

Screwthread Joints

A versatile system of couplings with standard glass screwthreads to which heat and chemically resistant melamine caps are fitted. An aperture in the top of each cap allows the fitting to pass through and be held in position by compression of a silicone rubber ring inside the cap. A PTFE washer protects the rubber ring and plastic cap from contact with the contents of the glass apparatus. All fittings are readily adjustable and depth of immersion can be altered quickly by slackening the screwcap.

Use under vacuum

Quickfit screwthread joints give excellent results under vacuum with no appreciable variation in performance between the available cap sizes. However, vacuum holding does tend to vary slightly, relative to the diameter of the insert, but the range 10^{-3} to 10^{-4} torr is typical of performance.

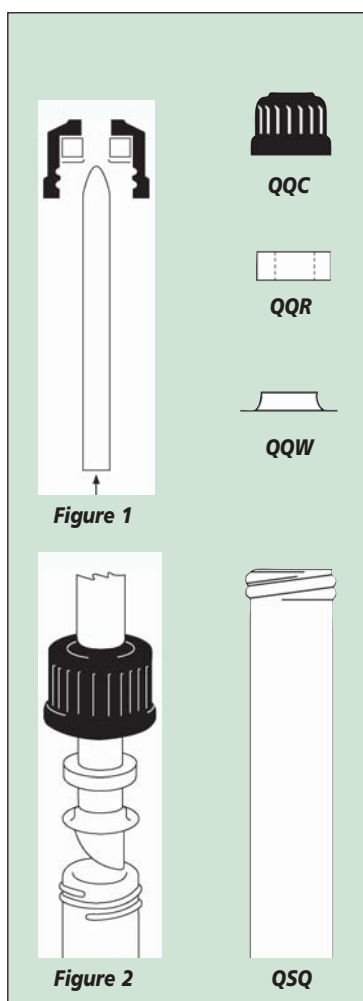
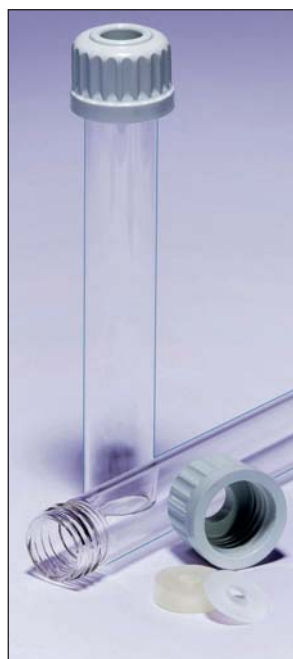
Use at temperature

Quickfit screwcaps, rings and washers can be safely used with apparatus operating up to 300°C providing excessive heat is not applied directly to the screwthread union. Direct heat application above 140°C will result in some discolouration and shrinkage of the screwcap although the rings and washers will be unaffected at this temperature.

Screwcap assembly

When using apparatus which incorporates screwthreads it is important that the PTFE washer is fitted carefully and correctly. This is best achieved by opening out the washer to the correct diameter using a tapered former. This should be carried out with the silicone rubber ring and PTFE washer in position in the plastic cap as shown in figure 1.

Withdraw the tapered former and remove the rubber ring and washer from the cap. Fit each component separately to the fitting which is to be held, as shown in figure 2, and screw the cap on to the thread. It is advisable that the ends of all fittings should be slightly tapered or fired in a Bunsen flame to remove sharp edges and produce a slight taper.



Glass screwthreads

	Thread size	Min. shank length mm	Shank o.d. mm	Min. bore mm
Unbadged				
QSQ13UB	13	160	11.1	7.5
QSQ18UB	18	160	15.4	10.5
QSQ24UB	24	140	22.5	15.5
QSQ28UB	28	110	24.5	19.7

Plastic screwcaps, silicone rubber rings and PTFE washers

To fit the QSQ range of screwthread joints.

	Thread size	Acceptable diameter through screwcap, mm
Plastic screwcap		
QQC13/7	13	6.0 to 7.0
QQC18/11	18	7.0 to 8.5
QQC24/12	24*	6.0 to 7.0
	24*	8.5 to 9.5
	24*	10.5 to 11.5
QQC28/13	28*	10.5 to 11.5

Rings and washers for screwcaps

	For cap thread size	To accept tube diameters, mm
Rubber ring		
QQR13/6	13	6.0 to 7.0
QQR18/7	18	7.0 to 8.5
QQR24/6	24*	6.0 to 7.0
QQR24/9	24*	8.5 to 9.5
QQR24/11	24*	10.5 to 11.5
QQR28/6	28*	6.0 to 7.0
QQR28/11	28*	10.5 to 11.5
QQR28/18	28*	18.0 to 19.0
PTFE washer		
QQW13/6	13	6.0 to 7.0
QQW18/7	18	7.0 to 8.5
QQW24/6	24*	6.0 to 7.0
QQW24/9	24*	8.5 to 9.5
QQW24/11	24*	10.5 to 11.5
QQW28/6	28*	6.0 to 7.0
QQW28/11	28*	10.5 to 11.5
QQW28/18	28*	18.0 to 19.0

*Size 24 screwcaps allow different tube sizes to be inserted by using the appropriate rubber rings and PTFE washers. Size 28 screwcaps also accept different tube diameters but screwcaps must be changed to fit each size together with rings and washers.