

# CHILLED WATER SYSTEM

HYDRO TECHNOLOGY

VRA

AMAC-A/B

A5MAC-D

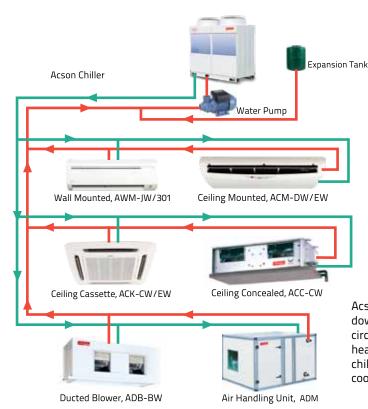
AWGZ-B

AMAC-C/A4AC-C/A5AC-CR



# **CHILLED WATER SYSTEM**

# **Hydro Technology**



Acson Chilled Water System works by using air to cool down the refrigerant circuit. The cooled refrigerant is then circulated to a Brazed Plate Heat Exchanger (BPHE) where heat exhange takes place to cool down the water. The chilled water is then circulated to the Fan Coil Unit (FCU) for cooling in desired place.

# **Common Features**

## Long Piping Applications

Unlike normal Direct Expansion system with constraints in piping design and installation, Acson Chilled Water System allows for long piping application by correct pump sizing. All refrigerant circuit is within the system making it no risk of leakage in building and no oil return issue.

#### Partial Loading

Acson Chilled Water System is designed with two or more separate refrigerant circuits with multiple compressors. By doing so, the unit has part load capabilities. This will improve the reliability and energy efficiency especially during low loading operations.

- \* Mini Chiller Applicable for AMAC80-150C
- \*\* Modular Chiller Applicable for AMAC160A~1600A, AMAC260B~2600B, A5MAC210D~3360D, A5MAC230D~3680D & A5MACY 230E~A5MACY 3680E

#### Time and Cost Saving

As the unit is fully assembled in the factory and pass through a series of stringent quality control and assurance processes, mind is rest assured when installing the system. Refrigerant is also precharged to reduce the hustle of field charging and cost saving.

#### Brazed Plate Heat Exchanger

The heat exchanger is made of AISI 316 stainless steel plates closely arranged and brazed together to maximize heat exchange for higher efficiency.



#### R407C & R410A

Environmental friendly R407C & R410A refrigerant system with zero Ozone Depletion Potential (ODP) is available upon request.

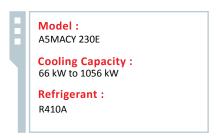
#### Compact Size

The Chilled Water System is so compact that it can be integrated perfectly with any architectural design, making it an ideal choice for house, office, restaurant and shop.

# AIR COOLED MODULAR CHILLER INVERTER E Series





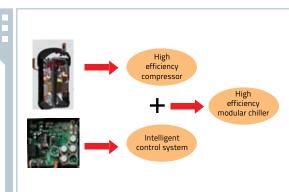


Acson is committed to offer the new high efficiency inverter air- cooled modular chiller that meets the challenging need of today's market. With advanced technology, it combines both the benefits of R410A refrigerant and inverter in 1 united body. It is proper designed to provide the best coefficient of performance by option of using variable speed compressor instead of fixed-speed compressor to ensure the end product is compatible with various applications. Air-cooled Modular Chiller Inverter E Series is surely a people oriented solution for the next generation.

# **Features**

# R410A leading-edge Inverter Technology

By advanced DC inverter technology, it provides the outstanding energy efficient performance. The module is equipped with a DC inverter compressor and fan motor, as well as intelligent inverter control system. The inverter driven feature multi speed driven compressors precisely match their output capacity according to load requirement, so that the module is always maintain at optimal energy efficiency operation.



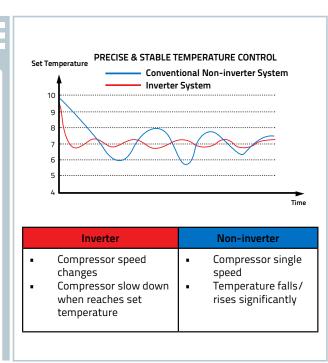
## More Efficient

R410 inverter air-cooled modular chiller adopts the extreme DC inverter Hermetic Scroll Compressors technology. Significantly greater efficiency with IPLV as high as 4.38 and COP up to 3.39, it is making a new breakthrough in energy saving.



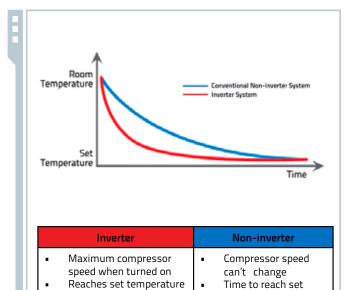
## Precise Temperature Control

The unique Inverter keeps room temperature stable by controlling the compressor at variable speed with minimum temperature fluctuation. Thus, each unit auto adaptive to real capacity needs for a high level of comfort.



## Rapid Cooling

Utmost operation performance shorter cooling time



temperature depend

on heat gain

#### Low inrush Current

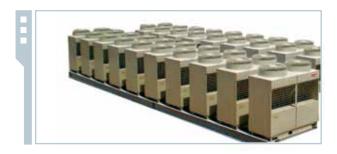
faster

Inverter driven compressor requires lower starting torque which features soft start to ensure a smooth ramp up profile without withdrawing high current. This aspect avoid peak fluctuation that potential to harm sensitive equipment and no need of expensive additional components for power factor correction.



## Expandable Capacity

The beauty of modular design feature new levels of unit compact in size and configuration which facilitates flexibility in expands of capacity for building extension by arbitrary combination up to 16 units to cater to additional cooling requirements.



## Redundant Operation

Redundancy feature back up capacity and capabilities to continue to run given a component failure. Fault of any unit can be isolated for service and will not affect the normal operation of other units.



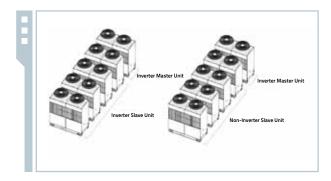
### Diverse System Solution

#### Fully inverter modules

[Inverter master unit + N × Inverter slave unit]

#### Mix modules

[Inverter master unit + N  $\times$  Non-Inverter slave unit]



## Supply Fresh Air Regulation

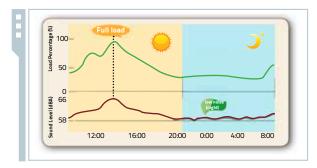
Able to couple with different Air Handling Unit (AHU) and Fan Coil Unit (FCU) which fresh air can be easily introduce from outside and extract stale air to the outside thus improve Indoor Air Quality (IAO).

#### Relative Humidity Control

Control of temperature and relative humidity can be achieved precisely by adding accessories such as heating coil, electrical heater and Precision Air-conditioner.

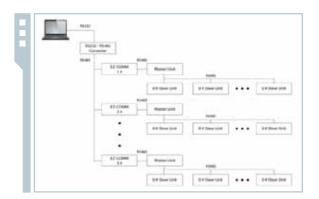
## Practically silent operation

The inverter sound performance introduces sound level as low as 58dBA with respect to conventional unit. At part-load conditions, typical at the night, the inverter device adjust speed variation to have lower sound levels than conventional on-off compressor systems in both running and start-up periods.



#### Ez-Comm for ModBus Communication

The Ez-Comm is a data converter that coordinates Acson modular chiller unit control system and controls inter-system communications based on the ModBus communication protocol. It automatically converts the internal communication protocol of Acson modular chiller unit into the ModBus communication protocol to ensure that the unit is connected to the BAS system that is based on the ModBus RTU communication protocol and uses the RS485 communication mode.



## A5MACY 230E - A5MACY 1380E (R410A)

Model			A5MACY 230E	A5MACY 460E	A5MACY 690E	A5MACY 920E	A5MACY 1150E	A5MACY 1380E		
Naminal Casling Consider		BTU/h	225,255	450,510	675,765	901,020	1,126,275	1,351,530		
Nominal Cooling Capacity		W	66,018	132,037	198,055	264,074	330,092	396,111		
Nominal Total Input Power		W	19,500	39,000	58,500	78,000	97,500	117,000		
Nominal Running Current		А	39.2	78.4	117.6	156.8	196.0	235.2		
EER BTU/h/W W/W					11	.55				
					3.	39				
Power Source		V/Ph/Hz		380 - 415 / 3 / 50						
Control			EXV							
Sound Pressure Level		dBA	58 - 66	61 - 69	63 - 71	64 - 72	65 - 73	66 - 74		
Water Flow Rate		l/s (m³/h)	3.17 (11.4)	6.33 (22.8)	9.5 (34.20)	12.64 (45.6)	15.83 (570)	19 (68.4)		
	Height	mm (in)	1,840 (72.44)							
Unit Dimension	Width	mm (in)			1, 990	(78.35)				
	Depth	mm (in)	845 (33.3)	2,090 (82.3)	3,335 (131.3)	4,580 (180.3)	5,825 (229.3)	7,070 (278.3)		
Net Weight		kg (lb)	565 (1,245.61)	1,130 (2,491.22)	1,695 (3,736.83)	2,260 (4,982.44)	2,825 (6,228.05)	3,390 (7,473.66)		
Gross Weight		kg (lb)	605 (1,333.80)	1,210 (2,667.59)	1,815 (4,001.39)	2,420 (5,335.18)	3,025 (6,668.98)	3,630 (8,002.77)		
Operating weight		kg (lb)	575 (1,267.66)	1,150 (2,535.31)	1,725 (3,802.97)	2,300 (5,070.63)	2,875 (6,338.28)	3,450 (7,605.94)		
Refrigerant					R4	10A				

- 1. All specifications are subjected to change by the manufacturer without prior notice.
- 2. Nominal cooling capacity are based on the conditions below:

  Cooling: 12°C / 7°C entering / leaving evaporator water temperature, 35°C air ambient tempeature.

# AIR COOLED MODULAR CHILLER A/B & D Series



Model:
A5MAC 210D - 3360D

Cooling Capacity:
66 kW to 960 kW

Refrigerant:
R410A

Model:
A5MAC 230D - 3680D

Cooling Capacity:
65 kW to 1040 kW

Refrigerant:
R410A



Model:
AMAC 160A - 1600A

Cooling Capacity:
46 kW to 460 kW

Refrigerant:
R22

Model:
AMAC 260B - 2600B

Cooling Capacity:
78 kW to 780 kW

Refrigerant:
R22

## **Features**

#### Modular Design

The modular chiller allows for combination of up to 10 base modules unit for A,B Series and up to 16 base modules unit for D series where each module can be connected to form a much larger system.

Base Module	AMAC 160A	AMAC 260B		
	AMAC 320A	AMAC 520B		
	AMAC 480A	AMAC 780B		
	AMAC 640A	AMAC 1040B		
Modular	AMAC 800A	AMAC 1300B		
Chiller	AMAC 960A	AMAC 1560B		
A/B Series	AMAC 1120A	AMAC 1820B		
	AMAC 1280A	AMAC 2080B		
	AMAC 1440A	AMAC 2340B		
	AMAC 1600A	AMAC 2600B		

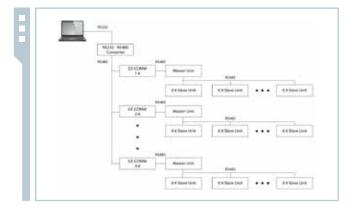
Base Module	A5MAC 210D	A5MAC 230D
	A5MAC 420D	A5MAC 460D
	A5MAC 630D	A5MAC 690D
	A5MAC 840D	A5MAC 920D
	A5MAC 1050D	A5MAC 1150D
	A5MAC 1260D	A5MAC 1380D
	A5MAC 1470D	A5MAC 1610D
Modular	A5MAC 1680D	A5MAC 1840D
Chiller D	A5MAC 1890D	A5MAC 2070D
Series	A5MAC 2100D	A5MAC 2300D
	A5MAC 2310D	A5MAC 2530D
	A5MAC 2520D	A5MAC 2760D
	A5MAC 2730D	A5MAC 2990D
	A5MAC 2940D	A5MAC 3220D
	A5MAC 3150D	A5MAC 3450D
	A5MAC 3360D	A5MAC 3680D

## Intelligent Control System with Safety Protection

An user friendly intelligent control system is built into the modular chiller. Microchip and large-scaled LCD display are employed to make the control swift and easy. The modular chiller is equipped with a series of safety control including the high/low pressure switch to ensure safe operation .

### Ez-Comm for ModBus Communication

The Ez-Comm is a data converter that coordinates Acson modular chiller unit control system and controls inter-system communications based on the ModBus communication protocol. It automatically converts the internal communication protocol of Acson modular chiller unit into the ModBus communication protocol to ensure that the unit is connected to the BAS system that is based on the ModBus RTU communication protocol and uses the RS485 communication mode.



## Low Noise Operation

The specially designed spiral blades ensure smooth air flow, significantly reducing the turbulence and lowering sound level.





# AMAC 160A - AMAC 960A (R22)

Model			AMAC160A	AMAC320A	AMAC480A	AMAC640A	AMAC800A	AMAC960A	
Naminal Canadia		BTU/h	157,000	314,000	471,000	628,000	785,000	942,000	
Nominal Capacity		W	46,000	92,000	138,000	184,000	230,000	276,000	
Nominal Total Input Power		W	17,200	34,400	51,600	68,800	86,000	103,200	
Nominal Running Current		А	30.70	61.40	92.10	122.80	153.50	184.20	
BTU/h/W				Ġ	9.13				
EER W/W					2	2.67			
Power Source	V/Ph/Hz		380 - 415 / 3 / 50						
Control			CAPILLARY TUBE						
Sound Level Pressure		dBA	67	70	72	73	74	75	
Water Flow Rate		l/s (m³/h)	2.2 (7.9)	4.4 (15.8)	6.6 (23.7)	8.8 (31.6)	11.0 (39.50)	13.2 (47.4)	
	Height	mm (in)	1,843 (72.56)						
Unit Dimension	Width	mm (in)			1,820	(71.65)			
	Depth	mm (in)	1,091 (42.95)	2,091 (82.32)	3,091 (121.69)	4,091 (161.06)	5,091 (200.43)	6,091 (239.80)	
Net Weight		kg (lb)	620 (1,366.87)	1,240 (2,733.73)	1,860 (4,100.60)	2,480 (5,467.46)	3,100 (6,834.33)	3,720 (8,201.20)	
Gross Weight	kg (lb)	670 (1,477.10)	1,340 (2,954.19)	2,010 (4,431.29)	2,680 (5,908.39)	3,350 (7,385.49)	4,020 (8,862.58)		
Operating Weight kg (lb)			640 (1,410.96)	1,280 (2,821.92)	1,920 (4,232.88)	2,560 (5,643.83)	3,200 (7,054.79)	3,840 (8,465.75)	
Refrigerant						R22			

Arbitrary combination up to 10 modules

## AMAC 260B - AMAC 1560B (R22)

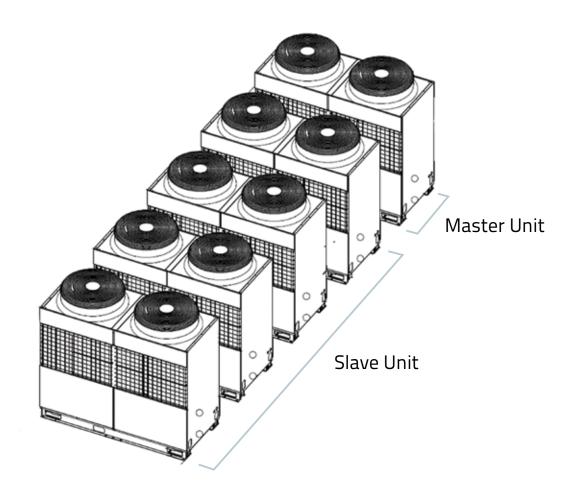
Model			AMAC260B	AMAC520B	AMAC780B	AMAC1040B	AMAC1300B	AMAC1560B			
Name in all Comparison		BTU/h	266,000	532,000	798,000	1,064,000	1,330,000	1,596,000			
Nominal Capacity		W	78,000	156,000	234,000	312,000	390,000	468,000			
Nominal Total Input Power		W	26,100	52,200	78,300	104,400	130,500	156,600			
Nominal Running Current		А	49.10	98.20	147.30	196.40	245.50	294.60			
BTU/h/W				1	0.19						
EER W/W					2	2.99					
Power Source	V/Ph/Hz	380 - 415 / 3 / 50									
Control	Control				TXV						
Sound Level Pressure		dBA	68	71	73	74	75	76			
Water Flow Rate		l/s (m³/h)	3.72 (13.39)	7.44 (26.80)	11.16 (40.30)	14.88 (53.60)	18.6 (66.96)	22.3 (80.35)			
	Height	mm (in)			2,256	5 (88.82)					
Unit Dimension	Width	mm (in)			2,056	5 (80.94)					
	Depth	mm (in)	1,263 (49.72)	2,416 (95.12)	3,569 (140.51)	4,722 (185.91)	5,875 (231.30)	7,028 (276.69)			
Net Weight kg (lb)			910 (2,006.21)	1,820 (4,012.41)	2,730 (6,018.62)	3,640 (8,024.83)	4,550 (10,031.03)	5,460 (12,037.24)			
Gross Weight	kg (lb)	960 (2,116.44)	1,920 (4,232.88)	2,880 (6,349.31)	3,840 (8,465.75)	4,800 (10,582.19)	5,760 (12,698.62)				
Operating Weight	kg (lb)	960 (2,116.44)	1,860 (4,100.60)	2,790 (6,150.90)	3,720 (8,201.20)	4,650 (10,251.50)	5,580 (12,301.79)				
Refrigerant					-	R22					

<sup>1.</sup> All specifications are subjected to change by the manufacturer without prior notice.2. Nominal cooling capacity are based on the conditions below: Cooling: 12°C / 7°C entering/ leaving evaporator water temperature, 35°C air ambient tempeature.

# A5MAC 210D - A5MAC1260D (R410A)

Model			A5MAC 210D	A5MAC 420D	A5MAC 630D	A5MAC 840D	A5MAC 1050D	A5MAC 1260D		
Nominal Canacity		BTU/h	205,000	410,000	615,000	820,000	1,025,000	1,230,000		
Nominal Capacity		W	60,000	120,000	180,000	240,000	300,000	360,000		
Nominal Total Input Power		W	18,800	37,600	56,400	75,200	94,000	112,800		
Nominal Running Current		А	35.50	71.00	106.50	142.00	177.50	213.00		
EER BTU/h/W					1	0.90				
					3	3.19				
Power Source		V/Ph/Hz		380-415 / 3 / 50						
Control			EXV							
Sound Level Pressure		dBA	66	69	71	72	73	74		
Water Flow Rate		1/s (m³/h)	2.86 (10.3)	5.72 (20.6)	8.58 (30.9)	11.44 (41.2)	14.3 (51.5)	17.16 (61.8)		
	Height	mm (in)	1,840 (72.44)							
Unit Dimension	Width	mm (in)			1,990	(78.35)				
	Depth	mm (in)	845 (33.3)	2,090 (82.3)	3,335 (131.3)	4,580 (180.3)	5,825 (229.3)	7,070 (278.3)		
Net Weight		kg (lb)	520 (1,146.40)	1,040 (2,292.81)	1,560 (3,439.21)	2,080 (4,585.62)	2,600 (5,732.02)	3,120 (6,878.42)		
Gross Weight		kg (lb)	570 (1,256.63)	1,140 (2,513.27)	1,710 (3,769.90)	2,280 (5,026.54)	2,850 (6,283.17)	3,420 (7,539.81)		
Operating Weight	kg (lb)	540 (1,190.50)	1,080 (2,380.99)	1,620 (3,571.49)	2,160 (4,761.98)	2,700 (5,952.48)	3,240 (7,142.98)			
Refrigerant					R	410A				

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   Nominal cooling capacity are based on the conditions below:
   Cooling: 12°C / 7°C entering/ leaving evaporator water temperature, 35°C air ambient tempeature.



# A5MAC 230D - A5MAC1380D (R410A)

Model			A5MAC230D	A5MAC460D	A5MAC690D	A5MAC920D	A5MAC1150D	A5MAC1380D				
Naminal Canadia		BTU/h	222,000	444,000	666,000	888,000	1,110,000	1,332,000				
Nominal Capacity		W	65,000	130,000	195,000	260,000	325,000	390,000				
Nominal Total Input Power		W	19,200	38,400	57,600	76,800	96,000	115,200				
Nominal Running Current		А	36.90	73.80	110.70	147.60	184.50	221.40				
BTU/h/W				1	1.56							
EER W/W					3	3.39						
Power Source		V/Ph/Hz		380-415 / 3 / 50								
Control	Control				EXV							
Sound Level Pressure		dBA	66	69	71	72	73	74				
Water Flow Rate		1/s (m³/h)	3.11 (11.2)	6.22 (22.4)	9.33 (33.6)	12.44 (44.8)	15.55 (56)	18.66 (67.2)				
	Height	mm (in)	1,840 (72.44)									
Unit Dimension	Width	mm (in)			1,990	(78.35)						
	Depth	mm (in)	845 (33.3)	2,090 (82.3)	3,335 (131.3)	4,580 (180.3)	5,825 (229.3)	7,070 (278.3)				
Net Weight		kg (lb)	520 (1,146.40)	1,040 (2,292.81)	1,560 (3,439.21)	2,080 (4,585.62)	2,600 (5,732.02)	3,120 (6,878.42)				
Gross Weight kg (lb)			570 (1,256.63)	1,140 (2,513.27)	1,710 (3,769.90)	2,280 (5,026.54)	2,850 (6,283.17)	3,420 (7,539.81)				
Operating Weight kg (lb)			540 (1,190.50)	1,080 (2,380.99)	1,620 (3,571.49)	2,160 (4,761.98)	2,700 (5,952.48)	3,240 (7,142.98)				
Refrigerant					R	410A						

- All specifications are subjected to change by the manufacturer without prior notice.
   Nominal cooling capacity are based on the conditions below:
   Cooling: 12°C / 7°C entering/ leaving evaporator water temperature, 35°C air ambient tempeature.



# WATER COOLED MODULAR CHILLER Series









## **Features**

### Modular Design

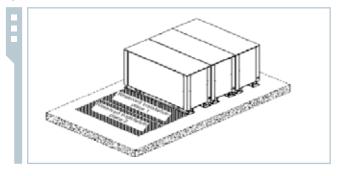
The modular chiller allows for combination of up to 16 base modules unit where each module can be connected to form a much larger system.

Base Module	AWGZ 020B	AWGZ 030B
	AWGZ 040B	AWGZ 060B
	AWGZ 060B	AWGZ 090B
	AWGZ 080B	AWGZ 120B
Modular	AWGZ 100B	AWGZ 150B
IVIOUUIAI	AWGZ 120B	AWGZ 180B
	AWGZ 140B	AWGZ 210B
	AWGZ 160B	AWGZ 240B
	AWGZ 180B	AWGZ 270B

<sup>\*</sup>Arbitrary combination up to 16 modules

#### Change Whenever Need

It is unnecessary to fix the central air-conditioning equipment for one time to be certain combination. Instead, other modules and corresponding equipment can be added as required by the growth of the occupants. It helps to save the initial investment and the operation cost.



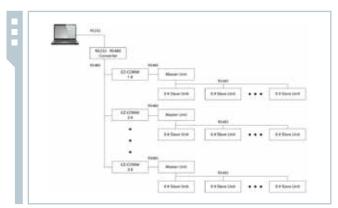
## Reliable Operation

The fault of any compressor or the maintenance and care of any unit will not affect the normal operation of other units.



#### Ez-Comm for ModBus Communication

The Ez-Comm is a data converter that coordinates Acson modular chiller unit control system and controls inter-system communications based on the ModBus communication protocol. It automatically converts the internal communication protocol of Acson modular chiller unit into the ModBus communication protocol to ensure that the unit is connected to the BAS system that is based on the ModBus RTU communication protocol and uses the RS485 communication mode.



## **AWGZ 020B - AWGZ 120B**

Model			AWGZ 020B	AWGZ 040B	AWGZ 060B	AWGZ 080B	AWGZ 100B	AWGZ 120B		
Naminal Canadi		BTU/h	226,216	452,431	678,647	904,862	1,131,078	1,357,294		
Nominal Capaci	τγ	W	66,300	132,600	198,900	265,200	331,500	397,800		
Nominal Total II	nput Power	W	13,300	26,600	39,900	53,200	66,500	79,800		
Nominal Running Current A			29.20	58.40	87.60	116.80	146.00	175.20		
EED	EER BTU/h/W					17.01				
W/W		W/W				4.98				
Power Source		V/Ph/Hz			380 - 4	415 / 3 / 50				
Control			TXV							
Sound Pressure	Level	dBA	56	59	61	62	63	64		
Water Flow	Evaporator	l/s (m³/h)	3.2 (11.4)	6.4 (22.8)	9.6 (34.2)	12.8 (45.6)	16.0 (57.0)	19.2 (68.4)		
Rate	Condenser	l/s (m³/h)	4.0 (14.3)	8.0 (28.6)	12.0 (42.9)	16.0 (57.2)	20.0 (71.5)	24.0 (85.8)		
	Height	mm (in)			1,2	00 (47.2)				
Unit Dimensiom	Width	mm (in)			1,6	45 (64.8)				
	Depth	mm (in)	630 (24.8)	1,265 (49.8)	1,900 (74.8)	2,535 (99.8)	3,170 (124.8)	3,805 (149.8)		
Net Weight		kg/lb	452 (994.4)	904 (1,988.8)	1,356 (2,983.2)	1,808 (3,977.6)	2,260 (4,972)	2,712 (5,966.4)		
Gross Weight kg/lb		478 (1,051.6)	956 (2,103.2)	1,434 (3,154.8)	1,912 (4,206.4)	2,390 (5,258)	2,868 (6,309.6)			
Operating Weight kg/lb			472 (1,038.4)	944 (2,076.8)	1,416 (3,115.2)	1,888 (4,153.6)	2,360 (5,192)	2,832 (6,230.4)		
Refrigerant						R22				

Arbitrary combination up to 16 modules

## **AWGZ 030B - AWGZ 180B**

Model			AWGZ 030B	AWGZ 060B	AWGZ 090B	AWGZ 120B	AWGZ 150B	AWGZ 180B		
Naminal Canasit		BTU/h	351,436	702,872	1,054,308	1,405,744	1,757,180	2,108,616		
Nominal Capacit	·Y	W	103,000	206,000	309,000	412,000	515,000	618,000		
Nominal Total In	put Power	W	21,000	42,000	63,000	84,000	105,000	126,000		
Nominal Running Current A			42.00	84.00	126.00	168.00	210.00	252.00		
		BTU/h/W				16.74				
EER W/W						4.90				
Power Source		V/Ph/Hz			380 - 4	15 / 3 / 50				
Control			TXV							
Sound Pressure	Level	dBA	56	59	61	62	63	64		
Water Flow	Evaporator	l/s (m³/h)	4.9 (17.7)	9.8 (35.4)	14.7 (53.1)	19.6 (70.8)	24.5 (88.5)	29.4 (106.2)		
Rate	Condenser	l/s (m³/h)	6.2 (22.2)	12.4 (44.4)	18.6 (66.6)	24.8 (88.8)	31.0 (111.0)	37.2 (133.2)		
	Height	mm (in)			1,20	00 (47.2)				
Unit Dimensiom	Width	mm (in)			1,64	45 (64.8)				
	Depth	mm (in)	630 (24.8)	1,265 (49.8)	1,900 (74.8)	2,535 (99.8)	3,170 (124.8)	3,805 (149.8)		
Net Weight		kg/lb	591 (1,300.2)	1,182 (2,600.4)	1,773 (3,900.6)	2,364 (5,200.8)	2,961 (6,501)	3,552 (7,801.2)		
Gross Weight kg/lb			617 (1,357.4)	1,234 (2,714.8)	1,851 (4,072.2)	2,468 (5,429.6)	3,085 (6,787)	3,702 (8,144.4)		
Operating Weight kg/lb			621 (1,366.2)	1,242 (2,732.4)	1,863 (4,098.6)	2,484 (5,464.8)	3,105 (6,831)	3,726 (8,197.2)		
Refrigerant						R22				

- All specifications are subjected to change by the manufacturer without prior notice.
   Nominal cooling capacity are based on the conditions below:
   Cooling: 12°C / 7°C entering/ leaving evaporator water temperature, 35°C air ambient tempeature.

# **AIR COOLED MINI CHILLER Series**



#### Model:

AMAC 20/25/30C A5AC 20/25/30CR A4AC 25/30C

#### **Cooling Capacity:**

5.9kW to 8.8 kW 4.6kW to 7.3 kW 6.7kW to 7.9 kW

#### Refrigerant:

R22, R410A, R407C



#### Model:

AMAC 40/50/60C A5AC 40/50/55CR A4AC 40/50/60C

Cooling Capacity: 11.6kW to 15.8 kW 10 kW to 13.2 kW 11.3kW to 14.70 kW

#### Refrigerant:

R22, R410A, R407C



#### Model:

AMAC 80/100/120/150C A4AC 80/100/120/150C

#### **Cooling Capacity:**

24.9kW to 40.4 kW 23.4kW to 40.2 kW

#### Refrigerant:

R22, R407C

## **Features**

#### All in One Unit

The mini chiller is fully integrated and equipped with key hydronic components such as expansion tank, water tank, brazed plate heat exchanger and water circulating pump. The all in one concept will ease the job of installation.

#### Protection

#### Anti-Freeze heater

The BPHE (Brazed Plate Heat Exchanger) has a strip heater around it to prevent it from water freezing.

#### Anti-Freeze sensor

Signal is sent from the anti-freeze sensor to cut out the compressor if the water temperature becomes too low to prevent BPHE from frosting.

#### Water pressure differential switch

This protection feature will ensure there is water flow in pipings when the chiller is in operation. Otherwise, the compressor will cut out immediately.

The unit is also equipped with a series of other protections like:

- High & Low Pressure Switches
- Discharge Temperature Sensor
- Compressor, Water Pump & Fan Motor Overload Protector
- Pressure Relief Valve

### Power is nothing without Control

An user friendly and versatile control is equipped with every mini chiller.

- Whole system configuration
- Unique parameter settings
- Operation status display
- Tracing fault record (quick troubleshooting solutions)
- 8-lines graphical LCD display
- Menu selection



## **AMAC 20C - AMAC 50C (R22)**

Model				AMAC 20C	AMAC 25C	AMAC 30C	AMAC 40C	AMAC 50C		
Naminal	Canadia		BTU/h	20,000	24,200	30,000	39,500	48,500		
Nominal	Capacity		W	5,860	7,090	8,790	11,580	14,210		
Nominal	Total Input Power		W	2,650	2,680	3,540	4,490	5,080		
NOMINA	L RUNNING CURRENT		А	12.25	12.17	16.41	9.67	9.75		
EER			BTU/h/W	7.55	9.03	8.47	8.80	9.55		
EER			W/W	2.21	2.65	2.48	2.58	2.80		
Power So	ource		V/Ph/Hz		220 - 240 / 1 / 50		380 - 415	/ 3 / 50		
Control				CAPILLARY TUBE						
Sound Pr	essure Level		dBA	57 58			59	9		
Water Flo	ow Rate		l/s (m³/h)	0.29 (1.03)	0.33 (1.2)	0.42 (1.51)	0.53 (1.9)	0.67 (2.4)		
		Height	mm (in)		790 (31.10)	,	1,140 (44.88)			
Unit Dim		Width	mm (in)		1,160 (45.67)		1,160 (	45.67)		
		Depth	mm (in)		460 (18.10)					
Unit Wei	ght		kg (lb)	116 (255.74)	123 (271.17)	126 (277.78)	188 (414.47)	189 (416.67)		
Water Pi	pe Connection		mm (in)			BSPT 25.40 (1)				
Tank	Tank  Capacity (Volume)  L (ft³)			MILD STEEL COATED WITH ZINK						
			L (ft³)		22 (0.78)		40 (1.41)			
Refrigera	ınt				R22					

## **AMAC 60C - AMAC 150C (R22)**

Model				AMAC 60C	AMAC 80C	AMAC 100C	AMAC 120C	AMAC 150C		
Naminal	Constitu		BTU/h	54,000	85,000	95,000	116,000	138,000		
Nominai	Capacity		W	15,830	24,910	27,840	34,000	40,450		
Nominal	Total Input Power		W	5,770	8,870	10,590	11,370	14,220		
NOMINA	L RUNNING CURRENT		А	12.01	17.00	18.50	25.83	31.80		
EER			BTU/h/W	9.34	9.58	8.97	10.20	9.70		
EEK			W/W	2.74	2.81	2.63	2.99	2.84		
Power So	ource		V/Ph/Hz			380 - 415 / 3 / 50				
Control				CAPILLARY TUBE	TXV					
Sound Pr	ressure Level		dBA	59	63		6	7		
Water FI	ow Rate		l/s (m³/h)	0.76 (2.7)	1.22 (4.4)	1.36 (4.9)	1.67 (6.0)	2 (7.2)		
		Height	mm (in)	1,140 (44.88)	1,245 (49.00)					
Unit Dim		Width	mm (in)	1,160(45.67)	1,500	(59.10)	1,800 (70.90)			
		Depth	mm (in)	460 (18.10)	900 (	35.40)	1,150 (	45.30)		
Unit Wei	ght		kg (lb)	196 (432)	340 (7	749.57)	480 (1,058)	560 (1,190.50)		
Water Pi	pe Connection		mm (in)	BSPT 25.40 (1)		BSPT 31	.75 (1.25)			
Tank	Material Tank			MILD STEEL COATED WITH ZINK	NA					
	Capacity (Volume)		L (ft³)	40 (1.41)		N	NA			
Refrigera	ant					R22				

- 1. All specifications are subjected to change by the manufacturer without prior notice. 2. All units are being tested and comply to ISO 5151 & ISO 13253
- 3. Nominal cooling capacity are based on the conditions below:

  Cooling: 12°C / 7°C entering/ leaving evaporator water temperature, 35°C air ambient tempeature.
- 4. The sound level are according to JIS 8615 standard. Position of the measurement point is 1m in front and 1m below the unit.

## A4AC 25C - A4AC 60C (R407c)

Model				A4AC 25C	A4AC 30C	A4AC 40C	A4AC 50C	A4AC 60C		
Nominal	Canacity		BTU/h	23,000	26,900	38,500	47,000	50,000		
Nominal	Сараспу		W	6,740	7,880	11,280	13,920	14,650		
Nominal	Total Input Power		W	2,950	3,770	4,680	5,430	6,040		
NOMINA	L RUNNING CURRENT		А	13.30	17.41	9.62 10.20 11.28				
EER			BTU/h/W	7.80	7.14	8.23	8.66	8.28		
EEK			W/W	2.29	2.09	2.41	2.56	2.43		
Power Sc	ource		V/Ph/Hz	220-240	/ 1 / 50		380-415 / 3 / 50			
Control						CAPILLARY TUBE				
Sound Pr	essure Level		dBA	dBA 57 58 59 60						
Water Flo	ow Rate		l/s (m³/h)	0.31 (1.1)	0.38 (1.4)	0.53 (1.9)	0.64 (2.3)	0.7 (2.5)		
		Height	mm (in)	790 (31.10)		1,140 (44.88)				
Unit Dim		Width	mm (in)	1,160 (	45.67)	1,160 (45.67)				
		Depth	mm (in)			460 (18.10)				
Unit Wei	ght		kg (lb)	123 (271)	126 (278)	188 (415)	189 (417)	196 (432)		
Water Pi	pe Connection		mm (in)			BSPT 25.40 (1)				
Tank	Material Tank			MILD STEEL COATED WITH ZINC						
	Capacity (Volume)	Capacity (Volume)		22 (0	0.78)		40 (1.41)			
Refrigera	ınt					R407c				

## A4AC 80C - A4AC 150C (R407c)

Model				A4AC80C	A4AC100C	A4AC120C	A4AC150C	
			BTU/h	80,000	90,000	115,000	137,000	
	Capacity		W	23,450	26,380	33,700	40,150	
Nominal	Total Input Power		W	9,430	11,210	12,170	14,970	
NOMINAL	L RUNNING CURRENT		А	18	19.22	26.50	33	
EER BTU/h/W			BTU/h/W	8.48	8.03	9.45	9.15	
EEK			W/W	2.49	2.35	2.77	2.68	
Power So	ource		V/Ph/Hz		380-415	5 / 3 / 50		
Control					Т	XV		
Sound Pr	essure Level		dBA	6	3	67		
			1/s (m³/h)	1.14 (4.1)	1.25 (4.5)	1.67 (6.0)	2.0 (7.2)	
		Height	mm (in)		1,245	(49.00)		
		Width	mm (in)	1,500 (	59.10)	1,800 (70.90)		
		Depth	mm (in)	900 (3	5.40)	2.77 2.68 5 / 3 / 50 TXV 67 1.67 (6.0) 2.0 (7.2)	(45.30)	
Unit Weig	ght		kg (lb)	340 (7	49.57)	480 (1,058)	560 (1,235)	
Water Pip	pe Connection		mm (in)		BSPT 31	.75 (1.25)		
Tank	Material				ľ	NA .		
Tank	Capacity (Volume)	Capacity (Volume)			1	NA		
Refrigera	int				R4	.07c		

- 1. All specifications are subjected to change by the manufacturer without prior notice. 2. All units are being tested and comply to ISO 5151 & ISO 13253
- 3. Nominal cooling capacity are based on the conditions below:

  Cooling: 12°C / 7°C entering/ leaving evaporator water temperature, 35°C air ambient tempeature.
- 4. The sound level are according to JIS 8615 standard. Position of the measurement point is 1m in front and 1m below the unit.

## A5AC 20CR - A5AC 55CR (R410A)

Model				A5AC 20CR	A5AC 25CR	A5AC 30CR	A5AC 40CR	A5AC 50CR	A5AC 55CR	
Neminal	Canadia		BTU/h	15,700	21,000	24,800	34,100	41,600	45,000	
Nominal Capacity W			4,610	6,150	7,270	10,000	12,200	13,200		
Nominal	Total Input Power		W	2,620	2,760	3,830	5,000	5,310	5,490	
NOMINA	AL RUNNING CURRENT		А	11.76	12.70	16.88	7.44	7.44 7.90 8.18		
EER			BTU/h/W	5.99	7.61	6.48	6.82	7.83	8.20	
EER			W/W	1.76	2.23	1.90	2.00	2.30	2.40	
Power S	ource		V/Ph/Hz		220-240 / 1 / 5	50	380-415 / 3 / 50			
Control				CAPILLA	RY TUBE		CAPILLARY TUBE & TXV			
Sound P	ressure Level		dBA	58	59	57	59 59 61			
Water Fl	low Rate		l/s (m³/h)	0.24 (0.86)	0.28 (1.00)	0.42 (1.50)	0.50 (1.80)	0.60 (2.15)	0.75 (2.70)	
		Height	mm (in)	790 (31.10)			1,140 44.88)			
	ater Flow Rate 1/s (m³/h) 0.24 (0.86		1,050 (41.34)		1,060 (41.73)					
		Depth	mm (in)		460 (18.10)			7.83 2.30 380-415 / 3 / 50 TUBE & TXV 59 0.60 (2.15) 0,1,140 44.88) 1,060 (41.73) 460 (18.10) 195 (429.90) BSPT 25.40 (1)		
Unit Wei	ight		kg (lb)		128 (282.19)			195 (429.90)		
Water Pi	ipe Connection		mm (in)		BSPT 25.40 (1	)		BSPT 25.40 (1)		
Tank	Material		MILD STEEL COATED WITH ZINC			NA				
	Capacity (Volume)	Capacity (Volume) L (ft³)		22 (0	0.78)	NA				
Refriger	ant					R4	₊10A			

- All specifications are subjected to change by the manufacturer without prior notice.
   All units are being tested and comply to ISO 5151 & ISO 13253
   Nominal cooling capacity are based on the conditions below:

   Cooling: 12°C / 7°C entering/ leaving evaporator water temperature, 35°C air ambient tempeature.

   The sound level are according to JIS 8615 standard. Position of the measurement point is 1m in front and 1m below the unit.



# **CHILLED WATER FAN COIL UNITS Series**



A wide range of fan coil units ranging from residential use to industial application is available for different needs. Each model comes with their own unique features and advantages.

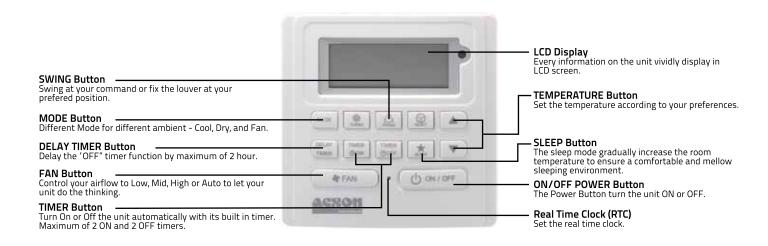
The available chilled water fan coil units are:

- Wall Mounted JW/ 301 Series
- Ceiling Cassette CW/ EW Series
- Ceiling Mounted DW/EW Series
- Ducted Blower BW Series
- Ceiling Concealed CW Series

## Power is nothing without Control

#### SLM 9

The Chilled Water Fan Coil Unit is supplied with SLM 9 micro computer thermostat as the standard wired controller. This wired controller comes with a LCD screen with every information of the unit easily visible. It is adapted to fan coil and electromechanical valve's control.



## AWM 07JW - AWM 25JW, AWM 301W (Wall Mounted)

Model			AWN 07JW	AWM 10JW	AWM 15JW	AWM 20JW	AWM 25JW	AWM 301W	
		BTU/h	8,300	9,200	11,300	15,500	18,000	22,000	
Nominal Capacity		W	2,430	2,700	3,310	4,540	5,280	6,450	
Nominal Total Input Power		W	31	32	42	53	72	74	
Nominal Running Current		А	0.19	0.20	0.21	0.29	0.34	0.32	
Power Source V/Ph/Hz					220 - 24	0 / 1 / 50			
Air Flow	High	I/s (CFM)	123 (260)	132 (280)	175 (370)	241 (510)	293 (620)	316 (670)	
	Medium	I/s (CFM)	109 (230)	118 (250)	151 (320)	212 (450)	245 (520)	297 (630)	
	Low	I/s (CFM)	94 (200)	103 (220)	122 (260)	184 (390)	217 (460)	236 (500)	
	Quiet	I/s (CFM)	85 (180)	90 (190)	113 (240)	170 (360)	208 (440)	NA	
External Static (H/M/L)		Pa	NA						
Sound Pressure Level (H/M	/L/Q)	dBA	34 / 29 / 25 / 24	35 / 30 / 25 / 24	42 / 39 / 32 / 29	42 / 38 / 34 / 32	46 / 42 / 39 / 37	49 / 47 /45 /NA	
Water Flow Rate		USGPM	1.85	2.03	2.51	3.43	4.01	4.90	
water Flow Rate		Litres/min	7.00	7.68	9.50	13.00	72 0.34 293 (620) 245 (520) 217 (460) 208 (440) 46 / 42 / 39 / 37 4.01 15.18 0 (12.20) 5 (41.93) 4 (8.82)	18.50	
	Height	mm (in)		288 (11.34)		310 (1	2.20)	291 (11.46)	
Unit Dimension	Width	mm (in)		800 (31.50)		1,065 (	41.93)	815 (32.09)	
	Depth	mm (in)		206 (8.11)		224 (	8.82)	181 (7.13)	
Unit Weight	it Weight kg (lb) 9 (19.84) 14 (30.86)			0.86)	17.6 (38.80)				
Water Pipe Connection				-	1/2" BSP FEN	MALE ADAPTOR			

# ADB 75BW - ADB 150BW(Ducted Blower)

Model			ADB 75BW	ADB 100BW	ADB 125BW	ADB 150BW
N		BTU/h	75,600	95,000	125,000	150,000
Nominal Capacity		W	22,160	27,840	36,640	43,960
Nominal Total Input Powe	er	W	760	1,800	1,620	1,910
Nominal Running Current	:	А	3.49	7.84	3.33	4.03
Power Source		V/Ph/Hz	220 - 240	/1/50	380 - 41	5 / 3 / 50
	High	I/s (CFM)	1,180 (2,500)	1,510 (3,200)	1,982 (4,200)	2,171 (4,600)
	Medium	I/s (CFM)	991 (2,100) 1,416 (3,000)		NA	
	Low	I/s (CFM)	826 (1,750) 1,321 (2,800)		N	IA
External Static (H/M/L)		Pa	100 / 72 / 50	100 / 80 / 60	230	230
Sound Pressure Level (H/	M/L/Q)	dBA	50 / 46 / 42	54 / 52 / 50	58	58
Water Flow Date		USGPM	16.90	21.10	27.70	33.30
Water Flow Rate		Litres/min	64.00	86.00	105.00	126.00
	Height	mm (in)	572 (2	2.52)	885 (34.84)	
Unit Dimension	Width	mm (in)	1,502 (	59.13)	1,640	(64.57)
Unit Dimension	Depth	mm (in)	761 (2	9.96)	1,040	(40.94)
Unit Weight		kg (lb)	96 (211.64)	102 (224.87)	176 (388.01) 189 (416.67)	
Water Pipe Connection				1 1/8" B	RAZING	•

- 1. All specifications are subjected to change by the manufacturer without prior notice. 2. All units are being tested and comply to ISO 5151 & ISO 13253.
- 3. Nominal cooling capacity are based on the conditions below:
  Cooling: 7°C / 12°C entering/ leaving evaporator water temperature.
  4. Sound pressure level are according to JIS B 9612 standard. Position of the measurement point is 1.4m below the unit.

# **ACK 10CW - ACK 15CW (Ceiling Cassette C Series)**

Model			ACK 10CW	ACK 15CW	ACK 20CW		
Nominal Capacity		BTU/h	8,500	14,000	15,500		
Nonlinal Capacity		W	2,490	2,490 4,100			
Nominal Total Input Power		W	63	64	79		
Nominal Running Current		А	0.3	28	0.35		
Power Source		V/Ph/Hz		220 - 240 / 1 / 50			
Air Flow	High	I/s (CFM)	179 (380)	189 (400)	208 (440)		
	Medium	I/s (CFM)	137 (290)	146 (310)	156 (330)		
	Low	I/s (CFM)	109 (230)	104 (220)	132 (280)		
External Static (H/M/L)		Pa	NA				
Sound Pressure Level (H/M	/L/Q)	dBA	42 / 35 / 29	45 / 38 / 30	48 / 40 / 36		
Water Flow Rate		USGPM	2.03	3.43	3.57		
Water Flow Rate		Litres/min	7.68	12.98	13.51		
	Height	mm/in		250 (9.84) / 295 (11.61)			
Unit Dimension	Width	mm/in		570 (22.44) / 640 (25.20)			
	Depth	mm/in		_			
Unit Weight (Unit + Panel)	Unit Weight (Unit + Panel) kg (lb) 15+3 (33.07+6.61)				17+3 (37.48+6.61)		
Water Pipe Connection				3/4" BSP FEMALE UNION			

# ACK 20EW - ACK 50EW (Ceiling Cassette E Series)

Model			ACK 20EW	ACK 25EW	ACK 30EW	ACK 40EW	ACK 50EW			
Name in all Carracito		BTU/h	21,000	25,000	30,000	38,000	43,000			
Nominal Capacity		W	6,150	7,330	8,790	11,140	12,600			
Nominal Total Inp	out Power	W	95	126	167	186	227			
Nominal Running	Current	А	0.44	0.55	0.74	0.85	1.03			
Power Source		V/Ph/Hz			220 - 240 / 1 / 50					
	High	I/s (CFM)	354 (750)	406 (860)	420 (890)	472 (1,000)	538 (1,140)			
	Medium	I/s (CFM)	293 (620)	330 (700)	340 (720)	396 (840)	472 (1,000)			
	Low	I/s (CFM)	227 (480)	255 (540)	269 (570)	321 (680)	396 (840)			
	Quiet	I/s (CFM)	115 (320)	179 (380)	198 (420)	255 (540)	330 (700)			
External Static (H	/M/L)	Pa	NA							
Sound Pressure L (H/M/L/Q)	evel	dBA	42 / 38 / 32 /23	46 / 42 / 35 / 27	48 / 43 / 38 / 30	48 / 43 / 39 / 33	51 / 48 / 43 / 39			
Make Flam Bake		USGPM	4.45	5.59	6.69	8.45	9.60			
Water Flow Rate		Litres/min	16.82	21.17	25.29	31.94	36.29			
	Height	mm/in	2	265 (300) / 10.43 (11.8 <sup>-</sup>	1)	300 (335) /	11.81 (13.19)			
	Width	mm/in		8	320 (900) / 32.28 (35.43	3)				
	Depth	mm/in		8	320 (900) / 32.28 (35.43	3)				
Unit Weight (Unit	+ Panel)	kg (lb)	26 + 4 (57	'.32 + 8.80)	28 + 4 (61.73 + 8.80)	32 + 4 (70	).55 + 8.80)			
Water Pipe Conne	ection			3	/4" BSP FEMALE UNIO	N				

- 1. All specifications are subjected to change by the manufacturer without prior notice.
- 2. All units are being tested and comply to ISO 5151 & ISO 13253.
- 3. Nominal cooling capacity are based on the conditions below:
- Cooling: 7°C / 12°C entering/ leaving evaporator water temperature.
  4. Sound pressure level are according to JIS B 9612 standard. Position of the measurement point is 1.4m below the unit.

# ACM 20DW - ACM 50DW (Ceiling Mounted D Series)

Model			ACM 20DW	ACM 25DW	ACM 30DW	ACM 40DW	ACM 50DW		
None in al Canacito		BTU/h	17,700	20,800	24,600	31,200	45,000		
Nominal Capacity		W	5,190	6,100	7,210	9,140	13,190		
Nominal Total In	put Power	W	96	130	132	240	240		
Nominal Running	g Current	А	0.41	0.54	0.57	0.98	1.03		
Power Source V/Ph/Hz			220 - 240 / 1 / 50						
	High	I/s (CFM)	264 (560)	297 (630)	329 (698)	451 (956)	500 (1,060)		
	Medium	I/s (CFM)	238 (505)	293 (620)	325 (688)	428 (908)	483 (1,023)		
	Low	I/s (CFM)	189 (400)	262 (555)	307 (650)	419 (889)	451 (956)		
External Static (H	I/M/L)	Pa	NA						
Sound Pressure I (H/M/L)		dBA	50 / 47 / 40	54 / 53 / 50	51 / 50 / 48	54 / 53 / 52	54 / 53 / 52		
Water Flow Rate		USGPM	3.92	4.62	5.46	6.91	9.99		
Water Flow Rate		Litres/min	14.80	17.50	20.70	26.15	37.81		
	Height	mm (in)	214 (8	.43)		249 (9.80)			
Unit Dimension	Width	mm (in)		1,214 (47.80)		1,714 (	(67.48)		
	Depth	mm (in)		_	670 (26.38)				
Unit Weight		kg (lb)	43 (94	.80)	45 (99.21)	45 (99.21) 70 (154.32)			
Water Pipe Conn	ection			3/	4" BSP FEMALE ADAPT	OR			

# ACM 15EW - ACM 25EW (Ceiling Mounted E Series)

Model			ACM 15EW	ACM 20EW	ACM 25EW		
N		BTU/h	15,500	20,300	21,000		
Nominal Capacity	Nonmai Capacity		4,540	4,540 5,950			
Nominal Total Input Power				109	113		
Nominal Running Current		A	0.46	0.49	0.52		
Power Source		V/Ph/Hz		220 - 240 / 1 / 50			
	High	I/s (CFM)	236 (500)	274 (580)	293 (620)		
	Medium	I/s (CFM)	213 (450) 250 (530)		269 (570)		
	Low	I/s (CFM)	189 (400)	231 (490)	245 (520)		
External Static (H/M/L)		Pa	NA				
Sound Pressure Level (H/M/L	_)	dBA	50 / 43 / 41	53 / 51 / 49	56 / 51 / 44		
Water Flow Rate		USGPM	3.43	4.49	4.67		
Water Flow Rate		Litres/min	13.00	17.00	17.68		
	Height	mm (in)		212 (8.3)			
"Unit Dimension ()- With Panel"	Width	mm (in)		1,090 (42.9)			
	Depth	mm (in)		630 (24.8)			
Unit Weight		kg (lb)	27 (59.5)				
Water Pipe Connection			1/2'	BSP FEMALE ADAF	PTOR		

- All specifications are subjected to change by the manufacturer without prior notice.
   All units are being tested and comply to ISO 5151 & ISO 13253.
   Nominal cooling capacity are based on the conditions below:
   Cooling: 7°C / 12°C entering/ leaving evaporator water temperature.
- 4. Sound pressure level are according to JIS B 9612 standard. Position of the measurement point is 1.4m below the unit.

## ACC 10CW - ACC 60CW (Ceiling Concealed)

Model			ACC 10CW	ACC 15CW	ACC 20CW	ACC 25CW	ACC 30CW	ACC 40CW	ACC 50CW	ACC 60CW
Naminal Canacity		BTU/h	9,900	11,600	18,000	22,500	24,800	37,000	44,700	51,800
Nominal Capacity		W	2,900	3,400	5,280	6,590	7,270	10,840	13,100	15,180
Nominal Total Input Power		W	89	140	168	182	345	442	427	530
Nominal Running Current		А	0.40	0.65	0.77	0.86	1.50	1.93	1.86	2.31
Power Source V/Ph/Hz						220 - 24	40 / 1 / 50			
	High	I/s (CFM)	142 (300)	241 (510)	330 (700)	344 (730)	392 (830)	585 (1,240)	632 (1,340)	731 (1,550)
Air Flow	Medium	I/s (CFM)	134 (285)	231 (490)	319 (675)	311 (660)	359 (760)	519 (1,100)	576 (1,220)	661 (1,400)
External Static (H/M/L)	Low	I/s (CFM)	123 (260)	189 (400)	302 (640)	274 (580)	335 (710)	481 (1,020)	562 (1,190)	609 (1,300)
External Static (H/M/L)		Pa	49 / 44 / 36	49 / 42 / 28	49 / 45 / 41	49 / 43 / 30	167 / 128 / 88	128 / 88 / 39	157 / 137 / 108	157 /137 / 98
Sound Pressure Level (H/M/L	)	dBA	36 / 35 / 33	40 / 38 / 33	42 / 41 / 40	41 /40 /36	46 / 42 / 38	49 / 45 / 41	52 / 50 / 47	53 / 50 / 47
Water Florida		USGPM	2.20	2.60	4.05	5.06	5.55	8.28	10.04	11.62
Water Flow Rate		Litres/min	8.33	9.84	15.33	19.15	21.01	31.34	38	43.98
	Height	mm (in)	266 (10.47)		267 (1051)			384	(15.12)	
Unit Dimension	Width	mm (in)	702 (27.64)	842 (33.15)	1,002 (39.45)	1,137 (44.76)	917 (36.10)	1,003 (39.49)	1,287 (50.67)	1,487 (58.54)
	Depth	mm (in)		351 (1	3.82)			462 (18.19)		
Unit Weight	kg (lb) 18 (8.16) 22 (9.98) 24 (10.89) 26 (11.79) 42 (19.05) 44 (19.96) 50 (22.68)			56 (25.40)						
Water Pipe Connection						3/4" BSP FEN	MALE ADAPT	OR		

- 1. All specifications are subjected to change by the manufacturer without prior notice.
- 2. All units are being tested and comply to ISO 5151 & ISO 13253.
- 3. Nominal cooling capacity are based on the conditions below: Cooling:  $7^{\circ}\text{C}$  /  $12^{\circ}\text{C}$  entering/ leaving evaporator water temperature.
- 4. Sound pressure level are according to JIS B 9612 standard. Position of the measurement point is 1.4m below the unit.





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