MARVEL X™

Next Generation UHPLC Connection Technology

IDEX
HEALTH & SCIENCE

Intelligent Solutions for Life®
Fluidics | Optics | Consumables | Assemblies
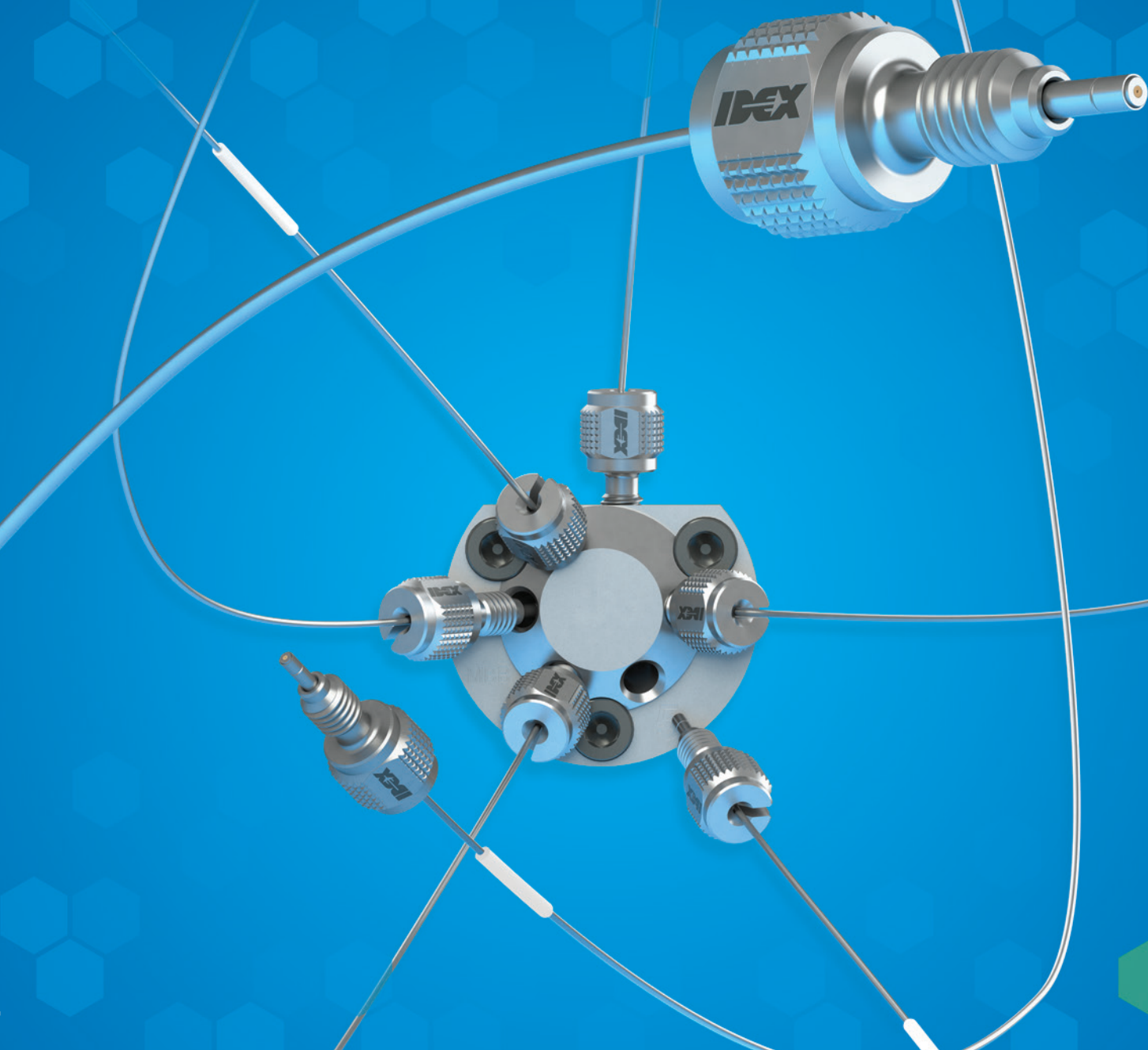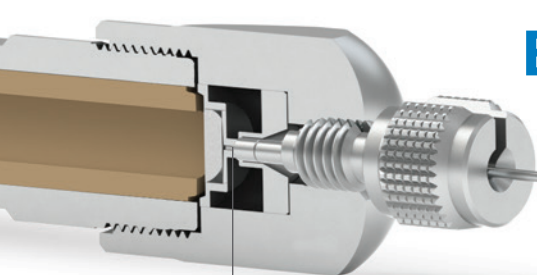
Advance Your Fluidic Systems with Finger-Tight MarvelX™ UHPLC Connection Technology from IDEX Health & Science

MarvelX UHPLC Connection Systems have been expertly designed for easy routing throughout your instrument, while providing consistent performance and superior re-usability. Built with convenient, removable stainless steel fittings and changeable, precision-cut flexible tubing, MarvelX can be used for more than 100 connects and disconnects! The connection system is compatible with 10-32 coned receiving ports and is absolutely finger-tight — no tool required. MarvelX utilizes our unique next-generation patented technology to auto-adjust to various port depths. This ensures zero dead volume and delivers better chromatography results with sleek, simple, and reliable functionality. In addition to our powerful Stainless Steel version, MarvelX offers a truly bioinert option in PEEK-Lined Stainless Steel.
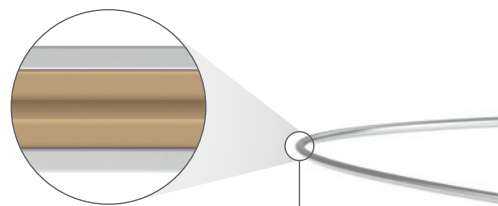
MarvelX Features

BioVersal™

TRUE BIOINERTNESS
System versions include Stainless Steel or bioinert PEEK-Lined Stainless Steel (pictured above) with an ID range of 25 µm to 254 µm, for 10-32 coned ports.

ZERO DEAD VOLUME
Proprietary sealing technology eliminates extra internal volume.

FLEXIBLE TUBING
Special tubing blend prevents kinking and allows considerable flexibility to route throughout your instrument. Usable in any application, and can be replaced independent of fittings.

**FINGER-TIGHT TO 19,000 PSI**

>100 CONNECTS AND DISCONNECTS

NO PEAK TAILING

HIGH PLATE EFFICIENCY

MarvelX UHPLC Fittings vs. Conventional Coned Fittings

Conventional coned fittings require a ferrule in conjunction with a fitting for proper sealing. They depend on complex techniques, including tools, to improve sealing performance, which significantly increases probability of extra internal volume and poor chromatography results. The excessive force needed for tightening increases wear of expensive components and the likelihood of replacement, adding to overall costs.
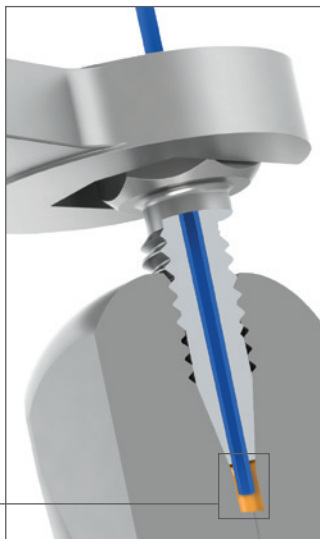
EXTRA INTERNAL VOLUME

MarvelX UHPLC fittings do not depend on ferrules. They seal at the bottom of the port, without complex techniques, which significantly reduces required torque and enables many more connects and disconnects. Furthermore, they are virtually impossible to over-tighten by hand, limiting wear and increasing product life. An enhanced proprietary tip design also ensures zero dead volume (ZDV) and better chromatography results.
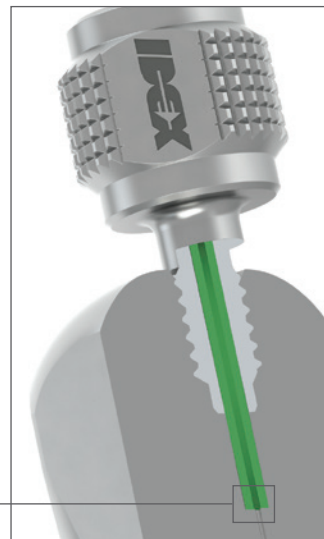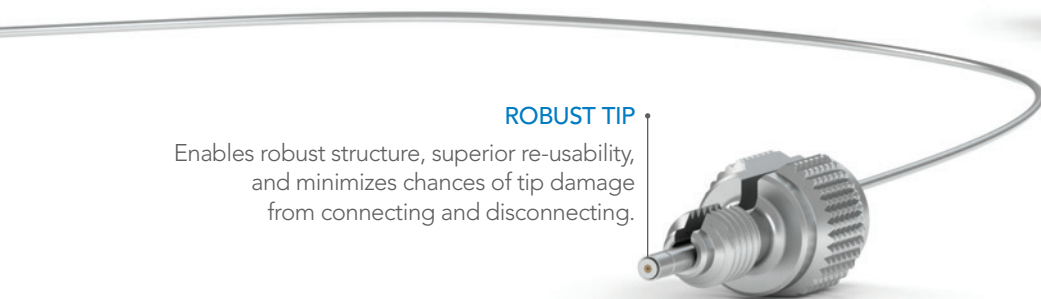
ZERO DEAD VOLUME

SMALL & ACCESSIBLE
Fittings are small enough to fit in tight spaces, yet allow for finger-tightening at UHPLC pressures.

REPLACEABLE TUBING
Innovative design makes it possible to replace tubing independent of fittings, which reduces waste and drives replacement costs down.

ROBUST TIP
Enables robust structure, superior re-usability, and minimizes chances of tip damage from connecting and disconnecting.

REMOVABLE FITTING
Facilitates easy routing of tubing in the instrument, which reduces time and effort during installation and instrument maintenance.

FINGER-TIGHT TO UHPLC
MarvelX is truly a finger-tight connection system that only requires 2 in-lbs of installation torque, and seals up to 19,000 psi (~1,310 bar) for routine use. Our combination of optimum nut dimensions and proprietary sealing design makes it virtually impossible to over-tighten by hand.

MARVELX™

MarvelX™ Technical Specifications

Length:	070 mm	150 mm	250 mm	350 mm	500 mm	600 mm
PEEK-Lined Stainless Steel Assemblies*						
25 µm ID	UPFP-6025070	UPFP-6025150	UPFP-6025250	UPFP-6025350	UPFP-6025500	UPFP-6025600
50 µm ID	UPFP-6050070	UPFP-6050150	UPFP-6050250	UPFP-6050350	UPFP-6050500	UPFP-6050600
75 µm ID	UPFP-6075070	UPFP-6075150	UPFP-6075250	UPFP-6075350	UPFP-6075500	UPFP-6075600
100 µm ID	UPFP-6100070	UPFP-6100150	UPFP-6100250	UPFP-6100350	UPFP-6100500	UPFP-6100600
Stainless Steel Assemblies*						
100 µm ID	UPFS-6100070	UPFS-6100150	UPFS-6100250	UPFS-6100350	UPFS-6100500	UPFS-6100600
125 µm ID	UPFS-6125070	UPFS-6125150	UPFS-6125250	UPFS-6125350	UPFS-6125500	UPFS-6125600
254 µm ID	UPFS-6254070	UPFS-6254150	UPFS-6254250	UPFS-6254350	UPFS-6254500	UPFS-6254600

Replacement Parts*

Replacement Tubing	To order Replacement Tubing, simply add the letter "T" to the end of any of the part numbers listed above. Example: UPFP-6025070T is the replacement tubing for UPFP-6025070.
Replacement Fittings	UPN-61032 – Includes 3 replacement fittings.

Product availability and lead times may vary depending on the configuration.
Contact Customer Service at +1 800 426 0191 or email CustomerService.hs@idexcorp.com for details.

Product Specifications

Pressure Capability	19,000 psi (~1,310 bar) for routine use; up to 23,000 psi max over pressure for PEEK-Lined versions; up to 29,000 psi max over pressure for Stainless Steel versions.
Installation Method	Finger-tight, 1/8 of a turn (45 degree angle) after initial resistance (~2 in-lbs)
Tubing Type	1/32" OD flexible 316 Stainless Steel with 1/16" OD rigid tube ends
Fitting Type	10-32 threaded, removable 316 Stainless Steel
Wetted Materials	**PEEK-Lined versions:** PEEK | **Stainless Steel versions:** PEEK and 316 Stainless Steel
Maximum Use Temperature	120 °C

NOTE: The above performance specifications apply to use with appropriately-designed receiving ports under optimal conditions, using water at up to 120 °C for the testing process. If different conditions are used, the expected pressure threshold will be different.

IMPORTANT NOTES

❯ MarvelX tubing includes a sleeve that assists in product identification, with ID, length and part number information:


IDEX HEALTH & SCIENCE   XXX (µm) — YYY (mm)

❯ Minimum recommended bend-radius with MarvelX tubing is 1/4" (~6.35 mm).

REGULATORY COMPLIANCE

As of the date of publication, MarvelX is compliant with current RoHS and REACH regulations.

INSTRUCTIONS FOR TIGHTENING

1. Route tubing to the target port.
2. Slide fitting onto the tubing end via slot.
3. Slowly finger-tighten to first resistance; continue tightening 1/8-turn (45 degree angle).
4. Learn more at www.idex-hs.com/MarvelX

INSUFFICIENT TIGHTENING
OPTIMAL TIGHTENING
OVER TIGHTENING
POTENTIAL DAMAGE
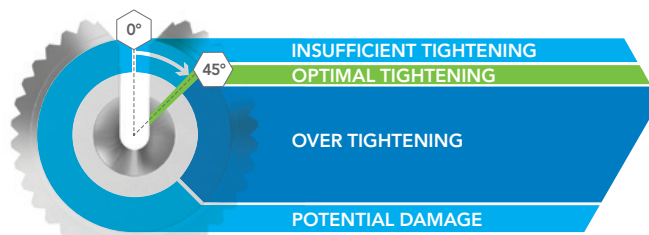
For ordering, technical support, and contact information please visit www.idex-hs.com