

# MANHATTAN MODULAR CHILLERS



MODULAR CHILLERS TO HUNDREDS OF TONS  
COMPACT MODULES FIT THROUGH MOST DOORS  
AIR-COOLED, WATER COOLED AND SPLIT SYSTEMS  
SCROLL, RECIP OR SCREW COMPRESSORS  
PRECISE CAPACITY CONTROL & REDUNDANCY  
TANKS, PUMPS AND FREE-COOLING MODULES  
ADVANCED MICROPROCESSOR CONTROLS  
REMOTE WEB MONITORING, E-MAIL ALERTS  
HIGHEST QUALITY MODULAR CHILLERS



**Air & Water Cooled  
Chillers for HVAC  
& Process Cooling**

# High Tonnage Chillers - in small spaces.

## “Manhattan Modular<sup>®</sup>” The New Standard of Efficiency.

Continual product development with users and service professionals has resulted in a new generation of ArctiChill’s popular “Manhattan Modular” Chillers. Now, even more compact designs are available, air-cooled and water-cooled, with more capacity and new features. Standard and custom designs to hundreds of tons allow simplified field assembly from small, lightweight modules, fitting into elevators, through access doors and around corners. Microprocessor control systems across all modules allow several stages of compressor unloading to precisely match energy usage to your heat load. Modules are available with cleanable shell & tube or high efficiency brazed plate condensers. Options include Free-Cooling modules, Tank and Pump Systems, Glycol-Feed Systems, VFD Fan Drives and water valves for system efficiency and variable flow schemes.



### Simple Concept - Ultimate Flexibility

#### Design and Installation

- Indoor, outdoor and split designs
- Compact modules fit through doors
- Field-assembly of large systems
- High pressure heat exchangers
- Modules connect easily and quickly
- Single point connections

#### Durable and Dependable

- Corrosion-free epoxy over aluminum
- Multiple independent circuits
- Quick access service panels
- Highest reliability control system
- Inherent component redundancy

#### Operation and Service

- No proprietary training required
- Excellent part-load efficiency
- Isolate & service individual modules
- ModBus compatible interface
- Advanced Web-based monitoring

#### Numerous Options

- Tanks and pumping systems
- Compressor and condenser options
- Variable frequency fan drives
- Glycol-feed and Free-Cooling

### Unparalleled Commitment to Service and Flexibility

Ultimately, our reputation depends on your operational success. By employing the highest quality component selection, assembled and tested by highly skilled technicians, and supported by advanced microprocessor control and communication systems, there is simply no need for second-best - no better choice than ArctiChill. Heavy duty components throughout provide true 350 PSI operation, critical for equipment rooms in high-rise buildings. Scroll, semi-hermetic, screw or centrifugal compressors are available to provide even more precise load and duty matching. Air cooled models can be engineered for high ambient temperatures. Shell & tube heat exchangers allow larger particles to pass through its surfaces, providing the significant advantage of easier serviceability and longer service intervals than with brazed-plate designs. Steel frame minimizes vibration. Mill finished aluminum, or epoxy painted sheet metal panels are easily removable for access. Low noise fans and compressors, sound attenuating access panels are available to meet strict noise level requirements.

# Water-Cooled Modular Chillers

## Efficient and Low Cost



**CONTROLS** - Systems can be equipped with analog or microprocessor controls with remote diagnostics.

**COMPRESSORS** - Scroll, reciprocating and screw compressors provide models from 30 to 120 HP per module.

**HEAT EXCHANGERS** - Standard brazed plate evaporators and condensers. Shell and tube exchangers are optional.

**FILTER SERVICE** - Innovative easy-access-filter allows non-technical personnel to perform routine service in minutes.

**MODULES** - All modules are fully charged and run-tested under load prior to shipment. Connections include single-point electrical and rolled groove couplings for piping.



Seventy-ton screw module

## Superior Engineering By Design



When we launched the design of a new generation of modular chillers, we enlisted the hands-on help of our customers. The result incorporates the most sought after features, some not available from any company, in a low-cost, highly reliable and servicable design. Filter service is now an easy, non-technical process, reducing costs and increasing condenser reliability.

## Know us by the customers we serve and the company we keep

Nothing speaks louder than the trust and long-term loyalty from customers. In a world where competitors are a click away, we know our niche is in creating higher value by producing close performance highly reliable and attractive products using innovative designs, combined with advanced services. We are honored to be a supplier to these and many other fine companies.



**UNITED STATES  
WHITE HOUSE**



**MOTOROLA**  
intelligence everywhere™



*The Coca-Cola Company*



**VARIAN**

**Marriott**



**IMAX**



**EATON**



**Nestlé**

# Air-Cooled "Manhattan Modular"



*"Manhattan Modular" chillers allow easy field assembly of large tonnage systems, without the need for heavy rigging and construction. Quiet operation and highly reliable components and controls provide dependable air-conditioning and more precise load balancing.*

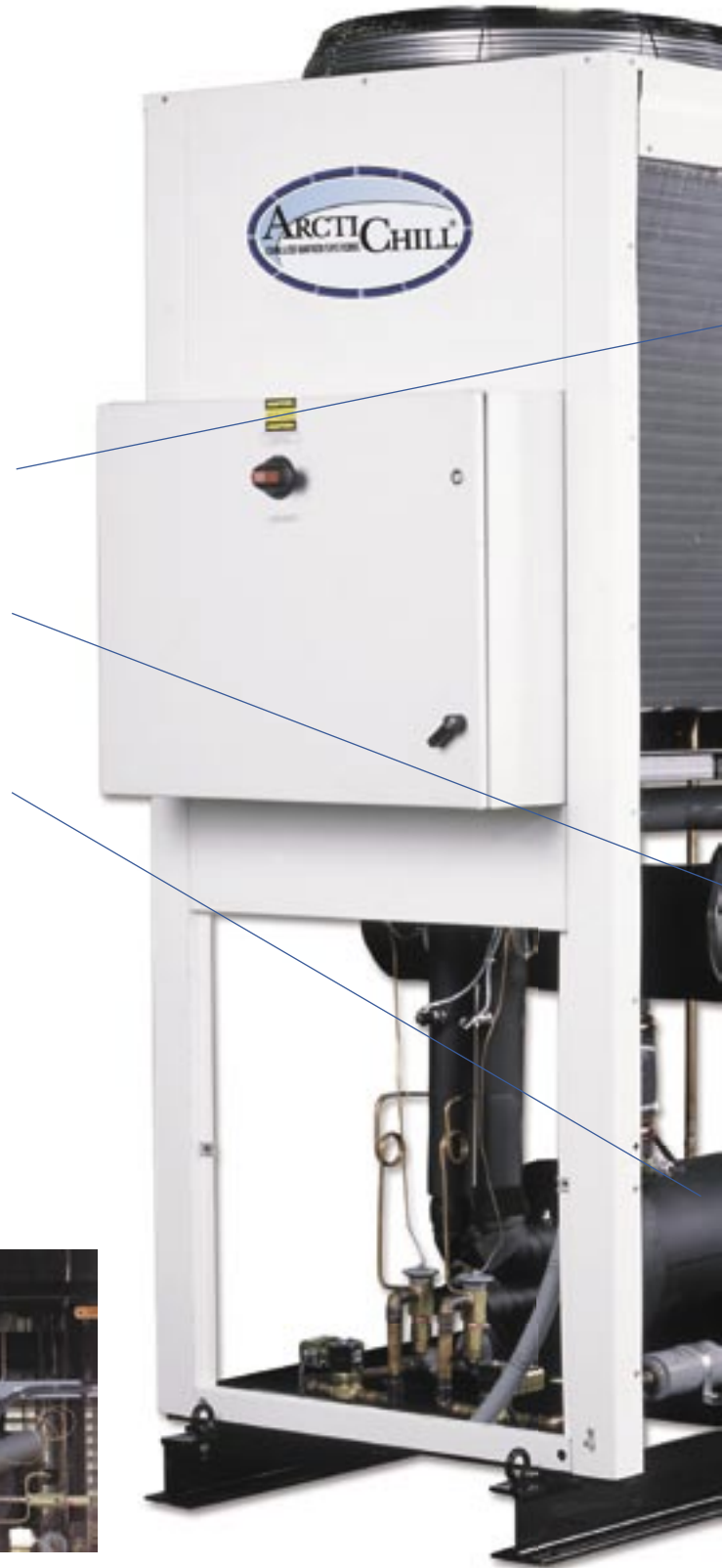
## ArctiChill - Reliability is Built-In!

**High Ambient Condenser Coils** - Means greater efficiency and lower refrigerant head pressures, even on hot building rooftops. Special coatings and low-noise fans are available.

**Choice of Compressors** - Standard designs feature hermetic scroll compressors and semi-hermetics, Screw compressors are also available.

**Shell and Tube Evaporators** - Known for their ability to operate in poor water quality environments where brazed-plate designs quickly become fouled. Large passages allow particulate to pass through the tube bundle. Eliminates frequent filter services. Circuits include equalized expansion valves, liquid line solenoid valve and large filter-dryers.

Standard controls feature single-point electrical connections at the Master Module. Control system is microprocessor based with one master and multiple slave controllers. System monitors all temperatures and pressures, compressor run status, and system alarms. The Master Controller has a 4x20 line display that has function and set point control. Optional VFD fan drives.



# Compact. Serviceable. Expandable. Smart.

*"Manhattan Modular" chillers are compact enough to easily field assemble large systems. Service access is the best of all modular chillers. Individual modules can be isolated without shutting down entire system.*



Frames are heavy duty welded structural steel and epoxy painted with an extra thick coating. Service panels have tool-free recessed hardware. Louvers include animal screens. All Slave Modules are connected to the Master Module which houses centralized controls and power connections for the bank of chillers.

Pumping systems are optional and can include primary and standby with automatic pump lead/lag rotation. Pressurized tank and automatic glycol-feed systems are available.



**Water Manifolds** are schedule 40 steel pipe. Modules are attached using roll-groove couplings. Optional isolation valves.

# Performance & Selections - Air Cooled Scroll Models

20-Ton Air Cooled - LWT	Ambient Air Temperature			
	95°F	100°F	105°F	110°F
40°F	214,100	207,000	201,000	194,200
45°F	234,400	227,600	220,400	213,200
50°F	253,600	246,200	238,800	231,200
55°F	273,600	265,800	258,000	250,000

25-Ton Air Cooled - LWT	Ambient Air Temperature			
	95°F	100°F	105°F	110°F
40°F	252,800	245,100	237,200	229,200
45°F	283,500	272,000	263,500	254,800
50°F	309,500	300,500	291,400	282,200
55°F	334,100	324,700	315,100	305,300

30-Ton Air Cooled - LWT	Ambient Air Temperature			
	95°F	100°F	105°F	110°F
40°F	312,400	302,800	293,200	283,400
45°F	349,600	334,400	329,000	318,200
50°F	382,200	371,200	360,200	348,600
55°F	412,600	400,800	389,000	377,200

# Performance & Selections - Water Cooled Scroll Models

20-Ton Water Cooled - LWT	Condenser Water Temperature				
	75°F	80°F	85°F	90°F	95°F
40°F	240,000	234,000	228,000	222,000	216,000
45°F	264,000	258,000	252,000	246,000	240,000
50°F	292,000	286,000	278,000	272,000	264,000
55°F	320,000	314,000	306,000	298,000	292,000

30-Ton Water Cooled - LWT	Condenser Water Temperature				
	75°F	80°F	85°F	90°F	95°F
40°F	362,000	354,000	344,000	336,000	328,000
45°F	398,000	390,000	380,000	372,000	362,000
50°F	438,000	428,000	418,000	408,000	398,000
55°F	478,000	468,000	458,000	448,000	438,000

40-Ton Water Cooled - LWT	Condenser Water Temperature				
	75°F	80°F	85°F	90 °F	95°F
40°F	470,000	458,000	448,000	438,000	428,000
45°F	518,000	506,000	496,000	484,000	472,000
50°F	570,000	558,000	546,000	534,000	522,000
55°F	628,000	614,000	602,000	588,000	574,000

50-Ton Water Cooled - LWT	Condenser Water Temperature				
	75°F	80°F	85°F	90 °F	95°F
40°F	600,000	586,000	570,000	556,000	540,000
45°F	664,000	648,000	632,000	614,000	598,000
50°F	730,000	714,000	696,000	678,000	662,000
55°F	804,000	784,000	766,000	748,000	728,000

Note: All capacity ratings are in BTUH at varying Leaving Water Temperature, LWT, and condenser water temperature. Capacity is based on R-22 Refrigerant. Air cooled models use scroll compressors. Water cooled models use semi-hermetic compressors. Consult factory for alternative refrigerants.

# Performance & Selections - Water Cooled Screw Models

<b>40-HP Water Cooled - LWT</b>	<b>75°F cond water</b>	<b>80°F cond water</b>	<b>85°F cond water</b>	<b>90°F cond water</b>	<b>95°F cond water</b>
40°F	416,400	406,800	393,350	386,600	376,350
45°F	458,850	448,300	434,000	426,600	415,340
50°F	504,850	493,250	478,000	469,850	457,500
55°F	552,690	539,900	523,700	514,800	501,300
<b>50-HP Water Cooled - LWT</b>	<b>75°F cond water</b>	<b>80°F cond water</b>	<b>85°F cond water</b>	<b>90°F cond water</b>	<b>95°F cond water</b>
40°F	517,840	505,600	489,400	480,980	468,150
45°F	570,900	557,500	541,600	530,750	516,700
50°F	628,460	615,500	596,550	586,360	570,900
55°F	690,290	674,150	653,660	642,550	625,690
<b>60-HP Water Cooled - LWT</b>	<b>75°F cond water</b>	<b>80°F cond water</b>	<b>85°F cond water</b>	<b>90 °F cond water</b>	<b>95°F cond water</b>
40°F	640,150	624,900	606,700	596,200	580,370
45°F	705,900	689,200	669,390	657,900	640,500
50°F	777,000	758,800	737,300	724,700	705,650
55°F	851,300	831,265	807,870	794,150	773,300
<b>70-HP Water Cooled - LWT</b>	<b>75°F cond water</b>	<b>80°F cond water</b>	<b>85°F cond water</b>	<b>90 °F cond water</b>	<b>95°F cond water</b>
40°F	730,650	711,290	680,750	667,780	648,150
45°F	808,150	787,000	753,400	739,300	717,890
50°F	892,000	869,000	832,100	816,700	793,350
55°F	979,350	954,300	913,900	897,170	871,760
<b>80-HP Water Cooled - LWT</b>	<b>75°F cond water</b>	<b>80°F cond water</b>	<b>85°F cond water</b>	<b>90 °F cond water</b>	<b>95°F cond water</b>
40°F	837,400	815,190	780,000	765,000	742,580
45°F	926,000	902,000	863,340	935,550	909,000
50°F	1,022,400	996,000	953,600	935,880	909,000
55°F	1,122,500	1,093,800	1,047,400	1,028,100	998,980
<b>90-HP Water Cooled - LWT</b>	<b>75°F cond water</b>	<b>80°F cond water</b>	<b>85°F cond water</b>	<b>90 °F cond water</b>	<b>95°F cond water</b>
40°F	942,850	917,860	877,900	861,200	835,850
45°F	1,042,860	1,015,600	971,600	953,390	935,930
50°F	1,151,200	1,121,450	1,073,000	1,053,200	1,023,000
55°F	1,263,850	1,232,500	1,178,600	1,156,900	1,124,200
<b>100-HP Water Cooled - LWT</b>	<b>75°F cond water</b>	<b>80°F cond water</b>	<b>85°F cond water</b>	<b>90 °F cond water</b>	<b>95°F cond water</b>
40°F	1,038,500	1,010,980	968,100	950,000	921,700
45°F	1,148,600	1,118,650	1,071,500	1,051,400	1,128,290
50°F	1,267,900	1,235,200	1,183,490	1,181,500	1,128,280
55°F	1,392,000	1,356,470	1,299,870	1,276,000	1,239,850
<b>120-HP Water Cooled - LWT</b>	<b>75°F cond water</b>	<b>80°F cond water</b>	<b>85°F cond water</b>	<b>90 °F cond water</b>	<b>95°F cond water</b>
40°F	1,257,250	1,223,880	1,170,400	1,148,150	1,114,400
45°F	1,390,670	1,354,250	1,295,350	1,295,350	1,234,240
50°F	1,535,200	1,495,500	1,430,650	1,404,000	1,364,000
55°F	1,685,500	1,642,350	1,571,280	1,542,450	1,498,800

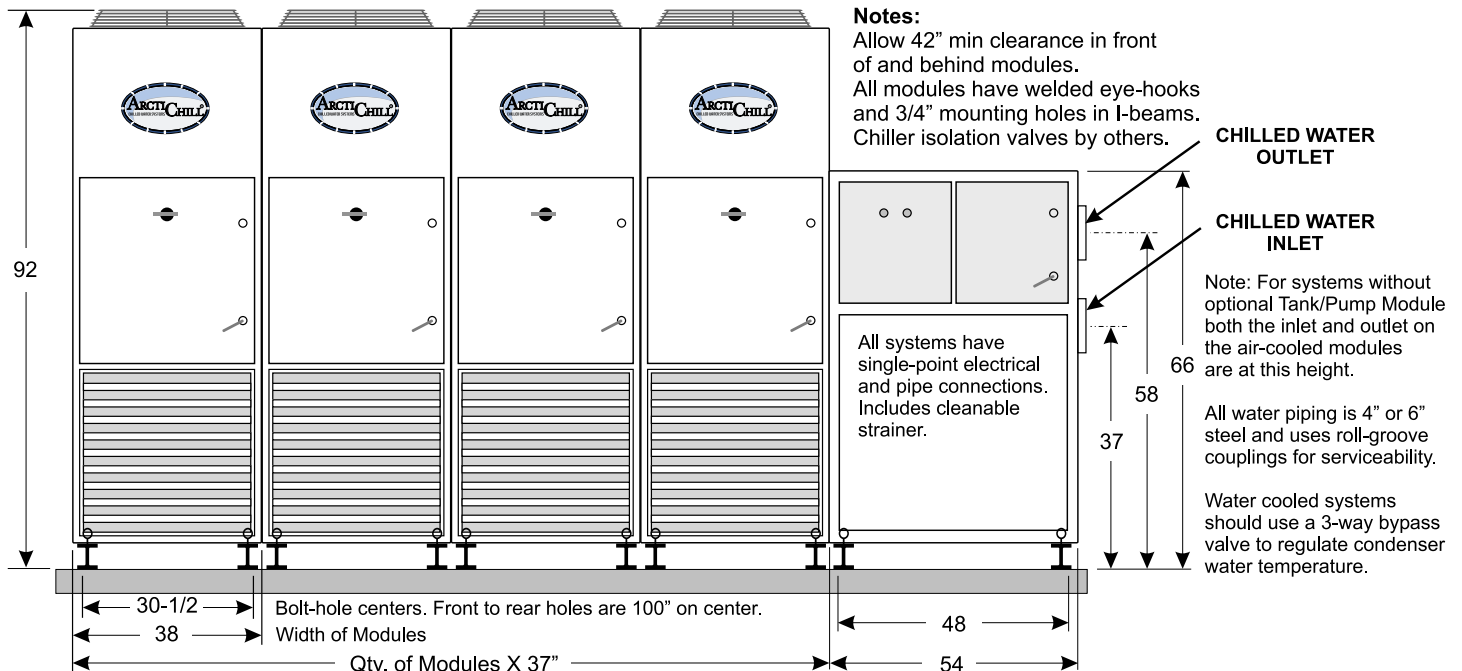
Note: Above models use one screw compressors per module. Consult factory for alternative refrigerants.

# Electrical & Installation - "Manhattan Modular"

Air Cooled Models	Nom Tons	EER kW/Ton	IPLV	Power Supply	Compressors		Fan Motors		Chiller			Installation	
					LRA Amps (ea)	RLA Amps (ea)	Fan HP (ea)	RLA Amps Total	RLA Total	Min Ckt	Max Fuse	Dimensions LxWxH	Wght (Lbs)
PACVMV0200D3-MM	20	11.3 1.06	3.26	208/3/60	251	31.4	(2ea) 1.5	11.6	76.4	85	110	96"x37"x87"	2,400
PACVMV0200D3-MM				230/3/60	222	28.4		10.4	69.2	77	100		
PACVMV0200D4-MM				460/3/60	117	14.2		5.2	35.6	40	50		
PACVMV0250D3-MM	25	10.9 1.10	3.05	208/3/60	350	33.6	(3ea) 1.5	15.6	84.8	94	125	96"x37"x87"	2,800
PACVMV0250D3-MM				230/3/60	350	30.4		14.1	76.9	85	110		
PACVMV0250D4-MM				460/3/60	158	15.2		7.1	39.5	44	50		
PACVMV0300D3-MM	30	11.2 1.07	3.14	208/3/60	475	46.0	(3ea) 1.5	15.6	110	122	150	96"x37"x87"	2,900
PACVMV0300D3-MM				230/3/60	425	42.0		14.1	100	111	150		
PACVMV0300D4-MM				460/3/60	187	21.0		7.1	51.1	56	70		

Water Cooled Scroll Models	Nom Tons	EER kW/Ton	IPLV	Power Supply	Compressors		Chiller			Installation	
					LRA Amps (ea)	RLA Amps (ea)	RLA (Total)	Min Ckt	Max Fuse	Dimensions *Braze Plate **Shell and Tube	Wght (Lbs)
PWCCMV0200D3-MM	20	15.7 0.76	20.3	208/3/60	278	27.6	57.2	64	90	*52"L x 22"W x 74"H **66"L x 24"W x 80"H	1,400
PWCCMV0200D4-MM				460/3/60	127	13.8	29.6	34	45		
PWCCMV0200D5-MM				575/3/60	100	11.1	24.2	27	35		
PWCCMV0300D3-MM	30	15.8 0.75	20.2	208/3/60	425	38.3	78.6	89	125	*52"L x 22"W x 74"H **66"L x 24"W x 80"H	1,500
PWCCMV0300D4-MM				460/3/60	187	19.1	40.2	45	60		
PWCCMV0300D5-MM				575/3/60	148	15.3	32.6	37	50		
PWCCMV0400D3-MM	40	15.3 0.78	19.2	208/3/60	511	48.3	98.6	111	150	*60"L x 32"W x 78"H **78"L x 24"W x 80"H	1,550
PWCCMV0400D4-MM				460/3/60	225	24.1	50.2	57	80		
PWCCMV0400D5-MM				575/3/60	178	19.3	40.6	46	60		
PWCCMV0500D3-MM	50	16.1 0.74	21.3	208/3/60	568	69	140	157	225	*60"L x 32"W x 68"H **78"L x 24"W x 80"H	1,650
PWCCMV0500D4-MM				460/3/60	250	31.2	64.4	73	100		
PWCCMV0500D5-MM				575/3/60	198	25.0	52.0	59	80		

Note: Nominal tons based on R-22, 45°F LWT and 95°F ambient air. All modules have two compressors. Evaporator pressure drop for all models is less than 10 psi. Chiller flow based on 2.4 GPM/ton. Water cooled condenser flow based on 3 GPM/ton at 85°F.





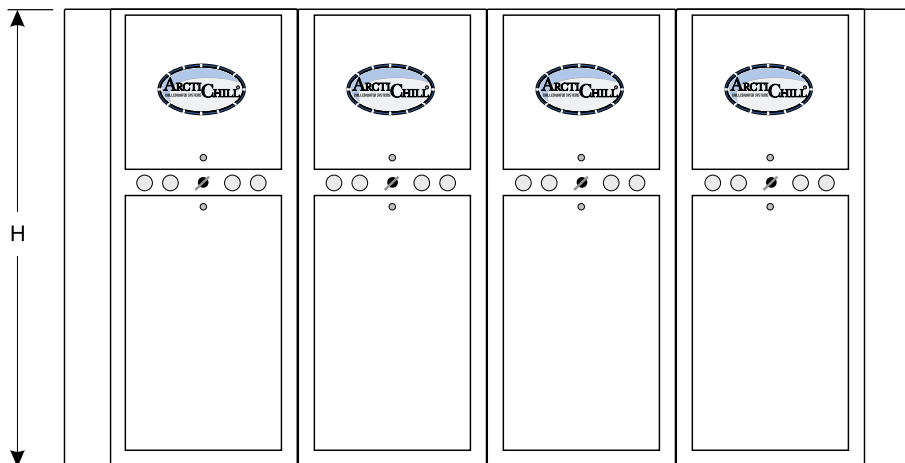
# Electrical & Installation - "Manhattan Modular"

Water Cooled Screw Models	HP	EER kW/Ton	IPLV	Power Supply	Compressor		Chiller			Installation	
					LRA Amps	RLA Amps	RLA (Total)	Min Ckt	Max Fuse	Dimensions	Wght (Lbs)
PWCCMV0400D3-MM	40	14.5 0.85	16.7	208/3/60	335	102.6	104.6	130	200	72"L x 32"W x 72"H	2,750
PWCCMV0400D3-MM				230/3/60	335	92.8	94.8	118	200		
PWCCMV0400D4-MM				460/3/60	194	52.7	54.7	68	110		
PWCCMV0400D5-MM				575/3/60	155	42.2	44.2	55	100		
PWCCMV0500D3-MM	50	15.7 0.79	16.9	208/3/60	377	125.5	127.5	159	250	72"L x 32"W x 72"H	2,950
PWCCMV0500D3-MM				230/3/60	377	113.5	115.5	144	250		
PWCCMV0500D4-MM				460/3/60	218	63.8	65.8	82	110		
PWCCMV0500D5-MM				575/3/60	175	51.0	53.0	66	100		
PWCCMV0600D3-MM	60	15.1 0.79	17.1	208/3/60	420	167.3	169.3	211	300	72"L x 32"W x 72"H	3,050
PWCCMV0600D3-MM				230/3/60	420	151.3	153.3	191	300		
PWCCMV0600D4-MM				460/3/60	243	85.0	87.0	109	150		
PWCCMV0600D5-MM				575/3/60	195	68.0	70.0	88	150		
PWCCMV0700D3-MM	70	14.7 0.81	18.1	208/3/60	489	179.5	181.5	227	300	72"L x 32"W x 72"H	4,000
PWCCMV0700D3-MM				230/3/60	489	162.3	164.3	205	300		
PWCCMV0700D4-MM				460/3/60	283	91.2	93.2	117	200		
PWCCMV0700D5-MM				575/3/60	226	72.9	74.9	94	175		
PWCCMV0800D3-MM	80	14.35 0.83	17.7	208/3/60	576	219.5	221.5	275	400	72"L x 32"W x 72"H	4,150
PWCCMV0800D3-MM				230/3/60	576	198.5	200.5	250	400		
PWCCMV0800D4-MM				460/3/60	333	111.5	113.5	141	250		
PWCCMV0800D5-MM				575/3/60	266	89.2	91.2	114	200		
PWCCMV0900D3-MM	90	14.9 0.81	17.9	208/3/60	688	243.6	245.6	304	500	78"L x 34"W x 78"H	4,700
PWCCMV0900D3-MM				230/3/60	688	220.3	222.3	278	400		
PWCCMV0900D4-MM				460/3/60	398	123.8	125.8	156	250		
PWCCMV0900D5-MM				575/3/60	318	99.0	101.0	127	225		
PWCCMV1000D4-MM	100	14.2 0.84	17.0	460/3/60	499	131.2	133.2	166	250	78"L x 34"W x 78"H	4,700
PWCCMV1000D5-MM				575/3/60	399	105	107	134	250		
PWCCMV1200D4-MM	120	15.9 0.75	18.1	460/3/60	634	151	153	191	300	78"L x 34"W x 78"H	5,400
PWCCMV1200D5-MM				575/3/60	507	121	123	154	275		

## Water Cooled Models

Allow 36" min clearance in front of and behind modules for service.

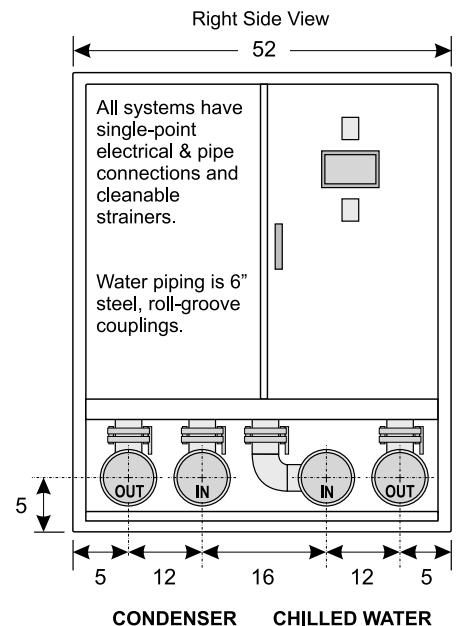
Models 90-120 tons are 78" tall.  
Shell & Tube models are 68" deep



20-1/2" Bolt-hole centers. Front to rear holes are xx" on center.

W Width of Modules

9-1/2" Electrical connections, fuse blocks, condenser flush system, on end modules.



# Adjustment Factors - “Manhattan Modular”

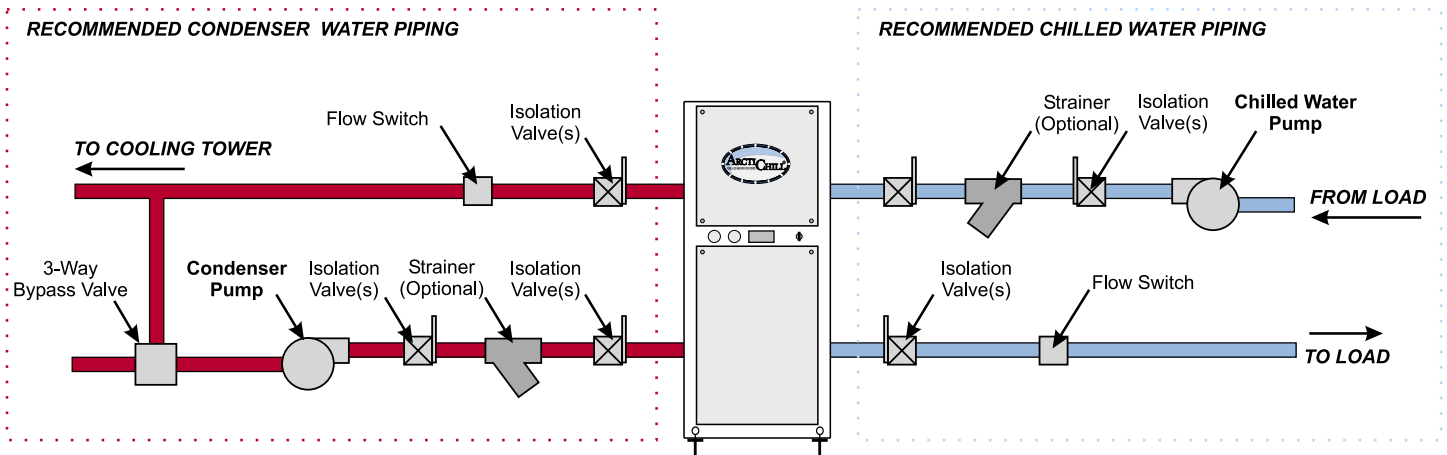
Leaving Water Temp LWT	30% Propylene Glycol		40% Propylene Glycol		50% Propylene Glycol	
	Capacity Factor	Pressure Drop Factor	Capacity Factor	Pressure Drop Factor	Capacity Factor	Pressure Drop Factor
20°F	-	-	0.80	1.74	0.74	2.07
30°F	0.92	1.39	0.87	1.63	0.82	1.94
40°F	0.93	1.36	0.89	1.55	0.85	1.83
45°F	0.94	1.35	0.90	1.53	0.87	1.81
50°F	0.94	1.33	0.91	1.51	0.88	1.75
55°F	0.95	1.31	0.92	1.50	0.89	1.73
60°F	0.95	1.31	0.92	1.47	0.90	1.68
70°F	0.96	1.27	0.93	1.43	0.91	1.63

Note: Minimum LWT for 30% PG is 25°F; 40% PG is 10°F; 50% PG is -10°F  
 Minimum ambient air temp for air cooled models: 30% PG is 10°F; 40% PG is -4°F; 50% PG is -20°F  
 Consult factory for applications where the LWT is below 20°F

Leaving Water Temp LWT	30% Ethylene Glycol		40% Ethylene Glycol		50% Ethylene Glycol	
	Capacity Factor	Pressure Drop Factor	Capacity Factor	Pressure Drop Factor	Capacity Factor	Pressure Drop Factor
20°F	0.92	1.39	0.89	1.61	0.86	1.86
30°F	0.96	1.34	0.93	1.53	0.90	1.78
40°F	0.96	1.33	0.94	1.52	0.92	1.74
45°F	0.96	1.33	0.94	1.51	0.93	1.72
50°F	0.96	1.31	0.95	1.49	0.93	1.69
55°F	0.96	1.31	0.95	1.47	0.94	1.67
60°F	0.97	1.31	0.96	1.47	0.94	1.65
70°F	0.97	1.27	0.96	1.49	0.95	1.62

Note: Minimum LWT for 30% EG is 20°F; 40% EG is 5°F; 50% EG is -15°F  
 Minimum ambient air temp for air cooled models: 30% EG is 5°F; 40% EG is -9°F; 50% EG is -28°F  
 Consult factory for applications where the LWT is below 20°F

## Field Installation - Recommended Piping



Note: Sensor ports for chilled water system are furnished within each air-cooled module. Inlet and outlet chilled water temperature can be read from the microprocessor interface. Water cooled modules include ports for reading pressure or temperature at the chiller and condenser water inlets. Water cooled modules have easy-access filters and pressure ports to facilitate pressure differential readings. Only system isolation valves are suggested. Isolation between modules is not required. All external components by contractor.

# Standard & Custom Specifications - “Manhattan Modular”

Component	Standard Specifications	Optional Specifications
<b>Cabinet</b>	Welded steel frame, primed and epoxy painted. Reinforced white epoxy painted aluminum panels with easy access hardware. Water cooled and split systems can pass through 34” doors. Adjacent modules connected using heavy steel headers with rolled groove couplings.	<ul style="list-style-type: none"> <li>• Stainless steel access panels</li> <li>• Sound attenuating access panels</li> <li>• Smaller enclosure sizes</li> <li>• Engineered frames to accommodate special size restrictions</li> </ul>
<b>Controls and Safeties</b>	Microprocessor controller monitors temperatures and pressures. Manual reset high and auto reset low refrigerant safeties. Alternating lead/lag with anti short cycle compressors. Power supply monitor. Keypad interface for set points, temperatures, pressures and alarms. Dual pump lead/lag operation. Modules can be run with full safeties independent of master controller.	<ul style="list-style-type: none"> <li>• Dual pump lead/lag controls</li> <li>• Flooded head pressure controls</li> <li>• Web-based monitoring &amp; alerting</li> <li>• MODBUS or BACNET interface</li> <li>• Up to 16 compressors for load matching</li> </ul>
<b>Electrical</b>	Models can be specified for 208-230, 460, 575 or 380 Volts with 50 or 60 Hz three phase operation. 24 volt control circuit. Single point power connections. Master Module has fuse blocks for all modules and conduit between modules.	<ul style="list-style-type: none"> <li>• Panel or remote disconnect</li> <li>• Single phase for large models</li> <li>• Special voltages</li> </ul>
<b>Indicators</b>	Chiller run status, compressor run hours, active alarm indication, alarm logging of previous 100 alarms. Water temperature and refrigerant pressure readouts.	<ul style="list-style-type: none"> <li>• Dry contacts for building automation systems</li> <li>• Remote panel with flow, temp, and pressures indicators</li> <li>• Web-based monitoring &amp; alerting</li> </ul>
<b>Refrigeration</b>	Two independent HCFC R-22 circuits include filter dryer. Service valves for isolation service and pump down are provided. HFC refrigerants available.	<ul style="list-style-type: none"> <li>• Alternate refrigerants</li> <li>• Hot gas bypass capacity control</li> <li>• Semi-hermetic compressors with staged capacity control</li> </ul>
<b>Air Cooled Condensers</b>	Enhanced seamless copper tubing. Mechanically bonded aluminum fins. Integral subcooling. Overload protected TEAO fan motors. Aluminum fans.	<ul style="list-style-type: none"> <li>• Coated or copper fins for corrosion</li> <li>• Free cooling module</li> <li>• High ambient and altitude designs</li> <li>• Low noise fans</li> </ul>
<b>Water Cooled Condensers</b>	Brazed Plate standard. Shell and Tube available for serviceability and increased particle tolerance. Seamless, enhanced surface copper tubing on shell and tube.	<ul style="list-style-type: none"> <li>• Special construction materials</li> <li>• High pressure designs</li> <li>• External 3-way water regulating valve</li> </ul>
<b>Evaporators</b>	Dual circuit Brazed Plate standard on water cooled. Direct expansion shell & tube standard on air cooled. Other configurations available. Evaporators include closed cell insulation.	<ul style="list-style-type: none"> <li>• Special construction materials</li> <li>• Options for low ambients</li> </ul>
<b>Compressors</b>	Hermetic scroll standard, semi-hermetic reciprocating or screw available. Internal overload protection. Crankcase heaters and service valves.	<ul style="list-style-type: none"> <li>• Semi-hermetic compressors for rugged, rebuildable operation and unloading. Other compressors available.</li> </ul>
<b>Piping</b>	Refrigerant piping is rigid copper with service valves. Insulated suction lines. Water circuit is insulated steel piping with roll-groove couplings for leak free service. Includes unique easy-access water filter system.	<ul style="list-style-type: none"> <li>• Alternative materials for special fluids and corrosion resistance</li> <li>• Automatic timed condenser header blowdown ports and controls.</li> <li>• Water valves to heat exchangers for energy efficiency and variable flow.</li> </ul>
<b>Warranty and Certifications</b>	One year parts, five year limited compressor warranty. ETL Listed. MEA-386-92E for metropolitan New York.	<ul style="list-style-type: none"> <li>• Extended parts &amp; labor warranty</li> <li>• Guaranteed emergency response</li> <li>• Factory start-up and maintenance</li> </ul>

# Refrigeration. Pumping. Controls - a Total Resource

**Medical Chillers** - Mission-critical chillers for cooling MRI's, CAT Scanners and Linear Accelerators used for cancer treatment. Models are engineered to meet and exceed OEM specifications. Self-contained packages can include tanks and pumps, component redundancy, automatic city-water switchover, de-ionized water control and advanced remote monitoring. Systems can be configured as water-cooled, air-cooled or split-systems with remote condensers. Higher pressure pumping, assured temperature stability and reliable microprocessor controls are standard features. Medical equipment OEMs recognize ArctiChill as a world-class provider of highly reliable chillers and pumping systems for their critical duty equipment.

*Model shown is a two-ton package with complete redundancy.*



**Process Chillers** - Standard and custom chillers for virtually any application. ArctiChill is specified when overall reliability is paramount. With experience in military, government, and industrial process cooling requirements, we can provide the right equipment - including integral or remote pumping, analog or PLC controls, data-logging, low-temperature, low ambient or low noise requirements.

*Model shown is a fifty-ton package with data-logging for a large military and commercial aircraft manufacturer*

**Engineered Process Cooling** - Process cooling often requires specialized refrigeration, filtration and pumping. We specialize in niche applications where equipment must be highly reliable and engineered to work with other equipment seamlessly.

*Model at right is a 25-ton transportable package for the military. A number of these chillers are deployed around the world for Navy Fighter Maintenance. Below is the filtration and pumping station for the US Pentagon. System includes UV and fine filtration of drinking water for government leaders.*



**ArctiChill is now part of the Freeze Co family of companies, a multi-national provider of refrigeration and process cooling equipment, installation and service. Large efficient systems are a specialty.**

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