PN1130 Isocratic Pump

Eluent Delivery System for FFF and SEC

PN1130 FFF/SEC Pump

Features

The Postnova PN1130 Pump is an isocratic dual piston eluent delivery system optimized for FFF. It employs short piston stroke technology with two check valves. The working principle of the PN1130 solvent delivery system is shown in the Figure below.

The delivery piston works with a 2 mm stroke length, the compensation piston with 1 mm. The nearly pulseless solvent discharge of the PN1130 results from the high stroke frequency/low stroke volume (20 µL) and the use of a compensation piston. While the delivery piston discharges the solvent volume, the compensation piston, located on the pressurized side, collects half of the volume. During the return movement of the delivery piston, the collected volume is discharged from the compensation piston.

The microprocessor controlled speed regulation leads to a highly stable motor speed. In contrast to standard regulators, the microprocessor is able to compensate continuously the compressibility of the eluents through a computerized program.
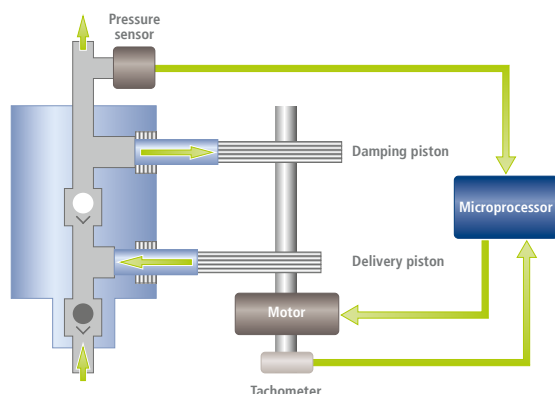
This results in a constant volume delivery throughout the entire delivery range. The microprocessor technology also offers the possibility to handle the programming, application and control of an instrument in a simple way. Through the alphanumeric display, the operation parameters are shown in clear letters. The user can easily control or change the data. To simplify operation, the number of function keys is kept at a minimum.

Basically, the user has the choice between two operation modes. The delivery with „Constant Pressure" and the delivery with „Constant Flow". The operation modes can be programmed with the following parameters:

- Constant pressure in MPa
- Constant flow in mL/min
- Minimum pressure level
- Maximum pressure level
- Maximum flow
- Compressibility factor
- Maximum run time
- Delay time
- Programmable start/stop delay time

The PN1130 pump is equipped with a built-in diagnostic system. This continuously controls the following parameters:

- Power failure
- Program memory
- Minimum pressure levels
- Maximum pressure levels
- Maximum flow
- Motor function

Specifications

- Flow Rate:
  Micro: 0.05 to 4.00 mL/min
  Analytical: 0.10 to 9.95 mL/min
  Preparative: 40 to 40.00 mL/min

- Pulsation:
  Less than 1 %

- Maximum Pressure:
  Micro: 40 MPa (400 bar)
  Analytical: 40 MPa (400 bar)
  Preparative: 20 MPa (200 bar)

- Display:
  LCD alphanumerical 2 x 24 characters

- Compressibility Factor:
  Select from 0.7 to 1.0

- Operation Modes:
  Constant flow / Constant pressure

- Remote Control:
  RS232 + analog control (flow, start, stop)

- Run Time:
  00:01 to 99:59 h

- Delay Time:
  00:01 to 99:59 h

- Safety Control:
  Minimum/maximum pressure
  Power supply
  Logical data input

- Error Message Transfer:
  Potential free relay contact
  Acoustic and optic signal

- Power Requirements:
  220/110 V; 50/60 Hz

- Dimensions
  285 x 130 x 420 mm

- Weight:
  8 kg

Ordering Information

S-PUM-1130-001   PN1130 Micro Stainless Steel
S-PUM-1130-002   PN1130 Micro Peek
S-PUM-1130-003   PN1130 Micro PVDF

S-PUM-1130-004   PN1130 Analytical Stainless Steel
S-PUM-1130-005   PN1130 Analytical Peek
S-PUM-1130-006   PN1130 Analytical PVDF

S-PUM-1130-007   PN1130 Preparative Stainless Steel
S-PUM-1130-008   PN1130 Preparative Peek
S-PUM-1130-009   PN1130 Preparative PVDF

Technical specifications are subject to change without further notice.

Contact

- Postnova Analytics GmbH
  86899 Landsberg, GERMANY
  T: +49 8191 985 688 0

- Postnova Analytics UK Ltd.
  Malvern, Worcestershire, WR14 3SZ, UK
  T: +44 1684 585167

- Postnova Analytics Inc.
  Salt Lake City, UT 84102, USA
  T: +1 801 521 2004

- Postnova North Europe
  01630 Vantaa, FINLAND
  T: +358 9 8545 510

info@postnova.com
www.postnova.com