

# PN1650 S3

FFF Smart Stream Splitting Module



**Enhanced Sensitivity for FFF**

# PN1650 Smart Stream Splitter

## Features

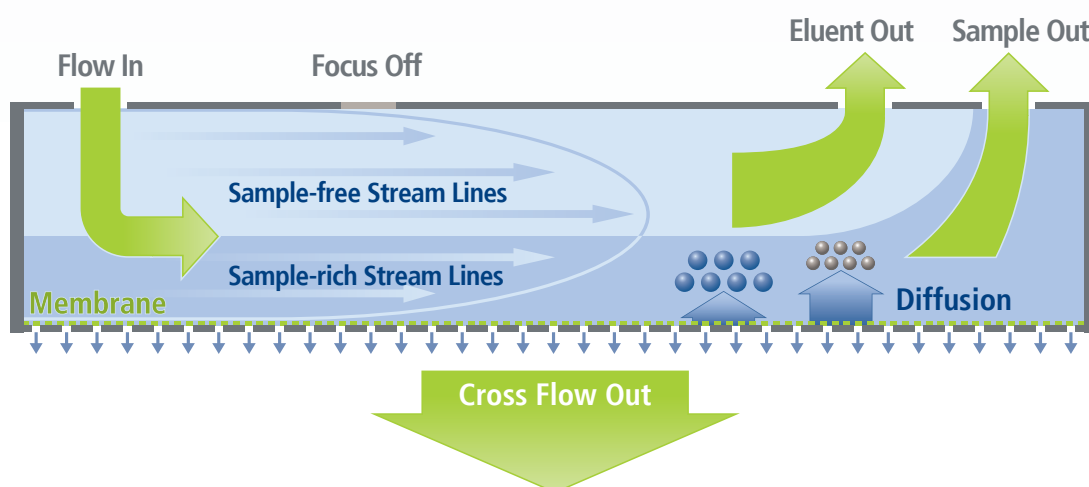
The PN1650 Smart Stream Splitter (S3) module is a microprocessor-controlled mass flow controller which allows precise and automated outlet splitting of the eluent stream leaving the FFF channel. This unique proprietary S3 technology has been exclusively developed to offer an advanced option for FFF researchers to increase sensitivity in FFF detection currently available for AF2000 Flow FFF systems. Together with an AF2000 double outlet channel cartridge, detection levels can be increased by a factor between six and eight without any further injection of additional sample into the FFF separation system.

## Working Principle

The PN1650 Smart Stream Splitter is used as an additional module for any AF2000 series FFF system. It perfectly allows the specific removal of laminar „sample-free“ eluent streams from the upper region of the FFF channel via a first outlet. At the same time, the „sample-containing“ laminar flow streams that are located in the lower region of the channel, exit the channel via a second outlet at the end of the channel and are transferred directly to the connected detectors.

## Typical Applications

Smart Stream Splitting (S3) is ideally suited and often employed when low concentration samples are investigated. Most applications come from the area of environmental, protein and polymer research, where even the highest sensitivity detection can be insufficient and where large volume injections of diluted sample systems are standard. In these cases the S3 technology can make the difference, especially when employed together with Postnova's unique FOCUS technology and flexible FFF channel cartridges. Smart Stream Splitting can be used within different runs of a total sequence and allows to change the eluent outlet split ratios and to customize and optimize conditions for each run differently.



## Unique Features of PN1650 Smart Stream Splitter

- Special Flow Splitter for enhancement of sensitivity by factor up to 5
- Flexible use within any kind of sequence of runs
- No changes to system hardware necessary
- Ideal when concentration signals are insufficient
- Can be used with any AF2000 Series FFF system
- For more information please ask for application notes

## Ordering Information

S-AF4-SOT-600      S3 Option AQU  
S-AF4-SOT-601      S3 Option ORG

## Specifications

- Function:  
Metering pump for the Smart Stream Splitting option
- Setup and Flow Setting:  
Via Postnova NovaFFF AF2000 Control Software
- Controllable Flow Rates:  
0.1 mL/min up to 1 mL/min at 0.01 mL/min resolution
- Accuracy:  
0.2 %
- Reproducibility:  
0.05 %
- Solvents:  
All in FFF useable solvents and cleaning solutions  
All organic and aqueous solvents (no high concentrated acids)  
No solvent specific setup needed
- Viscosity Range:  
0.1 - 5 cP
- Wetted Materials:  
PTFE, PEEK, Kalrez®, stainless steel
- Liquid Connections (In, Out):  
Fittings (stainless steel or PEEK) for 1/6" tubes with a 10-32 UNF thread on front  
Tubes with 1/6" outer diameter  
Purge port on front
- Max. Pressure:  
30 bar
- Communication:  
Via RS232 cable with the AF4 module box
- Power Requirements:  
100 – 240 V<sub>AC</sub> @ 50 – 60 Hz, 40 W
- Environmental Conditions:  
Temperature Range: 10 - 30 °C  
Relative Humidity: 20 - 80 %
- Dimensions:  
Length x Width x Height  
430 x 270 x 90 mm
- Weight:  
7.5 kg

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