



EXP[®]
UHPLC PRODUCTS

Extreme Pressure



Welcome to the brand new standard of ultra high pressure liquid chromatography (UHPLC) hardware and consumables. Optimize Technologies' EXP product family includes fittings, filters, and packed-bed products which offer unparalleled convenience and ease of use through exciting new patented and patent-pending innovations. This advanced system is the first design to provide reusable hand-tight connections and hand-tight cartridge replacement for UHPLC. These innovations significantly accelerate challenging UHPLC applications and reduce costly instrument downtime.

Revolutionary features include

- EXP titanium/PEEK hybrid ferrule offering repeated zero-dead-volume connections, hand-tight to 8,700 psi or wrench-tight to 20,000+ psi (1,400+ bar).
- EXP holders and cartridges with ultra-low internal swept volume and hand-tight cartridge changeover for use to 20,000+ psi (1,400+ bar).

This rare combination of attributes enables our EXP components to provide excellent protection with negligible impact on analyte retention and peak shape. The elegant design of our EXP line showcases sleek architecture for easy installation in crowded instrument compartments without compromising accessibility. Our commitment to exceed industry standards yields an entire EXP product family conservatively rated to 20,000+ psi (1,400+ bar). The EXP product line, as well as virtually all Optimize products, are proudly designed and manufactured in our facility in Oregon, USA*.

From the name you've trusted for 25 years of precision innovation in HPLC accessories and consumables, EXP represents the culmination of a generation of research and development in our field. And though our exacting quality control consistently guarantees that every product bearing the EXP trademark exemplifies our high standards, our responsive customer service and expert technical support are always here for you.

* 100% of all Optimize EXP products are made in the U.S.A. from raw materials originating in the U.S.A. 98% of all Optimize products are made in the U.S.A. from raw materials originating in the U.S.A.



optimizetechnologies
INNOVATIVE HPLC, UHPLC & LC/MS PRODUCTS

EXP[®]

Extreme Pressure

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The Foundation of the EXP Family

Optimize Technologies recognizes the challenges faced by scientists and technicians in the constantly evolving field of chromatography and LC instrumentation. Ultra high pressure liquid chromatography is one good example of how these advances present an opportunity for innovative products.

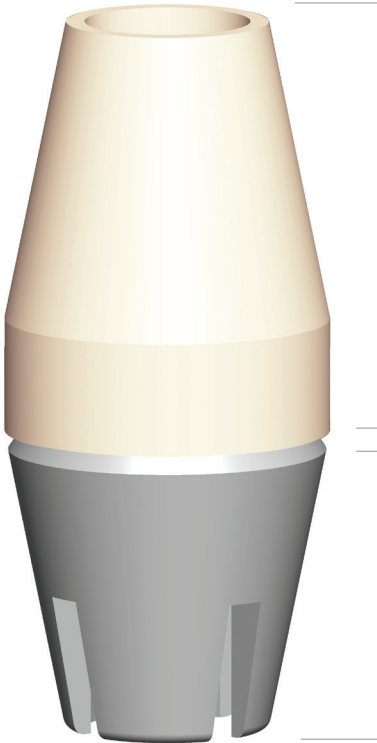
In response to evolving UHPLC technologies, Optimize delivers with the EXP Titanium PEEK Hybrid ferrule. The ingenuity of the EXP ferrule lies in a design which adjusts to **any 10-32 or 6-40 port depth** and can subsequently be removed and reused in a different port while still maintaining adjustability. The EXP ferrule provides the necessary zero-dead-volume seal to allow connections beyond 20,000+ psi (1,400+ bar).

The EXP ferrule, with its innovative capabilities, forms the foundation of our EXP product family. A quick look through these pages shows that the EXP ferrule is incorporated into the entire EXP product line, demonstrating its wide array of applications. If you are interested to see how the EXP products can work for you, please contact Optimize Technologies or one of our representatives. At Optimize, we strive to develop new products that are straight forward, yet elegant, solutions to daily issues in the lab.

ADVANTAGES OF THE EXP FERRULE

- Rated to 20,000+ psi (1,400+ bar)
- Tested to 30,000 psi
- Auto-adjusting ZDV connection
- Intended for many repeat uses
- No more cut-off and replacement of swaged ferrules

A Perfect Seal with every connection



PEEK:

Proven sealing ability
beyond 20,000+ psi
(1,400+ bar).

Titanium:

Enables the swage to
be released and reset.
Intended for many
repeat connections.



actual size of 10-32 EXP Ferrule

EXP FITTING SYSTEM

The EXP Fitting System is the premier adjustable nut and ferrule compression fitting for extreme high-pressure connections between 1/16" tubing and any 10-32 port. The key advantages of the EXP fitting lie at the confluence of simplicity and versatility.

The patent-pending Titanium Hybrid Ferrule integrates the resilience of titanium with the proven sealing ability of PEEK in a superb one-piece design. The Hybrid Ferrule provides a perfect seal with every connection, yet the swage can be released without tools to adjust to the different port depths of various hardware. This adjustability provides unlimited value through repeated zero-dead-volume connections with any 10-32 port configuration.

With the EXP Fitting System, you no longer have to clip off and replace swaged ferrules or wonder if you are achieving the best possible connection.

ADVANTAGES OF EXP FITTINGS

- Available in hand-tight & wrench-tight configurations
- Rated to 20,000+ psi (1,400+ bar)
- Tested to 30,000 psi
- Auto-adjusting ZDV connection
- Intended for many repeat uses

HAND-TIGHT

- Hand-Tight to 8,700+ psi
- Wrench-Tight to 20,000+ psi



HEX HEAD

- Rated to 20,000+ psi

EXP TITANIUM HYBRID FERRULES

15-24-03831	Titanium Hybrid Ferrule
15-24-03832	Titanium Hybrid Ferrules (10/pk)

HAND-TIGHT EXP FITTINGS

15-20-03888	10-32 Hand-Tight Nut & Titanium Ferrule
15-20-03930	10-32 Hand-Tight Nut & Titanium Ferrule (10/pk)

HEX HEAD EXP FITTINGS

15-20-04120	10-32 Standard Hex Head Nut & Titanium Hybrid Ferrule
15-20-03839	10-32 Hex Head Nut, Short
15-20-03840	10-32 Short Hex Nuts & Titanium Hybrid Ferrules (10/pk)
15-20-03833	10-32 Hex Head Nut, Standard
15-20-03834	10-32 Standard Hex Nuts & Titanium Hybrid Ferrules (10/pk)
15-20-03841	10-32 Hex Head Nut, Long
15-20-03842	10-32 Long Hex Nuts & Titanium Hybrid Ferrules (10/pk)

HAND-TIGHT EXP COUPLER

15-20-04128	1/16" OD x 0.005" ID x 5cm Stainless Steel Tubing (includes 2 EXP Hand-Tight Fittings)
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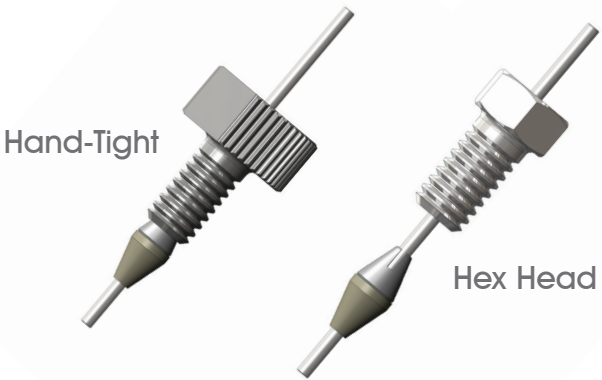
EXP NANO FITTING SYSTEM

The EXP Nano Fittings System offers hand-tight and hex head adjustable nut and ferrule compression fittings for extreme pressure connections between 1/32" stainless steel tubing and 6-40 ports.

Ideal for nano-scale UHPLC and UHPLC/MS, this nut and ferrule compression fitting is rated to 20,000+ psi (1400+ bar). The patent-pending EXP 1/32" Titanium Hybrid Ferrule combines the sealing capability of PEEK and robust nature of titanium to create the perfect seal. The ferrule can be released without tools, as the titanium permits the swage to be released and reset, allowing for many repeat connections and the ability to adjust to various port depths. The EXP product line streamlines the process of making fluid connections for UHPLC hardware and reduces instrument downtime. The combination of specialized features, innovative technology, and precision manufacturing make the EXP Nano Fittings an unbeatable choice for chromatographers operating at UHPLC pressures.

ADVANTAGES OF EXP NANO FITTINGS

- Rated to 20,000+ psi (1,400+ bar)
- Made in U.S.A.
- Intended for many repeat uses
- Auto-adjusting, zero-dead-volume connection
- One piece ferrule design
- Perfect for nano-scale UHPLC and UHPLC/MS



EXP TITANIUM HYBRID NANO FERRULES

15-19-04242	1/32" Titanium Hybrid Ferrule
15-19-04243	1/32" Titanium Hybrid Ferrules (10/pk)

HAND-TIGHT **EXP** NANO FITTINGS

15-19-04245	6-40 Hand-Tight Nut & 1/32" Titanium Hybrid Ferrule
15-19-04246	6-40 Hand-Tight Nut & 1/32" Titanium Hybrid Ferrule (10/pk)
15-19-04244	6-40 Hand-Tight Nut

HEX HEAD **EXP** FITTINGS

15-19-04248	6-40 Hex Head Nut & 1/32" Titanium Hybrid Ferrule
15-19-04249	6-40 Hex Head Nut & 1/32" Titanium Hybrid Ferrule (10/pk)
15-19-04247	6-40 Hex Head Nut

EXP[®] filtration

EXP STEM FILTER

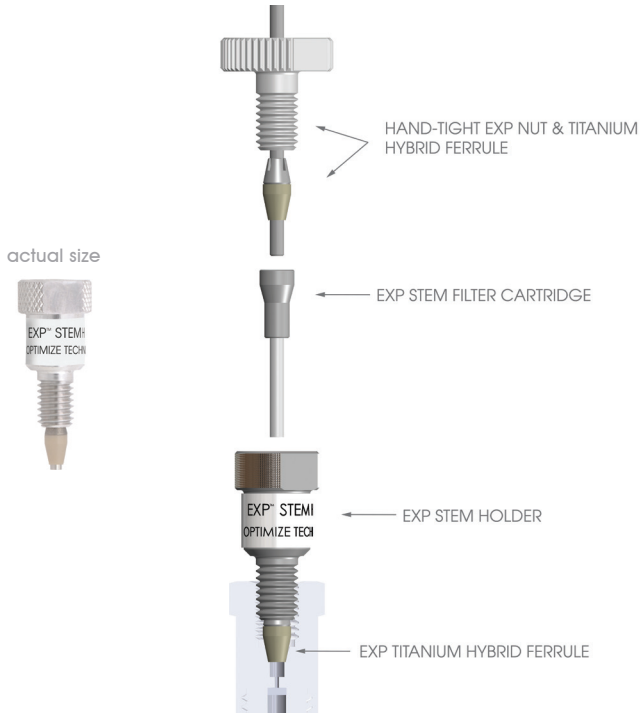
Modern UHPLC and UHPLC/MS instrumentation pushes the envelope in fluid-handling with tiny passages and extremely high pressures. At any time, an unprotected system is virtually a stray 1um seal fragment away from failure, loss of priceless data continuity, and subsequent troubleshooting and repair. The best assurance against this costly prospect comes from safeguarding your system with thorough filtration.

The EXP Stem Filter features a choice of frit porosities integrated with our patented auto-adjusting stem for repeated ZDV connections with any 10-32 port. The entire filter stem and reusable holder are only slightly larger than a standard HPLC fitting. This slim architecture allows it to easily fit into crowded instrument compartments, tightly spaced injection ports, and anywhere else you need an extra level of protection against clogging and contamination. The EXP Stem Filter is an ideal solution to protect expensive UHPLC columns, injectors, autosamplers, and MS electrospray tips without extra-column effects.

When tightened by hand, the EXP Stem Filter seals to 8,700+ psi. The reusable holder hardware also incorporates wrench flats to enable flawless sealing to 20,000+ psi (1,400+ bar). The EXP Stem Filter is the ultimate low-impact protection for your expensive UHPLC and MS equipment, assuring trouble-free performance so you can concentrate on the data, not troubleshooting.

ADVANTAGES OF EXP STEM FILTERS

- Approved for use at 20,000+ psi (1,400+ bar)
- Hand-tight and wrench-tight configuration
- Reusable holder intended for many repeat uses
- Auto-adjusting ZDV connection
- Low-dispersion cartridges
- Custom volumes/porosities available
- Ultra-low .27 µL total swept volume



EXP STEM FILTER KIT

15-04-041122	0.2 μm , EXP Stem Filter Kit
15-04-041123	0.5 μm , EXP Stem Filter Kit

EXP STEM FILTER REPLACEMENT CARTRIDGES

15-04-041117	0.2 μm , EXP Stem Filter Cartridge, 5/Pk
15-04-041119	0.5 μm , EXP Stem Filter Cartridge, 5/Pk

Kit includes: Holder, Ferrule & 3 Stem Filter Cartridges.

EXP[®] filtration

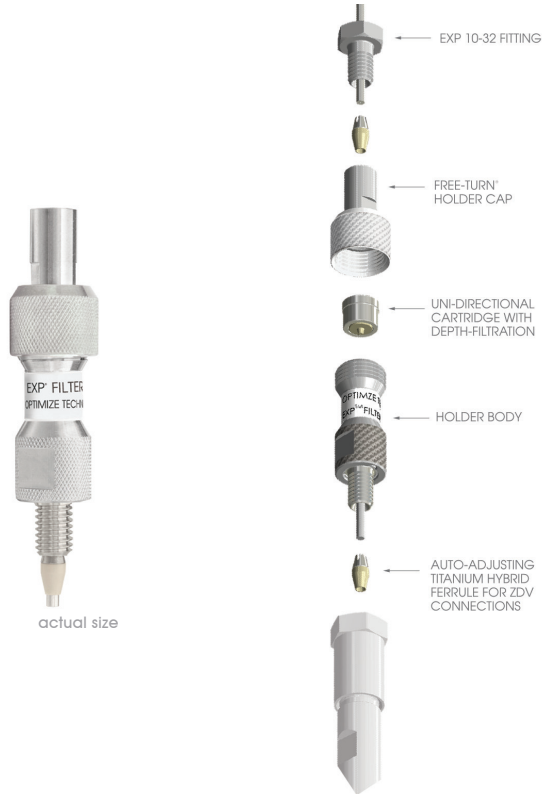
EXP PRE-COLUMN FILTER

The EXP Pre-Column Hand-Tight Filter is ideal for protecting small particle size UHPLC columns. Such techniques analyze samples in the most demanding applications, which can decrease the life of these expensive columns. EXP Pre-Column Filters help extend that life and protect your column investment without sacrificing performance. Free-turn[®] architecture allows the user to change cartridges by hand without breaking fluid connections on the holder inlet/outlet.

EXP Pre-Column Filter holders are available with Titanium Hybrid ferrules for easy direct connection to any 10-32 port. The filter holder comes as a complete package including fittings to provide repeated zero-dead-volume column connections.

ADVANTAGES OF EXP PRE-COLUMN FILTERS

- Approved for use at 20,000+ psi (1,400+ bar)
- Tested to 30,000 psi
- Depth filtration maximizes capacity
- Auto-adjusting ZDV column connection
- Custom volumes/porosities available
- Hand-tight filter replacement - NO TOOLS!
- Low-volume, low-dispersion cartridges
- Hardened stainless steel end cap eliminates galling



EXP PRE-COLUMN FILTER HOLDER

15-04-03837 **EXP** Pre-Column Filter Holder
(fittings included)



EXP PRE-COLUMN REPLACEMENT FILTER CARTRIDGES

15-04-03093	0.5 μm , EXP Filter Cartridge, 5/Pk
15-04-03096	0.2 μm , EXP Filter Cartridge, 5/Pk
15-04-03094	0.5 μm , EXP Filter Cartridge, 10/Pk
15-04-03097	0.2 μm , EXP Filter Cartridge, 10/Pk

U.S. Pat. No.s 5,525,303; 5,730,943; 5,911,954 and other U.S. and foreign patents pending.

EXP NANO TRAP AND NANO TRAP HR

The EXP Nano Trap System is designed to remove detergents or salts which can affect the ionization process in MS work rated for routine use up to 20,000 psi.

The new nano-scale traps are available in two formats – EXP Nano Trap and EXP Nano Trap HR. Both formats are available in 10 or 20 mm lengths and in a variety of bed volumes ranging from 0.25 - 4.0 μ L. The EXP Nano Trap follows a traditional trap column format, designed for removing detergents or salts in an offline sample loop. The new EXP Nano Trap HR is designed as a vented trap, with an even further reduction in extra column volume, resulting in impeccable and repeatable high-resolution Nano-LC. Concentrating the sample on-line with the EXP Nano Trap HR promotes increased recovery of the sample when compared with off-line techniques.

The new EXP Nano Trap Holder Kit incorporates Free-Turn architecture, allowing the user to quickly exchange trap columns by hand without breaking any fluid connections. The universal holder is compatible with both column types and lengths. Nano Holder kits include auto-adjusting EXP Nano Fittings, 6-40 thread, to ensure repeated Zero-Dead-Volume connections.

These specialized features, patented technology, precision engineering and 100% USA manufacturing make the new EXP Nano Trap and EXP Nano Trap HR an unbeatable choice for volume-critical Ultra High Pressure trapping applications.

ADVANTAGES OF EXP NANO TRAP

- Rated to 20,000+ psi (1,400+ bar)
- Cartridge-Based Format
- Reduced Column Volume for superior performance
- Repeated Zero-Dead-Volume, Hand-Tight connections
- Free-Turn Architecture for quick & convenient exchanges
- Available in bed volumes from 0.25ul to 4ul.

NANO TRAP KIT/REPLACEMENT TRAP SELECTION GUIDE

For bed volume and phase requirements, please refer to the selection guide below. Each kit includes 1 holder (fittings included) & 2 trap cartridges. The replacement traps are available in a 3 pack. Custom packing and more sizes are also available, please contact us for details.

Example: a three pack of 4μl Nano Trap HR replacement cartridges with HALO C18 would have part number 15-04515-HA

		Bed Volume	Dimensions	Dimension Code	Phase Code	Phase	
Standard	Nano Trap Kit	0.25μL	180um x 10mm	0 4 3 5 1	H A	C18	2.7μm HALO®
	Replacement Traps	0.25μL		0 4 3 5 2	H B	C8	
	Nano Trap Kit	0.50μL	180um x 20mm	0 4 2 1 8	H D	HILIC	
	Replacement Traps	0.50μL		0 4 2 1 9	H E	RP-Amide	
	Nano Trap Kit	4μL	500um x 20mm	0 4 2 2 7	H F	Phenyl-Hexyl	
	Replacement Traps	4μL		0 4 2 2 8	H N	Peptide ES-C18	
High Resolution	Nano Trap HR Kit	0.25μL	180um x 10mm	0 4 5 5 1	H G	C18	3μm EXP®
	Replacement Traps	0.25μL		0 4 5 5 2	H H	C8	
	Nano Trap HR Kit	0.50μL	180um x 20mm	0 4 5 0 8	H I	C4	
	Replacement Traps	0.50μL		0 4 5 0 9	H J	HILIC	
	Nano Trap HR Kit	4μL	500um x 20mm	0 4 5 1 4	H K	Phenyl-Hexyl	
	Replacement Traps	4μL		0 4 5 1 5	H L	SAX	
					H M	SCX	
					E S	Custom	

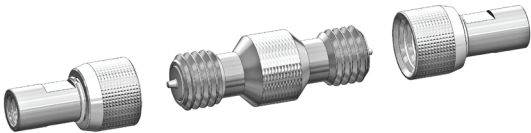
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Part Number



ADDITIONAL EXP NANO TRAP HOLDER

15-02-04177 EXP NANO HOLDER
(fittings included)

U.S. and foreign patents pending.

EXP STEM TRAPS

The entire EXP Stem Trap and reusable holder are only slightly larger than a standard HPLC fitting. Its slim architecture allows it to easily fit into crowded instrument compartments or to connect directly to tightly-spaced injection ports. When tightened by hand, the EXP Stem Trap seals to 8,700+ psi. All configurations incorporate wrench-flats to enable **flawless sealing to 20,000 + psi (1,400+ bar)**. The unique packed floating stem installs directly into any 10-32 port and automatically adjusts to provide a perfect ZDV connection.

Our specialized features, patented technology, precision engineering and state-of-the-art manufacturing make the new EXP Stem Trap an unbeatable choice for Ultra High Pressure trapping applications.

ADVANTAGES OF EXP STEM TRAPS

- Hand-tight and wrench-tight configurations
- Intended for many repeat uses
- Auto-adjusting ZDV connection
- Rated to 20,000+ psi (1,400+ bar)
- Custom packing available
- Available in bed volumes from 0.17ul to 2.6ul
- Low-volume, low-dispersion cartridges



ADDITIONAL EXP STEM HOLDERS

15-02-03996

EXP Stem Holder
(fittings included)

EXP Stem Trap Kit




Please use the table below to find the bed volume and phase you require.

Example: a three pack of 0.17 μ L Stem Traps packed with HALO C8 would have part number 15-03992-HB.

EXP STEM TRAP KIT SELECTION GUIDE

[illegible]

15-  - 

Part Number

* Includes 3 replacement stems. To be used with reusable EXP Stem Holder only.

** Suggested max load rate is based on 60/40 Acetonitrile/Water Mobile phase.

EXP TRAP COLUMNS

The patent-pending Hand-Tight EXP Trap Column is rated for use up to 20,000+ psi (1,400+ bar). This unique design connects directly to any injection valve (with 10-32 threads) or in-line with 1/16" stainless tubing for unparalleled convenience and efficiency.

The EXP Cartridge System enables chemists to quickly remove detergents or salts which can affect the ionization process in MS work. This trapping technique can concentrate the sample directly on-line thus allowing for increased recovery of precious sample material compared to off-line techniques. On-line trapping readily lends itself to automation for high-throughput analysis in UHPLC/MS applications. Free-turn[®] architecture allows the user to change cartridges by hand without breaking fluid connections on the holder inlet/outlet.

ADVANTAGES OF EXP TRAP COLUMNS

- Hand-tight to 20,000+ psi (1,400+ bar)
- Hand-Tight trap replacement - NO TOOLS
- Uni-directional cartridge
- Auto-adjusting ZDV connections
- Custom packing available
- Available in bed volumes from 4ul to 100ul
- Hardened stainless steel end cap eliminates galling

EXP HOLDERS

15-02-03956	EXP Direct Connect Holder (fittings included)
15-02-03946	EXP In-Line Holder (fittings included)
15-02-04041	EXP All-In-One Holder Kit (includes: In-Line and Direct-Connect Holder Components)

Extreme Pressure

EXP In-Line Holder



EXP Direct Connect Holder



actual size

Please use the table below to find the bed volume and phase you require.
Example: a three pack of 4 μ L Cartridges with HALO C8 Phase would have part number 15-03964-HB.

Cartridge



actual size

EXP TRAP CARTRIDGE SELECTION GUIDE

	Bed Volume	Suggested Max Load Rate*	Dimensions	Dimension Code	Phase Code	Phase	
3 PACKS	4 μ L	2mL/min	1.0 x 5mm	0 3 9 6 4	HA HB HD HE HF HN	C18 C8 Hilic Rp-Amide Phenyl-Hexyl Peptide ES-C18	2.7 μ m HALO
	10 μ L	4mL/min	1.5 x 5mm	0 3 9 6 9			
	20 μ L	6mL/min	2.1 x 5mm	0 3 9 7 3	HG HH HI HJ HK HL HM	C18 C8 C4 Hilic Phenyl-Hexyl SAX SCX	3 μ m EXP
	40 μ L	8mL/min	3.0 x 5mm	0 3 9 7 8			
	100 μ L	10mL/min	4.6 x 5mm	0 3 9 8 3	ES	Custom	
				15- [0 3 9 6 4] - [HB]			
				Part Number			

* Suggested max load rate is based on 60/40 Acetonitrile/Water Mobile phase.
Custom packing is also available, please contact us for details.

EXP GUARD COLUMNS

The EXP Guard Column cartridge system is rated to 15,000 psi with hand-tight replaceable cartridges. This unique design connects directly to any UHPLC column with the auto-adjusting Titanium Hybrid ferrule and EXP™ Fittings, providing repeated zero-dead-volume connections and easy adjustability between various column types.

Free-turn® architecture allows the user to change cartridges by hand without breaking fluid connections on the holder inlet/outlet. The combination of low-dispersion and ultra high-pressure capabilities provides effective protection with negligible effects on retention time, plate count, and peak shape.

ADVANTAGES OF EXP GUARD COLUMNS

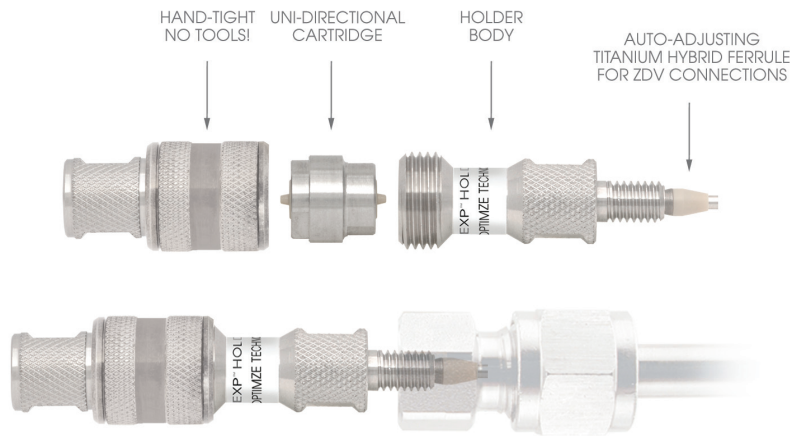
- Hand-tight guard replacement - NO TOOLS!
- Hardware rated to 20,000+ psi (1400+ bar)
- Packed guard rated for routine use to **15,000 psi (1,000 bar)**
- 1.4 µl Swept Volume (excluding packed bed)
- Hardened stainless steel end cap eliminates galling
- Low-volume, low-dispersion cartridges
- Auto-adjusting ZDV column connection

EXP HOLDER

15-02-03956

EXP Direct Connect Holder
(fittings included)

Extreme Pressure



Please use the table below to find the bed volume and phase you require.
Example: a three pack of 2.1 x 5 mm with HALO C8 Phase would have part number 15-04104-HB.

Cartridge



EXP GUARD CARTRIDGE SELECTION GUIDE

	Dimension	Dimension Code	Phase Code	Phase	
3 PACKS	1.0 x 5 mm	0 4 1 0 0	H A H B H C H D	C18 C8 C4 HILIC	Sub 2 µm
	1.5 x 5 mm	0 4 1 0 2			
	2.1 x 5 mm	0 4 1 0 4	H E H F H G H H	C18 C8 C4 HILIC	3 µm
	3.0 x 5 mm	0 4 1 0 6	H I H J H K	Phenyl-Hexyl SAX SCX	
	4.6 x 5 mm	0 4 1 0 8	E S	Custom	
15-			-		
Part Number					

U.S. Pat. No.s 5,525,303; 5,730,943; 5,911,954 and other U.S. and foreign patents pending.

EXP ANALYTICAL COLUMNS

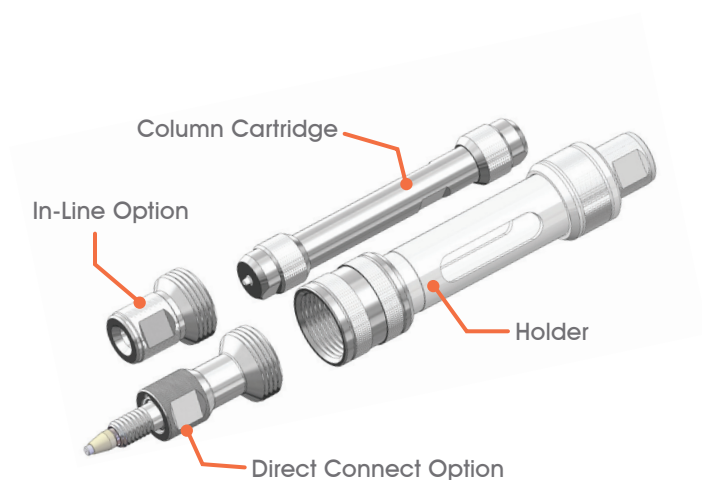
The cartridge-based EXP Analytical Column System is designed for superior chromatographic analysis with each injection rated for routine use up to 20,000 psi. The Analytical Column System is designed for superior chromatographic analysis with each injection.

The new EXP Analytical Column Holders incorporate Free-Turn Architecture allowing the user to quickly exchange columns without breaking any fluid connections. The EXP Analytical Column Holders are available in two formats – the standard In-Line format and Direct Connect, allowing the user to bypass additional tubing and connect directly to the detector for even greater resolution. Holder kits also include EXP Nuts and Titanium Hybrid Ferrules to ensure repeated Zero-Dead-Volume connections.

The new EXP Analytical Column Hardware is precision machined and held to the highest of specifications to ensure excellent performance and repeatability. EXP Analytical Column Hardware is available for purchase as empty columns. The column hardware is assembled up to the point of packing, allowing the customer to completely control the resins used, packing processes and testing conditions. Packing fixtures are also available and are compatible with all column dimensions.

ADVANTAGES OF EXP ANALYTICAL COLUMNS

- Hardware rated to 20,000+ psi (1400+ bar)
- Cartridge-Based Format
- Repeated Column Performance
- Free-Turn Architecture for quick exchanges of columns
- Quick Connect/Disconnect
- Repeated Zero-Dead-Volume Connections



EXP ANALYTICAL COLUMN HOLDERS

15-70-04448	50mm Inline Holder Kit
15-70-04450	100mm Inline Holder Kit
15-70-04454	50mm Direct Connect Holder Kit
15-70-04455	100mm Direct Connect Holder Kit

EXP ANALYTICAL COLUMN HARDWARE KITS

15-70-04457	1.0mm x 50mm
15-70-04461	1.0mm x 100mm
15-70-04471	2.1mm x 50mm
15-70-04473	2.1mm x 100mm
15-70-04476	3.0mm x 50mm
15-70-04479	3.0mm x 100mm
15-70-04483	4.6mm x 50mm
15-70-04487	4.6mm x 100mm

U.S. Pat. No.s 5,525,303; 5,730,943; 5,911,954 and other U.S. and foreign patents pending.

EXP CHECK VALVES

Introducing the OPTI-MAX EXP Check Valve cartridge system for UHPLC instruments. Rated for routine use at UHPLC system pressures, the unique housing design connects directly to the existing OEM Pump Heads and allows for quick and easy exchange between check valve cartridges.

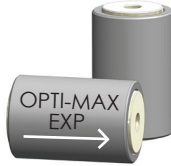
The new OPTI-MAX EXP Check Valve housings incorporate Free-Turn Architecture allowing the user to change check valve cartridges with the tubing still attached. This dramatically accelerates check valve maintenance, while reducing the wear on fittings.

The OPTI-MAX EXP Check Valve cartridge features a higher density ceramic ball and seat enabling the valve to be more responsive and seat faster in lighter solvents. Each ball and seat set is individually matched to ensure a lock-and-key fit, guaranteeing 3 bubbles/minute or less in the industry standard nitrogen bubble test (common acceptable standards are 12 bubbles/minute or less). As with all OPTI-MAX check valve products, ball travel within the cartridge is minimized to ensure quicker seating and more accurate pump metering.

The combination of specialized features, innovative technology, and precision manufacturing make the OPTI-MAX EXP Check Valve cartridge system an unbeatable choice for pumps operating at UHPLC pressures.

ADVANTAGES OF EXP CHECK VALVES

- Hardware rated to 20,000+ psi (1400+ bar)
- Cartridge based system - can be used between multiple brands
- Ceramic ball and seat - increased inertness and response
- Free-Turn Architecture for quick exchanges of cartridges
- Minimized ball travel distance - faster seating and accurate flows
- Body offers same outer dimensions as existing OPTI-MAX cartridges



EXP CHECK VALVES

10-86-02004 OPTI-MAX EXP Replacement Check Valve Cartridges (2pk)

Please visit [optimize-tech.com](https://www.optimize-tech.com) and click the "replacements parts" tab to purchase your specific check valve.

If your pump model is not listed on our website, please contact us directly as the OPT-MAX product line is continually expanding.

Trademarks

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Optimize Technologies[®] and Free-Turn[®] are registered trademarks of Optimize Technologies Inc.

Patents

U.S. Pat. No.s 5,525,303; 5,730,943; 5,911,954; 8,201,854 and other U.S. and foreign patents pending.

other Trademarks

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To get a catalog with our complete product offerings or to download an electronic copy, visit optimizetech.com/literature.



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