# **BROEN-LAB**

Drejervaenget 2, 5610 Assens, Denmark

Phone: +45 6376 6376 E-mail: lab@broen-lab.com Web : broen-lab.com



# FITTINGS FOR SPECIAL WATER

**PREMIUM range** 

99B0049 - 14.11.2025

# **TABLE OF CONTENTS**

ROEN-LAB UniFlex™				Page 3
Product overview				Page 4
Wall mounted fitting - Fully recirculating	Bench mounted fitting on a column - Fully recirculating	Wall mounted fitting with plastic inner tube	Bench mounted fitting on a column with plastic inner tube	Suspended fitting with plastic inner tube
Page 5	Page 6	Page 7	Page 8	Page 9
Wall mounted fitting in Stainless Steel  Page 10	Bench mounted fitting on a column in Stainless Steel <i>Page 11</i>	Bench mounted fitting with swivel spout Page 12	Wall mounted fitting with swivel spout Page 13	Bench mounted fitting on a column with swivel spout <i>Page 14</i>
rage 10	rayeTI	raye 12	raye 13	raye 14
				at the
Wall mounted fitting with swivel spout	Wall mounted fitting in Stainless Steel	Wall mounted fitting in Stainless Steel	Single Valves - Self-closing	Single Valve - Full Flow
Page 15	Page 16	Page 17	Page 18	Page 18
BROEN-LAB UniFlex™ hoses	s for special water			Page 19
leadworks				Page 2
ccessories				Page 2
echnical information - Fully	recirculating			Page 2
ordering information				Page 2

2

# **BROEN-LAB UNIFLEX™**

#### THIS IS BROEN-LAB UNIFLEX™

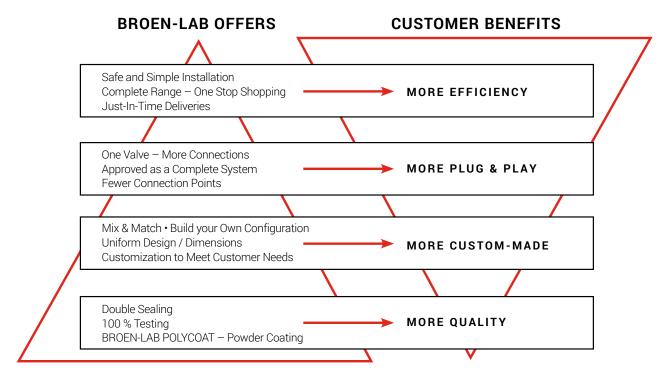
BROEN-LAB UniFlex $^{\text{TM}}$  line offers a very high quality and durability combined with the complete programme, this adds up to low LCC (Life Cycle Costs). Our line takes the standards in the market to a higher level.

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 POLY-COAT powder coating, which is highly resistant to most chemicals, UV light and heat — Please refer to the "BROEN-LAB POLY-COAT" 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<sup>TM</sup> 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™ programme



3

# **PRODUCT OVERVIEW**

# 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** 

# **WALL MOUNTED FITTING - FULLY RECIRCULATING**

# **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

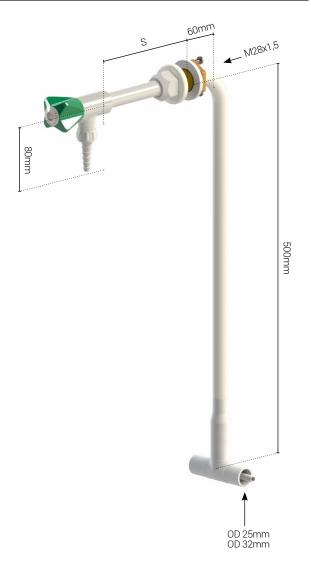
Diaphragm: PTFE Plastics: PP, PP-n, PVDF Rubber: EPDM

#### ORDERING INFORMATION

For standard configuration please refer to the item numbers below.

Other options:

- also available in PVDF OD 20mm



# **Configuration options**

Choose standout length and connection OD

	S = 150 mm	S = 200 mm
OD 25 mm	2533 039 10 <b>XX</b>	2533 041 10 <b>XX</b>
OD 32 mm	2533 040 10 <b>XX</b>	2533 042 10 <b>XX</b>

Replace XX with one of these media types:



03 •Distilled water



36 · Deionized water, cold

# BENCH MOUNTED FITTING ON A COLUMN - FULLY RECIRCULATING

# **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

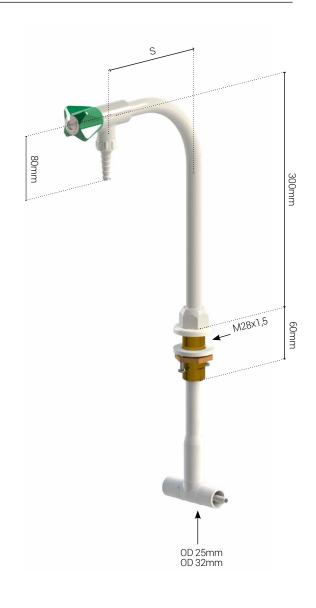
Diaphragm: PTFE Plastics: PP, PP-n, PVDF Rubber: EPDM

# ORDERING INFORMATION

For standard configuration please refer to the item numbers below.

Other options:

- also available in ABS (1,  $1^{1/4}$ ,  $1^{1/2}$ ) and PVDF OD 20mm



# **Configuration options**

Choose standout length and connection OD

	S = 150 mm	S = 200 mm
OD 25 mm	2533 043 10 <b>XX</b>	2533 031 10 <b>XX</b>
OD 32 mm	2533 044 10 <b>XX</b>	2533 045 10 <b>XX</b>

Replace XX with one of these media types:



6

03 •Distilled water



36 • Deionized water, cold

# WALL MOUNTED FITTING 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 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, PP Rubber: EPDM

#### ORDERING INFORMATION

For standard configuration please refer to the item numbers below.

#### Other options:

- different sizes of push fittings
- different inlet lengths



Can be delivered without R3/8" push fitting

# **Configuration options**

Choose standout length and connection OD

	S = 150 mm	S = 200 mm
With R3/8" fitting	2533 034 10 <b>XX-YY</b>	2533 035 10 <b>XX-YY</b>
OD10 hose	2533 017 10 <b>XX-YY</b>	2533 019 10 <b>XX-YY</b>

Replace XX with one of these media types:



03 •Distilled water



36 • Deionized water, cold

# 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 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

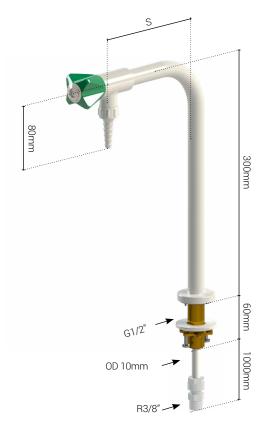
Diaphragm: PTFE Plastics: PVDF, PP Rubber: EPDM

#### ORDERING INFORMATION

For standard configuration please refer to the item numbers below.

Other options:

- different sizes of push fittings
- different inlet lengths



Can be delivered without R3/8" push fitting

# **Configuration options**

Choose standout length and connection OD

	S = 150 mm	S = 200 mm
With R3/8" fitting	2533 046 10 <b>XX-YY</b>	2533 033 10 <b>XX-YY</b>
OD10 hose	2533 008 10 <b>XX-YY</b>	2533 010 10 <b>XX-YY</b>

Replace XX with one of these media types:



03 •Distilled water



36 • Deionized water, cold

# SUSPENDED FITTING WITH PLASTIC INNER TUBE

# **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, PP Rubber: EPDM

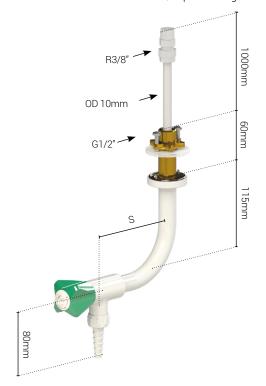
#### ORDERING INFORMATION

For standard configuration please refer to the item numbers below.

Other options:

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

Can be delivered without R3/8" push fitting



# **Configuration options**

Choose connection OD

With R3/8" fitting	2533 254 10 <b>XX-YY</b>
OD10 hose	2533 255 10 <b>XX-YY</b>

Replace XX with one of these media types:



03 •Distilled water



36 • Deionized water, cold

# WALL MOUNTED FITTING 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: 0.9 kg

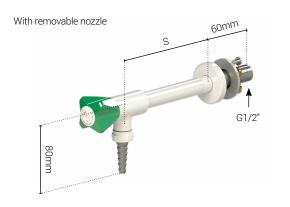
# MATERIALS WITH MEDIA CONTACT

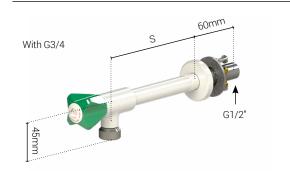
Metals: Stainless Steel, AISI 316

Diaphragm: PTFE Rubber: EPDM

# ORDERING INFORMATION

For standard configuration please refer to the item numbers below.





# **Configuration options**

Choose standout length and connection OD

	S = 150 mm	S = 200 mm
With removable nozzle	2533 001 10 <b>XX</b>	2533 002 10 <b>XX</b>
With G3/4	2533 032 10 <b>XX</b>	2533 047 10 <b>XX</b>

Replace XX with one of these media types:



03 •Distilled water



**36** • Deionized water, cold

# 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

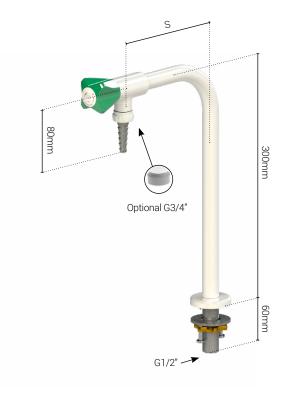
# MATERIALS WITH MEDIA CONTACT

Metals: Stainless Steel, AISI 316

Diaphragm: PTFE Rubber: EPDM

# ORDERING INFORMATION

For standard configuration please refer to the item numbers below.



# **Configuration options**

Choose standout length and connection OD

	S = 150 mm	S = 200 mm
With removable nozzle	2533 003 10 <b>XX</b>	2533 004 10 <b>XX</b>
With G3/4"	2533 048 10 <b>XX</b>	2533 049 10 <b>XX</b>

Replace XX with one of these media types:





# BENCH MOUNTED FITTING WITH SWIVEL SPOUT WITH PLASTIC INNER TUBE

# **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 1/2 x 360°

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

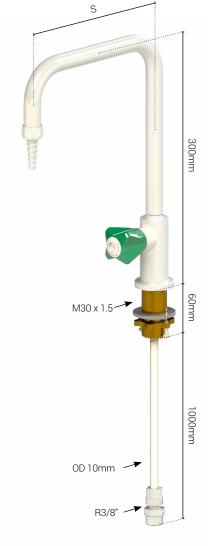
Diaphragm: PTFE Plastics: PVDF, PP Rubber: EPDM

# ORDERING INFORMATION

For standard configuration please refer to the item numbers below.

# Other options:

- diffferent sizes of push fittings
- other inlet options



Can be delivered without R3/8" push fitting

# **Configuration options**

Choose standout length and connection OD

	S = 150 mm	S = 200 mm	S = 250 mm	S = 300 mm
With removable nozzle	2534 045 10 <b>XX-YY</b>	2534 041 10 <b>XX-YY</b>	2534 046 10 <b>XX-YY</b>	2534 048 10 <b>XX-YY</b>
With G3/4"	2534 036 10 <b>XX-YY</b>	2534 037 10 <b>XX-YY</b>	2534 047 10 <b>XX-YY</b>	2534 049 10 <b>XX-YY</b>

Replace XX with one of these media types:



03 • Distilled water



# WALL MOUNTED FITTING WITH SWIVEL SPOUT WITH PLASTIC INNER TUBE

# **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 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

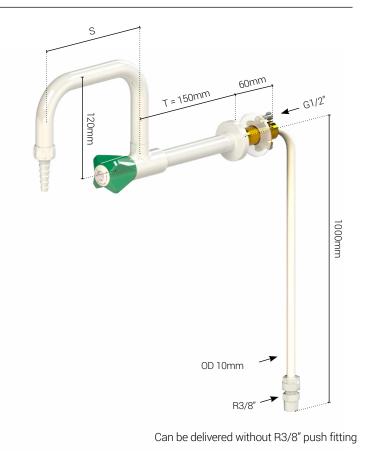
Diaphragm: PTFE Plastics: PVDF, PP Rubber: EPDM

# 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



# **Configuration options**

Choose standout length and connection OD

	S = 150 mm	S = 200 mm	S = 250 mm	S = 300 mm
With R3/8" fitting	2533 185 10 <b>XX-YY</b>	2533 186 10 <b>XX-YY</b>	2533 187 10 <b>XX-YY</b>	2533 188 10 <b>XX-YY</b>
OD10 hose	2533 189 10 <b>XX-YY</b>	2533 190 10 <b>XX-YY</b>	2533 191 10 <b>XX-YY</b>	2533 192 10 <b>XX-YY</b>

Replace XX with one of these media types:



03 •Distilled water



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

# **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 1/2 x 360°

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

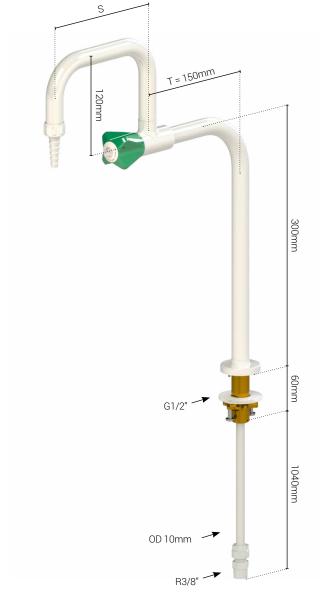
Diaphragm: PTFE Plastics: PVDF, PP Rubber: EPDM

# 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 = 200mm



Can be delivered without R3/8" push fitting

# **Configuration options**

Choose standout length and connection OD

	S = 150 mm	S = 200 mm	S = 250 mm	S = 300 mm
With R3/8" fitting	2533 036 10 <b>XX-YY</b>	2533 064 10 <b>XX-YY</b>	2533 193 10 <b>XX-YY</b>	2533 194 10 <b>XX-YY</b>
OD10 hose	2533 195 10 <b>XX-YY</b>	2533 196 10 <b>XX-YY</b>	2533 197 10 <b>XX-YY</b>	2533 198 10 <b>XX-YY</b>

Replace XX with one of these media types:



03 •Distilled water



# WALL MOUNTED FITTING WITH SWIVEL SPOUT IN STAINLESS STEEL

# **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 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



Diaphragm: PTFE Plastics: PVDF, PP

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

# **Configuration options**

Choose standout length and connection OD

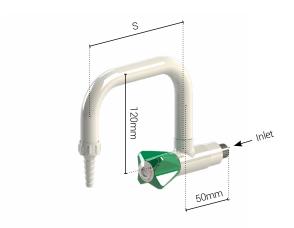
	S = 150 mm	S = 200 mm	S = 250 mm	S = 300 mm
Inlet: male G3/8"	2530 022 10 <b>XX</b>	2530 023 10 <b>XX</b>	2530 016 10 <b>XX</b>	2530 024 10 <b>XX</b>
Inlet: male G1/2"	2530 025 10 <b>XX</b>	2530 026 10 <b>XX</b>	2530 017 10 <b>XX</b>	2530 027 10 <b>XX</b>

Replace XX with one of these media types:



03 •Distilled water

36 • Deionized water, cold



# WALL MOUNTED FITTING IN STAINLESS STEEL

# **SPECIFICATIONS**

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



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

# **Configuration options**

Choose inlet and connection OD

	Removable nozzle	G3/4"
Inlet: male G3/8"	2530 029 10 <b>XX</b>	2530 030 10 <b>XX</b>
Inlet: male G1/2"	2530 019 10 <b>XX</b>	2530 028 10 <b>XX</b>

Replace XX with one of these media types:



03 •Distilled water





# WALL MOUNTED FITTING IN STAINLESS STEEL

# **SPECIFICATIONS**

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

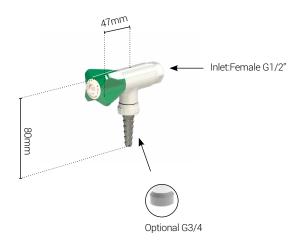
# MATERIALS WITH MEDIA CONTACT

Metals: Stainless Steel , AISI 316

Diaphragm: PTFE Rubber: EPDM

# ORDERING INFORMATION

For standard configuration please refer to the item numbers below.



# **Configuration options**

Choose connection OD

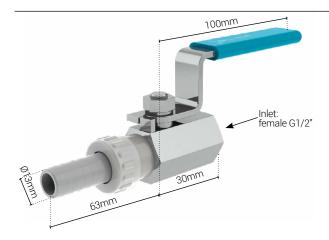


Replace XX with one of these media types:





# **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.

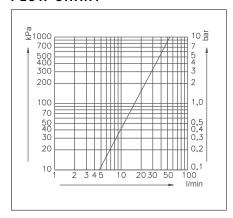
No. 15382509

#### **SPECIFICATIONS**

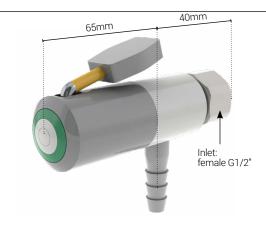
A full flow valve is an alternative to the models showed in this catalogue. Please contact your BROEN-LAB representative for further

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**

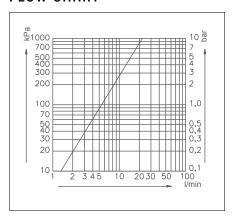
A self-closing valve is an alternative to the models shown in this catalogue. Please contact your BROEN-LAB representative for further information.

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

50	Female G1/2" union nut connection	EPDM rubber
20	Straight BROEN-LAB UniFlex™ connection with EPDM 0-ring	*

# OUTLET CONNECTIONS 93 D XX XX XXXX

50	Female G1/2" union nut connection	EPDM rubber
20	Straight BROEN- LAB UniFlex™ con- nection with EPDM O-ring	*
		*

# 93 D **XX XX XXXX**

LENGTH



If 45° and 90° elbows occur on the same hose, it will as default be mounted in U-form

\*\*Standard lengths of hoses (L):

**0500** = 500 mm

**0700** = 700 mm **1000** = 1000 mm

**1200** = 1200 mm **1500** = 1500 mm

2000 = 2000 mm

**2500** = 2500 mm **3000** = 3000 mm

Length tolerance of hoses:  $L = \le 400 \text{ mm } (-0, +10 \text{ mm})$  L = 401 mm to 1000 mm (-0, +20 mm)L = >1000 mm (-0, +30 mm)

\*\* Other lengths are available on request

# 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: 8.2 mm

Outside diameter: 12 mm

Max. working pressure: 10 bar

Max. working temperature: 90°C

Bending radius (inner): ≥ 40 mm

Min. length with connections: 160 mm

# **EXAMPLE OF HOSE CONFIGURATION**

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



\*All O-rings are lubricated with silicone based lubricant

# **HEADWORK FOR SPECIAL WATER FITTINGS**

# ORDERING INFORMATION



Headwork sparepart kit: No. 19 152 480

Complete set with  ${\rm G1/2}^{"}$  diaphragm headwork, plastic handle and media indication:

No. 2575 021 10**XX** (replace **XX** with media code on page 23)

Complete set with plastic handle and media indication No. 19 150 140 10**XX** (replace **XX** with media code on page 23)

#### **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

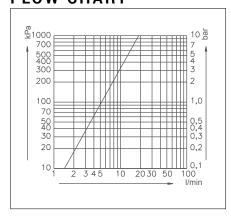
Media: Special water

# MATERIALS WITH MEDIA CONTACT

Metals: No metals with media contact

Diaphragm: PTFE

# **FLOW CHART**



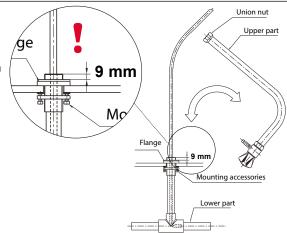
# **ACCESSORIES**

Illustration	Description	BROEN-LAB item no.
	Removable Stainless Steel nozzle (G1/2") Removable Stainless Steel nozzle (G3/4")	2539 020 1003 2539 047 1003
	Removable polypropylene nozzle (G1/2")	2539 004 1001
	Push-in fittings: Ø10 x R3/8" Ø10 x R1/2"	15 384 38 15 384 36
	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 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.



300

200 mm

#### **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]

 $(standard: d = \emptyset 20.4mm = \emptyset 0.0204m)$ 

v = Water velocity (> 0.6 m/s) [m/s]

Example:

standard; d=ø20.4mm

 $Q = (\pi/4) \times 0.0204^2 \times 0.6 = 1.96 \times 10^{-4} \text{ m}^3/\text{s} = 11.77 \text{ l/min}$ 

Please note that Q = 11.77 I/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.



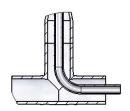
# **KV - VALUES FOR T-PIECE**

PP-n, OD 25 mm:

- flow in same direction as inner tubing: Kv=15,7 m<sup>3</sup>/hbar
- flow against direction of inner tubing: Kv=14,0 m<sup>3</sup>/hbar

PP-n, OD 32 mm:

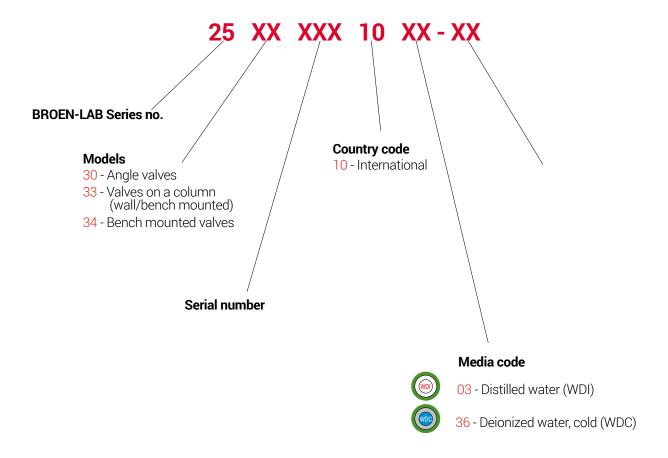
- flow in same direction as inner tubing: Kv=33,6 m<sup>3</sup>/hbar
- flow against direction of inner tubing: Kv =29,0 m<sup>3</sup>/hbar



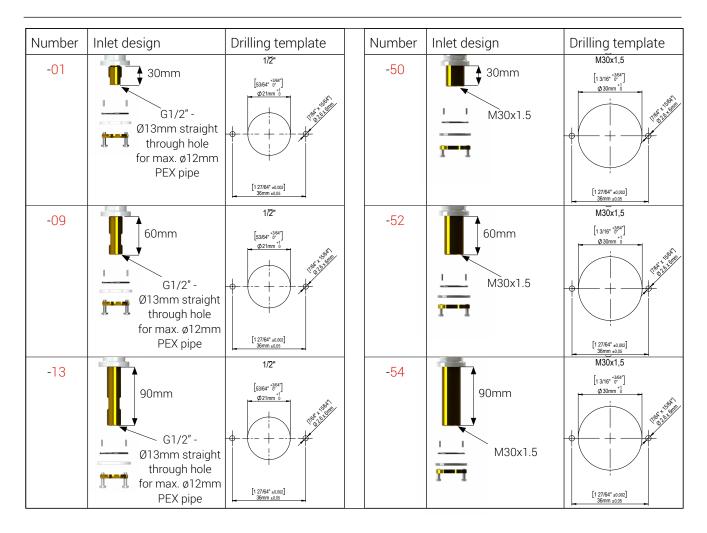
Cross section of the T-piece with inner tubing

# ORDERING INFORMATION BROEN-LAB UNIFLEX™ FITTINGS

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



# ORDERING INFORMATION BROEN-LAB UNIFLEX™ FITTINGS



23

broen-lab.com

#### **HEADQUARTER**

#### **BROEN-LAB A/S**

Drejervaenget 2 5610 Assens Denmark

Tel. +45 6376 6376

lab@broen-lab.com broen-lab.com

#### **INTERNATIONAL OFFICES**

#### **BROEN-LAB Ltd.**

Tel. +44 121 522 4515

lab@broen-lab.com broen-lab.com

#### **BROEN-LAB Singapore Pte. Ltd.**

25 International Business Park #04-60A German Centre Singapore 609916

Tel. +65 6298 0662

lab@broen-lab.com broen-lab.com

# **BROEN-LAB GmbH**

Tel. +45 6376 6376

lab@broen-lab.com broen-lab.com

# **BROEN-LAB Sverige AB**

Tel. +45 6376 6376

lab@broen-lab.com broen-lab.com

#### **BROEN-LAB Inc.**

15 Constitution Drive Suite 122 NH 03110 Bedford USA

Tel. +1 603 310 5089

lab@broen-lab.com broen-lab.com 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 offers solutions that ensure the functionality, compliance, hygiene, durability and safety are of the highest priority. For more than 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



# **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.

# BROEN-LAB A/S ISO 14001:2015 certification

In December 2022 we got certified according to ISO 14001 in Environmental certification. The new certification was carried out by Bureau Veritas, Denmark, for Danish site in Assens.

The Environment ISO14001 management system of BROEN-LAB A/S is included in internationally acknowledged EN ISO 9001:2015. Both certifications furthermore contribute to reputation for quality and reliability of BROEN-LAB A/S.