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Part Number: APG20EA

Base Pump: AZURA\*\* P 4.1S

# Compact pump with pressure sensor and 10 ml/min stainless steel pump head

For HPLC and dosing applications

With its small footprint, the compact dual-piston pump AZURA P 4.1S can be used for many different laboratory tasks. It features an integrated pressure sensor, which ensures pressure-independent flow rate accuracy. Moreover, for system protection, the pump drive is switched off when reaching a pre-defined pressure limit. Pump heads with maximum flow rates of 10 and 50 ml/min are available.

A pressure rating of up to 400 bar and chemical resistance to a wide ranges of eluents make it the perfect choice for LC and dosing applications.

The exchangeable pump head allows adaptation of the pump for delivery of aggressive media and bioinert applications. The pump head can be heated or cooled with optional accessories



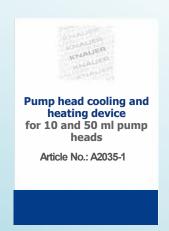
AZURA P 4.1S pump with pressure sensor

### **ACCESSORIES & SPARE PARTS**











## **TECHNICAL DATA**

#### **General Information**

Max. flow rate: 10 ml/min

Flow rate range: 0.001-10 ml/min

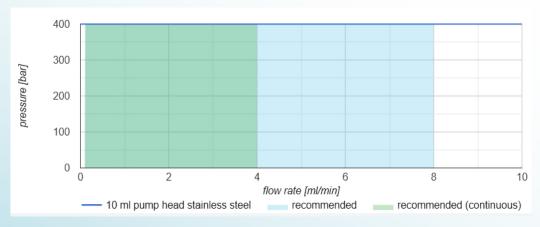
Flow rate increment: 0.001

Maximum delivery pressure [psi]: 5800 psi

Maximum delivery pressure [bar]: 400 bar

Maximum delivery pressure [MPa]: 40MPa

Pressure range:



Pump head materials: Stainless steel

Maximum viscosity: 100 cp

Liquid temperature range: 4-60 °C (39.2-140 °F)

Gradient: Isocratic

Leak management: No

Wetted materials: GFP (graphite fiber-reinforced PTFE), ruby, sapphire,

Titanium, PEEK

Note: Pressure sensor membrane made of stainless steel;

limited wetting in fluidic path



#### **Detailed information**

Best working conditions: 0.1-8.0 ml/min

0.1-4.0 ml/min **Continuous working conditions:** 

±1% Flow rate accuracy:

Flow rate accuracy conditions: 5-50% of flow range using ethanol/water 10:90

Flow rate precision: < 0.5% RSD

Measured at 1 ml/min using ethanol/water 10:90 Flow rate precision conditions:

**Pulsation compensation:** No

Pump type: Ultra-compact high pressure pump

Active Piston seal wash: No

Piston seal washing: Yes

System protection: Pressure min and max adjustable

Pump head inlet (standard): 1/4"-28 UNF (flat bottom)

Pump head outlet (standard): 10-32 UNF (coned)

Communication

Interfaces: Display

Control: RS-232; analog; button on device

**Analog inputs:** 0-10V

General

100-240 V; 50-60 Hz Power supply:

121 x 129 x 220 mm **Dimensions:** 

2.3 kg Weight:

No Leak sensor:

**Ambient conditions:** Temperature range: 10-40 °C; 50-104 °F; air humidity: below 90 % humidity (non

condensing)

<sup>\*\*</sup>AZURA® is a Registered Trademark of KNAUER Wissenschaftliche Geräte GmbH