# **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 134 Bellows



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Page 133 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 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°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 Gripping Ring**







# BESTSELLER

## **BOLA Sleeves with Ribs**

Material:

PTFE

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

+++ universal

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.





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 Spherical Ground Joint Sleeves**

Material: Temperature resistance: Chemical resistance: Vacuum: Feature:

PTFE	from -200 °C to +250°C	+++ universal	suitable	reusable	
FDA conform	Product description: Made of PTFE, with gripping high-vacuum tight sealing; l solid construction for contin	ow leak rate: <1x			
	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	Н 931-16
	40	H 934-12			
	51	H 934-16			
	64	H 934-18			



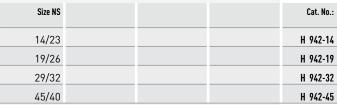
# **BOLA Joint Clamps**

Material:

PTFE

from -50 °C to +250 °C

From -50 °C t



#### Applications:

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





## **BOLA Bellows**

Material: PTFE	Temperature resistar		emical resistance: + universal	Vacuum: suitable		
FDA conform	Product description: Made of PTFE, wit maximum deflect		and sealing ring	s on the o	outside;	
	Socket NS	Cone NS	Total minimum	length, mm	Total maximum length,	Cat. No.:



#### Applications:

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









# BESTSELLER

## **BOLA Bellows**

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

Product description:

Made of PTFE, with sharp folds and sealing rings on the outside; maximum deflection:  $120^\circ$ .

FDA conform

<b>A</b> Eur	Socket NS opean standard	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
_					
В	Socket US standard	Cone	Total minimum length,	Total maximum length,	US Cat. No.:
В		Cone 14/35	• ,	• .	US Cat. No.: H 905-02
В	US standard		mm	mm	
В	US standard 14/35	14/35	82	90	H 905-02
В	US standard 14/35 19/22	14/35 19/22	82 95	90 97	H 905-02 H 905-07



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







## **BOLA Stoppers**

BESTSELLER

Material: Temperature resistance: Chemical resistance:
PTFE from -200 °C to +250 °C +++ 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 co knurled grip.	ne, with sealing rings on th	e outside and	
FDA conform				
	Socket NS	Cone NS	<b>Knurled grip dia.</b> 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 gr	ound joint sizes.		





# **BOLA Ground Joint Reducing Set**



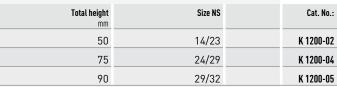
ure resistance:  00 °C to +250°C  escription:  PTFE, consisting of	Chemical resistance: +++ universal reducing rings grad	Vacuum: suitable	
PTFE, consisting of	reducing rings grad		
NS 19 – NS 24 – NS	S 29 – NS 34 - NS 4		
		ground joint mm	Cat. No.
14 - 60		20	H 981-14
t	Dimensions NS 14 - 60 tions: lging different cone	Dimensions NS Height/length of 14 - 60	Dimensions NS Height/length of ground joint mm  14 - 60 20  tions:  ging different cone and socket sizes e. g. a NS 14 cone can func-





## **BOLA Stoppers**





#### Applications:

For closing ground joint parts. By turning the screw nut clockwise, a stuck stopper can be removed easily.







## **BOLA Glass Flange Metal Adaptors**

ΓFE				Pressure:	Vacuum:
FE	Silicone	from -50°C to +250°C	+++ universal	low	suitable
	assures ex contractio	TFE and silicone, circular P kact placement of the gask ns is given by a special kin ng lips. Universal chemical	et. The elasticity for e d of silicone which is	xpansions a placed behi	and ind



Nominal width	0.D.	Bore dia.	Sealing height	Cat. No.:
	mm	mm	mm	
10	25	14	3	D 720-10
15	32	16	3	D 720-15
25	47	27	3	D 720-25



For HWS $^{\textcircled{\$}}$  "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**





## **BOLA 0-Rings for Laboratory Flat Flanges**

Material: FEP	Temperature resistance: from -60°C to +205°C	Chemical resistance: ++ very good		
FDA conform	Product description: Silicone core with seamles DIN 12214;1996-12; flexibl	•	•	
	For flat flange NW	<b>Dimensions</b> mm		Cat. No.:

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



**Applications:** As sealing.