

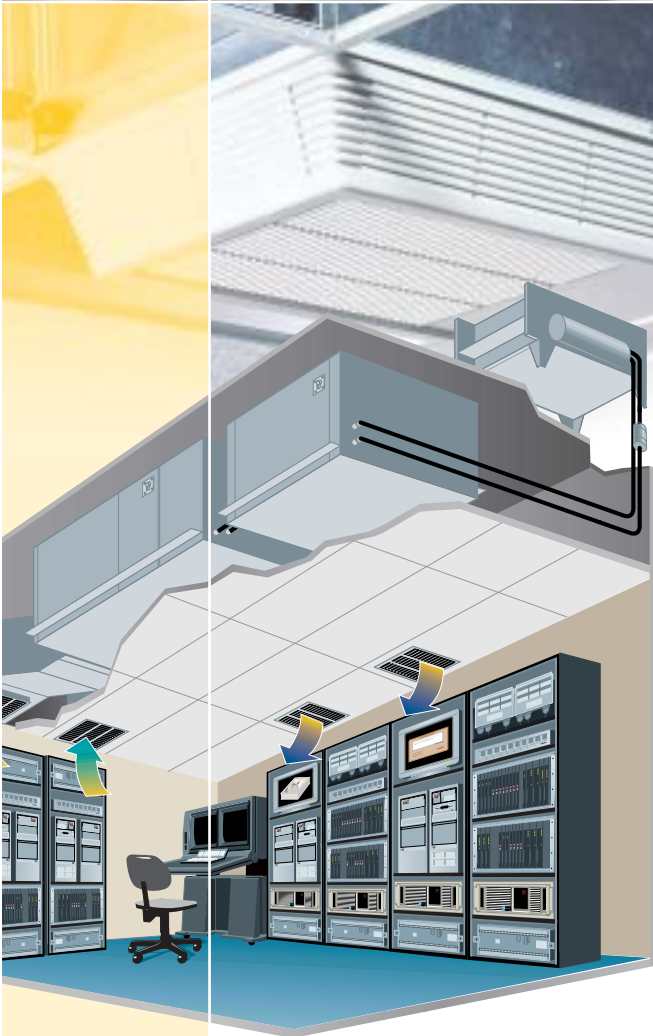


Mini-Mate2™

1 to 8 Tons

Heat Removal

OVERHEAD COOLING IN A VARIETY OF CAPACITIES AND CONFIGURATIONS



*Provides Precision Cooling And Humidity Control
Of Small Areas Where Space Is At A Premium,
Including CAD/CAM Installations, Telecommunications
Equipment, Data Processing, Control Rooms, Desktop
Publishing, Network Facilities, Laboratories
And Other Critical Electronic Systems.*



THE SOLUTION FOR YOUR COOLING NEEDS MAY BE RIGHT ABOVE YOU

When the need calls for precision cooling & humidity control but your floor space says otherwise, the Liebert Mini-Mate2 can provide the overhead answer.

Designed To Meet Your Site Needs

High sensible cooling capacity. Unlike “comfort” air conditioners, Liebert systems are designed for the cooling requirements of electronic equipment – 80% of the capacity dedicated to the removal of dry “sensible” heat, and 20% for the control of humidity.

Reliable. Based on a field-proven system, the Mini-Mate2 is manufactured with rugged, efficient components. To ensure 365 days x 24 hours operation at your site, each system is factory tested.

Warranty protection. In addition to the standard one-year warranty, your Liebert representative can offer extended warranties on the unit, compressor, parts and labor.

Preventive Maintenance Programs. Liebert factory certified personnel provide regular inspections and service to extend the life of the system. Ask your local representative.

Liebert spare parts. Highest quality parts, designed for your system, are easily available through your Liebert service representative.

Energy Efficient Operation

High efficiency compressor. The rotary or scroll compressor (depending on the model) is both energy efficient and rugged, to ensure continuous operation.

Free-cooling option. A second cooling coil allows the system to take advantage of colder outdoor temperatures and bypass compressor operation.

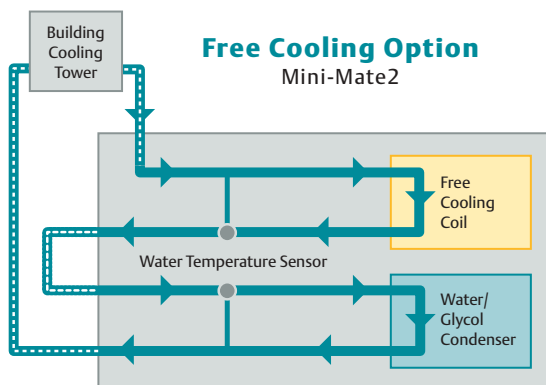
*The components in units are located for easy service
(1 ton self-contained unit shown)*



Easy Installation and Maintenance

- The evaporator and indoor condensing units are mounted above the dropped ceiling, requiring minimal site disturbance.
- Split systems require simple thermostat-type wiring to controls and condensing units.
- Single point power kits, sweat adapters, condensate pumps, duct adapters and other options are ordered as kits, ensuring availability of required parts and complete compatibility with your system.
- Units are designed for easy component access, and most can be serviced from the front. (Refer to product submittals, installation manuals or CAD drawings)
- In addition, the units are NRTL-C listed/certified to meet U.S. and Canadian safety standards, and MEA listed for New York City applications. These agency listings ensure fast, hassle-free inspection and building code approvals.

When water temperature goes below 45°, cooling switches over to Free-Cooling operation. A separate chilled water source can also be used with Air-Cooled system. Note: Special cupro-nickel free-cooling coil must be specified when applied to open cooling tower.





Microprocessor Control

The microprocessor control system, with its user-friendly wall-mount display, provides precise control of all unit functions.

- Temperature Control
- Humidity Control
- Alarm Indication
- Programming
- Auto Restart

More Monitoring Solutions Than Anyone Else

The Mini-Mate2's microprocessor controls can also provide valuable operating information to Liebert's remote monitoring and control systems, as well as building management systems. These capabilities include:

SiteScan® Centralized Monitoring Systems

SiteScan is a monitoring solution for critical environments that utilizes a facility-view approach. The system enables communications from Liebert environmental and power units — as well as many other pieces of analog or digital equipment — to a front end software package which provides monitoring, control and alarm management. SiteScan gives you decision-making power to proactively manage the equipment that is critical to your business.

OpenComms™ Nform

Liebert's OpenComms™ Nform is a network communications system that will enable you to monitor any piece of precision cooling or power protection equipment that can support a network interface, such as the SNMP/Web card or OpenComms NIC. This software solution combines full-scale monitoring with cost-effective deployment through the use of existing network wiring. It is both scalable and adaptable so it can grow as your systems expand and needs change.

OpenComms® NIC And OC-DO Interface Cards

These interface cards are designed for use with individual Liebert air conditioning units, such as the MiniMate2, enabling cost-effective monitoring by your facility or network monitoring system. Uses Ethernet, Modbus, and BACnet standard open protocol options, as well as SNMP and web-based communications.

SiteLink™ Communications Module

The microprocessor-based module provides two-way communication between an existing building management system and up to 12 Liebert units via MODBUS or BACnet.

Dry Contact Monitors — RCM4, RCM8CE

LEDs display customized alarm indication for any dry contact input, including alarms for Liebert environmental systems. RCM4 monitors and displays four dry contact points. The RCM8CE monitors and displays eight dry contacts — it can also communicate with a Liebert SiteScan system and has modem dial-up capabilities.



THE RIGHT SIZE TO FIT YOUR SPACE AND APPLICATION

With more than 10,000 possible configurations, there is a Mini-Mate2 system available to fit the needs of many room cooling or spot cooling requirements.

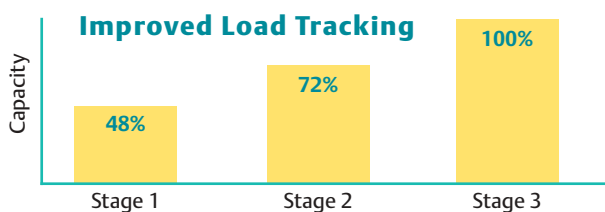
Mini-Mate2 product features include:

- Available in 1, 1.5, 2, 3, 5 & 8 ton capacities (3 stage cooling on 8-ton)
- Self-contained or split systems – allows for fitting systems with a variety of architectures
- Reliable refrigeration components featuring rotary or scroll compressors with copper tube aluminum fin coils – for high efficiency
- Available in air-cooled, water-cooled, glycol-cooled or chilled water configurations
- Easy-to-use menu-driven microprocessor control. Optional room sensors available.

A variety of options help you meet numerous applications:

- Grille (1-1.5 tons) or Plenum (2-3 tons) that fits 2'x4' ceiling grid for direct supply & return air distribution
- Fan speed and/or blower options to handle supply air ductwork with higher external static pressures
- Filter box or duct kits to connect to ducted sites
- Hot water reheat to utilize building hot water for energy savings
- Stainless steel electric reheat and/or canister humidifier for humidity control
- Hot gas bypass for low load applications
- High pressure chilled water systems
- Single point power connection kit to facilitate close coupled evaporator & condensing unit wiring
- Multiple air-cooled heat rejection solutions: indoor ducted, outdoor, Quiet-Line, high ambient
- 2 way or 3 way water regulating valves rated for standard or high pressure applications
- Unit disconnect, smoke detector, and/or firestat options
- Site monitoring and communication devices to meet monitoring needs

3-Stage Cooling (8 ton system only)



A unique compressor staging system utilizes independent 3-ton and 5-ton circuits to provide better control of room conditions. The unit microprocessor continuously monitors recent cooling operation, and selects the most economical cooling stage to satisfy demand.

1-1.5 Ton w/Grille

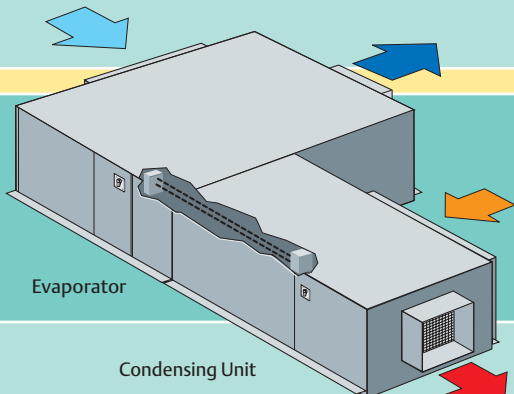


Product Option Availability

	Capacity (Tons)						
	1	1.5	2	3	5	8	
System Types	Chilled Water (rated @ 300 psi static pressure)		•		•	•	
	Chilled Water (rated @ 400 psi static pressure)					•	•
	Self-Contained Air Cooled	•	•				
	Self-Contained Water/Glycol Cooled	•	•				
	Split System Air Cooled w/Centrifugal Indoor Condensing Unit			•	•	•	•
	Split System Air Cooled w/Outdoor High Ambient Prop Fan Condensing Unit	•	•	•	•	•	
	Split System Air Cooled w/Outdoor Prop Fan Condensing Unit	•	•	•	•	•	•
	Split System Air Cooled w/Outdoor Quiet-Line Prop Fan Condensing Unit	•	•	•	•	•	•
Factory Installed Options¹	Split System Water/Glycol Cooled (2 or 3 way Valve, 150 or 350 psi)	•	•	•	•	•	•
	50 & 60 Hz voltages	•	•	•	•	•	•
	Canister Humidifier	•	•	•	•	•	•
	Chilled Water w/High Close-Off Pressure Valve	•	•	•	•	•	•
	Direct-Drive Motor/Two-Speed	•	•	•	•	•	•
	Filter Clog Alarm	•	•	•	•	•	•
	Firestat	•	•	•	•	•	•
	Free-Cooling Coil (Cu or CuNi Versions)	•	•	•	•	•	•
	Hot Gas Bypass	•	•	•	•	•	•
	Hot Gas Reheat (self-contained systems only)	•	•	•	•	•	•
	Hot Water Reheat	•	•	•	•	•	•
	Internal Disconnect Switch	•	•	•	•	•	•
	SCR Reheat	•	•	•	•	•	•
	Smoke Detector	•	•	•	•	•	•
Stainless Steel Electric Reheat	•	•	•	•	•	•	
High External Static Option	•	•	•	•	•	•	
Ship Loose Accessories¹	15' or 30' Refrigerant Line Sets	•	•	•	•	•	•
	Condensate Pump Kit	•	•	•	•	•	•
	Duct Kit	•	•	•	•	•	•
	Filter Box	•	•	•	•	•	•
	Remote Sensors	•	•	•	•	•	•
	Single Point Power Kit	•	•	•	•	•	•
	Supply & Return Grille/Plenum	•	•	•	•	•	•
Monitoring²	AC3 Autochangeover Controller	•	•	•	•	•	•
	Liqui-tect 410 Point Detection Leak Detection Sensor	•	•	•	•	•	•
	LT460-K Zone Leak Detection Kits	•	•	•	•	•	•
	NIC-ENCL OPENCOMMS Network Interface Card	•	•	•	•	•	•
	OC-DO-ENCL OPENCOMMS Discrete Output Card	•	•	•	•	•	•
	RAC2-8 Remote Autochangeover Controller	•	•	•	•	•	•
	RCM4 Four-Point Dry Contact Monitor	•	•	•	•	•	•
	RCM8CE Eight Point Remote Dry Contact Monitor	•	•	•	•	•	•
	RCM8DO Eight Point Remote Dry Contact Monitor w/N.O. relays	•	•	•	•	•	•
Site Scan Monitoring	•	•	•	•	•	•	

Single Point Power Kit

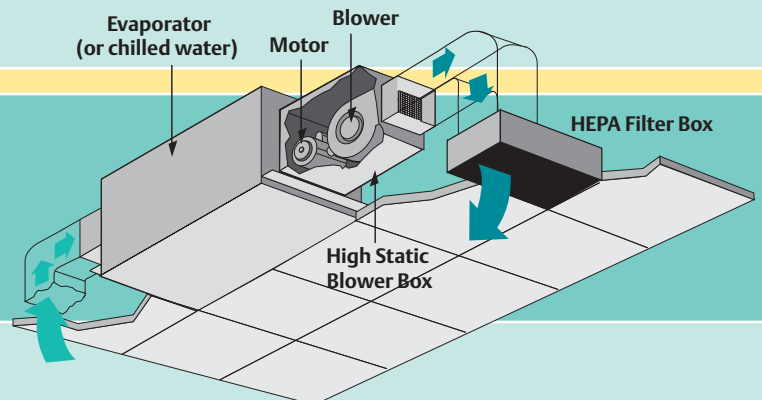
Field installed single point power kit simplifies connection and installation. (8-ton Config. Shown)



¹Some option/ accessory combinations are not available.
²For Further Information, Please refer to www.liebert.com

High Static Pressure Option

(2-3 Ton Shown)

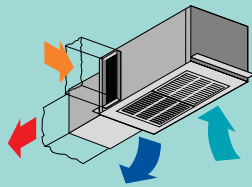


1 AND 1-1/2 TON SYSTEMS

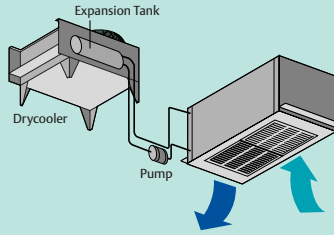
Air Cooled

Water/Glycol

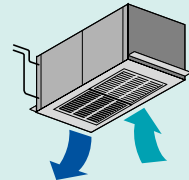
Chilled Water



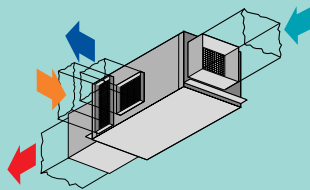
Self-Contained Air-Cooled with Grille



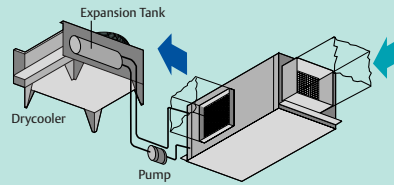
Self-Contained Glycol System with Grille



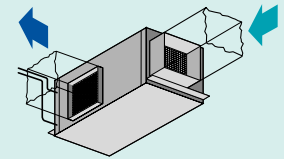
Chilled Water with Grille



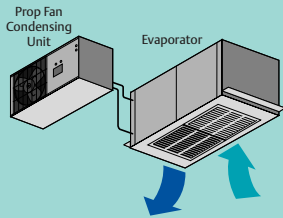
Self-Contained Air-Cooled Ducted
Optional Filter Box, Duct Connection Available



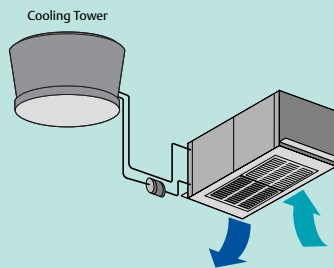
Self-Contained Glycol System Ducted
Optional Filter Box, Duct Connection Available



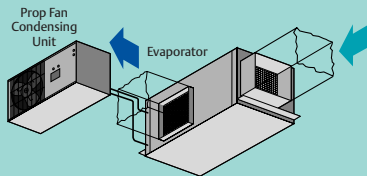
Chilled Water Ducted
Optional Filter Box, Duct Connection Available



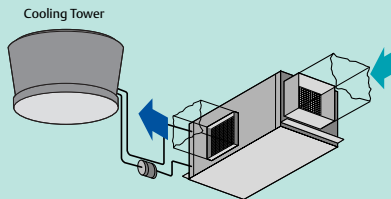
Split System with Grille



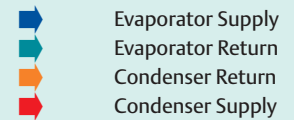
Self-Contained Water-Cooled with Grille



Split System Ducted
Optional Filter Box, Duct Connection Available



Self-Contained Water-Cooled Ducted
Optional Filter Box, Duct Connection Available



Specifications (1 and 1-1/2 Ton Systems)

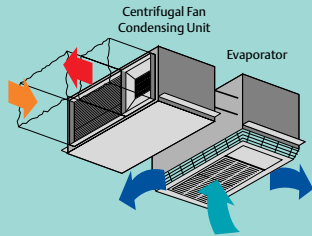
	Air Cooled-60 HZ				Air Cooled-50 HZ			
	1-ton		1.5-tons		1-ton		1.5-tons	
Net Capacity Data*	MMD12E	MMD12A	MMD18E	MMD18A	MMD11E	MMD11A	MMD17E	MMD17A
BTUH (kW) High Fan Speed	Split System	Self Contained	Split System	Self Contained	Split System	Self Contained	Split System	Self Contained
80 F (27.7) DB Total	14100 (4.1)	13300 (3.9)	19800 (5.8)	19300 (5.7)	14400 (4.2)	13400 (3.9)	21200 (4.2)	20800 (6.1)
50% RH Sensible	11600 (3.4)	11300 (3.3)	15500 (4.5)	15300 (4.5)	11700 (3.4)	11300 (3.3)	16000 (4.7)	15900 (4.7)
75 F (23.9 C) DB Total	13000 (3.8)	12300 (3.6)	18400 (5.4)	18000 (5.3)	13300 (3.9)	12400 (3.6)	19800 (5.8)	19500 (5.7)
50% RH Sensible	11200 (3.3)	10900 (3.2)	15000 (4.4)	14900 (4.4)	11300 (3.3)	10900 (3.2)	15600 (4.6)	15500 (4.5)
72 F (22.2 C) DB Total	12400 (3.6)	11800 (3.5)	17700 (5.2)	17300 (5.1)	12700 (3.7)	11900 (3.5)	19000 (5.6)	18700 (5.5)
50% RH Sensible	10900 (3.2)	10600 (3.1)	14800 (4.3)	14600 (4.3)	11000 (3.2)	10700 (3.1)	15300 (4.5)	15200 (4.5)
Net Capacity Data*								
BTUH (kW) Low Fan Speed								
80 F (26.7) DB Total	14000 (4.1)	13300 (3.9)	19300 (5.7)	18800 (5.5)	14300 (4.2)	13400 (3.9)	20600 (6.0)	20300 (5.9)
50% RH Sensible	10500 (3.1)	10200 (3.0)	13800 (4.0)	13700 (4.0)	10600 (3.1)	10200 (3.0)	14400 (4.2)	14200 (4.2)
75 F (23.9 C) DB Total	12900 (3.8)	12300 (3.6)	18000 (5.3)	17700 (5.2)	13200 (3.9)	12400 (3.6)	19200 (5.6)	18900 (5.5)
50% RH Sensible	10100 (3.0)	9900 (2.9)	13500 (4.0)	13400 (3.9)	10200 (3.0)	9900 (2.9)	14000 (4.1)	13900 (4.1)
72 F (22.2) DB Total	12300 (3.6)	11800 (3.5)	17200 (5.0)	16900 (5.0)	12600 (3.7)	11900 (3.5)	18400 (5.4)	18200 (5.3)
50% RH Sensible	9900 (2.9)	9700 (2.8)	13300 (3.9)	13100 (3.8)	10000 (2.9)	9700 (2.8)	13800 (4.0)	14200 (4.2)
	Water/Glycol-60 HZ				Water/Glycol-50 HZ			
	Water Cooled	Glycol Cooled	Water Cooled	Glycol Cooled	Water Cooled	Glycol Cooled	Water Cooled	Glycol Cooled
Net Capacity Data*	MMD14W	MMD14W	MMD20W	MMD20W	MMD13W	MMD13W	MMD19W	MMD19W
BTUH (kW) High Fan Speed	Self Contained	Self Contained	Self Contained	Self Contained	Self Contained	Self Contained	Self Contained	Self Contained
80F (26.7) DB Total	15000 (4.4)	13700 (4.0)	22000 (6.4)	19900 (5.8)	15000 (4.4)	13900 (4.1)	23000 (6.7)	21300 (6.2)
50% RH Sensible	12500 (3.7)	12000 (3.5)	16600 (4.9)	15800 (4.6)	12400 (3.6)	12000 (3.5)	15500 (4.5)	16400 (4.8)
75 F (23.9 C) DB Total	13900 (4.1)	12800 (3.8)	20500 (6.0)	18600 (5.4)	13900 (4.1)	12900 (3.8)	21300 (6.2)	20000 (5.9)
50% RH Sensible	12000 (3.5)	11600 (3.4)	16100 (4.7)	15400 (4.5)	12000 (3.5)	11600 (3.4)	15100 (4.4)	15900 (4.7)
72 F (22.2 C) DB Total	13300 (3.9)	12300 (3.6)	19600 (5.7)	17900 (5.2)	13300 (3.9)	12400 (3.6)	20400 (5.6)	19200 (5.6)
50% RH Sensible	11800 (3.5)	11400 (3.3)	15800 (4.6)	15100 (4.4)	11800 (3.5)	11400 (3.3)	14900 (4.4)	15700 (4.6)
Net Capacity Data*								
BTUH (kW) Low Fan Speed								
80 F (26.7) DB Total	14600 (4.3)	13400 (3.9)	21100 (6.2)	18900 (5.5)	14500 (4.2)	13500 (4.0)	23900 (7.0)	20700 (6.1)
50% RH Sensible	11000 (3.2)	10500 (3.1)	14800 (4.3)	13900 (4.1)	11000 (3.2)	10600 (3.1)	17300 (5.1)	14600 (4.3)
75 F (23.9 C) DB Total	13500 (4.0)	12500 (3.7)	19700 (5.8)	17800 (5.2)	13500 (4.0)	12600 (3.7)	22200 (6.5)	19300 (5.7)
50% RH Sensible	10700 (3.1)	10200 (3.0)	14400 (4.2)	13600 (4.0)	10600 (3.1)	10300 (3.0)	16900 (5.0)	14300 (4.2)
72 F (22.2 C) DB Total	12900 (3.8)	12000 (3.5)	18900 (5.5)	17100 (5.0)	12900 (3.8)	12100 (3.5)	21200 (6.2)	18600 (5.4)
50% RH Sensible	10400 (3.0)	10000 (2.9)	14200 (4.2)	13400 (3.9)	10400 (3.0)	10100 (3.0)	16500 (4.8)	14000 (4.1)
	Chilled Water-60HZ				Chilled Water-50 HZ			
	Chilled Water				Chilled Water			
Capacity Data	MMD23C				MMD22C			
BTUH (kW) High Fan Speed	Self Contained				Self Contained			
80 F (26.7) DB Total	21900 (6.4)				21900 (6.4)			
50% RH Sensible	17300 (5.1)				17300 (5.1)			
75 F (23.9 C) DB Total	15500 (4.5)				15500 (4.5)			
50% RH Sensible	14500 (4.2)				14500 (4.2)			
72 F (22.2 C) DB Total	13100 (3.8)				13100 (3.8)			
50% RH Sensible	12800 (3.8)				13000 (3.8)			
Capacity Data								
BTUH (kW) Low Fan Speed								
80 F (26.7) DB Total	18400 (5.4)				18400 (5.4)			
50% RH Sensible	14300 (4.2)				14300 (4.2)			
75 F (23.9 C) DB Total	13500 (4.0)				13500 (4.0)			
50% RH Sensible	12200 (3.6)				12200 (3.6)			
72 F (22.2 C) DB Total	11200 (3.3)				11300 (3.3)			
50% RH Sensible	11000 (3.2)				11000 (3.2)			

*The net capacity data has fan motor heat factored in for all ratings and the entering air condition of 72 °F (22.2 °C), 50% RH is the standard rating condition of ASHRAE 127-1988

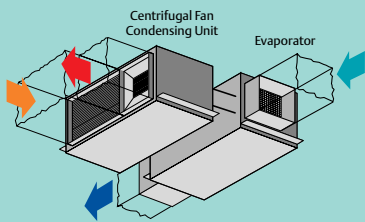
2 AND 3 TON SYSTEMS

Air Cooled

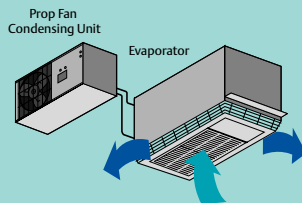
Utilizes Split System Evaporator



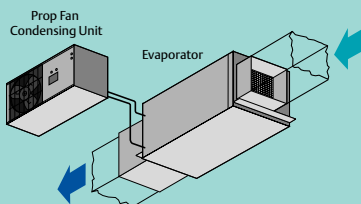
Remote Air Cooled Condensing Unit
Supply & Return Air Plenum



Remote Air Cooled Condensing Unit
Supply & Return Air Ducted
Optional Filter Box, Duct Connection Available



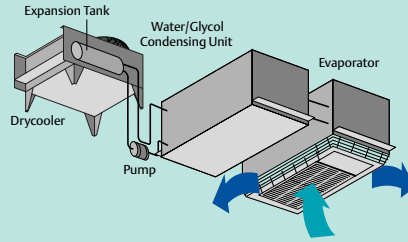
Outdoor Prop Fan Condensing Unit
Supply & Return Air Plenum



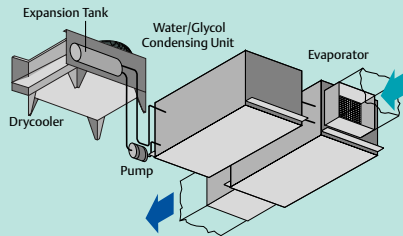
Outdoor Prop Fan Condensing Unit
Supply & Return Air Ducted
Optional Filter Box, Duct Connection Available

Water/Glycol

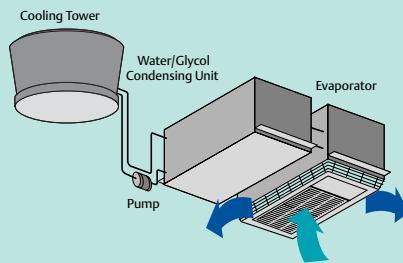
Utilizes Split System Evaporator



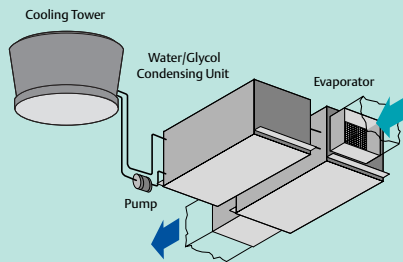
Remote Water/Glycol Condensing Unit
Supply & Return Air Plenum



Remote Water/Glycol Condensing Unit
Supply & Return Air Ducted
Optional Filter Box, Duct Connection Available



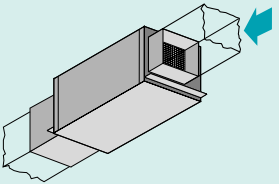
Remote Water/Glycol Condensing Unit
Supply & Return Air Plenum



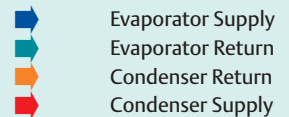
Remote Water/Glycol Condensing Unit
Supply & Return Air Ducted
Optional Filter Box, Duct Connection Available

Chilled Water

Chilled Water
Supply & Return Plenum



Chilled Water
Supply & Return Air Ducted
Optional Filter Box, Duct Connection Available



Note: All split systems may be close-coupled or configured with condensing unit located remotely from the evaporator.

Specifications (2 and 3 Ton Systems)

	60 HZ				50HZ				
	with Outdoor Condensing Unit		with Centrifugal Condensing Unit		with Outdoor Condensing Unit		with Centrifugal Condensing Unit		
	2-tons MMD24E Split System	3-tons MMD36E Split System	2-tons MMD24E Split System	3-tons MMD36E Split System	2-tons MMD23E Split System	3-tons MMD35E Split System	2-tons MMD23E Split System	3-tons MMD35E Split System	
AIR COOLED SYSTEM									
Net Capacity Data*									
BTUH (kW) High Fan Speed									
80 F (26.7 C) DB	Total	25,600 (7.5)	37,400 (11.0)	24,100 (7.1)	34,100 (10.0)	23,800 (7.0)	34,500 (10.1)	22,600 (6.6)	31,800 (9.3)
50% RH	Sensible	20,600 (6.0)	29,100 (8.5)	20,100 (5.9)	27,900 (8.2)	19,900 (5.8)	28,000 (8.2)	19,500 (5.7)	27,100 (7.9)
75 F (23.9 C) DB	Total	23,800 (7.0)	34,800 (10.2)	22,300 (6.5)	31,700 (9.3)	22,100 (6.5)	32,100 (9.4)	20,900 (6.1)	29,600 (8.7)
50% RH	Sensible	19,900 (5.8)	28,100 (8.2)	19,300 (5.7)	26,800 (7.9)	19,200 (5.6)	27,000 (7.9)	18,700 (5.5)	26,000 (7.6)
72 F (22.2 C) DB	Total	22,800 (6.7)	33,400 (9.8)	21,400 (6.3)	30,300 (8.9)	21,200 (6.2)	30,800 (9.0)	20,000 (5.9)	28,300 (8.3)
50% RH	Sensible	19,400 (5.7)	27,500 (8.1)	18,800 (5.5)	26,200 (7.7)	18,700 (5.5)	26,400 (7.7)	18,200 (5.3)	25,300 (7.4)
Net Capacity Data*									
BTUH (kW) Low Fan Speed									
80 F (26.7 C) DB	Total	25,300 (7.4)	36,400 (10.7)	23,800 (7.0)	33,100 (9.7)	23,500 (6.9)	33,500 (9.8)	22,400 (6.6)	31,000 (9.1)
50% RH	Sensible	19,500 (5.7)	26,100 (7.6)	19,000 (5.6)	24,800 (7.3)	18,800 (5.5)	24,900 (7.3)	18,400 (5.4)	24,000 (7.0)
75 F (23.9 C) DB	Total	23,600 (6.9)	33,800 (9.9)	22,100 (6.5)	30,800 (9.0)	21,800 (6.4)	31,200 (9.1)	20,700 (6.1)	28,800 (8.4)
50% RH	Sensible	18,900 (5.5)	25,200 (7.4)	18,200 (5.3)	23,900 (7.0)	18,100 (5.3)	24,100 (7.1)	17,700 (5.2)	23,100 (6.8)
72 F (22.2 C) DB	Total	22,500 (6.6)	32,400 (9.5)	21,100 (6.2)	29,500 (8.6)	20,900 (6.1)	29,900 (8.8)	19,800 (5.8)	27,600 (8.1)
50% RH	Sensible	18,400 (5.4)	24,700 (7.2)	17,800 (5.2)	23,400 (6.9)	17,700 (5.2)	23,600 (6.9)	17,200 (5.0)	22,600 (6.6)
WATER/GLYCOL COOLED									
Net Capacity Data*									
BTUH (kW) High Fan Speed									
80 F (26.7 C) DB	Total	26,400 (7.7)	38,400 (11.3)	23,000 (6.7)	35,200 (10.3)	24,700 (7.2)	35,700 (10.5)	21,300 (6.2)	32,600 (9.6)
50% RH	Sensible	20,500 (6.0)	29,500 (8.6)	19,600 (5.7)	28,300 (8.3)	19,900 (5.8)	28,500 (8.4)	19,000 (5.6)	27,400 (8.0)
75 F (23.9 C) DB	Total	24,400 (7.1)	35,500 (10.4)	21,400 (6.3)	32,700 (9.6)	22,700 (6.7)	33,000 (9.7)	19,800 (5.8)	30,400 (8.9)
50% RH	Sensible	19,700 (5.8)	28,400 (8.3)	18,900 (5.5)	27,300 (8.0)	19,000 (5.6)	27,400 (8.0)	18,300 (5.4)	26,300 (7.7)
72 F (22.2 C) DB	Total	23,200 (6.8)	33,900 (9.9)	20,500 (6.0)	31,300 (9.2)	21,600 (6.3)	31,500 (9.2)	18,900 (5.5)	29,100 (8.5)
50% RH	Sensible	19,200 (5.6)	27,700 (8.1)	18,400 (5.4)	26,600 (7.8)	18,600 (5.4)	26,700 (7.8)	17,800 (5.2)	25,700 (7.5)
Net Capacity Data*									
BTUH (kW) Low Fan Speed									
80 F (26.7 C) DB	Total	26,200 (7.7)	37,300 (10.9)	22,700 (6.7)	34,100 (10.0)	24,500 (7.2)	34,600 (10.1)	21,100 (6.2)	31,800 (9.3)
50% RH	Sensible	19,900 (5.8)	26,400 (7.7)	18,500 (5.4)	25,200 (7.4)	19,200 (5.6)	25,400 (7.4)	17,900 (5.2)	24,300 (7.1)
75 F (23.9 C) DB	Total	24,200 (7.1)	34,400 (10.1)	21,100 (6.2)	31,800 (9.3)	22,500 (6.6)	32,000 (9.4)	19,600 (5.7)	29,500 (8.6)
50% RH	Sensible	19,100 (5.6)	25,500 (7.5)	17,800 (5.2)	24,400 (7.1)	18,400 (5.4)	24,500 (7.2)	17,200 (5.0)	23,400 (6.9)
72 F (22.2 C) DB	Total	23,000 (6.7)	33,800 (9.6)	20,200 (5.9)	30,400 (8.9)	21,400 (6.3)	30,500 (8.9)	18,800 (5.5)	28,300 (8.3)
50% RH	Sensible	18,600 (5.4)	24,900 (7.3)	17,400 (5.1)	23,900 (7.0)	18,000 (5.3)	23,900 (7.0)	16,800 (4.9)	22,900 (6.7)
CHILLED WATER									
Capacity Data*									
BTUH (kW) High Fan Speed									
80 F (26.7 C) DB	Total	43,100 (12.6)			43,100 (12.6)				
50% RH	Sensible	32,800 (9.6)			32,800 (9.6)				
75 F (23.9 C) DB	Total	31,000 (9.1)			31,000 (9.1)				
50% RH	Sensible	27,600 (8.1)			27,600 (8.1)				
72 F (22.2 C) DB	Total	25,800 (7.6)			25,800 (7.6)				
50% RH	Sensible	24,600 (7.2)			24,600 (7.2)				
Capacity Data*									
BTUH (kW) Low Fan Speed									
80 F (26.7 C) DB	Total	36,400 (10.7)			36,400 (10.7)				
50% RH	Sensible	27,300 (8.0)			27,300 (8.0)				
75 F (23.9 C) DB	Total	26,000 (7.6)			26,000 (7.6)				
50% RH	Sensible	22,800 (6.7)			22,800 (6.7)				
72 F (22.2 C) DB	Total	21,600 (6.3)			21,600 (6.3)				
50% RH	Sensible	20,500 (6.0)			20,500 (6.0)				

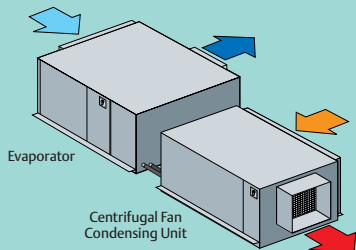
*The net capacity data has fan motor heat factored in for all ratings and the entering air condition of 72° F (22.2° C), 50% RH is the standard rating condition of ASHRAE 127-1988

5 AND 8 TON SYSTEMS

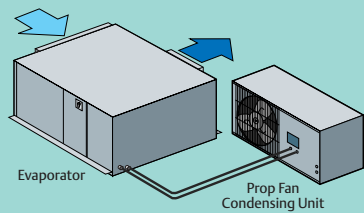
5 Ton System

Air Cooled

Utilizes Split System Evaporator



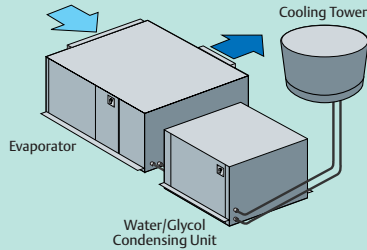
Indoor Air Cooled Condensing Unit
Supply & Return Air Ducted
Optional Filter Box/Duct Connection Available



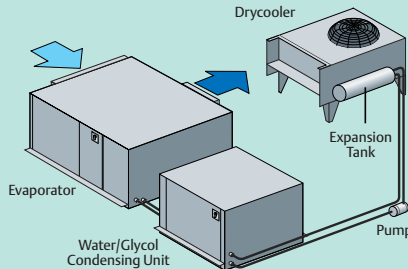
Outdoor Prop Fan Condensing Unit
Supply & Return Air Ducted
Optional Filter Box/Duct Connection Available

Water/Glycol

Utilizes Split System Evaporator

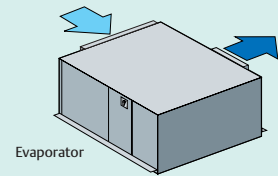


Remote Water/Glycol Condensing Unit
Supply & Return Air Ducted
Optional Filter Box/Duct Connection Available



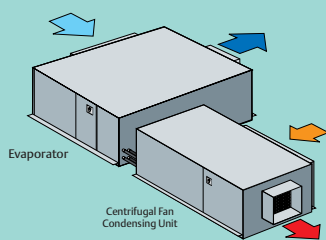
Remote Water/Glycol Condensing Unit
Supply & Return Air Ducted
Optional Filter Box/Duct Connection Available

Chilled Water

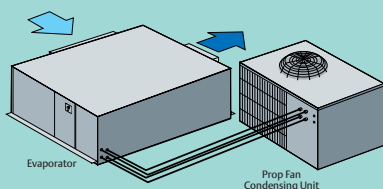


Chilled Water Coil
Supply & Return Air Ducted
Optional Filter Box/Duct Connection Available

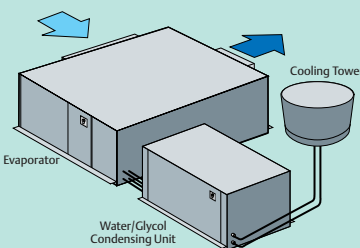
8 Ton System



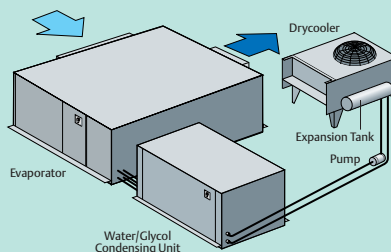
Indoor Air Cooled Condensing Unit
Supply & Return Air Ducted
Optional Filter Box/Duct Connection Available



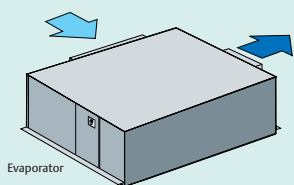
Outdoor Prop Fan Condensing Unit
Supply & Return Air Ducted
Optional Filter Box/Duct Connection Available



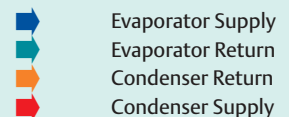
Remote Water/Glycol Condensing Unit
Supply & Return Air Ducted
Optional Filter Box/Duct Connection Available



Remote Water/Glycol Condensing Unit
Supply & Return Air Ducted
Optional Filter Box/Duct Connection Available



Chilled Water Coil
Supply & Return Air Ducted
Optional Filter Box/Duct Connection Available



Specifications (5 and 8 Ton Systems)

		60 Hz		50 Hz		60 Hz		50 Hz	
		AIR-COOLED SYSTEM							
		w/Outdoor Condensing Unit				w/Centrifugal Condensing Unit			
Evaporator Condensing Unit		5-Ton MMD60E PFC067A		5-Ton MMD59E PFC066A		5-Ton MMD60E MCD65A		5-Ton MMD59E MCD64A	
Net Capacity Data* -BTUH (kW)									
80 F (26.7 C) DB	Total	65000	(19.0)	65400	(19.2)	66200	(19.4)	65500	(19.2)
50% RH	Sensible	54400	(15.9)	54800	(16.1)	54800	(16.1)	54800	(16.1)
75 F (23.9 C) DB	Total	60500	(17.7)	60000	(17.6)	61800	(18.1)	61000	(17.9)
50% RH	Sensible	52600	(15.4)	52600	(15.4)	53100	(15.6)	53000	(15.5)
72 F (22.2 C) DB	Total	58100	(17.0)	57200	(16.8)	59400	(17.4)	58600	(17.2)
50% RH	Sensible	51500	(15.1)	51300	(15.0)	52100	(15.3)	51900	(15.2)
		WATER COOLED				GLYCOL COOLED			
Evaporator Condensing Unit		5-Ton MMD60E MCD69W		5-Ton MMD59E MCD68W		5-Ton MMD60E MCD69W		5-Ton MMD59E MCD68W	
Net Capacity Data* -BTUH (kW)									
80 F (26.7 C) DB	Total	70800	(20.7)	70000	(20.5)	63400	(18.6)	62000	(18.2)
50% RH	Sensible	56900	(16.7)	56600	(16.6)	54200	(15.9)	53700	(15.7)
75 F (23.9 C) DB	Total	66100	(19.4)	65100	(19.1)	59300	(17.4)	57900	(17.0)
50% RH	Sensible	55200	(16.2)	54800	(16.1)	52500	(15.4)	51900	(15.2)
72 F (22.2 C) DB	Total	63300	(18.5)	62200	(18.2)	57000	(16.7)	55700	(16.3)
50% RH	Sensible	54100	(15.9)	53600	(15.7)	51400	(15.1)	50900	(14.9)
		CHILLED WATER							
Capacity Data* -BTUH (kW)		5-Ton MMD92C		5-Ton MMD91C					
80 F (26.7 C) DB	Total	94200	(27.6)	94200	(27.6)				
50% RH	Sensible	69800	(20.5)	69800	(20.5)				
75 F (23.9 C) DB	Total	67400	(19.7)	67400	(19.7)				
50% RH	Sensible	58300	(17.1)	58300	(17.1)				
72 F (22.2 C) DB	Total	53900	(15.8)	53900	(15.8)				
50% RH	Sensible	50900	(14.9)	50900	(14.9)				

		60 Hz		50 Hz		60 Hz		50 Hz	
		AIR-COOLED SYSTEM							
		w/Outdoor Condensing Unit				w/Centrifugal Condensing Unit			
Evaporator Condensing Unit		8-Ton MMD96E PDC096A		8-Ton MMD95E PFC095A		8-Ton MMD96E MCD96A		8-Ton MMD95E MCD95A	
Net Capacity Data* -BTUH (kW)									
80 F (26.7 C) DB	Total	100200	(29.4)	96700	(28.3)	95900	(28.1)	93800	(27.5)
50% RH	Sensible	80500	(23.6)	79300	(23.2)	79400	(23.3)	78300	(22.9)
75 F (23.9 C) DB	Total	93100	(27.3)	90200	(26.4)	89500	(26.2)	87400	(25.6)
50% RH	Sensible	78600	(23.0)	77400	(22.7)	77000	(22.6)	76200	(22.3)
72 F (22.2 C) DB	Total	89200	(26.1)	86200	(25.3)	86800	(25.4)	83600	(24.5)
50% RH	Sensible	77200	(22.6)	75900	(22.2)	76500	(22.4)	74900	(21.9)
		WATER COOLED				GLYCOL COOLED			
Evaporator Condensing Unit		8-Ton MMD96E MCD98W		8-Ton MMD95E MCD97W		8-Ton MMD96E MCD98W		8-Ton MMD95E MCD97W	
Net Capacity Data* -BTUH (kW)									
80 F (26.7 C) DB	Total	105000	(30.8)	101100	(29.6)	93000	(27.2)	89600	(26.3)
50% RH	Sensible	83300	(24.4)	81000	(23.7)	77500	(22.7)	76500	(22.4)
75 F (23.9 C) DB	Total	97400	(28.5)	93600	(27.4)	86400	(25.3)	84500	(24.8)
50% RH	Sensible	81300	(23.8)	78700	(23.1)	75000	(22.0)	75600	(22.2)
72 F (22.2 C) DB	Total	93200	(27.3)	89400	(26.2)	84100	(24.6)	81100	(23.8)
50% RH	Sensible	79000	(23.1)	77100	(22.6)	75300	(22.1)	73900	(21.7)
		CHILLED WATER							
Capacity Data* -BTUH (kW)		8-Ton MMD8TC		8-Ton MMD8TC					
80 F (26.7 C) DB	Total	130600	(38.3)	130600	(38.3)				
50% RH	Sensible	98900	(29.0)	98900	(29.0)				
75 F (23.9 C) DB	Total	93400	(27.4)	93400	(27.4)				
50% RH	Sensible	82900	(24.3)	82900	(24.3)				
72 F (22.2 C) DB	Total	72100	(21.1)	72100	(21.1)				
50% RH	Sensible	70500	(20.7)	70500	(20.7)				

*The net capacity data has fan motor heat factored in for all ratings and the entering air condition of 72 °F (22.2 °C), 50% RH is the standard rating condition of ASHRAE 127-1988

WE HELP YOU GET IT RIGHT — RIGHT FROM THE START.

Mini-Mate2™

1 to 8 Tons

Heat Removal

For over 35 years, Liebert has been providing tailored solutions for protecting the operation of critical electronic systems in a variety of industries. From customer premise equipment to global networks, we've used our expertise to tailor the right products, monitoring systems and global service capabilities into a variety of specific solutions.

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