SIELC is Introducing New HPLC Finger-Tight SmartFitting™ System

When pressures begin to approach or exceed 5000 psi (350 bar), capillary lines have the tendency to pop up when tightened by finger-tight HPLC fittings. SIELC addresses this situation with a new breakthrough design of ultra-high-pressure finger-tight fittings.

- Special capillary holding mechanism requires only a gentle force to produce a tight seal and pop-free connection.
- One-size-fits-most applications, including columns, valves, and instrument ports.
- Strong metal thread allows many more use-cycles than a PEEK fitting design.
- Pressure rating up to 14,000 psi (1000 bar) and more.
- Break-resistant -- when a column is accidentally dropped with the fitting in, the PEEK fitting usually breaks, leaving hard-to-remove pieces inside the column. Metal fittings can bend -- but they won't break, and thus can be simply replaced with another fitting, saving the expensive column.
- Improves heat transfer with the incoming capillary.
- Both PEEK and metal-capillary compatible.
- Patented design.

SmartFittings™ Part Number and Description

- **HPF-1032**: The ultra-high-pressure fitting for regular or ultra-high pressure HPLC systems. Can be used for all types of connection with 1/16” OD tubing. This fitting has unique locking mechanism that allows to hold pressure up to 14,000 psi (1,000 bar) and more. Use with both metal and plastic tubing. These fittings are available in single quantity or in packs of 10 (HPF-1032.10).

- **SFS-1032**: The ultra-high-pressure fitting for regular or ultra-high pressure HPLC systems. Can be used for all types of connection with 1/16” OD tubing. This fitting has unique quick release locking mechanism which allows to hold pressure up to 14,000 psi (1,000 bar). Use with both metal and plastic tubing. These fittings are available in single quantity or in packs of 10 (SFS-1032.10).

- **F-1032G**: The high-pressure fitting for regular HPLC systems. Can be used for all types of connection with 1/16” OD tubing. This fitting available in 4 colors: gold as shown (F-1032G), black (F-1032B), navy (F-1032N), and red (F-1032R). Made of metal threaded part and integrated plastic ferrule to allow a reliable quick release connection every time. These fittings are only sold in packs of 10.
The higher the pressure requirements of the connection, the more expensive all components become. Also the tubing became more ridged and difficult to work with. Tubing and fitting for lower pressure are less expensive and convenient to connect.

Different tubing and fitting materials are suitable for various pressure ranges in HPLC systems:

- **Low-pressure**
  - From column to detector, from detector to waste, from degasser to pump inlet

- **High-pressure**
  - From pump to autosampler, from autosampler to column, sample loop in HPLC systems

- **Ultra-high-pressure**
  - From pump to autosampler, from autosampler to column, sample loop in UPLC systems

The materials available for these connections include:

- **Metal***
- **PPS***
- **PEEK***
- **FEP***
- **PTFE***

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* Metals commonly used for HPLC are stainless steel (SS316) and titan.
* PPS (Polyphenylene sulfide, Ryton®, Radel ®)
* PEEK® (PolyEtherEtherKeton)
* FEP (Fluorinated Ethylene-Propylene)
* PTFE (PolyTetraFluoEthylene, Teflon ®)

** Maximum pressure at room temperature