Cartridge Style
Low Temperature Printhead

Product Description

The PH-41 is a cartridge style, low-temperature drop-on-demand printhead. It is designed for dispensing fluids at room temperature, or optionally up to 50°C. The reservoir attaches directly to the dispensing device, forming a replaceable assembly that allows quick change out and storage, permitting multiple fluids to be printed without having to clean or disassemble the printhead. An integrated filter enhances reliability. A broad range of materials can be dispensed using the PH-41, including bioactive, optically active, sensor, and other materials. Drop volumes ranging from 5 pL to as high as 0.5 nL have been dispensed.

Standard Features

- MJ-AL dispensing device, filter, and reservoir form replaceable cartridge assembly for quick change out and storage, simplifying printing of multiple fluids. All parts cleanable / reusable.
- 2.5 mL capacity polypropylene reservoir; unused fluid recoverable; 0.5mL minimum load volume.
- Integrated, replaceable / removable 5µm stainless steel sintered filter.
- Compatible with Jetlab® II, and Jetlab® 4 family.

Available Options

- MJ-AL devices available in orifice diameters 10-80µm.
- Filter material and pore size selectable.
- Optional heater element & thermocouple for operation to 50°C.
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Ordering Information

PH-41  Cartridge style, low temperature drop-on-demand printhead. Includes one polypropylene reservoir. H for heated option.
PH-41H  
MJ-AL-01-xxx  Low-temperature device with Luer fluid fitting, xxx denotes orifice diameter in microns. Includes 5µm stainless steel sintered filter element.
C-03  Five (5) 2.5 mL polypropylene reservoirs with caps.
C-03a  C-03 plus one set insert & sleeve.

Support Equipment

The PH-41 may be combined with the following components and subsystems to create a functional subsystem.

CT-M5-01  JetDrive™ V controller, including command set and stand-alone control program. Includes built in strobe delay. Level 02 firmware (complex waveforms) included.
CT-PT-21  Pressure / Thermal Controller with one manual pneumatic channel. Add one TS-01 temperature controller for the PH-41H.
CT-PT-A1  Electronic Pressure Controller and Pressure Mode Selector, single channel.
CM-VS-01  Basic Optics System: CCD camera, power supply, lens, fine focus, mounting block.

Addition Information

Available at microfab.com
• Drawings with dimensions
• Equipment selection guide
• Integration Guide
• Cleaning Guide.

Polymer light-emitting diodes (PLED) printed into 100x300µm features.
Functional polymers printed onto 100µm sensor elements.
1.8mm diam. vascular stents coated with fluorescent dyes; (analog for antirestenotic drugs).