

**BROEN  
UNIFLEX™  
FLEXIBLE PIPES &  
HOSES**



BROEN UNIFLEX™ FLEXIBLE PIPES AND HOSES

BROEN UNIFLEX™ FLEXIBLE PIPES AND HOSES



**LAB  
FITTINGS**

**BROEN**

INTELLIGENT FLOW SOLUTIONS

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## BROEN UNIFLEX™ HOSES - PRODUCT OVERVIEW

BROEN LAB offers BROEN UniFlex™ hoses and flexible Stainless Steel pipes as an easy way to make the installation in the laboratory where safety and efficiency are required. BROEN UniFlex™ hoses are the ideal solution where there is a higher requirement for flexibility. Installation with flexible hoses saves time and labour - in other words - reduced installation costs.

*Select the right product to ensure safe installation and long service life!*

| Hose material                             | SPX<br>(braided) | PEX        | PA<br>(Nylon) | Rubber<br>(Nitrile),<br>polyester<br>reinforced | PTFE<br>(braided) | Stainless<br>Steel<br>(braided) |
|---|------------------|------------|---------------|---|-------------------|---------------------------------|
| Medium                                    |                  |            |               |   |                   |                                 |
| Potable / non-potable /<br>coolant water* | <b>93V</b>       | <b>93P</b> |               |   |                   |                                 |
| Special water sorts                       | <b>93D</b>       |            | <b>93N</b>    |   |                   | <b>93E</b>                      |
| Burning gases                             |                  |            |               | <b>93G</b>                                      |                   | <b>93M</b>                      |
| Non-burning 2.0 gases/<br>Vacuum          | <b>93T</b>       | <b>93B</b> |               |   |                   |                                 |
| Non-burning 4.0 gases/<br>Oxygen          |                  |            |               |   | <b>93R</b>        |                                 |
| High purity 5.0 gases                     |                  |            |               |   | <b>93R</b>        |                                 |
| High purity 6.0 gases                     |                  |            |               |   |                   | <b>93S</b>                      |



The total design of the system must be taken into consideration when selecting the type of BROEN UniFlex™ flexible hose or pipe for specific media. Only then products will provide safe, trouble-free operation.

**Please always check local requirements/regulations regarding installation and maintenance of hoses/flexible pipes!**

A very high quality of materials applied for production of hoses and Stainless Steel flexible pipes, which are supplied by BROEN LAB, and a long-time experience in making installations worldwide, combined with optimal installation conditions, may assure a lifetime for a hose to be more than 10 years. Expected lifetime can only be achieved under normal use and proper installation methods, which are described in technical specifications, i.e. max. working pressure, max. temperature, physical installation methods and other. Any nonconformity to specifications decreases the lifetime of a hose/flexible pipe.

## Which hose/flexible pipe to select?

In the table below you find the summary of the factors that are necessary to consider when selecting a BROEN UniFlex™ flexible hoses/pipes.

| Hose<br>Factors*                  | SPX<br>93V, 93D, 93T             | PEX<br>93P, 93B             | PA (Nylon)<br>93N               | Rubber<br>93G               | PTFE<br>93R              | SS<br>93E, 93M, 93S                             |
|-----------------------------------|----------------------------------|-----------------------------|---------------------------------|-----------------------------|--------------------------|---|
| Inner hose material               | SPX                              | PEX                         | PA                              | Nitrile (NBR)               | PTFE**                   | Corrugated Stainless Steel AISI 316             |
| Outer hose material / braiding    | Stainless Steel AISI 304         | None                        | None                            | EPDM (polyester reinforced) | Stainless Steel AISI 304 | Stainless Steel AISI 304                        |
| Hose materials with media contact | SPX                              | PEX                         | PA, POM                         | Nitrile (NBR)               | PTFE                     | Stainless Steel AISI 316                        |
| Sealing material                  | - EPDM (93V, 93D)<br>- FKM (93T) | - EPDM (93P)<br>- FKM (93B) | None                            | Nitrile (NBR)               | FKM                      | - EPDM (93E)<br>- Nitrile (93M)<br>- None (93S) |
| Inside diameter                   | 8.2mm                            | 6.4mm                       | 8mm                             | 6.3mm                       | 6.3mm                    | 8.2mm   |
| Outside diameter                  | 12mm                             | 10mm                        | 10mm                            | 12.9mm                      | 9.5mm                    | 12.2mm  |
| Max. working pressure             | 10 bar (water)<br>16 bar (gases) | 10 bar                      | 10 bar by 23°C<br>6 bar by 65°C | 10 bar                      | 21 bar                   | 21 bar  |
| Max. working temperature          | 90°C                             | 70°C                        | 65°C                            | 50°C                        | 50°C                     | 50°C***   |
| Min. bending radius               | 40mm                             | 40mm                        | 90mm                            | 40mm                        | 60mm                     | 32mm  |
| UV resistance                     | ++                               | +                           | +                               | +                           | ++                       | +++   |
| Range of connections              | +++                              | +                           | +                               | +++                         | +++                      | +   |

\* Values shown in the table are valid for hoses and flexible Stainless Steel pipes only.

For more information please refer to individual pages in this catalogue or contact your BROEN LAB representative.

\*\* PTFE and rubber are penetrable materials meaning that gases, vapors, and liquids may diffuse through them. Therefore, for applications where a defined gas content is required, or absorbed gases might disturb applications, alternative materials could be considered. Check compatibility with gases in application!

\*\*\* For applications requiring higher temperatures please contact your BROEN LAB representative



## INLET CONNECTIONS

93 V XX XX XXXX

G3/8"A fixed connection (Code 32)



G1/2"A fixed connection (Code 31)



G3/4"A fixed connection (Code 33)



G3/8" union connection (Code 41)



G1/2" union connection (Code 40)



G3/4" union connection (Code 42)



OD10mm connection for compression fittings (Code 10)



OD12mm connection for compression fittings (Code 12)



OD15mm connection for compression fittings (Code 15)



OD15mm connection for press fittings (Code 65)



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



45° BROEN UniFlex™ connection with EPDM O-ring (Code 25)



90° BROEN UniFlex™ connection with EPDM O-ring (Code 30)



## OUTLET CONNECTIONS

93 V XX XX XXXX

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



45° BROEN UniFlex connection with EPDM O-ring (Code 25)



90° BROEN UniFlex connection with EPDM O-ring (Code 30)



M10x1mm short connection with EPDM O-ring (Code 51)



### PLEASE NOTE:

M10 connections can only be used to mixer and multimedia fittings

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

## HOSE

93 V XX XX XXXX

SPX hose with braiding in stainless steel



Marking for water with Part no. and Media indication

## HOSE LENGTHS

Definition of length (L)



Definition of length (L)



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 = 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, brass, EPDM and silicone based lubricant

**Sealing:** EPDM, Aramid fiber/NBR

**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 OD 12mm inlet connection and straight UniFlex™ outlet connection



**93V12201200**

\* Other lengths are available on request



## INLET CONNECTIONS

93 P **XX** XX XXXX

OD10mm hose connection (Code **00**)



G3/8" union connection (Code **41**)



G1/2" union connection (Code **40**)



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



## OUTLET CONNECTIONS

93 P XX **XX** XXXX

M10x1mm short connection with EPDM O-ring (Code **51**)



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



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

## HOSE

93 P XX XX **XXXX**

PEX hose



Marking for 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:** PEX

**Braiding:** None

**Hose materials with media contact:**  
PEX, brass, EPDM with silicone based lubricant

**Sealing:** EPDM, Aramid fiber/NBR

**Inside diameter:** 6.4mm

**Outside diameter:** 10mm

**Max. working pressure:** 10bar

**Max. working temperature:** 70°C

**Bending radius (inner):** ≥ 40mm

**Min. length with connections:** 160mm

## EXAMPLE OF HOSE CONFIGURATION

1200mm hose with OD10mm inlet connection and straight UniFlex™ outlet connection



**93P00201200**

\* Other lengths are available on request

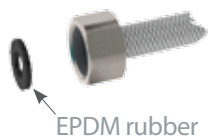




### INLET CONNECTIONS

93 D **XX** XX XXXX

1/2" union connection (Code **50**)



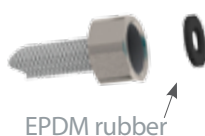
Straight BROEN UniFlex™ connection with EPDM O-ring (Code **20**)



### OUTLET CONNECTIONS

93 D XX **XX** XXXX

1/2" union connection (Code **50**)



Straight BROEN 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



### 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



### INLET CONNECTIONS

93 N **XX** XX XXXX

OD10mm pipe connection  
incl. support bushing (Code **00**)



G3/8"A fixed connection (code **32**)



G1/2"A fixed connection (Code **31**)



G3/4"A fixed connection (Code **33**)



### OUTLET CONNECTIONS

93 N XX **XX** XXXX

OD10mm pipe connection  
incl. support bushing (Code **00**)



### HOSE

93 N XX XX **XXXX**

PA hose



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:** PA

**Braiding:** None

**Hose materials with media contact:**

PA, POM, EPDM

**Inside diameter:** 8mm

**Outside diameter:** 10mm

**Max. working pressure:**

10 bar by 23°C

6 bar by 65°C

**Max. working temperature:** 65°C

**Bending radius (inner):** ≥ 90mm

**Min. length with connections:** 150mm

### EXAMPLE OF HOSE CONFIGURATION

1200mm hose with G3/8" fixed  
inlet connection and OD10mm  
pipe outlet connection



**93N32001200**

\* Other lengths are available on request

## 93E - BROEN UNIFLEX™ FLEXIBLE STAINLESS STEEL PIPES FOR SPECIAL WATER



### INLET CONNECTIONS

93 E **XX** XX XXXX

OD12mm connection (Code **12**)



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



### OUTLET CONNECTIONS

93 E XX **XX** XXXX

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



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

### HOSE

93 E XX XX **XXXX**

Flexible SS pipe 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:

Stainless Steel AISI 316L

#### Braiding: Stainless steel AISI 304

#### Hose materials with media contact:

SS AISI 316L, EPDM and silicone based lubricant

**Inside diameter:** 8.2 mm

**Outside diameter:** 12.2 mm

**Max. working pressure at 20°C:** 132 bar

**Max. working temperature:** 50°C

#### Bending radius (inner):

≥ 32 mm (static)

≥ 124 mm (dynamic)

**Min. length with connections:** 350mm

### EXAMPLE OF HOSE CONFIGURATION

1200mm hose with OD 12mm inlet connection and straight UniFlex™ outlet connection



**93E12201200**

\* Other lengths are available on request





## INLET CONNECTIONS

93 M XX XX XXXX

G1/2" union connection (Code 40)



NBR rubber

OD12mm connection (Code 12)



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



## OUTLET CONNECTIONS

93 M XX XX XXXX

Straight BROEN UniFlex connection with NBR O-ring (Code 20)



## HOSE

93 M XX XX XXXX

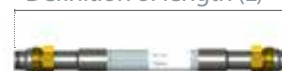
Flexible SS pipe with braiding in stainless steel



Marking for burning gases 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)

\*All O-rings are lubricated with mineral oil based lubricant

## SPECIFICATIONS

### Inner hose material:

Stainless Steel AISI 316L

**Braiding:** Stainless steel AISI 304

### Hose materials with media contact:

SS AISI 316L, NBR and mineral oil based lubricant

**Inside diameter:** 8.2 mm

**Outside diameter:** 12.2 mm

**Max. working pressure at 20°C:** 132 bar

**Max. working temperature:** 50°C

### Bending radius (inner):

≥ 32 mm (static)

≥ 124 mm (dynamic)

**Min. length with connections:** 350mm

## EXAMPLE OF HOSE CONFIGURATION

1200mm hose with OD 12mm inlet connection and straight UniFlex™ outlet connection


**93M12201200**

\* Other lengths are available on request



## INLET CONNECTIONS

93 G XX XX XXXX

G3/8"A fixed connection (Code 32)



G1/2"A fixed connection (Code 31)



G1/2" union connection (Code 40)



NBR rubber

OD10mm connection for compression fittings (Code 10)



OD12mm connection for compression fittings (Code 12)



OD15mm connection for compression fittings (Code 15)



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



45° BROEN UniFlex™ connection with NBR O-ring (Code 25)



90° BROEN UniFlex™ connection with NBR O-ring (Code 30)



## OUTLET CONNECTIONS

93 G XX XX XXXX

Straight BROEN UniFlex connection with NBR O-ring (Code 20)



45° BROEN UniFlex connection with NBR O-ring (Code 25)



90° BROEN UniFlex connection with NBR O-ring (Code 30)



\*All O-rings are lubricated with mineral oil based lubricant

## HOSE

93 G XX XX XXXX

Rubber hose (polyester reinforced)



Marking for burning gases with Part no. and Media indication

## HOSE LENGTHS

Definition of length (L)



Definition of length (L)



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 = 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:** Nitrile (NBR)

**Outer hose material:** EPDM

**Hose materials with media contact:** brass, NBR

**Sealing material:** Nitrile (NBR) with mineral oil based lubricant

**Inside diameter:** 6.3mm

**Outside diameter:** 12.9mm

**Max. working pressure:** 10 bar

**Max. working temperature:** 50°C

**Bending radius (inner):** ≥ 40mm

**Min. length with connections:** 160mm

## EXAMPLE OF HOSE CONFIGURATION

1200mm hose with OD 12mm inlet connection and straight UniFlex™ outlet connection



**93G12201200**

\* Other lengths are available on request



## INLET CONNECTIONS

93 T XX XX XXXX

G3/8"A fixed connection (Code 32)



G1/2"A fixed connection (Code 31)



G3/8" union connection (Code 41)



G1/2" union connection (Code 40)



OD10mm connection for compression fittings (Code 10)



OD12mm connection for compression fittings (Code 12)



OD15mm connection for compression fittings (Code 15)



OD15mm connection for press fittings (Code 65)



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



45° BROEN UniFlex™ connection with FKM O-ring (Code 25)



90° BROEN UniFlex™ connection with FKM O-ring (Code 30)



## OUTLET CONNECTIONS

93 T XX XX XXXX

Straight BROEN UniFlex connection with FKM O-ring (Code 20)



45° BROEN UniFlex connection with FKM O-ring (Code 25)



90° BROEN UniFlex connection with FKM O-ring (Code 30)



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

## HOSE

93 T XX XX XXXX

SPX hose with braiding in stainless steel



Marking for technical gases with Part no. and Media indication

## HOSE LENGTHS

Definition of length (L)



Definition of length (L)



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 = 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:** PEX, brass, FKM and perfluoropolyether based lubricant

**Inside diameter:** 8.2mm

**Outside diameter:** 12mm

**Max. working pressure:** 16 bar

**Max. working temperature:** 90°C

**Bending radius (inner):** ≥ 40mm

**Min. length with connections:** 160mm

## EXAMPLE OF HOSE CONFIGURATION

1200mm hose with OD 12mm inlet connection and straight UniFlex™ outlet connection



**93T12201200**

\* Other lengths are available on request

## 93B - BROEN UNIFLEX™ PEX HOSES FOR NON-BURNING 2.0 GASES/VACUUM



### INLET CONNECTIONS

93 B **XX** XX XXXX

OD10mm hose connection (Code **00**)



G3/8" union connection (Code **41**)



G1/2" union connection (Code **40**)



Straight BROEN UniFlex™ connection with FKM O-ring (Code **20**)



### OUTLET CONNECTIONS

93 B XX **XX** XXXX

Straight BROEN UniFlex connection with FKM O-ring (Code **20**)



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

### HOSE

93 B XX XX **XXXX**

PEX hose



Marking for Technical gases 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)

BROEN UNIFLEX™ FLEXIBLE PIPES AND HOSES

### SPECIFICATIONS

**Inner hose material:** PEX

**Braiding:** None

**Hose materials with media contact:**

PEX, brass

**Sealing material:** FKM with perfluoropolyether based lubricant

**Inside diameter:** 6.4mm

**Outside diameter:** 10mm

**Max. working pressure:** 10bar

**Max. working temperature:** 70°C

**Bending radius (inner):** ≥ 40mm

**Min. length with connections:** 160mm

### EXAMPLE OF HOSE CONFIGURATION

1200mm hose with OD10mm inlet connection and straight UniFlex™ outlet connection



**93B00201200**

\* Other lengths are available on request



## INLET CONNECTIONS

93 R XX XX XXXX

G1/2" union connection (Code 40)



OD10mm connection for compression fittings (Code 10)



OD12mm connection for compression fittings (Code 12)



OD15mm connection for compression fittings (Code 15)



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



45° BROEN UniFlex™ connection with FKM O-ring (Code 25)



90° BROEN UniFlex™ connection with FKM O-ring (Code 30)



## OUTLET CONNECTIONS

93 R XX XX XXXX

Straight BROEN UniFlex connection with FKM O-ring (Code 20)



45° BROEN UniFlex connection with FKM O-ring (Code 25)



90° BROEN UniFlex connection with FKM O-ring (Code 30)



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

## HOSE

93 R XX XX XXXX

PTFE hose with braiding in stainless steel



Marking for clean gases with Part no. and Media indication

## HOSE LENGTHS

Definition of length (L)



Definition of length (L)



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 = 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:** PTFE\*

**Braiding:** Stainless steel

**Hose materials with media contact:** PTFE, brass, FKM\* and perfluoropolyether based lubricant (Oxygen approved)

**Inside diameter:** 6.3mm

**Outside diameter:** 9.5mm

**Max. working pressure:** 21bar

**Max. working temperature:** 50°C

**Bending radius (inner):** ≥ 60mm

**Min. length with connections:** 160mm

**Packaging:** individually packed in sealed bags

## EXAMPLE OF HOSE CONFIGURATION

1200mm hose with OD 12mm inlet connection and straight UniFlex™ outlet connection



**93R12201200**

\* PTFE and FKM are penetrable materials meaning that gases, vapors, and liquids may diffuse through them. Therefore, for applications where a defined gas content is required, or absorbed gases might disturb applications, alternative materials could be considered. Check compatibility with gases in application!

\*\* Other lengths are available on request

# 93S - BROEN UNIFLEX™ FLEXIBLE STAINLESS STEEL PIPES FOR HIGH PURITY GASES UP TO 6.0



## INLET CONNECTIONS

93 S **XX** XX XXXX

OD10mm connection (Code **80**)



1/4"NPT fixed connection (Code **70**)



## OUTLET CONNECTIONS

93 S XX **XX** XXXX

OD10mm connection (Code **80**)



## HOSE

93 S XX XX **XXXX**

Flexible SS pipe with braiding  
in stainless steel



Marking for clean gases 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:

Corrugated\* Stainless Steel 1.4404 similar to AISI 316L  
(acc. to EN 10028-7). Specially cleaned for use with gases having purity  
coefficient 6.0 (99,9999% pure gases)

**Braiding:** Stainless Steel 1.4301 similar to AISI 304

**Hose connections:** Stainless Steel 1.4404 and 1.4541 (acc. to EN 10216-5  
CFA D4/T4 (DIN 17458 D4/T4))

### Surface roughness of the raw material:

Ra max - 1.5 µm

Ra - 0.12 µm

**Inside diameter:** 8.3 mm

**Outside diameter:** 13.7 mm

**Max. working pressure:** 21 bar

**Max. working temperature:** 50°C

**Bending radius (inner):** ≥ 32 mm

**Min. length with connections:** 350mm

**Packaging:** individually packed in sealed bags

## EXAMPLE OF HOSE CONFIGURATION

1200mm hose with male 1/4"NPT  
inlet connection and OD 10mm  
pipe outlet connection



**93S70801200**

*\* Corrugated hoses have a large inner surface with media contact,  
therefore extended flushing maybe required before taking into use!*

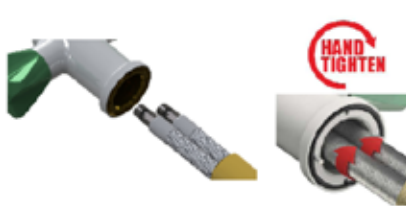
*\*\* Other lengths are available on request*





**BROEN UniFlex**

**M10x1 mm**



DK: Slangetilslutninger skal spændes som vist.

UK: Hose connections must be tightened as shown.

D: Schlauchverbindungen müssen angezogen werden, wie gezeigt.

## English

When mounting flexible connection hoses/pipes from BROEN a few basic rules must be followed to ensure a safe and durable connection.

### Keeping and transport

- Leave the connection hose/pipe in the original packing until installation
- Avoid clamping and breaking the flexible hose/pipe during transport

### Before the mounting

- The scope of application of the connection hose/pipe must be according to the installation planned
- Use the correct tools. Use appropriate opener spanner. Do not use pipe wrench or similar

### During mounting

- Install the flexible connection hose/pipe so that torsion, breaking and stretching of the hose is avoided
- Install the flexible connection hose/pipe, so that physical stress is avoided, e.g. wear and tear of the surface of the hose/pipe
- The hose/pipe may not be installed in strongly corrosive environments

### After mounting

- Test the tightness of the hose/pipe before start using the product
- The hose/pipe must be mounted accessible for following inspection

## Deutsch

Bei Montage von flexiblen Verbindungsleitungen von BROEN müssen einige Grundregeln befolgt werden, um eine sichere und haltbare Verbindung zu erreichen.

### Aufbewahrung und Transport

- Der Verbindungsleitung muss in der Originalverpackung bis zur Montage aufbewahrt werden.
- Drücken und Knicken der Verbindungsleitung während des Transport muss vermieden werden.

### Vor der Montage

- Der Anwendungsbereich des Verbindungsleitung muss in Übereinstimmung mit der geplanten Installation sein.
- Verwenden Sie korrektes Werkzeug. Verwenden Sie passende Festschlüssel und NICHT Rohrspanner oder etwas ähnliches.

### Während der Montage

- Montieren Sie die flexible Verbindungsleitung, so dass Verdrehen, Knicken und Strecken der Leitung vermieden wird.
- Die Verbindungsleitung muss so montiert werden, dass physische Einwirkung, z.B. Verschleiß der Oberfläche der Leitung, vermieden wird.
- Die Leitung darf in stark korrosive Umgebung nicht montiert werden.

### Nach Installation

- Dichtprüfung der montierten Leitung vor Inbetriebnahme.
- Die Leitung muss leicht zugänglich montiert werden.

## Dansk

Ved montage af fleksible koblingsledninger fra BROEN A/S er der få enkle grundregler, som bør følges, herved opnås en sikker og langtidsholdbar tilslutning.

### Opbevaring og transport

- Lad koblingsledningen blive i original emballage indtil ledningen skal monteres
- Undgå klemning og knækning af koblingsledningen under transport

### Forud for montering

- Koblingsledningens anvendelsesområde skal være i overensstemmelse med den påtænkte installation
- Brug korrekt værktøj. Anvend passende fastnøgler og ikke rørtænger eller lign.

### Under montage

- Monter den fleksible koblingsledning så vridning, knækning og strækning af ledningen undgås
- Koblingsledningen skal være monteret sådan at fysisk påvirkning undgås f.eks. i form af slitage af ledningens overflade
- Koblingsledningen må ikke monteres i stærkt korrosive miljøer

### Efter installation

- Tæthedsprøv den monterede koblingsledning inden den tages i brug
- Koblingsledningen skal være monteret let-tilgængeligt for efterfølgende tilsyn

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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.

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