Available in 20 - 60 ton single units, the High Efficiency Chillers can be expandable up to 600 ton cooling capacity and save you up to 60% in energy costs.

www.sterlco.com
Energy Efficient

The most efficient chiller of its kind.

Rewarding its users with upwards of 60% in average energy savings compared to traditional cooling systems.

Modular & Expandable

Invest in today, expand in the future.

Offering expansions up to 10 modules with 600 tons of cooling capacity within the same control platform.

Virtually Eliminate Downtime

Sterling maximizes uptime with a redundant design.

Chillers communicate with one another to maintain desired tank temperature. Should a unit go down, the others automatically compensate to maintain the necessary process temperature.
The High Efficiency Central Chiller is designed to meet the process cooling needs of the most agile manufacturing facility. The units are remarkably energy efficient and can save up to 60% in electrical costs. The system continuously measures ambient and process conditions and will adjust to operate in the most efficient manner. Designed with electrical, mechanical and control redundancy, paired with predictive analysis, downtime is virtually eliminated.

The High Efficiency Central Chiller is available in single circuits from 20 to 60 tons and are designed with modularity in mind. Users can purchase a system to meet their current process cooling needs. Expansion is made easy by plugging similar capacity units in parallel for up to 600 tons of cooling. The compact chillers control off the temperature of the fluid tank and can maintain between 20°F to 80°F (-7°C to 26.6°C).

Industry Leading Support Available

Full System Provider
Sterling offers full system capabilities including pump tanks, remote condensers, chillers, cooling towers, hybrid adiabatic systems, winter coolers, heat exchangers, filtration equipment, and temperature control units.

Technical Support & Training
Sterling provides expert technical support and training, allowing customers to get the most out of their production environment.

On-Site Service
Service and support is available to provide regular maintenance and emergency service at your facility.

Parts Support
Thousands of parts in stock, ready for same day shipment including specific wear parts. Parts customer service representatives are ready to assist, ensuring you get the part you need - when you need it.

Applications
Central chillers can be used in any application that needs a constant source of cool process fluid. Typical applications include, but are not limited to, the following:

- Injection molding
- Blow molding
- Extrusion
- Thermoforming
- Machine tooling
- Metal plating
- Thermal spray
- Laser
- After-coolers (air compressors, dryers, etc.)
- Printing (offset, gravure, digital)
Remote Air-Cooled Design

Higher Performance Motors
The electronically commutated (EC) brush-less motor increases reliability, controllability and energy savings.

Robust Design
Tube & Fin Condensers have a higher resistance to corrosion while providing more efficiency.

Intuitive 10” Touch Screen
Control and monitor one to ten paralleled units with a large, high resolution color touch screen.

Simple Strainer Maintenance
Cleaning is easy with the Stainless Steel Brazed Plate Evaporator. Incorporated TS Tech™ tool-less technology allows for quick access with less effort. The large surface area on the strainer also increases the time between required cleanings.

Welded Frame
Provides better structural integrity during transport & operation. The frame is powder coated for increased corrosion resistance.
Water-Cooled Design

More Accurate Temperature Control
Chilling system operates based on tank temperature instead of unit leaving fluid temperature.

Controlled to Optimize Performance
The electronic water regulating valve automatically adjusts to increase efficiency.

Increased Energy Efficiency
Tandem Scroll Compressors with Staging Capability are managed by proprietary algorithms.

Built in Auto-Redundancy & Controls
Zones communicate between one another to maintain tank temperatures via Ethernet connectivity.

Resistant to Corrosion
Shell & Tube Condenser designed to be more resilient to clogging and easier to clean.

Replaceable Filter Core
Easily replace and maintain filters without having to cut out old unit and braze in new.

Increased Stability
Condenser is closer to the ground to reduce operational vibration.
Up to 60% More Efficient

High Efficiency Central Chillers vs Traditional Cooling Technologies

Sterling’s High Efficiency Central Chiller is the most efficient of its kind among chilling technologies, rewarding its users with upwards of 60% in average energy savings. A simple design makes for easy maintenance and service, saving additional time and cost. Compared to the VFD controlled compressor, the High Efficiency Chiller is much more efficient and much less complex.

Estimated Energy Cost Per Year

Energy savings directly impacts the bottom line. By utilizing more efficient technologies, you can expect to see higher annual savings vs traditional cooling systems.

The High Efficiency chiller realizes the largest savings when running between 40% - 80% of capacity. When running at the NPLV rates, the High Efficiency chiller will save up to 60% in energy costs annually.

Fan Power Consumption

Energy efficiency starts with the best fan technology. Electrically Commutated (EC) motors have proven to be more efficient than VFD’s and fan staging across the entire load spectrum.

Chiller Energy Efficiency Comparison (EER)

Per ASHRAE NPLV conditions the High Efficiency Central Chiller is superior to traditional cooling technologies.
A Redundant Design Maximizes Uptime

Paralleled Machines Reduce Risk

High Efficiency Central Chillers communicate with one another to maintain tank temperatures via Ethernet connectivity. Should a unit go down, the others automatically compensate to maintain the tank temperature. Even if the master goes down, the other units continue to communicate. Auto recovery allows for the process cooling to continue, leading to virtually zero downtime and less service time. Sterling’s High Efficiency Central Chillers are inherently redundant. Even a single module has two compressors that will cycle at different times. This also eliminates downtime due to runtime being split equally between all components in the system.

Modular & Expandable

Designed to Grow with You

Sterling is the leader in chiller modularity, offering expansions up to 10 modules with 600 tons of chilling capacity within the same control platform. The High Efficiency Central Chiller is designed to grow with your company. As facility requirements change, additional modules can be paralleled to reach necessary cooling levels. The High Efficiency Central Chiller is easy to install and is easily integrated. The controls automatically recognize a new unit when it is plugged in to neighboring units. A simple touch of a button enables the circuit.
Intuitive Controls

Complete System Access via Robust, Easy-To-Use Display

At the heart of the master module is an intelligent touch screen and controller. Combined with the advanced 10” HD color display, users can easily control and monitor the entire chiller system from one location. Rather than a basic list of temperatures and pressures, the touch screen shows visual representation of the status of each zone. If application parameters approach limitations, the zone will automatically raise an alarm. If an alarm sounds, the machine will continue to operate where possible, and custom-built software will provide guidance via ‘help’ screens.

1. **Home Screen**
   Quick visual representation of the entire system, easily allowing circuits to be enabled or disabled.

2. **Legend & Enabled Circuits**
   Color coded visuals to quickly identify status of each compressor & circuit.

3. **Individual Circuit Overview**
   An in depth look at each circuit for a full representation of status and performance.

4. **System Circuit Overview**
   Allows for review and analysis of full system operating conditions.
Live Graphing
Graph, log, and output pressures & temperatures directly from the touchscreen.

Alarm History
A detailed history of each alarm is documented, for faster diagnosis of root cause.

Alarm Help Screen
Guides users through common alarms and offers suggestions on solutions.

Save, Restore, & Download
Save & restore settings as well as download alarm history to USB for troubleshooting.

Smart Controls for a Smarter Facility
- Remotely monitor the system 24/7 via phone, tablet, or PC.
- Quick, intelligent diagnostics of system status and alarms through live graphing and data logging.
- With predictive analysis and monitoring changing operation conditions, the system responds in real time to maximize uptime.
- Advanced temperature and pressure sensors are used throughout the equipment providing much more insight into total system performance.
- The system is designed with pass-through communication providing the ability to skip a unit that is down, while not interrupting the connection to the rest of the system.
How TS Tech™ Works.

Step 1: Remove containment clip.

Step 2: Remove strainer assembly cover.

Step 3: Remove strainer & clean.

Tech Tip: To maximize system uptime, we recommend purchasing a spare strainer for fast replacement.

TS Tech™ features a much larger strainer surface, improving performance and reducing time between cleaning.

Reduce Service Downtime with TS Tech™

The tool-less strainer technology significantly reduces service time by providing easy access to the strainer.

Fast service and maintenance of the High Efficiency Central Chiller is paramount to an efficient operation. Traditional chilling systems require an externally mounted strainer involving draining the system and multiple tools for cleaning. The High Efficiency Central Chiller incorporates a debris strainer equipped with TS Tech™ tool-less strainer which has significantly more surface area to increase the time between required cleanings. When necessary, cleaning the system is simple for service personnel with the ability to isolate the evaporator and only drain a small section instead of the entire system. Traditional models require cutting out of the existing filter and brazing in a new unit. No tools are required to remove the strainer which reduces service labor hours and increases uptime.
**High Efficiency Central Chiller (Water-cooled)**

<table>
<thead>
<tr>
<th>Model</th>
<th>Cooling Capacity Tons @ 50° F (kW)</th>
<th>Condenser Water Flow GPM (LPM)</th>
<th>Dimensions in Inches (CM)</th>
<th>Shipping Wt. Lbs (Kg)</th>
</tr>
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<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td>Height 2</td>
<td>Width 2</td>
</tr>
<tr>
<td>20T</td>
<td>23.1 (81.2)</td>
<td>60</td>
<td>72 (183)</td>
<td>40 (101)</td>
</tr>
<tr>
<td>25T</td>
<td>28.6 (100.5)</td>
<td>75</td>
<td>72 (183)</td>
<td>40 (101)</td>
</tr>
<tr>
<td>30T</td>
<td>33.6 (118.2)</td>
<td>90</td>
<td>72 (183)</td>
<td>40 (101)</td>
</tr>
<tr>
<td>40T</td>
<td>43.7 (153.7)</td>
<td>120</td>
<td>72 (183)</td>
<td>40 (101)</td>
</tr>
<tr>
<td>50T</td>
<td>54.9 (193.1)</td>
<td>150</td>
<td>72 (183)</td>
<td>40 (101)</td>
</tr>
<tr>
<td>60T</td>
<td>70.6 (248.3)</td>
<td>180</td>
<td>72 (183)</td>
<td>40 (101)</td>
</tr>
</tbody>
</table>

1. For additional capacities at multiple LFTs, refer to the product Operation and Installation manual.
2. Stated capacity data assumes 95° F condenser water, 2.4 GPM/Ton flow on the evaporator ± 5% component variance.
3. Shipping weight does not include packaging materials, such as pallets, cardboard, etc.

**High Efficiency Central Chiller (Remote Air-cooled)**

<table>
<thead>
<tr>
<th>Model</th>
<th>Cooling Capacity Tons @ 50° F (kW)</th>
<th>Dimensions in Inches (CM)</th>
<th>Shipping Wt. Lbs (Kg)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>Height 2</td>
<td>Width 2</td>
</tr>
<tr>
<td>20T</td>
<td>20.7 (72.8)</td>
<td>72 (183)</td>
<td>40 (101)</td>
</tr>
<tr>
<td>25T</td>
<td>25.7 (90.4)</td>
<td>72 (183)</td>
<td>40 (101)</td>
</tr>
<tr>
<td>30T</td>
<td>30.3 (106.5)</td>
<td>72 (183)</td>
<td>40 (101)</td>
</tr>
<tr>
<td>40T</td>
<td>39.5 (138.9)</td>
<td>72 (183)</td>
<td>40 (101)</td>
</tr>
<tr>
<td>50T</td>
<td>49.6 (174.5)</td>
<td>72 (183)</td>
<td>40 (101)</td>
</tr>
<tr>
<td>60T</td>
<td>63.5 (223.3)</td>
<td>72 (183)</td>
<td>40 (101)</td>
</tr>
</tbody>
</table>

1. For additional capacities at multiple LFTs, refer to the product Operation and Installation manual.
2. Stated capacity data assumes 85° F condenser water, 2.4 GPM/Ton flow on the evaporator ± 5% component variance.
3. Add additional 3 inches to height when ordering alarm option.
4. Shipping weight does not include packaging materials, such as pallets, cardboard, etc.

**Remote Condenser**

<table>
<thead>
<tr>
<th>Model</th>
<th>THR BTUH</th>
<th>Condenser Fan Sections</th>
<th>Total CFM</th>
<th>Dimensions in Inches (CM)</th>
<th>Shipping Wt. Lbs (Kg)</th>
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</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Height</td>
<td>Width</td>
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<tr>
<td>20T</td>
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<td>25T</td>
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<tr>
<td>40T</td>
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<td>50T</td>
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<td>37,000</td>
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<td>45.5</td>
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<tr>
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<td>975,301</td>
<td>5</td>
<td>46,200</td>
<td>50</td>
<td>45.5</td>
</tr>
</tbody>
</table>

1. Remote condensers requiring more than 5 zones are shipped as two separate sets. Shipping weight does not include packaging materials, such as pallets, cardboard, etc.

**Optional Features**

**Evaporator Pressure Differential**

Provides a warning should the pressure difference between the input and the output of the evaporator become too great. Excellent for determining a maintenance schedule for the TS Tech™ strainer.

**Flow Sensor**

Integrated into the chilled water line, the flow sensor can assist in monitoring individual circuit flows.

**Alarm Package**

An optional top-mounted alarm system provides both audible and visual indication in the event that the unit needs attention. The red fault strobe alerts an operator to a unit shut down. The audible portion of the alarm reaches levels of 105 decibels at a distance of one meter.

**Box-In-Box**

Allows access to touch screen and controller without having to expose serviceman to high voltages.

**Shell & Tube Evaporator**

Designed for continuous operation in high particulate water applications.
Get More From Your Production Floor

Count on Sterling to bring you all the technologies you need to advance uptime, energy efficiency and performance in your operation. Turn to our technical support team to evaluate your expected system loads and load characteristics, energy and climate-related issues as well as incorporating new equipment with plastics industry equipment you already own.

Sterling History

Sterling has been an innovator in the industry for over 100 years. Mold temperature control units continue to be called “Sterlcos” because when you bring such an important product to market, the name sticks. Sterling brings a reputation of quality and unmatched reliability. As the industry leader, Sterling provides the largest line of process heating and cooling TCU’s, chillers, and cooling systems. Sterling supplies innovative solutions to a wide range of process industries, and has grown to be a leader in blending, drying, conveying, and size reduction equipment.

Aftermarket Service & Support

Sterling has a service network across the United States and in several key international locations. We are focused on having the right people and products in the right places to keep our customers running efficiently. Whether you need On-Site Service, Technical Support & Training, Parts Support or even Product Repair & Refurbishment, we have you covered. Contact our team today for all of your aftermarket needs at 262-641-8600 or service@acscorporate.com.

About ACS Group

The ACS Group designs, manufactures, markets and supports one of the most comprehensive lines of auxiliary products for the plastics processing industry. Over the years, ACS Group has grown both organically through technical innovation and through acquisition. ACS Group offers an expansive product line, which includes size reduction equipment (granulators and shredders), material conveying equipment, metering and blending devices, heat exchangers (mold temperature controls units and chillers), drying systems, and hydraulic presses.