

**BROEN
UNIFLEX™
FITTINGS FOR
SPECIAL
WATER**















BROEN UNIFLEX™ FITTINGS FOR SPECIAL WATER

BROEN UNIFLEX™ FITTINGS FOR SPECIAL WATER



BROEN

INTELLIGENT FLOW SOLUTIONS

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THIS IS BROEN UNIFLEX™ BASIC

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

BROEN UniFlex™ BASIC 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 POLYCOAT powder coating, which is highly resistant to most chemicals, UV light and heat – Please refer to the “BROEN 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 UniFlex™ BASIC fittings are as a standard delivered with a plastic handle. BROEN UniFlex™ BASIC plastic lined fittings are delivered with LLDPE (Linear Low-Density Polyethylene) inner pipe.

BROEN UniFlex™ BASIC 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 UniFlex™ BASIC programme

BROEN UNIFLEX™ FITTINGS FOR SPECIAL WATER



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



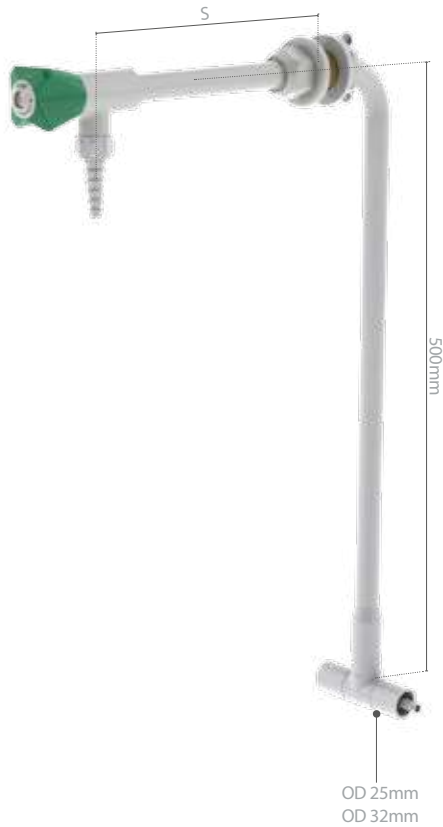
Fittings with Plastic Inner Tube



Recirculating Fittings



BROEN UNIFLEX™ FITTINGS FOR SPECIAL WATER



SPECIFICATIONS

- Handle:** Plastic
- Media indication:** according to EN13792
- Hose nozzle:** Removable plastic
- 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

- Rubber:** EPDM
- Plastics:** PP, PP-n, PVDF

ORDERING INFORMATION

For standard configuration please refer to the item numbers below.

BROEN UNIFLEX™ FITTINGS FOR SPECIAL WATER

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.com or contact your local BROEN LAB representative.

**BENCH MOUNTED FITTING ON A COLUMN
- FULLY RECIRCULATING**



SPECIFICATIONS

- Handle:** Plastic
- Media indication:** according to EN13792
- Hose nozzle:** Removable plastic
- 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

- 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")

BROEN UNIFLEX™ FITTINGS FOR SPECIAL WATER

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.com or contact your local BROEN LAB representative.



Can be delivered with and without G3/8 push-in fitting

SPECIFICATIONS

- Handle:** Plastic
- Media indication:** according to EN13792
- Hose nozzle:** Removable plastic
- 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

- 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.com or contact your local BROEN LAB representative.

BENCH MOUNTED FITTING ON A COLUMN WITH PLASTIC INNER TUBE



Can be delivered with and without G3/8 push-in fitting

SPECIFICATIONS

- Handle:** Plastic
- Media indication:** according to EN13792
- Hose nozzle:** Removable plastic
- 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

- 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

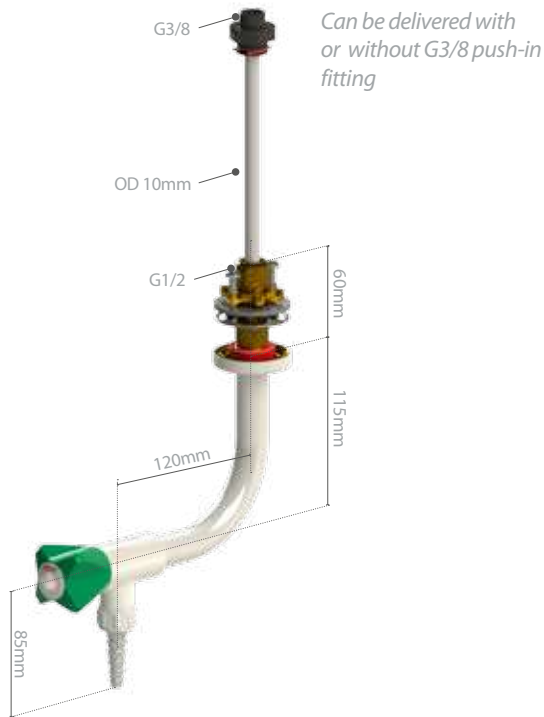
Model: With G3/8 push-in fitting

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.com or contact your local BROEN LAB representative.



SPECIFICATIONS

- Handle:** Plastic
- Media indication:** according to EN13792
- Hose nozzle:** Removable plastic
- 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

- 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

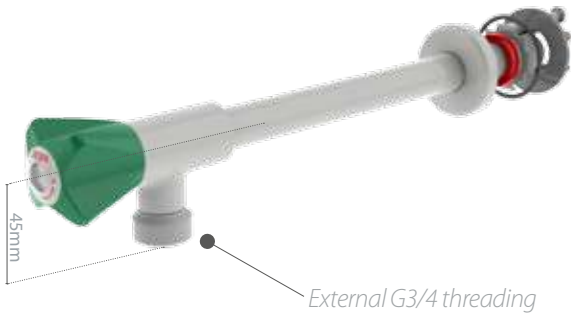
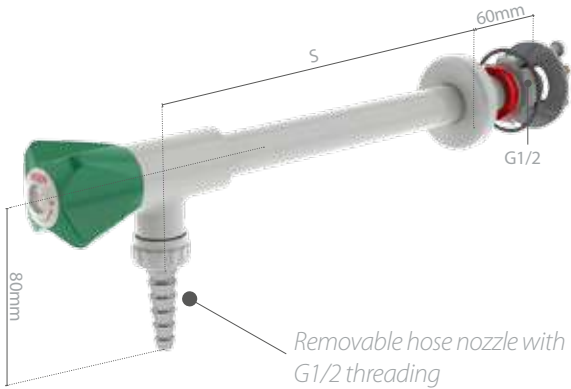
	Distilled water	2533 256 1003-09
	Deionized water, cold	2533 256 1036-09

Model: Without push-in fitting

Media

	Distilled water	2533 257 1003-09
	Deionized water, cold	2533 257 1036-09

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



SPECIFICATIONS

- Handle:** Plastic
- 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

- 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 030 1003	2533 124 1003
Deionized water, cold	2533 030 1036	2533 124 1036

Model: With G3/4

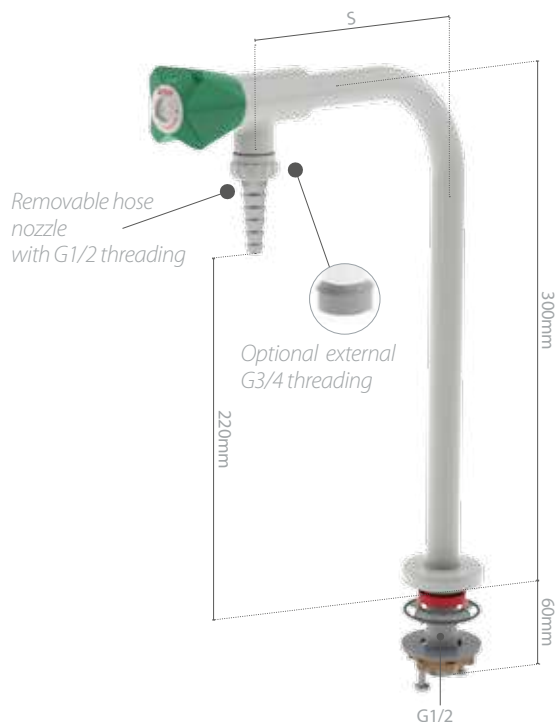
Media	S = 150mm	S = 200mm
Distilled water	2533 029 1003	2533 125 1003
Deionized water, cold	2533 029 1036	2533 125 1036

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

BENCH MOUNTED FITTING ON A COLUMN IN STAINLESS STEEL



BROEN UNIFLEX™ FITTINGS FOR SPECIAL WATER



SPECIFICATIONS

- Handle:** Plastic
- 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

- 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.com or contact your local BROEN LAB representative.

BENCH MOUNTED FITTING WITH SWIVEL SPOUT WITH PLASTIC INNER TUBE



Can be delivered with and without G3/8 push-in fitting

SPECIFICATIONS

- Handle:** Plastic
- Media indication:** according to EN13792
- Hose nozzle:** Removable plastic
- 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

- 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

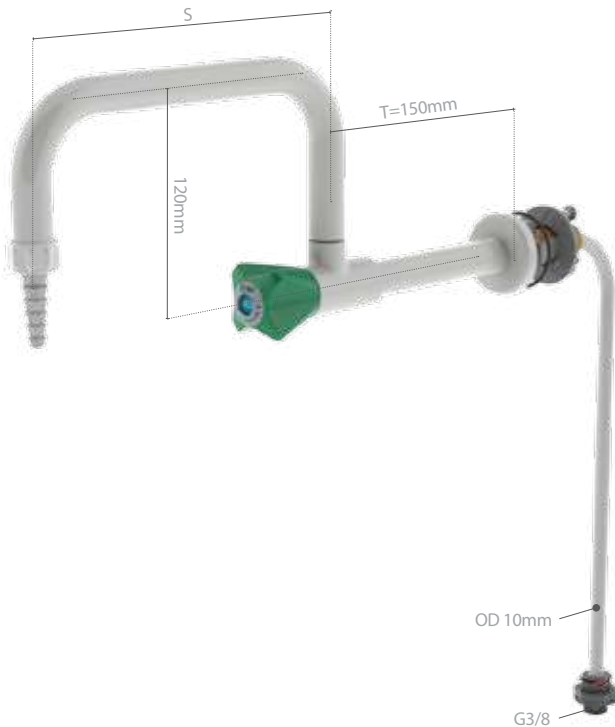
Media	S = 150mm	S = 200mm	S = 250mm	S = 300mm
Distilled water	2534 100 1003-52	2534 101 1003-52	2534 102 1003-52	2534 103 1003-52
Deionized water, cold	2534 100 1036-52	2534 101 1036-52	2534 102 1036-52	2534 103 1036-52

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.com or contact your local BROEN LAB representative.

WALL MOUNTED FITTING WITH SWIVEL SPOUT WITH PLASTIC INNER TUBE



Can be delivered with and without G3/8 push-in fitting

SPECIFICATIONS

- Handle:** Plastic
- Media indication:** according to EN13792
- Hose nozzle:** Removable plastic
- 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

- 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.com or contact your local BROEN LAB representative.

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



Can be delivered with and without G3/8 push-in fitting

SPECIFICATIONS

- Handle:** Plastic
- Media indication:** according to EN13792
- Hose nozzle:** Removable plastic
- 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

- 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

BROEN UNIFLEX™ FITTINGS FOR SPECIAL WATER

Model: With G3/8 push-in fitting

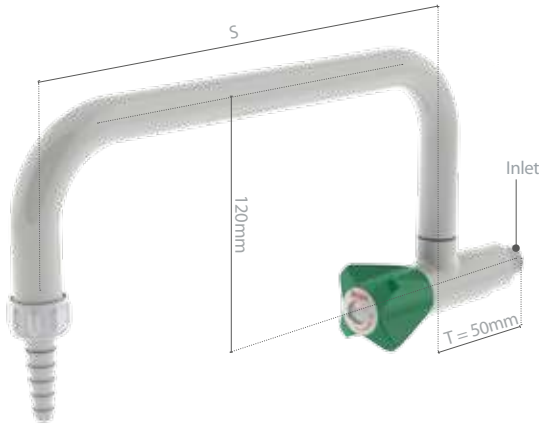
Media	S = 150mm	S = 200mm	S = 250mm	S = 300mm
Distilled water	2533 055 1003-09	2533 057 1003-09	2533 058 1003-09	2533 060 1003-09
Deionized water, cold	2533 055 1036-09	2533 057 1036-09	2533 058 1036-09	2533 060 1036-09

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.com or contact your local BROEN LAB representative.

WALL MOUNTED SS FITTING WITH SWIVEL SPOUT WITH PLASTIC INNER TUBE



SPECIFICATIONS

- Handle:** Plastic
- Media indication:** according to EN13792
- Hose nozzle:** Removable plastic
- 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

- Rubber:** EPDM
- Plastics:** PP, LLDPE
- Metals:** Stainless Steel , AISI 316

ORDERING INFORMATION

For standard configuration please refer to the item numbers below.

- Other options:
- S-shaped spout
 - T = 75/90/110mm

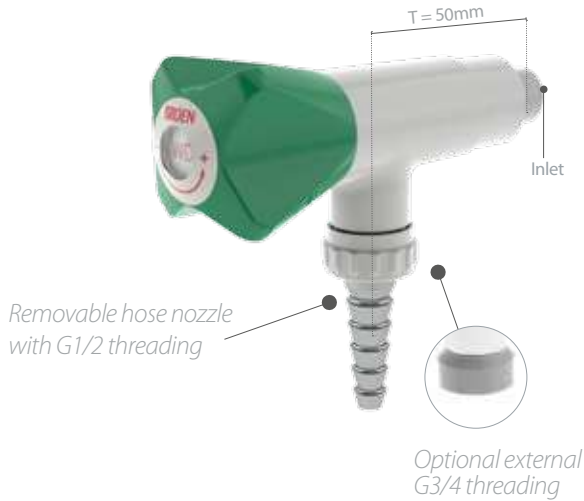
Model: Inlet: male G3/8

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.com or contact your local BROEN LAB representative.



SPECIFICATIONS

- Handle:** Plastic
- 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

- 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

BROEN UNIFLEX™ FITTINGS FOR SPECIAL WATER

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.com or contact your local BROEN LAB representative.



SPECIFICATIONS

- Handle:** Plastic
- 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

- Rubber:** EPDM
- Metals:** Stainless Steel, AISI 316

ORDERING INFORMATION

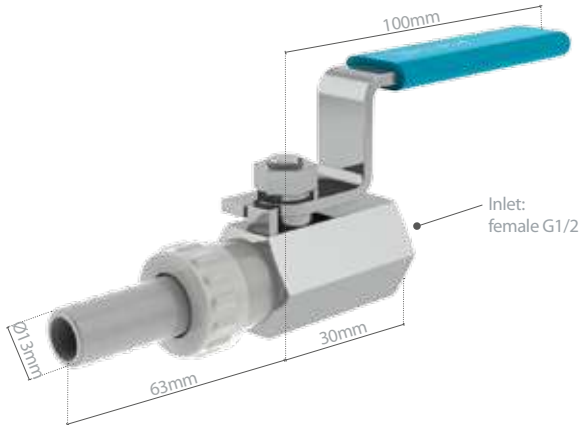
For standard configuration please refer to the item numbers below.

BROEN UNIFLEX™ FITTINGS FOR SPECIAL WATER

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.com or contact your local BROEN LAB representative.



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 representative for further information.

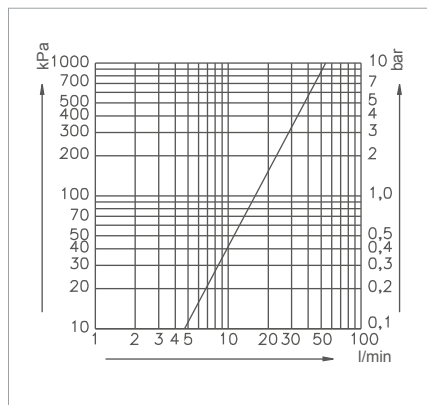
Opening/closing function: 90° turn

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 representative for further information.

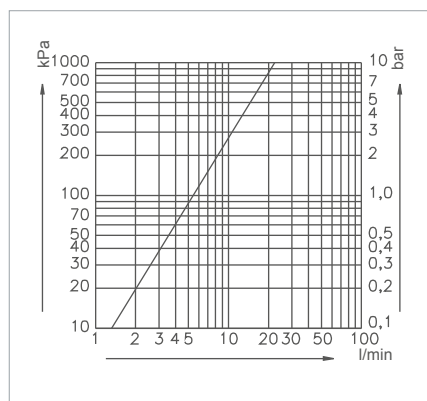
Opening/closing function: Self-closing

Temperature range: 0-65°C

Max. working pressure: 10 bar / 147 psi

Test pressure: 1 x working pressure

FLOW CHART



INLET CONNECTIONS
93 D XX XX XXXX


1/2" union connection
(Code 50)



EPDM rubber

OUTLET CONNECTIONS
93 D XX XX XXXX

1/2" union connection
(Code 50)



EPDM rubber

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
- Hose 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

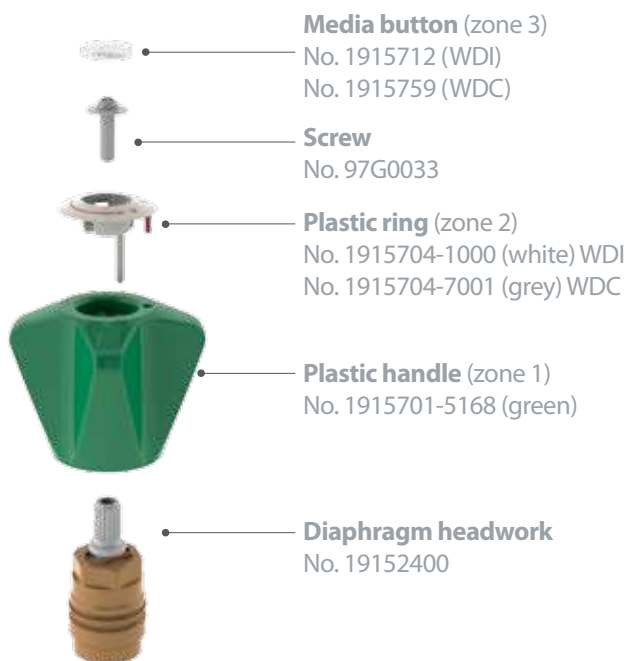
1200mm hose with 1/2" union inlet connection and 1/2" union outlet connection



93D50501200

* Other lengths are available on request

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

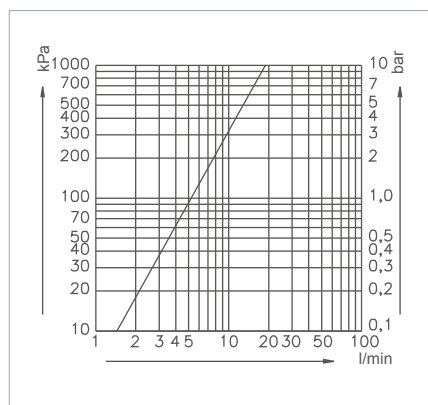
Media: Special water

MATERIALS WITH MEDIA CONTACT

Metals: No metals in media contact, headwork only.

Sealing: EPDM

FLOW CHART

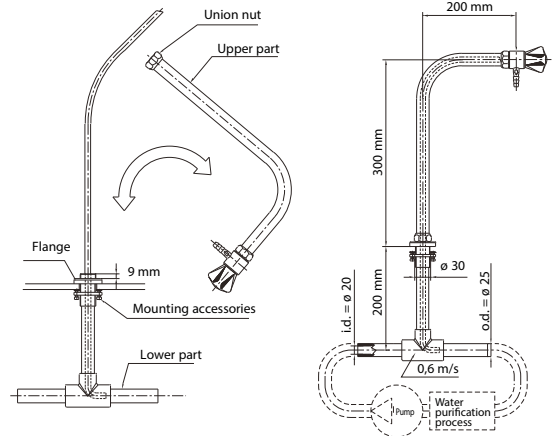


ACCESSORIES AND SPARE PARTS

Illustration	Description	BROEN 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

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:

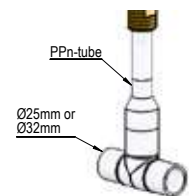
standard; d= $\varnothing 20,4\text{mm}$
 $Q = (\pi/4) \times 0,024^2 \times 0,6 = 2,71 \times 10^{-4} \text{ m}^3/\text{s} = 16,3 \text{ l}/\text{min}$

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.



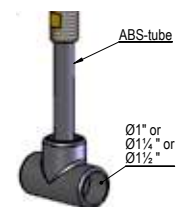
If the PP-n material is welded to other types of PP on site, then the following precautions are important to follow:

- 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.



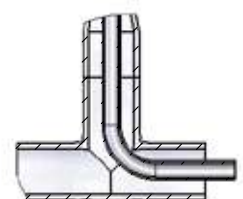
Kv - VALUES FOR TEE-PIECE

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

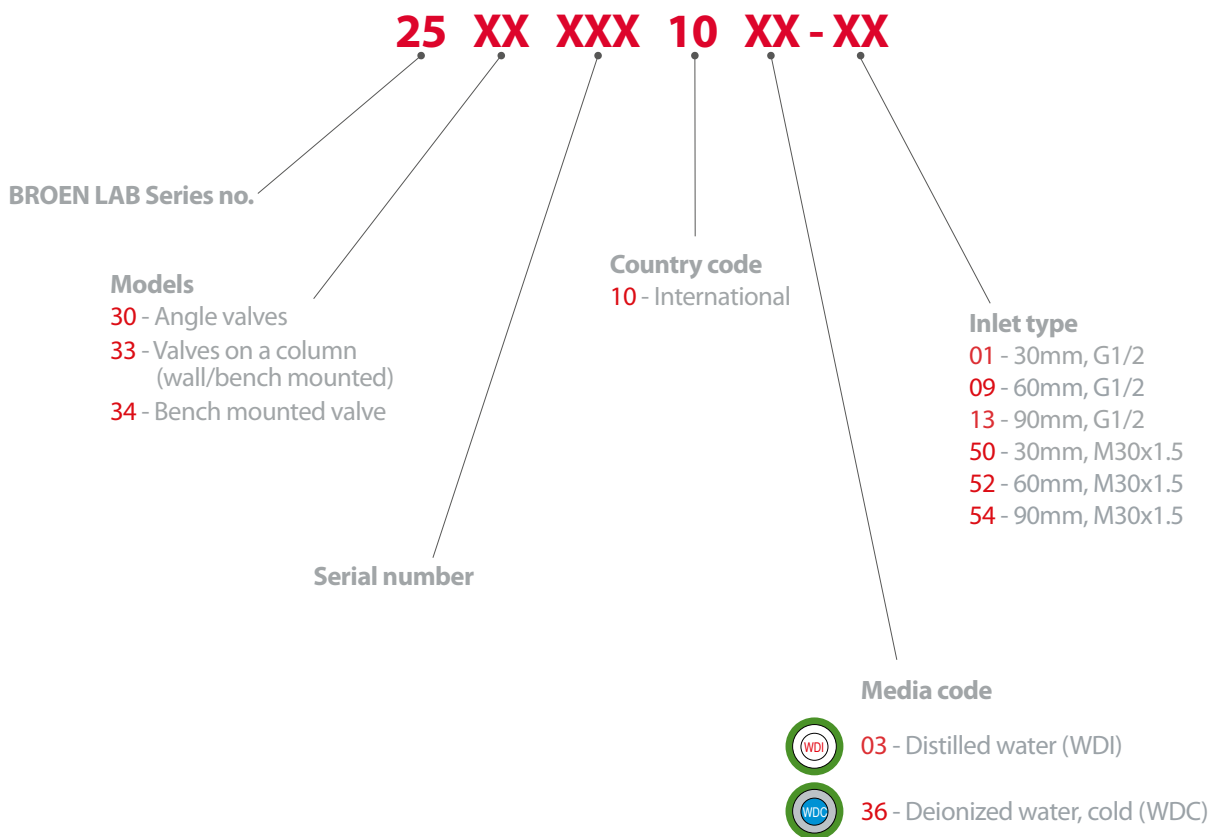
PP-n, OD 32 mm:

- 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

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



BROEN LAB develops, manufactures and delivers complete range of fittings for professional laboratories. Our know-how and our quality products ensure the precise flow of water, gases and air, from source to user.

BROEN LAB solutions are used by professional users in many kinds of laboratories, from the education and health sectors to industry in general. Our products are already an integrated part of many workplaces. From fittings for purified water, nitrogen, vacuum and compressed air, to the control and regulation of pure gases in critical applications such as a gas chromatography and spectrometry.

Our extensive knowledge allows us to continually develop and optimize our products so that they meet customer needs and specifications. Safety, functionality and quality are an integral part of product design and flexibility. Our insight and understanding of working environments and safety in laboratories allow us to develop custom solutions for projects around the world. Use us to plan your project so we can advise you on laboratory layout and design.

HEAD OFFICE

BROEN LAB GROUP

Skovvej 30 • DK-5610 Assens
Tel. +45 6471 2095 • Fax +45 6471 2476
E-mail: lab@broen.com



BROEN LAB GROUP ISO 9001 certification

In September 1991 BROEN LAB GROUP 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 at Assens.

The quality management system of BROEN LAB GROUP now complies with detailed specifications laid down by the internationally acknowledged EN ISO 9001:2008. This certification will further contribute to BROEN LAB GROUP's reputation for quality and reliability.

INTERNATIONAL OFFICES

BROEN Armaturen GmbH

Industriestrasse 8 • D - 64579 Gernsheim • Germany
Tel. +49 6258 9319-0 • Fax +49 6258 51812
E-mail: info@broen.de

BROEN VALVES Ltd.

7, Cleton Street Business Park, Cleton Street
Tipton • West Midlands DY4 7TR • U.K.
Tel. +44 121 522 4515 • Fax +44 121 522 4535
E-mail: broenvalves@broen.com

BROEN Singapore Pte. Ltd.

10 Bukit Batok Crescent #10-02 • The Spire S(658079) • Singapore
Tel: +65 6298 0662 • Fax: +65 6298 0468
E-mail: sales@broen.com.sg

www.broen.com

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