

AZURA® Pump P 2.1S

AZURA® Pump P 2.1S was developed for high-pressure dosing applications of up to 400 bar and for flow rates of up to 50 ml/min. Whenever a compact and the easy-to-integrate pump is required, this pump is a perfect choice. The exchangeable pump heads are compatible with a wide range of chemicals and the versatile control options allow easy remote and standalone operation. For aggressive liquids, a Hastelloy® C version is available.



Specifications

Solvent delivery

Pump type	Ultra-compact high pressure pump
Delivery system	Dual piston pump with one working piston, one auxillary piston
Pulsation compensation	No
Piston seal washing	Passive Wash
Flow rate accuracy	± 5%, measured at 5 - 50% of flow range using ethanol/water 10:90. ±2% at calibration point (one point calibration), measured at 5 - 50% of flow range
Flow rate precision	≤ 0.5% RSD, measured at 1/5 ml/min using ethanol/water 10:90
System protection	Imin und Imax are programmable (I ~ pressure)
Liquid temperature range	4–60 °C (39.2–140 °F)
Pump head inlet (standard)	1/8" OD, 2.1 mm ID FEP tubing (UNF 1/4-28 thread, flat bottom)
Pump head outlet (standard)	UNF 10-32 Thread (for 1/16" capillary)

Communication

Display	Yes
Inputs	LAN, Pin header connectors (Analog IN, Start In, Error IN), RS-232
Analog inputs	0 - 10 V
Analog control input	Flow Rate
Control	LAN, RS-232, analog, standalone

Technical parameters

Display	Yes
Ambient conditions	10-40 °C (50-104 °F) Air humidity below 90%, non-condensing

General

Power supply	100 - 240 V; 50 - 60 Hz; Maximum power consumption 100 Watt
Dimensions	121 x 129 x 220 mm (W x H x D)
Weight	2.3 kg



For accessories see page 19.



A variety of software control options is available: KNAUER offers various options for drivers. For more information, please visit <https://www.knauer.net/softwarecontrol>

AZURA® Pump P 2.1S with 10 ml pump head

Specifications

Pump specifications

Pump head	10 ml
Flow rate range	0.001 - 10 ml/min
Maximum delivery pressure	5800 psi / 400 bar / 40 MPa up to 10 ml/min
Wetted materials	Graphite fiber reinforced PTFE, FKM (FFKM for APG90EC), PEEK (PCTFE for APG90EC), sapphire, ruby, zirconium oxide and pump head material
Maximum viscosity	100 mPa s (at reduced max. flow)
Flow rate increment	0.001 ml/min
Best working conditions	0.1 - 8.0 ml/min
Continuous working conditions	0.1 - 4.0 ml/min
Pumphead material	Stainless steel / ceramic / Hastelloy® C

Ordering details:

APG90EA	AZURA® Pump P 2.1S compact HPLC pump with 10 ml/min stainless steel pump head
APG90EB	AZURA® Pump P 2.1S compact HPLC pump with 10 ml/min ceramic pump head
APG90EC	AZURA® Pump P 2.1S compact HPLC pump with 10 ml/min Hastelloy® C pump head
APG90EG	AZURA® Pump P 2.1S compact HPLC pump with 10 ml/min stainless steel pump head, recommended for aqueous solutions

AZURA® Pump P 2.1S with 50 ml pump head

Specifications

Pump specifications

Pump head	50 ml
Flow rate range	0.01 - 50 ml/min
Maximum delivery pressure	2180 psi / 150 bar / 15 MPa up to 50 ml/min
Wetted materials	Graphite fiber reinforced PTFE, FKM (FFKM for APG90FC), PEEK (PCTFE for APG90FC), sapphire, ruby, zirconium oxide and pump head material
Maximum viscosity	100 mPa s (at reduced max. flow)
Flow rate increment	0.01 ml/min
Best working conditions	0.5 - 40.0 ml/min
Continuous working conditions	0.5 - 20 ml/min
Pumphead material	Stainless steel / ceramic / Hastelloy® C

Ordering details:

APG90FA	AZURA® Pump P 2.1S compact HPLC pump with 50 ml/min stainless steel pump head
APG90FB	AZURA® Pump P 2.1S compact HPLC pump with 50 ml/min ceramic pump head
APG90FC	AZURA® Pump P 2.1S compact HPLC pump with 50 ml/min Hastelloy® C pump head
APG90FG	AZURA® Pump P 2.1S compact HPLC pump with 50 ml/min stainless steel pump head, recommended for aqueous solutions