

Q-FLEX
www.q-flex.fi info@q-flex.fi
+358 2 4894 500

LairdTM

THERMAL SYSTEMS



NextremeTM Recirculating Chiller Platform



The Next-Generation Chillers

The Nextreme™ Performance Chiller Platform from Laird Thermal Systems is the next generation of recirculating chillers that feature premium components at a mid-level price. The platform features high-quality components, environmentally friendly refrigerants, low-noise designs and a user-friendly operation for reliable, precise temperature control of analytical, medical and industrial equipment.

The Nextreme chiller line is designed to cool well below ambient temperature and dissipate heat away from thermally sensitive equipment. It is designed for OEM companies, businesses both large and small, and research facilities, laboratories and universities that need an energy-efficient chiller platform versatile enough to support the cooling needs of their entire equipment installation.

Fits Your Application Needs

Design engineers in every industry are facing demands for higher performance with reduced energy consumption and lower noise levels. The Nextreme Performance Chiller Platform offers a high coefficient of performance in a smaller and lighter package compared to previous versions. Laboratory technicians, R&D engineers and equipment operators will appreciate the quiet, “set it and forget it” operation and high performance components that minimize system downtime.

Industrial

- Laser Cutting & Marking
- Printing
- X-Ray Scanning
- Packaging
- Additive Manufacturing
- Semiconductor Fabrication

Analytical

- Mass Spectrometers
- Chromatography
- Microscopes
- Biotech

Medical

- Imaging
- Pharmaceutical
- Surgical Laser

The Nextreme Performance Chiller Platform

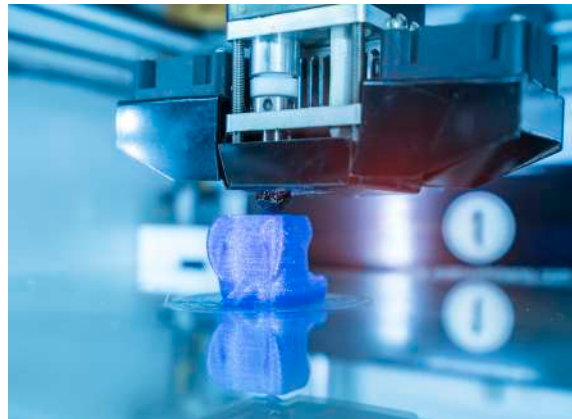


NRC400

NRC1200

NRC2400

NRC5000



Performance	NRC400			NRC1200			NRC2400			NRC5000		
	10°C	20°C	30°C	10°C	20°C	30°C	10°C	20°C	30°C	10°C	20°C	30°C
Cooling capacity ¹	0.3 kW	0.4 kW	0.5 kW	0.7 kW	1.6 kW	2.3 kW	1.7 kW	2.8 kW	3.9 kW	3.1 kW	4.9 kW	5.9 kW
Setpoint Range	-5°C to 40°C			-10°C to 40°C			-10°C to 40°C			-10°C to 40°C		
Temperature Stability	±0.05°C			±0.1°C			±0.1°C			±0.1°C		
Nominal Flow Rate ¹ (50Hz / 60Hz)	1 lpm @ 1.05 bar			15 lpm @ 1.5 bar / 15 lpm @ 2.6 bar			15 lpm @ 1.5 bar / 15 lpm @ 2.6 bar			15 lpm @ 1.7 bar / 15 lpm @ 2.8 bar		
Maximum available pressure	1.18 bar			5.3 bar			5.3 bar			5.3 bar		
Refrigerant	N/A			R 513A			R 513A			R 513A		
Storage	0°C to 50°C			-25°C to 70°C			-25°C to 70°C			-25°C to 70°C		
Humidity	5% to 95%, non-condensing			5% to 95%, non-condensing			5% to 95%, non-condensing			5% to 95%, non-condensing		
Operation	Water or Water/Glycol			Water or Water/Glycol			Water or Water/Glycol			Water or Water/Glycol		
Temperature ²	10°C to 40°C			15°C to 40°C			15°C to 40°C			15°C to 40°C		
Relative Humidity	35% to 85%			30% to 80%			30% to 80%			30% to 80%		
Altitude	≤2,000 meters			≤2,000 meters			≤2,000 meters			≤2,000 meters		
Input	115 - 230 VAC			100 - 120 VAC or 220 - 230 VAC			220 - 230 VAC			220 - 230 VAC		
Frequency	50/60 Hz			50/60 Hz			50/60 Hz			50/60 Hz		
Physical	27.4 X 41.3 X 40			45 X 52 x 67 cm			48 X 52 x 75 cm			63 x 59 x 91 cm		
Weight (w/o coolant)	24 kg			48 kg			54 kg			100 kg		
Coolant Capacity	1 L			5 L			5 L			5 L		
Couplings	Quick-Connect (3/8 in ID Tubing)			1/2" NPT			1/2" NPT			1/2" NPT		



The Nextreme Value Chiller Platform

The Nextreme™ Value Chiller Platform from Laird Thermal Systems offers reliable, cost-efficient temperature control. Based on the design for the Nextreme Performance Chiller Series, the Value line offers the same ease of use, high reliability, and low maintenance features as the Performance Series but at a lower cost through materials (brass instead of stainless steel), simpler components (single speed instead of variable speed compressor) and different control system (switches instead of sensors). This provides more competitive pricing to OEMs looking for a packaged solution with their instrument.



VRC1200



VRC2400



VRC4500

Performance									
Cooling capacity ¹	10°C	20°C	30°C	10°C	20°C	30°C	10°C	20°C	30°C
	1.1kW	1.2kW	1.5kW	2.0kW	2.7kW	3.4kW	3.0kW	4.9kW	6.1kW
Setpoint Range	5°C to 40°C			5°C to 40°C			5°C to 40°C		
Temperature Stability	±0.5°C			±0.5°C			±0.5°C		
Nom. Flow Rate ¹ (50Hz / 60Hz) BT Nom. Flow Rate ¹ (50Hz / 60Hz) BV	15 L/min @ 1.8 Bar - 15 L/min @ 2.9 Bar 9 L/min @ 5 Bar - 10.5 L/min @ 5 Bar			15 L/min @ 1.8 Bar - 15 L/min @ 2.9 Bar 14.4 L/min @ 5 Bar - 17.4 L/min @ 5 Bar			15 L/min @ 1.8 Bar - 15 L/min @ 2.9 Bar 14.4 L/min @ 5 Bar - 17.4 L/min @ 5 Bar		
Maximum available pressure BT Maximum available pressure BV	5 bar 6.5 bar			3.5 bar 6.5 Bar			5 bar 6.5 bar		
Refrigerant	R 513A			R 513A			R 513A		
Storage									
Temperature (w/o coolant)	-25°C to 70°C			-25°C to 70°C			-25°C to 70°C		
Humidity	5% to 95%, non-condensing			5% to 95%, non-condensing			5% to 95%, non-condensing		
Operation									
Coolant	Water or Water/Glycol			Water or Water/Glycol			Water or Water/Glycol		
Temperature ²	15°C to 40°C			15°C to 40°C			15°C to 40°C		
Relative Humidity	30% to 80%			30% to 80%			30% to 80%		
Altitude	<2,000 meters			<2,000 meters			<2,000 meters		
Input									
Voltage	230 VAC			230 VAC			230 VAC		
Frequency	50/60 Hz			50/60 Hz			50/60 Hz		
Physical									
Dimensions (W x D x H)	56.3 x 48.2 x 69.9 cm			48.2 x 56.3 x 69.9			56.3 x 57.9 x 81.8		
Weight (w/o coolant) BT / BV	51 / 58 kg			56 / 63 kg			67 / 74 kg		
Coolant Capacity	5 L			5 L			5 L		



Compressor-Based Chillers

- High performance variable speed motors provide **lower noise and 50% reduced power consumption** compared to previous versions.
- **Half the Global Warming Potential** compared to traditional HFC refrigerants.
- Optical fluid level sensors **improves reliability** compared to mechanical fluid switches
- The optional “hot swappable” 5-micron water filter **maximizes uptime**
- **Intuitive LCD** touchscreen display

Thermoelectric-Based Chillers

- Solid-state Thermoelectrics offer **high reliability with minimal maintenance**
- Thermoelectrics deliver **high temperature stability** at 0.05°C
- **Portable** and **compact form factor**
- Premium components result in **low noise and vibration**
- **Zero Global Warming Potential** as no harmful refrigerants are being used
- Centrifugal pump offers **low pulsation** for cooling sensitive optoelectronics
- **Intuitive LCD** touchscreen display



Model Numbering

Example: NRC2400-A1-20-ST1

Basic Model No	Cooling Engine	Electrical Configuration	Pump Options
Compressor-based chillers			
NRC1200 NRC2400 NRC5000	A1 Air Cooled/ R513A	10¹ 100-120V-, 1ph, 50/60 Hz 20 220-230V-, 1ph, 50/60Hz	ST1 Stainless, Turbine Pump
VRC1200 VRC2400 VRC4500	A1 Air Cooled/ R513A	20 230V-, 1ph, 50/60Hz	BT1 Brass, Turbine Pump BV1 Rotary, Vane Pump BV2 Rotary, Vane Pump
Thermoelectric-based chillers			
NRC400	T0 Air Cooled/ Thermoelectric	00 115-230V-, 2.17-4.35 A, 1ph, 50/60Hz	PC2 Plastic, Centrifugal Pump

1. Only available with NRC1200

LTS-BRO-NEXTREME-PERFORMANCE-CHILLER-PLATFORM



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