Teca Liquid Chillers are compact and reliable alternatives to conventional recirculating coolers. A complete integrated package is now offered in a standard configuration.

FEATURES

- Precise temperature control
- External plumbing lines with quick connectors
- 12’ of tubing and insulation included
- Self priming pumps

Options Available

- Heating
- RS-232 interface
- RS-485 interface
- Computer Communications software
- Ramping and soaking

APPLICATIONS

Teca Liquid Chillers are ideal for bench-top or portable applications such as laboratory, laser, x-ray, outpatient and medical therapy as well as many others.
LIQUID CHILLERS
Air Cooled
730-2700 BTH/hr

TLC-SERIES

TLC-1400 page 112
1400-1450 BTU/hr Rating,
12” x 14” footprint
120 or 240 VAC operation

TLC-1200 page 116
830-950 BTU/hr Rating,
15.4” x 7.6” footprint
24 VDC input

TLC-900 page 114
1050-1350 BTU/hr Rating,
15.4” x 7.6” footprint
100-240 VAC or 24 VDC operation

TLC-700 page 118
730-800 BTU/hr Rating,
12” x 7” footprint
120 VAC or 24 VDC operation

TLC-702 page 118
730-800 BTU/hr Rating,
12” x 7” footprint
240 VAC operation

TLC³ page 124
330-1250 BTU/hr Rating,
various size and voltages

RLC-SERIES

RLC-900 page 120
1050-1350 BTU/hr Rating,
19” X 25” X 9” Size
100-240 VAC input

RLC-1400 page 122
1400-1450 BTU/hr Rating,
19” X 25” X 9” Size
120 or 240 VAC input

RLC-1800 page 120
2000-2700 BTU/hr Rating,
19” X 25” X 11” Size
100-240 VAC input

www.teca-eu.com 1-888-TECA-USA (832-2872) TECA 111
TLC-1400 Liquid Chiller
Air Cooled 120 VAC, 240 VAC Input

FEATURES
• Compact (only 12” X 14” bench top footprint)
• Weighs approximately 59 lbs. (27 kg)
• Integral PID “tunable” temperature control (two styles)
• Ambient temperature up to +50°C
• No compressor, fluorocarbons or filters
• Virtually maintenance-free operation
• Remote Sensibility™
• Un-cooled, 500mL reservoir
• Front to back air-flow system
• Stainless steel exterior housing
• Low fluid level and low flow warning
• Integral power supply
• Self priming pump/reservoir
• Low pressure drop fluid quick connects
• Tubing and insulation
• 3/8” CPC low pressure drop shut off fittings
• Cool and Heat/Cool versions

TC-3400 FEATURES
• RS-485 communications (optional)
• Communications Software (optional)

SPECIFICATIONS

<table>
<thead>
<tr>
<th>MODEL</th>
<th>PART NUMBER</th>
<th>PERFORMANCE RATING</th>
<th>VOLTAGE AC</th>
<th>CURRENT AMPS 50/60 HZ</th>
<th>WEIGHT LBS. (KG)</th>
<th>MAX OPERATING TEMP °C</th>
<th>TEMP CONTROL</th>
<th>HEATING OPTION (HC SUFFIX) AMBIENT</th>
<th>FLUID TEMP RANGE °C</th>
</tr>
</thead>
<tbody>
<tr>
<td>TLC-1400</td>
<td>6-B0G0-0-000</td>
<td>1400-1450</td>
<td>120 VAC</td>
<td>7.0</td>
<td>59 (26.7)</td>
<td>50°C (+122 F)</td>
<td>TC-3400</td>
<td>-5/65</td>
<td></td>
</tr>
<tr>
<td>TLC-1400HC</td>
<td>6-B0G0-1-000</td>
<td>1400-1450</td>
<td>120 VAC</td>
<td>7.0</td>
<td>59 (26.7)</td>
<td>50°C (+122 F)</td>
<td>TC-3400</td>
<td>400 Watt</td>
<td>-5/65</td>
</tr>
<tr>
<td>TLC-1402</td>
<td>6-B0G2-0-000</td>
<td>1400-1450</td>
<td>240 VAC</td>
<td>4.0</td>
<td>59 (26.7)</td>
<td>50°C (+122 F)</td>
<td>TC-3400</td>
<td>-5/65</td>
<td></td>
</tr>
<tr>
<td>TLC-1402HC</td>
<td>6-B0G2-1-000</td>
<td>1400-1450</td>
<td>240 VAC</td>
<td>4.0</td>
<td>59 (26.7)</td>
<td>50°C (+122 F)</td>
<td>TC-3400</td>
<td>400 Watt</td>
<td>-5/65</td>
</tr>
</tbody>
</table>
**PERFORMANCE CURVE**

| Ambient Temp | Fluid Supply  
<table>
<thead>
<tr>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>25°C</td>
<td>y = 0.08x - 33.1</td>
</tr>
<tr>
<td>50°C</td>
<td>y = 0.08x - 36.1</td>
</tr>
</tbody>
</table>

Equation of line: y = ΔT(°C) x = Capacity (Watts)

**DIMENSIONS**

* Minimum recommended clearance 3".

Dimensions: Inches [Millimeters]

**ENVIRONMENTS**

- Bench top
- Laboratory
- Industrial

**COOLING CAPACITY**

410 Watts @ 0 °C ΔT (standard)

**PUMP CURVE**

<table>
<thead>
<tr>
<th>Flow (Liter/Min)</th>
<th>Pressure Differential (PSI)</th>
</tr>
</thead>
<tbody>
<tr>
<td>0</td>
<td>11</td>
</tr>
<tr>
<td>0.5</td>
<td>10</td>
</tr>
<tr>
<td>1.0</td>
<td>9</td>
</tr>
<tr>
<td>1.5</td>
<td>8</td>
</tr>
<tr>
<td>2.0</td>
<td>7</td>
</tr>
<tr>
<td>2.5</td>
<td>6</td>
</tr>
<tr>
<td>3.0</td>
<td>5</td>
</tr>
<tr>
<td>3.5</td>
<td>4</td>
</tr>
</tbody>
</table>

**Liquid Chiller - Air Cooled**

**TLC-1400**

Front View

Side View
TLC-900 | Liquid Chiller

**STANDARD FEATURES**
- 90-265 VAC universal integrated power supply
- Heats and cools
- 1 Liter un-cooled reservoir
- Low pressure drop 3/8 I.D. fluid quick connects
- Variable fan speed for quieter operation
- User-friendly front-fill design
- Easy prime/pump reset feature
- Wide process fluid temperature range
- Multiport bottom to top air-flow for easier bench use
- Hardwired over-temperature protection
- No compressor, fluorocarbons or filters
- Virtually maintenance-free operation

**CONTROL FEATURES**
- Integral PID “tunable” temperature control
- One shot smart PID control tuning or Adaptive Smart Continuous Tuning
- Internal RTD sensor
- Remote Sensibility™ switch selectable exterior sensor
- Multi-segment ramp and soak programs
- RS-232 communications standard includes EzLog® software for easy programming, tuning and charting
- Low fluid level and low flow warning
- Process fluid “out of temperature range” warning
- No flow system shut down
- Optional software iTools®, OPC Server

**PUMP OPTIONS**
- Option #1 - Standard Magnetic Drive, Can Pump, 0 to 50 °C process temperature
- Option #2 - Low Temperature Magnetic Drive, Impeller Pump, -20 to 90 °C process temperature
- Option #3 - Gear pump, 3.75 Liter/Min, -20 to 90 °C process temperature
- Option #4 - High Flow Magnetic Drive, Can Pump, 0 to 50 °C process temperature

**SPECIFICATIONS**

<table>
<thead>
<tr>
<th>MODEL</th>
<th>PART NUMBER</th>
<th>PUMP OPTION</th>
<th>PERFORMANCE RATING BTU/HR</th>
<th>VOLTAGE VAC 50/60 HZ</th>
<th>CURRENT AMPS</th>
<th>WEIGHT LBS. (KG)</th>
<th>MAX OPERATING AMBIENT</th>
<th>FLUID TEMP. RANGE °C</th>
</tr>
</thead>
<tbody>
<tr>
<td>TLC-900 6-E4EB-1-0A1</td>
<td>1</td>
<td>1050-1100</td>
<td>100-240</td>
<td>3.5†</td>
<td>42 (19)</td>
<td>50 °C (+122 F)</td>
<td>0 to 50</td>
<td></td>
</tr>
<tr>
<td>TLC-900 6-E4EB-1-0A2</td>
<td>2</td>
<td>1260-1330</td>
<td>100-240</td>
<td>4.0†</td>
<td>42 (19)</td>
<td>50 °C (+122 F)</td>
<td>0 to 50</td>
<td></td>
</tr>
<tr>
<td>TLC-900 6-E4EB-1-0A3</td>
<td>3</td>
<td>1260-1330</td>
<td>100-240</td>
<td>3.5†</td>
<td>42 (19)</td>
<td>50 °C (+122 F)</td>
<td>-20 to 90</td>
<td></td>
</tr>
<tr>
<td>TLC-900 6-E4EB-1-0A4</td>
<td>4</td>
<td>1050-1100</td>
<td>100-240</td>
<td>4.0†</td>
<td>42 (19)</td>
<td>50 °C (+122 F)</td>
<td>0 to 50</td>
<td></td>
</tr>
<tr>
<td>TLC-900 6-E4E5-1-0A1</td>
<td>1</td>
<td>1050-1100</td>
<td>24 VDC</td>
<td>22</td>
<td>42 (19)</td>
<td>50 °C (+122 F)</td>
<td>0 to 50</td>
<td></td>
</tr>
<tr>
<td>TLC-900 6-E4E5-1-0A2</td>
<td>2</td>
<td>1050-1100</td>
<td>24 VDC</td>
<td>22</td>
<td>42 (19)</td>
<td>50 °C (+122 F)</td>
<td>-20 to 90</td>
<td></td>
</tr>
<tr>
<td>TLC-900 6-E4E5-1-0A3</td>
<td>3</td>
<td>1050-1100</td>
<td>24 VDC</td>
<td>22</td>
<td>42 (19)</td>
<td>50 °C (+122 F)</td>
<td>-20 to 9</td>
<td></td>
</tr>
<tr>
<td>TLC-900 6-E4E5-1-0A4</td>
<td>4</td>
<td>1050-1100</td>
<td>24 VDC</td>
<td>22</td>
<td>42 (19)</td>
<td>50 °C (+122 F)</td>
<td>0 to 50</td>
<td></td>
</tr>
</tbody>
</table>

* This part number is ready for use with a low temperature cascade option and includes power input and control provisions to the cascade. For other pump options for cascade unit consult the factory. Refer to pages 108 and 109 for cascades and other options available for liquid chillers.
† Refeects the current draw @ 120 VAC, 60 Hz input
PERFORMANCE CURVE

Curves below represent performance of TLC-900 with pump option 1.
Performance curves for systems with other pumps will be different.

Cooling Capacity (BTU/HR)

<table>
<thead>
<tr>
<th>Ambient Temp</th>
<th>Capacity 25°C</th>
<th>Capacity 50°C</th>
<th>Capacity 25°C @ 0°C</th>
<th>Capacity 50°C @ 0°C</th>
</tr>
</thead>
<tbody>
<tr>
<td>Standard</td>
<td>y=.102x-30.3</td>
<td>y=.102x-31.2</td>
<td></td>
<td></td>
</tr>
<tr>
<td>High Capacity</td>
<td>y=.105x-36.2</td>
<td>y=.105x-38.7</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

PUMP CURVE

Equation of line: $y = \Delta T (°C) x = $ Capacity (Watts)

<table>
<thead>
<tr>
<th>Ambient Temp</th>
<th>Capacity 25°C</th>
<th>Capacity 50°C</th>
<th>Capacity 25°C @ 0°C</th>
<th>Capacity 50°C @ 0°C</th>
</tr>
</thead>
<tbody>
<tr>
<td>Standard</td>
<td>y=.102x-30.3</td>
<td>y=.102x-31.2</td>
<td></td>
<td></td>
</tr>
<tr>
<td>High Capacity</td>
<td>y=.105x-36.2</td>
<td>y=.105x-38.7</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

DIMENSIONS

- Liquid Chiller - Air Cooled
- TLC-900
- ENVIRONMENTS
  - Bench top
  - Laboratory
  - Industrial
- COOLING CAPACITY
  - 310 Watts @ 0 °C ΔT (standard)
  - 360 Watts @ 0 °C ΔT (high capacity)
**TLC-1200 Air Cooled Liquid Chiller**

**Air Cooled General Purpose 24 VDC input**

---

**SPECIFICATIONS**

<table>
<thead>
<tr>
<th>MODEL</th>
<th>PART NUMBER</th>
<th>PERFORMANCE RATING BTU/HR</th>
<th>VOLTAGE VDC</th>
<th>CURRENT AMPS.</th>
<th>WEIGHT LBS. (KG)</th>
<th>MAX OPERATING AMBIENT</th>
<th>HEATING OPTION</th>
<th>TEMP. CONTROL</th>
<th>FLUID TEMP RANGE °C</th>
</tr>
</thead>
<tbody>
<tr>
<td>TLC-1200</td>
<td>6-3095-0-000</td>
<td>830-950</td>
<td>24</td>
<td>9.0</td>
<td>20 (9.1)</td>
<td>50 °C(+122 F)</td>
<td>Cool Only</td>
<td>None</td>
<td>-5/65</td>
</tr>
<tr>
<td>TLC-1200</td>
<td>6-3055-0-000</td>
<td>830-950</td>
<td>24</td>
<td>9.0</td>
<td>20 (9.1)</td>
<td>50 °C(+122 F)</td>
<td>Cool Only</td>
<td>EXT*</td>
<td>-5/65</td>
</tr>
<tr>
<td>TLC-1200HC</td>
<td>6-3055-1-000</td>
<td>830-950</td>
<td>24</td>
<td>9.0</td>
<td>20 (9.1)</td>
<td>50 °C(+122 F)</td>
<td>Heat/Cool</td>
<td>EXT**</td>
<td>-5/65</td>
</tr>
</tbody>
</table>

* Unit is set for 5-32 VDC external control signal, relay included

**FEATURES**

- Two separate fluid cooling circuits
- Weighs only 20 lbs. (9.1 kg)
- Mount through bench top or enclosure wall
- No compressor, fluorocarbons or filters
- Virtually maintenance-free operation
- Stainless steel exterior housing
- Mounts in any orientation
- 3/8” OD Stainless steel tubing

**INCLUDES**

- Internal H-Bridge for reverse polarity operation on HC versions
- Rubber feet
- Power input leads

---
**PERFORMANCE CURVE**

Equation of line: \( y = \frac{x}{9004} \)

<table>
<thead>
<tr>
<th>Capacity</th>
<th>Standard</th>
<th>High</th>
</tr>
</thead>
<tbody>
<tr>
<td>Fluid Supply</td>
<td>( y = 0.138x - 22.4 )</td>
<td>( y = 0.138x - 26.2 )</td>
</tr>
</tbody>
</table>

**COOLING CAPACITY**

- Standard: 162 Watts @ 0 °C ΔT (25 °C Ambient)
- High Cap: 190 Watts @ 0 °C ΔT (25 °C Ambient)

**ENVIRONMENTS**

- Bench top
- OEM
- Industrial

**DIMENSIONS**

**FLOW CHARACTERISTICS**

**Liquid Chiller - Air Cooled**

TLC-1200

Ambient Air Path

Control Cable

Power Input Leads

Rubber Feet

Dimensions: Inches [Millimeters]
TLC-700 Air Cooled Liquid Chiller

**SPECIFICATIONS**

<table>
<thead>
<tr>
<th>MODEL</th>
<th>PART NUMBER</th>
<th>PERFORMANCE RATING BTU/HR</th>
<th>VOLTAGE VAC</th>
<th>CURRENT AMPS</th>
<th>WEIGHT LBS. (KG)</th>
<th>MAX OPERATING AMBIENT</th>
<th>HEATING OPTION (HC SUFFIX)</th>
<th>TEMP. CONTROL</th>
<th>FLUID TEMP RANGE °C</th>
<th>AGENCY APPROVALS (ETL)</th>
</tr>
</thead>
<tbody>
<tr>
<td>TLC-700</td>
<td>6-A0D0-0-000</td>
<td>730-800</td>
<td>120 VAC</td>
<td>4.2</td>
<td>32(14.5)</td>
<td>50 °C(+122 F)</td>
<td>TC-3300</td>
<td>-5/65</td>
<td>UL3101-1/CSA22.2, CE</td>
<td></td>
</tr>
<tr>
<td>TLC-700HC</td>
<td>6-A0D0-1-000</td>
<td>730-800</td>
<td>120 VAC</td>
<td>4.2</td>
<td>32(14.5)</td>
<td>50 °C(+122 F)</td>
<td>200 Watt</td>
<td>TC-3300</td>
<td>-5/65</td>
<td>UL3101-1/CSA22.2, CE</td>
</tr>
<tr>
<td>TLC-702</td>
<td>6-A0D2-0-000</td>
<td>730-800</td>
<td>240 VAC</td>
<td>2.9</td>
<td>42(19)</td>
<td>50 °C(+122 F)</td>
<td>TC-3300</td>
<td>-5/65</td>
<td>UL3101-1/CSA22.2, CE</td>
<td></td>
</tr>
<tr>
<td>TLC-702HC</td>
<td>6-A0D2-1-000</td>
<td>730-800</td>
<td>240 VAC</td>
<td>2.9</td>
<td>42(19)</td>
<td>50 °C(+122 F)</td>
<td>200 Watt</td>
<td>TC-3300</td>
<td>-5/65</td>
<td>UL3101-1/CSA22.2, CE</td>
</tr>
</tbody>
</table>

**FEATURES**

- Compact (only 15.5" X 7.6" bench top footprint)
- Easy prime pump design
- Integral PID "tunable" temperature control (two styles)
- No compressor, fluorocarbons or filters
- Un-cooled, 500mL reservoir
- Front to back air-flow system
- Stainless steel exterior housing
- Ergonomic sloping front design
- Low fluid level and low flow warning
- Integral power supply
- Self priming pump/reservoir
- Low pressure drop fluid quick connects
- Cool and Heat/Cool versions

**TC-3300 FEATURES**

- RS-232 communications (optional)
- Communications Software (optional)
**TLC-700**

**ENVIRONMENTS**
- Bench top
- Laboratory
- Industrial

**COOLING CAPACITY**
- 215 Watts @ 0 °C ΔT

**DIMENSIONS**

**PERFORMANCE CURVE**

Equation of line: $y = \frac{-30.2}{H9004} + 25°C$  
$y = \frac{-33.2}{H9004} + 50°C$

<table>
<thead>
<tr>
<th>Ambient Temp</th>
<th>Fluid Supply</th>
</tr>
</thead>
<tbody>
<tr>
<td>25°C</td>
<td>$y = 0.14x - 30.2$</td>
</tr>
<tr>
<td>50°C</td>
<td>$y = 0.14x - 33.2$</td>
</tr>
</tbody>
</table>

**PUMP CURVE**
RLC-900 Rack Mount Liquid Chiller

RLC-1800

100-240 VAC Input

Air Cooled Rack Mount

**FEATURES**

- Compact only 19” x 25” x 9”
- Standard 19” rack mounting
- Integral PID “Tuneable” temperature control
- Remote sensibility™
- Ambient to +50ºC
- No compressor, fluorocarbons
- Virtually maintenance-free operation
- Stainless steel exterior housing
- Low fluid/flow warning
- External washable air filter

**INCLUDES**

- Integral power supply
- Self priming pump/reservoir
- TC-4300 temperature Control
- Low pressure drop fluid quick connects
- RS-232 interface
- Computer communication software

**SPECIFICATIONS**

<table>
<thead>
<tr>
<th>MODEL</th>
<th>PART NUMBER</th>
<th>PUMP OPTION</th>
<th>PERFORMANCE RATING BTU/HR</th>
<th>VOLTAGE VAC 50/60 HZ</th>
<th>CURRENT AMPS</th>
<th>WEIGHT LBS. (KG)</th>
<th>MAX OPERATING AMBIENT</th>
<th>FLUID TEMP. RANGE °C</th>
</tr>
</thead>
<tbody>
<tr>
<td>RLC-900</td>
<td>8-E4EB-1-0A1</td>
<td>1</td>
<td>1050-1100</td>
<td>100-240</td>
<td>3.5*</td>
<td>42 (19)</td>
<td>50 °C (+122 F)</td>
<td>0 to 50</td>
</tr>
<tr>
<td>RLC-900</td>
<td>8-E4EB-1-0A2</td>
<td>2</td>
<td>1050-1100</td>
<td>100-240</td>
<td>3.5*</td>
<td>42 (19)</td>
<td>50 °C (+122 F)</td>
<td>-20 to 90</td>
</tr>
<tr>
<td>RLC-900</td>
<td>8-E4EB-1-0A3</td>
<td>3</td>
<td>1050-1100</td>
<td>100-240</td>
<td>3.5*</td>
<td>42 (19)</td>
<td>50 °C (+122 F)</td>
<td>-20 to 90</td>
</tr>
<tr>
<td>RLC-1800</td>
<td>8-04EB-1-0A1</td>
<td>1</td>
<td>2000-2200</td>
<td>100-240</td>
<td>7.0</td>
<td>50 (23)</td>
<td>50 °C (+122 F)</td>
<td>-0 to 50</td>
</tr>
<tr>
<td>RLC-1800</td>
<td>8-04EB-1-0A2</td>
<td>2</td>
<td>2000-2200</td>
<td>100-240</td>
<td>7.0</td>
<td>50 (23)</td>
<td>50 °C (+122 F)</td>
<td>-20 to 90</td>
</tr>
<tr>
<td>RLC-1800</td>
<td>8-04EB-1-0A3</td>
<td>3</td>
<td>2000-2200</td>
<td>100-240</td>
<td>7.0</td>
<td>50 (23)</td>
<td>50 °C (+122 F)</td>
<td>-20 to 90</td>
</tr>
<tr>
<td>RLC-1800</td>
<td>8-04EB-1-0A4</td>
<td>4</td>
<td>2000-2200</td>
<td>100-240</td>
<td>7.0</td>
<td>50 (23)</td>
<td>50 °C (+122 F)</td>
<td>-0 to 50</td>
</tr>
</tbody>
</table>

* Reflects current draw @ 120 VAC, 60 Hz input

**PUMP OPTIONS**

- Option #1 - Standard Magnetic Drive, Can Pump, 0 to 50 °C process temperature
- Option #2 - Low Temperature Magnetic Drive, Impeller Pump, -20 to 90 °C process temperature
- Option #3 - Gear pump, 3.75 Liter/Min, -20 to 90 °C process temperature
- Option #4 - High Flow Magnetic Drive, Can Pump, 0 to 50 °C process temperature
**PERFORMANCE CURVE**

Curves below represent performance of systems with pump option 1. Performance curves for systems with other pumps will be different.

Equation of line: \( y = \Delta T(\text{°C}) \times \text{Capacity (Watts)} \)

<table>
<thead>
<tr>
<th>Ambient Temp</th>
<th>25°C</th>
<th>50°C</th>
</tr>
</thead>
<tbody>
<tr>
<td>RLC-900</td>
<td>( y = 0.101x - 31.4 )</td>
<td>( y = 0.100x - 32.1 )</td>
</tr>
<tr>
<td>RLC-1800</td>
<td>( y = 0.05x - 31.4 )</td>
<td>( y = 0.05x - 32.1 )</td>
</tr>
</tbody>
</table>

**PUMP CURVE**

<table>
<thead>
<tr>
<th>Flow (Liter/Min)</th>
<th>0</th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
<th>6</th>
<th>7</th>
<th>8</th>
<th>9</th>
<th>10</th>
<th>11</th>
<th>12</th>
</tr>
</thead>
<tbody>
<tr>
<td>Pressure Differential (PSI)</td>
<td>12.6</td>
<td>11.2</td>
<td>9.8</td>
<td>8.4</td>
<td>7.0</td>
<td>5.6</td>
<td>4.2</td>
<td>2.8</td>
<td>1.4</td>
<td>0.0</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**RLC-900/RLC-1800**

**ENvironments**
- 19" rack mount
- Laboratory
- Industrial

**Cooling Capacity**
- 310 Watts @ 0 °C \( \Delta T \) (RLC-900)
- 620 Watts @ 0 °C \( \Delta T \) (RLC-1800)

**Dimensions**

**Liquid Chiller - Air Cooled**

**Equation of line:**

- Temperature Controller TC-4300 Front Panel
- Reservoir Fill (non-vented Cover)
- Air Filter Latch
- RS-232 Comms
- Power Entry Module
- Switch and Fuse (5 Amps, 30 Bio)

*Indicates RLC-1800 dimensions Dimensions: Inches*
RLC-1400 Rack Mount Liquid Chiller

**Features**

- Compact only 19” x 25” x 9”
- Standard 19” rack mounting
- Integral PID “Tuneable” temperature control
- Remote sensibility™
- Ambients to +50°C
- No compressor, fluorocarbons
- Virtually maintenance-free operation
- Stainless steel exterior housing
- Low fluid/flow warning

**Includes**

- Integral power supply
- Self priming pump/reservoir
- TC-3400 temperature Control
- Low pressure drop fluid quick connects

**Options**

- Heating
- RS-485 interface, RS-232 interface (with external adapter)
- Computer communication software

**Specifications**

<table>
<thead>
<tr>
<th>Model</th>
<th>Part Number</th>
<th>Performance Rating</th>
<th>Voltage VAC</th>
<th>Current Amps</th>
<th>Weight LBS (KG)</th>
<th>Max Operating Ambient °C</th>
<th>Heating Option (HC Suffix)</th>
<th>Fluid Temp Range °C</th>
</tr>
</thead>
<tbody>
<tr>
<td>RLC-1400</td>
<td>8-B0G0-0-000</td>
<td>1400-1450</td>
<td>120 VAC</td>
<td>7.0</td>
<td>59 (26.7)</td>
<td>50 °C (+122 F)</td>
<td>400 Watt</td>
<td>-5/65</td>
</tr>
<tr>
<td>RLC-1400HC</td>
<td>8-B0G0-1-000</td>
<td>1400-1450</td>
<td>120 VAC</td>
<td>7.0</td>
<td>59 (26.7)</td>
<td>50 °C (+122 F)</td>
<td>400 Watt</td>
<td>-5/65</td>
</tr>
<tr>
<td>RLC-1402</td>
<td>8-B0G2-0-000</td>
<td>1400-1450</td>
<td>240 VAC</td>
<td>7.0</td>
<td>59 (26.7)</td>
<td>50 °C (+122 F)</td>
<td>400 Watt</td>
<td>-5/65</td>
</tr>
<tr>
<td>RLC-1402HC</td>
<td>8-B0G2-1-000</td>
<td>1400-1450</td>
<td>240 VAC</td>
<td>7.0</td>
<td>59 (26.7)</td>
<td>50 °C (+122 F)</td>
<td>400 Watt</td>
<td>-5/65</td>
</tr>
</tbody>
</table>
**PERFORMANCE CURVE**

Equation of line: \( y = \Delta T(\degree C) \)  \( x = \) Capacity (Watts)

<table>
<thead>
<tr>
<th>Ambient Temp</th>
<th>25°C</th>
<th>50°C</th>
</tr>
</thead>
<tbody>
<tr>
<td>Fluid Supply</td>
<td>( y = 0.08x - 33.1 )</td>
<td>( y = 0.08x - 36.1 )</td>
</tr>
</tbody>
</table>

**PUMP CURVE**

**RLC-1400**

**ENVIRONMENTS**
- 19” rack mount
- Laboratory
- Industrial

**COOLING CAPACITY**
410 Watts @ 0 °C \( \Delta T \)

**DIMENSIONS**

Equation: \( y = \Delta T(\degree C) \)  \( x = \) Capacity (Watts)
TLC³ Thermoelectric Cooling Cube
Air Cooled

FEATURES

- Customized to fit your application
- In process fluid cooling
- Gas cooling/drying
- Aluminum hot side heat exchanger
- Aluminum cold side heat exchanger
- Various DC inputs and efficiencies
- Special finishes and materials on request
- Many fan options
- 4 and 6 pass heat exchanger
- Input/output fitting options
- Heating options

REQUIRED (NOT INCLUDED)

- Pump
- Power supply
- Tubing
- Fan
- Housing

NOTES

TECA model TLC³ cooling cubes are thermoelectric cooling “engines” that the engineer or designer can use in OEM systems. Generally these are made in 100, 200 and 300 Watts capacity range, they work with a variety of fans. Small or large quantities available.
**PERFORMANCE CURVE**

![Performance Curve Graph]

**DIMENSIONS**

![Dimensions Diagrams]

**FLOW CHARACTERISTICS**

![Flow Characteristics Graph]

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**Liquid Chiller - Air Cooled**

**TLC³**

330-1250 BTU/hr

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**www.teca-eu.com**

1-888-TECA-USA (832-2872)
**HEAT EXCHANGERS**

**COLD PLATES**

Turn your TLC water chiller into a direct contact cooler using these cold plates. Modify them with your required taps and machining, mount your components, run the flexible hose to the chiller and turn it on. With care the remote sensor feature on select TLC models can be used to control the temperature of the plate or the item being cooled.

**FAN COILS**

Use your liquid chiller to cool an enclosure or a flow of air. Cool the inside of your glove box with little vibration and no big holes or air conditioner on the back. Mount the fan coils in your glove box, run the flexible tubing through a port or bulkhead fitting on your glove box to the liquid chiller and begin cooling.

**FITTINGS AND QUICK CONNECTS**

**MALE QUICK CONNECT WITH NPT**

- QCM-F3/8NPT: Male quick connect with female 3/8 NPT
- QCM-F1/4NPT: Male quick connect with female 1/4 NPT
- QCM-M1/2NPT: Male quick connect with male 1/2 NPT
- QCM-M3/8NPT: Male quick connect with male 3/8 NPT

**MALE QUICK CONNECT WITH BARB**

- QCM-3/8B: Male quick connect with 3/8” barb
- QCM-1/4B: Male quick connect with 1/4” barb
- QCM-3/16B: Male quick connect with 3/16” barb
- QCM-3/8BE: Male quick connect with 3/8” barb elbow

**MALE QUICK CONNECT - HIGH TEMPERATURE**

- QCHM-M1/2NPT: Male quick connect, 1/2 MNPT
- QCHM-3/8B: Male quick connect, 3/8” barb
- QCHM-1/2B: Male quick connect, 1/2” barb
- QCHM-3/4B: Male quick connect, 3/4” barb

**MISC. QUICK CONNECTS**

- QCM-FPLCD: Male quick connect with female PLCD
- QCF-M3/8NPT: Female quick connect with male 3/8 NPT
LOW TEMPERATURE CASCADES FOR USE WITH LIQUID CHILLERS

One thermoelectric stacked on top of another with the goal of increasing the maximum temperature differential is a "cascade". Use these assemblies with the liquid chiller to create 2 and 3 stage cascades. The performance will vary with the degree of insulation, with the amount of the active load and with the ambient temperature.

**TWO STAGE - LARGE PLATE**

![Diagram of a two stage large plate cascade]

**TWO STAGE - SMALL PLATE**

![Diagram of a two stage small plate cascade]

**THREE STAGE**

![Diagram of a three stage cascade]

**RTD SENSOR**

- **RTD-PROBE**: 100 Ω, 3 wire, platinum RTD 6” long, 1/8” diameter
- **RTD-RING**: 100 Ω, 3 wire, platinum RTD surface mount

**CONVERTER**

- **C-USB**: USB-RS-232 converter “includes adapter, cable and software”
- **C-RS232**: RS-232 Cable, DB9 Male to DB9 Female 10’ long

**HOSE**

- **HOSE-01**: Standard hose, 3/8” ID, per foot
- **HOSE-02**: High temperature hose, 3/8” ID, per foot

Purchase by the foot

**INSULATION**

- **INS-01**: Single hose insulation, 5/8” ID 6’ Lengths

**FILTERS**

- **FBL-100**: Low profile filter body and bowl
- **FML-20**: Filter screen, 20 Mesh (915 Micron)
- **FML-40**: Filter screen, 40 Mesh (480 Micron)
- **FML-80**: Filter screen, 80 Mesh (178 Micron)
- **FML-100**: Filter screen, 100 Mesh (80 Micron)
- **FML-250**: Filter screen, 250 Mesh (40 Micron)