

Nextreme™ NRC400 Performance Chiller

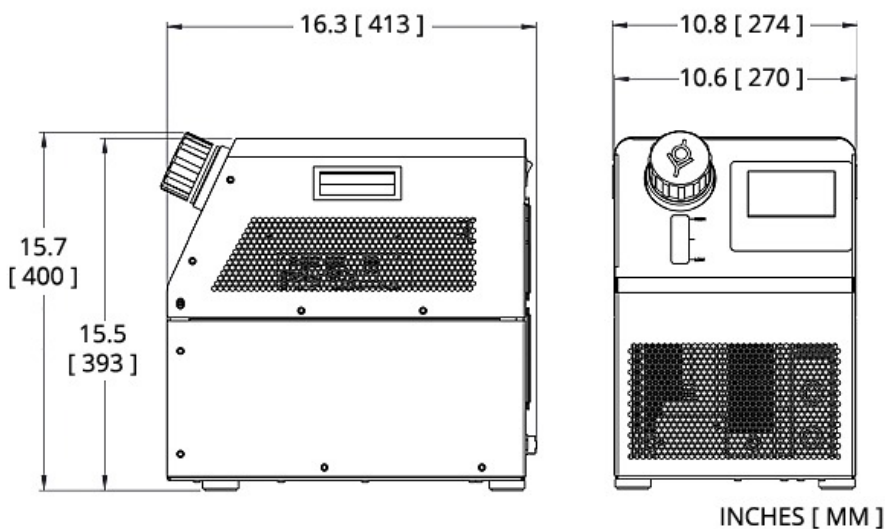
The Nextreme NRC400 is a next generation benchtop recirculating chiller using solid-state thermoelectric technology for precise temperature control of analytical and industrial equipment. It offers high heat pumping capacity for its size, improved temperature stability and lower noise operation than 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 POINTS¹

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

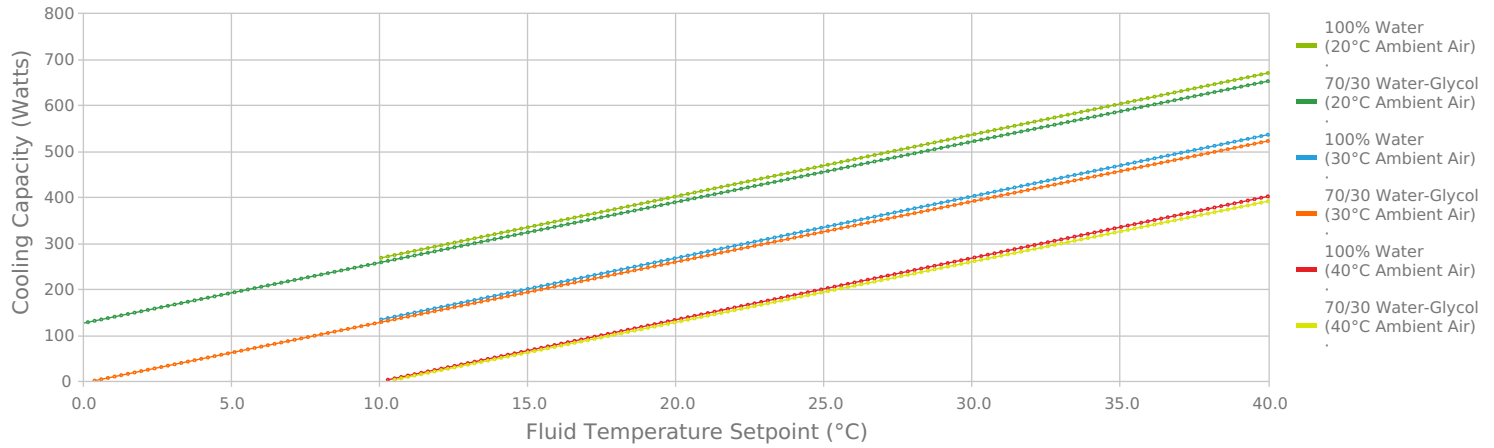
70/30 Water-Glycol (20°C Ambient Air)

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

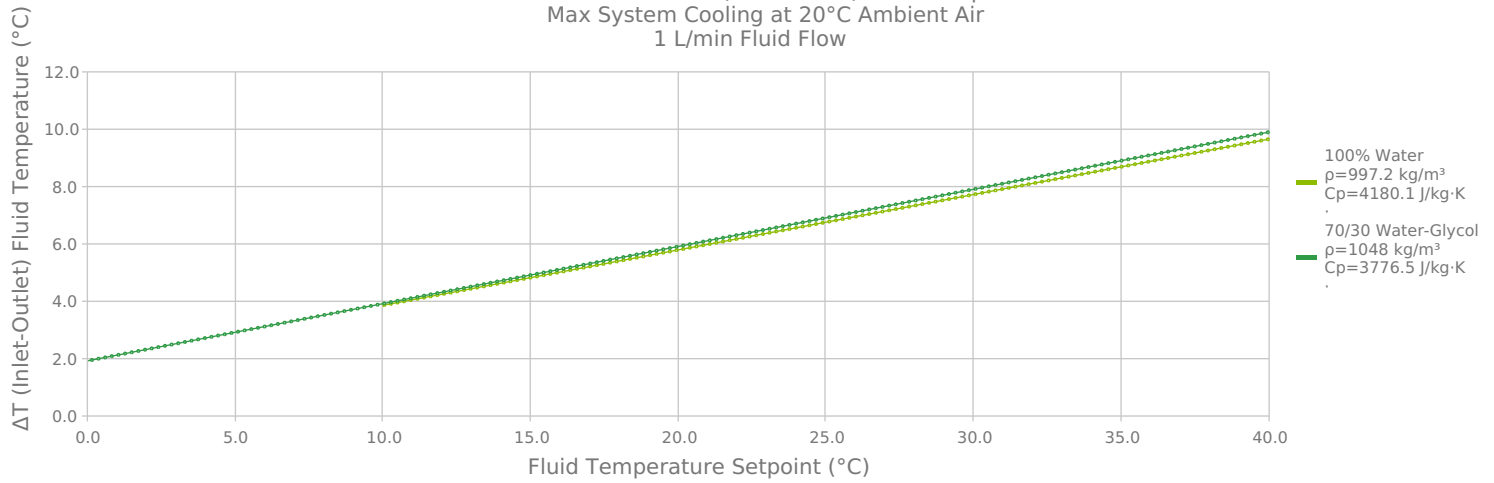
70/30 Water-Glycol (30°C Ambient Air)

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

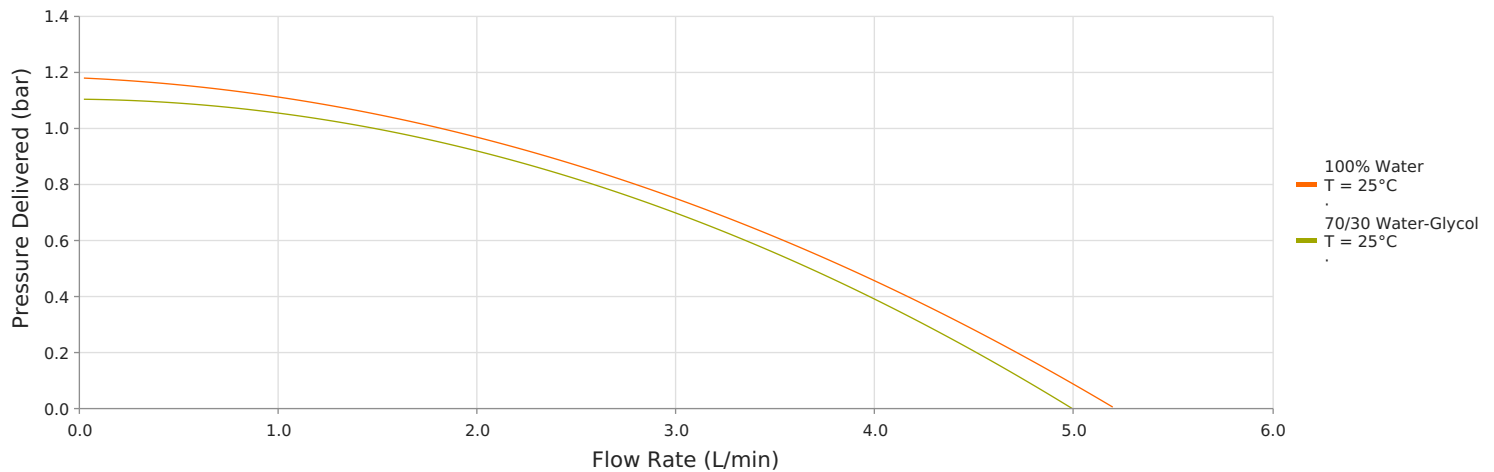
NRC400-T0-00-PC1 Cooling Capacity
1 L/min Fluid Flow



NRC400-T0-00-PC1 ΔT (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

Maximum Cooling Capacity²	400 Watts
Setpoint Range	-5°C to 40°C
Temperature Stability	±0.05°C

Operation

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

Physical

Height	400 mm
Length	413 mm
Width	274 mm
Weight	21 kg
Coolant Capacity	1 Liters
Couplings	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 ²	Black	C19
387006822	Europlug	CEE 7 / VII	straight	2.0 m	3 x 1.5 mm ²	Black	C19
387006823	China	GB 2099	straight	2.0 m	3 x 1.5 mm ²	Black	C19
387006932	Japan	JIS 8303	straight	2.0 m	3 x 2 mm ²	Black	C19
387006821	United Kingdom	BS 1363	straight	2.0 m	3 x 1.5 mm ²	Black	C19
387007040	United States	NEMA 5-15P	straight	2.0 m	3 x 2 mm ²	Black	C19

LIQUID INTERFACE



NOTES

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

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