

PRODUCT SPECIFICATIONS

Thermo Scientific Viper and nanoViper Fingertight Fitting systems

Tool-free LC connections for HPLC, UHPLC and nano LC systems

Benefits

- Provides virtually zero-dead volume fingertight connections
- Easy to install tool-free and reusable capillaries (1/32 in. OD)
- Fits narrow connections such as 10-port valves
- Always reproducible LC connections
- Supports operating pressures up to 1,500 bar (22,000 psi)
- Works with virtually any system, valve and column

The Thermo Scientific™ Viper™ and Thermo Scientific™ nanoViper™ Fingertight Fittings provide tool-free connections designed to be used for the entire fluidic pathway in all LC systems to improve chromatographic results.

Offering virtually dead-volume free LC connections, Viper and nanoViper fittings require no tools for installation, and combine simplicity with high performance. Viper and nanoViper connections can be used on all LC modules, valves, and columns quickly, independent of different connection geometries and system backpressures.

Advantages of Viper and nanoViper Fingertight fittings

- Available in different lengths: from 65 to 1100 mm, or custom lengths
- Available in different inner diameters: from 10 μm (0.0004 in.) to 150 μm (0.006 in.) in nanoViper design and from 100 μm (0.004 in.) to 180 μm (0.007 in.) for standard applications
- Available in different materials: stainless steel (SST), PEEK, fused-silica or biocompatible MP35N™

Keywords

Viper, nanoViper, Fingertight Fittings, LC connections

Specifications

Thermo Scientific Viper Fingertight Fitting System – SST

Connection principle	Fingertight
Tubing type	Flexible stainless steel (SST)
Wetted material	PEEK, SST
Maximum pressure	131 MPa (1,310 bar; 19,000 psi)
Maximum temperature limit	120 °C
Outer diameter	0.79 mm (1/32 in.)
Inner diameter	100 µm (0.004 in.), 130 µm (0.005 in.), 180 µm (0.007 in.)
Available lengths	Various lengths from 65 mm to 950 mm

Thermo Scientific Viper Fingertight Fitting System – Biocompatible PEEK

Connection principle	Fingertight
Tubing type	PEEK
Wetted material	PEEK
Maximum pressure	34.5 MPa (345 bar; 5,000 psi)
Outer diameter	0.79 mm (1/32 in.)
Inner diameter	65 µm (0.0026 in.), 90 µm (0.0035 in.), 130 µm (0.005 in.)
Available lengths	Various lengths from 65 mm to 850 mm

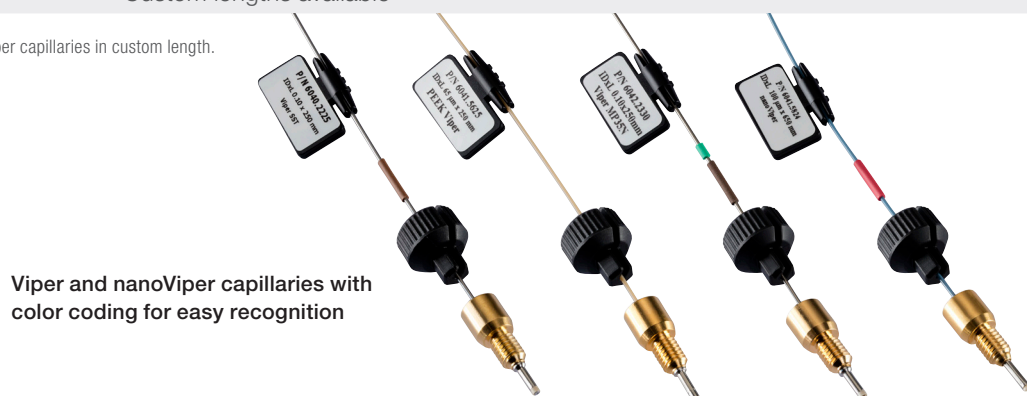
Thermo Scientific Viper Fingertight Fitting System – Biocompatible MP35N

Connection principle	Fingertight
Tubing type	MP35N
Wetted material	PEEK, MP35N
Maximum pressure	151 MPa (1,517 bar; 22,000 psi)
Maximum temperature limit	120 °C
Outer diameter	0.79 mm (1/32 in.)
Inner diameter	100 µm (0.004 in.), 130 µm (0.005 in.), 180 µm (0.007 in.)
Available lengths	Various lengths from 65 mm to 950 mm

Thermo Scientific nanoViper Fingertight Fitting System – Shielded Fused silica

Connection principle	Fingertight
Tubing type	PEEK-shielded fused silica
Wetted material	PEEK, fused silica
Maximum pressure	120 MPa (1,200 bar; 17,400 psi)
Maximum temperature limit	120 °C
Outer diameter	0.79 mm (1/32 in.)
Inner diameter	Various ID from 10 µm (0.0004 in.) to 150 µm (0.006 in.)
Available lengths	Various lengths from 70 mm to 1100 mm Custom lengths available*

* Please contact us for more information on nanoViper capillaries in custom length.



Ordering Information

In the U.S., call (800) 346-6390 or contact the Thermo Fisher Scientific Regional Office nearest you. Outside the U.S., order through your local Thermo Fisher Scientific office or distributor. Refer to the following part numbers.



Viper Fingertight Fitting Systems – SST

Length (mm)	100 µm ID 0.004 in. ID	130 µm ID 0.005 in. ID	180 µm ID 0.007 in. ID
65	6040.2207	6040.2307	6040.2357
100	—	6040.2322	—
150	6040.2215	6040.2315	6040.2360
200	—	6040.2327	—
250	6040.2225	6040.2325	6040.2385
350	6040.2235	6040.2335	6040.2375
450	6040.2245	6040.2345	6040.2365
550	6040.2255	6040.2305	6040.2355
650	6040.2265	6040.2310	6040.2395
750	—	6040.2320	6040.2370
850	—	6040.2330	6040.2380
950	—	6040.2340	6040.2390

Viper Fingertight Fitting Systems – Biocompatible

Length (mm)	65 µm ID 0.0025 in. ID PEEK	90 µm ID 0.0035 in ID PEEK	130 µm ID 0.005 in. ID PEEK	100 µm ID 0.004 in. ID MP35N	130 µm ID 0.005 in. ID MP35N	180 µm ID 0.007 in. ID MP35N
65	—	6041.9075 (L 75 mm)	—	6042.2306	—	—
150	6041.5615	—	6041.5616	6042.2320	—	6042.2315
250	6041.5625	6041.9025	—	6042.2330	—	6042.2327
350	—	—	—	6042.2340	—	6042.2337
450	—	—	—	6042.2350	—	6042.2365
550	—	—	—	6042.2360	—	6042.2355
650	6041.5665	—	—	6042.2370	—	6042.2380
750	6041.5675	—	—	6042.2390	6042.2373	6042.2375
850	6041.5685	—	—	—	—	—
950	—	—	—	6042.2395	—	6042.2385

nanoViper Fingertight Fitting Systems – Shielded Fused Silica

Length (mm)	10 µm ID 0.0004 in. ID	20 µm ID 0.0008 in. ID	50 µm ID 0.002 in. ID	75 µm ID 0.003 in. ID	100 µm ID 0.004 in. ID	150 µm ID 0.006 in. ID
70	—	6041.5120	6041.5123	6041.5126	6041.5810	6041.5817
150	6041.5118 (L 180 mm)	6041.5121	6041.5124	6041.5127	6041.5811	6041.5818
250	—	—	—	6041.5730	6041.5812	6041.5819
350	—	6041.5240	6041.5540	6041.5735	6041.5813	6041.5820
450	—	—	—	—	6041.5814	6041.5821
550	—	6041.5260	6041.5560	6041.5760	6041.5815	6041.5822
650	—	6041.5275	6041.5575	6041.5775	6041.5824	—
750	—	6041.5280	6041.5580	6041.5780	6041.5816	6041.5823
850	—	—	—	6041.5785	—	—
950	—	6041.5122	6041.5125	6041.5128	—	—
1100	—	—	—	6041.5711	—	6041.5828

Special Viper Fingertight Fitting Capillaries

Description	Part Number
Active Pre-heater, MP35N, ID × L, 100 µm × 380 mm (for Vanquish Column Compartment H)	6732.0110
Passive Pre-heater, MP35N, ID × L, 100 µm × 530 mm (for Vanquish Column Compartment H)	6732.0174
Post Column Cooler, MP35N, ID × L, 100 µm × 240 mm (for Vanquish Column Compartment H)	6732.0510
Passive Pre-heater, SST, ID, 100 µm (for TCC-3000)	6722.0510
Passive Pre-heater, SST, ID, 130 µm (for TCC-3000)	6722.0530
Passive Pre-heater, SST, ID, 180 µm (for TCC-3000)	6722.0540
Passive Pre-heater, SST, ID, 250 µm (for TCC-3000)	6722.0550
Passive Pre-heater, coated steel, biocompatible, ID, 130 µm (for TCC-3000)	6723.0232
Passive Pre-heater, coated steel, biocompatible, ID, 250 µm 7 µL (for TCC-3000)	6723.0242
Passive Pre-heater, coated steel, biocompatible, ID, 250 µm 11 µL (for TCC-3000)	6723.0252
Passive Pre-heater, MP35N, ID, 100 µm (for TCC-3000)	6723.0235
Passive Pre-heater, MP35N, ID, 180 µm (for TCC-3000)	6723.0245
Post Column Cooler, SST, ID, 130 µm (for TCC-3000)	6730.0008
MP35N thermally insulated, ID × L, 100 µm × 300 mm	6083.2405
MP35N thermally insulated, ID × L, 130 µm × 500 mm	6083.2411

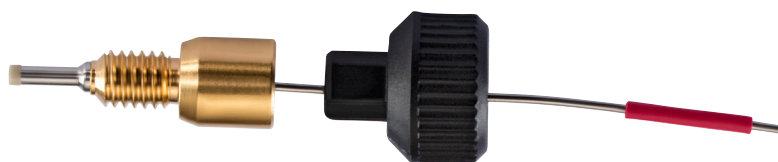
Special nanoViper Fingertight Fitting Capillaries

Description	Part Number
nanoViper, ID × L, 20 µm × custom length	6041.5299
nanoViper, ID × L, 50 µm × custom length	6041.5599A
nanoViper, ID × L, 75 µm × custom length	6041.5799
nanoViper, thermally insulated, ID × L, 75 µm × 300 mm	6083.2415
UHPLC waste, ID × OD × L, 75 µm × 360 µm × 550 mm	6041.5289
Liquid Junction column out, ID × OD × L, 20 µm × 360 µm × 550 mm	6041.5290
Nano LC column to MS tubing, ID × OD × L, 20 µm × 280 µm × 1 m	6041.5292
Nano LC column to MS tubing, ID × OD × L, 20 µm × 360 µm × 1 m	6041.5293
Nano LC column to MS tubing, ID × OD × L, 50 µm × 280 µm × 1 m	6041.5294
Nano LC column to MS tubing, ID × OD × L, 50 µm × 360 µm × 1 m	6041.5295



Viper Accessories

Description	Part Number
Blind Plug, biocompatible (titanium)	6040.2303
Union, SST	6040.2304
Calibration Tool	6040.2312
Inline Filter, titanium, av. frit pore size 0.5 µm	6036.1045



Viper Fingertight Fitting Kits for UltiMate 3000 and Vanquish Systems

Description	SD System	RS System	Vanquish
Viper Capillary Kit for LPG, DGP or ISO pumps	6040.2302	6040.2301	—
Viper Capillary Kit for HPG pumps	6040.2309	6040.2308	—
Viper Capillary Kit for Biocompatible RS systems	—	6841.2301	—
MS Connection Kit for systems without UV detector	6720.0355	6720.0370	—
MS Connection Kit for systems with UV detector	6720.0365	6720.0375	—
MS Connection Kit for systems with OAS autosampler without UV detector	—	6720.0372	—
MS Connection Kit for systems with OAS autosampler with UV detector	—	6720.0377	—
MS Connection Kit for Vanquish systems with and without UV detector	—	—	6720.0405
Viper Solution Kit – Online SPE	6040.2802	6040.2801	—
Viper Solution Kit – Tandem Operation	6040.2804	6040.2803	—
Viper Solution Kit – Parallel Setup	6040.2810	6040.2809	—
Viper Solution Kit – Application Switching	6040.2806	6040.2805	—
Viper Solution Kit – Method Scouting	6040.2808	6040.2807	6036.2807
Viper Solution Kit – Method Scouting, ID 100 µm, biocompatible	—	6042.2807	—
Viper Solution Kit – Method Scouting, ID 180 µm, biocompatible	—	6042.2808	—
Viper Solution Kit – Inverse Gradient	6040.2819	6040.2820	—

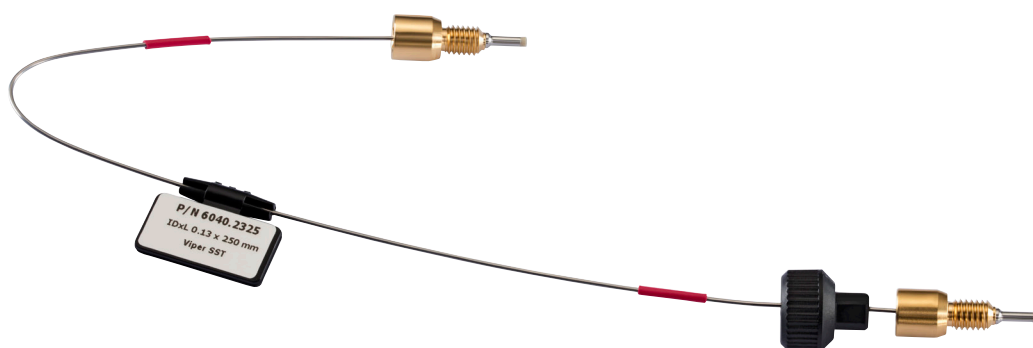
nanoViper Fingertight Fitting Kits for RSLCnano Systems

Description	Part Number
Direct Injection nano LC kit	6720.0300
Direct Injection capillary LC kit	6720.0305
Preconcentration nano LC kit	6720.0310
Preconcentration capillary LC kit	6720.0315
Preconcentration micro LC kit	6720.0320
2D salt plugs kit	6720.0325
Automated off line SCX-RP peptides kit	6720.0330
Tandem nano LC kit	6720.0335
Automated off line RP-RP peptides kit	6720.0340
MS Connection kit	6720.0345
OQ/PQ kit, NCS, NCp	6720.0360
EASY-Spray connection kit	6720.0395
Upgrade Kit ProFlow Flowmeter	6041.3003

To learn more about RSLCnano applications and how to configure nano LC for MS analysis, please download:

- The Complete and Easy Guide to Configuring Your Thermo Scientific™ Nano LC for Mass Spectrometric Analysis
- Thermo Scientific™ UltiMate™ 3000 RSLCnano - Standard Application





Find out more at www.thermofisher.com/viper

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