APMR-V SERIES

Inverter Packaged Air Conditioners

اجهـــزة تـكـيـيـف هـــواء
AIR CONDITIONING EQUIPMENT

Since 1974
منتج خليجي

50/60Hz

R-410A
REFRIGERANT

Range 6 TR to 35 TR
(21 kW to 123 kW)

DC Inverter

CE

bsi
ISO 9001 Quality Management Systems CERTIFIED
ISO 14001 Environmental Management CERTIFIED
ISO 45001 Occupational Health and Safety Management CERTIFIED

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..... Inch water gauge
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

A P M R - 5 1 006 V Y

- Y: Power supply code (Y: 380-415V/3Ph / 50Hz; R: 380-400V/3Ph / 60Hz)
- V: Inverter series
- 006: Nominal Capacity in TR
- 1: 1 : Single Circuit, 2 : Double Circuit
- 5: 5 = 50 Hz, 6 = 60Hz
- R: R-410A
- M: Scroll Compressor
- P: Package
- A: Air Cooled

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-V** Series BLDC - Inverter Type Packaged Air Conditioners Series are designed and manufactured to meet the requirements of Gulf's severe climatic conditions and are built specifically for High Energy Efficiency ducted systems which will enable them to be installed easily on rooftop or on ground .

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

Available in 10 different sizes from 6 to 35 TR (21 to 123 kW) in 50/60 Hz at nominal AHRI conditions. **APMR-V** series packaged air conditioners are designed to operate in a wide
ambient temperature range between 50°F (10°C) to 125.6°F (52°C). Two independent refrigeration circuits are provided where two compressors are used.
For Ratings above 125.6 °F , please contact SKM.

APMR-V units are designed and rated in accordance with AHRI 340/360 standards, and comply with Gulf Standards ESMA and SASO.

APMR-V 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 L.L.C

AIR CONDITIONING EQUIPMENT

You name it.....We cool it

General Features

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

The **APMR-V** Series BLDC- Inverter 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 **APMR -V** 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 **APMR-V** series BLDC- Inverter type 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 APMR-V series yet another model in the top class range of SKM products is the use of:

- High efficiency totally sealed Inverter driven 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.
- EC Condenser fan for smooth unit operation along with wide range of ambient conditions
- Cabinet construction specifically designed for Gulf climates.
- Advance microprocessor for the unit operation.
- Typically, much heavier gauge tubing and thicker fins for ruggedness and long life.
- Electronic expansion Valves for Precise Temperature control.

Main Component Features

The common standard features of all **APMR-V** series packaged units include the following

Compressor

Compressors used in **APMR-V** packaged unit series are BLDC type Inverter Driven,hermetically sealed, compact scroll with the following features:

- High Energy Efficiency.
- Variable speed
- Quiet operation, Low Sound levels.
- Compact and light.
- Limited wear.
- Unique ability to handle liquid refrigerant.
- Suction gas cooled compressor.
- Brazed fittings or Rotalock options.
- Two refrigerant circuits on larger units provides efficient part load.
- No internal valves.

Condenser Coil

Condenser coils are manufactured of seamless copper tubes mechanically bonded to aluminum fins to ensure optimum heat transfer. All coils are tested against leakage by air pressure of 715psig (4930kPa) under water. All standard coils are 2,3 or 4 rows With 14FPI (1.8mm) or 16FPI (1.6mm).

An integral sub cooling circuit is provided to increase the cooling capacity, without additional operating cost.
For different application requirements, other optional condenser fin materials are available:

Condenser Coil

- Copper fins.
- Electrotinned 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. The additional 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-V** packaged unit perform efficiently and durably.

Condenser Fan

The condenser fans are Propeller type , aluminum-alloy blades , directly driven by EC-Technology electric motors.

Motors are Totally Enclosed Air Over (TEAO) with class 'F' insulation and with IP55 protection.

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 Steel coated Guard Grille.

Evaporator Coil

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.
- Electrotinned 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 ELECTRONIC 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 turbulance 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-V series have single and dual fans mounted on a single heavy duty shaft.

The fan(s) are driven by a single speed electric motor, Class F insulated, IP55 protected & are totally enclosed 4-pole motor rated for continuous operation at design conditions.

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-V series are supplied with 1" thick Aluminium type filters with grade G2 as standard for all models.

Expansion Valve

Inverter series package use electronic expansion valve for precise control refrigerant mass flow. Our electronic expansion valve improves EER (Energy Efficiency Ratio) at full & part-load conditions. Also it improves temperature control & increases the range of operating conditions.

Casing and Structure

The unit casing used in **APMR -V** Inverter 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 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 evaporator section is insulated from all the sides with thick fiber glass insulation with extremely tough and durable black compositesurface .

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

Control Panel

The unit mounted control panel enclosure is fabricated out of heavy gauge sheet steel in phosphatized powder coated baked finish. The panel is factory wired in accordance with NEC 430 / 440, labelled, tagged and features 220V / 240V controls.

- A compatible VFD drives compressors.
- Individual contactor for each condenser fan motors 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.
- Circuit breaker for control circuit.
- Microprocessor master board with graphical display.
- Electronic expansion valve control integrated in the controller.
- Control Relay.
- Control circuit on/off switch.
- Control terminal blocks and power terminal blocks.

Microprocessor control

Microprocessor control system is available for Inverter series package as a standard feature. Our high-energy efficient package has a full function microprocessor control unit designed to keep the package running at its most energy efficient level. It is a rugged microprocessor-based controller that is designed for the hostile environment of HVAC industry. It provides flexibility with set points and control options that can be selected prior to commissioning a system or when the unit is live and functioning.

Displays, alarms and other interfaces are accomplished in a clear and simple Displays, alarms and other interfaces are accomplished in a clear and simple language that informs the user as to the status of the system. It is designed to safeguard the system that is being controlled, eliminate the need for manual intervention and to provide a simple but meaningful man-machine-interface.

This controller provides complete operational control for the package and has built-in auto diagnostic capability that can signal normal operation or alarm conditions as well as shutting down the package or system, if necessary.

Room Unit

The controller comes with a loose supplied sleek and elegant design room unit for installing in the conditioned space. For the serial connection use three-wire shielded cable, AWG 20-22. The length of the network must not exceed 500 m. For extended networks fit a 120 Ohm resistor between RX/TX+ and RX/TX- on the first and last device, to avoid possible communication problems.

The room unit has a built in sensor for measuring the room temperature. It transmits room temperature, set point, unit-operating mode, operating schedule etc. to the unit controller.

The room unit has a built in sensor for measuring the room temperature. It transmits room temperature, set point, unit-operating mode, operating schedule etc. to the unit controller. Control of the compressors is based on room temperature and the set point, as standard. If unit control needs to be based on duct temperature, please specify during time of order.

The Main Features of the controller are as follows:

- A graphical LCD Display with back-lit that can be seen in bright or dim lighting.
- A six button generic keypad that is so user friendly, it rarely requires a reference manual.
- Multiple authorization levels to provide tight security of the control system.
- Usability and display The menu-based system allows the application to be configured as a tool for instant diagnostics. All this is possible by the immediately accessible overview screens and the commissioning tool.
- Quick menus information on the status, accessible directly from the main menu, without needing to access the submenus. Configuration, active function and operating temperature information are arranged in loops of screens, scrolled by pressing the DOWN button from the main screen.
- BMS 485/Modbus cpCO controller has a built in BMS port that allows direct interfacing with compressor driver an RS485 network with maximum baud rate of 19200.
- Capacity control based on temperature set point and the return air temperature. A special control zone based on return air temperature that reduces compressor cycling, and improved unit part load efficiency.

Display Information

SKM package offer a graphics LCD display which allows the operator to access different parameters of the package . Operator can view and change the set point of package parameters.
The graphical display has lot of features, trending is one of the key features of graphical display. The well designed keypad with three function keys, two direction keys and one selection key allows the operator to navigate through different Menu, such as:

- Status.
- Outputs.
- Inputs.
- Setpoint
- Alarm

System Control Philosophy

The unit may be enabled or disabled manually or through the use of an external signal from a building automation system (BMVF option).

Control is based upon set point and return air temperature. How fast the temperature changes is calculated and capacity decisions are based upon the rate, the current temperature, and the control temperature zone.

Capacity is never added if the system is moving toward the temperature target at an acceptable rate. The unit will monitor all control functions and stage the compressor to maintain the required operating capacity.

Easy Accessible Measurements Include:

- Status of the unit.
- Status of each circuit/compressor.
- Status of condenser fans.
- Suction pressure and temperature for each refrigerant circuit.
- Discharge pressure and temperature for each refrigerant circuit.
- Expansion valve opening percentage.
- All active set points.
- Run time for each compressor.
- Number of compressor starts.
- Lockout and alarm status.
- Log of last 100 alarms.
- Date and time.

System Protection

The following system protection controls will automatically act to insure system reliability and protection of the unit.

- Low suction pressure protection.
- High discharge pressure protection.
- High discharge temperature protection.
- Low discharge pressure protection.
- Low superheat protection.
- Compressor external thermal protection.
- Freeze protection.
- Under voltage, over voltage, phase loss, phase reversal and phase unbalance protection.
- Sensor error protection.
- Anti-recycle.
- 3-Levels of passwords to restrict the intentional mishandling.

Selection Procedure

APMR-V 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	114.7 MBh	33.6 kW
Sensible cooling capacity	89.7 MBh	26.3 kW
Condenser entering air temp db	115°F	46.1°C
Evaporator entering air temp. db/wb	80/67°F	26.6/19.4°C
Evaporator air flow rate	4000 cfm	1888 l/s
External static pressure	1 inwg	250 Pa
Electric power supply	380-415V/3PH/50Hz	380-415V/3PH/50Hz
Refrigerant	R-410A	R-410A

Selection Procedure :

Enter packaged unit capacity ratings at given condition and select unit size **APMR-V** 51012 having total cooling capacity 122.5 MBh (35.9 kW), and sensible cooling 93MBh (27.2 kW), PI=12.3 kW. Total sensible cooling capacities & power to be interpolated for untabulated data.
- For EDB other than 80ºF (26.7ºC), use following formula:

Actual sensible capacity = Rated sensible capacity + 0.0011 (1 - BPF)(EDB - 80) x cfm - IP Units
Actual sensible capacity = Rated sensible capacity + 0.00123 (1 - BPF)(EDB - 26.7) x l/s - SI Units

Factory Installed Options

Double Skin Evaporator (DSE)

Double skin evaporator section with galvanized inner skin.
(Applicable only for models 52012V / 62012V and above)

Double Skin Insulation (DSI)

Inner skin in the evaporator section is provided with foam board insulation.
(Applicable only for models 52012V / 62012V and above)

Flat Filter (FSIP2)

Filter Section with Two-Inch Thick Washable Aluminum Flat Filter Media (EN Class: G3).

Alternative Condenser Material

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

- For Aluminum Fins with Aeris Post Coat Protection, specify **(FAA)**.
- For Pre Coated aluminum fins, specify **(FAP)**.
- For Copper Fins, specify **(FC)**.
- 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 Aluminum Fins with Aeris post Coat Protection, specify **(EFAA)**.
- For Pre-Coated aluminum fins, specify **(EFAP)**.
- For Copper Fins, specify **(EFC)**.
- For Copper Fins with Aeris Post Coat Protection, specify **(EFCA)**

Electric Heating (HTR1)

Electric heating batteries are made up of finned heating elements, constructed from high quality 80/20 nickel chrome resistance wire centered 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 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.

APMR -V	HEATER (KW)	STAGES
51006 / 61006	6	1
51008 / 61008	9	
51010 / 61010	12	
52012 / 62012	12	2
52015 / 62015	15	
52018 / 62018	18	
52020 / 62020	21	
52025 / 62025	27	
52030 / 62030	30	
52035 / 62035	36	

Table 1

Circuit Breaker for Compressor (CBC)

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

Rotalock Valves on Compressors (RVC)

For additional facilitation of maintenance of unit.

Pump Down Facility with Solenoid Valve (PDS)

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.

Ball Valve (BLV)

Ball valve can be incorporated in the liquid line.

Extra Ball Valve (XFV)

Extra ball valve can be incorporated in the liquid line.

Marine Paint (MP)

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

Stainless Steel SS316L Fasteners (SSF)

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.

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 and moisture eliminator. Insulation under drain pan as per SKM standard.

Up Size Evaporator Motor (USM)*

Unit with one up size evaporator motor.

Circuit breaker for Motors** (CBM)*

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

Main Isolator (without door interlock) (ISO)

For main power isolation. (consult SKM)

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.

Power Terminal Block with Multiple Output Connection (MPTB)

For Power Terminal Block that requires a single feed terminal and having multiple output connections.

Fire Alarm Interlock (VFC-F)

To provide provision for fire alarm interlock.

Voltage Monitoring Module as per DEWA (DVM)

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

Note:

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

* USM option covers up to region II (refer page no: 11-16)

**If CBM combined with USM option please consult SKM as components might be changed

GENERAL DATA - 50 & 60 Hz

Model		APMR-V	51006/61006	51008 / 61008	51010 / 61010	51012 / 61012	52015 / 62015
Cooling Capacity (1)		MBH	73.9	94.6	111.3	135.2	178.0
		kW	21.7	27.7	32.6	39.6	52.2
		CSPF	4.8	4.9	4.6	5.1	4.7
Cooling Capacity (2)		MBH	64.8	83.8	98.9	119.8	157.3
		kW	19.0	24.6	29.0	35.1	46.1
		CSPF	3.9	4.0	3.8	4.1	3.8
Refrigerant Type		-	R410A				
Compressor	Type	-	INVERTER DRIVEN HERMETIC SCROLL				
	Quantity	-	1	1	1	1	2
	Oil Charge	US Gal	0.43	0.43	0.71	0.71	0.43/0.43
		Liter	1.40	1.40	2.30	2.30	1.4/1.4
Condenser Coil	Type	-	Hi-X 3/8" Tubes				
	Face Area	ft^2	24.0	24.0	25.3	37.3	37.3
		m^2	2.2	2.2	2.4	3.5	3.5
Condenser Fan	Type	-	Propeller Direct Drive EC Fan				
	Code / Quantity	-	630 /1	710/1	710/1	630/2	630/2
Condenser Motor	Type	-	Electronically Commutated, Class-F insulation, IP-55 Protected				
	Max Power Input / Quantity	kW	0.55/1	1.1/1	1.1/2	0.55/2	0.55/2
Evaporator Coil	Type	-	Hi-X 3/8" Tubes				
	Face Area	ft^2	5.8	8.9	10.7	13.3	13.3
		m^2	0.5	0.8	1.0	1.2	1.2
Evaporator Fan	Type	-	Centrifugal DIDW Belt Drive				
	Code / Quantity	-	12/12	15/15	15/15	12/12 R2	12/12 R2
	Air Flow Rate	cfm	2200	3000	3600	4000	4800
		l/s	1034	1410	1692	1880	2256
Evaporator Motor	Type	-	Totally Enclosed Fan Cooled, Class-F insulation, 4-pole, IP55 Protected.				
	Size (I / II / III)	kW	0.75/1.1/-	1.1/1.5/-	1.5/2.2/3	1.5/2.2/3	2.2/3/4
Refrigerant Operating Charge Ckt (A / B)		lbs	16.7	18.6	28.5	40.0	20.2/20.2
		kg	7.5	8.4	12.8	18.0	9.1/9.1
Number of Refrigerant Circuits		-	1	1	1	1	2
Unit Operating Weight		lbs	928	1100	1281	1639	1729
		kg	421	499	581	744	784

Table 2

Notes:

(1) Evaporator entering air conditions of 80.6°F/66.2°F (27°C/19°C) dry bulb/wet bulb and condenser entering air temperature of 95°F (35°C) dry bulb.

(2) Evaporator entering air conditions of 84.2°F/66.2°F (29°C/19°C) dry bulb/wet bulb and condenser entering air temperature of 114.8°F (46°C) dry bulb.

(3) Capacity is gross capacity which does not include the effect of evaporator fan motor heat.

(4) CSPF is Cooling Seasonal Performance Factor.

GENERAL DATA - 50 & 60 Hz

Model		APMR-V	52018 / 62018	52020 / 62020	52025 / 62025	52030 / 62030	52035 / 62035
Cooling Capacity (1)		MBH	208	230.9	276.1	353.6	407.8
		kW	61.0	67.7	80.9	103.6	119.5
		CSPF	4.7	4.6	4.3	4.4	4.1
Cooling Capacity (2)		MBH	185.3	205	245.7	313	359.9
		kW	54.3	60.1	72.0	91.7	105.5
		CSPF	3.8	3.8	3.6	3.6	3.4
Refrigerant Type		-	R410A				
Compressor	Type	-	INVERTER DRIVEN HERMETIC SCROLL				
	Quantity	-	2	2	2	2	2
	Oil Charge	US Gal	0.71/0.71	0.71/0.71	0.71/0.71	0.71/0.71	0.71/0.71
		Liter	2.3/2.3	2.3/2.3	2.3/2.3	2.3/2.3	2.3/2.3
Condenser Coil	Type	-	Hi-X 3/8" Tubes				
	Face Area	ft^2	52	52	60	65	69.3
		m^2	4.8	4.8	5.6	6.0	6.4
Condenser Fan	Type	-	Propeller Direct Drive EC Fan				
	Code / Quantity	-	710/2	710/2	710/3	710/4	800/3
Condenser Motor	Type	-	Electronically Commutated, Class-F insulation, IP-55 Protected				
	Max power input / Quantity	kW	1.1/2	1.1/2	1.1/3	1.1/4	1.5/3
Evaporator Coil	Type	-	Hi-X 3/8" Tubes				
	Face Area	ft^2	21.7	21.7	26	30.3	35.8
		m^2	2.0	2.0	2.4	2.8	3.3
Evaporator Fan	Type	-	Centrifugal DIDW Belt Drive				
	Code / Quantity	-	15/15 R2	15/15 R2	15/15 R2	18/18 R2	18/18 R2
	Air Flow Rate	cfm	7000	7500	9000	11000	12000
		l/s	3290	3525	4230	5170	5640
Evaporator Motor	Type	-	Totally Enclosed Fan Cooled, Class-F insulation, 4-pole, IP55 Protected.				
	Size (I / II / III)	kW	2.2/3/4	3/4/5.5	4/5.5	4/5.5/7.5	5.5/7.5/-
Refrigerant Operating Charge Ckt (A / B)		lbs	21.8/21.8	28.9/28.9	36.8/36.8	38.9/38.9	51.7/51.7
		kg	9.8/9.8	13.0/13.0	16.6/16.6	17.5/17.5	23.3/23.3
Number of Refrigerant Circuits		-	2	2	2	2	2
Unit Operating Weight		lbs	2286	2414	2785	3391	3603
		kg	1037	1095	1263	1538	1634

Table 3

Notes:

(1) Capacity ratings are based on AHRI Standard 340/360. Evaporator entering air conditions of 80°F/67°F (26.6°C/19.4°C) dry bulb/wet bulb and condenser entering air temperature of 95°F (35°C) dry bulb.

(2) Evaporator entering air conditions of 84.2°F/66.2°F (29°C/19°C) dry bulb/wet bulb and condenser entering air temperature of 114.8°F (46°C) dry bulb.

(3) Capacity is gross capacity which does not include the effect of evaporator fan motor heat.

(4) CSPF is Cooling Seasonal Performance Factor.

GROSS CAPACITY RATING - 50 & 60 Hz

Model APMRV	AFR cfm l/s	EWB		Condenser Entering Air Temperature																							
				95°F (35°C)					105°F (40.6°C)					115°F (46.1°C)					120°F (48.9°C)					125°F (51.7°C)				
				Total Capacity		Sensible		PI	Total Capacity		Sensible		PI	Total Capacity		Sensible		PI	Total Capacity		Sensible		PI	Total Capacity		Sensible		PI
	(BPF)	°F	°C	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
51006 61006	1800	62	16.7	65.2	19.1	57.4	16.8	4.7	61.7	18.1	55.9	16.4	5.3	58.2	17.1	54.4	15.9	5.9	56.5	16.5	53.6	15.7	6.2	54.7	16.0	52.9	15.5	6.6
	850	67	19.4	72.2	21.2	48.3	14.2	4.8	68.9	20.2	47.0	13.8	5.4	65.5	19.2	45.7	13.4	6.0	63.6	18.7	45.0	13.2	6.4	61.5	18.0	44.1	12.9	6.7
	0.1	72	22.2	77.7	22.8	38.4	11.2	4.8	74.0	21.7	37.1	10.9	5.5	70.2	20.6	35.7	10.5	6.1	68.3	20.0	35.1	10.3	6.4	66.3	19.4	34.4	10.1	6.8
	2200	62	16.7	66.8	19.6	63.7	18.7	4.8	63.4	18.6	62.3	18.3	5.4	59.9	17.6	59.9	17.6	6.0	58.2	17.1	58.2	17.1	6.3	56.4	16.5	56.4	16.5	6.6
	1038	67	19.4	75.0	22.0	53.3	15.6	4.8	71.3	20.9	51.9	15.2	5.4	66.9	19.6	50.2	14.7	6.1	64.7	19.0	49.4	14.5	6.4	62.5	18.3	48.6	14.2	6.7
	0.11	72	22.2	80.4	23.6	41.5	12.1	4.8	76.5	22.4	40.1	11.8	5.5	72.4	21.2	38.8	11.4	6.1	70.3	20.6	38.1	11.2	6.5	68.3	20.0	37.4	11.0	6.8
	2600	62	16.7	68.3	20.0	68.3	20.0	4.8	64.9	19.0	64.9	19.0	5.4	61.3	18.0	61.3	18.0	6.0	59.6	17.5	59.6	17.5	6.3	57.8	16.9	57.8	16.9	6.6
	1227	67	19.4	76.5	22.4	57.7	16.9	4.8	72.2	21.2	56.1	16.5	5.4	67.8	19.9	54.5	16.0	6.1	65.7	19.2	53.8	15.8	6.4	63.6	18.6	53.0	15.5	6.7
	0.13	72	22.2	82.4	24.2	44.4	13.0	4.9	78.3	22.9	43.0	12.6	5.5	74.0	21.7	41.6	12.2	6.2	71.8	21.1	40.9	12.0	6.5	69.7	20.4	40.2	11.8	6.8
51008 61008	2600	62	16.7	84.7	24.8	79.1	23.2	6.3	80.4	23.6	77.2	22.6	7.0	76.0	22.3	75.4	22.1	7.8	73.8	21.6	73.8	21.6	8.2	71.5	21.0	71.5	21.0	8.6
	1227	67	19.4	95.2	27.9	66.4	19.5	6.3	89.9	26.4	64.4	18.9	7.1	84.4	24.7	62.3	18.3	7.9	81.7	23.9	61.3	18.0	8.3	79.0	23.2	60.3	17.7	8.7
	0.09	72	22.2	102.0	29.9	52.0	15.2	6.4	97.0	28.4	50.2	14.7	7.2	91.7	26.9	48.4	14.2	8.0	89.0	26.1	47.5	13.9	8.5	86.4	25.3	46.7	13.7	8.9
	3000	62	16.7	86.5	25.4	85.7	25.1	6.3	82.2	24.1	82.2	24.1	7.1	77.7	22.8	77.7	22.8	7.8	75.4	22.1	75.4	22.1	8.2	73.2	21.4	73.2	21.4	8.6
	1416	67	19.4	96.5	28.3	71.0	20.8	6.4	91.0	26.7	68.9	20.2	7.1	85.6	25.1	66.9	19.6	7.9	82.9	24.3	65.9	19.3	8.3	80.3	23.5	65.0	19.0	8.8
	0.1	72	22.2	104.3	30.6	55.0	16.1	6.4	99.0	29.0	53.3	15.6	7.2	93.6	27.4	51.5	15.1	8.1	90.8	26.6	50.6	14.8	8.5	88.1	25.8	49.7	14.6	8.9
	3600	62	16.7	88.8	26.0	88.8	26.0	6.3	84.4	24.7	84.4	24.7	7.1	79.8	23.4	79.8	23.4	7.9	77.4	22.7	77.4	22.7	8.2	75.1	22.0	75.1	22.0	8.6
	1699	67	19.4	98.0	28.7	77.6	22.7	6.4	92.7	27.2	75.7	22.2	7.2	87.3	25.6	73.8	21.6	8.0	84.6	24.8	72.8	21.3	8.4	82.0	24.0	71.9	21.1	8.8
	0.12	72	22.2	106.9	31.3	59.4	17.4	6.4	101.3	29.7	57.6	16.9	7.3	95.5	28.0	55.8	16.3	8.1	92.4	27.1	54.7	16.0	8.5	89.3	26.2	53.8	15.8	8.9
51010 61010	2800	62	16.7	98.1	28.8	88.6	26.0	7.5	93.2	27.3	86.5	25.3	8.5	88.1	25.8	84.3	24.7	9.7	85.6	25.1	83.3	24.4	10.3	83.1	24.3	82.2	24.1	10.8
	1321	67	19.4	110.1	32.3	74.9	21.9	7.6	105.0	30.8	72.9	21.4	8.7	98.6	28.9	70.4	20.6	9.8	95.4	28.0	69.2	20.3	10.4	92.3	27.1	68.0	19.9	10.9
	0.09	72	22.2	118.1	34.6	59.1	17.3	7.6	112.5	33.0	57.1	16.7	8.7	106.7	31.3	55.1	16.2	9.9	103.7	30.4	54.1	15.9	10.5	100.7	29.5	53.0	15.5	11.0
	3500	62	16.7	101.5	29.7	100.4	29.4	7.5	96.5	28.3	96.5	28.3	8.6	91.3	26.8	91.3	26.8	9.7	88.7	26.0	88.7	26.0	10.3	86.1	25.2	86.1	25.2	10.9
	1652	67	19.4	113.3	33.2	83.2	24.4	7.6	107.0	31.4	80.8	23.7	8.7	100.8	29.5	78.5	23.0	9.8	97.7	28.6	77.4	22.7	10.4	94.6	27.7	76.3	22.4	11.0
	0.1	72	22.2	122.5	35.9	64.6	18.9	7.7	116.5	34.1	62.5	18.3	8.8	110.2	32.3	60.5	17.7	10.0	107.1	31.4	59.5	17.4	10.5	103.9	30.5	58.4	17.1	11.0
	4400	62	16.7	104.9	30.8	104.9	30.8	7.5	99.8	29.2	99.8	29.2	8.6	94.4	27.7	94.4	27.7	9.8	91.7	26.9	91.7	26.9	10.3	89.0	26.1	89.0	26.1	10.9
	2077	67	19.4	115.7	33.9	93.2	27.3	7.6	109.5	32.1	91.0	26.7	8.7	103.3	30.3	88.8	26.0	9.9	100.2	29.4	87.7	25.7	10.4	97.2	28.5	86.7	25.4	11.0
	0.12	72	22.2	126.4	37.0	71.2	20.9	7.7	120.0	35.2	69.1	20.3	8.8	112.9	33.1	66.9	19.6	10.0	109.3	32.0	65.7	19.3	10.5	105.7	31.0	64.6	18.9	11.1
51012 61012	3400	62	16.7	120.1	35.2	108.2	31.7	9.4	114.1	33.4	105.6	30.9	10.7	107.9	31.6	102.9	30.2	12.1	104.8	30.7	101.6	29.8	12.8	101.7	29.8	100.3	29.4	13.5
	1605	67	19.4	134.7	39.5	91.5	26.8	9.6	128.4	37.6	89.0	26.1	10.9	120.6	35.3	85.9	25.2	12.3	116.7	34.2	84.4	24.7	13.0	112.9	33.1	83.0	24.3	13.7
	0.08	72	22.2	144.5	42.4	72.2	21.2	9.7	137.7	40.4	69.8	20.5	11.0	130.5	38.3	67.3	19.7	12.5	126.8	37.2	66.0	19.4	13.1	123.2	36.1	64.8	19.0	13.8
	4000	62	16.7	123.1	36.1	118.4	34.7	9.5	117.0	34.3	115.8	33.9	10.8	110.7	32.5	110.7	32.5	12.2	107.6	31.5	107.6	31.5	12.9	104.4	30.6	104.4	30.6	13.6
	1888	67	19.4	137.9	40.4	98.8	28.9	9.6	130.2	38.2	95.8	28.1	10.9	122.5	35.9	93.0	27.2	12.3	118.7	34.8	91.5	26.8	13.0	115.0	33.7	90.2	26.4	13.7
	0.09	72	22.2	148.6	43.6	77.0	22.6	9.7	141.3	41.4	74.5	21.8	11.1	133.7	39.2	72.0	21.1	12.5	129.9	38.1	70.7	20.7	13.2	126.1	37.0	69.5	20.4	13.8
	5000	62	16.7	127.3	37.3	127.3	37.3	9.5	121.0	35.5	121.0	35.5	10.8	114.6	33.6	114.6	33.6	12.2	111.3	32.6	111.3	32.6	12.9	108.0	31.7	108.0	31.7	13.6
	2360	67	19.4	140.6	41.2	110.0	32.2	9.7	133.1	39.0	107.2	31.4	11.0	125.5	36.8	104.5	30.6	12.4	121.8	35.7	103.2	30.2	13.1	118.0	34.6	101.9	29.9	13.7
	0.11	72	22.2	153.3	44.9	84.5	24.8	9.8	145.6	42.7	82.0	24.0	11.1	137.6	40.3	79.4	23.3	12.6	133.1	39.0	77.9	22.8	13.2	128.7	37.7	76.5	22.4	13.8
52015 62015	3600	62	16.7	156.2	45.8	127.4	37.3	11.8	148.2	43.4	123.7	36.3	13.3	138.8	40.7	119.4	35.0	14.9	134.2	39.3	117.3	34.4	15.7	129.7	38.0	115.4	33.8	16.5
	1699	67	19.4	169.0	49.5	107.4	31.5	11.9	161.3	47.3	104.2	30.5	13.5	153.2	44.9	100.8	29.6	15.2	149.0	43.7	99.2	29.1	16.0	144.9	42.5	97.5	28.6	16.9
	0.09	72	22.2	182.3	53.4	87.0	25.5	12.0	173.9	51.0	83.8	24.6	13.7	164.9	48.3	80.6	23.6	15.4	160.3	47.0	78.9	23.1	16.3	155.8	45.7	77.3	22.7	17.1
	4800	62	16.7	161.8	47.4	146.4	42.9	11.8	152.9	44.8	142.6	41.8	13.4	144.0	42.2	138.8	40.7	15.0	139.5	40.9	136.9	40.1	15.8	135.2	39.6	135.1	39.6	16.6
	2265	67	19.4	179.4	52.6	122.7	36.0	12.0	170.9	50.1	119.4	35.0	13.7	162.0	47.5	116.0	34.0	15.3	156.7	45.9	114.0	33.4	16.2	151.2	44.3	111.9	32.8	17.0
	0.11	72	22.2	192.8	56.5	96.7	28.3	12.1	183.3	53.7	93.4	27.4	13.8	173.5	50.9	90.0	26.4	15.6	168.6	49.4	88.3	25.9	16.4	163.5	47.9	86.6	25.4	17.3
	6000	62	16.7	166.1	48.7	164.9	48.3	11.9	157.4	46.1	157.4	46.1	13.5	148.4	43.5	148.4	43.5	15.1	144.0	42.2	144.0	42.2	15.9	139.5	40.9	139.5	40.9	16.7
	2832	67	19.4	186.5	54.7	136.9	40.1	12.1	176.0	51.6	133.0	39.0	13.7	164.9	48.3	128.9	37.8	15.4	159.4	46.7	126.9	37.2	16.2	154.1	45.2	125.0	36.6	17.1
	0.13	72	22.2	199.6	58.5	105.4	30.9	12.2	189.6	55.6	102.1	29.9	13.9	179.0	52.5	98.7	28.9	15.6	173.7	50.9	97.0	28.4	16.5	168.4	49.3	95.3	27.9	17.4
52018 62018	5800	62	16.7	186.1	54.6	176.0	51.6	14.3	176.8	51.8	172.1	50.4	16.3	167.2	49.0	167.2	49.0	18.6	162.3	47.6	162.3	47.6	19.6	157.5	46.2	157.5	46.2	20.6
	2737	67	19.4	208.5	61.1	147.3	43.2	14.5	196.7	57.6	142.8	41.9	16.6	184.9	54.2	138.4	40.6	18.8	179.1	52.5	136.2	39.9	19.9	173.5	50.8	134.0	39.3	20.8
	0.09	72	22.2	224.5	65.8	115.3	33.8	14.7	213.3	62.5	111.4	32.7	16.8	201.8	59.1	107.5	31.5	19.0	196.0	57.4	105.6	30.9	20.1	190.2	55.7	103.6	30.4	21.0
	7000	62	16.7	191.6	56.2	191.6	56.2	14.4	182.1	53.4	182.1	53.4	16.4	172.2	50.5	172.2	50.5	18.6	167.3	49.0	167.3	49.0	19.7	162.3	47.6	162.3	47.6	20.7
	3304	67	19.4	212.0	62.1	161.1	47.2	14.6	200.4	58.7	156.8	46.0	16.7	188.9	55.4	152.6	44.7	18.9	183.1	53.7	150.5	44.1	19.9	177.4	52.0	148.4	43.5	20.9
	0.1	72	22.2	230.8	67.7	124.5	36.5	14.8	219.1	64.2	120.6	35.3	16.9	207.0	60.7	116.7	34.2	19.1	200.4	58.7	114.5	33.6	20.1	193.7	56.8	112.4	32.9	21.0
	8200	62	16.7	196.2	57.5	196.2	57.5	14.4	186.4	54.6	186.4	54.6	16.5	176.3	51.7	176.3	51.7	18.7	171.2	50.2	171.2	50.2	19.8	165.4	48.5	165.4	48.5	20.7
	3870	67	19.4	215.4	63.1	174.7	51.2	14.6	204.0	59.8	170.7	50.0	16.7	192.3	56.4	166.5	48.8	18.9	186.5	54.7	164.5	48.2	19.9	180.8	53.0	162.5	47.6	20.9
	0.11	72	22.2	235.6	69.0	133.3	39.1	14.8	223.0	65.4	129.3	37.9	17.0	209.3	61.3	124.9	36.6	19.1	202.6	59.4	122.8	36.0	20.1	196.0	57.4	120.7	35.4	21.1
52020 62020	5900	62	16.7	203.9	59.8	185.2	54.3	15.7	193.5	56.7	180.7	53.0	17.9	183.0	53.6	176.2	51.6	20.4	177.8	52.1	174.0	51.0	21.6	172.5	50.6	171.8	50.3	22.7
	2784	67	19.4	228.6	67.0	156.2	45.8	16.0	218.0	63.9	152.0	44.6	18.2	204.6	60.0	146.8	43.0	20.6	198.1	58.1	144.4	42.3	21.8	191.6	56.2	141.9	41.6	22.9
	0.09	72	22.2	245.3	71.9	123.1	36.1	16.1	233.7	68.5	119.0	34.9	18.4	221.5	64.9	114.8	33.7	20.9	215.3	63.1	112.7	33.0	22.0	209.0	61.3	110.5	32.4	23.1
	7500	62	16.7	211.3	61.9	211.3	61.9	15.8	200.8	58.9	200.8	58.9	18.0	190.0	55.7	190.0	55.7	20.5	184.6	54.1	184.6	54.1	21.7	179.2	52.5	179.2	52.5	22.8
	3540	67	19.4	235.4	69.0	175.0	51.3	16.0	222.5	65.2	170.1	49.9	18.3	209.5	61.4	165.3	48.5	20.7	203.1	59.5	163.0	47.8	21.9	196.8	57.7	160.7	47.1	23.0
	0.11	72	22.2	255.0	74.7	135.5	39.7	16.2	242.4	71.0	131.3	38.5	18.5	229.3	67.2	127.0	37.2	21.0	222.7	65.3	124.9	36.6	22.1	216.1	63.3	122.7	36.0	23.2
	8700	62	16.7	215.9	63.3	215.9	63.3	15.8	205.2	60.2	205.2	60.2	18.1	194.2	56.9	194.2	56.9	20.5	188.7	55.3	188.7	55.3	21.7	183.2	53.7	183.2	53.7	22.8
	4106	67	19.4	238.6	69.9	188.3	55.2	16.1	225.8	66.2	183.6	53.8	18.3	212.9	62.4	179.1	52.5	20.8	206.5	60.5	176.8	51.8	21.9	200.2	58.7	174.5	51.2	23.0
	0.12	72	22.2	260.1	76.2	144.3	42.3	16.3	247.0	72.4	140.0	41.0	18.6	233.4	68.4	135.6	39.8	21.0	225.8	66.2	133.2	39.0	22.1	218.3	64.0	130.9	38.4	23.2
52025 62025	7000	62	16.7	243.3	71.3	220.4	64.6	18.4	231.1	67.7	215.2	63.1	20.9	218.8	64.1	209.9	61.5	23.7	212.5	62.3	207.2	60.7	25.2	206.4	60.5	204.7	60.0	26.5
	3304	67	19.4	272.9	80.0	186.1	54.5	18.7	260.5	76.4	181.2	53.1	21.2	244.9	71.8	175.1	51.3	24.0	237.1	69.5	172.2	50.5	25.4	229.4	67.2	169.3	49.6	26.8
	0.09	72	22.2	292.9	85.9	146.8	43.0	18.8	279.4	81.9	142.0	41.6	21.4	265.1	77.7	137.1	40.2	24.3	257.7	75.5	134.5	39.4	25.7	250.4	73.4	132.0	38.7	27.0
	9000	62	16.7	252.6	74.0	252.6	74.0	18.5	240.3	70.4	240.3	70.4	21.0	227.6	66.7	227.6	66.7	23.8	221.2	64.8	221.2	64.8	25.3	214.8	63.0	214.8	63.0	26.6
	4248	67	19.4	281.5	82.5	209.6	61.4	18.7	266.3	78.1	203.9	59.8	21.3	251.1	73.6	198.3	58.1	24.1	243.5	71.4	195.5	57.3	25.5	236.0	69.2	192.8	56.5	26.8
	0.11	72	22.2	305.2	89.5	162.3	47.6	18.9	290.3	85.1	157.4	46.1	21.6	275.0	80.6	152.3	44.7	24.4	267.1	78.3	149.8	43.9	25.8	259.3	76.0	147.3	43.2	27.1
	11000	62	16.7	260.0	76.2	260.0	76.2	18.6	247.5	72.5	247.5	72.5	21.1	234.4	68.7	234.4	68.7	23.9	227.7	66.8	227.7	66.8	25.3	221.1	64.8	221.1	64.8	26.7
	5191	67	19.4	286.8	84.1	231.7	67.9	18.8	271.8	79.7	226.4	66.4	21.3	256.6	75.2	221.0	64.8	24.2	249.0	73.0	218.4	64.0	25.6	241.5	70.8	215.7	63.2	26.9
	0.12	72	22.2	313.4	91.9	176.8	51.8	19.0	297.9	87.3	171.8	50.4	21.6	280.7	82.3	166.4	48.8	24.5	271.7	79.6	163.5	47.9	25.8	262.9	77.1	160.8	47.1	27.1
52030 62030	8400	62	16.7	310.1	90.9	272.1	79.8	23.1	294.0	86.2	265.0	77.7	26.1	277.7	81.4	257.9	75.6	29.6	269.6	79.0	254.5	74.6	31.3	261.6	76.7	251.1	73.6	33.0
	3964	67	19.4	344.6	101.0	229.9	67.4	23.6	329.2	96.5	223.7	65.6	26.7	313.0	91.7	217.3	63.7	30.2	303.6	89.0	213.6	62.6	31.9	293.3	86.0	209.7	61.4	33.5
	0.09	72	22.2	370.7	108.7	182.7	53.6	23.9	353.6	103.6	176.7	51.8	27.1	335.7	98.4	170.4	49.9	30.5	326.6	95.7	167.2	49.0	32.2	317.3	93.0	164.0	48.1	33.8
	11000	62	16.7	321.7	94.3	314.4	92.2	23.3	305.8	89.6	305.8	89.6	26.3	289.5	84.8	289.5	84.8	29.8	281.2	82.4	281.2	82.4	31.5	273.0	80.0	273.0	80.0	33.2
	5191	67	19.4	361.6	106.0	262.1	76.8	23.8	341.3	100.0	254.4	74.6	26.9	321.0	94.1	246.8	72.3	30.3	311.0	91.2	243.1	71.3	32.0	301.2	88.3	239.5	70.2	33.6
	0.11	72	22.2	388.4	113.8	203.1	59.5	24.1	369.6	108.3	196.8	57.7	27.3	349.9	102.6	190.3	55.8	30.8	339.9	99.6	187.0	54.8	32.4	330.0	96.7	183.8	53.9	34.0
	12000	62	16.7	325.7	95.5	325.7	95.5	23.3	309.7	90.8	309.7	90.8	26.4	293.2	85.9	293.2	85.9	29.9	284.8	83.5	284.8	83.5	31.6	276.5	81.0	276.5	81.0	33.2
	5663	67	19.4	363.8	106.6	272.8	80.0	23.8	343.9	100.8	265.4	77.8	26.9	323.7	94.9	258.0	75.6	30.3	313.8	92.0	254.4	74.6	32.0	304.0	89.1	250.9	73.5	33.6
	0.12	72	22.2	393.3	115.3	210.4	61.7	24.2	374.0	109.6	204.1	59.8	27.4	353.9	103.7	197.5	57.9	30.8	343.7	100.7	194.3	56.9	32.5	333.6	97.8	191.0	56.0	34.0
52035 62035	8400	62	16.7	351.5	103.0	296.7	87.0	26.7	332.7	97.5	288.1	84.4	30.1	313.8	92.0	279.6	82.0	34.1	304.5	89.2	275.5	80.7	36.0	295.3	86.6	271.4	79.6	37.9
	3964	67	19.4	387.2	113.5	251.6	73.7	27.2	370.2	108.5	244.5	71.7	30.8	352.2	103.2	237.1	69.5	34.7	343.0	100.5	233.4	68.4	36.7	333.5	97.7	229.6	67.3	38.5
	0.05	72	22.2	417.2	122.3	202.3	59.3	27.6	398.2	116.7	195.3	57.2	31.2	378.3	110.9	188.0	55.1	35.1	368.2	107.9	184.4	54.1	37.1	357.9	104.9	180.8	53.0	38.9
	12000	62	16.7	369.6	108.3	359.7	105.4	27.0	351.4	103.0	351.4	103.0	30.5	332.7	97.5	332.7	97.5	34.4	323.2	94.7	323.2	94.7	36.4	313.7	92.0	313.7	92.0	38.2
	5663	67	19.4	414.6	121.5	299.8	87.9	27.6	391.5	114.7	291.1	85.3	31.1	368.4	108.0	282.4	82.8	35.0	357.0	104.6	278.1	81.5	36.9	345.8	101.3	273.9	80.3	38.7
	0.08	72	22.2	446.4	130.8	233.2	68.3	28.0	424.6	124.5	225.7	66.2	31.7	402.0	117.8	218.1	63.9	35.6	390.5	114.4	214.3	62.8	37.4	379.0	111.1	210.6	61.7	39.2
	13000	62	16.7	374.3	109.7	374.3	109.7	27.0	356.0	104.3	356.0	104.3	30.5	337.0	98.8	337.0	98.8	34.5	327.4	96.0	327.4	96.0	36.4	317.9	93.2	317.9	93.2	38.3
	6135	67	19.4	417.3	122.3	311.6	91.3	27.6	394.5	115.6	303.0	88.8	31.1	371.6	108.9	294.5	86.3	35.0	360.3	105.6	290.4	85.1	36.9	349.1	102.3	286.3	83.9	38.7
	0.08	72	22.2	451.9	132.4	241.1	70.7	28.1	429.7	125.9	233.7	68.5	31.7	406.5	119.2	226.1	66.3	35.6	394.9	115.7	222.3	65.1	37.5	383.2	112.3	218.5	64.0	39.3

Table 4

Notes:

(1). Ratings are based on 80ºF (26.7ºC) entering air dry bulb temperature.
(2). Capacity is gross capacity which does not include the effect of evaporator fan motor heat.
(3). Direct interpolation is permissible. Do not extrapolate.
* Power input 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 (17) should be referred for the same.

FAN PERFORMANCE - 50Hz

Model APMRV	AirFlowRate			Internal Static Pressure		External Static Pressure - in.wg(Pa)													
						0.2(50)		0.4(100)		0.6(150)		0.8(200)		1(250)		1.2(300)		1.4(350)	
	cfm	FPM	l/s	in.wg	Pa	RPM	kW	RPM	kW	RPM	kW	RPM	kW	RPM	kW	RPM	kW	RPM	kW
51006	1800	284	849	0.3	74	-	-	692	0.27	781	0.33	867	0.41	**946**	**0.49**	-	-	-	-
	2000	316	944	0.36	89	641	0.27	729	0.34	811	0.4	890	0.48	**967**	**0.56**	1042	0.66	-	-
	2200	347	1038	0.43	107	689	0.35	770	0.42	847	0.49	**920**	**0.57**	991	0.66	1061	0.75	1129	0.85
	2400	379	1133	0.52	128	739	0.44	815	0.51	887	0.59	955	0.68	1022	0.76	1087	0.86	1150	0.96
	2600	411	1227	0.61	152	791	0.6	862	0.63	929	0.71	994	0.8	1056	0.89	1117	0.99	-	-

Table 5

Region “I” shows standard motor size 0.75kw
Region “II” shows alternate motor size 1.1kw

Model APMRV	AirFlowRate			Internal Static Pressure		External Static Pressure - in.wg(Pa)													
						0.2(50)		0.4(100)		0.6(150)		0.8(200)		1(250)		1.2(300)		1.4(350)	
	cfm	FPM	l/s	in.wg	Pa	RPM	kW	RPM	kW	RPM	kW	RPM	kW	RPM	kW	RPM	kW	RPM	kW
51008	2600	293	1227	0.31	77	**485**	**0.27**	**564**	**0.36**	638	0.45	708	0.56	-	-	-	-	-	-
	2800	315	1321	0.36	89	**508**	**0.33**	**583**	**0.42**	653	0.51	720	0.62	785	0.74	-	-	-	-
	3000	338	1416	0.41	101	**532**	**0.39**	604	0.48	671	0.58	735	0.69	796	0.81	856	0.94	-	-
	3200	360	1510	0.46	115	**558**	**0.46**	627	0.56	691	0.66	751	0.78	810	0.9	867	1.03	-	-
	3400	383	1604	0.53	131	**585**	0.53	650	0.64	712	0.75	770	0.87	826	0.99	880	1.13	933	1.27
	3600	405	1699	0.59	148	612	0.62	675	0.73	734	0.85	790	0.97	843	1.1	896	1.24	947	1.38

Table 6

Region “I” shows standard motor size 1.1kw
Region “II” shows alternate motor size 1.5kw

Model APMRV	AirFlowRate			Internal Static Pressure		External Static Pressure - in.wg(Pa)																	
						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	FPM	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
51010	2800	315	1321	0.36	89	**468**	**0.29**	**548**	**0.37**	**620**	**0.47**	688	0.57	754	0.68	-	-	-	-	-	-	-	-	-	-
	3000	338	1416	0.41	101	**486**	**0.33**	**563**	**0.43**	**633**	**0.52**	698	0.63	760	0.74	821	0.87	-	-	-	-	-	-	-	-
	3200	360	1510	0.46	115	**506**	**0.39**	**580**	**0.49**	**647**	**0.59**	710	0.7	769	0.81	827	0.94	884	1.07	-	-	-	-	-	-
	3400	383	1604	0.53	131	**527**	**0.45**	**598**	**0.55**	**662**	**0.66**	723	0.77	781	0.89	836	1.02	890	1.15	944	1.3	-	-	-	-
	3600	405	1699	0.59	148	**549**	**0.53**	**617**	**0.63**	679	0.74	738	0.86	794	0.98	847	1.11	899	1.25	950	1.39	1000	1.55	-	-
	3800	428	1793	0.67	166	**572**	**0.61**	**637**	**0.72**	697	0.83	754	0.95	808	1.08	860	1.21	910	1.35	959	1.5	1007	1.65	1055	1.81
	4000	450	1888	0.74	185	**596**	**0.69**	**658**	**0.81**	717	0.93	771	1.06	824	1.19	874	1.32	922	1.47	970	1.61	1016	1.77	1062	1.93
	4200	473	1982	0.82	205	**620**	**0.79**	680	0.91	736	1.04	790	1.17	840	1.31	889	1.45	936	1.59	982	1.74	1027	1.9	1071	2.06
	4400	495	2076	0.91	226	**645**	**0.9**	703	1.03	757	1.16	809	1.29	858	1.43	905	1.58	951	1.73	995	1.88	1039	2.04	1082	2.21

Table 7

Region “I” shows standard motor size 1.5kw
Region “II” shows alternate motor size 2.2kw
Region “III” shows alternate motor size 3.0kw

Model APMRV	AirFlowRate			Internal Static Pressure		External Static Pressure - in.wg(Pa)																	
						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	FPM	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
51012	3400	255	1604	0.25	62	-	-	**679**	**0.48**	778	0.61	872	0.76	964	0.94	1055	1.15	1139	1.39	-	-	-	-	-	-
	3600	270	1699	0.27	68	-	-	**691**	**0.53**	787	0.66	877	0.82	965	0.99	1052	1.19	1138	1.42	-	-	-	-	-	-
	3800	285	1793	0.3	74	**606**	**0.46**	**705**	**0.59**	797	0.73	885	0.88	969	1.05	1052	1.25	1134	1.47	1215	1.72	-	-	-	-
	4000	300	1888	0.33	81	**625**	**0.52**	**721**	**0.65**	810	0.8	894	0.95	976	1.12	1055	1.31	1133	1.53	1211	1.77	1288	2.04	-	-
	4200	315	1982	0.36	89	**645**	**0.58**	**738**	**0.72**	824	0.87	905	1.03	984	1.2	1061	1.39	1136	1.6	1210	1.83	1283	2.09	1357	2.38
	4400	330	2076	0.39	97	**666**	**0.65**	**756**	**0.8**	839	0.95	918	1.12	994	1.29	1068	1.48	1140	1.69	1212	1.91	1282	2.16	1353	2.43
	4600	345	2171	0.43	106	**687**	**0.73**	774	0.89	855	1.04	932	1.21	1006	1.39	1077	1.58	1147	1.78	1216	2.01	1284	2.25	1352	2.51
	4800	360	2265	0.46	115	**710**	**0.82**	794	0.98	873	1.14	947	1.31	1019	1.49	1088	1.69	1156	1.89	1222	2.11	1288	2.35	-	-
	5000	375	2360	0.5	126	**733**	**0.91**	814	1.08	891	1.25	963	1.42	1033	1.61	1100	1.8	1166	2.01	1230	2.23	1294	2.47	-	-

Table 8

Region “I” shows standard motor size 1.5kw
Region “II” shows alternate motor size 2.2kw
Region “III” shows alternate motor size 3.0kw

Model APMRV	AirFlowRate			Internal Static Pressure		External Static Pressure - in.wg(Pa)																	
						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	FPM	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
52015	3600	270	1699	0.24	61	-	-	**678**	**0.51**	**774**	**0.65**	865	0.8	953	0.97	1040	1.16	1126	1.39	1206	1.64	-	-	-	-
	4000	300	1888	0.29	73	**608**	**0.49**	**706**	**0.63**	**796**	**0.77**	881	0.92	962	1.09	1042	1.28	1121	1.49	1198	1.72	1275	1.99	-	-
	4400	330	2076	0.35	87	**647**	**0.62**	**739**	**0.77**	**823**	**0.92**	903	1.08	980	1.26	1054	1.44	1127	1.65	1198	1.87	1269	2.11	1339	2.38
	4800	360	2265	0.42	104	**690**	**0.78**	**776**	**0.94**	**855**	**1.10**	931	1.27	1003	1.45	1073	1.64	1141	1.84	1208	2.06	1273	2.3	1339	2.55
	5200	390	2454	0.5	124	**735**	**0.97**	**815**	**1.14**	891	1.32	962	1.5	1030	1.68	1096	1.88	1161	2.08	1224	2.3	1286	2.53	1347	2.78
	5600	420	2643	0.58	145	**781**	**1.18**	**857**	**1.37**	929	1.56	996	1.75	1061	1.95	1124	2.15	1185	2.36	1245	2.58	1304	2.82	1361	3.06
	6000	450	2831	0.68	168	**829**	**1.43**	901	1.63	968	1.84	1033	2.04	1095	2.25	1155	2.46	1213	2.68	1270	2.91	1326	3.14	1381	3.39

Table 9

Region “I” shows standard motor size 2.2kw
Region “II” shows alternate motor size 3.0kw
Region “III” shows alternate motor size 4.0kw

FAN PERFORMANCE - 50Hz

Model APMRV	AirFlowRate			Internal Static Pressure		External Static Pressure - in.wg(Pa)																	
						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	FPM	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
52018	5800	268	2737	0.24	60	**486**	**0.63**	**570**	**0.82**	645	1.03	716	1.25	783	1.49	849	1.75	913	2.04	977	2.35	1040	2.7	1103	3.09
	6200	286	2926	0.27	67	**505**	**0.74**	**585**	**0.94**	658	1.15	726	1.38	791	1.62	853	1.89	914	2.17	974	2.48	1034	2.81	1093	3.18
	6600	305	3115	0.3	75	**525**	**0.86**	**602**	**1.07**	673	1.29	738	1.53	800	1.78	860	2.04	919	2.33	976	2.63	1032	2.96	1088	3.31
	7000	323	3303	0.34	84	**546**	**1.00**	621	1.22	689	I 1.45	752	1.69	812	1.95	870	2.22	926	2.51	981	2.81	1035	3.14	1088	3.48
	7400	342	3492	0.38	94	**569**	**1.15**	640	1.38	706	1.62	767	1.87	825	2.14	881	2.42	935	2.71	988	3.02	1040	3.34	-	-
	7800	360	3681	0.42	104	**592**	**1.32**	661	1.57	724	1.82	784	II 2.08	840	2.35	894	2.64	946	2.93	997	3.25	-	-	III -	
	8200	378	3870	0.47	116	616	1.51	682	1.77	743	2.03	801	2.3	856	2.58	908	2.87	959	3.18	1008	3.5	-	-	-	-

Table 10

Region “I” shows standard motor size 2.2kw
Region “II” shows alternate motor size 3.0kw
Region “III” shows alternate motor size 4.0kw

Model APMRV	AirFlowRate			Internal Static Pressure		External Static Pressure - in.wg(Pa)																	
						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	FPM	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
52020	5900	272	2784	0.25	62	**491**	**0.66**	**573**	**0.85**	**648**	**1.06**	718	1.28	785	1.52	850	1.78	913	2.07	976	2.38	1038	2.73	1100	3.11
	6300	291	2973	0.28	69	**510**	**0.77**	**589**	**0.97**	**662**	**1.18**	729	1.41	793	1.66	855	1.92	915	2.21	974	2.51	1033	2.85	1091	3.21
	6700	309	3162	0.31	77	**530**	**0.89**	**607**	**1.1**	**676**	**1.33**	741	1.57	803	1.82	863	2.08	920	2.37	977	II 2.68	1033	3	1088	3.35
	7100	328	3350	0.35	86	**552**	**1.03**	**625**	**1.26**	693	1.49	756	1.74	815	1.99	872	2.27	928	2.56	982	2.86	1036	3.19	1088	3.53
	7500	346	3539	0.39	96	**575**	**1.19**	**645**	**1.43**	710	1.67 I	771	1.92	829	2.19	884	2.47	938	2.76	990	3.07	1041	3.4	1092	3.74
	7900	365	3728	0.43	107	**598**	**1.37**	**666**	**1.61**	729	1.87	788	2.13	844	2.41	898	2.69	949	2.99	1000	3.31	1049	3.63	1098	3.98
	8300	383	3917	0.48	119	**622**	**1.57**	688	1.82	748	2.09	806	2.36	860	2.64	912	2.94	962	3.24	1011	3.56	III 1059	3.9	1106	4.24
	8700	402	4106	0.53	132	**647**	**1.78**	710	2.05	769	2.32	824	2.61	877	2.9	928	3.2	977	3.52	1024	3.84	1071	4.18	1116	4.53

Table 11

Region “I” shows standard motor size 3.0kw
Region “II” shows alternate motor size 4.0kw
Region “III” shows alternate motor size 5.5kw

Model APMRV	AirFlowRate			Internal Static Pressure		External Static Pressure - in.wg(Pa)																	
						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	FPM	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
52025	7000	269	3304	0.23	58	**507**	**0.88**	**586**	**1.09**	**658**	**1.32**	724	1.55	787	1.8	847	2.07	904	2.35	960	2.65	1016	2.97	1070	3.31
	7500	288	3540	0.27	68	**533**	**1.05**	**609**	**1.28**	**678**	**1.52**	742	1.77	802	2.03	859	2.3	915	2.59	968	2.89	1021	3.21	1073	3.54
	8000	308	3776	0.31	78	**555**	**1.26**	**626**	**1.50**	**692**	**1.75**	753	2.01	810	2.28	865	2.56	918	2.85	969	II 3.15	1019	3.47	1067	3.81
	8500	327	4012	0.34	85	**580**	**1.47**	**648**	**1.73**	**712**	**1.99**	771	2.26	826	2.54	879	2.83	930	3.13	980	3.45	1028	3.77	1075	4.11
	9000	346	4248	0.39	98	**606**	**1.72**	**671**	**1.98**	**732**	**2.26**	I 789	2.54	843	2.83	895	3.14	944	3.45	992	3.77	1039	4.1	1084	4.44
	9500	365	4484	0.43	108	**633**	**1.99**	**695**	**2.27**	**754**	**2.56**	809	2.85	862	3.16	912	3.47	960	3.79	1006	4.12	1052	4.46	1096	4.82
	10000	385	4719	0.48	120	**661**	**2.29**	**720**	**2.59**	**777**	**2.89**	830	3.2	881	3.51	930	3.84	977	4.17	1022	4.51	1066	4.86	1109	5.22
	10500	404	4955	0.53	133	**689**	**2.63**	**746**	**2.94**	**801**	**3.25**	852	3.57	902	3.9	949	4.24	995	4.58	1039	4.94	III 1082	5.3	1123	5.67
	11000	423	5191	0.59	148	**718**	**3.00**	**772**	**3.32**	**825**	**3.65**	875	3.98	923	4.33	969	4.67	1014	5.03	1056	5.39	1098	5.77	1139	6.14

Table 12

Region “I” shows standard motor size 4.0kw
Region “II” shows alternate motor size 5.5kw
Region “III” shows alternate motor size 7.5kw

Model APMRV	AirFlowRate			Internal Static Pressure		External Static Pressure - in.wg(Pa)																	
						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	FPM	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
52030	8400	277	3964	0.25	64	**427**	**1.00**	**493**	**1.28**	554	1.58	613	1.92	669	2.29	725	2.71	781	3.17	820	3.69	880	4.27	930	4.92
	8800	290	4153	0.28	69	**443**	**1.13**	**506**	**1.42**	566	1.73	622	2.07	676	2.45	730	2.86	783	3.32	822	3.83	882	4.39	932	5.01
	9200	303	4342	0.30	75	**455**	**1.26**	**517**	**1.56**	574	1.87	629	2.22	682	2.60	733	3.01	784	3.46	830	3.96	883	4.50	936	5.10
	9600	316	4531	0.32	81	**469**	**1.39**	**527**	**1.70**	583	2.03	636	2.38	687	2.76	737	3.17	786	3.62	835	4.11	884	4.64	938	5.21
	10000	330	4719	0.35	88	**482**	**1.55**	541	1.87	595	2.21	646	2.56	696	2.95	744	3.36	792	3.81	839	4.30	886	4.82	939	5.38
	10400	343	4908	0.38	95	**497**	**1.72**	554	2.05	606	I 2.40	656	2.76	705	3.15	752	3.57	798	4.02	843	4.50	888	5.02	940	5.58
	10800	356	5097	0.41	102	**512**	**1.90**	567	2.24	618	2.60	667	2.97	714	3.37	759	3.79	804	4.24	848	4.72	892	5.24	942	5.79
	11200	369	5286	0.44	110	**526**	**2.09**	580	2.45	630	2.81	677	3.19	723	3.60	767	4.02	811	4.48	854	4.96	III 896	5.47	943	6.02
	11600	382	5475	0.48	119	543	2.31	595	2.68	644	3.05	690	3.45	735	3.86	II 778	4.29	820	4.75	862	5.24	903	5.75	944	6.30
	12000	396	5663	0.51	128	557	2.53	608	2.91	656	3.29	701	3.69	744	4.11	787	4.55	828	5.01	869	5.11	909	6.02	-	-

Table 13

Region “I” shows standard motor size 4.0kw
Region “II” shows alternate motor size 5.5kw
Region “III” shows alternate motor size 7.5kw

FAN PERFORMANCE - 50Hz

Model APMRV	AirFlowRate			Internal Static Pressure		External Static Pressure - in.wg(Pa)																	
						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	FPM	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
52035	8500	280	4012	0.31	78	**449**	**1.11**	**513**	**1.39**	**572**	**1.70**	630	2.05	686	2.43	741	2.86	796	3.34	846	3.87	895	4.46	950	5.12
	9000	297	4248	0.34	85	**465**	**1.27**	**527**	**1.56**	**584**	**1.88**	639	2.23	692	2.62	745	3.04	797	3.51	848	4.02	897	4.59	952	5.21
	9500	313	4484	0.37	94	**481**	**1.44**	**540**	**1.75**	**596**	**2.08**	648	2.44	700	2.83	750	3.25	799	3.71	849	4.21	898	4.75	953	5.35
	10000	330	4719	0.41	103	**500**	**1.65**	**557**	**1.97**	**610**	**2.31**	661	2.68	710	3.07	759	3.50	806	3.95	853	4.45	900	4.98	954	5.56
	10500	346	4955	0.45	113	**519**	**1.87**	**574**	**2.21**	625	2.56	674	2.93	722	3.33	768	3.76	813	4.22	858	4.71	903	5.24	955	5.81
	11000	363	5191	0.50	124	**540**	**2.13**	**593**	**2.48**	642	2.84	690	3.23	735	3.64	780	4.07	824	4.54	867	5.03	910	5.56	957	6.12
	11500	379	5427	0.54	136	**558**	**2.38**	**609**	**2.75**	657	3.13	703	3.52	747	3.94	790	4.38	833	4.85	875	5.34	916	5.87	959	6.42
	12000	396	5663	0.60	149	**581**	**2.70**	630	3.08	676	3.47	721	3.88	763	4.31	805	4.76	846	5.23	887	5.73	926	6.26	-	-
	12500	412	5899	0.65	163	**600**	**3.01**	648	3.41	693	3.81	736	4.23	778	4.67	818	5.13	858	5.61	897	6.12	-	-	-	-
	13000	429	6135	0.71	177	622	3.37	668	3.78	712	4.20	754	4.63	764	5.08	833	5.55	872	6.04	910	6.50	-	-	-	-

Table 14

Region “I” shows standard motor size 5.5kw
Region “II” shows alternate motor size 7.5kw

Notes:

(1). For data specified in **BOLD,** kindly consult for drive set selection.
(2). Internal static pressure is based on pressure drops through the evaporator coil, fan casing & 1”thk. washable flat filter.
(3). USM option for region III, please consult SKM.

FAN PERFORMANCE - 60Hz

Model APMRV	AirFlowRate			Internal Static Pressure		External Static Pressure - in.wg(Pa)													
						0.2(50)		0.4(100)		0.6(150)		0.8(200)		1(250)		1.2(300)		1.4(350)	
	cfm	FPM	l/s	in.wg	Pa	RPM	kW	RPM	kW	RPM	kW	RPM	kW	RPM	kW	RPM	kW	RPM	kW
61006	1800	284	849	0.3	74	-	-	692	0.27	781	0.33	867	0.41	946	0.49	-	-	II	-
	2000	316	944	0.36	89	641	0.27	729	0.34	811	0.4	890	0.48	967	0.56	1042	0.66		-
	2200	347	1038	0.43	107	689	0.35	770	0.42	847	0.49	920	0.57	991	0.66	1061	0.75	1129	0.85
	2400	379	1133	0.52	128	739	0.44	815	0.51	887	0.59	955	0.68	1022	0.76	1087	0.86	1150	0.96
	2600	411	1227	0.61	152	791	0.6	862	0.63	929	0.71	994	0.8	1056	0.89	1117	0.99	-	-

I

Table 15

Region “I” shows standard motor size 0.75kw
Region “II” shows alternate motor size 1.1kw

Model APMRV	AirFlowRate			Internal Static Pressure		External Static Pressure - in.wg(Pa)													
						0.2(50)		0.4(100)		0.6(150)		0.8(200)		1(250)		1.2(300)		1.4(350)	
	cfm	FPM	l/s	in.wg	Pa	RPM	kW	RPM	kW	RPM	kW	RPM	kW	RPM	kW	RPM	kW	RPM	kW
61008	2600	293	1227	0.31	77	**485**	**0.27**	**564**	**0.36**	638	0.45	708	0.56	-	-	-	-	-	-
	2800	315	1321	0.36	89	**508**	**0.33**	**583**	**0.42**	653	0.51	720	0.62	785	0.74	-	-	-	-
	3000	338	1416	0.41	101	**532**	**0.39**	**604**	**0.48**	671	0.58	735	0.69	796	0.81	856	0.94	-	-
	3200	360	1510	0.46	115	**558**	**0.46**	627	0.56	691	0.66	751	0.78	810	0.9	867	1.03	-	-
	3400	383	1604	0.53	131	**585**	**0.53**	650	0.64	712	0.75	770	0.87	826	0.99	880	1.13	933	1.27
	3600	405	1699	0.59	148	612	0.62	675	0.73	734	0.85	790	0.97	843	1.1	896	1.24	947	1.38

Table 16

Region “I” shows standard motor size 1.1kw
Region “II” shows alternate motor size 1.5kw

Model APMRV	AirFlowRate			Internal Static Pressure		External Static Pressure - in.wg(Pa)																	
						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	FPM	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
61010	2800	315	1321	0.36	89	**468**	**0.29**	**548**	**0.37**	**620**	**0.47**	688	0.57	754	0.68	-	-	-	-	-	-	-	-	-	-
	3000	338	1416	0.41	101	**486**	**0.33**	**563**	**0.43**	**633**	**0.52**	698	0.63	760	0.74	821	0.87	-	-	-	-	II	-	-	-
	3200	360	1510	0.46	115	**506**	**0.39**	**580**	**0.49**	**647**	**0.59**	710	0.7	769	0.81	827	0.94	884	1.07	-	-		-	-	-
	3400	383	1604	0.53	131	**527**	**0.45**	**598**	**0.55**	**662**	**0.66**	723	0.77	781	0.89	836	1.02	890	1.15	944	1.3	-	-	-	III
	3600	405	1699	0.59	148	**549**	**0.53**	**617**	**0.63**	679	0.74	738	0.86	794	0.98	847	1.11	899	1.25	950	1.39	1000	1.55	-	-
	3800	428	1793	0.67	166	**572**	**0.61**	**637**	**0.72**	697	0.83	754	0.95	808	1.08	860	1.21	910	1.35	959	1.5	1007	1.65	1055	1.81
	4000	450	1888	0.74	185	**596**	**0.69**	**658**	**0.81**	717	0.93	771	1.06	824	1.19	874	1.32	922	1.47	970	1.61	1016	1.77	1062	1.93
	4200	473	1982	0.82	205	**620**	**0.79**	680	0.91	736	1.04	790	1.17	840	1.31	889	1.45	936	1.59	982	1.74	1027	1.9	1071	2.06
	4400	495	2076	0.91	226	**645**	**0.9**	703	1.03	757	1.16	809	1.29	858	1.43	905	1.58	951	1.73	995	1.88	1039	2.04	1082	2.21

I

Table 17

Region “I” shows standard motor size 1.5kw
Region “II” shows alternate motor size 2.2kw
Region “III” shows alternate motor size 3.0kw

Model APMRV	AirFlowRate			Internal Static Pressure		External Static Pressure - in.wg(Pa)																	
						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	FPM	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
62012	3400	255	1604	0.25	62	**-**	**-**	**679**	**0.48**	778	0.61	872	0.76	964	0.94	1055	1.15	1139	1.39	-	-	-	-	-	-
	3600	270	1699	0.27	68	**-**	**-**	**691**	**0.53**	787	0.66	877	0.82	965	0.99	1052	1.19	1138	1.42	-	-	-	-	-	III
	3800	285	1793	0.3	74	**606**	**0.46**	**705**	**0.59**	797	0.73	885	0.88	969	1.05	1052	1.25	1134	1.47	1215	1.72	-	-	-	
	4000	300	1888	0.33	81	**625**	**0.52**	**721**	**0.65**	810	0.8	894	0.95	976	1.12	1055	1.31	1133	1.53	1211	1.77	1288	2.04	-	-
	4200	315	1982	0.36	89	**645**	**0.58**	**738**	**0.72**	824	0.87	905	1.03	984	1.2	1061	1.39	1136	1.6	1210	1.83	1283	2.09	1357	2.38
	4400	330	2076	0.39	97	**666**	**0.65**	**756**	**0.8**	839	0.95	918	1.12	994	1.29	1068	1.48	1140	1.69	1212	1.91	1282	2.16	1353	2.43
	4600	345	2171	0.43	106	**687**	**0.73**	**774**	**0.89**	855	1.04	932	1.21	1006	1.39	1077	1.58	1147	1.78	1216	2.01	1284	2.25	1352	2.51
	4800	360	2265	0.46	115	**710**	**0.82**	794	0.98	873	1.14	947	1.31	1019	1.49	1088	1.69	1156	1.89	1222	2.11	1288	2.35	-	-
	5000	375	2360	0.5	126	**733**	**0.91**	814	1.08	891	1.25	963	1.42	1033	1.61	1100	1.8	1166	2.01	1230	2.23	1294	2.47	-	-

I II

Table 18

Region “I” shows standard motor size 1.5kw
Region “II” shows alternate motor size 2.2kw
Region “III” shows alternate motor size 3.0kw

FAN PERFORMANCE - 60Hz

Model APMRV	AirFlowRate			Internal Static Pressure		External Static Pressure - in.wg(Pa)																	
						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	FPM	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
62015	3600	270	1699	0.24	61	-	-	678	0.51	774	0.65	865	0.8	953	0.97	1040	1.16	1126	1.39	1206	1.64	-	-	-	-
	4000	300	1888	0.29	73	608	0.49	706	0.63	796	0.77	881	0.92	962	1.09	1042	1.28	1121	1.49	1198	1.72	1275	1.99	-	-
	4400	330	2076	0.35	87	647	0.62	739	0.77	823	0.92	903	1.08	980	1.26	1054	1.44	1127	1.65	1198	1.87	1269	2.11	1339	2.38
	4800	360	2265	0.42	104	690	0.78	776	0.94	855	1.10	931	1.27	1003	1.45	1073	1.64	1141	1.84	1208	2.06	1273	2.3	1339	2.55
	5200	390	2454	0.5	124	735	0.97	815	1.14	891	1.32	962	1.5	1030	1.68	1096	1.88	1161	2.08	1224	2.3	1286	2.53	1347	2.78
	5600	420	2643	0.58	145	781	1.18	857	1.37	929	1.56	996	1.75	1061	1.95	1124	2.15	1185	2.36	1245	2.58	1304	2.82	1361	3.06
	6000	450	2831	0.68	168	829	1.43	901	1.63	968	1.84	1033	2.04	1095	2.25	1155	2.46	1213	2.68	1270	2.91	1326	3.14	1381	3.39

Table 19

Region “I” shows standard motor size 2.2kw
Region “II” shows alternate motor size 3.0kw
Region “III” shows alternate motor size 4.0kw

Model APMRV	AirFlowRate			Internal Static Pressure		External Static Pressure - in.wg(Pa)																	
						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	FPM	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
62018	5800	268	2737	0.24	60	486	0.63	570	0.82	645	1.03	716	1.25	783	1.49	849	1.75	913	2.04	977	2.35	1040	2.7	1103	3.09
	6200	286	2926	0.27	67	505	0.74	585	0.94	658	1.15	726	1.38	791	1.62	853	1.89	914	2.17	974	2.48	1034	2.81	1093	3.18
	6600	305	3115	0.3	75	525	0.86	602	1.07	673	1.29	738	1.53	800	1.78	860	2.04	919	2.33	976	2.63	1032	2.96	1088	3.31
	7000	323	3303	0.34	84	546	1.00	621	1.22	689	1.45	752	1.69	812	1.95	870	2.22	926	2.51	981	2.81	1035	3.14	1088	3.48
	7400	342	3492	0.38	94	569	1.15	640	1.38	706	1.62	767	1.87	825	2.14	881	2.42	935	2.71	988	3.02	1040	3.34	-	-
	7800	360	3681	0.42	104	592	1.32	661	1.57	724	1.82	784	2.08	840	2.35	894	2.64	946	2.93	997	3.25	-	-	-	-
	8200	378	3870	0.47	116	616	1.51	682	1.77	743	2.03	801	2.3	856	2.58	908	2.87	959	3.18	1008	3.5	-	-	-	-

Table 20

Region “I” shows standard motor size 2.2kw
Region “II” shows alternate motor size 3.0kw
Region “III” shows alternate motor size 4.0kw

Model APMRV	AirFlowRate			Internal Static Pressure		External Static Pressure - in.wg(Pa)																	
						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	FPM	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
62020	5900	272	2784	0.25	62	491	0.66	573	0.85	648	1.06	718	1.28	785	1.52	850	1.78	913	2.07	976	2.38	1038	2.73	1100	3.11
	6300	291	2973	0.28	69	510	0.77	589	0.97	662	1.18	729	1.41	793	1.66	855	1.92	915	2.21	974	2.51	1033	2.85	1091	3.21
	6700	309	3162	0.31	77	530	0.89	607	1.10	676	1.33	741	1.57	803	1.82	863	2.08	920	2.37	977	2.68	1033	3	1088	3.35
	7100	328	3350	0.35	86	552	1.03	625	1.26	693	1.49	756	1.74	815	1.99	872	2.27	928	2.56	982	2.86	1036	3.19	1088	3.53
	7500	346	3539	0.39	96	575	1.19	645	1.43	710	1.67	771	1.92	829	2.19	884	2.47	938	2.76	990	3.07	1041	3.4	1092	3.74
	7900	365	3728	0.43	107	598	1.37	666	1.61	729	1.87	788	2.13	844	2.41	898	2.69	949	2.99	1000	3.31	1049	3.63	1098	3.98
	8300	383	3917	0.48	119	622	1.57	688	1.82	748	2.09	806	2.36	860	2.64	912	2.94	962	3.24	1011	3.56	1059	3.9	1106	4.24
	8700	402	4106	0.53	132	647	1.78	710	2.05	769	2.32	824	2.61	877	2.9	928	3.2	977	3.52	1024	3.84	1071	4.18	1116	4.53

Table 21

Region “I” shows standard motor size 3.0kw
Region “II” shows alternate motor size 4.0kw
Region “III” shows alternate motor size 5.5kw

Model APMRV	AirFlowRate			Internal Static Pressure		External Static Pressure - in.wg(Pa)																	
						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	FPM	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
62025	7000	269	3304	0.23	57.5	507	0.88	586	1.09	658	1.32	724	1.55	787	1.8	847	2.07	904	2.35	960	2.65	1016	2.97	1070	3.31
	7500	288	3540	0.27	67.5	533	1.05	609	1.28	678	1.52	742	1.77	802	2.03	859	2.3	915	2.59	968	2.89	1021	3.21	1073	3.54
	8000	308	3775	0.31	76	555	1.26	626	1.50	692	1.75	753	2.01	810	2.28	865	2.56	918	2.85	969	3.15	1019	3.47	1067	3.81
	8500	327	4011	0.34	86	580	1.47	648	1.73	712	1.99	771	2.26	826	2.54	879	2.83	930	3.13	980	3.45	1028	3.77	1075	4.11
	9000	346	4247	0.39	96	606	1.72	671	1.98	732	2.26	789	2.54	843	2.83	895	3.14	944	3.45	992	3.77	1039	4.1	1084	4.44
	9500	365	4483	0.43	108	633	1.99	695	2.27	754	2.56	809	2.85	862	3.16	912	3.47	960	3.79	1006	4.12	1052	4.46	1096	4.82
	10000	385	4719	0.48	120	661	2.29	720	2.59	777	2.89	830	3.2	881	3.51	930	3.84	977	4.17	1022	4.51	1066	4.86	1109	5.22
	10500	404	4955	0.53	133	689	2.63	746	2.94	801	3.25	852	3.57	902	3.9	949	4.24	995	4.58	1039	4.94	1082	5.3	1123	5.67
	11000	423	5191	0.59	147	718	3.00	772	3.32	825	3.65	875	3.98	923	4.33	969	4.67	1014	5.03	1056	5.39	1098	5.77	1139	6.14

Table 22

Region “I” shows standard motor size 4.0kw
Region “II” shows alternate motor size 5.5kw
Region “III” shows alternate motor size 7.5kw

FAN PERFORMANCE - 60Hz

Model APMRV	AirFlowRate			Internal Static Pressure		External Static Pressure - in.wg(Pa)																	
						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	FPM	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
62030	8400	277	3964	0.25	64	**427**	**1.00**	**493**	**1.28**	**554**	**1.58**	613	1.92	669	2.29	725	2.71	781	3.17	820	3.69	**880**	**4.27**	930	4.92
	8800	290	4153	0.28	69	**443**	**1.13**	**506**	**1.42**	**566**	**1.73**	622	2.07	676	2.45	730	2.86	783	3.32	822	3.83	**882**	**4.39**	932	5.01
	9200	303	4342	0.30	75	**455**	**1.26**	**517**	**1.56**	**574**	**1.87**	629	2.22	682	2.60	733	3.01	784	3.46	830	3.96	**883**	**4.50**	936	5.10
	9600	316	4531	0.32	81	**469**	**1.39**	**527**	**1.70**	**583**	**2.03**	636	2.38	687	2.76	737	3.17	786	3.62	835	4.11	884	4.64	938	5.21
	10000	330	4719	0.35	88	**482**	**1.55**	**541**	**1.87**	595	2.21	646	2.56	696	2.95	744	3.36	792	3.81	839	4.30	886	4.82	939	5.38
	10400	343	4908	0.38	95	**497**	**1.72**	**554**	**2.05**	606	2.40	656	2.76	705	3.15	752	3.57	798	4.02	843	4.50	888	5.02	940	5.58
	10800	356	5097	0.41	102	**512**	**1.90**	**567**	**2.24**	618	2.60	667	2.97	714	3.37	759	3.79	804	4.24	848	4.72	892	5.24	942	5.79
	11200	369	5286	0.44	110	**526**	**2.09**	**580**	**2.45**	630	2.81	677	3.19	723	3.60	767	4.02	811	4.48	854	4.96	896	5.47	943	6.02
	11600	382	5475	0.48	119	**543**	**2.31**	595	2.68	644	3.05	690	3.45	735	3.86	778	4.29	**820**	**4.75**	862	5.24	903	5.75	944	6.30
	12000	396	5663	0.51	128	**557**	**2.53**	608	2.91	656	3.29	701	3.69	744	4.11	787	4.55	**828**	**5.01**	869	5.11	909	6.02	-	-

Table 23

Region “I” shows standard motor size 4.0kw
Region “II” shows alternate motor size 5.5kw
Region “III” shows alternate motor size 7.5kw

Model APMRV	AirFlowRate			Internal Static Pressure		External Static Pressure - in.wg(Pa)																	
						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	FPM	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
62035	8500	280	4012	0.31	78	**449**	**1.11**	**513**	**1.39**	**572**	**1.70**	**630**	**2.05**	686	2.43	741	2.86	796	3.34	846	3.87	**895**	**4.46**	950	5.12
	9000	297	4248	0.34	85	**465**	**1.27**	**527**	**1.56**	**584**	**1.88**	**639**	**2.23**	692	2.62	745	3.04	797	3.51	848	4.02	897	4.59	952	5.21
	9500	313	4484	0.37	94	**481**	**1.44**	**540**	**1.75**	**596**	**2.08**	**648**	**2.44**	700	2.83	750	3.25	799	3.71	849	4.21	898	4.75	953	5.35
	10000	330	4719	0.41	103	**500**	**1.65**	**557**	**1.97**	**610**	**2.31**	661	2.68	710	3.07	759	3.50	806	3.95	853	4.45	900	4.98	954	5.56
	10500	346	4955	0.45	113	**519**	**1.87**	**574**	**2.21**	**625**	**2.56**	674	2.93	722	3.33	768	3.76	813	4.22	858	4.71	903	5.24	955	5.81
	11000	363	5191	0.50	124	**540**	**2.13**	**593**	**2.48**	**642**	**2.84**	690	3.23	735	3.64	780	4.07	**824**	**4.54**	867	5.03	910	5.56	957	6.12
	11500	379	5427	0.54	136	**558**	**2.38**	**609**	**2.75**	657	3.14	703	3.52	747	3.94	790	4.38	833	4.85	875	5.34	916	5.87	959	6.42
	12000	396	5663	0.60	149	**581**	**2.70**	**630**	**3.08**	676	3.47	721	3.88	763	4.31	**805**	**4.76**	846	5.23	887	5.73	926	6.26	-	-
	12500	412	5899	0.65	163	**600**	**3.01**	**648**	**3.41**	693	3.81	736	4.23	**778**	**4.67**	**818**	**5.13**	858	5.61	897	6.12	-	-	-	-
	13000	429	6135	0.71	177	**622**	**3.37**	668	3.78	712	4.20	**754**	**4.63**	**764**	**5.08**	833	5.55	872	6.04	910	6.50	-	-	-	-

Table 24

Region “I” shows standard motor size 5.5kw
Region “II” shows alternate motor size 7.5kw

Notes:

(1). For data specified in **BOLD,** kindly consult for drive set selection.
(2). Internal static pressure is based on pressure drops through the evaporator coil, fan casing & 1”thk. washable flat filter.
(3). USM option for region III, please consult SKM.

ELECTRICAL DATA

Model APMR	Unit Characteristic		Compressor		Condenser Fan Motor		Evaporator Fan Motor		
	MFA	MCA	QTY	RLA	QTY	FLA	QTY	FLA	LRA
51006 V	40	24	1	13	1	6	1	1.7	10.2
51008 V	40	21	1	13	1	2.3	1	2.4	16.2
51010 V	80	42	1	29	1	2.3	1	3.3	24.9
51012 V	80	52	1	29	2	6	1	3.3	24.9
52015 V	63	46	2	13	2	6	1	4.7	37.8
52018 V	125	75	2	29	2	2.3	1	4.7	37.8
52020 V	125	77	2	29	2	2.3	1	6.2	44.7
52025 V	125	81	2	29	3	2.3	1	8.3	58.9
52030 V	160	103	2	38	4	2.3	1	8.3	58.9
52035 V	60	106	2	38	3	3.2	1	10.7	92.0

Table 25

Model APMR	Unit Characteristic		Compressor		Condenser Fan Motor		Evaporator Fan Motor		
	MFA	MCA	QTY	RLA	QTY	FLA	QTY	FLA	LRA
61006 V	40	25	1	13	1	6	1	1.9	12.0
61008 V	40	22	1	13	1	2.3	1	2.5	17.3
61010 V	80	42	1	29	1	2.3	1	3.2	26.0
61012 V	80	52	1	29	2	6	1	3.2	26.1
62015 V	63	46	2	13	2	6	1	4.5	36.0
62018 V	125	75	2	29	2	2.3	1	4.5	36.0
62020 V	125	76	2	29	2	2.3	1	6.1	43.6
62025 V	125	81	2	29	3	2.3	1	8.1	57.2
62030 V	160	103	2	38	4	2.3	1	8.1	57.2
62035 V	160	107	2	38	3	3.2	1	11.1	95.5

Table 26

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.

RLA Rated Load Amps. (at worst operating condition)

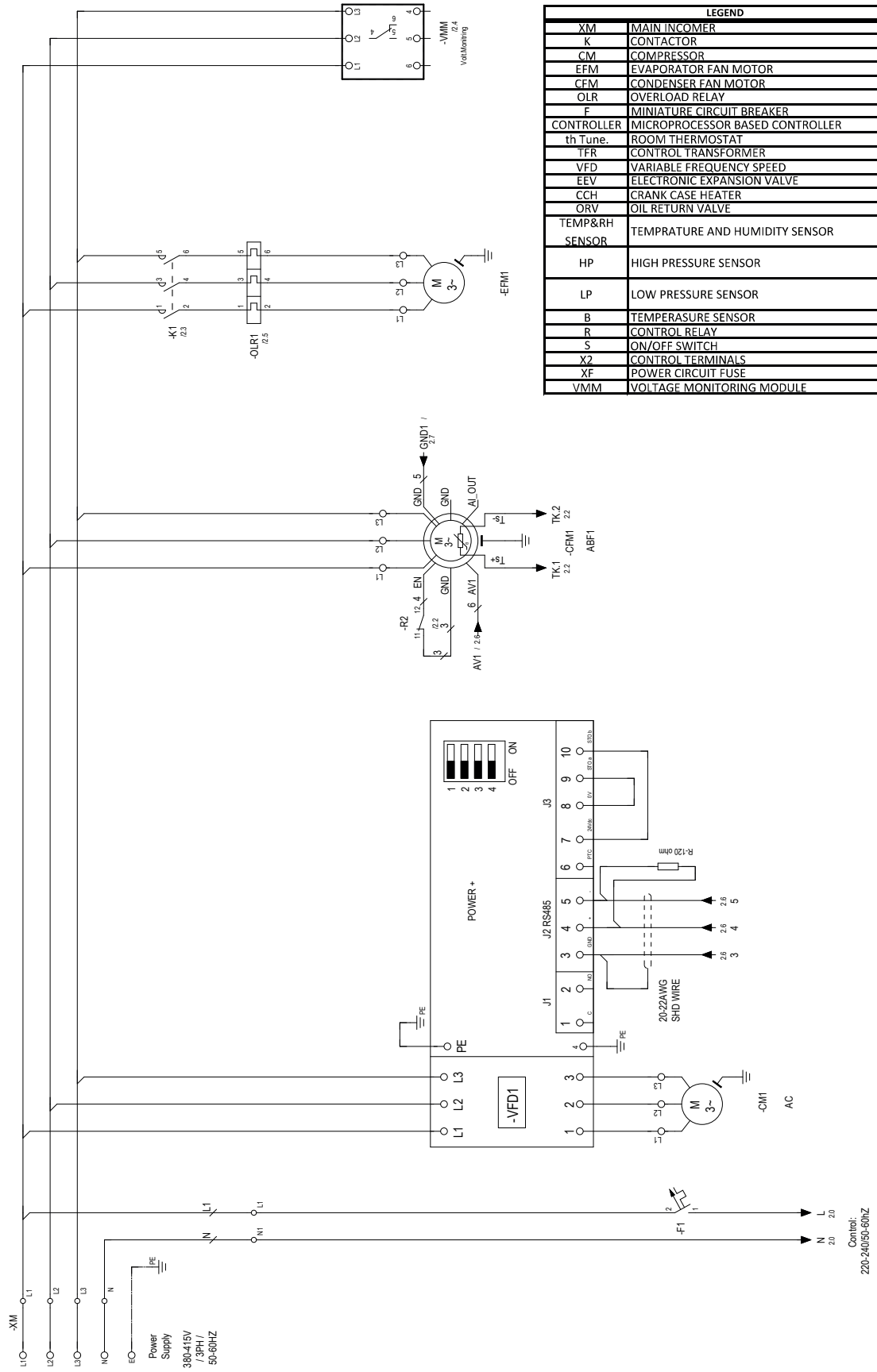
LRA Locked Rotor Amps

FLA Full Load Amps

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

Typical Wiring Diagram

(Single Circuit)



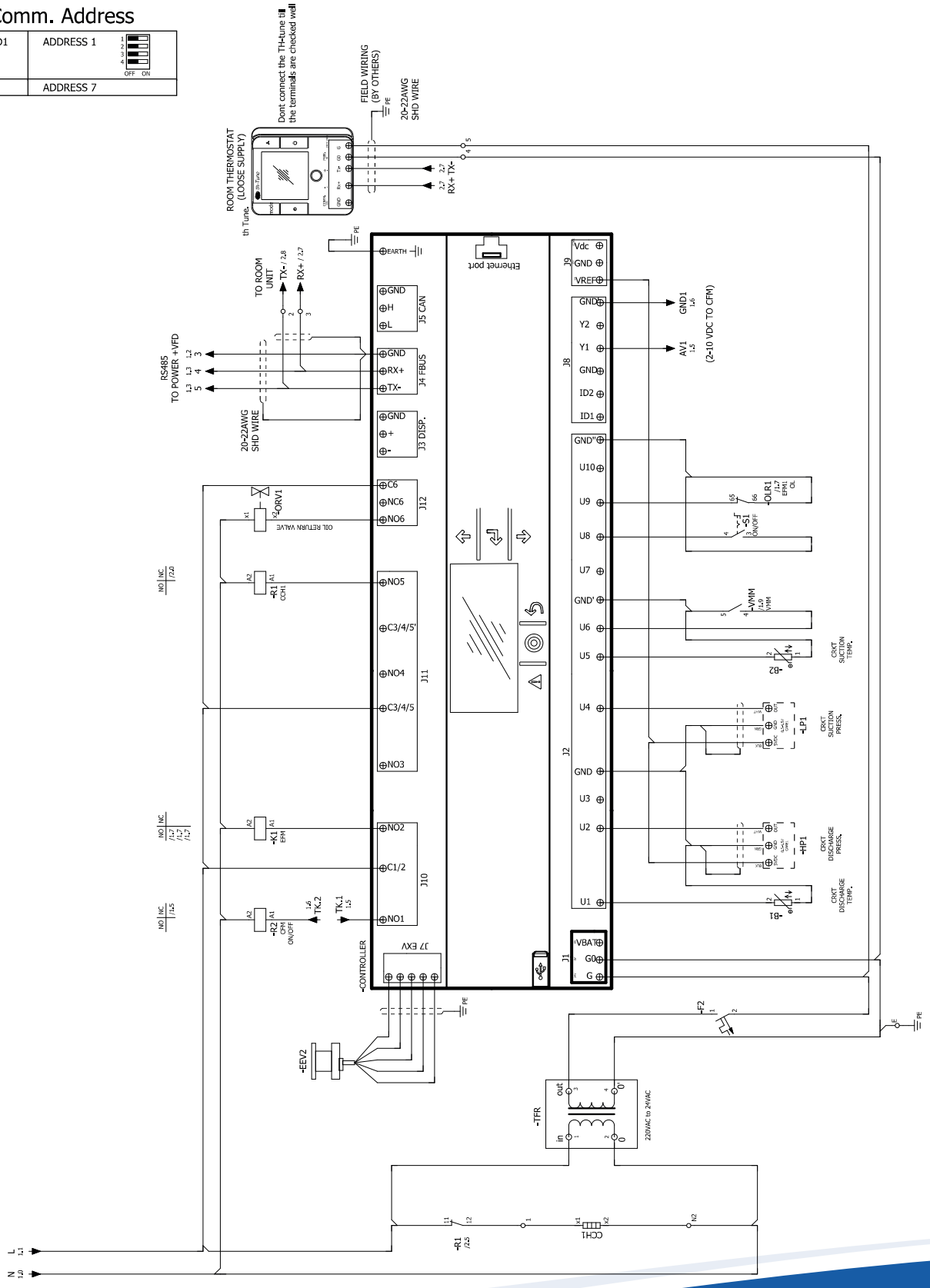
LEGEND	
XM	MAIN INCOMER
K	CONTACTOR
CM	COMPRESSOR
EFM	EVAPORATOR FAN MOTOR
CFM	CONDENSER FAN MOTOR
OLR	OVERLOAD RELAY
F	MINIATURE CIRCUIT BREAKER
CONTROLLER	MICROPROCESSOR BASED CONTROLLER
th Tune.	ROOM THERMOSTAT
TFR	CONTROL TRANSFORMER
VFD	VARIABLE FREQUENCY SPEED
EEV	ELECTRONIC EXPANSION VALVE
CCH	CRANK CASE HEATER
ORV	OIL RETURN VALVE
TEMP&RH SENSOR	TEMPRATURE AND HUMIDITY SENSOR
HP	HIGH PRESSURE SENSOR
LP	LOW PRESSURE SENSOR
B	TEMPERASURE SENSOR
R	CONTROL RELAY
S	ON/OFF SWITCH
X2	CONTROL TERMINALS
XF	POWER CIRCUIT FUSE
VMM	VOLTAGE MONITORING MODULE

Typical Wiring Diagram

(Single Circuit)

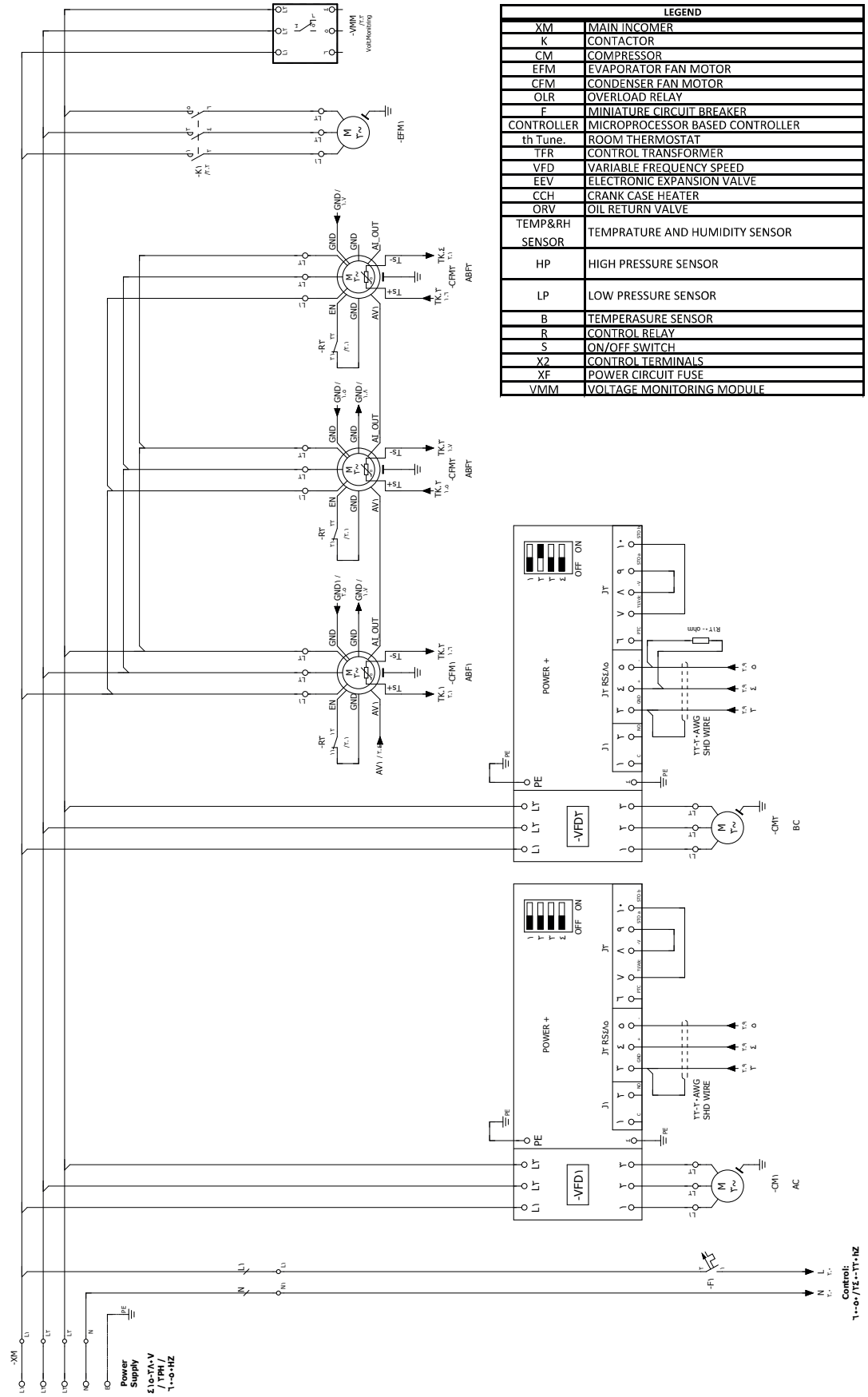
Serial Comm. Address

COMPRESSOR VFD1	ADDRESS 1
ROOM UNIT	ADDRESS 7



Typical Wiring Diagram

(Two Circuit)



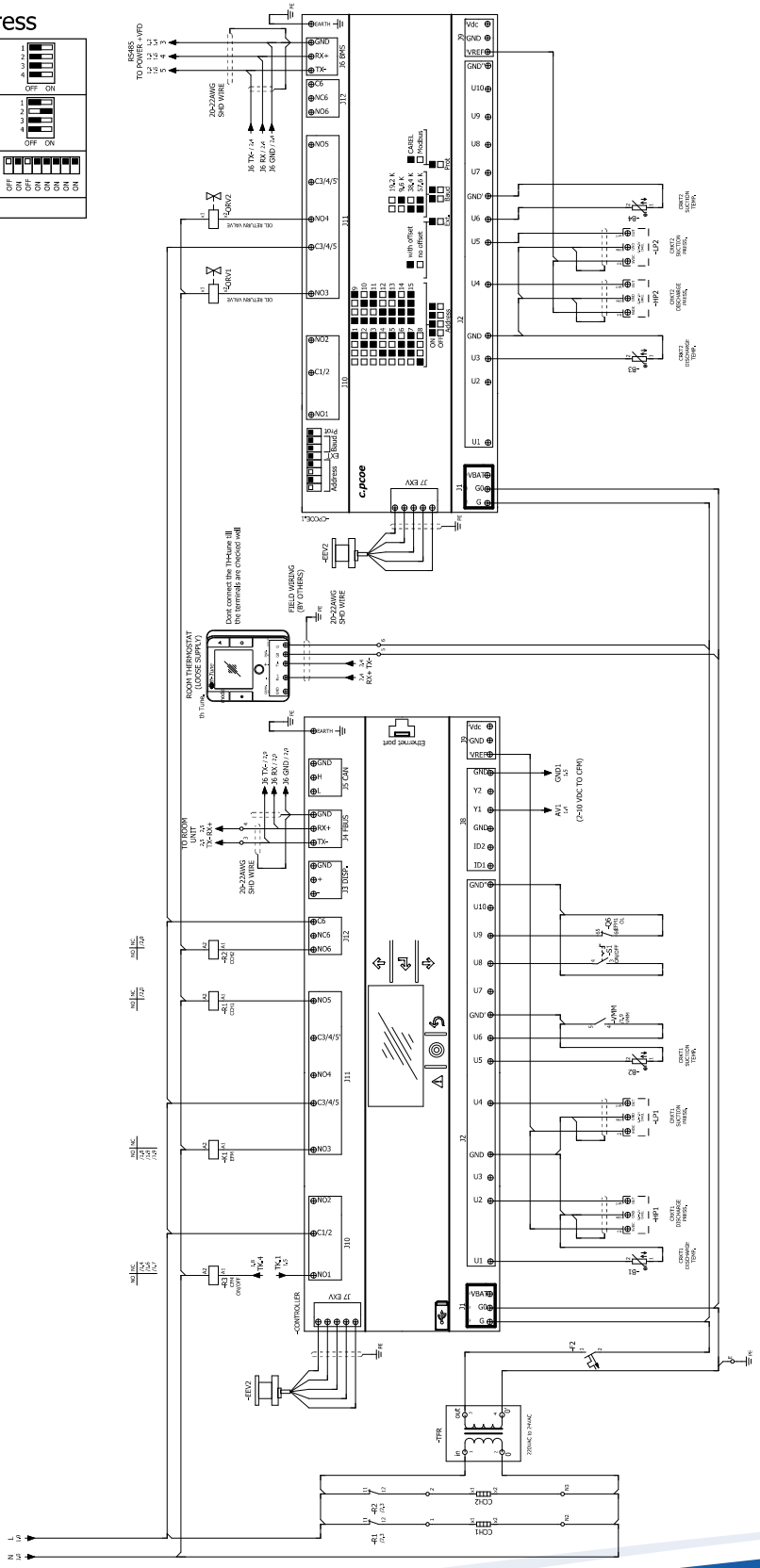
LEGEND	
XM	MAIN INCOMER
K	CONTACTOR
CM	COMPRESSOR
EFM	EVAPORATOR FAN MOTOR
CFM	CONDENSER FAN MOTOR
OLR	OVERLOAD RELAY
F	MINIATURE CIRCUIT BREAKER
CONTROLLER	MICROPROCESSOR BASED CONTROLLER
th Tune.	ROOM THERMOSTAT
TFR	CONTROL TRANSFORMER
VFD	VARIABLE FREQUENCY SPEED
EEV	ELECTRONIC EXPANSION VALVE
CCH	CRANK CASE HEATER
ORV	OIL RETURN VALVE
TEMP&RH SENSOR	TEMPRATURE AND HUMIDITY SENSOR
HP	HIGH PRESSURE SENSOR
LP	LOW PRESSURE SENSOR
B	TEMPERASURE SENSOR
R	CONTROL RELAY
S	ON/OFF SWITCH
X2	CONTROL TERMINALS
XF	POWER CIRCUIT FUSE
VMM	VOLTAGE MONITORING MODULE

Typical Wiring Diagram

(Two Circuit)

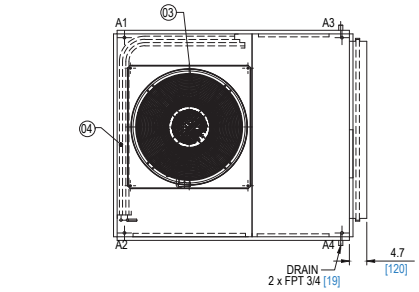
Serial Comm. Address

COMPRESSOR VFD1	ADDRESS 1
COMPRESSOR VFD2	ADDRESS 3
CPCOE	ADDRESS 5
ROOM UNIT	ADDRESS 7



Dimensional Data

APMR-V Model - 51006/61006, 51008/61008 & 51010/61010



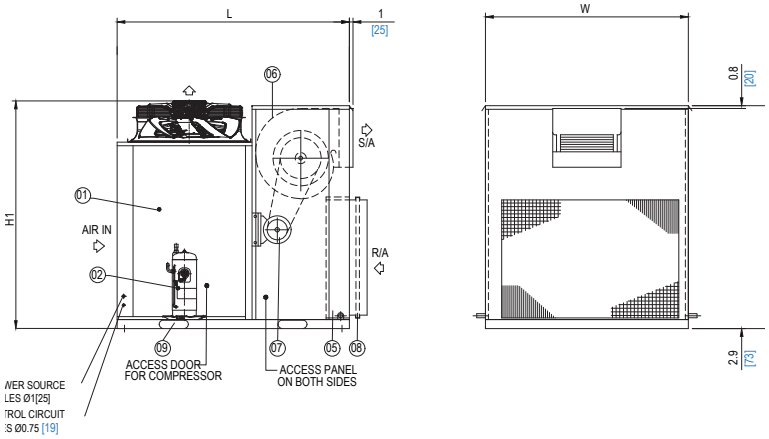
LEGEND

01- CONTROL PANEL
02- SCROLL COMPRESSOR
03- CONDENSER FAN
04- CONDENSER COIL
05- EVAPORATOR COIL
06- EVAPORATOR FAN
07- EVAPORATOR FAN MOTOR
08- 1" THK FLAT FILTER
09- FORK LIFT PROVISION

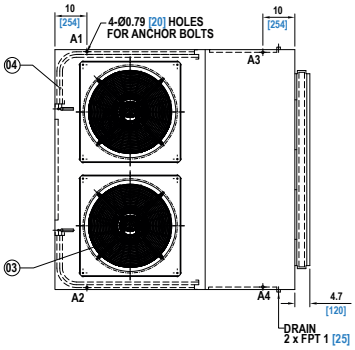
ALL DIMENSIONS ARE IN INCHES[MM]

MODEL APMRV	DIMENSIONS			
	L	H	H1	W
51006 / 61006	60	50.6	60.6	47
	[1530]	[1284]	[1538]	[1194]
51008 / 61008	63.0	60.5	61.7	47
	[1600]	[1536]	[1568]	[1194]
51010 / 61010	63.0	60.5	61.7	55
	[1600]	[1536]	[1568]	[1397]

Table 27



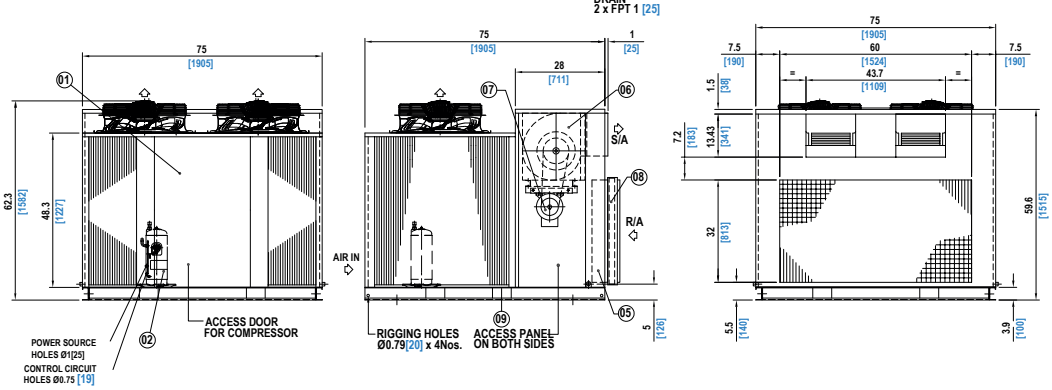
APMR-V Model - 52012/62012 & 52015/62015



LEGEND

01- CONTROL PANEL
02- SCROLL COMPRESSOR
03- CONDENSER FAN
04- CONDENSER COIL
05- EVAPORATOR COIL
06- EVAPORATOR FAN
07- EVAPORATOR FAN MOTOR
08- 1" THK FLAT FILTER
09- FORK LIFT PROVISION

ALL DIMENSIONS ARE IN INCHES[MM]



Note :

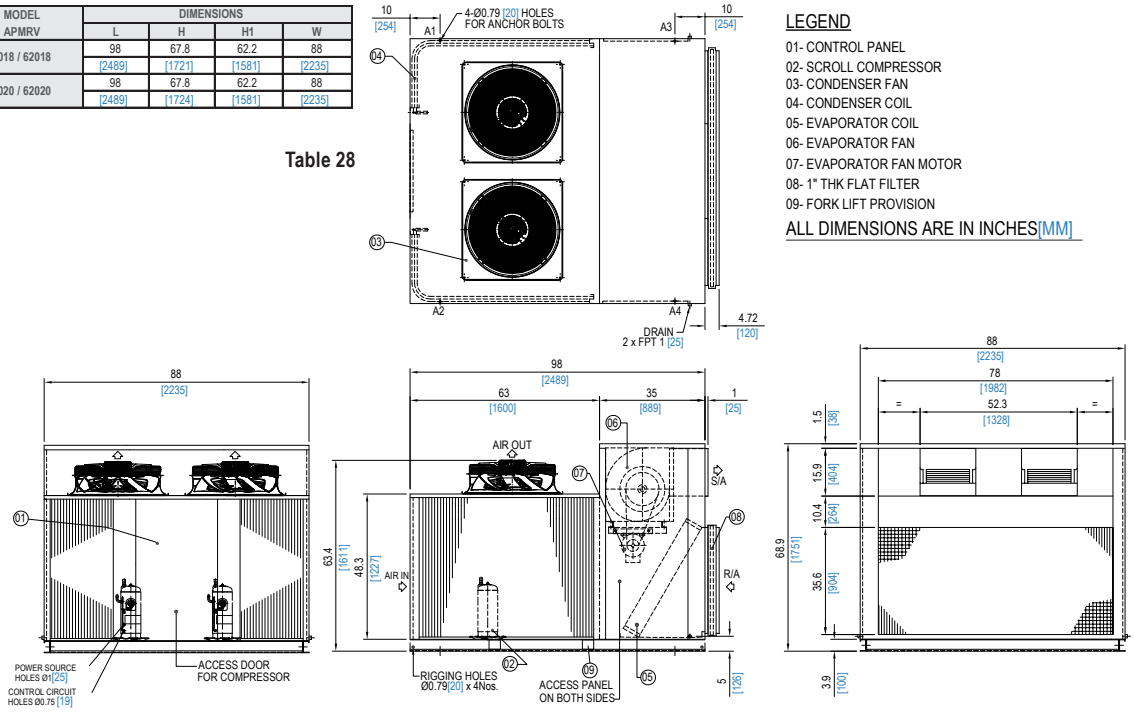
1.Drawings are not contractually binding. 2.Before designing an installation, consult the certified drawings, available on request
2.For single unit and multiple unit installation or unit is installing near to the wall,Please refer to the recommended clearance drawings (refer page no:26-27).
3.Dimensions shown in standard drawing are suitable only for open trailers. In case of closed container please consult SKM as the unit dimension will change.

Dimensional Data

APMR-V Model - 52018/62018 & 52020 / 62020

MODEL APMRV	DIMENSIONS			
	L	H	H1	W
52018 / 62018	98 [2489]	67.8 [1721]	62.2 [1581]	88 [2235]
52020 / 62020	98 [2489]	67.8 [1724]	62.2 [1581]	88 [2235]

Table 28

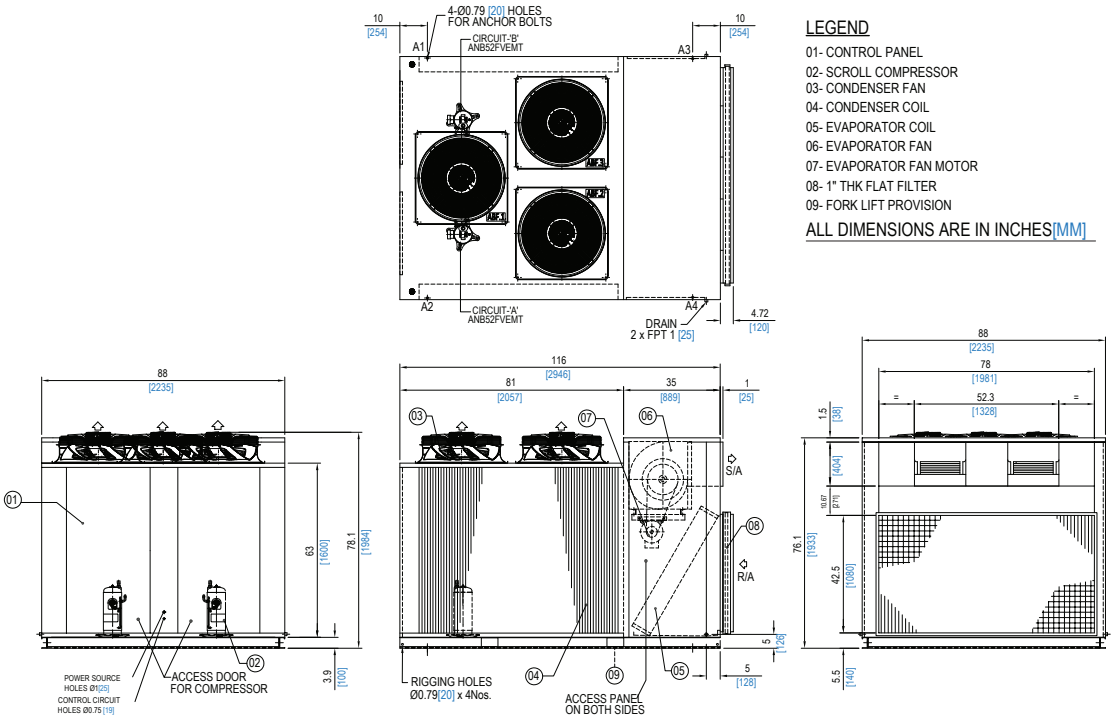


LEGEND

01- CONTROL PANEL
02- SCROLL COMPRESSOR
03- CONDENSER FAN
04- CONDENSER COIL
05- EVAPORATOR COIL
06- EVAPORATOR FAN
07- EVAPORATOR FAN MOTOR
08- 1" THK FLAT FILTER
09- FORK LIFT PROVISION

ALL DIMENSIONS ARE IN INCHES[MM]

APMR-V Model - 52025/62025



LEGEND

01- CONTROL PANEL
02- SCROLL COMPRESSOR
03- CONDENSER FAN
04- CONDENSER COIL
05- EVAPORATOR COIL
06- EVAPORATOR FAN
07- EVAPORATOR FAN MOTOR
08- 1" THK FLAT FILTER
09- FORK LIFT PROVISION

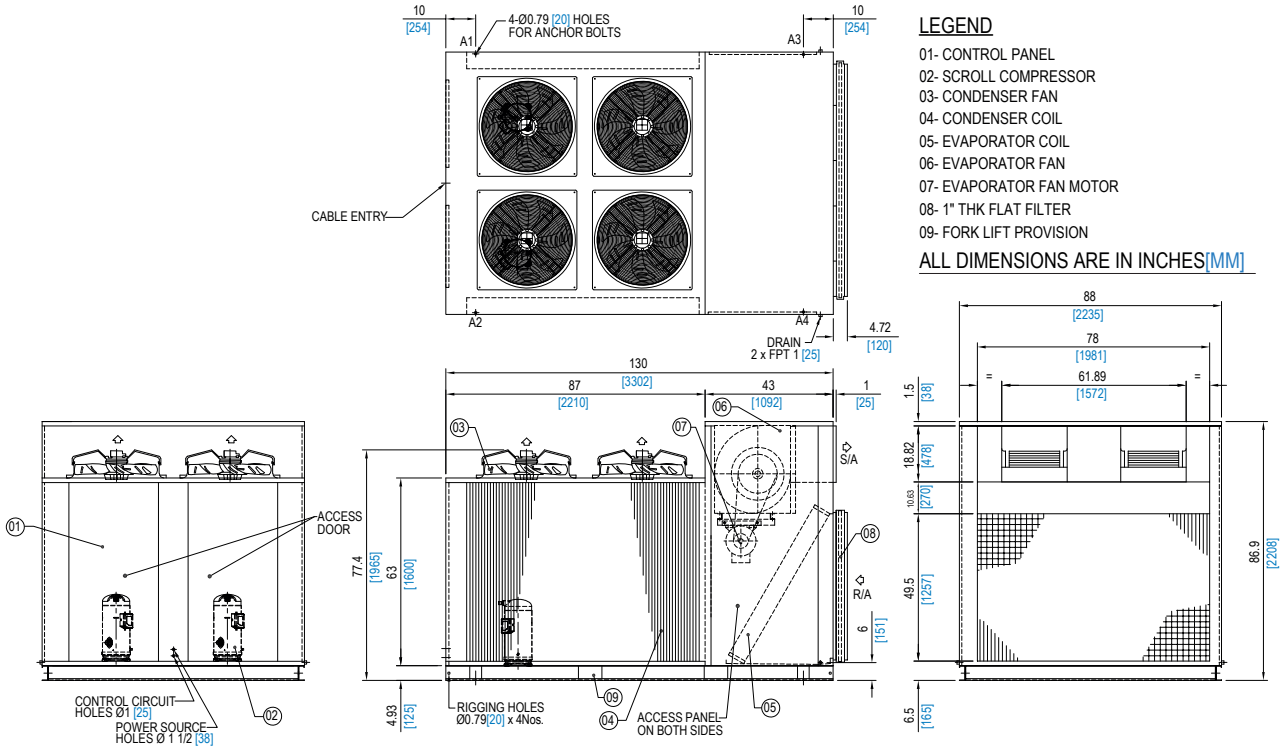
ALL DIMENSIONS ARE IN INCHES[MM]

Note :

1.Drawings are not contractually binding. 2.Before designing an installation, consult the certified drawings, available on request
2.For single unit and multiple unit installation or unit is installing near to the wall,Please refer to the recommended clearance drawings (refer page no:26-27).
3.Dimensions shown in standard drawing are suitable only for open trailers. In case of closed container please consult SKM as the unit dimension will change.

Dimensional Data

APMR-V Model - 52030/62030

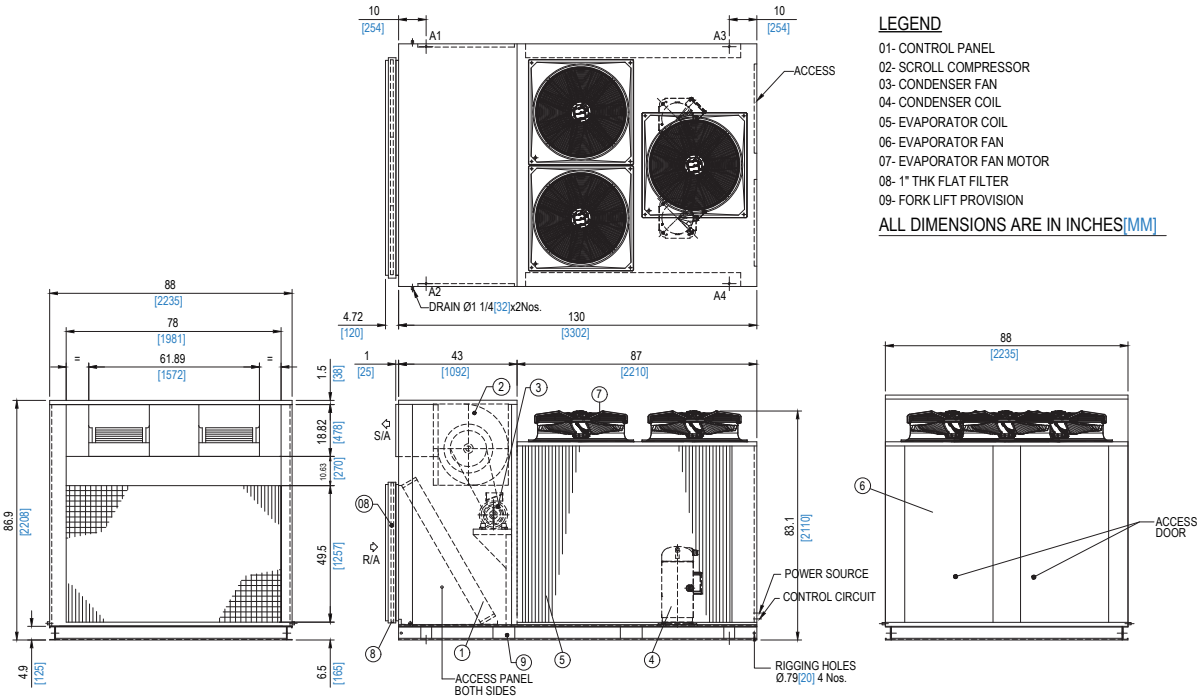


LEGEND

01- CONTROL PANEL
02- SCROLL COMPRESSOR
03- CONDENSER FAN
04- CONDENSER COIL
05- EVAPORATOR COIL
06- EVAPORATOR FAN
07- EVAPORATOR FAN MOTOR
08- 1" THK FLAT FILTER
09- FORK LIFT PROVISION

ALL DIMENSIONS ARE IN INCHES[MM]

APMR-V Model - 52035 / 62035



LEGEND

01- CONTROL PANEL
02- SCROLL COMPRESSOR
03- CONDENSER FAN
04- CONDENSER COIL
05- EVAPORATOR COIL
06- EVAPORATOR FAN
07- EVAPORATOR FAN MOTOR
08- 1" THK FLAT FILTER
09- FORK LIFT PROVISION

ALL DIMENSIONS ARE IN INCHES[MM]

Note :

1.Drawings are not contractually binding. 2.Before designing an installation, consult the certified drawings, available on request
2.For single unit and multiple unit installation or unit is installing near to the wall,Please refer to the recommended clearance drawings (refer page no:26-27).
3.Dimensions shown in standard drawing are suitable only for open trailers. In case of closed container please consult SKM as the unit dimension will change.

Weights and Loading Points

APMR-V	UOM	LOADING POINT				TOTAL WEIGHT
		A1	A2	A3	A4	
51006/61006	lbs	182	253	234	259	928
	kg	82	115	106	118	421
51008/61008	lbs	224	288	285	303	1100
	kg	101	131	129	138	499
51010/61010	lbs	271	346	321	343	1281
	kg	123	157	146	155	581
51012/61012	lbs	367	367	453	453	1639
	kg	166	166	205	205	744
52015/62015	lbs	404	403	461	460	1729
	kg	183	183	209	209	784
52018/62018	lbs	494	493	656	643	2286
	kg	224	224	298	292	1037
52020/62020	lbs	537	536	677	663	2414
	kg	244	243	307	301	1095
52025/62025	lbs	664	560	788	773	2785
	kg	301	254	357	351	1263
52030/62030	lbs	814	723	967	887	3391
	kg	369	328	439	402	1538
52035/62035	lbs	940	977	822	864	3603
	kg	426	443	373	392	1634

Table 29

Sound data

MODEL	Sound Power Level in dBA ref 10^{-12} W Spectrum per Octave band dB(A) **								Overall
APMR-V	63	125	250	500	1k	2k	4k	8k	dBA
51006/61006	72	65	65	68	69	75	67	63	79
51008/61008	71	74	73	75	75	78	71	68	83
51010/61010	71	74	73	76	75	74	70	66	82
51012/61012	75	71	69	72	76	76	72	70	83
52015/62015	75	69	69	69	73	81	73	70	83
52018/62018	74	77	76	79	78	77	72	69	85
52020/62020	74	77	76	79	78	77	74	69	85
52025/62025	76	80	78	80	81	80	76	73	88
52030/62030	77	80	79	82	82	81	76	74	89
52035/62035	76	79	78	81	86	84	78	77	90

** Sound data ±2 .

Table 30

MODEL	Sound pressure level in dBA ref $2x10^{-5}$ Pa @ 1 meter in free field Spectrum per Octave band dB(A) **								Overall
APMR-V	63	125	250	500	1k	2k	4k	8k	dBA
51006/61006	61	54	54	57	58	64	56	52	68
51008/61008	60	63	62	64	64	67	60	57	72
51010/61010	60	63	62	65	64	63	59	55	71
51012/61012	64	60	58	61	65	65	61	59	72
52015/62015	64	58	58	58	62	70	62	59	72
52018/62018	63	66	65	68	67	66	61	58	74
52020/62020	63	66	65	68	67	66	63	58	74
52025/62025	65	69	67	69	70	69	65	62	77
52030/62030	66	69	68	71	71	70	65	63	78
52035/62035	65	68	67	70	75	73	67	66	79

** Sound data ±2 .

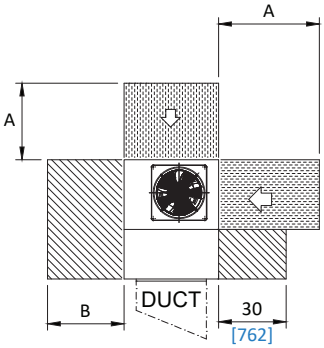
Table 31

Recommended Clearances

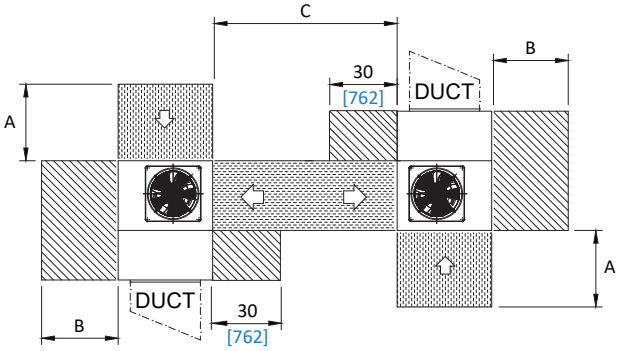
SPACING FOR SERVICE

SPACING FOR AIR FLOW

SINGLE UNIT



MULTIPLE UNIT

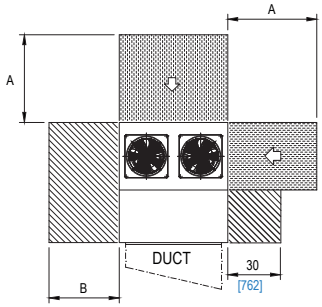


MODELS: APMR- 51006V/61006, 51008V/61008V, 51010V/61010V

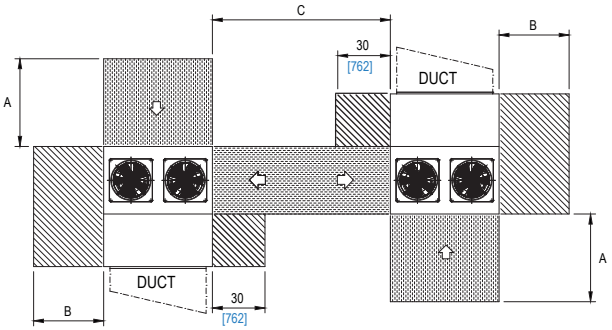
MODEL APMRV	All Dimensions are Inches [mm]		
	A	B	C
51006 / 61006	52	44	88
	[1321]	[1118]	[2235]
51008 / 61008	52	44	88
	[1321]	[1118]	[2235]
51010 / 61010	52	52	88
	[1321]	[1321]	[2235]
51012 / 61012	52	64	88
	[1321]	[1626]	[2235]
52015 / 62015	52	64	88
	[1321]	[1626]	[2235]
52018 / 62018	52	82	88
	[1321]	[2083]	[2235]
52020 / 62020	52	82	88
	[1321]	[2083]	[2235]
52025 / 62025	76	82	136
	[1930]	[2083]	[3454]
52030 / 62030	76	82	136
	[1930]	[2083]	[3454]
52035 / 62035	76	82	136
	[1930]	[2083]	[3454]

Table 32

SINGLE UNIT

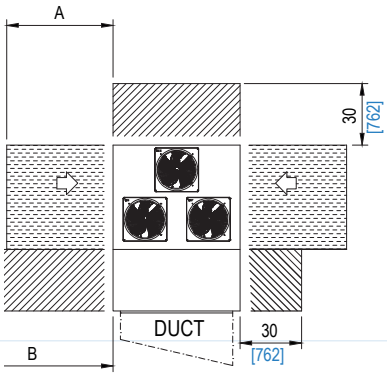


MULTIPLE UNIT

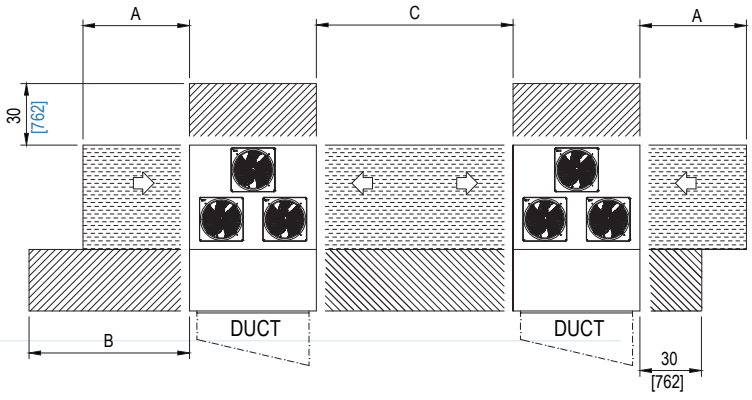


MODELS: APMR- 52012V/62012V, 52015V/62015V 52018V/62018V, 52020V/62020V

SINGLE UNIT



MULTIPLE UNIT



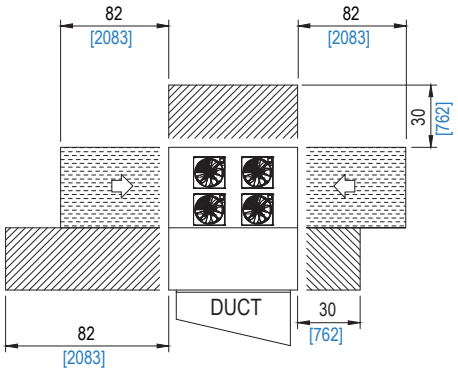
MODELS: APMR- 52025V /62025V

Recommended Clearances

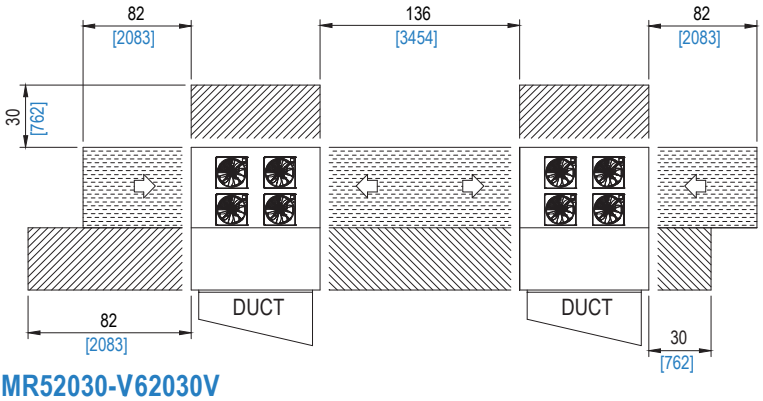
SPACING FOR SERVICE

SPACING FOR AIR FLOW

SINGLE UNIT

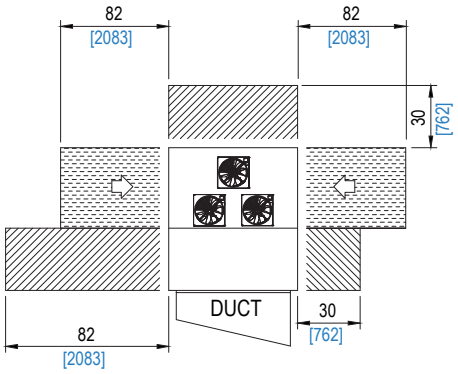


MULTIPLE UNIT

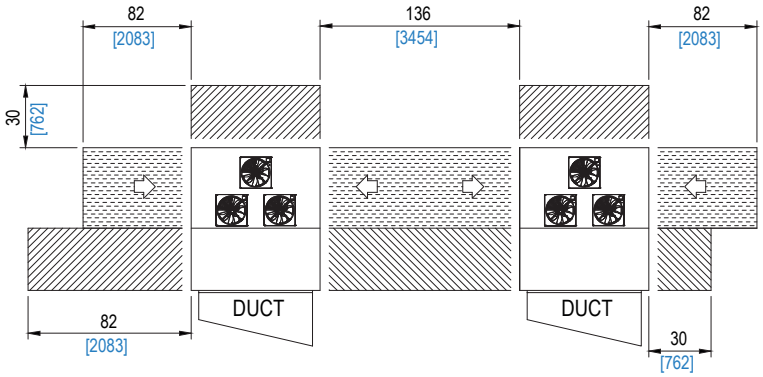


MODEL: APMR52030-V62030V

SINGLE UNIT



MULTIPLE UNIT



MODEL: APMR52035-V62035V

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. These units shall be capable to operate from 50 °F (10°C) to 125 °F (51.7°C) ambient temperature without failure & shall be rated in accordance with AHRI-340/360 and AHRI- 210/240 standards. Capacity as per attached schedule.

COMPRESSOR(S)

Compressor shall be BLDC- INVERTER Driven hermetic scroll, refrigerant gas cooled furnished with crankcase heater, and shall be mounted on rubber isolators.

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 with corrugated cross-wave fins with maximum 14 FPI (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.

CONDENSER FAN(S)

The machine shall be furnished with Electronically Commutated 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, Class-F insulation, IP-55 Protected depending on models 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 crosswave fins with maximum 14 FPI (1.8mm) spacing.

Coil consists of headers of seamless copper tubing, Electronic 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 & DRIVE

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, filter drier, sight glass and Electronic expansion valve.

Oil separator and discharge line check valve is a standard feature of this series.

Suction line shall be insulated with ½" (12mm) wall thickness enclosed cell pipe insulation with maximum K factor 0.28 Btu.in /ft2.h.°F. (0.040 W/mK).

CASING AND STRUCTURE

Unit casing shall be made of zinc coated galvanized steel sheets conforming to JIS-G3302 and ASTMA653 which shall be phosphatized and then electrostatically dry powder coated of approx.60 microns to provide an extremely tough, scratch resistance, excellent anticorrosive 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.

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.

NOTES

NOTES

NOTES

Contact us

SKM Offices

P.O Box: 6004, Sharjah, United Arab Emirates
Tel: +971 6 514 3333 | Fax: +971 6 514 3300
Email: sales@skmaircon.com | info@skmaircon.com
Spare Parts Division: spareparts.skm@skmaircon.com
Service Center: aftersales@skmaircon.com
Toll Free: 800 MYSKM (69756) (UAE only)

Al Khobar: Tel.: +966 13 8820152 | Fax: +966 13 8820153
Al-Riyadh: Tel.: +966 11 2914775 | Fax: +966 11 2914771
Jeddah: Tel.: +966 12 6639357 | Fax: +966 12 6639357
P.O Box: 7334, Al Khobar 34432 - 5423 - KSA
Customer Call Center: 920022595
ksasales.skm@skmaircon.com

P.O Box: 1215, Dasman, Kuwait Office, Murgab, Kuwait
Tel : +965 22 492 200 | Fax: +965 22 494 400
Email: kuwaitsales.skm@skmaircon.com

For SKM Regional Offices & Distributors
visit: www.skmaircon.com

171/2021B
Supercedes Bulletin # 171/2021A

اجهـــزة تكـييـف هـــواء
AIR CONDITIONING EQUIPMENT

CONTACT US

HEAD OFFICE

P.O Box: 6004, Sharjah,
United Arab Emirates

Tel: +971 6 514 3333
Fax: +971 6 514 3300

Email: sales@skmaircon.com
Email: info@skmaircon.com

Spare Parts Division
spareparts.skm@skmaircon.com

Service Center
aftersales@skmaircon.com

For SKM Regional Offices & Distributors
visit: www.skmaircon.com

Authorized Distributor
in Sri Lanka / Maldives :

LEAD AIRTEC(Pvt)Ltd

92/3, Colombo Road, Katuwawala,
Boralesgamuwa,Sri Lanka.
T : +94 (11) 5288856 - 8 F: +94 (11)2516367
info@leadairtec.com