

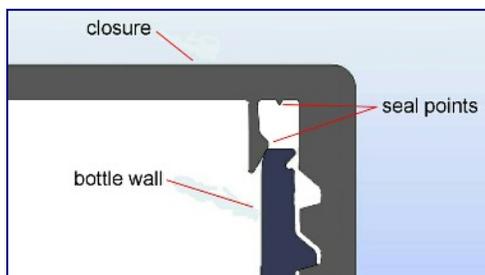
PharmaTainer™ FAQ

Reliable Closure Seal & Torque

<http://biofluidfocus.com/>

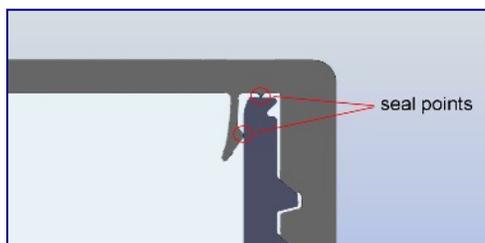
Closure seal is critical in pharmaceutical containers. PharmaTainer bottles and carboys achieve seal through a 2-point sealing system.

PharmaTainer closures have two sealing rings shown in the cut-away drawing below.



The innermost ring seals against the inside wall of the container neck. One can feel an increase in resistance as this ring engages when tightening the closure by hand. The outer seal ring seals against the rim of the container neck when the cap is applied with the recommended force (torque).

The PharmaTainer closure seal has been demonstrated to hold seal when applied at ambient lab temperature, then cooled to -80°C and finally brought back to ambient. ¹



Torque

It is necessary to apply a specific amount of torque to the closure to achieve a reliable engagement of the second seal ring. The table below shows the recommended values.

Torque Table in Newton Meters

Description	Resin	Non-freezing Apps			Freezing Apps		
		Max.	Nom.	Min.	Max.	Nom.	Min.
48mm Cap	HDPE	10	5	4	10	8	7
70mm Cap	HDPE	10	5	4	10	8	7
48mm Cap	PP	10	8	7	N/A	N/A	N/A
48mm Ported Cap	PP	10	6	8	N/A	N/A	N/A
70 mm Ported Caps on PC	PP	10	9	8	N/A	N/A	N/A
70 mm Ported Caps on PET	PP	10	8	7	N/A	N/A	N/A

Note: HDPE caps are standard on all PharmaTainer containers. Polypropylene is used for ported caps and some special modifications. Note that PP is not rated for service at -80°C . Generally torque values are the same whether on PC or PET containers. The exception is the 70mm ported closure. Nom.=Nominal a recommended value. All values in Newton meters.

¹ PharmaTainer FAQ -80 Tests at <http://biofluidfocus.com/downloads/literature>

Torque Fittings

Torque may be applied by hand or mechanically using a calibrated torque wrench. Three styles of torque fitting are available.

The standard torque fittings (2595-PC48/70) feature a T-bar handle for application of force by hand and a metal socket for use with ¼ inch drive torque wrenches. As a hand tool, this fitting is useful for opening containers as well as sealing them. The tools are autoclavable polycarbonate.

The deep torque fittings (2596-PCD48/70) are similar to the standard fitting, but with a deeper skirt so it is useful to apply torque to ported closures that do not yet have tubing affixed to the upper tubulations. Autoclavable polycarbonate.

Open Top NiAl Fittings (2597-NiAl48/70) are designed for use with ported closures that are assembled with tubing attached to the upper tubulations. There is no handle for hand application and the ¼ inch drive socket is off-set. Nickel-aluminum construction, autoclavable.



Catalog No.	Description
2595-PC48	Torque Fitting for 48mm
2595-PC70	Torque Fitting for 70mm
2596-PCD48	Deep Torque Fitting for 48mm
2596-PCD70	Deep Torque Fitting for 70mm
2597-NiAl48	Open-Top NiAl Torque Ftg. For 48mm
2597-NiAl70	Open-Top NiAl Torque Ftg. For 70mm



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