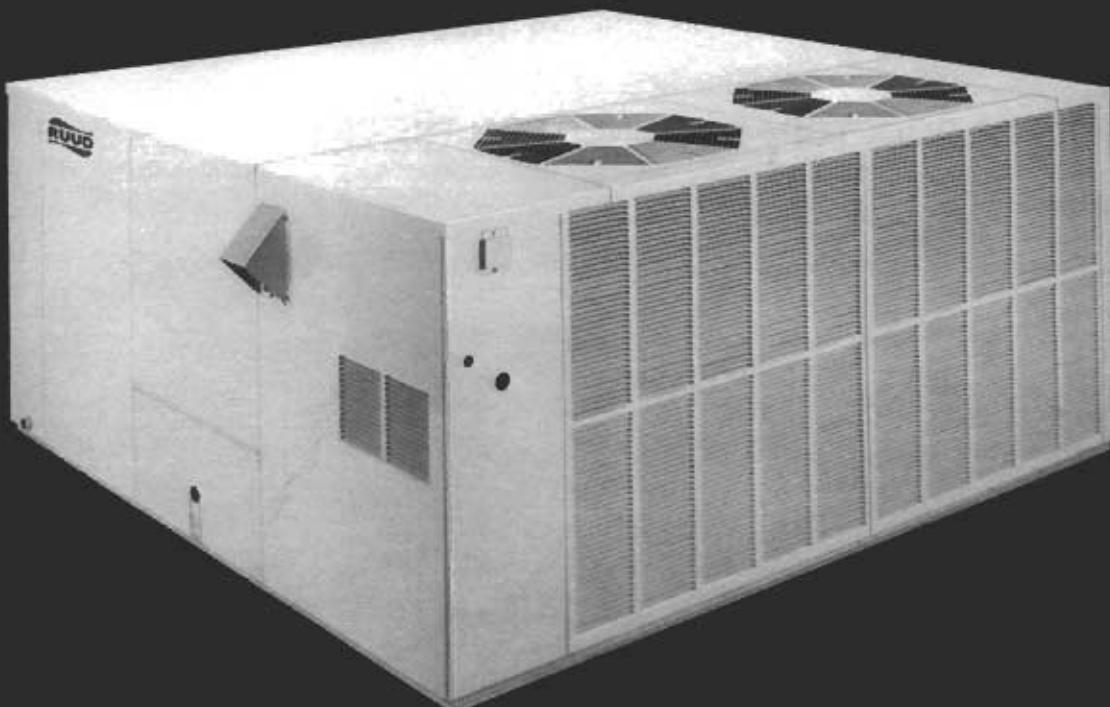


**Commercial  
High Efficiency  
Heating and Cooling  
Package Units**  
**URCG- Cooling Only**  
**UREG- Electric Heat**  
**URGG- Gas Heat**



**7.5 & 10 NOMINAL TON  
[26.4 & 35.2 kW] UNITS  
STANDARD RATING 96 & 120 MBH**



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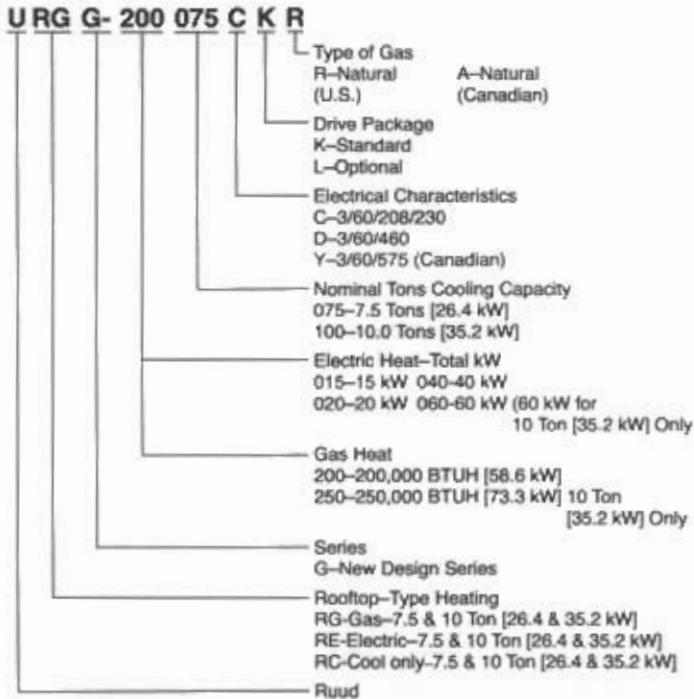
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NOTE: 575 VOLT MODELS ARE  
NOT A.R.I. CERTIFIED  
OR U.L. LISTED.

575 VOLT  
MODELS ONLY

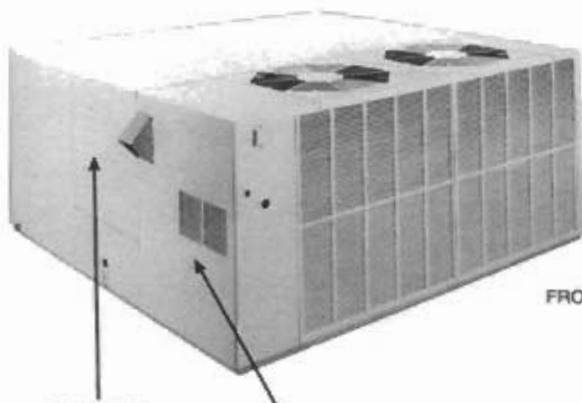
## MODEL NUMBER DESIGNATION



[ ] Designates Metric Conversions

## A NEW BREED OF ROOFTOPS DESIGNED FOR THE 90'S.

Ruud® combined years of proven product reliability and high tech engineering to develop this line of versatile, High Efficiency Rooftops with EER's to 10.8! This resulted in a flexible design with the features of earlier models in a fully accessible, totally new compact cabinet.

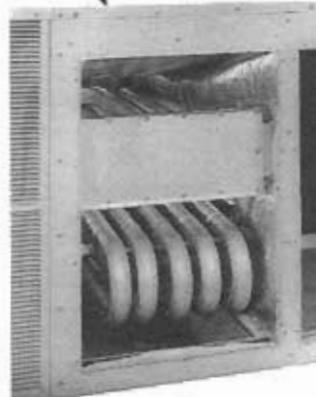
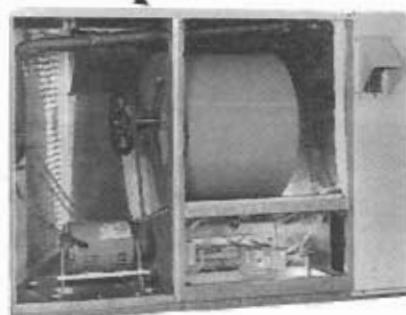


BLOWER &  
FURNACE  
COMPONENTS

URGG-SERIES  
FRONT AND REAR VIEWS



TUBULAR HEAT  
EXCHANGER



## GENERAL DESCRIPTION

The Ruud URCG-, UREG- and URGG- series rooftops are designed for outdoor installation. Their cabinets and condenser base pans are powder coat painted. Cabinets are fully insulated and gasketed to resist all types of weather conditions. All models are shipped ready for downflow duct application requiring no additional labor to remove panels. For sideflow ducting, duct cap panels are easily repositioned in the field. Economizer and fresh air damper accessories are designed for use in either duct configuration. The units are evacuated to remove moisture from the refrigeration system, precisely charged with the refrigerant and run tested at the factory prior to shipment.

## URGG-

The combination rooftops provide comfort conditioning in all seasons. Two separate cooling circuits supply cool air to meet the demands of hot summer days. One cooling circuit operates independently to satisfy the needs on warm spring and fall days. The gas furnace furnishes two stages of heat during cold winter weather. For those cool nights when full capacity is not needed, the first stage heat operates to produce the right amount of warm air.

## UREG-

The electric heat models offer the same cooling characteristics and features as the gas heat models but factory installed electric heating elements warm the building supply air. The electric heaters are designed for two stages of heat and are wired to balance the electrical load across the three phase power. Unit mounted terminal blocks and internal branch fusing allow single point external power wiring which eliminates the need for separate power circuits to the electric heater and the cooling sections, thus reducing installation costs.

## URCG-

The cooling only models deliver high efficiency cooling in two capacity steps. A wide range of electric heat accessories can be field installed in the unit to satisfy heating requirements. All operating parts of the unit are accessible through exterior panels. The control components are mounted in one conveniently located control box. The control box and compressor access panel can be removed for servicing without interfering with condenser air flow.

## FEATURES

### ENCLOSURE

- Galvanized Steel
- Powder coat painted cabinet and condenser base pan, capable of withstanding a 1000-HR salt spray test per ASTM B 117.
- Indoor section panels insulated with high density glass fiber.
- Louvered inlet panels protecting condenser coil are standard.
- 14 Gauge base rails for use with rollers and rigging.
- Weather tight construction.

### COMPRESSORS

- Two scrolls in separate refrigerant circuits, have internal overload protection.
- External rubber mounts provide compressor isolation.
- High and low pressure controls.

### CONDENSER COIL

- Copper tubes with mechanically bonded enhanced aluminum plate fins.
- Two-row, circuited for two refrigerant systems.

### CONDENSER FAN

- Vertical discharge, direct drive.
- Permanently lubricated "PSC" motor has inherent thermal overload.
- Discharge grille easily removable for access to fan, motor and coil.

### EVAPORATOR COIL

- Copper tubes with mechanically bonded aluminum plate fins.
- Four row, two circuit, interlaced design provides full-face cooling at part load.
- Refrigerant flow control by filter-protected capillary tubes.
- Galvanized steel drain pan with threaded connector on side.

### FILTERS

- Filter frame holds 2" [51 mm] filters—throwaway type provided.
- Access panel and unique clip arrangement allows easy replacement.

### INDOOR BLOWER

- Adjustable belt drive, forwardly curved centrifugal fan.
- Alternate motors and drives available to meet job requirements.
- Motor and fan shaft have permanently lubricated ball bearings.

### ELECTRICAL

- Control box easily accessible for power and control connections.
- Factory wiring provides terminal strips and remote plugs with designated jumpers for easy, fool-proof, accessory installation.
- Single point power wiring.

### GAS HEAT

- Natural gas.
- Aluminized steel tubular heat exchangers.
- In-shot burners with induced draft combustion air have spark ignition (100% Lockout) system.
- Two stage heating.

### ELECTRIC HEAT

- Five sizes available ranging from 15 kW to 60 kW. (60 kW for 10 Ton [35.2 kW] only)
- Factory installed in UREG- models complete with wiring and appropriate fuses.
- Field installed electric heat available for use in URCG- model.

### APPLICATION

- Cooling operation to 45°F [7°C]. Field add low ambient controls.
- Shipped for vertical airflow—relocate two panels for horizontal.

### QUALITY ASSURANCE

- All production units are run tested at the factory.
- Certified to applicable ARI Standards.
- Listed to applicable U.L. and CSA Standards, and tested in accordance with ANSI Standard Z21.47.

## ACCESSORIES

**RXRK-E54 ROOF CURB**—Full perimeter curb with insulation panel under operating components provides for duct attachment prior to setting unit. Complies with NRCA Standards.

**RXRF-CA54 MANUAL FRESH AIR DAMPER**—Fixed position, field adjustable (0-25%) fresh air damper.

**RXRQ-FM54Z ECONOMIZER**—Fully modulating, integrated, enthalpy controlled, with major parts pre-assembled and wired for plug-in installation. Suitable for horizontal or vertical airflow application. Factory installed option.

**RXRP-E54 RELIEF DAMPER**—Gravity operated damper and hood assembly for use with economizer to relieve positive building pressure.

**RXRT-C54 LOW AMBIENT**—Two condensing pressure actuated switches, cycle condenser fan in response to pressure of operating cycle. Wire to terminal strip; connect capillaries to Schrader valves.

**RXRW-C55 COMBINATION TIME DELAY BETWEEN COMPRESSORS AND ANTI-SHORT CYCLE TIMER**—Instructions and components to provide time delay and staging relay.

**RXSE-BF ELECTRIC HEAT**—Complete assembly includes elements, controls and wiring. Mounts in prepared area of URCG- model. Designed for single point power wiring.

**RXRM-EB54 CONCENTRIC TRANSITION**—Drops in roof curb prior to placing unit. Directs supply air around the perimeter of center return duct.

**RXRN-EE54 CONCENTRIC GRILLE**—Used in conjunction with the concentric transition. Grille mounts to the concentric ducts at ceiling level.

**RXRJ-GP05W GAS CONVERSION KITS**—Converts Natural gas units to operate on Propane gas.

**RXRJ-GP06W GAS CONVERSION KITS**—Converts Natural gas units to operate on Propane gas. (High altitude Canadian models only).

**WALL THERMOSTAT**—24 volt, 2 stage cool, 2 stage heat (Part #41-21444-01) with subbase, automatic (Part #41-21445-01) or manual (Part #41-21443-02) changeover; fan on or auto.

**REMOTE INDICATOR PANEL**—Panel has indicator lights to show fan cooling and heating operations. (Part #41-41946-01).

**REMOTE STATUS PANEL**—Kit includes remote panel with indicator lights, potentiometer and system switches, also has room thermostat for remote sensing and adjustment. (Part #41-21946-12).

# PHYSICAL DATA

## MODEL URCG-/UREG-/URGG- COOLING DATA

Nominal Cooling Capacity—Tons [kW]	7.5 [26.4]	10 [35.2]
Compressors—Scroll (No.)	2	2
Capacity Stages-%	50/100	50/100
Refrigerant Charge/Circuit (Oz. R-22)	115/115	131/137
Condenser Fans (No.)	2	2
CFM [L/s] Total	6000 [2832]	6000 [2832]
Diameter In./Blades (No.)	22/3	22/3
Motor HP [W]/RPM	1/3 [249]/1075	1/3 [249]/1075
Condenser Coils	1	1
Face Area—Sq. Ft. [m <sup>2</sup> ]-Total	24.0 [2.23]	24.0 [2.23]
Rows/Fins Per In.—Total Enhanced	2/22	2/22
Tube Dia.—In.	.375	.375
Indoor Blower	1	1
CFM [L/s]-Nom.	3000 [1416]	4000 [1888]
Wheel-Dia./Width-In.	12/12	15/11
Motor HP-Std./Alt.	1.5/2.0	2/3
Motor RPM	1725	1725
Evaporator Coil	1	1
Face Area—Sq. Ft. [m <sup>2</sup> ]-Total	11.8 [1.1]	11.8 [1.1]
Rows/Fins Per In.	4/13	4/13
Tube Dia.—In.	.3125	.3125
Filters—(Number) Size ea.—In. (mm)	(2) 20x25x2 [508x635x51] (2) 20x25x2 [508x635x51]	(2) 20x25x2 [508x635x51] (2) 16x25x2 [406x635x51]
Crated Unit Dimensions—In. [mm]	42H x 86.25W x 86.75L [1067 x 2191 x 2203]	42H x 86.25W x 86.75L [1067 x 2191 x 2203]
Shipping Weight (lbs.) [kg]	URCG Cool Only	1192 [541]
	URGG Gas Heat	1329 [603]
Operating Weight (lbs.) [kg]	URCG Cool Only	1014 [460]
	URGG Gas Heat	1151 [522]

## MODEL URGG- GAS HEATING DATA

Heating Input-BTUH [kW]	200,000 [58.61]	200,000 [58.61]	250,000 [73.27]
Heating Output-BTUH [kW]	162,000 [47.48]	162,000 [47.48]	202,500 [59.35]
Heat Exchanger Tubes—(No.)	5	5	6
Capacity Stages-(%)	50/100		50/100
Thermal Efficiency-(%)	81		81

## MODEL UREG- ELECTRIC HEATING DATA

Heater Size Designation	15K	20K①	30K②	40K③	***60K
KW Input @	208V	10.8	15.0	21.6	30.0
	240V	14.4	20.0	28.8	40.0
	480V	14.4	20.0	28.8	40.0
	600V	—	20.0	28.8	40.0
Heating Capacity-MBH @	208V	36.9	51.2	73.7	102.3
	240V	49.1	68.2	98.3	136.4
	480V	49.1	68.2	98.3	136.4
	600V	—	68.3	98.3	136.5
Capacity Stages*	2	2	2	2	2
Nominal Cooling Capacity-Tons [kW]	7.5 [26.4]	10 [35.2]	7.5 [26.4]	10 [35.2]	7.5 [26.4]
Shipping Weight (lbs.) [kg]	1202 [545]	1244 [564]	1212 [550]	1254 [569]	1222 [554]
Operating Weight (lbs.) [kg]	1024 [464]	1076 [488]	1034 [469]	1086 [493]	1044 [474]
Element Material	Helix Wound Nickel Chrome Wire				

\* First stage heating is 50% of total capacity.

\*\*\* For UREG-10 ton [35.2 kW] model only.

① 600 volt model not available for UREG-10 ton [35.2 kW].

② 600 volt model not available for UREG-7.5 ton [26.4 kW].

[ ] Designates Metric Conversions

# GENERAL INFORMATION

## LOCATING UNIT

Consult local building codes or ordinances for special installation requirements. When selecting a site to locate the rooftop unit, consider the following:

### ROOF MOUNT

If unit is to be roof mounted, check building codes for weight distribution requirements. Refer to accessory roof curb mounting instructions if unit is to be curb mounted. Check unit nameplate for supply voltage required. Determine if adequate electrical power is available. Furnace may be installed on Class A, B or C roofing material.

### SLAB MOUNT

Provide a level concrete slab that extends beyond unit cabinet at least 6 inches [152 mm], with 4 inches [102 mm] above grade. Use a 24-inch [610 mm] gravel apron in front of outdoor air openings to prevent grass and foliage from obstructing air flow.

### POSITIONING

Unit air inlets and outlets may be located in any compass direction as they are not affected by wind. Provide clearance around and above the unit for air flow, safety, and service access. See page 6 for minimum clearances.

## FOR OUTDOOR INSTALLATION ONLY

Unit is design certified for outdoor installation only. Do not install unit in any indoor location. Do not locate unit air inlets near exhaust vents or other sources of contaminated air.

Furnace venting as supplied with the unit must be used without alteration or addition. Consult your local utility **BEFORE** installing.

Although unit is weatherproof, guard against water from higher level runoff and overhangs.

## HANDLING

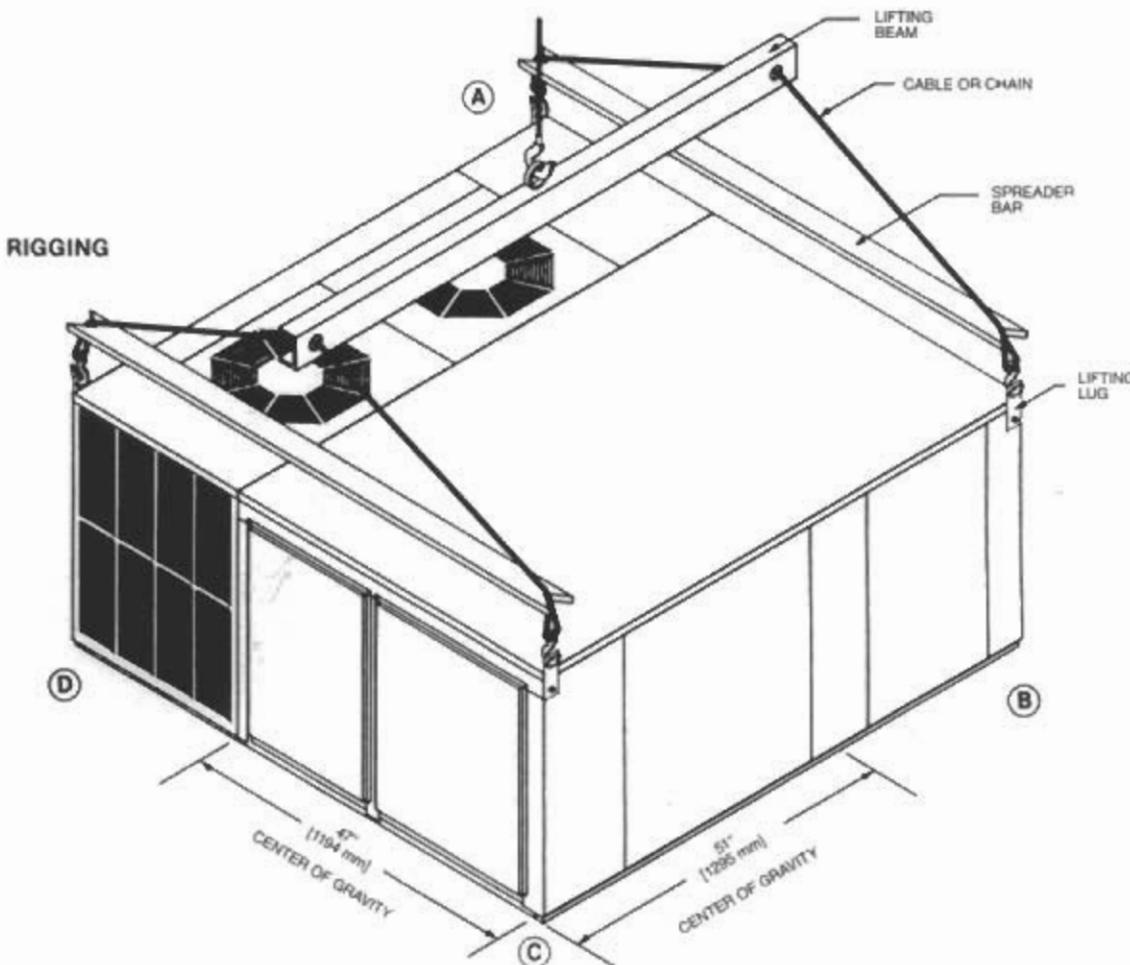
Units are designed and crated to enable handling by any conventional method.

**FORKLIFT**—Unit is shipped on a skid which allows for entry of forks. A minimum fork length of 36" [914 mm] is required. Shorter forks will damage the base of the unit.

**CAUTION:** Fork extensions must be used if forks are less than 36" [914 mm].

**RIGGING**—Units may be rigged for crane or helicopter. Attach slings and spreader bars as shown in figure below. Test lift and adjust slings accordingly until unit stays horizontal.

**ROLLERS**—The unit base rails are heavy gauge steel, adequate for handling on pipe rollers.

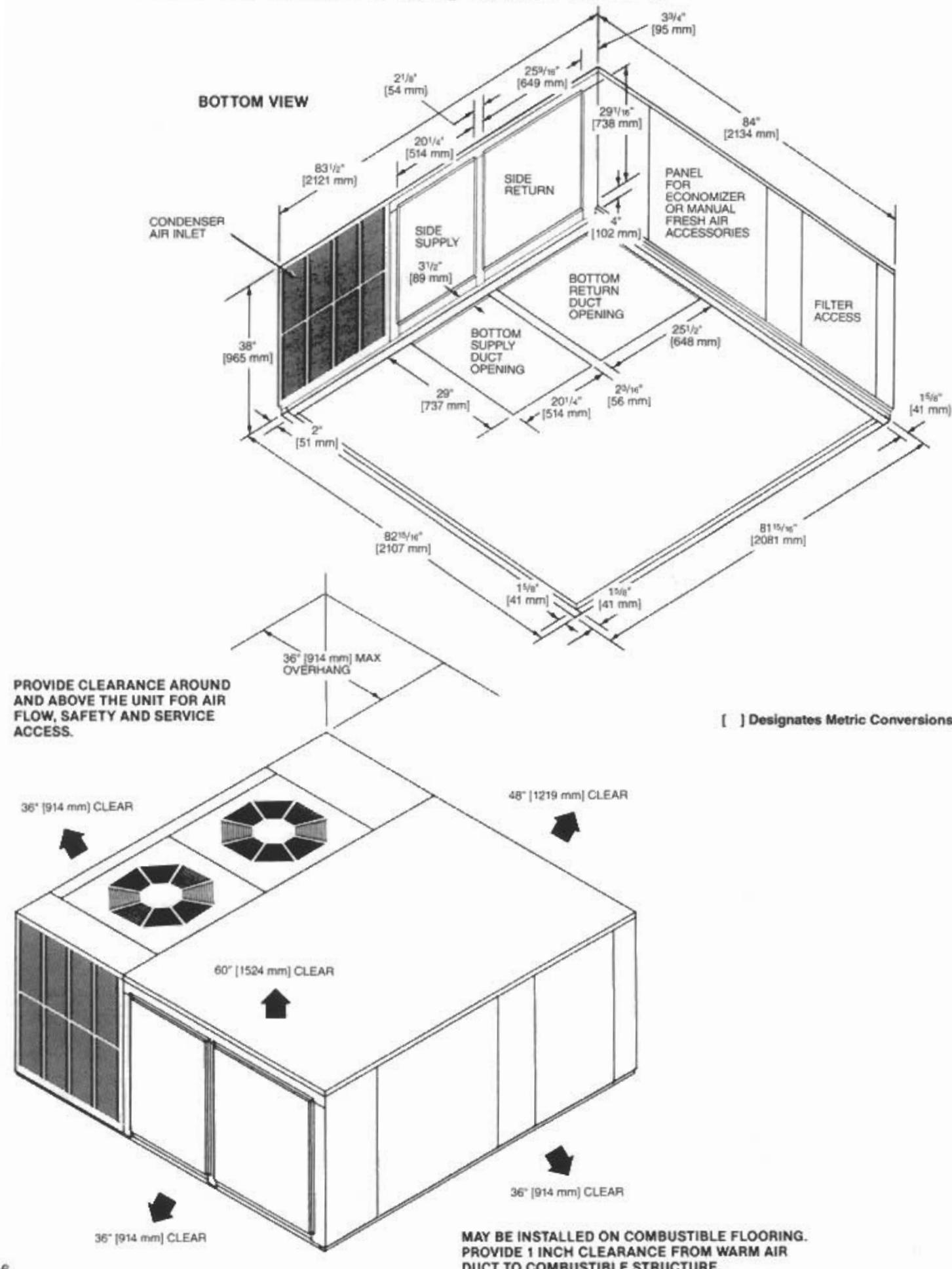


## CORNER WEIGHTS (LBS.) [kg]

MODEL	A	B	C	D
7½ Ton [26.4 kW] Gas and Electric	392 [178]	307 [139]	199 [90]	253 [115]
7½ Ton [26.4 kW] Electric and Electric	387 [176]	300 [136]	163 [74]	214 [97]
7½ Ton [26.4 kW] Cooling Only	368 [167]	281 [127]	157 [71]	208 [94]
10 Ton [35.2 kW] Gas and Electric	422 [191]	318 [144]	205 [93]	261 [118]
10 Ton [35.2 kW] Electric and Electric	411 [186]	307 [139]	166 [75]	222 [101]
10 Ton [35.2 kW] Cooling Only	392 [178]	288 [131]	160 [73]	216 [98]

[ ] Designates Metric Conversions

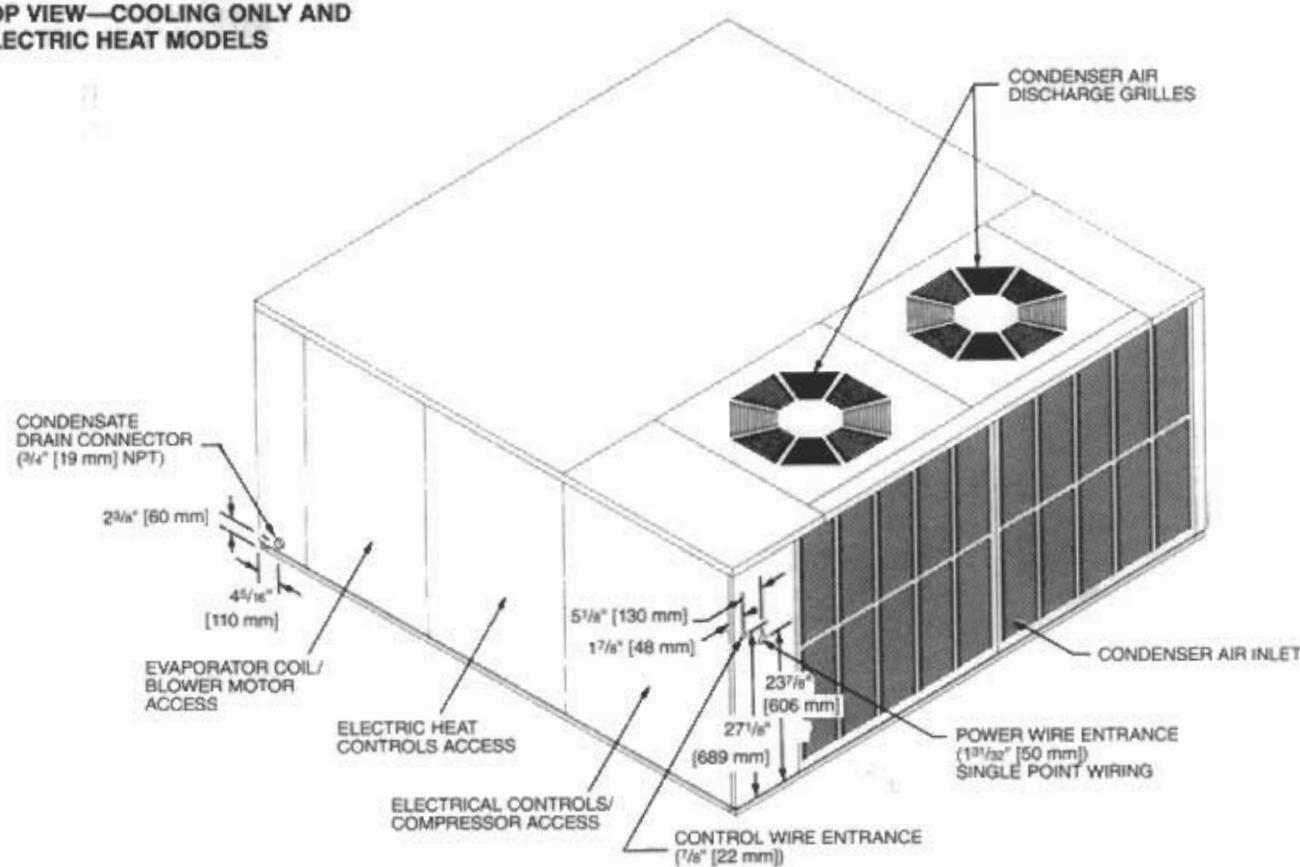
**DIMENSIONAL DATA—  
URGG-/URCG-/UREG- 7.5 AND 10 TON [26.4 AND 35.2 kW]**



## DIMENSIONAL DATA—

### URCG-/UREG- 7.5 AND 10 TON [26.4 AND 35.2 kW]

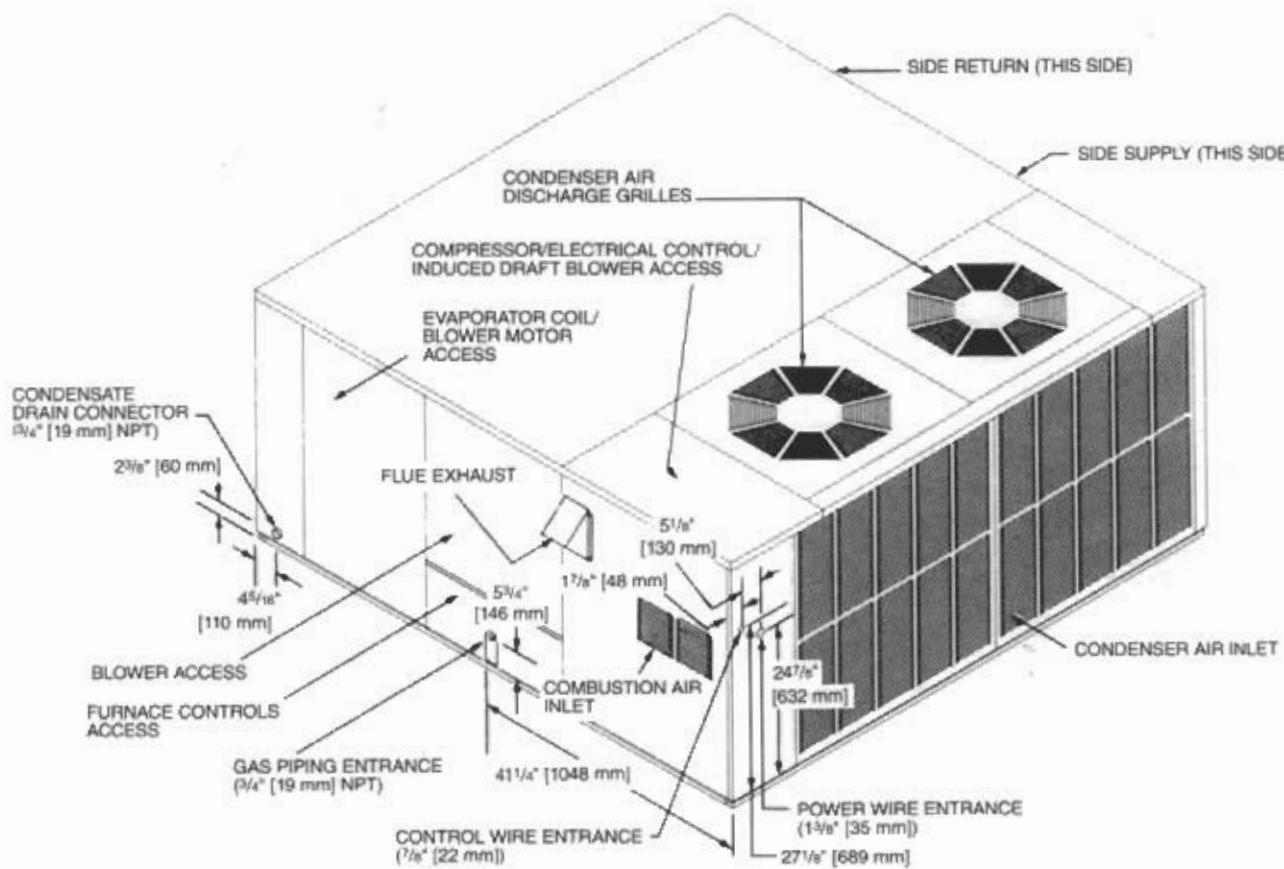
TOP VIEW—COOLING ONLY AND ELECTRIC HEAT MODELS



### URGG- 7.5 AND 10 TON [26.4 AND 35.2 kW]

TOP VIEW—GAS MODELS

[ ] Designates Metric Conversions

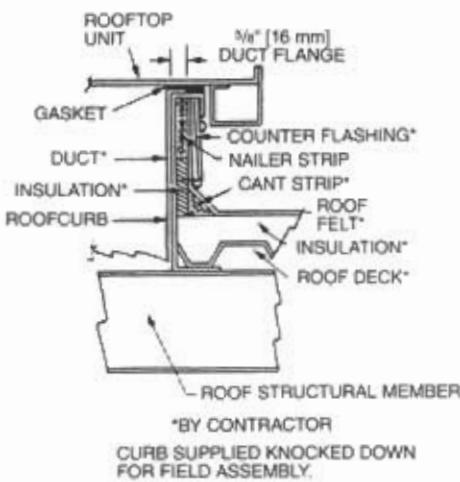
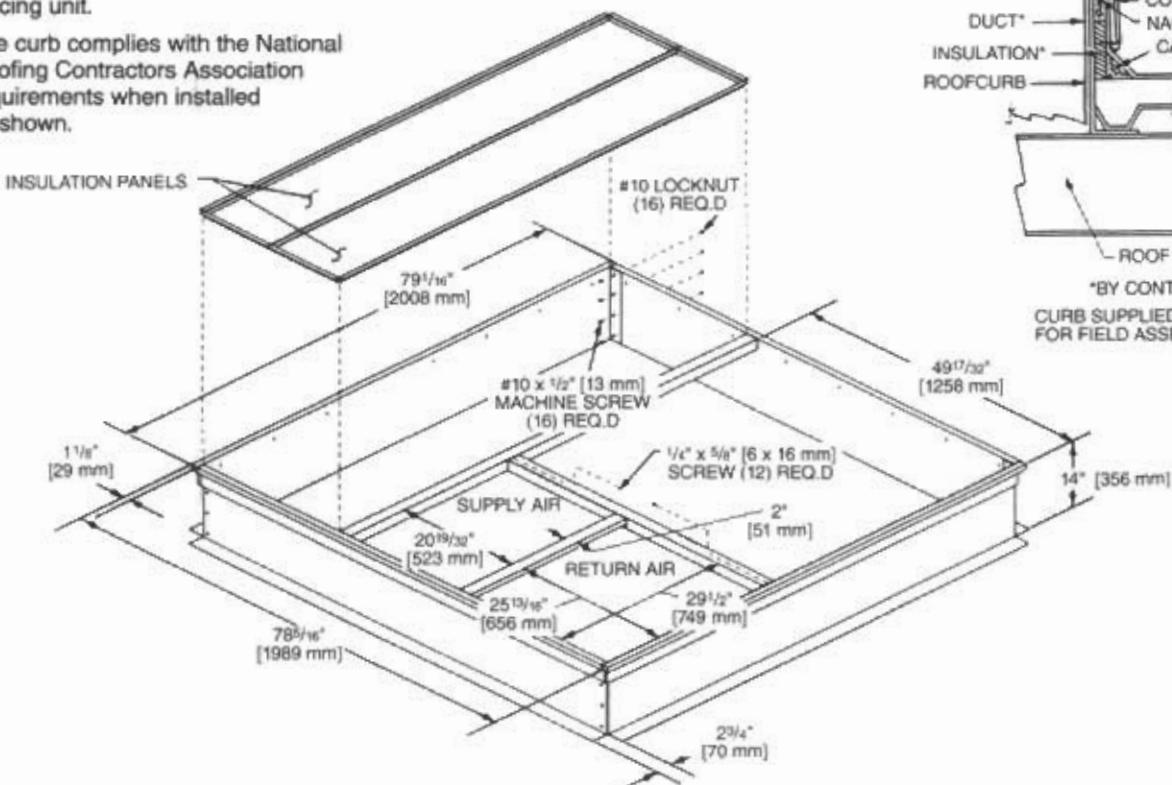


## ACCESSORIES

### ROOFCURB (RXRK-E54)

The roof curb frames the roof openings and is designed to provide a watertight connection between the unit and the roof. The curb is designed so that roof flashing and ducts may be installed prior to placing unit.

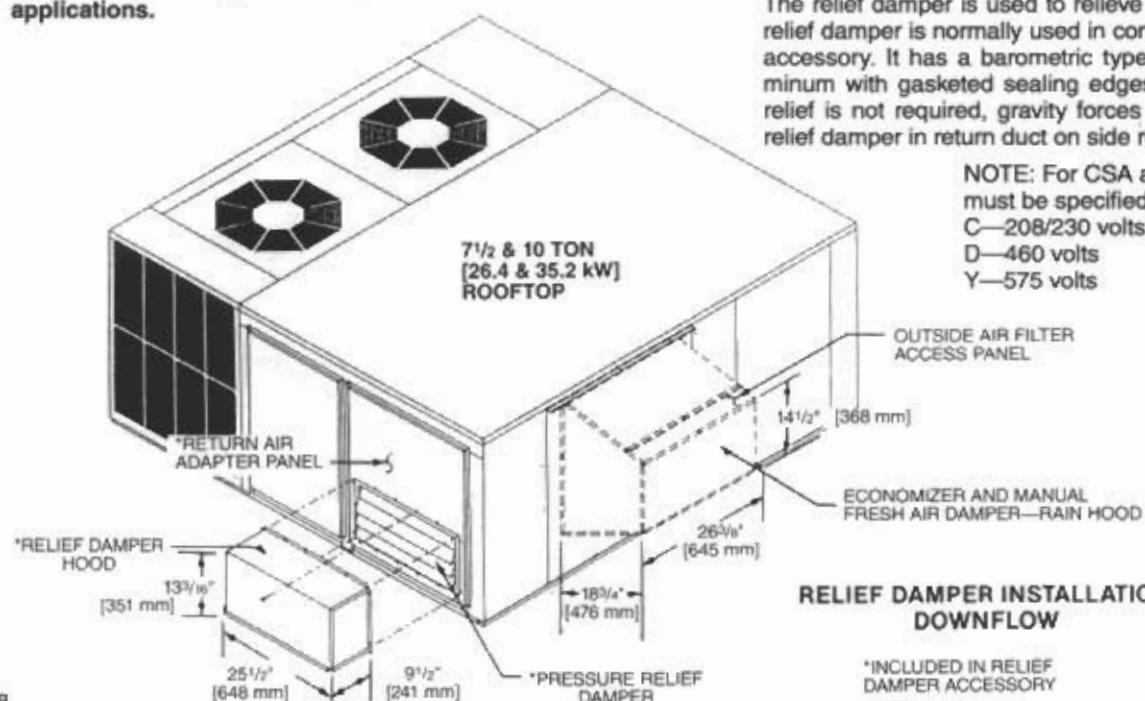
The curb complies with the National Roofing Contractors Association requirements when installed as shown.



### ECONOMIZER (RXRQ-FM54Z)

This fully modulating economizer can introduce up to 100% of suitable outdoor air to help satisfy cooling requirements. During the economizer cycle, the first stage compressor will be locked out to take advantage of free outdoor air cooling. If required, the second stage room thermostat can cycle one compressor to maintain space temperature. When the blower motor cycles off, the economizer motor will close the low leak fresh air dampers to stop outdoor air entry into the building.

**Economizer is designed for use in either bottom or side duct applications.**



### MANUAL FRESH AIR DAMPER (RXRF-CA54)

The manual fresh air damper has a fixed damper that can be adjusted to allow 0% to 25% outside air into the unit to satisfy requirements for minimum fresh air. Outside air enters the rain hood through cleanable filters and is regulated by an adjustable damper mounted on a fixed panel.

### RELIEF DAMPER (RXRP-E54)

The relief damper is used to relieve positive building pressure. A relief damper is normally used in conjunction with the economizer accessory. It has a barometric type damper constructed of aluminum with gasketed sealing edges. When the blower is off or relief is not required, gravity forces the damper to close. Mount relief damper in return duct on side return applications.

NOTE: For CSA approved economizer voltage must be specified as follows:  
C—208/230 volts  
D—460 volts  
Y—575 volts

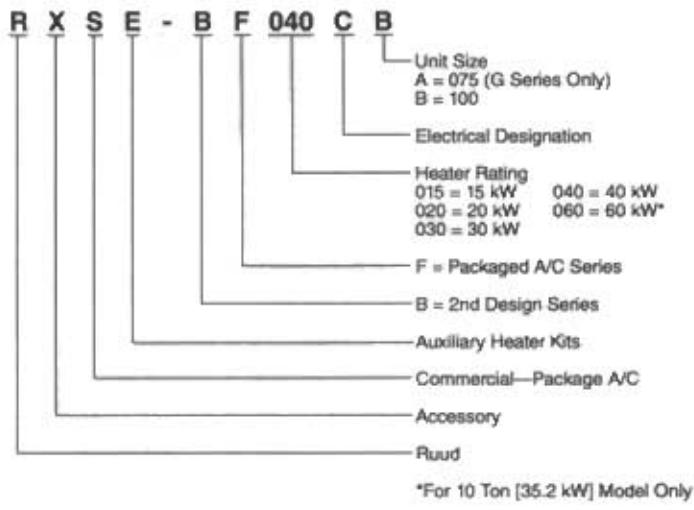
### RELIEF DAMPER INSTALLATION DOWNFLOW

\*INCLUDED IN RELIEF DAMPER ACCESSORY

## ELECTRIC HEATER KIT

15 kW through 60 kW are designed for installation in discharge air compartment of the indoor blower. All kits are furnished with power terminal blocks, high voltage leads for connection to the cooling section and low voltage quick connect plugs. Branch circuit fuses are included to allow for single point power wiring.

Note: 60 kW kit not to be installed in 7.5 ton [26.4 kW] models.

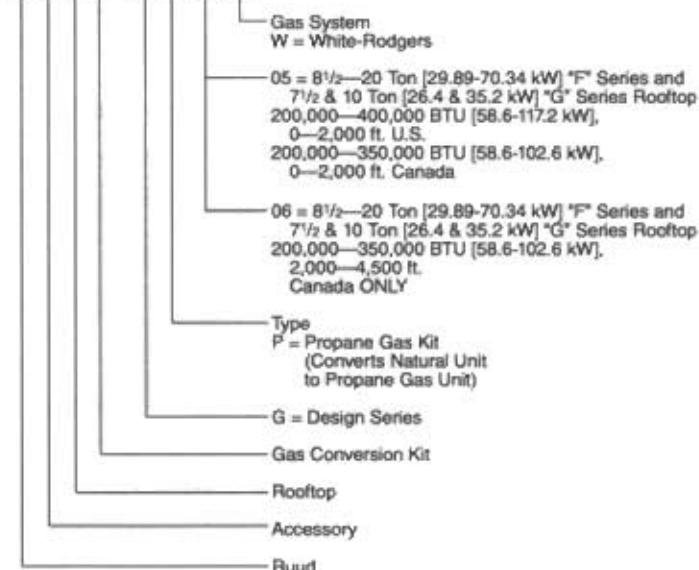


**WARNING: ONLY ELECTRIC HEATER KITS SUPPLIED BY THIS MANUFACTURER AS DESCRIBED IN THIS PUBLICATION HAVE BEEN DESIGNED, TESTED, AND EVALUATED BY A NATIONALLY RECOGNIZED SAFETY TESTING AGENCY FOR USE WITH THIS UNIT. USE OF ANY OTHER MANUFACTURED ELECTRIC HEATERS INSTALLED WITHIN THE UNIT MAY CAUSE HAZARDOUS CONDITIONS RESULTING IN PROPERTY DAMAGE, FIRE, OR BODILY INJURY.**

## GAS CONVERSION KIT

The rooftop units are supplied from the factory with furnace controls and orifices for natural gas. However, gas conversion kits are available to field convert the furnaces.

### R X R J - G P 05 W



## CONVERTING FURNACE TO DIFFERENT TYPE FUEL

Local authorities should be consulted first regarding the acceptance of converted units. Where so permitted, (Manufacturer's) Conversion Kits are available for conversion of this unit.

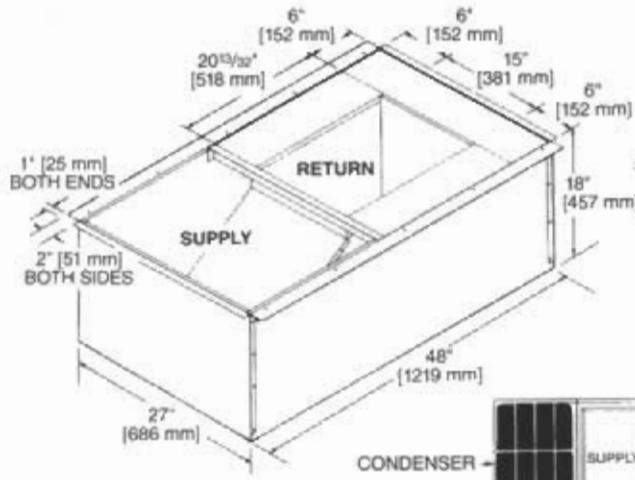
Before using any other conversion kit, check to be certain the kit's components, accessories and installation requirements are compatible with the furnace. Failure to do so can create unsafe conditions and damage to the furnace.

## ACCESSORY WEIGHTS

ACCESSORY	MODEL NUMBER	NET WEIGHT LBS. [kg]	SHIPPING WEIGHT LBS. [kg]
Economizer	RXRQ-FM54Z	109 [49]	167 [76]
Roofcurb	RXRK-E54	163 [74]	173 [78]
Manual Fresh Air Damper	RXRF-CA54	45 [20]	52 [24]
Relief Damper	RXRP-E54	17 [8]	27 [12]
Concentric Transition	RXRM-EB54	66 [30]	91 [41]
Concentric Grille	RXRN-EE54	20 [9]	26 [12]
Electric Heater Kit	RXSE-BF060	45 [20]	50 [23]

[ ] Designates Metric Conversions

## CONCENTRIC TRANSITION (RXRM-EB54)



Transition box drops into curb when center duct divider in curb is removed.

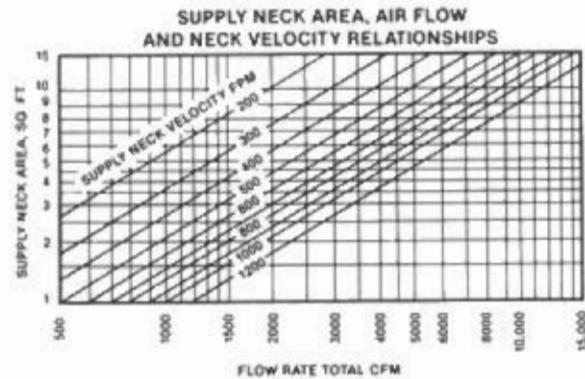
[ ] Designates Metric Conversions

## SUPPLY & RETURN GRILLE DIMENSIONAL & PERFORMANCE DATA

SUPPLY DUCT DIMENSIONS (IN.) [mm]	RETURN DUCT DIMENSIONS (IN.) [mm]	OVERALL DIMENSIONS (IN.) [mm]	CFM [L/s]	THROW		SUPPLY NECK AREA (SQ. FT.) [m <sup>2</sup> ]	RETURN GRILLE AREA (SQ. FT.) [m <sup>2</sup> ]	PRESSURE DROP TRANSITION & GRILLE
				SIDES	ENDS			
				MIN/MAX (FT.) [m]	MIN/MAX (FT.) [m]			
48 x 27 [1219 x 686]	36 x 15 [914 x 381]	53 1/8 x 32 1/8 [1349 x 816]	2400 [1133]	11/21 [3.4/6.4]	8/16 [2.4/4.9]	5.25 [0.49]	3.75 [0.35]	.04" H <sub>2</sub> O
48 x 27 [1219 x 686]	36 x 15 [914 x 381]	53 1/8 x 32 1/8 [1349 x 816]	3000 [1416]	12/24 [3.7/7.3]	9/18 [2.7/5.5]	5.25 [0.49]	3.75 [0.35]	.15" H <sub>2</sub> O
48 x 27 [1219 x 686]	36 x 15 [914 x 381]	53 1/8 x 32 1/8 [1349 x 816]	3200 [1510]	13/26 [4.0/7.9]	10/20 [3.0/6.1]	5.25 [0.49]	3.75 [0.35]	.19" H <sub>2</sub> O
48 x 27 [1219 x 686]	36 x 15 [914 x 381]	53 1/8 x 32 1/8 [1349 x 816]	3600 [1699]	16/33 [4.9/10.1]	12/24 [3.7/7.3]	5.25 [0.49]	3.75 [0.35]	.28" H <sub>2</sub> O
48 x 27 [1219 x 686]	36 x 15 [914 x 381]	53 1/8 x 32 1/8 [1349 x 816]	4000 [1888]	18/37 [5.5/11.3]	14/28 [4.3/8.5]	5.25 [0.49]	3.75 [0.35]	.38" H <sub>2</sub> O
48 x 27 [1219 x 686]	36 x 15 [914 x 381]	53 1/8 x 32 1/8 [1349 x 816]	4800 [2265]	22/45 [6.7/13.7]	16/33 [4.9/10.1]	5.25 [0.49]	3.75 [0.35]	.58" H <sub>2</sub> O

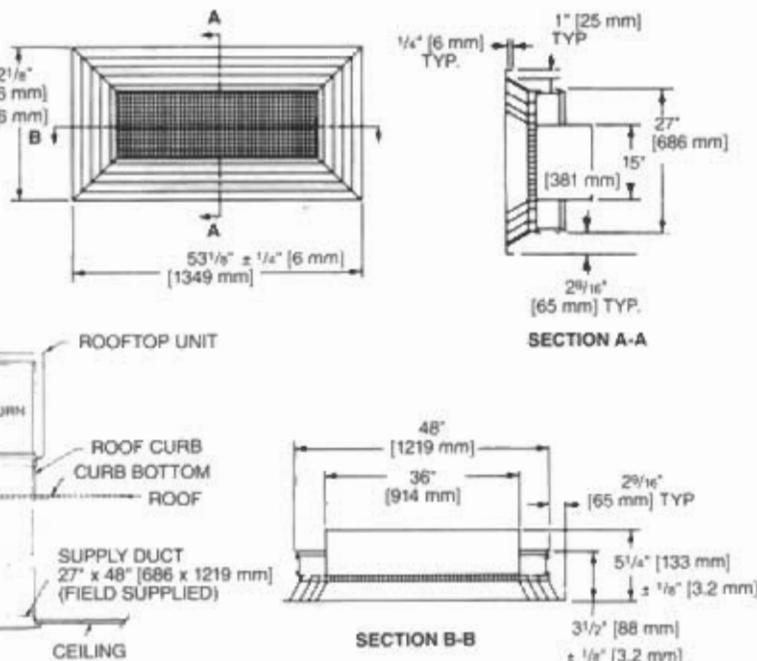
To determine Supply Neck Velocity and Throw at CFM [L/s] different from those listed, please refer to chart below. Proceed vertically from "Flow Rate Total CFM [L/s]" to diffuser "Neck Area Sq. Ft [m<sup>2</sup>]." At intersection of lines, read Neck Velocity FPM.

To determine Throw in each direction, use CFM [L/s] in each direction (not total CFM [L/s]) and refer to Throw Characteristics Chart.



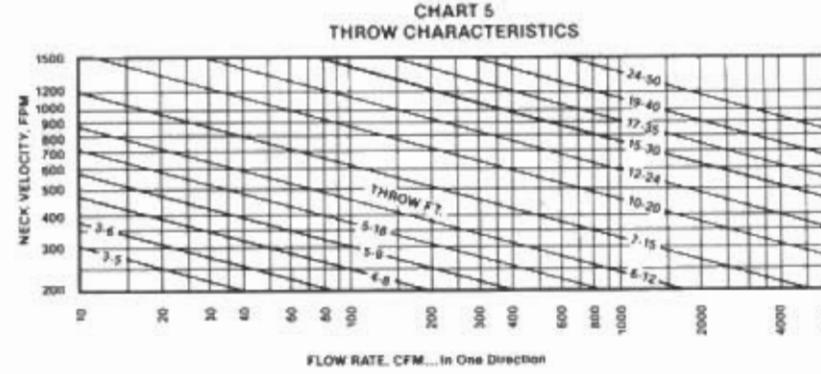
## CONCENTRIC GRILLE (RXRN-EE54)

This concentric grille is sized to be used in conjunction with the EXRM-EB54 concentric transition. The grille has aluminum frame, supply louvers and return grille.



The smaller figure represents a throw resulting in a high residual velocity of approximately 75 FPM. Using the larger throw figure will ensure a low residual velocity of approximately 35 FPM.

Throw values are for diffuser mounted flush on 10' [3.05 m] ceiling. If mounted on exposed duct without Ceiling Effect, the throw will be reduced 25% and pattern of discharge will be at 30° angle down from ceiling.



# PERFORMANCE RATINGS

## COOLING RATED AND CERTIFIED WITH ARI STANDARD 210

MODEL	COOLING CAPACITY NET BTUH [kW]	STANDARD CFM [L/s]	EFFICIENCY		SOUND BELS <sup>①</sup>
			EER	IPLV	
URCG-075	96,000 [28.13]	3000 [1416]	10.8	11.1	9.0
UREG-075	96,000 [28.13]	3000 [1416]	10.8	11.1	9.0
URGG-075	96,000 [28.13]	3000 [1416]	10.8	11.1	9.0
URCG-100	120,000 [35.17]	3900 [1841]	10.0	9.8	9.0
UREG-100	120,000 [35.17]	3900 [1841]	10.0	9.8	9.0
URGG-100	120,000 [35.17]	3900 [1841]	10.0	9.8	9.0

<sup>①</sup> In accordance with ARI Standard 270.

NOTE: Deduct 2000 BTUH from 100 model for net cooling capacity at 208 volts.

## ELECTRIC HEATING (7.5 Ton Models)

MODEL	HEATING OUTPUT BTUH [kW] 1ST STAGE	HEATING OUTPUT BTUH [kW] 2ND STAGE	HEATING OUTPUT BTUH [kW] TOTAL	TEMPERATURE RISE °F [°C] @ CFM [L/s]				
				2600 [1227]	3000 [1416]	3400 [1605]	3800 [1793]	4200 [1982]
UREG-015075C	24,574 [7.2]	24,574 [7.2]	49,148 [14.4]	18 [10.0]	15 [8.3]	13 [7.2]	12 [6.7]	11 [6.1]
UREG-020075C	34,096 [10.0]	34,096 [10.0]	68,192 [20.0]	24 [13.3]	21 [11.7]	19 [10.6]	17 [9.4]	15 [8.3]
UREG-030075C	49,147 [14.4]	49,147 [14.4]	98,294 [28.8]	35 [19.4]	30 [16.7]	27 [15.0]	24 [13.3]	22 [12.2]
UREG-040075C	68,192 [20.0]	68,192 [20.0]	136,384 [40.0]	49 [27.2]	42 [23.3]	37 [20.6]	33 [18.3]	30 [16.7]
UREG-015075D	24,574 [7.2]	24,574 [7.2]	49,148 [14.4]	18 [10.0]	15 [8.3]	13 [7.2]	12 [6.7]	11 [6.1]
UREG-020075D	34,096 [10.0]	34,096 [10.0]	68,192 [20.0]	24 [13.3]	21 [11.7]	19 [10.6]	17 [9.4]	15 [8.3]
UREG-030075D	49,147 [14.4]	49,147 [14.4]	98,294 [28.8]	35 [19.4]	30 [16.7]	27 [15.0]	24 [13.3]	22 [12.2]
UREG-040075D	68,192 [20.0]	68,192 [20.0]	136,384 [40.0]	49 [27.2]	42 [23.3]	37 [20.6]	33 [18.3]	30 [16.7]
UREG-020075Y	34,130 [10.0]	34,130 [10.0]	68,260 [20.0]	24 [13.3]	21 [11.7]	19 [10.6]	17 [9.4]	15 [8.3]
UREG-040075Y	68,260 [20.0]	68,260 [20.0]	136,520 [40.0]	49 [27.2]	42 [23.3]	38 [21.1]	34 [18.9]	30 [16.7]

NOTE: Electric heat output rated at 240 volts on "C" voltage units, 480 volts on "D" voltage units, and 600 volts on "Y" voltage units.

## ELECTRIC HEATING (10 Ton Models)

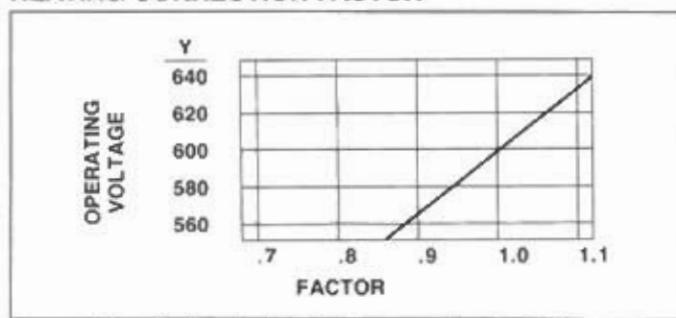
MODEL	HEATING OUTPUT BTUH [kW] 1ST STAGE	HEATING OUTPUT BTUH [kW] 2ND STAGE	HEATING OUTPUT BTUH [kW] TOTAL	TEMPERATURE RISE °F [°C] @ CFM [L/s]				
				3200 [1510]	3600 [1699]	4000 [1888]	4400 [2077]	4800 [2265]
UREG-015100C	24,574 [7.2]	24,574 [7.2]	49,148 [14.4]	14 [7.8]	13 [7.2]	11 [6.1]	10 [5.6]	9 [5.0]
UREG-020100C	34,096 [10.0]	34,096 [10.0]	68,192 [20.0]	20 [11.1]	18 [10.0]	16 [8.9]	14 [7.8]	13 [7.2]
UREG-030100C	49,147 [14.4]	49,147 [14.4]	98,294 [28.8]	28 [15.6]	25 [13.9]	23 [12.8]	21 [11.7]	19 [10.6]
UREG-040100C	68,192 [20.0]	68,192 [20.0]	136,384 [40.0]	39 [21.7]	36 [20.0]	32 [17.8]	29 [16.1]	26 [14.4]
UREG-060100C	98,295 [28.8]	98,295 [28.8]	196,590 [57.6]	57 [31.7]	51 [28.3]	46 [25.6]	41 [22.8]	38 [21.1]
UREG-015100D	24,574 [7.2]	24,574 [7.2]	49,148 [14.4]	14 [7.8]	13 [7.2]	11 [6.1]	10 [5.6]	9 [5.0]
UREG-020100D	34,096 [10.0]	34,096 [10.0]	68,192 [20.0]	20 [11.1]	18 [10.0]	16 [8.9]	14 [7.8]	13 [7.2]
UREG-030100D	49,147 [14.4]	49,147 [14.4]	98,294 [28.8]	28 [15.6]	25 [13.9]	23 [12.8]	21 [11.7]	19 [10.6]
UREG-040100D	68,192 [20.0]	68,192 [20.0]	136,384 [40.0]	39 [21.7]	36 [20.0]	32 [17.8]	29 [16.1]	26 [14.4]
UREG-060100D	98,295 [28.8]	98,295 [28.8]	196,590 [57.6]	57 [31.7]	51 [28.3]	46 [25.6]	41 [22.8]	38 [21.1]
UREG-030100Y	49,148 [14.4]	49,148 [14.4]	98,295 [28.8]	14 [7.8]	13 [7.2]	11 [6.1]	10 [5.6]	9 [5.0]
UREG-060100Y	98,295 [28.8]	98,295 [28.8]	196,590 [57.6]	57 [31.7]	51 [28.3]	46 [25.6]	41 [22.8]	38 [21.1]

NOTE: Electric heat output rated at 240 volts on "C" voltage units, 480 volts on "D" voltage units, and 600 volts on "Y" voltage units.

## HEATING TEMPERATURE RISE

FORMULA: TEMP. RISE. °F [°C] = $\frac{3160 \times \text{Kw}}{\text{Cfm} [\text{L/s}]}$
3160 = CONSTANT
KW = KW RATING OF UNIT
CFM [L/s] = AIR FLOW AT SPECIFIED CONDITIONS

## HEATING CORRECTION FACTOR



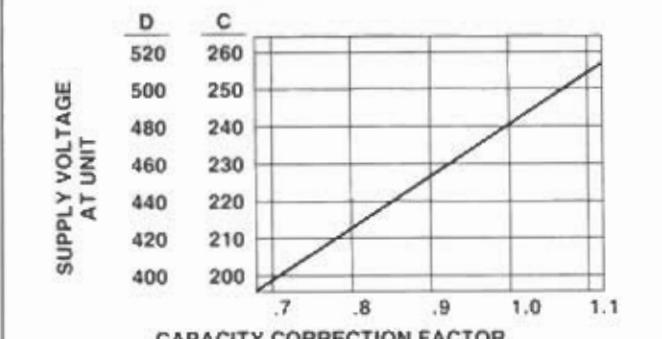
For correction of unit output, multiply the correction factor times the kW rating at 600V.

## GAS HEATING

MODEL	HEATING CAPACITY		THERMAL EFFICIENCY (%)	AFUE (%)	HEAT RISE °F [°C] DB
	INPUT BTUH [kW]	OUTPUT BTUH [kW]			
URGG-200075	200,000 [58.6]	162,000 [47.5]	81	79.5	30-60 [-3.9-17.8]
URGG-200100	200,000 [58.6]	162,000 [47.5]	81	79.8	25-55 [-3.9-17.8]
URGG-250100	250,000 [73.3]	202,500 [59.3]	81	79.6	30-60 [-3.9-17.8]

NOTE: Output capacity rated in accordance with ANSI-Z221.47.

## HEATING CORRECTION FACTOR



For correction of unit output, multiply the correction factor times the unit rating in BTU if actual supply voltage differs from rated voltage.

Blower watts not included in heater ratings. Refer to Blower Table for watts on a particular job and multiply by 3.413 to obtain BTUH adder.

[ ] Designates Metric Conversions

## SELECTION PROCEDURE

To select an URCG- Cooling unit, an UREG- Cooling and Electric Heating unit or URGG- Cooling and Gas Heating unit to meet a job requirement, follow this procedure, with example, using data supplied in this specification sheet.

### 1. DETERMINE COOLING AND HEATING REQUIREMENTS AND SPECIFIC OPERATING CONDITIONS FROM PLANS AND SPECS.

Example:	Total cooling capacity—	106,000 BTUH [31.07 kW]
	Sensible cooling capacity—	82,000 BTUH [24.03 kW]
	Heating capacity—	150,000 BTUH [43.96 kW]
	*Condenser Entering Air—	95°F [35°C] DB
	*Evaporator Mixed Air Entering	65°F [18.3°C] WB; 78°F [25.6°C] DB
	*Indoor Air Flow (vertical)	3600 CFM [1699 L/s]
	*External Static Pressure	.40 in. WG

### 2. SELECT UNIT TO MEET COOLING REQUIREMENTS.

Since total cooling is within the range of a nominal 10 ton [35.2 kW] unit, enter cooling performance table at 95°F [35°C] DB condenser inlet air. Interpolate between 63°F [17.2°C] and 67°F [19.4°C] to determine total capacity and power input for 65°F [18.3°C] WB evap inlet air at 4000 CFM [1888 L/s] indoor air flow (table basis):

$$\begin{aligned}\text{Total Capacity} &= 119,400 \text{ BTUH} [34.99 \text{ kW}] \\ \text{Power Input (Compressor and Cond. Fans)} &= 10,200 \text{ watts}\end{aligned}$$

Interpolate between 75°F [23.9°C] and 80°F [26.7°C] to determine sensible capacity at 78°F [25.6 °C] DB evaporator entering air:

$$\text{Sensible Capacity} = 93,200 \text{ BTUH} [27.3 \text{ kW}]$$

### 3. CORRECT CAPACITIES OF STEP 2 FOR ACTUAL AIR FLOW.

Select factors from airflow correction table at 3600 CFM [1699 L/s] and apply to data obtained in step 2 to obtain gross capacity:

$$\begin{aligned}\text{Total capacity, } 119,400 \times .97 &= 115,818 \text{ BTUH} [33.94 \text{ kW}] \\ \text{Sensible Capacity, } 93,200 \times .95 &= 88,540 \text{ BTUH} [25.94 \text{ kW}] \\ \text{Power Input } 10,200 \times .99 &= 10,098 \text{ Watts}\end{aligned}$$

These are Gross Capacities, not corrected for blower motor heat or power.

### 4. DETERMINE BLOWER SPEED AND WATTS TO MEET SYSTEM DESIGN.

Enter Indoor Blower performance table at 3600 CFM [1699 kW]. Total ESP (external static pressure) per the spec of .40 in. includes the system duct and grilles. Add from the table "Component Air Resistance," .076 for wet coil, .220 for vertical air flow, for a total selection static pressure of .7 inches of water, and determine:

$$\begin{aligned}\text{RPM} &= 782 \\ \text{WATTS} &= 1,470 \\ \text{DRIVE} &= K (\text{standard 2 H.P. motor})\end{aligned}$$

### 5. CALCULATE INDOOR BLOWER BTUH HEAT EFFECT FROM MOTOR WATTS, STEP 4.

$$\text{BTUH} = 1,470 \times 3.412 = 5,016$$

### 6. CALCULATE NET COOLING CAPACITIES, EQUAL TO GROSS CAPACITY, STEP 3, MINUS INDOOR BLOWER MOTOR HEAT.

$$\begin{aligned}\text{Net Total Capacity} &= 115,818 - 5,016 = 110,802 \text{ BTUH} [32.47 \text{ kW}] \\ \text{Net Sensible Capacity} &= 88,540 - 5,016 = 83,524 \text{ BTUH} [24.48 \text{ kW}]\end{aligned}$$

### 7. CALCULATE UNIT INPUT AND JOB EER.

$$\text{Total Power Input} = 10,200 \text{ (step 3)} + 1,470 \text{ (step 4)} = 11,670 \text{ Watts}$$

$$\text{EER} = \frac{\text{Net Total BTUH (step 6)}}{\text{Power Input, Watts (above)}} = \frac{110,802}{11,670} = 9.49$$

### 8. SELECT UNIT HEATING CAPACITY.

From Physical Data Table read that gas heating output (input rating x efficiency) is:

$$\text{Heating Capacity} = 162,000 \text{ BTUH} [47.48 \text{ kW}]$$

\*NOTE: These operating conditions are typical of a commercial application in a 95°F/79°F [35°C/26.11°C] design area with indoor design of 76°F [24.4°C] DB and 50% RH and 10% ventilation air, with the unit roof mounted and centered on the zone it conditions by ducts.

[ ] Designates Metric Conversions



# INDOOR BLOWER PERFORMANCE DATA URGG—7.5 TON [26.4 kW] GAS HEAT

DRIVE PKG.	STD. AIR CFM [l/s]	E.S.P.—INCHES OF WATER [kPa]											
		.1 [0.02]	.2 [0.05]	.3 [0.07]	.4 [0.10]	.5 [0.12]	.6 [0.15]	.7 [0.17]	.8 [0.20]	.9 [0.22]	1.0 [0.25]	1.1 [0.27]	1.2 [0.30]
STANDARD	2600 [1227]	—	—	—	—	—	—	—	—	—	—	—	—
K 1.5 H.P.	2800 [1321]	—	—	—	—	—	—	—	—	—	—	—	—
L 2 H.P.	3000 [1416]	—	—	—	—	—	—	—	—	—	—	—	—
OPTIONAL	3200 [1510]	—	—	—	—	—	—	—	—	—	—	—	—
L 2 H.P.	3400 [1605]	790	1210	830	1200	864	1250	895	1310	930	1410	962	1500
L 2 H.P.	3600 [1699]	630	1380	866	1440	895	1510	925	1610	960	1610	988	1720
L 2 H.P.	3800 [1793]	868	1560	898	1630	930	1750	960	1860	992	1860	1020	1840
L 2 H.P.	4000 [1886]	905	1780	920	1800	970	1900	995	2000	1022	2080	1052	2140
L 2 H.P.	4200 [1982]	—	—	975	2050	995	2125	1025	2200	1060	2300	—	—

## COMPONENT AIR RESISTANCE URGG—7.5 TON [26.4 kW]

COMPONENT	STANDARD INDOOR AIRFLOW—CFM [l/s]											
	2600 [1227]	3000 [1416]	3400 [1605]	3800 [1793]	4200 [1982]							
Wet Coil	.085	.080	.071	.062	.053	.093						
Bottom Supply and Return	.14	.23	.29	.33	.36							
Concentric Grille and Transition	.058	.145	.227	.313	.428							
Economizer RA Damper Open	.015	.030	.045	.060	.073							

NOTE: Add component resistance to duct resistance to determine total E.S.P.

## INDOOR BLOWER PERFORMANCE DATA URCG/UREG—7.5 TON [26.4 kW]

DRIVE PKG.	STD. AIR CFM [l/s]	E.S.P.—INCHES OF WATER [kPa]											
		.1 [0.02]	.2 [0.05]	.3 [0.07]	.4 [0.10]	.5 [0.12]	.6 [0.15]	.7 [0.17]	.8 [0.20]	.9 [0.22]	1.0 [0.25]	1.1 [0.27]	1.2 [0.30]
STANDARD	2600 [1227]	—	—	—	—	—	—	—	—	—	—	—	—
K 1.5 H.P.	2800 [1321]	—	—	—	—	—	—	—	—	—	—	—	—
L 2 H.P.	3000 [1416]	—	—	—	—	—	—	—	—	—	—	—	—
L 2 H.P.	3200 [1510]	—	—	—	—	—	—	—	—	—	—	—	—
L 2 H.P.	3400 [1605]	—	—	—	—	—	—	—	—	—	—	—	—
L 2 H.P.	3600 [1699]	—	—	—	—	—	—	—	—	—	—	—	—
L 2 H.P.	3800 [1793]	—	—	—	—	—	—	—	—	—	—	—	—
L 2 H.P.	4000 [1886]	—	—	750	1300	780	1380	806	1440	835	1530	862	1610
L 2 H.P.	4200 [1982]	752	1380	780	1460	802	1520	828	1610	855	1685	888	1800

NOTES: 1. Operation below heavy line requires optional drive package.

2. Standard air @ .075 LB./CU. FT.

3. Performance shown with dry coil and standard

2" [51 mm] filters in the side flow configuration.

4. Motor Efficiency = 80%

5. BHP = Watts x Motor Efficiency

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CODES: BHP = Brake Horsepower

CFM = Cubic Feet per minute

RPM = Revolutions per minute

W = Watts

DRIVE PKG.	STD. AIR CFM [l/s]	INDOOR BLOWER DRIVE SPECS URGG—7.5 TON [26.4 kW]											
		DRIVE PACK	MOTOR SHEAVE O.D. [mm]	BLOWER SHEAVE O.D. [mm]	BELT SIZE	0	1	2	3	4	5	6	NO. TURNS OPEN
K (Standard)	43/4" [121]	8 3/4" [210]	BP44	—	935	905	865	830	795	760			
L (Optional)	6" [152]	8 1/4" [210]	BP48	1150	1085	1050	1025	995	965	935			

NOTE: Bold print denotes factory setting on motor sheave.

[ ] Designates Metric Conversions

## INDOOR BLOWER DRIVE SPECS URCG/UREG—7.5 TON [26.4 kW]

DRIVE PKG.	STD. AIR CFM [l/s]	E.S.P.—INCHES OF WATER [kPa]											
		.1 [0.02]	.2 [0.05]	.3 [0.07]	.4 [0.10]	.5 [0.12]	.6 [0.15]	.7 [0.17]	.8 [0.20]	.9 [0.22]	1.0 [0.25]	1.1 [0.27]	1.2 [0.30]
STANDARD	2600 [1227]	—	—	—	—	—	—	—	—	—	—	—	—
K 1.5 H.P.	2800 [1321]	—	—	—	—	—	—	—	—	—	—	—	—
L 2 H.P.	3000 [1416]	—	—	—	—	—	—	—	—	—	—	—	—
L 2 H.P.	3200 [1510]	—	—	—	—	—	—	—	—	—	—	—	—
L 2 H.P.	3400 [1605]	—	—	—	—	—	—	—	—	—	—	—	—
L 2 H.P.	3600 [1699]	—	—	—	—	—	—	—	—	—	—	—	—
L 2 H.P.	3800 [1793]	—	—	—	—	—	—	—	—	—	—	—	—
L 2 H.P.	4000 [1886]	—	—	750	1300	780	1380	806	1440	835	1530	862	1610
L 2 H.P.	4200 [1982]	752	1380	780	1460	802	1520	828	1610	855	1685	888	1800

DRIVE PKG.	STD. AIR CFM [l/s]	INDOOR BLOWER DRIVE SPECS URCG/UREG—7.5 TON [26.4 kW]											
		DRIVE PACK	MOTOR SHEAVE O.D. [mm]	BLOWER SHEAVE O.D. [mm]	BELT SIZE	0	1	2	3	4	5	6	NO. TURNS OPEN
K (Standard)	43/4" [121]	8 3/4" [210]	BP44	—	935	905	865	830	795	760			
L (Optional)	6" [152]	8 1/4" [210]	BP48	1150	1085	1050	1025	995	965	935			

NOTE: Bold print denotes factory setting on motor sheave.

NOTE: Add component resistance to duct resistance to determine total E.S.P.

## INDOOR BLOWER PERFORMANCE DATA URGG—10 TON [35.2 kW] GAS HEAT

### E.S.P.—INCHES OF WATER [kPa]

DRIVE PKG.	STD. AIR CFM [l/s]	E.S.P.—INCHES OF WATER [kPa]									
		.1 [0.02]	.2 [0.05]	.3 [0.07]	.4 [0.10]	.5 [0.12]	.6 [0.15]	.7 [0.17]	.8 [0.20]	.9 [0.22]	1.0 [0.25]
STANDARD	3200 [1510]	—	—	—	—	—	—	—	—	1240	840
K 2 H.P.	3400 [1605]	—	—	—	—	—	680	1130	1200	1290	872
X 3600 [1699]	—	—	—	—	—	702	1280	728	1340	1440	856
OPTIONAL	3800 [1793]	—	—	—	—	700	1350	724	1420	1580	850
L 4200 [1982]	—	—	696	1420	720	1490	752	1570	1746	1880	874
3 H.P.	4400 [2077]	720	1700	748	1780	800	1660	1730	1824	1950	916
	4600 [2171]	752	1920	780	2010	810	1850	1930	1950	1990	914
	4800 [2265]	784	2140	812	2280	822	2160	850	2270	872	2400

## COMPONENT AIR RESISTANCE URGG—10 TON [35.2 kW]

COMPONENT	STANDARD INDOOR AIRFLOW—CFM [l/s]									
	RESISTANCE—INCHES OF WATER [kPa]									
Wet Coil	.065	.076	.087	.099	.110					
Bottom Supply and Return	.180	.220	.285	.400	.560					
Concentric Grille and Transition	.190	.280	.380	.443	.580					
Economizer RA Damper Open	.038	.053	.068	.080	.095					

NOTE: Add component resistance to duct resistance to determine total E.S.P.

## INDOOR BLOWER PERFORMANCE DATA URCG/UREG—10 TON [35.2 kW]

### E.S.P.—INCHES OF WATER [kPa]

DRIVE PKG.	STD. AIR CFM [l/s]	E.S.P.—INCHES OF WATER [kPa]									
		.1 [0.02]	.2 [0.05]	.3 [0.07]	.4 [0.10]	.5 [0.12]	.6 [0.15]	.7 [0.17]	.8 [0.20]	.9 [0.22]	1.0 [0.25]
STANDARD	3200 [1510]	—	—	—	—	—	630	1100	660	1150	1220
K 2 H.P.	3400 [1605]	—	—	—	—	—	645	1220	670	1290	1430
X 3600 [1699]	—	—	—	—	—	—	635	1290	660	1330	1470
OPTIONAL	3800 [1793]	—	—	—	—	—	625	1340	650	1395	1630
L 4200 [1982]	—	—	645	1455	670	1525	690	1620	720	1690	1780
3 H.P.	4400 [2077]	—	—	635	1505	665	1600	690	1680	715	1770
	4600 [2171]	640	1670	655	1720	690	1860	705	1910	725	2050
	4800 [2265]	660	1780	675	1850	700	1910	715	1970	735	2100

NOTES: 1. Operation below heavy line requires optional drive package.

2. Standard air @ .075 LB./CU. FT.

3. Performance shown with dry coil and standard

2" [51 mm] filters in the side flow configuration.

## COMPONENT AIR RESISTANCE URCG/UREG—10 TON [35.2 kW]

COMPONENT	STANDARD INDOOR AIRFLOW—CFM [l/s]									
	RESISTANCE—INCHES OF WATER [kPa]									
Wet Coil	.065	.076	.087	.099	.110					
Economizer RA Damper Open	.038	.053	.068	.080	.095					
Bottom Supply and Return	.110	.130	.150	.170	.190					
Concentric Grille and Transition	.190	.280	.380	.443	.580					
Resistance 15-20 kW	.120	.180	.250	.310	.370					
Heater Kit 30-60 kW	.250	.370	.500	.640	.780					

NOTE: Add component resistance to duct resistance to determine total E.S.P.

## INDOOR BLOWER DRIVE SPECS URGG/UREG—10 TON [35.2 kW]

DRIVE PKG.	STD. AIR CFM [l/s]	NO. TURNS OPEN									
		0	1	2	3	4	5	6	BLOWER RPM	BELT SIZE	MOTOR SHEAVE O.D. [mm]
K (Standard)	4 1/4" [121]	9 3/4" [248]	BP55	—	840	810	780	750	715	685	1760
L (Optional)	6" [152]	9 3/4" [248]	BP55	1010	980	950	920	890	855	820	2060

CODES: BHP = Brake Horsepower

CFM = Cubic Feet per minute

RPM = Revolutions per minute

W = Watts

[ ] Designates Metric Conversions

**ELECTRICAL DATA  
GAS HEAT AND COOLING ONLY MODELS—URGG/URCG-**

MODEL SIZE TONS [kW]			7.5 [26.4]					10 [35.2]						
POWER—VOLTS 3 PH-60 HERTZ			208/230		460		575		208/230		460			
COMPRESSOR (NUMBER)			2		2		2		2		2			
RLA Each			13.6		7.5		6.0		21/19		10			
LRA Each			99		49.5		40		124		62			
CONDENSER FAN MOTOR (NUMBER)			2		2		2		2		2			
FLA			2.2		1.3		.8		2.2		1.3			
DRAFT MOTOR* (NUMBER)			1		1		1		1		1			
FLA			1.2		.6		1.2		1.2		.6			
INDOOR BLOWER MOTOR (NUMBER)			1		1		1		1		1			
H.P. [W]	STD.		1.5 [1119]		1.5 [1119]		1.5 [1119]		2 [1491]		2 [1491]			
	OPT.		2 [1491]		2 [1491]		2 [1491]		3 [2237]		3 [2237]			
FLA	STD.		5.7/5.2		2.6		2.3		7.5/6.8		3.4			
	OPT.		7.5/6.8		3.4		2.6		10.7/9.6		4.8			
UNIT TOTAL	STD.		37.3/36.8		20.2		15.7		54.0/49.3		25.8			
	FLA		39.1/38.4		21.0		16.3		57.2/52.1		27.2			
LRA	STD.		229.4		115.1		89.0		318.7		159.8			
	OPT.		250.7		125.8		94.3		327.4		164.1			
MIN. CIRC. AMPACITY	STD.		41/41		23		18		59.2/54.0		28.5			
	OPT.		43/42		23		18		62.4/56.8		29.9			
MAX. FUSE OR HACR CIRCUIT BREAKER SIZE/AMPACITY			50		25		20		70		35			

\*Gas heat models ONLY

**ELECTRIC HEAT/ELECTRIC COOL MODELS—UREG—\***

MODEL SIZE TONS [kW]			7.5 [26.4]					10 [35.2]												
HEATER SIZE NOMINAL KW			15		20		30		40		15		20		30		40		60	
POWER—VOLTS 3 PH-60 HERTZ	208/230	460	208/230	460	575	208/230	460	208/230	460	575	208/230	460	208/230	460	208/230	460	208/230	460	575	
COMPRESSOR (NUMBER)	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	
RLA Each	13.6	7.5	13.6	7.5	6.0	13.6	7.5	13.6	7.5	6.0	21/19	10	21/19	10	21/19	10	6.4	21/19	10	6.4
LRA Each	99	49.5	99	49.5	40	99	49.5	99	49.5	40	124	62	124	62	124	62	50	124	62	50
CONDENSER FAN MOTOR (NUMBER)	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	
FLA	2.2	1.3	2.2	1.3	.8	2.2	1.3	2.2	1.3	.8	2.2	1.3	2.2	1.3	2.2	1.3	.8	2.2	1.3	.8
INDOOR BLOWER MOTOR (NUMBER)	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	
H.P. [W]	1.5 [1119]	2 [1491]																		
	2 [1491]	3 [2237]																		
FLA	5.7/5.2	2.6	5.7/5.2	2.6	2.3	5.7/5.2	2.6	5.7/5.2	2.6	2.3	7.5/6.8	3.4	7.5/6.8	3.4	7.5/6.8	3.4	7.5/6.8	3.4	7.5/6.8	
	OPT.	7.5/6.8	3.4	7.5/6.8	3.4	2.6	7.5/6.8	3.4	2.6	10.7/9.6	4.8	10.7/9.6	4.8	10.7/9.6	4.8	10.7/9.6	4.8	10.7/9.6		
ELECTRIC HEAT ELECTRICAL DATA																				
HEATER FLA	30/35	17	42/48	24	19.2	60/70	35	83/96	48	38.4	30/35	17	42/48	24	60/70	35	27.7	83/96	48	
MIN. CIRCUIT AMPACITY	STD.	47/51	25	60/67	34	27	83/94	47	111/127	64	51	59.2/54.0	28.5	62/69	34	84/96	48	38	113/129	64
OPT.	49/53	26	62/69	35	27	85/96	48	114/129	65	51	62.4/56.8	29.9	66/72	36	88/100	50	39	117/132	66	163/186
MAX. FUSE OR HACR BRKR.	STD.	60/60	30	60/70	35	30	90/100	50	125/150	70	60	70/70	35	70/70	35	90/100	50	40	125/150	70
OPT.	60/60	30	70/70	35	30	90/100	50	125/150	70	60	70/70	35	70/70	40	90/100	50	40	125/150	70	175/200

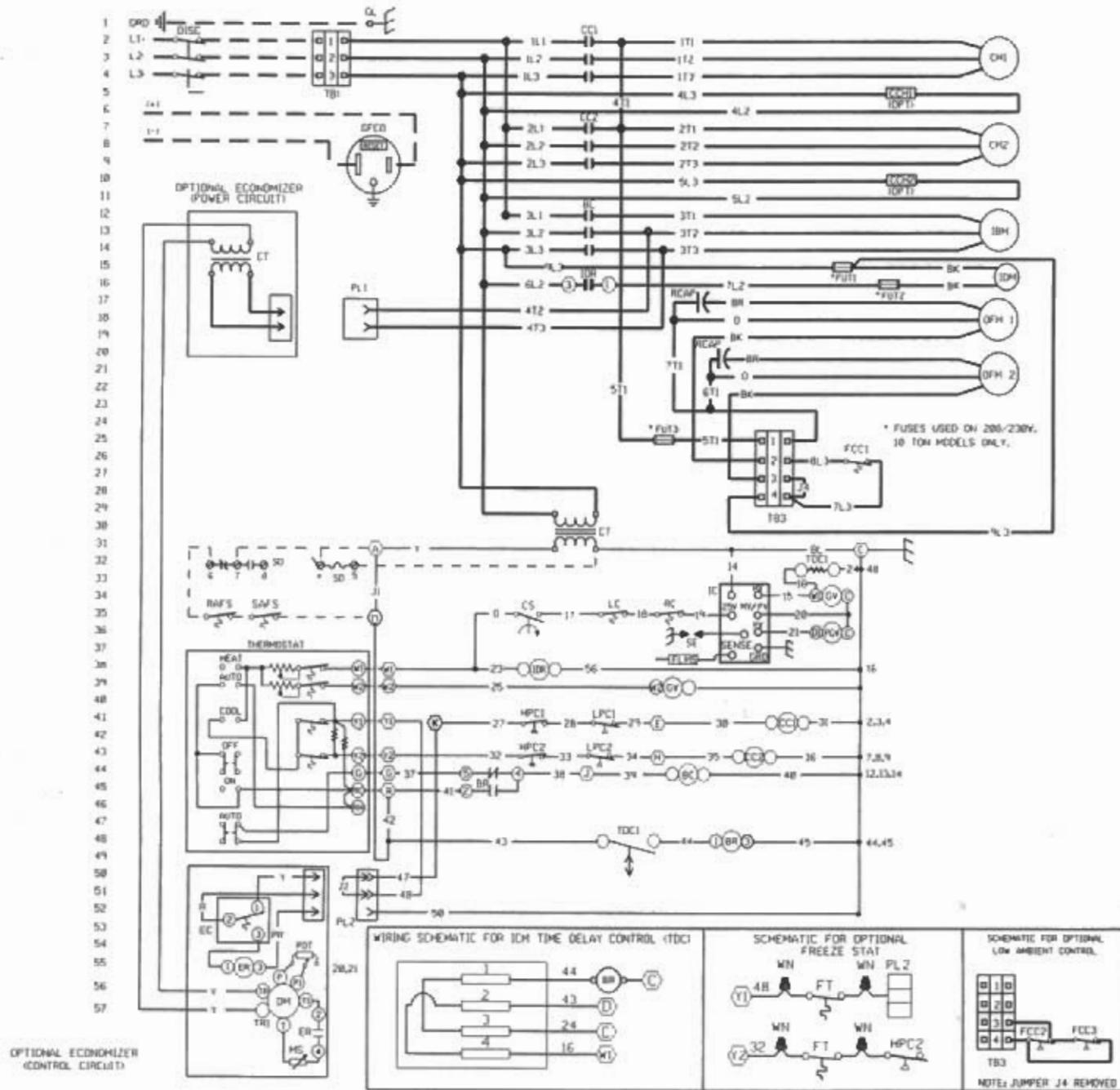
NOTES: 575 volt models are not UL listed.

Field wiring must comply with the National Electric Code (Canadian Electric Code in Canada) and any local ordinance that may apply.

\*Also applicable for URCG with RXSE-BF electric heater kit installed.

[ ] Designates Metric Conversions

# TYPICAL WIRING SCHEMATICS



COMPONENT CODE	
BC	BLOWER CONTACTOR
BR	BLOWER RELAY
CC	COMPRESSOR CONTACTOR
CCH	CRANKCASE HEATER
CM	COMPRESSOR MOTOR
CS	CENTRIFUGAL SWITCH
CT	CONTROL TRANSFORMER
DISC	DISCONNECT SWITCH
DM	DAMPER MOTOR
EC	ENTHALPY CONTROL
ER	ECONOMIZER RELAY
FCC	FAN CYCLE CONTROL
FLMS	FLAME SENSOR
FUT	FUSE W/TIME DELAY
GL	GROUND LUG
GRD	GROUND
GV	GAS VALVE
HPC	HIGH PRESSURE CONTROL
IBM	INDOOR BLOWER MOTOR
IDC	IGNITION CONTROL
IDM	INDUCED DRAFT MOTOR
IDR	INDUCED DRAFT RELAY
J	JUMPER
LC	LIMIT CONTROL
LPC	LOW PRESSURE CONTROL
MS	MIXED AIR SENSOR
OPM	OUTDOOR FAN MOTOR
PGV	PILOT GAS VALVE
PL	PLUG
POT	POTENTIOMETER
RAFS	RETURN AIR FIRESTAT
RC	ROLLOUT CONTROL
RCAP	RUN CAPACITOR
SAFS	SUPPLY AIR FIRESTAT
SE	SPARK ELECTRODE
TB	TERMINAL BLOCK
TDC	TIME DELAY CONTROL

## WIRING INFORMATION

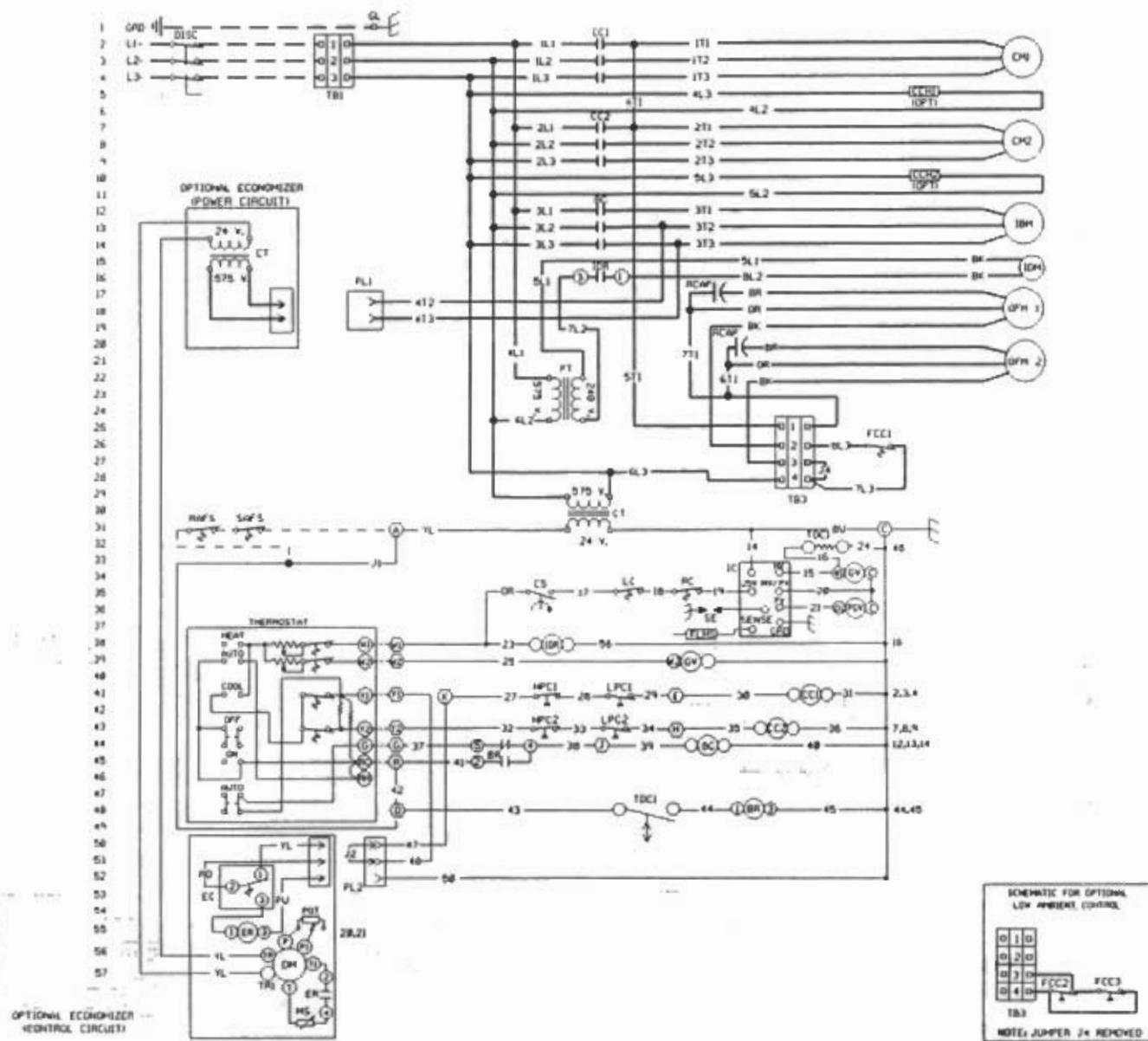
1. LINE VOLTAGE  
FACTORY STANDARD  
FACTORY OPTION  
FIELD INSTALLED
2. LOW VOLTAGE  
FACTORY STANDARD  
FACTORY OPTION  
FIELD INSTALLED
3. REPLACEMENT WIRE  
MUST BE THE SAME SIZE AND TYPE OF  
INSULATION AS ORIGINAL (105°C MIN.)

**WARNING**  
CABINET MUST BE PERMANENTLY  
GROUNDED AND CONFORM TO N.E.C.,  
(C.E.C.-CANADA) AND LOCAL CODES.

BK - BLACK	PU - PURPLE
BR - BROWN	RD - RED
BU - BLUE	WH - WHITE
GR - GREEN	YL - YELLOW
OR - ORANGE	

**WIRING SCHEMATIC**  
**7½ & 10 TON URGG**  
**[26.4 & 35.2 kW]**  
**208/230 & 460V UNITS**  
**COMBINATION UNIT**  
**NATURAL AND PROPANE GAS**  
**HONEYWELL IGNITION AND**  
**WHITE RODGERS GAS CONTROLS**

# TYPICAL WIRING SCHEMATICS



## COMPONENT CODE

BC	BLOWER CONTACTOR	IDM	INDUCED DRAFT MOTOR
BR	BLOWER RELAY	IDR	INDUCED DRAFT RELAY
CC	COMPRESSOR CONTACTOR	J	JUMPER
CCH	CRANKCASE HEATER (OPT)	LC	LIMIT CONTROL
CM	COMPRESSOR MOTOR	LPC	LOW PRESSURE CONTROL
CS	CENTRIFUGAL SWITCH	MS	MIXED AIR SENSOR
CT	CONTROL TRANSFORMER	OFM	OUTDOOR FAN MOTOR
DISC	DISCONNECT SWITCH	PGV	PILOT GAS VALVE
DM	DAMPER MOTOR	PL	PLUG
EC	ENTHALPY CONTROL	POT	POTENTIOMETER
ER	ECONOMIZER RELAY	PT	POWER TRANSFORMER
FCC	FAN CYCLE CONTROL	RAFS	RETURN AIR FIRESTAT
FLMS	FLAME SENSOR	RC	ROLLOUT CONTROL
GL	GROUND LUG	RCAP	RUN CAPACITOR
GRD	GROUND	SAFS	SUPPLY AIR FIRESTAT
GV	GV	SE	SPARK ELECTRODE
HPC	HIGH PRESSURE CONTROL	TDC	TIME DELAY CONTROL
IMB	INDOOR BLOWER MOTOR		
IC	IGNITION CONTROL		

## WIRING INFORMATION

1. LINE VOLTAGE  
FACTORY STANDARD  
FACTORY OPTION  
FIELD INSTALLED
2. LOW VOLTAGE  
FACTORY STANDARD  
FACTORY OPTION  
FIELD INSTALLED
3. REPLACEMENT WIRE  
MUST BE THE SAME SIZE AND TYPE OF  
INSULATION AS ORIGINAL (105°C MIN.)

### WARNING

CABINET MUST BE PERMANENTLY GROUNDED AND CONFORM TO N.E.C. (C.E.C. CANADA) AND LOCAL CODES.

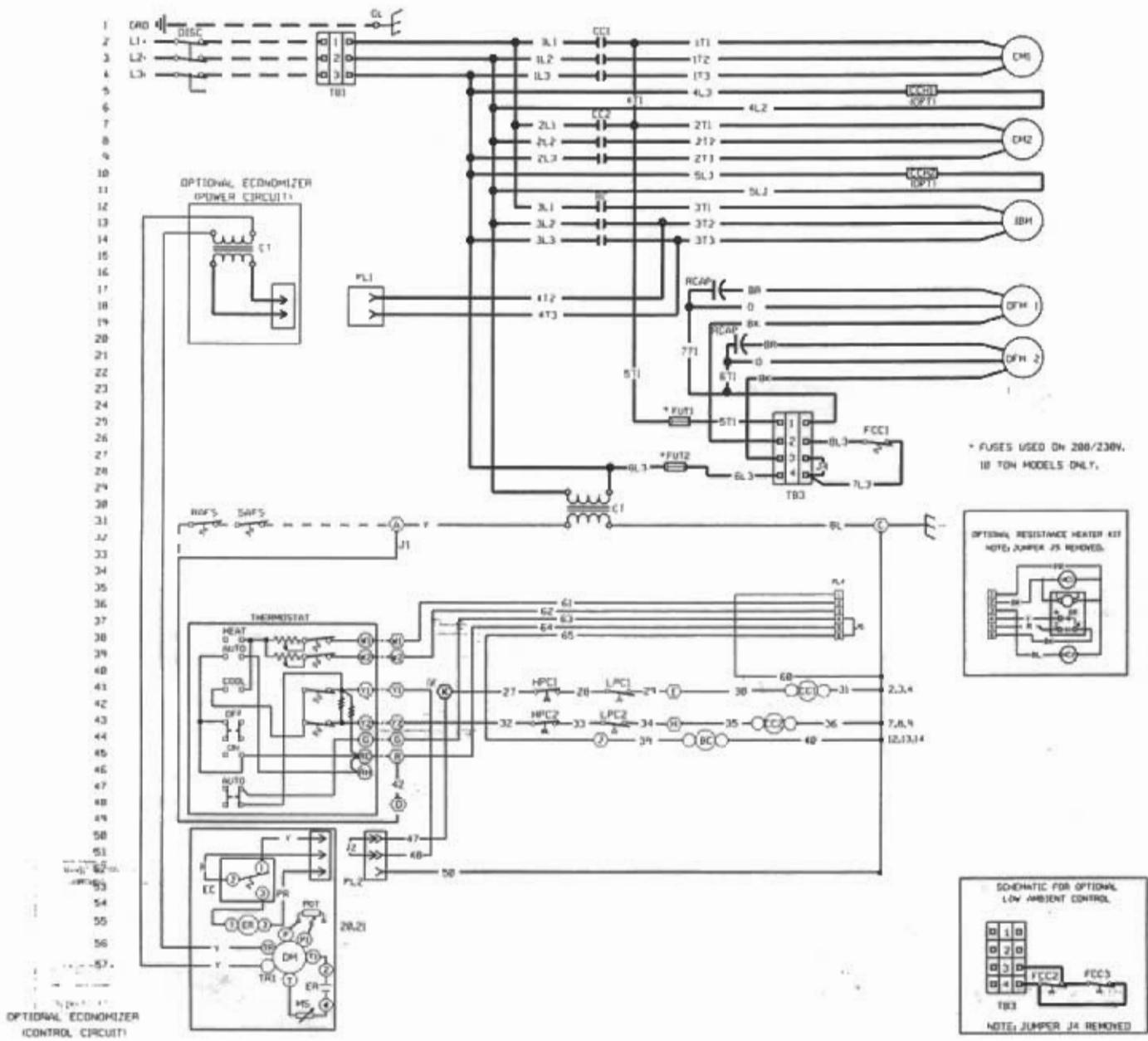
BK — BLACK	PU — PURPLE
BR — BROWN	RD — RED
BU — BLUE	WH — WHITE
GR — GREEN	YL — YELLOW
OR — ORANGE	

## WIRING SCHEMATIC 7 1/2 & 10 TON URGG [26.4 & 35.2 kW]

575 VOLT

COMBINATION UNIT  
NATURAL AND PROPANE GAS  
HONEYWELL IGNITION AND  
WHITE RODGERS GAS CONTROLS

# TYPICAL WIRING SCHEMATICS



## COMPONENT CODE

BC	BLOWER CONTACTOR	HC	HEATER CONTROLLER
BR	BLOWER RELAY	HPC	HIGH PRESSURE CONTROL
CC	COMPRESSOR CONTACTOR	IBM	INDOOR BLOWER MOTOR
CCH	CRANKCASE HEATER (OPT)	J	JUMPER
CM	COMPRESSOR MOTOR	LPC	LOW PRESSURE CONTROL
CT	CONTROL TRANSFORMER	MS	MIXED AIR SENSOR
DISC	DISCONNECT SWITCH	OFM	OUTDOOR FAN MOTOR
DM	DAMPER MOTOR	POT	POTENTIOMETER
EC	ENTHALPY CONTROL	RAPS	RETURN AIR FIRESTAT
FCC	ECONOMIZER RELAY	RCAP	RUN CAPACITOR
FUT	FAN CYCLE CONTROL	SAFS	SUPPLY AIR FIRESTAT
GL	FUSE W/TIME DELAY	TB	TERMINAL BLOCK
GRO	GROUND LUG		
	GROUND		

## WIRING INFORMATION

1. LINE VOLTAGE  
FACTORY STANDARD  
FACTORY OPTION  
FIELD INSTALLED
2. LOW VOLTAGE  
FACTORY STANDARD  
FACTORY OPTION  
FIELD INSTALLED
3. REPLACEMENT WIRE  
MUST BE THE SAME SIZE AND TYPE OF  
INSULATION AS ORIGINAL (105°C MIN.)

**WARNING**  
CABINET MUST BE PERMANENTLY GROUNDED AND CONFORM TO N.E.C., (C.E.C.-CANADA) AND LOCAL CODES.

WIRE COLOR CODE	
BK	BLACK
BR	BROWN
BU	BLUE
GR	GREEN
OR	ORANGE
PU	PURPLE
RD	RED
WH	WHITE
YL	YELLOW

**WIRING SCHEMATIC**  
**7 1/2 & 10 TON UREG**  
**[26.4 & 35.2 kW]**  
**PACKAGE UNITS**  
**208/230, 460 AND 575V UNITS**

90-42271-02-08

## GENERAL TERMS OF LIMITED WARRANTY\*

Ruud will furnish a replacement for any part of this product which fails in normal use and services within the applicable periods stated below, in accordance with the terms of the limited warranty.

Heat Exchanger in Gas/Electric  
Rooftop Unit ..... Ten (10) Years

Heating Elements in Electric/Electric	
Rooftop Unit or Electric Duct Heater	Five (5) Years
Air Conditioner Motor Compressor	Five (5) Years
Any Other Part	One (1) Year

\*For complete details of the limited warranty, including applicable terms and conditions, see your local installer or contact the manufacturer for a copy.

## SAMPLE SPECIFICATION

### COMBINATION HEATING AND COOLING ROOFTOP UNIT

Combination Heating and Cooling Rooftop Unit(s) shall be completely factory assembled as a unitary package consisting of heating section, cooling section, air handling-filtering section, and complete operating controls section. Unit(s) shall have flexibility of air flow for either curb mounting with separate ducting through bottom or concentric ducting through bottom, or separate side by side ducting through side, with the duct air flow arrangement as shown on the plans. The entire assembly shall be U.L./CSA listed on gas heating/electric cooling models, electric heating/electric cooling and cooling only models, with the cooling capacity A.R.I. certified. Cabinet and condenser base pan shall be powder coat painted and capable of withstanding a 1000-HR salt spray test per ASTM B 117. Service access panels shall be furnished as standard to allow service and inspection of all internal components. Unit shall have powder-coat painted louvered inlet panels to protect the condenser coil. Unit(s) furnished shall be Ruud model(s).

**COOLING HEATING CAPACITY**—The total heating capacity shall be not less than \_\_\_\_\_ BTUH [kW] (gas input) (electric heating output) and a minimum of \_\_\_\_\_ BTUH [kW] cooling, with \_\_\_\_\_ CFM [L/s] evaporator air entering the unit at standard ARI conditions.

**COOLING SECTION**—Two refrigerant circuits, each equipped with a hermetic compressor, shall be furnished standard with crankcase heaters. The refrigeration system shall be factory charged, ready for operation, providing two stage cooling capacity (50% and 100%). Compressor protection shall include high pressure control and low pressure control. Evaporator coil shall have two full face refrigerant circuits.

**CONDENSER FANS AND MOTORS**—Each unit shall have two 1075 RPM permanently lubricated motors fixed with direct drive, multiple blade fans. Motors shall be equipped with inherent overload protection. Motors and fans shall be mounted on removable top panels for easy access. Condenser air shall discharge vertically.

**EVAPORATOR BLOWER AND MOTOR**—The evaporator blower assembly shall consist of a double inlet, forward curved, centrifugal blower with ground and polished steel shaft, coated with rust inhibitor and permanently lubricated ball bearings. The assembly shall have a single belt drive system with fixed blower sheave and adjustable pitch motor sheave. The blower motor shall be \_\_\_\_\_ hp [W], 1725 RPM, thermally protected and bolted to an adjustable motor mount. The assembly shall be capable of moving \_\_\_\_\_ CFM [L/s] at \_\_\_\_\_ in. of W.C. external static pressure.

**GAS HEATING SECTION**—The gas fired heating shall be staged at 50% and 100% capacity as controlled by a two-stage gas valve. A power venter and an electronic spark ignition shall be furnished standard, backed with safety features including outlet air limit switch, centrifugal switch on the venter motor, fan-limit control, and a pilot flame switch. The heat exchanger shall be constructed of aluminized steel tubes. The steel burners shall be painted with silicon aluminum.

**ELECTRIC HEATING SECTION**—The electric heating section shall be furnished with nickel-chromium heating elements, with each heater element protected by an automatic reset limit thermostat and heat limiter for both primary and secondary overcurrent/thermal protection. Factory installed maximum size fusing shall be furnished standard.

**UNIT CONFIGURATION**—The unit shall be of compact design with height not more than 38" [965.2 mm] off the roof curb and width-length not more than 84" x 83 1/2" [2133.6 mm x 2120.9 mm].

**ACCESSORY EQUIPMENT**—The following accessories shall be factory supplied as specified: Roof curb, economizer with factory installed plug in wiring harness, relief damper and thermostat with two-stage heating/two-stage cooling (automatic changeover).

Before proceeding with installation, refer to installation instructions packaged with each model, as well as complying with all Federal, State, Provincial, and Local codes, regulations, and practices.

**RUUD**  
**AIR CONDITIONING**  
**DIVISION**

P.O. Box 17010, Fort Smith, Arkansas 72917-7010



"In keeping with its policy of continuous progress and product improvement, Ruud reserves the right to make changes without notice."