

# C14 TD1/TD2/TD3/TD4/TD5 Needles and Seals

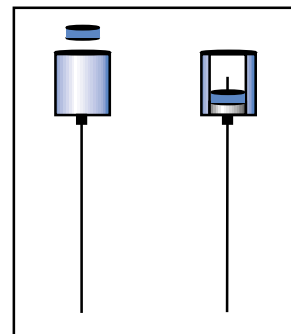
## Needles for the Desorption Tubes

In the Short Path™ Thermal Desorption System, the needle serves as the transfer line for the introduction of the sample into the Gas Chromatograph. This “short path” for sample transmission is the key advantage of the Short Path Thermal Desorption technology which minimizes sample decomposition, eliminates system contamination and provides for the maximum delivery of samples to the GC.

This 2 piece needle has been specifically designed for the AutoDesorb™ system and is now used for all models of the Thermal Desorption System replacing the previous design. The new design will permit the sealing of the needles and connecting tube to the desorption tube with just a finger tight twist connection. Vespel™ seals (sold separately) are used to make the leak tight seal. Double seals are not needed with this system. The needles are of the side port design to eliminate coring of the GC septa and are 35 mm long. The needles are available in plain stainless steel and now also in Silco™ coated steel to eliminate any metal surface in contact with your samples.

For other style needles please call.

Part No.	Description	Price ea.
786035	AutoDesorb™ Needle, 35 mm	
786135	AutoDesorb™ Needle, 35 mm, Silco™	



2 Piece Desorption Tube Needle and Cross Section Showing placement of the needle and seal.

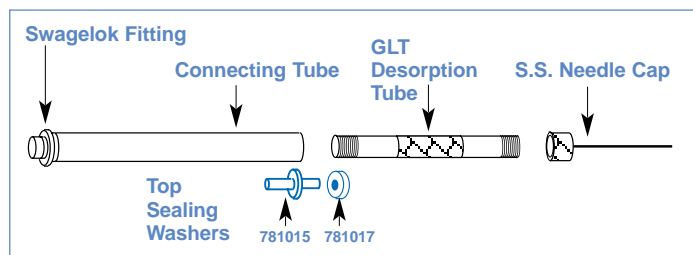
## Seals for Desorption Tubes

Seals are utilized in a variety of locations in the Short Path Thermal Desorption Unit.

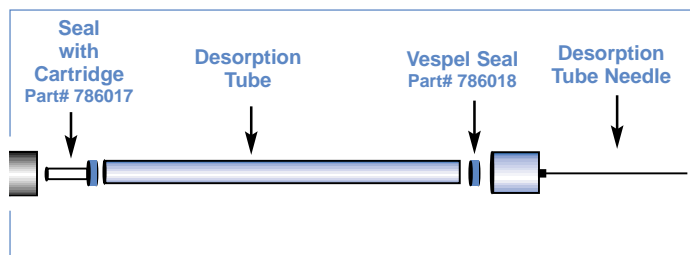
Graphite seals are physically soft but have excellent sealing properties and temperature limits and are recommended for most applications with the Desorption System. The graphite seals have good sealing properties when tightened finger tight, have a fairly good life, and provide for the highest temperature without contamination of the system by foreign matter.

PTFE seals have temperature limitations like the Viton™ seals, but are good general seals for lower temperature applications. They have good sealing characteristics, good abrasion resistance, and are usable to about 230°C. At temperatures above this they tend to flow and then are quite difficult to remove from the fittings.

Graphitized Vespel™ seals contain 40% graphite and physically are harder than graphite seals but with lower temperature limits. They require slightly more force to form a good seal in the Desorption Unit. Normally about 1/16 turn past finger tight will form a good seal. Since these seals are harder than graphite, they hold their shape better, have a longer life, and are easily removable.



Desorption Tube & Connector Assembly for TD1-TD4



Connecting Tube and Needle Assembly for TD5

Seals for the Desorption Tubes												
Part No.	Type	(Dimensions inches)			Cap Seal	Top Seal	Needle Seal	Accessory Seals	Max. Temp.	Sealing Properties	Price / pkg	Units /pkg
		O.D.	I.D.	Thick								
781004	PTFE Washer	.21	.12	.06	X	X	X	X	230°C	G		10/pkg.
781015	Graphite Top Sealing Washer	.21	.06	.06	-	X	-	X	450°C	EX		1 ea.
781016	Graphite Needle Washer	.21	.04	.06	X	-	X	-	450°C	EX		1 ea.
781017	Grap Vesp Top Sealing Washer	.22	.06	.06	-	X	-	X	350°C	G		1 ea.
781018	Grap Vesp Needle Seal Washer	.22	.04	.06	-	-	X	X	350°C	G		1 ea.
786017	Vespel Seal with Cartridge (TD5)											1 ea.