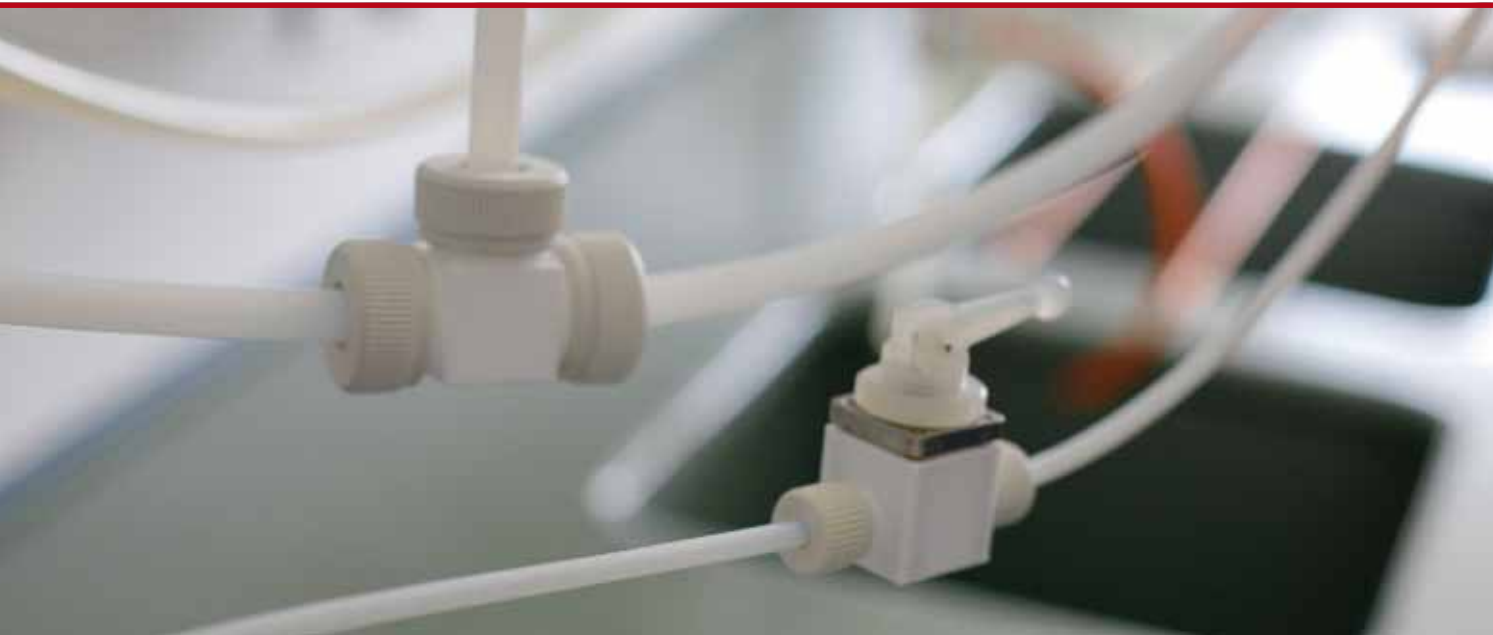


## Screw Joints for Pressures up to 5 bar



Joining things together: we have the ideal screw joints and connectors for almost all equipment and applications.

### PRODUCT TIPS



ab Seite 116:  
Tube fittings



ab Seite 120:  
Stopcocks

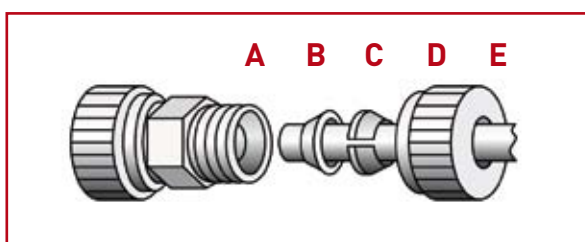


ab Seite 124:  
Tubing Connectors

## BOLA Screw Joints for Pressures up to 5 Bar

### Components:

- A** Threaded neck of fitting
- B** Tapered ring
- C** V-ring
- D** Nut
- E** Tubing or tube



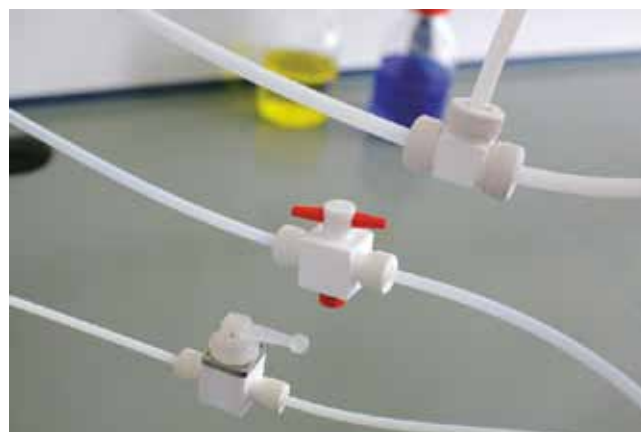
### Assembly:

1. Push the nut on the tubing/tube
2. Push V-ring and then the tapered ring on the tubing/tube
3. Tighten the nut on the threaded neck – ready

### What you should know about the screw joint system up to 5 bar

This economic screw joint system was developed especially for tubing made of PTFE, PFA or FEP, but it can also be used with tubes made of glass or steel. Its function is based on compression rings which provide a pressure resistance of up to 5 bar at room temperature. All parts which are exposed to the medium are made of PTFE. Only the nut which is not in contact with the medium is made of glass-fibre reinforced PTFE for better stability. The fittings and nuts have metric threads.

All components of this system have a universal chemical resistance, since the product is only exposed to PTFE.



### BOLA Tube Fittings

**BESTSELLER**

Material:	Temperature resistance:	Chemical resistance:	Pressure:	Vacuum:
PTFE	from -200°C to +250°C	+++ universal	5 bar	suitable

#### Product description:

Straight tube fitting made of PTFE with nuts made of glass-fibre reinforced PTFE. Universal chemical resistance, the product is only exposed to PTFE.

FDA conform

Thread of fitting M	Bore dia. mm	Total length mm	For tubing O.D. mm	Cat. No.:
14 x 2	6	49	4	D 503-02
14 x 2	6	49	6	D 503-04
14 x 2	6	49	(1/4") 6,35	D 503-06
18 x 2	8	54	8	D 503-08
18 x 2	8	54	10	D 503-12
28 x 2	14	58	12	D 503-14
28 x 2	14	58	14	D 503-16
28 x 2	14	58	16	D 503-18



## BOLA Tube Fittings T

Material: PTFE Temperature resistance: from -200°C to +250°C Chemical resistance: +++ universal Pressure: 5 bar Vacuum: suitable

Product description:

Tube fitting T-shaped made of PTFE, three connections with nuts made of glass-fibre reinforced PTFE. Universal chemical resistance, the product is only exposed to PTFE.

FDA conform

Thread of fitting M	Bore dia. mm	Dimensions (L x H) mm	For tubing O.D. mm	Cat. No.:
14 x 2	4	56 x 39	4	D 505-02
14 x 2	4	56 x 39	6	D 505-04
14 x 2	4	56 x 39	(1/4") 6,35	D 505-06
18 x 2	8	60 x 43	8	D 505-08
18 x 2	8	60 x 43	10	D 505-12
28 x 2	14	71 x 54	12	D 505-14
28 x 2	14	71 x 54	14	D 505-16
28 x 2	14	71 x 54	16	D 505-18



SUITABLE: page 128  
Tubing for all fittings

## BOLA Tube Fittings Elbow

Material: PTFE Temperature resistance: from -200°C to +250°C Chemical resistance: +++ universal Pressure: 5 bar Vacuum: suitable

Product description:

Tube fitting elbow-shaped made of PTFE, two connections with nuts made of glass-fibre reinforced PTFE. Universal chemical resistance, the product is only exposed to PTFE.

FDA conform

Thread of fitting M	Bore dia. mm	Dimensions (L x H) mm	For tubing O.D. mm	Cat. No.:
14 x 2	4	39 x 39	4	D 504-02
14 x 2	4	39 x 39	6	D 504-04
18 x 2	8	43 x 43	8	D 504-08
18 x 2	8	43 x 43	10	D 504-12
28 x 2	14	54 x 54	12	D 504-14
28 x 2	14	54 x 54	14	D 504-16
28 x 2	14	54 x 54	16	D 504-18



### BOLA Practical Tipp

Uwe Hossfeld » application engineering

#### Protection from buckling

If you want to avoid buckling of your tubing, simply cut it and add an elbow fitting for connection.

## BOLA Reducing Unions

Material: PTFE	Temperature resistance: from -200°C to +250°C	Chemical resistance: +++ universal	Pressure: 5 bar	Vacuum: suitable
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Product description:

Straight tube fitting made of PTFE with nuts made of glass-fibre reinforced PTFE. For connecting tubing or tube with different outer diameters. Universal chemical resistance, the product is only exposed to PTFE.

FDA conform

A Thread of fitting M	For tubing O.D. mm	Bore dia. mm	B Thread of fitting M	For tubing O.D. mm	Cat. No.:
14 x 2	6	6	14 x 2	4	D 526-02
18 x 2	8	6	14 x 2	4	D 526-04
18 x 2	8	6	14 x 2	6	D 526-10
18 x 2	10	6	14 x 2	4	D 526-06
18 x 2	10	6	14 x 2	6	D 526-12
18 x 2	10	8	18 x 2	8	D 526-14
28 x 2	12	6	14 x 2	4	D 526-26
28 x 2	12	6	14 x 2	6	D 526-32
28 x 2	12	10	18 x 2	8	D 526-38
28 x 2	12	10	18 x 2	10	D 526-18
28 x 2	14	6	14 x 2	4	D 526-28
28 x 2	14	6	14 x 2	6	D 526-34
28 x 2	14	10	18 x 2	10	D 526-20
28 x 2	16	6	14 x 2	4	D 526-30
28 x 2	16	6	14 x 2	6	D 526-36
28 x 2	16	10	18 x 2	10	D 526-22



## BOLA Distributors

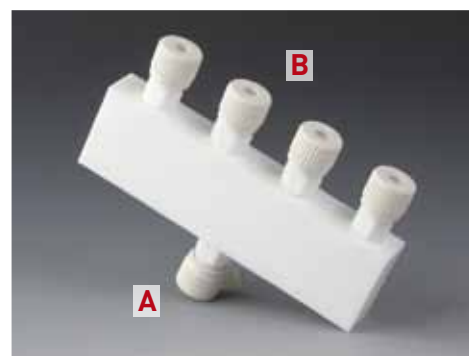
Material: PTFE	Temperature resistance: from -200°C to +250°C	Chemical resistance: +++ universal	Pressure: 5 bar	Vacuum: suitable
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Product description:

Body made of PTFE with nuts made of glass-fibre reinforced PTFE. One inlet and three or four outlets, bore diameter 6 mm. Universal chemical resistance, the product is only exposed to PTFE.

FDA conform

Thread of fitting M	Inlets A	For tubing O.D. mm	Outlets B	For tubing O.D. mm	Dimensions L x W x H mm	Cat. No.:
14 x 2	1	4	3	4	100 x 22 x 96	D 512-01
14 x 2	1	6	3	6	100 x 22 x 96	D 512-02
14 x 2	1	4	4	4	140 x 22 x 96	D 512-08
14 x 2	1	6	4	6	140 x 22 x 96	D 512-09



## BOLA Screw-in Tube Fittings

Material: PTFE    Temperature resistance: from -200°C to +250°C    Chemical resistance: +++ universal    Pressure: 5 bar    Vacuum: suitable

Product description:

Straight tube fitting made of PTFE with nuts made of glass-fibre reinforced PTFE and a screw-in thread (either NPT or G). Universal chemical resistance, the product is only exposed to PTFE.

FDA conform

A Thread of fitting M	For tubing O.D mm	Bore dia. mm	B Screw- in thread	Total length mm	Cat. No.:
14 x 2	4	4	NPT 1/8"	38	D 518-02
14 x 2	4	4	G 1/8"	38	D 518-04
14 x 2	4	4	NPT 1/4"	40	D 518-06
14 x 2	4	4	G 1/4"	38	D 518-08
14 x 2	6	4	NPT 1/4"	40	D 518-12
14 x 2	6	4	G 1/4"	38	D 518-14
14 x 2	6	4	NPT 3/8"	46	D 518-16
14 x 2	6	4	G 3/8"	46	D 518-18
18 x 2	8	8	NPT 1/4"	46	D 518-24
18 x 2	8	8	G 1/4"	46	D 518-26
18 x 2	8	8	NPT 3/8"	46	D 518-28
18 x 2	8	8	G 3/8"	46	D 518-30
18 x 2	10	8	NPT 1/4"	46	D 518-36
18 x 2	10	8	G 1/4"	46	D 518-38
18 x 2	10	8	NPT 3/8"	46	D 518-40
18 x 2	10	8	G 3/8"	46	D 518-42
28 x 2	12	12	NPT 3/8"	56	D 518-48
28 x 2	12	12	G 3/8"	56	D 518-50
28 x 2	12	12	NPT 1/2"	56	D 518-52
28 x 2	12	12	G 1/2"	56	D 518-54
28 x 2	14	12	NPT 1/2"	56	D 518-60
28 x 2	14	12	G 1/2"	56	D 518-62
28 x 2	16	12	NPT 1/2"	56	D 518-68
28 x 2	16	12	G 1/2"	56	D 518-70



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SCREW JOINTS FOR PRESSURE UP TO 5 BAR

**BOLA Practical Tipp**  
Marion Stoppel » construction

**You don't know which thread type and size you have in your hands?**

Our scale thread illustrations help to make an optical comparison.

see page 254



**SUITABLE:** page 128  
Tubing for all fittings

## BOLA (2-Way/3-Way) Stopcocks

Material:	Temperature resistance:	Chemical resistance:	Pressure:
PTFE	from -200°C to +250°C	+++ universal	2 bar

Product description:

2-way stopcock with straight bore and two connections or 3-way stopcock with T-shaped bore and three connections, with nuts made of glass-fibre reinforced PTFE for connecting tubing or tube. Conical stopcock plug, tightness is increased by turning the nut on the lower side. 3-way stopcock plug with T-shaped mark of flow direction. Universal chemical resistance, the flowing product is only exposed to PTFE.

FDA conform

Typ	Bore shape stopcock	Bore dia. mm	For tubing O. D. mm	Thread M	Outer dimensions L x D x H mm	Cat. No.:
<b>A</b> 2-Way	—	2	4	14 x 2	59 x 22 x 53	E 652-02
2-Way	—	2	6	14 x 2	59 x 22 x 53	E 652-04
2-Way	—	5	8	18 x 2	74 x 35 x 69	E 652-06
2-Way	—	5	10	18 x 2	74 x 35 x 69	E 652-08
<b>B</b> 3-Way	T	1,5	4	14 x 2	59 x 41 x 53	E 654-02
3-Way	T	1,5	6	14 x 2	59 x 41 x 53	E 654-04
3-Way	T	3,5	8	18 x 2	74 x 54 x 69	E 654-06
3-Way	T	3,5	10	18 x 2	74 x 54 x 69	E 654-08

**Applications:**

For distributing liquids or gases. Quick and easy disconnection of flow.



## BOLA Control Valves

Material:	Temperature resistance:	Chemical resistance:	Pressure:	Vacuum:
PTFE	from -30°C to +150°C	+++ universal	6 bar	suitable

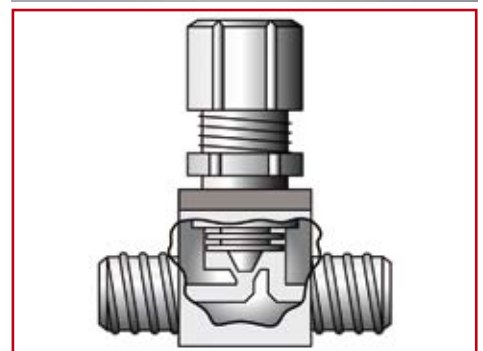
Product description:

Body made of PTFE with 2 connections and nuts made of glass-fibre reinforced PTFE for connecting tubing or tube. Bore dia. 6 mm. Motionless sealing by means of a gastight bellows made of PTFE with flat cone point. No leakages.

FDA conform

- » volume flow can be regulated manually (without regulation scale).
- » suitable for panel mounting
- » easy disassembly for cleaning
- » universal chemical resistance, the flowing product is only exposed to PTFE

Thread of fitting M	For tubing O. D. mm	Outer dimensions L x D x H mm	Cat. No.:
18 x 2	8	85 x 44 x 84	E 672-54
18 x 2	10	85 x 44 x 84	E 672-56



## BOLA Snap Valves

Material: <b>PTFE</b>	Temperature resistance: <b>from -30°C to +150°C</b>	Chemical resistance: <b>+++ universal</b>	Pressure: <b>6 bar</b>	Vacuum: <b>suitable</b>
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### Product description:

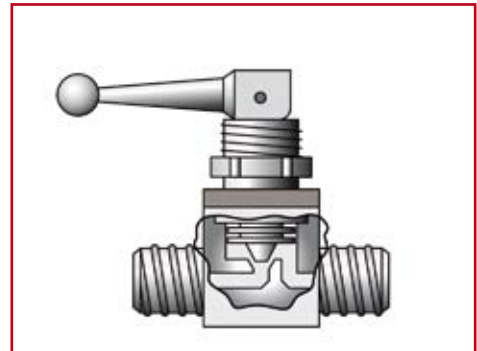
Body made of PTFE with 2 connections and nuts made of glass-fibre reinforced PTFE for connecting tubing or tube. Bore dia. 6 mm. Motionless sealing by means of a gastight bellows made of PTFE with flat cone point. No leakages.

Lever locks when valve is open, switch setting is easily visible at position of the lever.

FDA conform

- » suitable for panel mounting
- » easy disassembly for cleaning
- » universal chemical resistance, the flowing product is only exposed to PTFE

Thread of fitting M	For tubing O.D. mm	Outer dimensions L x D x H mm	Cat. No.:
18 x 2	8	85 x 44 x 90	E 674-54
18 x 2	10	85 x 44 x 90	E 674-56



## BOLA Non-Return Valves

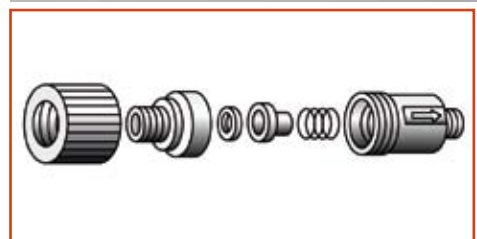
Material: <b>PTFE</b>	Temperature resistance: <b>from -200°C to +250°C</b>	Chemical resistance: <b>+++ universal</b>
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### Product description:

Made of PTFE, with nuts made of glass-fibre reinforced PTFE for connecting tubing or tube. Opening pressure adjustable between 0,1 bar and 2 bar (factory setting 0,1 bar). The built-in lock function only allows flow in one direction, the flow direction is marked by an arrow, any fitting position is possible. All parts are easy to disassemble by hand for cleaning. Universal chemical resistance, the flowing product is only exposed to PTFE or PFA.

FDA conform

Thread of fitting M	For tubing O.D. mm	Total length mm	O.D. mm	Cat. No.:
14 x 2	4	110	38	E 680-21
14 x 2	6	110	38	E 680-23
18 x 2	8	110	38	E 680-27
18 x 2	10	110	38	E 680-31
28 x 2	12	140	54	E 680-33



SUITABLE: page 128  
Tubing for all fittings

## BOLA Ground Joint Tube Fittings

Material: PTFE	Temperature resistance: from -200°C to +250°C	Chemical resistance: +++ universal	Vacuum: suitable
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Product description:

Fitting made of PTFE for transition from ground joints to metric threads for connecting hard-walled tubing (e.g. PTFE, PFA or FEP). With nuts made of glass-fibre reinforced PTFE, body with rings and knurled grip for opening. The product is only exposed to PTFE.

FDA conform

Ground joint NS	For tubing O.D. mm	Thread of fitting M	Bore dia. mm	Cat. No.:
14/23	6	14 x 2	5,0	H 1001-04
19/26	6	14 x 2	5,0	H 1001-06
29/32	6	14 x 2	5,0	H 1001-10
29/32	8	18 x 2	8,5	H 1001-12
29/32	10	18 x 2	8,5	H 1001-14

Applications:

For connecting tubes or tubing to vessels with ground joint. For inserting and fixing probes, thermometers, dip tubes or cables.



## BOLA Replacement Nuts

Material: PTFE	Temperature resistance: from -200°C to +250°C
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Product description:

Made of glass-fibre reinforced PTFE. For fittings, valves and stopcocks.

FDA conform

Thread of fitting M	For tubing O.D. mm	Cat. No.:
14 x 2	4 - 6,35	D 501-01
18 x 2	8 - 10,0	D 501-04
28 x 2	12 - 16,0	D 501-07



## BOLA Replacement Compression Rings

Material: PTFE	Temperature resistance: from -200°C to +250°C
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Product description:

Made of PTFE, two-part set with one tapered ring and one v-ring

FDA conform

Thread of fitting M	For tubing O.D. mm	Cat. No.:
14 x 2	4	D 502-01
14 x 2	6	D 502-02
14 x 2	{1/4"} 6,35	D 502-03
18 x 2	8	D 502-04
18 x 2	{3/8"} 9,52	D 502-05
18 x 2	10	D 502-06
28 x 2	12	D 502-07
28 x 2	{1/2"} 12,7	D 502-51
28 x 2	14	D 502-08
28 x 2	16	D 502-09





## BOLA BOLA Plugs

Material: <b>PTFE</b>	Temperature resistance: <b>from -200°C to +250°C</b>	Chemical resistance: <b>+++ universal</b>	Pressure: <b>5 bar</b>	Vacuum: <b>suitable</b>
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Product description:

Made of PTFE, for closing unused fitting connections (a suitable glass-fibre reinforced PTFE nut has to be ordered separately (Cat. No. D501-... see page 122).

FDA conform

Connection for O.D. mm	Cat. No.:
4 / 6 / (1/4") 6,35	<b>D 648-02</b>
8 / (3/8") 9,52 / 10	<b>D 648-08</b>
12 / (1/2") 12,7 / 14 / 16	<b>D 648-14</b>



## BOLA Stopcocks with Hose Connectors

Material: <b>PTFE</b>	Temperature resistance: <b>from -200°C to +250°C</b>	Chemical resistance: <b>+++ universal</b>	Pressure: <b>2 bar</b>
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Product description:

2-way stopcock with straight bore and two hose connectors or 3-way stopcock with T-shaped bore and three hose connectors for connecting elastic tubing (e.g. Viton®, Tygon®, silicone). Conical stopcock plug, tightness is increased by turning the nut on the lower side. 3-way stopcock plug with T-shaped mark of flow direction. Universal chemical resistance, the flowing product is only exposed to PTFE.

FDA conform

Type	Bore shape stopcock	Bore dia. mm	For tubing I. D. mm	O.D. of hose connectors mm	Outer dimensions L x D x H mm	Cat. No.:
<b>A</b> 2-Way	—	1,5	4	4,5	60 x 22 x 53	<b>E 650-03</b>
2-Way	—	3,0	6	6,8	60 x 22 x 53	<b>E 650-06</b>
2-Way	—	4,0	8	9,0	60 x 22 x 53	<b>E 650-09</b>
2-Way	—	6,0	10	11,0	85 x 35 x 69	<b>E 650-12</b>
<b>B</b> 3-Way	T	1,0	4	4,5	60 x 41 x 53	<b>E 650-50</b>
3-Way	T	2,0	6	6,8	60 x 41 x 53	<b>E 650-53</b>
3-Way	T	3,0	8	9,0	60 x 41 x 53	<b>E 650-56</b>
3-Way	T	4,0	10	11,0	85 x 60 x 69	<b>E 650-59</b>

**Applications:**

For distributing liquids or gases. Quick and easy disconnection of flow.



## BOLA Tubing Connectors

Material: <b>PTFE</b>	Temperature resistance: <b>from -200°C to +250°C</b>	Chemical resistance: <b>+++ universal</b>	Vacuum: <b>suitable</b>
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Product description:

Straight fitting made of PTFE with two connectors for elastic tubing (e.g. Viton<sup>®</sup>, Tygon<sup>®</sup>, silicone). Universal chemical resistance, the product is only exposed to PTFE.

FDA conform

Total length mm	Bore dia. mm	O.D. of connectors mm	Cat. No.:
45	2	4,5	<b>D 575-02</b>
53	3	6,8	<b>D 575-04</b>
61	5	9,0	<b>D 575-06</b>
69	6	11,0	<b>D 575-08</b>



## BOLA Tubing Connectors T

Material: <b>PTFE</b>	Temperature resistance: <b>from -200°C to +250°C</b>	Chemical resistance: <b>+++ universal</b>	Vacuum: <b>suitable</b>
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Product description:

T-shaped fitting made of PTFE with three connectors for elastic tubing (e.g. Viton<sup>®</sup>, Tygon<sup>®</sup>, silicone). Universal chemical resistance, the product is only exposed to PTFE.

FDA conform

Total length mm	Bore dia. mm	O.D. of connectors mm	Cat. No.:
19,5	2	4,5	<b>D 577-02</b>
22,5	3	6,8	<b>D 577-04</b>
25,5	5	9,0	<b>D 577-06</b>
28,5	6	11,0	<b>D 577-08</b>



## BOLA Tubing Connectors Elbow

Material: <b>PTFE</b>	Temperature resistance: <b>from -200°C to +250°C</b>	Chemical resistance: <b>+++ universal</b>	Vacuum: <b>suitable</b>
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Product description:

Elbow-shaped fitting made of PTFE with two connectors for elastic tubing (e.g. Viton<sup>®</sup>, Tygon<sup>®</sup>, silicone). Universal chemical resistance, the product is only exposed to PTFE.

FDA conform

Total length mm	Bore dia. mm	O.D. of connectors mm	Cat. No.:
19,5	2	4,5	<b>D 574-02</b>
22,5	3	6,8	<b>D 574-04</b>
25,5	5	9,0	<b>D 574-06</b>
28,5	6	11,0	<b>D 574-08</b>



« »  
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## BOLA Tubing Connectors Cross

Material: **PTFE**    Temperature resistance: **from -200°C to +250°C**    Chemical resistance: **+++ universal**    Vacuum: **suitable**

Product description:

Cross-shaped fitting made of PTFE with four connectors for elastic tubing (e.g. Viton®, Tygon®, silicone). Universal chemical resistance, the product is only exposed to PTFE.

FDA conform

Total length mm	Bore dia. mm	O.D. of connectors mm	Cat. No.:
28,5	6	11,0	D 573-08



## BOLA Tubing Connectors Y

Material: **PTFE**    Temperature resistance: **from -200°C to +250°C**    Chemical resistance: **+++ universal**    Vacuum: **suitable**

Product description:

Y-shaped fitting made of PTFE with three connectors for elastic tubing (e.g. Viton®, Tygon®, silicone). Universal chemical resistance, the product is only exposed to PTFE.

FDA conform

Total length mm	Bore dia. mm	O.D. of connectors mm	Cat. No.:
40	2	4,5	D 576-02
47	3	6,8	D 576-04
53	5	9,0	D 576-06
60	6	11,0	D 576-08



## BOLA Reducing Tubing Connectors

Material: **PTFE**    Temperature resistance: **from -200°C to +250°C**    Chemical resistance: **+++ universal**    Vacuum: **suitable**

Product description:

Straight fitting made of PTFE with two connectors for elastic tubing (e.g. Viton®, Tygon®, silicone) with different inner diameters. Universal chemical resistance, the product is only exposed to PTFE.

FDA conform

Total length mm	Bore dia. mm	From O.D. of connector mm	To O.D. of connector mm	Cat. No.:
45	2	6,8	4,5	D 572-02
55	3	9,0	6,8	D 572-04
75	5	11,0	9,0	D 572-06



## BOLA Screw-In Tubing Connectors

Material: PTFE    Temperature resistance: from -200°C to +250°C    Chemical resistance: +++ universal    Vacuum: suitable

Product description:

Straight fitting made of PTFE with one connector for elastic tubing (e.g. Viton®, Tygon®, silicone) and one screw-in thread (either NPT or G).  
 Universal chemical resistance, the product is only exposed to PTFE.

FDA conform

Total length mm	Bore dia. mm	O.D. of connector mm	Thread		Wrench size mm	Cat. No.:
			NPT	G		
20	2,5	4,5	1/8"		14	D 579-02
22	5,0	6,8	1/4"		15	D 579-04
22	5,8	9,0	1/4"		15	D 579-06
22	4,0	6,8		1/4"	15	D 579-22
22	5,0	9,0		1/4"	15	D 579-24
25	8,0	11,0		3/8"	18	D 579-26

