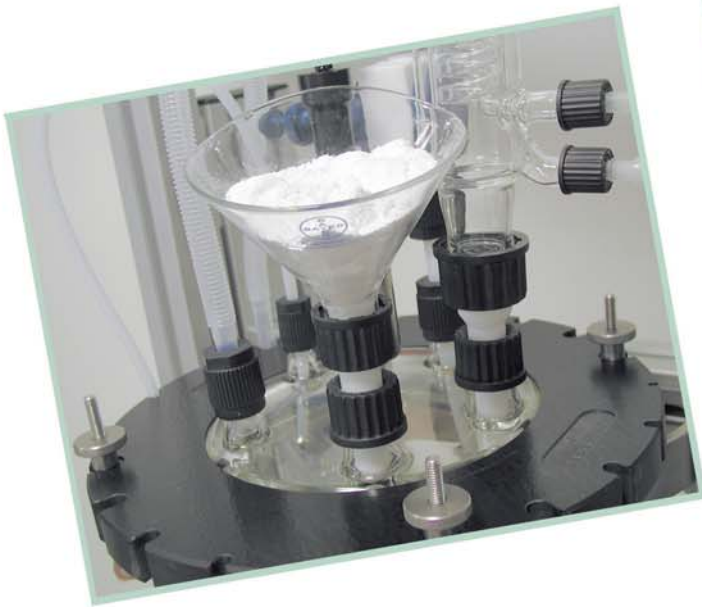


Screw Joints with GL Threads

R



**Reducing Unions
Laboratory Screw Joints
Screw Thread Adaptor Couplings**



BOLA-HT (High Temp) Laboratory Screw Joints

Pressure resistant up to approx. 10 bar (at room temperature and in thread sizes GL 14, GL 18 and GL 25), suitable for vacuum. The circulating medium is exposed only to PTFE, the screw cap is made of glass-fibre reinforced PPS (max. +250°C). For many years laboratory screw joints have been mainly used for connecting glass tubes with PTFE tubing or with plastic, glass and metal tubes. In addition, these couplings are also suitable for locking probes (also stainless-steel), thermometers, laboratory stopcocks, immersion tubes or for lead-in cables. (Patented). (Supplied with cap and inner spare parts).

PPS	chem. +++	+250° -50°	Max. pressure 10 bar	For vacuum
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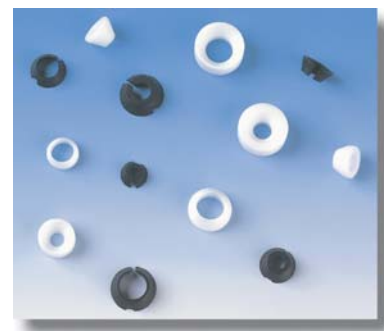
For tubing O.D.	GL 14 Cat.No.	GL 18 Cat.No.	GL 25 Cat.No.	GL 32 Cat.No.	GL 45 Cat.No.
0,8 mm (1/32")	D 628-10	D 629-06			
1,0 mm	D 628-18	D 629-10			
1,6 mm (1/16")	D 628-26	D 629-18	D 630-18		
2,0mm	D 628-34	D 629-22	D 630-22		
3,0 mm	D 628-50	D 629-34	D 630-34		
3,2 mm (1/8")	D 628-58	D 629-42	D 630-42		D 632-18
4,0 mm	D 628-66	D 629-46	D 630-46		
6,0 mm	D 628-74	D 629-54	D 630-54	D 631-38	D 632-26
6,35 mm (1/4")	D 628-78	D 629-56	D 630-58	D 631-42	
8,0 mm	D 628-82	D 629-62	D 630-62	D 631-46	D 632-32
9,52 mm (3/8")		D 629-68	D 630-68	D 631-52	
10,0 mm		D 629-74	D 630-74	D 631-56	D 632-40
12,0 mm			D 630-80	D 631-60	D 632-44
12,7 mm (1/2")			D 630-84	D 631-66	
14,0 mm			D 630-90	D 631-72	D 632-48
16,0 mm				D 631-78	D 632-54
18,0 mm				D 631-82	D 632-56
20,0 mm				D 631-88	D 632-60
22,0 mm					D 632-68
25,4 mm (1")					D 632-74
26,0 mm					D 632-76
30,0 mm					D 632-84
32,0 mm					D 632-90

You will find
suitable fittings on
pages 52 to 54.

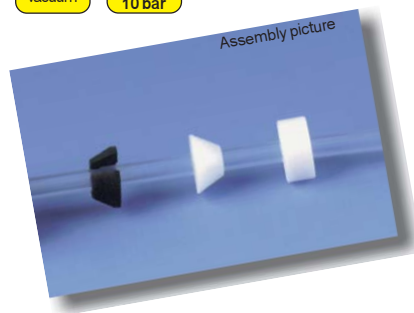
BOLA-HT (High Temp) Inner Spare Parts

With V-ring made of black glass-fibre reinforced PPS (polyphenylsiloxan), and sealing and tapered rings made of fluoroplastic (PTFE). For service temperatures up to max. +250°C.

For tubing O.D.	GL 14 Cat.No.	GL 18 Cat.No.	GL 25 Cat.No.	GL 32 Cat.No.	GL 45 Cat.No.
0,8 mm (1/32")	D 638-10	D 639-06			
1,0 mm	D 638-18	D 639-10			
1,6 mm (1/16")	D 638-26	D 639-18	D 640-18		
2,0 mm	D 638-34	D 639-22	D 640-22		
3,0 mm	D 638-50	D 639-34	D 640-34		
3,2 mm (1/8")	D 638-58	D 639-42	D 640-42		D 642-18
4,0 mm	D 638-66	D 639-46	D 640-46		
6,0 mm	D 638-74	D 639-54	D 640-54	D 641-38	D 642-26
6,35 mm (1/4")	D 638-78	D 639-56	D 640-58	D 641-42	
8,0 mm	D 638-82	D 639-62	D 640-62	D 641-46	D 642-32
9,52 mm (3/8")		D 639-68	D 640-68	D 641-52	
10,0 mm		D 639-74	D 640-74	D 641-56	D 642-40
12,0 mm			D 640-80	D 641-60	D 642-44
12,7 mm (1/2")			D 640-84	D 641-66	
14,0 mm			D 640-90	D 641-72	D 642-48
16,0mm				D 641-78	D 642-54
18,0 mm				D 641-82	D 642-56
20,0 mm				D 641-88	D 642-60
22,0 mm					D 642-68
25,4 mm (1")					D 642-74
26,0 mm					D 642-76
30,0 mm					D 642-84
32,0 mm					D 642-90

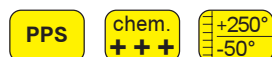


PPS	PTFE	chem. +++	+250° -50°
For vacuum	Max. pressure 10 bar		



BOLA-HT (High Temp) Replacement Caps

Made of black glass-fibre reinforced PPS (polyphenylsiloxan). With handy knurl and hexagon. For service temperatures up to max. +250°C.



Cat.No.	Thread	From tubing O.D.	To tubing O.D.
D 634-10	GL 14	0,8 mm	6 mm
D 634-14	GL 14	6,1 mm	8 mm
D 634-20	GL 18	0,8 mm	10 mm
D 634-30	GL 25	0,8 mm	10 mm
D 634-34	GL 25	10,1 mm	14 mm
D 634-40	GL 32	0,8 mm	10 mm
D 634-44	GL 32	10,0 mm	16 mm
D 634-48	GL 32	18,0 mm	20 mm
D 634-50	GL 45	1,6 mm	10 mm
D 634-54	GL 45	11,0 mm	16 mm
D 634-58	GL 45	17,0 mm	22 mm
D 634-62	GL 45	23,0 mm	32 mm



BOLA-Fork Wrenches

Made of glass-fibre reinforced PA (polyamide). The light weight reduces the risk of injury or damage if the wrench slips off of the hexagon nut or is dropped. For service temperatures up to max. +140°C. Withstands short exposure to higher temperatures.



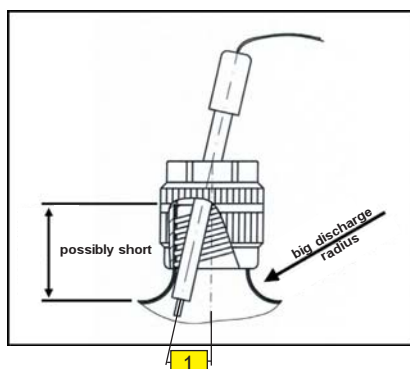
Cat.No.	For thread	Opening of the spanner
D 647-08	GL 14/18/25	17/22/27
D 647-24	GL 32/45	32/42

BOLA-Swivelling Screw Fittings

By means of this screw fitting with GL thread the user can screw and fix all kinds of sensors (stainless steel, glass, PTFE), tubes and tight tubing in the requested angle. Sensors will no longer break because of accidental touch with the stirrer shaft. Supply tubes can be positioned independently from the angle of the thread. This system is suitable for both pressure and vacuum.



Cat. No.	For sensor/ tube O.D.	For thread	1	Max. angle
D 690-14	2,0 mm	GL 18		10°
D 690-18	3,2 mm (1/8")	GL 18		9°
D 690-24	6,0 mm	GL 18		5°
D 690-34	6,0 mm	GL 25		12°
D 690-38	8,0 mm	GL 25		10°
D 690-42	9,52 mm (3/8")	GL 25		9°



Our tip:

You benefit from the biggest possible angle by taking short GL-thread glasses and a big discharge radius.



New



BOLA-Replacement Caps

Made of red glass-fibre reinforced ETFE. With handy knurl and hexagon. For service temperatures up to max. +150°.

ETFE	chem. +++	+150° -105°
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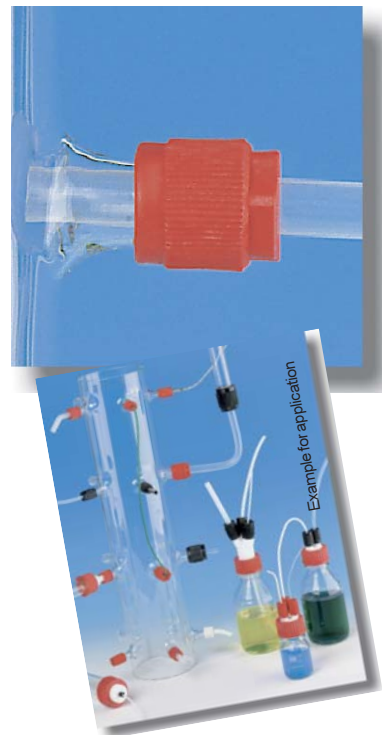
Cat. No.	Thread	Tubing/Tube dia.
D 600-04	GL 14	up to ø 6,35 mm
D 600-08	GL 18	up to ø 10 mm
D 600-12	GL 25	up to ø 10 mm
D 600-16	GL 25	from ø 10,1 mm

BOLA-Laboratory Screw Joints

Pressure resistant up to 10 bar, suitable for vacuum. The medium is exposed only to fluoroplastic; screw cap made of glass-fibre reinforced ETFE (max. +150°C). For many years laboratory screw joints have been mainly used for connecting glass tubes with PTFE tubing or plastic, glass and metal tubes. In addition, these couplings are also suitable for locking probes (also stainless-steel), thermometers, laboratory stopcocks, immersion tubes or for lead-in cables. (Patented)

PTFE	ETFE	chem. +++	+150° -50°	Max. pressure 10 bar	For vacuum
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For tubing O.D.	GL 14 Cat.No.	GL 18 Cat.No.	GL 25 Cat.No.
0,8mm	D 593-02	D 593-20	
1,0 mm	D 593-04	D 593-22	
1,6 mm	D 593-06	D 593-26	
2,0 mm	D 593-10	D 593-30	
2,4 mm	D 593-12		
3,0 mm	D 590-02	D 590-10	D 590-22
3,2 mm	D 590-08	D 590-20	D 590-24
4,0 mm	D 590-04	D 590-12	D 590-26
6,0 mm	D 590-06	D 590-14	D 590-28
6,35 mm	D 590-62		
8,0 mm		D 590-16	D 590-30
10,0 mm		D 590-18	D 590-32
12,0 mm			D 590-34
14,0 mm			D 590-36



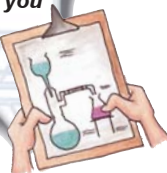
BOLA-Inner Spare Parts

With V-ring made of polyvinylidene fluoride (PVDF) and sealing and tapered rings made of fluoroplastic (PTFE). The medium is exposed only to fluoroplastic. For service temperatures up to max. +150°C.

PTFE	ETFE	PVDF	chem. +++	+150° -50°	Max. pressure 10 bar	For vacuum
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For tubing O.D.	GL 14	GL 18	GL 25
0,8 mm	D 598-02	D 598-20	
1,0 mm	D 598-04	D 598-22	
1,6 mm	D 598-06	D 598-26	
2,0 mm	D 598-10	D 598-30	
2,4 mm	D 598-12		
3,0 mm	D 597-02	D 597-10	D 597-22
3,2 mm	D 597-08	D 597-20	D 597-24
4,0 mm	D 597-04	D 597-12	D 597-26
6,0 mm	D 597-06	D 597-14	D 597-28
6,35 mm	D 597-62		
8,0 mm	D 597-16	D 597-30	
10,0 mm		D 597-18	D 597-32
12,0 mm			D 597-34
14,0 mm			D 597-36

*Do you need other
laboratory screw joints?
Please send us a sketch with the
required quantities.
We will be glad to submit you
our best quotation!
Fax +49(0)9346 / 92 86-55*

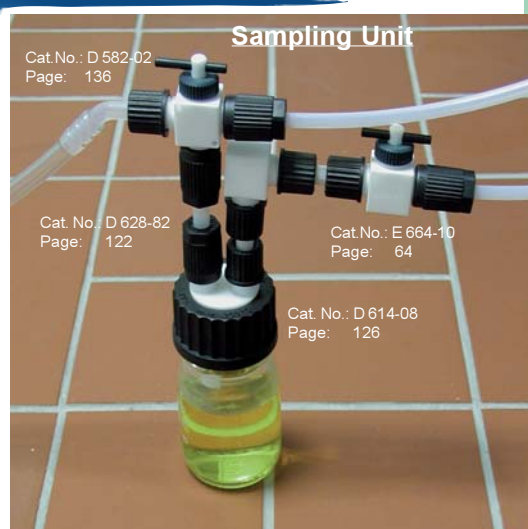
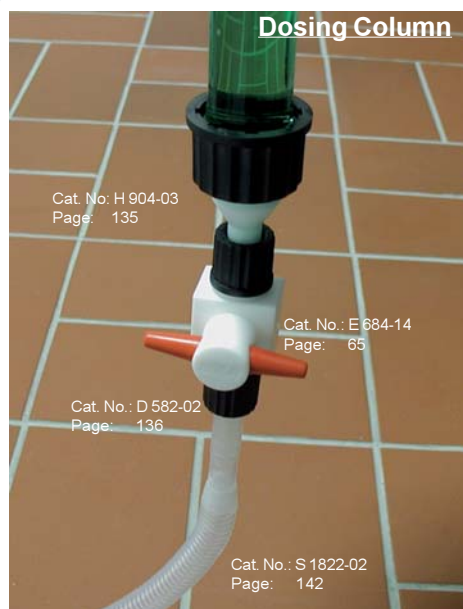
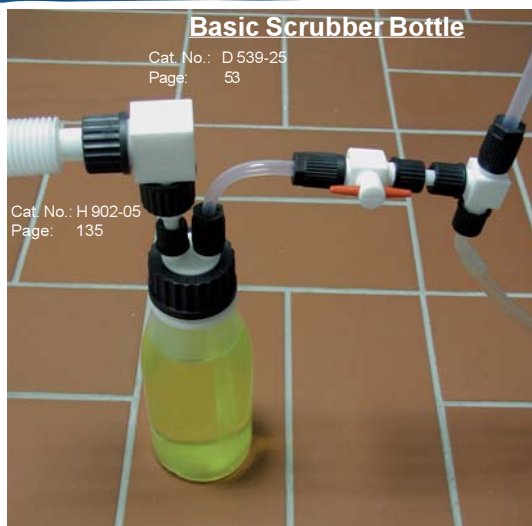


The GL - Building Block System !

Simply combine different parts with GL thread to a complete system:

The advantages speak for themselves:

- ✓ Easily screwable / without tooling
- ✓ Optionally extensible / now and in the future
- ✓ Many creative possibilities
- ✓ No determination at the beginning of assembly
- ✓ Independent from tubing diameters
- ✓ Compatible with glass equipment with GL threads



BOLA-Screw Cap Distributors

Made of polypropylene. With GL thread sockets, for bottles with GL 45 thread, ideal for transferring liquids. The sockets with glass screw threads are connected by means of our Laboratory Screw Joints (Cat. No. D 590-..) to a liquid source and to a pressure or vacuum system. (Supplied without Laboratory Screw Joints).



Cat. No.	Max. tubing O.D.	Sockets	Suitable for bottle thread
D 622-10	8 mm	3 x GL 18	GL 45

BOLA-Multiple Distributors for Bottles

Made of fluoroplastic or polypropylene. With GL thread sockets to connect tubes or tubing. Suitable for bottles with GL thread, complete with screw cap made of PPS or PP, ideal for transferring liquids. The sockets with GL threads can be connected to a liquid source or to a pressure or vacuum system. The PTFE material is resistant to virtually all chemicals and can be used up to +250°C. PP has a restricted chemical resistance, and can be used only up to +110°C. The distributor can be loosened by simply turning the screw cap. The inner part with all the tubing assembled does not turn and remains in place. For the connection of tubes or tubing we recommend the Laboratory Screw Joints (see page 122).

(Supplied without Laboratory Screw Joints).



BESTSELLER

Cat.No.		Material	For bottle with socket	Max. tubing O.D.	Sockets
D 612-08	1	PP	GL 45	8,0 mm	2 x GL 14
D 613-08	2	PP	GL 45	8,0 mm	3 x GL 14



Cat.No.		Material	For bottle with socket	Max. tubing O.D.	Sockets
D 614-08	3	PTFE	GL 45	8,0 mm	2 x GL 14
D 615-08	4	PTFE	GL 45	8,0 mm	3 x GL 14

BOLA-Multiple Distributors for Bottles with other thread sizes are available upon request.



BOLA-Multiple Distributors for Bottles with Stopcocks

Made of fluoroplastic. With GL thread sockets to connect tubing or tubes. Each GL thread socket can be closed by means of a stopcock. With this version, the tubing cannot pass through the stopcock, but special bores on the lower side allow the attachment of tubing O.D. 6 mm so that a connection to the bottom of the bottle is possible. These distributors are suitable for bottles with a GL 45 thread. They are supplied with a screw cap made of PPS and are ideal for transferring liquids. The sockets with GL threads can be connected to a liquid source or to a pressure or vacuum system. The PTFE material is resistant to virtually all chemicals and can be used up to +250°C. The distributor can be loosened by simply turning the screw cap. The inner part with all the tubing assembled does not turn and remains in place. For the connection of tubes or tubing we recommend the Laboratory Screw Joints (see page 122).



Cat.No.		Max. tubing O.D.	Stopcocks	Stopcock bore dia.	Sockets	For bottle with thread
D 616-08	1	8 mm	2	4 mm	2 x GL 14	GL 45
D 616-16	2	6 mm	3	4 mm	3 x GL 14	GL 45

New

BESTSELLER



BOLA-Multiple Distributors for Bottles

Made of fluoroplastic. With GL thread sockets to connect tubes or tubing. Suitable for bottles and threaded pipes with GL or S thread, complete with screw cap made of PPS, ideal for transferring liquids. The sockets can be connected to a liquid source or to a pressure or vacuum system. The distributor can be loosened by simply turning the screw cap. The inner part with all the tubing assembled does not turn and remains in place. For the connection of tubes or tubing we recommend the Laboratory Screw Joints (see page 122). (Supplied without Laboratory Screw Joints).

PTFE

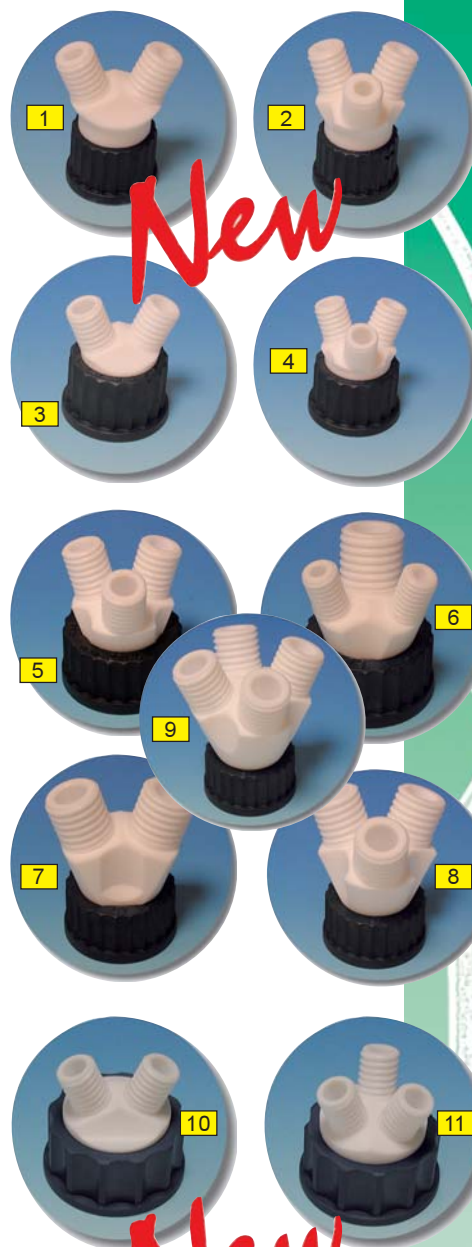
chem.
+++

+250°
-200°

For
vacuum

autoclave
121°

Cat.No.	For max. tubing O.D.	Sockets	For bottles with thread
1 D 619-04	6,0 mm	2 x GL 14	GL 25
2 D 619-08	6,0 mm	3 x GL 14	GL 25
3 D 621-04	8,0 mm	2 x GL 14	GL 32
4 D 621-08	8,0 mm	3 x GL 14	GL 32
5 D 618-16	3 x 10 mm	3 x GL 18	GL 45
6 D 618-24	2 x 6,0 mm + 1 x 14,0 mm	2 x GL 14 + 1 x GL 25	GL 45
7 D 618-44	2 x 14 mm	2 x GL 25	GL 45
8 D 618-46	3 x 14 mm	3 x GL 25	GL 45
9 D 618-48	4 x 14 mm	4 x GL 25	GL 45
10 D 624-04	8,0 mm	2 x GL 14	S 40
11 D 624-08	8,0 mm	3 x GL 14	S 40



BOLA-Multiple Distributors for Bottles with Ground Joint

Made of fluoroplastic. With GL sockets for connecting tubes or tubing. Suitable for bottles with standard ground joint NS 29/32. The distributors are ideal for transferring liquids without causing permanent air pollution or contamination of the liquid. The sockets can be connected to a liquid source and to a pressure or vacuum system. We recommend to use our Laboratory Screw Joints for the connection of tubes or tubing. (See page 122). (Supplied without Laboratory Screw Joints).

PTFE

For
vacuum

autoclave
121°

Cat.No.	Suitable for standard ground joint	For max. tubing O.D.	Sockets
D 620-08	NS 29/32	8,0 mm	2 x GL 14



Multiple Distributors for Bottles with Ground Joint have an additional integrated nut which allows easy opening of the bottle even after a long period of time.





BOLA-Distributors for Barrels

Made of fluoroplastic. With GL thread sockets and coupling ring suitable for barrels with female thread (see following chart). Ideal for transferring liquids without causing permanent air pollution or contaminating the liquids with ambient air. The sockets can be connected to a liquid source and to a pressure or vacuum system. Due to the handy coupling ring with grooves, the distributor can be screwed off from the barrel without turning the assembled tubing. Of course it is also possible to connect tubes or sensors (e.g. PT100, PH-meter) to the GL sockets. For the connection of tubes or tubing we recommend the Laboratory Screw Joints (see page 122).

(Supplied without Laboratory Screw Joints).

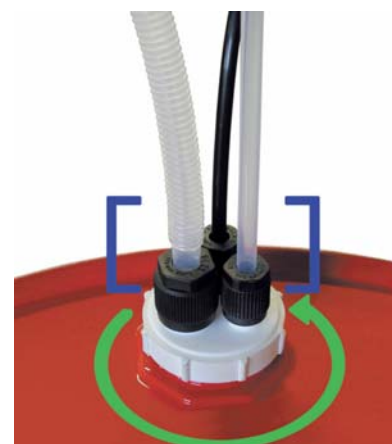
PTFE	chem.+++	+250° -200°	For vacuum	autoclave 121°	Max. pressure 1 bar
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Cat.No.	For female thread	Number of sockets x thread of sockets	For max. tubing O.D.
1 D 696-08	R2"	4 x GL 18	10 mm
2 D 696-14	R2"	2 x GL 18 and 1 x GL 25	2 x 10 mm and 1 x 14 mm
1 D 697-08	Mauser 2 Zoll	4 x GL 18	10 mm
2 D 697-14	Mauser 2 Zoll	2 x GL 18 and 1 x GL 25	2 x 10 mm and 1 x 14 mm
1 D 698-08	Tri-Sure 2"	4 x GL 18	10 mm
2 D 698-14	Tri-Sure 2"	2 x GL 18 and 1 x GL 25	2 x 10 mm and 1 x 14 mm



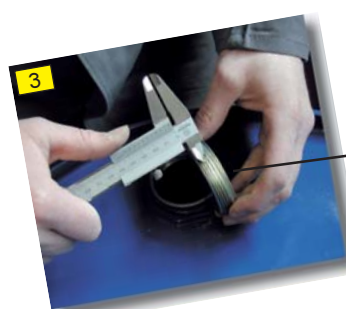
Tubing remains
fixed tightly

Coupling ring
can be turned



To facilitate the determination of the requested thread, we have combined the most important, easily measurable dimensions as follows:

Barreal thread/Denomination	R 2 Zoll	Mauser 2 Zoll (BCS 70 x 6)	Tri-Sure 2 Zoll (BCS 56 x 4)
1 Measureable I.D., approx.	57,0 mm	62,0 mm	52,0 mm
2 O.D. of cap thread, approx.	58,5 mm	69,6 mm	56,8 mm
3 Thread pitch	2,3 mm (11 turns/inch)	6,0 mm	4,0 mm



BOLA-Ring Wrenches

To open and close the BOLA-Distributors for Barrels (D696.. to D 698..).



New

Cat.No.
D 701-24

I.D.
78 mm

Total length
200 mm

BOLA-Barrel Aerations

Made of fluoroplastic. When drawing or filling liquids, slight overpressure or vacuum can arise in the barrel, and this has to be compensated. The BOLA barrel aeration made of fluoroplastic is ideal for this compensation. It consists of 4 parts which, assembled as a unit, provide an extremely quick pressure compensation already at 0,1 bar differential pressure. The integrated 2 µm membrane reliably filters out almost all impurities like for example particles of dust or dirt. It can be exchanged easily.

Maximum flow:

- ✓ Differential pressure of 0,5 bar: 80 l/h;
- ✓ Differential pressure of 1 bar: 320 l/h.

Supplied with: PTFE Body, PTFE/Silicone Gasket, Membrane and PPS Screw Cap

Cat.No.	For female thread	Dia. of membrane	Thickness of membrane	Thread of cap
N 1696-32	R 3/4"	29 mm	0,2 mm	GL 32

BOLA-Sets for Pressure Compensation

This set allows easy sterile drawing or filling of liquids at GL thread sockets (made of glass, PTFE, ...). The 2 µm membrane provides a good air passage and reliably filters out almost all impurities like for example particles of dust or dirt. The extremely quick pressure compensation already starts at a differential pressure of 0,1 bar. This avoids overpressure or vacuum in the vessel. The filter membranes for pressure compensation are screwed tightly on the GL socket by means of a screw cap and a gasket (Supplied with: Membrane for Pressure Compensation, Gasket, Cap)



New

Cat.No.	Suitable for	Dia. of membrane	Flow at 0,5 bar	Flow at 1 bar
N 1698-14	GL 14	12 mm	16 l/h	25 l/h
N 1698-18	GL 18	16 mm	25 l/h	85 l/h
N 1698-25	GL 25	23 mm	50 l/h	180 l/h
N 1698-32	GL 32	29 mm	80 l/h	320 l/h
N 1698-45	GL 45	42 mm	210 l/h	800 l/h

BOLA-Membranes for Pressure Compensation

Made of fluoroplastic. Together with the BOLA distributors, these membranes allow sterile drawing or filling of liquids. The 2 µm membrane provides a good air passage and reliably filters out almost all impurities like for example particles of dust or dirt. The extremely quick pressure compensation already starts at a differential pressure of 0,1 bar. This avoids overpressure or vacuum in the vessel. The filter membranes for pressure compensation are screwed tightly on the GL socket by means of a screw cap and a gasket (see Cat. No.: N 1698-..).



Cat.No.	Suitable for	Dia. of membrane	Thickness	Flow at 0,5 bar	Flow at 1 bar
N 1699-14	GL 14	12 mm	0,2 mm	16 l/h	25 l/h
N 1699-18	GL 18	16 mm	0,2 mm	25 l/h	85 l/h
N 1699-25	GL 25	23 mm	0,2 mm	50 l/h	180 l/h
N 1699-32	GL 32	29 mm	0,2 mm	80 l/h	320 l/h
N 1699-45	GL 45	42 mm	0,2 mm	210 l/h	800 l/h



New

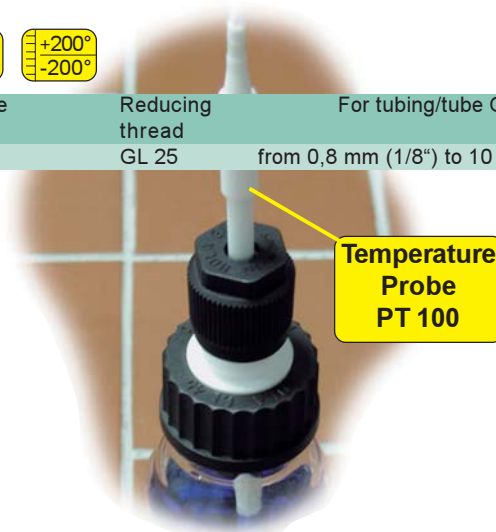
BOLA-GL Reductions

Made of fluoroplastic. Ideal for introducing tubing, sensors, thermoelements or tubes (steel or glass) in one connection with a male GL 45 thread. It is for example possible to connect small tubing to GL 45 threads or to lead PH-meter-sensors tightly in glass bottles. Due to the swivel nut made of PPS, the reduction can be screwed off without twisting the connected tubing. To connect the reduction to a tube/tubing, we request the use of BOLA Laboratory Screw Joints (see page 122) which have to be ordered separately according to the O.D. of the tubing.

GL-Reductions are also available for other thread sizes. Simply send us your request!



Cat.No.	For bottle thread	Reducing thread	For tubing/tube O.D.
D 784-24	GL 45	GL 25	from 0,8 mm (1/8") to 10 mm



Temperature Probe PT 100

BOLA-Leading-in for Sensors

Made of fluoroplastic. For contamination-free insertion into bottles with GL threads. The probes/sensors or PH-meter probes are inserted into the leading-in and make a tight and reliable sealing. By means of the adjusting screw it is possible to compensate tolerances of the outer diameter of the probes/sensors. Due to the swivel nut the probe/sensor can completely be screwed off from the bottle without twisting the connected cables. For quick and safe closing a plug made of PTFE is enclosed. The product in the bottle as well as the probe/sensor are only exposed to high-purity and solvent-free PTFE.



Cat.No.	For sensors dia.	For bottles with thread
D 780-14	12 mm (+/- 0,5 mm)	GL 45

New



Plug enclosed



We can also manufacture this item for other bottle threads or probe diameters. Simply contact us!

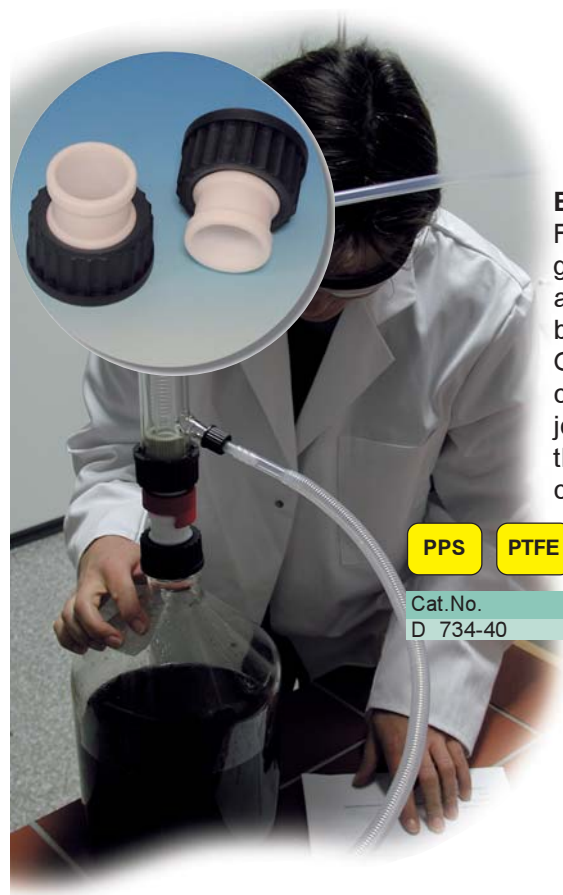
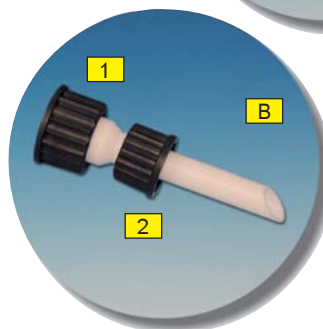
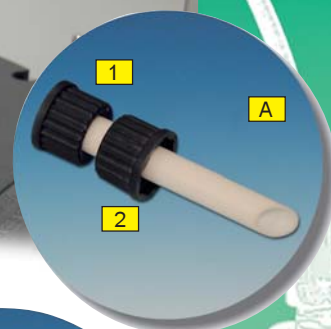
BOLA-Leading-in for GL Threads

This leading-in helps to introduce products from outside directly in the product. It prevents powders from adhering or agglutinating on the border. Liquid products are not introduced over a wall with lower temperature and with danger of adhering or polymerisation. When using a condenser with GL thread, also the reflux runs directly into the product. The leading-in can be removed from the glass thread without running the risk of twisting the connected tubing or cable.



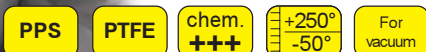
Cat.No.	1 Upper GL thread	2 Lower GL thread	O.D. x I.D. of inlet tube	Length of outlet tube (from lower border of cap)
D 738-12	A GL 25	GL 25	15 x 12 mm	64 mm
D 738-22	A GL 32	GL 32	20 x 17 mm	64 mm
D 738-42	B GL 25	GL 32	20 x 17 mm	64 mm
D 738-52	B GL 32	GL 25	15 x 12 mm	64 mm

New



BOLA-Ground Joint GL Adaptors

For the transition from a standard ground joint to a glass thread (e.g. SCHOTT bottle). By means of this adaptor, ground joint parts (condensers, stirrer bearings,...) can be mounted easily on glass bottles or GL threads. Due to its ingenious snap-in function, the cap can be turned without having to turn the ground joint and the adaptor can be removed from the glass thread without running the risk of twisting the connected tubing or cable.

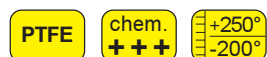


Cat.No.	Glass thread	Ground joint
D 734-40	GL 45	NS 29/32

New

BOLA-Dispensers

For controlled, safe pouring of liquids. With control stopcock and necessary vent. When not in use, the discharge tube can be sealed with a cap. The dispenser with bottle can be fastened in a holder. (Supplied without bottle).



Cat.No.	For bottle thread	Stopcock bore	Dia. of discharge tube
H 918-10	GL 45	4 mm	4 mm



BOLA-Screw Caps with Aperture

There are three versions of BOLA screw caps with aperture.

All of them have a handy knurl which allows safe closing and easy opening of the caps.



Characteristics:



1 Extremely pure and resistant to chemicals - also in aggressive ambiances.



2 Especially for the work with high temperatures, a cap with high mechanical strength which can close even small GL threads tightly.



3 Low cost cap with restricted thermal and chemical resistance.

Cat. No. 1	Cat. No. 2	Cat. No. 3	For	Bore dia.
PTFE-Caps	PPS-Caps	PBTP-Caps	bottle thread	
H 983-01	H 995-14	H 984-01	GL 14	9,2 mm
H 983-02	H 995-18	H 984-02	GL 18	11 mm
H 983-03	H 995-25	H 984-03	GL 25	15 mm
H 983-04	H 995-32	H 984-04	GL 32	20 mm
H 983-05	H 995-45	H 984-05	GL 45	34 mm

BOLA-Screw Caps

There are three versions of BOLA screw caps.

All of them have a handy knurl which allows safe closing and easy opening of the caps and an almost universal chemical resistance against the product in the bottles.

Characteristics:



1 Extremely pure and resistant to chemicals - also in aggressive ambiances.



2 Especially for the work with high temperatures, a cap with high mechanical strength which can close even small GL threads tightly. The PTFE/SILICONE gasket compensates smaller unevennesses of the glass thread and provides a good sealing also at thermal fluctuations. The medium is only exposed to PTFE.



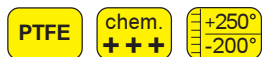
3 Low cost cap with restricted thermal and chemical resistance. The PTFE/SILICONE gasket compensates smaller unevennesses of the glass thread. The medium is only exposed to PTFE.



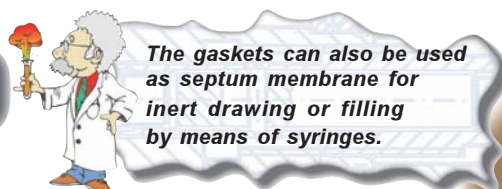
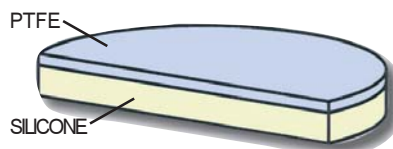
Cat. No. 1	Cat. No. 2	Cat. No. 3	For
PTFE-Caps	PPS-Caps	PBTP-Caps	bottle thread
H 986-01	H 993-14	H 987-01	GL 14
H 986-02	H 993-18	H 987-02	GL 18
H 986-03	H 993-25	H 987-03	GL 25
H 986-04	H 993-32	H 987-04	GL 32
H 986-05	H 993-45	H 987-05	GL 45

BOLA-Gaskets for Caps

Made of fluoroplastics, with SILICONE-elastomer. To be used as gasket in GL screw caps (e.g. H 993-... and H 987-... on page 132). The SILICONE-elastomer compensates small unevennesses of the glass threads and the PTFE membrane with its almost universal chemical resistance protects from aggressive substances.



Cat.No.	Suitable for caps with female thread	O.D. of gasket	Thickness of gasket
H 973-14	GL 14	13,0 mm	3,3 mm
H 973-18	GL 18	16,8 mm	3,3 mm
H 973-25	GL 25	23,5 mm	3,3 mm
H 973-32	GL 32	30,2 mm	3,3 mm
H 973-45	GL 45	43,2 mm	3,3 mm



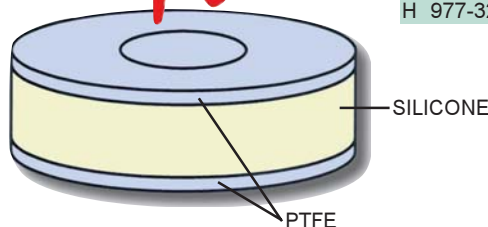
The gaskets can also be used as septum membrane for inert drawing or filling by means of syringes.



New

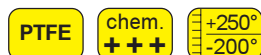


New



BOLA-Double-Sided Gaskets

Silicone O-ring with double-sided fluoroplastic (PTFE) washer. Suitable for all BOLA screw caps and screw caps with aperture as well as for the GL caps of company SCHOTT.



Cat.No.	For thread	O.D. x I.D. x Height	For tube O.D.
H 977-08	GL 14	12 x 6 x 3,6 mm	5,5 - 6,5 mm
H 977-16	GL 18	16 x 6 x 4,6 mm	5,5 - 6,5 mm
H 977-18	GL 18	16 x 8 x 4,6 mm	7,5 - 9,0 mm
H 977-20	GL 18	16 x 10 x 4,6 mm	9,0 - 11,0 mm
H 977-32	GL 25	22 x 10 x 6,6 mm	9,0 - 11,0 mm

Other dimensions on request.

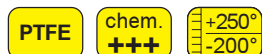
As a manufacturing company we are able to fulfill almost all of your wishes. We will be glad to submit you our best quotation - for free, of course.

Fax +49(0)9346 / 92 86-55



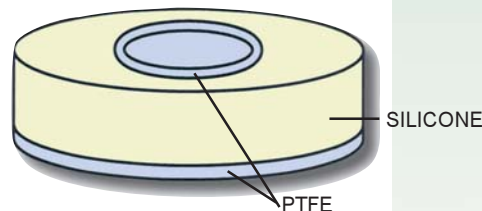
BOLA-One-Sided Gaskets

Silicone-O-ring with fluoroplastic (PTFE) washer. The packing unit is 10 pieces. Please always order a multiple of 10 pieces, e.g. 20, 40 or 80 pieces. Quantities which do not correspond to factor 10 will be rounded up.



BESTSELLER

Cat.No.	For thread	O.D. x I.D. x Height	For tube O.D.
H 975-02	GL 14	12 x 6,0 x 3,5 mm	5,5 - 6,5 mm
H 975-04	GL 18	16 x 6,0 x 4,5 mm	5,5 - 6,5 mm
H 975-06	GL 18	16 x 8,0 x 4,5 mm	7,5 - 9,0 mm
H 975-10	GL 18	16 x 10,0 x 4,5 mm	9,0 - 11,0 mm
H 975-12	GL 25	22 x 8,0 x 6,5 mm	7,5 - 9,0 mm
H 975-14	GL 25	22 x 10,0 x 6,5 mm	9,0 - 11,0 mm
H 975-18	GL 25	22 x 12,0 x 6,5 mm	11,0 - 13,0 mm
H 975-20	GL 32	29 x 10,0 x 9,0 mm	9,0 - 11,0 mm
H 975-22	GL 32	29 x 12,0 x 9,0 mm	11,0 - 13,0 mm
H 975-26	GL 32	29 x 14,0 x 9,0 mm	13,0 - 15,0 mm
H 975-28	GL 32	29 x 16,0 x 9,0 mm	15,0 - 17,0 mm
H 975-30	GL 32	29 x 18,0 x 9,0 mm	17,0 - 19,0 mm
H 975-34	GL 45	42 x 26,0 x 9,0 mm	25,0 - 27,0 mm
H 975-36	GL 45	42 x 32,0 x 9,0 mm	31,0 - 33,0 mm





Screw Caps with your colour, your logo?

Which size (from GL 14 to GL 45) of PP or PPS caps may we injection-mould with your logo and in your colour?

The minimum quantity is 500 pieces.



BOLA-Screw Caps with Aperture

Made of glass-fibre reinforced PP. Colour: green. Resistant to high mechanical stresses. A very handy knurl allows safe closing and easy opening.

PP	chem. ++	+140° -20°	autoclave 121°
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Cat. No.	For thread	Bore dia.
H 999-45	GL 45	34 mm

BOLA-HT (High Temp) Screw Caps with Virgin PTFE Membrane Gaskets

Made of PPS (polyphenylsiloxan). The screw caps with virgin PTFE membrane gaskets are resistant to high mechanical stresses - even at temperatures of up to +250°C. The very handy knurl allows a safe closing and an easy opening of the screw caps. The gasket consists of a virgin PTFE membrane with a multidirectionally orientated fibre structure. Thus, the medium is exposed only to PTFE and a universal chemical resistance is assured. The PTFE membrane with its plastic and elastic qualities can easily be formed, and unevennesses along the contact surface can be compensated. This membrane which has an excellent sealing quality is particularly suitable for the use under vacuum (cold traps, ...). According to VDI/VDE directions 2480 the gasket is physiologically safe at a permanent temperature up to +250°C. The requirements according to FDA 21 CFR 177-1550 are also fulfilled.



PPS	chem. +++	+250° -200°	For vacuum
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Cat.No.	For thread
PPS-Caps	
H 994-14	GL 14
H 994-18	GL 18
H 994-25	GL 25
H 994-32	GL 32
H 994-45	GL 45

BOLA-Screw Thread Adaptor Couplings

Made of fluoroplastic. For flexible coupling of two glass screw threads, with integral PTFE/FPM gasket. The medium is exposed only to PTFE. The screw caps are made either of glass-fibre reinforced PPS or of PBTP.

PTFE	chem. +++
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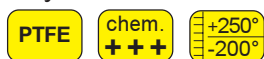
PPS-Cap (up to +250°)	PBTP -Cap (up to +180°)	For thread	Length from contact surface to contact surface
Cat. No.	Cat. No.		
H 900-01	H 901-01	GL 14	15 mm
H 900-02	H 901-02	GL 18	17 mm
H 900-03	H 901-03	GL 25	22 mm
H 900-04	H 901-04	GL 32	22 mm
H 900-05	H 901-05	GL 45	23 mm





BOLA-Screw Thread Adaptor Couplings, Reduced

Made of fluoroplastic. With screw cap made of glass-fibre reinforced PPS (max. +250°C). For flexible coupling of two glass screw threads, with integral PTFE/FPM gasket. The medium is exposed only to PTFE.



Cat.No.	From thread	To thread	Length from contact surface to contact surface
H 904-02	GL 18	GL 14	20,0 mm
H 904-03	GL 25	GL 14	27,5 mm
H 904-04	GL 25	GL 18	28,3 mm
H 904-05	GL 32	GL 18	32,5 mm
H 904-06	GL 32	GL 25	28,0 mm
H 904-07	GL 45	GL 25	38,0 mm
H 904-08	GL 45	GL 32	33,0 mm

Other thread sizes are available on request

BOLA-Bellows for GL Threads

Made of fluoroplastic. With screw caps made of PPS. The sharp folds allow a very flexible connection (up to an angle of 120°) and an ideal elimination of stresses between connections with GL threads.

Cat.No.	For thread	Min. length	Max. length
H 902-05	GL 25	58 mm	104 mm
H 902-10	GL 32	58 mm	90 mm
H 902-15	GL 45	67 mm	115 mm



BOLA-Distributors for Bottles

Made of fluoroplastic. For miniature fittings, with female thread ports UNF 1/4" 28 G on top and bottom of the distributor. Suitable for bottles with GL 45 thread, complete with screw cap made of thermoplastic PPS. These distributors for bottles with FEP stopcock have a wide working temperature range, from -50°C to +200°C.

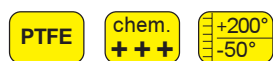


Cat.No.	Number of stopcocks	For tubing I.D. x O.D.	Bore dia.	Ports	For thread	
F 745-02	1	without stopcock	0,8 x 1,6 mm	0,8 mm	2 x UNF 1/4" 28 G	GL 45
F 745-04		without stopcock	1,6 x 3,2 mm	1,6 mm	2 x UNF 1/4" 28 G	GL 45
F 745-10	2	without stopcock	0,8 x 1,6 mm	0,8 mm	4 x UNF 1/4" 28 G	GL 45
F 745-12		without stopcock	1,6 x 3,2 mm	1,6 mm	4 x UNF 1/4" 28 G	GL 45
F 746-02	3	with 2 stopcocks	0,8 x 1,6 mm		2 x UNF 1/4" 28 G	GL 45
F 746-04		with 2 stopcocks	1,6 x 3,2 mm		2 x UNF 1/4" 28 G	GL 45
F 746-10	4	with 3 stopcocks	0,8 x 1,6 mm		3 x UNF 1/4" 28 G	GL 45
F 746-12		with 3 stopcocks	1,6 x 3,2 mm		3 x UNF 1/4" 28 G	GL 45

BOLA-Chromatography Adaptors

Made of fluoroplastic. With elastic gasket. The medium is exposed only to fluoroplastic.

These chromatography adaptors are suitable for connecting GL threads with the chromatography thread UNF 1/4" 28 G. Available for two tubing diameters.



For tubing 0,8 x 1,6 mm	For tubing 1,6 x 3,2 mm	Female thread	For thread
Cat.No.	Cat.No.		
F 755-03	F 757-03	1 x UNF 1/4" 28 G	GL 14
F 755-06	F 757-06	1 x UNF 1/4" 28 G	GL 18
F 755-09	F 757-09	1 x UNF 1/4" 28 G	GL 25
F 755-12	F 757-12	1 x UNF 1/4" 28 G	GL 32
F 755-15	F 757-15	1 x UNF 1/4" 28 G	GL 45





BOLA-Hose Connectors (with Nut)

Made of fluoroplastic. Types: straight and bent. With glass-fibre reinforced PPS screw caps with aperture (max. +250°C). The hose connectors are made of PFA and have an elastic PFA sealing lip and a FPM O-ring. The medium is exposed only to PFA (thread sizes GL 25 and GL 32 are made of PTFE).



BESTSELLER

Cat.No.	1	Thread	Connector O.D.	Connector I.D.	Length
D 581-02		GL 14	8,7 mm	6 mm	45 mm
D 581-04		GL 18	10,5 mm	7 mm	51 mm
D 581-06		GL 25	16 mm	10 mm	68 mm
D 581-08		GL 32	21 mm	16 mm	80 mm

Cat.No.	2	Thread	Connector O.D.	Connector I.D.	Length
D 582-02		GL 14	8,7 mm	6 mm	49 mm
D 582-04		GL 18	10,5 mm	7 mm	65 mm

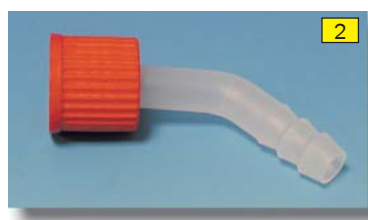
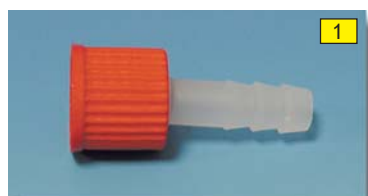
BOLA-Hose Connectors (without Nut)

Made of fluoroplastic. Types: straight and bent. The hose connectors are made of PFA and have an elastic PFA sealing lip and a FPM O-ring. The medium is exposed only to PFA (thread sizes GL 25 and GL 32 are made of PTFE).



Cat.No.	1	Thread	Connector O.D.	Connector I.D.	Length
D 568-14		GL 14	8,7 mm	6 mm	35 mm
D 568-18		GL 18	10,5 mm	7 mm	39 mm
D 568-25		GL 25	16 mm	10 mm	55 mm
D 568-32		GL 32	21 mm	16 mm	65 mm

Cat.No.	2	Thread	Connector O.D.	Connector I.D.	Length
D 569-14		GL 14	8,7 mm	6 mm	39 mm
D 569-18		GL 18	10,5 mm	7 mm	54 mm



BOLA-Hose Connectors (with Nut)

Particularly designed for a higher flow rate. Types: straight and bent, with elastic sealing lip and FPM O-ring. The medium is exposed only to PP. Supplied with matching PBTP cap.



Cat.No.	1	Thread	Connector O.D.	Connector I.D.	Length
D 585-14		GL 14	9 mm	6 mm	46 mm
D 585-18		GL 18	10,8 mm	7 mm	52 mm
D 585-25		GL 25	16 mm	10 mm	68 mm

Cat.No.	2	Thread	Connector O.D.	Connector I.D.	Length
D 586-14		GL 14	9 mm	6 mm	51 mm
D 586-18		GL 18	10,8 mm	7 mm	66 mm

BOLA-Hose Connectors (without Nut)

Particularly designed for a higher flow rate. Types: straight and bent, with elastic sealing lip and FPM O-ring. The medium is exposed only to PP.



Cat.No.	1	Thread	Connector O.D.	Connector I.D.	Length
D 583-14		GL 14	9 mm	6 mm	36 mm
D 583-18		GL 18	10,8 mm	7 mm	40 mm
D 583-25		GL 25	16 mm	10 mm	55 mm

Cat.No.	2	Thread	Connector O.D.	Connector I.D.	Length
D 584-14		GL 14	9 mm	6 mm	41 mm
D 584-18		GL 18	10,8 mm	7 mm	55 mm

