



| Content | Page |
|---|--|
| Table of Content | 2 |
| BROEN-LAB UniFlex™ PREMIUM | 4 |
| Product Overview | 5 |
| Special Water Fittings | |
| Wall Mounted Fitting - Fully Recirculating6 | Bench Mounted Fitting with Swivel Spout |
| Bench Mounted Fitting on a Column - Fully Recirculating | Wall Mounted Fitting with Swivel Spout14 |
| Wall Mounted Fitting with Plastic Inner Tube | Bench Mounted Fitting on a Column with Swivel Spout |
| with Plastic Inner Tube | Wall Mounted Fitting with Swivel Spout16 Wall Mounted Fitting - Stainless Steel17 |
| Wall Mounted Fitting in Stainless Steel11 | Wall Mounted Fitting - Stainless Steel |
| Bench Mounted Fitting on a Column in Stainless Steel12 | |
| BROEN-LAB UniFlex™ Hoses for Special Water | 20 |
| Headwork for Special Water Fittings / Accessories | and Spare parts 21 |
| Technical Information - Fully Recirculating Fittings | 22 |
| Ordering Information BROEN-LAB UniFlex™ Fittings | 23 |
| | |





THIS IS BROEN-LAB UNIFLEX™ PREMIUM

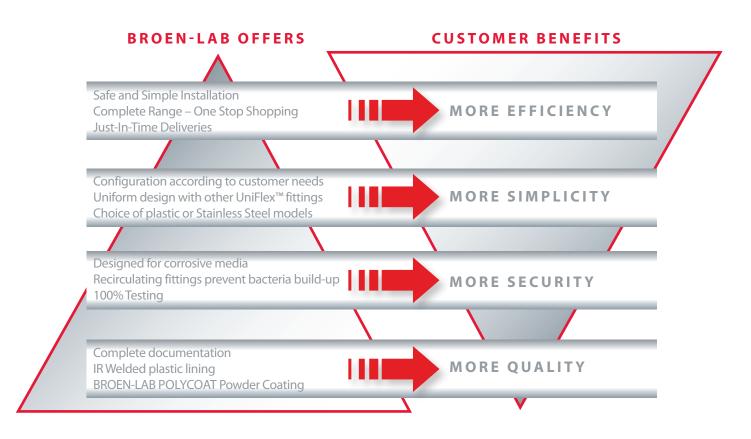
BROEN-LAB UniFlexTM PREMIUM line offers a very high quality and durability combined with the complete programme, this adds up to low LCC (Life Cycle Costs). Our PREMIUM line takes the standards in the market to a higher level.

BROEN-LAB UniFlexTM PREMIUM 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™ PREMIUM 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 (PVDF) lined fittings
- Recirculating fittings
- Designed to secure maximum purity of the water
- PTFE diaphragm
- Uniform design with the rest of the BROEN-LAB UniFlex™ PREMIUM 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.:

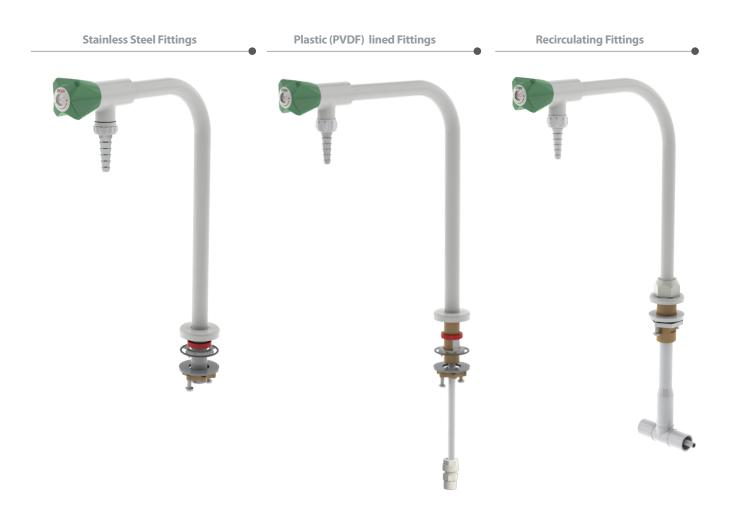
- Demineralisation (Boiling)
- RO Reverse Osmosis
- UV light
- Ultra Filtration
- Desalination

WHY DO I NEED SPECIAL FITTINGS?

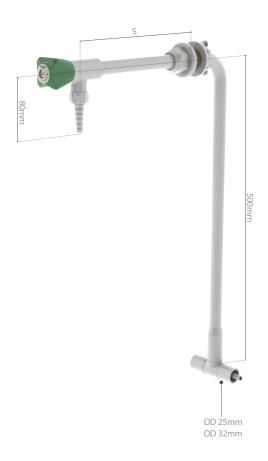
Special water or purified water becomes very aggressive when treated, as a consequence of this normal brass fittings will corrode very quickly if used in connection with these media. Our fittings for special water offer materials that are suitable and tested for use with treated water and all components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







BROEN-LAB fully recirculating fittings ensure constant fresh water with no dead legs even when the point-of-use valve is in closed position.

The Tee-piece of the fitting should be connected to a loop with a constant circulation of water. For more details about installation, jointing methods, etc. please refer to page 22.

SPECIFICATIONS

Handle: Metal, BROEN-LAB POLYCOAT powder coated with 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

MATERIALS WITH MEDIA CONTACT

Diaphragm: PTFE
Plastics: PP, PP-n, PVDF
Rubber: EPDM

ORDERING INFORMATION

For standard configuration please refer to the item numbers below.

Model: OD 25mm

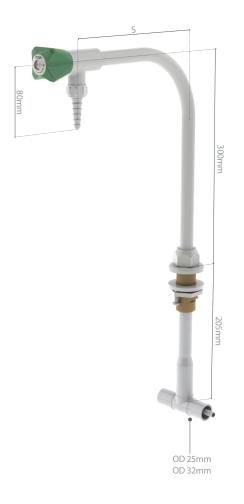
| Media | | S = 150mm | S = 200mm | |
|-------|-----------------------|---------------|---------------|--|
| | Distilled water | 2533 039 1003 | 2533 041 1003 | |
| WDC | Deionized water, cold | 2533 039 1036 | 2533 041 1036 | |

Model: OD 32mm

| Media | | S = 150mm | S = 200mm | (|
|-------|-----------------------|---------------|---------------|---|
| WDI | Distilled water | 2533 040 1003 | 2533 042 1003 | |
| | Deionized water, cold | 2533 040 1036 | 2533 042 1036 | |

BENCH MOUNTED FITTING ON A COLUMN - FULLY RECIRCULATING





BROEN-LAB fully recirculating fittings ensure constant fresh water with no dead legs even when the point-of-use valve is in closed position.

The Tee-piece of the fitting should be connected to a loop with a constant circulation of water. For more details about installation, jointing methods, etc. please refer to page 22.

SPECIFICATIONS

Handle: Metal, BROEN-LAB POLYCOAT powder coated with 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

MATERIALS WITH MEDIA CONTACT

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

ORDERING INFORMATION

For standard configuration please refer to the item numbers below.

Other options:

- also available in ABS (1, 11/4, 11/2)

Model: OD 25mm

| • | Media | | S = 150mm | S = 200mm | |
|---|-------|-----------------------|---------------|---------------|--|
| | WDI | Distilled water | 2533 043 1003 | 2533 031 1003 | |
| | WDO | Deionized water, cold | 2533 043 1036 | 2533 031 1036 | |

Model: OD 32mm

| Media | | S = 150mm | S = 200mm | |
|-------|-----------------------|---------------|---------------|--|
| WDI | Distilled water | 2533 044 1003 | 2533 045 1003 | |
| (WDO) | Deionized water, cold | 2533 044 1036 | 2533 045 1036 | |





Can be delivered with and without R3/8 push fitting

Handle: Metal, BROEN-LAB POLYCOAT powder coated with 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: 0.7 kg

MATERIALS WITH MEDIA CONTACT

Diaphragm: PTFE Plastics: PVDF Rubber: EPDM

ORDERING INFORMATION

For standard configuration please refer to the item numbers below.

Other options:

- different sizes of push fittings
- different inlet lengths

Model: With R3/8 push fitting

| Media | | S = 150mm | S = 200mm | |
|-------|-----------------------|------------------|------------------|--|
| (WD) | Distilled water | 2533 034 1003-09 | 2533 035 1003-09 | |
| WDC | Deionized water, cold | 2533 034 1036-09 | 2533 035 1036-09 | |

Model: Without push fitting

| Media | 1 | S = 150mm | S = 200mm | • |
|-------|-----------------------|------------------|------------------|---|
| WD | Distilled water | 2533 017 1003-09 | 2533 019 1003-09 | |
| | Deionized water, cold | 2533 017 1036-09 | 2533 019 1036-09 | |

BENCH MOUNTED FITTING ON A COLUMN WITH PLASTIC INNER TUBE





SPECIFICATIONS

Handle: Metal, BROEN-LAB POLYCOAT powder coated

with media indication according to EN13792

Hose nozzle: Removable plastic **Headwork:** Diaphragm type

Opening/closing function: $1.1/2 \times 360^{\circ}$

Temperature range: 0-65°C

Max. working pressure: 10 bar / 147 psi **Test pressure:** 1 x working pressure

Weight: 0.7 kg

MATERIALS WITH MEDIA CONTACT

Diaphragm: PTFE Plastics: PVDF Rubber: EPDM

ORDERING INFORMATION

For standard configuration please refer to the item numbers below.

Other options:

- different sizes of push fittings
- different inlet lengths

Model: With R3/8 push fitting

| Media | | S = 150mm | S = 200mm | |
|-------|-----------------------|------------------|------------------|--|
| WD | Distilled water | 2533 046 1003-09 | 2533 033 1003-09 | |
| WDO | Deionized water, cold | 2533 046 1036-09 | 2533 033 1036-09 | |

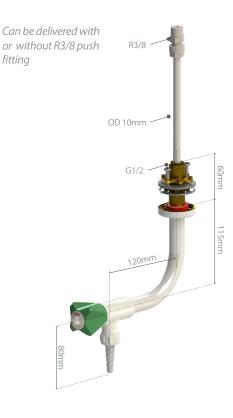
Model: Without push fitting

| Media | | S = 150mm | S = 200mm | |
|-------|-----------------------|------------------|------------------|--|
| WD | Distilled water | 2533 008 1003-09 | 2533 010 1003-09 | |
| WDC | Deionized water, cold | 2533 008 1036-09 | 2533 010 1036-09 | |

fitting

FITTING WITH PLASTIC INNER TUBE FOR SUSPENDED MOUNTING





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: 0.7 kg

MATERIALS WITH MEDIA CONTACT

Diaphragm: PTFE **Plastics:** PVDF **Rubber: EPDM**

ORDERING INFORMATION

For standard configuration please refer to the item numbers below.

Other options:

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

Model: With R3/8 push fitting

Media

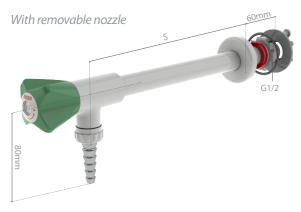
| WDI | Distilled water | 2533 254 1003-09 |
|-----|-----------------------|------------------|
| | Deionized water, cold | 2533 254 1036-09 |

Model: Without push fitting

Media

| WDD | Distilled water | 2533 255 1003-09 |
|-----|-----------------------|------------------|
| WDO | Deionized water, cold | 2533 255 1036-09 |







Handle: Metal, BROEN-LAB POLYCOAT powder coated with media indication according to EN13792

Hose nozzle: Removable/external G3/4 thread, metal

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

Metals: Stainless Steel, AISI 316

Diaphragm: PTFE **Rubber:** EPDM

ORDERING INFORMATION

For standard configuration please refer to the item numbers below.



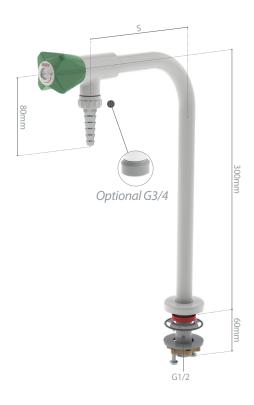
| Me | dia | S = 150mm | S = 200mm | |
|-----|-----------------------|---------------|---------------|--|
| (WI | Distilled water | 2533 001 1003 | 2533 002 1003 | |
| W | Deionized water, cold | 2533 001 1036 | 2533 002 1036 | |

Model: With G3/4

| Media | 1 | S = 150mm | S = 200mm | |
|-------|-----------------------|---------------|---------------|--|
| WDI | Distilled water | 2533 032 1003 | 2533 047 1003 | |
| WDD | Deionized water, cold | 2533 032 1036 | 2533 047 1036 | |

BENCH MOUNTED FITTING ON A COLUMN IN STAINLESS STEEL





SPECIFICATIONS

Handle: Metal, BROEN-LAB POLYCOAT powder coated with media indication according to EN13792

Hose nozzle: Removable/external G3/4 thread, metal

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

Metals: Stainless Steel, AISI 316

Diaphragm: PTFE **Rubber:** EPDM

ORDERING INFORMATION

For standard configuration please refer to the item numbers below.



| Media | | S = 150mm | S = 200mm | • |
|-------|-----------------------|---------------|---------------|---|
| WDI | Distilled water | 2533 003 1003 | 2533 004 1003 | |
| WDO | Deionized water, cold | 2533 003 1036 | 2533 004 1036 | |

Model: With G3/4

| Media | | S = 150mm | S = 200mm | • |
|-------|-----------------------|---------------|---------------|---|
| WD | Distilled water | 2533 048 1003 | 2533 049 1003 | |
| woo l | Deionized water, cold | 2533 048 1036 | 2533 049 1036 | |





Handle: Metal, BROEN-LAB POLYCOAT powder coated with media indication according to EN13792

Hose nozzle: Removable plastic

Spout: Full swivel action **Headwork:** Diaphragm type

Opening/closing function: $1 \frac{1}{2} \times 360^{\circ}$

Temperature range: 0-65°C

Max. working pressure: 10 bar / 147 psi **Test pressure:** 1 x working pressure

Weight: 1.0 kg

MATERIALS WITH MEDIA CONTACT

Diaphragm: PTFE Plastics: PVDF Rubber: EPDM

ORDERING INFORMATION

For standard configuration please refer to the item numbers below.

Other options:

- diffferent sizes of push fittings
- other inlet options

Model: With R3/8 push fitting

| ı | Media | | S = 150mm | S = 200mm | S = 250mm | S = 300mm |
|---|-------|-----------------------|------------------|------------------|------------------|------------------|
| (| WDI | Distilled water | 2534 045 1003-52 | 2534 041 1003-52 | 2534 046 1003-52 | 2534 048 1003-52 |
| | (WDG) | Deionized water, cold | 2534 045 1036-52 | 2534 041 1036-52 | 2534 046 1036-52 | 2534 048 1036-52 |

Model: Without push fitting

| Media | 1 | S = 150mm | S = 200mm | S = 250mm | S = 300mm |
|-------|-----------------------|------------------|------------------|------------------|------------------|
| WD | Distilled water | 2534 036 1003-52 | 2534 037 1003-52 | 2534 047 1003-52 | 2534 049 1003-52 |
| (MDO) | Deionized water, cold | 2534 036 1036-52 | 2534 037 1036-52 | 2534 047 1036-52 | 2534 049 1036-52 |





Can be delivered with and without R3/8 push fitting

Handle: Metal, BROEN-LAB POLYCOAT powder coated

with media indication according to EN13792

Hose nozzle: Removable plastic

Spout: Full swivel action **Headwork:** Diaphragm type

Opening/closing function: $1 \frac{1}{2} \times 360^{\circ}$

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 Plastics: PVDF Rubber: EPDM

ORDERING INFORMATION

For standard configuration please refer to the item numbers below.

Other options:

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

Model: With R3/8 push fitting

| Media | | S = 150mm | S = 200mm | S = 250mm | S = 300mm |
|-------|-----------------------|------------------|------------------|------------------|------------------|
| WD | Distilled water | 2533 185 1003-09 | 2533 186 1003-09 | 2533 187 1003-09 | 2533 188 1003-09 |
| WDO | Deionized water, cold | 2533 185 1036-09 | 2533 186 1036-09 | 2533 187 1036-09 | 2533 188 1036-09 |

Model: Without push fitting

| Me | edia | | S = 150mm | S = 200mm | S = 250mm | S = 300mm |
|----|------|-----------------------|------------------|------------------|------------------|------------------|
| | WDI | Distilled water | 2533 189 1003-09 | 2533 190 1003-09 | 2533 191 1003-09 | 2533 192 1003-09 |
| | WDO | Deionized water, cold | 2533 189 1036-09 | 2533 190 1036-09 | 2533 191 1036-09 | 2533 192 1036-09 |

BENCH MOUNTED FITTING ON A COLUMN WITH SWIVEL SPOUT





SPECIFICATIONS

Handle: Metal, BROEN-LAB POLYCOAT powder coated with media indication according to EN13792

Hose nozzle: Removable plastic

Spout: Full swivel action **Headwork:** Diaphragm type

Opening/closing function: $1 \frac{1}{2} \times 360^{\circ}$

Temperature range: 0-65°C

Max. working pressure: 10 bar / 147 psi **Test pressure:** 1 x working pressure

Weight: 1.4 kg

MATERIALS WITH MEDIA CONTACT

Diaphragm: PTFE Plastics: PVDF Rubber: EPDM

ORDERING INFORMATION

For standard configuration please refer to the item numbers below.

Other options:

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

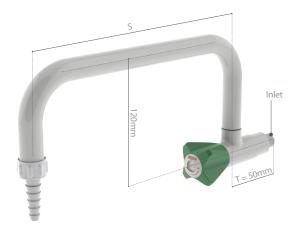
Model: With R3/8 push fitting

| Med | lia | S = 150mm | S = 200mm | S = 250mm | S = 300mm |
|-----|-----------------------|------------------|------------------|------------------|------------------|
| WDI | Distilled water | 2533 036 1003-09 | 2533 064 1003-09 | 2533 193 1003-09 | 2533 194 1003-09 |
| WDO | Deionized water, cold | 2533 036 1036-09 | 2533 064 1036-09 | 2533 193 1036-09 | 2533 194 1036-09 |

Model: Without push fitting

| Media | | S = 150mm | S = 200mm | S = 250mm | S = 300mm |
|-------|-----------------------|------------------|------------------|------------------|------------------|
| WD | Distilled water | 2533 195 1003-09 | 2533 196 1003-09 | 2533 197 1003-09 | 2533 198 1003-09 |
| WDO | Deionized water, cold | 2533 195 1036-09 | 2533 196 1036-09 | 2533 197 1036-09 | 2533 198 1036-09 |





Handle: Metal, BROEN-LAB POLYCOAT powder coated with media indication according to EN13792

Hose nozzle: Removable plastic

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 Plastics: PVDF

Metals: Stainless Steel, AISI 316

Rubber: EPDM

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 022 1003 | 2530 023 1003 | 2530 016 1003 | 2530 024 1003 |
| WDC | Deionized water, cold | 2530 022 1036 | 2530 023 1036 | 2530 016 1036 | 2530 024 1036 |

Model: Inlet: male G1/2

| • | Media | | S = 150mm | S = 200mm | S = 250mm | S = 300mm |
|---|-------|-----------------------|---------------|---------------|---------------|---------------|
| | WDI | Distilled water | 2530 025 1003 | 2530 026 1003 | 2530 017 1003 | 2530 027 1003 |
| | WDO | Deionized water, cold | 2530 025 1036 | 2530 026 1036 | 2530 017 1036 | 2530 027 1036 |





Handle: Metal, BROEN-LAB POLYCOAT powder coated

with media indication according to EN13792 $\,$

Hose nozzle: Removable metal **Headwork:** Diaphragm type

Opening/closing function: $1.1/2 \times 360^{\circ}$

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

Metals: Stainless Steel, AISI 316

Diaphragm: PTFE **Rubber:** EPDM

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 | • |
|-------|-----------------------|------------------|---------------|---|
| WD | Distilled water | 2530 029 1003 | 2530 030 1003 | |
| | Deionized water, cold | 2530 029 1036 | 2530 030 1036 | |

Model: Inlet: male G1/2

| Media | | Removable nozzle | G3/4 | (|
|-------|-----------------------|------------------|---------------|---|
| (WD) | Distilled water | 2530 019 1003 | 2530 028 1003 | |
| | Deionized water, cold | 2530 019 1036 | 2530 028 1036 | |





Handle: Metal, BROEN-LAB POLYCOAT powder coated

with media indication according to EN13792

Hose nozzle: Removable metal **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

Metals: Stainless Steel, AISI 316

Diaphragm: PTFE Rubber: EPDM

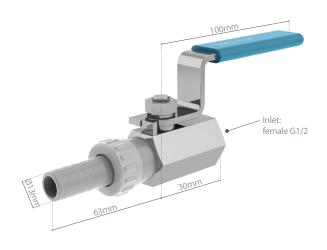
ORDERING INFORMATION

For standard configuration please refer to the item numbers below.

Model: With removable nozzle

| • | Media | | Removable nozzle | G3/4 | |
|---|-------|-----------------------|------------------|---------------|--|
| | WD | Distilled water | 2530 031 1003 | 2530 056 1003 | |
| | | Deionized water, cold | 2530 031 1036 | 2530 056 1036 | |





MATERIALS WITH MEDIA CONTACT

Body: Stainless Steel, AISI 316 **Sealing:** PTFE

ORDERING INFORMATION

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

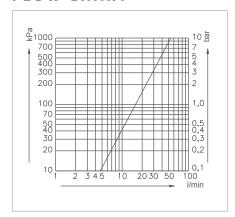
No. 15382509

SPECIFICATIONS

A full flow valve is an alternative to the models showed 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

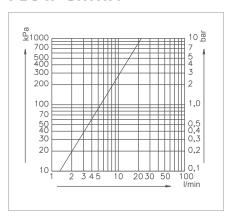
A self-closing valve is an alternative to the models shown in this catalogue. Please contact your BROEN-LAB representative for further information.

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











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



* Other lengths are available on request



ORDERING INFORMATION



Complete set with G1/2 diaphragm headwork, metal handle and media indication

No. 19152459

Complete set with metal handle and media indication

No. 191601491003 (WDI) No. 191601491036 (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

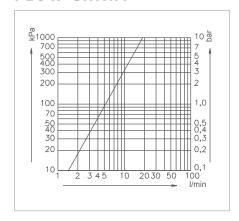
Media: Special water

MATERIALS WITH MEDIA CONTACT

Metals: No metals with media contact

Diaphragm: PTFE

FLOW CHART



ACCESSORIES AND SPARE PARTS

| Illustration | Description | BROEN-LAB item No. | |
|--------------|---|---|--|
| | Removable hose nozzles: Stainless Steel (G1/2) Stainless Steel (G3/4) Plastic (PVDF) | 2539 020 1003 2539 047 1003 2539 070 1003 | |
| | Push fittings (PVDF): - Ø10 x R3/8 - Ø10 x R1/2 | 15 384 38 15 384 36 | |

TECHNICAL INFORMATION FULLY RECIRCULATING FITTINGS

PREMIUM

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 Ø30 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.

Union nut Upper part Upper part Upper part Upper part Oo my Nounting accessories Lower part Oo my Water purification process

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: $d = \emptyset 20.4$ mm = $\emptyset 0.024$ m) v = Water velocity (> 0.6 m/s) [m/s]

Example:

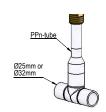
standard; d= \emptyset 20.4mm Q = $(\pi/4) \times 0.024^2 \times 0.6 = 2.71 \times 10^{-4} \text{ m}^3/\text{s} = 16.3 \text{ l/min}$

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.



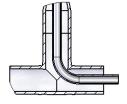
Kv - VALUES FOR TEE-PIECE

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:

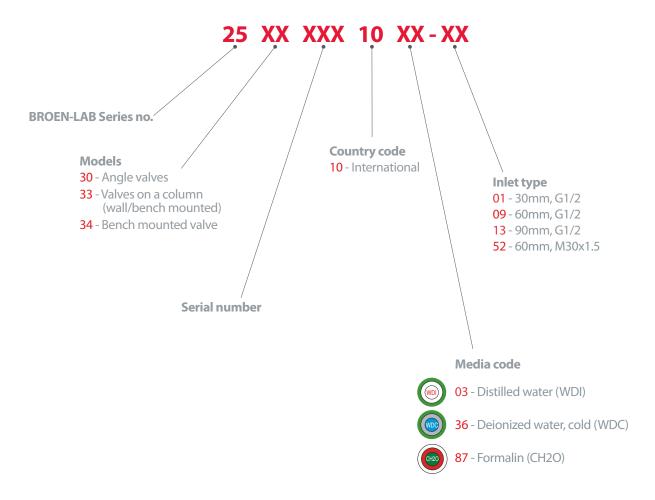
- flow in same direction as inner tubing: Kv=33,6 m³/hbar
- flow against direction of inner tubing: $Kv = 29.0 \text{ m}^3/\text{hbar}$



Cross section of the Teepiece with inner tubing



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



BROEN-LAB develops, manufactures and sells 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

Drejervænget 2 • DK-5610 Assens Tel. +45 6471 2095 • Fax +45 6471 2476 E-mail: lab@broen-lab.com

Deutscher Kontakt

Tel. +45 6373 2252 • Fax +45 6471 2476 E-mail: lab@broen-lab.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 9001:2008. This certification will further contribute to reputation for quality and reliability of BROEN-LAB A/S.

INTERNATIONAL OFFICES

BROEN-LAB Ltd.

Unit 9 Navigation Point, Golds Hill Way Tipton • West Midlands DY4 OPY • U.K. Tel. +44 121 522 4515 • Fax +44 121 522 4535 E-mail: broenvalves@broen-lab.com

BROEN-LAB Singapore Pte. Ltd.

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

www.BROEN-LAB.com