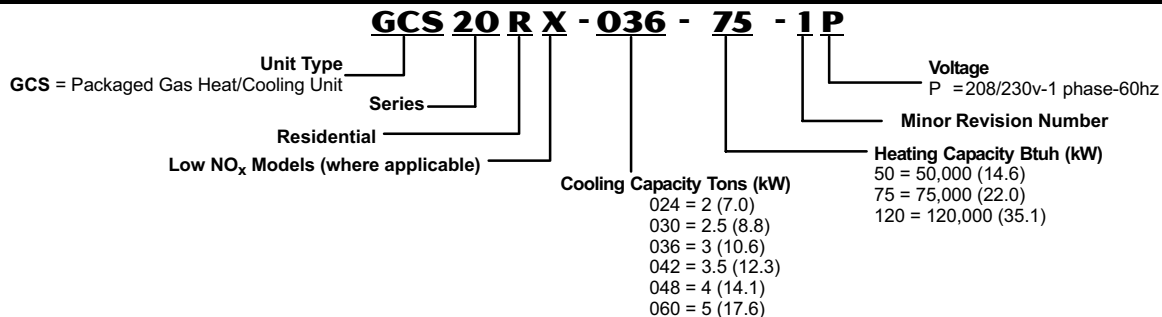


GCS20R
Basic Unit



MODEL NUMBER IDENTIFICATION



FEATURES

Application

- AFUE of 80%.
- SEER of up to 12.70.
- 2 through 5 ton (7.0 through 17.5 kW).
- Single phase power supply.
- Bottom (down-flow) or horizontal supply and return air.
- Designed for outdoor rooftop or ground level installations in residential applications.

Approvals

- Certified in accordance with the USE certification program, which is based on ARI Standard 210/240-94.
- Sound rated in the Lennox reverberant sound test room in accordance with test conditions included in ARI Standard 270-95.
- Tested in the Lennox Research Laboratory environmental test room.
- Rated according to U.S. Department of Energy (DOE) test procedures.
- Blower data is from unit tests conducted in the Lennox Laboratory air test chamber.
- Units certified by CSA International (formerly AGA/CGA) and ratings are certified by GAMA.
- Gas heat is tested according to DOE test procedures and FTC labeling regulations.
- All "X" models meet California Nitrogen Oxides (NO_x) standards and California Seasonal Efficiency Requirements.
- Developed in accordance with ISO 9002 quality standards.
- Each unit test operated at the factory before shipment ensuring dependable operation at start-up.

Equipment Warranty

- Heat Exchanger - limited warranty for fifteen years in residential applications, ten years in non-residential applications.
- Compressor - limited warranty for ten years in residential applications, five years in non-residential applications.
- All other covered components - limited warranty for five years in residential applications, one year in non-residential applications.
- Refer to Lennox Equipment Limited Warranty certificate for specific details.

NOTE - Due to Lennox' ongoing commitment to quality, Specifications, Ratings and Dimensions subject to change without notice and without incurring liability. Improper installation, adjustment, alteration, service or maintenance can cause property damage or personal injury. Installation and service must be performed by a qualified installer and servicing agency.

FEATURES - CONTINUED

Heat Exchanger

- Constructed of tubular aluminized steel for superior resistance to corrosion and oxidation.
- Curving design allows complete exposure of heating surfaces to supply air stream.
- Round surfaces create minimum air resistance and allow air to surround all surfaces for excellent heat transfer. Internal baffles prolong flue gas passage resulting in maximum heat transfer.
- Compact design reduces space requirements in unit cabinet.
- Removable cabinet panels allow service access. Panel also has a peep hole for viewing flame.
- Heat exchanger has been laboratory life cycle tested.

Combustion Air Inducer

- Prepurges heat exchanger and safely vents flue products.
- Pressure switch proves blower operation before allowing gas valve to open.
- Combustion air blower operates only during heating cycle.
- Flame rollout switch (manual reset) protects against loss of combustion air due to flue vent or intake air blockage.

Inshot Burners

- Aluminized steel inshot burners provide efficient trouble free operation, unaffected by adverse wind or atmospheric conditions.
- Burner venturi mixes air and gas in correct proportion for proper combustion.
- Burners can be removed individually for service.

Gas Control Valve

- 24 volt redundant combination gas control valve combines a manual main shutoff valve, pressure regulation and automatic electric valve (dual) into one compact combination control.

Direct Spark Ignition

- Solid-state electronic direct spark ignition control provides positive and safe main burner ignition.
- Spark is intermittent and occurs only when required.
- Separate electronic flame sensor control assures safe and reliable operation.
- Should loss of flame occur, flame sensor controls will initiate 3 attempts at re-ignition.

Fan and Limit Controls

- Factory installed and accurately located limit control provides protection from abnormal operating conditions.
- Limit control has fixed temperature setting.

Copeland Scroll™ Compressor

- Compressor features high efficiency with uniform suction flow, constant discharge flow and high volumetric efficiency and quiet operation.
- Compressor consists of two involute spiral scrolls matched together to generate a series of crescent shaped gas pockets between them.
- During compression, one scroll remains stationary while the other scroll orbits around it.
- Gas is drawn into the outer pocket, the pocket is sealed as the scroll rotates.
- As the spiral movement continues, gas pockets are pushed to the center of the scrolls. Volume between the pockets is simultaneously reduced.
- When pocket reaches the center, gas is now at high pressure and is forced out of a port located in the center of the fixed scrolls.
- During compression, several pockets are compressed simultaneously resulting in a smooth continuous compression cycle.
- Continuous flank contact, maintained by centrifugal force, minimizes gas leakage and maximizes efficiency.
- Scroll compressor is tolerant to the effects of slugging and contaminants. If this occurs, scrolls separate, allowing liquid or contaminants to be worked toward the center and discharged.
- Low gas pulses during compression reduces operational sound levels.
- Compressor motor is internally protected from excessive current and temperature.
- Compressor is installed in the unit on resilient rubber mounts for vibration free operation.



Refrigeration System

- All models include: expansion valve, liquid line strainer, suction and liquid line service gauge ports, and full refrigerant charge.
- Freezestat prevents coil freeze-up during low ambient operation or loss of air flow.
- Low ambient operation down to 30°F (-1°C) without additional controls.

Condenser Fan

- Direct drive fan moves large air volumes uniformly through entire condenser coil for high refrigerant cooling capacity.
- Vertical air discharge minimizes operating sounds and keeps air up and away from building.
- Permanently lubricated, permanent split capacitor (PSC) motor.
- Motor totally enclosed for maximum protection from weather, dust and corrosion.
- Corrosion resistant PVC (polyvinyl chloride) coated steel wire fan guard is furnished as standard.

Copper Tube/Enhanced Fin Coil

- Lennox designed and fabricated coil.
- Copper tube construction, indoor coil is rifled for improved efficiency.
- Lanced aluminum fins provide maximum exposure of fin surface to air stream resulting in excellent heat transfer.
- Fin collars grip tubing for maximum contact area.
- Flared shoulder tubing connections/silver soldering construction.
- Coil is factory tested under high pressure to insure leakproof construction.

Coil Guards

- PVC Coated steel wire guards to protect outdoor coil.
- Not for use with optional Hail Guards.

Blower

- Multi-speed direct drive blowers.
- Each blower assembly statically and dynamically balanced.
- Multiple-speed permanent split capacitor (PSC) motor resiliently mounted.
- Blower speeds are easily changed on the blower motor.
- See blower performance tables.

Filter (Not Furnished)

- Filter and provisions for mounting must be field provided.

FEATURES - CONTINUED

Cabinet

- Heavy gauge, galvanized steel cabinet with five station metal wash process.
- Powder enamel paint, electrostatically bonded to the metal, provides superior rust and corrosion protection.
- Control box is conveniently located with all controls factory wired.
- Large removable panels provide service access.
- Base section and cabinet panels exposed to conditioned air are lined with thick fiberglass insulation.
- Flanged supply and return air openings.
- Aluminized steel flue outlet shipped with unit for field installation.
- Gas and electrical inlets furnished for entry into the cabinet.
- Evaporator coil drain pan constructed of painted, corrosion resistant galvanized steel with galvanized steel pipe drain outlet coupling.
- Lifting brackets factory installed.

OPTIONAL ACCESSORIES - MUST BE ORDERED EXTRA

Ceiling Diffusers

- Aluminum grilles, large center grille, insulated diffuser box with flanges, hanging rings furnished, interior transition (even air flow), internally sealed (prevents recirculation), adapts to T-bar ceiling grids or plaster ceilings.
- Step-Down diffusers feature double deflection louvers.
- Flush diffusers have fixed blade louvers.

Ceiling Diffuser Transitions (Supply and Return)

- Used with diffusers and installs in roof mounting frame.
- Galvanized steel construction, flanges furnished for duct connection, fully insulated.

Combustion Air Intake Extensions

- For use in areas where high snow drifts can block intake air.

Hail Guards

- Heavy duty field installed coil guard protects coils from damage.
- Not for use with Coil Guards.

Low Ambient Control Kit

- Units operate down to 30°F (-1°C) outdoor air temperature in cooling mode without any additional controls.
- Enables unit to operate properly down to 0°F (-17.7°C).

LPG/Propane Kit

- Conversion from Natural Gas to LPG/Propane Gas.

Outdoor Air Damper Section (Down-Flow)

- Damper assembly replaces blower access panel.
- Manually adjustable, 0 to 25% (fixed) outdoor air.
- Outdoor air hood with cleanable filter included.

Roof Curb Power Entry Kit

- Allows power entry through roof mounting frame, knockouts provided in roof frame.
- Kit contains 40 in. (1016 mm) armored conduit and installation hardware.
- Two kits are required, one for low voltage and one for high voltage.
- See Dimension Drawing.

Roof Mounting Frame

- Nailer strip furnished, mates to unit, U.S. National Roofing Contractors Approved, shipped knocked down.
- RMF16-41 may be used on all sizes, with a slight unit overhang on GCS20R-036-042-048-060 units.
- Sound Reduction Plate must be ordered separately for field installation (US Only).

Timed Off Control

- Prevents compressor short-cycling and allows time for suction and discharge pressure to equalize, permitting the compressor to start in an unloaded condition.
- Automatic reset control provides a time delay between compressor shutoff and start-up.

Unit Stand-Off Mounting Kit

- Elevates horizontal application units above mounting surface.
- Includes six high impact polystyrene stand-off mounts.
- See dimension drawings.

Vertical Vent Extension Kit

- To exhaust flue gases vertically above unit.

HIGH ALTITUDE INFORMATION

No gas pressure adjustment is needed when operating from 0 to 7500 ft. (0 to 2285 m). See below for correct manifold pressures for natural gas and LPG/propane.

FUEL	Manifold Absolute Pressure (outlet) 0 to 7500 ft. (0 to 2248 m) above sea level
Natural Gas	3.5 in. w.g. (0.87 kPa)
LPG/Propane	10.5 in. w.g. (2.61 kPa)

SPECIFICATIONS

		Model No.	GCS20R-024-50	GCS20R-030-75	GCS20R-036-75	GCS20R-042-75	GCS20R-042-120
Heating Performance		Low NO _x Model No.	GCS20RX-024-50	GCS20RX-030-75	GCS20RX-036-75	GCS20RX-042-75	- - -
	Input - Btuh (kW)		50,000 (14.7)	75,000 (22.0)	75,000 (22.0)	75,000 (22.0)	120,000 (35.2)
	Output - Btuh (kW)		40,000 (11.7)	60,000 (17.6)	60,000 (17.6)	60,000 (17.6)	96,000 (28.1)
	☆A.F.U.E.		80.0%	80.0%	80.0%	80.0%	80.0%
	California Seasonal Efficiency		76.0%	76.0%	76.0%	75.0%	75.0%
	Gas Supply Connections npt - in.		1/2	1/2	1/2	1/2	1/2
	Rec. Gas Supply Pressure - w.c. in. (kPa)	Natural	7 (1.7)	7 (1.7)	7 (1.7)	7 (1.7)	7 (1.7)
		LPG/Propane	11 (2.7)	11 (2.7)	11 (2.7)	11 (2.7)	11 (2.7)
Cooling Performance		Nominal Tonnage (kW)	2 (7.0)	2.5 (8.8)	3 (10.6)	3.5 (12.3)	3.5 (12.3)
	★Cooling capacity - Btuh (kW)		24,600 (7.2)	30,400 (8.9)	35,200 (10.3)	42,000 (12.3)	42,000 (12.2)
	Total Unit Watts		2420	3140	3330	3950	3950
	★SEER (Btuh/Watts)		11.00	11.00	12.40	12.60	12.60
	EER (Btuh/Watts)		10.20	9.70	10.60	10.70	10.70
	*Sound Rating Number (dB)		80	80	82	82	82
	Refrigerant Charge (HCFC-22)		4 lbs. 5 oz. (1.96 kg)	4 lbs. 10 oz. (2.10 kg)	5 lbs. 2 oz. (2.32 kg)	7 lbs. 6 oz. (3.35 kg)	7 lbs. 6 oz. (3.35 kg)
Condenser Coil		Net face area - sq. ft. (m ²)	Outer Coil 8.7 (0.81)	8.7 (0.81)	14.3 (1.33)	14.3 (1.33)	14.3 (1.33)
			Inner Coil 8.4 (0.78)	8.4 (0.78)	5.9 (0.55)	13.7 (1.27)	13.7 (1.27)
	Tube diameter - in. (mm)		3/8 (9.5)	3/8 (9.5)	3/8 (9.5)	3/8 (9.5)	3/8 (9.5)
	Number of rows		2	2	1.4	2	2
	Fins per inch (m)		20 (787)	20 (787)	20 (787)	20 (787)	20 (787)
Condenser Fan		Motor output - hp (W)	1/6 (124)	1/6 (124)	1/4 (187)	1/4 (187)	1/4 (187)
	Motor watts		240	240	340	340	340
	Diameter - in. (mm)		20 (508)	20 (508)	24 (610)	24 (610)	24 (610)
	Number of blades		4	4	4	4	4
	Air volume - cfm (L/s)		2200 (1040)	2200 (1040)	3880 (1830)	3770 (1780)	3770 (1780)
Evaporator Coil		Net face area - sq. ft. (m ²)	3.2 (0.30)	4.1 (0.38)	5.3 (0.49)	6.2 (0.58)	6.2 (0.58)
	Tube diameter - in. (mm)		3/8 (9.5)	3/8 (9.5)	3/8 (9.5)	3/8 (9.5)	3/8 (9.5)
	Number of rows		2	2	2	2	2
	Fins per inch (m)		15 (590)	15 (590)	15 (590)	15 (590)	15 (590)
	Condensate drain coupling size npt - in.		3/4	3/4	3/4	3/4	3/4
Evaporator Blower		Motor output - hp (W)	1/3 (249)	1/3 (249)	1/2 (373)	3/4 (560)	3/4 (560)
	Wheel nominal diameter x width - in. (mm)		9 x 8 (229 X 203)	10 x 8 (254 X 203)	10 x 8 (254 X 203)	11-1/2 x 9 (292 x 228)	11-1/2 x 9 (292 x 228)
Shipping Data		Net weight of basic unit - lbs. (kg)	406 (184)	406 (184)	496 (225)	541 (245)	541 (245)
	Shipping weight of basic unit - lbs. (kg) 1 pkg.		650 (295)	472 (214)	605 (274)	650 (295)	650 (295)
Electrical characteristics (60 hz)			208/230V-1 ph	208/230V-1 ph	208/230V-1 ph	208/230V-1 ph	208/230V-1 ph
OPTIONAL ACCESSORIES - MUST BE ORDERED EXTRA							
Ceiling Diffusers		Step-Down - Net Weight - lbs. (kg)	RTD9-65 - 67 (30)			RTD9-65 - 67 (30)	
		Flush - Net Weight - lbs. (kg)	FD9-65 - 37 (17)			FD9-65 - 37 (17)	
		Transitions (Supply and Return) - lbs. (kg)	SRT16-65 - 20 (9)			SRT16-65 - 20 (9)	
Combustion Air Intake Extensions			96L71	96L71	96L71	96L71	96L71
Hail Guards			90N90	90N90	90N91	90N91	90N91
Low Ambient Control Kit			24H77	24H77	24H77	24H77	24H77
LPG/Propane Kits			50L89	50L89	50L89	50L89	50L88
Outdoor Air Damper Section		US Only	Down-Flow - Net Weight OAD16-41 - 12 lbs. (5 kg)			Down-Flow - Net Weight OAD16-65 - 12 lbs. (5 kg)	
		Number & Size of Filter - in. (mm)	(1) 5 x 17 x 1 (127 x 432 x 25)			(1) 8 x 17 x 1 (203 x 432 x 25)	
		Canada Only	Down-Flow - Net Weight OAD16-41S - 10 lbs. (5 kg)			Down-Flow - Net Weight OAD16-65S - 16 lbs. (7 kg)	
		Number & Size of Filter - in. (mm)	(1) 14 x 6 x 1 (356 x 152 x 25)			(1) 18 x 6 x 1 (457 x 152 x 25)	
Roof Curb Power Entry Kit - 1/2 in. (13 mm) Conduit			18H70	18H70	18H70	18H70	18H70
Roof Mounting Frame		Frame	RMF16-41	RMF16-41	RMF16-41 or RMF16-65		
		Sound Reduction Plate (US Only) For RMF16-41	73H80	73H80	73H80	73H80	73H80
		For RMF16-65	- - -	- - -	73H82	73H82	73H82
Timed-Off Control			47J27	47J27	47J27	47J27	47J27
Unit Stand-Off Mounting Kit			38H18	38H18	38H18	38H18	38H18
Vertical Vent Extension Kit			28M50	28M50	28M50	28M50	28M50

☆Annual Fuel Utilization Efficiency based on DOE test procedures and FTC labeling regulations.

*Sound Rating Number in accordance with test conditions included in ARI Standard 270.

★Certified in accordance with the USE certification program, which is based on ARI Standard 210/240: 95°F (35°C) outdoor air temperature and 80°F (27°C) db/67°F (19.5°C) wb entering evaporator air.

SPECIFICATIONS

Heating Performance		Model No.	GCS20R-048-75	GCS20R-048-120	GCS20R-060-75	GCS20R-060-120
		Model No.	GCS20RX-048-75	GCS20RX-048-120	GCS20RX-060-75	GCS20RX-060-120
	Input - Btuh (kW)		75,000 (22.0)	120,000 (35.2)	75,000 (22.0)	120,000 (35.2)
	Output - Btuh (kW)		60,000 (17.6)	96,000 (28.1)	60,000 (17.6)	96,000 (28.1)
	☆A.F.U.E.		80.0%	80.0%	80.0%	80.0%
	California Seasonal Efficiency		75.0%	75.0%	75.0%	75.0%
	Gas Supply Connections npt - in.		1/2	1/2	1/2	1/2
	Rec. Gas Supply Pressure - w.c. in. (kPa)		7 (1.7)	7 (1.7)	7 (1.7)	7 (1.7)
	Natural					
	LPG/Propane		11 (2.7)	11 (2.7)	11 (2.7)	11 (2.7)
Cooling Performance						
	Nominal Tonnage (kW)		4 (14.1)	4 (14.1)	5 (17.6)	5 (17.6)
	★Cooling Capacity Btuh (kW)		50,000 (14.6)	50,000 (14.6)	59,000 (17.3)	59,000 (17.3)
	Total Unit Watts		4545	4545	5780	5780
	★SEER (Btuh/Watts)		12.70	12.70	12.00	12.00
	EER (Btuh/Watts)		11.00	11.00	10.20	10.20
	*Sound Rating Number (dB)		82	82	82	82
	Refrigerant Charge (HCFC-22)		7 lbs. 14 oz. (3.57 kg)	7 lbs. 14 oz. (3.57 kg)	8 lbs. 8 oz. (3.86 kg)	8 lbs. 8 oz. (3.86 kg)
Condenser Coil						
	Net face area - sq. ft. (m ²)	Outer Coil	14.3 (1.33)	14.3 (1.33)	14.3 (1.33)	14.3 (1.33)
		Inner Coil	13.7 (1.27)	13.7 (1.27)	13.7 (1.27)	13.7 (1.27)
	Tube diameter - in. (mm)		3/8 (9.5)	3/8 (9.5)	3/8 (9.5)	3/8 (9.5)
	Number of rows		2	2	2	2
	Fins per inch (m)		20 (787)	20 (787)	20 (787)	20 (787)
Condenser Fan						
	Motor output - hp (W)		1/4 (187)	1/4 (187)	1/4 (187)	1/4 (187)
	Motor watts		360	360	360	360
	Diameter - in. (mm)		24 (610)	24 (610)	24 (610)	24 (610)
	Number of blades		4	4	4	4
	Air volume - cfm (L/s)		3770 (1780)	3770 (1780)	3770 (1780)	3770 (1780)
Evaporator Coil						
	Net face area - sq. ft. (m ²)		6.2 (0.58)	6.2 (0.58)	6.2 (0.58)	6.2 (0.58)
	Tube diameter - in. (mm)		3/8 (9.5)	3/8 (9.5)	3/8 (9.5)	3/8 (9.5)
	Number of rows		3	3	3	3
	Fins per inch (m)		14 (551)	14 (551)	14 (551)	14 (551)
	Condensate drain coupling size npt - in.		3/4	3/4	3/4	3/4
Evaporator Blower						
	Motor output - hp (W)		3/4 (560)	3/4 (560)	3/4 (560)	3/4 (560)
	Wheel nominal diameter x width - in. (mm)		11-1/2 x 9 (292 x 228)	11-1/2 x 9 (292 x 228)	11-1/2 x 9 (292 x 228)	11-1/2 x 9 (292 x 228)
Shipping Data						
	Net weight of basic unit - lbs. (kg)		541 (245)	541 (245)	541 (245)	541 (245)
	Shipping weight of basic unit - lbs. (kg) 1 pkg.		541 (245)	650 (295)	650 (295)	650 (295)
Electrical characteristics (60 hz)			208/230V - 1 ph	208/230V - 1 ph	208/230V - 1 ph	208/230V - 1 ph
OPTIONAL ACCESSORIES - MUST BE ORDERED EXTRA						
Ceiling Diffusers						
	Step-Down - Net Weight - lbs. (kg)		RTD9-65 - 67 (30)	RTD9-65 - 67 (30)	RTD9-65 - 67 (30)	RTD9-65 - 67 (30)
	Flush - Net Weight - lbs. (kg)		FD9-65 - 37 (17)	FD9-65 - 37 (17)	FD9-65 - 37 (17)	FD9-65 - 37 (17)
	Transitions (Supply and Return) - lbs. (kg)		SRT16-65 - 20 (9)	SRT16-65 - 20 (9)	SRT16-65 - 20 (9)	SRT16-65 - 20 (9)
Combustion Air Intake Extensions			96L71	96L71	96L71	96L71
Hail Guards			90N91	90N91	90N91	90N91
Low Ambient Control Kit			24H77	24H77	24H77	24H77
LPG/Propane Kits			50L89	50L88	50L89	50L88
Outdoor Air Damper Section						
	US Only	Down-Flow - Net Weight - lbs. (kg)	OAD16-65 - 12 (5)	OAD16-65 - 12 (5)	OAD16-65 - 12 (5)	OAD16-65 - 12 (5)
		Number & Size of Filter - in. (mm)	(1) 8 x 17 x 1 (203 x 432 x 25)	(1) 8 x 17 x 1 (203 x 432 x 25)	(1) 8 x 17 x 1 (203 x 432 x 25)	(1) 8 x 17 x 1 (203 x 432 x 25)
	Canada Only	Down-Flow - Net Weight - lbs. (kg)	OAD16-65S - 16 (7)	OAD16-65S - 16 (7)	OAD16-65S - 16 (7)	OAD16-65S - 16 (7)
		Number & Size of Filter - in. (mm)	(1) 18 x 6 x 1 (457 x 152 x 25)	(1) 18 x 6 x 1 (457 x 152 x 25)	(1) 18 x 6 x 1 (457 x 152 x 25)	(1) 18 x 6 x 1 (457 x 152 x 25)
Roof Curb Power Entry Kit - 1/2 in. (13 mm) Conduit			18H70	18H70	18H70	18H70
Roof Mounting Frame						
		Frame	RMF16-41 or RMF16-65	RMF16-41 or RMF16-65	RMF16-41 or RMF16-65	RMF16-41 or RMF16-65
		Sound Reduction Plate (US Only) For RMF16-41	73H80	73H80	73H80	73H80
		For RMF16-65	73H82	73H82	73H82	73H82
Timed-Off Control			47J27	47J27	47J27	47J27
Unit Stand-Off Mounting Kit			38H18	38H18	38H18	38H18
Vertical Vent Extension Kit			28M50	28M50	28M50	28M50

☆Annual Fuel Utilization Efficiency based on DOE test procedures and FTC labeling regulations.

*Sound Rating Number in accordance with test conditions included in ARI Standard 270.

★Certified in accordance with the USE certification program, which is based on ARI Standard 210/240: 95°F (35°C) outdoor air temperature and 80°F (27°C) db/67°F (19.5°C) wb entering evaporator air.

COOLING RATINGS

NOTE - For Temperatures and Capacities not shown in tables, see bulletin — Cooling Unit Rating Table Correction Factor Data in Miscellaneous Engineering Data section.

GCS20R-024 — COOLING CAPACITY

Entering Wet Bulb Temperature	Total Air Volume		Outdoor Air Temperature Entering Outdoor Coil																							
			85°F (29°C)						95°F (35°C)						105°F (41°C)						115°F (46°C)					
			Total Cooling Capacity		Comp Motor kW Input	Sensible To Total Ratio (S/T) Dry Bulb			Total Cooling Capacity		Comp Motor kW Input	Sensible To Total Ratio (S/T) Dry Bulb			Total Cooling Capacity		Comp Motor kW Input	Sensible To Total Ratio (S/T) Dry Bulb			Total Cooling Capacity		Comp Motor kW Input	Sensible To Total Ratio (S/T) Dry Bulb		
			kBtuh	kW		75°F 24°C	80°F 27°C	85°F 29°C	kBtuh	kW		75°F 24°C	80°F 27°C	85°F 29°C	kBtuh	kW		75°F 24°C	80°F 27°C	85°F 29°C	kBtuh	kW		75°F 24°C	80°F 27°C	85°F 29°C
63°F (17°C)	640	300	24.1	7.1	1.68	.71	.84	.95	23.3	6.8	1.90	.72	.85	.97	22.4	6.6	2.14	.73	.86	.98	21.5	6.3	2.42	.74	.88	1.00
	800	380	25.0	7.3	1.69	.75	.90	1.00	24.1	7.1	1.91	.77	.92	1.00	23.3	6.8	2.15	.78	.93	1.00	22.3	6.5	2.43	.79	.95	1.00
	960	455	25.7	7.5	1.70	.80	.95	1.00	24.8	7.3	1.92	.82	.97	1.00	24.0	7.0	2.16	.83	.98	1.00	23.1	6.8	2.43	.85	.99	1.00
67°F (19°C)	640	300	25.7	7.5	1.69	.56	.68	.80	24.8	7.3	1.91	.57	.69	.82	23.8	7.0	2.16	.57	.70	.83	22.9	6.7	2.43	.58	.71	.85
	800	380	26.5	7.8	1.70	.59	.73	.87	25.5	7.5	1.92	.59	.74	.88	24.6	7.2	2.16	.60	.75	.90	23.6	6.9	2.44	.61	.77	.92
	960	455	27.1	7.9	1.70	.61	.78	.92	26.1	7.6	1.92	.62	.79	.94	25.1	7.4	2.17	.63	.81	.96	24.1	7.1	2.44	.64	.82	.97
71°F (22°C)	640	300	27.4	8.0	1.70	.43	.54	.66	26.4	7.7	1.93	.43	.55	.67	25.4	7.4	2.17	.43	.55	.68	24.4	7.2	2.44	.43	.56	.69
	800	380	28.3	8.3	1.70	.43	.57	.70	27.2	8.0	1.93	.44	.58	.72	26.2	7.7	2.18	.44	.59	.73	25.1	7.4	2.45	.44	.59	.75
	960	455	28.9	8.5	1.70	.44	.60	.75	27.8	8.1	1.94	.45	.61	.77	26.7	7.8	2.18	.45	.62	.79	25.6	7.5	2.45	.46	.63	.80

GCS20R-030 — COOLING CAPACITY

Entering Wet Bulb Temperature	Total Air Volume		Outdoor Air Temperature Entering Outdoor Coil																							
			85°F (29°C)						95°F (35°C)						105°F (41°C)						115°F (46°C)					
			Total Cooling Capacity		Comp Motor kW Input	Sensible To Total Ratio (S/T) Dry Bulb			Total Cooling Capacity		Comp Motor kW Input	Sensible To Total Ratio (S/T) Dry Bulb			Total Cooling Capacity		Comp Motor kW Input	Sensible To Total Ratio (S/T) Dry Bulb			Total Cooling Capacity		Comp Motor kW Input	Sensible To Total Ratio (S/T) Dry Bulb		
			kBtuh	kW		75°F 24°C	80°F 27°C	85°F 29°C	kBtuh	kW		75°F 24°C	80°F 27°C	85°F 29°C	kBtuh	kW		75°F 24°C	80°F 27°C	85°F 29°C	kBtuh	kW		75°F 24°C	80°F 27°C	85°F 29°C
63°F (17°C)	800	380	30.2	8.9	2.17	.71	.84	.95	29.2	8.6	2.45	.72	.85	.96	28.1	8.2	2.77	.73	.86	.98	26.9	7.9	3.14	.74	.88	.99
	1000	470	31.4	9.2	2.18	.75	.90	1.00	30.3	8.9	2.46	.77	.91	1.00	29.1	8.5	2.78	.78	.93	1.00	27.9	8.2	3.15	.80	.95	1.00
	1200	565	32.3	9.5	2.19	.80	.95	1.00	31.2	9.1	2.47	.82	.97	1.00	30.0	8.8	2.79	.83	.98	1.00	28.8	8.4	3.16	.85	.99	1.00
67°F (19°C)	800	380	32.1	9.4	2.19	.56	.68	.80	31.0	9.1	2.47	.57	.69	.82	29.8	8.7	2.79	.57	.70	.83	28.5	8.4	3.16	.58	.72	.85
	1000	470	33.2	9.7	2.20	.59	.73	.87	32.0	9.4	2.48	.59	.74	.89	30.7	9.0	2.80	.60	.76	.90	29.4	8.6	3.17	.61	.78	.92
	1200	565	33.9	9.9	2.21	.61	.78	.93	32.7	9.6	2.49	.62	.79	.94	31.4	9.2	2.81	.63	.81	.96	30.0	8.8	3.18	.64	.83	.98
71°F (22°C)	800	380	34.2	10.0	2.21	.43	.54	.66	33.0	9.7	2.49	.43	.55	.67	31.8	9.3	2.81	.43	.55	.68	30.4	8.9	3.18	.43	.56	.69
	1000	470	35.2	10.3	2.23	.43	.57	.71	34.0	10.0	2.50	.44	.58	.72	32.7	9.6	2.82	.44	.59	.73	31.3	9.2	3.20	.44	.60	.75
	1200	565	35.9	10.5	2.23	.44	.60	.76	34.6	10.1	2.51	.45	.61	.77	33.3	9.8	2.84	.45	.62	.79	31.9	9.3	3.20	.46	.63	.81

GCS20R-036 — COOLING CAPACITY

Entering Wet Bulb Temperature	Total Air Volume		Outdoor Air Temperature Entering Outdoor Coil																							
			85°F (29°C)						95°F (35°C)						105°F (41°C)						115°F (46°C)					
			Total Cooling Capacity		Comp Motor kW Input	Sensible To Total Ratio (S/T) Dry Bulb			Total Cooling Capacity		Comp Motor kW Input	Sensible To Total Ratio (S/T) Dry Bulb			Total Cooling Capacity		Comp Motor kW Input	Sensible To Total Ratio (S/T) Dry Bulb			Total Cooling Capacity		Comp Motor kW Input	Sensible To Total Ratio (S/T) Dry Bulb		
			kBtuh	kW		75°F 24°C	80°F 27°C	85°F 29°C	kBtuh	kW		75°F 24°C	80°F 27°C	85°F 29°C	kBtuh	kW		75°F 24°C	80°F 27°C	85°F 29°C	kBtuh	kW		75°F 24°C	80°F 27°C	85°F 29°C
63°F (17°C)	960	455	34.0	10.0	2.33	.71	.84	.96	32.9	9.6	2.62	.72	.86	.97	31.7	9.3	2.96	.73	.87	.98	30.4	8.9	3.35	.74	.89	.99
	1200	565	35.3	10.3	2.34	.76	.91	1.00	34.1	10.0	2.63	.77	.92	1.00	32.9	9.6	2.97	.79	.94	1.00	31.6	9.3	3.35	.80	.96	1.00
	1440	680	36.4	10.7	2.34	.81	.96	1.00	35.2	10.3	2.64	.82	.97	1.00	34.0	10.0	2.97	.84	.99	1.00	32.7	9.6	3.36	.86	1.00	1.00
67°F (19°C)	960	455	36.2	10.6	2.34	.56	.69	.81	35.0	10.3	2.63	.57	.69	.82	33.7	9.9	2.97	.57	.71	.84	32.3	9.5	3.37	.58	.72	.86
	1200	565	37.4	11.0	2.35	.59	.74	.88	36.1	10.6	2.64	.60	.75	.89	34.7	10.2	2.98	.60	.76	.91	33.3	9.8	3.37	.61	.78	.93
	1440	680	38.2	11.2	2.35	.62	.79	.93	36.9	10.8	2.65	.63	.80	.95	35.5	10.4	2.99	.64	.82	.96	34.1	10.0	3.38	.65	.83	.98
71°F (22°C)	960	455	38.6	11.3	2.35	.42	.54	.66	37.4	11.0	2.65	.43	.55	.67	36.0	10.6	2.99	.43	.55	.68	34.5	10.1	3.39	.43	.56	.70
	1200	565	39.8	11.7	2.36	.43	.57	.71	38.5	11.3	2.66	.44	.58	.72	37.0	10.8	3.00	.44	.59	.74	35.5	10.4	3.40	.44	.60	.75
	1440	680	40.6	11.9	2.37	.45	.61	.76	39.2	11.5	2.67	.45	.61	.78	37.8	11.1	3.01	.45	.62	.79	36.2	10.6	3.40	.46	.64	.81

GCS20R-042 — COOLING CAPACITY

Entering Wet Bulb Temperature	Total Air Volume		Outdoor Air Temperature Entering Outdoor Coil																							
			85°F (29°C)						95°F (35°C)						105°F (41°C)						115°F (46°C)					
			Total Cooling Capacity		Comp Motor kW Input	Sensible To Total Ratio (S/T) Dry Bulb			Total Cooling Capacity		Comp Motor kW Input	Sensible To Total Ratio (S/T) Dry Bulb			Total Cooling Capacity		Comp Motor kW Input	Sensible To Total Ratio (S/T) Dry Bulb			Total Cooling Capacity		Comp Motor kW Input	Sensible To Total Ratio (S/T) Dry Bulb		
			kBtuh	kW		75°F 24°C	80°F 27°C	85°F 29°C	kBtuh	kW		75°F 24°C	80°F 27°C	85°F 29°C	kBtuh	kW		75°F 24°C	80°F 27°C	85°F 29°C	kBtuh	kW		75°F 24°C	80°F 27°C	85°F 29°C
63°F (17°C)	1120	530	42.0	12.3	2.62	.74	.88	1.00	40.6	11.9	2.96	.75	.89	1.00	39.0	11.4	3.35	.76	.91	1.00	37.5	11.0	3.79	.78	.93	1.00
	1400	660	43.6	12.8	2.63	.79	.94	1.00	42.1	12.3	2.97	.81	.96	1.00	40.5	11.9	3.36	.82	.98	1.00	38.9	11.4	3.79	.84	1.00	1.00
	1680	795	44.9	13.2	2.64	.84	1.00	1.00	43.4	12.7	2.98	.86	1.00	1.00	41.8	12.3	3.37	.88	1.00	1.00	40.2	11.8	3.80	.89	1.00	1.00
67°F (19°C)	1120	530	44.7	13.1	2.64	.58	.71	.85	43.1	12.6	2.98	.59	.73	.86	41.5	12.2	3.37	.60	.74	.87	39.8	11.7	3.80	.60	.75	.89
	1400	660	46.1	13.5	2.65	.61	.77	.91	44.5	13.0	2.99	.62	.78	.93	42.8	12.5	3.38	.63	.79	.95	41.0	12.0	3.81	.64	.81	.97
	1680	795	47.1	13.8	2.65	.64	.82	.97	45.5	13.3	2.99	.65	.83	.99	43.7	12.8	3.38	.66	.85	1.00	41.9	12.3	3.82	.67	.87	1.00
71°F (22°C)	1120	530	47.6	14.0	2.66	.44	.57	.69	46.0	13.5	3.00	.44	.57	.70	44.3	13.0	3.39	.44	.58	.71	42.5	12.5	3.83	.45	.58	.72
	1400	660	49.0	14.4	2.66	.45	.60	.74	47.3	13.9	3.01	.45	.60	.76	45.5	13.3	3.40	.46	.61	.77	43.6	12.8	3.84	.46	.62	.79
	1680	795	50.0	14.7	2.67	.46	.63	.80	48.3	14.2	3.02	.47	.64	.81	46.4	13.6	3.40	.47	.65	.83	44.4	13.0	3.84	.48	.67	.85

COOLING RATINGS

NOTE - For Temperatures and Capacities not shown in tables, see bulletin — Cooling Unit Rating Table Correction Factor Data in Miscellaneous Engineering Data section.

GCS20R-048 — COOLING CAPACITY

Entering Wet Bulb Temperature	Total Air Volume		Outdoor Air Temperature Entering Outdoor Coil																							
			85°F (29°C)						95°F (35°C)						105°F (41°C)						115°F (46°C)					
			Total Cooling Capacity		Comp Motor kW Input	Sensible To Total Ratio (S/T) Dry Bulb			Total Cooling Capacity		Comp Motor kW Input	Sensible To Total Ratio (S/T) Dry Bulb			Total Cooling Capacity		Comp Motor kW Input	Sensible To Total Ratio (S/T) Dry Bulb			Total Cooling Capacity		Comp Motor kW Input	Sensible To Total Ratio (S/T) Dry Bulb		
			kBtuh	kW		75°F 24°C	80°F 27°C	85°F 29°C	kBtuh	kW		75°F 24°C	80°F 27°C	85°F 29°C	kBtuh	kW		75°F 24°C	80°F 27°C	85°F 29°C	kBtuh	kW		75°F 24°C	80°F 27°C	85°F 29°C
63°F (17°C)	1280	605	50.6	14.8	3.20	.74	.88	1.00	48.8	14.3	3.60	.75	.89	1.00	46.9	13.7	4.05	.76	.91	1.00	44.9	13.2	4.59	.78	.93	1.00
	1600	755	52.5	15.4	3.21	.79	.95	1.00	50.6	14.8	3.61	.81	.96	1.00	48.7	14.3	4.07	.82	.98	1.00	46.6	13.7	4.61	.84	1.00	1.00
	1920	905	54.0	15.8	3.23	.85	1.00	1.00	52.2	15.3	3.63	.86	1.00	1.00	50.2	14.7	4.09	.88	1.00	1.00	48.2	14.1	4.62	.90	1.00	1.00
67°F (19°C)	1280	605	53.7	15.7	3.23	.58	.71	.84	51.8	15.2	3.63	.59	.72	.86	49.7	14.6	4.09	.60	1.00	.88	47.6	14.0	4.62	.60	.75	.89
	1600	755	55.4	16.2	3.25	.61	.77	.92	53.4	15.6	3.64	.62	.78	.93	51.3	15.0	4.10	.63	.80	.95	48.9	14.3	4.64	.64	.82	.97
	1920	905	56.6	16.6	3.27	.65	.82	.98	54.5	16.0	3.66	.66	.84	1.00	52.3	15.3	4.12	.67	.86	1.00	49.9	14.6	4.65	.68	.88	1.00
71°F (22°C)	1280	605	57.1	16.7	3.28	.44	.57	.69	55.1	16.1	3.67	.44	.57	.70	52.9	15.5	4.12	.45	.58	.71	50.6	14.8	4.65	.45	.59	.73
	1600	755	58.8	17.2	3.30	.45	.60	.75	56.6	16.6	3.69	.45	.61	.76	54.4	15.9	4.15	.46	.62	.78	51.9	15.2	4.67	.46	.63	.79
	1920	905	59.9	17.6	3.31	.46	.64	.80	57.7	16.9	3.71	.47	.64	.82	55.3	16.2	4.16	.47	.66	.84	52.8	15.5	4.68	.48	.67	.86

GCS20R-060 — COOLING CAPACITY

Entering Wet Bulb Temperature	Total Air Volume		Outdoor Air Temperature Entering Outdoor Coil																							
			85°F (29°C)						95°F (35°C)						105°F (41°C)						115°F (46°C)					
			Total Cooling Capacity		Comp Motor kW Input	Sensible To Total Ratio (S/T) Dry Bulb			Total Cooling Capacity		Comp Motor kW Input	Sensible To Total Ratio (S/T) Dry Bulb			Total Cooling Capacity		Comp Motor kW Input	Sensible To Total Ratio (S/T) Dry Bulb			Total Cooling Capacity		Comp Motor kW Input	Sensible To Total Ratio (S/T) Dry Bulb		
			kBtuh	kW		75°F 24°C	80°F 27°C	85°F 29°C	kBtuh	kW		75°F 24°C	80°F 27°C	85°F 29°C	kBtuh	kW		75°F 24°C	80°F 27°C	85°F 29°C	kBtuh	kW		75°F 24°C	80°F 27°C	85°F 29°C
63°F (17°C)	1600	755	60.6	17.8	4.02	.74	.87	.99	58.6	17.2	4.52	.75	.89	1.00	56.4	16.5	5.09	.76	.90	1.00	54.1	15.9	5.71	.77	.92	1.00
	2000	945	62.9	18.4	4.05	.79	.94	1.00	60.8	17.8	4.55	.80	.96	1.00	58.6	17.2	5.11	.82	.97	1.00	56.2	16.5	5.74	.83	.99	1.00
	2400	1135	64.8	19.0	4.07	.84	1.00	1.00	62.7	18.4	4.57	.85	1.00	1.00	60.5	17.7	5.13	.87	1.00	1.00	58.2	17.1	5.77	.89	1.00	1.00
67°F (19°C)	1600	755	64.4	18.9	4.06	.58	.71	.84	62.2	18.2	4.56	.58	.72	.85	59.8	17.5	5.14	.59	.73	.87	57.4	16.8	5.77	.60	.75	.89
	2000	945	66.4	19.5	4.09	.61	.77	.91	64.1	18.8	4.59	.62	.78	.93	61.7	18.1	5.15	.63	.79	.94	59.1	17.3	5.78	.64	.81	.96
	2400	1135	67.9	19.9	4.10	.64	.82	.97	65.5	19.2	4.60	.65	.83	.99	63.0	18.5	5.18	.66	.85	1.00	60.4	17.7	5.81	.67	.87	1.00
71°F (22°C)	1600	755	68.5	20.1	4.10	.44	.56	.68	66.2	19.4	4.61	.44	.57	.69	63.8	18.7	5.18	.44	.57	.71	61.2	17.9	5.81	.44	.58	.72
	2000	945	70.5	20.7	4.13	.45	.60	.74	68.1	20.0	4.64	.45	.60	.76	65.5	19.2	5.20	.45	.61	.77	62.9	18.4	5.83	.46	.62	.79
	2400	1135	71.9	21.1	4.15	.46	.63	.80	69.4	20.3	4.65	.46	.64	.81	66.7	19.5	5.22	.47	.65	.83	64.0	18.8	5.85	.47	.66	.85

BLOWER DATA - All air data is measured external to the unit with dry coil and without air filter.

GCS20R-024-50 BLOWER PERFORMANCE @ 230V (For 208V unit operation, derate air volume by 7%)

External Static Pressure	Down-Flow Air Openings								Horizontal Air Openings								
	Air Volume at Various Blower Speeds								Air Volume at Various Blower Speeds								
	High		Medium-High		Medium-Low		Low		High		Medium-High		Medium-Low		Low		
in. w.g.	Pa	cfm	L/s	cfm	L/s	cfm	L/s	cfm	L/s	cfm	L/s	cfm	L/s	cfm	L/s	cfm	L/s
0	0	1335	630	1000	470	905	425	665	315	1315	620	915	430	840	395	615	290
.05	12	1330	630	1010	475	915	430	680	320	1300	615	930	440	855	405	640	300
.10	25	1315	620	1015	480	920	435	685	325	1285	605	945	445	870	410	655	310
.15	37	1300	615	1015	480	925	435	690	325	1265	595	950	450	875	415	670	315
.20	50	1280	605	1010	475	920	435	695	330	1240	585	950	450	880	415	680	320
.25	62	1255	590	1005	475	915	430	695	330	1220	575	950	450	880	415	685	325
.30	75	1225	580	990	465	900	425	690	325	1195	565	945	445	875	415	685	325
.40	100	1160	550	945	445	865	410	665	315	1140	540	915	430	850	400	675	320
.50	125	1075	505	885	420	815	385	630	295	1080	510	870	410	815	385	650	305
.60	150	975	460	805	380	745	350	585	275	1010	475	805	380	760	360	610	290
.70	175	860	405	705	335	655	310	520	245	935	440	725	340	690	325	550	260
.80	200	730	345	590	280	545	255	---	---	845	400	625	295	600	285	---	---
.90	225	570	270	---	---	---	---	---	---	735	345	515	245	---	---	---	---

GCS20R-030-75 BLOWER PERFORMANCE @ 230V (For 208V unit operation, derate air volume by 7%)

External Static Pressure	Down-Flow Air Openings								Horizontal Air Openings								
	Air Volume at Various Blower Speeds								Air Volume at Various Blower Speeds								
	High		Medium-High		Medium-Low		Low		High		Medium-High		Medium-Low		Low		
in. w.g.	Pa	cfm	L/s	cfm	L/s	cfm	L/s	cfm	L/s	cfm	L/s	cfm	L/s	cfm	L/s	cfm	L/s
0	0	1525	720	1350	635	1090	515	870	410	1435	675	1280	605	1010	475	860	405
.05	12	1515	715	1345	635	1090	515	880	415	1425	675	1265	595	1005	475	860	405
.10	25	1495	705	1335	630	1085	510	885	420	1410	665	1250	590	1005	475	865	410
.15	37	1480	700	1325	625	1075	505	890	420	1380	650	1235	585	1000	470	860	405
.20	50	1465	690	1310	620	1065	505	885	420	1365	645	1220	575	990	465	855	405
.25	62	1450	685	1285	605	1055	500	875	415	1345	635	1205	570	975	460	845	400
.30	75	1420	670	1270	600	1045	495	870	410	1315	620	1190	560	970	460	835	395
.40	100	1375	650	1230	580	1020	480	855	405	1270	600	1160	550	945	445	810	380
.50	125	1325	625	1190	560	990	465	835	395	1220	575	1115	525	920	435	790	375
.60	150	1280	605	1150	545	965	455	810	380	1155	545	1070	505	900	425	765	360
.70	175	1220	575	1110	525	930	440	790	375	1095	515	1010	475	865	410	740	350
.80	200	1130	535	1030	485	885	420	765	360	1030	485	955	450	820	385	700	330
.90	225	1070	505	955	450	820	385	---	---	950	450	865	410	745	350	---	---
1.00	250	965	455	860	405	---	---	---	---	850	400	760	360	---	---	---	---

BLOWER DATA - All air data is measured external to the unit with dry coil and without air filter.

GCS20R-036-75 BLOWER PERFORMANCE @ 230V (For 208V unit operation, derate air volume by 7%)

External Static Pressure		Down-Flow Air Openings								Horizontal Air Openings							
		Air Volume at Various Blower Speeds								Air Volume at Various Blower Speeds							
		High		Medium-High		Medium-Low		Low		High		Medium-High		Medium-Low		Low	
in. w.g.	Pa	cfm	L/s	cfm	L/s	cfm	L/s	cfm	L/s	cfm	L/s	cfm	L/s	cfm	L/s	cfm	L/s
0	0	1885	890	1530	720	1335	630	990	465	1935	915	1580	745	1320	625	1140	540
.05	12	1860	880	1530	720	1335	630	995	470	1910	900	1580	745	1325	625	1150	545
.10	25	1840	870	1525	720	1340	630	995	470	1890	890	1570	740	1330	630	1160	545
.15	37	1815	855	1520	715	1340	630	1000	470	1870	880	1565	740	1330	630	1165	550
.20	50	1790	845	1510	715	1335	630	1000	470	1845	870	1555	735	1330	630	1170	550
.25	62	1765	835	1500	710	1330	630	995	470	1820	860	1540	725	1330	630	1170	550
.30	75	1735	820	1485	700	1320	625	995	470	1795	845	1525	720	1325	625	1170	550
.40	100	1675	790	1450	685	1295	610	985	465	1740	820	1490	705	1305	615	1160	545
.50	125	1605	755	1405	665	1255	590	975	460	1680	795	1450	685	1280	605	1135	535
.60	150	1530	720	1350	635	1210	570	955	450	1620	765	1395	660	1240	585	1105	520
.70	175	1450	685	1285	605	1155	545	930	440	1550	730	1335	630	1195	565	1060	500
.80	200	1365	645	1205	570	1085	510	900	425	1480	700	1270	600	1140	540	1010	475
.90	225	1270	600	1120	530	1005	475	870	410	1405	665	1190	560	1070	505	945	445
1.00	250	1165	550	1020	480	915	430	830	390	1325	625	1105	520	995	470	870	410

GCS20R-042-75 and GCS20R-042-120 BLOWER PERFORMANCE @ 230V (For 208V unit operation, derate air volume by 7%)

External Static Pressure		Down-Flow Air Openings										Horizontal Air Openings									
		Air Volume at Various Blower Speeds										Air Volume at Various Blower Speeds									
		High		Medium-High		Medium		Medium-Low		Low		High		Medium-High		Medium		Medium-Low		Low	
in. w.g.	Pa	cfm	L/s	cfm	L/s	cfm	L/s	cfm	L/s	cfm	L/s	cfm	L/s	cfm	L/s	cfm	L/s	cfm	L/s	cfm	L/s
0	0	2740	1295	2520	1190	2270	1070	2025	955	1710	805	2760	1305	2545	1200	2295	1085	2015	950	1680	795
.05	12	2715	1280	2495	1180	2250	1060	2005	945	1690	800	2745	1295	2530	1195	2280	1075	2005	945	1675	790
.10	25	2685	1265	2470	1165	2230	1055	1980	935	1670	790	2730	1290	2510	1185	2265	1070	1995	940	1670	790
.15	37	2655	1255	2445	1155	2210	1045	1960	925	1650	780	2710	1280	2495	1180	2250	1060	1985	935	1665	785
.20	50	2630	1240	2420	1140	2190	1035	1935	915	1635	770	2695	1270	2480	1170	2235	1055	1970	930	1665	785
.25	62	2600	1225	2395	1130	2170	1025	1910	900	1615	760	2675	1265	2460	1160	2220	1050	1955	925	1645	775
.30	75	2570	1215	2370	1120	2150	1015	1885	890	1595	755	2650	1250	2440	1150	2200	1040	1930	910	1635	770
.40	100	2510	1185	2320	1095	2100	990	1835	865	1550	730	2600	1225	2395	1130	2160	1020	1875	885	1605	760
.50	125	2450	1155	2255	1065	2080	980	1780	840	1500	710	2540	1200	2340	1105	2110	995	1805	850	1555	735
.60	150	2375	1120	2185	1030	1995	940	1755	830	1440	680	2480	1170	2265	1070	2025	955	1725	815	1475	695
.70	175	2305	1090	2120	1000	1935	915	1695	800	1390	655	2395	1130	2200	1040	1985	935	1630	770	1450	685
.80	200	2230	1055	2040	965	1860	880	1645	775	1315	620	2285	1080	2100	990	1900	895	1540	725	1370	645
.90	225	2140	1010	1945	920	1775	840	1585	750	---	---	2155	1015	1985	935	1795	845	1410	665	---	---
1.00	250	2030	960	1835	865	1670	790	---	---	---	---	2000	945	1845	870	1665	785	---	---	---	---

GCS20R-048-75, GCS20R-048-120, GCS20R-060-75, and GCS20R-060-120 BLOWER PERFORMANCE @ 230V

(For 208V unit operation, derate air volume by 7%)

External Static Pressure		Down-Flow Air Openings										Horizontal Air Openings									
		Air Volume at Various Blower Speeds										Air Volume at Various Blower Speeds									
		High		Medium-High		Medium		Medium-Low		Low		High		Medium-High		Medium		Medium-Low		Low	
in. w.g.	Pa	cfm	L/s	cfm	L/s	cfm	L/s	cfm	L/s	cfm	L/s	cfm	L/s	cfm	L/s	cfm	L/s	cfm	L/s	cfm	L/s
0	0	2480	1170	2315	1090	2060	970	1800	850	1555	735	2470	1165	2340	1105	2160	1020	1880	885	1620	765
.05	12	2460	1160	2295	1085	2055	970	1795	845	1555	735	2445	1155	2315	1090	2145	1010	1865	880	1615	760
.10	25	2435	1150	2275	1075	2050	965	1785	840	1550	730	2420	1140	2295	1085	2130	1005	1855	875	1610	760
.15	37	2410	1135	2255	1065	2040	965	1775	840	1545	730	2395	1130	2270	1070	2110	995	1840	870	1605	755
.20	50	2380	1125	2235	1055	2030	960	1765	835	1540	725	2365	1115	2245	1060	2090	985	1825	860	1595	755
.25	62	2355	1110	2210	1045	2015	950	1755	830	1535	725	2340	1105	2220	1050	2070	975	1810	855	1585	750
.30	75	2325	1095	2185	1030	2005	945	1745	825	1525	720	2310	1090	2195	1035	2050	965	1795	845	1575	745
.40	100	2265	1070	2135	1010	1970	930	1715	810	1505	710	2250	1060	2135	1010	2000	945	1760	830	1545	730
.50	125	2205	1040	2080	980	1930	910	1685	795	1475	695	2185	1030	2075	980	1950	920	1715	810	1510	715
.60	150	2135	1010	2015	950	1880	885	1650	780	1445	680	2115	1000	2010	950	1890	890	1670	790	1470	695
.70	175	2065	975	1950	920	1825	860	1610	760	1405	665	2045	965	1945	920	1825	860	1620	765	1420	670
.80	200	1990	940	1880	885	1765	835	1570	740	1365	645	1965	925	1870	880	1760	830	1565	740	1370	645
.90	225	1910	900	1800	850	1700	800	1520	715	1315	620	1885	890	1795	845	1685	795	1505	710	1310	620
1.00	250	1825	860	1720	810	1625	765	1470	695	1260	595	1800	850	1715	810	1605	755	1440	680	1245	590

BLOWER DATA

AIR RESISTANCE

Air Volume		Total Air Resistance							
		RTD9-65 Diffuser				FD9-65 Diffuser			
		2 Ends Open		1 Side 2 Ends Open		All Ends & Sides Open			
cfm	L/s	in. w.g.	Pa	in. w.g.	Pa	in. w.g.	Pa	in. w.g.	Pa
800	380	.15	37	.13	32	.11	27	.11	27
1000	470	.19	47	.16	40	.14	35	.14	35
1200	565	.25	62	.20	50	.17	42	.17	42
1400	660	.33	82	.26	65	.20	50	.20	50
1600	755	.43	107	.32	80	.20	50	.24	60
1800	850	.56	139	.40	90	.30	75	.30	75
2000	945	.73	182	.50	124	.36	90	.36	90
2200	1040	.95	236	.63	157	.44	109	.44	109

CEILING DIFFUSER AIR THROW DATA

Model No.		RTD9-65		FD9-65	
Air Volume		Effective Throw		Effective Throw	
cfm	L/s	ft.	m	ft.	m
1000	470	10-17	3-5	15-20	5-6
1200	565	11-18	3-5	16-22	5-7
1400	660	12-19	4-6	17-24	5-7
1600	755	12-20	4-6	18-25	5-8
1800	850	13-21	4-6	20-28	6-9
2000	945	14-23	4-7	21-29	6-9
2200	1040	16-25	5-8	22-30	7-9

† Effective throw based on terminal velocities of 75 ft. (22.9 m) per minute.

WET INDOOR COIL AIR RESISTANCE

Model Number	Air Volume		Air Resistance	
	cfm	L/s	in. w.g.	Pa
GCS20R-024	800	380	0.06	15
	1000	470	0.07	17
	1200	565	0.08	20
GCS20R-030	800	380	0.09	22
	1000	470	0.10	25
	1200	565	0.11	27
GCS20R-036	800	380	0.09	22
	1000	470	0.08	20
	1200	565	0.09	22
	1400	660	0.10	23
GCS20R-042 GCS20R-048 GCS20R-060	1600	755	0.08	20
	1800	850	0.09	22
	2000	945	0.10	25
	2200	1040	0.11	27

ELECTRICAL DATA

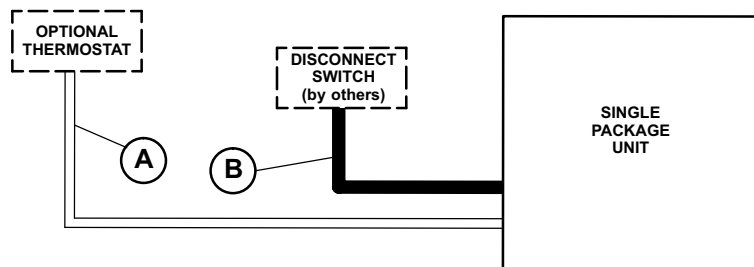
General Data		Model No.	GCS20R-024	GCS20R-030	GCS20R-036	GCS20R-042	GCS20R-048	GCS20R-060
Line voltage data - 60 hz - 1 phase			208/230v	208/230v	208/230v	208/230v	208/230v	208/230v
Rec. maximum fuse size (amps)			30	30	40	45	50	70
† Minimum Circuit Ampacity			19	21	27	30	32	44
Compressor	Rated load amps		12.2	13.5	16.1	17.9	19.2	28.8
	Locked rotor amps		61	73	88	104	137	148
Condenser Coil Fan Motor	Full load amps		1.1	1.1	2.0	2.0	2.0	2.0
	Locked rotor amps		2.3	2.3	4.2	4.2	4.2	4.2
Evaporator Blower Motor	Motor output - hp (W)		1/3 (249)	1/3 (249)	1/2 (373)	3/4 (560)	3/4 (560)	3/4 (560)
	Full load amps		2.2	3.0	3.9	5.0	5.0	5.0
	Locked rotor amps		4.6	6.2	8.3	10.1	10.1	10.1
Combustion Air Inducer Motor full load amps			0.7	0.7	0.7	0.7	0.7	0.7

† Refer to National or Canadian Electrical Code manual to determine wire, fuse and disconnect size requirements.

NOTE - Extremes of operating range are plus and minus 10% of line voltage.

FIELD WIRING

BASIC UNIT



A — Four Wire Low Voltage (Electro-mechanical)

— Five Wire Low Voltage (Electronic)

B — Two Wire Power (See Electrical Data Table)

— Field Wiring Not Furnished —

NOTE - All wiring must conform to NEC or CEC and local electrical codes.

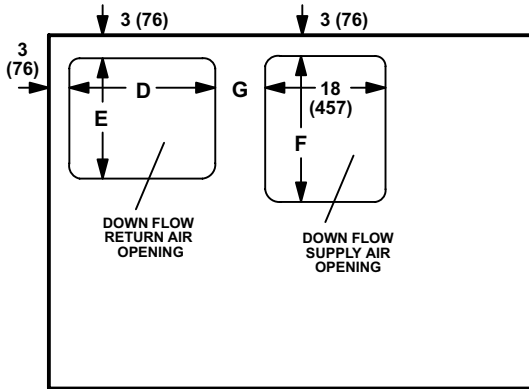
DIMENSIONS - INCHES (MM)

CORNER WEIGHTS

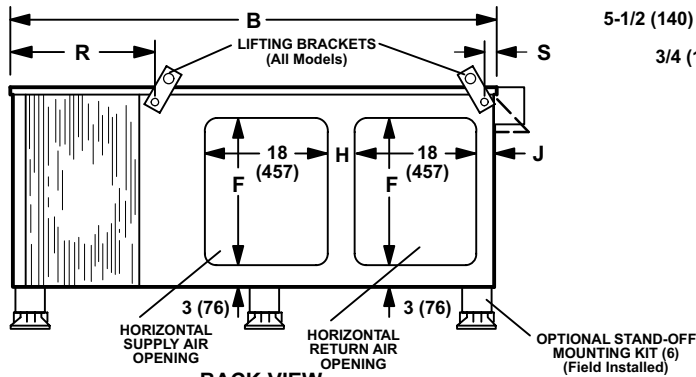
Model Number	AA		BB		CC		DD	
	lbs.	kg	lbs.	kg	lbs.	kg	lbs.	kg
GCS20R-024-030	88	40	75	34	111	51	131	60
GCS20R-036	111	50	97	44	135	61	153	70
GCS20R-042-048-060	121	55	106	48	147	67	168	76

CENTER OF GRAVITY

Model Number	EE		FF	
	inch	mm	inch	mm
GCS20R-024-030	32-1/2	826	27-1/2	699
GCS20R-036-042-048-060	38-5/8	981	30-1/4	768

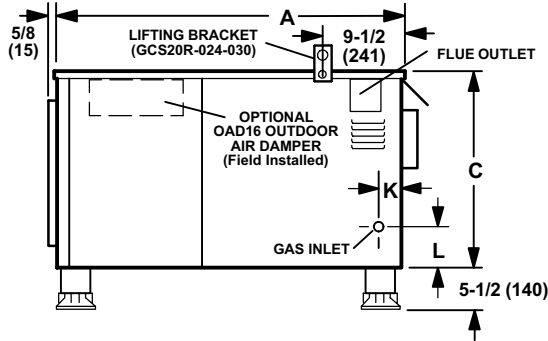


TOP VIEW BASE SECTION

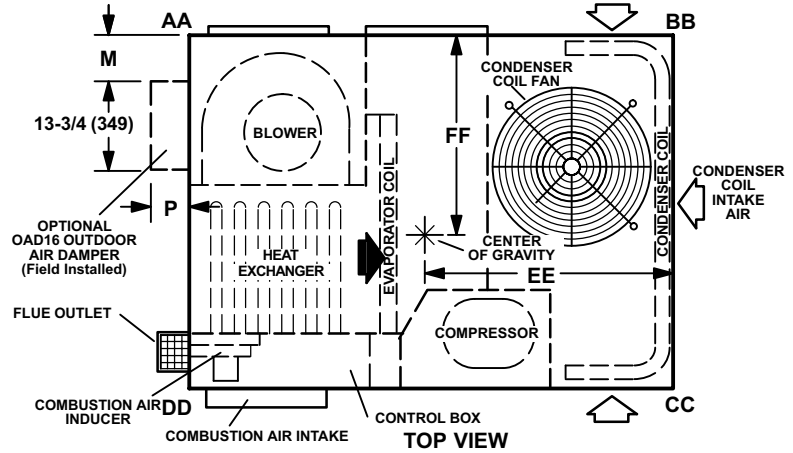


BACK VIEW

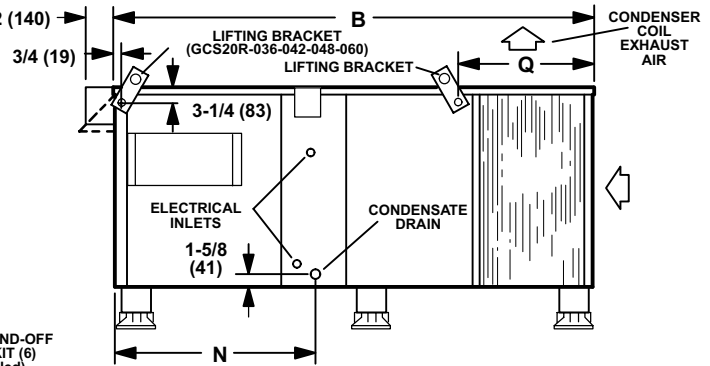
(With Horizontal Supply & Return Air)



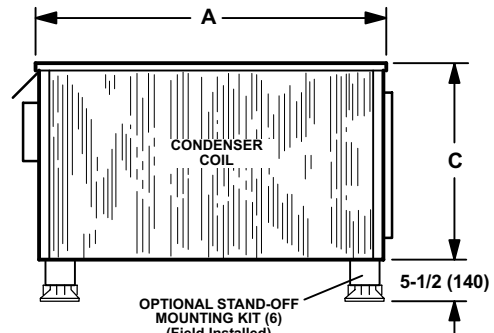
END VIEW



TOP VIEW



FRONT VIEW



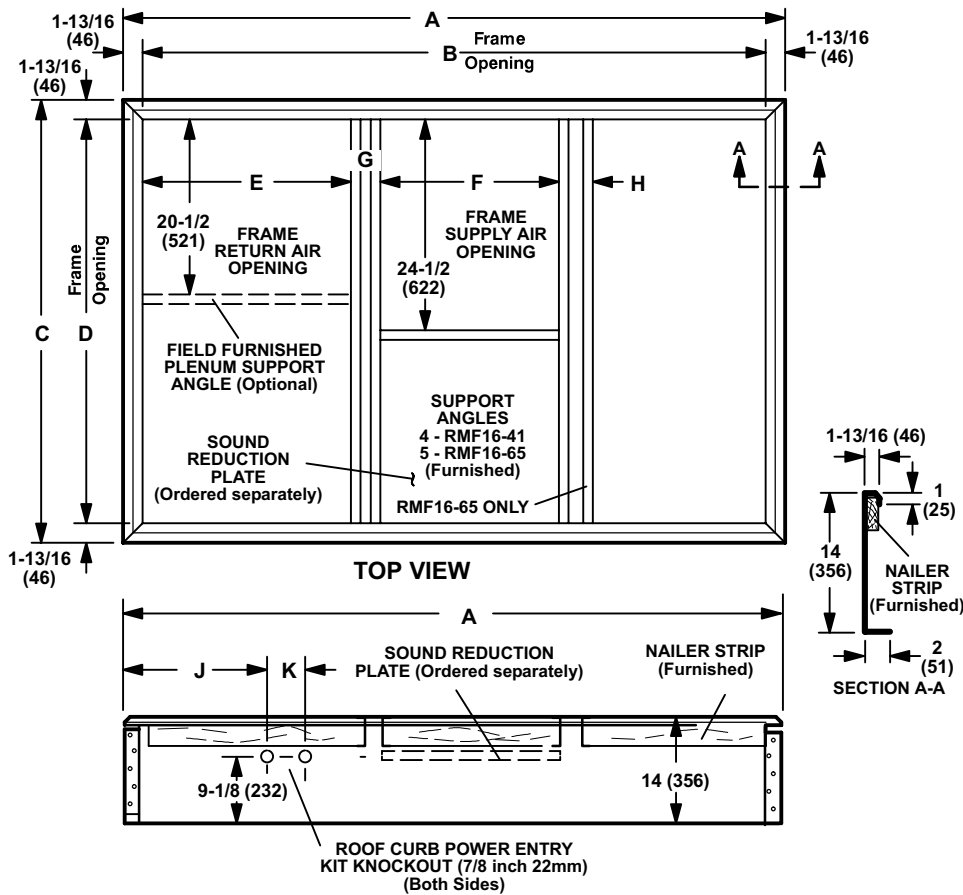
END VIEW

Model No.	A		B		C		D		E		F		G		H		J	
	in.	mm	in.	mm	in.	mm	in.	mm	in.	mm	in.	mm	in.	mm	in.	mm	in.	mm
GCS20R-024-030	46	1168	60	1524	23	584	18	457	13	330	13	330	10	254	3	76	4	102
GCS20R-036-042-048-060	52	1321	72-1/2	1842	29	737	22	559	18	457	22	737	7-1/2	191	5	127	3	76

Model No.	K		L		M		N		P		Q		R		S	
	in.	mm	in.	mm	in.	mm	in.	mm	in.	mm	in.	mm	in.	mm	in.	mm
GCS20R-024-030	2-1/4	57	10-5/8	270	2	51	26-3/4	679	5	127	20	508	20-5/16	516	4-1/8	105
GCS20R-036-042-048-060	3-3/8	86	13-1/8	333	5	127	28	711	8	203	19-3/8	492	19-3/16	487	3/4	19

ACCESSORY DIMENSIONS - INCHES (MM)

RMF16-41 & RMF16-65 ROOF MOUNTING FRAME WITH DOUBLE DUCT OPENING



Model Number		RMF16-41	RMF16-65
A	inch	56-3/8	69
	mm	1432	1753
B	inch	52-3/4	65-3/8
	mm	1340	1661
C	inch	44-1/8	50-1/2
	mm	1119	1283
D	inch	40-1/2	46-7/8
	mm	1029	1191
E	inch	24-3/8	24-1/4
	mm	619	616
F	inch	20-9/16	20-1/2
	mm	522	521
G	inch	4	4
	mm	102	102
H	inch	---	4
	mm	---	102
J	inch	22-3/16	27
	mm	564	686
K	inch	4-1/2	5
	mm	114	127

3-1/4 inches (83 mm) for GCS20R-024-030.

RMF16-41 & RMF16-65 ROOF MOUNTING FRAMES WITH SRT16-65 SUPPLY AND RETURN AIR TRANSITIONS FOR FD9-65 & RTD9-65 CEILING DIFFUSERS

Model Number		RMF16-41 With SRT16-65	RMF16-65 With SRT16-65
A	inch	56-3/8	69
	mm	1432	1753
B	inch	52-3/4	65-3/8
	mm	1340	1661
C	inch	44-1/8	50-1/2
	mm	1119	1283
D	inch	40-1/2	46-7/8
	mm	1029	1191
E	inch	4	4
	mm	102	102
F	inch	---	4
	mm	---	102

3-1/4 inches (83 mm) for GCS20R-024-030.

