



#### Professional labware for

## Chemical and Pharmaceutical sector, Industries and Research



Magnetic Stirring Bars and Equipment

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Flexible Distributors

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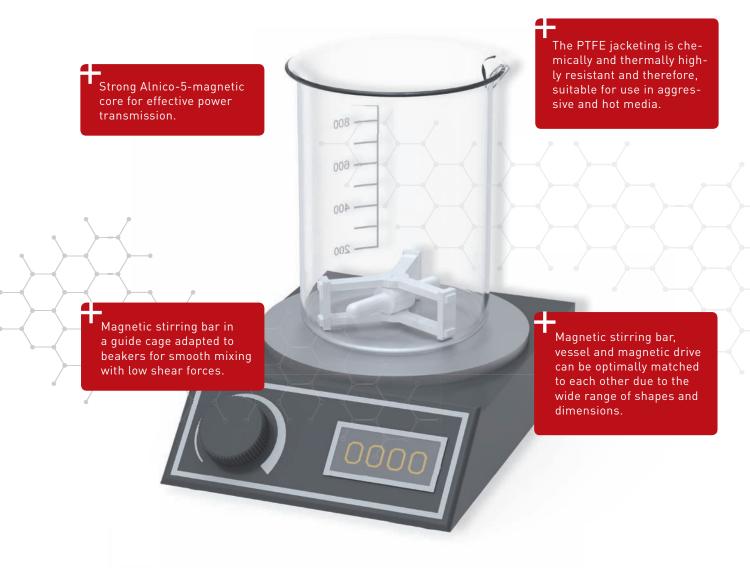


from page 16





#### **BOLA Stirring equipment - what you should now about it.**



#### **BOLA Cylindrical Magnetic Stirring Bars**

Temperature resistance:

Chemical resistance:

PTFE

from -200 °C to +250 °C

+++ universal





Product description:

PTFE-encapsulated magnetic core (Alnico 5), standard magnetic stirring bar, universal chemical resistance.

Length mm	<b>Dia.</b> mm	Cat. No.:	*recomm. price Euro
5	2	C 350-03	1,57
6	3	C 350-04	1,66
7	2	C 350-05	1,20
8	2	C 350-06	1,57
8	3	C 350-07	1,80
10	3	C 350-08	1,19
10	6	C 350-09	2,02
12	4,5	C 350-10	2,04
13	3	C 350-11	1,54
15	4,5	C 350-13	1,60
15	6	C 350-14	1,63
20	6	C 350-16	1,92

Length mm	<b>Dia.</b> mm	Cat. No.:	*recomm. price Euro
25	6	C 350-19	1,99
25	7	C 350-20	1,48
30	6	C 350-21	2,26
30	7	C 350-22	3,37
35	6	C 350-23	2,95
40	7	C 350-24	3,05
40	8	C 350-25	2,44
40	10	C 350-26	5,07
50	8	C 350-29	3,75
55	12	C 350-30	12,17
60	9	C 350-32	5,58
110	27	C 350-36	49,75
120	12	C 350-37	28,69





#### Applications:

Cylindrical magnetic stirring bars offer excellent centering and smooth running characteristics.

#### **BOLA Beakerliner**

Material: PTFE

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

Chemical resistance:

Vacuum: suitable autoclave: 121°



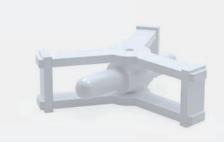
#### FDA conform

PTFE-encapsulated magnetic core (Alnico 5) axially mounted in a guide cage made of PTFE, universal chemical resistance.

For Beakers low form ml	Cage O.D.	Cage height mm	Stirring bar length mm	Cat. No.	*recomm. price Euro
5, 10	15	8,5	10 x 3	C 362-02	142,73
25	25	10	20 x 3	C 362-04	144,90
50, 100	30	12,5	25 x 5	C 362-05	145,31
150, 250	47	17,5	35 x 6	C 362-07	131,65
400	67	21	50 x 8	C 362-08	114,88
600	74	28	60 x 9	C 362-12	126,76
800, 1.000	85	28	70 x 9	C 362-14	179,30
2.000	103	32	80 x 10	C 362-16	205,85
3.000, 5.000	125	48	106 x 25	C 362-20	223,14
10.000	185	50	155 x 26	C 362-24	357,60



No shear action on the bottom of the beaker, smooth running in glass beakers also on an uneven bottom. The cage acts like a baffel and thus provides optimum mixing results.





#### **BOLA Egg-Shaped Magnetic Stirring Bars**

Material:

Temperature resistance:

Chemical resistance:

PTFE

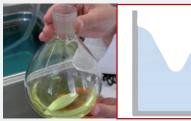
from -200 °C to +250 °C +++ universal

#### FDA conform

PTFE-encapsulated magnetic core (Alnico 5), universal chemical resistance.

<b>Length</b> mm	<b>Dia.</b> mm	Suitable for round bottom flasks (DIN 12 348) ml	Cat. No.:	*recomm. price Euro
20	10	25	C 358-02	4,30
25	12	50	C 358-04	5,02
30	15	100	C 358-06	8,06
35	15	250	C 358-08	12,30
40	20	500	C 358-10	14,59
50	20	1.000	C 358-12	17,63
65	20	4.000	C 358-14	23,13
70	20	10.000	C 358-16	27,37





#### **Applications:**

Ideal for stirring in round bottom flasks. Shape mimics the one of the flasks and assures complete mixing.

#### **BOLA Magnetic Stirring Bar Retrievers**

Material: PTFE

Temperature resistance:

Chemical resistance:

from -200 °C to +250 °C +++ universal







Product description:

PTFE-encapsulated stirring bar retriever with strong permanent magnet (Alnico 5), universal chemical resistance.

<b>Length</b> mm	<b>Lower end dia.</b> mm	Bar dia. mm	Cat. No.:	*recomm. price Euro
150	10	8	C 372-02	11,28
200	10	8	C 372-04	12,58
250	10	8	C 372-06	12,00
300	10	8	C 372-08	12,79
350	10	8	C 372-10	12,95
400	10	8	C 372-12	13,64
600	10	8	C 372-18	18,28

#### Applications:

For the removal of stirring bars from aggressive liquids, prevents loss of stirring bars.



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#### **BOLA Sleeves - what you should know about them.**

BOLA Sleeves are sealing without any grease and the product will not be contaminated by any greasy residues. They are made for creating gas-tight, liquid 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.

BOLA Sleeves are available for all common ground joint sizes from NS 10 to NS 100.

Sleeves can be easily cleaned and reused.

BOLA Sleeves make ground joint grease redundant. Grease residues and impurities in the medium are avoided.

The solid and robust design made of PTFE allows continuous use even at high temperatures and with aggressive media.

Sealing rings provide punctual sealing and at the same time improve releasability.

The smaller contact surface minimizes the risk of sticking and thus glass breakage and the risk of injury while maintaining the same tightness.

#### **BOLA Sleeves with Ribs**

Material: Temperature resistance: Chemical resistance: Feature: Vacuum: PTFE from -200 °C to +250°C +++ universal suitable reusable FDA conform Product description: Made of PTFE, with sealing rings ("rips") 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 easy accessible and therefore easy to clean. **Ground** joint Cat. No.: **Ground joint** Cat. No.: \*recomm. \*recomm. price Euro Size NS price Euro Size NS 7/16 H 930-01 34/35 H 930-08 10/19 H 930-02 40/38 H 930-09 5,12 15,98 12/21 H 930-03 45/40 H 930-10 7,95 4,56 50/42 14/23 H 930-04 H 930-11 29,80 1,48 19/26 60/46 H 930-05 H 930-13 36,86 1,98 24/29 H 930-06 2,60 71/51 H 930-14 69,77

85/55

H 930-15

75,12

#### Applications:

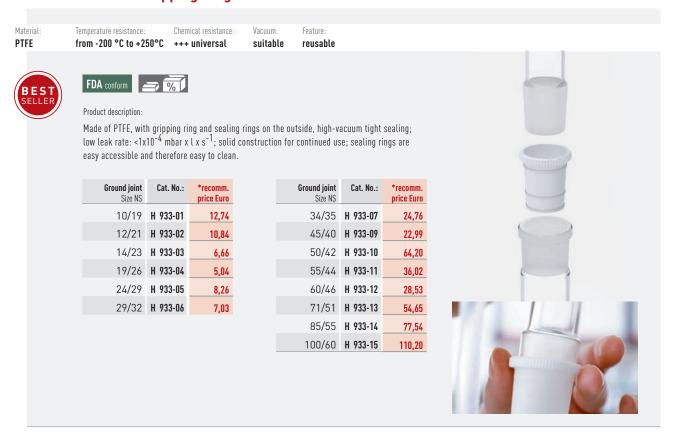
For example for rotary evaporators.

29/32

H 930-07

3,29

#### **BOLA Sleeves with Gripping Ring**





## **BOLA** Flexible Distributors – what you should know about them.

BOLA Flexible Distributors have especially been developed for the connection of elastic tubing such as silicone, Viton® or Tygon®. They consist of a screw cap for bottle thread GL 45 or GLS 80 and a free movable distributor body with hose connectors on the top and bottom side. Elastic tubing can be easily put on the hose connectors

for a continuous connection to the bottom of the bottle. Bent hose connectors prevent bends in the tubing. The body of the distributor can be turned independently from the screw cap. This means, the tubing will not be disarranged when the distributor is fixed on another bottle.



#### **BOLA Flexible Distributors**

Material: Temperature resistance: PP from -20°C to +110 °C

Chemical resistance: ++ very good

Vacuum: suitable autoclave: 121°

#### FDA conform

#### Product description:

Screw cap green made of PP for bottle thread GL 45 and distributor body with hose connectors made of PP. Bent hose connectors on the upper side, straight hose connectors on the bottom side. Restricted chemical resistance, for working temperatures up to max. +110 °C.

	Number of hose connectors	O.D. of hose connector mm	Bore of hose connectors mm	Cat. No.:	*recomm. price Euro
A	2	8,8	6	D 800-24	38,71
В	3	8,8	6	D 800-36	51,44
C	2	10,8	7	D 800-48	39,32

#### **Applications:**

Drawing or inserting liquids. For elastic tubing (e.g. Viton®, Tygon®, silicone).



#### **BOLA Flexible Distributors**

Material: Temperature resistance: PP

Chemical resistance: from 0 °C to +110 °C ++ very good

Vacuum: suitable

autoclave: 121°

#### FDA conform

#### Product description:

Screw cap blue made of PP for bottle thread GLS 80 and distributor body with hose connectors made of PP. Bent 2-step hose connectors on the upper side, straight hose connectors on the bottom side. Restricted chemical resistance, for working temperatures up to max. +110 °C.

	Number of hose connectors	2-step 0.D. 1	hose connectors 0.D. 2 mm	Bore of hose connectors mm	Cat. No.:	*recomm. price Euro
A	2	9	12	6	D 804-06	68,44
В	3	9	12	6	D 804-12	78,83

#### **Applications:**

Drawing or inserting liquids. For elastic tubing (e.g. Viton®, Tygon®, silicone).

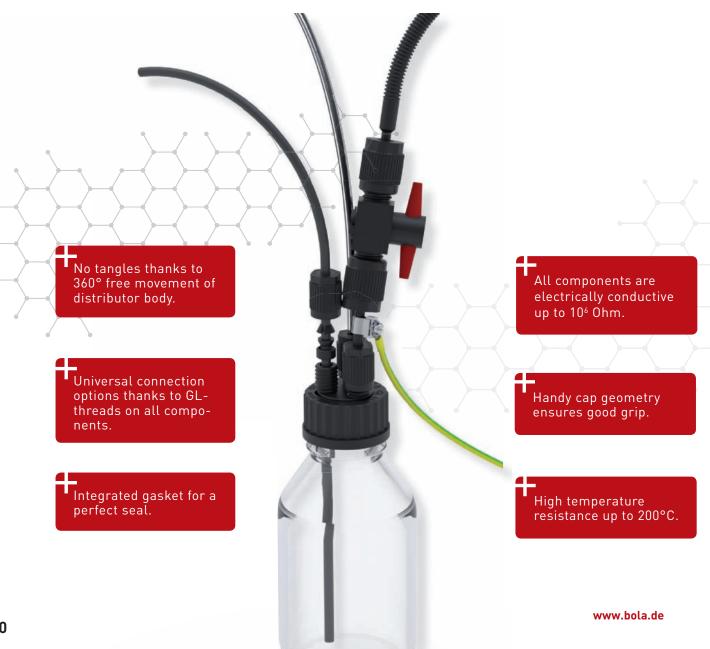




The special highlight: The body of the distributor can be turned independently from the screw cap. This means, the tubing will not be disarranged when the distributor is fixed on another bottle.



## **BOLA** Screw Joints / Components for Ex-Protection – what you should know about them.



#### **BOLA Multiple Distributors for Bottles EX**

Material: Temperature resistance: Chemical resistance: Vacuum: Conductivity:

PTFE-, PPS-EX from -20°C to +200°C ++ very good suitable 106 0hm

#### Product description:

Screw cap black for thread GL 45 made of conductive PPS-EX. Distributor body made of conductive PTFE-EX with GL-threaded necks. Tubes can be inserted through the necks. Connection of tubes and tubing by means of BOLA Laboratory Screw Joints EX.

	Necks GL	For tubing O. D.	Cat. No.:	*recomm. price Euro
A	2 x 14	2 x 8,0	D 864-08	102,85
В	3 x 14	3 x 8,0	D 865-08	137,18
C	3 x 25	3 x 14,0	D 866-08	314,52

#### **Applications:**

Drawing or inserting aggressive or pure liquids. Inserting tubing, tubes and probes into jars.





The special highlight: The body of the distributor can be turned independently from the screw cap. This means, the tubing will not be disarranged when the distributor is fixed on another bottle.

#### **BOLA Distributors for Canisters EX**

 Material:
 Temperature resistance:
 Chemical resistance:
 autoclave:
 Conductivity:

 PTFE-EX
 from -20 °C to +200 °C
 ++ very good
 121 °C
 106 0hm

#### Product description:

Screw cap and movable body with GL-threaded necks made of conductive PTFE EX. Without earthing connection. Earthing is made via a conductive canister. Connection of tubing made by BOLA Laboratory Screw Joints EX.

Canister Thread	Necks GL	For tubing O.D. max. mm	Cat. No.	*recomm. price Euro
55	2x 14 /1x 18	2x 8 / 1x 10	D 772-08	204,30
60	3 x 18	3x 10	D 772-20	208,34
65	3 x 18	3x 10	D 772-32	242,92

#### Applications:

Drawing or inserting aggressive or pure liquids. Inserting tubing, tubes and probes into canisters.



#### **BOLA Laboratory Screw Joints EX**

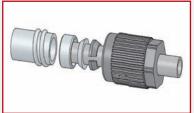
Material: Temperature resistance: Chemical resistance: Pressure: Vacuum: Conductivity:
PTFE-, PPS-EX from -200°C to +250°C ++ very good 10 bar suitable 106 0hm

#### Product description:

Screw cap made of conductive black PPS-EX reinforced with glass fibres, inner parts made of conductive PTFE-EX

For tubing O.D.	<b>Thread</b> GL	Cat. No.:	*recomm. price Euro
4	14	D 840-66	26,14
6	14	D 840-74	26,37
4	18	D 841-46	35,72
6	18	D 841-54	28,75
8	18	D 841-62	28,49
10	18	D 841-74	32,88
8	25	D 842-62	51,96
10	25	D 842-74	45,88
12	25	D 842-80	36,69
14	25	D 842-90	52,03







#### 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.

#### **BOLA GL Tube Fittings EX**

#### Product description:

Straight tube fitting made of PTFE-EX, connections with GL thread. Connection of tubing or tube with BOLA Laboratory Screw Joints EX.

Material: Temperature resistance: Chemical resistance: Pressure: Vacuum: Conductivity:
PTFE-EX from -200°C to +250°C ++ very good 10 bar suitable 106 0hm

#### BOLA GL Tube Fittings EX

Straight tube fitting, two connections

Thread	Bore dia.	Length without screw joint	Wrench size	Cat. No.:	*recomm.
GL	mm	mm	hexagon mm		price Euro
14	6,5	50	15	D 856-14	30,48
18	10,5	50	19	D 856-18	36,93
25	14 5	56	27	D 856-25	50.03

#### BOLA GL Tube Fittings T EX

Tube fitting T-shaped, three connections

Thread GL	Bore dia. mm	Length without screw joint mm	Wrench size square mm	Cat. No.:	*recomm. price Euro
14	6,5	50	20	D 857-14	38,63
18	10,5	56	20	D 857-18	44,65
25	14,5	70	27	D 857-25	68,64

#### **BOLA GL Tube Fittings Elbow EX**

Tube fitting elbow-shaped, two connections

Thread GL	Bore dia. mm	Length without screw joint mm	Wrench size square mm	Cat. No.:	*recomm. price Euro
14	6,5	37	20	D 858-14	33,83
18	10,5	39	20	D 858-18	41,02
25	14,5	51	27	D 858-25	48,20

#### **Applications:**

For distributing liquids or gases. As reduction for connecting different diameters of tubes or tubing.







#### **BOLA Antistatic Explosion-Proof Tubing**

Material:

Temperature resistance:

Chemical resistance:



from -200°C to +250°C +++ universal

106 Ohm



#### FDA conform

#### Product description:

Very good electric conductivity due to a special "antistatic compound" made of pure PTFE and finest, highly pure carbon dust (less than 2,5%). Colour: black

I.D. mm	<b>0.D.</b> mm	Wall thick- ness mm	Bending radius 1 mm	Burst pressure <sup>2</sup> bar	Cat. No.:	*recomm. price Euro
(1/32") 0,8	(1/16") 1,6	0,4	7	140	S 1827-10	4,90
(1/16") 1,6	(1/8") 3,2	0,8	13	140	S 1827-26	12,11
2,0	3,0	0,5	18	70	S 1827-30	12,11
2,0	4,0	1,0	16	140	S 1827-32	9,22
3,0	4,0	0,5	32	46	S 1827-34	8,14
4,0	6,0	1,0	36	70	S 1827-40	15,50
(11/64") 4,35	(1/4") 6,35	1,0	40	64	S 1827-42	14,74
6,0	8,0	1,0	64	46	S 1827-50	19,56
8,0	10,0	1,0	100	35	S 1827-60	24,49
10,0	12,0	1,0	144	28	S 1827-64	30,72
12,0	14,0	1,0	196	23	S 1827-68	51,54
14,0	16,0	1,0	256	20	S 1827-74	53,61



#### Produktvorteile:

- extensive chemical resistance due to PTFE parts
   resistance of less than 10<sup>6</sup> Ohm according to EN 12115 directive
   ideal for light-sensitive substances

#### Applications:

- » antistatic applications
- » in explosive ambiance (explosion protection)
- » for transport of solvents or alcohols



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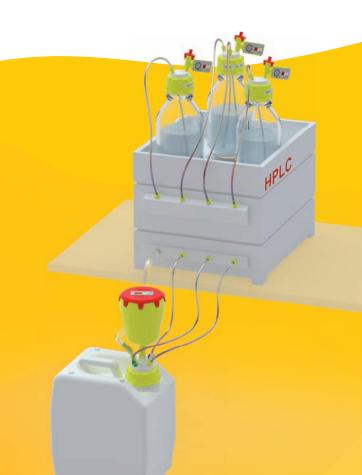
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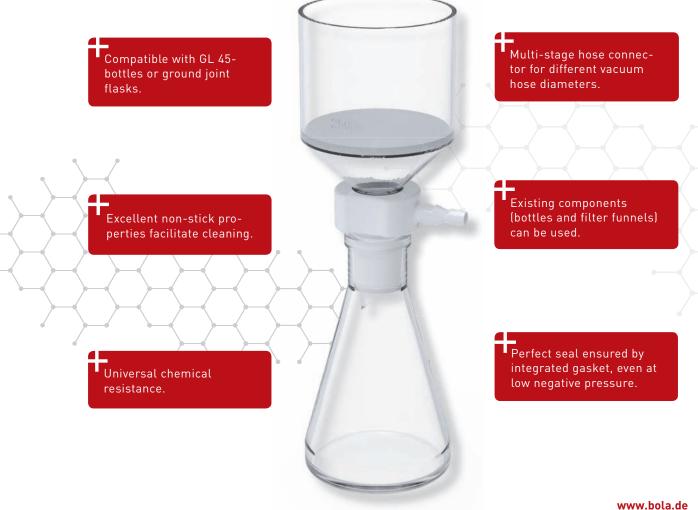
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#### **BOLA Vacuum Filtration Adaptors** - what you should know about them.

Vacuum filtration is an indispensable step in the lab to efficiently separate particles from liquids. It is advantageous if this can be done with existing bottles and filter funnels: By using BOLA Vacuum Adaptor GL for bottles GL 45 or BOLA Vacuum Adaptor with ground joint, it is possible to use standart bottles /round bottom flasks. Likewise existing and proven filter funnels can still be used. The intermediate assembly of the vacuum adapter creates a highly efficient system.



#### **BOLA Vacuum Adaptor GL**

Material: PTFE

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

121°

suitable



#### FDA conform

#### Product description:

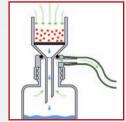
Made of PTFE. Pass-through with o-ring made of FKM for safe assembly of standard filter funnels made of glass or plastic on flasks with thread GL 45. Lateral 2-step hose connector made of PTFE for connection to a vacuum pump by means of suitable tubing.

For thread	For funnel outlet max. Ø mm	2-Step hose connector A O.D. mm B O.D. mm		Cat. No.:	*recomm. price Euro
45	22	9		N 1656-45	97,45

#### Applications:

For vacuum filtration, the o-ring at the pass-through provides good sealing to the filter funnel. A slight vacuum is sufficient.







#### **BOLA Vacuum Adaptor with Ground Joint**

Material: PTFE

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

Chemical resistance:

autoclave:

Vacuum: suitable



#### FDA conform

#### Product description:

Made of PTFE. Pass-through with o-ring made of FKM for safe assembly of standard filter funnels made of glass or plastic on vessels and round- bottom flasks with ground joint. Lateral 2-step hose connector made of PTFE for connection to a vacuum pump by means of suitable

Cone size	For funnel outlet max. Ø mm	2-Step hos A O.D. mm	se connector  B 0.D. mm	Cat. No.:	*recomm. price Euro
14/23	8	9	12	N 1655-01	91,32
19/26	11	9	12	N 1655-02	53,93
29/32	22	9	12	N 1655-04	62,66
45/40	22	9	12	N 1655-06	125,26



For vacuum filtration, the o-ring at the pass-through provides good sealing to the filter funnel. A slight vacuum is sufficient.





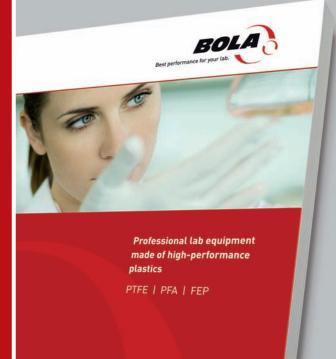


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