

## Pneumatics & Temperature Controllers

### Product Description

The pneumatics controller includes a three-state pneumatic circuit: pressure fill / purge; vacuum purge; and operating pressure control. A precision regulator is used to create the correct static pressure for drop-on-demand operation, regardless of the reservoir location and fluid level. The temperature controllers can be used to control printhead temperature(s) and substrate temperature(s). Configurations with up to four independent pressure control channels and up to four temperature controllers are available. Manual and electronic pressure control configurations are available.



### Standard Features

- Three-state pneumatic circuit; precision regulator, 2 mbar resolution.
- Digital pressure gage.
- 1°C temperature resolution.
- Integrated into Jetlab® II, and Jetlab® 4 family.

### Available Options

- Up to four independent pneumatic channels
- Up to four temperature controllers
- Electronic pressure regulator
- Electronic pressure mode selection



## Ordering Information

- CT-PT-21** Pressure / Thermal Controller with one manual pneumatic channel: precision regulator and Pressure Mode Selector. No temperature controllers. Add up to two T-01 temperature controllers.
- CT-PT-A1** Electronic Pressure Controller and Pressure Mode Selector, single channel. USB interface.
- CT-PT-A2** Electronic Pressure Controller, manual Pressure Mode Selector, single channel. USB interface.
- CP-01** Manual pneumatics control channel for CT-PT4 (precision regulator and Pressure Mode Selector).
- CT-PT4** Four channel Pressure / Thermal Controller, base unit (no pneumatics channels and no temperature controllers). Add up to four (4) CP-01 manual pneumatic channels and up to three (3) T-01 temperature controllers.
- CP-21** Pressure / vacuum pump for jetlab® Printing Systems and microdispensing subsystems.
- T-ENCL-x** Enclosure for temperature controllers. Select from x=1-3. Includes power switches, fuses, power cord, and connectors for heaters and thermocouples.
- T-01** Temperature controller for CT-PT-21, CT-PT-04, and T-ENCL-x.

## Specifications

Common (except CP-21):	
Pneumatics circuit	three state
(1) Pressure fill / purge	0-15 psi (0-100 kPa)
(2) Vacuum purge	
(3) Operating pressure	vacuum / pressure fine adjust to 2 mbar (manual), 1 mbar (electronic)
Pressure gages	digital, resolution: 0.1 psi, 0.2 kPa, 2 mbar, 0.1 in Hg, 2 mm Hg
Input pressure	60 psig (420 kPa)
Input flow, max	20 scfm (560 L/min)
Input vacuum	< -20" Hg (-70 kPa)
Temperature control	Increments of 1°C
Heater connector	4 pin AMP, round
Thermocouple connector	Omega mini
Pneumatic connectors	1/8" (32 mm) quick connects
Power	110V or 220V (set internal)

Size (H x W x D):	
CP-PT-21	7.1 x 7.1 x 10.1 in 18 x 18 x 20.2 cm
CP-PT-A1	7.1 x 7.1 x 10.1 in 18 x 18 x 20.2 cm
CP-PT-A2	7.1 x 7.1 x 10.1 in 18 x 18 x 20.2 cm
CT-PT-04	18 x 11.9 x 12 in 45.7 x 30.2 x 30.5
T-ENCL-x	5.1 x 6 x 6 in 13 X 15.2 x 15.2 cm
CP-21:	
Power	110V or 220V models
Output pressure	60 psig (420 kPa)
Output flow	1.1 cfm (31.2 L/min)
Output vacuum	25.5" Hg at zero flow