500 Series Thermo-Electric Gas Cooler

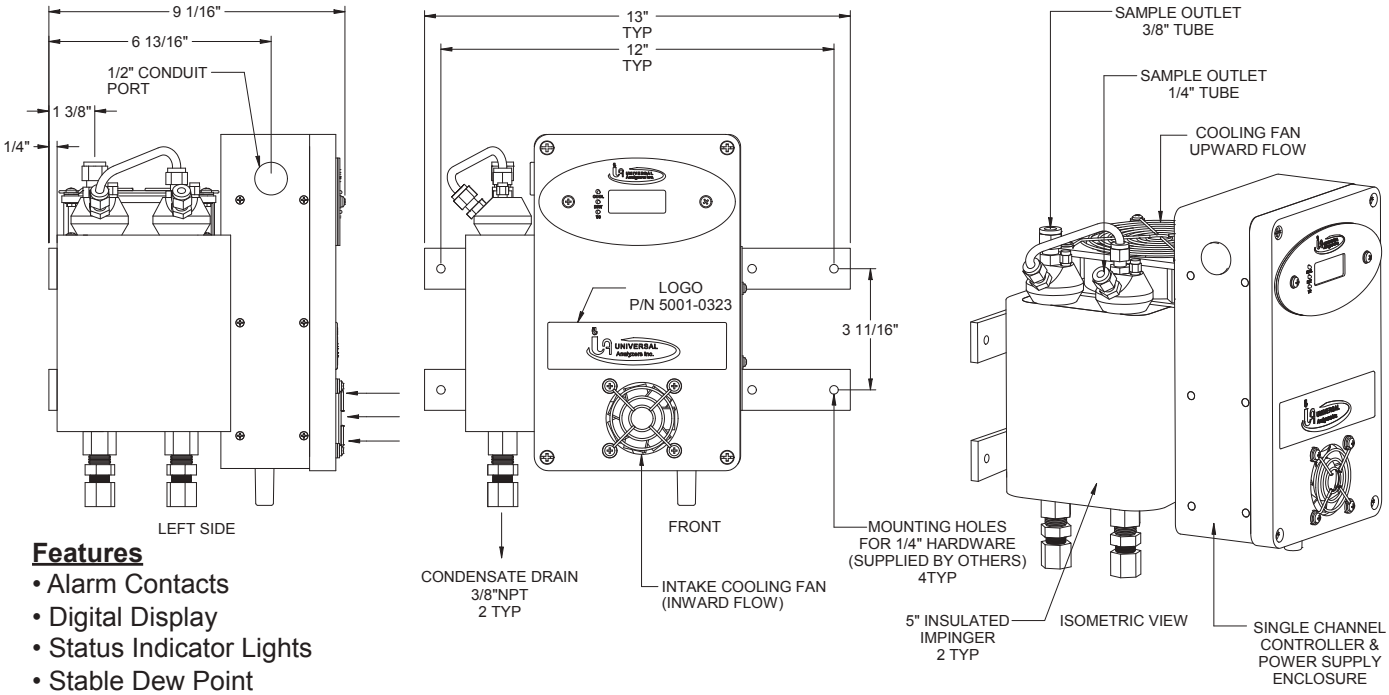
The Series 500 Sample Coolers are moderate capacity thermoelectric coolers. They provide a self-regulated 4.0°C dew point gas sample. The 500 Series Coolers condense the water from a wet gas sample with minimal loss of the water soluble gas fraction. This results from the unique design of the heat exchangers. The separation occurs in the heat exchangers which have a highly polished cylindrical surface cooled by thermoelectric Peltier devices to the desired dew point temperature. These heat exchangers are available in a variety of materials including Stainless Steel, Kynar/Glass, and Hastelloy.

The 500 series coolers can be either panel or wall mounted and can contain one or more 5” heat exchangers. The number of heat exchangers and cooling scheme can be configured to satisfy your application need. The unit’s Peltier elements are cooled by heat sinks which are then cooled using either ambient air or a continuous supply of water.

The 500 Series Coolers can be easily integrated with other Universal Analyzers’ sample components including a condensate slip sensor with or without an integral condensate coalescing filter, peristaltic pump, sample pump, manual switches, external terminal strip, or PLC controlled sample handling systems, PLC controlled sample sequencers and a complete line of Stack Filter Probes. For high pressure applications, metal heat exchangers can be welded together as a single assembly. For special applications, stainless steel heat exchangers can be Silconert 2000* coated.

Applications

- CEMS Integration
- Process Analysis
- Process System Integration
- In-Plant Chiller Requirements



Features

- Alarm Contacts
- Digital Display
- Status Indicator Lights
- Stable Dew Point
- Can be integrated into your sample system
- 5” Impingers available in different materials (wetted parts)
- Heat sink cooled by a highly efficient blower

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Gas Cooler Selection Chart:

Conditions		Model						
Ambient	Water	520	530	540	560	570	574	574
77°F (25°C)	12%	2.5 l/m	4.0 l/m	2.5 l/m	5.0 l/m	4.0 l/m	5.0 l/m	2.5 l/m
	15%	2.0 l/m	4.0 l/m	2.0 l/m	4.0 l/m	4.0 l/m	4.0 l/m	2.0 l/m
	30%	1.0 l/m	4.0 l/m	1.0 l/m	2.0 l/m	4.0 l/m	2.0 l/m	1.0 l/m
	50%	0.6 l/m	4.0 l/m	0.6 l/m	1.0 l/m	4.0 l/m	1.0 l/m	0.6 l/m
90°F (32°C)	12%	2.0 l/m	3.0 l/m	2.0 l/m	4.0 l/m	3.0 l/m	4.0 l/m	2.0 l/m
	15%	1.8 l/m	3.0 l/m	1.8 l/m	3.5 l/m	3.0 l/m	3.5 l/m	1.8 l/m
	30%	0.9 l/m	3.0 l/m	0.9 l/m	1.8 l/m	3.0 l/m	1.8 l/m	0.9 l/m
	50%	0.5 l/m	3.0 l/m	0.5 l/m	0.9 l/m	3.0 l/m	0.9 l/m	0.5 l/m
105°F (41°C)	12%	1.5 l/m	2.0 l/m	1.5 l/m	3.0 l/m	2.0 l/m	3.0 l/m	1.5 l/m
	15%	1.2 l/m	2.0 l/m	1.2 l/m	2.5 l/m	2.0 l/m	2.5 l/m	1.2 l/m
	30%	0.6 l/m	2.0 l/m	0.6 l/m	1.3 l/m	2.0 l/m	1.3 l/m	0.6 l/m
	50%	0.3 l/m	2.0 l/m	0.3 l/m	0.7 l/m	2.0 l/m	0.7 l/m	0.3 l/m
# of Gas Streams		1	1	2	1	2	2	4

Technical Information:

Sample Flow Rate:	(Specific to model; See Capacity Chart)
Maximum Inlet Sample Temperature: Stainless Steel Heat Exchanger: Kynar/Glass Heat Exchanger:	 700°F. (371°C.) 280°F. (138°C.)
Maximum Inlet Water Concentration:	50%*
Maximum Ambient Temperature:	105°F. (41°C.)*
Outlet Sample Dew Point:	41° F. (5°C.)
Voltage:	115/230 VAC, 50/60 Hz
Electrical Classification:	General Purpose
Weight:	18 LB (8 KG)
Soluble Gas Removal Rates:	NO 0% LOSS NO2 <10% LOSS SO2 < 2% LOSS CO 0% LOSS CO2 < 2% LOSS
*At reduced flow rates, see capacity chart.	