

24 THE PROFESSIONAL CONNECTION: CONNECTION-SYSTEM FOR DURAN® LABORATORY GLASS BOTTLES

The connection systems for DURAN® laboratory glass bottles enable safe transfer of liquid media within a closed and sterile system. Therefore they are ideally suited to use in chemistry and biotechnology laboratories.

Successfully used in numerous applications

- Feeding of HPLC automated machines with solvents (eluent)
- Disposal of waste media
- Titration systems
- All closed systems in which a sterile transfer of media is required and as a result of which pressure results (only in conjunction with DURAN® pressure plus bottle)
- Biotechnology processes, e.g. to pump additives such as culture media etc. from reservoir vessels into reaction vessels
- Automated, closed processes to transfer pure, sterile media
- Transfer of harmful-to-health, toxic substances in closed systems (to reduce out gassing)
- Autoclavable





How it works: flexible working with system

The basis of the connection system for DURAN® laboratory bottles are screw caps with GL 45 threads and two or three outlets or ports. Liquid media can be added to or removed from bottles using the tube connections. Using a universal GL 14 tube adapter and different inserts, four different tube diameters can be used. An additional membrane filter with 0.2 µm pore size permits sterile pressure equalization via one of the outlets.

This flexible, modular system provides the option of combining various components according to need and application.

The components are compatible with each other and are used in conjunction with original DURAN® GL 45 laboratory glass bottles. To increase safety in the laboratory, use of the pressure-resistant DURAN® pressure plus laboratory glass bottle is to be recommended. Due to its modified geometry, a pressure-resistance of -1 bar to +1.5 bar is assured, as confirmed by TÜV.

One system – many advantages

- Wide range of uses, because the screw cap is based on the standard GL 45 thread
- Four different tube diameters can be used (1.6 mm [1/16 Inch]; 3.0 mm; 3.2 mm [1/8 Inch]; 6.0 mm [1/4 Inch])
- The components for the 2- and 3-port system are identical and interchangeable
- Unused ports can be sealed with a blanking cap
- Due to their composition (PP and PTFE), the caps and all individual components are autoclavable and are thus easily reused; dismantling into individual parts is not necessary
- Through working in a closed system, toxic gases are largely retained in the bottle and the evaporation of expensive substances is reduced
- Flexible modular system for individual assembly according to application
- Temperature resistant to +140 °C
- Autoclavable



DURAN® products can be obtained from your specialist laboratory dealer.

Order addresses and other details about the items (e.g. technical information) can be found under www.duran-group.com or in the DURAN® laboratory glassware catalogue.

Special safety caps and wide-neck bottles are contained in the brochures "DG Safety Caps" and "DURAN® GLS80 Glass bottles with wide neck".

Product	Item No.	Material	Colour	Temperature resistance	Chemical resistance	Tightness	Con-formity	DIN-Threads	Special properties	Additional available sizes
Caps										
Premium Cap	10 886 79	TpCh260/ PTFE/Silicone	co- lour- less	-196 °C/+260 °C	+++	+++	FDA/ USP	GL 45	Sealing disk/ Batch Code on item	-
Membrane Cap	10 886 55	PP/PTFE	Blue	-40 °C/+140 °C	+	+	FDA	GL 45	Pressure equali- zat. from 0.1 bar	GL 32, 25
PP Cap	29 239 28	PP	Blue	-40 °C/+140 °C	+	+	FDA	GL 45		GL 32, 25
	29 338 286	PP	Green	-40 °C/+140 °C	+	+	FDA	GL 45		-
	29 338 280	PP	Yellow	-40 °C/+140 °C	+	+	FDA	GL 45		-
	29 338 288	PP	Grey	-40 °C/+140 °C	+	+	FDA	GL 45		-
Tamper-evident Cap	10 175 26	PP	Blue/ Red	-40 °C/+140 °C	+	+	FDA	GL 45	Tamper- evident cap	-
	11 558 86	PP	Blue/ Yellow	-40 °C/+140 °C	++	++	FDA	GL 45	Tamper-evi- dent cap with sealing disk	-
PBT Cap	29 240 28	PBT/PTFE/ Silicone	Red	-45 °C/+180 °C	++	++	FDA	GL 45	With sealing disk	GL 32, 25, GL 18, 14
PBT Aperture Cap	29 227 10	PBT	Red	-45 °C/+180 °C	++	++	FDA	GL 45	Opening for e.g. septa	GL 32, 25, GL 18, 14
Pouring rings for										
Premium Cap	10 886 78	TpCh260	co- lour- less	-196 °C/+260 °C	+++	+++	FDA/ USP	GL 45		-
PBT Cap	29 244 28	ETFE	Red	-45 °C/+180 °C	++	++		GL 45		GL 32
PP Cap	29 242 28	PP	Blue	-40 °C/+140 °C	+	+	FDA	GL 45		GL 32
	10 899 11	PP	Green	-40 °C/+140 °C	+	+	FDA	GL 45		-
	10 899 14	PP	Yellow	-40 °C/+140 °C	+	+	FDA	GL 45		-
	10 899 17	PP	Grey	-40 °C/+140 °C	+	+	FDA	GL 45		-

Product DURAN GL 45 Connection System	Item No.	Material	Colour	Temperature resistance	Chemical resistance	Tightness	Con- formity	DIN- Threads	Special properties
2/3-Ports									
Screw cap GL 45, 2-ports GL 14	11 297 50	PP	Blue/Grey	-40 °C/+140 °C	+	+	FDA	GL 45/14	2-Ports (GL 14)
Screw cap GL 45, 3-ports GL 14	11 297 51	PP	Blue/Grey	-40 °C/+140 °C	+	+	FDA	GL 45/14	3-Ports (GL 14)
Screw cap GL 14 for tube connection	11 298 14	PP	Blue	-40 °C/+140 °C	+	+	-	GL 14	
Insert for screw cap GL 14, 1.6 mm [1/16 inch] iØ	11 298 15	PTFE/ Silicone	White	-50 °C/+230 °C	+++	++	FDA	-	
Insert for screw cap GL 14, 3.0 mm [-1/8 inch] iØ	11 298 16	PTFE/ Silicone	White	-50 °C/+230 °C	+++	++	FDA	-	
Insert for screw cap GL 14, 3.2 mm [1/8 inch] iØ	11 298 17	PTFE/ Silicone	White	-50 °C/+230 °C	+++	++	FDA	-	
Insert for screw cap GL 14, 6.0 mm [-1/4 inch] iØ	11 298 18	PTFE/ Silicone	White	-50 °C/+230 °C	+++	++	FDA	-	
Screw cap, GL 14 Red	11 562 92	PBT/ PTFE/ Silicone	Red	-45 °C/+180 °C	++	++	FDA	GL 14	
Pressure equalization set for 2- and 3-port screw cap (incl. 0.2 m membrane filter)	11 377 99	PBT/PP/ PTFE	White	-40 °C/+140 °C	+	+		GL 14	
Spare membrane filter for pres- sure equalization 0.2 µm	11 298 19	PP/PTFE	White	-40 °C/+140 °C	+	+		-	
4-Ports									
Screw cap HPLC GL 45	11 298 12	PP	Blue/Grey	-40 °C/+140 °C	+	+		GL 45	4-Ports (complete set)
Spare set for HPLC cap	11 298 13	PP	Blue/Grey	-40 °C/+140 °C	+	+			4-Ports (complete set)
Pressure equalization set for 4 ports	11 378 01	PP	Blue/Grey	-40 °C/+140 °C	+	+			
Spare membrane filter for pres- sure equalization 0.2 µm	11 298 19	PP	Blue/Grey	-40 °C/+140 °C	+	+			

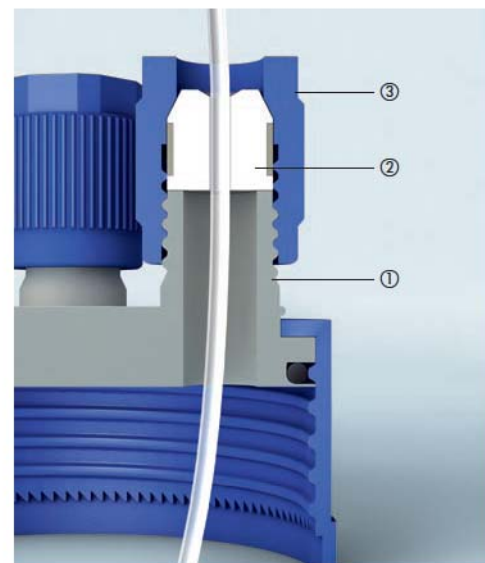
ORDERING MADE EASY:

You would like to equip two bottles with a three port connection system.

You would like to work with two different tube diameters (1.6 mm and 3 mm) and pressure equalization.

Consequently, you need the following individual components (1, 2 and 3 shown in the illustration):

- ① Screw cap GL 45 3 port
(Art. No. 1129751) 1 pack (2 per pack)
- ② Insert for screw cap GL14 1.6 mm
iØ, (Art. No. 1129815) 2 packs (1 per pack)
- ③ Screw cap GL 14 (Art. No. 1129814)
2 packs (2 per pack)
- ④ Insert for screw cap GL14 3.0 mm
iØ, (Art. No. 1129816) 2 packs (1 per pack)
- ⑤ Pressure equalization set (complete)
(Art. No. 1137799) 2 packs (1 per pack)



Order No.	Description	Thread	d mm	h mm	Pack. Qty
11 297 50	Screw cap GL 45, 2-port GL 14	GL 45	54	45	2
11 297 51	Screw cap GL 45, 3-port GL 14	GL 45	54	45	2
11 298 14	Screw cap GL 14 for tube connection	GL 14	20	28	2
11 298 15	Insert for screw cap GL 14, 1.6 mm [1/16 inch] iØ		13	13	1
11 298 16	Insert for screw cap GL 14, 3.0 mm [-1/8 inch] iØ		13	13	1
11 298 17	Insert for screw cap GL 14, 3.2 mm [1/8 inch] iØ		13	13	1
11 298 18	Insert for screw cap GL 14, 6.0 mm [-1/4 inch] iØ		13	13	1
11 562 92	Screw cap GL 14, red	GL 14	20	17	2
11 377 99	Pressure equalization set for 2- and 3-port screw cap (incl. 0.2 µm membrane filter)	GL 14	20	63	1
11 298 19	Spare membrane filter for pressure equalization 0.2 µm				2

*It's even easier with
the DURAN®
HPLC laboratory
glass bottle,
the preassembled
complete system*