

**Nextreme™ Series Liquid Cooling System**

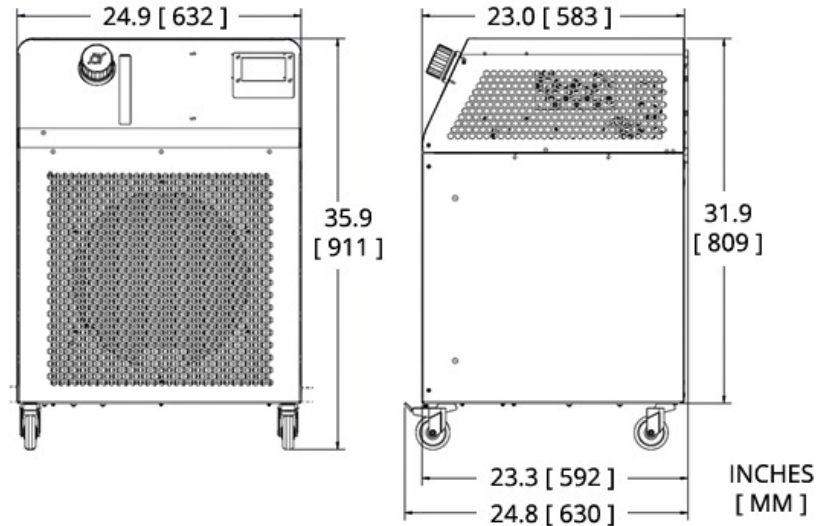
The Nextreme NRC5000 Recirculating Chiller features premium components and environmentally friendly refrigerants in a user-friendly design. It is designed to cool well below ambient and dissipate heat away from thermally sensitive equipment. Featuring variable speed motors for the compressor and condensing fan, the Nextreme NRC5000 offers a high coefficient of performance and low-noise operation. The Nextreme NRC5000 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**

- Recirculating Chillers for Industrial Lasers
- Precise Temperature Control for Microscopes



**COOLING POWER OPERATING POINTS**

**100% Water (20°C Ambient Air)**

Cooling Power (Qc) = 4,900 Watts  
 Fluid Setpoint = 20 °C  
 Fluid ΔT @ 15.0 L/min = 4.7 °C

**100% Water (30°C Ambient Air)**

Cooling Power (Qc) = 3,800 Watts  
 Fluid Setpoint = 20 °C  
 Fluid ΔT @ 15.0 L/min = 3.7 °C

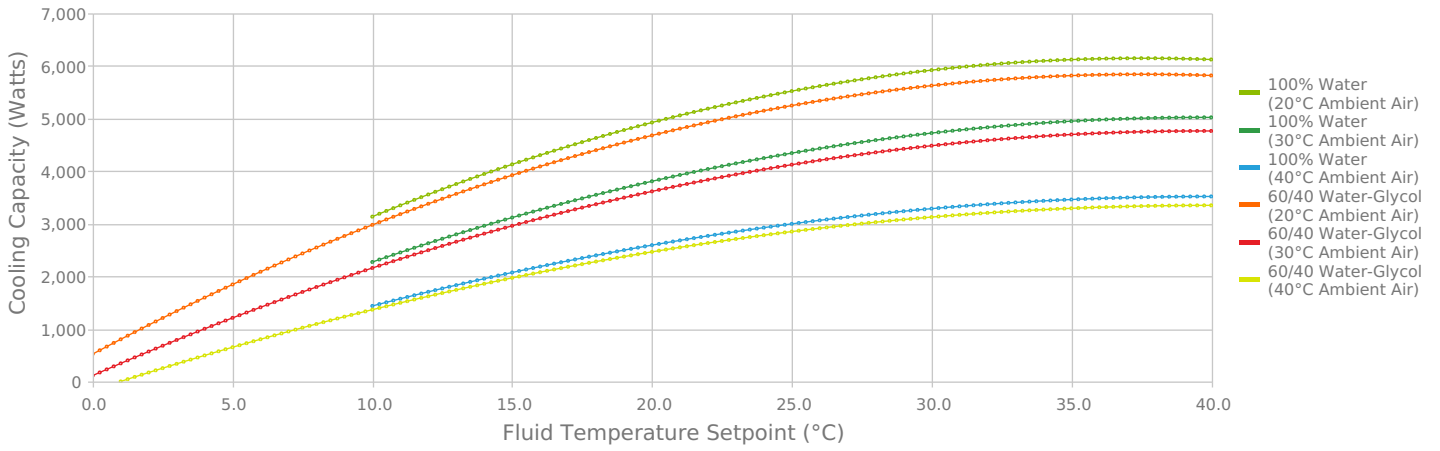
**60/40 Water-Glycol (20°C Ambient Air)**

Cooling Power (Qc) = 4,700 Watts  
 Fluid Setpoint = 20 °C  
 Fluid ΔT @ 15.0 L/min = 4.9 °C

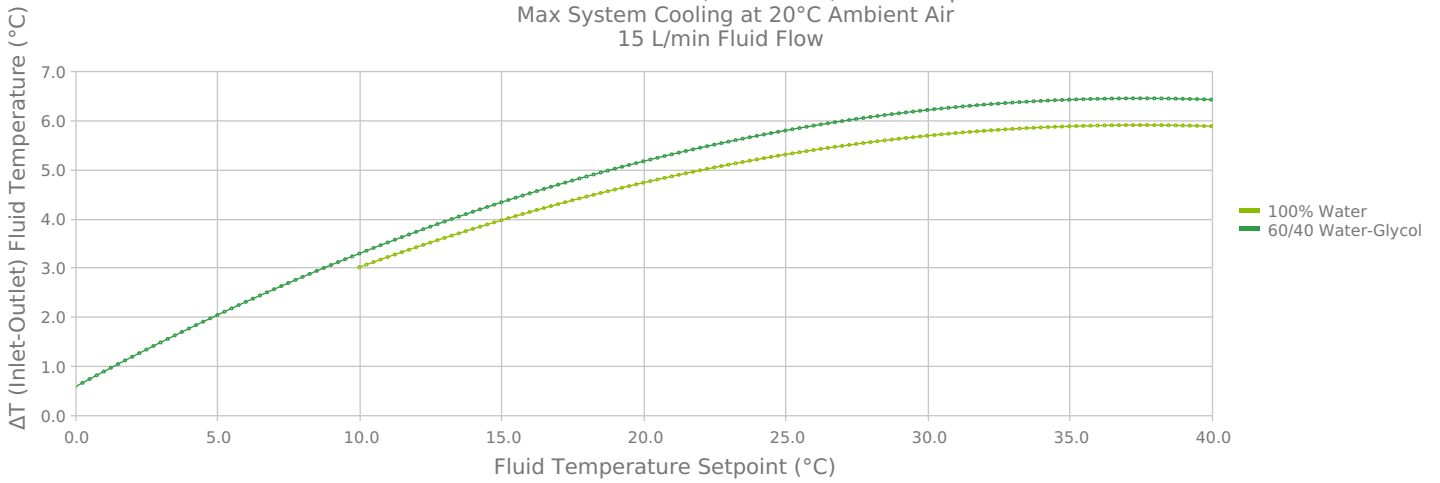
**60/40 Water-Glycol (30°C Ambient Air)**

Cooling Power (Qc) = 3,600 Watts  
 Fluid Setpoint = 20 °C  
 Fluid ΔT @ 15.0 L/min = 3.8 °C

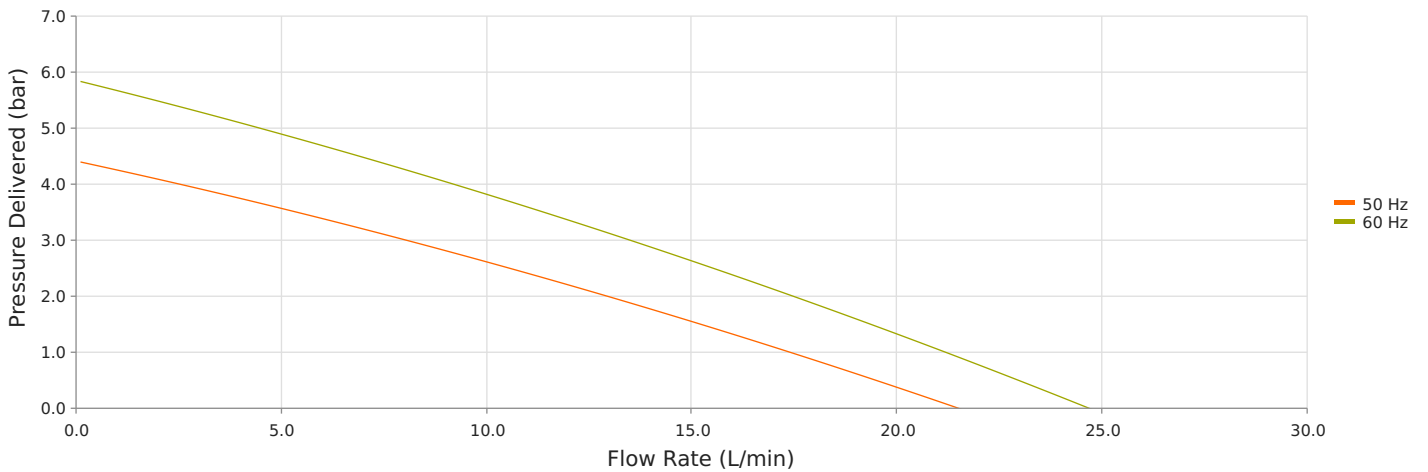
NRC5000-A1-20-ST1 Cooling Capacity  
 15 L/min Fluid Flow



NRC5000-A1-20-ST1 ΔT (Inlet-Outlet) Fluid Temperature  
 Max System Cooling at 20°C Ambient Air  
 15 L/min Fluid Flow



NRC5000-A1-20-ST1 - Pump Curve



## TECHNICAL SPECIFICATIONS

### Performance

|                                    |                      |
|------------------------------------|----------------------|
| Nominal Cooling Capacity           | 4,900 Watts          |
| Setpoint Range                     | -10°C to 40°C        |
| Temperature Stability              | ±0.1°C               |
| Nominal Operating Flowrate (60 Hz) | 15.0 L/min @ 2.8 Bar |
| Nominal Operating Flowrate (50 Hz) | 15.0 L/min @ 1.7 Bar |
| Refrigerant                        | R 513A               |

### Operation

|   |                           |
|---|---------------------------|
| Coolant                                 | Water or Water/Glycol     |
| Operating Temperature                   | 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                           | 220 - 230 VAC             |
| Frequency                               | 50/60 Hz                  |
| Maximum Forward Pressure                | 4.1 Bar                   |

### Physical

|                  |            |
|------------------|------------|
| Height           | 910 mm     |
| Length           | 590 mm     |
| Width            | 630 mm     |
| Weight           | 100 kg     |
| Coolant Capacity | 5 Liters   |
| Couplings        | 1/2 in NPT |

## STANDARD FEATURES

|                                       |   |
|---------------------------------------|---|
| <b>Variable Speed Motors</b>          | Variable speed compressor and condensing fans for quiet operation and improved energy efficiency.   |
| <b>Semi-Closed Fluid System</b>       | Sealed fluid system with breathable reservoir cap (similar to an automobile). This prevents evaporative losses, introduction of bacteria, and the need for components to prevent fluid from draining back into the system when installed below the application. |
| <b>Optical Fluid Level Switch</b>     | Fluid level sensing with no moving parts.   |
| <b>RS-232 / RS-485 Communications</b> | Complete control integration of chiller into higher level assembly control system.  |
| <b>Supply Pressure Sensing</b>        | Pressure sensing for applications sensitive to high operating conditions.   |

## ACCESSORY KITS

| Feature  | Kit Part Number  | Description   |
|--|------------------|---|
| <b>Flow Control Valve and Flow Sensing Kit</b> | <b>387004277</b> | Externally installed valve for reducing the overall flow to the application. Full flow continues through the chiller to maintain high heat transfer rates and temperature stability. Flow meter for measuring coolant flow rate. Installed external to the chiller with both a local display and connectivity to chiller LCD display. |
| <b>Water Filter Kit</b>                        | <b>387004279</b> | Hot swappable, 5-micron water filter for filtering particulates from the coolant circuit.   |

## CORD OPTIONS

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

| 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 V-Lock |
| 387005325       | United States | NEMA 5-15P | straight     | 2.0 m        | 125V, 15A            | Black | C19 V-Lock |
| 387006932       | Japan         | JIS 8303   | straight     | 2.0 m        | 125V, 15A            | Black | C19 V-Lock |

\* IEC \*\* UL

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