

**Trident Direct Guard Cartridge System** Easy to Use, Low Dead Volume—  
The Ultimate Combination of Convenience and Column Protection

Unlike “one size fits all” guard systems, the Trident direct system gives you the power to select the right level of protection for your analysis. The system offers three levels of protection, with a variety of bonded phases to match your analytical column. The economical, leak-free cartridge design provides an unprecedented combination of convenience, economy, and reliability. The foundation of the Trident direct system is a reusable direct connect holder that easily attaches to any HPLC column using CPI- or Waters-style end fittings.\* The system is available in configurations to match different protection levels: filter only, guard cartridge holder without filter, and guard cartridge holder with filter. The guard cartridges (see page 191) are available in 2.1 and 4.0 mm ID and are interchangeable within the holder.



25082

**Filter:**

Protection against particulate matter.



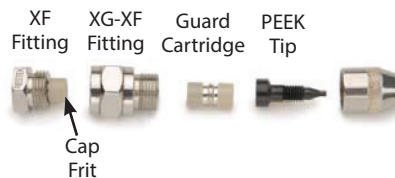
25084

**Guard Cartridge and Filter:**

Protection against particulate matter *and* moderate protection against irreversibly adsorbed compounds.

Trident direct 10 mm guard cartridge holder with filter

Components



Assembled



Installed onto column



Description	qty.	cat.#
High-pressure filter	ea.	25082
10 mm guard cartridge holder without filter	ea.	25083
10 mm guard cartridge holder with filter	ea.	25084
PEEK tip for Waters-style end fittings	ea.	25088
PEEK tip for standard fittings	ea.	25087

\*The standard PEEK tip in Trident direct systems is compatible with Parker, Upchurch Scientific, Valco, and other CPI-style fittings. To use Trident direct systems with Waters-style end fittings, replace the tip with cat.# 25088.

See page 191 for a full selection of Trident HPLC guard cartridges.

**Double the Protection With Cap Frits!**

**Replacement Cap Frits** for Trident Guard Cartridges

Replacement guard cartridges can cost as much as an analytical column, so why not protect them, too? The removable cap frit in a Trident direct helps prevent clogged cartridges to extend the life of your column, your cartridge, and your budget.

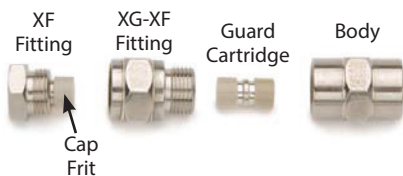
Description	ID	Porosity	qty.	cat.#
Replacement Cap Frits	4 mm	2.0 µm	5-pk.	25022
Replacement Cap Frits	4 mm	0.5 µm	5-pk.	25023
Replacement Cap Frits	2 mm	2.0 µm	5-pk.	25057
Replacement Cap Frits	2 mm	0.5 µm	5-pk.	25990



25022

Trident in-line 10 mm guard cartridge holder with filter

Components



Assembled



Installed onto column



Trident HPLC In-Line Guard Cartridge Holders

A Trident in-line guard cartridge holder can be used with almost any HPLC column by connecting it with a short piece of 1/16" tubing, appropriate nuts and ferrules, or finger-tight fittings. The system can be used with Restek® columns, or with columns from other manufacturers. Holders are available for 10 mm guard cartridges (see page 191). Purchase with or without a prefilter, which provides added protection against the particles that can shorten the lifetime of the guard cartridge.



25021



25040

Description	qty.	cat.#
Holder for 10 mm guard cartridge	ea.	25021
Holder with filter for 10 mm guard cartridge	ea.	25040
Frit-Type In-Line Filter, 2.0 µm	ea.	25041

For HPLC tubing, visit [www.restek.com/LCacc](http://www.restek.com/LCacc)

EXP® Reusable Fittings for HPLC & UHPLC for 10-32 fittings and 1/16" tubing  
EXP® Hand-Tight Coupler



25940

Description	qty.	cat.#
EXP Hand-Tight Coupler (2 Nuts, 2 Ferrules, 1/16" x 0.005" ID Tubing)	ea.	25940

Hybrid Ferrule U.S. Patent No. 8201854, Optimize Technologies. Optimize Technologies EXP Holders are Patent Pending. Other U.S. and Foreign Patents Pending. The Opti- prefix is a registered trademark of Optimize Technologies, Inc.

also available

Our entire EXP® fitting selection.

See page 335.



Double the Protection With Cap Frits!

Replacement Cap Frits for Trident Guard Cartridges

Replacement guard cartridges can cost as much as an analytical column, so why not protect them, too? The removable cap frit in a Trident direct helps prevent clogged cartridges to extend the life of your column, your cartridge, and your budget.



25057

Description	ID	Porosity	qty.	cat.#
Replacement Cap Frits	4 mm	2.0 µm	5-pk.	25022
Replacement Cap Frits	4 mm	0.5 µm	5-pk.	25023
Replacement Cap Frits	2 mm	2.0 µm	5-pk.	25057
Replacement Cap Frits	2 mm	0.5 µm	5-pk.	25990

### Trident HPLC Guard Cartridges

Description	3-pk. (10 x 2.1 mm)	3-pk. (10 x 4.0 mm)
<b>Pinnacle DB Guard Cartridges</b>		
Pinnacle DB C18 Guard Cartridge	941450212	941450210
Pinnacle DB C8 Guard Cartridge	941350212	941350210
Pinnacle DB Aqueous C18 Guard Cartridge	941850212	941850210
Pinnacle DB Biphenyl Guard Cartridge	940950212	940950210
Pinnacle DB PFP Propyl Guard Cartridge	941950212	941950210
Pinnacle DB Cyano Guard Cartridge	941650212	941650210
Pinnacle DB Silica Guard Cartridge	941050212	941050210
<b>Ultra Guard Cartridges</b>		
Ultra C18 Guard Cartridge	917450212	917450210
Ultra C8 Guard Cartridge	910350212	910350210
Ultra C4 Guard Cartridge	910250212	910250210
Ultra C1 Guard Cartridge	910150212	910150210
Ultra Aromax Guard Cartridge	912750212	912750210
Ultra Aqueous C18 Guard Cartridge	917850212	917850210
Ultra Biphenyl Guard Cartridge	910950212	910950210
Ultra IBD Guard Cartridge	917550212	917550210
Ultra PFP Propyl Guard Cartridge	917950212	917950210
Ultra Cyano Guard Cartridge	910650212	910650210
Ultra Amino Guard Cartridge	—	910750210
Ultra Silica Guard Cartridge	910050212	910050210
<b>Viva Guard Cartridges</b>		
Viva C18 Guard Cartridge	951450212	951450210
Viva C8 Guard Cartridge	951350212	951350210
Viva C4 Guard Cartridge	951250212	951250210
Viva Biphenyl Guard Cartridge	951650212	951650210
Viva PFP Propyl Guard Cartridge	951950212	951950210
Viva Silica Guard Cartridge	951050212	951050210



Trident HPLC Guard Cartridge







Experience *Selectivity Accelerated*

See pages 155–159 or visit [www.restek.com/raptor](http://www.restek.com/raptor)

Raptor™ EXP® Guard Columns also available.