Experience Value That Differentiates!

• Innovative and Energy Efficient Systems
• Multiple Acoustical Solutions
• Diverse Product Offering
• Robust Packaging for Reduced Project Costs
• Factory Tested for Quality Assurance
At Technical Systems, we recognize that time is often the most valuable commodity we have in today’s economic climate. As a built-to-order manufacturer, our greatest strength lies not only in the quality of the products we build, but also in the knowledge and skills of our Sales and Engineering teams. Our extensive versatility enables us to design and build equipment for multiple HVAC-R applications, giving us a unique understanding of how to properly apply our products to your specific project.

Combined with our industrial-duty manufacturing capabilities, Technical Systems is able to easily manufacture quality equipment with long-term reliability, reduced maintenance, and the assurance of proper field performance. We maintain representative offices coast to coast and our representatives are ready to work with you on your specific projects and applications. So whether you’re facing an acoustical issue, an environmental concern, or the worry of maintaining a completely balanced system, let our experts save you time and money with products built to meet your exact needs!
Technical Systems Series 10 air cooled condensers can be rated for all refrigerants, including R22, 407c, 134a, and 410a. Fan type and performance can be configured to meet your unique sound requirements for the ultimate acoustical solution. Unlike typical products with microchannel or “enhanced” fins coils, Series 10 plate-fin coils remain fully cleanable with simple corrugated fins. This means reliability over time and reduced maintenance costs.

The 10 Series condensers offer a range of capacities far beyond typical commercial offerings, allowing fewer skids, reduced rigging costs, and smaller footprint. Multiple profile shapes give you flexibility to fit your space and budget without compromising on performance.

Product Features

- Catalogued Sizes from 1 to 18 fans
- Special sizes up to 36 fans in a single shipped piece
- Ships fully assembled without loose legs or parts to field install
- Factory installed controls for completely independent operation
- Corrosion packages with coatings and special materials
- True low ambient packages for a full -20°F rating
- Save time and costs with factory mounted receivers, liquid driers, and trim
- Integral dedicated sub-cooling circuit
- Variable speed fan options with VFD or EC control for optimal part load efficiency.
- Microprocessor options with BAS communication
- Factory testing, evacuation, and dry nitrogen charging

Technical Systems Series FC dry fluid coolers provide unparalleled capacity range and packaging options that will reduce your total project costs. Large capacity model FC Series coolers offer industry leading acoustical solutions to meet your jobsite needs. Technical Systems offers the only dry cooler on the market with a complete and fully integrated pumping package. TSI packages do not need field labor to connect loose parts and assemble system trim.

The FC Series can provide a pre-manufactured and ready to install water side economizer system. Factory mounted valves and pre-programmed onboard controls means free cooling can be quickly and economically added to an existing system for instant energy savings, without expensive changes to the BAS or installation time.

Product Features

- Catalogued Sizes up to 330 tons with 40% glycol
- Special sizes up to 36 fans in a single shipped piece
- Multiple profile configurations for flexibility
- Ships fully assembled without loose legs or parts to field install
- Factory installed controls for completely independent operation
- Factory mounted waterside economizer valves and controls.
- Coil turbulators for greater performance with glycol
- Multiple circulating options to reduce pressure losses
- Fully integrated pumping and hydronic packages
- Single, Dual, and Multiple pump options with integral N+1
- Variable speed fan options with VFD or EC control for optimal part load efficiency.
- Microprocessor options with BAS communication
- Factory operational testing, and hydrostatic leak test
### Series 20

**Air Cooled Condensing Units**

The 20 Series air cooled condensing units give you choices in size, shape, and configuration while not compromising on a purpose built DX solution. The 20AO Series offers dual circuit models in small sizes where most products only allow a single circuit.

The 20A4 series use a compact “V” configuration for minimal footprint and extended capacity range to 200 tons.

The 20AO-H series is designed for horizontal airflow and is a great solution for overhead obstructions, narrow footprints, or integration directly into a packaged air handler.

All condensing units offer factory mounted refrigerant trim such as liquid driers, isolation valves, sight glasses, and solenoids. This saves significant installation time and costs, and all condensing units include a factory functionality test, a full 500 micron evacuation, and a nitrogen holding charge to be sure your equipment arrives leak free.

With any DX system, it is critical that the condensing unit and evaporator be closely matched together to assure the system will operate reliably and as expected. Technical Systems makes this easy by designing and manufacturing the matching cooling coils to fit any air handler installation.

### Product Features

- Capacity range from 3 to 200 tons.
- Single and Tandem scroll compressors optimized for R-410a
- Variable capacity options with digital or VFD compressor
- Factory mounted and wired hot gas reheat options for both on/off and modulating applications
- DX cooling and reheat coils available for a complete matched system
- Packages for 100% OA and VAV systems
- Corrosion resistant packages to suit any environment
- Hazardous and explosion proof classifications available
- Mechanical and microprocessor controls for easy integration
- True low ambient packages for a full -20°F rating
- Variable speed fan options with VFD or EC control for optimal part load efficiency.
- Microprocessor options with BAS communication
- Factory testing, evacuation, and dry nitrogen charging

### Series 30AO

**Air Cooled Scroll Chillers**

The 30 Series air cooled chiller’s strength is its ability to reduce your engineering and installation time by providing a built to order package with single source responsibility. Acoustical solutions, waterside economizer systems, and pumping packages are just a few of the easily adaptable features that will save energy, reduce installation time, and lower project costs. Using glycol? No problem! Evaporators are sized for actual job conditions, preventing capacity de-rate factors and keeping efficiency high.

No longer must you rely on modified off-the-shelf products for custom packages. Series 30 chillers are purpose built from the ground up. Chillers with integral pumping packages offer a ready to install complete hydronic system from a single source, with options such as air separation, expansion tanks, storage tanks, and controls. Economizer chillers are designed and manufactured by one company in one facility, this means free cooling is optimized without sacrificing chiller performance and efficiency.

### Product Features

- Capacity range from 3 to 150 tons.
- Single and Tandem scroll compressors optimized for R-410a
- Brazed plate or Shell and tube evaporators available
- Integral waterside economizers
- Multiple circuit options for integral N+1 redundancy.
- Variable capacity options with digital or VFD compressor
- Microprocessor controls and BAS communication
- True low ambient packages for a full -20°F rating
- Variable speed fan options with VFD or EC control for optimal part load efficiency.
- Corrosion resistant packages to suit any environment
- Hazardous and explosion proof classifications available
- Factory operational test under an applied hot water load
The 30AO-H Series chillers offer the same values and abilities of the 30AO series but expand them to larger capacities. High efficiency screw compressors, and waterside economizer packages are a perfect energy saving solution for manufacturing processes, data centers, and any facility needing year round cooling. Screw chillers can often be difficult to use in sound sensitive areas, but 30AO2 chillers are available with industry leading fan technology and compressor attenuation options to create a purpose built low sound chiller designed specifically for your environment.

As with all TSI chillers, the 30A2 are available with a full offering of single, dual, and multiple pump arrangements with both constant and variable flow. Chillers can be designed with redundant compressors and refrigerant circuits to give you N+1 redundancy without having to purchase and install additional chillers.

Technical Systems 30AO-H chillers have been placed underneath overhanging roofs, inside parking garages, underneath roof dunnage, and even under helicopter landing decks. This unique arrangement is just one more example of how Technical Systems is focused on saving you money by providing the performance you need, where you need it.
Product Features

• Capacity range of 100-400 tons - custom sizes beyond
• High efficiency screw compressors with infinite position unloading
• Lowest sound performing packaged chiller
• 30-40% reduced energy compared to air cooled
• Reduced electrical loading and installation costs compared to air cooled
• Simpler and quicker field installation compared to traditional water cooled
• Reduced engineering time and field coordination
• Waterside economizer system available - ship loose section
• Packaged pumping systems available
• Independent refrigerant circuits - dual and quad circuit models

• Factory performance tested under load
• Seismically certified to IBC Code 2009
• Initial operating charge of R-134a refrigerant and POE oil
• Digital microprocessor controller with display screen and keypad
• Electrical phase failure and over/under voltage protection
• Refrigerant leak detector and ventilation system per ASHRAE 15
• Forced draft low sound condenser fans
• Variable speed fan motor control for part load efficiency
• High efficiency rotary screw compressors optimized for evaporative condensing
• Heavy gauge steel cabinetry with primed and painted exterior
• Factory verification testing under applied artificial load

Technical Systems Evaporative Condenser Chillers are able to dramatically reduce your energy and installation costs. Series 35E2 chillers are 30-40% more energy efficient than air cooled chillers, yet because they are a single piece package, they do not have the high installation costs of traditional water cooled systems.

By including both high efficiency operation and a built to order factory tested solution, 35E2 Chillers reduce your utility costs, are easier and faster to install, and provide the best return on your investment.

Product Features

• Applied to all product types, condensers, fluid coolers, condensing units, and chillers.
• Exceed minimum energy standards and qualify for rebate plans.
• Only use water when you have to. Able to run dry up to 85% of the year in most climates.
• Coils stay completely dry, reducing reliance on chemicals to prevent scale.
• Most locations do not need the cost and hassle of chemical water treatment.
• Minimize water usage without sacrificing energy efficiency.

Dry fluid coolers with APEX technology can supply water colder than the ambient dry bulb. Air cooled condensing units and chillers with APEX offer full load efficiencies 30-40% superior to AHRAE 90.1 2013 minimum standards. Competing systems use spray nozzles that cause excessive water use with scale and dirt buildup on the coils. APEX coils stay completely dry and reduce your maintenance time and costs. APEX products provide all these benefits, with up to 90% less annual water usage than a system using a cooling tower.

• Can be sized to provide no lost capacity without water, avoiding costly emergency water makeup storage tanks for critical facilities like data centers.
• Microprocessor controls optimize water usage and wet/dry operation based on ambient.
• On-board water makeup and drain controls maintain sump water quality and reduce potential for scale.
• Variable speed fan options with VFD or EC control for optimal part load efficiency.
Series 37 Air Cooled Chillers are designed specifically for New York City requirements for individual 13 or 15 hp compressor circuits. Typical “modular” chillers require costly field labor to re-connect and rig multiple pieces, but because they are designed as a single piece, the 37 Series are faster to install and reduce project costs. The 37 Series chillers can include industry leading fan and compressor technology, resulting in an acoustical solution custom designed to comply with most any sensitive location.

Technical Systems offers one of the only New York City compliant chillers with a truly integral waterside economizer. The 37 Series condenser and economizer coils are integrated together, eliminating additional free cooling “modules" and making them one of the most compact chiller systems available. Whether you are shipping into New York City, or simply looking for a packaged chiller with inherent redundancy and backup, the 37 Series chillers are for you.

Product Features

- Capacity range of 30-240 tons in a single piece. Custom sizes available beyond.
- Multiple 13hp or 15hp scroll compressor circuits.
- Custom acoustical solutions for ultra-low sound applications
- Integral economizers are more compact than products using free cooling modules.
- Integral pumping packages, storage tanks, and hydronics reduce project costs.

- One piece construction does not require field assembly of modules.
- Options available for dual power feeds and redundant control systems.
- Microprocessor controls and BAS communication
- True low ambient packages for a full -20°F rating
- Variable speed fan options with VFD or EC control for optimal part load efficiency.
- Factory operational test under an applied hot water load

Series 37 Air Cooled Chillers

Pre-manufactured pumping packages by Technical Systems save you money by allowing a single source responsibility and reducing installation time and costs. Series PP packages are available as either stand-alone packages or integral to a Technical Systems fluid cooler or chiller package. Rather than only be limited to a few standard configurations, Series PP skids are designed with features and components to fit the client’s exact needs.

Pumps are provided with either Single, Dual, or Multiple pump arrangements with a true N+1 redundant pump. Packages can include Primary and Secondary loops, as well as secondary heat exchangers, tanks, air separation, control valves, and hydronic trim. Series PP packages are designed to give the client a complete fluid pumping system ready to install and run with minimal field effort. In addition, all skids are factory tested with a functionality test and a hydrostatic leak test before shipment to give you assurance of quality and easy commissioning.

Product Features

- Single, Dual, and Multiple pump arrangements from ¾” to 12” pipe sizes.
- Primary Only and Primary / Secondary loop configurations.
- Horizontal or Vertical In-Line pumps, either close coupled or base mounted.
- Variable frequency drives for pumps
- Optional shell and tube or plate and frame secondary heat exchangers
- Storage tanks available for additional fluid volume
- Temperature control valves for applications requiring precise supply water control.

- Lead / Lag and Automatic Changeover controls to maximize pump uptime and equal run time.
- Microprocessor controls for stand-alone operation of the entire skid
- Single point power / Single point fluid connections for fast installation
- Open construction for indoor locations.
- Single un-insulated or dual wall insulated cabinetry for outdoor applications.
- Optional interior cooling and heating
All Technical Systems products are subjected to a strenuous quality control and testing procedure. Water piping and hydronics are checked with an air pressure leak test. All refrigerant piping receives a 500 micron evacuation test before charging with refrigerant and oil. Electrical systems are checked for proper wiring and tight connections. The completed chiller is then filled with water and operated under an applied artificial load to verify proper operation.

“Technical Systems provides assurance that the refrigeration system has been verified before delivery to the site.”

Traditional water cooled chiller components (chillers, towers, pumps, controls, etc.) are often provided in multiple pieces by different manufacturers. They do not operate together as a system until startup and commissioning, which makes correcting problems costly. Technical Systems provides a single source, factory tested, packaged chiller with assurance that the refrigeration system has been verified before delivery to the site.
We reserve the right to change or revise specifications and product design in connection with any feature of our products. Such changes do not entitle the buyer to corresponding changes, improvements, additions or replacement for equipment previously sold or shipped.