

Restek's Exclusive Trident Integral System

- Convenient and economical leak-free guard cartridge system, extremely easy to install.
- Versatile configuration protects against all levels of contamination.
- Integral design eliminates troublesome tubing connections.

The system's foundation consists of the analytical column configured with our exclusive Trident end fitting and XF fitting. This configuration contains the standard internal frit as well as a replaceable cap frit, which easily can be changed without disturbing the packed bed. Changing the external frit can reverse the effects of accumulated particles, such as high backpressure or peak distortion. To obtain this basic configuration, simply order any Restek HPLC column, and add the suffix -700 to the catalog number for the column. Nominal additional charge.

For maximum protection against contaminants and particulate matter, the system can be configured with an integral guard cartridge holder (XG-XF), a guard cartridge, and a replaceable external frit. To obtain this configuration, simply order any Restek HPLC column, add the suffix -700 to the catalog number for the column, and order the appropriate XG-XF male fitting (cat.# 25026 or 25062, below) and Trident guard cartridges (page 339).



Lori McGarry
Environmental
Health & Safety Officer
2+ years of service!

Description	qty.	cat.#
XG-XF Fitting for 10mm Guard Cartridge	ea.	25026
XG-XF Fitting for 20mm Guard Cartridge	ea.	25062
Replacement XF Filter Fitting	ea.	25024
Replacement Cap Frits: 4mm, 2.0µm	5-pk.	25022
Replacement Cap Frits: 4mm, 0.5µm	5-pk.	25023
Replacement Cap Frits: 2mm, 2.0µm	5-pk.	25057

Trident Integral Guard System



Assembled column with Trident integral guard system



Column with Trident Integral Inlet Fitting (to order add "-700" to catalog number of column) and guard cartridge, XG-XF fitting, cap frit, and XF end fitting.



Remove the XF end fitting and install the guard cartridge in the end of the column.



Add the XG-XF fitting (order cat.# 25026 for 10mm guard cartridges, cat.# 25062 for 20mm guard cartridges).



Re-install the XF end fitting with cap frit.



The cap frit can be easily replaced if it becomes contaminated/plugged.

Trident Direct Guard Cartridge System, Cartridge Holders



Trident Direct provides three levels of protection



Trident Direct high-pressure filter
Protection against particulate matter.



Trident Direct 10mm guard cartridge holder with filter

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



Trident Direct 20mm guard cartridge holder with filter

Protection against particulate matter and maximum protection against irreversibly adsorbed compounds.

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 and guard cartridges in four dimensions, 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 level needs: in-line filter, in-line filter with holder for 10mm guard cartridge, and in-line filter with holder for 20mm guard cartridge. The guard cartridges are available in 2.1 and 4.0mm ID and are interchangeable within the appropriate length holder.

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

Description	qty.	cat.#
High-pressure filter	ea.	25082
10mm guard cartridge holder without filter	ea.	25083
10mm guard cartridge holder with filter	ea.	25084
20mm guard cartridge holder without filter	ea.	25085
20mm guard cartridge holder with filter	ea.	25086
Connection tip for Waters-style end fittings	ea.	25088
PEEK™ tip standard fittings	ea.	25087
Replacement Cap Frits: 4mm, 2.0µm	5-pk.	25022
Replacement Cap Frits: 4mm, 0.5µm	5-pk.	25023
Replacement Cap Frits: 2mm, 2.0µm	5-pk.	25057



Cap frits

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 either 10mm or 20mm guard cartridges. Either size can be purchased with or without a prefilter, which provides added protection against the particles that can shorten the lifetime of the guard cartridge.

Description	qty.	cat.#
Holder for 10mm guard cartridge	ea.	25021
Holder with filter for 10mm guard cartridge	ea.	25040
Holder for 20mm guard cartridge	ea.	25061
Holder with filter for 20mm guard cartridge	ea.	25060
Replacement Cap Frits: 4mm, 2.0µm*	5-pk.	25022
Replacement Cap Frits: 4mm, 0.5µm	5-pk.	25023
Replacement Cap Frits: 2mm, 2.0µm*	5-pk.	25057

*Standard porosity.



Holder for 10mm guard cartridge



Holder with filter for 10mm guard cartridge



Holder for 20mm guard cartridge



Holder with filter for 20mm guard cartridge

Trident HPLC Guard Cartridges

Guard Cartridges	3-pk. (10 x 2.1mm)	3-pk. (10 x 4.0mm)	2-pk. (20 x 2.1mm)	2-pk. (20 x 4.0mm)
Allure® AK	—	915950210	—	—
Allure® Basix	916150212	916150210	916150222	916150220
Allure® C18	916450212	916450210	916450222	916450220
Allure® PFP Propyl	916950212	916950210	916950222	916950220
Allure® Silica	916050212	916050210	916050222	916050220
Allure® Organic Acids	916550212	916550210	916550222	916550220
Allure® Aqueous C18	916850212	916850210	916850222	916850220
Allure® Biphenyl	916650212	916650210	916650222	916650220
pHidelity® C18	957930212	957930210	957930222	957930220
Pinnacle™ II Amino	921750212	921750210	921750222	921750220
Pinnacle™ II C8	921350212	921350210	921350222	921350220
Pinnacle™ II C18	921450212	921450210	921450222	921450220
Pinnacle™ II Cyano	921650212	921650210	921650222	921650220
Pinnacle™ II PAH	921950212	921950210	921950222	921950220
Pinnacle™ II Phenyl	921550212	921550210	921550222	921550220
Pinnacle™ II Biphenyl	—	920950210	—	920950220
Pinnacle™ II Silica	921050212	921050210	921050222	921050220
Pinnacle™ DB C8	941350212	941350210	941350222	941350220
Pinnacle™ DB C18	941450212	941450210	941450222	941450220
Pinnacle™ DB Aqueous C18	941850212	941850210	941850222	941850220
Pinnacle™ DB Biphenyl	940950212	940950210	940950222	940950220
Pinnacle™ DB PFP Propyl	941950212	941950210	941950222	941950220
Pinnacle™ DB Cyano	941650212	941650210	941650222	941650220
Pinnacle™ DB Phenyl	941550212	941550210	941550222	941550220
Pinnacle™ DB Silica	941050212	941050210	941050222	941050220
Ultra Amino	910750212	910750210	910750222	910750220
Ultra Aqueous C18	917850212	917850210	917850222	917850220
Ultra C1	910150212	910150210	910150222	910150220
Ultra C4	910250212	910250210	910250222	910250220
Ultra C8	910350212	910350210	910350222	910350220
Ultra C18	917450212	917450210	917450222	917450220
Ultra Carbamate	917750212	917750210	917750222	917750220
Ultra Cyano	910650212	910650210	910650222	910650220
Ultra IBD	917550212	917550210	917550222	917550220
Ultra PFP	917650212	917650210	917650222	917650220
Ultra Phenyl	910550212	910550210	910550222	910550220
Ultra Silica	910050212	910050210	910050222	910050220
Ultra Quat	918150212	918150210	918150222	918150220
Viva C18	951450212	951450210	951450222	951450220
Viva C8	951350212	951350210	951350222	951350220
Viva C4	951250212	951250210	951250222	951250220
Viva PFP Propyl	951950212	951950210	951950222	951950220
Viva Biphenyl	951650212	951650210	951650222	951650220
Viva Silica	951050212	951050210	951050222	951050220
Kromasil® C1	920150212	920150210	—	920150220
Kromasil® C4	920250212	920250210	—	920250220
Kromasil® C8	920350212	920350210	—	920350220
Kromasil® C18	920450212	920450210	—	920450220
Kromasil® Amino	920750212	920750210	920750222	920750220
Kromasil® Phenyl	920550212	920550210	920550222	920550220
Kromasil® Silica	920050212	920050210	—	920050220



10 & 20mm Guard Cartridges

new!



Kevin Davey
HPLC Column
Manufacturing Technician