

**Nextreme™ NRC400 Performance Chiller**

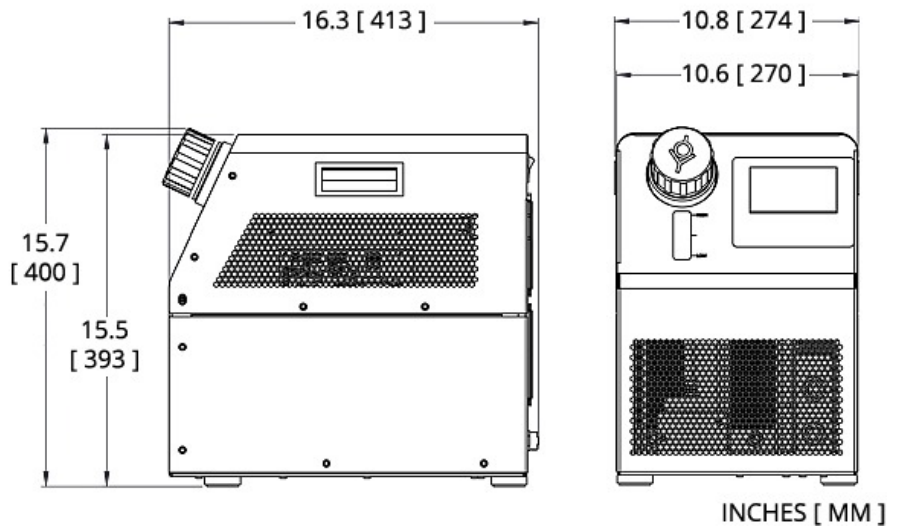
The Nextreme NRC400 is a next generation benchtop recirculating chiller using solid-state thermoelectric technology for precise temperature control of analytical and industrial equipment. It offers high heat pumping capacity for its size, improved temperature stability and lower noise operation than previous models. Utilizing custom thermoelectric coolers with premium thermoelectric materials, it delivers a higher coefficient of performance (COP). The NRC400 is a semi-closed system with a large reservoir tank requiring less refilling. It is equipped with a high-quality pump offering high MTBF with low pulsation to accommodate highly sensitive imaging and test instruments. Users can easily control temperature setpoints and alarm settings via the LCD touchscreen display. Custom configurations are available, however, MOQ applies. Power cord is **not** supplied with the unit and **must be ordered separately**.

**Features**

- Precise Temperature Control
- Compact Form Factor
- Reliable Solid-State Operation
- Intuitive GUI
- Low Noise Operation

**Applications**

- Analytical Imaging
- Industrial Laser Systems
- Semiconductor Test & Measurement
- Laboratory Testing
- Bath Cooling



**COOLING POWER OPERATING POINTS<sup>1</sup>**

**100% Water (20°C Ambient Air)**

Cooling Power (Qc) = 400 Watts  
 Fluid Setpoint = 20 °C  
 Fluid ΔT @ 1.0 L/min = 5.8 °C

**100% Water (30°C Ambient Air)**

Cooling Power (Qc) = 266 Watts  
 Fluid Setpoint = 20 °C  
 Fluid ΔT @ 1.0 L/min = 3.8 °C

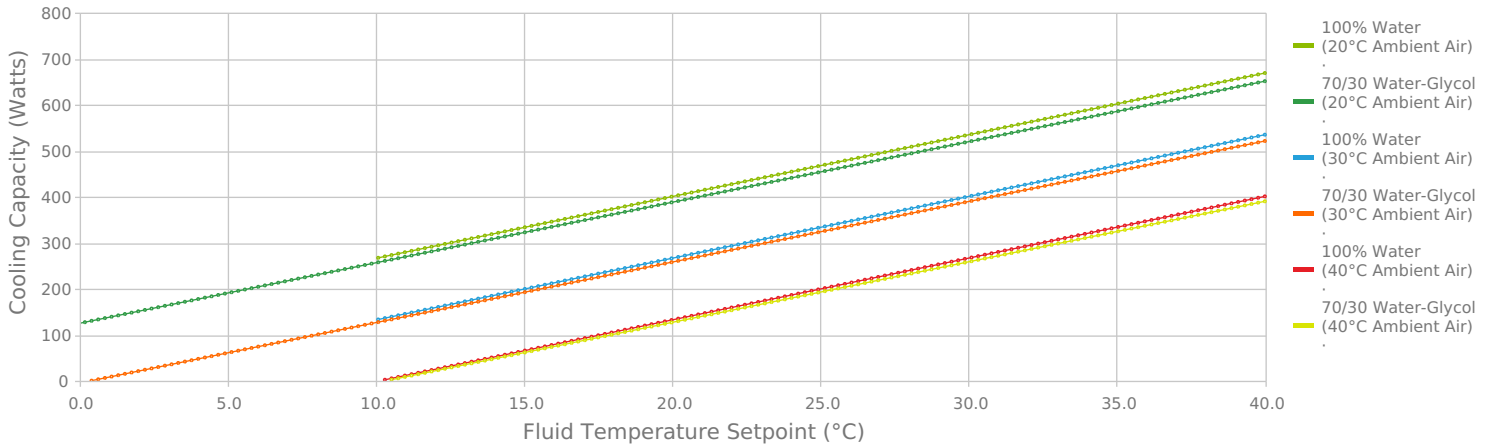
**70/30 Water-Glycol (20°C Ambient Air)**

Cooling Power (Qc) = 388 Watts  
 Fluid Setpoint = 20 °C  
 Fluid ΔT @ 1.0 L/min = 5.9 °C

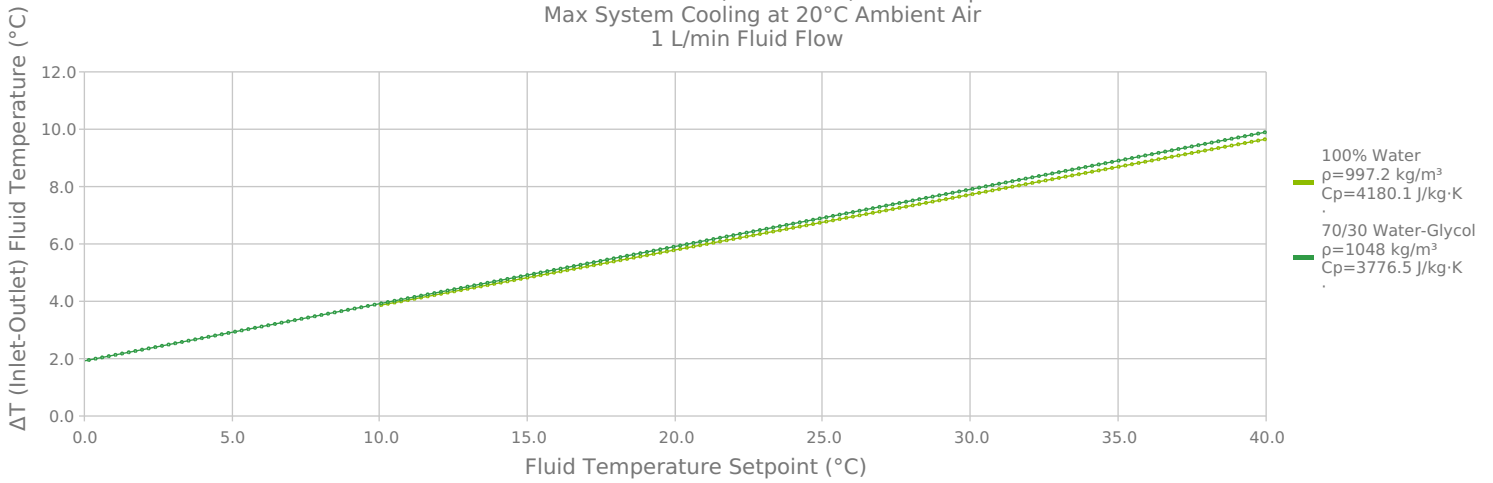
**70/30 Water-Glycol (30°C Ambient Air)**

Cooling Power (Qc) = 258 Watts  
 Fluid Setpoint = 20 °C  
 Fluid ΔT @ 1.0 L/min = 3.9 °C

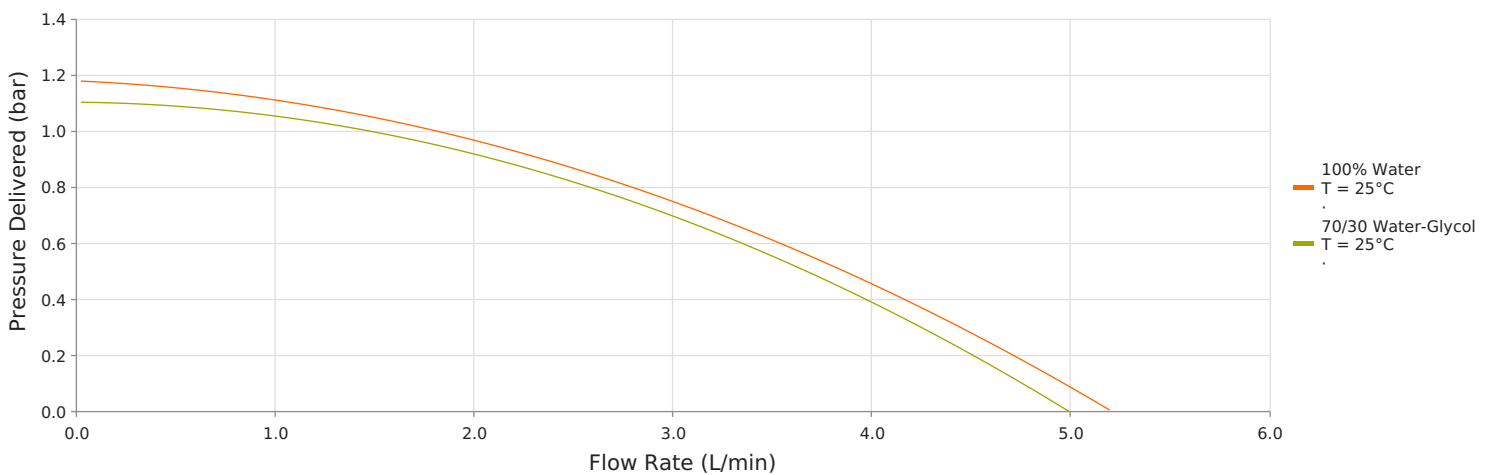
NRC400-T0-00-PC1 Cooling Capacity  
 1 L/min Fluid Flow



NRC400-T0-00-PC1  $\Delta T$  (Inlet-Outlet) Fluid Temperature  
 Max System Cooling at 20°C Ambient Air  
 1 L/min Fluid Flow



NRC400-T0-00-PC1 - Chiller Pump Curves



## TECHNICAL SPECIFICATIONS

### Performance

<b>Maximum Cooling Capacity<sup>2</sup></b>	400 Watts
<b>Setpoint Range</b>	-5°C to 40°C
<b>Temperature Stability</b>	±0.05°C

### Operation

<b>Coolant</b>	Water or Water/Glycol
<b>Operating Temperature</b>	10°C to 40°C
<b>Storage temperature range (w/o coolant)</b>	0°C to 50°C
<b>Humidity range</b>	35% to 85%
<b>Storage Humidity range</b>	5% to 95%, non-condensing
<b>Input Voltage</b>	115 - 230 VAC
<b>Frequency</b>	50/60 Hz
<b>Current</b>	< 4.35 Amps
<b>Maximum Forward Pressure</b>	1.18 Bar
<b>Compliance</b>	ANSI / UL / CSA / IEC EN 61010-1 Edition 3

### Physical

<b>Height</b>	400 mm
<b>Length</b>	413 mm
<b>Width</b>	274 mm
<b>Weight</b>	24 kg
<b>Coolant Capacity</b>	1 Liters
<b>Couplings</b>	Quick-Connect (3/8 in ID Tubing)

**CORD OPTIONS**

These power cords all terminate in an IEC320-C20 plug. All compliance testing and validation has been done with these specific cord models.

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

MFG Part Number	Plug Type	Standard	Style	Cable Length	Conductor Cross-Section	Color	Connector
387006827	Australia	AS 3112	straight	2.0 m	3 x 1.5 mm <sup>2</sup>	Black	C19
387006822	Europlug	CEE 7 / VII	straight	2.0 m	3 x 1.5 mm <sup>2</sup>	Black	C19
387006823	China	GB 2099	straight	2.0 m	3 x 1.5 mm <sup>2</sup>	Black	C19
387006932	Japan	JIS 8303	straight	2.0 m	3 x 2 mm <sup>2</sup>	Black	C19
387006821	United Kingdom	BS 1363	straight	2.0 m	3 x 1.5 mm <sup>2</sup>	Black	C19
387007040	United States	NEMA 5-15P	straight	2.0 m	3 x 2 mm <sup>2</sup>	Black	C19

**LIQUID INTERFACE**



**NOTES**

1. Performance curve deviation is within +/-5%
2. Maximum Cooling Capacity rated at 20°C Ambient Air and 20°C Fluid Temperature
3. Use water as coolant for control temperatures above 10°C
4. To prevent freezing, use coolant with up to 30% glycol below 10°C
5. For alternate coolants please contact Laird Thermal Systems

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