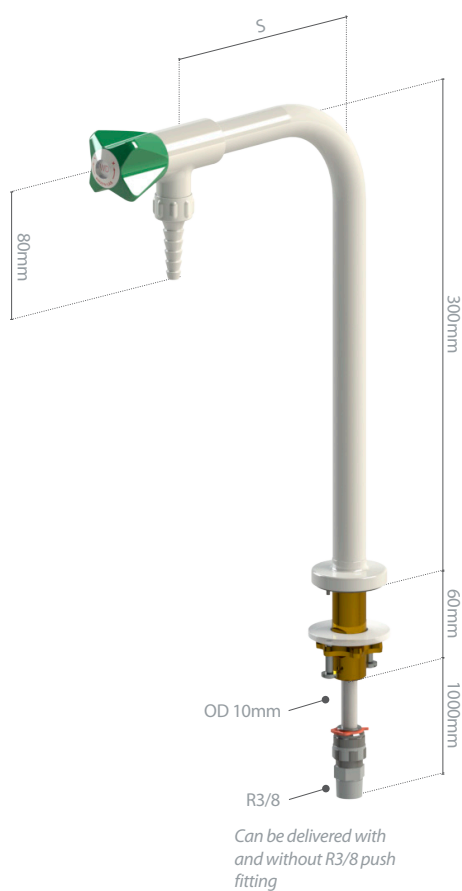
Media		S = 150mm	S = 200mm
 Distilled water		2533 184 1003-09	2533 181 1003-09
 Deionized water, cold		2533 184 1036-09	2533 181 1036-09

Model: Without push-in fitting

Media		S = 150mm	S = 200mm
 Distilled water		2533 018 1003-09	2533 020 1003-09
 Deionized water, cold		2533 018 1036-09	2533 020 1036-09

For further information and mounting instructions please refer to www.BROEN-LAB.com or contact your local BROEN-LAB representative.

BENCH MOUNTED FITTING ON A COLUMN WITH PLASTIC INNER TUBE



SPECIFICATIONS

Handle: Polypropylene

Media indication: according to EN13792

Hose nozzle: Removable polypropylene

Headwork: Diaphragm type

Opening/closing function: 1 1/2 x 360°

Max. working pressure:

10 bar / 147 psi at 20°C

6 bar / 87 psi at 65°C

Test pressure: 1 x working pressure

Weight: 0.7 kg

MATERIALS WITH MEDIA CONTACT

Diaphragm: PTFE

Rubber: EPDM

Plastics: LLDPE, POM, PP, PVDF



ORDERING INFORMATION

For standard configuration please refer to the item numbers below.



Other options:

- different sizes of push-in fittings
- different inlet lengths

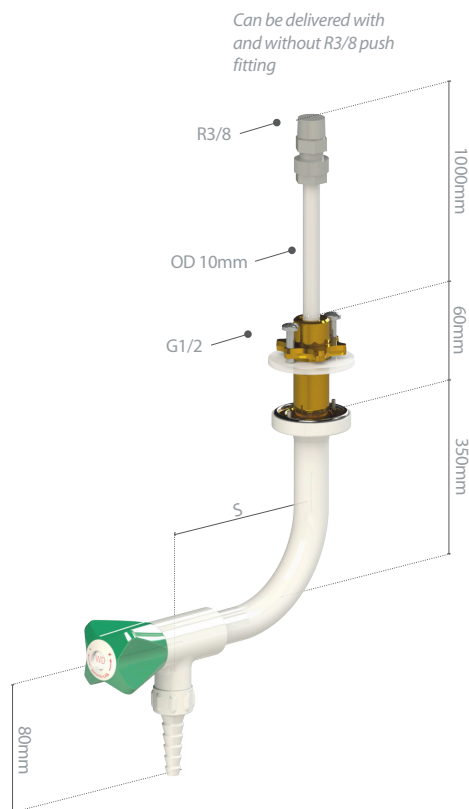
Model: With G3/8 push-in fitting

Media		S = 150mm	S = 200mm
 Distilled water		2533 170 1003-09	2533 159 1003-09
 Deionized water, cold		2533 170 1036-09	2533 159 1036-09

Model: Without push-in fitting

Media		S = 150mm	S = 200mm
 Distilled water		2533 009 1003-09	2533 011 1003-09
 Deionized water, cold		2533 009 1036-09	2533 011 1036-09

For further information and mounting instructions please refer to www.BROEN-LAB.com or contact your local BROEN-LAB representative.



SPECIFICATIONS

Handle: Polypropylene

Media indication: according to EN13792

Hose nozzle: Removable polypropylene

Headwork: Diaphragm type

Opening/closing function: 1 1/2 x 360°

Max. working pressure:

10 bar / 147 psi at 20°C

6 bar / 87 psi at 65°C

Test pressure: 1 x working pressure

Weight: 0.7 kg

MATERIALS WITH MEDIA CONTACT

Diaphragm: PTFE

Rubber: EPDM

Plastics: LLDPE, POM, PP, PVD

ORDERING INFORMATION

For standard configuration please refer to the item numbers below.

Other options:

- different sizes of push-in fittings
- different inlet lengths
- straight valve

Model: With G3/8 push-in fitting

Media



Distilled water

2533 256 1003-09



Deionized water, cold

2533 256 1036-09

Model: Without push-in fitting

Media



Distilled water

2533 257 1003-09

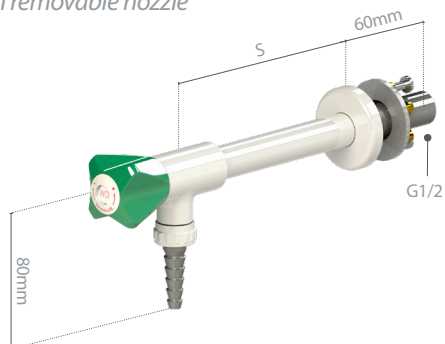


Deionized water, cold

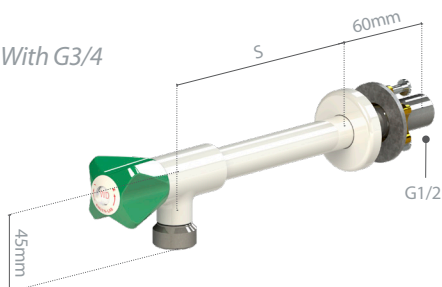
2533 257 1036-09

WALL MOUNTED FITTING IN STAINLESS STEEL

With removable nozzle





With G3/4




Model: With removable nozzle



Media		S = 150mm	S = 200mm
 Distilled water		2533 030 1003	2533 124 1003
 Deionized water, cold		2533 030 1036	2533 124 1036

Model: With G3/4



Media		S = 150mm	S = 200mm
 Distilled water		2533 029 1003	2533 125 1003
 Deionized water, cold		2533 029 1036	2533 125 1036

SPECIFICATIONS

Handle: Polypropylene

Media indication: according to EN13792

Headwork: Diaphragm type

Opening/closing function: 1 1/2 x 360°

Temperature range: 0-90°C

Max. working pressure: 10 bar / 147 psi

Test pressure: 1 x working pressure

Weight: 0.9 kg

MATERIALS WITH MEDIA CONTACT

Diaphragm: PTFE

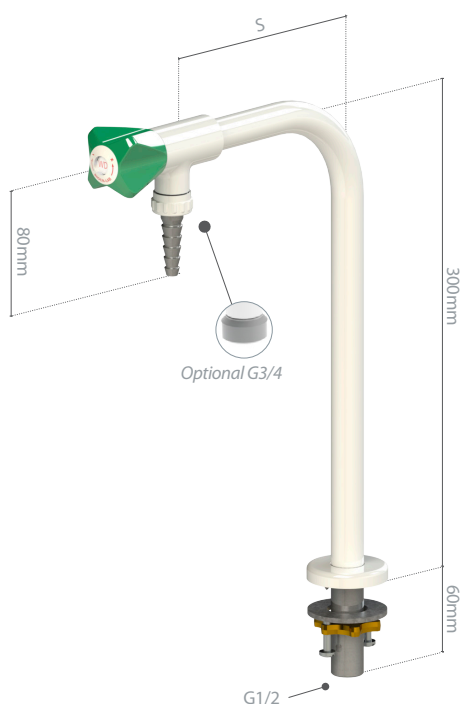
Rubber: EPDM

Metals: Stainless Steel, AISI 316

ORDERING INFORMATION

For standard configuration please refer to the item numbers below.

BENCH MOUNTED FITTING ON A COLUMN IN STAINLESS STEEL



SPECIFICATIONS

Handle: Polypropylene

Media indication: according to EN13792

Headwork: Diaphragm type

Opening/closing function: 1 1/2 x 360°

Temperature range: 0-90°C

Max. working pressure: 10 bar / 147 psi

Test pressure: 1 x working pressure

Weight: 1.4 kg

MATERIALS WITH MEDIA CONTACT

Diaphragm: PTFE

Rubber: EPDM



Metals: Stainless Steel, AISI 316

ORDERING INFORMATION

For standard configuration please refer to the item numbers below.



Model: With removable nozzle



Media	S = 150mm	S = 200mm
 Distilled water	2533 093 1003	2533 007 1003
 Deionized water, cold	2533 093 1036	2533 007 1036

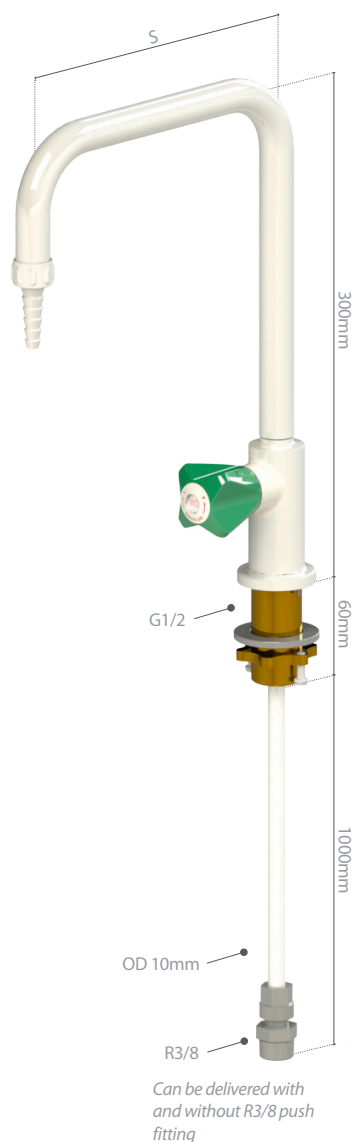
Model: With G3/4



Media	S = 150mm	S = 200mm
 Distilled water	2533 126 1003	2533 028 1003
 Deionized water, cold	2533 126 1036	2533 028 1036

For further information and mounting instructions please refer to www.BROEN-LAB.com or contact your local BROEN-LAB representative.

BENCH MOUNTED FITTING WITH SWIVEL SPOUT WITH PLASTIC INNER TUBE



SPECIFICATIONS

Handle: Polypropylene

Media indication: according to EN13792

Hose nozzle: Removable polypropylene

Spout: Full swivel action

Headwork: Diaphragm type

Opening/closing function: 1 1/2 x 360°

Max. working pressure:

10 bar / 147 psi at 20°C

6 bar / 87 psi at 65°C

Test pressure: 1 x working pressure

Weight: 1.0 kg

MATERIALS WITH MEDIA CONTACT

Diaphragm: PTFE

Rubber: EPDM

Plastics: LLDPE, POM, PP, PVDF



ORDERING INFORMATION

For standard configuration please refer to the item numbers below.



Other options:

- different sizes of push-in fittings
- other inlet options

Model: With G3/8 push-in fitting

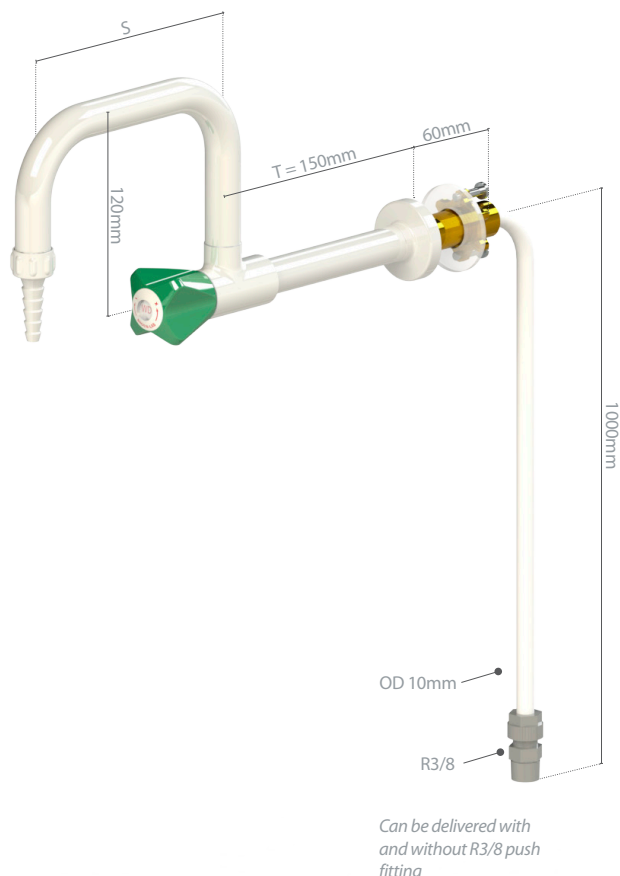
Media		S = 150mm	S = 200mm	S = 250mm	S = 300mm
 Distilled water		2534 100 1003-52	2534 101 1003-52	2534 102 1003-52	2534 103 1003-52
 Deionized water, cold		2534 100 1036-52	2534 101 1036-52	2534 102 1036-52	2534 103 1036-52

Model: Without push-in fitting

Media		S = 150mm	S = 200mm	S = 250mm	S = 300mm
 Distilled water		2534 034 1003-52	2534 035 1003-52	2534 055 1003-52	2534 099 1003-52
 Deionized water, cold		2534 034 1036-52	2534 035 1036-52	2534 055 1036-52	2534 099 1036-52

For further information and mounting instructions please refer to www.BROEN-LAB.com or contact your local BROEN-LAB representative.

WALL MOUNTED FITTING WITH SWIVEL SPOUT WITH PLASTIC INNER TUBE



SPECIFICATIONS

Handle: Polypropylene

Media indication: according to EN13792

Hose nozzle: Removable polypropylene

Spout: Full swivel action

Headwork: Diaphragm type

Opening/closing function: 1 1/2 x 360°

Max. working pressure:

10 bar / 147 psi at 20°C

6 bar / 87 psi at 65°C

Test pressure: 1 x working pressure

Weight: 1.2 kg

MATERIALS WITH MEDIA CONTACT

Diaphragm: PTFE

Rubber: EPDM

Plastics: LLDPE, POM, PP, PVDF



ORDERING INFORMATION

For standard configuration please refer to the item numbers below.



Other options:

- different sizes of push-in fittings
- different inlet lengths
- S-shaped spout
- T = 50/75/200mm

Model: With G3/8 push-in fitting

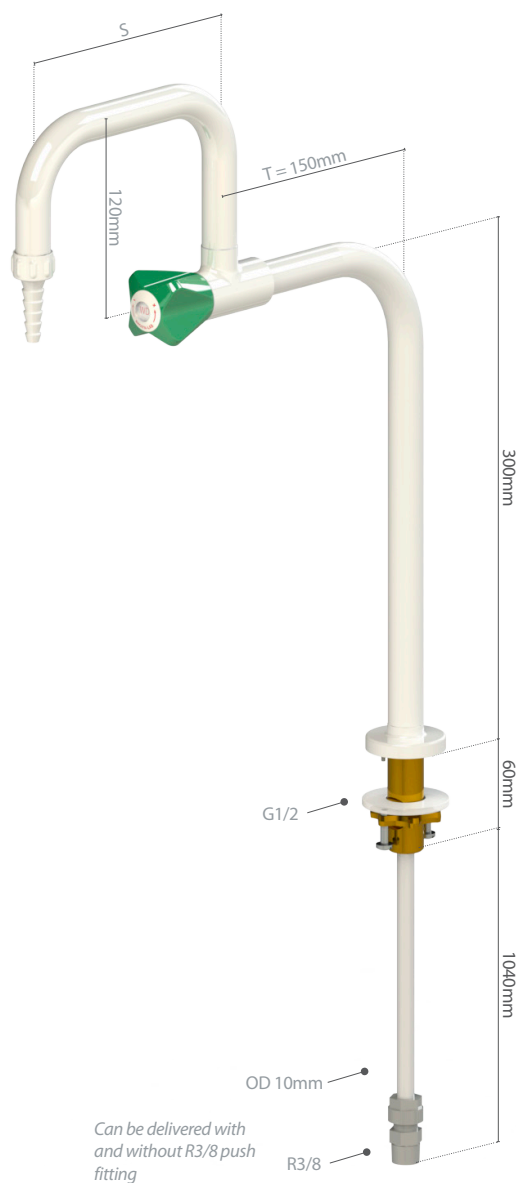
Media	S = 150mm	S = 200mm	S = 250mm	S = 300mm
 Distilled water	2533 051 1003-09	2533 052 1003-09	2533 053 1003-09	2533 054 1003-09
 Deionized water, cold	2533 051 1036-09	2533 052 1036-09	2533 053 1036-09	2533 054 1036-09

Model: Without push-in fitting

Media	S = 150mm	S = 200mm	S = 250mm	S = 300mm
 Distilled water	2533 050 1003-09	2533 012 1003-09	2533 013 1003-09	2533 014 1003-09
 Deionized water, cold	2533 050 1036-09	2533 012 1036-09	2533 013 1036-09	2533 014 1036-09

For further information and mounting instructions please refer to www.BROEN-LAB.com or contact your local BROEN-LAB representative.

BENCH MOUNTED FITTING ON A COLUMN WITH SWIVEL SPOUT WITH PLASTIC INNER TUBE



Model: With G3/8 push-in fitting

SPECIFICATIONS

Handle: Polypropylene

Media indication: according to EN13792

Hose nozzle: Removable polypropylene

Spout: Full swivel action

Headwork: Diaphragm type

Opening/closing function: 1 1/2 x 360°

Max. working pressure:

10 bar / 147 psi at 20°C

6 bar / 87 psi at 65°C

Test pressure: 1 x working pressure

Weight: 1.4 kg

MATERIALS WITH MEDIA CONTACT

Diaphragm: PTFE

Rubber: EPDM



Plastics: LLDPE, POM, PP, PVDF

ORDERING INFORMATION



For standard configuration please refer to the item numbers below.

Other options:

- different sizes of push-in fittings
- different inlet lengths
- S-shaped spout
- T = 200mm

Media		S = 150mm	S = 200mm	S = 250mm	S = 300mm
 Distilled water		2533 055 1003-09	2533 057 1003-09	2533 058 1003-09	2533 060 1003-09
 Deionized water, cold		2533 055 1036-09	2533 057 1036-09	2533 058 1036-09	2533 060 1036-09

Model: Without push-in fitting

Media		S = 150mm	S = 200mm	S = 250mm	S = 300mm
 Distilled water		2533 056 1003-09	2533 027 1003-09	2533 059 1003-09	2533 061 1003-09
 Deionized water, cold		2533 056 1036-09	2533 027 1036-09	2533 059 1036-09	2533 061 1036-09

For further information and mounting instructions please refer to www.BROEN-LAB.com or contact your local BROEN-LAB representative.

WALL MOUNTED SS FITTING WITH SWIVEL SPOUT WITH PLASTIC INNER TUBE



SPECIFICATIONS

Handle: Polypropylene

Media indication: according to EN13792

Hose nozzle: Removable polypropylene

Spout: Full swivel action

Headwork: Diaphragm type

Opening/closing function: 1 1/2 x 360°

Temperature range: 0-65°C

Max. working pressure: 10 bar / 147 psi

Test pressure: 1 x working pressure

Weight: 1.2 kg

MATERIALS WITH MEDIA CONTACT

Diaphragm: PTFE

Rubber: EPDM

Plastics: PVDF

Metals: Stainless Steel , AISI 316



ORDERING INFORMATION

For standard configuration please refer to the item numbers below.



Other options:

- S-shaped spout
- T = 75/90/110/150/200mm
- Inlet: female G1/2

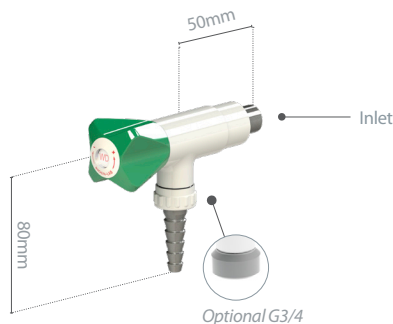
Model: Inlet: male G3/8

Media		S = 150mm	S = 200mm	S = 250mm	S = 300mm
 Distilled water		2530 048 1003	2530 013 1003	2530 011 1003	2530 012 1003
 Deionized water, cold		2530 048 1036	2530 013 1036	2530 011 1036	2530 012 1036

Model: Inlet: male G1/2

Media		S = 150mm	S = 200mm	S = 250mm	S = 300mm
 Distilled water		2530 049 1003	2530 004 1003	2530 007 1003	2530 008 1003
 Deionized water, cold		2530 049 1036	2530 004 1036	2530 007 1036	2530 008 1036

For further information and mounting instructions please refer to www.BROEN-LAB.com or contact your local BROEN-LAB representative.



SPECIFICATIONS

Handle: Polypropylene

Media indication: according to EN13792

Headwork: Diaphragm type

Opening/closing function: 1 1/2 x 360°

Temperature range: 0-90°C

Max. working pressure: 10 bar / 147 psi

Test pressure: 1 x working pressure

Weight: 0.5 kg

MATERIALS WITH MEDIA CONTACT

Diaphragm: PTFE

Rubber: EPDM

Metals: Stainless Steel , AISI 316



ORDERING INFORMATION

For standard configuration please refer to the item numbers below.

Other options:

- T = 75/90/110mm

Model: Inlet: male G3/8

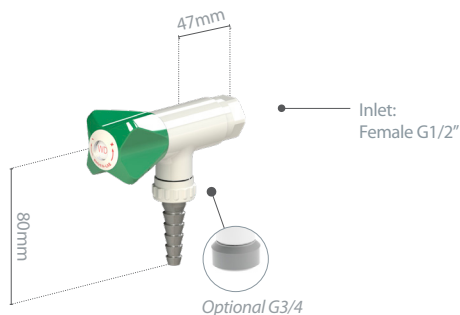
Media	Removable nozzle	G3/4
 Distilled water	2530 001 1003	2530 033 1003
 Deionized water, cold	2530 001 1036	2530 033 1036

Model: Inlet: male G1/2

Media	Removable nozzle	G3/4
 Distilled water	2530 002 1003	2530 003 1003
 Deionized water, cold	2530 002 1036	2530 003 1036

For further information and mounting instructions please refer to www.BROEN-LAB.com or contact your local BROEN-LAB representative.

WALL MOUNTED FITTING - STAINLESS STEEL



SPECIFICATIONS

Handle: Polypropylene

Media indication: according to EN13792

Headwork: Diaphragm type

Opening/closing function: 1 1/2 x 360°

Temperature range: 0-90°C

Max. working pressure: 10 bar / 147 psi

Test pressure: 1 x working pressure

Weight: 0.5 kg

MATERIALS WITH MEDIA CONTACT

Diaphragm: PTFE


Rubber: EPDM

Metals: Stainless Steel, AISI 316

ORDERING INFORMATION

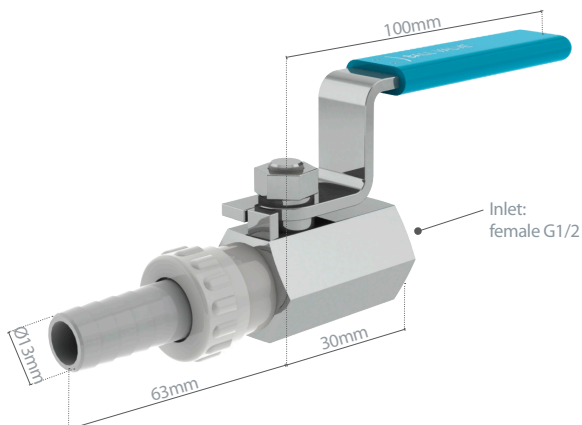
For standard configuration please refer to the item numbers below.

Model: With removable nozzle

Media	Removable nozzle	G3/4
 Distilled water	2530 050 1003	2530 051 1003
 Deionized water, cold	2530 050 1036	2530 051 1036

For further information and mounting instructions please refer to www.BROEN-LAB.com or contact your local BROEN-LAB representative.

FULL FLOW VALVE



MATERIALS WITH MEDIA CONTACT

Body: Stainless Steel, AISI 316

Sealing: PTFE

ORDERING INFORMATION

Full flow valve in stainless steel based on a ball valve.

No. 15382509

SPECIFICATIONS

A full flow valve is an alternative to the models shown in this catalogue. Please contact your BROEN-LAB representative for further information.

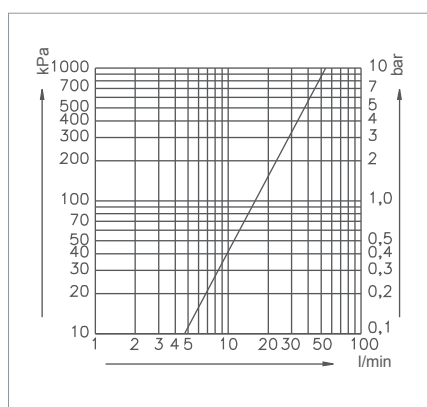
Opening/closing function: 90° turn

Temperature range: Maximum 90°C

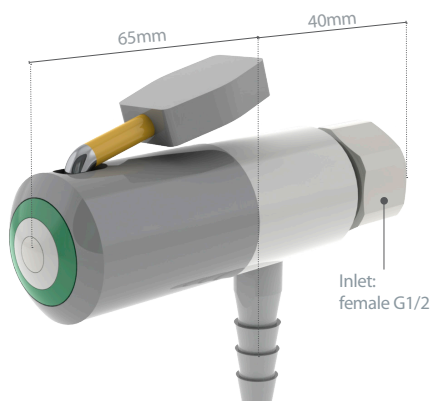
Max. working pressure: 10 bar / 147 psi

Test pressure: 1 x working pressure

FLOW CHART



SELF-CLOSING VALVE



MATERIALS WITH MEDIA CONTACT

Valve house: Stainless Steel, AISI 316

Sealing: EPDM

Plastics: POM, PA

Lubricant: Silicone based

ORDERING INFORMATION

Valve based on self-closing principle with a stainless steel valve house. Filter on inlet side.

No. 15389009

SPECIFICATIONS

A self-closing valve is an alternative to the models shown in this catalogue. Please contact your BROEN-LAB representative for further information.

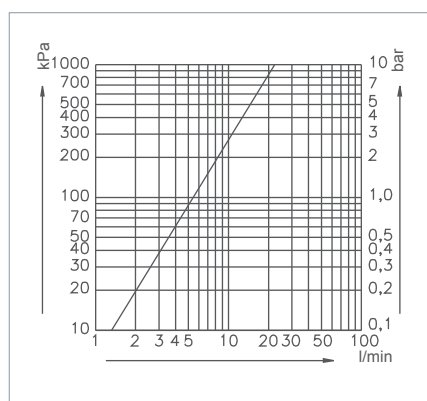
Opening/closing function: Self-closing

Temperature range: 0-65°C

Max. working pressure: 10 bar / 147 psi

Test pressure: 1 x working pressure

FLOW CHART

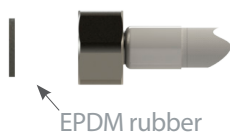


93D - BROEN-LAB UNIFLEX™ SPX HOSES FOR SPECIAL WATER

INLET CONNECTIONS

93 D XX XX XXXX

Female G1/2" union nut connection
(Code 50)



Straight BROEN-LAB UniFlex™ connection
with EPDM O-ring (Code 20)



OUTLET CONNECTIONS

93 D XX XX XXXX

Female G1/2" union nut connection
(Code 50)



Straight BROEN-LAB UniFlex™ connection
with EPDM O-ring (Code 20)



*All O-rings are lubricated with
silicone based lubricant

HOSE

93 D XX XX XXXX

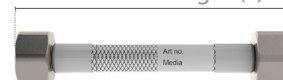
SPX hose with braiding
in Stainless Steel



Marking for special water with
Part no. and Media indication

HOSE LENGTHS

Definition of length (L)



*Standard lengths of hoses (L):

0500 = 500mm

0700 = 700mm

1000 = 1000mm

1200 = 1200mm

1500 = 1500mm

2000 = 2000mm

2500 = 2500mm

3000 = 3000mm

Length tolerance of hoses:
L = ≤400mm (- 0, +10mm)
L = 401mm to 1000mm (- 0, + 20mm)
L = >1000mm (- 0, + 30mm)

SPECIFICATIONS

Inner hose material: SPX (soft PEX)

Braiding: Stainless steel with one
green stripe

Materials with media contact:
SPX, Stainless Steel AISI 316, EPDM

Inside diameter: 8.2mm

Outside diameter: 12mm

Max. working pressure: 10 bar

Max. working temperature: 90°C

Bending radius (inner): ≥ 40mm

Min. length with connections: 160mm

EXAMPLE OF HOSE CONFIGURATION

1200mm hose with 1/2" union inlet
connection and 1/2" union outlet
connection

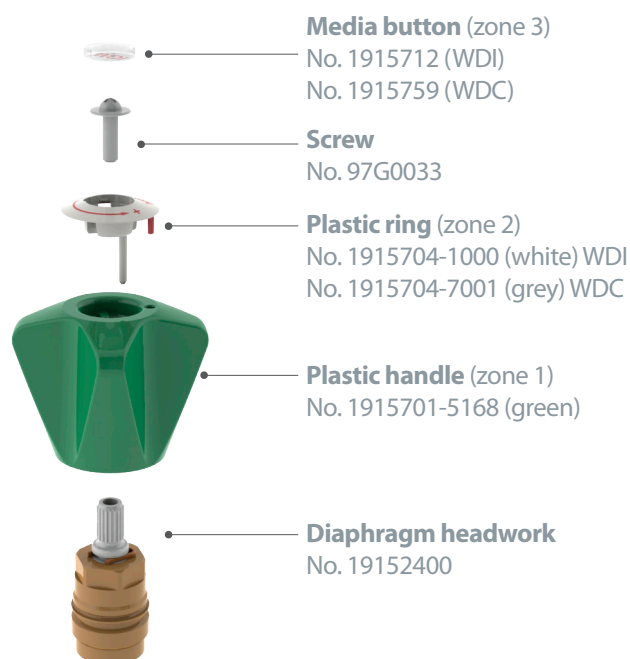


93D50501200

* Other lengths are available on request

HEADWORK FOR SPECIAL WATER FITTINGS

ORDERING INFORMATION



Complete set with G1/2 diaphragm headwork, plastic handle and media indication
No. 19152469

Complete set with plastic handle and media indication
No. 191501401003 (WDI)
No. 191501401036 (WDC)

SPECIFICATIONS

Manual valve based on diaphragm headwork.
The diaphragm is the only part of the headwork that has media contact (no lubrication or other materials have media contact).

Opening/closing function: 1 1/2 x 360° turn

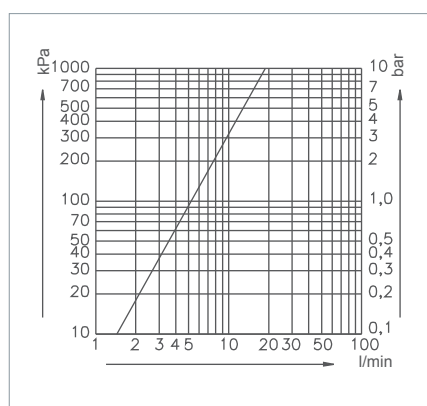
Media: Special water

MATERIALS WITH MEDIA CONTACT

Metals: No metals in media contact, headwork only.

Sealing: EPDM

FLOW CHART



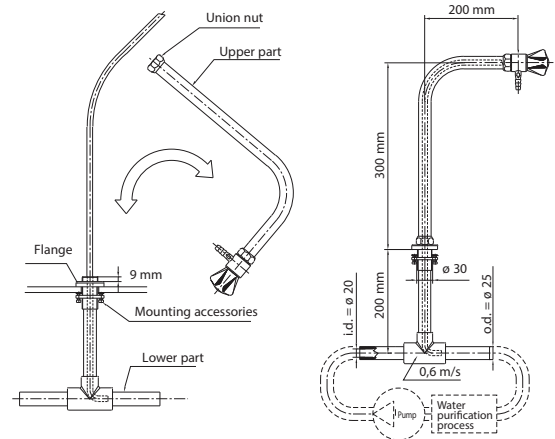
ACCESSORIES AND SPARE PARTS

Illustration	Description	BROEN-LAB item No.
	Removable hose nozzles: Stainless Steel (G1/2) Stainless Steel (G3/4) Plastic (G1/2)	2539 020 1003 2539 047 1003 2539 004 1001
	Push-in fittings: Ø10 x G3/8 Ø10 x G1/2	13710750 13710760
	Push-in fitting for welding: Ø10 x OD20	13710770
	Push-in coupling support bush for LLDPE tube Ø10/Ø7	91J0057

TECHNICAL INFORMATION - FULLY RECIRCULATING FITTINGS

INSTALLATION

Unscrew the union nut and lift off the upper part of the valve. Unscrew the flange and mount the lower part from under the table and up into a $\varnothing 30$ mm hole. Remount the flange leaving 9 mm free thread above the flange for the union nut. Use the mounting accessories to fix the lower part. Remount the upper part by sticking the inner tube into the upper part. Place the upper part in the correct position and mount the union nut to the 9 mm M28x1.5 thread with a torque of 20-30 Nm. Connect the valve to the recirculating special water system.



WORKING TEMPERATURE AND PRESSURES

Circulating flow rate:

The flow rate in the main water flow has to be so high, that the water velocity passing the bent inner tube in the main stream is more than 0,6 m/s.

$$Q = (\pi/4) \times d^2 \times v$$

Q = Flow rate [m³/s]
d = Inside diameter of main tubing [m]
(standard: d = $\varnothing 20,4\text{mm} = \varnothing 0,024\text{m}$)
v = Water velocity (> 0.6 m/s) [m/s]

Example:

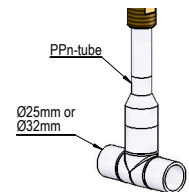
standard; d= $\varnothing 20,4\text{mm}$
 $Q = (\pi/4) \times 0,024^2 \times 0,6 = 2,71 \times 10^{-4} \text{ m}^3/\text{s} = 16,3 \text{ l/min}$

Please note that Q = 16.3 l/min should be obtained even with open point of use valves in other parts of the system.

JOINTING METHODS

PP-n:

- The wetted components below the table top are made of PP-n-parts from G+F, Progef Natural.
- The BCF-welding (Bead and Crevice Free Fusion) is applied during the manufacturing process in order to achieve the highest possible quality of the connection. We recommend also that the material used on site is PP-n and furthermore that BCF-welding is used as well.



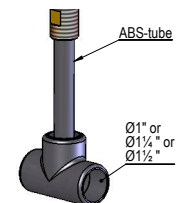
If the PP-n material is welded to other types of PP on site, then the following precautions are important to follow:

- The welding of PP-n to PP-h is possible only with conventional butt fusion (DVS 2207-11) or socket fusion.
- IR-welding (Infra Red) is officially not allowed because of the different melting range temperatures and BCF-welding is not allowed for the same reason.

ABS (bench mounted fittings only):

- The wetted components below the table top are made of ABS parts.
- ABS parts are glued together and if ABS material is also used on site, then the same jointing method should be applied

For other possible jointing methods please contact your BROEN-LAB sales representative.



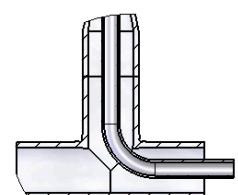
Kv - VALUES FOR TEE-PIECE

PP-n, OD 25 mm:

- flow in same direction as inner tubing: Kv=15,7 m³/hbar
- flow against direction of inner tubing: Kv=14,0 m³/hbar

PP-n, OD 32 mm:

- flow in same direction as inner tubing: Kv=33,6 m³/hbar
- flow against direction of inner tubing: Kv=29,0 m³/hbar

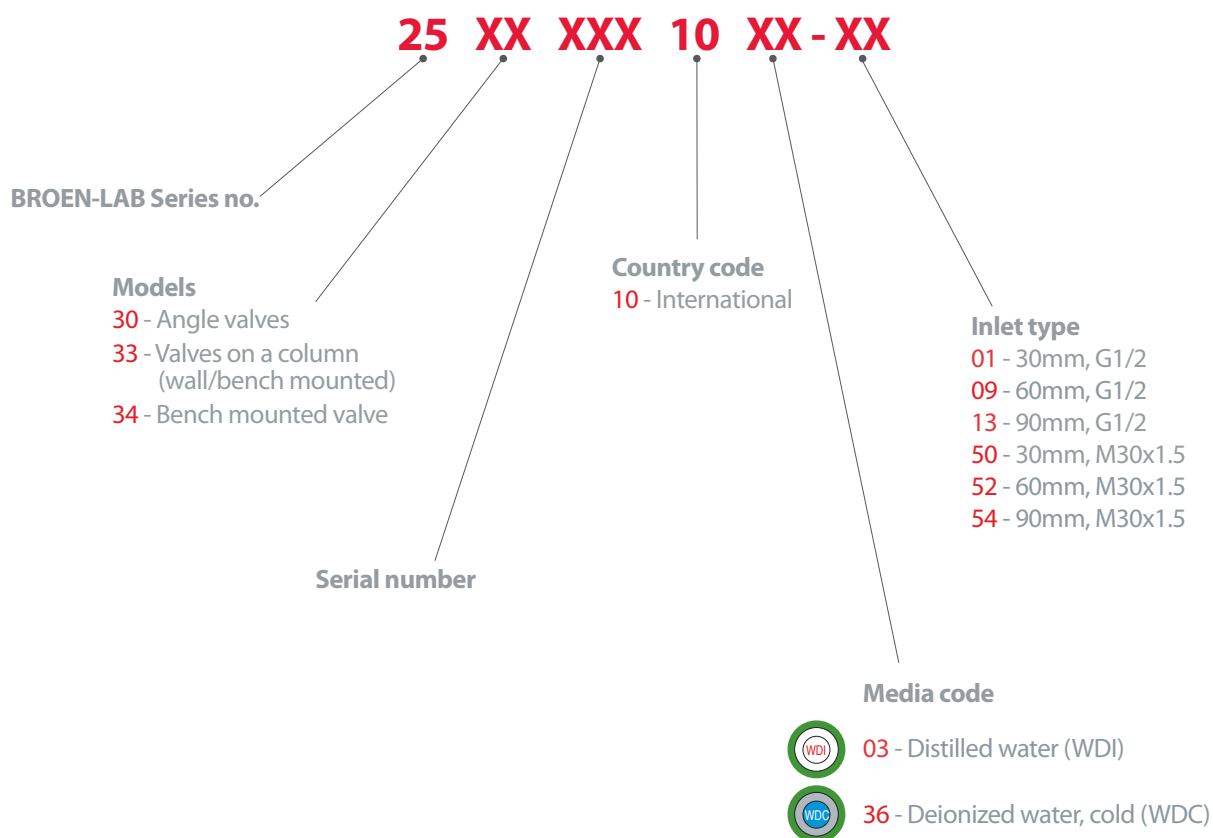


Cross section of the Tee-piece with inner tubing

ORDERING INFORMATION

BROEN-LAB UNIFLEX™ FITTINGS

Generally, item number for BROEN-LAB UniFlex fittings has the following structure:



BROEN-LAB develops, manufactures and sells Laboratory Fittings, Emergency Shower Systems and Eye Wash Systems into a broad spectrum of laboratories and industrial locations; sectors include Pharmaceutical, Food&Beverage and Academia. Our expertise and product quality ensure optimal solutions compliant to all relevant international norms setting new standards in risk mitigation in modern research and development facilities.

BROEN-LAB offer solutions that ensure the functionality, compliance, hygiene, durability and safety are of the highest priority. For over 50 years our products have been integrated into a wide variety of workplaces, laboratories, hospitals and industrial locations, with features that are assessed and designed to be flexible, durable and compliant offering a broad range of options tailored to each location. This inherent design integrity provides confidence in the solution adopted wherever in the world these are applied.

BROEN-LAB is a collaboration partner in the design and layout of your next laboratory and it's integrated safety solutions.

HEAD OFFICE

BROEN-LAB A/S

Drejervaenget 2 • DK-5610 Assens
Denmark
Tel.: +45 6376 6376 • Fax +45 6471 2476
E-mail: lab@broen.com



BROEN-LAB A/S ISO 9001 certification

In September 1991 BROEN-LAB A/S was certified according to ISO 9001 as one of the first Danish companies. The certification was carried out by Bureau Veritas, Denmark, for our Danish site in Assens. The quality management system of BROEN-LAB A/S now complies with detailed specifications laid down by the internationally acknowledged EN ISO 9001:2015. This certification will further contribute to reputation for quality and reliability of BROEN-LAB A/S.

INTERNATIONAL OFFICES

BROEN-LAB Ltd

Tel. +44 121 522 4515
E-mail: lab@broen-lab.com

BROEN-LAB Singapore Pte. Ltd.

25 International Business Park #04-60A German Centre
Singapore 609916
Tel. +65 6298 0662 • Fax +65 6298 0468
E-mail: lab@broen-lab.com

BROEN-LAB GmbH

Tel.: +45 6376 6376 • Fax +45 6471 2476
E-mail: lab@broen-lab.com

BROEN-LAB Sverige AB

Tel.: +45 6376 6376 • Fax +45 6471 2476
E-mail: lab@broen-lab.com

BROEN-LAB Inc.

15 Constitution Drive Suite 122
Bedford • NH 03110 • USA
Tel.: +1 603 310 5089
E-mail: lab@broen-lab.com

www.BROEN-LAB.com

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