



Central Chillers

**TX, TS & TP
Series**

Plant-wide cooling
systems from design
through start-up



TX Series

Our newest and most reliable central chiller design

Choose from Thermal Care's comprehensive selection of central chillers.

Depend on Thermal Care, Inc.® for efficient and reliable central chilling systems — no matter what the need or application. With several different chiller designs from which to choose, you can get exactly the capacity you need from 20°F to 75°F process water temperature with all the features you want.

Time-proven reliability.

For decades, Thermal Care has been a leader in the design and fabrication of central chiller systems for industrial use. Every central chiller unit we manufacture has been engineered for years of dependable operation and built with the best available components.

Sized to fit your needs.

Select from a wide array of proven chiller designs – each with a full one year warranty on parts and labor. These high quality central chillers are equipped with rotary screw, scroll, or Discus® compressors and come standard with NEMA 4 control panels and a large selection of available customizing options.

Advanced customized control is standard on every Thermal Care Central Chiller.

Get the latest in system control with an Allen-Bradley® SLC 5/02 PLC. Every controller comes with a PanelView™ 600 color display and touch-screen operator interface. Accurate diagnostics and system information are at your fingertips with this easy-to-operate controller that comes with a 16-color interface screen.

Over 30 available report screens in nine categories quickly and accurately show all chiller functions and related system information. Operators access data by simply touching the monitor screen. Use the screen commands or keypad to enter data, set system parameters or make changes to existing system information.

There are no difficult programming instructions to master and no special operator training is required. A wide viewing angle lets operators see information from a distance and larger PanelView screens are an available option to display even more system information and equipment data on each screen. Networking options are available using DH-485, DH+ or Ethernet and an optional modem allows remote system monitoring and diagnostics.

Control and report screens include:

- System status
- Compressor status
- System capacity profile
- System temperatures
- System alarms
- Compressor run time and capacity profile
- Compressor lead/lag
- Pump run time
- Chiller parts and service
- Troubleshooting guide
- General operating information
- Faults for low flow and freezestat
- Alarm history log
- System flow and pressure readouts (optional)

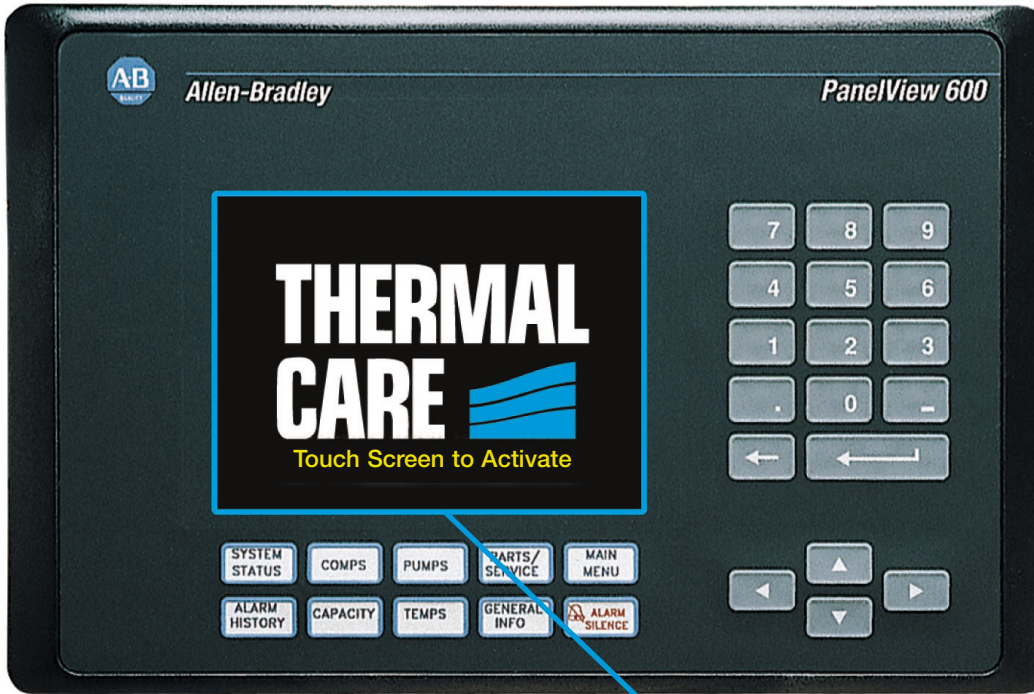
Pre-configured alarms include:

- Low water level
- PLC low battery
- High water temperature
- Freezestat
- Refrigerant low pressure
- Refrigerant high pressure
- Thermocouple fault
- Compressor fault
- Pump fault
- No flow
- Low water pressure (optional)
- Oil protection (TX & TP Series only)

Controller includes:

- 3-year warranty
- Bright back-lit screen
- Wide 50° viewing angle
- Pre-programmed software
- Cross-reference screens
- Unit is 12" wide by 8" high
- Password protection

Every controller comes with a 3-year warranty as standard.



The touchscreen and keypad interfaces allow access to all control, monitor, alarm, and information functions.

Screens shown are typical representations and will vary depending on application and system setup.



TX Series

Central Chillers from Thermal Care.

Nothing is more important than chiller reliability. That's why we build every TX Series Central Chiller using advanced Trane® twin rotary screw compressors.

Screw compressor technology uses fewer moving parts and that means our TX Series chillers are extremely reliable, more energy efficient and much quieter than units built with traditional reciprocating compressors. Plus, screw compressors are more forgiving to liquid slugging and do not require significant torque at start-up which means less heat generation and less wear on the compressors.

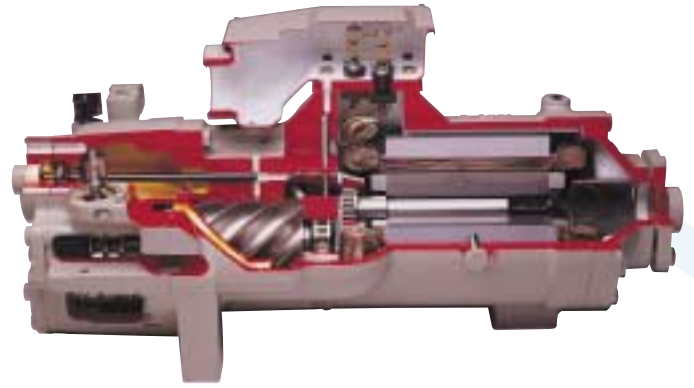
Every TX Series chiller comes with two totally independent refrigeration circuits, including shell-and-tube evaporators. On TXW Series units, two standard microprocessor-controlled electronic water regulating valves with solid-state sensors control the flow of water through condensers for stable system operation.

Units come with
**factory
authorized
start-up
service**

Advanced PLC control is standard — comes with color display and touchscreen interface

Thermal Care Central Chillers come standard with the industry's best warranties.

- One full year on parts
- One full year on labor
- Three full years on PLC controller and PanelView 600



Extremely reliable, rotary screw compressors.

Rotary screw compressors have a higher reliability rate (99.5% vs. 97.0%) when compared to semi-hermetic compressors, making the TX Series chiller the best choice for central chilling applications over 80 tons. Every TX Series chiller comes with two rotary screw compressors.



Pre-wired control panels make installation easy.

All Thermal Care chillers come standard with NEMA 4 electrical enclosures to protect controller and chiller wiring. High quality electrical components are fully tested before shipping and meet IEC standards. Disconnect switches UL, and NFPA-79 construction are affordable options, as are custom wiring configurations to any specification.

Our most recent central chiller design — with advanced rotary screw compressors.

Two, totally independent refrigeration circuits, each with evaporator and service valves

Allows routine maintenance
to be performed without
costly downtime

Evaporator and condenser manifolds with service valves

Reduces installation costs and
makes unit easy to service

PLC-controlled electronic water regulating valves

Optimizes chiller operation
and efficiency

Oil management system with nonferrous oil cooler

Maintains proper oil level
and oil temperature

Encapsulated refrigerant safeties

Eliminates capillary tubes and
allows quicker response time

Low pressure switches for refrigerant and compressor

Provides extra compressor
protection

Electronic freezestat with thermistor sensor

Eliminates capillary tubes and
provides faster reaction time

Audible horn alarm

Provides fast notification of
alarm conditions

Allen-Bradley SLC 5/02 PLC with PanelView 600

Provides accurate control, user-
friendly operational diagnostics,
and three-phase monitoring

Each circuit has NEMA 4, nonferrous flow switches

Protect unit from operating
with insufficient flow

Replaceable core filter driers

Allows easy servicing

Liquid line solenoid valves

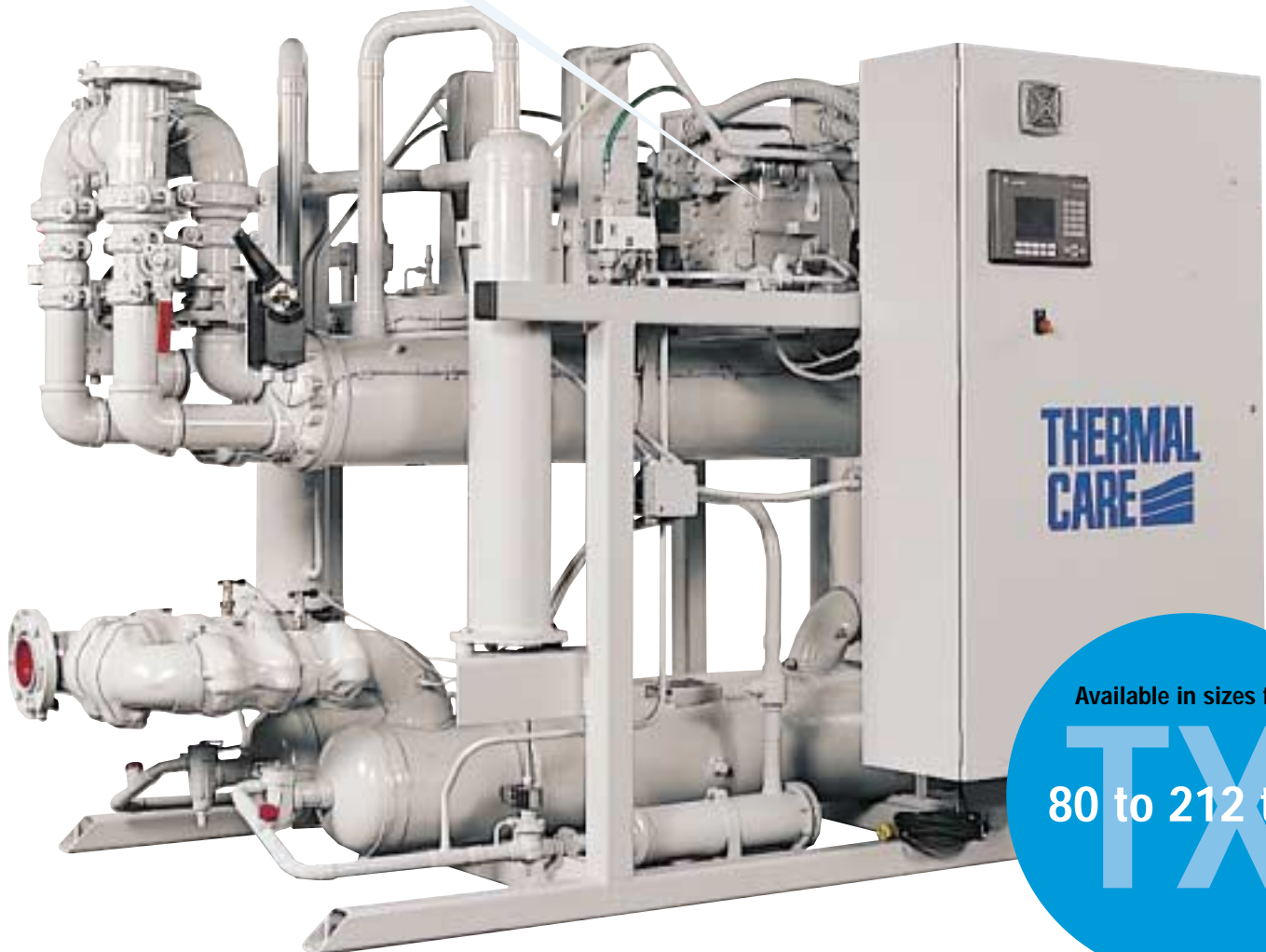
Prevents liquid refrigerant from
migrating back into the
compressor during off cycles

NEMA 4 control panel

Protects chiller wiring while
allowing easy access to
electronic controls

Optional features include:

- Disconnect switch
- Remote monitoring diagnostics
- NFPA-79 construction
- Flow and pressure package
- UL panel



Available in sizes from

80 to 212 tons

TXW120 Central Chiller
with advanced rotary screw compressors

TS Series

Central Chillers from Thermal Care.

No one builds a better central chiller than Thermal Care. Plus, you can add one of several integral pump/reservoir options to our TS Series Central Chillers for even greater system productivity.

We build every TS Series chiller using energy-efficient, trouble-free scroll compressors that operate with 64 percent fewer moving parts than typical reciprocating compressors. This time-proven design makes these chillers extremely reliable and isn't that exactly what you want from your chilling system?

Every TS Series chiller comes with two independent refrigeration circuits with stainless steel brazed plate evaporators. TSW Series units come with water-cooled condensers with removable heads for easy cleaning. Plus, you can add an integral stainless steel reservoir as a system option. TS Series chillers are available with two, four or six compressors.

Units come with
**factory
authorized
start-up
service**

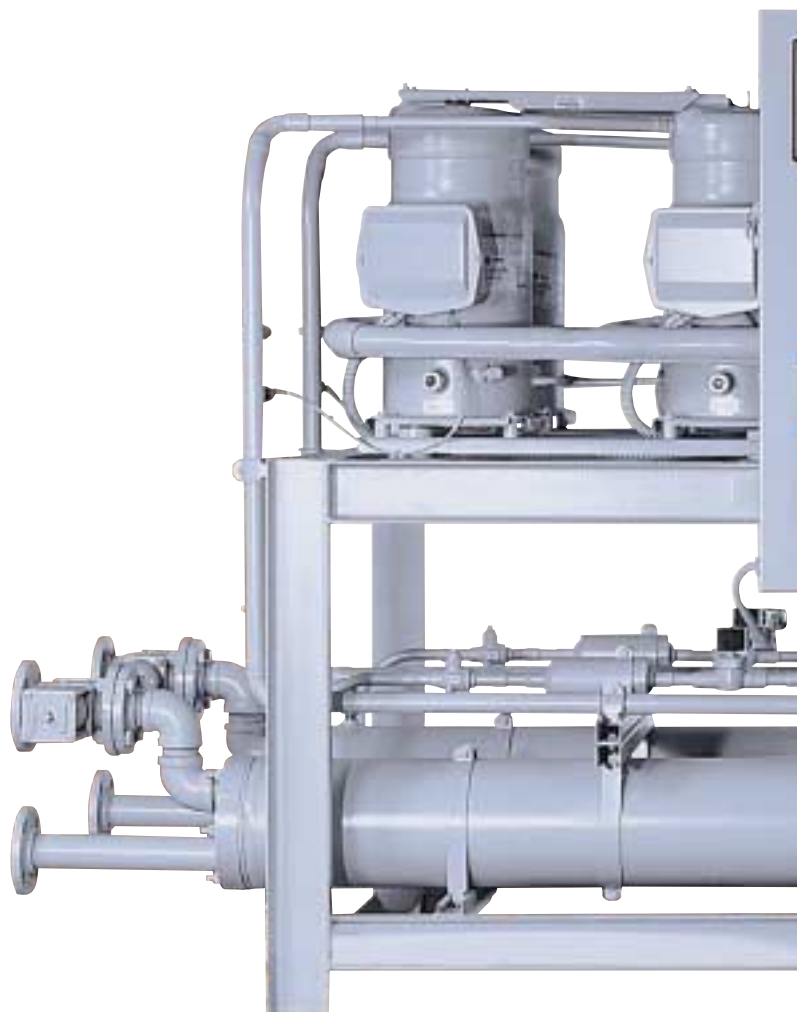
Advanced PLC control is standard — comes with color display and touchscreen interface

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- One full year on parts
- One full year on labor
- Three full years on PLC controller and PanelView 600



TSW30 Central Chiller





Efficient and reliable scroll compressors.

Scroll compressors are the ideal choice for smaller size chiller systems. Each chiller utilizes between two and six scroll compressors in two totally independent circuits.

Trouble-free scroll compressors improve efficiency

Additional standard features on all TS Series chillers include:

- Allen-Bradley PLC with touch-screen operator interface
- NEMA 4 control panel
- NEMA 4 flow switches
- Brazed plate evaporators
- Scroll compressors
- Inlet Y-strainers at each evaporator
- Audible alarm horn with silence switch
- Electronic freezestats with solid-state sensors
- Evaporator manifolds with shutoff valves for single supply and return connections

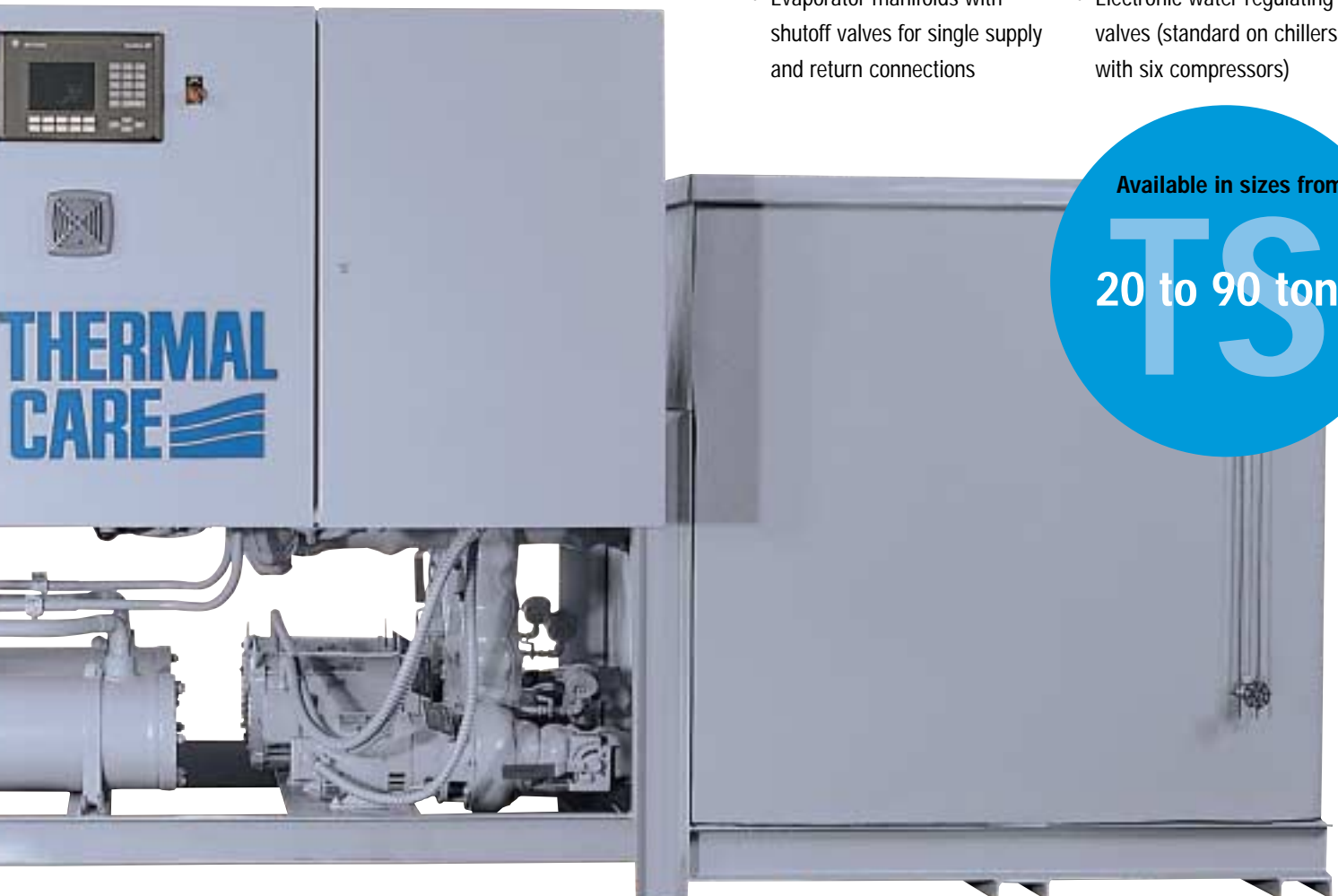
- Condenser manifolds and water regulating valves
- Accessible open frame design
- Encapsulated refrigerant safeties

Integral reservoir packages can include:

- Insulated stainless steel reservoirs with cover and sight glass
- PLC control of pumps including lead/lag and operational profile

Optional feature:

- Electronic water regulating valves (standard on chillers with six compressors)



Available in sizes from

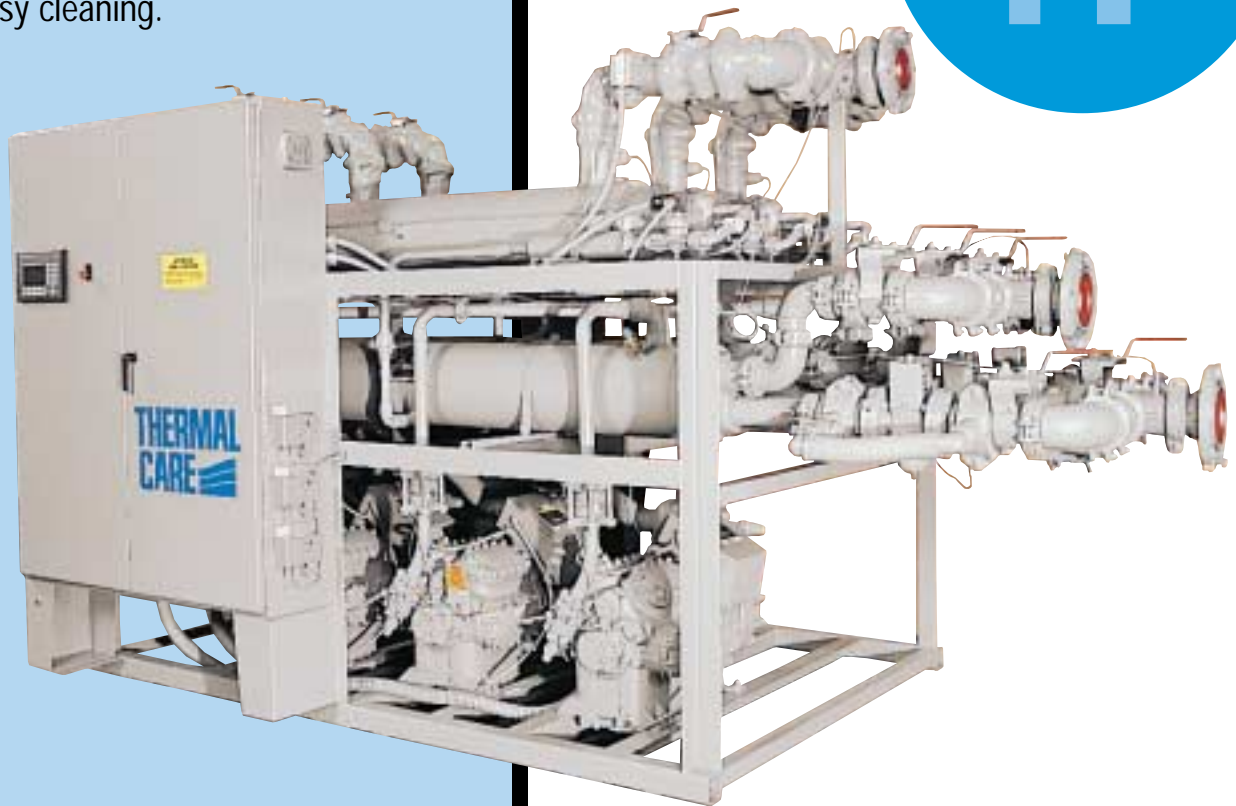
TS
20 to 90 tons

TSW50 Central Chiller
with optional stainless steel reservoir

TP Series

Central Chillers from Thermal Care.

It's the perfect chiller for larger applications when three refrigeration circuits are preferred. With TP Series Central Chillers, all three refrigeration circuits run independently—using individual components, including evaporators. These chillers come with semi-hermetic Discus compressors mounted on a sturdy accessible open frame. TPW Series units come with condensers that have removable heads for easy cleaning.



**Time-proven design
for larger applications.**

**Additional standard features
on all TP Series chillers
include:**

- Allen-Bradley PLC with touch-screen operator interface
- NEMA 4 control panel
- NEMA 4 flow switches
- Audible alarm horn with silence switch
- Shell-and-tube evaporators and condensers come with individual valves and manifolds
- Encapsulated refrigerant safeties

Available in sizes from

TP
105 to 170 tons

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- One full year on labor
- Three full years on PLC controller and PanelView 600

TPW150 Central Chiller

with three independent refrigeration circuits

Eliminate cooling towers with versatile, air-cooled condensers from Thermal Care.

Consider adding a remote condenser system with vertical air discharge fans and completely eliminate the need for cooling towers and related water treatment systems. Units are extremely energy efficient in cold weather, and when compared to packaged outside air-cooled units, these units do not require glycol for cooling operations.

Electronic controls **determine fan speeds/cycles**

Units come with electronic, pressure-controlled fan cycling capabilities. Variable speed, last-stage control is available for low ambient applications.

More location options

Designed with liquid subcooling to ensure proper operation and flexible installation even with long piping runs between chiller and condenser.

More cooling capacity

Thermal Care units have more fans than competitive models for stable head pressure control.

Branched fused circuit protection

Protects equipment and makes operation easier.

Corrosion resistant

Textured aluminum housing and heavy mill galvanized steel legs. Larger capacity models have galvanized steel fan sections.

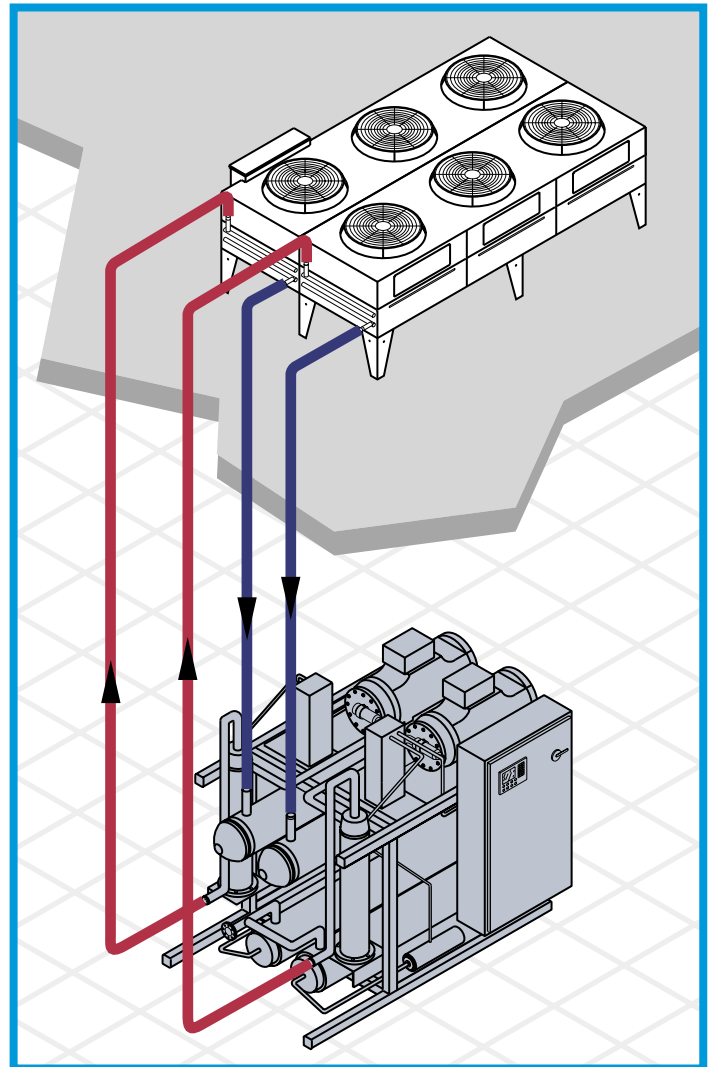
Direct-drive propeller fans

Quiet multi-blade propeller fans provide uniform air distribution through coils. Venturi fan openings optimize efficiency.

Extremely quiet

Fan and coil vibration is isolated from cabinet so not to transmit sound to frame or building supports.

Built with high-quality components for years of dependable operation.



Air-cooled remote condensers

perform efficiently under all weather conditions.

Why you should consider Thermal Care for your next central process cooling system.

No company in the process cooling business is better prepared to handle all phases of your project—no matter the size or system requirements. Thermal Care has the largest available selection of chillers, towers, and pump/reservoir configurations so you can get the most efficient system for your plant or process.

Engineering expertise.

Thermal Care excels in initial application engineering and system design. Many systems incorporate PLCs to provide control and diagnostics, and if desired, can be accessed via a modem for a quick diagnosis of system problems. System maintenance is simplified and equipment is integrated with single point control.

Custom configurations.

Our experienced sales team works together with an in-house staff of highly qualified system design engineers to develop the perfect cooling system for each customer's requirements. A system comprised of high quality Thermal Care equipment is integrated to save both time and money.

All from one single source.

From system design through manufacturing, installation, and start-up, Thermal Care is here to assure a perfect operating system. Outstanding service and replacement parts after the system is operational completes our total customer support program. Plus, all our integrated systems come with a 1-year parts and labor warranty.

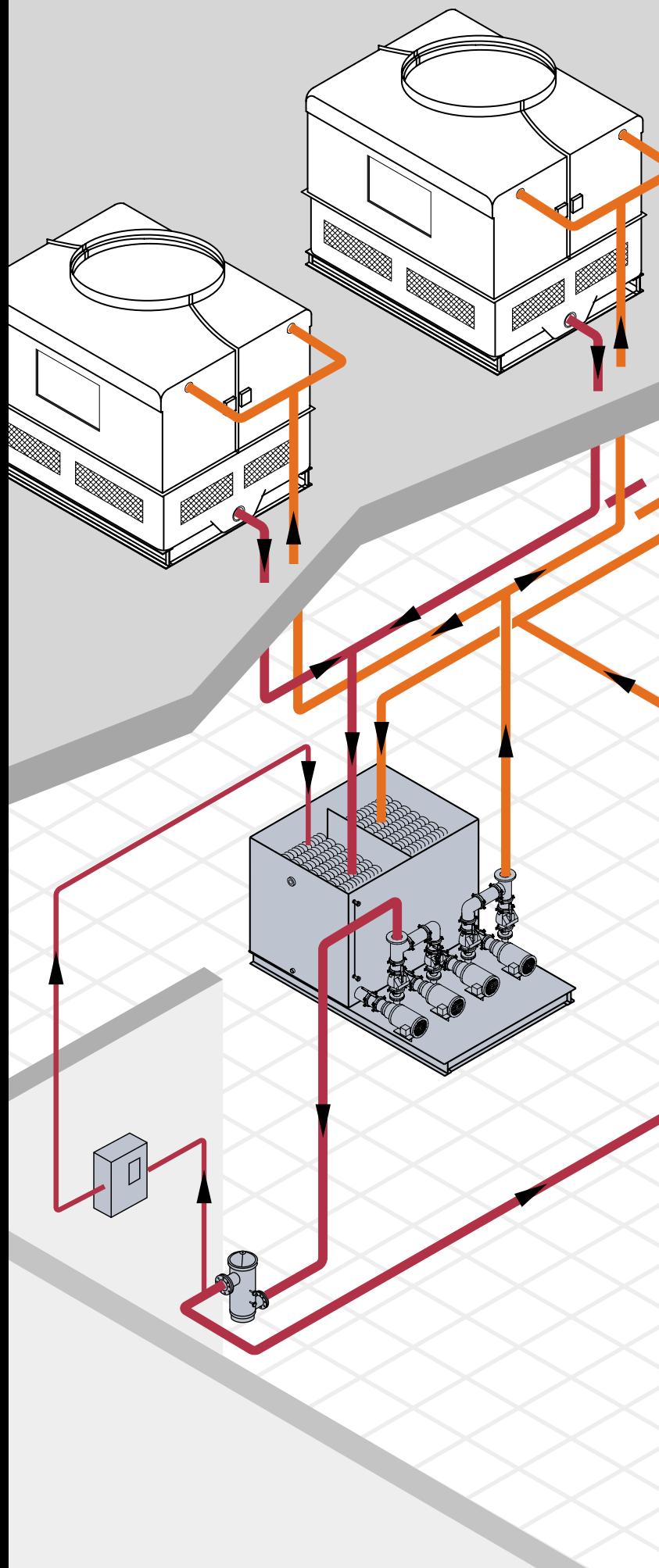
Thermal Care understands how important your process cooling system is to your ultimate success and we listen to you to see that you get the best and most efficient equipment available.

Units come with
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- One full year on parts
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- Three full years on PLC controller and PanelView 600



Work with the industry leader in central cooling systems.

Thermal Care was the first manufacturer to offer these impressive innovations.

- First process central chiller with scroll compressors and brazed plate evaporators
- First process central chiller with screw compressors and PLC control
- First fiberglass cooling tower in the industry
- First fiberglass pump/reservoir and first with encapsulated insulation
- First to offer PLC control as standard equipment on process central chillers
- First to offer Victaulic (grooved pipe connecting system) fittings on pump/reservoir assemblies



Process/
Application

Get the most complete package of equipment, engineering, controls and service.

Thermal Care offers complete engineering and installation service and manufactures a complete line of process cooling equipment that includes chillers, towers, pump/reservoirs, water treatment and filtration products, and PLC-based control systems with Allen-Bradley controllers.

Central Chiller and Tower System with PLC-Integrated Control

This illustration depicts a typical integrated process cooling system and includes both chiller and tower systems. The capacity of either system can expand easily by adding more Thermal Care central chillers or towers. Entire system is operated by one PLC. Automatic sequencing first starts tower pumps, followed by tower fans and tower process pumps. Sequence controls then turn on chiller recirculating pumps, chiller process pumps, and finally start-up chillers.

Your one source for a complete line of dependable process cooling equipment.

Thermal Care understands your process cooling needs.

No other process cooling equipment company can offer you more than Thermal Care. From system design through equipment start-up, to exceptional service and repair parts—we can do it all.

Our complete line of reliable equipment includes everything you need for an economical and efficient process cooling system. Ask for more information about Accuchiller Portable Chillers, Aquatherm Temperature Controllers or any of these dependable system components shown at right.



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Discus is a registered trademark of Copeland Corporation.

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Cooling Towers



Made of totally nonferrous materials, FC Series cooling towers come with a 10-year shell warranty and a 5-year warranty on the complete tower—including the motor. Available in sizes from 100 to 240 tons.



Pump/Reservoir Assemblies

Features include a solid steel pump deck, Victaulic® (grooved pipe connecting system) fittings, mounted NEMA 4 control panel and non-overloading pumps. Reservoirs are available in fiberglass, steel or stainless steel and sizes range from 125 to 6000 gallons.

Water Treatment Systems



TWC Series computer-controlled treatment systems incorporate all necessary facets of a cooling tower treatment system on a single, space-saving panel. System information is displayed on a LCD screen.



Water Filtration Equipment

Strainer filters, sand media filters and bag filters remove heavy-duty suspended solids from both cooling tower and chilled water systems.