

APMR SERIES

Packaged Air conditioners



50Hz

R-410A
REFRIGERANT



Range 5 TR to 46 TR
(17 kW to 172 kW)



Contents

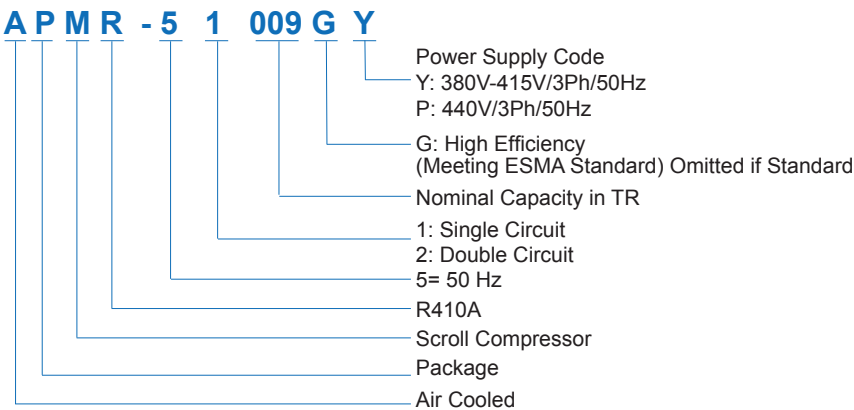
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Legend

The following legends are used throughout this manual:

AFR.....Air Flow Rate	MBh.....BTUH x 1000
BPF.....By-pass Factor	Ph.....Phase
C.Cap....Cooling Capacity	Pa.....Pascal
CFM..... Cubic feet per minute	PD.....Pressure Drop
EER.....Energy Efficiency Ratio	PI.....Compressor Power Input in kW
Hz.....Hertz	RPM.....Revolutions per Minute
in.wg.....inches of water gauge	RPS.....Rated Power Supply
kW.....Kilowatt	TR.....Tons of refrigeration = 12 MBh
Kg.....Kilogram	V.....Volts
lbs.....Pounds weight (British units)	FPI.....Fins per Inch
L/s.....Liters per second	ESP...External Static Pressure

Nomenclature



 **SKM reserves the right to change, in part or in whole the specifications of its Air Conditioning Equipment at any time in order to add the latest technology. Therefore, the enclosed information may change without any prior notice.**

Introduction

SKM **APMR** Series Packaged Air Conditioners are designed and manufactured to meet the requirements of the Gulfs severe climatic conditions and are built specifically for outdoor installations, either on ground or roof level.

The **APMR** Series Packaged Air Conditioners are ideal for warehouses, large halls, schools, mosques, or wherever the requirement is for a heavy duty unit with a hermetic compressor.

APMR Series Air-cooled Packaged Air Conditioners (hermetic scroll) are available in 15 models covering nominal capacity ranges from 5 TR – 46TR (17 kW to 172 kW) in 50Hz.

APMR units are designed to operate in a wide ambient temperature range from 50°F(10°C) to 125.6°F (52°C) and even lower if an optional head pressure control system is provided . above 120°F, please consult SKM.

APMR units are designed and rated in accordance with AHRI-210/240 and AHRI-340/360 standards.

APMR Series will come in two tiers, Standard models which have competitive pricing and Hi-Efficiency models which will meet high EERs and exceed ESMA requirements.

APMR Series Packaged Air Conditioners are completely assembled, internally wired, charged with R-410A refrigerant at factory, tested before despatch and ready for installation. All that is required on site is connecting ducting and power supply. This greatly reduces installation work and costs. They are designed for ducted systems which will enable them to be installed on roof tops or on the ground.

SKM provides qualified service and stocks of replacement parts in all major cities of the G.C.C. countries, Egypt, Jordan, and Pakistan. See back cover for details or call SKM.

S.K.M Air Conditioning LLC



You name it.....We cool it



General Features

The **APMR** Series Packaged Air Conditioners is yet another unique series from SKM incorporating a high efficiency cooling coil, heavy duty evaporator blower and motor resulting in an extremely rugged, long-life, energy efficient, self-contained unit that will provide cooling at higher efficiency over a long and extended life. Compared to the traditional units available in the market, the **APMR** series Packaged Units are very low on energy consumption.

The flexibility of the **APMR** series is ideal for consideration on special applications including:

- 100% fresh air units or units with high incidence of outdoor fresh air.
- Units with unusual filtration requirements incorporating carbon, bag and/or other filters.
- Special units for ducted condenser air using centrifugal type condenser air fans.
- Units constructed of aluminium or stainless steel.
- For those special off-shore or refinery or sewage treatment applications requiring specially coated heat transfer coils.

All of these flexibilities cannot be cataloged nor all the possible options listed. They are available and SKM has over 40 years of experience in designing and building such units to meet the most stringent requirements of most applications. For your special requirements please consult SKM.

Component Features

The common standard features of all **APMR** series Packaged Units include the following.

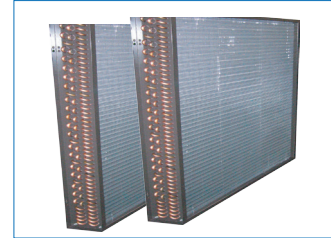
Compressor

Compressors used in **APMR** packaged unit series are hermetically sealed, compact scroll with the following features:

- High Efficiency.
- Quiet operation, Low Sound levels.
- Compact and light .
- Limited wear.
- 70% fewer moving parts than comparably sized reciprocating compressors
- Unique ability to handle liquid refrigerant.
- Suction gas motor cooling.
- Centrifugal oil pumps.
- Brazed fittings or Rotalock as options.
- Two refrigerant circuits on larger units provides efficient part load.

Condenser

Condenser coils are manufactured of seamless copper tubes mechanically bonded to aluminum fins to ensure optimum heat transfer.



Condenser Coil

All coils are tested against leakage by air pressure of 715psig (4930kPa) under water.. All coils are 1, 2, 3 or 4 rows, with 14FPI (1.8mm) or 16FPI (1.6mm), 3/8”(9.5mm) O.D. tubes. An integral subcooling circuit is provided to increase the cooling capacity, without additional operating cost.

For different application requirements, other optional condenser fin materials are available:

- Copper fins.
- Electroplated Copper Fins.
- Copper finned coils with electro-tinned after manufacturing.
- Precoated Aluminum fins
The pre-coated is hydrophobic polyurethane resin. This option provides substantial corrosion protection beyond standard coil construction.
- Aeris Guard Coil Coating
The Aeris Guard Coil is a self etching high performance modified epoxy finish that is specifically designed to coat and protect Aluminum and Copper surfaces. In addition, the coating is ideal for the protection of ferrous and non ferrous materials.

All models are suitable for Gulf countries, ensuring the condenser coil design shall provide long life operation with the least possibility operational blockage on the condenser. Ample condenser surface and sensible air flow across the condenser ensures a low temperature differential between condensing temperature and the high Gulf ambient making the **APMR** packaged unit perform efficiently and durably.

Condenser Fans

The condenser fans are propeller type, aluminium alloy blades, directly driven by electric motors.

Motors are Totally Enclosed Air Over (TEAO) four pole or six pole with class 'F' insulation and minimum IP54 / IP55 protection depending on models.

The TEAO and class 'F' Insulation features ensure long life and are unique to SKM. The motors are factory wired using wires specially selected for high ambient operation, to unit control panel where the motor contactors are located to control the operation of these motors.

The condenser fans are individually statically and dynamically balanced at the factory Complete fan assembly is provided with Suitable acrylic coated fan guard.

Evaporator

Evaporator coils are manufactured of seamless copper tubes mechanically bonded to aluminium fins to ensure optimum heat transfer. All evaporator coils are tested against leakage by air pressure of 450psig(3103kPa) under water. The DX evaporator coils are complete with headers of seamless copper tubing. Supply headers incorporate a correctly sized distributor. For different application requirements, other evaporator coil material and/or treatment are available on request.

- Copper fins.
 - Electro-tinned Copper fins.
 - Copper finned coils with electro-tinned after manufacturing.
 - Precoated Aluminum fins.
- The pre-coated is hydrophobic polyurethane resin. This option provides substantial corrosion protection beyond standard coil construction.
- Aeris Guard Coil Coating.
- The Aeris Guard Coil is a self etching high performance modified epoxy finish that is specifically designed to coat and protect Aluminum and Copper surfaces. In addition, the coating is ideal for the protection of ferrous and non ferrous materials.

Evaporator coils are rated in accordance with AHRI-410. Evaporator coil supplied with suitable size thermostatic expansion valve(s) and multi-circuited distributors providing capacity modulation to match the compressors. The cross wave fins and staggered tubes design uses the evaporator surface effectively by creating uniform air turbulence and optimum heat transfer over the entire finned surface. Requirements for higher face velocities can be handled by use of moisture eliminators to avoid carryover.

Evaporator Fan & Drive

Standard evaporator fan is forward curved centrifugal DIDW, statically and dynamically balanced complete with shaft, self-aligning, lubricated for life ball bearings.

APMR series have single and dual fans mounted on a single heavy duty shaft. The fan(s) are driven by single speed electric motor. The electric motors are foot mounted, 4 pole, totally enclosed fan cooled (TEFC), IP-55 protected, and with Class F insulation. The motor is fitted with an adjustable V-belt drive, as standard. Shaft ends insert into oversized, tapered lock self-aligning, long-life bearings. Motor is factory wired to the control panel where the motor contactor is located.

Filter Section

APMR series can be with a range of filter sections and filters to meet requirements for the most demanding applications.

- Flat or vee filter sections to accommodate 1" or 2" cleanable aluminium media filters can be provided.
- A bag filter section to house 15", 21" or 30" deep bag filters having efficiencies as desired can also be provided, as required. Filter sections come with latches to provide easy access for removal and for maintenance.
- On 100% fresh air applications an initial sand trap louvre can effectively minimize entrance of sand into the air stream.

- High efficiency mini pleat panel filters are available as an alternative for bag filter where space is limited.

To order a sand trap louvre from SKM specify fresh air opening size with option ASL.

Casing/Structure

The unit casing used in **APMR** Packaged units is made of zinc coated galvanized steel sheets conforming to JIS-G 3302 and ASTM A653 which is phosphatized before application of an electrostatic powder coat of approximately 60 microns and then oven-baked for a tough and lasting weather resistant finish. This finish and coating can pass a 1000 hour in 5 % salt spray testing at 95°F (35°C) and 95% relative humidity as per ASTM B117. The entire casing panels are designed to be leak proof against rain and ensure rain water cannot enter the packaged air conditioner interior.

The evaporator section is sealed with vinyl gaskets.

The standard evaporator section is insulated from all sides with black-neoprene faced heavy density 1" thick fiber glass insulation.

The insulation-cum-sound liner meets the fire requirements of NFPA90A & 90B and is secured with mechanical fasteners in addition to water resistant adhesive.

For applications requiring an inner skin in the evaporator section, option DSE provides an 0.7mm galvanized inner skin. Suitable isolation to ensure no cold-bridges and no condensation on the exterior of the units is provided. The condensate drain pan is heavily insulated to ensure condensation does not occur. Stainless steel condensate drain pans are available on request.

Electrical Control Panel

The **APMR** packaged Air Conditioners are provided with IP-54 control panel enclosure comprising all starting, operating and safety controls. The panel is factory wired in accordance with NEC 430 & 440, labelled, tagged and features 220V / 240V controls.

- All compressors are with DOL starting.
- Individual compressor, condenser fan motors and evaporator fan motor contactors.
- Motor protector circuit breaker for condenser and evaporator fan motors.
- Voltage monitoring module for protection against under voltage, over voltage, phase loss, phase reversal and phase unbalance of the incoming voltage.
- Control circuit breaker.
- Control circuit on/off switch.
- Electronic control board for unit operation.
- Diagnostic LED's on the control board for easy troubleshooting.
- Power and control circuit terminal blocks.
- Compressor short cycling protection.
- High pressure protection.
- Low pressure protection.



Optional Features

APMR series heavy duty packaged air- conditioners are available with a multitude of optional features which makes design and selection extremely easy and capable of matching the most stringent of requirements.

Alternative Condenser Material

Made of copper tubes and alternative fin material and/or protective coating.

- For Copper Fins, specify **(FC)**.
- For Electroplated Copper Fins only, specify **(CFT)**.
- For Copper Finned Coils electroplated post manufacturing, specify **(FCT)**.
- For Pre-Coated aluminum fins, specify **(FAP)**.
- For Aluminum Fins with Aeris post Coat Protection, specify **(FAA)**.
- For Copper Fins with Aeris post Coat Protection, specify **(FCA)**.

Alternative Evaporator Material

Made of copper tubes and alternative fin material and/or protective coating.

- For Copper Fins, specify **(EFC)**.
- For Electroplated Copper Fins only, specify **(ECFT)**.
- For Copper Finned Coils electroplated post manufacturing, specify **(EFC)**.
- For Pre-Coated aluminum fins, specify **(EFAP)**.
- For Aluminum Fins with Aeris post Coat Protection, specify **(EFAA)**.
- For Copper Fins with Aeris post Coat Protection, specify **(EFCA)**.

Condenser Coil Guard **(CGP)**

Wire mesh guard, in painted finish for condensers coils. Recommended on ground level installation where coil needs to be protected against vandalism.

Double Skin Evaporator **(DSE)**

Inner skin of 0.7 mm galvanized sheet in the evaporator section provided with no cold bridges. Recommended for 100% fresh air applications.

Marine Paint **(MP)**

To provide increased corrosion resistance on coastal environments and offshore location.

Filter Section

APMR series can be with a range of filter sections and filters to meet requirements for the most demanding applications.

S.No	Filter Type	Option code
		APMR 51005 to APMR 52046
Flat Filter Section with Media		
1	1" (25 mm) / 2" (50 mm) Thick Washable Aluminum.G2/G3	[FSIP1]/[FSIP2]
2	1" (25 mm) / 2" (50 mm) Thick Synthetic.G4	[FSIS2]
Vee Filter Section with Media		
3	1" (25 mm) / 2" (50 mm) Thick Washable Aluminum.G2/G3	[FVSP1]/[FVSP2]
4	1" (25 mm) / 2" (50 mm) Thick Synthetic.G4	[FVSS2]
Bag Filter Section with Media*		
5	15" (380 mm) deep bag filter	FSBG0-F8
6	21" (534 mm) deep bag filter	FSBG1-F8
7	30" (762 mm) deep bag filter	FSBG2-F8
Pleated Filter Media*		
8	4" (100 mm) thick	FSMP4-F8

*F8 indicates the efficiency, For F9 change option code.

Table 1

- Flat or vee filter sections to accommodate 1" or 2" cleanable aluminium media filters can be provided.
- A bag filter section to house 15", 21" or 30" deep bag filters having efficiencies as desired can also be provided, as required. Filter sections come with latches to provide easy access for removal and for maintenance.
- On 100% fresh air applications, an initial sand trap louvre can effectively minimize entrance of sand into the air stream, sand trap louvre (ASL) is available on request.
- High efficiency mini pleat panel filters are available as an alternative for bag filter where space is limited.

HEPA filters **(FIHP)**

Ultra high Absolute HEPA (High Efficiency Particulate Air filter with efficiency in excess of 99% when measured by using DOP (Di-Octyle Phthalate) method. In accordance with EN1882 standards. Eff : H13 (including section)

Sand trap louver **(ASL)**

To extract coarse sand prior to the entry in the unit.

Galvanized Frame And Base **(GFB)**

Steel frame and base which are hot dip galvanized after manufacturing process. This is recommended for highly corrosive environments.

Pressure Gauges **(SDG1)**

Suction and discharge indication of each refrigerant circuit. Gauges mounted outside the Control Panel.

Pressure Relief Valve **(PRV)**

To protect the unit from being over-pressurized.

Stainless Steel Drain Pan **(SSP)**

Heavy gauge 316 stainless steel drain pan under the entire cooling coil and moisture eliminator. Insulation under drain pan as per SKM standard.

Stainless steel drain pan (Grade 304) **(SDP)**

Stainless steel drain pan(Grade 304). Insulation under drain pan as per SKM standard.

Extra Shut Off Valve(s) **(XFV)**

To fully isolate refrigerant filter drier, additional shut-off valve (s) can be incorporated in the liquid line.

Rotalock Valves on compressors **(RVC)**

For additional facilitation of maintenance of unit.

Condenser & Evaporator Fans with polyglycoat coating **(PGF)**

To provide protection against corrosion for evaporator or condenser fans.

Anti Spark Fan & Belt (SPF)

For special applications like explosion proof units.

Mixing Box (BMX)

With or without sand trap louvre and bird screen on fresh air side.

Two inch insulation (2SG)

For evaporator section. Please contact SKM for this option

*Electric Heating (HTR1)

Electric heating batteries are made up of finned heating elements, constructed from high quality 80/20 nickel chrome resistance wire centred in metal tube by compressed magnesium oxide. Helical fins are tightly wound around the tubular heating element.

Heater batteries when ordered comes with stage contactors, primary auto reset thermal safety cut-out, secondary manual reset thermal safety cut-out and air flow switch. Power fuses / circuit breaker are provided for heaters with total ampere exceeding 48 amperes. For smaller heaters, power fuses can be provided if specified. Control of the heaters will be from the **APMR** control board.

Following are the optional kW ratings for electric heater. Ratings other than those specified here can be supplied on request. Consult SKM for details.

APMR	HEATER (kW)	STAGES
51005	4.5	1
51007		1
51008	9	1
51009		1
52010		
52013	18	
52015		
52019	24	
52022		
52025	36	2
52028		
52032		
52036	48	
52042		
52046		

Table 2

*Applicable for standard and high-efficiency units, but without ESMA certification. Consult SKM for applicable models.

Hot Gas Bypass System (GBP)

With solenoid to enable operation of a large sized unit at very low loads, during low load demand due to application requirements or where unit is selected to work on 100% fresh air applications.

Electronic Expansion Valve (EEV)

To provide energy saving benefits over mechanical thermostatic expansion valve (TXV).

Advanced Micro processor control system (AMCS)

An advanced microprocessor based controller can be provided as option, in case required. This controller will be with built-in display keypad and has many features. It comes with a loose supplied sleek and elegant design room thermostat for installing in the conditioned space.

Low Ambient Operation Kit (LAO)

For unit operation down to lower than normal gulf ambient. Please specify during the time of order. Please consult SKM for details.

IP 55 Control Panel (ICP)

Control Panel for special applications to meet IP55 requirements. Please consult SKM for details.

Main Isolator (without door interlock) (ISO)

For main power isolation. (Consult SKM)

Control Transformer (CXT)

This option is necessary and available for **APMR** models rated for 440V/3PH/50Hz or power supplies without neutral. When ordering for these voltages, this option must be ordered.

Voltage Monitoring Module as per DEWA (DVM)

Under voltage relay as per DEWA regulations. This option is available for Dubai, UAE only.

Circuit Breaker for Compressor (CBC)

For those electrical specification which requires additional short-circuit and overload protection for the compressors.

External Overload Protection (EOP)

For those electrical specification which requires additional overload protection for the compressors.

UL 1995* (UL-LISTED)

Unit constructions are certified and in compliance to UL-1995 safety standard. Model designation, construction and wiring details are unique. Please consult SKM for availability of selected models.

Soft Starter (SFS)

Compressors will be started using electronic solid state soft starters that will ramp up the speed of the compressors to rated speed within few seconds thus reducing the mechanical & electrical stresses. Please consult SKM for details.

Pump Down Facility (PD)

The compressor will switch off each time with a Pump Down Cycle in order to prevent Liquid refrigerant migration to the compressor during off Cycle periods.

With this option, each circuit will be provided with an additional discharge check valve (if required) to prevent Refrigerant Migration from High side to Low side when the compressor is off.

Note:

* Not applicable for Hi-Efficiency units.

** Whenever multiple options related to the unit control, please consult SKM for the drawings, as the size of the control panel might change.



Options for Field Installations

Anti-vibration mounts **(CAVM)**

Recommended for roof mounted units or other locations in the vicinity of occupied spaces, where noise may be objectionable.

Hi-Lo Pressure Gauges **(CSDG1)**

Without piping or isolating pet cocks.

Low Voltage Thermostat **(CHTS)**

(1 or 2 stages as per model) for wall mounting and for cooling/heating operation (not required with AMCS Option) .

Special custom built units incorporating specially required features like units for larger capacities , anti-condensation resistance heaters embedded in evaporator motors, can be manufactured on request. Consult SKM with detailed requirements.

Contact SKM for all such applications or requirements.

Capacity Control Steps

The Standard Capacity Control Steps are shown below.

APMR	APMR Hi-Efficiency	Standard	Number of Steps
51005	51005G	100-0	1
51007	51007G	100-0	1
51008	51008G	100-0	1
51009	51009G	100-0	1
52010	52010G	100-50-0	2
52013	52013G	100-50-0	2
52015	52015G	100-50-0	2
52019	52019G	100-50-0	2
52022	52022G	100-50-0	2
52025	52025G	100-50-0	2
52028	52028G	100-50-0	2
52032	52032G	100-56-0	2
52036	52036G	100-50-0	2
52042	52042G	100-56-0	2
52046	52046G	100-50-0	2

Table 3

Selection Procedure

APMR series packaged air-conditioners should be selected with care and using sound engineering judgement. Selections based on matching total capacity alone or air flow rate alone may not be correct. To meet requirements of a specific application, sample procedure for selection is given in examples below.

	Example 1: English Units	Example 2: SI Units
Application Requirements		
Required total cooling capacity.....	200 MBh.....	58.6 kW
Sensible cooling capacity.....	165 MBh.....	48.4 kW
Condenser entering air temp db.....	115°F.....	46.1°C
Evaporator entering air temp. db/wb.....	80/67°F.....	26.7/19.4°C
Evaporator air flow rate.....	8000 cfm.....	3775 l/s
External static pressure.....	1.00 inwg.....	250 Pa
Electric power supply.....	380V/3PH/50Hz.....	380V/3PH/50Hz
Refrigerant.....	R-410A.....	R-410A

Determine cooling capacity at design conditions.

Selection Procedure :

Enter packaged unit capacity ratings at given condition and select unit size **APMR** - 52019 having total cooling capacity 207.9 MBh (60.9 kW), and sensible cooling 159 MBh (46.7 kW), PI =19.1 kW. Total sensible cooling capacities & power to be interpolated for untabulated data.

- For EDB other than 80°F (26.7°C), use following formula:

$$\text{Actual sensible capacity} = \text{Rated sensible capacity} + 0.0011 (1 - \text{BPF}) (\text{EDB} - 80) \times \text{cfm} - \text{IP Units}$$

$$\text{Actual sensible capacity} = \text{Rated sensible capacity} + 0.00123 (1 - \text{BPF}) (\text{EDB} - 26.7) \times \text{l/s} - \text{SI Units}$$

Fan Speed & Motor Power

Refer to fan performance table on page 15-16 and adjust fan RPM = 853, fan brake power 2.49 kw. Standard motor size for selected model is 3 kW.

SKM Computer Selections are available for quick, detailed and accurate selections.



GENERAL DATA - STANDARD

Model	APMR	51005	51007	51008	51009	52010	52013	52015	52019	
Cooling Capacity (1)	MBh	59	75	81	99	118	151	169	234	
	kW	17	21	23	28	34	43	48	67	
Cooling Capacity (2)	MBh	53	67	72	89	106	136	151	208	
	kW	15	19	20	25	30	39	43	59	
Compressor	Type	Hermetic Scroll								
	Quantity	-	1	1	1	1	2	2	2	
	Oil Charge	US Gal	0.47	0.48	0.71	0.90	0.94	0.95	1.43	1.80
Litre		1.8	1.8	2.7	3.4	3.5	3.6	5.4	6.8	
Condenser Coil	Type	Air cooled 1,2,3 or 4 rows with 14FPI (1.8mm) or 16FPI (1.6mm) fin spacing, Aluminum Fins, Copper Tubes								
	Face Area	ft²	26.7	26.7	26.7	26.7	40.0	40.0	40.0	54.7
	m²	2.5	2.5	2.5	2.5	3.7	3.7	3.7	5.1	
Condenser Fan	Type	Propeller Direct Drive								
	Code / Quantity	-	550/2	550/2	550/2	550/2	630/2	630/2	K710/2	E800/2
	Air Flow Rate	cfm	8520	8520	8520	8260	10640	10640	15460	23200
l/s		3864	3864	3864	3746	4825	4825	7011	10522	
Condenser Motor	Type	Totally Enclosed Air Over, Class-F insulation, 4-pole or 6 pole, IP54 / IP55 protected								
	Size / Quantity	kW/#	0.275/2	0.275/2	0.275/2	0.275/2	0.357/2	0.357/2	0.8/2	1.5/2
Evaporator Coil	Type	Hi-X-Tubes								
	Face Area	ft²	4.6	6.4	6.4	8.7	9.7	12.5	13.3	19.5
	m²	0.4	0.6	0.6	0.8	0.9	1.2	1.2	1.8	
Evaporator Fan	Type	Centrifugal double inlet double width belt drive								
	Code / Quantity	-	10/10R	10/10R	12/12R	12/12R	15/15RK	12/12R2	15/15R2	
	Air Flow Rate	cfm	2000	2400	2900	3220	4000	5000	6000	8000
l/s		944	1133	1369	1520	1888	2360	2832	3776	
Evaporator Motor	Type	Totally Enclosed Fan Cooled, Class-F insulation, 4-pole, IP55 Protected.								
	Size	kW	0.55	0.75	1.1	1.1	1.5	2.2	2.2	3.0
Refrigerant (R - 410A) Operating Charge	lbs	10.7	11.0	11.0	18.5	15 / 15	15.3 / 15.3	15.4 / 15.4	20.4 / 20.4	
	kg	4.9	5.0	5.0	8.4	6.8 / 6.8	7/7	7/7	9.3/9.3	
Number of Refrigerant Circuits	-	1	1	1	1	2	2	2	2	
Unit Operating Weight	lbs	681	695	771	909	1242	1277	1469	1878	
	kg	310	315	350	413	563	579	667	851	

Model	APMR	52022	52025	52028	52032	52036	52042	52046	
Cooling Capacity (1)	MBh	267	284	323	363	408	480	542	
	kW	76	81	92	103	116	136	154	
Cooling Capacity (2)	MBh	234	251	288	325	365	430	484	
	kW	67	71	82	92	104	122	138	
Compressor	Type	Hermetic Scroll							
	Quantity	-	2	2	2	2	2	2	
	Oil Charge	US Gal	1.80	0.9 / 0.9	0.9 / 0.9	1.22 / 0.9	1.23 / 1.23	1.82 / 1.23	1.82 / 1.82
Litre		6.8	3.4 / 3.4	3.4 / 3.4	4.62 / 3.4	4.64 / 4.64	6.9 / 4.66	6.9 / 6.9	
Condenser Coil	Type	Air cooled 2,3 or 4 rows with 14FPI (1.8mm) or 16FPI (1.6mm) fin spacing, Aluminum Fins, Copper Tubes							
	Face Area	ft²	54.7	35.6	40.0	40.0	53.3	64.0	72.0
	m²	5.1	3.3	3.7	3.7	5.0	5.9	6.7	
Condenser Fan	Type	Propeller direct drive							
	Code / Quantity	-	E800/2	E800/3	E800/3	E800/3	E800/4	E800/4	
	Air Flow Rate	cfm	23200	25650	27090	25050	30240	38880	40480
l/s		10522	11633	12286	11361	13714	17633	18358	
Condenser Motor	Type	Totally enclosed, air over Class F insulation, 6-pole, IP-55							
	Size / Quantity	kW/#	1.5/2	1.5 / 3	1.5 / 3	1.5 / 3	1.5 / 3	1.5 / 4	1.5 / 4
Evaporator Coil	Type	Direct expansion, Aluminum Fins, Copper Tubes							
	Face Area	ft²	19.5	17.2	18.8	20.8	23.4	29.2	34.4
	m²	1.8	1.6	1.7	1.9	2.2	2.7	3.2	
Evaporator Fan	Type	Centrifugal double inlet double width belt drive							
	Code / Quantity	-	15/15R2	15/15R2	15/15R2	15/15R2	15/15R2	18/18R2	18/18R2
	Air Flow Rate	cfm	8000	8600	9400	10400	11700	14600	17200
l/s		3776	4059	4436	4908	5522	6890	8117	
Evaporator Motor	Type	Totally enclosed, fan cooled Class F insulation, 4-pole, IP-55							
	Size	kW	3	4	5.5	5.5	7.5	7.5	11
Refrigerant (R - 410A) Operating Charge	lbs	22.5 / 22.5	21.6 / 21.6	23.8 / 23.8	33.1 / 29.7	33.9 / 33.9	39.4 / 39.4	43.8 / 43.8	
	kg	10.2 / 10.2	9.8 / 9.8	10.8 / 10.8	15 / 13.5	15.4 / 15.4	17.9 / 17.9	19.9 / 19.9	
Number of Refrigerant Circuits	-	2	2	2	2	2	2	2	
Unit Operating Weight	lbs	1925	2704	2895	3167	3542	4512	4838	
	kg	873	1227	1313	1436	1606	2047	2195	

Table 4

- Notes :**
- (1) Capacity rating in accordance with AHRI standard 210/240 & 340 / 360.
 - (2) Capacity ratings based on evaporator entering air temperatures of 80/67 °F (26.7/19.4 °C) dry bulb/wet bulb and condenser entering air temperature of 115 °F (46 °C).
 - (3) Capacity is gross capacity which does not include the effect of evaporator fan motor heat.

GENERAL DATA - HI-EFFICIENCY UNITS

Model	APMR	51005G	51007G	51008G	51009G	52010G	52013G	52015G	
Cooling Capacity (1)	MBH	65	78	92	104	126	169	184	
	kW	19	23	27	30	37	50	54	
Cooling Capacity (2)	MBH	58	71	81	91	111	149	161	
	kW	17	21	24	27	33	44	47	
	EER	8.2	8.1	8.3	8.1	8.1	8.2	8.1	
Compressor	Type	Hermetic Scroll Compressor							
	Quantity	-	1	1	1	1	2	2	2
	Oil Charge Ckt (A / B)	US Gal	0.47	0.48	0.71	0.90	0.45 / 0.45	0.48 / 0.48	0.71 / 0.71
	Liter	1.8	1.8	2.7	3.4	1.7 / 1.7	1.80 / 1.80	2.7 / 2.7	
Condenser Coil	Type	Air cooled 2,3 or 4 rows with 14FPI (1.8mm) or 16FPI (1.6mm) fin spacing, Aluminum Fins, Copper Tubes							
	Face Area	ft ²	26.7	26.7	26.7	26.7	40.0	54.7	54.7
	m ²	2.5	2.5	2.5	2.5	3.7	5.1	5.1	
Condenser Fan	Type	Propeller direct drive							
	Code / Quantity	-	550 / 2	550 / 2	550 / 2	550 / 2	630 / 2	K710 / 2	K710 / 2
	Air Flow Rate	cfm	8260	8260	8260	8260	10640	15900	15900
	l/s	3898	3898	3898	3898	5021	7504	7504	
Condenser Motor	Type	Totally Enclosed Air Over, Class-F insulation, 4-pole or 6 pole, IP54 / IP55 protected							
	Size / Quantity	kW	0.275 / 2	0.275 / 2	0.275 / 2	0.275 / 2	0.357 / 2	0.8 / 2	0.8 / 2
Evaporator Coil	Type	Direct expansion, Aluminum Fins, Copper Tubes							
	Face Area	ft ²	4.6	6.4	8.7	8.7	13.3	15.6	15.6
	m ²	0.4	0.6	0.8	0.8	1.2	1.4	1.4	
Evaporator Fan	Type	Centrifugal double inlet double width belt drive							
	Code	-	10/10R	10/10R	12/12R	12/12R	15/15RK	15/15RK	12/12R2
	Air Flow Rate	cfm	2000	2400	2900	3220	5000	5000	6000
	l/s	944	1133	1369	1520	2360	2360	2832	
Evaporator Motor	Type	Totally enclosed, fan cooled Class F insulation, 4-pole IP55							
	Size	kW	0.55	0.75	0.75	1.10	1.5	1.5	2.2
Refrigerant Operating Charge Ckt (A / B)	lbs	18.9	19.0	20.3	20.3	20.3	20.4/20.4	20.4/20.4	
	kg	8.6	8.6	9.2	9.2	7/7	9.3/9.3	9.3/9.3	
Number of Refrigerant Circuits	-	1	1	1	1	2	2	2	
Unit Operating Weight	lbs	721	735	942	949	1050	1659	1754	
	kg	327	333	427	430	476	752	795	

Model	APMR	52019G	52022G	52025G	52028G	52032G	52036G	52042G	52046G	
Cooling Capacity (1)	MBH	253	283	289	330	400	449	521	586	
	kW	74	83	85	97	117	132	153	172	
Cooling Capacity (2)	MBH	221	246	257	296	354	403	457	517	
	kW	65	72	75	87	104	118	134	152	
	EER	8.1	8.0	7.6	7.6	7.6	7.7	7.6	7.5	
Compressor	Type	Hermetic Scroll Compressor								
	Quantity	-	2	2	2	2	2	2	2	
	Oil Charge Ckt (A / B)	US Gal	0.90 / 0.90	0.90 / 0.90	0.90 / 0.90	0.90 / 0.90	1.22 / 0.90	1.22 / 1.22	1.80 / 1.22	1.80 / 1.80
	Liter	3.40 / 3.40	3.40 / 3.40	3.40 / 3.40	3.40 / 3.40	4.60 / 3.40	4.60 / 4.60	6.80 / 4.60	6.80 / 6.80	
Condenser Coil	Type	Air cooled 2,3 or 4 rows with 14FPI (1.8mm) or 16FPI (1.6mm) fin spacing, Aluminum Fins, Copper Tubes								
	Face Area	ft ²	54.7	60.0	40.0	53.3	53.3	64.0	72.0	72.0
	m ²	5.1	5.6	3.7	5.0	5.0	5.9	6.7	6.7	
Condenser Fan	Type	Propeller direct drive								
	Code / Quantity	-	E800 / 2	E800 / 2	E800 / 3	E800 / 3	E800 / 3	E800 / 4	E800 / 4	E800 / 4
	Air Flow Rate	cfm	22400	22760	25050	30240	28530	36400	38200	46040
	l/s	10571	10741	11822	14271	13464	17178	18027	21727	
Condenser Motor	Type	Totally enclosed, air over Class F insulation, 6-pole, IP-55								
	Size / Quantity	kW	1.5 / 2	1.5 / 2	1.5 / 3	1.5 / 3	1.5 / 3	1.5 / 4	1.5 / 4	1.5 / 4
Evaporator Coil	Type	Direct expansion, Aluminum Fins, Copper Tubes								
	Face Area	ft ²	21.7	26.0	17.2	18.8	29.2	29.2	37.5	37.5
	m ²	2.0	2.4	1.6	1.7	2.7	2.7	3.5	3.5	
Evaporator Fan	Type	Centrifugal double inlet double width belt drive								
	Code	-	15/15R2	15/15R2	15/15R2	15/15R2	15/15R2	15/15R2	18/18R2	18/18R2
	Air Flow Rate	cfm	8000	8000	8600	9400	10400	11700	14600	17200
	l/s	3775	3775	4059	4436	4908	5521	6890	8117	
Evaporator Motor	Type	Totally enclosed, fan cooled Class F insulation, 4-pole IP55								
	Size	kW	3	3	4	5.5	5.5	7.5	7.5	11
Refrigerant Operating Charge Ckt (A / B)	lbs	29/29	33.4/33.4	29.1/29.1	29.5/29.5	43.3/39.7	49.3/49.3	55.7/55.7	71.2/71.2	
	kg	13.2/13.2	15.2/15.2	13.2/13.2	13.4/13.4	19.7/18	22.4/22.4	25.3/25.3	32.4/32.4	
Number of Refrigerant Circuits	-	2	2	2	2	2	2	2	2	
Unit Operating Weight	lbs	1911	2361	2659	2789	3432	3804	8180	4856	
	kg	867	1071	1206	1265	1556	1725	3710	2202	

Table 5

Notes :

- 1) Capacity rating in accordance with AHRI standard 210/240 & 340/360.
- 2) Capacity ratings based on evaporator entering air temperatures of 80/67 °F (26.7/19.4 °C) dry bulb/wet bulb and condenser entering air temperature of 115 °F (46 °C).
- 3) Capacity is gross capacity which does not include the effect of evaporator fan motor heat.



GROSS CAPACITY RATINGS-STANDARD

Model APMR-A	AFR cfm l/s (BPF)	EWB		Condenser Entering Air Temperature																			
				95°F (35°C)			105°F (40.6°C)			115°F (46.1°C)			120°F (48.9°C)										
				Total Capacity MBh kW	Sensible Capacity MBh kW	PI* kW	Total Capacity MBh kW	Sensible Capacity MBh kW	PI* kW	Total Capacity MBh kW	Sensible Capacity MBh kW	PI* kW	Total Capacity MBh kW	Sensible Capacity MBh kW	PI* kW								
1375	62	16.7	51.8	15.2	42.9	12.6	4.1	49	14.4	41.7	12.2	4.7	45.7	13.4	40.2	11.8	5.4	43.8	39.4	12.8	39.4	11.5	5.7
649	67	19.4	55.9	16.4	35.9	10.5	4.2	53.1	15.6	34.8	10.2	4.8	50	14.6	33.5	9.8	5.4	48.4	44.2	32.9	9.7	5.7	5.7
0.18	72	22.2	60.3	17.7	28.8	8.5	4.3	57.2	16.8	27.8	8.1	4.9	54	15.8	26.6	7.8	5.5	52.3	15.3	26	7.6	5.9	5.9
2000	62	16.7	54.5	16	51.4	15.1	4.2	50.9	14.9	50	14.6	4.8	47.2	13.8	47.2	13.8	5.4	45.4	13.3	45.4	13.3	5.7	5.7
944	67	19.4	59.4	17.4	42.3	12.4	4.3	56.3	16.5	41.2	12.1	4.8	53	15.5	39.9	11.7	5.5	51.3	15	39.3	11.5	5.8	5.8
0.22	72	22.2	63.9	18.7	32.9	9.6	4.3	60.4	17.7	31.7	9.3	4.9	56.8	16.7	30.6	9	5.6	55	16.1	30	8.8	6	6
2521	62	16.7	55.3	16.2	55.3	16.2	4.2	51.8	15.2	51.8	15.2	4.8	48.3	14.1	48.3	14.1	5.4	46.5	13.6	46.5	13.6	5.7	5.7
1190	67	19.4	61.2	17.9	47.1	13.8	4.3	57.9	17	46	13.5	4.9	54.4	15.9	44.7	13.1	5.5	52.2	15.3	44	12.9	5.8	5.8
0.26	72	22.2	65.6	19.2	35.8	10.5	4.3	62	18.2	34.7	10.2	5	58.2	17.1	33.5	9.8	5.7	-	-	-	-	-	-
1930	62	16.7	66.7	19.6	57.6	16.9	5.5	62.6	18.3	55.8	16.3	6.2	58.3	17.1	54	15.8	7	56.3	16.5	53.1	15.6	7.4	7.4
911	67	19.4	72.2	21.2	47.9	14	5.6	68.6	20.1	46.5	13.6	6.4	64.8	19	45.1	13.2	7.2	63	18.5	44.4	13	7.6	7.6
0.18	72	22.2	77.8	22.8	38.1	11.2	5.7	73.9	21.7	36.7	10.8	6.5	69.8	20.5	35.3	10.4	7.3	67.9	19.9	34.6	10.2	7.7	7.7
2400	62	16.7	67.9	19.9	63.8	18.7	5.5	63.7	18.7	62.1	18.2	6.2	59.6	17.5	59.6	17.5	7.1	57.6	16.9	57.6	16.9	7.4	7.4
1133	67	19.4	74.8	21.9	52.8	15.5	5.6	71	20.8	51.4	15.1	6.4	67	19.6	50	14.6	7.2	65.1	19.1	49.2	14.4	7.6	7.6
0.2	72	22.2	80.4	23.6	41.1	12.1	5.8	76.3	22.4	39.8	11.7	6.6	72.1	21.1	38.4	11.3	7.3	70	20.5	37.7	11.1	7.7	7.7
3538	62	16.7	70.2	20.6	70.2	20.6	5.5	66.1	19.4	66.1	19.4	6.3	62	18.2	62	18.2	7.1	60	17.6	60	17.6	7.5	7.5
1670	67	19.4	78.7	23.1	63.6	18.6	5.7	74	21.7	62	18.2	6.5	69	20.2	60.2	17.7	7.3	66.6	19.5	59.4	17.4	7.6	7.6
0.26	72	22.2	84.2	24.7	47.8	14	5.9	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1930	62	16.7	70.6	20.7	59.2	17.4	5.9	66.5	19.5	57.5	16.8	6.9	61.5	18	55.3	16.2	7.8	59.1	17.3	54.3	15.9	8.3	8.3
911	67	19.4	75.9	22.3	49.4	14.5	6.1	71.8	21.1	47.7	14	7	67.6	19.8	46.1	13.5	7.9	65.6	19.2	45.3	13.3	8.3	8.3
0.18	72	22.2	81.6	23.9	39.4	11.6	6.3	77.3	22.7	37.9	11.1	7.2	72.8	21.3	36.3	10.7	8	70.6	20.7	35.6	10.4	8.3	8.3
2900	62	16.7	73.5	21.6	72.1	21.1	6	68.7	20.1	68.7	20.1	6.9	63.9	18.7	63.9	18.7	7.9	61.6	18.1	61.6	18.1	8.3	8.3
1369	67	19.4	80.7	23.7	59.2	17.3	6.3	76.3	22.4	57.5	16.9	7.2	71.8	21	55.9	16.4	8	69.2	20.3	55	16.1	8.3	8.3
0.23	72	22.2	86.5	25.4	45.5	13.3	6.5	81.8	24	44	12.9	7.3	77	22.6	42.5	12.4	8	74.6	21.9	41.7	12.2	8.3	8.3
3538	62	16.7	74.6	21.9	74.6	21.9	6	69.8	20.5	69.8	20.5	7	65.1	19.1	65.1	19.1	7.9	62.8	18.4	62.8	18.4	8.3	8.3
1670	67	19.4	82.7	24.2	65	19.1	6.3	78.1	22.9	63.4	18.6	7.2	72.6	21.3	61.5	18	8	69.9	20.5	60.6	17.7	8.3	8.3
0.26	72	22.2	88.4	25.9	49.1	14.4	6.5	83.5	24.5	47.6	14	7.3	-	-	-	-	-	-	-	-	-	-	-
2604	62	16.7	88.6	26	77	22.6	6.3	83	24.3	74.7	21.9	7.2	77.3	22.7	72.2	21.2	8.1	74.5	21.8	71.1	20.8	8.6	8.6
1229	67	19.4	96	28.1	64.1	18.8	6.4	91.3	26.8	62.2	18.2	7.3	86.2	25.3	60.3	17.7	8.3	83.7	24.5	59.4	17.4	8.8	8.8
0.18	72	22.2	103.2	30.3	50.8	14.9	6.5	98.2	28.8	49	14.4	7.5	92.8	27.2	47.2	13.8	8.4	90.2	26.4	46.3	13.6	8.9	8.9
3220	62	16.7	89.9	26.4	85.2	25	6.3	84.6	24.8	83	24.3	7.2	79.1	23.2	79.1	23.2	8.2	76.4	22.4	76.4	22.4	8.6	8.6
1520	67	19.4	99.3	29.1	70.5	20.7	6.5	94.3	27.6	68.7	20.1	7.4	89.1	26.1	66.7	19.6	8.4	86.1	25.2	65.7	19.2	8.8	8.8
0.2	72	22.2	106.6	31.2	54.8	16.1	6.6	101.2	29.7	53	15.5	7.5	95.7	28	51.2	15	8.5	92.9	27.2	50.3	14.8	9	9
4774	62	16.7	93.1	27.3	93.1	27.3	6.4	87.9	25.8	87.9	25.8	7.3	82.4	24.1	82.4	24.1	8.2	79.6	23.3	79.6	23.3	8.7	8.7
2253	67	19.4	104.4	30.6	85.2	25	6.6	98	28.7	83	24.3	7.5	91.4	26.8	80.7	23.7	8.4	88.3	25.9	79.6	23.3	8.9	8.9
0.26	72	22.2	111.6	32.7	63.9	18.7	6.7	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
2917	62	16.7	103.2	30.2	88	25.8	7.4	97.6	28.6	85.6	25.1	8.4	90.5	26.5	82.5	24.2	9.6	87	25.5	81.1	23.8	10.3	10.3
1377	67	19.4	111.9	32.8	73.5	21.5	7.4	106.7	31.3	71.4	20.9	8.4	100.8	29.5	69.2	20.3	9.6	97.8	28.7	68	19.9	10.2	10.2
0.18	72	22.2	121.1	35.5	58.8	17.2	7.5	115.3	33.8	56.8	16.6	8.5	109	32	54.6	16	9.6	105.9	31	53.5	15.7	10.1	10.1
4000	62	16.7	106.5	31.2	102.5	30	7.4	100.2	29.4	100	29.3	8.4	93.5	27.4	93.5	27.4	9.7	90.2	26.4	90.2	26.4	10.3	10.3
1888	67	19.4	118	34.6	84.8	24.8	7.5	112.2	32.9	82.7	24.2	8.5	106	31.1	80.4	23.6	9.6	102.7	30.1	79.2	23.2	10.2	10.2
0.22	72	22.2	127.2	37.3	65.8	19.3	7.5	120.8	35.4	63.8	18.7	8.5	114.3	33.5	61.6	18.1	9.5	111	32.5	60.6	17.8	10	10
5347	62	16.7	109.1	32	109.1	32	7.4	103.1	30.2	103.1	30.2	8.4	96.5	28.3	96.5	28.3	9.7	93.2	27.3	93.2	27.3	10.3	10.3
2524	67	19.4	122.6	35.9	97.4	28.6	7.5	116.4	34.1	95.3	27.9	8.5	108.5	31.8	92.5	27.1	9.6	104.6	30.6	91.1	26.7	10.2	10.2
0.26	72	22.2	131.6	38.6	73.7	21.6	7.5	125	36.6	71.6	21	8.5	-	-	-	-	-	-	-	-	-	-	-
3750	62	16.7	133.5	39.1	113.5	33.3	10.6	126.3	37	110.4	32.4	12.1	117.5	34.4	106.6	31.3	13.8	113.3	33.2	104.8	30.7	14.5	14.5
1770	67	19.4	144.4	42.3	94.7	27.7	10.8	137.3	40.2	91.9	26.9	12.4	129.9	38.1	89	26.1	14	126.2	37	87.6	25.7	14.8	14.8
0.18	72	22.2	155.7	45.6	75.6	22.1	11.1	148.2	43.4	72.9	21.4	12.6	140.1	41.1	70.1	20.6	14.3	136.1	39.9	68.8	20.2	15	15
5000	62	16.7	137.5	40.3	130.3	32.2	10.7	129.1	37.8	126.9	37.2	12.2	120.8	35.4	120.8	35.4	13.8	116.8	34.2	116.8	34.2	14.6	14.6
2360	67	19.4	151.2	44.3	107.7	31.6	11	143.7	42.1	104.9	30.7	12.5	135.8	39.8	102	29.9	14.2	131.8	38.6	100.5	29.5	14.9	14.9
0.21	72	22.2	162.8	47.7	83.7	24.5	11.2	154.5	45.3	81	23.7	12.8	146	42.8	78.3	22.9	14.4	141.9	41.6	76.9	22.5	15.1	15.1
6875	62	16.7	141	41.3	141	41.3	10.8	132.9	39	132.9	39	12.3	124.7	36.6	124.7	36.6	13.9	120.7	35.4	120.7	35.4	14.7	14.7
3245	67	19.4	157.7	46.2	125.3	36.7	11.1	149.5	43.8	122.4	35.9	12.7	139.4	40.9	118.9	34.8	14.2	134.5	39.4	117.2	34.4	15	15
0.26	72	22.2	169	49.5	94.6	27.7	11.4	160.4	47	91.9	26.9	12.9	-	-	-	-	-	-	-	-	-	-	-
4000	62	16.7	147.3	43.2	123.3	36.1	10.9	139.7	40.9	119.9	35.1	12.5	130	38.1	115.7	33.9	14.5	124.9	36.6	113.5	33.3	15.5	15.5
1888	67	19.4	158.8	46.6	102.9	30.2	11.2	151	44.3	99.8	29.2	12.8	142.4	41.7	96.5	28.3	14.7	138.1	40.5	94.8	27.8	15.6	15.6
0.18	72	22.2	171.2	50.2	82.4	24.1	11.5	162.7	47.7	79.4	23.3	13.1	153.6	45	76.2	22.3	14.9	149	43.7	74.7	21.9	15.7	15.



GROSS CAPACITY RATINGS-HI-EFFICIENCY UNITS

Model APMRG	AFR cfm / I/s	EWB °F / °C	Condenser Entering Air Temperature																							
			95°F (35°C)						105°F (40.6°C)						115°F (46.1°C)						120°F (48.9°C)					
			Total Capacity		Sensible Capacity		PI	Total Capacity		Sensible Capacity		PI	Total Capacity		Sensible Capacity		PI	Total Capacity		Sensible Capacity		PI				
			MBh	kW	MBh	kW	kW	MBh	kW	MBh	kW	kW	MBh	kW	MBh	kW	kW	MBh	kW	MBh	kW	kW				
51005G	1375	62	16.7	55.8	16.4	46.6	13.7	3.8	53	15.5	45.3	13.3	4.4	49.2	14.4	43.7	12.8	5	47.3	13.9	42.8	12.5	5.3			
	649	67	19.4	60.5	17.7	39.2	11.5	3.9	57.7	16.9	38	11.1	4.4	54.6	16	36.7	10.8	5	52.9	15.5	36.1	10.6	5.3			
	0.09	72	22.2	65.3	19.1	31.5	9.2	3.9	62.3	18.3	30.4	8.9	4.4	58.8	17.2	29.2	8.5	5.1	57	16.7	28.5	8.4	5.4			
	2000	62	16.7	58.4	17.1	56.4	16.5	3.9	55.2	16.2	55	16.1	4.4	51.7	15.1	51.7	15.1	5	49.9	14.6	49.9	14.6	5.3			
	944	67	19.4	65.1	19.1	46.9	13.7	3.9	62	18.2	45.7	13.4	4.4	58.1	17	44.2	13	5.1	55.9	16.4	43.4	12.7	5.4			
	0.12	72	22.2	69.9	20.5	36.3	10.6	3.9	66.4	19.5	35.2	10.3	4.5	-	-	-	-	-	-	-	-	-	-			
	2521	62	16.7	59.9	17.6	59.9	17.6	3.9	56.8	16.6	56.8	16.6	4.4	53.2	15.6	53.2	15.6	5	51.4	15.1	51.4	15.1	5.3			
	1190	67	19.4	67.4	19.8	52.6	15.4	3.9	63.4	18.6	51.1	15	4.5	59.1	17.3	49.6	14.5	5.1	56.9	16.7	48.9	14.3	5.4			
	0.14	72	22.2	72.1	21.1	39.9	11.7	3.9	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-			
	1930	62	16.7	69.5	20.4	58.8	17.2	4.9	66.2	19.4	57.3	16.8	5.6	61.8	18.1	55.4	16.2	6.4	59.6	17.5	54.5	16	6.8			
51007G	911	67	19.4	75.2	22.1	49.1	14.4	5	71.8	21.1	47.8	14	5.6	68.2	20	46.3	13.6	6.5	66.3	19.4	45.6	13.4	6.9			
	0.18	72	22.2	81.3	23.8	39.3	11.5	5	77.7	22.8	38	11.1	5.7	73.7	21.6	36.6	10.7	6.5	71.6	21	35.9	10.5	7			
	2400	62	16.7	71.5	21	65.3	19.1	4.9	67.3	19.7	63.6	18.6	5.6	63	18.5	61.8	18.1	6.4	60.9	17.9	60.9	17.9	6.8			
	1133	67	19.4	78.1	22.9	54.1	15.9	5	74.5	21.8	52.7	15.5	5.7	70.6	20.7	51.3	15	6.5	68.6	20.1	50.5	14.8	6.9			
	0.2	72	22.2	84.3	24.7	42.4	12.4	5.1	80.4	23.6	41.1	12.1	5.8	76.1	22.3	39.7	11.6	6.6	74	21.7	39	11.4	7			
	3530	62	16.7	73.6	21.6	73.6	21.6	4.9	69.7	20.4	69.7	20.4	5.6	65.5	19.2	65.5	19.2	6.4	63.5	18.6	63.5	18.6	6.8			
	1670	67	19.4	82.4	24.2	64.9	19	5.1	78.5	23	63.6	18.6	5.7	73.7	21.6	61.9	18.1	6.5	71.1	20.8	61	17.9	7			
	0.26	72	22.2	88.6	26	49.2	14.4	5.2	84.3	24.7	47.9	14	5.9	-	-	-	-	-	-	-	-	-	-			
	2387	62	16.7	80.4	23.6	74	21.7	5.4	75.9	22.2	72	21.1	6.1	71.1	20.8	70	20.5	7.1	68.6	20.1	68.6	20.1	7.6			
	51008G	1127	67	19.4	89.8	26.3	62.1	18.2	5.6	85.3	25	60.3	17.7	6.4	79.3	23.3	58.1	17	7.2	76.4	22.4	57	16.7	7.6		
0.09		72	22.2	96.3	28.2	48.8	14.3	5.8	91.4	26.8	47	13.8	6.5	-	-	-	-	-	-	-	-	-	-			
2900		62	16.7	82.6	24.2	82.5	24.2	5.4	78.1	22.9	78.1	22.9	6.2	73.3	21.5	73.3	21.5	7.1	70.8	20.8	70.8	20.8	7.6			
1369		67	19.4	92.3	27	68.3	20	5.7	86.6	25.4	66.2	19.4	6.4	80.9	23.7	64	18.8	7.2	78.1	22.9	63	18.5	7.6			
0.1		72	22.2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-			
4774		62	16.7	88.2	25.9	88.2	25.9	5.6	83.4	24.5	83.4	24.5	6.3	80.7	23.7	80.7	23.7	7.2	77.9	22.8	77.9	22.8	7.6			
2253		67	19.4	96.4	28.3	88.5	25.9	5.8	90.9	26.6	86.6	25.4	6.5	-	-	-	-	-	-	-	-	-	-			
0.14		72	22.2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-			
2604		62	16.7	90.4	26.5	81.5	23.9	6.4	85.1	25	79.2	23.2	7.2	79.6	23.3	76.8	22.5	8.2	76.9	22.5	75.7	22.2	8.7			
51009G		1229	67	19.4	100.2	29.4	68.4	20	6.5	95.2	27.9	66.4	19.5	7.4	89.7	26.3	64.3	18.8	8.4	86.4	25.3	63	18.5	8.8		
	0.09	72	22.2	107.5	31.5	53.9	15.8	6.6	102.1	29.9	52	15.2	7.5	96.5	28.3	50	14.7	8.6	-	-	-	-	-			
	3220	62	16.7	92.9	27.2	91.4	26.8	6.4	87.7	25.7	87.7	25.7	7.3	82.2	24.1	82.2	24.1	8.2	79.5	23.3	79.5	23.3	8.7			
	1520	67	19.4	104.2	30.5	76	22.3	6.6	97.9	28.7	73.6	21.6	7.4	91.3	26.8	71.2	20.9	8.4	88.2	25.8	70	20.5	8.9			
	0.11	72	22.2	111.4	32.6	58.6	17.2	6.7	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-			
	4774	62	16.7	97.6	28.6	97.6	28.6	6.5	92.3	27	92.3	27	7.3	86.6	25.4	86.6	25.4	8.3	83.8	24.6	83.8	24.6	8.8			
	2253	67	19.4	107.4	31.5	92.4	27.1	6.6	101.1	29.6	90.2	26.4	7.5	94.9	27.8	88	25.8	8.5	91.8	26.9	87	25.5	9			
	0.14	72	22.2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-			
	4000	62	16.7	110.1	32.3	107.4	31.5	7.4	104	30.5	104	30.5	8.4	97.4	28.6	97.4	28.6	9.7	94.1	27.6	94.1	27.6	10.3			
	52010G	1888	67	19.4	124	36.4	89.5	26.2	7.5	117	34.3	86.9	25.5	8.5	109.1	32	84	24.6	9.6	105.2	30.8	82.6	24.2	10.1		
0.18		72	22.2	133	39	69.2	20.3	7.5	-	-	-	-	-	-	-	-	-	-	-	-	-	-				
5000		62	16.7	113	33.1	113	33.1	7.4	106.9	31.3	106.9	31.3	8.4	100.3	29.4	100.3	29.4	9.6	96.9	28.4	96.9	28.4	10.3			
2360		67	19.4	126.4	37.1	99.3	29.1	7.5	118.8	34.8	96.6	28.3	8.5	111.2	32.6	93.9	27.5	9.6	107.5	31.5	92.6	27.1	10.1			
0.2		72	22.2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-			
7333		62	16.7	117.8	34.5	117.8	34.5	7.5	111.5	32.7	111.5	32.7	8.5	104.6	30.7	104.6	30.7	9.6	101.2	29.7	101.2	29.7	10.2			
3461		67	19.4	129.7	38	120.3	35.2	7.5	122.3	35.8	117.7	34.5	8.5	114.9	33.7	114.9	33.7	9.5	111.3	32.6	111.3	32.6	10			
0.26		72	22.2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-			
4278		62	16.7	146.9	43.1	133.8	39.2	9.9	138.9	40.7	130.3	38.2	11.3	130.7	38.3	126.8	37.2	12.9	126.5	37.1	125.1	36.7	13.7			
52013G		2019	67	19.4	164.3	48.2	112.6	33	10.1	156.5	45.9	109.6	32.1	11.5	147	43.1	105.9	31	13.1	141.8	41.6	104	30.5	13.9		
	0.09	72	22.2	176.5	51.7	88.8	26	10.3	168.1	49.3	85.8	25.1	11.7	-	-	-	-	-	-	-	-	-				
	5000	62	16.7	150.2	44	145.8	42.7	9.9	142.3	41.7	142.3	41.7	11.3	134	39.3	134	39.3	12.9	129.8	38	129.8	38	13.7			
	2360	67	19.4	169.2	49.6	121.8	35.7	10.2	159.3	46.7	118.1	34.6	11.6	149.2	43.7	114.2	33.5	13.2	144.1	42.2	112.4	32.9	14			
	0.1	72	22.2	181.4	53.2	94.5	27.7	10.4	-	-	-	-	-	-	-	-	-	-	-	-	-	-				
	8550	62	16.7	161.6	47.4	161.6	47.4	10.1	153.3	44.9	153.3	44.9	11.5	144.4	42.3	144.4	42.3	13.1	144.4	42.3	144.4	42.3	14			
	4035	67	19.4	177.2	51.9	160.2	46.9	10.3	167.7	49.1	156.9	46	11.7	157.8	46.3	153.5	45	13.3	-	-	-	-				
	0.14	72	22.2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-				
	4667	62	16.7	158.9	46.6	144.6	42.4	10.8	149.8	43.9																

GROSS CAPACITY RATINGS - HI-EFFICIENCY UNITS

Model APMRG	AFR cfm /s (BPF)	EWB		Condenser Entering Air Temperature																							
				95°F (35°C)						105°F (40.6°C)						115°F (46.1°C)						120°F (48.9°C)					
				Total Capacity		Sensible Capacity		PI*	Total Capacity		Sensible Capacity		PI*	Total Capacity		Sensible Capacity		PI*	Total Capacity		Sensible Capacity		PI*				
				MBh	kW	MBh	kW	kW	MBh	kW	MBh	kW	kW	MBh	kW	MBh	kW	kW	MBh	kW	MBh	kW	kW				
52022G	6500	62	16.7	245.2	71.9	214	62.7	15.9	230.1	67.5	207.3	60.8	18.2	214.4	62.8	200.5	58.8	20.9	206.4	60.5	197.1	57.8	22.3				
	3068	67	19.4	271.2	79.5	180.5	52.9	16.2	257.1	75.4	174.8	51.2	18.6	241.6	70.8	168.7	49.4	21.4	232.2	68.1	165	48.4	22.8				
	0.08	72	22.2	291.4	85.4	143.5	42.1	16.4	275.9	80.9	138	40.4	18.8	259.3	76	132.2	38.7	21.7	251	73.6	129.3	37.9	23.2				
	8000	62	16.7	251.9	73.8	238.8	70	16	237.3	69.5	232.6	68.2	18.3	221.5	64.9	221.5	64.9	21	213.5	62.6	213.5	62.6	22.4				
	3776	67	19.4	282.5	82.8	199.8	58.6	16.3	265.6	77.9	193.4	56.7	18.7	246.3	72.2	186.1	54.6	21.5	236.8	69.4	182.6	53.5	22.9				
	0.1	72	22.2	302.2	88.6	155.6	45.6	16.5	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-				
	14300	62	16.7	272.2	79.8	272.2	79.8	16.2	256.7	75.2	256.7	75.2	18.6	239.9	70.3	239.9	70.3	21.3	238.5	69.9	238.5	69.9	22.9				
	6749	67	19.4	297.7	87.3	268.3	78.6	16.5	279.9	82	262.1	76.8	18.9	261.3	76.6	255.7	75	21.8	-	-	-	-	-				
	0.14	72	22.2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-				
	6016	62	16.7	250	73.3	204.9	60.1	18	236.7	69.4	198.8	58.3	20.4	221.2	64.8	191.9	56.2	23.3	211.5	62	187.6	55	24.7				
2839	67	19.4	269.5	79	172	50.4	18.3	255.8	75	166.4	48.8	20.9	240.4	70.5	160.2	46.9	23.7	232.4	68.1	157	46	25.1					
0.11	72	22.2	291.1	85.3	139	40.7	18.8	276.2	80.9	133.5	39.1	21.4	259.5	76.1	127.6	37.4	24.1	250.9	73.5	125.5	36.5	25.4					
8600	62	16.7	264.9	77.6	245.4	71.9	18.2	247.4	72.5	238	69.8	20.7	229	67.1	229	67.1	23.5	220	64.5	220	64.5	24.9					
4059	67	19.4	288.9	84.7	202.8	59.4	18.8	273.6	80.2	197	57.8	21.3	256.5	75.2	190.6	55.9	24	247.8	72.6	187.4	54.9	25.3					
0.14	72	22.2	311.3	91.2	158.6	46.5	19.3	294.2	86.2	152.9	44.8	21.8	275.4	80.7	146.6	43	24.4	265.9	77.9	143.5	42.1	25.6					
9453	62	16.7	266.6	78.1	257.2	75.4	18.3	249.4	73.1	249.4	73.1	20.7	231.3	67.8	231.3	67.8	23.5	222.4	65.2	222.4	65.2	24.9					
4461	67	19.4	293.2	85.9	212.1	62.2	18.9	277.5	81.3	206.2	60.4	21.4	260.1	76.2	199.8	58.6	24.1	250.6	73.5	196.4	57.6	25.4					
0.14	72	22.2	315.5	92.5	164.4	48.2	19.4	298	87.3	158.6	46.5	21.9	278.8	81.7	152.4	44.7	24.5	269.1	78.9	149.3	43.8	25.7					
6563	62	16.7	285.4	83.7	229.4	67.2	21.7	271.2	79.5	222.8	65.3	24.5	255.5	74.9	215.7	63.2	27.6	247.3	72.5	212	62.1	29.1					
3097	67	19.4	306.8	89.9	193	56.6	22.2	292.3	85.7	187	54.8	25	276.4	81	180.5	52.9	28	268.2	78.6	177.1	51.9	29.4					
0.11	72	22.2	331.5	97.2	156.9	46	22.8	315.7	92.5	150.9	44.2	25.6	298.5	87.5	144.7	42.4	28.4	289.7	84.9	141.5	41.5	29.7					
9400	62	16.7	304.6	89.3	274.6	80.5	22.1	286.8	84.1	267	78.3	24.9	266.6	78.1	258.5	75.8	27.8	256.7	75.2	254.5	74.6	29.3					
4436	67	19.4	329.6	96.6	226.9	66.5	22.7	313.3	91.8	220.7	64.7	25.5	295.7	86.7	214.1	62.7	28.3	286.7	84	210.7	61.8	29.6					
0.14	72	22.2	355.2	104.1	178.5	52.3	23.4	337.3	98.9	172.4	50.5	26.1	317.8	93.2	165.8	48.6	28.6	307.9	90.3	162.5	47.6	29.8					
10313	62	16.7	308.1	90.3	287.8	84.3	22.2	288.7	84.6	279.7	82	24.9	268.8	78.8	268.8	78.8	27.8	259.2	76	259.2	76	29.3					
4867	67	19.4	334.5	98	236.9	69.4	22.9	317.9	93.2	230.7	67.6	25.7	299.8	87.9	223.9	66.6	28.4	290.6	85.2	220.5	64.6	29.7					
0.14	72	22.2	360.3	105.6	184.8	54.2	23.6	341.8	100.2	178.5	52.3	26.2	321.8	94.3	172	50.4	28.7	311.8	91.4	168.7	49.5	29.8					
8750	62	16.7	351	102.9	301.3	88.3	25.6	329.4	96.5	291.6	85.5	28.8	307.7	90.2	282	82.6	32.5	297	87.1	277.3	81.3	34.2					
4130	67	19.4	385.2	112.9	253.9	74.4	26.4	365.8	107.2	246	72.1	29.8	345.1	101.1	237.7	69.7	33.3	334.5	98.1	233.5	68.4	35					
0.06	72	22.2	414.6	121.5	203	59.5	27.2	392.9	115.2	195.1	57.2	30.6	370.1	108.5	187	54.8	33.9	358.6	105.1	182.9	53.6	35.4					
10400	62	16.7	358.4	105	329.6	96.6	25.7	337.6	98.9	320.6	94	29	316.2	92.7	311.6	91.3	32.7	305.6	89.6	305.6	89.6	34.4					
4908	67	19.4	399.8	117.2	276.7	81.1	26.8	379.1	111.1	268.6	78.7	30.2	353.8	103.7	258.9	75.9	33.5	340.6	99.8	253.9	74.4	35.1					
0.07	72	22.2	428.6	125.6	217.3	63.7	27.7	405.7	118.9	209.2	61.3	30.9	-	-	-	-	-	-	-	-	-	-					
16042	62	16.7	381.6	111.9	381.6	111.9	26.3	360.3	105.6	360.3	105.6	29.7	338	99.1	338	99.1	33.2	326.8	95.8	326.8	95.8	34.8					
7571	67	19.4	421.1	123.4	344.5	101	27.4	395.5	115.9	335.4	98.3	30.6	369.6	108.3	326.2	95.6	33.8	356.8	104.6	321.8	94.3	35.4					
0.1	72	22.2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-					
8750	62	16.7	387.7	113.6	318.3	93.3	27.8	367.6	107.7	308.9	90.5	31.5	342.4	100.4	297.4	87.2	35.8	330.1	96.8	291.9	85.6	38					
4130	67	19.4	420.1	123.1	268.5	78.7	28.4	400.1	117.3	260.1	76.2	32.3	378.7	111	251.2	73.6	36.7	367.6	107.7	246.8	72.3	38.9					
0.06	72	22.2	454	133.1	217.7	63.8	29.2	432	126.6	209.5	61.4	33.2	408.3	119.7	200.7	58.8	37.5	396	116.1	196.2	57.5	39.6					
11700	62	16.7	403.8	118.4	369.1	108.2	28.1	380.5	111.5	359	105.2	31.8	356.8	104.6	348.9	102.3	36.1	345	101.1	344	100.8	38.3					
5522	67	19.4	448.9	131.6	309.5	90.7	29	426.5	125	300.7	88.1	33	402.5	118	291.5	85.4	37.3	387.7	113.6	285.9	83.8	39.4					
0.08	72	22.2	482.8	141.5	243.8	71.4	29.9	457.9	134.2	235	68.9	33.9	431.6	126.5	226	66.2	38.1	-	-	-	-	-					
16042	62	16.7	421.4	123.5	421.4	123.5	28.5	398.3	116.7	398.3	116.7	32.2	374.3	109.7	374.3	109.7	36.6	362.1	106.1	362.1	106.1	38.7					
7571	67	19.4	472.6	138.5	363.3	106.5	29.6	443.2	129.9	352.6	103.3	33.5	413.8	121.3	341.9	100.2	37.6	399.3	117	336.7	98.7	39.7					
0.1	72	22.2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-					
11250	62	16.7	448.1	131.3	385.9	113.1	32	421.1	123.4	373.8	109.6	36.1	393.9	115.4	361.8	106	40.8	380.5	111.5	355.9	104.3	43.2					
5309	67	19.4	492.7	144.4	325.5	95.4	32.7	468.3	137.3	315.5	92.5	37.1	442.1	129.6	305	89.4	42	428.7	125.7	299.6	87.8	44.4					
0.06	72	22.2	530.7	155.5	260.1	76.2	33.2	503.4	147.5	250.2	73.3	37.7	474.4	139	239.9	70.3	42.8	459.6	134.7	234.7	68.8	45.3					
14600	62	16.7	463.7	135.9	443.8	130.1	32.3	437.7	128.3	432.9	128.9	36.5	410.8	120.4	410.8	120.4	41.2	397.3	116.4	397.3	116.4	43.6					
6890	67	19.4	520.6	152.6	371.2	108.8	33.1	490.6	143.8	359.8	105.5	37.5	456.7	133.9	347	101.7	42.3	440.2	129	340.8	99.9	44.7					
0.07	72	22.2	557.9	163.5	288.9																						



FAN PERFORMANCE-STANDARD

Model APMR	AirFlowRate		Internal Static Pressure		External Static Pressure - in.wg(Pa)																					
					0(0)		0.2(50)		0.4(100)		0.6(150)		0.8(200)		1(250)		1.2(300)		1.4(350)		1.6(400)		1.8(450)		2(500)	
	cfm	l/s	in.wg	Pa	RPM	kW	RPM	kW	RPM	kW	RPM	kW	RPM	kW	RPM	kW	RPM	kW	RPM	kW	RPM	kW	RPM	kW	RPM	kW
51005	1375	649	0.28	69.3	-	-	636	0.15	747	0.19	855	0.24	959	0.29	-	-	-	-	-	-	-	-	-	-	-	-
	2000	944	0.59	147.23	744	0.32	833	0.38	916	0.44	995	0.51	1071	0.57	1145	0.64	1219	0.71	1291	0.79	1362	0.87	1433	0.96	-	-
	2521	1190	0.96	239.22	946	0.65	1017	0.73	1085	0.81	1150	0.88	1213	0.96	1275	1.04	1335	1.12	1394	1.21	1453	1.29	1511	1.38	1569	1.48
51007	1930	911	0.28	69.3	-	-	683	0.27	778	0.33	865	0.39	948	0.45	1027	0.51	1104	0.57	1180	0.64	1254	0.72	1329	0.8	1402	0.88
	2400	1133	0.43	106.01	725	0.41	803	0.48	883	0.55	959	0.62	1031	0.69	1099	0.77	1165	0.84	1229	0.92	1292	0.99	1354	1.08	1416	1.16
	3538	1670	0.96	239.14	1077	1.34	1130	1.43	1184	1.53	1239	1.63	1293	1.73	1345	1.84	1396	1.95	1446	2.05	1495	2.16	1542	2.27	1588	2.38
51008	1930	911	0.28	69.3	-	-	-	-	664	0.27	751	0.34	834	0.41	914	0.49	992	0.58	-	-	-	-	-	-	-	-
	2900	1369	0.63	157.7	693	0.52	768	0.61	839	0.7	905	0.79	968	0.88	1028	0.98	1086	1.07	1143	1.17	1199	1.28	1253	1.39	1307	1.5
	3538	1670	0.96	239.14	851	0.95	913	1.06	973	1.17	1029	1.28	1084	1.39	1136	1.5	1187	1.62	1237	1.73	1286	1.85	1333	1.97	1380	2.09
51009	2604	1229	0.28	69.29	-	-	608	0.36	693	0.44	770	0.52	842	0.61	910	0.69	976	0.78	1039	0.87	1100	0.96	1160	1.06	1219	1.17
	3220	1520	0.42	104.78	639	0.53	713	0.63	784	0.73	851	0.83	915	0.93	976	1.03	1034	1.13	1089	1.23	1143	1.34	1196	1.45	1248	1.56
	4774	2253	0.96	239.15	957	1.77	1006	1.9	1055	2.05	1104	2.2	1152	2.34	1198	2.49	1243	2.64	1287	2.79	1330	2.94	1372	3.09	1414	3.24
52010	2917	1377	0.28	69.31	-	-	633	0.45	712	0.54	786	0.64	855	0.73	920	0.82	982	0.91	1042	1	1100	1.1	1156	1.2	1211	1.31
	4000	1888	0.52	130.04	757	0.96	816	1.07	875	1.18	933	1.31	989	1.43	1043	1.56	1096	1.68	1146	1.81	1195	1.93	1242	2.06	1289	2.18
	5347	2523	0.96	239.16	1018	2.31	1062	2.45	1106	2.6	1150	2.76	1194	2.92	1237	3.09	1280	3.25	1322	3.42	1363	3.59	1403	3.76	1442	3.92
52013	3750	1770	0.28	69.3	431	0.4	508	0.5	579	0.6	644	0.71	703	0.83	760	0.95	814	1.08	866	1.21	916	1.35	966	1.5	1014	1.65
	5000	2360	0.49	122.56	573	0.94	632	1.07	689	1.21	743	1.35	793	1.49	842	1.64	888	1.79	933	1.95	976	2.11	1017	2.27	1058	2.44
	6875	3244	0.96	239.18	795	2.48	838	2.66	881	2.84	922	3.03	962	3.22	1001	3.41	1039	3.6	1076	3.8	1112	4	1147	4.21	1181	4.41
52015	4000	1888	0.25	61.16	-	-	-	-	684	0.6	775	0.74	861	0.89	944	1.05	1024	1.23	1102	1.44	1180	1.67	1257	1.92	1334	2.22
	6000	2831	0.56	140.61	708	1.12	787	1.32	861	1.52	931	1.72	997	1.93	1061	2.13	1122	2.34	1181	2.55	1239	2.78	1295	3.01	1350	3.25
	7333	3460	0.87	215.63	872	2.07	938	2.32	1000	2.56	1060	2.81	1117	3.06	1173	3.3	1226	3.55	1278	3.8	1329	4.05	1378	4.31	1427	4.57
52019	5850	2761	0.25	61.16	-	-	489	0.65	572	0.84	647	1.04	718	1.26	785	1.5	850	1.77	914	2.05	977	2.37	1039	2.72	1102	3.1
	8000	3775	0.46	115.22	539	1.2	611	1.44	678	1.69	740	1.95	798	2.22	853	2.49	907	2.78	958	3.09	1008	3.4	1057	3.73	1105	4.08
	10725	5061	0.87	215.65	732	2.96	787	3.27	839	3.6	889	3.93	936	4.27	982	4.62	1026	4.97	1069	5.33	1111	5.7	1152	6.08	1191	6.46
52022	5850	2761	0.29	72.86	417	0.51	509	0.69	590	0.88	664	1.09	734	1.32	800	1.56	865	1.83	928	2.13	991	2.45	1054	2.8	1117	3.2
	8000	3775	0.55	137.75	572	1.31	642	1.55	707	1.81	767	2.07	823	2.34	878	2.62	930	2.92	981	3.23	1030	3.55	1079	3.89	1126	4.24
	10725	5061	1.04	259.19	780	3.23	832	3.56	882	3.89	930	4.23	976	4.57	1021	4.92	1064	5.28	1106	5.65	1146	6.03	1186	6.42	-	-
52025	6016	2839	0.43	107.07	485	0.66	568	0.86	643	1.06	712	1.29	779	1.52	843	1.78	905	2.07	967	2.38	1028	2.71	1089	3.08	1150	3.49
	8600	4058	0.94	234.21	712	2.02	771	2.3	826	2.58	879	2.87	930	3.17	979	3.49	1027	3.81	1074	4.15	1119	4.5	1164	4.87	-	-
	9453	4461	1.15	286.81	787	2.71	840	3.01	891	3.32	940	3.64	988	3.96	1033	4.3	1078	4.64	1121	5	1164	5.37	-	-	-	-
52028	6563	3097	0.43	107.08	495	0.78	575	0.98	648	1.2	715	1.43	779	1.67	839	1.93	898	2.21	956	2.51	1013	2.83	1070	3.18	1126	3.55
	9400	4436	0.94	235.2	727	2.38	784	2.67	838	2.97	889	3.28	938	3.6	985	3.92	1031	4.26	1076	4.6	1120	4.96	1162	5.32	-	-
	10313	4867	1.15	286.85	802	3.17	854	3.49	903	3.81	951	4.15	996	4.49	1041	4.84	1083	5.2	1125	5.56	1166	5.94	-	-	-	-
52032	7292	3441	0.43	107.07	510	0.96	587	1.18	657	1.41	722	1.65	782	1.91	840	2.17	896	2.45	950	2.75	1003	3.06	1055	3.39	1106	3.75
	10400	4908	0.94	233.03	744	2.88	799	3.19	851	3.51	900	3.84	948	4.18	994	4.52	1038	4.87	1081	5.23	1123	5.6	1164	5.97	-	-
	11458	5407	1.15	286.8	824	3.88	874	4.22	921	4.58	967	4.93	1011	5.3	1054	5.67	1095	6.05	1135	6.43	1175	6.83	-	-	-	-
52036	8203	3871	0.43	107.06	531	1.23	604	1.47	671	1.72	733	1.98	791	2.25	846	2.53	899	2.82	950	3.13	1000	3.44	1048	3.77	1096	4.11
	11700	5521	0.94	233.03	774	3.68	825	4.02	874	4.37	922	4.72	967	5.09	1011	5.46	1054	5.83	1095	6.21	1135	6.6	1174	7	-	-
	12891	6083	1.15	286.84	856	4.95	903	5.32	948	5.71	992	6.1	1034	6.49	1075	6.89	1115	7.3	1153	7.71	1191	8.13	-	-	-	-
52042	10208	4817	0.43	107.05	445	1.44	506	1.76	561	2.08	613	2.43	662	2.8	710	3.19	756	3.61	802	4.07	848	4.56	893	5.08	938	5.65
	14600	6890	0.94	234.43	651	4.34	693	4.8	734	5.26	773	5.73	811	6.2	847	6.69	882	7.2	917	7.72	951	8.25	985	8.81	1018	9.38
	16042	7570	1.15	286.83	718	5.8	757	6.31	794	6.81	830	7.32	865	7.83	899	8.36	932	8.9	964	9.45	996	10.02	1027	10.6	1058	11.2
52046	12031	5677	0.43	107.06	477	2.03	534	2.41	585	2.79	633	3.17	679	3.57	722	3.98	764	4.4	805	4.86	845	5.33	885	5.83	924	6.35
	17200	8117	0.94	234.21	695	6.1	735	6.65	773	7.2	809	7.74	844	8.28	878	8.82	911	9.37	943	9.93	974	10.5	1005	11.08	1035	11.67
	18906	8922	1.15	286.81	767	8.15	803	8.76	838	9.35	871	9.95	904	10.54	936	11.14	966	11.73	996	12.34	1025	12.95	1054	13.57	1082	14.2

Fan PERFORMANCE- HI-EFFICIENCY UNITS

Model APMR	AirFlowRate		Internal Static Pressure		External Static Pressure - in.wg(Pa)																					
					0(0)		0.2(50)		0.4(100)		0.6(150)		0.8(200)		1(250)		1.2(300)		1.4(350)		1.6(400)		1.8(450)		2(500)	
	cfm	l/s	in.wg	Pa	RPM	kW	RPM	kW	RPM	kW	RPM	kW	RPM	kW	RPM	kW	RPM	kW	RPM	kW	RPM	kW	RPM	kW	RPM	kW
51005G	1375	649	0.33	81	-	-	663	0.16	773	0.2	879	0.25	983	0.31	-	-	-	-	-	-	-	-	-	-	-	-
	2000	944	0.69	173.09	791	0.35	877	0.41	957	0.48	1034	0.54	1110	0.6	1183	0.67	1256	0.75	1328	0.83	1399	0.91	-	-	-	-
	2521	1190	1.14	282.76	1009	0.72	1077	0.8	1142	0.87	1205	0.95	1267	1.03	1327	1.11	1387	1.19	1446	1.28	1504	1.37	1562	1.46	1619	1.56
51007G	1930	911	0.28	69.3	-	-	683	0.27	778	0.33	865	0.39	948	0.45	1027	0.51	1104	0.57	1180	0.64	1254	0.72	1329	0.8	1402	0.88
	2400	1133	0.43	106.01	725	0.41	803	0.48	883	0.55	959	0.62	1031	0.69	1099	0.77	1165	0.84	1229	0.92	1292	0.99	1354	1.08	1416	1.16
	3538	1670	0.96	239.14	1077	1.34	1130	1.43	1184	1.53	1239	1.63	1293	1.73	1345	1.84	1396	1.95	1446	2.05	1495	2.16	1542	2.27	1588	2.38
51008G	2387	1126	0.28	69.69	-	-	-	-	682	0.38	762	0.46	837	0.53	907	0.61	976	0.7	1042	0.79	1106	0.88	1170	0.99	1233	1.1
	2900	1369	0.4	99.36	-	-	680	0.5	756	0.59	827	0.68	894	0.77	957	0.87	1018	0.96	1077	1.06	1134	1.15	1189	1.26	1244	1.37
	4774	2253	1.13	282.68	1000	1.89	1049	2.03	1098	2.18	1146	2.33	1192	2.47	1238	2.62	1282	2.77	1325	2.92	1367	3.07	1408	3.22	1449	3.37
51009G	2604	1229	0.33	80.99	-	-	629	0.38	711	0.46	787	0.54	859	0.63	926	0.71	991	0.8	1053	0.89	1114	0.99	1174	1.09	1233	1.2
	3220	1520	0.49	122.85	666	0.57	739	0.67	809	0.77	875	0.87	937	0.97	997	1.07	1054	1.17	1109	1.27	1163	1.38	1215	1.49	1266	1.6
	4774	2253	1.13	282.68	1000	1.89	1049	2.03	1098	2.18	1146	2.33	1192	2.47	1238	2.62	1282	2.77	1325	2.92	1367	3.07	1408	3.22	1449	3.37
52010G	4000	1888	0.28	69.3	445	0.46	519	0.57	587	0.68	651	0.8	709	0.92	764	1.04	817	1.17	867	1.31	916	1.45	964	1.59	1010	1.75
	5000	2360	0.43	107.15	555	0.9	614	1.03	672	1.17	726	1.31	778	1.45	827	1.6	874	1.75	919	1.9	962	2.06	1005	2.22	1046	2.39
	7333	3460	0.96	239.16	821	2.88	862	3.07	902	3.26	942	3.46	980	3.66	1018	3.86	1055	4.06	1091	4.27	1126	4.48	1161	4.69	1194	4.91
52013G	4278	2019	0.28	69.7	462	0.55	532	0.66	598	0.77	660	0.9	717	1.02	771	1.15	822	1.28	871	1.42	918	1.57	964	1.72	1009	1.87
	5000	2360	0.37	92.15	536	0.86	597	0.99	655	1.13	710	1.26	763	1.41	813	1.55	860	1.7	906	1.85	950	2.01	992	2.17	1033	2.34
	8550	4035	1.13	282.34	926	4.37	962	4.59	997	4.82	1032	5.04	1066	5.27	1100	5.5	1133	5.73	1166	5.96	1198	6.2	-	-	-	-
52015G	4667	2202	0.29	72.87	-	-	627	0.65	719	0.8	803	0.96	882	1.12	957	1.29	1029	1.47	1100	1.67	1169	1.88	1236	2.1	1304	2.35
	6000	2831	0.48	120.66	675	1.04	756	1.24	832	1.44	904	1.64	971	1.84	1036	2.05	1098	2.25	1157	2.47	1216	2.69	1273	2.92	1328	3.15
	8550	4035	1.04	258.83	977	3.09	1035	3.37	1090	3.66	1145	3.95	1197	4.23	1248	4.52	1297	4.81	1345	5.09	1391	5.38	1437	5.67	1481	5.96
52019G	6500	3067	0.29	72.86	432	0.63	520	0.83	598	1.04	669	1.25	735	1.49	798	1.74	858	2	917	2.29	975	2.59	1032	2.92	1089	3.28
	8000	3775	0.44	110	531	1.18	604	1.42	671	1.66	734	1.92	792	2.19	848	2.46	901	2.75	953	3.05	1003	3.37	1052	3.7	1100	4.04
	11900	5616	1.04	258.42	805	3.99	855	4.34	903	4.7	949	5.06	993	5.43	1036	5.81	1078	6.19	1118	6.58	1157	6.98	1195	7.38	-	-
52022G	6500	3067	0.22	54.36	-	-	488	0.75	570	0.96	643	1.17	711	1.4	775	1.64	836	1.9	896	2.18	954	2.48	1011	2.8	1068	3.14
	8000	3775	0.31	76.35	478	1.03	555	1.26	626	1.5	692	1.75	753	2.01	810	2.28	865	2.56	918	2.85	969	3.15	1019	3.47	1067	3.81
	14300	6748	1.04	259.19	868	5.99	912	6.39	955	6.8	997	7.22	1038	7.64	1078	8.07	1117	8.51	1154	8.95	1191	9.39	-	-	-	-
52025G	6016	2839	0.43	107.07	485	0.66	568	0.86	643	1.06	712	1.29	779	1.52	843	1.78	905	2.07	967	2.38	1028	2.71	1089	3.08	1150	3.49
	8600	4058	0.94	234.21	712	2.02	771	2.3	826	2.58	879	2.87	930	3.17	979	3.49	1027	3.81	1074	4.15	1119	4.5	1164	4.87	-	-
	9453	4461	1.15	286.81	787	2.71	840	3.01	891	3.32	940	3.64	988	3.96	1033	4.3	1078	4.64	1121	5	1164	5.37	-	-	-	-
52028G	6563	3097	0.43	107.08	495	0.78	575	0.98	648	1.2	715	1.43	779	1.67	839	1.93	898	2.21	956	2.51	1013	2.83	1070	3.18	1126	3.55
	9400	4436	0.94	235.2	727	2.38	784	2.67	838	2.97	889	3.28	938	3.6	985	3.92	1031	4.26	1076	4.6	1120	4.96	1162	5.32	-	-
	10313	4867	1.15	286.85	802	3.17	854	3.49	903	3.81	951	4.15	996	4.49	1041	4.84	1083	5.2	1125	5.56	1166	5.94	-	-	-	-
52032G	8750	4129	0.36	90.78	522	1.34	593	1.59	660	1.85	722	2.12	780	2.4	835	2.68	887	2.98	937	3.29	986	3.6	1033	3.93	1079	4.27
	10400	4908	0.51	127.95	620	2.25	680	2.54	738	2.85	793	3.16	845	3.48	895	3.81	943	4.14	989	4.48	1033	4.83	1076	5.19	1118	5.56
	16042	7570	1.33	330.37	977	8.49	1016	8.95	1055	9.4	1093	9.87	1130	10.34	1166	10.81	-	-	-	-	-	-	-	-	-	-
52036G	8750	4129	0.36	90.78	522	1.34	593	1.59	660	1.85	722	2.12	780	2.4	835	2.68	887	2.98	937	3.29	986	3.6	1033	3.93	1079	4.27
	11700	5521	0.66	165.23	702	3.23	755	3.56	807	3.89	857	4.24	905	4.59	951	4.95	996	5.32	1039	5.69	1080	6.07	1121	6.46	1160	6.86
	16042	7570	1.33	330.37	977	8.49	1016	8.95	1055	9.4	1093	9.87	1130	10.34	1166	10.81	-	-	-	-	-	-	-	-	-	-
52042G	11250	5309	0.36	90.78	443	1.64	503	2	557	2.35	608	2.71	655	3.08	701	3.48	745	3.89	788	4.33	831	4.8	872	5.3	914	5.82
	14600	6890	0.62	154.72	576	3.6	624	4.07	668	4.53	710	4.99	750	5.45	788	5.92	825	6.4	861	6.89	896	7.4	931	7.93	965	8.47
	20625	9733	1.33	330.36	829	10.43	863	11.1	895	11.75	926	12.4	957	13.05	987	13.7	1016	14.35	1044	15	1072	15.65	1099	16.32	-	-
52046G	11250	5309	0.36	90.78	443	1.64	503	2	557	2.35	608	2.71	655	3.08	701	3.48	745	3.89	788	4.33	831	4.8	872	5.3	914	5.82
	17200	8117	0.89	222.42	685	5.97	726	6.52	764	7.07	801	7.61	836	8.15	870	8.69	903	9.24	935	9.79	967	10.36	998	10.94	1028	11.53
	20625	9733	1.33	330.36	829	10.43	863	11.1	895	11.75	926	12.4	957	13.05	987	13.7	1016	14.35	1044	15	1072	15.65	1099	16.32	-	-

Table 8 ends

Notes :

- (1) Areas shaded in grey indicate the operating range of a standard fan motor; out of this range shift to next larger motor size.
- (2) Internal static pressure is based on pressure drops through evaporator coil, fan casing and washable flat filters.
- (3) For external static pressure more than 2.0 in.wg. (498 Pa) and for the data corresponding to the blank boxes, please consult SKM.



Field Connections

APMR series self-contained heavy duty air cooled packaged units are designed for minimum field interaction.

Power hook-ups and control wiring of room thermostat as per Electrical hook-up diagram is all that is required to electrically connect any model of APMR series .

Every APMR series package air conditioning unit requires, at most, field installed fused disconnect switches or circuit breakers, and room thermostat.

Refer below for a schematic representation of required field electrical hook-ups for a standard APMR series packaged air conditioning unit.

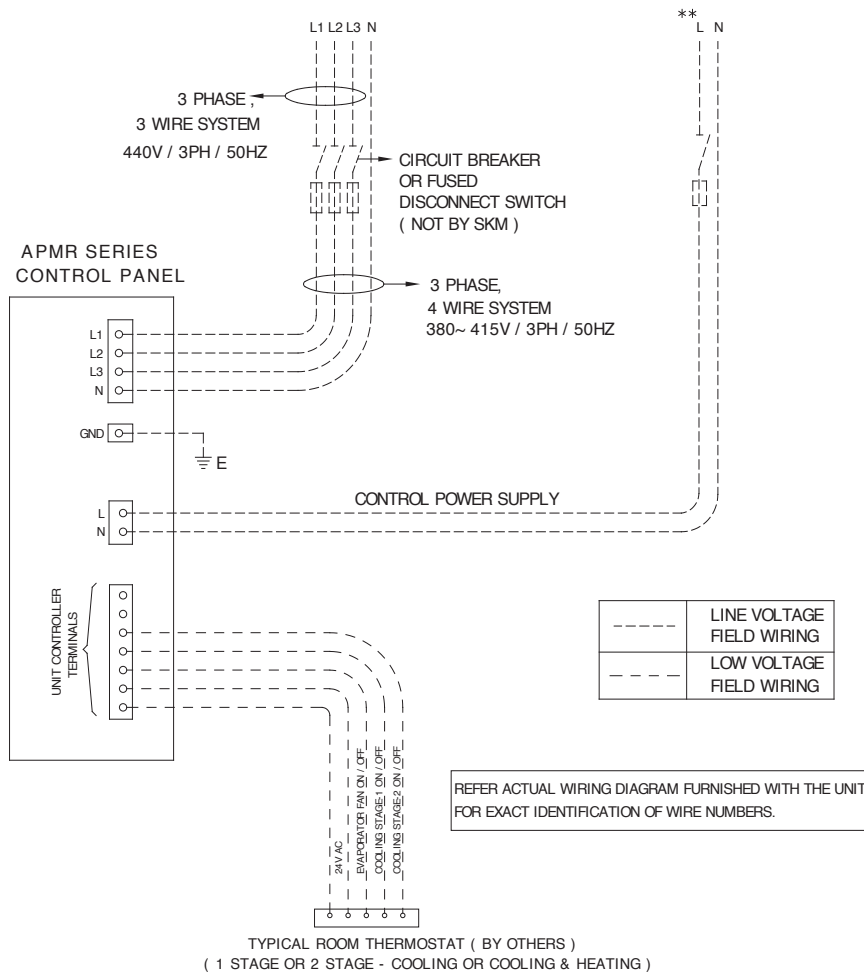
All field wiring must be done in accordance with applicable local and national codes.

For maximum recommended for fuse/circuit breaker sizing and minimum circuit amps for cable sizing, see Page 19~20 of this bulletin.

Duct work should be connected with flexible connections to the APMR series. One or two drains suitably trapped, are required to be connected to the drain outlet of all models of APMR series.

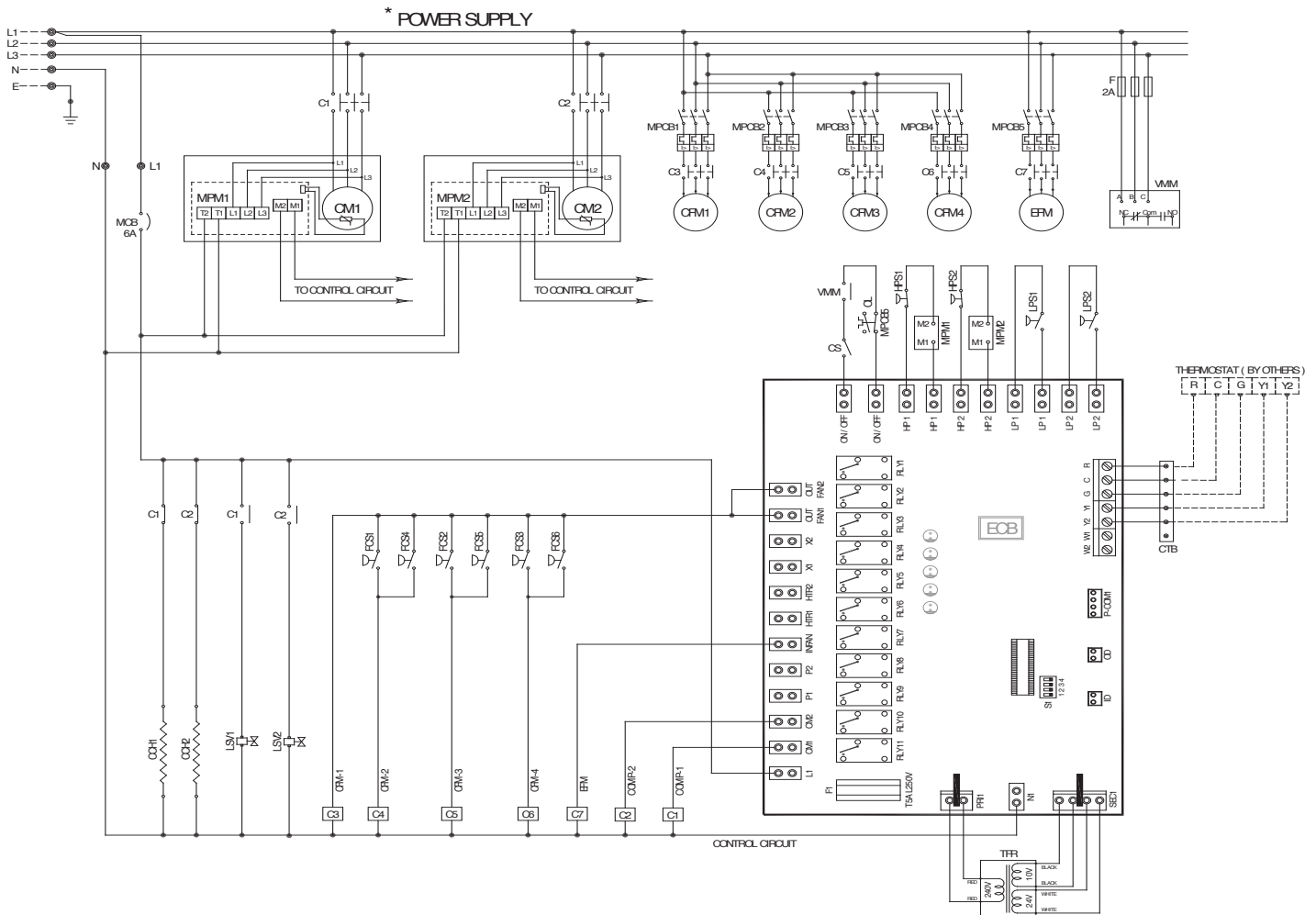
The APMR series is then ready to provide cooling, on demand.

Field Wiring Requirement Schematic



** APMR SERIES UNITS RATED FOR 440V / 3PH / 50HZ, OR POWER SUPPLIES WITHOUT NEUTRAL REQUIRE SEPARATE SOURCE OF CONTROL POWER SUPPLY THRU FIELD SUPPLIED AND INSTALLED 15A / 220V FUSED CONTROL DISCONNECT SWITCH OR ORDER WITH FACTORY BUILT OPTION CXT.

Typical Wiring Diagram



LEGEND			
----	FIELD WIRING & FIELD SUPPLIED DEVICES	CS	CONTROL SWITCH
CM	COMPRESSOR MOTOR	THR	TRANSFORMER
CFM	CONDENSER FAN MOTOR	CTB	CONTROL TERMINAL BLOCK
EFM	EVAPORATOR FAN MOTOR	FCS	FAN CYCLING SWITCH
MPCB	MOTOR PROTECTOR CIRCUIT BREAKER	HPS	HIGH PRESSURE SWITCH
F	POWER CIRCUIT FUSE	LPS	LOW PRESSURE SWITCH
VMM	VOLTAGE MONITORING MODULE	ECB	ELECTRONIC CONTROL BOARD
OL	OVERLOAD RELAY	LSV	LIQUID LINE SOLENOID VALVE
C	CONTACTOR	MPM	MOTOR PROTECTOR MODULE
MCB	MINIATURE CIRCUIT BREAKER	COH	CRANK CASE HEATER

NOTE

- * TYPICAL WIRING DIAGRAM SHOWN HERE IS ONLY FOR 380-415V/3PH/50Hz, 4 WIRE POWER SUPPLY.
- * FOR 440V/3PH/50Hz AND POWER SUPPLIES WITHOUT NEUTRAL, "CXT" OPTION IS A MUST. WIRING DIAGRAMS ARE AVAILABLE ON REQUEST.

** PROVIDE OVERCURRENT, EARTH FAULT PROTECTION, SHORT CIRCUIT AND DISCONNECT MEANS AS REQUIRED BY LOCAL & NATIONAL ELECTRIC CODE (BY OTHERS)



Electrical Data-STANDARD

Power Supply : 380-415V/3PH/50Hz

Model APMR	Unit Characteristic			Compressor			Condenser Fan Motor			Evaporator Fan Motor	
	MFA	MCA	ICF	QTY	RLA	LRA	QTY	FLA	LRA	FLA	LRA
51005	32	19	80	1	12	74	2	1.1	3.3	1.5	5.7
51007	40	22	107	1	14	101	2	1.1	3.3	1.9	7.9
51008	50	25	102	1	16	95	2	1.1	3.3	2.6	12.0
51009	50	29	118	1	19	111	2	1.1	3.3	2.6	12.0
52010	50	34	96	2	12	74	2	1.5	4.5	3.5	18.3
52013	63	39	126	2	14	101	2	1.5	4.5	4.9	25.0
52015	63	45	127	2	16	95	2	2.2	9.0	4.9	25.0
52019	80	58	161	2	20	118	2	3.4	13.0	6.3	34.0
52022	100	60	162	2	21	118	2	3.4	13.0	6.3	34.0
52025	100	75	193	2	25	140	3	3.4	13.0	8.2	43.5
52028	125	87	234	2	29	174	3	3.4	13.0	11.2	63.8
52032	160	93	289	1 + 1	34 + 29	229 + 174	3	3.4	13.0	11.2	63.8
52036	160	103	298	2	34	229	3	3.4	13.0	15.2	100.3
52042	160	116	393	1 + 1	42 + 34	320 + 229	4	3.4	13.0	15.2	100.3
52046	200	130	407	2	42	320	4	3.4	13.0	22.0	140.8

Table 9

Power Supply : 440V/3PH/50Hz

Model APMR	Unit Characteristic			Compressor			Condenser Fan Motor			Evaporator Fan Motor	
	MFA	MCA	ICF	QTY	RLA	LRA	QTY	FLA	LRA	FLA	LRA
51005	32	19	80	1	12	74	2	1.1	3.3	1.3	5.2
51007	40	21	107	1	14	101	2	1.1	3.3	1.7	7.2
51008	50	25	102	1	16	95	2	1.1	3.3	2.4	10.9
51009	50	28	118	1	19	111	2	1.1	3.3	2.4	10.9
52010	50	33	95	2	12	74	2	1.5	4.5	3.1	16.6
52013	63	39	126	2	14	101	2	1.5	4.5	4.5	23.0
52015	63	44	123	2	16	95	2	1.9	5.8	4.5	23.0
52019	80	58	161	2	20	118	2	3.7	14.0	5.7	30.8
52022	100	60	162	2	21	118	2	3.7	14.0	5.7	30.8
52025	100	75	194	2	25	140	3	3.7	14.0	7.5	39.8
52028	125	87	235	2	29	174	3	3.7	14.0	10.4	59.3
52032	160	93	290	1 + 1	34 + 29	229 + 174	3	3.7	14.0	10.4	59.3
52036	160	102	299	2	34	229	3	3.7	14.0	14.0	92.4
52042	160	116	393	1 + 1	42 + 34	320 + 229	4	3.7	14.0	14.0	92.4
52046	200	130	408	2	42	320	4	3.7	14.0	20.5	131.2

Table 10

Legend

- MFA** Maximum Fuse Amps (for fuse/circuit breaker sizing), complies with NEC Article 440-22 & 430-52.
- MCA** Minimum Circuit Amps.(for wire sizing), complies with NEC article 440-33.
- ICF** Maximum Instantaneous Current Flow.

- RLA** Rated Load Amps. (at worst operating condition) .
- LRA** Locked Rotor Amps.
- FLA** Full Load Amps.

Note :

Voltage imbalance not to exceed ± 2 % of the rated voltage.

Electrical Data - Hi-EFFICIENCY

Power Supply :380-415V/3Ph/50Hz

Model APMR	Unit Characteristic			Compressor			Condenser Fan Motor			Evaporator Fan Motor	
	MFA	MCA	ICF	QTY	RLA	LRA	QTY	FLA	LRA	FLA	LRA
51005G	32	19	80	1	12	74	2	1.1	3.3	1.5	5.7
51007G	40	22	107	1	14	101	2	1.1	3.3	1.9	7.9
51008G	40	24	101	1	16	95	2	1.1	3.3	1.9	7.9
51009G	50	29	118	1	19	111	2	1.1	3.3	2.6	12.0
52010G	50	31	85	2	11	64	2	1.5	4.5	3.5	18.3
52013G	63	39	130	2	14	101	2	2.2	9.0	3.5	18.3
52015G	63	45	127	2	16	95	2	2.2	9.0	4.9	25.0
52019G	100	58	161	2	20	118	2	3.4	13.0	6.3	34.0
52022G	100	60	162	2	21	118	2	3.4	13.0	6.3	34.0
52025G	100	75	193	2	25	140	3	3.4	13.0	8.2	43.5
52028G	125	87	234	2	29	174	3	3.4	13.0	11.2	63.8
52032G	160	93	289	1 + 1	34 + 29	229 + 174	3	3.4	13.0	11.2	63.8
52036G	160	106	302	2	34	229	4	3.4	13.0	15.2	100.3
52042G	160	116	393	1 + 1	42 + 34	320 + 229	4	3.4	13.0	15.2	100.3
52046G	200	130	407	2	42	320	4	3.4	13.0	22.0	140.8

Table 11

Legend

MFA Maximum Fuse Amps (for fuse/circuit breaker sizing), complies with NEC Article 440-22 & 430-52.

MCA Minimum Circuit Amps.(for wire sizing), complies with NEC article 440-33.

ICF Maximum Instantaneous Current Flow.

RLA Rated Load Amps. (at worst operating condition) .

LRA Locked Rotor Amps.

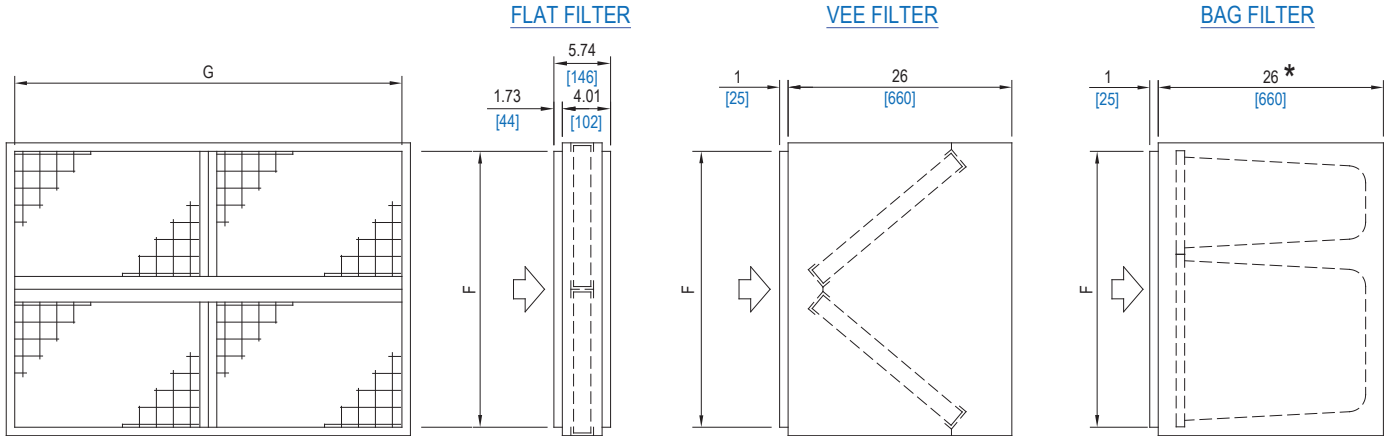
FLA Full Load Amps.

Note :

Voltage imbalance not to exceed $\pm 2\%$ of the rated voltage.



Filter Dimensions & Sizes - STANDARD



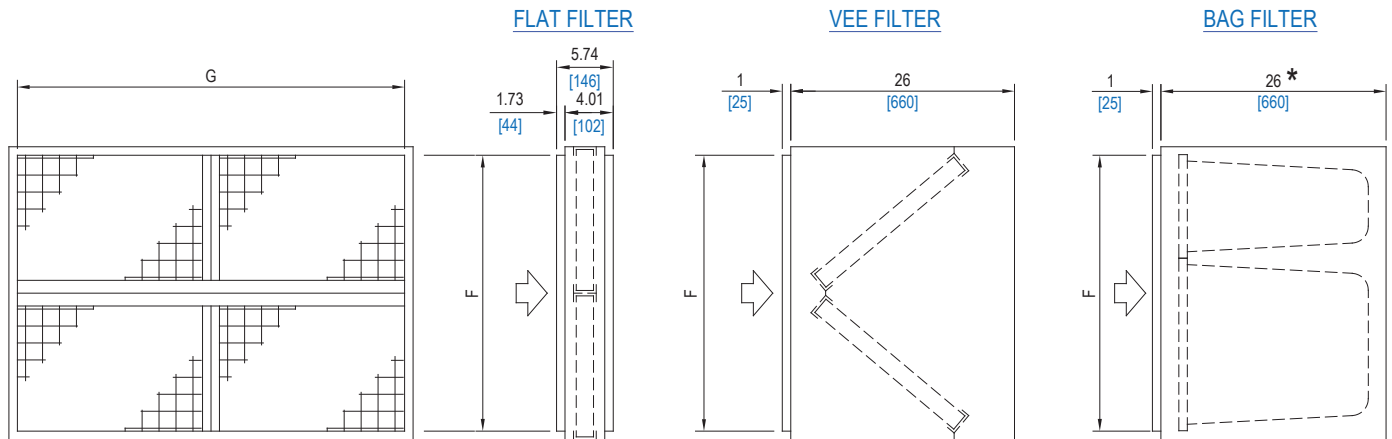
MODEL APMR	F	G	FLAT FILTER				VEE FILTER				BAG FILTER					
			SIZE H x L	QTY.	SIZE H x L	QTY.	SIZE H x L	QTY.	SIZE H x L	QTY.	SIZE H x L	QTY.	SIZE H x L	QTY.		
51005	22	30	20x20 [508x508]	1	-	-	-	-	16x16 [406x406]	4	20x20 [508x508]	1	-	-	-	-
	[559]	[762]	20x12 [508x304]	1	-	-	-	-	20x12 [508x304]	1	-	-	-	-	-	-
51007	24	38.6	24x20 [610x508]	2	-	-	-	-	20x20 [508x508]	4	24x20 [610x508]	2	-	-	-	-
	[610]	[980]	-	-	-	-	-	-	-	-	-	-	-	-	-	-
51008	24	38.6	24x20 [610x508]	2	-	-	-	-	20x20 [508x508]	4	24x20 [610x508]	2	-	-	-	-
	[610]	[980]	-	-	-	-	-	-	-	-	-	-	-	-	-	-
51009	25	50	24x20 [610x508]	2	-	-	-	-	20x20 [508x508]	2	24x20 [610x508]	2	-	-	-	-
	[635]	[1270]	24x12 [610x304]	1	-	-	-	-	20x16 [508x406]	4	24x12 [610x304]	1	-	-	-	-
52010	25	56	24x24 [610x610]	1	24x12 [610x304]	1	-	-	20x20 [508x508]	4	24x24 [610x610]	1	24x12 [610x304]	1	-	-
	[635]	[1422]	24x20 [610x508]	1	-	-	-	-	20x16 [508x406]	2	24x20 [610x508]	1	-	-	-	-
52013	30	60	12x20 [305x508]	3	-	-	-	-	24x20 [610x508]	6	12x20 [305x508]	3	-	-	-	-
	[762]	[1524]	20x20 [508x508]	3	-	-	-	-	-	-	20x20 [508x508]	3	-	-	-	-
52015	32	60	12x20 [305x508]	3	-	-	-	-	24x20 [610x508]	6	12x20 [305x508]	3	-	-	-	-
	[813]	[1524]	20x20 [508x508]	3	-	-	-	-	-	-	20x20 [508x508]	3	-	-	-	-
52019	36	78	24x24 [610x610]	2	24x12 [610x304]	1	12x20 [305x508]	1	20x20 [508x508]	12	24x24 [610x610]	2	24x12 [610x304]	1	12x20 [305x508]	1
	[914]	[1981]	24x20 [610x508]	1	12x24 [305x610]	2	12x12 [305x305]	1	-	-	24x20 [610x508]	1	12x24 [305x610]	2	12x12 [305x305]	1
52022	36	78	24x24 [610x610]	2	24x12 [610x304]	1	12x20 [305x508]	1	20x20 [508x508]	12	24x24 [610x610]	2	24x12 [610x304]	1	12x20 [305x508]	1
	[914]	[1981]	24x20 [610x508]	1	12x24 [305x610]	2	12x12 [305x305]	1	-	-	24x20 [610x508]	1	12x24 [305x610]	2	12x12 [305x305]	1
52025	33	75	12x24 [305x610]	1	12x12 [305x305]	1	20x20 [508x508]	2	24x24 [610x610]	6	12x24 [305x610]	1	12x12 [305x305]	1	20x20 [508x508]	2
	[838]	[1905]	12x20 [305x508]	2	20x24 [508x610]	1	20x12 [508x304]	1	-	-	12x20 [305x508]	2	20x24 [508x610]	1	20x12 [508x304]	1
52028	36	75	12x24 [305x610]	1	12x12 [305x305]	1	24x20 [610x508]	2	24x24 [610x610]	6	12x24 [305x610]	1	12x12 [305x305]	1	24x20 [610x508]	2
	[914]	[1905]	12x20 [305x508]	2	24x24 [610x610]	1	24x12 [610x304]	1	-	-	12x20 [305x508]	2	24x24 [610x610]	1	24x12 [610x304]	1
52032	40	75	20x24 [508x610]	2	20x12 [508x304]	2	-	-	20x24 [508x610]	9	20x24 [508x610]	2	20x12 [508x304]	2	-	-
	[1016]	[1905]	20x20 [508x508]	4	-	-	-	-	-	-	20x20 [508x508]	4	-	-	-	-
52036	45	75	20x24 [508x610]	1	20x12 [508x304]	1	24x20 [610x508]	2	20x24 [508x610]	9	20x24 [508x610]	1	20x12 [508x304]	1	24x20 [610x508]	2
	[1143]	[1905]	20x20 [508x508]	2	24x24 [610x610]	1	24x12 [610x304]	1	-	-	20x20 [508x508]	2	24x24 [610x610]	1	24x12 [610x304]	1
52042	56	75	12x24 [305x610]	1	20x24 [508x610]	1	24x24 [610x610]	1	24x24 [610x610]	9	12x24 [305x610]	1	20x24 [508x610]	1	24x24 [610x610]	1
			12x20 [305x508]	2	20x20 [508x508]	2	24x20 [610x508]	2	-	-	12x20 [305x508]	2	20x20 [508x508]	2	24x20 [610x508]	2
	[1422]	[1905]	12x12 [305x305]	1	20x12 [508x304]	1	24x12 [610x304]	1	-	-	12x12 [305x305]	1	20x12 [508x304]	1	24x12 [610x304]	1
52046	66	75	20x24 [508x610]	1	20x12 [508x304]	1	24x20 [610x508]	4	24x24 [610x610]	12	20x24 [508x610]	1	20x12 [508x304]	1	24x20 [610x508]	4
	[1676]	[1905]	20x20 [508x508]	2	24x24 [610x610]	2	24x12 [610x304]	2	-	-	20x20 [508x508]	2	24x24 [610x610]	2	24x12 [610x304]	2

*BAG FILTER IS APPLICABLE FOR 21" DEPTH

ALL DIMENSIONS ARE IN INCHES [mm]

Table 12

Filter Dimensions & Sizes - Hi-EFFICIENCY



MODEL APMR	F	G	FLAT FILTER				VEE FILTER				BAG FILTER					
			SIZE H x L	QTY.	SIZE H x L	QTY.	SIZE H x L	QTY.	SIZE H x L	QTY.	SIZE H x L	QTY.	SIZE H x L	QTY.		
51005G	22	30	20x20 [508x508]	1	-	-	-	-	16x16 [406x406]	4	20x20 [508x508]	1	-	-	-	-
	[559]	[762]	20x12 [508x304]	1	-	-	-	-	20x12 [508x304]	1	-	-	-	-	-	-
51007G	24	38.6	24x20 [610x508]	2	-	-	-	-	20x20 [508x508]	4	24x20 [610x508]	2	-	-	-	-
	[610]	[980]	-	-	-	-	-	-	-	-	-	-	-	-	-	-
51008G	25	50	24x20 [610x508]	2	-	-	-	-	20x20 [508x508]	2	24x20 [610x508]	2	-	-	-	-
	[635]	[1270]	24x12 [610x304]	1	-	-	-	-	20x16 [508x406]	4	24x12 [610x304]	1	-	-	-	-
51009G	25	50	24x20 [610x508]	2	-	-	-	-	20x20 [508x508]	2	24x20 [610x508]	2	-	-	-	-
	[635]	[1270]	24x12 [610x304]	1	-	-	-	-	20x16 [508x406]	4	24x12 [610x304]	1	-	-	-	-
52010G	32	60	20x20 [508x508]	3	-	-	-	-	24x20 [610x508]	6	20x20 [508x508]	3	-	-	-	-
	[813]	[1524]	12x20 [305x508]	3	-	-	-	-	-	-	12x20 [305x508]	3	-	-	-	-
52013G	32	70	20x24 [508x610]	3	-	-	-	-	24x24 [610x610]	6	20x24 [508x610]	3	-	-	-	-
	[813]	[1778]	12x24 [305x610]	3	-	-	-	-	-	-	12x24 [305x610]	3	-	-	-	-
52015G	32	70	20x24 [508x610]	3	-	-	-	-	24x24 [610x610]	6	20x24 [508x610]	3	-	-	-	-
	[813]	[1778]	12x24 [305x610]	3	-	-	-	-	-	-	12x24 [305x610]	3	-	-	-	-
52019G	40	78	12x20 [305x508]	4	-	-	-	-	20x20 [508x508]	12	20x20 [508x508]	8	-	-	-	-
	[1016]	[1981]	24x20 [610x508]	4	-	-	-	-	-	-	-	-	-	-	-	-
52022G	48	78	20x20 [508x508]	4	-	-	-	-	24x20 [610x508]	12	24x20 [610x508]	8	-	-	-	-
	[1219]	[1981]	24x20 [610x508]	4	-	-	-	-	-	-	-	-	-	-	-	-
52025G	33	75	12x24 [305x610]	1	12x12 [305x305]	1	20x20 [508x508]	2	24x24 [610x610]	6	12x24 [305x610]	1	12x12 [305x305]	1	20x20 [508x508]	2
	[838]	[1905]	12x20 [305x508]	2	20x24 [508x610]	1	20x12 [508x304]	1	-	-	12x20 [305x508]	2	20x24 [508x610]	1	20x12 [508x304]	1
52028G	36	75	12x24 [305x610]	1	12x12 [305x305]	1	24x20 [610x508]	2	24x24 [610x610]	6	12x24 [305x610]	1	12x12 [305x305]	1	24x20 [610x508]	2
	[914]	[1905]	12x20 [305x508]	2	24x24 [610x610]	1	24x12 [610x304]	1	-	-	12x20 [305x508]	2	24x24 [610x610]	1	24x12 [610x304]	1
52032G	56	75	12x24 [305x610]	1	20x24 [508x610]	1	24x24 [610x610]	1	24x24 [610x610]	9	12x24 [305x610]	1	20x24 [508x610]	1	24x24 [610x610]	1
	[1422]	[1905]	12x20 [305x508]	2	20x20 [508x508]	2	24x20 [610x508]	2	-	-	12x20 [305x508]	2	20x20 [508x508]	2	24x20 [610x508]	2
52036G	56	75	12x24 [305x610]	1	20x24 [508x610]	1	24x24 [610x610]	1	24x24 [610x610]	9	12x24 [305x610]	1	20x24 [508x610]	1	24x24 [610x610]	1
	[1422]	[1905]	12x20 [305x508]	2	20x20 [508x508]	2	24x20 [610x508]	2	-	-	12x20 [305x508]	2	20x20 [508x508]	2	24x20 [610x508]	2
52042G	72	75	24x24 [610x610]	3	24x12 [610x304]	3	-	-	24x24 [610x610]	12	24x24 [610x610]	3	24x12 [610x304]	3	-	-
	[1829]	[1905]	24x20 [610x508]	6	-	-	-	-	-	-	24x20 [610x508]	6	-	-	-	-
52046G	72	75	24x24 [610x610]	3	24x12 [610x304]	3	-	-	24x24 [610x610]	12	24x24 [610x610]	3	24x12 [610x304]	3	-	-
	[1829]	[1905]	24x20 [610x508]	6	-	-	-	-	-	-	24x20 [610x508]	6	-	-	-	-

*BAG FILTER IS APPLICABLE FOR 21" DEPTH

ALL DIMENSIONS ARE IN INCHES[mm]

Table 13



Loading Points - STANDARD

APMR	UNIT	LOADING POINTS				TOTAL WEIGHT
		A1	A2	A3	A4	
51005	lb.	163	191	162	165	681
	Kg.	74	87	74	75	310
51007	lb.	164	191	169	171	695
	Kg.	74	87	77	77	315
51008	lb.	174	222	185	190	771
	Kg.	79	101	84	86	350
51009	lb.	222	254	215	218	909
	Kg.	101	115	98	99	413
52010	lb.	328	333	282	299	1242
	Kg.	149	151	128	135	563
52013	lb.	329	335	298	315	1277
	Kg.	149	152	135	143	579
52015	lb.	376	383	344	366	1469
	Kg.	171	174	156	166	667
52019	lb.	472	479	453	474	1878
	Kg.	214	217	205	215	851
52022	lb.	478	485	470	492	1925
	Kg.	217	220	213	223	873
52025	lb.	617	627	753	706	2704
	Kg.	280	284	342	320	1227
52028	lb.	665	676	803	751	2895
	Kg.	302	307	364	341	1313
52032	lb.	701	701	948	817	3167
	Kg.	318	318	430	370	1436
52036	lb.	760	770	1029	982	3542
	Kg.	345	349	467	446	1606
52042	lb.	973	1004	1311	1223	4512
	Kg.	442	455	595	555	2047
52046	lb.	1092	1053	1379	1314	4838
	Kg.	495	478	626	596	2194

Table 14

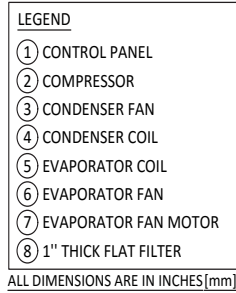
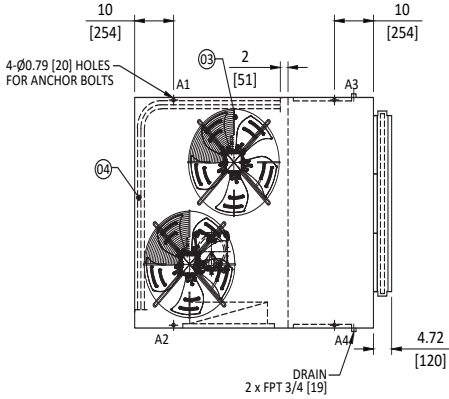
Hi-EFFICIENCY

APMR	UNIT	LOADING POINTS						TOTAL WEIGHT
		A1	A2	A3	A4	A5	A6	
51005G	lb.	173	201	172	175	-	-	721
	Kg.	78	91	78	79	-	-	327
51007G	lb.	174	201	179	181	-	-	735
	Kg.	79	91	81	82	-	-	333
51008G	lb.	230	260	225	227	-	-	942
	Kg.	104	118	102	103	-	-	427
51009G	lb.	232	264	225	228	-	-	949
	Kg.	105	120	102	103	-	-	430
52010G	lb.	248	305	243	254	-	-	1050
	Kg.	112	138	110	115	-	-	476
52013G	lb.	459	459	373	368	-	-	1659
	Kg.	208	208	169	167	-	-	753
52015G	lb.	485	485	396	388	-	-	1754
	Kg.	220	220	180	176	-	-	796
52019G	lb.	535	535	428	413	-	-	1911
	Kg.	243	243	194	187	-	-	867
52022G	lb.	613	582	591	575	-	-	2361
	Kg.	278	264	268	261	-	-	1071
52025G	lb.	612	608	744	694	-	-	2659
	Kg.	277	276	338	315	-	-	1206
52028G	lb.	665	664	755	705	-	-	2789
	Kg.	302	301	342	320	-	-	1265
52032G	lb.	784	778	998	872	-	-	3432
	Kg.	356	353	453	395	-	-	1556
52036G	lb.	833	838	1090	1043	-	-	3804
	Kg.	378	380	494	473	-	-	1725
52042G	lb.	973	940	1135	1131	-	-	4180
	Kg.	441	426	515	513	-	-	1896
52046G	lb.	580	550	1261	1171	594	701	4856
	Kg.	263	249	572	531	269	318	2202

Table 15

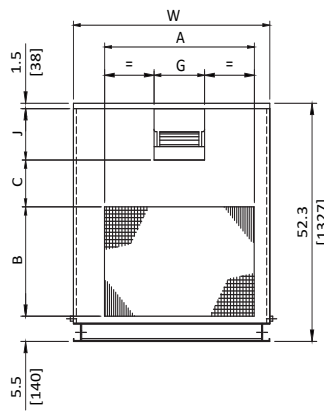
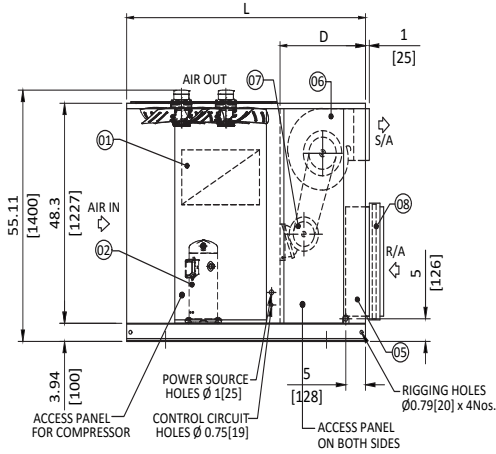
Dimensional Data - STANDARD

APMR Models: 51005 and 51009

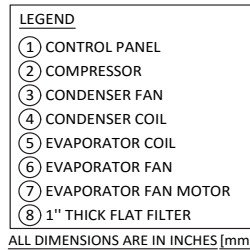
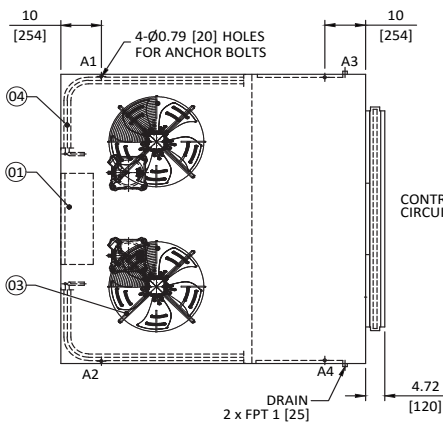


MODEL APMR	DIMENSIONS							
	L	W	A	B	C	D	J	G
51005	63.5	50.6	30	22	11.9	24	11.38	13.03
	[1613]	[1285]	[762]	[559]	[301]	[610]	[289]	[331]
51007	63.5	50.6	38.6	24	9.9	24	11.38	13.03
	[1613]	[1285]	[980]	[610]	[250]	[610]	[289]	[331]
51008	67.5	50.6	38.6	24	7.8	28	13.43	15.6
	[1714]	[1285]	[980]	[610]	[198]	[711]	[341]	[395]
51009	67.5	62	50	25	6.8	28	13.43	15.55
	[1714]	[1575]	[1270]	[635]	[173]	[711]	[341]	[395]

ALL DIMENSIONS ARE IN INCHES [mm] **Table 16**
 CERTIFIED DRAWINGS ARE AVAILABLE ON REQUEST

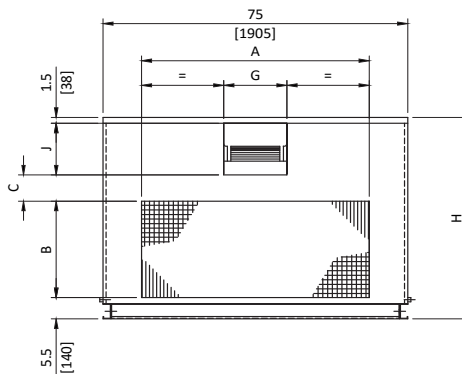
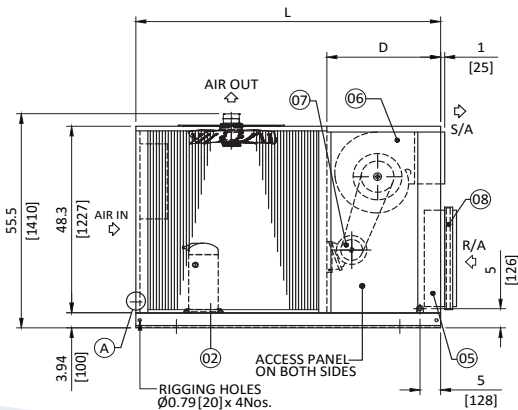


APMR Models: 52010 to 52013



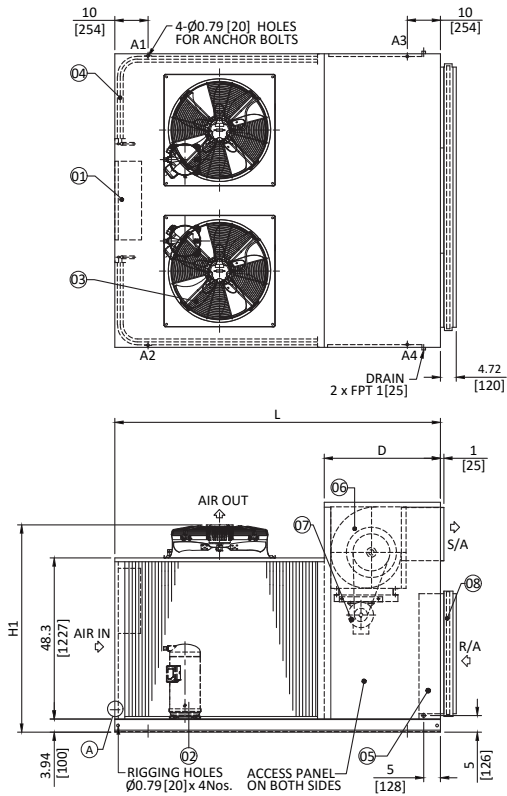
MODEL APMR	DIMENSIONS							
	L	A	B	C	D	J	G	H
52010	75	56	25	6.8	28	13.41	15.55	52.23
	[1905]	[1422]	[635]	[173]	[711]	[341]	[395]	[1327]
52013	77	60	30	8.2	30	15.9	18.5	61.12
	[1956]	[1524]	[762]	[208]	[762]	[404]	[470]	[1552]

ALL DIMENSIONS ARE IN INCHES [mm] **Table 17**
 CERTIFIED DRAWINGS ARE AVAILABLE ON REQUEST





APMR Models: 52015 and 52022



MODELS: APMR- 52015 to 52022

LEGEND

- ① CONTROL PANEL
- ② COMPRESSOR
- ③ CONDENSER FAN
- ④ CONDENSER COIL
- ⑤ EVAPORATOR COIL
- ⑥ EVAPORATOR FAN
- ⑦ EVAPORATOR FAN MOTOR
- ⑧ 1" THICK FLAT FILTER

ALL DIMENSIONS ARE IN INCHES [mm]

MODEL APMR	DIMENSIONS									
	L	W	A	B	C	D	J	G	H	H1
52015	75 [1905]	75 [1905]	60 [1524]	32 [813]	7.16 [182]	28 [711]	13.4 [341]	43.7 [1109]	59.63 [1515]	62.1 [1578]
*52019	98 [2489]	88 [2235]	78 [1981]	36 [914]	8.2 [208]	35 [889]	15.9 [404]	52.3 [1328]	67.11 [1705]	63.3 [1608]
*52022	98 [2489]	88 [2235]	78 [1981]	36 [914]	8 [208]	35 [889]	15.9 [404]	52.3 [1328]	67.11 [1705]	63.3 [1608]

Table 18

ALL DIMENSIONS ARE IN INCHES [mm]

CERTIFIED DRAWINGS ARE AVAILABLE ON REQUEST

*Use EBM 800 Cond. Fans.

APMR Models: 52025 to 52036

MODEL APMR	DIMENSIONS			
	B	C	H	H1
**52025	33 [838]	8.5 [216]	64.9 [1648]	58 [1473]
52028	36 [914]	7.6 [193]	66.94 [1700]	66 [1676]
52032	40 [1016]	8.5 [217]	71.9 [1826]	66 [1676]
52036	45 [1143]	8.5 [217]	76.9 [1953]	78 [1981]

Table 19

ALL DIMENSIONS ARE IN INCHES [mm]

CERTIFIED DRAWINGS ARE AVAILABLE ON REQUEST

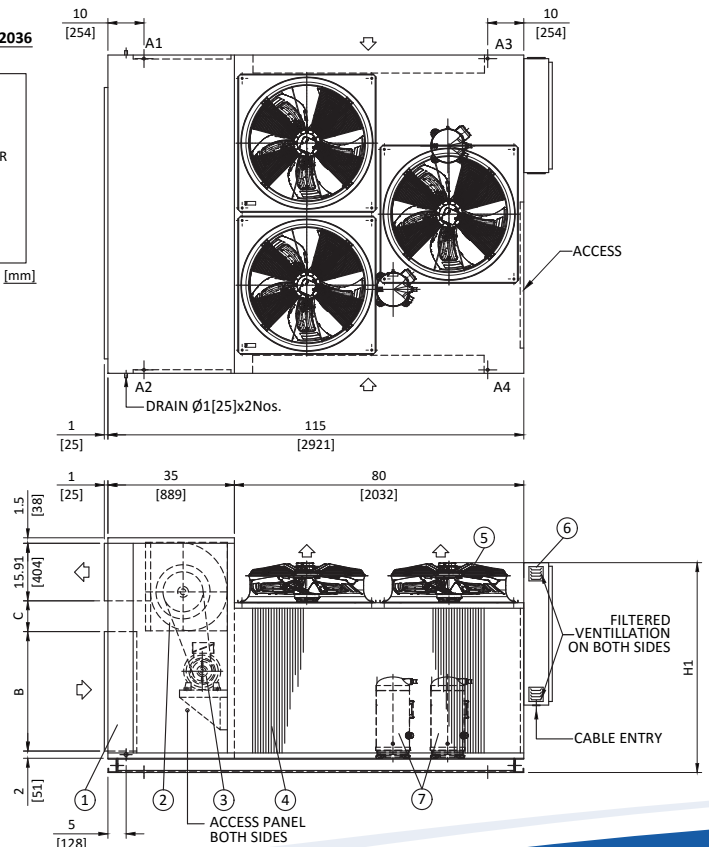
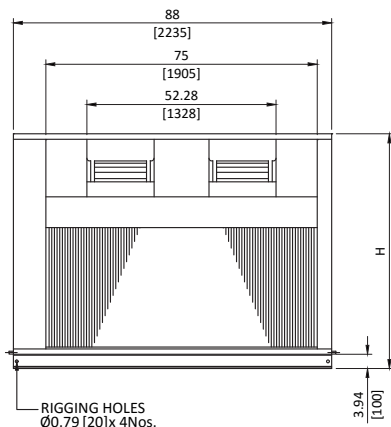
**For model 52025 evap. fan motor should be mounted on the fan frame.

MODELS: APMR- 52025 to 52036

LEGEND

- ① EVAPORATOR COIL
- ② EVAPORATOR FAN
- ③ EVAPORATOR FAN MOTOR
- ④ CONDENSER COIL
- ⑤ CONDENSER FAN
- ⑥ CONTROL PANEL
- ⑦ COMPRESSOR

ALL DIMENSIONS ARE IN INCHES [mm]



APMR Models: 52042 and 52046

MODELS: APMR- 52042, 52046

- LEGEND**
- ① EVAPORATOR COIL
 - ② EVAPORATOR FAN
 - ③ EVAPORATOR FAN MOTOR
 - ④ CONDENSER COIL
 - ⑤ CONDENSER FAN
 - ⑥ CONTROL PANEL
 - ⑦ COMPRESSOR

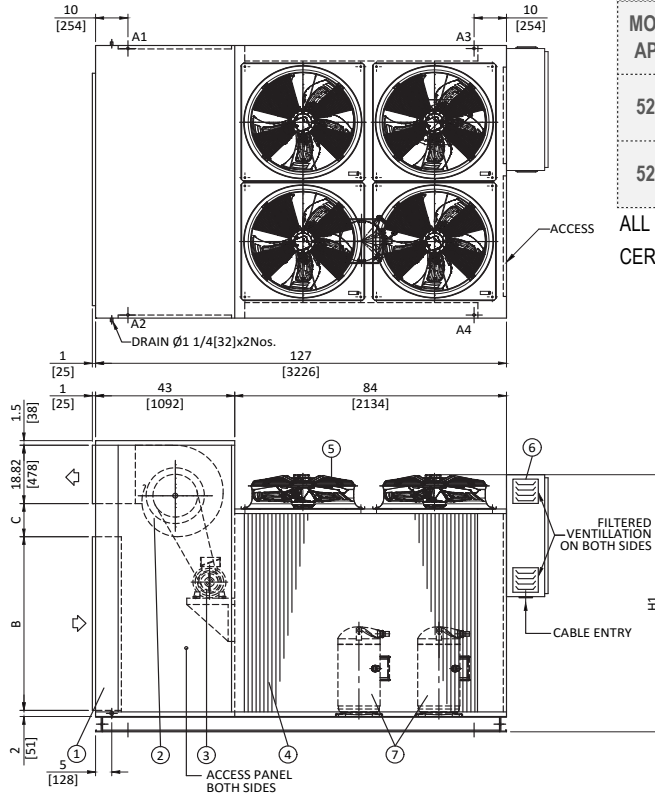
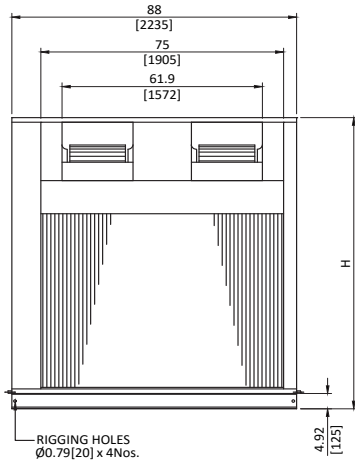


Table 20

MODEL APMR	DIMENSIONS			
	B	C	H	H1
52042	56 [1422]	10.70 [272]	94 [2388]	83 [2108]
52046	66 [1676]	6.0 [152]	99.26 [2521]	91 [2311]

ALL DIMENSIONS ARE IN INCHES[mm]
CERTIFIED DRAWINGS ARE AVAILABLE ON REQUEST

Dimensional Data - Hi-EFFICIENCY

APMR Models: 51005G to 51009G

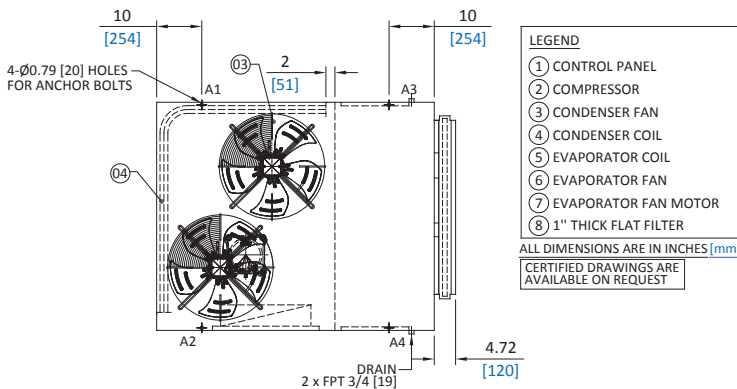
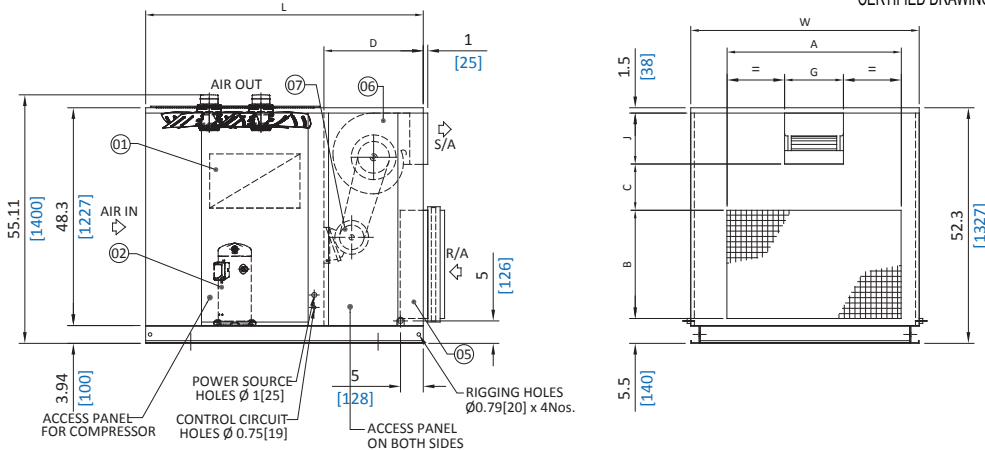


Table 21

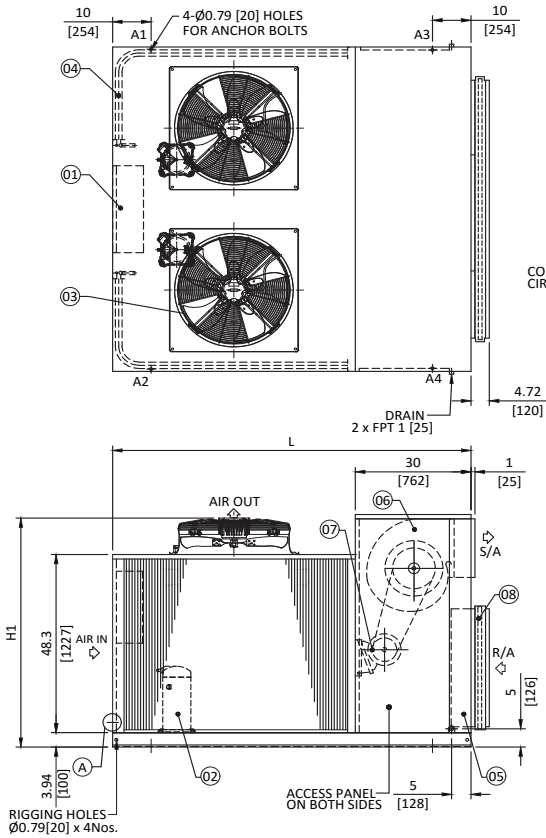
MODEL APMR	DIMENSIONS							
	L	W	A	B	C	D	J	G
51005G	63.5 [1613]	50.6 [1285]	30 [762]	22 [559]	11.9 [301]	24 [610]	11.38 [289]	13.03 [331]
51007G	63.5 [1613]	50.6 [1285]	38.6 [980]	24 [610]	9.9 [250]	24 [610]	11.4 [289]	13.03 [331]
51008G	67.5 [1714]	62 [1575]	50 [1270]	25 [635]	6.8 [173]	28 [711]	13.43 [341]	15.55 [395]
51009G	67.5 [1714]	62 [1575]	50 [1270]	25 [635]	6.8 [173]	28 [711]	13.43 [341]	15.55 [395]

ALL DIMENSIONS ARE IN INCHES[mm]
CERTIFIED DRAWINGS ARE AVAILABLE ON REQUEST



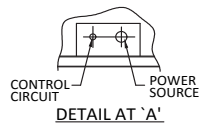


APMR Models: 52010G and 52013G



MODELS: APMR- 52010G to 52013G

- LEGEND
- ① CONTROL PANEL
 - ② COMPRESSOR
 - ③ CONDENSER FAN
 - ④ CONDENSER COIL
 - ⑤ EVAPORATOR COIL
 - ⑥ EVAPORATOR FAN
 - ⑦ EVAPORATOR FAN MOTOR
 - ⑧ 1" THICK FLAT FILTER



ALL DIMENSIONS ARE IN INCHES [mm]

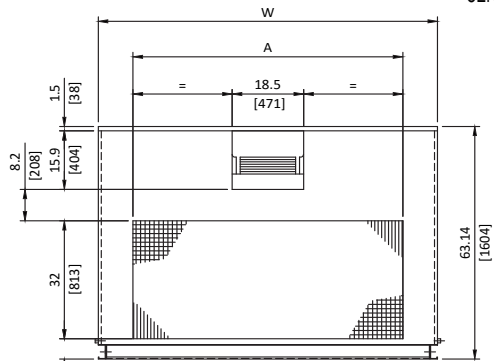
CERTIFIED DRAWINGS ARE AVAILABLE ON REQUEST

Table 22

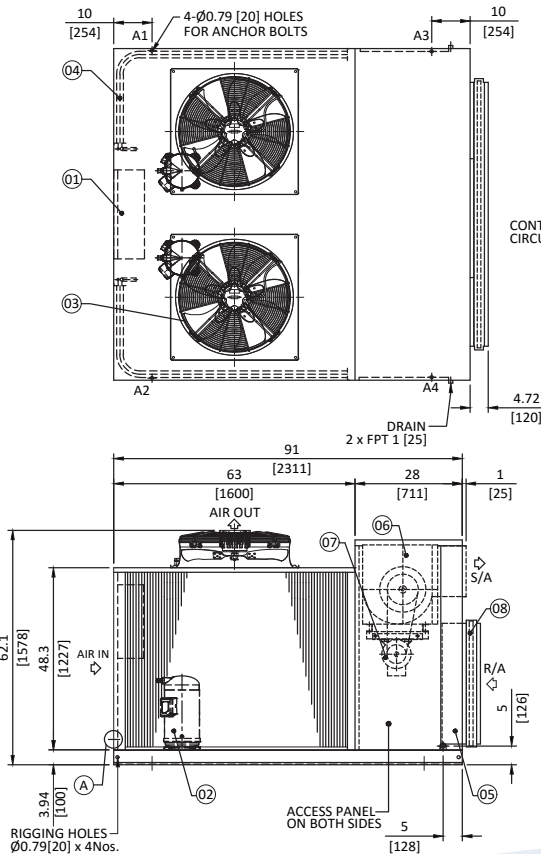
MODEL APMR	DIMENSIONS			
	L	W	A	H1
52010G	77	75	60	55.5
	[1956]	[1905]	[1525]	[1410]
52013G	93	88	70	62.14
	[2362]	[2235]	[1778]	[1578]

ALL DIMENSIONS ARE IN INCHES [mm]

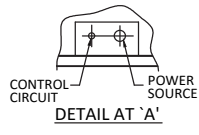
CERTIFIED DRAWINGS ARE AVAILABLE ON REQUEST



APMR Models: 52015G



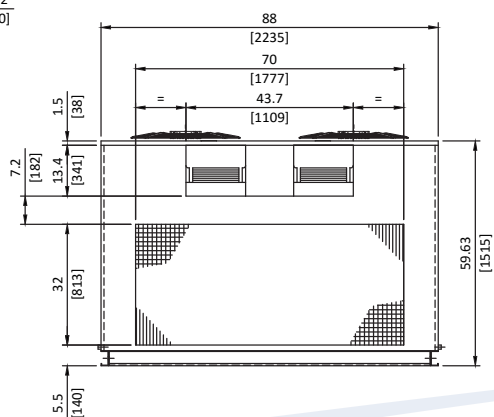
- LEGEND
- ① CONTROL PANEL
 - ② COMPRESSOR
 - ③ CONDENSER FAN
 - ④ CONDENSER COIL
 - ⑤ EVAPORATOR COIL
 - ⑥ EVAPORATOR FAN
 - ⑦ EVAPORATOR FAN MOTOR
 - ⑧ 1" THICK FLAT FILTER



ALL DIMENSIONS ARE IN INCHES [mm]

At 440V/3ph/50Hz power supply, knock-down cond. fan to be used.

CERTIFIED DRAWINGS ARE AVAILABLE ON REQUEST





APMR Models: 52025G - 52032G

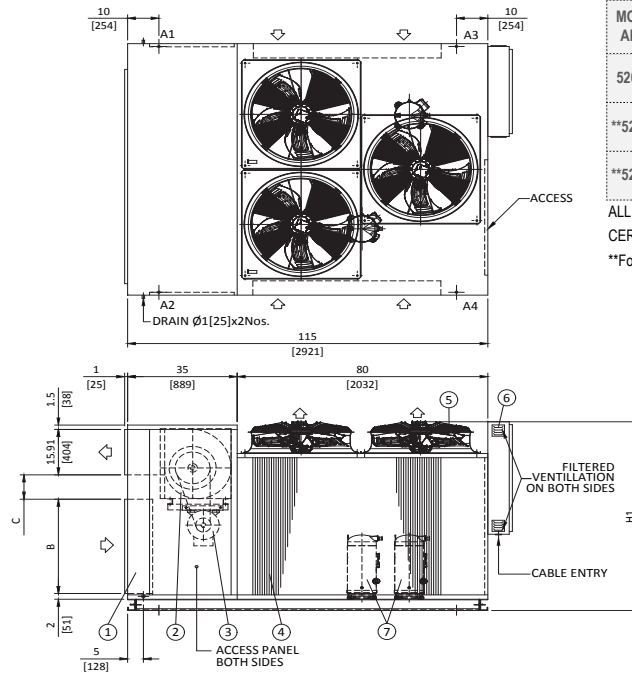
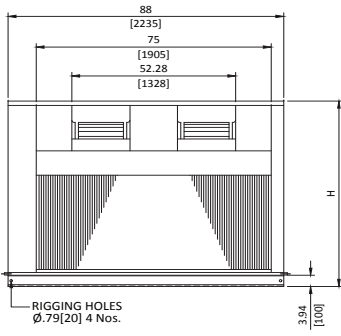
MODELS: APMR- 52025G to 52032G

LEGEND

- ① EVAPORATOR COIL
- ② EVAPORATOR FAN
- ③ EVAPORATOR FAN MOTOR
- ④ CONDENSER COIL
- ⑤ CONDENSER FAN
- ⑥ CONTROL PANEL
- ⑦ COMPRESSOR

ALL DIMENSIONS ARE IN INCHES [mm]

CERTIFIED DRAWINGS ARE AVAILABLE ON REQUEST



MODEL APMR	DIMENSIONS			
	B	C	H	H1
52025G	33 [838]	8.5 [216]	64.9 [1648]	66 [1676]
**52028G	36 [914]	7.6 [193]	66.9 [1700]	78 [1981]
**52032G	56 [1422]	8.5 [216]	87.9 [2232]	78 [1981]

ALL DIMENSIONS ARE IN INCHES[mm]

CERTIFIED DRAWINGS ARE AVAILABLE ON REQUEST

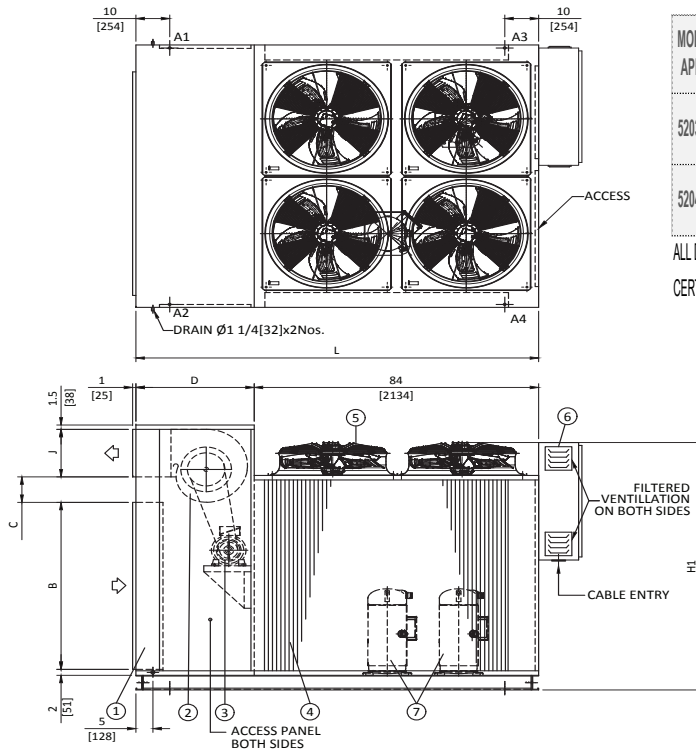
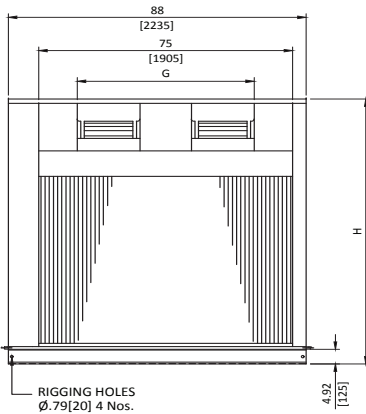
**For models 52028G and 52032G, evp. fan motor should be mounted on the panel.

APMR Models: 52036G - 52042G

LEGEND

- ① EVAPORATOR COIL
- ② EVAPORATOR FAN
- ③ EVAPORATOR FAN MOTOR
- ④ CONDENSER COIL
- ⑤ CONDENSER FAN
- ⑥ CONTROL PANEL
- ⑦ COMPRESSOR

CERTIFIED DRAWINGS ARE AVAILABLE ON REQUEST



MODEL APMR	DIMENSIONS							
	L	B	C	D	J	G	H	H1
52036G	119 [3023]	56 [1422]	8.5 [216]	35 [889]	15.9 [404]	52.28 [1328]	88.9 [2257]	82.98 [2108]
52042G	127 [3226]	72 [1829]	4 [102]	43 [1092]	18.8 [478]	61.9 [1572]	103.24 [2622]	91 [2311]

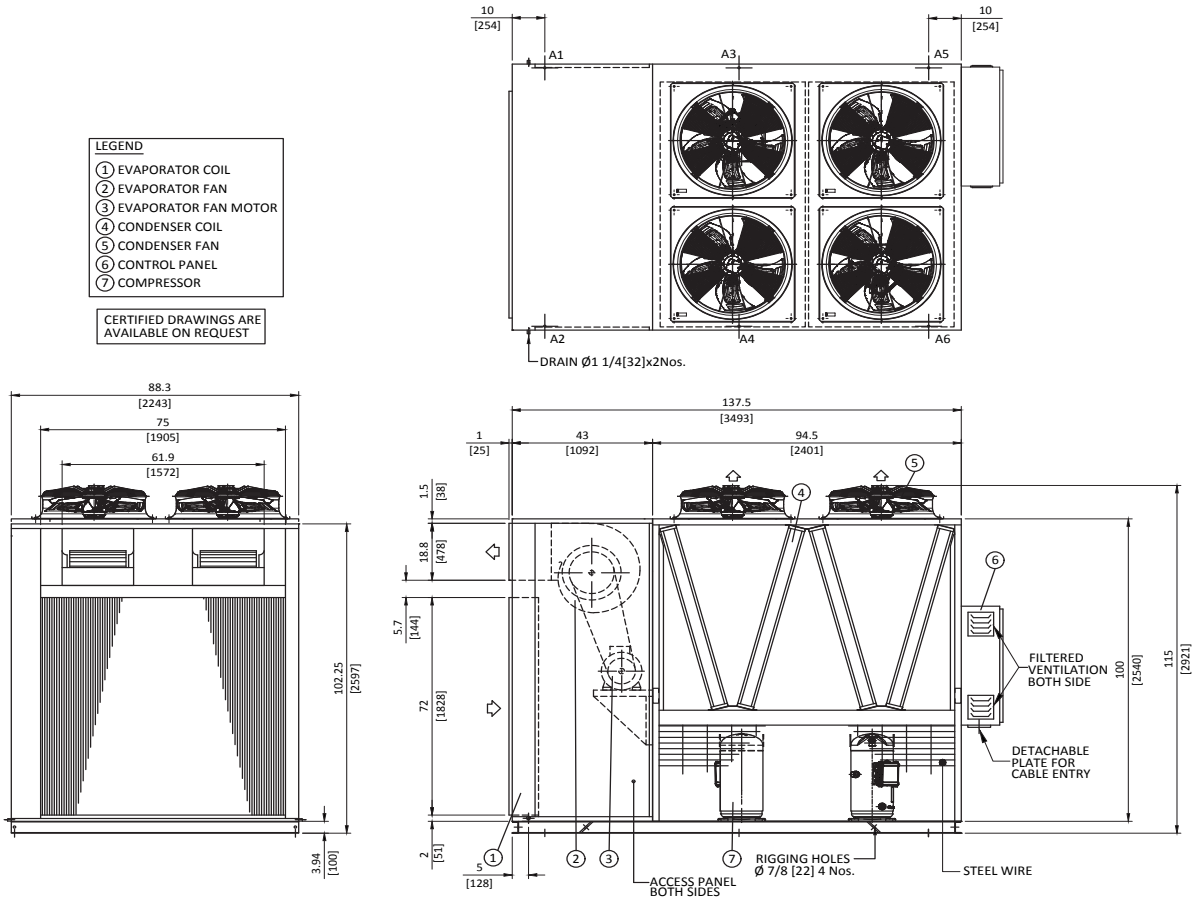
ALL DIMENSIONS ARE IN INCHES[mm]

CERTIFIED DRAWINGS ARE AVAILABLE ON REQUEST

APMR Models: 52046G

- LEGEND**
- ① EVAPORATOR COIL
 - ② EVAPORATOR FAN
 - ③ EVAPORATOR FAN MOTOR
 - ④ CONDENSER COIL
 - ⑤ CONDENSER FAN
 - ⑥ CONTROL PANEL
 - ⑦ COMPRESSOR

CERTIFIED DRAWINGS ARE AVAILABLE ON REQUEST





Sound Data - STANDARD

MODEL	Sound Power Level in dBA ref 10 ⁻¹² W Spectrum per Octave band								Overall dBA
	63	125	250	500	1k	2k	4k	8k	
51005	66.2	64.4	56.7	77.4	80.4	79.6	71.5	63.0	84.5
51007	66.2	64.4	56.7	77.4	80.4	79.6	71.6	63.0	84.5
51008	66.2	64.4	56.8	77.5	80.4	79.6	71.5	62.8	84.5
51009	66.2	64.4	56.8	77.5	80.4	79.6	71.7	62.9	84.5
52010	66.2	64.4	56.9	77.5	80.5	79.6	71.7	63.3	84.5
52013	66.2	64.4	56.8	77.5	80.5	79.6	71.9	63.4	84.5
52015	55.9	61.8	63.3	64.9	66.0	65.2	61.9	52.1	72.1
52019	51.3	50.8	59.6	67.8	69.6	70.1	67.5	67.3	75.7
52022	51.3	50.8	59.6	66.5	70.2	71.4	67.9	67.6	76.2
52025	53.1	52.5	61.3	68.9	71.2	73.0	70.6	69.2	78.0
52028	53.1	52.5	61.4	68.8	71.2	72.8	69.8	69.0	77.7
52032	53.1	52.5	62.7	70.0	71.7	78.5	71.3	69.0	80.7
52036	53.1	52.6	63.7	70.9	72.2	80.8	72.4	68.9	82.5
52042	58.3	64.9	65.8	71.8	76.1	81.8	74.6	70.6	84.1
52046	58.3	64.9	65.7	71.9	77.9	82.4	75.7	71.0	84.9

Table 25

MODEL	Sound pressure level in dBA ref 2x10 ⁻⁵ Pa @ 1meter in free field Spectrum per Octave band								Overall dBA
	63	125	250	500	1k	2k	4k	8k	
51005	55.2	53.4	45.7	66.5	69.4	68.6	60.5	52.0	73.5
51007	55.2	53.4	45.7	66.5	69.4	68.6	60.6	52.0	73.5
51008	55.2	53.4	45.8	66.5	69.4	68.6	60.5	51.8	73.5
51009	55.2	53.4	45.8	66.5	69.4	68.7	60.7	51.9	73.5
52010	55.2	53.4	45.9	66.5	69.5	68.6	60.7	52.3	73.5
52013	55.2	53.4	45.8	66.5	69.5	68.6	60.9	52.4	73.5
52015	44.9	50.8	52.3	53.9	55.0	54.2	50.9	41.1	61.1
52019	40.3	39.8	48.6	56.8	58.6	59.1	56.6	56.3	64.7
52022	40.3	39.8	48.6	55.5	59.2	60.4	56.9	56.6	65.2
52025	42.1	41.5	50.3	57.9	60.2	62.0	59.6	58.2	67.0
52028	42.1	41.5	50.4	57.8	60.2	61.8	58.8	58.0	66.7
52032	42.1	41.5	51.7	59.0	60.7	67.5	60.3	58.0	69.7
52036	42.1	41.6	52.7	59.9	61.2	69.8	61.4	57.9	71.5
52042	47.3	53.9	54.8	60.8	65.1	70.8	63.6	59.6	73.1
52046	47.3	53.9	54.7	60.9	66.9	71.5	64.7	60.0	73.9

Table 26

Sound Data - Hi-EFFICIENCY

MODEL	Sound Power Level in dBA ref 10^{-12} W								Overall
	Spectrum per Octave band								
APMRG	63	125	250	500	1k	2k	4k	8k	dBA
51005G	66.2	64.4	56.7	77.4	80.4	79.6	71.5	63.0	84.5
51007G	66.2	64.4	56.7	77.4	80.4	79.6	71.6	63.0	84.5
51008G	66.2	64.4	56.8	77.5	80.4	79.6	71.5	62.8	84.5
51009G	66.2	64.4	56.8	77.5	80.4	79.6	71.7	62.9	84.5
52010G	66.2	64.4	56.8	77.5	80.4	79.6	71.6	63.9	84.5
52013G	55.9	61.8	63.2	63.9	67.8	63.6	63.5	55.8	72.4
52015G	55.9	61.8	63.3	64.9	66.0	65.2	61.9	52.1	72.1
52019G	51.3	50.8	59.6	67.8	69.6	70.1	67.5	67.3	75.7
52022G	51.3	50.8	59.6	66.5	70.2	71.4	67.9	67.6	76.2
52025G	53.1	52.5	61.3	68.9	71.2	73.0	70.6	69.2	78.0
52028G	53.1	52.5	61.4	68.8	71.2	72.8	69.8	69.0	77.7
52032G	53.1	52.5	62.7	70.0	71.7	78.5	71.3	69.0	80.7
52036G	54.3	53.8	64.4	71.5	72.8	80.9	72.8	70.1	82.8
52042G	58.3	64.9	65.8	71.8	76.1	81.8	74.6	70.6	84.1
52046G	58.3	64.9	65.7	71.9	77.9	82.4	75.7	71.0	84.9

Table 27

MODEL	Sound pressure level in dBA ref 2×10^{-5} Pa @ 1meter in free field								Overall
	Spectrum per Octave band								
APMRG	63	125	250	500	1k	2k	4k	8k	dBA
51005G	55.2	53.4	45.7	66.5	69.4	68.6	60.5	52.0	73.5
51007G	55.2	53.4	45.7	66.5	69.4	68.6	60.6	52.0	73.5
51008G	55.2	53.4	45.8	66.5	69.4	68.6	60.5	51.8	73.5
51009G	55.2	53.4	45.8	66.5	69.4	68.7	60.7	51.9	73.5
52010G	55.2	53.4	45.9	66.5	69.4	68.6	60.6	52.9	73.5
52013G	44.9	50.8	52.3	52.9	56.8	52.6	52.5	44.8	61.4
52015G	44.9	50.8	52.3	53.9	55.0	54.2	50.9	41.1	61.1
52019G	40.3	39.8	48.6	56.8	58.6	59.1	56.6	56.3	64.7
52022G	40.3	39.8	48.6	55.5	59.2	60.4	56.9	56.6	65.2
52025G	42.1	41.5	50.3	57.9	60.2	62.0	59.6	58.2	67.0
52028G	42.1	41.5	50.4	57.8	60.2	61.8	58.8	58.0	66.7
52032G	42.1	41.5	51.7	59.0	60.7	67.5	60.3	58.0	69.7
52036G	43.3	42.8	53.4	60.5	61.8	69.9	61.8	59.2	71.8
52042G	47.3	53.9	54.8	60.8	65.1	70.8	63.6	59.6	73.1
52046G	47.3	53.9	54.7	60.9	66.9	71.5	64.7	60.0	73.9

Table 28



Installation & Space Requirement STANDARD

APMR	A	B	C	
51005	52	34	88	
51007		42		
51008		54		
51009		60		
52010		64		
52013		82		
52015		46		96
52019		81		54
52022	66		96	
52025	70		108	
52028	76			
52032				
52036				

Table 29

Hi-EFFICIENCY

APMR	A	B	C	
51005G	52	34	88	
51007G		42		
51008G		54		
51009G		60		
52010G		64		
52013G		82		
52015G		66		72
52019G		81		70
52022G	78		96	
52025G	81		108	
52028G				
52032G	84	81	72	

Table 30

Installation & Space Requirement - STANDARD



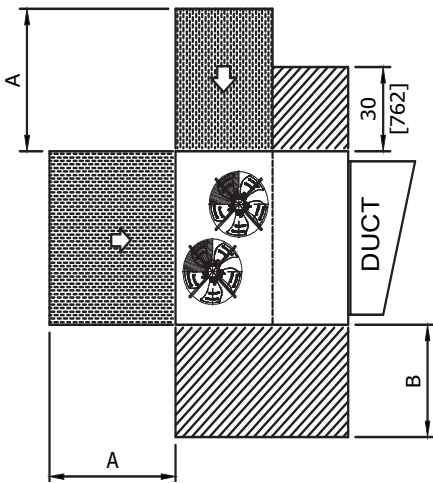
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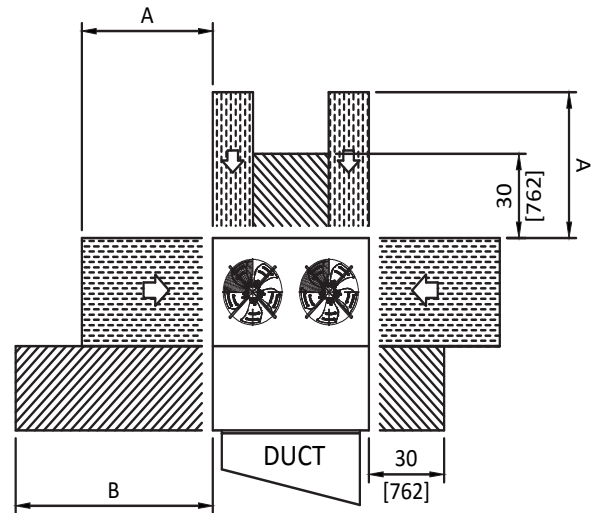
SPACING FOR AIR FLOW

SINGLE UNIT

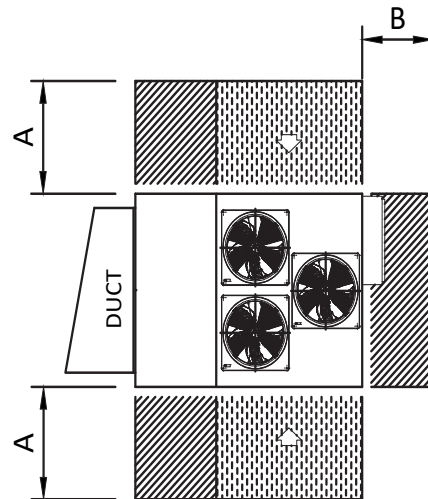
APMR- 51005 to 51009



APMR- 52010 to 52022



APMR- 52025 to 52046





Installation & Space Requirement - STANDARD



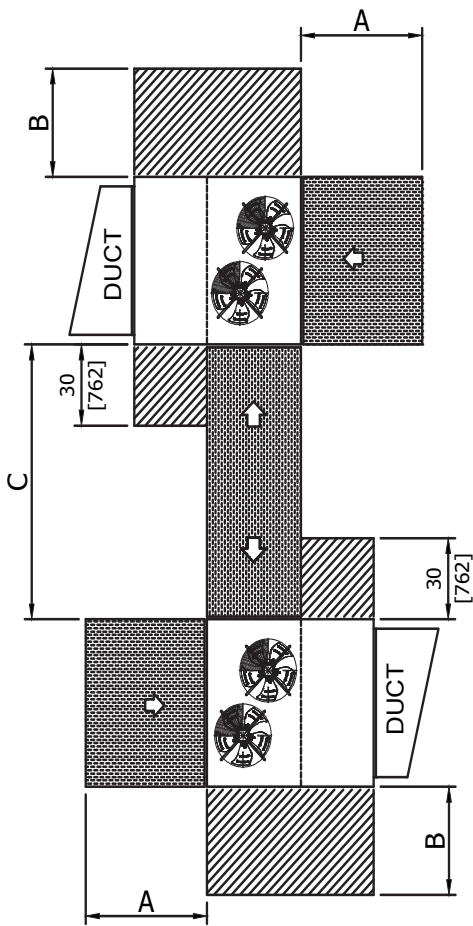
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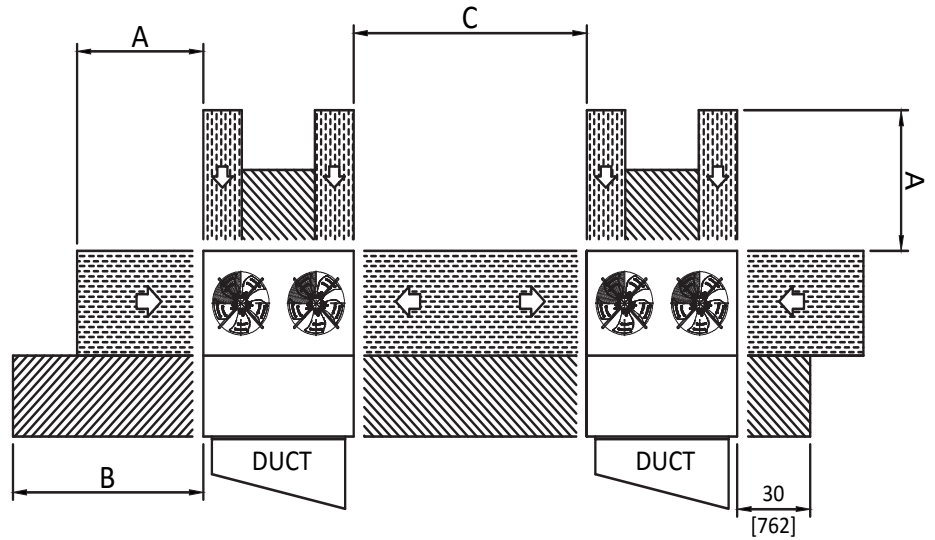
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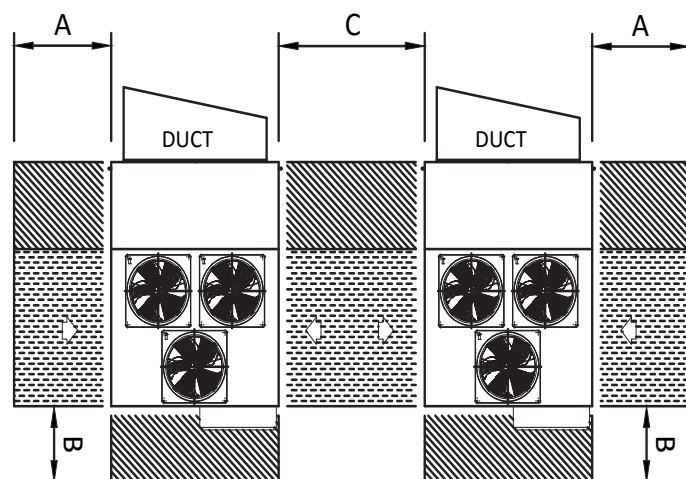
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APMR- 52010 to 52022



APMR- 52025 to 52046



Installation & Space Requirement - Hi-EFFICIENCY



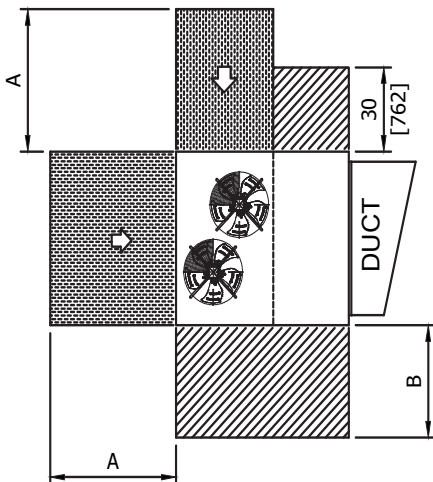
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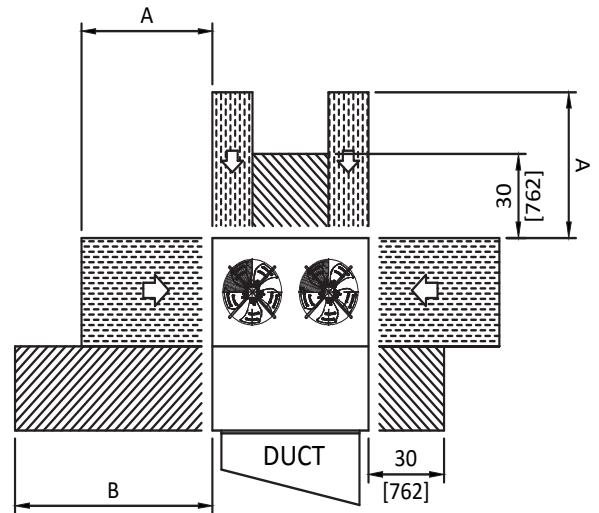
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SINGLE UNIT

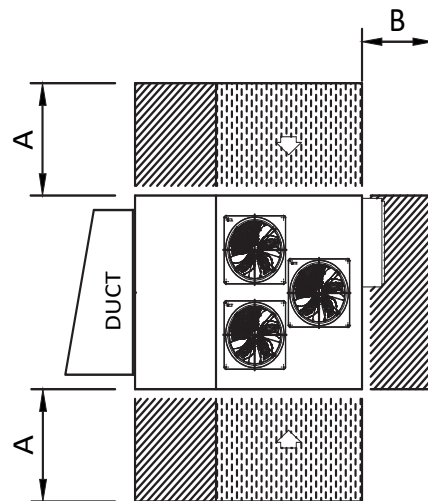
APMR- 51005G to 51009G



APMR- 52010G to 52022G



APMR- 52025G to 52046G

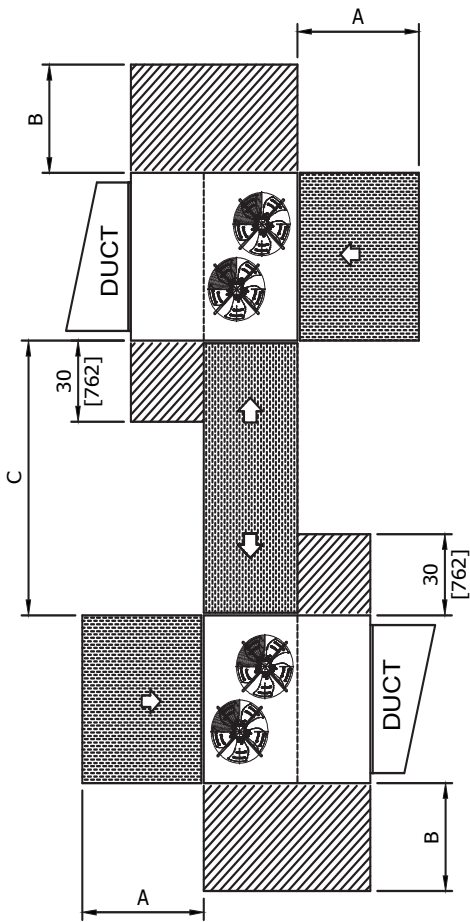




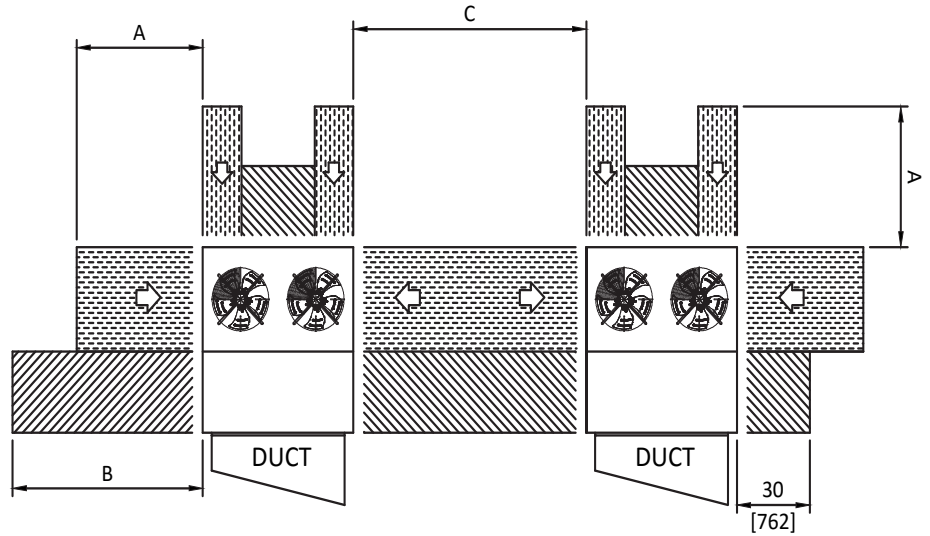
Installation & Space Requirement - Hi-EFFICIENCY

MULTIPLE UNIT

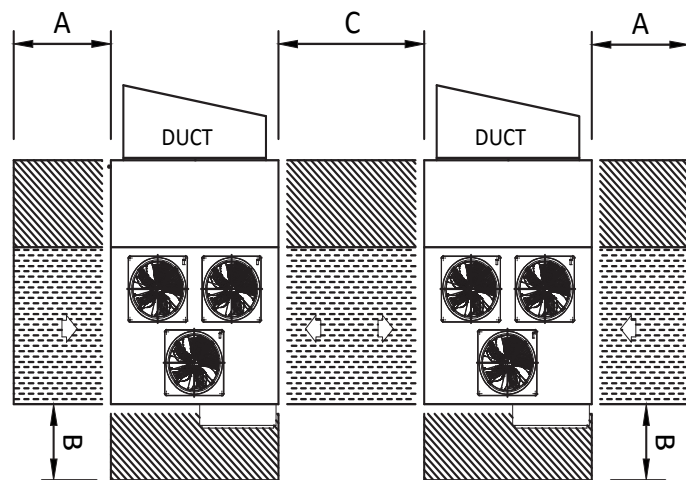
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APMR- 52010G to 52022G



APMR- 52025G to 52042G

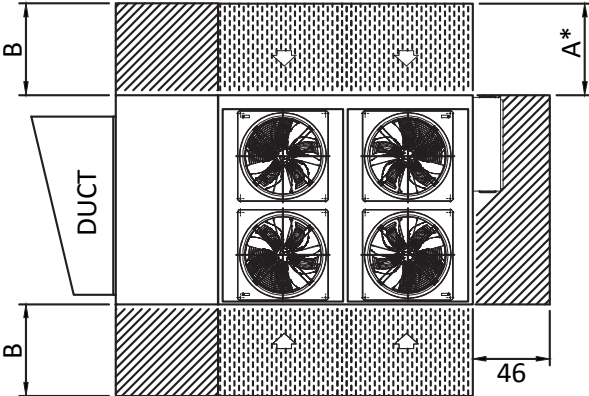


Installation & Space Requirement - Hi-EFFICIENCY

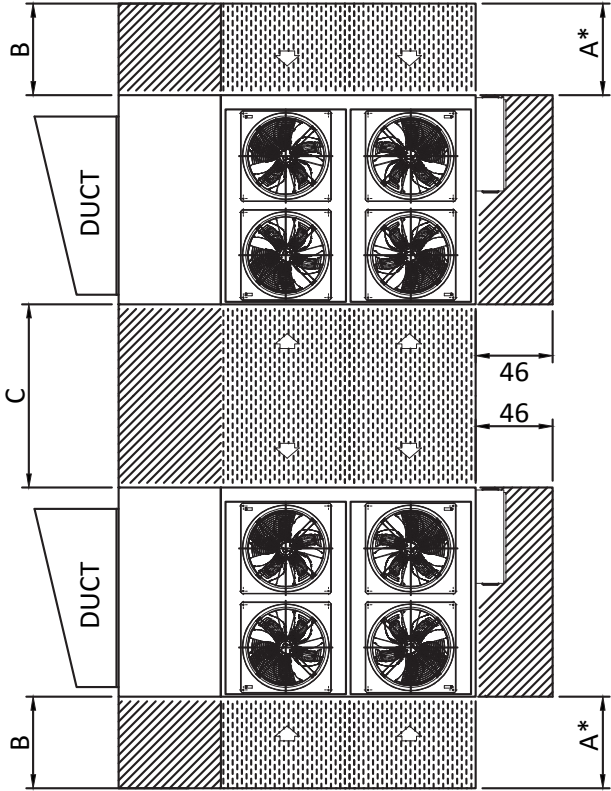
MULTIPLE UNIT

APMR-52046G

SINGLE UNIT



MULTIPLE UNIT





GUIDE SPECIFICATIONS

GENERAL FEATURES

Packaged air conditioners shall be composed of compressor(s), condenser coil(s), evaporator coil, expansion valve(s), connecting piping, all necessary liquid line accessories and safety controls.

Unit shall be factory assembled, internally wired, fully refrigerant charged with R-410A and thoroughly tested before delivery. Units should be capable to operate from 50°F (10°C) to 120°F (48.9°C) ambient temperature, and shall be rated in accordance with AHRI 210/240 and 340/360 standards.

CONDENSER COIL(S)

Coil shall be air cooled with integral sub-cooling circuit, constructed of seamless copper tubes 3/8" OD mechanically bonded to Aluminium or Copper corrugated cross wave fins with maximum 14FPI (1.8mm) or 16FPI (1.6mm) spacing. Coil shall be tested against leakage by pressurizing air at 715psig (4930kPa) in coil, under water, cleaned and dehydrated at the factory.

COMPRESSOR(S)

Compressor shall be hermetic scroll, refrigerant gas cooled furnished with internal overload protection device, crankcase heater, and shall be mounted on rubber isolators.

CONDENSER FAN(S) & MOTOR(S)

The machine shall be furnished with direct driven propeller type discharging air upward condenser fans. Fans shall be constructed of corrosion resistant blades such as heavy gauge aluminum. The fan and drive shall be held in proper alignment. Fan assemblies shall be provided with heavy gauge, rust resistant steel wire fan guard. All condenser fans shall be individually, statically, and dynamically balanced for vibration free operation. Motors shall be Totally Enclosed Air Over (TEAO), 4 poles or 6 poles, class F insulation, with IP54 or IP55 protection and factory wired to unit control panel.

EVAPORATOR COIL

Evaporator coil shall be constructed of seamless copper tubes 3/8" OD mechanically bonded to Aluminium or Copper corrugated cross wave fins with maximum 14 FPI (1.8mm) spacing.

Coil consists of headers of seamless copper tubing, thermostatic expansion valve(s) & multi-circuited distributor(s).

These coils shall be tested against leakage by air pressure of 450psig (3103kPa) under water, cleaned & dehydrated at the factory. Coil shall conform to AHRI-410.

EVAPORATOR FAN & MOTOR

Fans of evaporators shall be forward curved, double inlet double width (DIDW), centrifugal type, statically & dynamically balanced, mounted on a single heavy duty shaft with permanently lubricated bearings and belt driven by V belt with an adjustable variable pitch motor pulley.

Motor shall be Totally Enclosed Fan Cooled (TEFC), 4 poles, class-F insulated, minimum IP55 protection & wired to unit control panel.

REFRIGERANT PIPING

The refrigerant circuit piping shall be fabricated from ACR grade copper piping, with 1 & 2 refrigeration circuits, each liquid line shall include shut off valve, filter drier, sight glass, solenoid valve and thermostatic expansion valve.

Suction line shall be insulated with 1/2" (12mm) wall thickness enclosed cell pipe insulation with maximum K factor 0.28 Btu.in /ft² .h.°F. (0.040 W/mK).

CASING

Unit casing shall be made of zinc coated galvanized steel sheets conforming to JIS-G3302 and ASTM A653 which shall be phosphatized and then electrostatically dry powder coated of approx. 60 microns to provide an extremely tough, scratch resistance, excellent anti-corrosive protection that can pass 1000 hrs in 5% salt spray testing at 95°F (35°C) and 95% relative humidity as per ASTM B117.

Evaporator section shall be sealed with vinyl gaskets and completely insulated faced with black glass tissue (BGT) heavy density, fire retardant, 32 Kg/m³ density having Max. K factor 0.23 Btu.in /ft² .h.°F (0.033 W/mK) and permanent odorless fibre glass insulation of minimum 1" (25mm) thickness.

FILTERS

Units shall be supplied with a range of filter sections with flat filter or vee filter 1" or 2" thick, with 54% or 72% dust arresance, respectively, in accordance with ASHRAE 52.2 if so specified.

A bag filter section to house 15", 21", or 30" deep bag filters having efficiency as desired shall be provided, if so specified.

High efficiency pleat filter shall be provided as an alternative to bag filter, if so specified.

For 100%, Fresh Air application, a sand trap louver shall be provided, if so specified.

GUIDE SPECIFICATIONS

CONTROL PANEL

Packaged units shall be provided with IP-54 control panel enclosure comprising all starting, operating and safety controls. The panel shall be factory wired in accordance with NEC 430 & 440, labeled, tagged and features 220V / 240V controls and shall include the following as a minimum.

- All compressors shall be with DOL starting.
- Individual compressor, condenser fan motors and evaporator fan motor contactors.
- Voltage monitoring module for protection against under voltage, over voltage, phase loss, phase reversal and phase unbalance of the incoming voltage.
- Motor protector circuit breaker for condenser and evaporator fan motors.
- Control circuit breaker.
- Control circuit on/off switch.
- Electronic control board for unit operation.
- Diagnostic LED's on the control board for easy troubleshooting.
- Power and control circuit terminal blocks.
- Compressor short cycling protection.
- High pressure protection.
- Low pressure protection.

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