APMRG1 Series

Packaged Air Conditioners

اجهزة تكييف هواء
AIR CONDITIONING EQUIPMENT

50Hz

R-410A
REFRIGERANT

Range 4.6 TR to 45.8 TR
(16.1 kW to 161.2 kW)

CE

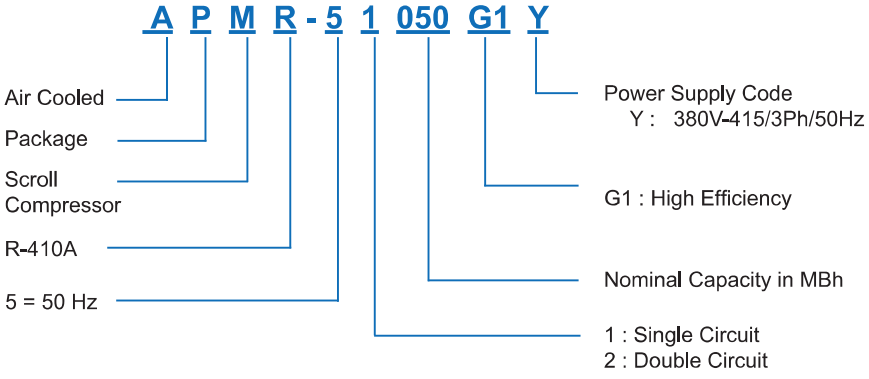
Contents

Legend

The following legends are used throughout this manual:

AFR ..... Air Flow Rate
BPF.....By Pass Factor
CFM.....Cubic feet per minute
EER.....Energy Efficiency Ratio
ESP.....External Static Pressure
Hz .....Hertz
in.wg.....Inchwatergauge
kW.....Kilowatts
kg.....Kilogram
lbs.....Pounds weight
L/s.....Liters per second
MBh.....BTUHx1000
Pa.....Pascal
Ph.....Phase
PI .....Power Input of Compressor in kW
RPM .....Revolutions Per Minute
RPS.....Rated Power Supply
TR.....Tons of Refrigeration
V.....Volts

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 **APMRG1** New Packaged Air Conditioners Series are designed and manufactured to meet the requirements of Gulf's severe climatic conditions and are built specifically for ducted systems which will enable them to be installed easily on roof tops or on the ground.

The **APMRG1** series Packaged Air Conditioners are compact, quiet, most efficient and self contained units are ideal for commercial and top end residential applications.

APMRG1 Series is also designed to perform as per ESMA regulation to achieve high efficiency level in gulf conditions

Available in 19 different sizes from 4.6 to 45.8 TR (16.1kW to 161.2kW) in 50 Hz at nominal AHRI conditions. **APMRG1** series packaged air conditioners are designed to operate in a wide ambient temperature range between 50°F (10°C) to 125°F (51.7°C), based on specific conditions & model applies. Two independent refrigeration circuits are provided where two compressors are used.

APMRG1 series units from SKM are completely assembled, leak tested, vacuumed, internally wired and fully charged with R-410A refrigerant at factory. Each unit is fully factory tested before dispatch and is ready for installation. All that is required on the site is to connect ducts, drain lines, main power supply and field wiring to the thermostat. This greatly reduces the installation work and cost.

SKM provides qualified service and stock 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.

SKM Air Conditioning LLC

اجهزة تكييف هواء
AIR CONDITIONING EQUIPMENT

You name it.....We cool it

General Features

The **APMRG1** Series is a modern, diversified and environment friendly series of packaged air conditioners which use R-410A refrigerant.

The **APMRG1** Series Packaged Air Conditioners are yet another new unique series from SKM incorporates many salient features which, together, provides a heavy duty, robust, long lasting commercial unit meant for high end residential and commercial applications. The **APMRG1** series models combine high efficiency condenser and cooling coils, evaporator blower and heavy duty motor in addition to premium safety and operational controls.

The complete **APMRG1** packaged unit provides an extremely rugged, long life, energy efficient, self contained packaged air conditioner that will provide cooling with higher efficiency over a long and extended life.

What makes **APMRG1** series yet another model in the top class range of SKM products is the use of:

- High efficiency totally sealed scroll hermetic compressors.
- Totally enclosed, Class F insulated,condenser and evaporator fan motors.
- Heavy duty condenser and evaporator coils optimised in design for long-life maintenance free operation.
- Cabinet construction specifically designed for Gulf climates.
- Electronic control board for the unit operation.
- Typically, much heavier gauge tubing and thicker fins for ruggedness and long life.

Main Component Features

The common standard features of all **APMRG1** series packaged units include the following

Compressors

Compressors used in **APMRG1** 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 hadle liquid refrigerant.
- Suction gas motor cooling.
- Suction screen.
- Centrifugal oil pumps with filter and magnet.
- Brazed fittings or Rotalock options.
- Two refrigerant circuits on larger units provides efficient part load.
- No internal valves.

Condenser Coils

Condenser coils are manufactured from Corrugated fin and Hi-X seamless copper tubes mechanically bonded to aluminium fins to ensure optimum heat transfer. All coils are tested against leakage by high air pressure 715psig (4930kPa) under water. An integral subcooling circuit is incorporated in the lower section of the condenser to increase system capacity. The additional condenser surface provides more cooling using less energy at no additional cost.

Condenser Fans

Condenser fans are propeller type with aluminum alloy blades and are directly driven by electric motors. Motors are Totally Enclosed Air Over (TEAO), six pole with Class F insulation and IP54/55 protection depending on models. Complete fan assembly is provided with fan guard.

Evaporator

Evaporator coils are manufactured from Hi-X seamless copper tubes mechanically bonded to aluminium Corrugated fins to ensure optimum heat transfer. All evaporator coils are tested against leakage by high air pressure of 450 psig (3100kPa) under water. Coils conform to AHRI-410.

Evaporator Fan & Drive

Evaporator fans are forward curved centrifugal double inlet, double width, statically and dynamically balanced. Bearings used in the fans are self aligning and lubricated for life. Evaporator fans are belt driven and use “V” belts with an adjustable variable pitch motor pulley resulting in an accurate fan air flow adjustment.

Fans are driven by Totally Enclosed, IP-55 Protected, 4 pole Class F insulated electric motors. The motors are factory wired to the control panel where the motor starters are located to control the operation of the motors. The motors conform to relevant IEC standards.

Casing and Structure

The unit casing used in **APMRG1** series is made of hot dip galvanized (zinc coated) steel sheets, conforming to JIS-G 3302 and ASTMA653, which is phosphatized and baked after an electrostatic powder coat of approx. 60 microns. 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 evaporator section is insulated from all the sides with 1/2” for model 51055G1 to 51120G1 & 1” for model 52130G1 to 52550G1 thick fiber glass insulation with extremely tough and durable black composite surface. The insulation cum sound liner meets the fire requirements of NFPA90A & 90B and is secured with mechanical fasteners in addition to water resistant adhesive.

Refrigerant R- 410A
Why 410A?

R-410A has a higher volumetric cooling capacity compared to R-22 and has better thermal exchange properties. This results in overall performance gains in terms of system efficiency. The greater density of the vapour in R-410A permits higher system velocities, reduces pressure drop losses and allows smaller diameter tubing to be used. In other words a smaller unit can be developed using a smaller displacement compressor, less coil and less refrigerant while maintaining system efficiencies comparable to current day R-22 equipment.

Benefits

- **No ozone depletion potential or phase-out date**

Using chlorine-free R-410A with zero Ozone Depletion Potential (ODP) helps protect both the environment and your investment. That's because new equipment using R-410A faces no mandated phase-out date over a 20 to 30 year equipment life expectancy.

- **Reduced service costs**

R-410A refrigerant has no significant "glide." If a leak occurs, only the lost refrigerant must be replaced.

Attention points

- Pressure level: 1.6 times of R-22.
- Lubricating oil: Ester Oil absorb moisture easily (Never mix with mineral oil).
- Tools exclusive for R-410A.
- Never mix R-410A with other refrigerant.
- Driers, valves and even copper tube must be approved for use with R-410A.
- Never allow refrigerant cylinders to exceed 60°C.

Control Panel

The APMRG1 packaged Air Conditioners are provided with IP-54 control panel enclosure comprising all starting, operating & safety controls. The panel is factory wired in accordance with NEC 430 & 440, labelled, tagged and features 220V / 240V controls.

- Starting contactors for compressors and motors.
- Internal overload protection for compressors.
- Internal or External overload protection for the motors (depending on the model).
- Electronic control board for unit operation.
- Diagnostic LEDs on the control board for easy troubleshooting .
- Compressor short cycling protection.
- Control switch for unit on/off.
- Control circuit breaker.
- Power and control circuit terminal blocks.
- High pressure protection.
- Low pressure protection.

Optional Features

As with all SKM air conditioning units, the **APMRG1** Series Packaged Units are available with multitude of optional features available on request:

Double Skin Evaporator (DSE)

Double skin evaporator section with galvanized inner skin.
(Applicable only for models 52130G1 to 52550G1)

Double Skin Insulation (DSI)

Inner skin in the evaporator section is provided with foam board insulation. **(Applicable only for models 52130G1 to 52550G1)**

1" (25mm) Thick Fiber Glass Insulation (1SG)

Evaporator section with 1" thick fiber glass insulation.
(This option applicable for models 51055G1 up to 51120G1)

Temperature Based Economizer (ECRU)

Simple temperature based economizer.

2" (50mm) Flat Filter Section (FSIP2)

For heavy filtration need a section can be provided without or with aluminium cleanable filter.

Alternative Condenser Material

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

- Pre Coated aluminum fins (FAP).
- Aluminum Fins with Aeris post Coat Protection (FAA).
- Copper Fins (FC).
- Copper Fins with Aeris post Coat Protection (FCA).

Alternative Evaporator Material

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

- Pre Coated aluminum fins (EFAP).
- Aluminum Fins with Aeris post Coat Protection (EFAA).
- Copper Fins (EFC).
- Copper Fins with Aeris post Coat Protectionn (EFCA).

Anti-Freeze Thermostat (AFT)

For evaporator coil freeze -up protection.

Western Make Scroll Compressor (WMSC)

Western make scroll compressor.

Compressor Run Hour Meter (RHM)

To monitor operating hours of each compressor.

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 requires additional overload protection for the compressors.(Not required with CBC option)

Manual Reset Type High Pressure Switch (MHP)

To replace standard auto reset, capsule type pressure switch.

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.

Control of the heaters will be from the unit controller.
Following are the optional kW ratings for electric heater. Ratings other than those specified here can be supplied on request.
Consult SKM for details **(Applicable only for models 52130G1 to 52550G1)**

Model APMR	Heater Kw	No. of Stages
52130G1	18	2
52150G1		
52170G1		
52180G1		
52210G1		
52240G1	24	
52270G1		
52300G1		
52340G1		
52380G1		
52420G1	48	
52500G1		
52550G1		

Table 1

Rotalock Valves on compressors (RVC)

For additional facilitation of maintenance of unit.

Advanced Micro Processor Control System (AMCS)

An advanced microprocessor based controller can be provided for the units as option, in case required. This controller will be with built-in display keypad and has many features. For this feature, additional options can be provided and to be specified during time of order:

- **DTS – Duct Temperature Sensor ***

(In order to control the unit based on return/supply air duct temperature.) (**This is not required with CHTS options**)

- **BMSP – BMS Protocol ***

(For interfacing the units with major BMS protocols such as BACnet, Modbus or LON. An extra hardware may be required depending on the protocol)

Extra Ball Valve (XFV)

Extra ball valve can be incorporated in the liquid line.

Pressure relief valve (PRV)

To protect the unit from being over - pressurized.

Pressure Gauges (SDG1)

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

Liquid Line Sight Glass (RSG)

For monitoring refrigerant charge and to provide visual indication of moisture presence in the system.

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.

Stainless Steel Drain Pan (Grade 304) (SDP-304)

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

Stainless Steel Drain Pan (SDP-316)

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

Circuit breaker for Motors** (CBM)

For those electrical specification which requires additional short circuit and overload protection for the fan motors.

IP 55 Control Panel (ICP)

Control Panel for special applications to meet IP55 requirements.

Main Isolator (without door interlock) (ISO)

For main power isolation. (**Consult SK**M)

BMS Interface Volt Free Contacts (BMVF)

Volt free contacts for run status, common fault status, auto mode status and provision for remote on/off shall be provided as option if required.
For additional requirements, please contact SKM.

Voltage Monitor Module (VMM)

Provides protection in the event of:
- Phase burn-out.
- Phase reversal.
- Under / over voltage on the incoming line voltage.

Up Size Evaporator Motor** (USM)

Unit with one up size evaporator motor.

Voltage Monitoring Module as per DEWA (DVM)

Under voltage relay as per DEWA regulations. This option is available for Dubai, UAE only.(**VMM option is not required if this option is opted.**)

Ball Valve (BLV)

Ball valve can be incorporated in the liquid line.

Pump Down Facility with solenoid Valve (PDS)

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

Fire Alarm Interlock (VFC-F)

To provide provision for fire alarm interlock.

Marine Paint (MP)

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

Options for Field Installation

Anti-vibration mounts (CAVM)

Recomended for roof mounted units or other location in the vicinity of occupied spaces. where noise may be objectionable.

Low Voltage Thermostat (CHTS)

For wall mounting and for cooling /heating operation with 1 or 2 stages as per model. (**Not required with AMCS option**).

- **DTS-TH – Duct Temperature Sensor for 24V Thermostat** * (In order to control the unit based on return/supply air duct temperature.) **(This is not required with AMCS options)**

Note:

- *DTS & BMSP options are only available along with AMCS option.

- *DTS-TH option is only available along with CHTS option.

- **If CBM combined with USM option please consult SKM as component might changed.

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

ENGINEERING SPECIFICATIONS

Model		APMR	51055G1	51070G1	51080G1	51090G1	51100G1	51120G1	52130G1
Cooling Capacity (1)		MBh	46.60	59.20	66.40	72.50	82.80	95.70	108.10
		kW	13.66	17.35	19.46	21.2	24.27	28.05	31.68
		EER	8.45	8.33	8.38	8.45	8.39	8.41	8.40
Refrigerant Type		-	R410A						
Compressor	Type	-	Hermetic Scroll						
	Quantity	-	1	1	1	1	1	1	2
	Oil Charge Ckt (A / B)	US Gal	0.52	0.47	0.47	0.66	0.86	0.86	1.19
		Liter	1.95	1.77	1.77	2.51	3.25	3.25	4.50
Condenser Coil	Type	-	Hi-X tubes						
	Face Area	ft^2	18.7	21.3	24	24	24	25.4	37.3
		m^2	1.7	2.0	2.2	2.2	2.2	2.4	3.5
Condenser Fan	Type	-	Propeller Direct Drive						
	Code / Quantity	-	630 / 1	630 / 1	710 / 1	710 / 1	710 / 1	710 / 1	710 / 2
Condenser Motor	Type	-	Totally Enclosed Air Over, Class F insulation, 6-pole, IP-54/55 Protected						
Evaporator Coil	Type	-	Hi-X tubes						
	Face Area	ft^2	5.8	5.8	8.9	8.9	8.9	10.7	13.3
		m^2	0.54	0.54	0.83	0.83	0.83	0.99	1.24
Evaporator Fan	Type	-	Centrifugal double inlet double width belt drive						
	Code / Quantity		10/10	12/12	12/12	15/15	15/15	15/15	12/12 R2
	Air Flow Rate	cfm	1700	2100	2800	3200	3500	4100	4500
		l/s	802	991	1321	1510	1651	1934	2123
Evaporator Motor	Type	-	Totally Enclosed Fan Cooled, Class F insulation, 4-pole IP55 Protected						
	Size	kW	0.55	0.55	0.75	1.1	1.1	1.5	1.5
Approximate Operating Gas Charge Ckt (A / B)		lbs	14.99	16.38	19.80	20.22	20.33	29.63	15.78 / 15.78
		kg	6.80	7.43	8.98	9.17	9.22	13.44	7.16 / 7.16
Number of Refrigerant Circuits		-	1	1	1	1	1	1	2
Unit Operating Weight		lbs	645	669	814	894	914	1040	1622
		kg	293	304	369	405	414	471	736

Table 2

Notes:

(1) Evaporator entering air conditions of 84.2°/66.2°F (29.0°C/19.0°C) dry bulb/wet bulb and condenser entering air temperature of 114.8°F (46°C) dry bulb, (Net Capacity).

ENGINEERING SPECIFICATIONS

Model		APMR	52150G1	52170G1	52180G1	52210G1	52240G1	52270G1	52300G1
Cooling Capacity (1)		MBh	123.30	135.90	145.80	162.70	188.90	212.90	240.60
		kW	36.14	39.83	42.73	47.7	55.36	62.39	70.51
		EER	8.40	8.33	8.20	8.21	8.18	8.26	8.32
Refrigerant Type		-	R410A						
Compressor	Type	-	Hermetic Scroll						
	Quantity	-	2	2	2	2	2	2	2
	Oil Charge Ckt (A / B)	US Gal	0.47	0.47	0.66	0.86	0.86	1.90	0.86
		Liter	1.77	1.77	2.51	3.25	3.25	7.20	3.25
Condenser Coil	Type	-	Hi-X tubes						
	Face Area	ft^2	37.3	52	52	52	52	53.3	53.3
		m^2	3.5	4.8	4.8	4.8	4.8	5.0	5.0
Condenser Fan	Type	-	Propeller Direct Drive						
	Code / Quantity	-	710 / 2	710 / 2	710 / 2	710 / 2	710 / 2	710 / 3	710 / 3
Condenser Motor	Type	-	Totally Enclosed Air Over, Class F insulation, 6-pole, IP-54/55 Protected						
Evaporator Coil	Type	-	Hi-X tubes						
	Face Area	ft^2	13.3	15.6	15.6	15.6	21.7	21.7	21.7
		m^2	1.24	1.45	1.45	1.45	2.02	2.02	2.02
Evaporator Fan	Type	-	Centrifugal double inlet double width belt drive						
	Code / Quantity	-	12/12 R2	12/12 R2	12/12 R2	12/12 R2	12/12 R2	15/15 R2	15/15 R2
	Air Flow Rate	cfm	5000	5800	6200	6500	7000	8000	9000
		l/s	2359	2737	2926	3067	3303	3775	4247
Evaporator Motor	Type	-	Totally Enclosed Fan Cooled, Class F insulation, 4-pole IP55 Protected						
	Size	kW	1.5	2.2	2.2	3	3	3	3
Approximate Operating Gas Charge Ckt (A / B)		lbs	15.78 / 15.78	20.26 / 20.26	20.26 / 20.26	28.79 / 28.79	30.03 / 30.03	31.24 / 31.24	31.24 / 31.24
		kg	7.16 / 7.16	9.19 / 9.19	9.19 / 9.19	13.06 / 13.06	13.62 / 13.62	14.17 / 14.17	14.17 / 14.17
Number of Refrigerant Circuits		-	2	2	2	2	2	2	2
Unit Operating Weight		lbs	1622	1956	2032	2090	2288	2724	2739
		kg	736	887	922	948	1038	1235	1242

Table 3

Notes:

(1) Evaporator entering air conditions of 84.2°/66.2°F (29.0°C/19.0°C) dry bulb/wet bulb and condenser entering air temperature of 114.8°F (46°C) dry bulb, (Net Capacity).

ENGINEERING SPECIFICATIONS

Model		APMR	52340G1	52380G1	52420G1	52500G1	52550G1
Cooling Capacity (1)		MBh	274.60	319.30	357.80	404.80	449.00
		kW	80.48	93.58	104.86	118.6	131.59
		EER	8.10	8.15	7.99	8.01	7.90
Refrigerant Type		-	R410A				
Compressor	Type	-	Hermetic Scroll				
	Quantity	-	2	2	2	2	2
	Oil Charge Ckt (A / B)	US Gal	0.86	1.19 / 0.86	1.19	1.19 / 1.19	1.19
		Liter	3.25	4.5 / 3.25	4.50	4.5 / 4.5	4.50
Condenser Coil	Type	-	Hi-X tubes				
	Face Area	ft^2	60	65	69.3	78	130
		m^2	5.6	6.0	6.4	7.2	12.1
Condenser Fan	Type	-	Propeller Direct Drive				
	Code / Quantity	-	710 / 3	710 / 4	800 / 3	800 / 3	800 / 4
Condenser Motor	Type	-	Totally Enclosed Air Over, Class F insulation, 6-pole, IP-54/55 Protected				
Evaporator Coil	Type	-	Hi-X tubes				
	Face Area	ft^2	26	30.3	30.3	37.5	37.5
		m^2	2.42	2.81	2.81	3.48	3.48
Evaporator Fan	Type	-	Centrifugal double inlet double width belt drive				
	Code / Quantity	-	15/15 R2	18/18 R2	18/18 R2	18/18 R2	18/18 R2
	Air Flow Rate	cfm	10000	10800	11800	13500	15800
		l/s	4719	5097	5568	6371	7456
Evaporator Motor	Type	-	Totally Enclosed Fan Cooled, Class F insulation, 4-pole IP55 Protected				
	Size	kW	4	4	5.5	5.5	7.5
Refrigerant Operating Charge Ckt (A / B)		lbs	34.88 / 34.88	42.11 / 42.11	52.91 / 52.91	60.43 / 60.43	66.14 / 66.14
		kg	15.82 / 15.82	19.1 / 19.1	24 / 24	27.41 / 27.41	30 / 30
Number of Refrigerant Circuits		-	2	2	2	2	2
Unit Operating Weight		lbs	2776	3391	3603	3835	4857
		kg	1259	1538	1634	1739	2203

Table 4

Notes:

(1) Evaporator entering air conditions of 84.2°/66.2°F (29.0°C/19.0°C) dry bulb/wet bulb and condenser entering air temperature of 114.8°F (46°C) dry bulb, (Net Capacity).

GROSS CAPACITY RATINGS

Model APMR	AFR cfm l/s	EWB	Condenser Entering Air Temperature																								
			95°F (35°C)					105°F (40.6°C)					114.8°F (46°C)					118.4°F (48°C)					125.6°F (52°C)				
			Total Capacity		Sensible Capacity		PI	Total Capacity		Sensible Capacity		PI	Total Capacity		Sensible Capacity		PI	Total Capacity		Sensible Capacity		PI	Total Capacity		Sensible Capacity		PI
	(BPF)	°F	MBh	kW	MBh	kW	kW	MBh	kW	MBh	kW	kW	MBh	kW	MBh	kW	kW	MBh	kW	MBh	kW	kW	MBh	kW	MBh	kW	kW
51055G1	1600	62	49.4	14.5	49.4	14.5	3.4	46.7	13.7	46.7	13.7	3.9	43.8	12.8	43.8	12.8	4.5	44.6	13.1	44.6	13.1	4.7	42.3	12.4	42.3	12.4	5.1
	755	66.2	53.5	15.7	47.4	13.9	3.4	50.5	14.8	46.3	13.6	3.9	47.2	13.8	45.1	13.2	4.5	46.0	13.5	44.6	13.1	4.7	43.6	12.8	43.6	12.8	5.1
	0.09	72	59.9	17.6	37.8	11.1	3.5	56.5	16.5	36.6	10.7	4.0	52.2	15.3	35.2	10.3	4.6	50.6	14.8	34.7	10.2	4.9	47.6	13.9	33.7	9.9	5.3
	1700	62	50.0	14.7	50.0	14.7	3.4	47.2	13.8	47.2	13.8	3.9	46.2	13.5	46.2	13.5	4.5	45.0	13.2	45.0	13.2	4.7	42.6	12.5	42.6	12.5	5.1
	802	66.2	54.0	15.8	49.1	14.4	3.4	50.9	14.9	48.0	14.1	3.9	47.6	14.0	46.7	13.7	4.5	46.4	13.6	46.3	13.6	4.7	44.0	12.9	44.0	12.9	5.1
	0.09	72	60.5	17.7	39.0	11.4	3.5	56.8	16.6	37.7	11.1	4.0	52.4	15.4	36.3	10.6	4.6	50.9	14.9	35.8	10.5	4.9	47.8	14.0	34.8	10.2	5.3
	2600	62	55.4	16.2	55.4	16.2	3.4	52.1	15.3	52.1	15.3	4.0	48.6	14.2	48.6	14.2	4.5	47.3	13.9	47.3	13.9	4.8	44.6	13.1	44.6	13.1	5.2
	1227	66.2	57.1	16.7	57.1	16.7	3.4	53.8	15.8	53.8	15.8	4.0	50.3	14.7	50.3	14.7	4.6	48.9	14.3	48.9	14.3	4.8	46.2	13.5	46.2	13.5	5.2
	0.13	72	62.8	18.4	48.5	14.2	3.5	58.6	17.2	47.2	13.8	4.1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
51070G1	1600	62	61.1	17.9	59.5	17.4	4.8	57.6	16.9	57.6	16.9	5.5	54.1	15.8	54.1	15.8	6.2	52.8	15.5	52.8	15.5	6.4	50.2	14.7	50.2	14.7	6.9
	755	66.2	67.6	19.8	53.1	15.6	4.9	63.4	18.6	51.4	15.1	5.6	59.0	17.3	49.6	14.5	6.3	57.4	16.8	49.0	14.4	6.5	54.4	15.9	47.8	14.0	7.0
	0.09	72	73.7	21.6	42.7	12.5	5.0	69.7	20.4	41.2	12.1	5.7	65.6	19.2	39.8	11.7	6.4	64.0	18.8	39.2	11.5	6.6	61.0	17.9	38.2	11.2	7.1
	2100	62	64.0	18.8	64.0	18.8	4.8	60.4	17.7	60.4	17.7	5.5	56.7	16.6	56.7	16.6	6.2	55.3	16.2	55.3	16.2	6.5	52.5	15.4	52.5	15.4	7.0
	991	66.2	69.7	20.4	61.0	17.9	4.9	65.4	19.2	59.4	17.4	5.6	61.2	17.9	57.8	16.9	6.3	59.6	17.5	57.2	16.8	6.6	56.6	16.6	56.0	16.4	7.0
	0.11	72	77.4	22.7	48.5	14.2	5.1	73.0	21.4	47.0	13.8	5.8	68.5	20.1	45.5	13.3	6.4	66.8	19.6	44.9	13.2	6.7	63.0	18.5	43.7	12.8	7.1
	2600	62	66.2	19.4	66.2	19.4	4.9	62.5	18.3	62.5	18.3	5.6	61.0	17.9	61.0	17.9	6.3	59.4	17.4	59.4	17.4	6.6	56.4	16.5	56.4	16.5	7.0
	1227	66.2	71.5	20.9	68.7	20.1	5.0	67.2	19.7	67.1	19.7	5.6	62.8	18.4	62.8	18.4	6.3	61.3	18.0	61.3	18.0	6.6	58.1	17.0	58.1	17.0	7.0
	0.13	72	79.9	23.4	53.9	15.8	5.1	75.1	22.0	52.4	15.3	5.8	69.7	20.4	50.6	14.8	6.5	67.8	19.9	50.0	14.7	6.7	64.0	18.8	48.8	14.3	7.1
51080G1	2500	62	74.8	21.9	74.8	21.9	5.1	70.8	20.8	70.8	20.8	5.8	69.6	20.4	69.6	20.4	6.7	68.0	19.9	68.0	19.9	7.0	64.7	19.0	64.7	19.0	7.5
	1180	66.2	80.7	23.7	72.9	21.4	5.2	76.4	22.4	71.3	20.9	5.9	71.8	21.1	69.6	20.4	6.7	70.2	20.6	68.9	20.2	7.0	66.9	19.6	66.9	19.6	7.6
	0.09	72	90.3	26.5	57.9	17.0	5.4	85.4	25.0	56.3	16.5	6.1	80.0	23.5	54.5	16.0	6.9	78.1	22.9	53.8	15.8	7.2	74.4	21.8	52.6	15.4	7.7
	2800	62	76.2	22.3	76.2	22.3	5.1	75.3	22.1	75.3	22.1	5.9	70.8	20.7	70.8	20.7	6.7	69.1	20.3	69.1	20.3	7.0	65.7	19.3	65.7	19.3	7.5
	1321	66.2	82.1	24.1	78.0	22.8	5.2	77.6	22.7	76.3	22.4	5.9	73.0	21.4	73.0	21.4	6.7	71.3	20.9	71.3	20.9	7.0	68.0	19.9	68.0	19.9	7.6
	0.1	72	91.5	26.8	61.2	17.9	5.4	86.2	25.3	59.5	17.4	6.1	80.9	23.7	57.8	16.9	6.9	79.0	23.2	57.2	16.8	7.2	75.3	22.1	56.0	16.4	7.7
	4000	62	83.3	24.4	83.3	24.4	5.2	78.6	23.0	78.6	23.0	6.0	73.7	21.6	73.7	21.6	6.8	71.9	21.1	71.9	21.1	7.0	68.4	20.0	68.4	20.0	7.6
	1888	66.2	85.9	25.2	85.9	25.2	5.3	81.2	23.8	81.2	23.8	6.0	76.5	22.4	76.5	22.4	6.8	74.7	21.9	74.7	21.9	7.1	71.2	20.9	71.2	20.9	7.6
	0.13	72	94.1	27.6	73.7	21.6	5.5	88.9	26.1	72.1	21.1	6.2	83.8	24.6	70.5	20.7	7.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
51090G1	2500	62	79.5	23.3	79.5	23.3	5.5	75.2	22.0	75.2	22.0	6.3	70.5	20.7	70.5	20.7	7.3	68.7	20.1	68.7	20.1	7.6	68.1	20.0	68.1	20.0	8.2
	1180	66.2	85.9	25.2	74.9	22.0	5.7	81.0	23.7	73.0	21.4	6.5	75.8	22.2	71.1	20.8	7.4	74.0	21.7	70.4	20.6	7.7	70.3	20.6	69.0	20.2	8.2
	0.09	72	95.7	28.1	59.8	17.5	6.0	90.4	26.5	57.9	17.0	6.7	84.9	24.9	56.1	16.4	7.4	82.6	24.2	55.3	16.2	7.7	78.3	22.9	53.9	15.8	8.2
	3200	62	82.8	24.3	82.8	24.3	5.6	81.3	23.8	81.3	23.8	6.5	76.1	22.3	76.1	22.3	7.4	74.2	21.7	74.2	21.7	7.7	70.3	20.6	70.3	20.6	8.2
	1510	66.2	88.9	26.1	86.4	25.3	5.8	83.7	24.5	83.7	24.5	6.6	78.5	23.0	78.5	23.0	7.4	76.5	22.4	76.5	22.4	7.7	72.8	21.3	72.8	21.3	8.2
	0.11	72	98.8	28.9	67.5	19.8	6.1	92.6	27.1	65.5	19.2	6.8	86.6	25.4	63.6	18.6	7.4	84.5	24.8	62.9	18.4	7.6	80.2	23.5	61.6	18.0	8.1
	4000	62	88.7	26.0	88.7	26.0	5.8	83.4	24.5	83.4	24.5	6.6	78.0	22.9	78.0	22.9	7.4	76.0	22.3	76.0	22.3	7.7	72.0	21.1	72.0	21.1	8.2
	1888	66.2	91.3	26.8	91.3	26.8	5.8	86.0	25.2	86.0	25.2	6.6	80.7	23.6	80.7	23.6	7.4	78.7	23.1	78.7	23.1	7.7	74.8	21.9	74.8	21.9	8.2
	0.13	72	100.3	29.4	75.7	22.2	6.1	94.3	27.6	73.8	21.6	6.8	88.4	25.9	72.0	21.1	7.4	86.3	25.3	71.3	20.9	7.6	0.0	0.0	0.0	0.0	0.0
51100G1	2500	62	87.7	25.7	87.7	25.7	6.5	82.8	24.3	82.8	24.3	7.4	77.7	22.8	77.7	22.8	8.3	75.9	22.2	75.9	22.2	8.7	72.3	21.2	72.3	21.2	9.3
	1180	66.2	95.9	28.1	78.9	23.1	6.6	89.9	26.4	76.5	22.4	7.5	84.1	24.7	74.2	21.8	8.5	82.1	24.1	73.4	21.5	8.8	78.1	22.9	71.9	21.1	9.4
	0.09	72	105.5	30.9	63.2	18.5	6.8	99.9	29.3	61.2	17.9	7.8	94.3	27.6	59.3	17.4	8.8	92.2	27.0	58.6	17.2	9.1	88.1	25.8	57.2	16.8	9.7
	3500	62	92.7	27.2	92.7	27.2	6.6	87.5	25.6	87.5	25.6	7.5	85.5	25.1	85.5	25.1	8.5	83.5	24.5	83.5	24.5	8.8	79.4	23.3	79.4	23.3	9.5
	1652	66.2	99.8	29.2	94.8	27.8	6.7	94.0	27.6	92.7	27.2	7.6	88.2	25.8	88.2	25.8	8.6	86.0	25.2	86.0	25.2	8.9	82.0	24.0	82.0	24.0	9.5
	0.11	72	111.0	32.5	74.4	21.8	6.9	104.6	30.7	72.3	21.2	7.9	98.0	28.7	70.2	20.6	8.9	95.6	28.0	69.4	20.3	9.2	90.9	26.6	67.9	19.9	9.8
	4000	62	94.5	27.7	94.5	27.7	6.6	92.8	27.2	92.8	27.2	7.6	86.9	25.5	86.9	25.5	8.5	84.8	24.8	84.8	24.8	8.9	80.6	23.6	80.6	23.6	9.5
	1888	66.2	101.4	29.7	101.4	29.7	6.7	95.5	28.0	95.5	28.0	7.7	89.6	26.3	89.6	26.3	8.6	87.5	25.6	87.5	25.6	9.0	83.4	24.4	83.4	24.4	9.6
	0.13	72	112.4	32.9	79.5	23.3	6.9	105.6	30.9	77.3	22.7	7.9	99.1	29.0	75.3	22.1	8.9	96.7	28.3	74.5	21.8	9.3	0.0	0.0	0.0	0.0	0.0
51120G1	3000	62	104.3	30.6	104.3	30.6	7.4	98.3	28.8	98.3	28.8	8.5	92.1	27.0	92.1	27.0	9.7	89.8	26.3	89.8	26.3	10.1	85.2	25.0	85.2	25.0	10.9
	1416	66.2	114.1	33.5	94.3	27.6	7.5	106.8	31.3	91.4	26.8	8.6	99.6	29.2	88.6	26.0	9.8	97.1	28.5	87.6	25.7	10.2	92.2	27.0	85.7	25.1	11.0
	0.09	72	125.9	36.9	75.6	22.1	7.8	119.0	34.9	73.1	21.4	8.9	111.8	32.8	70.7	20.7	10.0	109.3	32.0	69.8	20.5	10.4	104.4	30.6	68.1	20.0	11.1
	4100	62	110.0	32.2	110.0	32.2	7.4	103.6	30.4	103.6	30.4	8.6	101.0	29.6	101.0	29.6	9.8	98.4	28.9	98.4	28.9	10.3	93.4	27.4	93.4	27.4	11.0
	1935	66.2	118.6	34.7	111.9	32.8	7.6	111.5	32.7	109.3	32.0	8.7	104.1	30.5	104.1	30.5	9.9	101.5	29.8	101.5	29.8	10.3	96.5	28.3	96.5	28.3	11.1
	0.11	72	132.2	38.7	88.0	25.8	8.0	124.3	36.4	85.4	25.0	9.1	115.9	34.0	82.7	24.2	10.1	112.9	33.1	81.7	24.0	10.4	107.5	31.5	80.0	23.4	11.2
	4800	62	112.5	33.0	112.5	33.0	7.5	110.3	32.3	110.3	32.3	8.7	103.0	30.2	103.0	30.2	9.9	100.3	29.4	100.3	29.4	10.3	95.1	27.9	95.1	27.9	11.0
	2265	66.2	120.9	35.4	120.9	35.4	7.7	113.6	33.3	113.6	33.3	8.8	106.2	31.1	106.2	31.1	9.9	103.6	30.4	103.6	30.4	10.3	98.6	28.9	98.6	28.9	11.1
	0.13	72	134.2	39.3	95.2	27.9	8.1	125.7	36.8	92.5	27.1	9.1	117.4	34.4	89.9	26.3	10.1	114.5	33.6	89.0	26.1	10.5	109.2	32.0	87.3	25.6	11.2
52130G1	3700	62	116.0	34.0	116.0	34.0	8.1	109.7	32.1	109.7	32.1	9.3	102.7	30.1	102.7	30.1	10.5	104.5	30.6	104.5	30.6	11.0	99.0	29.0	99.0	29.0	11.9
	1746	66.2	125.4	36.8	110.3	32.3	8.2	118.2	34.6	107.5	31.5	9.4	110.6	32.4	104.6	30.7	10.6	107.7	31.6	103.6	30.4	11.1	102.2	29.9	101.5	29.7	12.1
	0.09	72	139.5	40.9	87.8	25.7	8.3	131.6	38.6	85.0	24.9	9.6	122.6	35.9	82.0	24.0	11.1	119.2	34.9	80.9	23.7	11.7	112.6	33.0	78.8	23.1	12.8
	4500	62	119.9	35.1	119.9	35.1	8.2	117.8	34.5	117.8	34.5	9.4	110.2	32.3	110.2	32.3	10.6	107.3	31.5	107.3	31.5	11.1	101.6	29.8	101.6	29.8	12.0
	2124	66.2	128.8	37.8	123.5	36.2	8.3	121.3	35.6	120.7	35.4	9.4	113.6	33.3	113.6	33.3	10.7	110.7	32.4	110.7	32.4	11.2	105.0	30.8	105.0	30.8	12.2
	0.1	72	142.8	41.8	96.6	28.3	8.3	133.6	39.2	93.6	27.4	9.6	124.5	36.5	90.7	26.6	11.2	121.1	35.5	89.6	26.3	11.8	114.6	33.6	87.5	25.7	13.0
	5900	62	129.4	37.9	129.4	37.9	8.3	121.6	35.6	121.6	35.6	9.4	113.5	33.3	113.5	33.3	10.7	110.5	32.4	110.5	32.4	11.2	104.5	30.6	104.5	30.6	12.2
	2784	66.2	133.1	39.0	133.1	39.0	8.3	125.4	36.8	125.4	36.8	9.5	117.3	34.4	117.3	34.4	10.8	114.4	33.5	114.4	33.5	11.4	108.4	31.8	108.4	31.8	12.4
	0.12	72	145.5	42.6	111.0	32.5	8.3	136.4	40.0	108.2	31.7	9.7	127.3	37.3	105.4	30.9	11.4	124.0	36.3	104.3	30.6	12.1	0.0	0.0	0.0	0.0	0.0

Table 5

See Notes on page 12

GROSS CAPACITY RATINGS

Model APMR	AFR cfm l/s	EWB	Condenser Entering Air Temperature																								
			95°F (35°C)					105°F (40.6°C)					114.8°F (46°C)					118.4°F (48°C)					125.6°F (52°C)				
			Total Capacity		Sensible Capacity		PI	Total Capacity		Sensible Capacity		PI	Total Capacity		Sensible Capacity		PI	Total Capacity		Sensible Capacity		PI	Total Capacity		Sensible Capacity		PI
	(BPF)	°F	MBh	kW	MBh	kW	kW	MBh	kW	MBh	kW	kW	MBh	kW	MBh	kW	kW	MBh	kW	MBh	kW	kW	MBh	kW	MBh	kW	kW
	3700	62	128.7	37.7	128.7	37.7	9.4	121.7	35.7	121.7	35.7	10.6	114.4	33.5	114.4	33.5	12.0	111.6	32.7	111.6	32.7	12.6	106.2	31.1	106.2	31.1	13.6
	1746	66.2	141.0	41.3	116.5	34.1	9.5	132.4	38.8	113.1	33.1	10.8	123.8	36.3	109.7	32.2	12.2	120.7	35.4	108.5	31.8	12.7	114.6	33.6	106.2	31.1	13.7
	0.09	72	156.1	45.7	93.5	27.4	9.8	147.6	43.3	90.6	26.5	11.1	138.7	40.7	87.5	25.6	12.5	135.4	39.7	86.3	25.3	13.0	128.6	37.7	84.0	24.6	13.9
	5000	62	135.6	39.7	135.6	39.7	9.5	128.3	37.6	128.3	37.6	10.7	125.3	36.7	125.3	36.7	12.2	122.2	35.8	122.2	35.8	12.7	115.8	33.9	115.8	33.9	13.7
52150G1	2360	66.2	146.4	42.9	137.5	40.3	9.6	138.1	40.5	134.3	39.4	10.9	129.2	37.9	129.2	37.9	12.3	125.9	36.9	125.9	36.9	12.8	119.5	35.0	119.5	35.0	13.8
	0.11	72	164.0	48.1	108.4	31.8	9.9	154.3	45.2	105.2	30.8	11.2	143.4	42.0	101.7	29.8	12.5	139.4	40.9	100.4	29.4	13.0	131.7	38.6	97.9	28.7	13.9
	5900	62	139.0	40.7	139.0	40.7	9.5	136.8	40.1	136.8	40.1	10.9	127.9	37.5	127.9	37.5	12.3	124.6	36.5	124.6	36.5	12.8	118.0	34.6	118.0	34.6	13.7
	2784	66.2	149.6	43.9	149.6	43.9	9.7	140.9	41.3	140.9	41.3	11.0	131.9	38.7	131.9	38.7	12.4	128.6	37.7	128.6	37.7	12.9	122.0	35.8	122.0	35.8	13.8
	0.12	72	166.9	48.9	117.8	34.5	10.0	156.0	45.7	114.3	33.5	11.2	145.2	42.6	110.9	32.5	12.6	141.3	41.4	109.7	32.2	13.1	133.7	39.2	107.3	31.5	13.9
	4300	62	144.2	42.3	144.2	42.3	10.0	136.7	40.1	136.7	40.1	11.5	129.0	37.8	129.0	37.8	13.1	126.2	37.0	126.2	37.0	13.7	120.2	35.2	120.2	35.2	14.8
	2029	66.2	157.1	46.1	132.7	38.9	10.2	148.3	43.5	129.2	37.9	11.7	139.5	40.9	125.8	36.9	13.3	136.3	40.0	124.6	36.5	13.9	129.9	38.1	122.2	35.8	15.0
	0.09	72	174.8	51.2	106.4	31.2	10.5	166.1	48.7	103.4	30.3	12.0	156.9	46.0	100.2	29.4	13.6	153.5	45.0	99.1	29.0	14.2	146.4	42.9	96.7	28.3	15.2
	5800	62	151.9	44.5	151.9	44.5	10.2	143.8	42.2	143.8	42.2	11.6	141.2	41.4	141.2	41.4	13.3	137.9	40.4	137.9	40.4	13.9	131.2	38.4	131.2	38.4	15.0
52170G1	2737	66.2	163.7	48.0	157.2	46.1	10.3	154.8	45.4	153.8	45.1	11.8	145.6	42.7	145.6	42.7	13.4	142.3	41.7	142.3	41.7	14.0	135.7	39.8	135.7	39.8	15.1
	0.11	72	183.0	53.7	123.4	36.2	10.7	172.4	50.5	120.0	35.2	12.1	161.7	47.4	116.5	34.1	13.7	157.9	46.3	115.3	33.8	14.2	150.5	44.1	112.9	33.1	15.3
	7000	62	162.6	47.7	162.6	47.7	10.3	153.7	45.1	153.7	45.1	11.7	144.4	42.3	144.4	42.3	13.4	140.9	41.3	140.9	41.3	13.9	134.0	39.3	134.0	39.3	15.0
	3304	66.2	167.5	49.1	167.5	49.1	10.4	158.5	46.4	158.5	46.4	11.8	149.2	43.7	149.2	43.7	13.4	145.8	42.7	145.8	42.7	14.0	139.0	40.7	139.0	40.7	15.1
	0.13	72	185.5	54.4	135.6	39.7	10.8	174.9	51.3	132.2	38.8	12.2	164.5	48.2	129.0	37.8	13.7	160.7	47.1	127.8	37.5	14.3	153.4	45.0	125.5	36.8	15.3
	4300	62	153.5	45.0	153.5	45.0	10.8	145.1	42.5	145.1	42.5	12.4	136.2	39.9	136.2	39.9	14.4	132.9	39.0	132.9	39.0	15.1	126.4	37.1	126.4	37.1	16.4
	2029	66.2	168.3	49.3	137.2	40.2	11.2	157.9	46.3	133.0	39.0	12.8	147.5	43.2	128.9	37.8	14.6	143.7	42.1	127.4	37.4	15.2	136.6	40.0	124.7	36.5	16.4
	0.09	72	185.0	54.2	110.0	32.2	11.6	175.2	51.3	106.5	31.2	13.2	165.1	48.4	103.0	30.2	14.7	161.3	47.3	101.7	29.8	15.3	153.9	45.1	99.2	29.1	16.3
	6200	62	163.1	47.8	163.1	47.8	11.0	154.1	45.2	154.1	45.2	12.7	150.6	44.1	150.6	44.1	14.6	146.8	43.0	146.8	43.0	15.2	139.3	40.8	139.3	40.8	16.4
52180G1	2926	66.2	175.7	51.5	167.4	49.1	11.4	165.6	48.5	163.6	48.0	13.0	155.2	45.5	155.2	45.5	14.7	151.3	44.4	151.3	44.4	15.3	143.9	42.2	143.9	42.2	16.4
	0.12	72	195.9	57.4	131.4	38.5	12.0	184.5	54.1	127.7	37.4	13.4	172.3	50.5	123.8	36.3	14.7	167.9	49.2	122.4	35.9	15.2	159.3	46.7	119.6	35.1	16.2
	7000	62	165.9	48.6	165.9	48.6	11.1	163.1	47.8	163.1	47.8	12.9	152.8	44.8	152.8	44.8	14.6	148.9	43.6	148.9	43.6	15.3	141.2	41.4	141.2	41.4	16.4
	3304	66.2	178.3	52.3	178.3	52.3	11.4	168.0	49.2	168.0	49.2	13.0	157.5	46.2	157.5	46.2	14.7	153.6	45.0	153.6	45.0	15.3	146.1	42.8	146.1	42.8	16.3
	0.13	72	198.4	58.1	139.7	40.9	12.1	185.9	54.5	135.7	39.8	13.5	173.9	51.0	131.9	38.7	14.7	169.6	49.7	130.6	38.3	15.2	161.2	47.2	127.9	37.5	16.1
	4300	62	172.1	50.4	163.5	47.9	12.3	162.6	47.7	159.2	46.7	14.0	152.6	44.7	152.6	44.7	16.0	149.0	43.7	149.0	43.7	16.7	141.8	41.5	141.8	41.5	18.0
	2029	66.2	189.1	55.4	145.8	42.7	12.6	179.9	52.7	142.0	41.6	14.3	167.9	49.2	137.1	40.2	16.2	163.3	47.9	135.2	39.6	16.9	154.8	45.4	131.8	38.6	18.2
	0.09	72	206.5	60.5	117.7	34.5	12.8	196.2	57.5	114.0	33.4	14.6	185.3	54.3	110.1	32.3	16.5	181.4	53.2	108.7	31.9	17.3	173.6	50.9	106.0	31.1	18.6
	6500	62	183.8	53.9	183.8	53.9	12.5	174.2	51.1	174.2	51.1	14.2	163.8	48.0	163.8	48.0	16.1	160.0	46.9	160.0	46.9	16.8	152.1	44.6	152.1	44.6	18.2
52210G1	3068	66.2	199.6	58.5	180.7	53.0	12.7	188.3	55.2	176.4	51.7	14.4	176.7	51.8	172.1	50.4	16.4	172.5	50.6	170.5	50.0	17.1	164.2	48.1	164.2	48.1	18.4
	0.12	72	221.7	65.0	142.7	41.8	13.0	210.2	61.6	138.9	40.7	14.8	198.4	58.1	135.0	39.6	16.9	194.1	56.9	133.6	39.2	17.6	184.3	54.0	130.5	38.2	19.0
	7000	62	185.9	54.5	185.9	54.5	12.5	176.1	51.6	176.1	51.6	14.3	165.5	48.5	165.5	48.5	16.2	161.5	47.3	161.5	47.3	16.9	160.5	47.1	160.5	47.1	18.3
	3304	66.2	201.3	59.0	188.3	55.2	12.7	190.0	55.7	184.0	53.9	14.5	178.4	52.3	178.4	52.3	16.4	174.1	51.0	174.1	51.0	17.1	165.7	48.6	165.7	48.6	18.4
	0.13	72	224.1	65.7	148.1	43.4	13.0	212.2	62.2	144.2	42.3	14.9	200.0	58.6	140.2	41.1	16.9	195.1	57.2	138.6	40.6	17.6	185.3	54.3	135.5	39.7	19.0
	6000	62	209.1	61.3	209.1	61.3	14.7	197.1	57.8	197.1	57.8	16.9	184.6	54.1	184.6	54.1	19.4	180.0	52.8	180.0	52.8	20.2	170.8	50.1	170.8	50.1	21.9
	2832	66.2	228.7	67.0	189.0	55.4	15.0	214.2	62.8	183.1	53.7	17.2	199.7	58.5	177.5	52.0	19.6	194.6	57.1	175.5	51.4	20.4	184.9	54.2	171.8	50.4	22.0
	0.09	72	252.5	74.0	151.5	44.4	15.6	238.5	69.9	146.6	43.0	17.8	224.3	65.7	141.6	41.5	20.0	219.1	64.2	139.9	41.0	20.8	209.3	61.3	136.6	40.0	22.2
	7000	62	214.8	63.0	214.8	63.0	14.8	202.5	59.4	202.5	59.4	17.0	189.5	55.5	189.5	55.5	19.4	184.8	54.2	184.8	54.2	20.3	183.2	53.7	183.2	53.7	22.0
52240G1	3304	66.2	232.8	68.2	205.1	60.1	15.1	218.7	64.1	199.6	58.5	17.3	204.4	59.9	194.3	56.9	19.7	199.2	58.4	192.3	56.4	20.5	189.2	55.5	188.5	55.3	22.0
	0.1	72	259.1	75.9	163.1	47.8	15.8	244.5	71.7	158.1	46.3	18.0	229.5	67.3	153.1	44.9	20.1	223.4	65.5	151.1	44.3	20.8	212.2	62.2	147.4	43.2	22.2
	9700	62	226.0	66.2	226.0	66.2	14.9	221.6	64.9	221.6	64.9	17.4	206.7	60.6	206.7	60.6	19.7	201.3	59.0	201.3	59.0	20.5	190.9	56.0	190.9	56.0	22.1
	4578	66.2	242.7	71.1	242.7	71.1	15.3	228.2	66.9	228.2	66.9	17.5	213.3	62.5	213.3	62.5	19.8	208.0	61.0	208.0	61.0	20.6	197.9	58.0	197.9	58.0	22.1
	0.13	72	269.0	78.9	191.8	56.2	16.1	252.0	73.9	186.3	54.6	18.2	235.6	69.0	181.2	53.1	20.2	229.8	67.4	179.4	52.6	20.9	219.2	64.2	176.0	51.6	22.3
	6000	62	230.7	67.6	223.8	65.6	16.2	217.0	63.6	217.0	63.6	18.6	202.8	59.4	202.8	59.4	21.4	197.5	57.9	197.5	57.9	22.4	187.1	54.8	187.1	54.8	24.4
	2832	66.2	254.6	74.6	199.6	58.5	16.6	238.9	70.0	193.1	56.6	19.1	221.3	64.9	186.0	54.5	21.8	215.0	63.0	183.5	53.8	22.8	203.0	59.5	178.8	52.4	24.6
	0.09	72	277.5	81.3	160.4	47.0	16.9	262.0	76.8	154.8	45.4	19.5	245.9	72.1	149.2	43.7	22.3	240.1	70.4	147.1	43.1	23.4	228.4	67.0	143.1	41.9	25.3
	8000	62	242.0	70.9	242.0	70.9	16.4	228.0	66.8	228.0	66.8	18.9	213.2	62.5	213.2	62.5	21.6	207.7	60.9	207.7	60.9	22.6	196.5	57.6	196.5	57.6	24.5
52270G1	3776	66.2	263.2	77.1	231.1	67.7	16.7	246.6	72.3	224.8	65.9	19.2	229.9	67.4	218.5	64.1	21.9	223.8	65.6	216.2	63.4	23.0	211.8	62.1	211.7	62.0	24.8
	0.11	72	291.6	85.5	183.4	53.8	17.1	274.9	80.6	177.8	52.1	19.7	257.6	75.5	172.0	50.4	22.6	251.2	73.6	169.9	49.8	23.7	237.0	69.5	165.3	48.5	25.5
	9700	62	249.4	73.1	249.4	73.1	16.5	234.9	68.9	234.9	68.9	19.0	219.3	64.3	219.3	64.3	21.7	222.5	65.2	222.5	65.2	22.9	210.3	61.7	210.3	61.7	24.8
	4578	66.2	269.1	78.9	257.3	75.4	16.8	252.7	74.1	251.2	73.6	19.3	235.6	69.1	235.6	69.1	22.1	229.3	67.2	229.3	67.2	23.1	217.2	63.7	217.2	63.7	25.0
	0.13	72	299.5	87.8	201.6	59.1	17.2	281.9	82.6	195.9	57.4	19.8	261.9	76.7	189.5	55.5	22.7	254.6	74.6	187.2	54.9	23.8	240.8	70.6	182.8	53.6	25.7
	6000	62	249.4	73.1	232.3	68.1	18.5	233.7	68.5	225.1	66.0	21.2	217.7	63.8	217.7	63.8	24.0	211.9	62.1	211.9	62.1	25.0	200.6	58.8	200.6	58.8	26.9
	2832	66.2	272.3	79.8	206.9	60.7	19.0	257.4	75.5	200.7	58.8	21.7	239.9	70.3	193.5	56.7	24.4	232.7	68.2	190.6	55.9	25.4	219.0	64.2	185.1	54.2	27.2
	0.09	72	297.3	87.1	167.7	49.2	19.5	280.8	82.3	161.6	47.4	22.1	263.2	77.2	155.3	45.5	24.8	256.8	75.3	153.0	44.8	25.8	244.2	71.6	148.6	43.5	27.6
	9000	62	265.2	77.7	265.2	77.7	18.9	249.5	73.1	249.5	73.1	21.5	233.1	68.3	233.1	68.3	24.3	227.0	66.5	227.0	66.5	25.3	214.8	63.0	214.8	63.0	27.1
52300G1	4248	66.2	289.1	84.7	255.1	74.8	19.4	270.2	79.2	248.0	72.7	21.9	251.4	73.7	240.9	70.6	24.6	244.7	71.7	238.4	69.9	25.6	231.4	67.8	231.4	67.8	27.4
	0.12	72	319.7	93.7	202.0	59.2	19.7	300.8	88.2	195.7	57.3	22.4	280.9	82.3	189.1	55.4	25.2	273.5	80.2	186.7	54.7	26.1	258.2	75.7	181.7	53.3	27.8
	9700	62	268.2	78.6	268.2	78.6	19.0	252.3	74.0	252.3	74.0	21.6	235.7	69.1	235.7	69.1	24.3	229.3	67.2	229.3	67.2	25.3	226.5	66.4	226.5	66.4	27.3
	4578	66.2	291.2	85.4	265.7	77.9	19.4	272.6	79.9	258.6	75.8	22.0	253.9	74.4	251.6	73.7	24.7	246.9	72.4	246.9	72.4	25.6	233.6	68.5	233.6	68.5	27.4
	0.13	72	323.3	94.8	209.5	61.4	19.7	303.9	89.1	203.1	59.5	22.4	283.5	83.1	196.4	57.6	25.2	275.4	80.7	193.8	56.8	26.2	259.5	76.1	188.7	55.3	27.8

Table 6

See Notes on page 12

GROSS CAPACITY RATINGS

Model APMR	AFR cfm l/s (BPF)	EWB °F	Condenser Entering Air Temperature																								
			95°F (35°C)					105°F (40.6°C)					114.8°F (46°C)					118.4°F (48°C)					125.6°F (52°C)				
			Total Capacity		Sensible Capacity		PI	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	MBh	kW	MBh	kW	kW
52340G1	7200	62	292.0	85.6	275.4	80.7	22.8	274.8	80.5	267.6	78.4	25.7	257.7	75.5	257.7	75.5	28.8	251.5	73.7	251.5	73.7	29.8	239.5	70.2	239.5	70.2	31.9
	3398	66.2	319.4	93.6	245.3	71.9	23.5	302.9	88.8	238.4	69.9	26.5	282.8	82.9	230.2	67.5	29.4	275.2	80.7	227.1	66.6	30.4	260.8	76.4	221.3	64.9	32.4
	0.09	72	348.0	102.0	198.0	58.0	24.1	329.5	96.6	191.2	56.0	27.0	310.5	91.0	184.4	54.1	30.0	303.6	89.0	182.0	53.3	31.0	0.0	0.0	0.0	0.0	0.0
	10000	62	307.1	90.0	307.1	90.0	23.2	289.9	85.0	289.9	85.0	26.1	272.4	79.8	272.4	79.8	29.1	266.0	78.0	266.0	78.0	30.2	253.2	74.2	253.2	74.2	32.2
	4719	66.2	334.4	98.0	290.2	85.1	23.8	313.8	92.0	282.3	82.7	26.7	293.7	86.1	274.7	80.5	29.6	286.5	84.0	272.0	79.7	30.7	272.6	79.9	266.8	78.2	32.7
	0.11	72	368.4	108.0	230.0	67.4	24.4	348.0	102.0	223.1	65.4	27.4	327.0	95.8	216.1	63.3	30.3	319.2	93.6	213.5	62.6	31.4	0.0	0.0	0.0	0.0	0.0
	11600	62	314.0	92.0	314.0	92.0	23.4	296.5	86.9	296.5	86.9	26.3	278.6	81.6	278.6	81.6	29.3	271.7	79.6	271.7	79.6	30.3	269.5	79.0	269.5	79.0	32.6
	5475	66.2	339.4	99.5	314.4	92.2	23.9	319.2	93.6	306.8	89.9	26.8	299.2	87.7	299.2	87.7	29.8	291.9	85.5	291.9	85.5	30.8	277.5	81.3	277.5	81.3	32.8
	0.12	72	376.3	110.3	247.1	72.4	24.5	354.8	104.0	240.1	70.4	27.5	332.3	97.4	232.8	68.2	30.4	323.4	94.8	230.0	67.4	31.4	0.0	0.0	0.0	0.0	0.0
52380G1	8400	62	334.2	98.0	318.4	93.3	26.0	315.3	92.4	309.9	90.8	29.4	296.5	86.9	296.5	86.9	33.0	289.6	84.9	289.6	84.9	34.4	276.1	80.9	276.1	80.9	36.8
	3964	66.2	366.6	107.4	283.6	83.1	26.7	348.3	102.1	276.0	80.9	30.2	324.7	95.2	266.4	78.1	33.7	316.3	92.7	263.0	77.1	34.9	300.3	88.0	256.6	75.2	37.3
	0.09	72	399.3	117.0	228.5	67.0	27.4	378.7	111.0	221.0	64.8	30.8	357.7	104.9	213.6	62.6	34.4	349.9	102.6	210.8	61.8	35.6	334.5	98.0	205.4	60.2	37.9
	10800	62	347.6	101.9	347.6	101.9	26.3	328.7	96.4	328.7	96.4	29.7	309.5	90.7	309.5	90.7	33.3	302.4	88.6	302.4	88.6	34.6	288.5	84.6	288.5	84.6	37.0
	5097	66.2	379.6	111.3	322.3	94.5	27.0	356.7	104.5	313.4	91.8	30.4	334.4	98.0	304.8	89.3	33.9	326.4	95.7	301.8	88.5	35.1	311.0	91.2	296.0	86.8	37.5
	0.11	72	417.4	122.3	256.3	75.1	27.7	395.3	115.9	248.7	72.9	31.2	372.6	109.2	241.0	70.6	34.7	364.1	106.7	238.2	69.8	35.9	347.2	101.8	232.6	68.2	38.1
	13600	62	360.1	105.5	360.1	105.5	26.6	340.6	99.8	340.6	99.8	30.0	320.3	93.9	320.3	93.9	33.6	313.0	91.7	313.0	91.7	34.8	310.8	91.1	310.8	91.1	37.5
	6418	66.2	388.6	113.9	365.0	107.0	27.2	366.5	107.4	356.7	104.5	30.6	344.3	100.9	344.3	100.9	34.1	336.1	98.5	336.1	98.5	35.3	320.1	93.8	320.1	93.8	37.6
52420G1	0.13	72	431.8	126.6	286.6	84.0	28.0	407.9	119.5	278.8	81.7	31.4	382.1	112.0	270.4	79.3	34.9	372.0	109.0	267.2	78.3	36.1	352.7	103.4	261.0	76.5	38.3
	3964	66.2	397.6	116.5	296.9	87.0	29.2	379.0	111.1	288.8	84.7	33.1	359.3	105.3	280.6	82.2	37.3	352.0	103.2	277.5	81.3	38.8	334.6	98.1	270.4	79.2	41.6
	0.09	72	434.2	127.3	241.6	70.8	29.9	413.7	121.2	233.9	68.5	33.8	392.2	115.0	225.9	66.2	38.0	384.1	112.6	223.0	65.3	39.4	368.0	107.9	217.2	63.7	42.2
	11800	62	385.8	113.1	385.8	113.1	29.0	365.4	107.1	365.4	107.1	32.8	344.5	101.0	344.5	101.0	37.0	336.8	98.7	336.8	98.7	38.6	321.6	94.3	321.6	94.3	41.4
	5569	66.2	425.1	124.6	354.1	103.8	29.7	399.4	117.0	344.0	100.8	33.5	374.3	109.7	334.3	98.0	37.6	365.3	107.1	330.9	97.0	39.1	348.1	102.0	324.4	95.1	41.8
	0.11	72	463.4	135.8	281.1	82.4	30.5	440.1	129.0	273.1	80.0	34.4	416.2	122.0	264.9	77.6	38.5	407.3	119.4	262.0	76.8	39.9	389.4	114.1	255.9	75.0	42.6
	13600	62	394.0	115.5	394.0	115.5	29.1	373.3	109.4	373.3	109.4	33.0	352.1	103.2	352.1	103.2	37.2	344.3	100.9	344.3	100.9	38.7	328.9	96.4	328.9	96.4	41.6
	6418	66.2	429.8	126.0	380.5	111.5	29.8	404.9	118.7	371.1	108.8	33.6	380.5	111.5	362.0	106.1	37.7	371.8	109.0	358.7	105.1	39.2	354.6	103.9	352.3	103.2	41.9
	0.13	72	473.7	138.8	300.5	88.1	30.7	449.5	131.7	292.4	85.7	34.6	424.6	124.5	284.2	83.3	38.7	415.2	121.7	281.2	82.4	40.1	396.4	116.2	275.1	80.6	42.7
52500G1	10400	62	418.2	122.6	396.1	116.1	32.4	395.0	115.8	385.7	113.0	36.8	371.9	109.0	371.9	109.0	41.8	363.4	106.5	363.4	106.5	43.5	346.8	101.6	346.8	101.6	46.8
	4908	66.2	458.8	134.5	353.2	103.5	33.3	436.5	127.9	343.9	100.8	37.8	408.5	119.7	332.4	97.4	42.5	397.9	116.6	328.1	96.2	44.2	377.7	110.7	320.0	93.8	47.3
	0.09	72	500.9	146.8	285.3	83.6	34.3	475.6	139.4	276.0	80.9	38.8	449.1	131.6	266.6	78.1	43.4	439.4	128.8	263.1	77.1	45.0	420.4	123.2	256.5	75.2	48.0
	13500	62	435.6	127.7	435.6	127.7	32.8	412.6	120.9	412.6	120.9	37.3	388.9	114.0	388.9	114.0	42.1	380.2	111.4	380.2	111.4	43.8	363.0	106.4	363.0	106.4	47.0
	6371	66.2	477.4	139.9	403.7	118.3	33.7	448.9	131.6	392.6	115.1	38.1	420.7	123.3	381.8	111.9	42.8	410.6	120.3	378.0	110.8	44.4	391.3	114.7	370.7	108.7	47.5
	0.11	72	525.2	153.9	321.4	94.2	34.9	497.5	145.8	311.8	91.4	39.3	469.0	137.5	302.2	88.6	43.9	458.5	134.4	298.6	87.5	45.5	437.9	128.3	291.8	85.5	48.3
	16800	62	450.7	132.1	450.7	132.1	33.1	427.0	125.1	427.0	125.1	37.6	402.4	117.9	402.4	117.9	42.4	392.9	115.1	392.9	115.1	44.1	390.5	114.4	390.5	114.4	47.4
	7929	66.2	488.1	143.0	453.9	133.0	34.0	460.4	134.9	443.5	130.0	38.4	432.6	126.8	432.6	126.8	43.1	422.3	123.8	422.3	123.8	44.7	402.3	117.9	402.3	117.9	47.6
	0.13	72	542.7	159.1	357.1	104.6	35.3	512.9	150.3	347.4	101.8	39.7	481.9	141.2	337.3	98.9	44.3	469.4	137.6	333.3	97.7	45.8	445.6	130.6	325.6	95.4	48.5
52550G1	10400	62	461.8	135.3	416.3	122.0	34.2	435.6	127.7	404.1	118.4	38.7	409.3	119.9	392.1	114.9	44.3	399.7	117.1	387.8	113.6	46.4	381.0	111.7	379.4	111.2	50.3
	4908	66.2	498.3	146.0	370.0	108.4	34.8	475.9	139.5	360.4	105.6	39.6	451.5	132.3	350.1	102.6	45.1	442.1	129.6	346.2	101.5	47.1	421.4	123.5	337.7	99.0	50.8
	0.09	72	546.2	160.1	302.3	88.6	35.8	521.3	152.8	293.0	85.9	40.6	493.7	144.7	282.6	82.8	45.9	482.9	141.5	278.7	81.7	47.9	461.7	135.3	271.1	79.4	51.5
	15800	62	489.2	143.4	489.2	143.4	34.7	464.5	136.1	464.5	136.1	39.3	438.5	128.5	438.5	128.5	44.8	428.7	125.6	428.7	125.6	46.8	409.2	119.9	409.2	119.9	50.7
	7452	66.2	540.3	158.3	460.1	134.8	35.7	508.8	149.1	447.8	131.2	40.3	476.3	139.6	435.4	127.6	45.6	464.5	136.1	431.1	126.4	47.5	441.9	129.5	422.6	123.9	51.1
	0.12	72	593.1	173.8	365.2	107.0	36.9	563.2	165.1	354.9	104.0	41.6	531.0	155.6	344.1	100.8	46.8	519.0	152.1	340.1	99.7	48.6	495.1	145.1	332.3	97.4	52.1
	16800	62	493.8	144.7	493.8	144.7	34.8	469.0	137.4	469.0	137.4	39.4	442.7	129.7	442.7	129.7	44.9	432.8	126.8	432.8	126.8	46.9	413.0	121.0	413.0	121.0	50.7
	7929	66.2	543.0	159.1	474.7	139.1	35.8	511.8	150.0	462.9	135.7	40.4	479.7	140.6	450.8	132.1	45.6	468.0	137.1	446.4	130.8	47.6	445.4	130.5	437.9	128.3	51.2
	0.13	72	598.8	175.5	375.8	110.1	37.0	568.4	166.6	365.6	107.2	41.7	535.6	157.0	354.7	104.0	46.9	523.1	153.3	350.7	102.8	48.7	499.2	146.3	342.9	100.5	52.2

Table 7

Notes:

1. See Page 2 for legend.
2. Ratings are based on 84.2°F (29°C) DB evaporator air entering temperature.
3. Direct interpolation is permissible. Do not extrapolate.
4. SKM Computer Selection Software are available for quick and accurate selections.
5. Capacity is gross capacity which does not include the effect of evaporator fan motor heat.

* Power input (PI) mentioned in this page is for compressor only and should not be used for cable or fuse selection. MCA and MFA values given in the electrical data (page 14) should be referred for the same.

FAN PERFORMANCE

Model APMR	AirFlowRate		Internal Static Pressure		External Static Pressure - in.wg (Pa)													
					0.2(50)		0.4(100)		0.5(125)		0.6(150)		0.8(200)		1(250)		1.2(300)	
	cfm	l/s	in.wg	Pa	RPM	kW	RPM	kW	RPM	kW	RPM	kW	RPM	kW	RPM	kW	RPM	kW
51055G1	1600	755	0.28	70	653	0.19	756	0.24	805	0.26	852	0.29	945	0.34	1035	0.4	1125	0.47
	1700	802	0.31	78	678	0.22	777	0.27	823	0.3	868	0.32	957	0.38	1043	0.44	1128	0.51
	2600	1227	0.73	183	944	0.68	1015	0.76	1049	0.8	1083	0.84	1147	0.92	1209	1	1270	1.08
51070G1	1600	755	0.28	70	-	-	662	0.21	711	0.25	759	0.28	-	-	-	-	-	-
	2100	991	0.47	117	665	0.31	749	0.37	790	0.41	829	0.45	905	0.52	978	0.61	1050	0.7
	2600	1227	0.73	183	791	0.55	862	0.63	896	0.67	929	0.71	994	0.8	1056	0.89	1117	0.99
51080G1	2500	1180	0.29	72	607	0.34	692	0.42	732	0.46	770	0.5	843	0.57	912	0.66	979	0.74
	2800	1321	0.36	89	655	0.45	734	0.54	771	0.58	807	0.63	876	0.71	941	0.8	1003	0.89
	4000	1888	0.74	185	881	1.2	938	1.32	967	1.38	995	1.45	1049	1.57	1101	1.7	1151	1.82
51090G1	2500	1180	0.29	72	474	0.25	556	0.33	594	0.38	632	0.43	704	0.53	-	-	-	-
	3200	1510	0.46	115	558	0.46	627	0.56	659	0.61	691	0.66	751	0.78	810	0.9	867	1.03
	4000	1888	0.74	185	670	0.83	727	0.95	755	1.02	781	1.08	833	1.21	883	1.35	931	1.49
51100G1	2500	1180	0.29	72	474	0.25	556	0.33	594	0.38	632	0.43	704	0.53	-	-	-	-
	3500	1652	0.56	139	599	0.58	663	0.69	693	0.74	723	0.8	780	0.92	834	1.05	888	1.18
	4000	1888	0.74	185	670	0.83	727	0.95	755	1.02	781	1.08	833	1.21	883	1.35	931	1.49
51120G1	3000	1416	0.29	72	486	0.33	563	0.43	598	0.47	633	0.52	698	0.63	760	0.74	821	0.87
	4100	1935	0.53	132	608	0.74	669	0.86	698	0.92	726	0.98	780	1.11	832	1.25	881	1.38
	4800	2265	0.74	185	695	1.15	749	1.29	775	1.36	800	1.43	848	1.57	895	1.72	940	1.88
52130G1	3700	1746	0.28	71	-	-	698	0.56	746	0.62	792	0.69	881	0.85	967	1.02	1052	1.22
	4500	2124	0.41	101	676	0.69	765	0.84	807	0.92	847	1	925	1.16	1000	1.34	1072	1.53
	5900	2784	0.72	178	841	1.43	912	1.63	946	1.73	980	1.83	1044	2.03	1106	2.23	1166	2.45
52150G1	3700	1746	0.28	71	-	-	698	0.56	746	0.62	792	0.69	881	0.85	967	1.02	1052	1.22
	5000	2360	0.5	126	733	0.91	814	1.08	853	1.16	891	1.25	963	1.42	1033	1.61	1100	1.8
	5900	2784	0.72	178	841	1.43	912	1.63	946	1.73	980	1.83	1044	2.03	1106	2.23	1166	2.45
52170G1	4300	2029	0.28	70	611	0.55	706	0.7	751	0.77	794	0.84	876	1	954	1.17	1030	1.35
	5800	2737	0.5	124	754	1.18	832	1.37	868	1.47	904	1.57	972	1.76	1037	1.96	1100	2.16
	7000	3303	0.74	185	885	1.98	951	2.22	983	2.33	1014	2.45	1074	2.69	1131	2.92	1187	3.16
52180G1	4300	2029	0.28	70	611	0.55	706	0.7	751	0.77	794	0.84	876	1	954	1.17	1030	1.35
	6200	2926	0.57	143	797	1.41	870	1.62	905	1.72	939	1.83	1004	2.04	1067	2.25	1127	2.46
	7000	3303	0.74	185	885	1.98	951	2.22	983	2.33	1014	2.45	1074	2.69	1131	2.92	1187	3.16
52210G1	4300	2029	0.28	70	611	0.55	706	0.7	751	0.77	794	0.84	876	1	954	1.17	1030	1.35
	6500	3067	0.63	158	830	1.61	900	1.83	934	1.94	966	2.05	1030	2.26	1090	2.48	1148	2.71
	7000	3303	0.74	185	885	1.98	951	2.22	983	2.33	1014	2.45	1074	2.69	1131	2.92	1187	3.16
52240G1	6000	2831	0.28	70	674	1.04	755	1.24	794	1.34	832	1.44	903	1.64	971	1.84	1035	2.05
	7000	3303	0.37	93	757	1.56	827	1.78	862	1.9	896	2.02	961	2.25	1023	2.49	1083	2.72
	9700	4577	0.73	183	1006	3.9	1057	4.2	1083	4.35	1108	4.51	1159	4.83	1208	5.15	1257	5.48
52270G1	6000	2831	0.28	70	508	0.71	588	0.91	626	1.01	662	1.12	730	1.34	796	1.59	860	1.85
	8000	3775	0.49	122	620	1.47	686	1.72	717	1.85	748	1.98	805	2.25	860	2.53	913	2.82
	9700	4577	0.73	183	730	2.51	786	2.81	813	2.96	839	3.11	890	3.43	939	3.75	986	4.08
52300G1	6000	2831	0.28	70	508	0.71	588	0.91	626	1.01	662	1.12	730	1.34	796	1.59	860	1.85
	9000	4247	0.63	156	684	2.04	744	2.31	772	2.46	800	2.6	854	2.89	905	3.2	954	3.51
	9700	4577	0.73	183	730	2.51	786	2.81	813	2.96	839	3.11	890	3.43	939	3.75	986	4.08
52340G1	7200	3398	0.28	70	529	0.99	605	1.21	640	1.33	673	1.45	737	1.69	797	1.94	855	2.21
	10000	4719	0.53	132	676	2.37	735	2.66	763	2.81	791	2.96	843	3.28	894	3.6	942	3.92
	11600	5474	0.73	181	770	3.6	821	3.94	846	4.11	871	4.28	918	4.64	964	5	1008	5.36
52380G1	8400	3964	0.28	70	436	1.05	500	1.33	530	1.48	560	1.64	617	1.98	672	2.35	727	2.77
	10800	5097	0.45	113	521	1.99	574	2.34	600	2.51	624	2.69	672	3.07	718	3.47	763	3.89
	13600	6418	0.74	183	634	3.77	678	4.19	699	4.41	720	4.63	760	5.07	799	5.53	837	6
52420G1	8400	3964	0.28	70	436	1.05	500	1.33	530	1.48	560	1.64	617	1.98	672	2.35	727	2.77
	11800	5568	0.54	136	560	2.53	610	2.91	634	3.1	657	3.29	701	3.69	745	4.11	786	4.55
	13600	6418	0.74	183	634	3.77	678	4.19	699	4.41	720	4.63	760	5.07	799	5.53	837	6
52500G1	10400	4908	0.28	71	465	1.58	524	1.91	551	2.07	577	2.24	628	2.6	676	2.97	723	3.37
	13500	6371	0.46	115	567	3.13	615	3.56	638	3.77	661	3.98	704	4.41	745	4.85	784	5.3
	16800	7928	0.73	183	687	5.79	727	6.32	746	6.59	765	6.85	802	7.38	838	7.91	872	8.44
52550G1	10400	4908	0.28	71	465	1.58	524	1.91	551	2.07	577	2.24	628	2.6	676	2.97	723	3.37
	15800	7456	0.64	161	650	4.86	692	5.36	713	5.61	733	5.86	771	6.36	808	6.86	844	7.36
	16800	7928	0.73	183	687	5.79	727	6.32	746	6.59	765	6.85	802	7.38	838	7.91	872	8.44

Table 8

Notes:

1. Areas shaded in blue indicate factory setting of RPM.
2. Areas shaded in grey indicate operating range outside the standard motor. Shift to larger motor size in this area.
3. Internal static pressure is based on pressure drops through evaporator coil, fan casing and 1" flat filter.
4. The shown RPM range is with standard pulleys combination.

ELECTRICAL DATA

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
51055G1	32	17	79	1	11	74	1	1.2	3.6	1.2	7.4
51070G1	40	20	105	1	14	100	1	1.2	3.6	1.2	7.4
51080G1	40	21	106	1	14	101	1	1.2	3.6	1.7	10.2
51090G1	40	24	101	1	16	95	1	1.2	3.6	2.4	16.2
51100G1	50	28	117	1	19	111	1	1.2	3.6	2.4	16.2
51120G1	50	30	125	1	20	118	1	1.2	3.6	3.3	25.0
52130G1	50	33	94	2	12	74	2	1.2	3.6	3.3	25.0
52150G1	63	38	122	2	14	100	2	1.2	3.6	3.3	25.0
52170G1	63	39	124	2	14	101	2	1.2	3.6	4.5	32.4
52180G1	63	43	120	2	16	95	2	1.2	3.6	4.5	32.4
52210G1	80	50	139	2	19	111	2	1.2	3.6	4.5	32.4
52240G1	80	52	147	2	20	118	2	1.2	3.6	4.5	32.4
52270G1	80	58	151	2	21	118	3	1.2	3.6	6.2	44.6
52300G1	100	67	177	2	25	140	3	1.2	3.6	6.2	44.6
52340G1	125	77	217	2	29	174	3	1.2	3.6	8.2	57.9
52380G1	125	84	273	1 + 1	34 + 29	229 + 174	4	1.2	3.6	8.2	57.9
52420G1	160	98	291	2	34	229	3	3.3	11.0	10.8	92.9
52500G1	160	107	382	1 + 1	42 + 34	320 + 229	3	3.3	11.0	10.8	92.9
52550G1	200	122	397	2	42	320	4	3.3	11.0	14.3	114.4

Table 9

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.

Field Connections

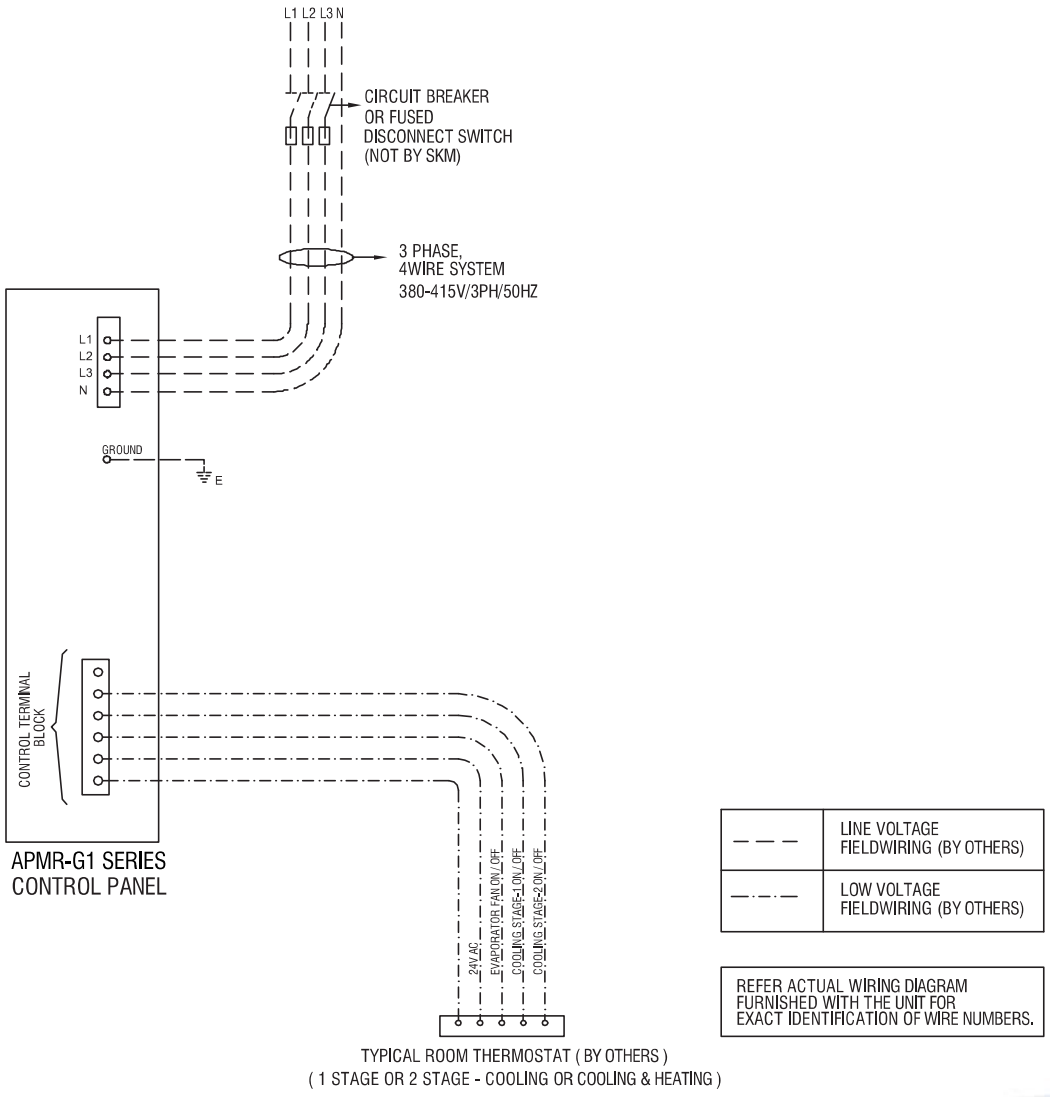
APMRG1 series self-contained heavy duty air cooled packaged units are designed for minimum field interaction. Power hook ups and control wiring of room thermostat as per field wiring diagrm is all that is required to electrically connect any model of APMRG1 series. Every APMRG1 series packaged air conditioning unit requires, at most,field installed fused disconnect switches or circuit breakers and room thermostat.

Refer below for schematic representation of required field electrical hook-ups for a standard APMRG1 series packaged air conditioning unit. All field wiring must be done in accordance with applicable local & national codes.

For the maximum fuse ampere for fuse sizing & minimum circuit amps for cable sizing, see page 14.

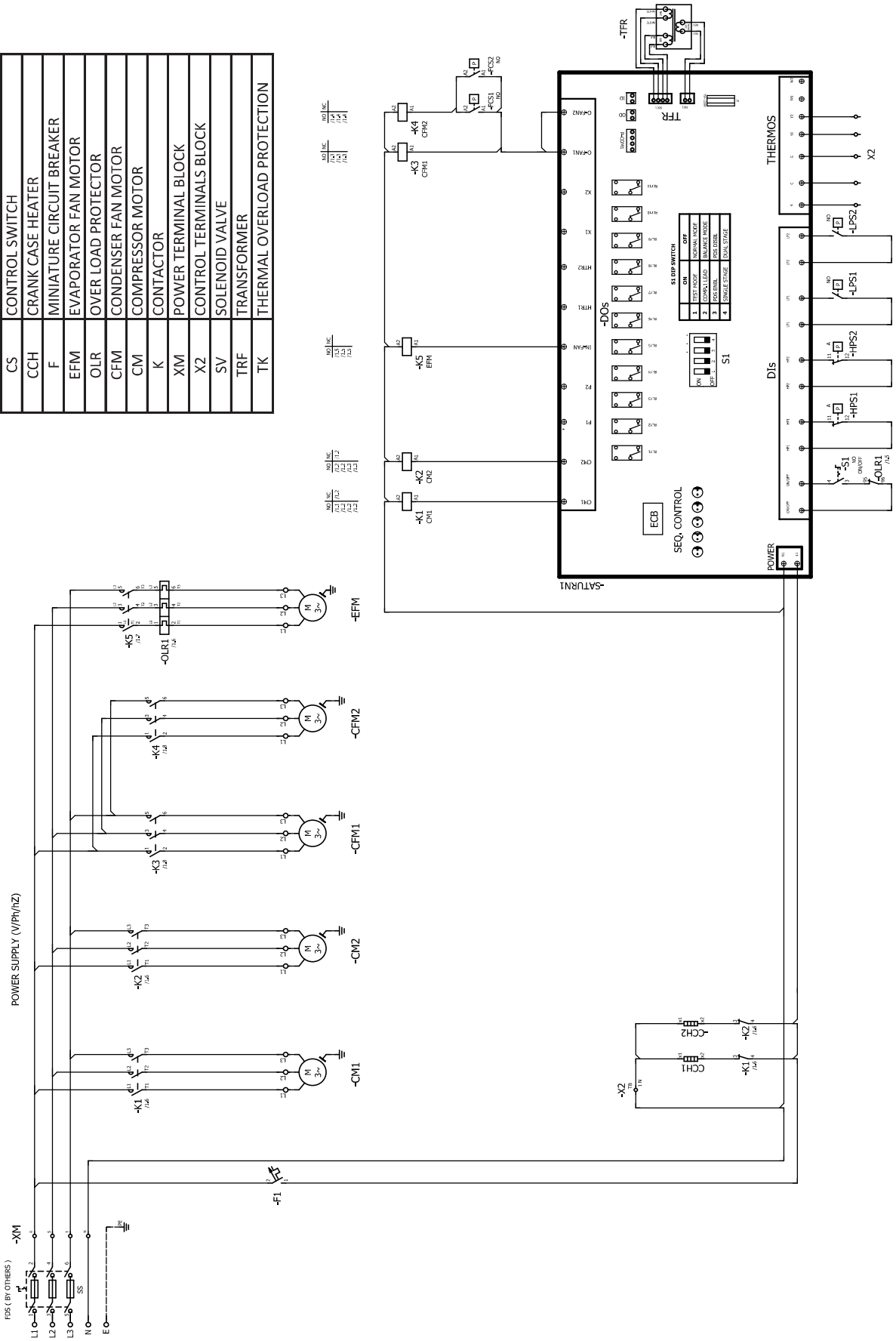
The APMRG1 series is then ready to provide cooling, on demand.

Field Wiring Requirement Schematic



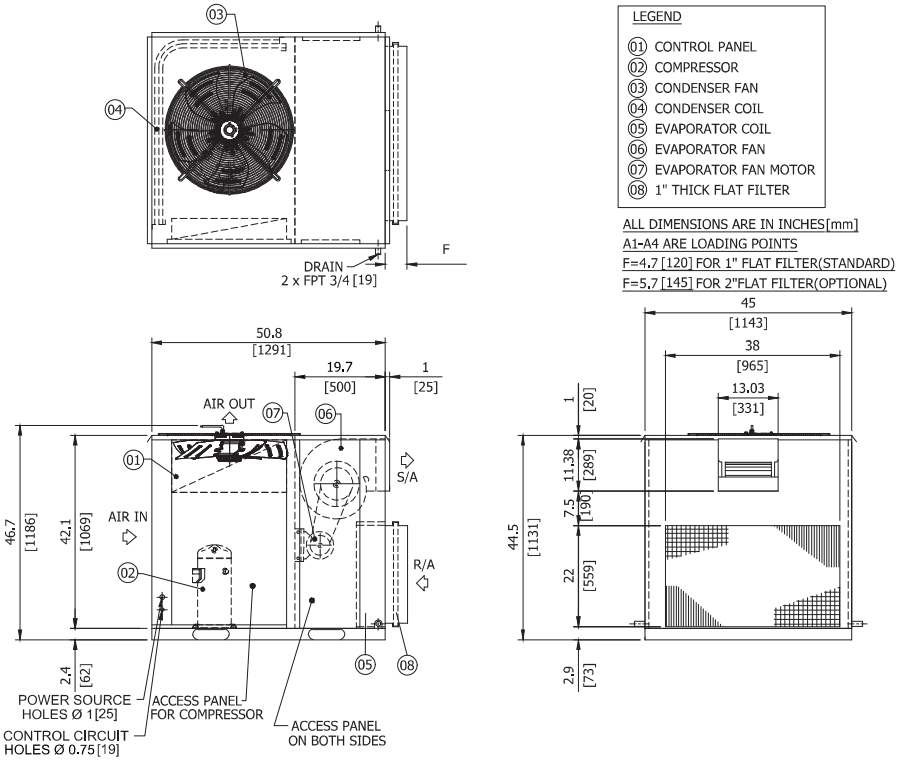
Typical Wiring Diagram

LEGEND	
- - - - - -	FIELD CONNECTIONS & FIELD SUPPLIED DEVICES
FDS	FUSED DISCONNECT SWITCH
LPS	LOW PRESSURE SWITCH
HPS	HIGH PRESSURE SWITCH
CS	CONTROL SWITCH
CCH	CRANK CASE HEATER
F	MINIATURE CIRCUIT BREAKER
EFM	EVAPORATOR FAN MOTOR
OLR	OVER LOAD PROTECTOR
CFM	CONDENSER FAN MOTOR
CM	COMPRESSOR MOTOR
K	CONTACTOR
XM	POWER TERMINAL BLOCK
X2	CONTROL TERMINALS BLOCK
SV	SOLENOID VALVE
TRF	TRANSFORMER
TK	THERMAL OVERLOAD PROTECTION

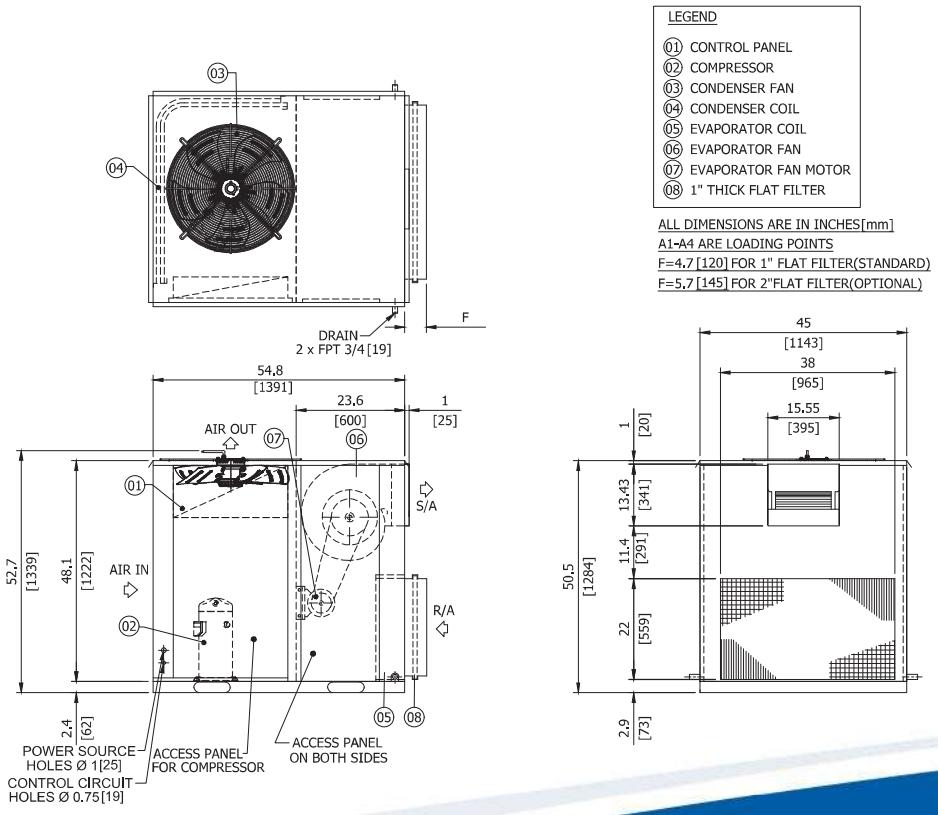


Dimensional Data

APMR Model - 51055G1

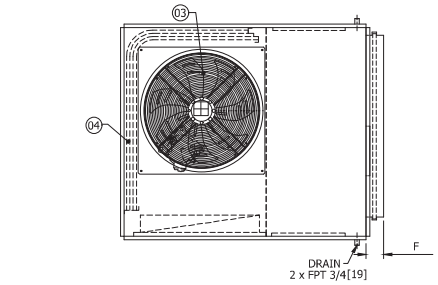


APMR Model - 51070G1



Dimensional Data

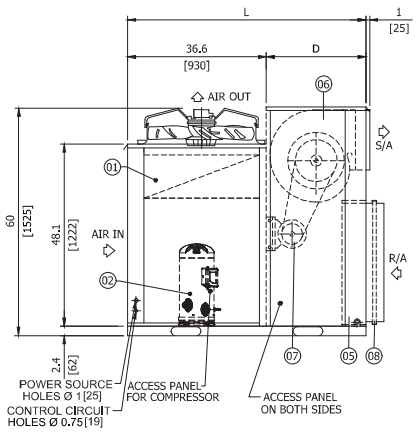
APMR Models - 51080G1 to 51120G1

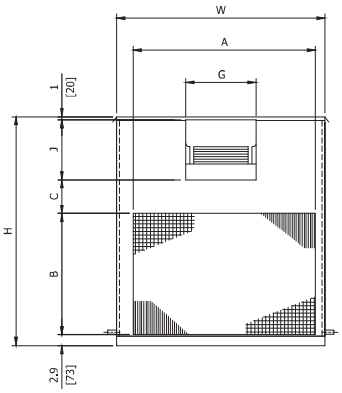


Model APMR	DIMENSIONS								
	L	W	A	B	C	D	J	G	H
51080G1	60.2 [1530]	47 [1194]	40 [1016]	32 [813]	11.3 [288]	23.6 [600]	13.43 [341]	15.55 [395]	60.4 [1535]
51090G1	63 [1600]	47 [1194]	40 [1016]	32 [813]	8.9 [225]	26.4 [670]	15.91 [404]	18.54 [471]	60.5 [1536]
51100G1									
51120G1	63 [1600]	55 [1397]	48 [1219]	32 [813]	8.9 [225]	26.4 [670]	15.91 [404]	18.54 [471]	60.5 [1536]

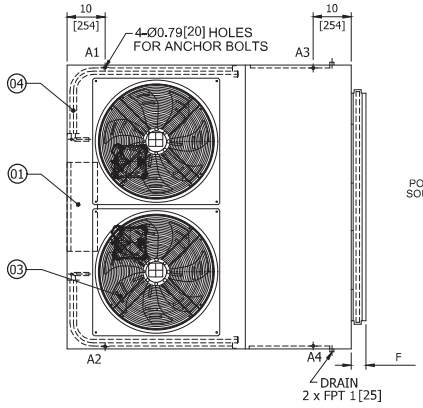
ALL DIMENSIONS ARE IN INCHES[MM]

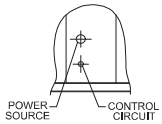
Table 10





APMR Models - 52130G1 & 52150G1



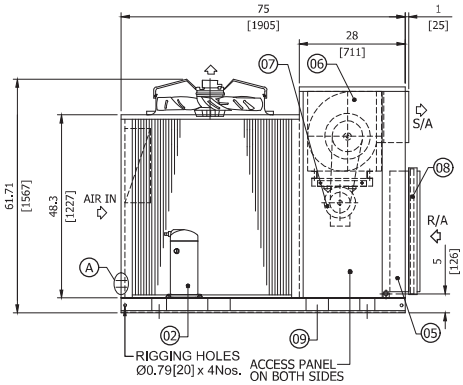


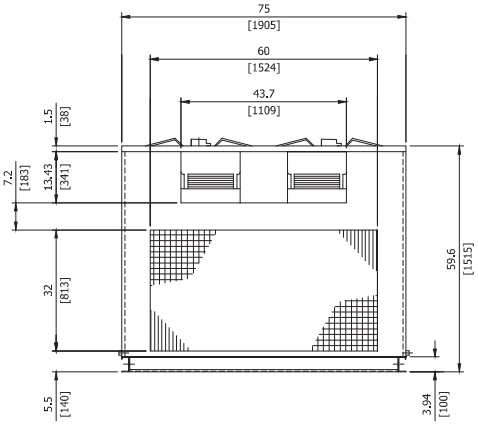
DETAIL AT 'A'

LEGEND

01 CONTROL PANEL
02 COMPRESSOR
03 CONDENSER FAN
04 CONDENSER COIL
05 EVAPORATOR COIL
06 EVAPORATOR FAN
07 EVAPORATOR FAN MOTOR
08 1" THICK FLAT FILTER
09 FORKLIFTING POCKET

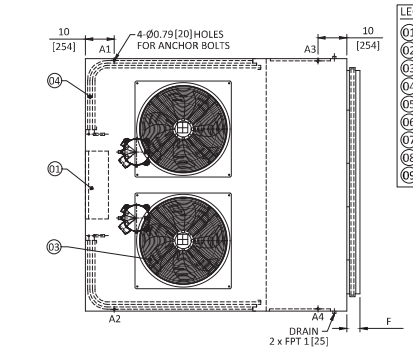
ALL DIMENSIONS ARE IN INCHES
A1-A4 ARE LOADING POINTS[mm]
F=4.7 [120] FOR 1" FLAT FILTER(STANDARD)
F=5.7 [145] FOR 2"FLAT FILTER(OPTIONAL)





Dimensional Data

APMR Models - 52170G1 to 52240G1



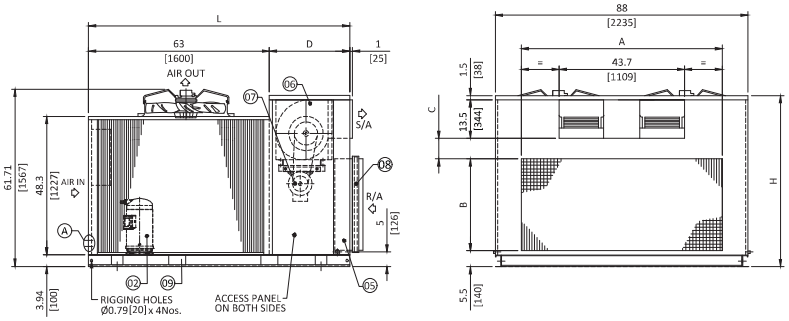
LEGEND
01 CONTROL PANEL
02 COMPRESSOR
03 CONDENSER FAN
04 CONDENSER COIL
05 EVAPORATOR COIL
06 EVAPORATOR FAN
07 EVAPORATOR FAN MOTOR
08 1" THICK FLAT FILTER
09 FORKLIFTING POCKETS

ALL DIMENSIONS ARE IN INCHES[mm]
A1-A4 ARE LOADING POINTS
F=4.7[120]FOR 1" FLAT FILTER(STANDARD)
F=5.7[145]FOR 2"FLAT FILTER(OPTIONAL)
MODEL 52240G1 EVAPORATOR COIL INCLINED TYPE ARRANGEMENTS

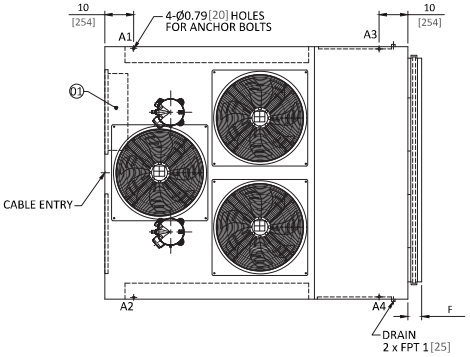
Model APMR	DIMENSIONS					
	L	A	B	C	D	H
52170G1 / 52180G1 / 52210G1	91 [2311]	70 [1778]	32 [813]	7.2 [182]	28 [711]	59.6 [1515]
52240G1	95 [2413]	78 [1981]	35.6 [904]	9.3 [236]	32 [813]	65.47 [1663]

ALL DIMENSIONS ARE IN INCHES[MM]

Table 11



APMR Models - 52270G1 to 52340G1

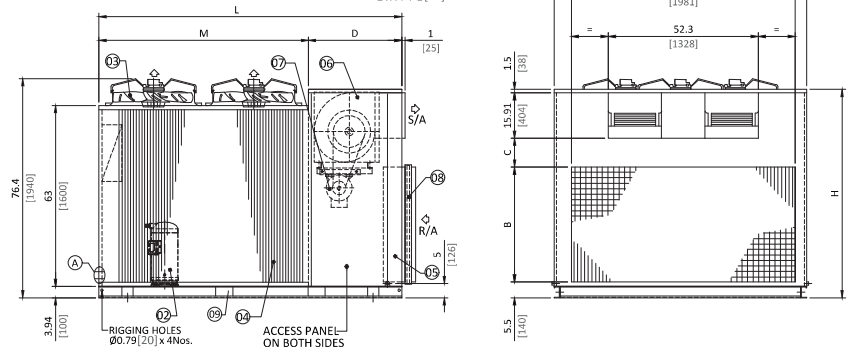


Model APMR	DIMENSIONS					
	L	M	D	B	C	H
52270G1 / 52300G1	105.6 [2682]	73 [1854]	32.6 [828]	40 [1016]	9.7 [247]	72.65 [1845]
52340G1	116 [2946]	81 [2057]	35 [889]	42.5 [1080]	10.66 [271]	76.1 [1933]

ALL DIMENSIONS ARE IN INCHES[MM]

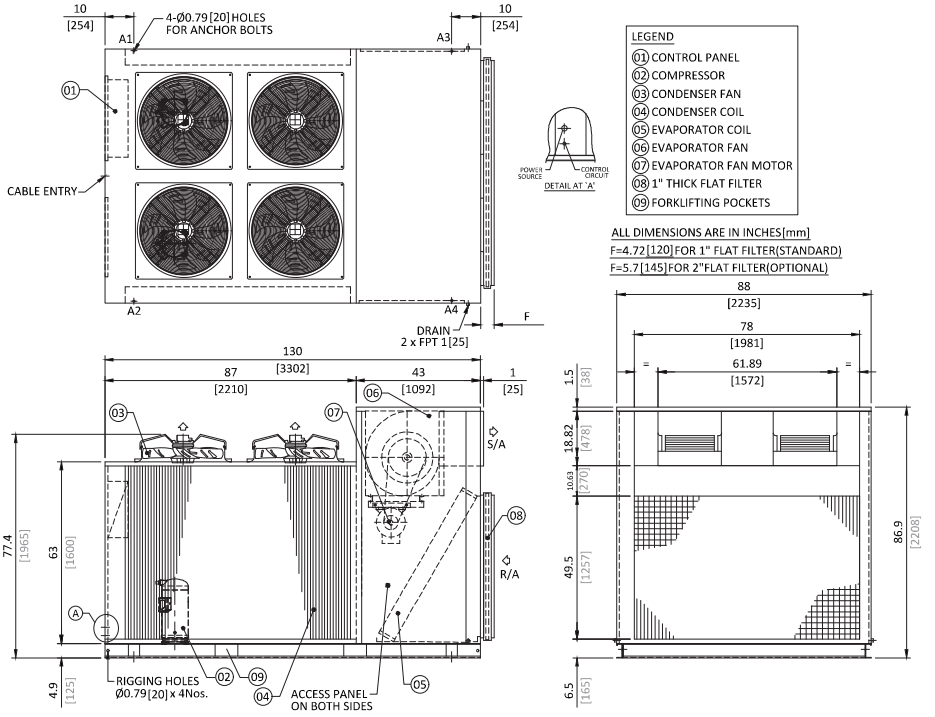
Table 12

MODEL 52340G1 EVAPORATOR COIL INCLINED TYPE ARRANGEMENTS

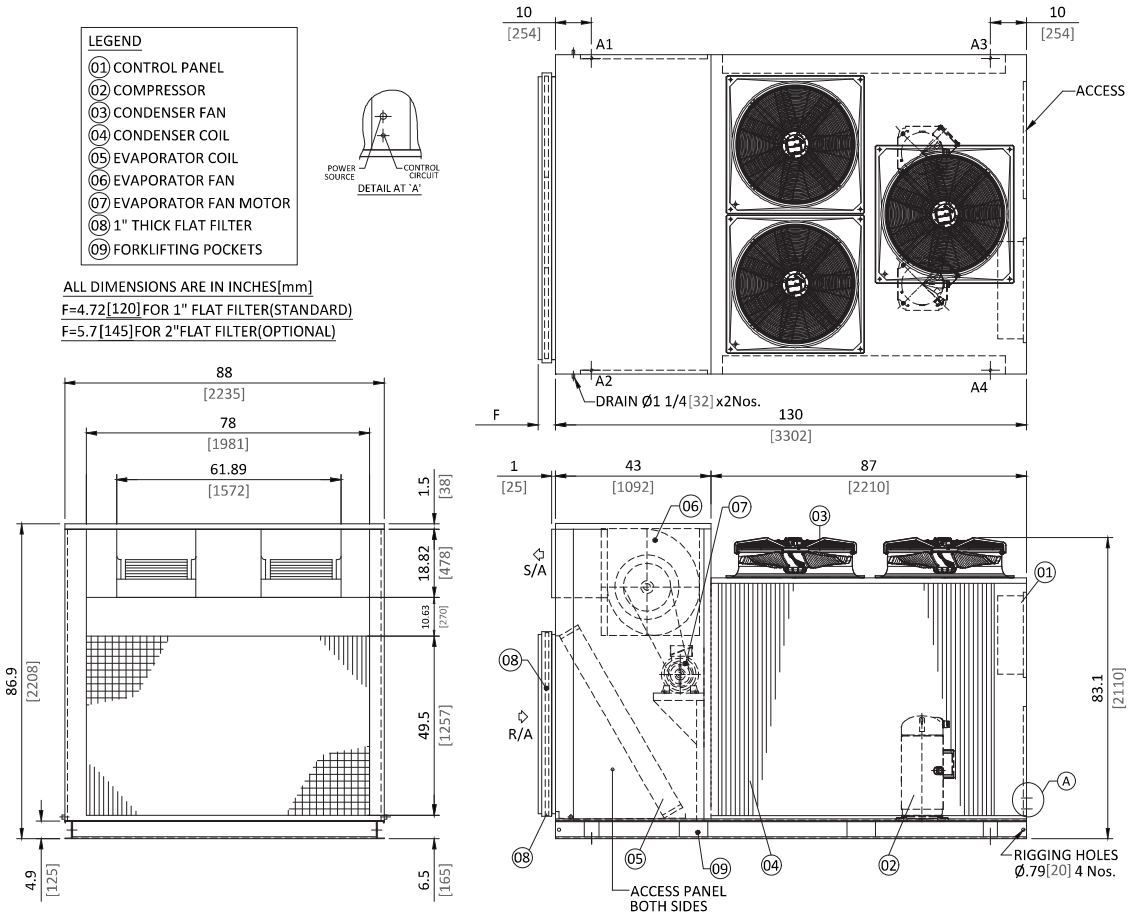


Dimensional Data

APMR Model - 52380G1

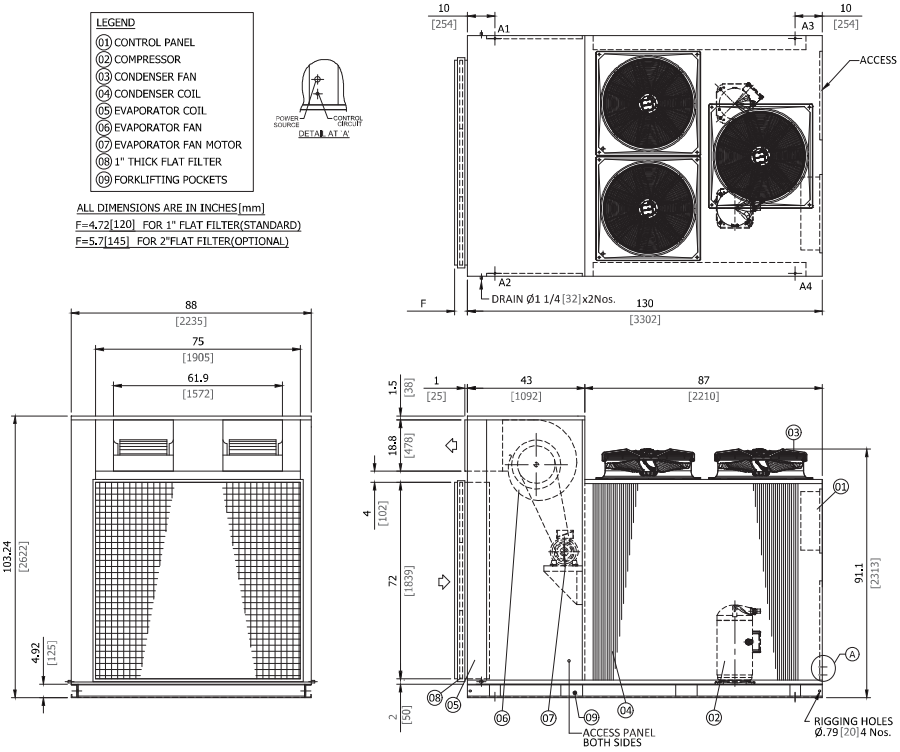


APMR Models - 52420G1

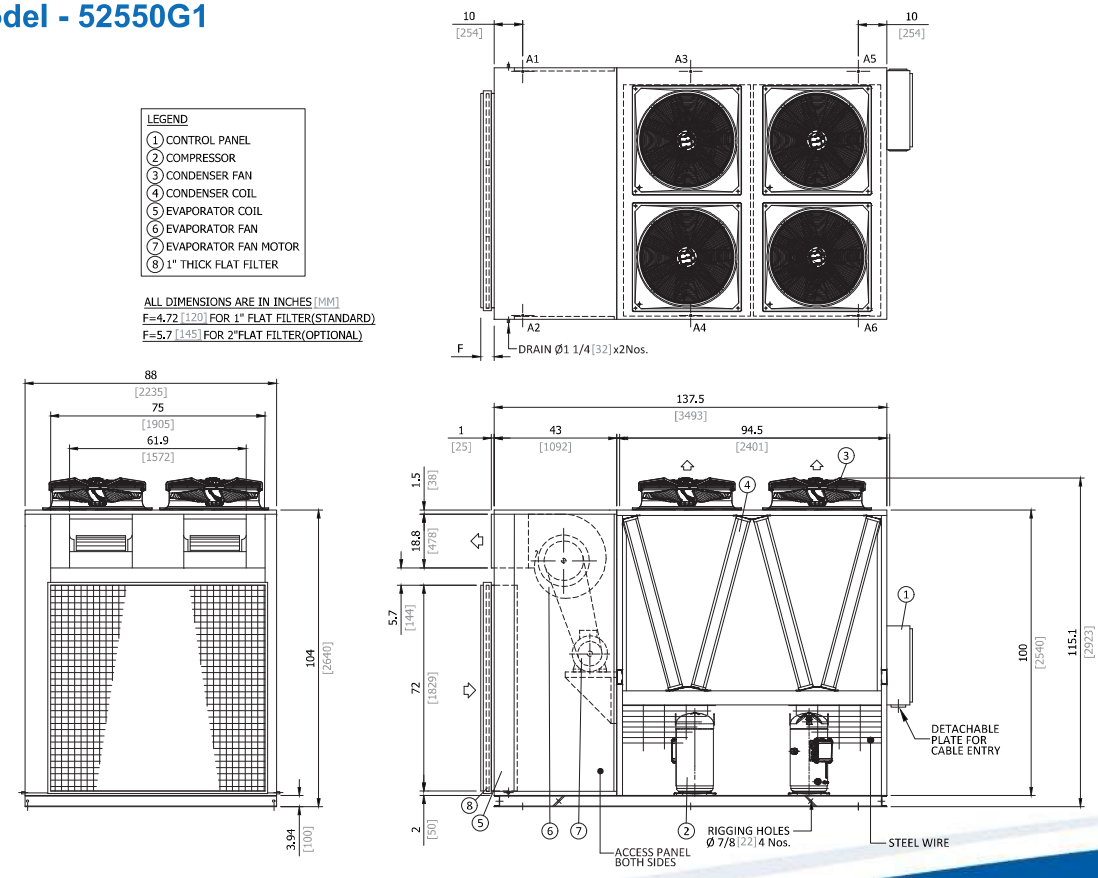


Dimensional Data

APMR Model - 52500G1



APMR Model - 52550G1



Loading Points

MODEL APMR	LOAD AT EACH POINT Lbs (Kgs)						TOTAL WEIGHT
	A1	A2	A3	A4	A5	A6	
51055G1	174 [79]	200 [91]	129 [59]	142 [64]	-	-	645 [293]
51070G1	181 [82]	207 [94]	134 [61]	147 [67]	-	-	669 [304]
51080G1	220 [100]	252 [114]	163 [74]	179 [81]	-	-	814 [369]
51090G1	241 [109]	277 [126]	179 [81]	197 [89]	-	-	894 [405]
51100G1	247 [112]	283 [128]	183 [83]	201 [91]	-	-	914 [414]
51120G1	281 [127]	322 [146]	208 [94]	229 [104]	-	-	1040 [471]
52130G1	363 [165]	363 [165]	448 [203]	448 [203]	-	-	1622 [736]
52150G1	363 [165]	363 [165]	448 [203]	448 [203]	-	-	1622 [736]
52170G1	421 [191]	421 [191]	557 [253]	557 [253]	-	-	1956 [887]
52180G1	451 [205]	451 [205]	565 [256]	565 [256]	-	-	2032 [922]
52210G1	484 [220]	484 [220]	561 [254]	561 [254]	-	-	2090 [948]
52240G1	537 [244]	537 [244]	615 [279]	599 [272]	-	-	2288 [1038]
52270G1	484 [220]	473 [215]	913 [414]	854 [387]	-	-	2724 [1235]
52300G1	490 [222]	478 [217]	915 [415]	856 [388]	-	-	2739 [1242]
52340G1	598 [271]	580 [263]	824 [374]	774 [351]	-	-	2776 [1259]
52380G1	814 [369]	723 [328]	967 [439]	887 [402]	-	-	3391 [1538]
52420G1	940 [426]	977 [443]	822 [373]	864 [392]	-	-	3603 [1634]
52500G1	1018 [462]	1073 [487]	840 [381]	904 [410]	-	-	3835 [1739]
52550G1	550 [249]	580 [263]	1261 [572]	1171 [531]	594 [269]	701 [318]	4857 [2203]

Table 13

Recommended Clearances

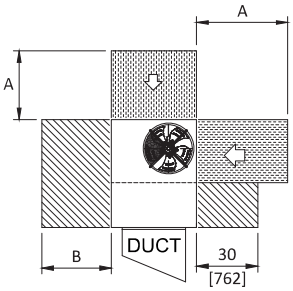
MODEL APMR-	A	B	C
51055G1	46 [1168]	42 [1067]	76 [1930]
51070G1	52 [1321]		88 [2235]
51080G1 / 51090G1 / 51100G1		44 [1118]	
51120G1		52 [1321]	
52130G1 / 52150G1		64 [1626]	
52170G1 / 52180G1 / 52210G1		74 [1880]	
52240G1		82 [2083]	

Table 14

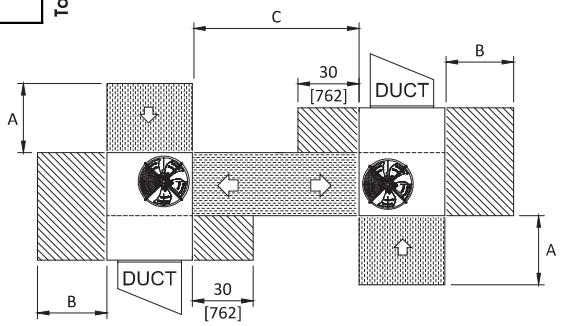
ALL DIMENSIONS ARE IN INCHES [MM]

SPACING FOR AIR FLOW

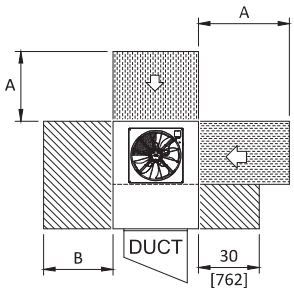
SPACING FOR SERVICE



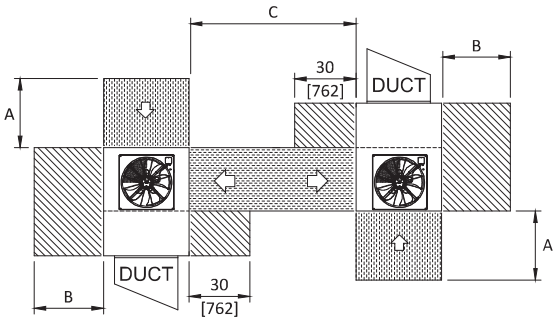
APMR- 51055G1



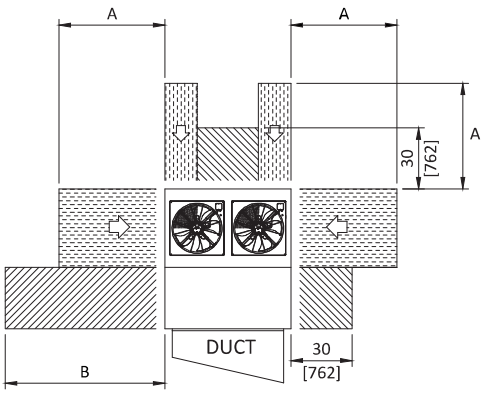
APMR- 51055G1



APMR- 51070G1 - 51120G1

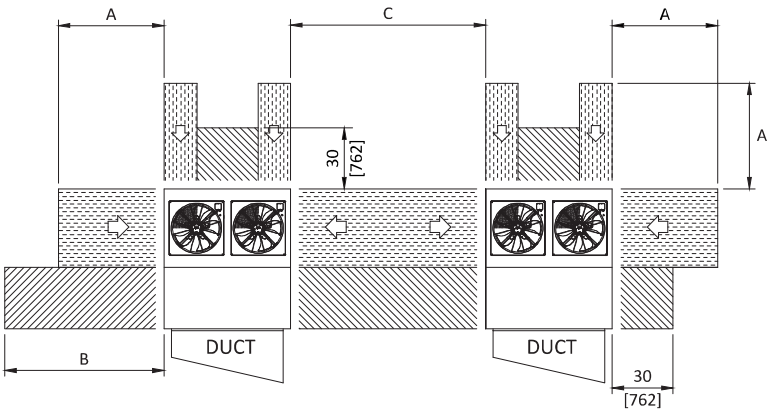


APMR- 51070G1 - 51120G1



APMR- 52130G1 - 52240G1

SINGLE UNIT



APMR- 52130G1 - 52240G1

MULTIPLE UNIT

Recommended Clearances

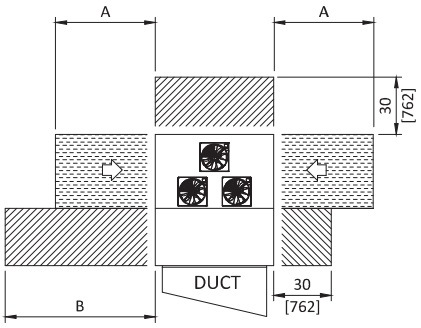
MODEL APMR-	A	B	C
52270G1 / 52300G1	68 [1727]	82 [2083]	120 [3048]
52340G1	76 [1930]		136 [3454]
52380G1 / 52420G1	82 [2083]		148 [3759]
52500G1		79 [2007]	

Table 15

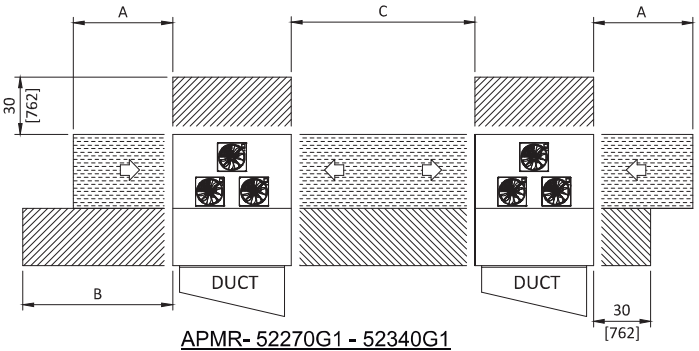
SPACING FOR SERVICE

SPACING FOR AIR FLOW

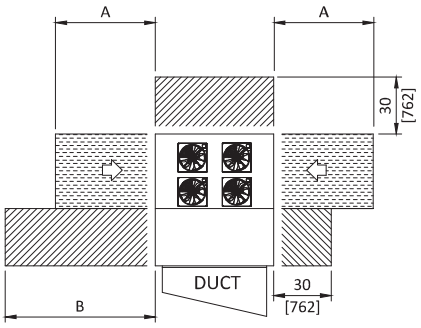
ALL DIMENSIONS ARE IN INCHES [MM]



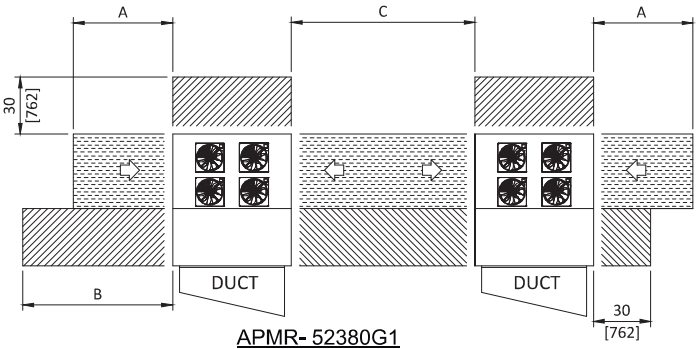
APMR- 52270G1 - 52340G1



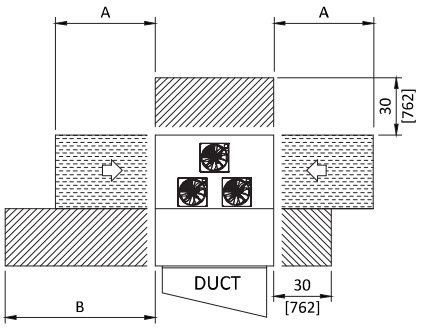
APMR- 52270G1 - 52340G1



APMR- 52380G1

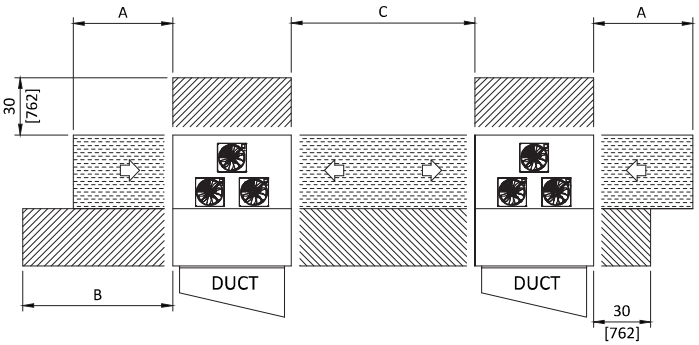


APMR- 52380G1



APMR- 52420G1 & 52500G1

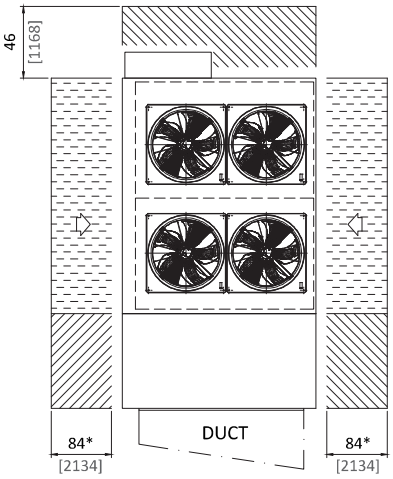
SINGLE UNIT



APMR- 52420G1 & 52500G1

MULTIPLE UNIT

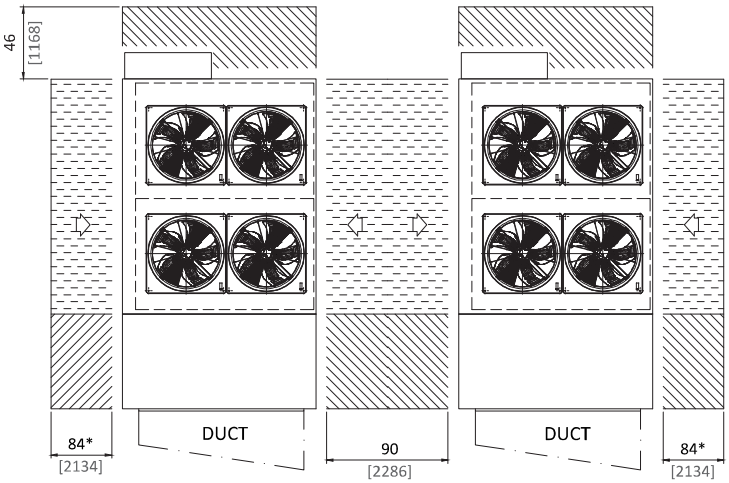
Recommended Clearances



SPACING FOR SERVICE

SPACING FOR AIR FLOW

SINGLE UNIT



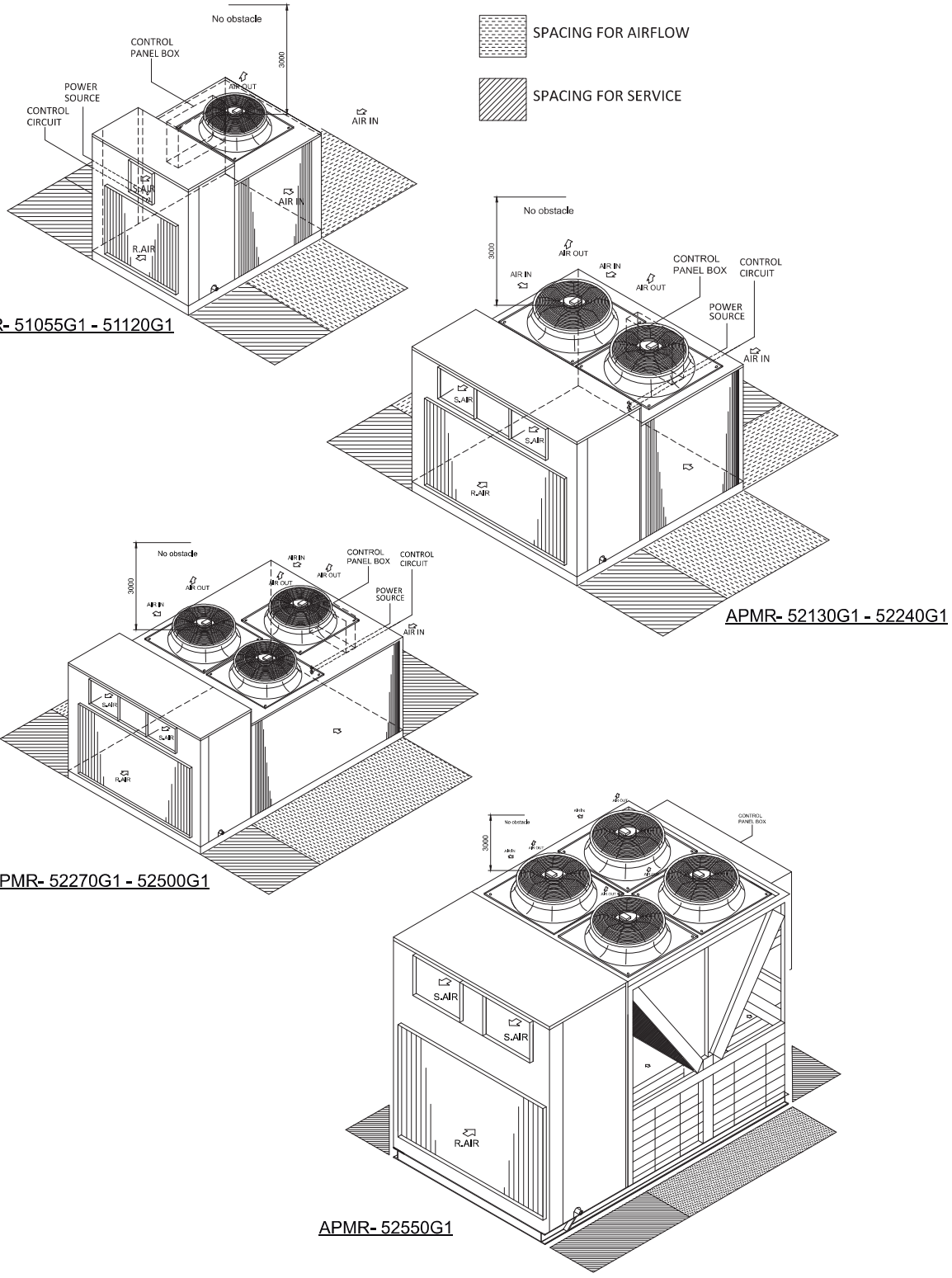
* SPACING FOR BOTH AIR FLOW & SERVICE

MULTIPLE UNIT

APMR- 52550G1

Installation and Commissioning

- Install the unit in such a location which is flat and strong enough to support its weight.
- Provide a trap of over 2" (50mm) in the drain piping for water seal.
- All field wiring must comply with applicable local and national codes.
- Service spacing should be provided as shown in the figure. If any obstacles are around the unit, distributed air is short-circuited so that the unit stops frequently and access to the unit is difficult for inspection and aftersales services.



APMR- 51055G1 - 51120G1

APMR- 52130G1 - 52240G1

APMR- 52270G1 - 52500G1

APMR- 52550G1

GUIDE SPECIFICATIONS

GENERAL
Packaged Air Conditioners shall be composed of compressor(s), condenser & evaporator coils with fans, refrigerant piping, electrical components & enclosing cabinet in one piece. These units shall be factory assembled, internally wired, fully refrigerant charged with R410A, tested under strict quality standards & are suitable for outdoor installation on rooftop or ground level with ducted system.

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 COIL(S)
Condenser coils shall be air cooled with integral sub cooler, constructed of special inner grooved seamless copper tubes 3/8" OD mechanically expanded into corrugated aluminum cross fins with maximum 16 fpi (1.6mm) spacing. These coils shall be tested against leakage by high air pressure air 715psig (4930kPa) under water, cleaned & dehydrated at the factory.

CONDENSER FAN(S) & MOTOR(S)
Condenser Fans shall be direct driven propeller type discharging air vertically upward, equipped with statically & dynamically balanced aluminum alloy blades, inherent corrosion resistant shaft & PVC coated steel wire fan guard. Condenser fan motor(s) shall be Totally Enclosed Air Over (TEAO), 6 pole with class-F insulation, minimum IP-54 protection & wired to unit control panel.

EVAPORATOR COIL
Evaporator coil shall be constructed of Hi-X copper tubes 3/8" OD mechanically bonded to aluminum (copper) corrugated 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 high air pressure 450psig(3100kPa) under water, cleaned & dehydrated at the factory. Coil shall conform to AHRI-410.

EVAPORATOR FAN & MOTOR
Fans of evaporator 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 belts 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 filter drier and thermostatic expansion valve.

Suction line shall be insulated with ½" (12mm) wall thickness enclosed cell pipe insulation with maximum K factor 0.28 Btu.in /ft^2 .h.°F. (0.040 W/mK).

CASING
Casing shall be made of hot dip galvanized (zinc coated), phosphatized steel sheets which are then electrostatically polyester powder coated to provide an extremely tough, scratch resistance & excellent anti-corrosive protection. Casing shall pass1000 hours in 5% salt spray testing at 95°F (35°C) & 95% relative humidity as per ASTM B117. Evaporator section shall be sealed with vinyl gaskets & completely insulated faced with black glass tissue (BGT) heavy density, fire retardant, permanent odorless fiberglass insulation of minimum 1" (25 mm) thickness and 32 kg/m^3 density having maximum k factor 0.23 Btu.in/ft^2 h°f. (0.033 W / m °k). Unit casing shall be provided with access panels for easy service and maintenance of all unit parts.

FILTER SECTION
Flat Filter Section incorporating 1" (25mm) thick is provided as standard and 2" (50mm) thick filter having an average arrestance efficiency of 54% as per ASHRAE Standard 52.1 or equivalent can be provided as an option.

CONTROL PANEL
The panel shall be factory wired and confirm to IP-54 requirements. Control panel shall contain compressor and motor starting contactors, electronic control board for unit operation, compressor anti-recycle time delay, control on/off switch, control circuit breaker and power & control terminal blocks. High and Low pressure switches should be provided for protection.