



BOLA Product Guide Highlights & News



HT Laboratory Screw Joints
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The management of Bohlender GmbH at the Grünsfeld production facility. Pictured (from left): Managing Director Volker Bohlender and Authorized Signatory Silas Bohlender.



Bohlender Crosses the Atlantic - New Sister Company Launches in the USA

The family-owned company BOHLENDER GmbH, founded in 1959 and currently transitioning to the third generation, continues its international growth strategy: With the foundation of BOHLENDER AMERICAS INC. in Alexandria, Virginia (USA) the company strengthens its presence in North and South America.

„With our new subsidiary we will be directly on site - nearer to our customers and partners in the American markets“ says CEO Volker Bohlender. This provides the basis for offering our products and solutions with greater precision and paves the way for further expansion in these regions.

For decades BOHLENDER has been an integral part in the economic landscape in the MAIN-TAUBER district and is reknown for its high-quality laboratory products made of high-performance plastics. The foundation of the US subsidiary is a response to the growing demand from North and South America and focuses on sustainable expansion.

„While many companies are currently viewing the US market with caution, we see this step as a long-term commitment rather than a short-term venture,“ says Silas Bohlender. „Our goal is to capitalize on opportunities with the measured approach, quality, and reliability that define the BOHLENDER brand.“

Our international ambition is reflected in the founding of BOHLENDER AMERICAS INC. and at the same time demonstrates that strong roots in our home region and global presence can go hand in hand.

Three Strong Brands for Your Safety.

With the three brands BOLA, SICCO and b.safe BOHLENDER develops, designs and manufactures high-quality laboratory products made of high-performance plastics - ranging from stirrer shafts to desiccators and safety solutions for HPLC.

b.safe

Safety Solutions for
HPLC.

bsafe.de/en



sicco

Drying Cabinets
Desiccators
Glove Boxes

sicco.de/en



b.safe SYSTEM

System Solutions for Safe
Solvent Waste Disposal

bsafe.de/en/system



BOLA

Professional Laboratory
Solutions
PTFE | PFA | FEP

bola.de/en





BOLA **Modular Construction System** - what you should know about.

- + No determination at the beginning of the construction
- + Compatible with glass devices with GL thread
- + Large creative freedom
- + Independent tube diameter
- + Easily screwable, without any tool
- + Can be extended optionally



Looking for the right components for every application? At BOLA, you'll find a comprehensive range of perfectly coordinated products. Thanks to a wide variety of combinable and easy-to-screw elements, individual solutions can be flexibly adapted to meet current requirements.

www.bola.de/en

BOLA Examples

GL Screw Joint System

On the other hand, the construction of the laboratory screw joints v-ring, sealing ring and tapered ring ensures a tight connection, suitable for both vacuum as well as overpressure.

Beside this, exchanging the inner parts, tubes with different outer diameter can be connected to the same GL thread; e. g. for GL 14 this would be tubes with an outer diameter of 0,8 to 8 mm. Therefore, GL connecting pieces can also be used for the installation of a tube reduction.

A Laboratory Screw Joint HT
Cat.No.: D 628-26
» see page 6

B Multiple Distributors for Bottles
Cat.No.: D 614-08
» see page 7

C Laboratory Flasks
Cat.No.: D 300-43
» see page 9

A Laboratory Screw Joint HT
Cat.No.: D 628-66
» see page 6

B GL Stopcocks
Cat.No.: E 684-18
» see page 8

C Rigid Threaded Couplings
Cat.No.: H 903-14
» see page 9

A Globe Stirrer Couplings
Cat.No.: C 398-08
» see page 11

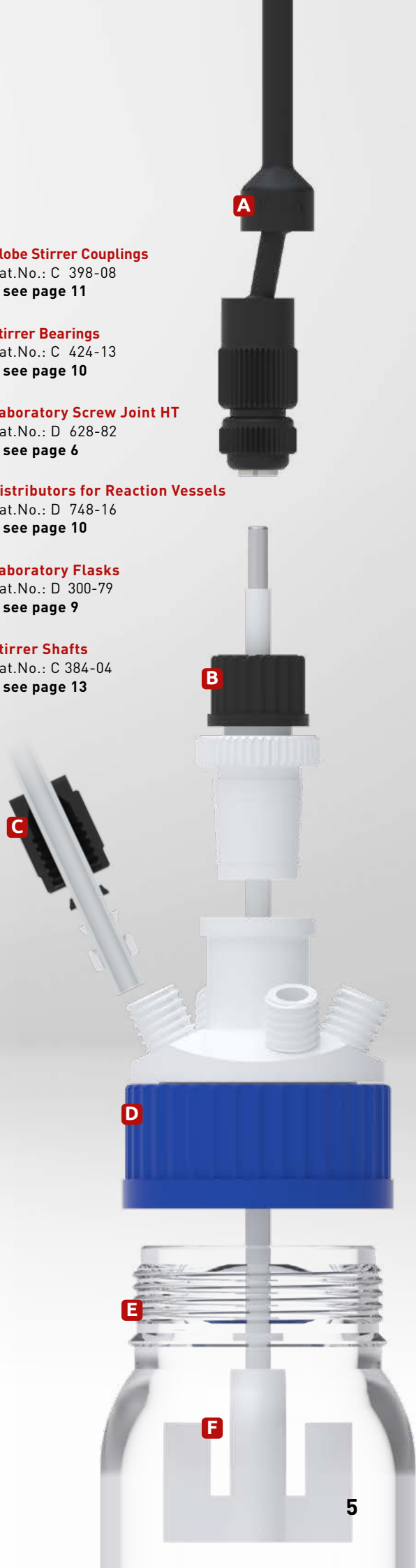
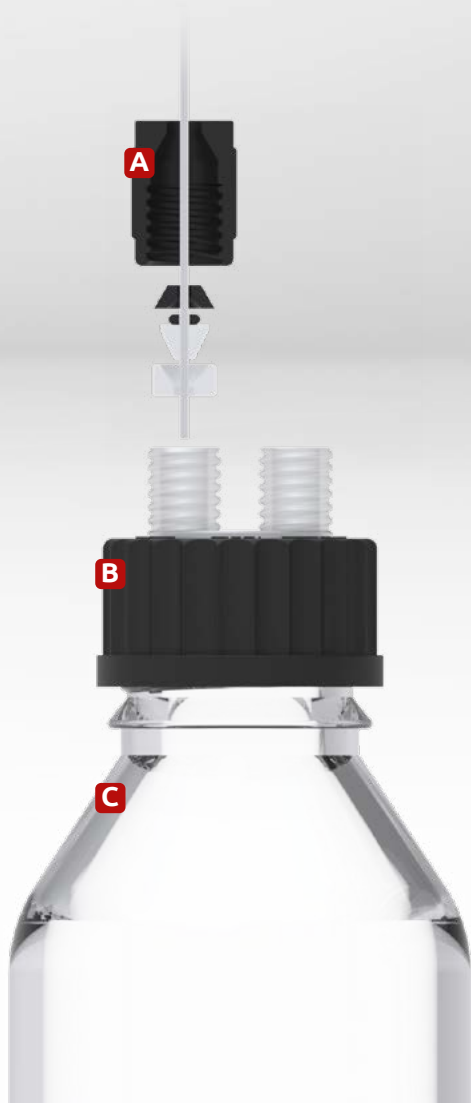
B Stirrer Bearings
Cat.No.: C 424-13
» see page 10

C Laboratory Screw Joint HT
Cat.No.: D 628-82
» see page 6

D Distributors for Reaction Vessels
Cat.No.: D 748-16
» see page 10

E Laboratory Flasks
Cat.No.: D 300-79
» see page 9

F Stirrer Shafts
Cat.No.: C 384-04
» see page 13



BOLA Laboratory Screw Joints HT (High Temp)

Material:
PTFE, PPS

Temperature resistance:
from -20 °C to +250 °C

Chemical resistance:
+++ universal

Pressure:
10 bar

Vacuum:
suitable

FDA conform

Product description:

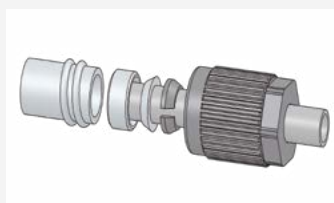
Black screw cap made of PPS, inner parts consisting of a v-ring (PPS), a tapered ring and a sealing ring (both PTFE) as well as an o-ring for tubing diameters under 3 mm (not exposed to the medium). Good chemical resistance, suitable for temperatures from -20°C to +250°C.



For external tube diameter mm	Cat. No.: Thread GL 14	*Recomm. price Euro	Cat. No.: Thread GL 18	*Recomm. price Euro	Cat. No.: Thread GL 25	*Recomm. price Euro	Cat. No.: Thread GL 32	*Recomm. price Euro	Cat. No.: Thread GL 45	*Recomm. price Euro
{1/32"} 0,8	D 628-10	45,36								
1,0	D 628-18	41,08								
{1/16"} 1,6	D 628-26	26,80	D 629-18	52,49	D 630-18	50,45				
2,0	D 628-34	26,83	D 629-22	38,06	D 630-22	48,88				
3,0	D 628-50	23,24	D 629-34	25,26	D 630-34	61,42				
{1/8"} 3,2	D 628-58	20,88	D 629-42	28,54	D 630-42	62,02			D 632-18	119,00
4,0	D 628-66	23,96	D 629-46	27,27	D 630-46	39,20				
5,0	D 628-70	36,44								
6,0	D 628-74	22,87	D 629-54	20,36	D 630-54	31,09	D 631-38	103,92	D 632-26	118,37
{1/4"} 6,35	D 628-78	33,08	D 629-56	52,38	D 630-58	61,97	D 631-42	98,29		
8,0	D 628-82	31,69	D 629-62	23,41	D 630-62	34,39	D 631-46	98,17	D 632-32	121,75
{3/8"} 9,52			D 629-68	61,53	D 630-68	64,20	D 631-52	107,67		
10,0			D 629-74	24,20	D 630-74	33,79	D 631-56	97,56	D 632-40	124,31
12,0					D 630-80	36,74	D 631-60	105,07	D 632-44	105,15
{1/2"} 12,7					D 630-84	68,17	D 631-66	114,58		
14,0					D 630-90	41,05	D 631-72	104,10	D 632-48	90,80
16,0							D 631-78	128,42	D 632-54	108,39
18,0							D 631-82	111,81	D 632-56	81,45
{3/4"} 19,05							D 631-84	201,22		
20,0							D 631-88	111,23	D 632-60	90,38
22,0									D 632-68	82,75
{1"} 25,4									D 632-74	122,18
26,0									D 632-76	132,14
30,0									D 632-84	128,44
32,0									D 632-90	118,38

Applications:

Connecting equipment and fittings with GL threads with hard-walled tubing or tubes made of glass, plastic or metal. Fixing probes, thermometers, dip tubes or cables in reaction vessels.



HT Replacement Inner Parts for various thread types and hose outer diameters can be found on our website or via the QR code.

www.bola.de/en

BOLA Multiple Distributors for Bottles

Material: PFA, PTFE Temperature resistance: from -20 °C to +200 °C Chemical resistance: +++ universal Vacuum: suitable autoclave: 121°



FDA conform

Product description:

Black screw cap made of PPS for bottle thread GL 45, body made of PTFE or PFA. Insertion of tubing with a max. O.D. of 8,5 mm. Very good chemical resistance, for working temperatures up to +200°C.

Material	Necks GL	Cat.No.:	*Recomm. price Euro
PFA	2 x GL14	D 614-08	82,44
PTFE	3 x GL14	D 615-08	133,80

Applications:

Drawing or inserting liquids. Inserting tubing, tubes and probes into vessels.



#SUITABLE PAGE 6
Laboratory screw joints

BOLA Multiple Distributors for Bottles

Material: PP Temperature resistance: from 0 °C to +110 °C Chemical resistance: ++ very good Vacuum: suitable autoclave: 121°

FDA conform

Product description:

Green screw cap made of PP for bottle thread GL 45 and body made of PP. Insertion of tubing with a max. O.D. of 8,5 mm. Restricted chemical resistance, for working temperatures up to +110°C.

Necks GL	Cat.No.:	*Recomm. price Euro
2 x GL14	D 612-08	77,33
3 x GL14	D 613-08	87,65

Applications:

Drawing or inserting liquids. Inserting tubing, tubes and probes into vessels.



BOLA GL Stopcocks

Material:
PTFE

Temperature resistance:
from 0 °C to +110 °C

Chemical resistance:
+++ universal

Pressure:
6 bar

Vacuum:
suitable



FDA conform

Product description:

Two-way stopcock with straight bore and two connections with GL thread or three-way stopcock with L-shaped or T-shaped bore and three connections with GL thread. Cylindrical stopcock plug for good tightness, stop valve with mark of flow direction. Suitable for pressure up to max. 6 bar, or for vacuum. Universal chemical resistance, the flowing product is only exposed to PTFE.

» Two-way stopcock with straight bore

	Type	Bore shape Stopcock	Bore dia. mm	Connecting thread GL	External dimensions L x D x H ca. mm	Cat.No.:	*Recomm. price Euro
A	2-Way		4	14	54 x 20 x 38	E 684-14	65,91
	2-Way		6	18	64 x 30 x 45	E 684-18	70,89
	2-Way		8	25	78 x 40 x 57	E 684-25	134,02

» Three-way stopcock with L-shaped bore

	Type	Bore shape Stopcock	Bore dia. mm	Connecting thread GL	External dimensions L x D x H ca. mm	Cat.No.:	*Recomm. price Euro
B	3-Way		4	14	64 x 47 x 43	E 686-14	103,89
	3-Way		6	18	74 x 57 x 57	E 686-18	141,54
	3-Way		6	25	78 x 59 x 57	E 686-25	209,25

» Three-way stopcock with T-shaped bore

	Type	Bore shape Stopcock	Bore dia. mm	Connecting thread GL	External dimensions L x D x H ca. mm	Cat.No.:	*Recomm. price Euro
C	3-Way		4	14	74 x 57 x 57	E 688-14	182,08
	3-Way		4	18	74 x 57 x 57	E 688-18	149,96
	3-Way		6	25	88 x 69 x 57	E 688-25	201,63

Applications:

For distributing liquids or gases. Quick and easy disconnection of flow. Connection of tubing or tubes by means of BOLA Laboratory Screw Joints.



BOLA Rigid Threaded Couplings

Material:
PTFE, PPS

Temperature resistance:
from -20 °C to +200 °C

Chemical resistance:
+++ universal

NEW

FDA conform

Product description:

Sturdy coupling with female GL threads made of PPS and internal connecting tube made of PTFE. Its special design allows to turn the two halves of the coupling independently from each other and to adjust connected components. Furthermore this design provides high stability. A sealing lip on the connecting tube with integrated FKM-o-ring provides good sealing on the GL thread. Universal chemical resistance, the flowing product is only exposed to PTFE.

For thread GL	Length from sealing lip to sealing lip mm	Passage-Ø mm	Total length mm	Cat.No.:	*Recomm. price Euro
14	28	5	49	H 903-14	119,50
18	24	8	49	H 903-18	132,27
25	24	12	51	H 903-25	212,20

Applications:

For connecting two GL threads of the same size.



freely rotatable

BOLA Laboratory Flasks

Material:
glass, PP

Temperature resistance:
0 to +110 °C

Chemical resistance:
+++ universal

Product description:

Flask made of borosilicate glass 3.3, thread GL45 with screw cap and pouring ring made of PP, outside with volume scale in 100 ml steps to estimate the volume. Using separately available BOLA Multiple Distributors GL45 and suitable tubing, you can simply fill or empty the flask.

	Volume ml	Thread GL	Cat.No.:	*Recomm. price Euro
A	500	45	D 300-43	20,32
B	1000	45	D 300-45	24,43



BOLA Laboratory Flasks

Material:
glass, PP

Temperature resistance:
0 to +110 °C

Chemical resistance:
+++ universal

Product description:

Flask made of borosilicate glass 3.3, thread GLS80 with screw cap and pouring ring made of PP, outside with volume scale in 100 ml steps to estimate the volume. Using separately available BOLA Multiple Distributors GLS80 and suitable tubing, you can simply fill or empty the flask.

	Volume ml	Thread GL	Cat.No.:	*Recomm. price Euro
A	500	GLS80	D 300-79	29,50
B	1000	GLS80	D 300-80	31,62



BOLA Stirrer Bearings

Material:
PTFE, PPS

Temperature resistance:
from -15 °C to +200 °C

Chemical resistance:
+++ universal



FDA conform

Product description:

Ground joint cone made of PTFE with sealing rings on the outside to prevent sticking of the connection and to reduce danger of breaking glass. A special gasket made of PTFE and an FPM o-ring which is compressed by a GL screw cap provide a good sealing of the stirrer shaft. This gasket can be exchanged after wearing. Max. speed 500 rpm.

Cone NS European standard	For stirrer shaft dia. mm	Total length mm	Thread of screw cap GL	Cat.No.:	*Recomm. price Euro
NS 19/26	6	63	18	C 424-04	43,66
NS 19/26	8	65	25	C 424-05	41,09
NS 24/29	8	69	25	C 424-08	48,88
NS 24/29	10	70	25	C 424-09	57,24
NS 29/32	6	72	18	C 424-12	47,24
NS 29/32	8	74	25	C 424-13	46,00
NS 29/32	10	72	25	C 424-14	43,67
NS 45/40	10	80	25	C 424-16	57,97
NS 45/40	16	86	32	C 424-18	65,13

Cone NS US Standard	For stirrer shaft dia. mm	Total length mm	Thread of screw cap GL	Cat.No.:	*Recomm. price Euro
24/40	8	80	25	C 429-14	84,65
24/40	10	80	25	C 429-18	58,87

Applications:

Suitable for vacuum, perfect bearing for stainless steel, glass and BOLA Stirrer Shafts.



BOLA Distributors for Reaction Vessels (S)

Material:
PTFE, PP

Temperature resistance:
0 °C to +110 °C

Chemical resistance:
+++ universal

Vacuum:
suitable

autoclave:
121°

FDA conform

Product description:

Blue screw cap made of PP with GLS 80 thread, body made of PTFE with center ground joint and lateral GL-threaded or ground joint necks. Very good chemical resistance, for working temperatures up to max. +200°C (PP screw cap max. +110°C).

GL	Lateral necks NS	Center neck NS	For tubing O.D. max. mm	Cat. No.:	*Recomm. price Euro
4x 18		1x 29/32	4x 10	D 748-16	252,25
2x 18	2x 29/32	1x 29/32	2x 14	D 748-40	314,74
	2x 29/32 2x 14/23	1x 29/32		D 748-60	391,13

Applications:

Drawing or inserting aggressive or pure liquids. Inserting tubing, tubes and probes into vessels. Use of a stirrer bearing in center neck for central position of a stirrer shaft.



#SUITABLE PAGE 6
Laboratory screw joints



#SUITABLE PAGE 9
Laboratory Flasks GLS80

BOLA Globe Stirrer Couplings

Material:
POM

Temperature resistance:
from -30 °C to +100 °C

Chemical resistance:
++ very good



Product description:

Made of POM, a plastic material with a good mechanical strength, powerful transmission of up to 300 Ncm, suitable for a speed of up to 1.200 rounds per minute, maximum misalignment of axes 10 mm.

NEW

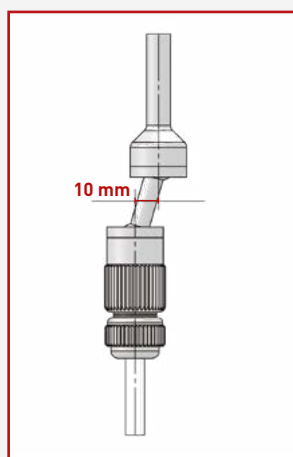
	Opening for stirrer shaft mm	Upper dia. mm	Total length mm	Cat. No.:	*Recomm. price Euro
A	Ø 4,0	8	190	C 394-01	140,55
A	Ø 4,0	10	190	C 398-04	139,40
NEW B	Ø 6,5 and 10,0	8	190	C 394-02	141,22
B	Ø 6,5 and 10,0	10	190	C 398-08	130,37
NEW B	Ø 8,0 and 10,0	8	190	C 394-03	130,63
B	Ø 8,0 and 10,0	10	190	C 398-12	133,35
C	Inner-square SW6	SW8	180	C 399-12	141,53
D	GL 10	10	170	C 393-12	181,28

Benefits:

- » very low centrifugal forces due to low weight
- » suitable for both left- and right-handed rotation (except for GL 10 thread: no left-handed rotation possible)
- » no resonance
- » simple assembly by means of screw joints with clamp rings
- » pivot (length 90 mm) can be shortened by the user

Applications:

Ideal for balancing misalignment of axes between agitator and stirrer shaft, suitable for glass, metal or BOLA stirrer shafts.



Spare Parts for Globe Stirrer Couplings

Description	Material	Packing Unit	for stirrer shaft-Ø	suitable for Cat.No.:	Cat.No.:	*Recomm. price Euro	
Replacement Clamping Nut	POM	Pack size: 3 pieces	4 mm 6,5; 8; 10 mm	C 398-04 C 398-08 / C 398-12	C 901-01 C 901-02	42,94 12,29	
Replacement Reducing Sleeve	PTFE-GF	Pack size: 3 pieces	6,5 mm 8,0 mm	C 398-08 C 398-12	C 911-01 C 911-02	24,49 13,20	

BOLA **Stirrer Shafts**

– what you should know about.

- + Unbreakable – stirrer consisting of stainless-steel and solid PTFE stirrer unit
- + Non-sticky surface, therefore no attachment of diverse media
- + High temperature resistance up to 250°C
- + Safe fixing in the chuck due to stainless steel holder
- + Universal chemical resistance
- + Glass stirrer shafts can be exchanged against stirrer shafts made of PTFE so that stirrer shafts/drive units, couplings and guides can still be used



Wide range of stirring shafts in various lengths and designs. For more information, please visit our website or scan the QR code.

BOLA Stirrer Shafts

Material:
PTFE

Temperature resistance:
from -200 °C to +250 °C

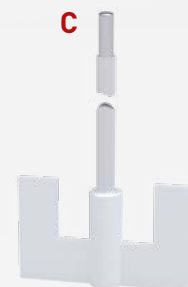
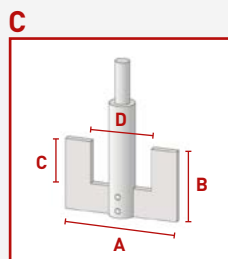
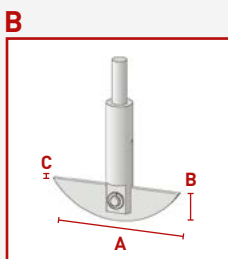
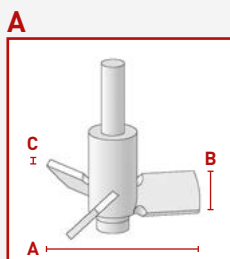
Chemical resistance:
+++ universal

Stirring effect:
bottom-up



FDA conform

	Description	Length mm	Shaft dia. mm	Chuck dia. mm	For ground joint NS	Dimensions according to drawing				Cat.No.:	*Recomm. price Euro
						A	B	C	D mm		
A	Propeller	350	8	6,5		75	18	3,0		C 378-12	235,60
	Propeller	450	8	6,5		75	18	3,0		C 378-14	237,45
B	Moon-Shaped	350	8	6,5	29/32	90	24	3,0		C 376-06	181,51
	Moon-Shaped	450	8	6,5	29/32	90	24	3,0		C 376-08	158,61
C	U-Shaped	450	8	6,5		80	50	30	44	C 384-06	209,15
	U-Shaped	600	8	6,5		80	50	30	44	C 384-08	230,84



You have a special request?
Call us on: **+49 (0) 93 46-92 86-0**

Or just send us a drawing (a rough sketch is sufficient) and some information to info@bola.de. We will then contact you to discuss further details and establish an offer for you free of charge.

BOLA **Tubing**

- what you should know about.

- + Safe connection due to small tolerances
- + Free from extractable substances
- + Universal chemically resistant
- + High temperature resistance up to 260°C



Choose the right hose and install it correctly – here's how! All important information and instructions can be found on our website or via the QR code.

www.bola.de/en

BOLA Tubing

Material:
PTFE

Temperature resistance:
from -200 °C to +250 °C

Chemical resistance:
+++ universal



FDA conform



Product description:

Translucent to milky-white appearance. Length can be customized up to a maximum roll length of 50 or 100 meters in one piece.

Product advantages:

- » almost universal chemical resistance
- » free from extractable agents
- » physiologically safe
- » non-adhesive surface
- » very good sliding characteristics
- » very good dielectric characteristics
- » flame retardant according to UL94V0
- » oxygen value more than 95
- » resistant to irradiation and weather
- » can be sterilized in autoclaves

PTFE



FEP



PFA



I.D. mm	O.D. mm	Wall thickness mm	Bending radius 1 mm	Burst pressure 2 bar	Cat.No.: PTFE	*Recomm. price Euro/m	Cat.No.: FEP	*Recomm. price Euro/m	Cat.No.: PFA	*Recomm. price Euro/m
(1/32") 0,8	(1/16") 1,6	0,40	7	140	S 1810-10	(from 10 m) 3,68	S 1815-04	(from 25 m) 2,73	S 1811-02	(from 25 m) 7,16
1,5	3,0	0,75	12	140	S 1810-23	(from 10 m) 9,78	S 1815-05	(from 25 m) 8,34	S 1811-03	(from 25 m) 11,50
(1/16") 1,6	(1/8") 3,2	0,80	13	140	S 1810-26	(from 10 m) 7,85	S 1815-08	(from 25 m) 6,31	S 1811-04	(from 25 m) 11,63
2,0	4,0	1,00	16	140	S 1810-32	(from 10 m) 12,09	S 1815-12	(from 25 m) 9,63	S 1811-06	(from 25 m) 12,15
3,0	4,0	0,50	32	46	S 1810-34	(from 10 m) 7,65				
(1/8") 3,175	(1/4") 6,35	1,58	26	112	S 1810-39	(from 10 m) 14,84	S 1815-14	(from 10 m) 21,17	S 1811-07	(from 10 m) 30,36
3,6	6,0	1,2	30	75			S 1815-16	(from 10 m) 18,11	S 1811-08	(from 10 m) 28,74
4,0	6,0	1,00	36	70	S 1810-40	(from 10 m) 9,92	S 1815-20	(from 10 m) 13,88	S 1811-10	(from 10 m) 19,02
(11/64") 4,35	(1/4") 6,35	1,00	40	64	S 1810-42	(from 10 m) 11,41	S 1815-28	(from 10 m) 16,65	S 1811-14	(from 10 m) 30,21
(3/16") 4,78	(1/4") 6,35	0,79	51	46	S 1810-43	(from 10 m) 12,30	S 1815-30	(from 10 m) 8,56	S 1811-15	(from 10 m) 13,80
6,0	8,0	1,00	64	46	S 1810-50	(from 10 m) 12,78	S 1815-36	(from 10 m) 17,86	S 1811-18	(from 10 m) 27,54
(3/4") 6,35	(3/8") 9,52	1,59	58	56			S 1815-40	(from 10 m) 36,84	S 1811-20	(from 10 m) 38,60
8,0	10,0	1,00	100	35	S 1810-60	(from 10 m) 18,15	S 1815-48	(from 10 m) 28,39	S 1811-24	(from 10 m) 29,48
(3/8") 9,52	(1/2") 12,7	1,59	101	37			S 1815-56	(from 10 m) 47,38	S 1811-28	(from 10 m) 54,13
10,0	12,0	1,00	144	28	S 1810-64	(from 10 m) 22,30	S 1815-60	(from 10 m) 29,98	S 1811-30	(from 10 m) 38,33
12,0	14,0	1,00	196	23	S 1810-68	(from 10 m) 27,02	S 1815-68	(from 10 m) 47,15	S 1811-40	(from 10 m) 55,45
14,0	16,0	1,00	256	20	S 1810-74	(from 10 m) 34,27			S 1811-50	(from 10 m) 83,32

BOLA Tubing – good to know.

Dimensions

Large choice of standard diameters in PTFE, PFA and FEP.

Tolerances

BOLA Tubing are adjusted to the BOLA fitting system. Thus, the tolerances are tighter than the standard.

Requested lengths

Depending on the diameter, we offer coils with up to 100 m in one piece. Several rolls with the same lengths are available at low extra charges.

¹ Bending radius: minimum bending radius in mm at a room temperature of 23°C

² Burst pressure: computed value in bar at a room temperature of 23°C. It is recommended to restrict the maximum working pressure to 25% of the burst pressure. For higher temperatures, this value has to be multiplied by the reduction factor shown on page 359 of the BOLA catalogue. It is the user's responsibility to check if the used tubing fulfils the respective requirements.

Choice of tubing – good to know.

Here you can find the most important features in tabular form.

The number of „+“-signs stands for the degree of performance of the feature.

Tubing material	PTFE	PFA	FEP
Maximum temperature (at moderate charge)	+250	+260°C	+205°C
Minimum temperature (at moderate charge)	-200°C	-200°C	-200°C
Chemical resistance	+++	+++	++(+)
Transparency	+	++(+)	+++
Surface quality	++	+++	+++
Gas proofness (in limit range)	++	+++	+++
Recovery	+	++	++
Costs	+	+++	++

BOLA

A PRODUCT BRAND OF
BOHLENDER GmbH

Waltersberg 8
D 97947 Grünsfeld
Germany

+49 (0) 93 46-92 86-0
info@bola.de
www.bola.de



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