MULTISTACK®

Originators. Innovators. Never the Imitators.sm

All Product Catalog

Airstack® MagLev™ MultiGEO™ Powered by Greensleeves MultiPRO™ AuraGreen™

Originators. Innovators. Never the Imitators.

Multistack products offer high efficiency, redundancy, expandability, serviceability, low sound and minimal carbon footprint. Multistack boasts speedy ship cycles including the best in the industry for modular chillers. Multistack LLC is a great business founded on the HVAC industry's core principle of making life better for people. We leverage and apply the value of good ideas to an outstanding array of HVAC products and systems—made in the U.S.A.

New! Air-Cooled ASF Modular Chiller with Integral Free Cooling

- 30–Ton module available with either single or dual refrigerant circuits
- ECM fans optional
- Integral free cooling coil optional
- Packaged controls provide chiller and free cooling control
- Up to 15 modules on a single master controller
- ASHRAE 90.1 compliant
- Aluminum fin/copper tube water and refrigerant coils provide efficient chiller and free cooling operation
- Service friendly design including coil cleaning

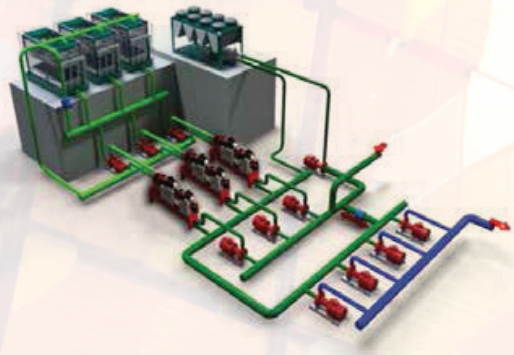
New! True Variable Speed Scroll Modules

- Available on 10–, 20–, 30–, 40– and 50– ton modules
- 20 Percent improvement in IPLV versus fixed speed modules
- Leaving water temperature control
- Two-way chilled water valves available as option
- Modulating condenser water valves available as option
- Footprint varies based on capacity
- 10-Inch touch-screen display available as option
- Available with Total Access™ modules only

MultiPRO™ Central Chiller Control

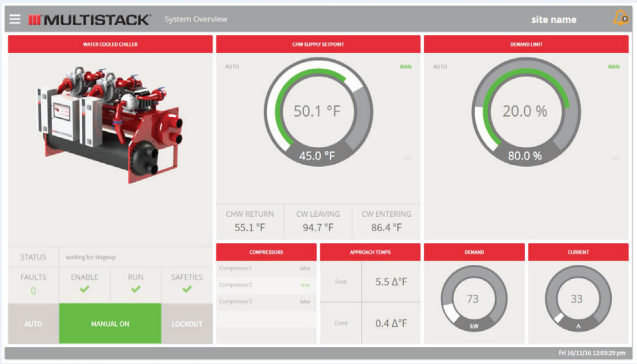
Completely flexible and works with any chiller and/or compressor type including water-cooled, air-cooled, stand-alone modular, screw, scroll, MagLev® compressors. Controls up to 10 chillers in a common plant with 24/7/365 scheduling plus automated and on-demand reporting capabilities.

- Full measurement & verification capability continuously monitors compressor and heat exchanger performance and compares to design IPLV/NPLV.
- For constant, variable/primary and primary/secondary flow systems. Chilled and hot water reset capabilities, plus cooling tower optimization.
- Brand agnostic: Multistack and others. Tridium Niagara Framework® software platform integrates Multistack HVAC with other building systems and devices into a single platform regardless of manufacturer or communication protocols. Multistack CrossTalk™ compatible.



New! FlexSys™ GIII Controller

- Cutting-edge human-machine interface with 19.5-inch full HD touchscreen display, 3D animated chiller, compressor, pump and cooling tower graphics
- User-friendly Tridium Niagara 4 Framework™ integrates seamlessly with any major building automation protocol
- Access user interface with any computer browser. Mobile device compatible interface
- Chiller-to-chiller communication
- Control MagLev™ VTT compressors, TT compressors, and in combination
- Improved functionality and efficiency over previous iterations
- MagLev service software integrated into controller
- Ability to control external devices as standard, including chilled and condenser water pumps, cooling towers
- Ability to control more complex chiller plants as option



FlexSys Gen III Provides a Wealth of System and Component Information

VME II™ Total System Package

- Simultaneous, variable heating and cooling
- Advantages in efficiency, simplicity, ease of installation, reliability, redundancy and cost
- Superior full- and part-load efficiency—and free cooling during cold weather
- Highly efficient during simultaneous heating and cooling, and eliminates multiple reversing valves (for an additional three-percent efficiency gain) and associated control complexity
- VME II control algorithm automatically matches chiller module capacity to building heating and cooling load requirements
- DHRC™ modules in VME II applications can provide up to 120 degrees of water temperature lift with a single compression cycle compared to only 86 degrees of lift with heat pumps in heating mode.
- Multistack's MultiPRO™ and MultiGEO controls and software provide unsurpassed efficiency, control, and installation benefits for VME II systems—and can be mounted directly on the frame!

Multistack VME II modules can be supplied on a single frame complete with pumps, valves, controls and other components for an efficient, total chiller plant package.

MultiGEO™ Software

Advanced, intelligent MultiGEO software from Multistack and developed by Greensleeves designs bore fields significantly smaller than typical, develops control algorithms and can "rescue" bore fields operating outside design conditions. MultiGEO makes geothermal system energy savings available to building owners who previously could not overcome the initial cost of a bore field. Also reduces pumping energy and overall system energy consumption. MultiGEO software predicts future ground source heat exchanger system conditions to determine the "health" of the system.

MultiGEO™
Powered by Greensleeves

**Tridium is an independent business entity of Honeywell International, Inc.*

Water-Cooled Systems

MagLev™ Flooded High-Efficiency Modular Chillers

- High-efficiency in a compact, modular footprint couples advanced MagLev compressor with breakthrough compact flooded evaporator technology
- Modular design for installation ease, expandability, and redundancy
- Available in 80- and 100-ton modules that can be assembled for up to 1,000 tons capacity
- Low refrigerant volume qualifies for LEED® EA credit
- Ideal for new construction or retrofit/renovation projects. Ultra-quiet operation
- Multiple compressor redundancy and Multistack Total Access™ stacked header design allows heat exchanger cleaning or replacement with chiller running—ideal for mission critical jobs including data centers
- Field-proven chiller controls

MagLev™ Centrifugal Chiller Modules

- MS80T modules with Multistack's proven brazed plate heat exchanger technology
- Assemble as many as 10 modules to create chillers up to 800 tons of capacity
- Integral variable frequency drive controls compressor speed and capacity to precisely, efficiently match the cooling load
- Modules use R-134a refrigerant.

Water-Cooled Process Chillers

- Ten through 80-ton capacity MSP chillers in stand-alone, non-modular configurations
- Single and dual refrigeration circuits with electronic expansion valves for precise control, reliable operation Optional thermal dispersion proof-of-flow.
- Scroll compressors standard; variable speed compressors available in some sizes
- Microprocessor non-proprietary controls interoperable with all major protocols. Large LCD screen with simple keypad. Web-based remote monitoring and diagnostics. Optional BAS interface
- Factory run tested and shipped wired and charged with refrigerant
- Also available as remote air-cooled units

Water-Cooled Modular Chillers

- Now available with variable speed compressors. Mix-match and combine modules to create up to 15-module arrays and 1,275 tons of cooling capacity using environmentally friendly R-410A
- Dual scroll compressor modules of 10 to 85-ton sizes available. Quad scroll compressor modules of 105-, 135-, 145- and 165-tons capacity are also available and may be mix-matched to create chillers of up to 1,320 tons capacity
- Can help owners qualify for USGBC LEED points and utility rebates
- Innovative modular design makes adding capacity as easy as installing more modules

Total Access™ Modular Chillers

- With Total Access, heat exchangers are on outer edges of frame for easy serviceability and a small footprint
- The ability to clean or replace a heat exchanger with the chiller running makes Total Access ideal for mission critical applications
- Options include 10- through 165-ton modular chillers with quad scroll, screw or MagLev™ compressors

Screw Compressor Modular Chillers

- Available in 90-, 125-, and 145-ton modules
- Each module has twin-screw compressor
- Combine modules to create chiller arrays of 180 to 1,160 tons capacity
- Optional VFDs for even greater energy efficiency

MagLev™ Water-Cooled Chillers

- Multistack's MagLev™ chiller with oil-free, magnetic levitation bearings in a centrifugal compressor is a leader in efficiency, reliability, redundancy, sustainability and serviceability
- One of the HVAC industry's lowest per ton refrigerant charge, unrivaled efficiency, flexibility and control and the smallest footprint per ton of capacity—and lowest total cost of ownership
- In 80- to 2,100-ton capacities MagLev chillers help owners qualify for USGBC LEED points and utility rebates
- Available in long and short shell configurations and with the Multistack FlexSys™ Gen III controller for best efficiency and reliable communications
- Also available as remote air-cooled or evaporative-cooled units

Water-Cooled Condensing Units

All Multistack modular water-cooled chillers are available as water-cooled condensing units. Refrigerant components are factory installed within the modules. Units are designed to connect with field-supplied evaporators.

MSF Flooded Evaporator High-Efficiency MagLev Chillers

MagLev™ Modular Chillers

10 to 80-ton Stand-Alone Water-Cooled Process Chillers

Total Access™ Modular Chillers

MagLev Water-Cooled Chillers

For more information on Multistack products, contact your nearest Multistack representative. info@multistack.com

Air-Cooled Systems

20- thru 195-ton Air-Cooled Packaged Chillers

- Efficient, reliable and compact ASC air-cooled packaged chillers with single, tandem and trio scroll compressors
- R-410A refrigerant with dual refrigerant circuits per chiller for excellent load flexibility, reliability, redundancy and serviceability
- Fixed speed, low sound condenser fans standard; ECM fans optional. Fan sizes tailored to specific circuit requirements
- Coils designed for customers' specific needs with numerous coating options
- Latest controller technology from Carel with WiFi, USB 2.0 port for PC connection, local and remote connectivity, multitask operating system
- Low ambient option to -20 F
- Sound pressure levels from 64 to 78 total dBA at 30 feet. Low sound options include compressor covers and discharge attenuators
- 120 VAC convenience outlet. Options on select sizes include desuperheaters, pumps, expansion tanks, glycol feeders and adiabatic media kits. Hot gas bypass and variable speed compressors available on some models.

20- to 195-ton Packaged Air-Cooled Chillers

Air-Cooled Modular Chillers

- Ideal for numerous applications including data centers
- Airstack™ air-cooled modules are available in a wide range of capacities and with tandem scroll compressor sets to create chillers of 10- to 600-tons capacity
- Modular design makes adding capacity as easy as purchasing and installing more modules
- Numerous options include specialty coatings, stainless steel construction and various control interfaces make it easy to meet specific customer needs including ducted and sound-sensitive applications
- Ideal for limited space installations including single-side access for airflow and/or service
- Can be factory-packaged and shipped on skids with accessory modules as an option

Air-Cooled Modular Chillers

MagLev™ Air-Cooled Packaged Chillers

- Available in 60- through 325-ton capacities
- Can help owners qualify for USGBC LEED points and utility rebates
- Oil-free, near-frictionless, two-stage variable speed MagLev centrifugal compressor in an air-cooled configuration
- Flooded evaporator for maximum full-load and ultra-low-load efficiency
- FlexSys™ controls for real-time chiller optimization and best system efficiency
- State-of-the-art EC condenser fans deliver quiet, ultra-efficient operation—a perfect complement to the virtually silent MagLev compressor
- Also available as air-cooled condensing units that can be matched with one or more DX evaporators

MagLev Air-Cooled Chillers

Medical/Process Chillers

- ASM non-modular chillers available in three through 30-ton capacities
- Single and dual refrigeration circuits and electronic expansion valves for precise control and reliable operation
- Variable speed scroll compressors available in some sizes
- EC fan motors with the latest fan blade technology
- Microprocessor non-proprietary controls interoperable with all major controls protocols
- Web-based remote monitoring and diagnostics
- Available in stainless steel construction, stainless steel components, or with epoxy paints and coil coatings

3 to 30-ton Packaged Air-Cooled Medical/ Process Chillers

Air-Cooled Split-System Chillers

- All Multistack modular water-cooled chillers are available as split-system air-cooled units
- All required refrigerant specialties for standard ambient units are factory installed in the indoor module. Multistack can also provide matching remote air-cooled condensers.
- Available in 10 to 1,275 tons capacity

Air-Cooled Condensing Units

- All Multistack modular air-cooled chillers are available as air-cooled condensing units
- Refrigerant specialties are factory installed within the module
- Units are designed to be connected to a field-supplied evaporator.

Airstack Accessory Module & Air-Cooled Packaged Chillers

Accessory Modules

A complete line of accessory modules is available with Multistack modular chillers including packaged pump modules, free cooling modules, water storage tanks, air separators, strainers, expansion tank/glycol feeder modules and lifting frames.

Heat Pumps & Heat Recovery Systems

Virtual Movable Endcap™

- Multistack VME (Virtual Movable Endcap) modular heat pumps are available in air- and water-cooled versions
- Available in 10- through 85-ton nominal capacity packages
- Four-pipe simultaneous heating and cooling, eliminating the need for separate heating and cooling systems or a distributed water source heat pump system

Virtual Movable Endcap™ II

- Offers the same features as the original Multistack VME systems
- Dual scroll compressor modules of 10- to 85-ton sizes available. Quad scroll compressor modules of 105-, 135-, 145- and 165-tons capacity are also available and may be mix-matched to create chillers of up to 1,320 tons capacity
- VME II eliminates reversing valves, increasing simultaneous load efficiency by up to 30 percent
- VME II operating algorithm automatically matches building heating and cooling load requirements by closing and/or opening the appropriate VME valves–maximizing efficiency

Water-to-Water Heat Pumps

- Available in 10- through 85-ton nominal capacity packages
- Two independent compressors
- Ideal for closed loop and ground loop water-source heat pump applications. Assemble modules to create chillers of 10 tons to more than 1,275 tons capacity

Dedicated Heat Recovery Chillers™

- Dedicated Heat Recovery Chillers (DHRC) are ideal for many water heating applications
- Available in 10- to 1,320-tons capacity with multiple compressor technology
- Reduce carbon emissions and water consumption
- Produce hot water up to 180 degrees F while producing chilled water
- DHRC chillers feature heating COPs of more than 3.0 and combined COPs of more than 7.0

Air-Source Heat Pumps

- Airstack™ air-source heat pumps are among the most efficient in the HVAC industry
- Digital controls and multiple modules and compressors to precisely match real-time operating loads for best efficiency and reduced energy use and cost
- Available in modules that easily connect to provide systems of 10- through 600-tons capacity
- Can help owners qualify for USGBC LEED points and utility rebates
- Multiple compressors and modules for redundancy and reliability
- Adding capacity is as easy as installing more modules. Options include specialty coatings, stainless steel construction and various control interfaces to make it easy to meet specific customer needs

VersaTemp™ Water-to-Water Heat Pump with Auxiliary Air-Cooled Condenser

- VersaTemp modular heat pumps with air-cooled condensers are available in 20- to 60-ton capacity
- Operates in DHRC, cooling or heating modes
- Can be matched with ASP cooling-only modules to provide heat recovery with an air-cooled chiller
- Integrated auxiliary air-cooled condenser handles unneeded heat without a well field or other heat sink
- High effective COP helps ensure low operating expense, fast payback and small carbon footprint
- Units feature full four-pipe operation with a brazed plate condenser sized for full heat rejection—these are not desuperheaters and provide four to six times more heat than a desuperheater
- Factory installed digital controls for full, partial or no hot water production and multiple connectivity options
- EC condenser fan motors and high-tech fans provide super-quiet operation
- Multiple options available for ducted and sound-sensitive applications

VME Air-to-Water Heat Pump

VME II DHRC™ Chiller-Heater, Total Access™ design

DHRC™ (Dedicated Heat Recovery Chiller) Module

ARA VersaTemp™ Heat Pump with Auxiliary Air-Cooled Condenser

For more information on Multistack products, contact your nearest Multistack representative. info@multistack.com

Heatstack™ Water Heaters

- Ideal for smaller commercial buildings or zones within a large building
- Simple, easy to install, highly-efficient standalone units require minimal floor space
- Provides water temps up to 180 degrees F
- Available in single-phase power models up to five tons capacity
- Available in up to 30 tons capacity using R-410A or R-134a refrigerant
- Single and dual compressor configurations, full-featured digital controls, electronic expansion valves with high and low pressure switches, and unit-mounted thermal dispersion flow switch
- VFD scroll compressors available as an option
- Options include double wall heat exchangers in select sizes, stainless steel cabinets, freeze stat, remote display panel, internal hot water pumps and BAS interface

Heatstack Water Heater

AuraGreen™ Energy Recovery Products

Patented AuraGreen energy recovery ventilators precondition outside air delivered to air handlers.

- Efficient direct-drive plenum fans—AC or EC motor technology
- Internal bypass for free cooling
- Cooling coils—DX or chilled water
- Heating coils—electric or hot water
- One- and two-core units with single-wall steel cabinets

Fixed Plate Total Energy Recovery Cores

- Reduced outside air load—both sensible and latent loads
- No moving parts for long life and easy maintenance
- Virtually zero leakage between airstreams
- No condensation—reduces environment for mold growth
- Great performance at low temperatures
- AHRI-certified performance

Energy Recovery Ventilators

- Wide range of stand alone unit sizes with fans from 200 cfm up to 20,000 cfm
- Non-fanned units available
- Custom applications using Multistack cores in your air handler

Other energy recovery technologies are available including enthalpy wheels, heat pipes, and sensible cores.

Multistack LLC supports and complies with the Buy American Act and the American Recovery and Reinvestment Act of 2009. Multistack air- and water-cooled chillers are manufactured in Sparta, Wisconsin, USA, with primary focus on American made components.

Multistack has a policy of continual improvement and reserves the right to change product design, literature and specifications without notice. Contact your Multistack representative for more information. info@multistack.com www.multistack.com

Originators…

Multistack invented the modular water chiller. It started with a radically simple idea: chiller modules that could be brought into the equipment room one at a time, through standard doorways and down elevators, to form a fully integrated chiller system. The idea launched a revolution and transformed Multistack into a leader in the commercial water-chiller industry.

Innovators…

Multistack perfected the modular chiller and leads the industry in innovative and environmentally friendly modular solutions. Since founding in the late 1980s, Multistack has engineered, manufactured, and distributed an impressive array of modular air conditioning firsts: the first on-board strainer, the first modular automatic blow-down device, the first modular chiller for variable flow, the first modular chiller-heater (heat pump), the first modular heat-recovery chiller, the first modular air-to-water heat pump, the first modular chiller to use MagLev™ magnetic bearing compressor technology, and the first modular chiller to use R-410A refrigerant.

Never the Imitators…

Multistack sets the industry standard for superior customer service, fast on-time shipment, superior product quality, and new product development. Our pioneering leadership in environmental issues is well documented. If you want the best, be sure to specify the original – Multistack®.

MULTISTACK®

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Supersedes F102 AllProd 0117
FWB