

HPLC and UHPLC

Upgrade your Vanquish LC system with Viper TQ UHPLC fittings

Perfect connections, every time: effortless installation, unmatched durability

Thermo Scientific™ Viper™ Fingertight Fittings transformed LC connections over a decade ago. Now, the next generation Thermo Scientific™ Viper™ TQ UHPLC Fittings set a new benchmark for the easiest and most durable fluidic connections in liquid chromatography. These fittings consistently deliver virtually zero-dead volume and leak-free connections, while minimizing carry-over.

Viper TQ UHPLC Fittings simplify fluidic connections for all users, requiring 40% less force compared to non-torque controlled fingertight fittings and providing an audible click and sensory feedback when correct tightening has been achieved. Tested through more than 300 connects and disconnects, they offer proven robustness and enhance the longevity and sustainability of Thermo Scientific™ Vanquish™ HPLC and UHPLC systems.

Thermo Scientific™ Viper™ TQ capillaries as well as active and passive pre-heaters and post-column coolers with TQ design maintain the same internal volume as their Viper-based predecessors, ensuring seamless integration and consistent performance with existing Vanquish HPLC and UHPLC system installations.

Designed to work with virtually any instrument, Viper TQ UHPLC Fittings support separation columns from 1.0 mm to 7.8 mm inner diameter, accommodating versatile applications.

Upgrade your LC system with confidence and enjoy smooth, reliable, and reproducible connections with Viper TQ UHPLC Fittings.

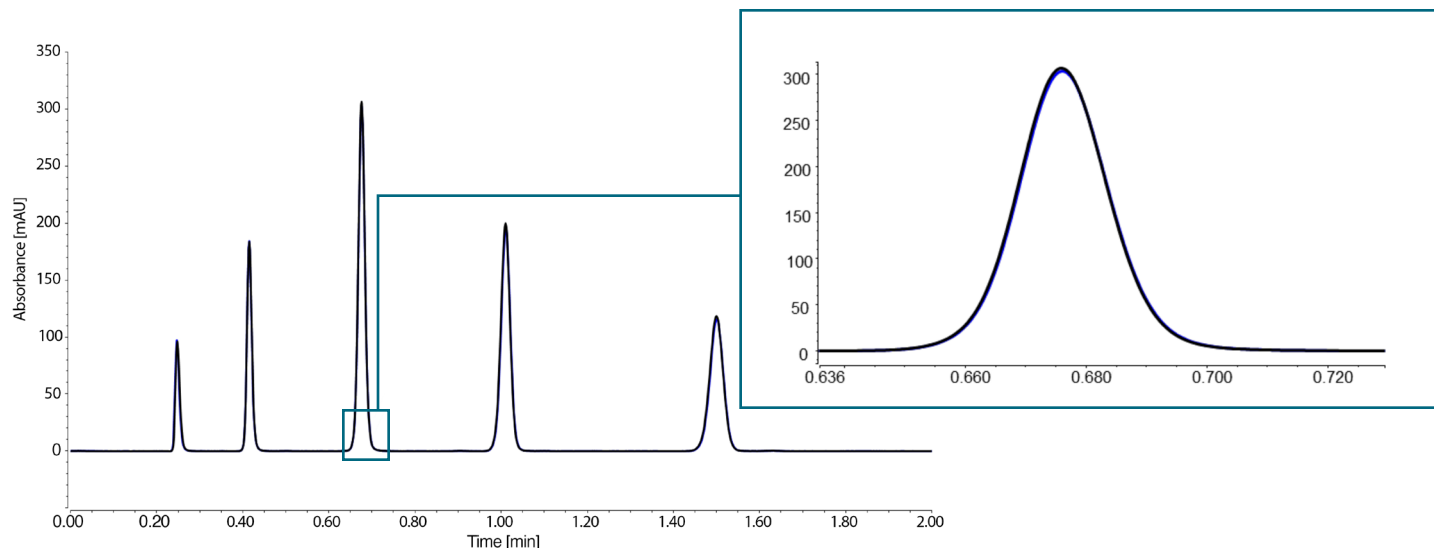


Figure: Two chromatograms of a separation on Thermo Scientific™ Hypersil GOLD™ 50 x 2.1 mm 1.9 µm C18 column achieved on a Vanquish Flex UHPLC system with Viper TQ UHPLC Fittings (black) and Viper Fingertight Fitting systems (blue) show perfect match.

Experience reliability in very sense

“Using the new fluidic connections with Viper TQ UHPLC Fitting design on our Vanquish LC systems has been remarkable.

The robust and tight connections provide a high level of reliability, and the capillaries are easier to use compared to other solutions. The tactile feedback ensures that the fittings are properly secured, regardless of the columns used.

I also appreciate the active pre-heater TQ design with replaceable outlet capillaries, which improves ecological efficiency while providing performance and consistency in my analyses.”

-Lyliia Drici, Senior Scientist at Ferring Pharmaceuticals



Ordering guide

Choose between standard or advanced Viper TQ capillaries, or system and application-specific Viper TQ kits to replace current Viper Fingertight Fitting systems with Viper TQ UHPLC Fittings in your Vanquish HPLC and UHPLC systems.

Standard stainless-steel (SST) Viper and Viper TQ capillaries

Viper Fingertight fitting system		Viper TQ UHPLC fitting	
Product name	Part number	Product name	Part number
Viper SST 0.180 x 150 mm	6040.2360	Viper TQ SST 0.180 x 150 mm	6751.1815
Viper SST 0.180 x 250 mm	6040.2385	Viper TQ SST 0.180 x 250 mm	6751.1825
Viper SST 0.180 x 350 mm	6040.2375	Viper TQ SST 0.180 x 350 mm	6751.1835
Viper SST 0.180 x 450 mm	6040.2365	Viper TQ SST 0.180 x 450 mm	6751.1845
Viper SST 0.180 x 550 mm	6040.2355	Viper TQ SST 0.180 x 550 mm	6751.1855
Viper SST 0.180 x 650 mm	6040.2395	Viper TQ SST 0.180 x 650 mm	6751.1865
Viper SST 0.180 x 750 mm	6040.2370	Viper TQ SST 0.180 x 750 mm	6751.1875
Viper SST 0.180 x 850 mm	6040.2380	Viper TQ SST 0.180 x 850 mm	6751.1885
Viper SST 0.180 x 950 mm	6040.2390	Viper TQ SST 0.180 x 950 mm	6751.1895
Viper SST 0.130 x 100 mm	6040.2322	Viper TQ SST 0.130 x 100 mm	6751.1310
Viper SST 0.130 x 150 mm	6040.2315	Viper TQ SST 0.130 x 150 mm	6751.1315
Viper SST 0.130 x 250 mm	6040.2325	Viper TQ SST 0.130 x 250 mm	6751.1325
Viper SST 0.130 x 350 mm	6040.2335	Viper TQ SST 0.130 x 350 mm	6751.1335
Viper SST 0.130 x 450 mm	6040.2345	Viper TQ SST 0.130 x 450 mm	6751.1345
Viper SST 0.130 x 550 mm	6040.2305	Viper TQ SST 0.130 x 550 mm	6751.1355
Viper SST 0.130 x 650 mm	6040.2310	Viper TQ SST 0.130 x 650 mm	6751.1365
Viper SST 0.130 x 750 mm	6040.2320	Viper TQ SST 0.130 x 750 mm	6751.1375
Viper SST 0.130 x 850 mm	6040.2330	Viper TQ SST 0.130 x 850 mm	6751.1385
Viper SST 0.130 x 950 mm	6040.2340	Viper TQ SST 0.130 x 950 mm	6751.1395
Viper SST 0.100 x 65 mm	6040.2207	Viper TQ SST 0.100 x 100 mm	6751.1010
Viper SST 0.100 x 150 mm	6040.2215	Viper TQ SST 0.100 x 150 mm	6751.1015
Viper SST 0.100 x 250 mm	6040.2225	Viper TQ SST 0.100 x 250 mm	6751.1025
Viper SST 0.100 x 350 mm	6040.2235	Viper TQ SST 0.100 x 350 mm	6751.1035
Viper SST 0.100 x 450 mm	6040.2245	Viper TQ SST 0.100 x 450 mm	6751.1045
Viper SST 0.100 x 550 mm	6040.2255	Viper TQ SST 0.100 x 550 mm	6751.1055
Viper SST 0.100 x 650 mm	6040.2265	Viper TQ SST 0.100 x 650 mm	6751.1065

Standard biocompatible Viper and Viper TQ capillaries

Viper Fingertight fitting system		Viper TQ UHPLC fitting	
Product name	Part number	Product name	Part number
Viper MP35N 0.180 x 65 mm	6042.2308	Viper TQ MP35N 0.180 x 100 mm	6752.1810
Viper MP35N 0.180 x 150 mm	6042.2315	Viper TQ MP35N 0.180 x 150 mm	6752.1815
Viper MP35N 0.180 x 250 mm	6042.2327	Viper TQ MP35N 0.180 x 250 mm	6752.1825
Viper MP35N 0.180 x 300 mm	6042.2322	Viper TQ MP35N 0.180 x 300 mm	6752.1830
Viper MP35N 0.180 x 350 mm	6042.2337	Viper TQ MP35N 0.180 x 350 mm	6752.1835
Viper MP35N 0.180 x 450 mm	6042.2365	Viper TQ MP35N 0.180 x 450 mm	6752.1845
Viper MP35N 0.180 x 550 mm	6042.2355	Viper TQ MP35N 0.180 x 550 mm	6752.1855
Viper MP35N 0.180 x 650 mm	6042.2380	Viper TQ MP35N 0.180 x 650 mm	6752.1865
Viper MP35N 0.180 x 750 mm	6042.2375	Viper TQ MP35N 0.180 x 750 mm	6752.1875
Viper MP35N 0.130 x 750 mm	6042.2373	Viper TQ MP35N 0.130 x 750 mm	6752.1375
Viper MP35N 0.100 x 65 mm	6042.2306	Viper TQ MP35N 0.100 x 100 mm	6752.1010
Viper MP35N 0.100 x 150 mm	6042.2320	Viper TQ MP35N 0.100 x 150 mm	6752.1015
Viper MP35N 0.100 x 250 mm	6042.2330	Viper TQ MP35N 0.100 x 250 mm	6752.1025
Viper MP35N 0.100 x 350 mm	6042.2340	Viper TQ MP35N 0.100 x 350 mm	6752.1035
Viper MP35N 0.100 x 450 mm	6042.2350	Viper TQ MP35N 0.100 x 450 mm	6752.1045
Viper MP35N 0.100 x 550 mm	6042.2360	Viper TQ MP35N 0.100 x 550 mm	6752.1055
Viper MP35N 0.100 x 650 mm	6042.2370	Viper TQ MP35N 0.100 x 650 mm	6752.1065
Viper MP35N 0.100 x 750 mm	6042.2390	Viper TQ MP35N 0.100 x 750 mm	6752.1075
Viper MP35N 0.100 x 950 mm	6042.2395	Viper TQ MP35N 0.100 x 950 mm	6752.1095

Advanced Viper and Viper TQ capillaries for dedicated purposes used in Thermo Scientific™ Vanquish™ Column Compartments and Thermo Scientific™ Vanquish™ Diode Array Detector HL

Advanced Viper capillaries		Advanced Viper TQ capillaries	
Product name	Part number	Product name	Part number
Viper MP35N 0.10 x 300 mm, insulated	6083.2405	Viper TQ MP35N 0.10 x 300 mm, insulated	6083.0230
Viper MP35N 0.10 x 250 mm, insulated	6083.2406	Viper TQ MP35N 0.10 x 250 mm, insulated	6083.0225
Viper MP35N 0.13 x 350 mm, insulated	6083.2410	Viper TQ MP35N 0.13 x 350 mm, insulated	6083.3235
Viper MP35N 0.13 x 500 mm, insulated	6083.2411	Viper TQ MP35N 0.13 x 500 mm, insulated	6083.3250
Active pre-heater, 0.10 x 380 mm, MP35N	6732.0110	Active pre-heater TQ 0.10 x 380 mm, MP35N	6732.0700
Active pre-heater, 0.10 x 610 mm, MP35N	6732.0150	Active pre-heater TQ 0.10 x 610 mm, MP35N	6732.0720
Passive pre-heater, 0.25 x 580 mm, SST	6732.0180	Passive pre-heater TQ 5µL 0.25 x 580 mm, SST	6732.0750
Passive pre-heater, 0.18 x 530 mm, SST	6732.0170	Passive pre-heater TQ 3µL 0.18 x 580 mm, SST	6732.0740
Passive pre-heater, 0.10 x 530 mm, MP35N	6732.0174	Passive pre-heater TQ 1µL 0.10 x 580 mm, MP35N	6732.0760
Passive pre-heater, 0.10 x 680 mm, MP35N	6732.0184	Passive pre-heater TQ 1µL 0.10 x 730 mm, MP35N	6732.0780
Post-column cooler 1µL, 0.10 x 240 mm, MP35N	6732.0510	Post-column cooler TQ 1µL 0.10 x 240 mm, MP35N	6732.0540
Post-column cooler 1µL, 0.10 x 590 mm, MP35N	6732.0520	Post-column cooler TQ 1µL 0.10 x 590 mm, MP35N	6732.0560

(1) Discontinued part number

Viper and Viper TQ capillary kits for easy set-up of the Vanquish HPLC and UHPLC systems

Viper capillary kits		Viper TQ capillary kits	
Product name	Part number	Product name	Part number
Viper capillary kits for Thermo Scientific™ Vanquish™ Core HPLC systems	6036.2302 ⁽¹⁾	Viper TQ capillary kits for Vanquish Core HPLC systems	6036.2302A
Method transfer kit for Vanquish Core HPLC systems	6036.2100	Method transfer kit for Vanquish Core HPLC systems	6036.2100
Viper capillary kits for Thermo Scientific™ Vanquish™ Horizon and Flex UHPLC systems	6036.2303A ⁽¹⁾	Viper TQ capillary kits for Vanquish Horizon and Flex UHPLC systems	6036.2303B
Viper capillary kits for Thermo Scientific™ Vanquish™ Duo UHPLC systems	6036.2305 ⁽¹⁾	Viper TQ capillary kits for Vanquish Duo UHPLC systems	6036.2305A
MS (Viper) connection kit for Vanquish UHPLC systems	6720.0405 ⁽¹⁾	MS (Viper TQ) connection kit for Vanquish UHPLC systems	6720.0405A
Viper kit for Thermo Scientific™ Vanquish™ Tandem LC systems	6036.2020 ⁽¹⁾	Viper TQ kit for Vanquish Tandem LC systems	6036.2020A
Viper kit for Thermo Scientific™ Vanquish™ Inverse Gradient LC systems	6036.2010 ⁽¹⁾	Viper TQ kit for Vanquish Inverse Gradient LC systems	6036.2010A
Viper kit for automation method scouting for Vanquish UHPLC systems	6036.2807 ⁽¹⁾	Viper kit for automation method scouting for Vanquish UHPLC systems	6036.2807A
Extension kit for automated method scouting for Vanquish LC systems	6036.0100	Extension kit for automated method scouting for Vanquish LC systems	6036.0100
Viper kit for Trap Heart-Cut and Simple Switch 2D-LC for Vanquish UHPLC systems	6036.2030 ⁽¹⁾	Viper kit for Trap Heart-Cut and Simple Switch 2D-LC for Vanquish UHPLC systems	6036.2030A

(1) Discontinued part number

Accessories

Viper accessories		Viper TQ accessories	
Product name	Part number	Product name	Part number
Calibration tool for Viper and nanoViper Fingertight fitting systems	6040.2312	Viper TQ reconditioner	6261.5020
Viper union (for connecting (nano)Viper capillaries)	6040.2304	Viper TQ union, Titanium (for connecting Viper TQ capillaries as well as (nano)Viper with Viper TQ capillaries)	6261.5060
Viper TQ union, Titanium (for connecting Viper TQ capillaries as well as (nano)Viper with Viper TQ capillaries)	6261.5060		
Adapter for Viper Fingertight fitting systems, SST (2 pcs.)	6261.5065 ⁽¹⁾	Viper TQ adapter, SST (2 pcs.)	6261.5065A
Tee-Piece (SST)	6263.0035 ⁽¹⁾	Viper TQ Tee-Piece, Titanium	6212.0003
Viper inline filter (Titanium) for column protection	6036.1045	Viper inline filter (Titanium) for column protection	6036.1045
–	–	Viper guard connector, biocompatible ⁽³⁾	6261.1130

(1) Discontinued part number

(3) For use with Viper TQ connections on earlier models of injection and switching valves labeled “Viper only,” as well as flow cells featuring Viper-only connectors, as illustrated below.

Ensuring a smooth transition

Viper TQ UHPLC Fittings are designed to integrate seamlessly with most existing Vanquish HPLC and UHPLC systems. While some previous models may require minor adjustments, we have developed straightforward strategies to ensure a smooth transition without disrupting your workflow.

The matrix and illustrations below help to guide you through dedicated upgrade workflows relevant to the instrument module versions in your lab.

Vanquish Core UHPLC systems

Fluidic connection	Start	End	Recommendation / upgrade path
Pump-to-sampler capillary	Pump mixers of all Vanquish Core Pumps	V Injection valves	Standard Viper capillaries (no upgrade possible)
Sampler-to-column capillary	V Injection valves	Column inlet	Upgrade with passive preheater TQ, active preheater TQ, or standard Viper TQ capillaries
Column-to-detector capillary	Column outlet	Flow cell inlet	See table "Vanquish Flex and Horizon UHPLC systems"

Vanquish Flex and Horizon UHPLC systems

Fluidic connection	Start	End	Recommendation / upgrade path
Pump-to-sampler capillary	Pump mixers of all Vanquish Flex and Horizon pumps	V+ Injection valves Viper-only Injection valves	Standard Viper capillaries (no upgrade possible)
Sampler-to-column capillary	V+ injection valves	Column inlet	Upgrade with active preheater TQ, passive preheater TQ, or standard Viper TQ capillaries
	Viper-only injection valves	Column inlet	<ol style="list-style-type: none"> Option: Viper-based active preheater, passive preheater, or standard Viper capillaries (no upgrade) Option: Upgrade with active preheater TQ, passive preheater TQ, or standard Viper TQ capillaries with Viper guard connected to the Viper-only injection valve Option: Upgrade with active preheater TQ, passive preheater TQ, or Viper TQ capillaries by installing V+ injection valve
Column-to-detector capillary	Column outlet	Inlet of all conventional flow cells for Vanquish Variable Wavelength and Diode Array Detectors with compatible connectors	Upgrade with standard Viper TQ capillaries or post column cooler TQ
		Inlet of all Vanquish Horizon Thermo Scientific™ LightPipe™ flow cells with SN ≥ A06990 and SN ≥ B01786	
	Column outlet	Inlet of conventional flow cells for Thermo Scientific™ Vanquish™ Variable Wavelength and Diode Array Detectors with Viper-only connectors Inlet of Vanquish Horizon LightPipe flow cells with SN < A06990 and SN < B01786	<ol style="list-style-type: none"> Option: Viper capillaries or Viper-based post-column cooler (no upgrade) Option: Upgrade with Viper TQ capillaries or post-column TQ with Viper guard connected to the flow cell inlet Option: Upgrade with Viper TQ capillaries or post-column cooler TQ by installation of a compatible flow cell


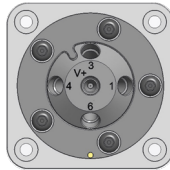
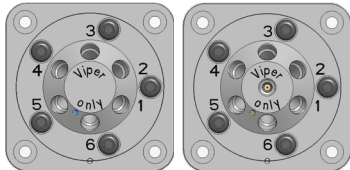
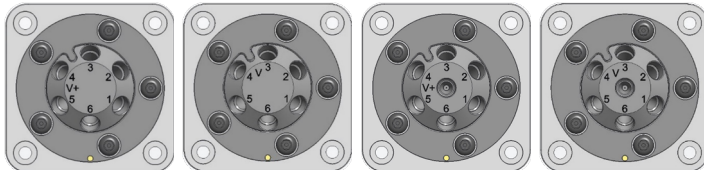
**Vanquish Duo UHPLC, Tandem UHPLC, Online 2D-LC and Inverse Gradient LC,
and automated method scouting systems**

Fluidic connection	Affected part	Recommendation / upgrade path
All fluidic connections	For existing systems shipped ≥ 08/2021	<ol style="list-style-type: none"> Option: In case of flow cells with compatible connectors, upgrade with dedicated Viper TQ capillary kits Option: In the case of flow cells with Viper-only connectors, individual Viper TQ and Viper capillary ordering is required as explained in the tables above
	For existing systems shipped < 08/2021	Individual Viper TQ and Viper capillary ordering is required as explained in the tables above

Thermo Scientific™ Vanquish™ Column Compartment C and H

Fluidic connection	Affected part	Recommendation / upgrade path
Any connection to switching valves	V+ and V switching valves	Upgrade to standard Viper TQ capillaries, active preheater TQ, or passive preheater TQ
	Viper-only switching valves	<ol style="list-style-type: none"> Option: Standard Viper capillaries, Viper-based active preheater, or passive preheater (no upgrade) Option: Upgrade to Viper TQ capillaries, active preheater TQ, or passive preheater TQ by installing V+ or V switching valves

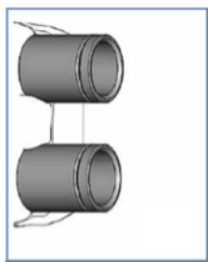
Thermo Scientific™ Vanquish™ Sampler and Vanquish Column Compartment switching valves

Viper-only injection valves		V+ injection valves (Viper TQ compatible)	
Installed in Vanquish Split and Dual Sampler FT and HT with S/N < 8329103 (shipped < 08/2021)		Installed in Vanquish Split and Dual Sampler FT and HT with S/N ≥ 8329103 (shipped ≥ 08/2021)	
			
Viper-only switching valves		V+ and V switching valves (Viper TQ compatible)	
shipped < 07/2021		shipped ≥ 07/2021	
			

Flow Cells for Vanquish Variable Wavelength and Diode Array Detectors F and C

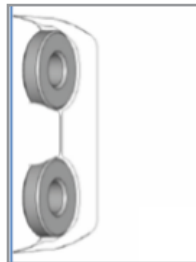
Viper-only connector

In flow cells shipped <01/ 2020



Viper TQ compatible connector

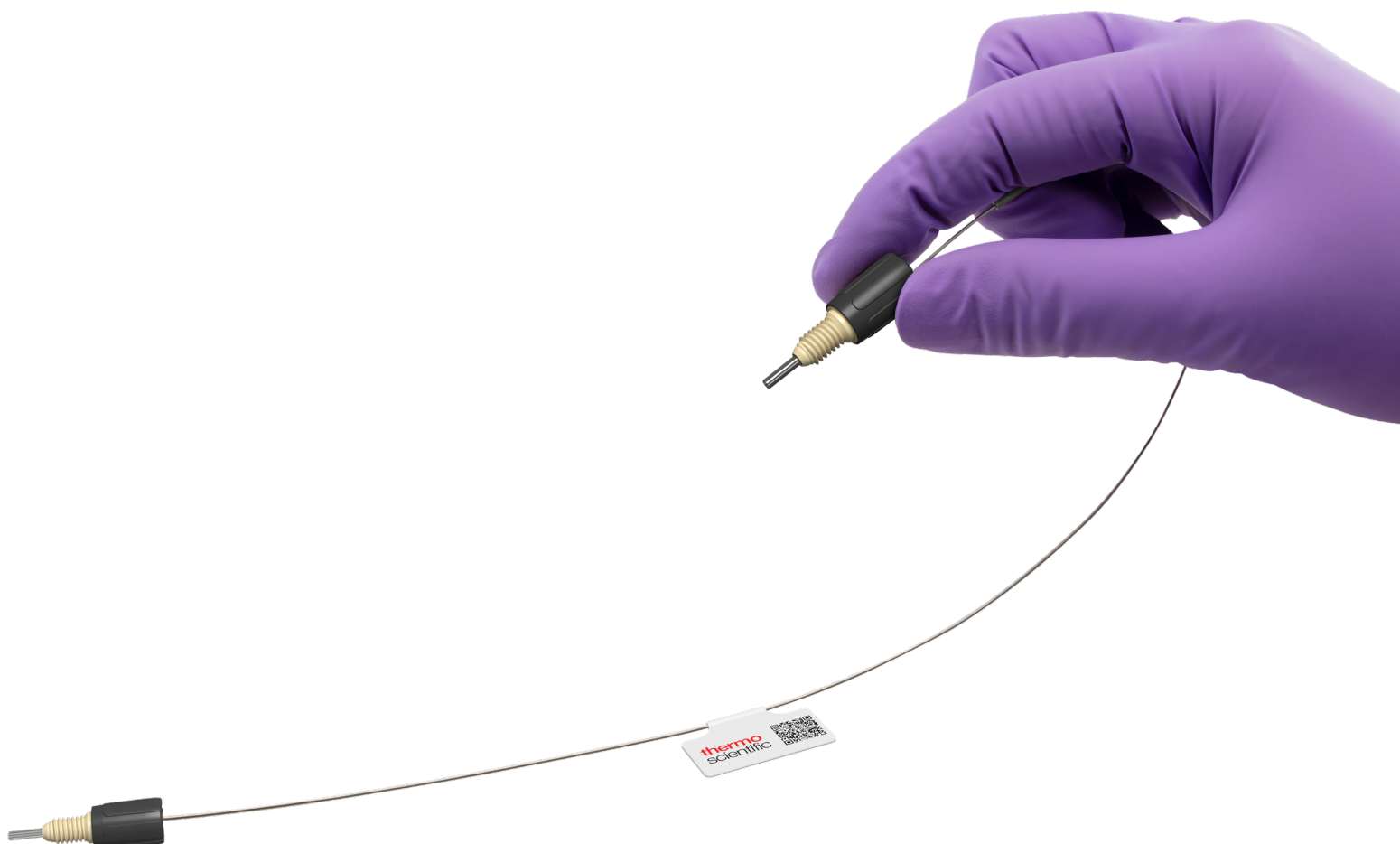
In flow cells shipped ≥ 01/2020

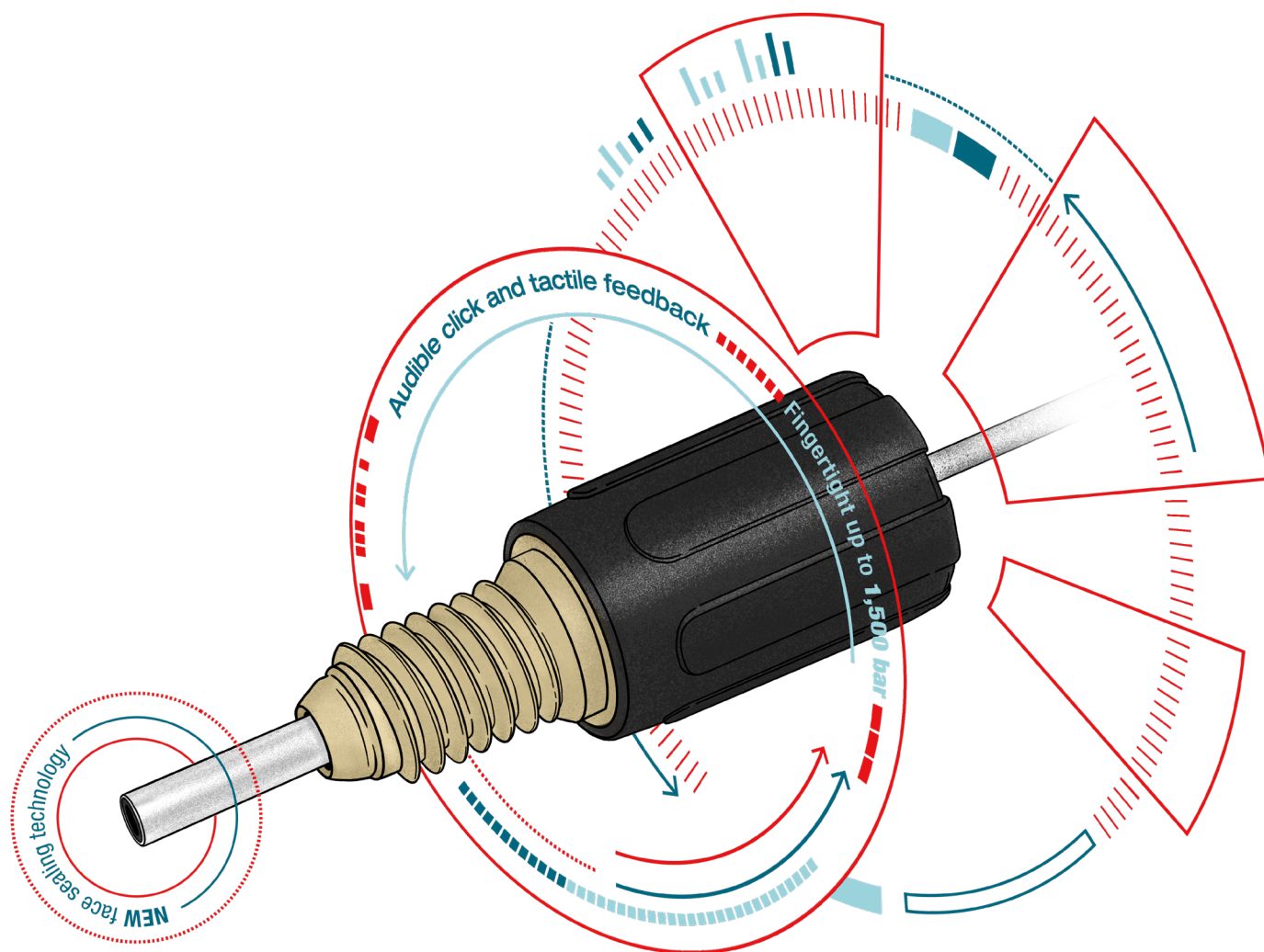


As a beta tester for the new capillary design with Viper TQ UHPLC Fitting, I can confidently say it is a game-changer for our lab. It is easier to use than any other capillary equipped to (U)HPLC systems on the market.

The reduced training requirement means my team can start using it immediately with confidence on correct installation, which significantly boosts our productivity.

-Georg Schuster, Principal Scientist at Coriolis Pharma





Our dedicated support team is available to assist you with any compatibility questions and provide guidance on the best practices for integrating Viper TQ UHPLC Fittings into your current setup. We are committed to making this upgrade as effortless as possible, ensuring you can explore the benefits of enhanced performance and reliability with your current LC system with confidence in your analysis.

Learn more at thermofisher.com/ViperTQ