SALAERA



Perma Pure is now part of Salaera

Reliable | Accurate | Configurable

Baldwin™-Series Digital Coolers

For CEMS and Process Analysis

Serving a Wide Range of Applications

POWER GENERATION • PETROCHEMICAL • REFINERIES • INCINERATION • INDUSTRIAL

Salaera's thermo-electric coolers are used by leading continuous emissions monitoring systems suppliers, industries and governments. We are proud to partner with our broad and diverse customer base to meet the latest SOx and NOx requirements, making the world healthier and cleaner. Our commitment to protect life starts with a focus on quality and partnership with our customers to meet the challenges of demanding applications while making the world safer and healthier.



Baldwin™–Series Digital Thermo-Electric Coolers

The Baldwin™-Series digital thermo-electric coolers are a powerful combination of the proven track record of Baldwin™-Series classic coolers with a digital control system. This combination ensures reliable performance for high flow rate, high ambient temperature, and high water volume applications.

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Features of Baldwin™-Series digital thermo-electric coolers include:

- Reliable, dedicated Digital Control System keeps your system operating efficiently
- Advanced P.I.D. control algorithm increases temperature control precision to maintain analysis accuracy
- Continuous display of temperature eliminates guesswork – a quick look tells it all
- Alarm outputs provide alarm interface capability for your data acquisition system as well as direct control of sample pumps
- Configurable for simple control of multiple sample streams
- Individual water slip sensors and alarm outputs safeguard against upset conditions
- Gas stream temperature output allows direct monitoring, eliminating guesswork
- 115 or 230 VAC models
- MODBUS for remote monitoring

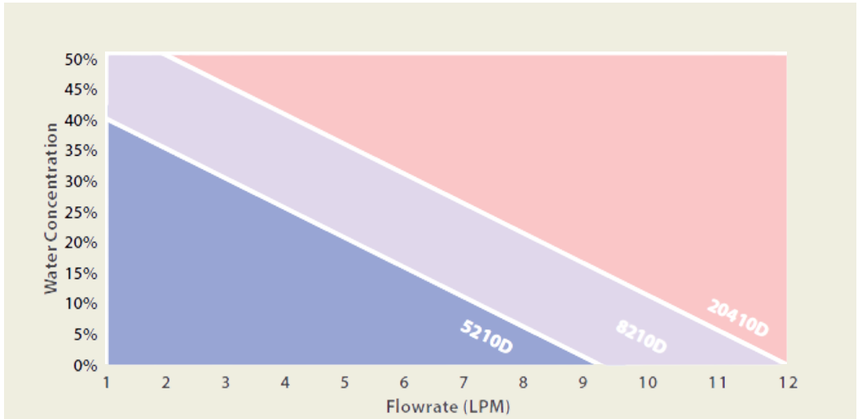


All Baldwin™-Series coolers use thermo-electric elements (Peltiers) to cool the sample gas to the desired dew point temperature. Condensate can be removed as it forms by an available peristaltic pump.

Explore our Gas Sample Conditioning Solutions

Specifications

Three Models With Standard Capacities Ranging from 3 to 20 LPM					
Model	Standard Capacity	Impingers		Dimensions (H x W x D)	Weight
		Passive	Active		
5210D	3-8 LPM (6-17 SCFH)	1 x 10 in	1 x 10 in	15 x 11 x 11 in (38 x 28 x 28 cm)	27 lbs (12 kg)
8210D	4-10 LPM (8.5-21.2 SCFH)	-	2 x 10 in	15 x 13 x 12 in (38 x 33 x 30 cm)	38 lbs (18 kg)
20410D	10-20 LPM (21-42 SCFH)	2 x 10 in	2 x 10 in	15 x 13 x 12 in (38 x 33 x 30 cm)	39 lbs (18 kg)



FEATURES OF ALL BALDWIN™–SERIES COOLERS INCLUDE:

- Dependable Water Removal
- *Alarm Relays Protect Analyzers*
- Low Maintenance
- EZ-Clean twist-apart impingers
- Single or Dual Sample Streams
- Durinert-coated impingers

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Intelligent Product Numbering System

Follow the below 5 steps to determine your product number.

Step 1: Select Model (Required)	
5210D	4C-5210D
8210D	4C-8210D
20410D	4C-20410D
Step 2: Select Voltage (Required)	
115 VAC, 50/60 Hz	1A
230 VAC, 50 Hz	2A
Step 3: Select Impingers (Required)	
10″ Stainless Steel, EZ Clean Twist-Apart Impingers	ES
10″ Glass Impingers, threaded with fittings	G
10″ Kynar Impingers	K
10″ Stainless-Durinert coated, EZ Clean Twist-Apart Impingers	ED
Step 4: Select NJ Thermocouple Option (Stainless Steel and Stainless-Durinert Coated Impingers Only)	
New Jersey thermocouple temperature sensor; lead wires only (5210D and 20410D only)	NJ
New Jersey thermocouple temperature sensor, series configuration (8210D only)	T1
New Jersey thermocouple temperature sensor, parallel configuration (8210D only)	T2
Step 5: Select Water Slip Sensor Option	
Water slip sensor with inline flow holder; 1/4″ Kynar tube fittings	WS
Water slip sensors with inline flow holder; 1/4″ Kynar tube fittings, parallel configuration (8210D only)	WP

Example Product Number

4C-8210D	1A	ES	T1	WS
Cooler	Voltage	Impingers	NJ Thermocouple	Water Sensor



Complete Family of Sample Gas Conditioning Systems

Nafion™-Based Gas Sample Conditioning Systems

Salaera is an exclusive licensee for Nafion™ tubing, a highly selective permeation membrane. While traditional coolers will reduce unwanted moisture from many sample gas streams, certain applications require the membrane drying power of Nafion™ to properly remove enough water vapor without dissolving water-soluble acid gases.

Our Nafion™-based solutions take advantage of the material's unique properties that allow the removal of water vapor without dissolving water-soluble acid gases. Removal of moisture improves the accuracy of measurements by eliminating interference. It also reduces maintenance expenses by protecting the analyzer and other components, as well as eliminating or lowering the temperature of the heated line.



Filters, Scrubbers & More

Salaera also offers additional products for your sample gas conditioning system, including:

- Particulate/Coalescing Filters
- Inertial Bypass Filters
- Ammonia Scrubbers
- Acid Scrubbers
- Heatless Air Dryer





Baldwin™-Series Coolers

In addition to the Baldwin™-Series digital thermo-electric coolers, Salaera offers a full range of coolers, including:

- Baldwin™-Series Digital Thermo-Electric Coolers
- SO3 Aerosol Removal Cooler
- eCool™
- Complete Sample Conditioners
- Baldwin™-Series Heated Filter Probes
- Flow Control Drawer
- Portable Products for Stack Testers
- SDS Supplemental Drying System (Nafion™-Based)





SDS Supplemental Drying System

SDS™-Series drying systems provide a boost to an existing gas sample conditioning system. The SDS will reduce the dew point of the sample from +4°C down to below –15°C, reducing the total moisture content by an additional 80%. Lowering the gas sample dew point is essential in order to eliminate the formation of acid mists. Rather than replace an existing cooler with a "super" cooler, the SDS is a cost-effective way of extending the life and improving the performance of your existing sample conditioning system. The SDS can process one stream of up to 10 lpm, or two streams of up to 5 lpm each.

- Eliminates the formation of acid mists
- Selective Nafion™ membrane technology
- Single or dual sample streams
- Improves chiller performance
- Corrosion resistant
- Improves the sensitivity of IR measurements



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800-337-3762
salaera.com

Salaera™, a Halma company, is a leading manufacturer of gas conditioning products including dryers, humidifiers, filters, coalescers, specialty scrubbers and complete sampling systems. We market these products worldwide for use in medical, environmental, industrial, and life science applications. To learn more about Salaera product solutions visit **www.salaera.com**

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