



Product Line Update

HPLC Components and Accessories

Flow Splitters

Mixers

Pumps

HPLC Pump Parts

Pulse Damper

PCR Modules

Fittings



About ASI:

ASI manufactures a broad range of fluid handling components and subassemblies for High Pressure Liquid Chromatography. While some of our products may appear rather routine at first glance, ASI fluidic components incorporate technology totally unique among their peers.

The approach to product development at ASI has always been to “build a better mouse trap” to solve some of the most vexing problems that chromatographers face.

Our solutions include: self priming **Check Valves**, vortex shear static and dynamic **Mixers** and fluid resistor based fixed and adjustable **Flow Splitters**. Whatever the product, the final test is customer satisfaction, so we go to great lengths to insure all ASI products work as advertised.

We can also apply our engineering and manufacturing expertise to develop **custom products** to meet your specific needs. ASI has worked with, and designed OEM products for most major HPLC manufacturers. Please let us know if we can provide components or subassemblies for your next HPLC project.

Analytical Scientific Instruments, Inc.

For all informations your exclusive agent :

TecDev

Le Villaret

CH 1432 Belmont s/Yverdon

Tel: +41 (0) 24 435 22 02

Fax: +41 (0) 24 435 22 03

Email: tecdevexpress@gmail.com , tecdev@hispeed.ch

Visit our site : www.tecdevexpress.com



Flow Splitters

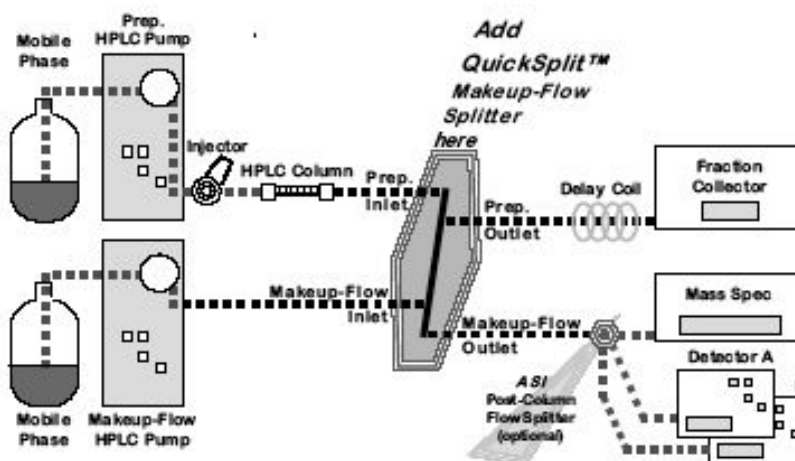
The ASI Flow Splitter is very elegant in its simplicity. Split ratios are created by two or more fluid resistors that form a parallel flow path. The Flow Splitters are available with a fixed or adjustable split ratio. Interchangeable fluid resistors make it easier to change split ratios quickly, eliminating tedious adjustments to capillary tubing. The technology can be applied to all applications where a controlled, reproducible split ratio is required including LC/MS, flow fractionation, pre/post column flow splitting, and capillary chromatography. All ASI splitters come in two flow rate ranges which make them compatible with micro, analytical and preparative inlet flows.



Binary Fixed Flow Splitter: Interchangeable fluid resistors eliminate the need to cut capillary tubing to change split ratio. Rugged stainless steel construction allows ultra-high pressure limits (up to 10,000PSI).

Split ratios are not affected by changes in viscosity or pressure. Split ratios are set at the factory but can be changed by replacing the resistor set. Split ratios from 1:1 to 20,000:1. Internal dead volume less than as low as 100nL on the low flow rate side. Replaceable inlet filter prevents plugging.

Multiport Fixed Flow Splitter: Splits incoming flow stream into 3 to 8 channels. The Multiport Flow Splitter is ideal for applications that use multiple detectors and/or a fraction collector. Split ratios can be configured to be identical in each channel or custom configured to accommodate specific flow rates at each channel. Split ratios at each channel can be changed at any time by simply replacing the fluid resistor. Low internal dead volume prevents excessive dispersion. Replaceable inlet filter prevents clogging.



Adjustable Flow Splitter:

The ASI adjustable flow splitter is a unique combination of an adjustable metering valve and fluid resistors. The adjustment knob on the metering valve enables precise direct control over split ratios. The splitter provides stable repeatable split ratios over a wide range of flow rates and split ratios regardless of changes to pressure and viscosity. Split ratios from 1:1 to 20,000:1. Stainless steel and PEEK Adjustable Flow Splitters operate to 5,000PSI. Dead volume is less than 0.5 μ L on the low flow rate side. Integral replaceable inlet filter element prevents clogging.



Adjustable Flow Splitter SS Model 600-2000

Mixers

ASI manufactures a wide range of Mixers to meet the most demanding HPLC mixing problems.

All ASI Mixers incorporate a highly efficient cross-flow shearing mechanism which produces vortex shear mixing over a wide flow range. This mixing technology typically delivers between 25% to 200% better mixing efficiency compared to conventional stir bar or tortuous path mixers. ASI Mixers are available in both static and dynamic formats with volumes ranging from 0.5 μ L to 1.5mL.



Static Mixers: Mixing volumes from 0.5 μ L to 1.5mL. Interchangeable cartridge design allows for quick volume changes. Internal geometry maximizes mixing efficiency while minimizing gradient distortion and peak dispersion. Manifold designs include: inline, binary and ternary inputs. ASI Static Mixers are available in stainless steel and biocompatible PEEK.



Dynamic Mixers: ASI Dynamic Mixers decrease mixing noise by as much as 50% compared to conventional stir bar mixers. Mixing volumes include 150 μ L, 250 μ L, 350 μ L, 500 μ L, and 1.0mL. Manifold designs for both binary and ternary (500 μ L and 1.0mL) inputs. Compact design makes it easy to interface the Mixer to your HPLC system.

Liquid Metering Pumps and Subassemblies



Model 501 and Model 500G

OEM Pumps are available from ASI in a variety of formats including; complete Pumps, Pump subassemblies, and custom Pump kits. ASI Pump technology incorporates several unique features (Patent Pending). These include self-priming heads, floating pump seals, and "quick change" pistons and seals. The overall benefit to this design is easy maintenance and long seal life. Noise spec is 1% delta p/p at 1,000PSI.

Replacement Parts for HPLC Pumps

Whether they are check valves, pistons, or pump seals, all ASI replacement parts are designed to exceed the manufacturers specifications.

All parts are subjected to rigorous engineering analysis and quality standards to insure the parts you purchase provide maximum life and superior chromatographic performance. Replacement parts are available for most HPLC pumps.

Check Valves:

ASI Check Valves are superior to all other check valves for three reasons.

- Self priming
- Superior flow stability and accuracy
- Crush proof cartridge design provides quick and easy maintenance

All ASI cartridges are available in stainless steel and biocompatible PEEK. The standard cartridge comes with a ruby ball and sapphire seat. Ceramic balls and seats are also available. ASI also manufactures a soft seat check valve for routine analysis with ACN.

Pistons: Manufactured from sapphire and zirconium ceramic, ASI Pistons are engineered to insure high quality surface finishes. Custom piston designs are available.

Pump Seals: Manufactured from UHMW and Teflon, ASI Pump Seals are designed for long life, wide solvent compatibility, and optimum performance.

Pulse Damper

Clean flush out flow path. Virtually indestructible with no diaphragm or other moving parts to wear out. The Pulse Damper is available in 3 different volumes to suit individual pump requirements. It can be manufactured to include a pressure transducer and/or a static mixer.



PCR Mixers and Reactors

ASI PCR systems combine efficient mixing with low reaction volumes. The result is improved reaction kinetics with less dispersion. Subassemblies and replaceable reactor cartridges are available. Units are rated to 3,000PSI at 150° C.



Fittings

Fittings, tubing, inline filter, and solvent filters. Custom inline filters available for a wide



Replacement Parts for HPLC Pumps / Agilent

All information at

TecDev

Le Villaret

CH 1432 Belmont s/

Yverdon



Tel: +41 (0) 24 435 22 02

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Email: tecdevexpress@gmail.com , tecdev@hispeed.ch

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