

Ground Joint Components



No matter if you use sleeves with gripping ring, with ribs or sleeves for spherical ground joints – you always make the right choice since they all feature the unique properties of PTFE.

PRODUCT TIPS



Page 152:
Bellows



Page 150:
Sleeves



Page 151:
Sleeves for spherical ground joints

BOLA Sleeves

BOLA Sleeves

– helpful accessories for many applications

All BOLA sleeves are sealing without any grease and the product will not be contaminated by any greasy residues. They are made for creating gastight, liquid-tight and vacuum tight ground joint connections.

Sealing rings on the outside of the sleeves and a low friction coefficient of PTFE prevent sticking of the ground joints. This reduces the danger of breaking and injury.

The sleeves have an excellent chemical resistance and can be used at working temperatures between -200°C and $+250^{\circ}\text{C}$.

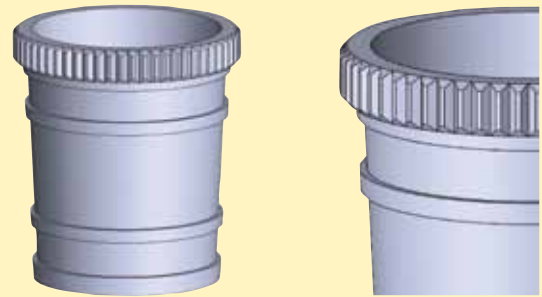
Their solid construction (partly with gripping ring) makes them suitable for continued use.

All common joint clamps can still be used.

The sleeves are available for European and American ground joint sizes.

BOLA Sleeves – with sealing rings.

Punctiform sealing on the rings improves both sealing and releasing.



BOLA Sleeves with Gripping Ring

BESTSELLER

Material:	Temperature resistance:	Chemical resistance:	Vacuum:	Feature:
PTFE	from -200°C to $+250^{\circ}\text{C}$	+++ universal	suitable	reusable

Product description:

Made of PTFE, with gripping ring and sealing rings on the outside, high-vacuum tight sealing; low leak rate: $<1 \times 10^{-4}$ mbar x l x s $^{-1}$; solid construction for continued use; sealing rings are easy accessible and therefore easy to clean.



FDA conform

European standard Size NS	ES Cat. No.:	US standard Size	US Cat. No.:
10/19	H 933-01	14/20	H 935-01
12/21	H 933-02	19/22	H 935-03
14/23	H 933-03	19/38	H 935-04
19/26	H 933-04	24/40	H 935-05
24/29	H 933-05	29/42	H 935-06
29/32	H 933-06	34/45	H 935-07
34/35	H 933-07	45/50	H 935-09
45/40	H 933-09		
50/42	H 933-10		
55/44	H 933-11		
60/46	H 933-12		
71/51	H 933-13		
85/55	H 933-14		
100/60	H 933-15		



BOLA Sleeves with Ribs

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

Made of PTFE, with sealing rings ("ribs") on the outside. Without gripping ring and therefore usable with joint clamps. For vacuum up to 0,1 mbar; solid construction for continued use; sealing rings are easily accessible and therefore easy to clean.



FDA conform

European standard	Size NS	ES Cat. No.:	US standard	Size	US Cat. No.:
	7/16	H 930-01		14/20	H 932-03
	10/19	H 930-02		19/38	H 932-05
	12/21	H 930-03		24/40	H 932-06
	14/23	H 930-04		29/42	H 932-07
	19/26	H 930-05		45/50	H 932-10
	24/29	H 930-06			
	29/32	H 930-07			
	34/35	H 930-08			
	40/38	H 930-09			
	45/40	H 930-10			
	50/42	H 930-11			
	60/46	H 930-13			
	71/51	H 930-14			
	85/55	H 930-15			

Applications:

For example for rotary evaporators.



BOLA INNOVATION

Sleeves

BOLA Sleeves for gastight, liquid-tight connections have sealing rings on the outside which provide a punctual sealing. This prevents sticking and allows easy removal

BOLA Spherical Ground Joint Sleeves

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

Made of PTFE, with gripping ring and sealing rings on the outside, high-vacuum tight sealing; low leak rate: $<1 \times 10^{-2}$ mbar x l x s⁻¹; solid construction for continued use.

FDA conform

European standard	Size S	ES Cat. No.:	US standard	Size KS	US Cat. No.:
	13	H 934-02		18	H 931-04
	19	H 934-04		28	H 931-06
	29	H 934-06		35	H 931-10
	35	H 934-08		55	H 931-16
	40	H 934-12			
	51	H 934-16			
	64	H 934-18			



BOLA Joint Clamps

Material: PTFE	Temperature resistance: from -50 °C to +250°C	Chemical resistance: +++ universal	Feature: reusable
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Product description:
PTFE-encapsulated steel spring core. Universal chemical resistance since the product is only exposed to PTFE.

FDA conform

Size NS	Cat. No.:
14/23	H 942-14
19/26	H 942-19
29/32	H 942-32
45/40	H 942-45

Applications:
For connecting ground joint parts, especially if highly aggressive liquids are involved; high recovery even at high temperatures.



BOLA Bellows

Material: PTFE	Temperature resistance: from -200 °C to +250°C	Chemical resistance: +++ universal	Vacuum: suitable
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Product description:
Made of PTFE, with round folds and sealing rings on the outside; maximum deflection: 40°

FDA conform

Socket NS	Cone NS	Total minimum length, mm	Total maximum length, mm	Cat. No.:
14/23	14/23	86	90	H 907-03
29/32	29/32	106	114	H 907-10
45/40	45/40	128	144	H 907-15

Applications:
Strainless connection of ground joint equipment; for compensating vibrations from vacuum pumps; for length compensation of heated columns; angular misalignment.



BOLA Bellows

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

Product description:
Made of PTFE, with sharp folds and sealing rings on the outside; maximum deflection: 120°.

FDA conform

A	Socket NS <i>European standard</i>	Cone NS	Total minimum length, mm	Total maximum length, mm	ES Cat. No.:
	14/23	14/23	82	90	H 906-02
	19/26	19/26	93	105	H 906-04
	24/29	24/29	110	124	H 906-06
	29/32	29/32	100	120	H 906-12
	45/40	45/40	130	170	H 906-14
B	Socket <i>US standard</i>	Cone	Total minimum length, mm	Total maximum length, mm	US Cat. No.:
	14/35	14/35	82	90	H 905-02
	19/22	19/22	95	97	H 905-07
	24/40	24/40	120	137	H 905-15
	29/42	29/42	124	142	H 905-17
	45/50	45/50	150	165	H 905-21

Applications:
Strainless connection of ground joint equipment; for compensating vibrations from vacuum pumps; for length compensation of heated columns; angular misalignment.

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Special Request?
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BOLA Stoppers

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

Product description:
Made of PTFE, with ground joint and sealing rings on the outside; knurled or hexagonal grip. Compared with glass stoppers, they are easily removable and can be used without grease. The stoppers can expand under heat which might lead to a breaking of the ground joint sockets.

FDA conform

A	Size NS	Knurled grip Cat. No.:	B	Size NS	Wrench size (SW) mm	Hexagonal grip Cat. No.:
	10/19	H 936-02				
	12/21	H 936-03				
	14/23	H 936-04		14/23	19	H 937-04
	19/26	H 936-05		19/26	26	H 937-05
	24/29	H 936-06				
	29/32	H 936-07		29/32	35	H 937-07
	34/35	H 936-08				
	45/40	H 936-10		45/40	52	H 937-10

Applications:
For closing ground joint parts.



BOLA Ground Joint Adaptors

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

Product description:

Made of PTFE, socket in cone, with sealing rings on the outside and knurled grip.

FDA conform

Socket NS	Cone NS	Knurled grip dia. mm	Cat. No.:
14/23	19/26	30	H 980-03
14/23	29/32	40	H 980-06
19/26	29/32	40	H 980-09
29/32	45/40	55	H 980-12

Applications:

For connecting different ground joint sizes.



BOLA Ground Joint Reducing Set

BESTSELLER

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

Product description:

Made of PTFE, consisting of reducing rings graduated as follows: NS 14 - NS 19 - NS 24 - NS 29 - NS 34 - NS 45 and NS 60.

NEW

FDA conform

Dimensions NS	Height/length of ground joint mm	Cat. No.:
14 - 60	20	H 981-14

Applications:

For bridging different cone and socket sizes e. g. a NS 14 cone can functionally be placed into a NS 45 socket.



BOLA Glass Flange Metal Adaptors

Material:	Material:	Temperature resistance:	Chemical resistance:	Pressure:	Vacuum:
PTFE	Silicone	from -50°C to +250°C	+++ universal	low	suitable

Product description:

Made of PTFE and silicone, circular PTFE collar facilitates assembly and assures exact placement of the gasket. The elasticity for expansions and contractions is given by a special kind of silicone which is placed behind PTFE sealing lips. Universal chemical resistance since the product is only exposed to PTFE.

NEW

FDA conform

Nominal width	O.D. mm	Bore dia. mm	Seating height mm	Cat. No.:
10	25	14	3	D 720-10
15	32	16	3	D 720-15
25	47	27	3	D 720-25

Applications:

For HWS® "Adaptor, metal, for flexible metallic hose" for a reliable sealing between glass flange and metal adaptor. Ideal for sealing temper connections, e.g. on double walled vessels.



BOLA O-Rings

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

Product description:

Made of PTFE. Due to the nearly inexhaustible possibilities of dimensions we only manufacture PTFE-O-Rings to your specifications. We would be glad to send you a quotation.

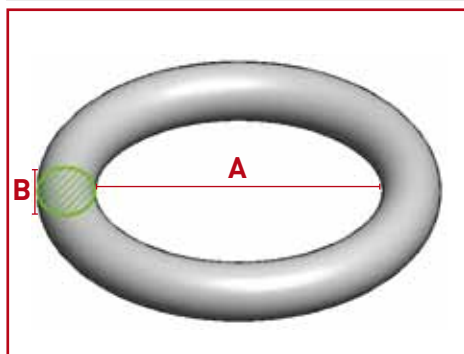
Please complete the list below and send us a copy by fax to +49 (0)9346-928651. Thank you.

FDA conform

Quantity:	
A O-Ring I.D.:	
B Thickness:	

Applications:

As sealing



BOLA O-Rings for Laboratory Flat Flanges

Material: **FEP** Temperature resistance: **from -60°C to +205°C** Chemical resistance: **++ very good**

Product description:

Silicone core with seamless FEP coating; manufactured according to DIN 12214:1996-12; flexible, almost universal chemical resistance.

FDA conform

For flat flange NW	Dimensions mm	Cat. No.:
60	75 x 4	H 969-18
100	110 x 4	H 969-25
120	132 x 4	H 969-45
150	155 x 5	H 969-55
200	214 x 5	H 969-75

Applications:

As sealing for flat flange with groove.

