		III MULTISTACK							Module Sizes (x) and Tonnage Range							
	Model #	Description	Tonnage Range	Refrigerant	Compressor Type	Compressor Qty.	200	ω ç	3 12	000	500	70	105	135	165	7200 7200 7200 7200 7200 7200 7200 7200
Air Cooled	ASC	Packaged Air-Cooled Chillers	20-195	R-410A	Scroll	2 to 6/Chiller		11.00	-							Compact, efficient w/ excellent load flexibility, reliability, redundancy, serviceabili
	ASF	Integral Free Cooling Air-Cooled Modular Chiller	30-450	R-410A	Scroll	2/Module				x						Air-cooled modular chiller with optional integral free cooling.
	ASP	Modular Air-Cooled Chiller	10-600	R-410A	Scroll	2/Module		,	x x x	x	x >					Redundancy. Future add-on. Pump packages.
	ASP-F	Packaged Chiller with MagLev™ Compressor	60-325	R-134a	Centrifugal	1, 2or 3/Chiller										Less than 0.95 kw/ton. Oil-free, magnetic bearing compressors.
	ARP	Heat Pump	10-600	R-410A	Scroll	2/Module		,	x x x	x	,					Redundancy. Future add-on. Pump packages, heat pump capability available.
	MSA	Split System	10-1,320	R-410A	Scroll	2 or 4/Module)	x x x	X	x x	x	x x	×	x x	Modular platform for redundancy. Air-cooled condensers are remote-mounted.
	ASM	Process	2-30	R-410A	Scroll	1 or 2/Chiller					2 2	100	**			Stand-alone packaged chiller with tank & pumps. Ideal for process loads.
	ARA	Heat Recovery	20-480	R-410A	Scroll	2/Module			×	x)					Cooling mode/heating mode/simultaneous cooling & heating.
	MSF	Flooded Chiller with MagLey Compressor	80-2,100	R-134a	Centrifugal	1 to 7/Chiller										Most efficient machine. Oil-free, magnetic bearing compressor. Flooded shells.
	MS80F MS100F	Modular Flooded with MagLev Compressor	80-1,000	R-134a	Centrifugal	1/Unit		505	24 3		0.00		x x			Flooded modular chiller with MagLev centrifugal compressor.
	MSS	Modular Chillers	10-1,275	R-410A	Scroll	2/Module)	x x x	x	xx	x	x			Redundancy. Micro refrigerant charge. Fits through single-width door.
	MSP	Process/Medical Chillers	10-80	R-410A	Scroll	1 or 2/Chiller						Ш				Packaged water-cooled scroll chiller; shell and tube condenser standard.
	MSS	Modular Quad	105-1,320	R-410A	Scroll	4/Module							x	х	x x	Four compressors per module; two manifold sets.
Water Cooled	MS80T	Modular with Maglev Compressor	80-800	R-134a	Centrifugal	1/Module				П		,	x			Most efficient modular chiller. MagLev TT300 compressor and brazed plate HX.
	MS-Screw	Modular Screw	90-1,160	R-134a	Screw	1/Module		П		П		1	x 3	×	x	Modular platform with efficient screw compressor. VFD optional.
	MS-DHRC	Modular Dedicated Heat Recovery DHRC	10-1,320	R-410A & R-134a	Scroll	2 or 4/Module		,	x x x	×	x x	x	x x	×	××	Usable condenser water up to 180 °F - simultaneous cooling and heating.
	MSR	Modular Heat Pump	10-1,275	R-410A & R-134a	Scroll	2/Module)	x x x	x	x x	x	x			Two-pipe heat pump system with modular platform.
	VME II	Four-Pipe Central Station System Heat Recovery	10- 1,320	R-410A & R-134a	Scroll	2 or 4/Module		,	×××	×	xx	x	x x	x	x x	Four-pipe system. Each module can be in heating, cooling or simultaneous mode.
	HSS	Heatstack Heat Recovery	3- 30	R-410A & R-134a	Scroll	1 or 2/Unit						0000				Stand-alone small packaged heat recovery chillers.

- Key Features/Benefits of Multistack Products
 Installation accessibility -- many modules fit through a standard door and can be lifted in a passenger elevator
- Redundancy -- multiple modules with dual circuits and multiple compressors
- Future add on -- Easily add capacity when needed Low refrigerant charge
- Excellent choice for sound-sensitive applications
- In-stock availability, quick shipping and fast build cycles

Multistack also manufactures a complete line of accessory modules including pump packages, glycol feeders, buffer tanks and more.

Handy HVAC Calculations Tons = 12,000 BTU/Hr kW = (BTU/Hr) / 3412.142 $kW = Tons \times 3.5168525$ kW/ton = 12/EER $KW/ton = 12/(COP \times 3.412)$

BTU/hr = 3412.142 x kWBTU/hr = 12000 x Tons

HP = kW / 0.745699872

COP = EER/3.412 $COP = \frac{12}{(kW/ton)/3.412}$

EER = 12/kW/ton $EER = COP \times 3.412$

Cooling Load (BTUH) = 500 x GPM x Delta-T Evaporator Flow Rate = Tons x 24/Entering-to-Leaving

Temp Delta-T

Condenser Flow Rate = Tons x 30 /Entering-to-Leaving Temp Delta-T (Assumes 25% heat of compression)



MultiGEO™ Geothermal Software Solutions

- Substantially reduce bore field first cost
- Generates control algorithms to optimize geothermal system efficiency
- Can "rescue" bore fields that are operating outside of design conditions



MultiPRO™ Central Plant Control System

- Control up to 10 chillers on the same chilled water loop regardless of chiller type or manufacturer
- Ideal for new or even 50-year-old chiller plants
- Supports constant flow, variable primary or primary/secondary pumping control as well as cooling tower control



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www.multistack.com

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 Modular Chillers

Multistack invented the modular chiller concept!

10 - 85-Ton Modules

- Now available with variable speed compressor option
- Dual scroll compressors with dual refrigeration circuits
- Create chiller arrays up to 14 modules with 10-through 85ton modules
- Acoustic panels available
- Also available as Dedicated Heat Recovery Chillers (DHRC) — hot water to 140F with R-410A, 180 F with R-134a refrigerant
- Total Access™ available as option

105 - 165-Ton Quad Scroll

ation circuits

Four compressors, two refriger

Combine up to eight modules

to create a chiller array

Also available as DHRC

Acoustic panels included

chillers—hot water to 140F with R-410A, 180 F with R-134a refrigerant

Total Access available as option

ASF Modular Air-Cooled Chillers

Integral free cooling coil optional

circuits, ECM fans optional

ASHRAE 90.1 Compliant

Available with either a single or dual refrigerant

Packaged controls for chiller and free cooling

Up to 15 modules on a single master controller

Aluminum Fin/Copper Tube water and refrigerant

Multistack has a policy of continual improvement and reserves the right to change product design,

coils provide efficient chiller and free cooling

operation plus ease of service including coil

literature and specifications without notice.

30-Ton module

Modules



MS80T MagLev™ Chiller **Modules**

- 80 Nominal tons; 10 modules maximum per chiller array
- One MagLev™ oil-free, magnetic bearing compressor per module
- Variable speed compres-
- Turn down to 18 tons
- **Evaporative condensers** available
- Total Access available as
- FlexSys™ controls optional
- Acoustic panels available

Screw Compressor Modules

- 90, 125 and 145 nominal tons per module; up to eight modules per chiller array
 DHRC up to 155 F water
- Acoustic panels included
- Slide valve control standard; VFD optional



Modular Flooded MagLev® Chiller

- 80 100 Tons nominal capacity Breakthrough compact flooded evaporator technology for flooded, high-efficiency chiller performance in a compact, modular footprint
- Modular design for easy installation, expandability and redundancy Total Access[™] header design is ideal for
- new construction or retrofit projects Multiple compressor redundancy ideal
- for mission-critical applications Field-proven MagLev® chiller controls Small refrigerant charge qualifies for LEED® EA credit

Ultra-quiet operation



VME Geothermal Central Station Heat Pumps

- Can use all Multistack two- and four-compressor modules
- Four-pipe system; heating, cooling and DHRC
- Packaged controls, valves and piping

Multistack Packaged Chillers



MagLev Compressor Flooded Chillers

- 80 thru 2,100 tons capacity
- One to seven oil-free MagLev centrifugal compressors
- Optional TT and VTT compressors that can be mixmatched
- New FlexSys™ Gen III controls
- Can also be configured as split system air-cooled or water-cooled chillers



Water-Cooled Stand-Alone Process Chillers

- Stand alone, non-modular 10-80 tons capacity ideal for process applications
- Single or dual scroll compressors Variable or fixed speed compressors
- Shell and tube condenser standard



ASM Air-Cooled Chillers

- Stand alone, three thru 30 tons
- Single or dual scroll compressors
- Variable or fixed speed compressors
- Single or dual pumps; buffer tank



Air-Cooled Stand-Alone Chillers

- 20 to 195 tons capacity with multiple scroll
- R-410A refrigerant with dual refrigerant circuits for excellent load flexibility, reliability, redundancy and serviceability
- Latest Carel c.PCO controller technology includes onboard WiFi
- Quiet operation with sound pressure levels as low as 64 total dBA at 30 feet
- Fixed speed, low sound condenser fans standard
- Options include ECM condenser fans and low ambient option to -20 F



Air-Cooled MagLev™ Flooded Chillers

60- to 325-ton sizes

operating costs

- One thru three compressors
- TT300 and TT350 oil-free, frictionless compressors
- Industry leading full- and part-load performance

AuraGreen™ Energy Recovery Products

Preconditions outside air delivered to air handlers

By removing sensible and latent heat, AuraGreen units

reduce outside air ventilation costs an average of 30

downsized by as much as one-third—significantly

A sustainable product that reduces carbon footprint

Allows new or existing HVAC equipment to be

reducing capital, installation, construction and

Heating and cooling coils available

Low sound

HeatStack™ Heat Recovery Chillers

- Stand-alone in three thru 30 tons capacity
- Variable or fixed speed compressors
- Ideal for small buildings or zones within a building
- R-134a for hot water up to 170 F; R-410A for hot water up to 140 F



VersaTemp™ Modular Heat Pumps

- Heating only, cooling only and simultaneous heating and cooling operating modes 20-, 30- and 60-ton sizes
- Can be matched with ASP modules
- Four-pipe simultaneous heating and cooling



Air-Cooled Modular Scroll Chillers

- 10-, 15-, 20- and 30-ton units may be combined in 14-module arrays
- Heat pump options available
- 50- and 60-ton modules may be combined in up to 10-module arrays
- Free cooling and hydronic accessory modules

II MULTISTACK Originators. Innovators. Never the Imitators.

For more information contact your Multistack representative.

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