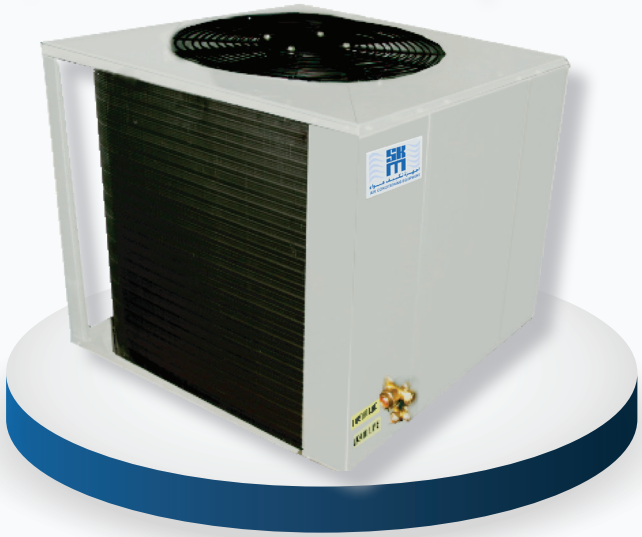
RX + DDP V1 Series

Concealed Ducted Split System

اجهـــزة تكـيـيـف هـــواء
AIR CONDITIONING EQUIPMENT



Since 1974
منتج خليجي

50Hz

R-410A
REFRIGERANT

Nominal Range 1.5 TR to 5 TR
(6 kW to 18 kW)

علامة الجودة الإماراتية
Emirates Quality Mark

CE

Contents

Legend

The following legends are used throughout this manual:

AFR .....Air Flow Rate
cfm ..... Cubic feet per minute
dB ..... Decibels
DB .....Dry Bulb
WB .....Wet Bulb
Hz ..... Hertz
kW .....Kilowatts
kg ..... Kilograms
kPa ..... Kilo Pascals
EER.....Energy Efficiency Ratio
lbs .....Pounds weight (British units)
l/s .....Liters per second
Mbh ..... 1000 Btuh
OD .....Outside Diameter
Ph .....Phase
Pa .....Pascals
SC ..... Sensible Capacity
TC .....Total Capacity
TR ..... Tons of refrigeration = 12 MBH
V .....Volts

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

The Ducted Split system from SKM consists of RXV (a high efficiency- TOP discharge Air Cooled Condensing Unit); matching with DDP (a low noise, ceiling suspended indoor fan coil unit). This split systems are ideally suited for apartments, houses, offices, shops, small residences, and in small commercial establishments.

SKM ducted split system are available in different models covering the range of 1.5 TR to 5 TR (6 kW to 18 kW) at nominal AHRI 210/240, ISO 13253 (T3) and MEW-R-6 (T4) conditions, which make them ideally suited for a very small foot print for space saving and a pleasant exterior appearance.

SKM ducted split units are suitable to operate in a wide range of ambient temperatures. (Minimum outdoor operating ambient in cooling mode is 55°F (13°C), maximum is 125.6°F (52°C).

SKM ducted split units are internally wired and all that required to be done on site is ducting, refrigerant piping, power supply and suitable room thermostat installation and field wiring, which reduces the installation work and consequently keeps to a minimum cost.

SKM provides qualified service and stock of replacement parts in all major cities of the G.C.C. countries, Egypt, Jordan, and Pakistan.

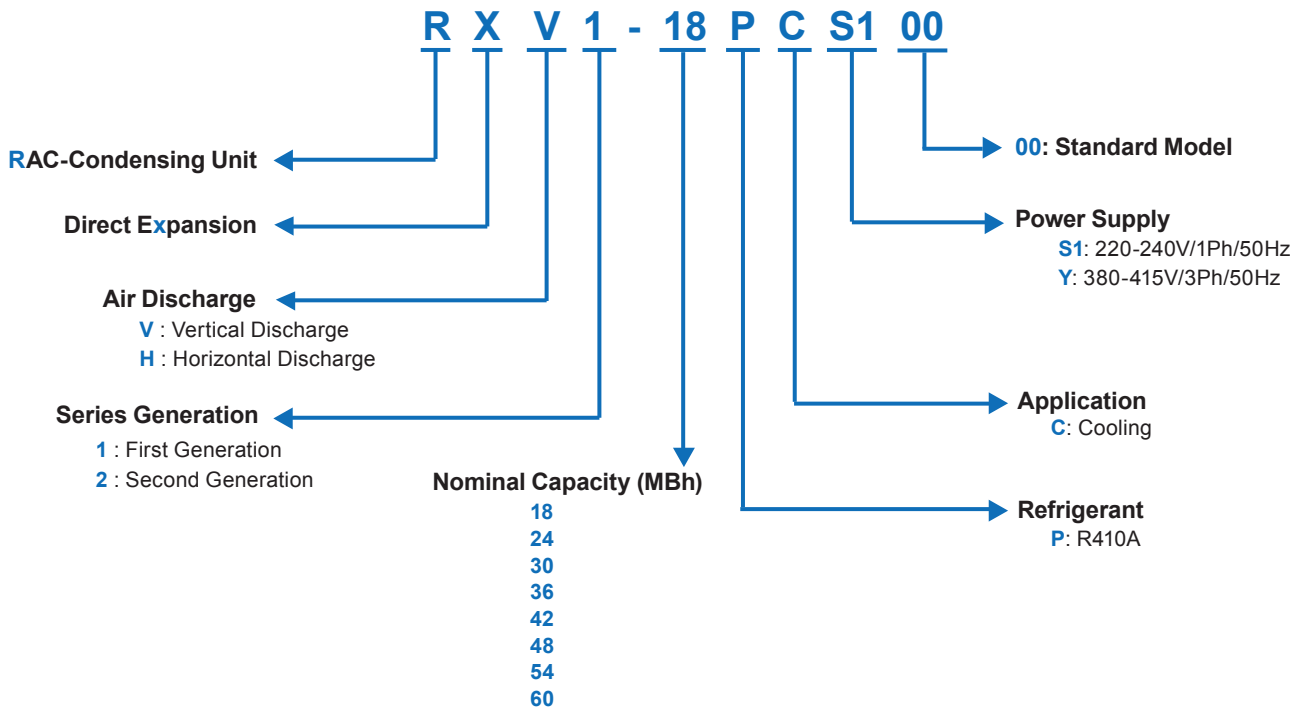
SKM Air Conditioning LLC

اجهزة تكييف هواء
AIR CONDITIONING EQUIPMENT

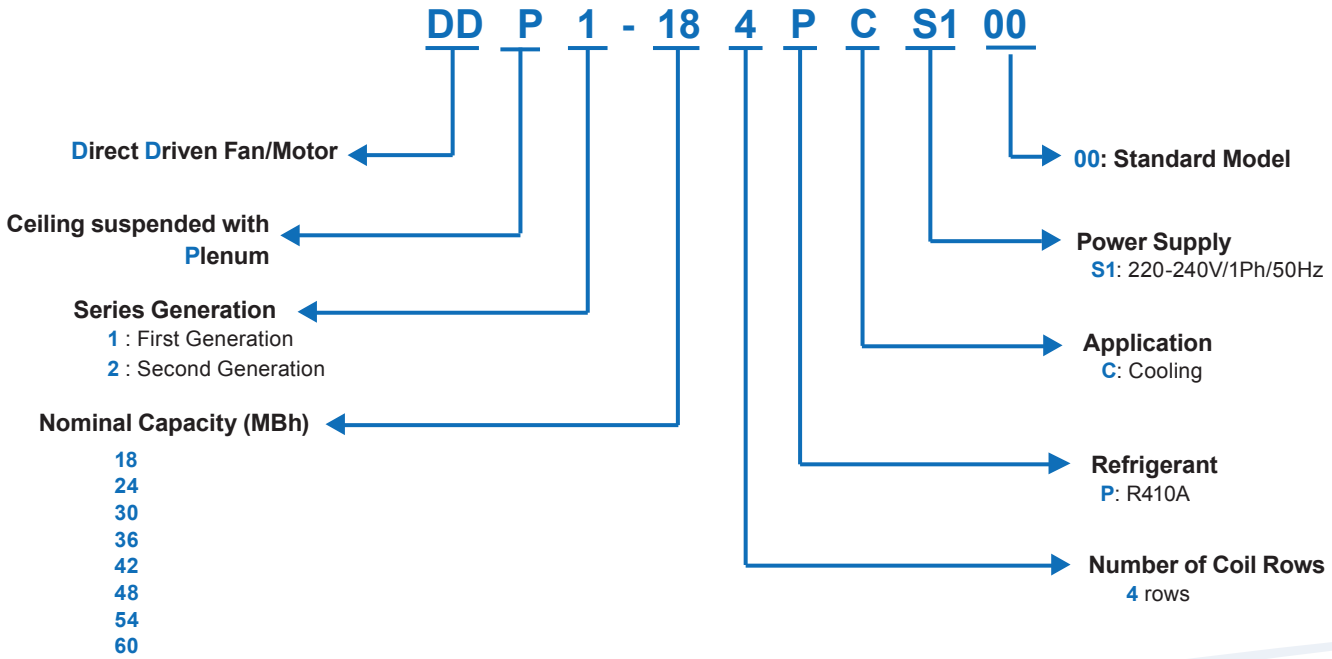
You name it.....We cool it

Nomenclature

Ducted Split Nomenclature Outdoor



Ducted Split Nomenclature Indoor



Outdoor Unit - RXV

Design Features: (Air Cooled units up to 5 Tons of Refrigeration)

- ***Design*** **-** Outdoor condensing units are ideal for rooftop or ground installation. Units have a pleasant exterior appearance and have a very small footprint for space saving installation.
- ***High efficiency Coils*** **-** inner groove tubes; mechanically bonded to hi-efficiency aluminium fins to match for a maximum efficiency. Pre-coated Fins is Optional.
- ***Hermetic Scroll Compressor*** **-** High efficiency hermetically sealed scroll type compressor located on engineered mounts for safe, quiet and vibration free operation. Compresssors are selected for reliability & power efficiency.
- ***Cabinet Construction*** **-** Heavy gauge zinc clad steel, latest technology electrostatic powder baked finish to ensure a long lasting, durable cabinet.
- ***Fan Motor*** **–** Condenser fan is propeller type with aluminium alloy blades and directly driven by electric motors.
- ***Brass Service Valves*** **–** Factory installed service valve with sweat connections to provide quick and accurate installation for start-up and servicing.
- ***Ease of Service and Installation*** **–** Designed to make servicing easier for the contractor, access panels are provided for all controls and the compressor from the side of the unit.
- ***Compressor Short Cycling Protection*** **–** To protect the compressor against rapid short cycling.
- ***High and Low Pressure Protection*** **-** To protect the compressor against high discharge pressure and low suction pressure, and to guarantee safe operation of compressor.
- ***Filter Drier*** **-** Filter drier is factory supplied (Field installed) for all sizes.

Specification (Outdoor Unit RXV)

Model RX			RXV1-18PCS100	RXV1-24PCS100	RXV1-30PCS100	RXV1-36PCS100	RXV1-42PCS100	RXV1-48PCY00	RXV1-54PCY00	RXV1-60PCY00
Power supply		V,Hz,Ph	220 - 240 V , 1Ph, 50Hz					380 - 415 V , 3Ph, 50Hz		
Compressor	Type		Hermetic Scroll							
	Brand		Copeland							
Condenser Coil	Tube outside dia.and type		Φ9.52 / Hi-X Copper							
	Fin type		Aluminum fin							
	Face Area	ft²	11.11	11.11	11.11	16.44	16.44	16.44	16.44	16.44
		mt²	1.03	1.03	1.03	1.53	1.53	1.53	1.53	1.53
Condenser Fan	Type		Propeller Direct Drive							
	Size		450	450	450	450	450	550	550	550
Condenser Motor	Type		Totally Enclosed Air Over (TEAO), Class F Insulated & IP-54 Protected							
	Size	Kw	0.11	0.11	0.11	0.11	0.11	0.28	0.28	0.28
Operating Refrigerant Charge (R-410A)		lbs	7.9	7.9	8.8	10.6	10.6	12.8	11.7	13.0
		KG	3.60	3.60	4.00	4.80	4.80	5.80	5.30	5.90
Factory Refrigerant Charge (R410A)		lbs	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.2
		KG	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Operating Weight Approximate		lbs	190	190	195	262	262	268	277	293
		KG	86	86	89	119	119	122	126	133
Pack Valve connections	Liquid		3/8"	3/8"	3/8"	3/8"	3/8"	3/8"	3/8"	3/8"
	Suction		3/4"	3/4"	3/4"	7/8"	7/8"	7/8"	7/8"	7/8"
Dimensions	Width	(in)	25	25	25	30	30	30	30	30
	Length	(in)	25	25	25	30	30	30	30	30
	Height	(in)	32.9	32.9	32.9	32.9	32.9	32.9	32.9	32.9

Table 1

Indoor Unit - DDP

Design Features

- High efficiency coil with high efficiency wavy corrugated fins.
- High efficiency, low power consumption PSC electric motor.
- High efficiency forward curved fan for quiet operation.
- Heavy gauge galvanized casing and fan housing. Hot dip is standard.
- Insulated heavy gauge drain pan.
- Isolating grommet for an additional vibration isolation.
- Easy wiring / electrical and piping connections.
- Evaporator coils equipped with copper tubes and aluminium fins which give high capacity sensible and latent cooling capabilities.

Specification (Indoor Unit DDP Matched with Outdoor Unit RXV)

Model DDP		FCU	DDP1-184PCS100	DDP1-244PCS100	DDP1-304PCS100	DDP1-364PCS100	DDP1-424PCS100	DDP1-484PCS100	DDP1-544PCS100	DDP1-604PCS100
Power supply		V,Hz,Ph	220 - 240V~, 1Ph, 50Hz	220 - 240V~, 1Ph, 50Hz	220 - 240V~, 1Ph, 50Hz	220 - 240V~, 1Ph, 50Hz	220 - 240V~, 1Ph, 50Hz	220 - 240V~, 1Ph, 50Hz	220 - 240V~, 1Ph, 50Hz	220 - 240V~, 1Ph, 50Hz
Cooling(T1)	Capacity	Btu/h	20000	23000	25500	33000	36000	42500	54000	60000
	Capacity	Kw	5.9	6.7	7.5	9.7	10.6	12.5	15.8	17.6
	EER		11.36	12.43	12.44	11.38	11.61	12.04	11.87	11.76
Cooling(T3)	Capacity	Btu/h	17500	19000	21000	30000	33000	37000	47000	51000
	Capacity	Kw	5.1	5.6	6.2	8.8	9.7	10.8	13.8	14.9
	EER		8.33	8.64	8.57	8.40	8.46	8.60	8.59	8.23
Cooling(T4)	Capacity	Btu/h	18000	19500	21500	30000	33000	36000	46000	52000
	Capacity	Kw	5.3	5.7	6.3	8.8	9.7	10.6	13.5	15.2
	kW/TR		1.47	1.42	1.42	1.48	1.43	1.44	1.47	1.48
Nominal Air Flow Rate	CFM		600	700	768	1034	1392	1392	1864	1893
	l/S		283	330	362	488	657	657	880	893
Indoor coil	Number of rows		4	4	4	4	4	4	4	4
	FPI		14	14	14	14	14	14	14	14
	Face Area	ft²	1.67	2.00	2.00	2.67	3.50	3.50	4.67	5.33
		mt²	0.16	0.19	0.19	0.25	0.33	0.33	0.43	0.50
	Fin type		Aluminum fin							
	Tube outside dia.and type	mm	Φ9.52 / Hi-X Copper							
Indoor fan	Type		Double Inlet Double Width Centrifugal Forward Curved Direct Driven							
	Quantity		1	1	1	1	2	2	2	2
Indoor Motor	Size	W	150	150	150	150	150	150	150	150
	Capacitor	uF	2.5	6.3	6.3	6.3	6.3	6.3	6.3	5
Indoor noise level (Hi/Mi/Lo)		dB(A)	57 / 54 / 49	60 / 57 / 53	60 / 57 / 53	57 / 55 / 53	61 / 59 / 54	61 / 59 / 54	57 / 55 / 53	62 / 60 / 58
Metering Device	Type		TXV	TXV	TXV	TXV	TXV	TXV	TXV	TXV
	Location		IDU	IDU	IDU	IDU	IDU	IDU	IDU	IDU
Thermostat (Wired Controller)			Option	Option	Option	Option	Option	Option	Option	Option
Indoor unit	Air Filter		Aluminum Filter							
	Drain pan material		Galvanized Steel							
	Dimension(W*D*H)	mm	584 X 703 X 381	686 X 703 X 381	686 X 703 X 381	686 X 760 X 459	1143 X 703 X 381	1143 X 703 X 381	1143 X 760 X 459	1295 X 760 X 459
	Net weight	Kg	27	31.8	31.8	39.1	41.4	51.8	64.1	67.3

Table 2

Notes:

1. Capacity ratings are based on AHRI Standard 210/240. Evaporator entering air conditions of 80/67ºF (26.7/19.4ºC) dry bulb/wet bulb and condenser entering air temperature of 95ºF (35ºC) dry bulb. (Gross capacity)
2. Evaporator entering air conditions of 84.2°F/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).
3. Evaporator entering air conditions of 80/67ºF (26.7/19.4ºC) dry bulb/wet bulb and condenser entering air temperature of 118.4ºF (48ºC) dry bulb. (Gross capacity)

Combination Ratings - DDP with RX Units

RXV + DDP	AFR	Evaporator Entering Air temperature DB/WB - 80/67°F (26.6/19.4°C)																			
		Condenser Entering Air Temperature																			
		95°F (35°C)					114.8°F (46°C)					118.4°F (48°C)					120°F (48.9°C)				
		Total Capacity		Sensible Capacity		PI	Total Capacity		Sensible Capacity		PI	Total Capacity		Sensible Capacity		PI	Total Capacity		Sensible Capacity		PI
	CFM	MBh	kW	MBh	kW	kW	MBh	kW	MBh	kW	kW	MBh	kW	MBh	kW	kW	MBh	kW	MBh	kW	kW
RXV 18 + DDP 18	364	18.6	5.5	11.3	3.3	1.4	16.8	4.9	10.5	3.1	1.8	16.5	4.8	10.4	3.0	1.9	16.3	4.8	10.3	3.0	1.9
	505	19.5	5.7	12.9	3.8	1.4	17.9	5.2	12.1	3.5	1.8	17.5	5.1	12.0	3.5	1.9	17.3	5.1	11.9	3.5	1.9
	600	20.0	5.9	14.8	4.3	1.4	18.8	5.5	14.1	4.1	1.8	18.0	5.3	13.9	4.1	1.8	17.8	5.2	13.8	4.0	1.9
RXV 24 + DDP 24	534	19.3	5.7	11.9	3.5	1.4	17.4	5.1	11.1	3.3	1.8	17.0	5.0	10.9	3.2	1.9	16.9	5.0	10.8	3.2	1.9
	653	20.8	6.1	13.8	4.0	1.4	18.7	5.5	13.0	3.8	1.8	18.3	5.4	12.8	3.8	1.8	18.1	5.3	12.7	3.7	1.9
	700	23.0	6.7	16.1	4.7	1.4	19.4	5.7	15.1	4.4	1.8	19.5	5.7	14.9	4.4	1.8	18.7	5.5	14.8	4.3	1.9
RXV 30 + DDP 30	534	22.9	6.7	15	4.4	1.6	20.6	6.0	14.1	4.1	2.0	20.2	5.9	14.0	4.1	2.1	20	5.9	13.9	4.1	2.1
	653	23.9	7.0	16.6	4.9	1.6	21.2	6.2	15.6	4.6	2.0	20.8	6.1	15.4	4.5	2.1	20.5	6.0	15.3	4.5	2.1
	768	24.6	7.2	18	5.3	1.6	21.6	6.3	16.9	5.0	2.0	21.5	6.3	16.7	4.9	2.1	20.8	6.1	16.6	4.9	2.1
RXV 36 + DDP 36	560	30.4	8.9	18.6	5.5	2.3	27.3	8.0	17.3	5.1	3.0	26.7	7.8	17.0	5.0	3.1	26.4	7.7	16.9	5.0	3.2
	683	31.8	9.3	20.3	5.9	2.3	28.5	8.4	19.0	5.6	3.0	27.9	8.2	18.7	5.5	3.1	27.6	8.1	18.6	5.5	3.2
	1034	33	9.7	24.7	7.2	2.3	30.2	8.9	23.1	6.8	3.0	30.0	8.8	22.8	6.7	3.1	29.1	8.5	22.7	6.7	3.2
RXV 42 + DDP 42	1035	35.1	10.3	25.3	7.4	2.3	30.7	9.0	23.7	6.9	3.0	29.9	8.8	23.4	6.9	3.1	29.6	8.7	23.3	6.8	3.2
	1227	35.6	10.4	27.5	8.1	2.3	31.3	9.2	26.0	7.6	3.0	31.5	9.2	25.7	7.5	3.2	30.2	8.9	25.6	7.5	3.2
	1392	36	10.6	29.4	8.6	2.3	31.8	9.3	27.9	8.2	3.0	33.0	9.7	27.6	8.1	3.2	30.7	9.0	27.5	8.1	3.2
RXV 48 + DDP 48	1035	40.05	11.7	27.3	8.0	2.5	35.6	10.4	25.5	7.5	3.4	34.6	10.1	25.0	7.3	3.5	34.2	10.0	25	7.3	3.6
	1227	41.33	12.1	29.7	8.7	2.6	36.1	10.6	27.7	8.1	3.4	35.2	10.3	27.3	8.0	3.5	34.7	10.2	27.2	8.0	3.6
	1392	42.5	12.5	31.5	9.2	2.6	36.6	10.7	29.5	8.6	3.4	36.0	10.6	29.2	8.6	3.5	35.2	10.3	29	8.5	3.6
RXV 54 + DDP 54	1350	50.8	14.9	35	10.3	3.5	44.6	13.1	32.7	9.6	4.5	43.5	12.7	32.2	9.4	4.7	43	12.6	32	9.4	4.8
	1578	51.7	15.2	37.7	11.0	3.5	45.3	13.3	35.3	10.3	4.5	44.1	12.9	34.9	10.2	4.7	43.6	12.8	34.7	10.2	4.8
	1864	54	15.8	40.8	12.0	3.5	46.0	13.5	38.5	11.3	4.5	46.0	13.5	38.1	11.2	4.7	44.4	13.0	37.9	11.1	4.8
RXV 60 + DDP 60	1343	56.7	16.6	37.5	11.0	4	50.4	14.8	35.0	10.3	5.1	49.0	14.4	34.5	10.1	5.3	48.4	14.2	34.2	10.0	5.4
	1595	58.7	17.2	40.8	12.0	4	51.2	15.0	38.0	11.1	5.1	49.9	14.6	37.5	11.0	5.3	49.3	14.4	37.2	10.9	5.4
	1893	60	17.6	44.2	13.0	4	52.2	15.3	41.4	12.1	5.1	52.0	15.2	40.9	12.0	5.3	50.3	14.7	40.7	11.9	5.4

Table 3

Notes:

1. Shaded areas represent matched cooling capacities based as per ARI standards 210/240 - 80/67°F (26.7/19.4°C) DB/WB temperature of air entering the indoor coil and 95°F outside air dry bulb, and as per MEW-R-6 (T4) - 80/67°F (26.7/19.4°C) DB/WB temperature of air entering the indoor coil and 118.4°F (48°C) outside air dry bulb.
Capacities at other ambient temperatures as shown.

2. For matched conditions,at entering condition other than shown; consult SKM.

3. Direct interpolation is permissible but extrapolation is prohibited.

4. Combination ratings are based on indoor and outdoor units at the same elevation and connected by 25 ft. (7.6 m) of refrigerant tubing. For tubing in excess of 25 feet, slight capacity reduction will occur. Do not exceed 120 feet tubing length without checking with SKM.

5. Matching systems will operate satisfactorily at desert conditions of 125.6°F (52°C) air entering outdoor unit and 80/67°F (26.7/19.4°C) DB/WB air entering the indoor coil.

6. Cooling capacities listed do not include a deduction for fan motor heat.

7. TC - Total Cooling Capacity in Mbh (1000 Btuh)
SC - Sensible Cooling Capacity in Mbh (1000 Btuh)
PI - Power Input in kW (compressor only)

To convert Mbh to kW, divide by 3.413. / To convert cfm to L/s, divide by 2.12.

* Power input mentioned in this page should not be used for cable or fuse selection. MCA and MFA values given in the electrical data (page 7) should be referred for the same.

Combination Ratings - DDP with RX Units

RXV + DDP	AFR	Evaporator Entering Air temperature DB/WB - 84.2/66.2°F (29/19°C)																			
		Condenser Entering Air Temperature																			
		95°F (35°C)					114.8°F (46°C)					118.4°F (48°C)					120°F (48.9°C)				
		Total Capacity		Sensible Capacity		PI	Total Capacity		Sensible Capacity		PI	Total Capacity		Sensible Capacity		PI	Total Capacity		Sensible Capacity		PI
	CFM	MBh	kW	MBh	kW	kW	MBh	kW	MBh	kW	kW	MBh	kW	MBh	kW	kW	MBh	kW	MBh	kW	kW
RXV 18 + DDP 18	364	18.4	5.4	13.1	3.8	1.4	16.6	4.9	12.3	3.6	1.8	16.2	4.7	12.1	3.5	1.9	16.1	4.7	12.1	3.5	1.9
	505	19.6	5.7	15.2	4.5	1.4	17.0	5.0	14.5	4.2	1.8	16.5	4.8	14.3	4.2	1.9	16.9	5.0	14.2	4.2	1.9
	600	20.6	6.0	17.9	5.2	1.4	17.5	5.1	16.9	5.0	1.8	17.2	5.0	16.8	4.9	1.9	17.4	5.1	16.7	4.9	1.9
RXV 24 + DDP 24	534	19.0	5.6	13.8	4.0	1.4	17.2	5.0	13.0	3.8	1.8	16.8	4.9	12.8	3.8	1.9	16.6	4.9	12.7	3.7	1.9
	653	20.5	6.0	16.3	4.8	1.4	18.1	5.3	15.3	4.5	1.8	17.6	5.2	15.2	4.5	1.9	17.4	5.1	15.1	4.4	1.9
	700	21.3	6.2	19.2	5.6	1.4	19.0	5.6	18.3	5.4	1.8	18.4	5.4	18.2	5.3	1.8	18.2	5.3	18.1	5.3	1.9
RXV 30 + DDP 30	534	22.6	6.6	17.8	5.2	1.6	19.9	5.8	16.7	4.9	2.0	19.4	5.7	16.5	4.8	2.1	19.2	5.6	16.4	4.8	2.1
	653	23.1	6.8	19.7	5.8	1.6	20.5	6.0	18.6	5.5	2.0	20.0	5.9	18.5	5.4	2.1	19.8	5.8	18.4	5.4	2.1
	768	23.5	6.9	21.5	6.3	1.6	21.0	6.2	20.5	6.0	2.0	20.5	6.0	20.3	5.9	2.1	20.3	5.9	20.2	5.9	2.1
RXV 36 + DDP 36	560	30.0	8.8	21.6	6.3	2.3	26.9	7.9	20.2	5.9	3.0	26.3	7.7	19.9	5.8	3.1	26.1	7.6	19.8	5.8	3.2
	683	31.4	9.2	23.8	7.0	2.3	27.9	8.2	22.4	6.6	3.0	27.1	7.9	22.0	6.4	3.1	26.8	7.9	21.9	6.4	3.2
	1034	33.3	9.8	29.5	8.6	2.3	30.0	8.8	28.0	8.2	3.0	28.6	8.4	27.7	8.1	3.1	28.3	8.3	27.6	8.1	3.2
RXV 42 + DDP 42	1035	34.0	10.0	30.3	8.9	2.3	30.0	8.8	28.8	8.4	3.0	29.3	8.6	28.5	8.4	3.1	29.0	8.5	28.4	8.3	3.2
	1227	34.8	10.2	33.5	9.8	2.3	30.7	9.0	30.7	9.0	3.0	30.0	8.8	30.0	8.8	3.1	29.7	8.7	29.7	8.7	3.2
	1392	35.3	10.3	35.3	10.3	2.3	33.0	9.7	31.2	9.2	3.0	30.5	8.9	30.5	8.9	3.2	30.2	8.9	30.2	8.9	3.2
RXV 48 + DDP 48	1035	38.9	11.4	32.3	9.5	2.5	34.4	10.1	30.5	8.9	3.3	33.5	9.8	30.1	8.8	3.5	33.1	9.7	30.0	8.8	3.6
	1227	39.7	11.6	35.3	10.3	2.6	35.2	10.3	33.6	9.8	3.3	34.3	10.1	33.3	9.8	3.5	33.9	9.9	33.1	9.7	3.6
	1392	40.3	11.8	37.9	11.1	2.6	37.0	10.8	35.8	10.5	3.3	34.9	10.2	34.9	10.2	3.5	34.5	10.1	34.5	10.1	3.6
RXV 54 + DDP 54	1350	49.2	14.4	41.5	12.2	3.5	43.4	12.7	39.2	11.5	4.5	42.3	12.4	38.8	11.4	4.7	41.9	12.3	38.7	11.3	4.7
	1578	50.1	14.7	45.2	13.2	3.5	44.3	13.0	43.0	12.6	4.5	43.2	12.7	42.6	12.5	4.7	42.8	12.5	42.4	12.4	4.8
	1864	51.1	15.0	49.7	14.6	3.5	47.0	13.8	45.2	13.2	4.5	44.1	12.9	44.1	12.9	4.7	43.6	12.8	43.6	12.8	4.8
RXV 60 + DDP 60	1343	55.6	16.3	44.3	13.0	4.0	48.3	14.2	41.4	12.1	5.1	47.1	13.8	40.9	12.0	5.3	46.6	13.7	40.7	11.9	5.4
	1595	56.6	16.6	48.3	14.2	4.0	49.7	14.6	45.7	13.4	5.1	48.4	14.2	45.2	13.2	5.3	47.9	14.0	45.0	13.2	5.4
	1893	57.8	16.9	53.2	15.6	4.0	51.0	14.9	50.6	14.8	5.1	49.7	14.6	49.7	14.6	5.3	49.1	14.4	49.1	14.4	5.4

Table 4

Notes:

1. Shaded areas represent matched cooling capacities based on ISO13253 (T3) 84.2/66.2 ° F (29/19 °C) DB/WB temperature of air entering the indoor coil and 114.8°F (46 °C) dry bulb.

2. For matched conditions,at entering condition other than shown;consult SKM.

3. Direct interpolation is permissible but extrapolation is prohibited.

4. Combination ratings are based on indoor and outdoor units at the same elevation and connected by 25 ft. (7.6 m) of refrigerant tubing.For tubing in excess of 25 feet,slight capacity reduction will occur. Do not exceed 120 feet tubing length without checking with SKM.

5. Cooling capacities listed do not include a deduction for fan motor heat.

6. TC - total cooling capacity in Mbh (1000 Btuh).
SC - sensible cooling capacity in Mbh (1000 Btuh).
PI - Power input in kW (compressor only).

To convert Mbh to kW,divide by 3.413. / To convert cfm to L/s,divide by 2.12.

* Power input mentioned in this page should not be used for cable or fuse selection. MCA and MFA values given in the electrical data page (7) should be referred for the same.

Combination Ratings - DDP with RXV Units

RXV + DDP	AFR	Evaporator Entering Air temperature DB/WB - 76/63°F (24.4/17.2°C)																			
		Condenser Entering Air Temperature																			
		95°F (35°C)					114.8°F (46°C)					118.4°F (48°C)					120°F (48.9°C)				
		Total Capacity		Sensible Capacity		PI	Total Capacity		Sensible Capacity		PI	Total Capacity		Sensible Capacity		PI	Total Capacity		Sensible Capacity		PI
	CFM	MBh	kW	MBh	kW	kW	MBh	kW	MBh	kW	kW	MBh	kW	MBh	kW	kW	MBh	kW	MBh	kW	kW
RXV 18 + DDP 18	364	17.7	5.2	12.0	3.5	1.4	16.0	4.7	10.8	3.2	1.8	15.5	4.5	10.5	3.1	1.9	15.4	4.5	10.6	3.1	1.9
	505	18.5	5.4	13.0	3.8	1.4	16.9	5.0	12.4	3.6	1.8	16.5	4.8	12.3	3.6	1.9	16.3	4.8	12.2	3.6	1.9
	600	19.5	5.7	15.0	4.4	1.4	17.5	5.1	14.3	4.2	1.8	17.1	5.0	14.1	4.1	1.9	16.9	5.0	14.0	4.1	1.9
RXV 24 + DDP 24	534	19.0	5.6	12.5	3.7	1.4	16.4	4.8	11.4	3.3	1.8	16.0	4.7	11.2	3.3	1.9	15.9	4.7	11.1	3.3	1.9
	653	19.7	5.8	14.0	4.1	1.4	17.6	5.2	13.3	3.9	1.8	17.1	5.0	13.0	3.8	1.9	16.9	5.0	13.0	3.8	1.9
	700	21.0	6.2	16.5	4.8	1.4	18.2	5.3	15.4	4.5	1.8	17.7	5.2	15.2	4.5	1.9	17.5	5.1	15.1	4.4	1.9
RXV 30 + DDP 30	534	21.4	6.3	15.2	4.5	1.6	19.1	5.6	14.2	4.2	2.0	18.6	5.5	14.0	4.1	2.1	18.4	5.4	13.9	4.1	2.1
	653	22.3	6.5	16.7	4.9	1.6	19.5	5.7	15.6	4.6	2.0	19.0	5.6	15.4	4.5	2.1	18.8	5.5	15.3	4.5	2.1
	768	22.6	6.6	18.0	5.3	1.6	19.9	5.8	16.9	5.0	2.0	19.5	5.7	16.7	4.9	2.1	19.2	5.6	16.6	4.9	2.1
RXV 36 + DDP 36	560	28.6	8.4	18.9	5.5	2.2	25.5	7.5	17.5	5.1	2.9	24.9	7.3	17.2	5.0	3.1	24.7	7.2	17.1	5.0	3.1
	683	29.8	8.7	20.6	6.0	2.3	26.6	7.8	19.2	5.6	3.0	26.0	7.6	18.9	5.5	3.1	25.7	7.5	18.8	5.5	3.2
	1034	32.2	9.4	24.9	7.3	2.3	28.1	8.2	23.3	6.8	3.0	27.3	8.0	23.0	6.7	3.1	27.0	7.9	22.8	6.7	3.2
RXV 42 + DDP 42	1035	32.6	9.6	25.5	7.5	2.3	28.6	8.4	23.9	7.0	3.0	27.9	8.2	23.6	6.9	3.1	27.6	8.1	23.5	6.9	3.2
	1227	33.2	9.7	27.8	8.1	2.3	29.3	8.6	26.2	7.7	3.0	28.6	8.4	25.9	7.6	3.1	28.3	8.3	25.8	7.6	3.2
	1392	33.7	9.9	29.7	8.7	2.3	29.8	8.7	28.1	8.2	3.0	29.0	8.5	27.8	8.1	3.1	28.7	8.4	27.7	8.1	3.2
RXV 48 + DDP 48	1035	37.5	11.0	27.6	8.1	2.5	33.0	9.7	25.7	7.5	3.3	32.1	9.4	25.3	7.4	3.5	31.7	9.3	25.1	7.4	3.5
	1227	38.2	11.2	29.8	8.7	2.5	33.6	9.8	27.9	8.2	3.3	32.7	9.6	27.6	8.1	3.4	32.3	9.5	27.4	8.0	3.6
	1392	38.7	11.3	31.6	9.3	2.5	34.1	10.0	29.8	8.7	3.3	33.3	9.8	29.5	8.6	3.5	32.9	9.6	29.3	8.6	3.6
RXV 54 + DDP 54	1350	47.6	14.0	35.5	10.4	3.5	41.6	12.2	32.9	9.6	4.5	40.5	11.9	32.5	9.5	4.6	40.1	11.8	32.3	9.5	4.7
	1578	48.3	14.2	38.0	11.1	3.5	42.4	12.4	35.6	10.4	4.5	41.3	12.1	35.2	10.3	4.6	40.8	12.0	35.0	10.3	4.7
	1864	49.0	14.4	41.2	12.1	3.5	43.2	12.7	38.9	11.4	4.5	42.2	12.4	38.5	11.3	4.7	41.7	12.2	38.3	11.2	4.7
RXV 60 + DDP 60	1343	53.0	15.5	38.0	11.1	3.9	46.4	13.6	35.1	10.3	5.1	45.1	13.2	34.5	10.1	5.3	44.5	13.0	34.3	10.1	5.4
	1595	54.6	16.0	41.1	12.0	4.0	47.3	13.9	38.1	11.2	5.1	46.1	13.5	37.6	11.0	5.3	45.5	13.3	37.4	11.0	5.4
	1893	55.5	16.3	44.5	13.0	4.0	48.4	14.2	41.7	12.2	5.1	47.2	13.8	41.2	12.1	5.3	46.6	13.7	40.9	12.0	5.4

Table 5

Notes:

1. The capacity ratings are based on 76/63°F (24.4/17.2°C) DB/WB temperature of air entering the indoor coil.
2. For matched conditions,at entering condition other than shown;consult SKM.
3. Direct interpolation is permissible but extrapolation is prohibited.
4. Combination ratings are based on indoor and outdoor units at the same elevation and connected by 25 ft. (7.6 m) of refrigerant tubing.For tubing in excess of 25 feet,slight capacity reduction will occur. Do not exceed 120 feet tubing length without checking with SKM.
5. Cooling capacities listed do not include a deduction for fan motor heat.
6. TC - total cooling capacity in Mbh (1000 Btuh).
SC - sensible cooling capacity in Mbh (1000 Btuh).
PI - Power input in kW (compressor only).

To convert Mbh to kW,divide by 3.413. / To convert cfm to L/s,divide by 2.12.
* Power input mentioned in this page should not be used for cable or fuse selection. MCA and MFA values given in the electrical data page (7) should be referred for the same.

Electrical Data - RXV & DDP

Model	RXV	18	24	30	36	42	48	54	60
Electrical	Power Supply	220-240V/1PH/50HZ					380-415V/3PH/50HZ		
	Comp. RLA	9.7	9.7	10.7	17.7	17.7	8.4	9.6	10.9
	LRA	53	53	60	102	102	55	72	64
	Condenser Motor FLA	0.85	0.85	0.85	0.85	0.85	0.87	0.87	0.87
	MCA	15	15	17	25	25	14	16	17
	MFA	25	25	25	50	50	20	25	32

Table 6

Model	DDP		18	24	30	36	42	48	54	60
Motor	Type		220-240V/1PH/50HZ, 3-speed electric motor with permanent split capacitor							
	Size	Watts	150	150	150	150	150	150	150	150
	Quantity	#	1	1	1	1	2	2	2	2
Motor Amps	Speed	High	1.3	1.3	1.4	1.3	2.8	2.8	2.6	2.8
		Medium	0.9	0.9	1.1	1.1	2.2	2.2	2.2	2.2
		Low	0.8	0.8	0.8	0.8	1.6	1.6	1.6	1.8

Table 7

Indoor Fan Performance

Speed	DDP Model	UOM	External static pressure			
		In. of WG	0.1	0.2	0.3	0.4
		pa	25	50	75	100
HIGH	DDP1-184PCS100	CFM	600	573	547	523
		l/S	283	270	258	247
	DDP1-244PCS100	CFM	700	669	638	610
		l/S	330	316	301	289
	DDP1-304PCS100	CFM	768	710	663	611
		l/S	361	334	312	287
	DDP1-364PCS100	CFM	1065	1003	943	868
		l/S	501	471	443	408
	DDP1-424PCS100	CFM	1442	1342	1266	1184
		l/S	678	631	595	556
	DDP1-484PCS100	CFM	1442	1342	1266	1184
		l/S	678	631	595	556
	DDP1-544PCS100	CFM	1966	1864	1723	1562
		l/S	924	876	810	734
	DDP1-604PCS100	CFM	2026	1893	1755	1570
		l/S	952	890	825	738
Medium	DDP1-184PCS100	CFM	505	483	458	429
		l/S	237	227	215	202
	DDP1-244PCS100	CFM	653	608	565	518
		l/S	307	286	266	243
	DDP1-304PCS100	CFM	653	608	565	518
		l/S	307	286	266	243
	DDP1-364PCS100	CFM	686	680	678	625
		l/S	322	320	319	294
	DDP1-424PCS100	CFM	1268	1186	1111	1011
		l/S	596	557	522	475
	DDP1-484PCS100	CFM	1268	1186	1111	1011
		l/S	596	557	522	475
	DDP1-544PCS100	CFM	1665	1578	1477	1334
		l/S	783	742	694	627
	DDP1-604PCS100	CFM	1670	1595	1488	1359
		l/S	785	750	699	639
Low	DDP1-184PCS100	CFM	364	348	334	310
		l/S	171	164	157	146
	DDP1-244PCS100	CFM	534	509	474	433
		l/S	251	239	223	204
	DDP1-304PCS100	CFM	534	509	474	433
		l/S	251	239	223	204
	DDP1-364PCS100	CFM	563	557	544	513
		l/S	265	262	256	241
	DDP1-424PCS100	CFM	1074	997	926	841
		l/S	505	469	435	395
	DDP1-484PCS100	CFM	1074	997	926	841
		l/S	505	469	435	395
	DDP1-544PCS100	CFM	1375	1350	1280	1147
		l/S	646	635	602	539
	DDP1-604PCS100	CFM	1378	1343	1280	1175
		l/S	648	631	602	552

Table 8

Recommended Suction and Liquid Line Sizes

RXV (Condensing Unit)	Recommended Suction And Liquid Line Sizes For Various Length of Run to Evaporator Side- Ft. (m)															
	25 (7.6)		50 (5.2)		75 (22.9)		100 (30.5)		120 (36.6)		140 (42.7)		160 (48.8)		180 (54.9)	
	Suction	Liquid	Suction	Liquid	Suction	Liquid	Suction	Liquid	Suction	Liquid	Suction	Liquid	Suction	Liquid	Suction	Liquid
18	5/8	3/8	5/8	3/8	3/4	3/8	3/4	3/8	3/4	3/8	3/4	3/8	3/4	3/8	3/4	3/8
24	5/8	3/8	3/4	3/8	3/4	3/8	3/4	3/8	3/4	3/8	3/4	3/8	3/4	3/8	3/4	3/8
30	5/8	3/8	5/8	3/8	3/4	3/8	3/4	3/8	3/4	3/8	3/4	3/8	3/4	3/8	3/4	3/8
36	5/8	3/8	3/4	3/8	3/4	3/8	7/8	1/2	7/8	1/2	7/8	1/2	7/8	1/2	7/8	1/2
42	3/4	3/8	3/4	3/8	7/8	1/2	7/8	1/2	7/8	1/2	7/8	1/2	7/8	1/2	7/8	1/2
48	3/4	3/8	7/8	1/2	7/8	1/2	1 1/8	1/2	1 1/8	1/2	1 1/8	1/2	1 1/8	1/2	1 1/8	1/2
54	3/4	3/8	7/8	1/2	1 1/8	1/2	1 1/8	1/2	1 1/8	1/2	1 1/8	1/2	1 1/8	1/2	1 1/8	1/2
60	7/8	1/2	7/8	1/2	1 1/8	1/2	1 1/8	1/2	1 1/8	1/2	1 1/8	1/2	1 1/8	1/2	1 1/8	1/2

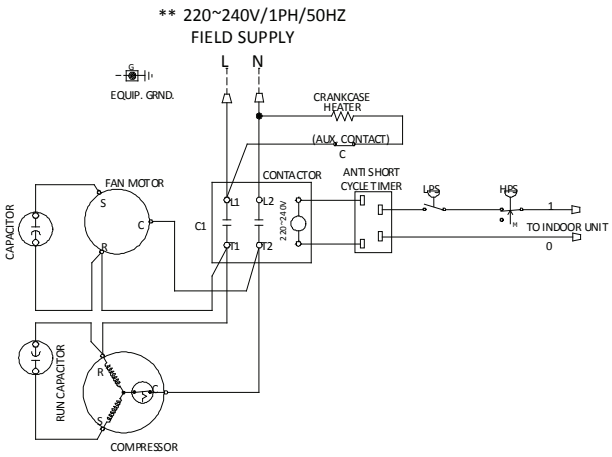
Table 9

Notes :

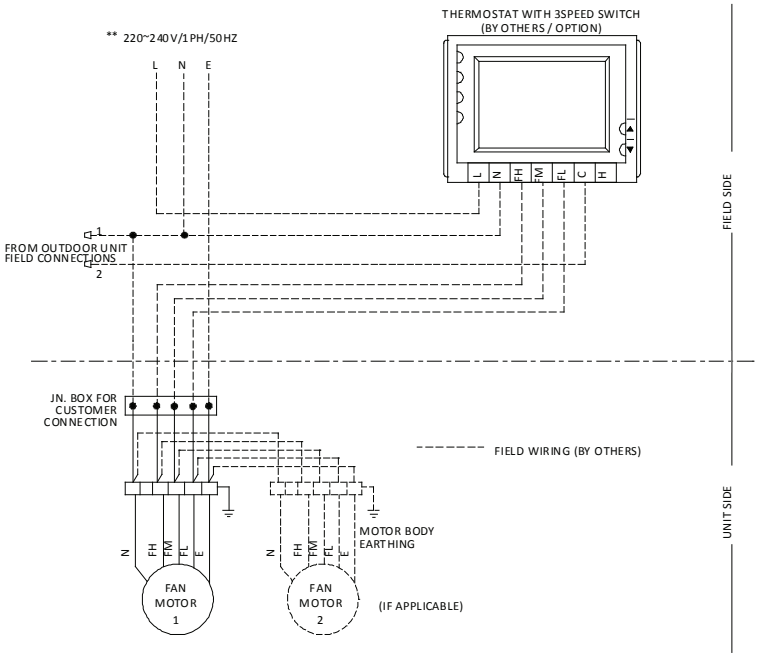
1. Pipe diameters are based on equivalent length of copper tubing sizes.
2. Pipe sizes are based on 2ºF (1.1ºC) or less temperature losses for liquid and suction line in equivalent pipe length.
3. If the condensing unit is below the evaporating unit, the maximum lift should not exceed to 66 feet.
4. Do not exceed 180 feet piping length without checking with SKM.
5. If the condensing unit is above the evaporating unit, the maximum lift should not exceed to 150 feet.
6. Install oil traps in the suction line every 20 feet (6mtr) to enhance oil movement and provide collection of oil during off cycle.
7. These sizes are for guidance only. For detailed proper piping, refer to recognized piping references like ASHRAE Guide and Data Book.

The recommended or required suction and liquid line sizes do not necessarily correspond with the refrigerant connections available on the outdoor or indoor unit. Necessary transformation may be required and it's field performed.

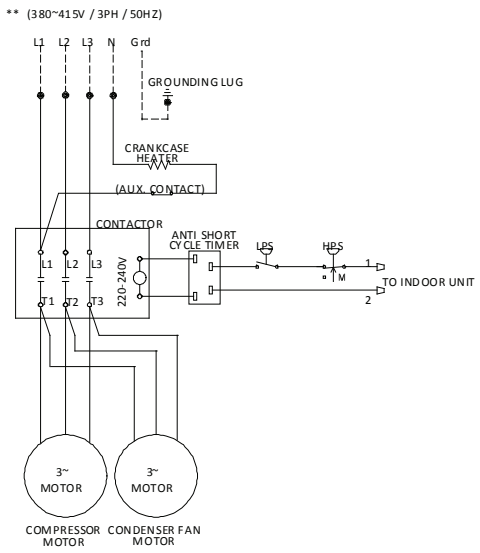
Typical Wiring Diagram - RXV & DDP



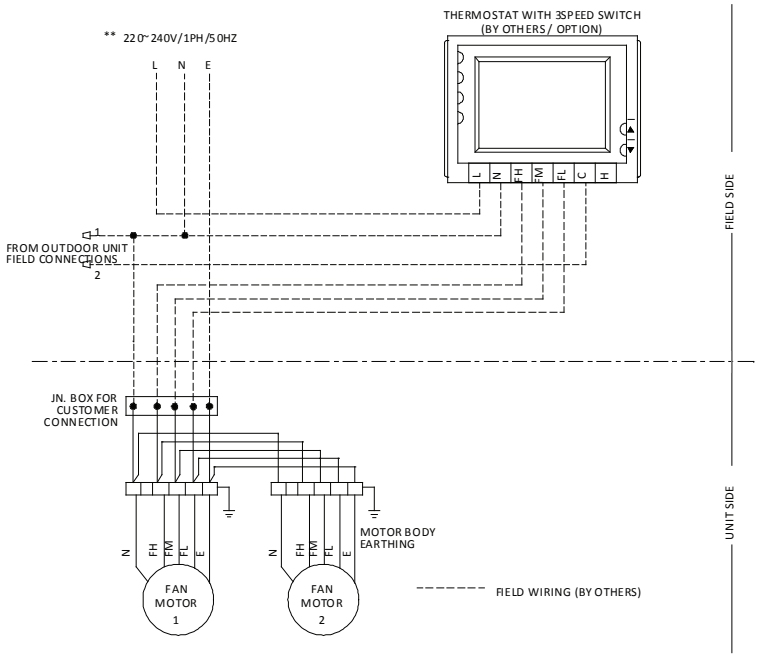
OUTDOOR UNIT RXV18, 24, 30, 36 & 42



INDOOR UNIT DDP



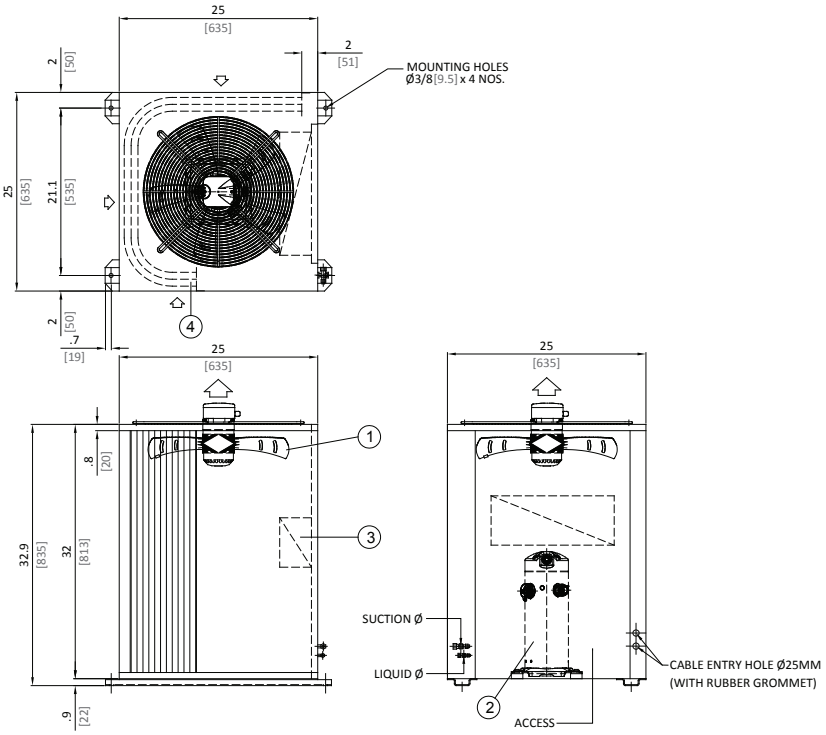
OUTDOOR UNIT RXV48, 54 and 60



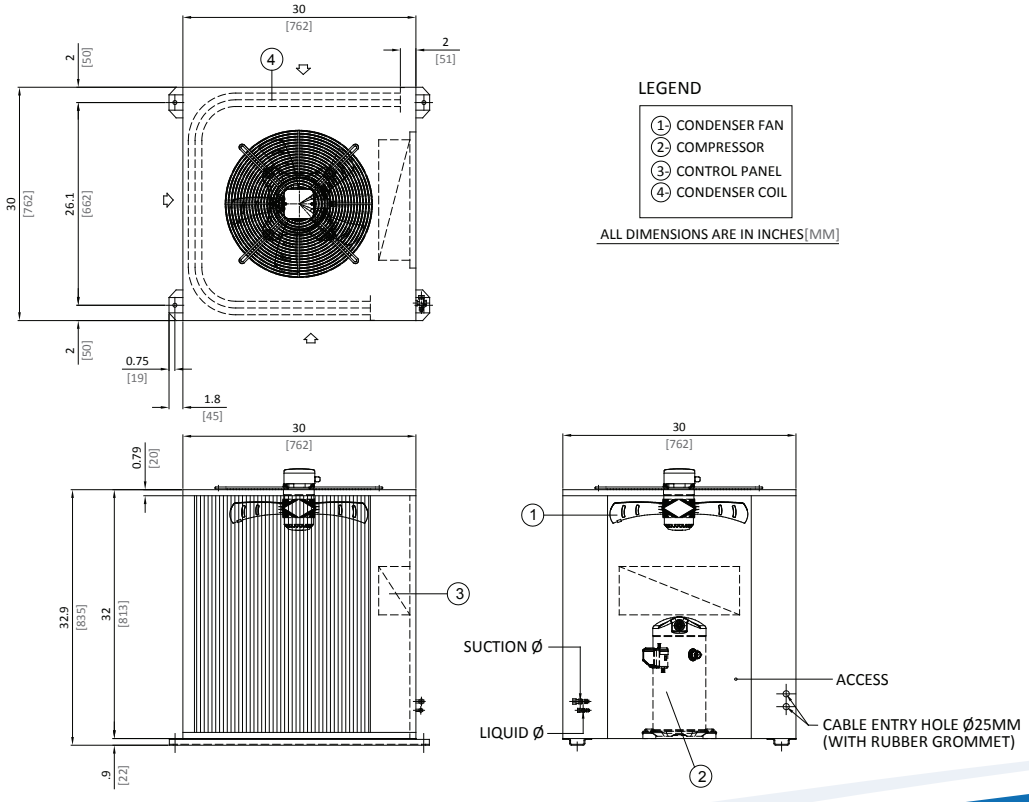
INDOOR UNIT DDP

Dimensional Data

OUTDOOR UNITS - RXV Models: 18, 24 & 30

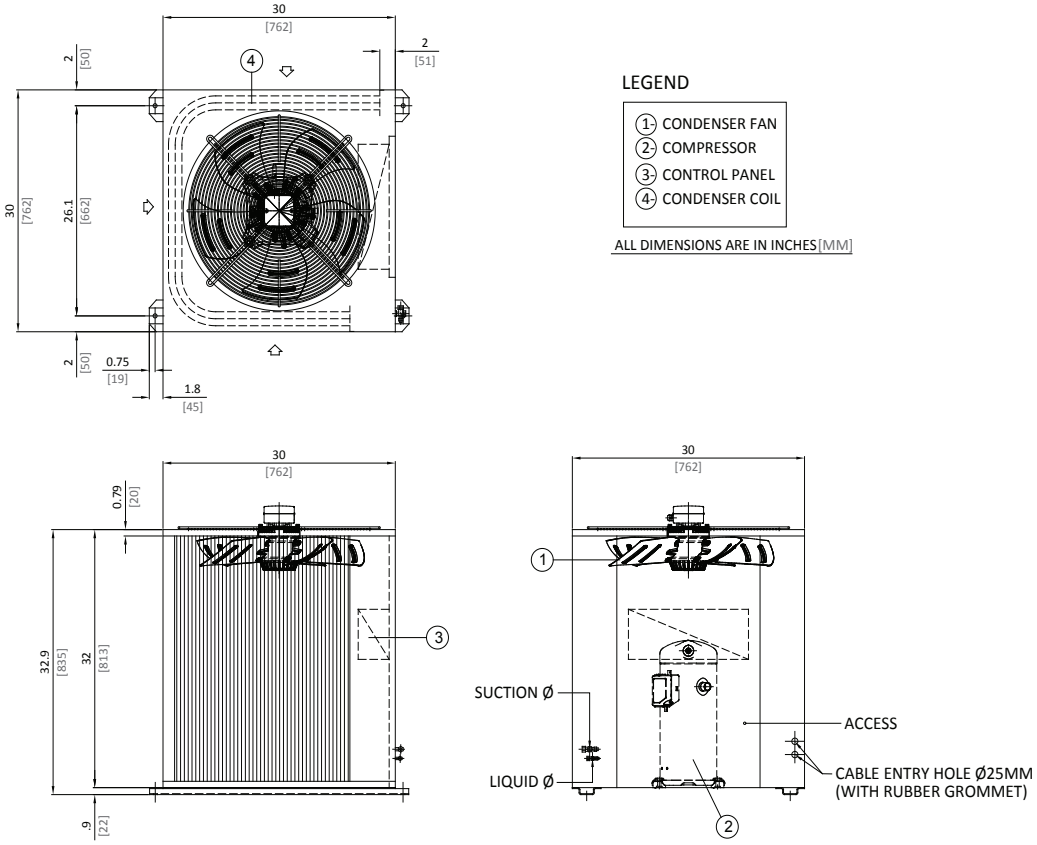


Model: RXV Models: 36, 42



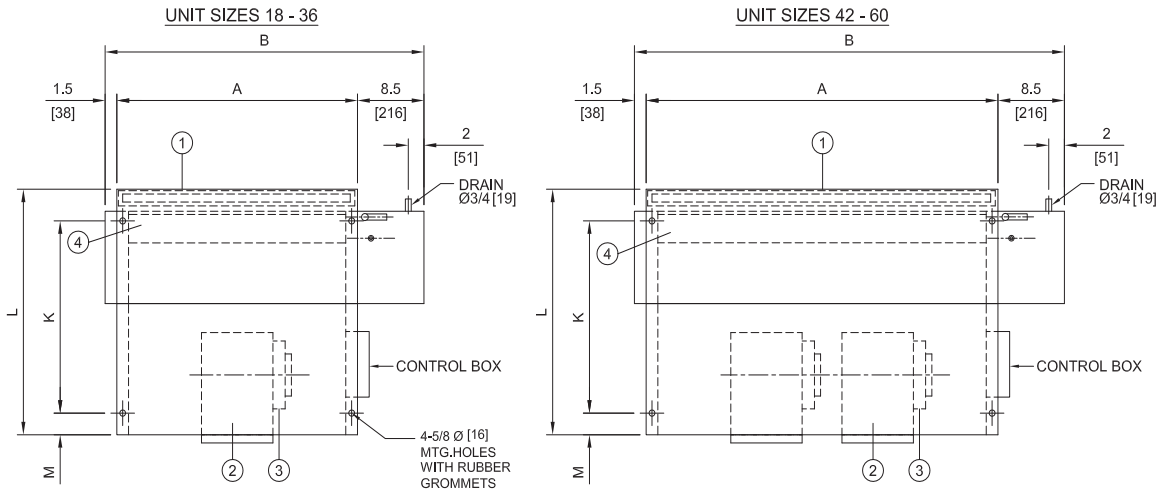
Dimensional Data

OUTDOOR UNITS - RXV Models: 48, 54 & 60



Dimensional Data

DDP INDOOR UNITS

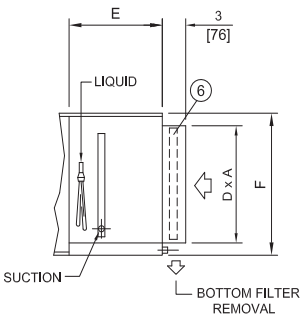


LEGEND

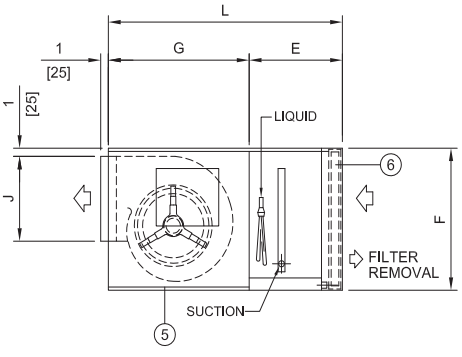
1. INSULATED R.A.PLENUM
2. SUPPLY FAN
3. FAN MOTOR
4. COOLING COIL
5. ACCESS PANEL
6. FILTER

DDP UNIT MODEL	K		L		M	
	INCH	MM	INCH	MM	INCH	MM
18	22.1	561	27.68	703	1.8	46
24/30						
36						
42/48	26.14	664	29.92	760	1.8	46
54						
60						

ALL DIMENSION ARE IN INCHES MM



REAR RETURN-OPTIONAL
(DUCTED)



FREE RETURN-STANDARD

DDP UNIT MODEL	A		B		C		D		E		F		G		J		I		H		N		CONNECTION SIZES			
																							LIQUID Ø		SUCTION Ø	
	INCH	MM	INCH	MM	INCH	MM	INCH	MM	INCH	MM	INCH	MM	INCH	MM	INCH	MM	INCH	MM	INCH	MM	INCH	MM	INCH	MM	INCH	MM
18	23	584	33	838	21.5	546	12	305	12.87	327	15	381	14.8	376	8.22	209	9.13	232	-	-	6.92	176	3/8	10	3/4	19
24/30	27	686	37	940	25.5	648	12	305	12.87	327	15	381	14.8	376	8.22	209	9.13	232	-	-	8.93	227	3/8	10	3/4	19
36	27	686	37	940	25.5	648	14.5	368	12.91	328	18.07	459	17	432	10.34	263	9.13	232	-	-	8.93	227	3/8	10	7/8	22
42/48	45	1143	55	1397	43.5	1105	12	305	12.91	328	15	381	14.8	376	8.22	209	9.13	232	11.85	301	7.44	189	3/8	10	7/8	22
54	45	1143	55	1397	43.5	1105	14.5	368	12.91	328	18.07	459	17	432	10.34	263	9.13	232	11.85	301	7.44	189	3/8	10	7/8	22
60	51	1295	61	1549	49.5	1257	14.5	368	12.91	328	18.07	459	17	432	10.34	263	9.13	232	14.87	378	8.93	227	3/8	10	7/8	22

ALL DIMENSION ARE IN INCHES MM

GUIDE SPECIFICATIONS

Ducted split Air Conditioning system shall composed of a compact design indoor fan coil unit and floor or Rooftop mounted outside air cooled condensing unit, rated with AHRI standards 210/240.

CONDENSING UNIT:
The condensing unit shall be composed of compressor, condenser, coil, condenser fan and motor.

CONDENSER COIL
The condenser coil shall be air cooled constructed of high efficiency inner grooved copper tube mechanically expanded into hi-efficiency aluminum fins and tested against leakage by high pressure under water.

COMPRESSOR
- Compressor shall be hermetic scroll type, refrigerant gas cooled, furnished with internal high temperature motor overload protection device.
- Compressor have an internal pressure relief assembly to protect against excessive pressure differential.

CONDENSER FAN
For top discharge air delivery, the fan shall be equipped with statically and dynamically balanced alloy blades, and inherent corrosion resistant shaft. Complete fan assembly is mounted downward on the strong and acrylic coated fan guard.

MOTOR
The motor shall be totally enclosed air over (TEAO), six pole.

CONTROLS
Condensing unit shall be provided with a control panel enclosure comprising all electrical control devices except for the field supplied room thermostat and shall include the following components as minimum:
- Compressor and condenser fan motor contactor
- Anti recycling time delay relay
- Terminal for external connections.

INDOOR UNIT:
The indoor unit/air handler shall be composed of evaporator coil, fan motor assembly and the metering device.

EVAPORATOR COIL
Evaporator coil shall be constructed of high efficiency copper tubes, mechanically bonded to aluminium fins. The coil consists of headers of seamless copper and flow control distributor.

EVAPORATOR FAN
Fan shall be double inlet, double width, direct driven with centrifugal type wheel. Fan wheel shall be with multi forward curved blades. Fan shall be statically and dynamically balanced. Fan housing and wheel shall be made of galvanized steel sheet.

MOTOR
Motor shall be single phase, 3 speed permanent split capacitor type, suitable for 220-240V/1Ph/50-60Hz.Highly efficient with integral thermal protection. Motor shall have high power factor and shall be with permanent lubricated sleeve bearings.

CASING
The unit casing shall be made of zinc coated galvanized steel sheets conforming to JIS-G3302 and ASTM-A525 that shall be phospatized and then electro statically dry powder coated of approx 60 microns to provide an extremely tough, scratch resistance, and excellent anti corrosive protection.

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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.skm@skmaircon.com

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

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