

Baldwin™-Series Classic Coolers

High Capacity Coolers For High-Performance, High-Flow Applications

- Dependable water removal
- Dual sample streams
- LCD temperature display
- Analog controlled
- Low maintenance
- EZ-Clean twist-apart impingers
- Excellent corrosion resistance
- Alarm relay protects analyzers

Perma Pure Baldwin™-Series Classic thermo electric coolers have a solid history of reliable performance. The original Classic Series of coolers are specifically designed for high flow rate, high ambient temperature, and high water volume applications.

Principle of Operation

All Baldwin-Series coolers use thermo-electric elements or Peltiers, to cool the sample gas to the desired dew point temperature. A Classic thermo-electric cooler is best illustrated as a small heat pump with no moving parts. The Peltiers operate by applying direct current to two dissimilar metals, causing a temperature differential, inducing condensate formation. The condensate formed should be removed with a small peristaltic pump.

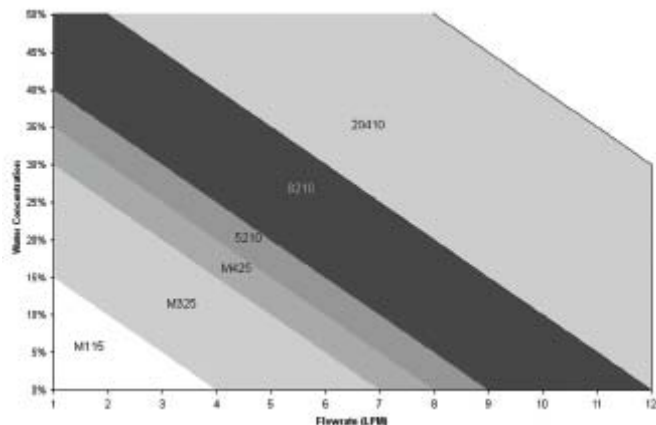
For more information about thermo-electric coolers please visit our website at www.permapure.com.



Classic

Thermo-Electric Cooler

Model Selection



Model	Heat Exchangers		Dimensions HWD	Weight
	Passive	Active		
610P	1 x 10 in.		11 x 10 x 10 in 28 x 25 x 25 cm	15 lbs 7 kg
M115		1 x 5 in.	13 x 7 x 11 in 33 x 18 x 29 cm	15 lbs 7 kg
M325	1 x 5 in.	1 x 5 in.	13 x 7 x 11 in 33 x 18 x 29 cm	17 lbs 8 kg
M425		2 x 5 in.	13 x 7 x 11 in 33 x 18 x 29 cm	17 lbs 8 kg
5210	1 x 10 in.	1 x 10 in.	15 x 11 x 11 in. 38 x 28 x 28 cm.	27 lbs 12 kg
8210		2 x 10 in.	15 x 13 x 12 in 38 x 33 x 30 cm	39 lbs 18 kg
20410	2 x 10 in.	2 x 10 in.	15 x 13 x 12 in 38 x 33 x 30 cm	39 lbs 18 kg



Model 610P Pre-cooler



Model 5210

General Specifications

Boards	Main control board Water slip alarm relay board HE thermocouple temperature transmitter
Display	LCD temperature display* LED heat exchanger status indicators
Alarm Relays	Cooler over temperature Cooler thermocouple failure
HE Types	One piece or EZ-Clean™ twist apart
HE Materials	Stainless steel, Durinert® treated stainless steel, Kynar®, Glass
HE Connections	1/4" FNPT Inlet (first heat exchanger) 1/8" FNTP Outlet 3/8" FNPT Drain
Heat Sink	High heat transfer aluminum
Voltage	110 VAC, 220 VAC; 50/60 Hz

* LCD is an optional upgrade on Model M115 and not available on Model 610P.

Operating Specifications

Max inlet sample temperature	400°F (205°C) SS, Durinert, Glass impingers 280°F (138°C) Kynar impingers
Max inlet pressure	45 psig; (3 bar; 2250 mmHg)
Max HE pressure drop	< +1 in H2O
Ambient temperature	33-104°F (0.6 – 40°C)
Outlet dew point	41°F (5°C)



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