



IET | International Equipment Trading Ltd.  
[www.IetLtd.com](http://www.IetLtd.com) | *Proudly serving laboratories worldwide since 1979*  
CALL +847.913.0777 for Refurbished & Certified Lab Equipment

## *Waters Column Heater/Cooler*

### Specifications

#### **Column Manager and column heater/cooler environmental specifications**

<b>Attribute</b>	<b>Specification</b>
Operating Temperature	4 to 40 °C (39.2 to 104 °F)
Operating Humidity	<50%, noncondensing
Shipping and storage temperature	-30 to 60 °C (-22 to 140 °F)
Shipping and storage humidity	<90%, noncondensing

#### **Column Manager and Column Heater/Cooler Electrical Specifications**

<b>Attribute</b>	<b>Specification</b>
Protection Class <sup>a</sup>	Class I
Overvoltage Category <sup>b</sup>	II
Pollution Degree <sup>c</sup>	2
Moisture Protection <sup>d</sup>	Normal (IPXO)
!Line Voltages, Nominal	Grounded AC

<sup>a</sup>Protection Class I: The Insulating scheme used in the instrument to protect from electrical shock. Class I identifies a single level of insulation between live parts (wires) and exposed conductive parts (metal panels), in which the exposed conductive parts are connected to a grounding system. In turn, this grounding system is connected to the third pin (grounded pin) on the electrical power cord plug.

<sup>b</sup>Overvoltage Category II: Pertains to instruments that receive their electrical power from a local level such as an electrical wall outlet.

<sup>c</sup>Pollution Degree 2: A measure of pollution on electrical circuits, which can only produce a reduction of dielectric strength or surface resistivity. Degree 2 refers only to normally nonconductive pollution. Occasionally, however, expect a temporary conductivity caused by condensation.

<sup>d</sup>Moisture Protection: Normal (IPXO)-IPXO means that no Ingress protection against any type of dripping or sprayed water exists. The X is a placeholder that identifies protection against dust, if applicable.

## Column Manager and Column Heater/Cooler Performance Specifications

Attribute	Specification
Set point temperature range	10 to 90 °C
Compartment Operational temperature range	15 °C below ambient to 90 °C; to a minimum of 10 °C
Compartment temperature measurement accuracy	±1.0 °C; Temperature measured by an NIST traceable probe located next to the measurement sensor will be within the specification.
Column Compartment	Column Manager: Accommodates up to four columns in parallel, 20 to 150 mm length X 2.1 to 4.6 mm ID, plus either a guard column or an in-line filter (30 mm maximum)
	Column Heater/Cooler: Accommodates one column; serially connected columns can also be supported (up to four), 20 to 150 mm length X 1.0 to 4.6 mm ID, plus either a guard column or an in-line filter (30 mm maximum)
Valve Management (std) <sup>a</sup>	Two injector-style valves; 7 port, 6 position
Over temperature	Thermal switch shuts (switch opens) off heater at temperatures greater than 115 °C ±4.4 °C. Switch recloses at 100 °C ±3.3 °C.
Unattended Operation	Leak sensors, full 96-hour diagnostic data displayed through ACQUITY UPLC Console software

<sup>a</sup>Column Manager Only

WWW.IETI-TD.COM



IET | International Equipment Trading Ltd.

[www.IetLtd.com](http://www.IetLtd.com) | Proudly serving laboratories worldwide since 1979

CALL +847.913.0777 for Refurbished & Certified Lab Equipment

IET - Used Lab Equipment - Refurbished Analytical Laboratory Instruments