TTS
TARK THERMAL SOLUTIONS

Nextreme™ Performance Chiller NRC1200-A1-10-ST1
MFG Part Number: 385910-015

Nextreme™ Performance Chiller

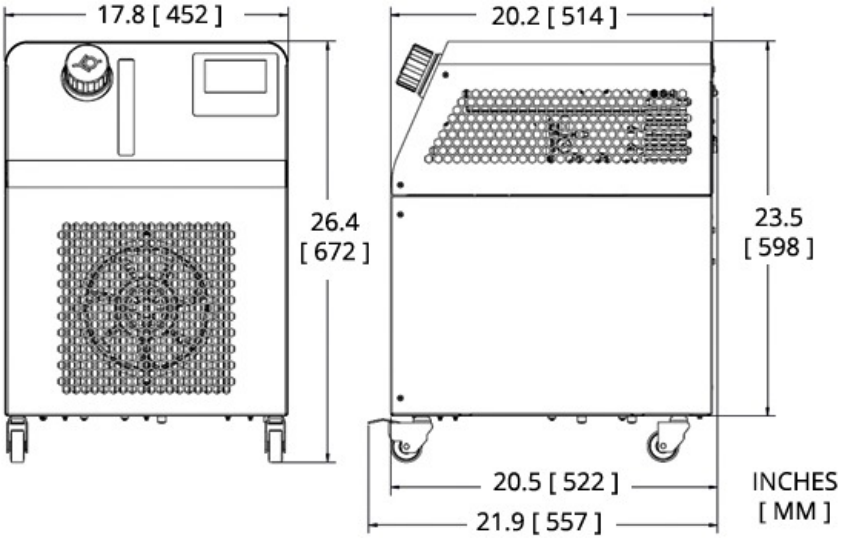
The Nextreme NRC1200 Recirculating Chiller features premium components and environmentally friendly refrigerants in a user-friendly design. It is designed to cool well below ambient and dissipate heat away from thermally sensitive equipment. Featuring variable speed motors for the compressor and condensing fan, the Nextreme NRC1200 offers a high coefficient of performance and low-noise operation. The Nextreme NRC1200 comes with several standard features and additional options allow for application-specific configurations. Power cord is **not** supplied with the unit and **must be ordered separately**.

Features

- Reliable Performance
- Environmentally Friendly
- User-Friendly
- Application Specific Configurations

Applications

- Industrial Lasers
- Additive Manufacturing
- Electron Microscopes
- Semiconductor Fabrication
- Laboratory Testing



Cooling Power Operating Points

100% Water (20°C Ambient Air)
Cooling Power (Qc) = 1,400 Watts
Fluid Setpoint = 20 °C
Fluid ΔT @ 15.0 L/min = 1.4 °C

100% Water (30°C Ambient Air)
Cooling Power (Qc) = 900 Watts
Fluid Setpoint = 20 °C
Fluid ΔT @ 15.0 L/min = 0.9 °C

60/40 Water-Glycol (20°C Ambient Air)
Cooling Power (Qc) = 1,350 Watts
Fluid Setpoint = 20 °C
Fluid ΔT @ 15.0 L/min = 1.4 °C

60/40 Water-Glycol (30°C Ambient Air)
Cooling Power (Qc) = 850 Watts
Fluid Setpoint = 20 °C
Fluid ΔT @ 15.0 L/min = 0.9 °C

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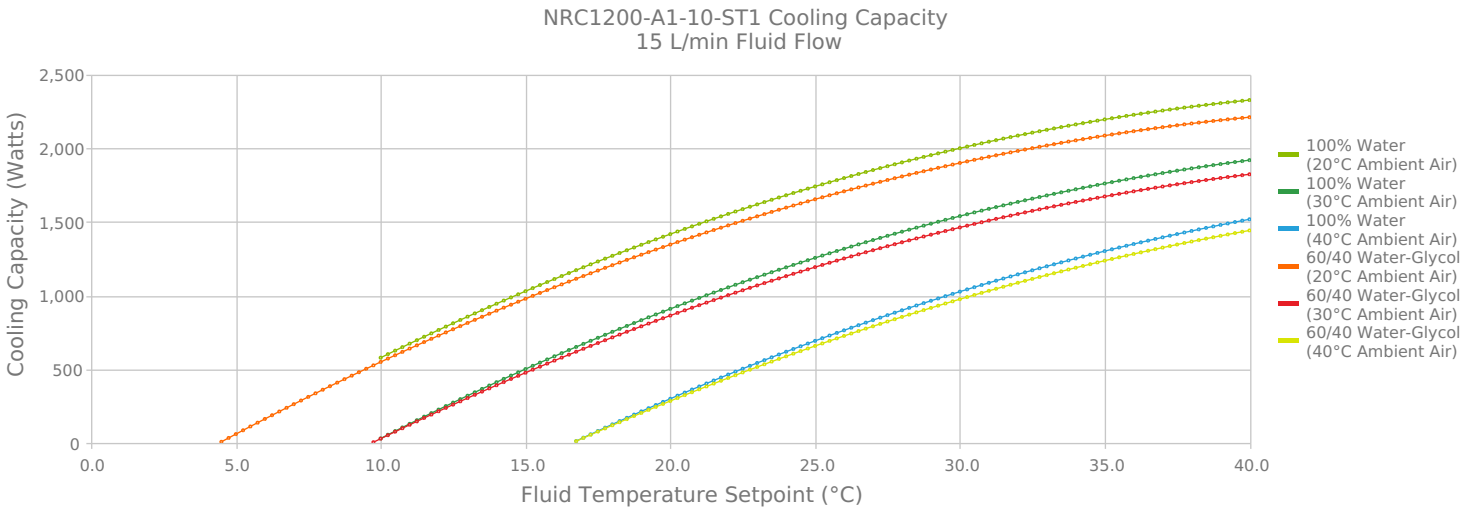
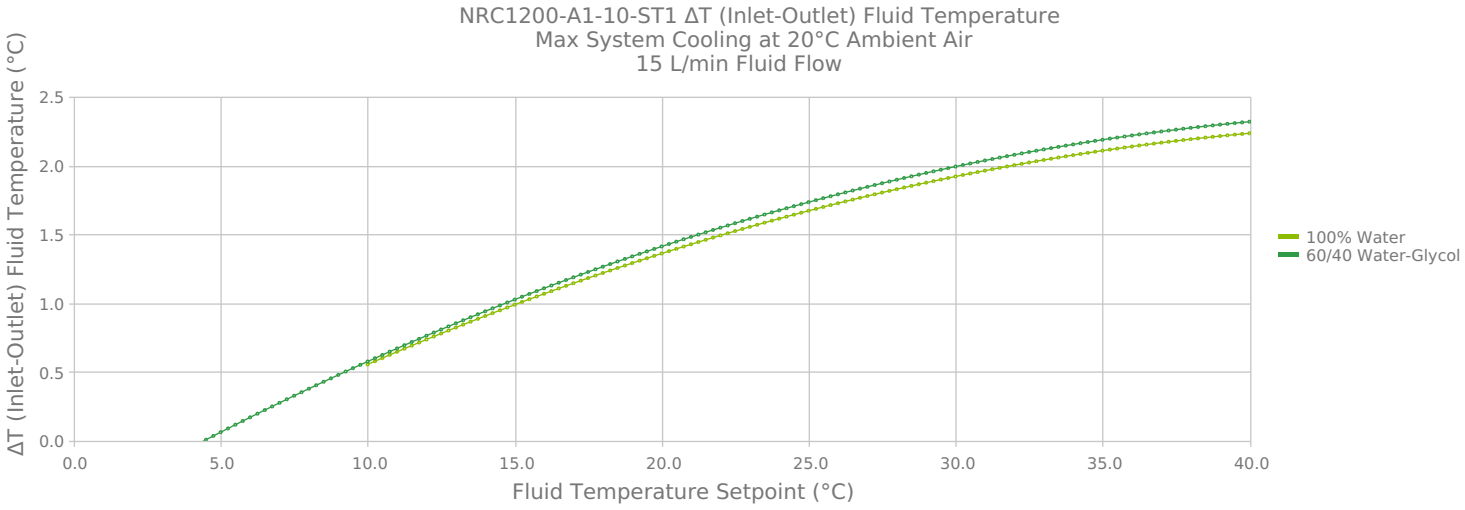
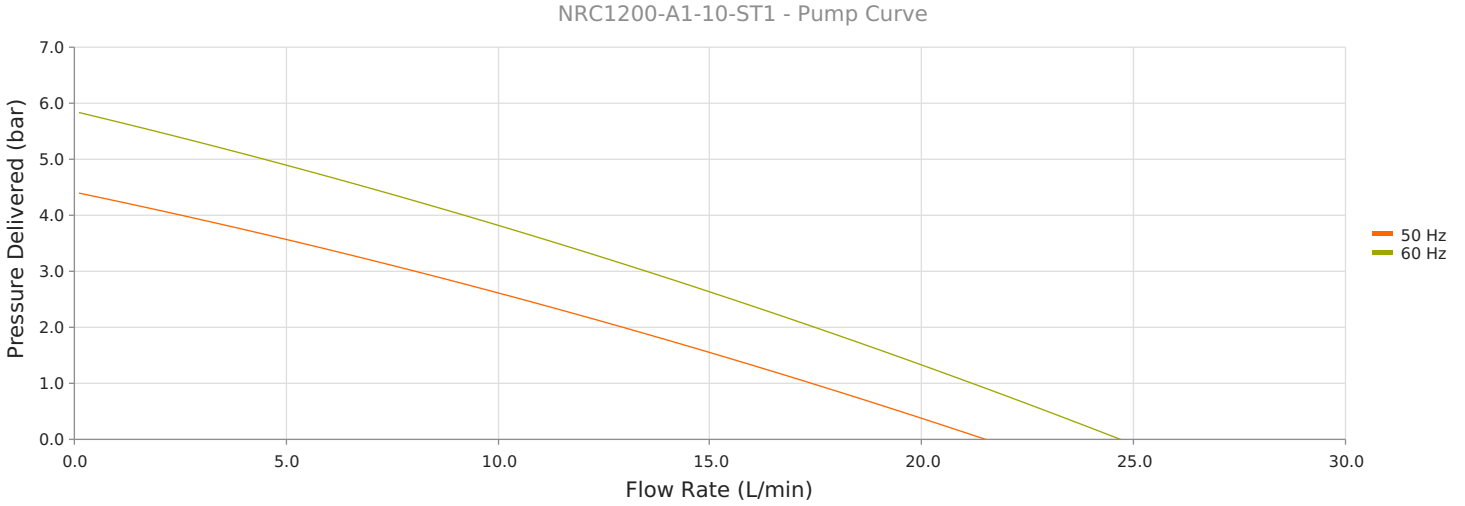






Technical Specifications

Performance

Nominal Cooling Capacity[1]	1,400 W
Setpoint Range	-10°C to 40°C
Temperature Stability[3]	±0.10°C
Nominal Operating Flowrate (60 Hz)[1]	15.0 L/min @ 2.6 Bar
Nominal Operating Flowrate (50 Hz)[1]	15.0 L/min @ 1.5 Bar
Refrigerant	R 513A
Sound Pressure Level at Nominal Cooling Capacity (50 Hz)[1]	61 dBA
Sound Pressure Level at Nominal Cooling Capacity (60 Hz)[1]	65 dBA

Operation

Coolant	Water or Water/Glycol
Operating Temperature[2]	15°C to 40°C
Storage temperature range (w/o coolant)	-25°C to 70°C
Humidity range	30% to 80%
Storage Humidity range	5% to 95%, non-condensing
Altitude	< 2,000 meters
Input Voltage	100 VAC / 100 - 120 VAC
Frequency	50 / 60 Hz
Current	7.8A / 8.1A
Input Power Connection	C19 Receptacle
Maximum Forward Pressure	4.1 Bar
Compliance	ANSI / UL / CSA / IEC EN 61010-1 Edition 3

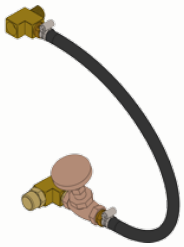
Physical

Height	670 mm
Length	520 mm
Width	450 mm
Weight	48 kg
Coolant Capacity	5 Liters
Couplings	1/2 in NPT

Standard Features

Variable Speed Motors	Variable speed compressor and condensing fans for quiet operation and improved energy efficiency.
Semi-Closed Fluid System	Sealed fluid system with breathable reservoir cap (similar to an automobile). This prevents evaporative loses, introduction of bacteria, and the need for components to prevent fluid from draining back into the system when installed below the application.
Optical Fluid Level Switch	Fluid level sensing with no moving parts.
RS-232 Communications	Complete control integration of chiller into higher level assembly control system.
Supply Pressure Sensing	Pressure sensing for applications sensitive to high operating conditions.

Accessory Kits

	Feature	Kit Part Number	Description
	Flow Control Valve and Flow Sensing Kit	387004277	This externally installed valve is for reducing the overall flow to the application. Full flow continues through the chiller to maintain high heat transfer rates and temperature stability. The flow meter is for measuring coolant flow rate and is installed externally to the chiller with both a local display (GPM) and connectivity to the chiller LCD display. The flow rate local display is only on NRC products. This kit is for all refrigerant chillers: EFC2400, NRC1200, NRC2400, NRC5000, VRC1200, VRC2400, and VRC4500.
	Water Filter Kit	387004279	Hot swappable, 5-micron water filter for filtering particulates from the coolant circuit.
	Flow Bypass Kit	387010608	This externally installed valve is for reducing the overall flow to the application. Full flow continues through the chiller to maintain high heat transfer rates and temperature stability. This kit does not contain a flow meter.
	Pressure Bypass Kit	387010420	This pressure bypass kit prevents high pressure operation and can either operate partially open or open when there is a change in operation (e.g., flow to application stopped). It can be used for flow control but operates with less precision. This pressure bypass maintains full flow through the chiller heat exchanger.

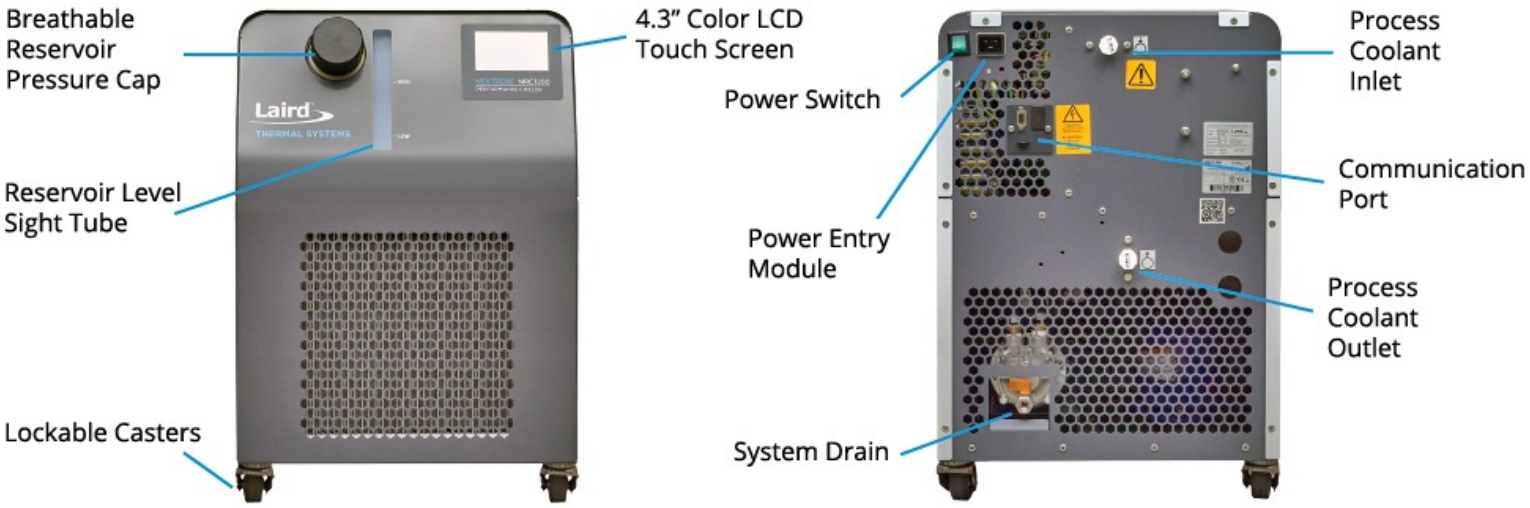
Cord Options

These power cords have been tested and validated on Nextreme devices.

Power cord is not supplied with the unit and must be ordered separately.

MFG Part Number	Plug Type	Standard	Style	Cable Length	Rating	Color	Connector
387005324	Universal	None	Flying Leads	2.0 m	250VAC, 16A* / 20A**	Black	C19
387005325	United States	NEMA 5-20P	straight	3.0 m	125V, 20A	Black	C19

* IEC ** UL



Notes

Nominal capacity rating is given at a 20°C (68°F) setpoint, 20°C (68°F) ambient temperature, sea level.
For ambient conditions outside this range, please contact Laird Thermal Systems.
Typical for nominal capacity rating. Contact LTS applications engineering for application specific performance.

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