



Web Site (design and architecture)



Web Site (previous design)

Farrar Scientific Intermediates

Farrar Scientific offers the Intermediate™ line of low and ultra-low temperature servers to take advantage of standardization in core industry markets. Although customer applications are always unique, many custom products possess similar components, controls and design architecture which form prerequisites for end-use systems. To take advantage of core commonality in low and ultra-low temperature products, and to meet the demand for highly specific products that are built, tested and delivered in relatively short lead times, Farrar Scientific has developed standard server systems re-manufactured to an intermediate point, stored in inventory, and available for final configuration to match customer specifications and quick turn-around. Marketed as Farrar ULT.

Size	Configuration	Part #	Power Model	Temperature Range	Compressor	
Small	Single Stage	48C	48C	Available Upon Request	30C to -40C	Hermetic
	Cascade	48C	48C	0.5kW @ -24C @ 50% RH	30C to -40C	
		48C	48C	0.5kW @ -40C @ 50% RH		
		48C	48C	1.1kW @ -80C @ 50% RH		
Medium	Single Stage	48C	24C	Available Upon Request	30C to -40C	Semi
	Cascade	48C	48C	1.1kW @ -24C @ 50% RH	30C to -40C	
		48C	48C	2.1kW @ -40C @ 50% RH		
		48C	48C	3.8kW @ -80C @ 50% RH		

Product Literature Inserts

Farrar Scientific, LLC
Ultra-Low Refrigeration Engineering

Viewbook (cover view)
4 x 9 inches, fits inside folder within
designated slot. Also fits in #10 envelope.

The Farrar Scientific Business Model

We work with companies who manufacture ultra-low temperature products as well as companies who use ultra-low temperature processes for a variety of purposes.

Because of the highly confidential nature of our business much of our work is expressed through the success of client companies who apply ultra-low temperature solutions to proprietary processes, or those who market products directly to end-use customers. Other work is detailed in case histories available upon request or viewable on our Web site.

With extensive industry and refrigeration process expertise, plus a proven track record among some of the world's largest companies, the Farrar Scientific team has evolved into a highly effective combination of applied academic engineering, industry relationships, hands-on craftsmanship, teamwork, timeliness and technology.

Farrar Scientific Services

Our firm offers services and products among three operating units.

- Intellectual Property Services
- Custom and OEM Manufacturing
- Farrar Standard Products

• **Intellectual Property Services (IP)** include consulting and OEM outsource support. We offer testing, oversight, remediation and optimization services. We make good designs better. We review, recommend and apply modifications, redundancies, controls, alarms and monitoring technologies as necessary. As an outsource extension of your in-house team, we participate in - or assume responsibility for - total system development, proof of concept, engineering documentation and technology transfer to your in-house team for internal management.

• **Custom and OEM Manufacturing (COEM)** embraces our ability to build whatever we design. By maintaining a core manufacturing team of ultra-low refrigeration technologists, we can transfer academically sound concepts out of the computer and into prototype development more quickly, with seamless integration and with a high degree of confidence.

Beginning with a thorough understanding of an intended ultra-low application and its derivatives, together with close working relationships with compressor and component suppliers, we can configure total systems, primary and back-up refrigeration platforms, integrated data monitoring points and controls, all leading to faster production and installation.

Farrar Scientific, LLC

Delivering Ultra-Low Temperature Refrigeration

Refrigeration Engineering, Consultative Solutions and OEM Products for Pharmaceutical, Life Science, Biotechnology and Industrial Applications

EnergyBalance™

EnergyBalance™ is an exclusive design modeling protocol of Farrar Scientific based on physics, chemistry and thermodynamic principles associated with ultra-low temperature refrigeration components, refrigerants, oils, lubricants and flow configurations. Refrigeration reviews, designs and products based on Farrar EnergyBalance™ modeling lead to faster proof of concept, better component matching and peak performance, energy savings and reliability for cyclical process or long-term storage systems operating at critical ultra-low and neo-cryogenic temperatures.

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EMERSON Climate Technologies

Folder (cover and back) features labeled file tab.

