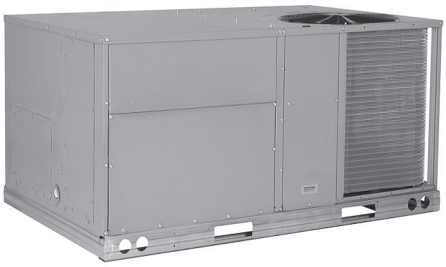
RGV/RAV
Product Specifications

SINGLE PACKAGED ROOFTOP UNITS WITH X-VANE™ FAN TECHNOLOGY: GAS HEATING/ ELECTRIC COOLING (RGV) AND ELECTRIC COOLING/OPTIONAL ELECTRIC HEAT (RAV) 3 TO 6 TON

The new 3 to 6 ton RGV/RAV series rooftop units (RTU) with X-Vane™ Fan Technology integrate new technology to provide value added benefits never seen in this type of equipment before. New major design features include:

- Patent pending, industry's first efficient indoor fan system using Vane Axial fan with electric commutated variable speed motor
- Reliable fixed speed scroll compressor on 3-5 ton sizes and 2 stage scroll technology on 6 ton sizes
- Upgraded unit control board with intuitive indoor fan adjustment
- Reliable copper tube/aluminum fin condenser coil with 5/16 in. tubing to help reduce refrigerant charge versus prior designs
- New outdoor fan system with rugged — lightweight high impact composite fan blade



RGV/RAV036-072

X Vane™ Fan

Installation ease

RGV/RAV units up to 6 tons are specifically designed to fit on our existing roof curbs that were installed back to 1989, which makes replacement easy and eliminates the need for curb adapters or changing utility connections.

Single-stage units deliver efficiencies of up to 14.0 SEER and 15.2 IEER on 3-phase products and 13.8 SEER2 on single-phase products. All models are capable of either vertical or horizontal airflow.

With "no-strip" screw collars, handled access panels, and more, the unit is easy to install, easy to maintain, and easy to use. Your new 3 to 6 ton RGV/RAV rooftop unit (RTU) provides optimum comfort and control from a packaged rooftop.

Installation ease

All RGV/RAV units are field-convertible to horizontal airflow, which makes it easy to adjust to unexpected jobsite complications. Lighter units make for easy replace. Simple, fast plug-in connections to the standard integrated unit control board (UCB). Clearly labeled connections points to reduce installation time. Also, a large control box provides room to work and room to mount accessory controls.

Easy to maintain

With the new X-Vane Vane Axial fan system and direct drive ECM motor, there is no longer a need to adjust belts or pulleys as in past designs. This frees up maintenance and installation time.

Easy access handles provide quick and easy access to all normally serviced components. Our "no-strip" screw system has superior holding power and guides screws into position while preventing the screw from stripping the unit's metal.

Sloped, corrosion resistant composite drain pan sheds water; and won't rust.

Easy to use

The newly re-designed Unit Control Board puts all connections and troubleshooting points in one convenient place. Most low voltage connections are made to the same board and make it easy to access it. Setting up the fan is simple by an intuitive switch and rotary dial arrangement. The RGV/RAV rooftops have high and low pressure switches, a filter drier, and 2-in. filters standard.

X-Vane Fan Technology

Direct drive X-Vane Fan Technology indoor fan system uses Vane Axial fan design and electrically commutated motors.

This new Vane Axial design over past belt drive systems has 75% fewer moving parts, uses up to 40% less energy and has no fan belts, blower bearings and shaft.

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Features/Benefits

Value-added features include:

- Optional Hot Gas Re-Heat dehumidification system for improved part load humidity performance
- R-410A refrigerant
- Single point gas and electrical connections
- 3 to 5 ton models use fixed refrigerant metering devices and 6 ton models use a TXV
- Scroll compressors with internal line-break overload protection
- Units come with an easy access tool-less filter door. Filter track tilts out for filter removal and replacement. All filters are the same size in each unit

Operating efficiency and flexibility

The RGV/RAV rooftops meet ASHRAE (American Society of Heating, Refrigerating, and Air-Conditioning Engineers) 90.1-2016, IECC[1] (International Energy Conservation Code) IECC-2018 minimum efficiency requirements.

Field convertible airflow

All RGV/RAV 3 to 6 ton units are field-convertible to horizontal airflow, which makes it easy to adjust to unexpected job-site complications.

Comfort control

Our patented Hot Gas Re-Heat dehumidification system is an all-inclusive factory-installed option on gas heating/electric cooling and electric cooling/electric heat models. This system provides reliable, flexible operation to meet indoor part load sensible and latent requirements.

1. IECC is a registered trademark of the International Code Council, Inc.

Model number nomenclature

RGV Model Number Nomenclature

MODEL SERIES	R	G	V	0	6	0	L	D	D	A	0	A	A	A
Position Number	**1**	**2**	**3**	**4**	**5**	**6**	**7**	**8**	**9**	**10**	**11**	**12**	**13**	**14**

Position 1 — Type
- R = Rooftop
- G = Gas Heat / Electric Cooling

Position 2 — Unit Efficiency
- V = Standard Efficiency 14 SEER and 13.4 SEER2

Positions 5, 6 — Nominal Cooling Capacity
- 036 = 36,000 BTUH = 3 Tons
- 037 = 36,000 BTUH = 3 Tons SEER2[1]
- 048 = 48,000 BTUH = 4 Tons
- 049 = 48,000 BTUH = 4 Tons SEER2[1]
- 060 = 60,000 BTUH = 5 Tons
- 061 = 60,000 BTUH = 5 Tons SEER2[1]
- 072 = 72,000 BTUH = 6 Tons

Position 7 — Voltage
- H = 208/230-3-60
- K = 208/230-1-60[2]
- L = 460-3-60
- S = 575-3-60

Position 8 — Heating Capacity
- D = Low Heat
- E = Medium Heat
- F = High Heat
- L = Low NOx, Low Heat (sizes 036-060 only), includes Stainless Steel HX
- S = Low Heat, Stainless Steel Heat Exchanger
- R = Medium Heat, Stainless Steel Heat Exchanger
- T = High Heat, Stainless Steel Heat Exchanger

Position 9 — Motor Option (Indoor Fan)
- D = Direct Drive X-Vane™ Fan – Standard Static
- E = Direct Drive X-Vane Fan – High Static
- F = Direct Drive X-Vane Fan – Medium Static
- G = Direct Drive X-Vane Fan – High Static with Hot Gas Re-Heat[3]

Position 10 — Outdoor Air Options / Control
- A = None
- B = Economizer with Barometric relief, OA Temp sensor
- E = Economizer with Barometric relief + CO_2 sensor, OA Temp sensor
- H = Economizer with Barometric relief, enthalpy sensor
- L = Economizer with Barometric relief + CO_2 sensor, enthalpy sensor
- P = Two-Position Damper (036-060 models only)
- U = Temp Ultra Low Leak Economizer with Barometric relief
- W = Enthalpy Ultra Low Leak Economizer with Barometric relief

Position 11 — Factory-Installed Options
- 0A = No Options
- 4B = Non-Fused Disconnect Switch
- AA = Hinged Access Panels
- AT = Un-Powered Convenience Outlet
- BB = Powered Convenience Outlet
- BP = Return Air Smoke Detector
- BR = Supply Air Smoke Detector
- CJ = Condensate Overflow Switch

Position 12 — Condenser / Evaporator Coil Configuration
- A = Aluminum / Copper Cond & Evap Coil
- B = Precoat Alum/Copper Cond with Alum / Copper Evap (3 phase only)
- C = E-Coated Alum/Copper Cond with Alum / Copper Evap (3 phase only)
- D = E-Coated Alum / Copper Cond & Evap (3 phase only)
- E = Copper/Copper Cond & Alum/Copper Evap (3 phase only)
- F = Copper/Copper Cond & Evap (3 phase only)

Position 13 — Economizer Control
- A = Economizer control (W7212) for EconoMiZer® IV (036-060 models)
- B = Economizer control (W7220) for EconoMiZer X (036-072 models)

[1] Units meet Department of Energy 2023 SEER2 requirements.

[2] The following are not available as factory-installed options for models with this voltage code: coated or copper fin coils, economizers and two-position damper, powered convenience outlet, Hot Gas Re-Heat.

[3] Hot Gas Re-Heat system includes Low Ambient controller.

Model number nomenclature (cont)

RAV Model Number Nomenclature

MODEL SERIES	R	A	V	0	6	0	L	0	D	A	0	A	A	A
Position Number	1	2	3	4	5	6	7	8	9	10	11	12	13	14

R = Rooftop

A = Electric/Electric, Cooling Only — **Type**

V = Standard Efficiency 14 SEER (036-060) — **Unit Efficiency**
13.4 SEER2 (036-060)
15.2 IEER (072)

036 = 36,000 BTUH = 3 Tons
048 = 48,000 BTUH = 4 Tons
060 = 60,000 BTUH = 5 Tons
072 = 72,000 BTUH = 6 Tons
037 = 36,000 BTUH = 3 Tons SEER2[1]
049 = 48,000 BTUH = 4 Tons SEER2[1]
061 = 60,000 BTUH = 5 Tons SEER2[1]
— **Nominal Cooling Capacity**

H = 208/230-3-60
K = 208/230-1-60[2]
L = 460-3-60
S = 575-3-60 — **Voltage**

0 = No Heat — **Heating Capacity**

D = Direct Drive X-Vane™ Fan — Standard Static
E = Direct Drive X-Vane Fan — High Static
F = Direct Drive X-Vane Fan — Medium Static
G = Direct Drive X-Vane Fan — High Static with Hot Gas Re-Heat[3] — **Motor Option (Indoor Fan)**

A = None
B = Economizer with Barometric relief, OA Temp sensor
E = Economizer with Barometric relief + CO_2 sensor, OA Temp sensor
H = Economizer with Barometric relief, enthalpy sensor
L = Economizer with Barometric relief + CO_2 sensor, enthalpy sensor
P = Two-Position Damper (036-060 models only)
U = Temp Ultra Low Leak Economizer with Barometric relief
W = Enthalpy Ultra Low Leak Economizer with Barometric relief — **Outdoor Air Options / Control**

0A = No Options
4B = Non Fused Disconnect Switch
AA = Hinged Access Panels
AT = Un-Powered Convenience Outlet
BB = Powered Convenience Outlet
BP = Return Air Smoke Detector
BR = Supply Air Smoke Detector
CJ = Condensate Overflow Switch — **Factory-Installed Options**

A = Aluminum / Copper Cond and Evap Coil
B = Precoat Alum/Copper Cond with Alum / Copper Evap (3 phase only)
C = E-Coated Alum/Copper Cond with Alum / Copper Evap (3 phase only)
D = E-Coated Alum / Copper Cond and Evap (3 phase only)
E = Copper/Copper Cond and Alum/Copper Evap (3 phase only)
F = Copper/Copper Cond and Evap (3 phase only) — **Condenser / Evaporator Coil Configuration**

A = Economizer control (W7212) for EconoMiZer® IV (036-060 models)
B = Economizer control (W7220) for EconoMiZer X (036-072 models) — **Economizer Control**

[1] Units meet Department of Energy 2023 SEER2 requirements.

[2] The following are not available as factory-installed options for models with this voltage code: coated or copper fin coils, economizers and two-position damper, powered convenience outlet, Hot Gas Re-Heat system.

[3] Hot Gas Re-Heat system includes Low Ambient controller.

Capacity ratings

RGV037/049/061 1-Phase AHRI Ratings[a,b,c,d]

UNIT	VOLTAGE	COOLING STAGES	NOMINAL CAPACITY (tons)	NET COOLING CAPACITY 2 (MBH)	TOTAL POWER 2 (kW)	SEER2	EER2
RGV037	K	1	3	34.0	3.0	13.4	11.5
RGV049	K	1	4	48.0	4.2	13.8	11.5
RGV061	K	1	5	58.5	5.1	13.6	11.5

NOTE(S):
a. Rated in accordance with AHRI Standards 210/240 (037/049/061 size).
b. Rating are based on:
Cooling Standard: 80°F (27°C) db, 67°F (19°C) wb indoor air temperature and 95°F (35°C) db outdoor air temperature.
c. Units comply with ASHRAE 90.1-2016 (American Society of Heating, Refrigerating, and Air-Conditioning Engineers) and DOE-2023 (Department of Energy) Energy Standard for minimum SEER2 and EER2 requirements.
d. RGV units comply with US Energy Policy Act (2005). To evaluate code compliance requirements, refer to state and local codes.

RGV036/048/060/072 3-Phase AHRI Ratings[a,b,c,d]

UNIT	VOLTAGE	COOLING STAGES	NOMINAL CAPACITY (tons)	NET COOLING CAPACITY (MBH)	TOTAL POWER (kW)	SEER	EER
RGV036	H, L, S	1	3	34.4	3.0	14.0	11.5
RGV048	H, L, S	1	4	47.0	4.1	14.0	11.6
RGV060	H, L, S	1	5	58.5	5.3	14.0	11.0
RGV072	H, L, S	2	6	70.0	6.4	—	11.0

UNIT	IEER WITH 2-SPEED INDOOR FAN MOTOR	NET COOLING CAPACITY 2 (MBH)	TOTAL POWER 2 (kW)	SEER2	EER2
RGV036	—	34.0	3.0	13.4	11.2
RGV048	—	47.0	4.2	13.4	11.2
RGV060	—	58.5	5.3	13.4	11.0
RGV072	15.0	—	—	—	—

NOTE(S):
a. Rated in accordance with AHRI Standards 210/240 (036/048/060 size) and 340/360 (072 size).
b. Rating are based on:
Cooling Standard: 80°F (27°C) db, 67°F (19°C) wb indoor air temperature and 95°F (35°C) db outdoor air temperature.
IEER Standard: A measure that expresses cooling part-load EER efficiency for commercial unitary air-conditioning and heat pump equipment on the basis of weighted operation at various load capacities.
c. Units comply with ASHRAE 90.1-2016 (American Society of Heating, Refrigerating, and Air-Conditioning Engineers) requirements, as well as DOE-2018 (Department of Energy) Energy Standard for minimum SEER and EER requirements and DOE-2023 Energy Standard for minimum SEER2 and EER2 requirements. ASHRAE 90.1 requires M1 ratings on 3-phase models.
d. RGV units comply with US Energy Policy Act (2005). To evaluate code compliance requirements, refer to state and local codes.

LEGEND

AHRI — Air-Conditioning, Heating and Refrigeration Institute
MBH — Btuh in thousands
EER — Energy Efficiency Ratio
IEER — Integrated Energy Efficiency Ratio
SEER — Seasonal Energy Efficiency Ratio











Capacity ratings (cont)

RAV037/049/061 1-Phase AHRI Ratings[a,b,c,d]

UNIT	VOLTAGE	COOLING STAGES	NOM. CAPACITY (tons)	NET COOLING CAPACITY 2 (MBH)	TOTAL POWER 2 (kW)	SEER2	EER2
RAV037	K	1	3	34.0	3.0	13.4	11.5
RAV049	K	1	4	48.0	4.2	13.8	11.5
RAV061	K	1	5	58.5	5.1	13.6	11.5

NOTE(S):
a. Rated in accordance with AHRI Standards 210/240 (037/049/061 size).
b. Rating are based on:
Cooling Standard: 80°F (27°C) db, 67°F (19°C) wb indoor air temperature and 95°F (35°C) db outdoor air temperature.
c. Units comply with ASHRAE 90.1-2016 (American Society of Heating, Refrigerating, and Air-Conditioning Engineers) and DOE-2023 (Department of Energy) Energy Standard for minimum SEER2 and EER2 requirements.
d. RAV units comply with US Energy Policy Act (2005). To evaluate code compliance requirements, refer to state and local codes.

RAV036/048/060/072 3-Phase AHRI Ratings[a,b,c,d]

UNIT	VOLTAGE	COOLING STAGES	NOMINAL CAPACITY (tons)	NET COOLING CAPACITY (MBH)	TOTAL POWER (kW)	SEER	EER
RAV036	H, L, S	1	3	34.4	2.9	14	11.7
RAV048	H, L, S	1	4	47.0	4.0	14	11.8
RAV060	H, L, S	1	5	58.5	5.2	14	11.2
RAV072	H, L, S	2	6	70.0	6.3	—	11.2

UNIT	IEER WITH 2-SPEED INDOOR FAN MOTOR	NET COOLING CAPACITY 2 (MBH)	TOTAL POWER 2 (kW)	SEER2	EER2
RAV036	—	34.0	3.0	13.4	11.2
RAV048	—	47.0	4.2	13.4	11.2
RAV060	—	58.5	5.3	13.4	11.0
RAV072	15.2	—	—	—	—

NOTE(S):
a. Rated in accordance with AHRI Standards 210/240 (036/048/060 size) and 340/360 (072 size).
b. Rating are based on:
Cooling Standard: 80°F (27°C) db, 67°F (19°C) wb indoor air temperature and 95°F (35°C) db outdoor air temperature.
IEER Standard: A measure that expresses cooling part-load EER efficiency for commercial unitary air-conditioning and heat pump equipment on the basis of weighted operation at various load capacities.
c. Units comply with ASHRAE 90.1-2016 (American Society of Heating, Refrigerating, and Air-Conditioning Engineers) requirements, as well as DOE-2018 (Department of Energy) Energy Standard for minimum SEER and EER and DOE-2023 Energy Standards for minimum SEER2 and EER2 requirements. ASHRAE 90.1 requires M1 ratings on 3-phase models.
d. RAV units comply with US Energy Policy Act (2005). To evaluate code compliance requirements, refer to state and local codes.

LEGEND

AHRI — Air-Conditioning, Heating and Refrigeration Institute
MBH — Btuh in thousands
EER — Energy Efficiency Ratio
IEER — Integrated Energy Efficiency Ratio
SEER — Seasonal Energy Efficiency Ratio











Capacity ratings (cont)

Sound Ratings Table

RGV/RAV UNIT	COOLING STAGES	OUTDOOR SOUND (dB) at 60 Hz[a,b]								
		A-Weighted[c]	63	125	250	500	1000	2000	4000	8000
036/037	1	79	85.6	84.7	80.5	76.0	72.4	68.0	62.8	59.3
048/049	1	79	85.6	84.7	80.5	76.0	72.4	68.0	62.8	59.3
060/061	1	79	85.6	84.7	80.5	76.0	72.4	68.0	62.8	59.3
072	2	79	85.6	84.7	80.5	76.0	72.4	68.0	62.8	59.3

NOTE(S):
a. Outdoor sound data is measured in accordance with AHRI.
b. Measurements are expressed in terms of sound power. Do not compare these values to sound pressure values because sound pressure depends on specific environmental factors which normally do not match individual applications. Sound power values are independent of the environment and therefore more accurate.
c. A-weighted sound ratings filter out very high and very low frequencies, to better approximate the response of “average” human ear. A-weighted measurements for units are taken in accordance with AHRI.

LEGEND

db — Decibel

Minimum - Maximum Airflow Ratings (cfm) — Natural Gas and Propane

UNIT	HEAT LEVEL	VOLTAGE	COOLING				HEATING[a]	
			Minimum Airflow cfm	Minimum 2-Speed Airflow (Low Speed)	Minimum 2-Speed Airflow (High Speed)	Maximum Airflow cfm	Minimum Airflow cfm	Maximum Airflow cfm
RGV037	LOW	1 phase	900	—	—	1500	890	1950
	MED						800	1520
	HIGH						—	—
RGV049	LOW	1 phase	1200	—	—	2000	890	2440
	MED						1050	2280
	HIGH						1220	2170
RGV061	LOW	1 phase	1500	—	—	2500	890	3250
	MED						1050	2730
	HIGH						1220	2790
RGV036	LOW	3 phase	900	—	—	1500	910	2010
	MED						960	1160
	HIGH						—	—
RGV048	LOW	3 phase	1200	—	—	2000	910	2010
	MED						1250	2330
	HIGH						1390	2220
RGV060	LOW	3 phase	1500	—	—	2500	910	2510
	MED						1250	2720
	HIGH						1390	2780
RGV072	LOW	3 phase	1800	1200	1800	3000	910	3350
	MED						1250	3260
	HIGH						1390	3170

NOTE(S):
a. Heating rating values are identical for aluminum heat exchangers and stainless steel heat exchangers.

Minimum - Maximum Airflow Ratings (cfm) — Cooling Units and Accessory Electric Heat

UNIT	COOLING				ELECTRIC HEAT[a]	
	Minimum Airflow cfm	Minimum 2-Speed Airflow (Low Speed)	Minimum 2-Speed Airflow (High Speed)	Maximum Airflow cfm	Minimum Airflow cfm	Maximum Airflow cfm
RAV036/037	900	—	—	1500	900	1500
RAV048/049	1200	—	—	2000	1200	2000
RAV060/061	1500	—	—	2500	1500	2500
RAV072	1800	1200	1800	3000	1800	3000

NOTE(S):
a. Electric heat modules are available as field-installed accessories for RAV units.

Capacity ratings (cont)

Heat Rating Table — Natural Gas and Propane

RGV UNIT		GAS HEAT	AL/SS HEAT EXCHANGER		TEMPERATURE RISE (°F)	THERMAL EFFICIENCY (%)	AFUE EFFICIENCY (%)
			Input/Output Stage 1 (MBH)	Input/Output Stage 2 (MBH)			
Single Phase	037	LOW	—	65/53	25-55	81	81
		MED	—	90/73	45-85	82	81
		HIGH	—	—	—	—	—
	049	LOW	—	65/53	20-55	81	81
		MED	—	90/73	30-65	82	81
		HIGH	—	130/106	45-80	81	81
	061	LOW	—	65/53	15-55	81	81
		MED	—	90/73	25-65	82	81
		HIGH	—	130/106	35-80	81	81
Three Phase	036	LOW	—	67/54	25-55	81	—
		MED	82/65	110/93	50-85	80	—
		HIGH	—	—	—	—	—
	048	LOW	—	67/54	25-55	81	—
		MED	—	110/88	35-65	80	—
		HIGH	120/96	150/120	50-80	80	—
	060	LOW	—	67/54	20-55	81	—
		MED	—	110/88	30-65	80	—
		HIGH	120/96	150/120	40-80	80	—
	072	LOW	—	67/54	15-55	81	—
		MED	—	110/88	25-65	80	—
		HIGH	120/96	150/120	30-80	80	—

Heat Rating Table — Low NO_X

RGV UNIT		GAS HEAT	LOW NOx HEAT EXCHANGER		TEMPERATURE RISE (°F)	THERMAL EFFICIENCY (%)	AFUE EFFICIENCY (%)
			Input/Output Stage 1 (MBH)	Input/Output Stage 2 (MBH)			
Single Phase	037	LOW	—	60/49	20-50	82.0	81.3
	049	LOW	—	60/49	20-50	82.0	81.3
	061	LOW	—	60/49	15-50	82.0	81.3
Three Phase	036	LOW	—	60/49	20-50	82.0	81.3
	048	LOW	—	60/49	20-50	82.0	81.3
	060	LOW	—	60/49	15-50	82.0	81.3

LEGEND

AFUE — Annual Fuel Utilization Efficiency
MBH — Btuh in thousands

Physical data

RGV/RAV 3 Ton Physical Data

RGV/RAV UNIT	RGV/RAV036	RGV/RAV036**G	RGV/RAV037
NOMINAL TONS	3	3	3
BASE UNIT OPERATING WT (lb) RGV/RAV[a]	482/437	482/437	482/437
REFRIGERATION SYSTEM			
No. Circuits/No. Compressors/Type	1 / 1/ Scroll	1 / 1/ Scroll	1 / 1/ Scroll
R-410A Charge A/B (lb-oz)	4-6	—	4-9.2
Hot Gas Re-Heat R-410A Charge A/B (lb-oz)	—	7-8	—
Metering Device	Acutrol	Acutrol	Acutrol
Hot Gas Re-Heat Metering Device	—	TXV-Acutrol	—
High-Pressure Trip/Reset (psig)	630/505	630/505	630/505
Low-Pressure Trip/Reset (psig)	54/117	27/44	54/117
EVAPORATOR COIL			
Material (Tube/Fin)	Cu/Al	Cu/Al	Cu/Al
Coil Type	3/8 in. RTPF	3/8 in. RTPF	3/8 in. RTPF
Rows/FPI	2/15	2/15	2/15
Total Face Area (ft^2)	5.5	5.5	5.5
Condensate Drain Connection Size	3/4 in.	3/4 in.	3/4 in.
CONDENSER COIL			
Material	Cu/Al	Cu/Al	Cu/Al
Coil Type	5/16 in. RTPF	5/16 in. RTPF	5/16 in. RTPF
Rows/FPI	1/18	1/18	1/18
Total Face Area (ft^2)	11.7	11.7	14.6
HOT GAS RE-HEAT COIL			
Material	—	Cu/Al	—
Coil Type	—	3/8 in. RTPF	—
Rows/FPI	—	1/17	—
Total Face Area (ft^2)	—	4.1	—
EVAPORATOR FAN AND MOTOR			
Standard Static 1 Phase			
Motor Qty/Drive Type	—	—	1/Direct
Maximum Cont Bhp	—	—	0.44
Rpm Range	—	—	189-1890
Fan Qty/Type	—	—	1/Vane Axial
Fan Diameter (in.)	—	—	16.6
Medium Static 1 Phase			
Motor Qty/Drive Type	—	—	1/Direct
Maximum Cont Bhp	—	—	0.71
Rpm Range	—	—	219-2190
Fan Qty/Type	—	—	1/Vane Axial
Fan Diameter (in.)	—	—	16.6
High Static 1 Phase			
Motor Qty/Drive Type	—	—	1/Direct
Maximum Cont Bhp	—	—	1.07
Rpm Range	—	—	249-2490
Fan Qty/Type	—	—	1/Vane Axial
Fan Diameter (in.)	—	—	16.6
Standard Static 3 Phase			
Motor Qty/Drive Type	1/Direct	1/Direct	—
Maximum Cont Bhp	0.44	0.44	—
Rpm Range	189-1890	189-1890	—
Fan Qty/Type	1/Vane Axial	1/Vane Axial	—
Fan Diameter (in.)	16.6	16.6	—
Medium Static 3 Phase			
Motor Qty/Drive Type	1/Direct	1/Direct	—
Maximum Cont Bhp	0.71	0.71	—
Rpm Range	219-2190	219-2190	—
Fan Qty/Type	1/Vane Axial	1/Vane Axial	—
Fan Diameter (in.)	16.6	16.6	—

Physical data (cont)

RGV/RAV 3 Ton Physical Data (cont)

RGV/RAV UNIT	RGV/RAV036	RGV/RAV036**G	RGV/RAV037
High Static 3 Phase			
Motor Qty/Drive Type	1/Direct	1/Direct	—
Maximum Cont Bhp	1.07	1.07	—
Rpm Range	249-2490	249-2490	—
Fan Qty/Type	1/Vane Axial	1/Vane Axial	—
Fan Diameter (in.)	16.6	16.6	—
CONDENSER FAN AND MOTOR			
Qty / Motor Drive Type	1 / Direct	1 / Direct	1 / Direct
Motor HP/Rpm	1/4 / 1100	1/4 / 1100	1/4 / 1100
Fan Diameter (in.)	23	23	23
FILTERS			
RA Filter Qty / Size (in.)	2 / 16 x 25 x 2	2 / 16 x 25 x 2	2 / 16 x 25 x 2
OA Inlet Screen Qty / Size (in.)	1 / 20 x 24 x 1	1 / 20 x 24 x 1	1 / 20 x 24 x 1

NOTE(S):
a. Base unit operating weight does not include weight of options.

Physical data (cont)

RGV/RAV 4 Ton Physical Data

RGV/RAV UNIT	RGV/RAV048	RGV/RAV048**G	RGV/RAV049
NOMINAL TONS	3	3	3
BASE UNIT OPERATING WT (lb) RGV/RAV[a]	482/437	482/437	482/437
REFRIGERATION SYSTEM			
No. Circuits/No. Compressors/Type	1 / 1/ Scroll	1 / 1/ Scroll	1 / 1/ Scroll
R-410A Charge A/B (lb-oz)	9-14	—	8-9.6
Hot Gas Re-Heat R-410A Charge A/B (lb-oz)	—	14-6	—
Metering Device	Acutrol	Acutrol	Acutrol
Hot Gas Re-Heat Metering Device	—	TXV-Acutrol	—
High-Pressure Trip/Reset (psig)	630/505	630/505	630/505
Low-Pressure Trip/Reset (psig)	54/117	27/44	54/117
EVAPORATOR COIL			
Material (Tube/Fin)	Cu/Al	Cu/Al	Cu/Al
Coil Type	3/8 in. RTPF	3/8 in. RTPF	3/8 in. RTPF
Rows/FPI	3/15	3/15	3/15
Total Face Area (ft^2)	5.5	5.5	5.5
Condensate Drain Connection Size	3/4 in.	3/4 in.	3/4 in.
CONDENSER COIL			
Material	Cu/Al	Cu/Al	Cu/Al
Coil Type	5/16 in. RTPF	5/16 in. RTPF	5/16 in. RTPF
Rows/FPI	2/18	2/18	2/18
Total Face Area (ft^2)	15.9	15.9	15.9
HOT GAS RE-HEAT COIL			
Material	—	Cu/Al	—
Coil Type	—	3/8 in. RTPF	—
Rows/FPI	—	2/17	—
Total Face Area (ft^2)	—	4.1	—
EVAPORATOR FAN AND MOTOR			
Standard Static 1 Phase			
Motor Qty/Drive Type	—	—	1/Direct
Maximum Cont Bhp	—	—	0.72
Rpm Range	—	—	190-1900
Fan Qty/Type	—	—	1/Vane Axial
Fan Diameter (in.)	—	—	16.6
Medium Static 1 Phase			
Motor Qty/Drive Type	—	—	1/Direct
Maximum Cont Bhp	—	—	1.06
Rpm Range	—	—	217-2170
Fan Qty/Type	—	—	1/Vane Axial
Fan Diameter (in.)	—	—	16.6
High Static 1 Phase			
Motor Qty/Drive Type	—	—	1/Direct
Maximum Cont Bhp	—	—	1.53
Rpm Range	—	—	246-2460
Fan Qty/Type	—	—	1/Vane Axial
Fan Diameter (in.)	—	—	16.6
Standard Static 3 Phase			
Motor Qty/Drive Type	1/Direct	1/Direct	—
Maximum Cont Bhp	0.72	0.72	—
Rpm Range	190-1900	190-1900	—
Fan Qty/Type	1/Vane Axial	1/Vane Axial	—
Fan Diameter (in.)	16.6	16.6	—
Medium Static 3 Phase			
Motor Qty/Drive Type	1/Direct	1/Direct	—
Maximum Cont Bhp	1.06	1.06	—
Rpm Range	217-2170	217-2170	—
Fan Qty/Type	1/Vane Axial	1/Vane Axial	—
Fan Diameter (in.)	16.6	16.6	—

Physical data (cont)

RGV/RAV 4 Ton Physical Data (cont)

RGV/RAV UNIT	RGV/RAV048	RGV/RAV048**G	RGV/RAV049
High Static 3 Phase			
Motor Qty/Drive Type	1/Direct	1/Direct	—
Maximum Cont Bhp	1.96	1.96	—
Rpm Range	266-2660	266-2660	—
Fan Qty/Type	1/Vane Axial	1/Vane Axial	—
Fan Diameter (in.)	16.6	16.6	—
CONDENSER FAN AND MOTOR			
Qty / Motor Drive Type	1 / Direct	1 / Direct	1 / Direct
Motor HP/Rpm	1/4 / 1100	1/4 / 1100	1/4 / 1100
Fan Diameter (in.)	23	23	23
FILTERS			
RA Filter Qty / Size (in.)	2 / 16 x 25 x 2	2 / 16 x 25 x 2	2 / 16 x 25 x 2
OA Inlet Screen Qty / Size (in.)	1 / 20 x 24 x 1	1 / 20 x 24 x 1	1 / 20 x 24 x 1

NOTE(S):
a. Base unit operating weight does not include weight of options.

Physical data (cont)

RGV/RAV 5 Ton Physical Data

RGV/RAV UNIT	RGV/RAV060	RGV/RAV060**G	RGV/RAV061
NOMINAL TONS	5	5	5
BASE UNIT OPERATING WT (lb) RGV/RAV[a]	556/511	556/511	556/511
REFRIGERATION SYSTEM			
No. Circuits/No. Compressors/Type	1 / 1 / Scroll	1 / 1 / Scroll	1 / 1 / Scroll
R-410A Charge A/B (lb-oz)	8-9	—	8-9.6
Hot Gas Re-Heat R-410A Charge A/B (lb-oz)	—	15-0	—
Metering Device	Acutrol	Acutrol	Acutrol
Hot Gas Re-Heat Metering Device	—	TXV-Acutrol	—
High-Pressure Trip/Reset (psig)	630/505	630/505	630/505
Low-Pressure Trip/Reset (psig)	54/117	27/44	54/117
EVAPORATOR COIL			
Material (Tube/Fin)	Cu/Al	Cu/Al	Cu/Al
Coil Type	3/8 in. RTPF	3/8 in. RTPF	3/8 in. RTPF
Rows/FPI	4/15	4/15	4/15
Total Face Area (ft^2)	5.5	5.5	5.5
Condensate Drain Connection Size	3/4 in.	3/4 in.	3/4 in.
CONDENSER COIL			
Material	Cu/Al	Cu/Al	Cu/Al
Coil Type	5/16 in. RTPF	5/16 in. RTPF	5/16 in. RTPF
Rows/FPI	2/18	2/18	2/18
Total Face Area (ft^2)	15.9	15.9	15.9
HOT GAS RE-HEAT COIL			
Material	—	Cu/Al	—
Coil Type	—	3/8 in. RTPF	—
Rows/FPI	—	2/17	—
Total Face Area (ft^2)	—	4.1	—
EVAPORATOR FAN AND MOTOR			
Standard Static 1 Phase			
Motor Qty/Drive Type	—	—	1/Direct
Maximum Cont Bhp	—	—	1.06
Rpm Range	—	—	215-2150
Fan Qty/Type	—	—	1/Vane Axial
Fan Diameter (in.)	—	—	16.6
Medium Static 1 Phase			
Motor Qty/Drive Type	—	—	1/Direct
Maximum Cont Bhp	—	—	1.44
Rpm Range	—	—	239-2390
Fan Qty/Type	—	—	1/Vane Axial
Fan Diameter (in.)	—	—	16.6
High Static 1 Phase			
Motor Qty/Drive Type	—	—	1/Direct
Maximum Cont Bhp	—	—	1.96
Rpm Range	—	—	266-2660
Fan Qty/Type	—	—	1/Vane Axial
Fan Diameter (in.)	—	—	16.6
Standard Static 3 Phase			
Motor Qty/Drive Type	1/Direct	1/Direct	—
Maximum Cont Bhp	1.06	1.06	—
Rpm Range	215-2150	215-2150	—
Fan Qty/Type	1/Vane Axial	1/Vane Axial	—
Fan Diameter (in.)	16.6	16.6	—
Medium Static 3 Phase			
Motor Qty/Drive Type	1/Direct	1/Direct	—
Maximum Cont Bhp	1.44	1.44	—
Rpm Range	239-2390	239-2390	—
Fan Qty/Type	1/Vane Axial	1/Vane Axial	—
Fan Diameter (in.)	16.6	16.6	—

Physical data (cont)

RGV/RAV 5 Ton Physical Data (cont)

RGV/RAV UNIT	RGV/RAV060	RGV/RAV060**G	RGV/RAV061
High Static 3 Phase			
Motor Qty/Drive Type	1/Direct	1/Direct	—
Maximum Cont Bhp	2.43	2.43	—
Rpm Range	284-2836	284-2836	—
Fan Qty/Type	1/Vane Axial	1/Vane Axial	—
Fan Diameter (in.)	16.6	16.6	—
CONDENSER FAN AND MOTOR			
Qty / Motor Drive Type	1 / Direct	1 / Direct	1 / Direct
Motor HP/Rpm	1/4 / 1100	1/4 / 1100	1/4 / 1100
Fan Diameter (in.)	23	23	23
FILTERS			
RA Filter Qty / Size (in.)	2 / 16 x 25 x 2	2 / 16 x 25 x 2	2 / 16 x 25 x 2
OA Inlet Screen Qty / Size (in.)	1 / 20 x 24 x 1	1 / 20 x 24 x 1	1 / 20 x 24 x 1

NOTE(S):
a. Base unit operating weight does not include weight of options.

Physical data (cont)

RGV/RAV 6 Ton Physical Data

RGV/RAV UNIT	RGV/RAV072	RGV/RAV072**G
NOMINAL TONS	5	5
BASE UNIT OPERATING WT (lb) RGV/RAV[a]	556/511	556/511
REFRIGERATION SYSTEM		
No. Circuits/No. Compressors/Type	1 / 1 / 2-Stage Scroll	1 / 1 / 2-Stage Scroll
R-410A Charge A/B (lb-oz)	10-3	—
Hot Gas Re-Heat R-410A Charge A/B (lb-oz)	—	20-8
Metering Device	TXV	TXV
Hot Gas Re-Heat Metering Device	—	TXV
High-Pressure Trip/Reset (psig)	630/505	630/505
Low-Pressure Trip/Reset (psig)	54/117	27/44
EVAPORATOR COIL		
Material (Tube/Fin)	Cu/Al	Cu/Al
Coil Type	3/8 in. RTPF	3/8 in. RTPF
Rows/FPI	4/15	4/15
Total Face Area (ft^2)	7.3	7.3
Condensate Drain Connection Size	3/4 in.	3/4 in.
CONDENSER COIL		
Material	Cu/Al	Cu/Al
Coil Type	5/16 in. RTPF	5/16 in. RTPF
Rows/FPI	2/18	2/18
Total Face Area (ft^2)	15.0	15.0
HOT GAS RE-HEAT COIL		
Material	—	Cu/Al
Coil Type	—	3/8 in. RTPF
Rows/FPI	—	2/17
Total Face Area (ft^2)	—	5.5
EVAPORATOR FAN AND MOTOR		
Standard Static 3 Phase		
Motor Qty/Drive Type	1/Direct	1/Direct
Maximum Cont Bhp	1.31	1.31
Rpm Range	230-2300	230-2300
Fan Qty/Type	1/Vane Axial	1/Vane Axial
Fan Diameter (in.)	16.6	16.6
Medium Static 3 Phase		
Motor Qty/Drive Type	1/Direct	1/Direct
Maximum Cont Bhp	1.76	1.76
Rpm Range	253-2530	253-2530
Fan Qty/Type	1/Vane Axial	1/Vane Axial
Fan Diameter (in.)	16.6	16.6
High Static 3 Phase		
Motor Qty/Drive Type	1/Direct	1/Direct
Maximum Cont Bhp	2.43	2.43
Rpm Range	284-2836	284-2836
Fan Qty/Type	1/Vane Axial	1/Vane Axial
Fan Diameter (in.)	16.6	16.6
CONDENSER FAN AND MOTOR		
Qty / Motor Drive Type	1 / Direct	1 / Direct
Motor HP/Rpm	1/4 / 1100	1/4 / 1100
Fan Diameter (in.)	23	23
FILTERS		
RA Filter Qty / Size (in.)	4 / 16 x 16 x 2	4 / 16 x 16 x 2
OA Inlet Screen Qty / Size (in.)	1 / 20 x 24 x 1	1 / 20 x 24 x 1

NOTE(S):
a. Base unit operating weight does not include weight of options.

Physical data (cont)

RGV 3 to 5 Ton Gas Heat Data — 1-Phase Units

RGV UNIT	RGV037	RGV049	RGV061
GAS CONNECTION			
No. of Gas Valves	1	1	1
Natural Gas Supply Line Pressure (in. wg)/(psig)	4-13 / 0.18-0.47	4-13 / 0.18-0.47	4-13 / 0.18-0.47
Liquid Propane Supply Line Pressure (in. wg)/(psig)	11-13 / 0.40-0.47	11-13 / 0.40-0.47	11-13 / 0.40-0.47
HEAT ANTICIPATOR SETTING (AMPS)			
First Stage	0.14	0.14	0.14
Second Stage	0.14	0.14	0.14
NATURAL GAS HEAT			
LOW			
No. of Stages / No. of Burners (total)	1 / 2	1 / 2	1 / 2
Connection Size	1/2 in. NPT	1/2 in. NPT	1/2 in. NPT
Rollout Switch Opens / Closes (°F)	195 / 115	195 / 115	195 / 115
Temperature Rise (°F)	25-55	20-55	15-55
MEDIUM			
No. of Stages / No. of Burners (total)	1 / 3	1 / 3	1 / 3
Connection Size	1/2 in. NPT	1/2 in. NPT	1/2 in. NPT
Rollout Switch Opens / Closes (°F)	195 / 115	195 / 115	195 / 115
Temperature Rise (°F)	45-85	30-65	25-65
HIGH			
No. of Stages / No. of Burners (total)	—	1 / 3	1 / 3
Connection Size	—	1/2 in. NPT	1/2 in. NPT
Rollout Switch Opens / Closes (°F)	—	195 / 115	195 / 115
Temperature Rise (°F)	—	45-80	35-80
LIQUID PROPANE HEAT			
LOW			
No. of Stages / No. of Burners (total)	1 / 2	1 / 2	1 / 2
Connection Size	1/2 in. NPT	1/2 in. NPT	1/2 in. NPT
Rollout Switch Opens / Closes (°F)	195 / 115	195 / 115	195 / 115
Temperature Rise (°F)	25-55	20-55	15-55
MEDIUM			
No. of Stages / No. of Burners (total)	1 / 3	1 / 3	1 / 3
Connection Size	1/2 in. NPT	1/2 in. NPT	1/2 in. NPT
Rollout Switch Opens / Closes (°F)	195 / 115	195 / 115	195 / 115
Temperature Rise (°F)	45-85	30-65	25-65
HIGH			
No. of Stages / No. of Burners (total)	—	1 / 3	1 / 3
Connection Size	—	1/2 in. NPT	1/2 in. NPT
Rollout Switch Opens / Closes (°F)	—	195 / 115	195 / 115
Temperature Rise (°F)	—	45-80	35-80
LOW NOx GAS HEAT			
No. of Stages / No. of Burners (total)	1 / 2	1 / 2	1 / 2
Connection Size	1/2 in. NPT	1/2 in. NPT	1/2 in. NPT
Rollout Switch Opens / Closes (°F)	195 / 115	195 / 115	195 / 115
Temperature Rise (°F)	20-50	20-50	15-50

LEGEND

Bhp — Brake Horsepower
FPI — Fins Per Inch
OA — Outdoor Air
RA — Return Air

Physical data (cont)

RGV 3 to 6 Ton Gas Heat Data — 3-Phase Units

RGV UNIT	RGV036	RGV048	RGV060	RGV072
GAS CONNECTION				
No. of Gas Valves	1	1	1	1
Natural Gas Supply Line Pressure (in. wg)/(psig)	4-13 / 0.18-0.47	4-13 / 0.18-0.47	4-13 / 0.18-0.47	4-13 / 0.18-0.47
Liquid Propane Supply Line Pressure (in. wg)/(psig)	11-13 / 0.40-0.47	11-13 / 0.40-0.47	11-13 / 0.40-0.47	11-13 / 0.40-0.47
HEAT ANTICIPATOR SETTING (AMPS)				
First Stage	0.14	0.14	0.14	0.14
Second Stage	0.14	0.14	0.14	0.14
NATURAL GAS HEAT				
LOW				
No. of Stages / No. of Burners (total)	1 / 2	1 / 2	1 / 2	1 / 2
Connection Size	1/2 in. NPT	1/2 in. NPT	1/2 in. NPT	1/2 in. NPT
Rollout Switch Opens / Closes (°F)	195 / 115	195 / 115	195 / 115	195 / 115
Temperature Rise (°F)	25-55	25-55	20-55	15-55
MEDIUM				
No. of Stages / No. of Burners (total)	2 / 3	1 / 3	1 / 3	1 / 3
Connection Size	1/2 in. NPT	1/2 in. NPT	1/2 in. NPT	1/2 in. NPT
Rollout Switch Opens / Closes (°F)	195 / 115	195 / 115	195 / 115	195 / 115
Temperature Rise (°F)	50-85	35-65	30-65	25-65
HIGH				
No. of Stages / No. of Burners (total)	—	2/ 3	2/ 3	2/ 3
Connection Size	—	1/2 in. NPT	1/2 in. NPT	1/2 in. NPT
Rollout Switch Opens / Closes (°F)	—	195 / 115	195 / 115	195 / 115
Temperature Rise (°F)	—	50-80	40-80	35-80
LIQUID PROPANE HEAT				
LOW				
No. of Stages / No. of Burners (total)	1 / 2	1 / 2	1 / 2	1 / 2
Connection Size	1/2 in. NPT	1/2 in. NPT	1/2 in. NPT	1/2 in. NPT
Rollout Switch Opens / Closes (°F)	195 / 115	195 / 115	195 / 115	195 / 115
Temperature Rise (°F)	25-55	25-55	20-55	15-55
MEDIUM				
No. of Stages / No. of Burners (total)	2 / 3	1 / 3	1 / 3	1 / 3
Connection Size	1/2 in. NPT	1/2 in. NPT	1/2 in. NPT	1/2 in. NPT
Rollout Switch Opens / Closes (°F)	195 / 115	195 / 115	195 / 115	195 / 115
Temperature Rise (°F)	50-85	35-65	30-65	25-65
HIGH				
No. of Stages / No. of Burners (total)	—	2 / 3	2 / 3	2 / 3
Connection Size	—	1/2 in. NPT	1/2 in. NPT	1/2 in. NPT
Rollout Switch Opens / Closes (°F)	—	195 / 115	195 / 115	195 / 115
Temperature Rise (°F)	—	50-80	40-80	35-80
LOW NOx GAS HEAT				
No. of Stages / No. of Burners (total)	1 / 2	1 / 2	1 / 2	—
Connection Size	1/2 in. NPT	1/2 in. NPT	1/2 in. NPT	—
Rollout Switch Opens / Closes (°F)	195 / 115	195 / 115	195 / 115	—
Temperature Rise (°F)	20-50	20-50	15-50	—

Options and accessories

ITEM	FACTORY-INSTALLED OPTION	FIELD-INSTALLED ACCESSORY
GAS HEAT (RGV units only)		
Low, Medium or High Gas Heat — Aluminized Heat Exchanger	X	
Low, Medium or High Gas Heat — Stainless Steel Heat Exchanger	X	
Propane Conversion Kit		X
High Altitude Conversion Kit		X
Flue Discharge Deflector		X
Flue Shield		X
ELECTRIC HEAT (RAV units only)		
Electric Resistance Heaters		X
Single Point Kits		X
CABINET		
Thru-the-Base Electrical or Gas-Line Connections	X	X
Hinged Access Panels	X	
MERV-8 Filters		X
COIL OPTIONS		
Cu/Cu Indoor and/or Outdoor Coils[a]	X	
Pre-coated Outdoor Coils[a]	X	
Premium, E-coated Outdoor Coils[a]	X	
HUMIDITY CONTROL		
Hot Gas Re-Heat Dehumidification System[a]	X	
CONDENSER PROTECTION		
Condenser Coil Hail Guard (louvered design)[a]	X	X
CONTROLS		
Thermostats, Temperature Sensors, and Subbases		X
Smoke Detector (supply and/or return air)	X	
Horn Strobe Annunciator[b]		X
Time Guard II Compressor Delay Control Circuit		X
Phase Monitor	X	X
Condensate Overflow Switch	X	X

ITEM	FACTORY-INSTALLED OPTION	FIELD-INSTALLED ACCESSORY
ECONOMIZERS AND OUTDOOR AIR DAMPERS		
EconoMi$er® IV for Electro-mechanical Controls — Non FDD (Standard air leak damper models)[a,c,d]	X	X
EconoMi$er X for Electro-mechanical Controls, complies with FDD (Standard and Ultra Low Leak damper models)[a,c,d]	X	X
Motorized Two-Position Outdoor-Air Damper[a]	X	X
Manual Outdoor-Air Damper (25% and 50%)		X
Barometric Relief[e]	X	X
Power Exhaust — Prop Design		X
ECONOMIZER SENSORS AND IAQ DEVICES		
Single Dry Bulb Temperature Sensors[f]	X	X
Differential Dry Bulb Temperature Sensors[f]		X
Single Enthalpy Sensors[f]	X	X
Differential Enthalpy Sensors[f]		X
CO_2 Sensor (wall, duct, or unit mounted)[f]	X	X
INDOOR MOTOR AND DRIVE		
Multiple Motor and Drive Packages	X	
LOW AMBIENT CONTROL		
Winter Start Kit[g]		X
Low Ambient Controller to –20°F (–29°C)[g]		X
POWER OPTIONS		
Convenience Outlet (powered)[a]	X	
Convenience Outlet (unpowered)	X	
Non-Fused Disconnect[h]	X	
ROOF CURBS		
Roof Curb 14 in. (356 mm)		X
Roof Curb 24 in. (610 mm)		X

NOTE(S):
a. Not available as a factory-installed option on single phase (-K voltage code) models. Use field-installed accessory where available.
b. Requires a field-supplied 24-v transformer for each application.
c. FDD (Fault Detection and Diagnostic) capability per California Title 24 section 120.2.
d. Available as a factory-installed option for 036-061 models only.
e. Included with economizer.
f. Sensors used to optimize economizer performance.
g. See application data for assistance.
h. Non-fused disconnect switch cannot be used when unit electrical rating exceeds:
208/230-1-60 and 208/230-3-60 = 80 amps (FLA).
480-3-60 and 575-3-60 = 80 amps (FLA).

Options and accessories (cont)

Factory-installed options

Economizer (dry-bulb or enthalpy)

Economizers save money. They bring in fresh, outside air for ventilation; and provide cool, outside air to cool your building. This is the preferred method of low-ambient cooling. When coupled to CO_2 sensors, economizers can provide even more savings by coupling the ventilation air to only that amount required.

Economizers are available, installed and tested by the factory, with either enthalpy or dry-bulb temperature inputs. Additional sensors are available as accessories to optimize the economizers. Economizers include a powered exhaust system to help equalize building pressures.

Economizers include gravity controlled barometric relief that helps equalize building pressure and ambient air pressures. This can be a cost effective solution to prevent building pressurization. Economizers are available in Ultra Low Leak and standard low leak versions. Economizers can be factory-installed or easily field-installed.

Unit mounted CO_2 sensor

The CO_2 sensor works with the economizer to intake only the correct amount of outside air for ventilation. As occupants fill your building, the CO_2 sensor detects their presence through increasing CO_2 levels, and opens the economizer appropriately. When the occupants leave, the CO_2 levels decrease, and the sensor appropriately closes the economizer. This intelligent control of the ventilation air, called demand controlled ventilation (DCV), reduces the overall load on the rooftop, saving money. It is also available as a field-installed accessory.

Smoke detector (supply and/or return air)

Smoke detectors make your application safer and your job easier. Our smoke detectors immediately shut down the rooftop unit when smoke is detected. They are available, installed by the factory, for supply air, return air, or both.

Optional Hot Gas Re-Heat dehumidification system

Our Hot Gas Re-Heat dehumidification system is an all-inclusive factory-installed option that can be ordered with any RGV/RAV036-072 rooftop unit, with the exception of single phase voltage (208-230/1/60) units.

This system expands the envelope of operation of our rooftop products to provide unprecedented flexibility to meet year round comfort conditions.

The Hot Gas Re-Heat dehumidification system has a unique dual operational mode setting. The Hot Gas Re-Heat system provides greater dehumidification of the occupied space by 2 modes of dehumidification operations in addition to its normal design cooling mode.

The RGV/RAV036-072 rooftop coupled with the Hot Gas Re-Heat system is capable of operating in normal design cooling mode, sub-cooling mode, and hot gas reheat mode. Normal design cooling mode is when the unit will operate under its normal sequence of operation by cycling compressors to maintain comfort conditions.

Sub-cooling mode will operate to satisfy part load type conditions when the space requires combined sensible and a higher proportion of latent load control. Hot Gas Reheat mode will operate when outdoor temperatures diminish and the need for latent capacity is required for sole humidity control Hot Gas Reheat mode will provide neutral air for maximum dehumidification operation.

NOTE: The Hot Gas Re-Heat system includes Low Ambient controller.

Thru-the-base connections

Thru-the-base connections, available as a factory option, are necessary to ensure proper connection and seal when routing wire and piping through the rooftop's basepan and curb. These couplings eliminate roof penetration and should be considered for gas lines, main power lines, as well as control power.

Hinged access panels

Allows access to unit's major components with specifically designed hinged access panels. Panels are filter, control box access indoor fan motor access.

Cu/Cu (indoor) coils

Copper fins and copper tubes are mechanically bonded to copper tubes and copper tube sheets. A polymer strip prevents coil assembly from contacting the sheet metal coil pan to minimize potential for galvanic corrosion between coil and pan.

E-coated (outdoor and indoor) coils

A flexible epoxy polymer coating uniformly applied to all coil surface areas without material bridging between fins. Coating process shall ensure complete coil encapsulation of tubes, fins and headers.

Pre-coated outdoor coils

A durable epoxy-phenolic coating to provide protection in mildly corrosive coastal environments. The coating minimizes galvanic action between dissimilar metals. Coating is applied to the aluminum fin stock prior to the fin stamping process to create an inert barrier between the aluminum fin and copper tube.

Condenser coil hail guard

Sleek, louvered panels protect the condenser coil from hail damage, foreign objects, and incidental contact.

Single enthalpy sensor

Prevents the wheel from rotating if the outside air conditions are acceptable for free cooling. Both exhaust and supply blowers will remain on.

Stainless steel heat exchanger (RGV units only)

The stainless steel heat exchanger option provides the tubular heat exchanger be made out of a minimum 20 gauge type 409 stainless steel for applications where the mixed air to the heat exchanger is expected to drop below 45°F (7°C). Stainless steel may be specified on applications where the presence of airborne contaminants require its use (applications such as paper mills) or in area with very high outdoor humidity that may result in

Options and accessories (cont)

severe condensation in the heat exchanger during cooling operation.

Convenience outlet (powered or un-powered)

Reduce service and/or installation costs by including a convenience outlet in your specification. We will install this service feature at our factory. Provides a convenient, 15 amp, 115v GFCI receptacle with “Wet in Use” cover. The “powered” option allows the installer to power the outlet from the line side of the disconnect or load side as required by code. The “unpowered” option is to be powered from a separate 115/120v power source.

The unpowered convenience outlet is available as a 15 amp factory-installed option or a 20 amp field-installed accessory.

Non-fused disconnect

This OSHA-compliant, factory-installed, safety switch allows a service technician to locally secure power to the rooftop. When selecting a factory-installed non-fused disconnect, note they are sized for the unit as ordered from the factory. The sizing of these do not accommodate field-installed items such as power exhaust devices, etc. If field installing electric heat with factory-installed non-fused disconnect switch, a single point kit may or may not be required.

Condensate overflow switch

This sensor and related controller monitors the condensate level in the drain pan and shuts down compression operation when overflow conditions occur. It includes:

- Indicator light — solid red (more than 10 seconds on water contact — compressors disabled), blinking red (sensor disconnected)
- 10-second delay to break — eliminates nuisance trips from splashing or waves in pan (sensor needs 10 seconds of constant water contact before tripping)
- Disables the compressor(s) operation when condensate plug is detected, but still allows fans to run for economizer.

Power exhaust with barometric relief

Superior internal building pressure control. This field-installed accessory may eliminate the need for costly, external pressure control fans.

Options and accessories (cont)

Field-installed accessories

Filter maintenance indicator

When the optional factory-installed filter maintenance indicator is used, a factory-installed differential pressure switch measures pressure drop across the outside air filter and activates a field-supplied dry contact indicator when the pressure differential exceeds the adjustable switch setpoint.

Condenser coil hail guard

Sleek, louvered panels protect the condenser coil from hail damage, foreign objects, and incidental contact. This can be purchased as a factory-installed option or as a field-installed accessory.

Differential enthalpy sensor

The differential enthalpy sensor is comprised of an outdoor and return air enthalpy sensors to provide differential enthalpy control. The sensor allows the unit to determine if outside air is suitable for free cooling.

Wall or duct mounted CO_2 sensor

The IAQ sensor shall be available in duct or wall mount. The sensor provides demand ventilation indoor air quality (IAQ) control.

Propane conversion kit (RGV units only)

Convert your gas heat rooftop from standard natural gas operation to Propane using this field-installed kit.

High altitude conversion kit (RGV units only)

High altitudes have less oxygen, which affects the fuel/air mixture in heat exchangers. In order to maintain a proper fuel/air mixture, heat exchangers operating in altitudes above 2000 ft (610 m) require different orifices. To select the correct burner orifices or determine the heat capacity for a high altitude application, use either the selection software, or the unit's service manual. High altitudes have less oxygen, which means heat exchangers need less fuel. The new gas orifices in this field-installed kit make the necessary adjustment for high altitude applications. They restore the optimal fuel to air mixture and maintain healthy combustion on altitudes above 2000 ft (610 m).

NOTE: Typical natural gas heating value ranges from 975 to 1050 Btu/ft^3 at sea level nationally. The heating value goes down approximately 1.7% per every thousand feet elevation. Standard factory orifices can typically be used up to 2000 ft (610 m) elevation without any operational issues.

Flue discharge deflector (RGV units only)

The flue discharge deflector is a useful accessory when flue gas recirculation is a concern. By venting the flue discharge upwards, the deflector minimizes the chance for a neighboring unit to intake the flue exhaust.

MERV-8 return air filters

This factory option upgrades the return air filters from standard unit filters to high efficiency MERV-8 filters. Non-woven MERV-8 filter media with high strength, moisture-resistant frame. Filter media is securely fasted inside the filter frame on all 4 sides.

Phase monitor protection

The Phase Monitor Control will monitor the sequence of 3-phase electrical system to provide a phase reversal protection and monitor the 3-phase voltage inputs to provide a phase loss protection for the 3-phase device. It will work on either a Delta or Wye power connection.

Winter start kit

Our winter start kit extends the low ambient limit of your rooftop to 25°F (–4°C). The kit bypasses the low pressure switch, preventing nuisance tripping of the low pressure switch. Other low ambient precautions may still be prudent.

Low ambient controller

The low ambient controller is a head pressure controller kit that is designed to maintain the unit's condenser head pressure during periods of low ambient cooling operation. This device should be used as an alternative to economizer free cooling when economizer usage is either not appropriate or desired. The low ambient controller will either cycle the outdoor fan motors or operate them at reduced speed to maintain the unit operation, depending on the model. This controller allows cooling operation down to –20°F (–29°C) ambient conditions.

Roof curb (14 in./356 mm or 24 in./610 mm)

Full perimeter roof curb with exhaust capability provides separate air streams for energy recovery from the exhaust air without supply air contamination.

Filter status indicator accessory

Monitors static pressure across supply and exhaust filters and provides indication when filters become clogged.

Power exhaust

Superior internal building pressure control. This field-installed accessory may eliminate the need for costly, external pressure control fans.

Manual OA Damper

Manual outdoor air dampers are an economical way to bring in ventilation air. The dampers are available in 25% and 50% versions.

NOTE: See application tip "ROOFTOP-18-01" prior to use of this damper on 072 size models.

Motorized Two-Position Damper

Our two-position, motorized outdoor air damper admits up to 100% outside air. Using reliable, gear-driven technology, the 2-position damper opens to allow ventilation air and closes when the rooftop stops, stopping unwanted infiltration.

NOTE: See application tip "ROOFTOP-18-01" prior to use of this damper on 072 size models.

Options and accessories (cont)

Electric Heaters

We offers a full-line of field-installed accessory heaters. The heaters are very easy to use, install and are all pre-engineered and certified.

Time Guard II control circuit

This accessory protects your compressor by preventing short-cycling in the event of some other failure, prevents the compressor from restarting for 30 seconds after stopping. Not required with authorized commercial thermostats.

Options and Accessory Weights

OPTION / ACCESSORY NAME	RGV/RAV UNIT WEIGHT[a]							
	036/037		048/049		060/061		072	
	lb	kg	lb	kg	lb	kg	lb	kg
Hot Gas Re-Heat System[b]	15	7	15	7	15	7	24	11
Power Exhaust — Vertical	51	23	51	23	51	23	51	23
Power Exhaust — Horizontal	39	18	39	18	39	18	39	18
EconoMi$er® (X, IV, or 2)	35	16	35	16	35	16	35	16
Two-Position Damper	39	18	39	18	39	18	58	26
Manual Damper	12	5	12	5	12	5	18	8
Medium Gas Heat (RGV units only)	9	4	9	4	9	4	15	7
High Gas Heat (RGV units only)	—	—	63	29	63	29	63	29
Hail Guard (louvered)	13	6	13	6	13	6	17	8
Cu/Cu Condenser Coil	37	17	74	34	74	34	95	43
Cu/Cu Condenser and Evaporator Coils	75	34	112	51	112	51	165	75
Roof Curb (14 in. curb)	95	43	95	43	95	43	95	43
Roof Curb (24 in. curb)	150	68	150	68	150	68	150	68
CO_2 Sensor	2	1	2	1	2	1	2	1
Flue Discharge Deflector	7	3	7	3	7	3	7	3
Optional Indoor Motor/Drive	10	5	10	5	10	5	15	7
Low Ambient Controller	9	4	9	4	9	4	9	4
Winter Start Kit	5	2	5	2	5	2	5	2
Return Air Smoke Detector	7	3	7	3	7	3	7	3
Supply Air Smoke Detector	7	3	7	3	7	3	7	3
Fan Filter Switch	2	1	2	1	2	1	2	1
Non-Fused Disconnect	15	7	15	7	15	7	15	7
Powered Convenience Outlet	36	16	36	16	36	16	36	16
Unpowered Convenience Outlet	4	2	4	2	4	2	4	2
Enthalpy Sensor	2	1	2	1	2	1	2	1
Differential Enthalpy Sensor	3	1	3	1	3	1	3	1

NOTE(S):
a. Where multiple variations are available, the heaviest combination is listed.
b. For Hot Gas Re-Heat system, add Low Ambient controller weight.

RGV036-072 Base Unit Dimensions

NOTES:

1. DIMENSIONS ARE IN INCHES. DIMENSIONS IN [ ] ARE IN MILLIMETERS.
2. CENTER OF GRAVITY
3. DIRECTION OF AIR FLOW
4. ALL VIEW DRAWN USING 3RD ANGLE

UNIT	J	K
RGV036	33 3/8 [847]	18 5/8 [472]
RGV048	33 3/8 [847]	14 7/8 [377]
RGV060	33 3/8 [847]	14 7/8 [377]
RGV072	41 3/8 [1051]	18 5/8 [472]

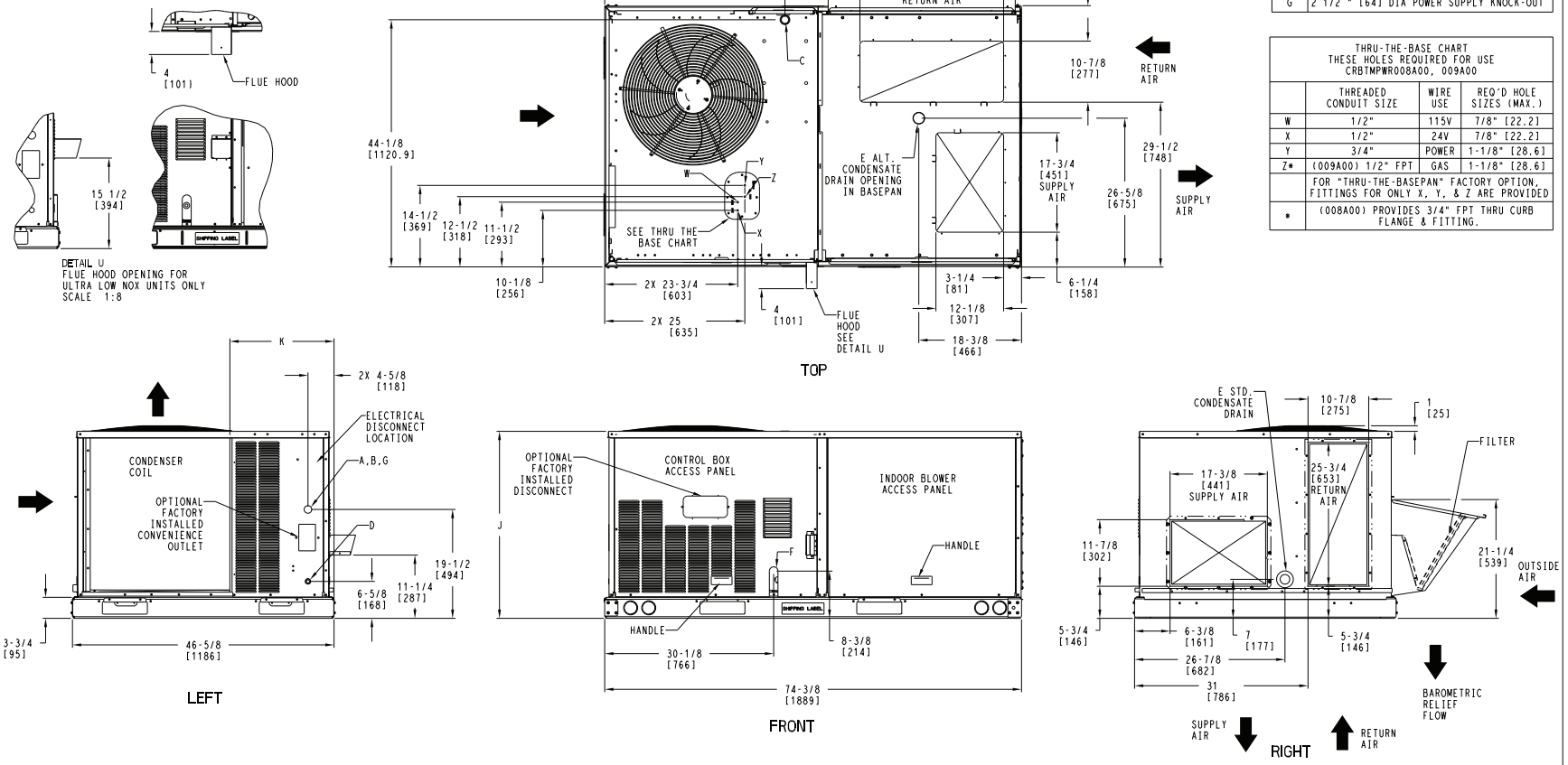
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	CONNECTION SIZES
A	1 3/8" [35] DIA FIELD POWER SUPPLY HOLE
B	2" [50] DIA POWER SUPPLY KNOCKOUT
C	1 3/4" [51] DIA GAUGE ACCESS PLUG
D	7/8" [22] DIA FIELD CONTROL WIRING HOLE
E	3/4"-14 NPT CONDENSATE DRAIN
F	1/2"-14 NPT GAS CONNECTION
G	2 1/2 " [64] DIA POWER SUPPLY KNOCK-OUT

THRU-THE-BASE CHART
THESE HOLES REQUIRED FOR USE CRBTMPWR008A00, 009A00

	THREADED CONDUIT SIZE	WIRE USE	REQ'D HOLE SIZES (MAX.)
W	1/2"	115V	7/8" [22.2]
X	1/2"	24V	7/8" [22.2]
Y	3/4"	POWER	1-1/8" [28.6]
Z*	(009A00) 1/2" FPT	GAS	1-1/8" [28.6]
	FOR "THRU-THE-BASEPAN" FACTORY OPTION, FITTINGS FOR ONLY X, Y, & Z ARE PROVIDED		
*	(008A00) PROVIDES 3/4" FPT THRU CURB FLANGE & FITTING.		



ITC CLASSIFICATION	SHEET	DATE	SUPERCEDES			REV
U.S. ECCN:NSR	1 OF 3	11/17/20	04/03/19	RGV 036 - 072 SINGLE PACKAGE ELECTRICAL COOLING WITH GAS HEAT	48TC003097	D

For dimensions and drawings, 036 also applies to 037; 048 also applies to 049; 060 also applies to 061.

RGV036-072 Base Unit Dimensions (cont)

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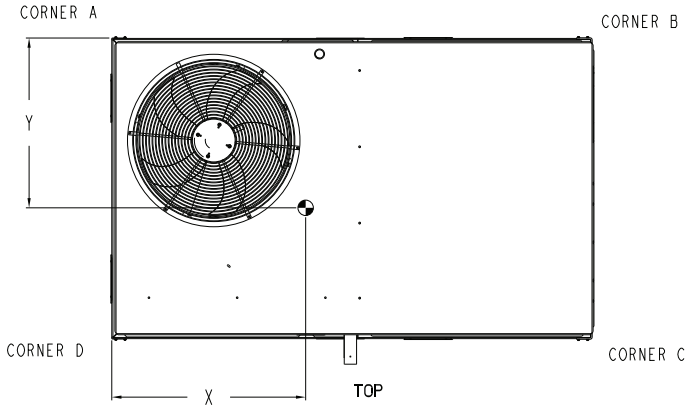
UNIT	STD. UNIT WEIGHT *		CORNER WEIGHT (A)		CORNER WEIGHT (B)		CORNER WEIGHT (C)		CORNER WEIGHT (D)		C.G.		HEIGHT
	LBS.	KG.	LBS.	KG.	LBS.	KG.	LBS.	KG.	LBS.	KG.	X	Y	Z
RGV036	482	219	113	51	116	53	128	58	125	57	37 5/8 [956]	24 9/16 [624]	18 1/4 [464]
RGV048	543	246	138	63	133	60	133	60	138	63	36 1/2 [927]	23 3/8 [594]	18 [457]
RGV060	556	252	142	64	136	62	136	62	142	64	36 1/2 [927]	23 3/8 [594]	18 [457]
RGV072	607	275	162	73	152	69	141	64	151	68	36 [914]	22 1/2 [572]	19 3/8 [492]

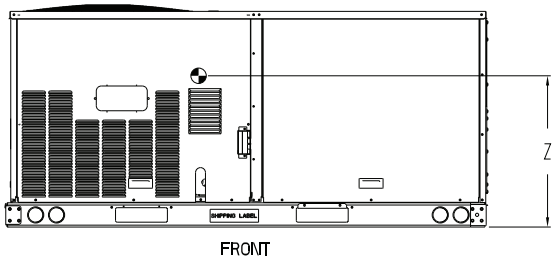
* STANDARD UNIT WEIGHT IS WITH LOW GAS HEAT AND WITHOUT PACKAGING.
FOR OTHER OPTIONS AND ACCESSORIES, REFER TO THE PRODUCT DATA CATALOG.

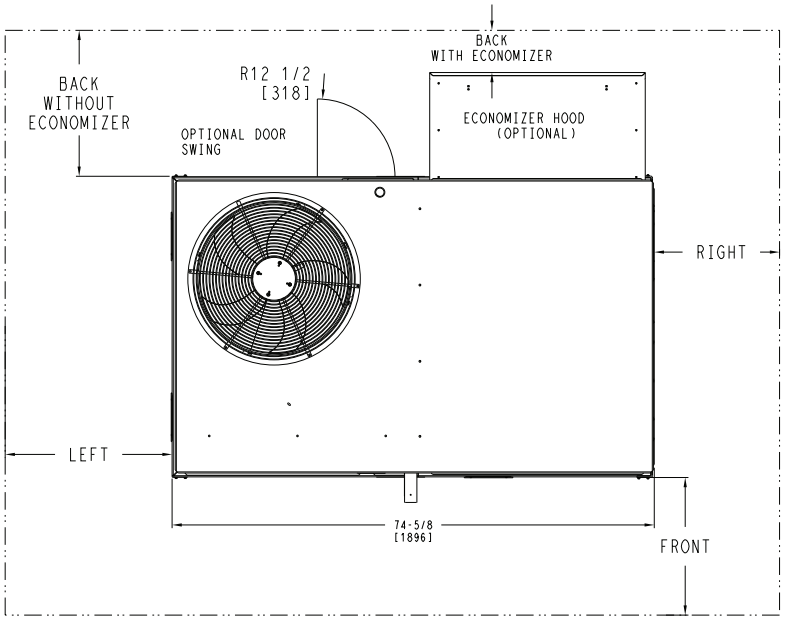
THIS TABLE IS FOR "ULTRA LOW NOX" UNITS ONLY

UNIT	STD. UNIT WEIGHT **		CORNER WEIGHT (A)		CORNER WEIGHT (B)		CORNER WEIGHT (C)		CORNER WEIGHT (D)		C.G.		HEIGHT
	LBS.	KG.	LBS.	KG.	LBS.	KG.	LBS.	KG.	LBS.	KG.	X	Y	Z
RGV036	512	233	120	55	122	55	136	62	134	61	37 1/2 [953]	24 11/16 [627]	18 1/8 [460]
RGV048	573	260	146	66	139	63	141	64	147	67	36 3/8 [924]	23 1/2 [597]	18 [457]
RGV060	586	266	149	68	143	65	144	65	151	69	36 3/8 [924]	23 1/2 [597]	18 [457]

** STANDARD UNIT WEIGHT IS WITHOUT PACKAGING.
FOR OTHER OPTIONS AND ACCESSORIES, REFER TO THE PRODUCT DATA CATALOG.







NOTES:

1. FOR ALL MINIMUM CLEARANCES LOCAL CODES OR JURISDICTIONS MAY PREVAIL.

	CLEARANCE		
	SERVICE WITH:	SERVICE WITH:	OPERATING
SURFACE	CONDUCTIVE BARRIER	NONCONDUCTIVE BARRIER	CLEARANCE
FRONT	48 [1219mm]	36 [914mm]	18 [457mm]
LEFT	48 [1219mm]	42 [1067mm]	18 [457mm]
BACK W/O HOOD	48 [1219mm]	42 [1067mm]	18 [457mm]
BACK W/HOOD	36 [914mm]	36 [914mm]	18 [457mm]
RIGHT	36 [914mm]	36 [914mm]	18 [457mm]
TOP	72 [1829mm]	72 [1829mm]	72 [1829mm]

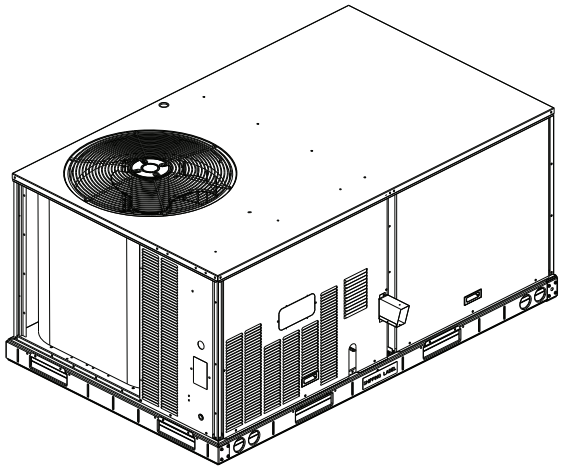
ITC CLASSIFICATION	SHEET	DATE	SUPERCEDES			REV
U.S. ECCN:NSR	2 OF 3	11/17/20	04/03/19	RGV 036 - 072 SINGLE PACKAGE ELECTRICAL COOLING WITH GAS HEAT	48TC003097	D

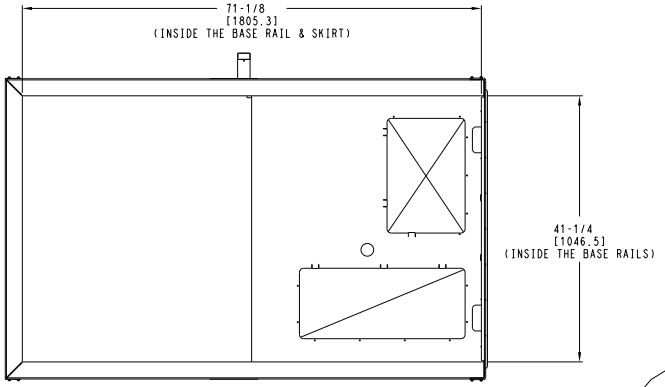
For dimensions and drawings, 036 also applies to 037; 048 also applies to 049; 060 also applies to 061.

RGV036-072 Base Unit Dimensions (cont)

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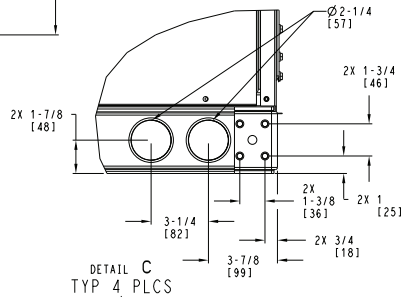
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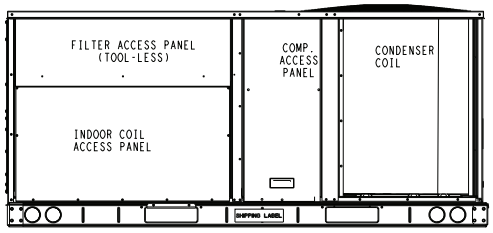


INSIDE BASERAIL DIMENSIONS

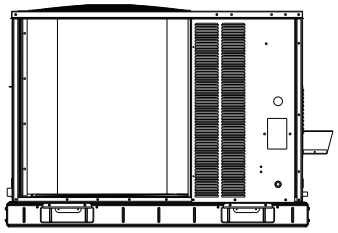
BOTTOM



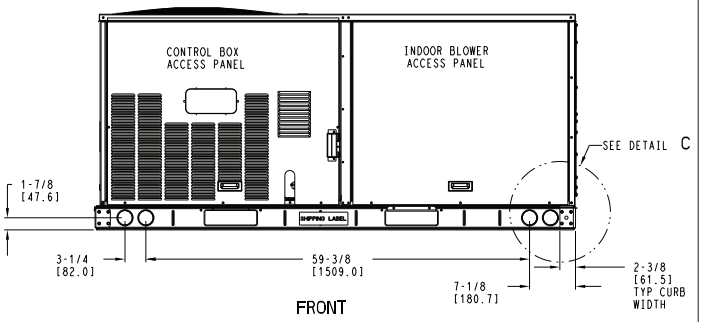
DETAIL C
TYP 4 PLCS



BACK



LEFT



FRONT

ITC CLASSIFICATION	SHEET	DATE	SUPERCEDES	RGV 036 - 072 SINGLE PACKAGE ELECTRICAL COOLING WITH GAS HEAT	48TC003097	REV
U.S. ECCN:NSR	3 OF 3	11/17/20	04/03/19			D

For dimensions and drawings, 036 also applies to 037; 048 also applies to 049; 060 also applies to 061.