

Carrier The Round One for High-Efficiency Condensing Units

38GR

Air Cooled — Hermetic
Cooling 24,000 to 60,000 Btuh

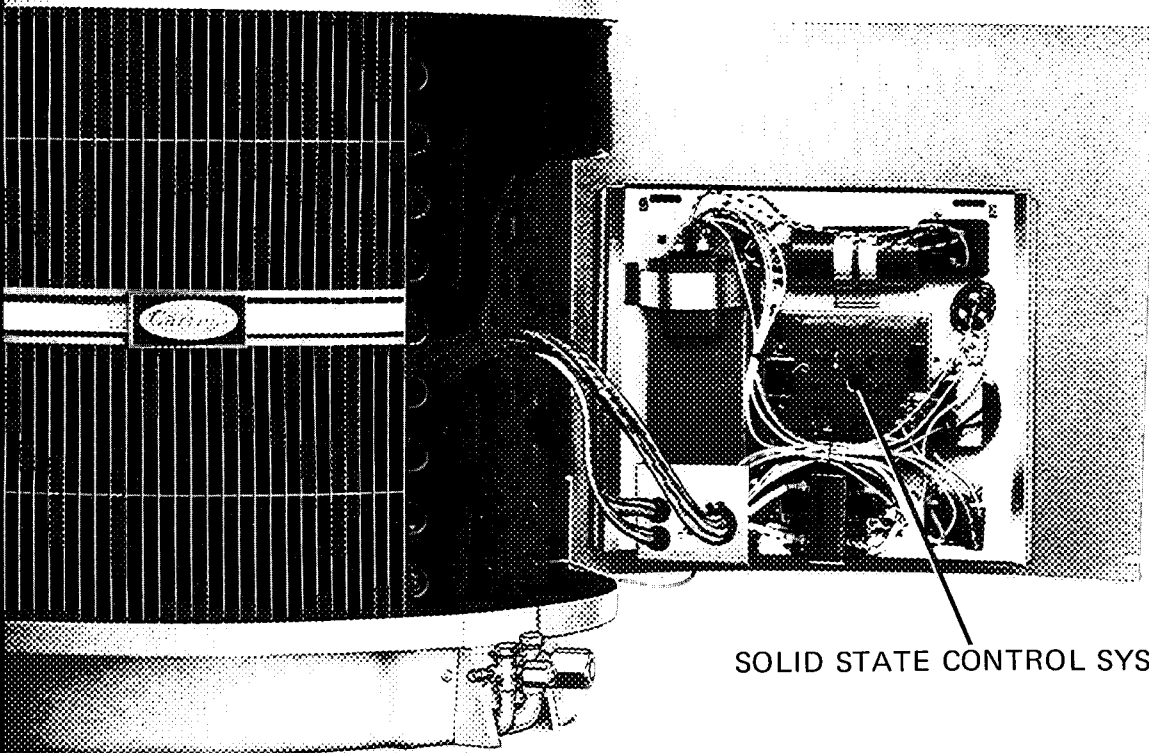


The famous Round One with a
solid-state system to protect itself!

Carrier

The pacesetter in air conditioning systems

THE "BRAINIEST" CONDENSING UNIT LASTS YEARS LONGER



SOLID STATE CONTROL SYSTEM

There's nothing "Me Too" about the Round One. It's been a recognized efficiency leader from the start. Competitors have been trying to catch up ever since the Round One first appeared. Here's a unit that combines a performance-proven compressor with an extra-large-surface condenser coil to come up with a high-efficiency, high-economy condensing unit. Figures back this up. Laboratory tests. Field tests. Data from actual installations. This means more cooling using less power . . . saving both energy and operating expense.

The Round One sets the pace in more ways than one. It makes reliability something you can plan on in air conditioning systems up to five tons. Because this unit has a brain . . . a solid state protective system that puts it in a class by itself. Located in the door of the Round One, this solid state package monitors every critical circuit before every start . . . automatically adjusts to brownouts . . . delays restarting after power interruption until full power is available to the unit . . . automatically spaces compressor starts at

four- to six-minute intervals. Your central air conditioning system can be depended on to operate years longer with minimum maintenance thanks to this built-in reliability assurance.

The Round One is easy to like. Sure it's good looking. A distinctive green finish, with coils painted black to disappear behind the bold vertical lines of the surrounding protective grille. But good looks are only part of it. The original purpose of the round shape was to get more condenser coil surface and quieter operation. Extra coil surface means more cooling capacity without extra power usage . . . more coil exposed to outside air so that the unit runs cooler, more efficiently, longer.

High quality insulation, sound shields, and upflow air discharge keep sound level low. And coil and control box surround the hermetic compressor to provide still another sound barrier.

There's more to the Round One. It's one of the most advanced condensing units you can choose for your central air conditioning system.

Choose the Round One for all-around value

Ensured reliability — The Round One has its own built-in protection against malfunction and damage. Almost like having a condensing unit with a brain.

- An ultra-sensitive, solid-state control system keeps an electronic check on all critical functions within the condensing unit . . . before it starts and while it's operating. In addition to providing automatic protection against possible damage from power brownout or interruption, the control system monitors a number of built-in safety features: high-pressure switch which shuts off compressor if discharge pressure exceeds preset limit . . . low-pressure switch which prevents compressor operation if suction pressure drops below preset point . . . internal thermostat protecting compressor from excessive temperature.

- Other protective features include a filter-drier which traps moisture and dirt, a crankcase heater which keeps refrigerant separate from oil for better lubrication, longer life expectancy, and protection for the motor against abnormal current and overtemperature.

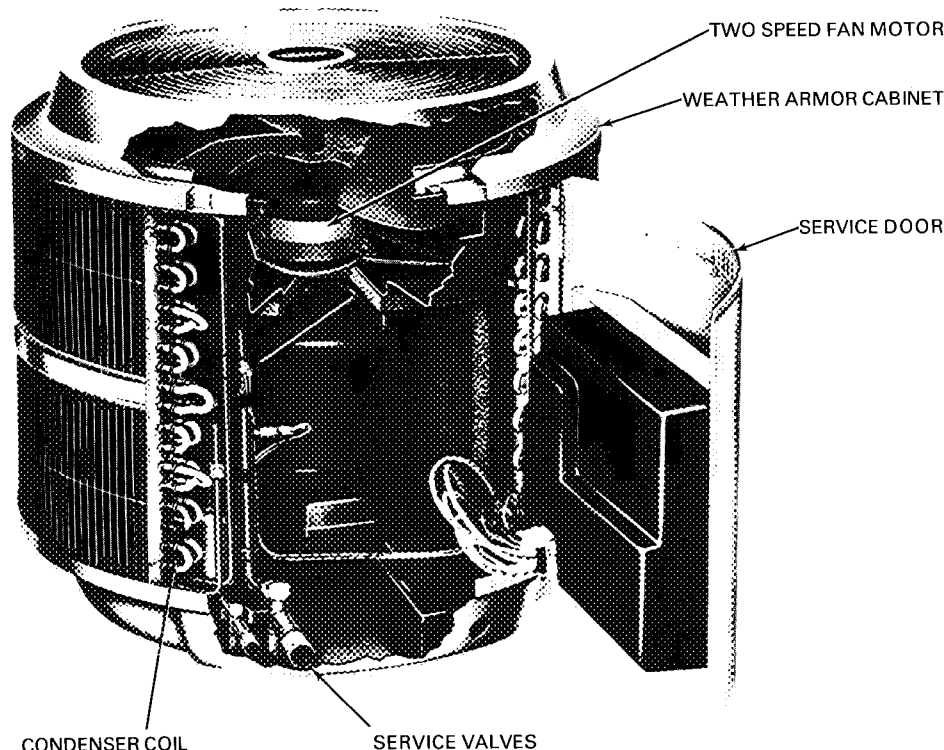
More cooling capacity with less power — Look at the efficiency rating of the Round One, and then compare its performance with similar models. The effi-

ciency rating for the Round One translates to lower operating costs . . . minimum power usage. A condenser coil with extra large surface and a rugged, high-performance compressor make the Round One an efficiency leader. The condenser coil gives extra capacity by exposing more coil surface, which allows the unit to run cooler, use less power.

Low sound level — You can hardly hear the Round One. The fan is shaped for high-volume air handling with minimum air turbulence, even on single-phase units when the fan shifts into high-speed operation at high temperatures. What's more, the compressor is located in the middle of the unit, surrounded by coil, control box, and sound absorbing material to minimize sound level.

Economical installation — Getting a unit in place is part of the initial cost. The Round One keeps installation cost down. Wiring connections are simple . . . providing fast installation without sacrificing quality workmanship. Leaktight Compatible Fittings — a Carrier exclusive — are located outside the unit. They give top protection to the refrigerant charge and require only a wrench to connect refrigerant piping between the Round One and the indoor coil.

Lower total cost — The long-run cost of a Round One is lower because it needs so little maintenance. Service calls are few and far between. When it is necessary, however, service work can be handled quickly, and that means economically. Brass service valves are long-wearing and located outside the unit for easy checking of refrigerant pressures. A liquid line sight glass permits easy inspection of refrigerant charge. The large, swing-open service door allows full access to interior components and piping. The solid state control system is conveniently located on the inside of the door . . . easy to test, remove, and replace if necessary. The Round One is built to withstand years of service outdoors in all kinds of weather. Weather Armor cabinet, specially coated grille, and corrosion-resistant hardware give the unit the durability that has made it so popular.



Accessories

- **Solid state head pressure control** — Series 32 Motormaster® modulates fan motor speed to maintain proper condensing temperature when outdoor temperature falls as low as -20 F. Special field-installed fan motor is required in single-phase units. Three-phase units have fan motor compatible with the motor speed modulating device.

- **Low voltage (24 v) indoor fan relay** — Single-pole, double-throw contacts operate two-speed furnace fan motor. Required if fan-coil unit or furnace does not have a fan relay.

- **Thermostat with subbase** — Several low-voltage (24 v) heating/cooling models available. Continuous or automatic fan operation offered. Subbase for the deluxe thermostat can be Carrier's distinctively styled Comfort Control Center, which puts heating/cooling control, system switching, and humidity control and indicator into one central unit.

- **Tubing packages** — Available in 10-, 18-, 25-, 35-, and 50-ft lengths for suction lines and liquid lines of units 002 thru 005. Suction lines are insulated with closed cell, foamed plastic material. Tubing for the 006 size is field supplied.

Physical data and dimensions

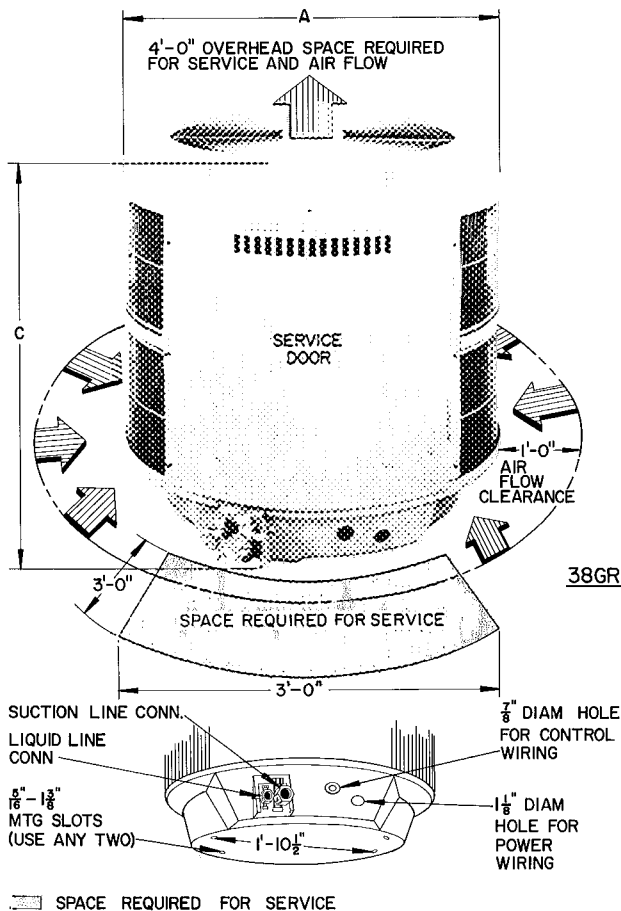
CONDENSING UNIT		38GR					
		002	003	004	045	005	006
OPERATING WT (lb)		151	170	182	194	234	260
REFRIGERANT*		22					
CONDENSER FAN		Propeller-Type, Direct Drive					
Air Discharge		Vertical					
Air Qty (cfm)	High	2800	2800	3100	3100	3700	3700
	Low	2300	2300	2600	2600	3200	3200
Motor Rpm (60-Hz)	High	1050	1050	1050	1050	1070	1070
	Low	850	850	850	850	870	870
COND COIL (Fin/in.)		15 6					
Face Area (sq ft)	Outer Coil	8 76	8 76	8 76	8 76	10 5	10 5
	Inner Coil	3 24	5 67	8 10	8 10	9 71	9 71
ROWS		2					
DIMENSIONS (ft-in.)							
Diameter		2-5 1/4					
Height		2-4	2-4	2-4	2-4	2-8	2-8
Mounting Slots†		1-10 1/2					
CONNECTIONS (in.)							
Suction (ODF)		5/8	3/4	3/4	3/4	3/4†	3/4†
Liquid (ODF)		3/8					

*38GR units contain correct operating charge for complete system when connected with Carrier accessory tubing to Carrier approved evaporators that are the same size as (or one size larger than) condensing unit. Charge adjustment may be required on other systems. See Installation, Start-Up and Service Instructions for details.

†Use any 2 mounting slots to bolt unit down.

‡38GR005, 006 supplied with 3/4-in. to 1-1/8 in. suction valve connection adapter (field installed) for 1-1/8 in. suction line (field supplied).

NOTE:
For Physical Data and Dimensions of 28 Series Coils and 40 Series Fan-Coils, see 28 or 40 Series Product Data Digest.



Electrical data (60-Hz)

UNIT	VOLTS/PH	OPER. VOLT.*		COMPR FLA	FAN FLA	WSA
		Max	Min			
38GR002	230/1	253	207	14.8	1.0	19.5
	230/1	253	207	19.2	1.1	25.1
	200/3	220	180	13.0	1.1	17.3
38GR003	230/3	253	207	11.5	1.1	15.5
	230/1	253	207	22.9	1.3	29.9
	200/3	220	180	14.0	1.3	18.8
38GR004	230/3	253	207	12.6	1.3	17.0
	460/3	506	414	6.5	.5	8.6
38GR045	230/1	253	207	23.9	1.3	31.2
	200/3	220	180	16.7	1.3	22.2
	230/3	253	207	14.3	1.3	19.2
38GR005	460/3	506	414	7.2	.5	9.5
	230/1	253	207	27.9	2.0	36.9
	200/3	220	180	18.3	2.0	24.9
38GR006	230/3	253	207	16.4	2.0	22.5
	460/3	506	414	8.8	1.3	12.3
38GR006	230/1	253	207	39.0	2.0	50.7
	200/3	220	180	24.0	2.0	32.0
	230/3	253	207	19.9	2.0	26.9
38GR006	460/3	506	414	10.4	1.3	14.3

FLA — Full Load Amps

WSA — Wire Sizing Amps

*Permissible voltage range limits at which the units will operate satisfactorily.

NOTES:

1. Aluminum field wiring may be used when splice-connected to copper pigtailed from unit with factory-supplied copper-to-aluminum splice connectors.
2. Control circuit voltage is 24 volts on all units.
3. Units require field-supplied grounding wire. See Installation, Start-Up and Service Instructions for wire sizes.

Performance data

COMBINATION RATING INDEX

COND UNIT	COIL	COMBINATION RATINGS†							EER	SRN‡
		Evap Air	Temp Air Ent Cond – db (F)							
	CFM	85	95	100	105	115				
	FAN- COIL	Total Net Capacity (1000 Btuh)								
		80 Edb (F); 67 Ewb (F)								
38GR002	28GS024	825	25	24	23	22	21	7.3	18/17	
	28MC024									
	28AR024	900	25	24	23	23	21	7.3		
	28GH002	860	27	25	25	24	22	7.4		
	40GS024	900	26	25	25	24	22	6.9		
	40HH002	900	25	24	23	22	21	7.1		
	28GS030									
	28MC030	940	26	25	24	24	22	7.4		
	28AR030	940	26	25	24	23	21	7.4		
	40VU003	975	28	26	25	25	23	7.4		
	40HH003	975	27	26	25	24	21	7.4		
	28GH003	975	28	26	25	25	23	7.6		
	28GS036									
	28MC036	975	28	26	25	25	23	7.4		
	28AR036	975	28	26	25	24	21	7.4		
	40VU004	1010	29	27	26	25	23	7.3		
	40HH004	1010	29	27	26	25	23	7.5		
	28GH004	1010	30	27	26	25	23	7.5		

COMBINATION RATING INDEX (Cont)

COND UNIT	COIL FAN- COIL	COMBINATION RATINGS†							EER	SRN‡
		Evap Air CFM	Temp Air Ent Cond – db (F)							
			85	95	100	105	115			
80 Edb (F); 67 Ewb (F)	Total Net Capacity (1000 Btuh)									
38GR003	28GS030	1030	31	31	30	30	28	7.0	18/17	
	28MC030									
	28AR030	1150	32	31	30	29	27	7.0		
	40VU003	1160	32	31	30	29	27	6.7		
	40HH003	1160	32	31	31	30	27	7.0		
	28GH003	1080	31	30	29	28	26	7.0		
	28GS036	1200	33	32	31	31	29	7.1		
	28MC036									
	28AR036	1200	33	32	31	30	27	7.1		
	40VU004	1200	33	32	31	30	28	7.0		
	40HH004	1200	33	32	31	30	28	7.0		
	28GH004	1200	34	32	31	30	28	7.1		
	28GS042	1240	36	33	32	31	29	7.2		
	28MC042									
	28AR042	1240	36	33	32	31	29	7.2		
	28GH005	1240	35	33	32	31	29	7.2		
	40VU005	1240	35	33	32	31	29	6.9		
	40HH005	1240	35	33	32	31	29	6.7		
38GR004	28GS036	1300	37	36	36	35	33	6.9	18/17	
	28MC036									
	28AR036	1350	37	36	35	34	31	6.9		
	40VU004	1390	39	37	36	35	33	6.7		
	40HH004	1350	38	36	35	34	32	6.5		
	28GH004	1350	38	36	35	34	32	6.9		
	28GS042	1390	38	37	36	35	33	7.1		
	28MC042									
	28AR042	1390	39	37	36	35	33	7.0		
	28GS048	1350	40	37	36	35	33	7.0		
	28MC048									
	28AR048	1350	40	37	36	35	33	7.0		
	28GH005	1425	39	38	37	36	33	7.2		
	40VU005	1425	40	38	37	36	33	7.6		
	40HH005	1425	40	38	38	37	35	6.8		
	28GH006	1425	41	38	37	35	33	7.0		
	40VU006	1425	41	38	37	35	33	6.8		
	40HH006	1425	41	38	37	35	33	6.7		
* 38GR045	28GS042	1535	44	41	40	40	36	7.6	18/17	
	28MC042									
	28AR042	1535	43	41	40	39	35	7.6		
	28GS048	1550	44	42	41	40	37	7.6		
	28MC048									
	28AR048	1535	45	42	41	40	36	7.6		
	40VU005	1575	44	42	41	40	38	7.5		
	40HH005	1575	44	42	41	40	38	7.5		
	28GH005	1535	43	41	40	39	36	7.6		
	28AR060	1610	45	43	41	40	35	7.8		
	28GH006	1575	45	42	41	40	37	7.6		
	40VU006	1610	45	43	41	40	38	7.7		
	40HH006	1610	45	43	41	40	38	7.7		

COND UNIT	COIL FAN- COIL	COMBINATION RATINGS†								EER	SRN‡
		Evap Air CFM 80 Edb (F); 67 Ewb (F)	Temp Air Ent Cond – db (F)								
			85	95	100	105	115				
								Total Net Capacity (1000 Btuh)			
* 38GR005	28GS048	1550	50	47	46	45	42	7.6	19/17		
	28MC048										
	28AR048	1735	50	47	46	45	42	7.6			
	40VU005	1760	51	47	46	44	41	7.3			
	40HH005	1760	51	47	46	44	41	7.3			
	28GH005	1735	50	47	46	44	41	7.6			
	28AR060	1800	51	48	47	45	42	7.6			
	40VU006	1800	52	48	47	46	43	7.5			
	40HH006	1800	52	48	47	46	43	7.5			
	28GH006	1800	51	48	47	45	42	7.6			
* 38GR006	28GS060	1750	61	57	56	54	50	7.3	19/18		
	28MC060										
	40FS200 with 28GS060 or 28MC060	2000	62	58	57	55	51	7.3			
	28AR060	2100	60	58	56	54	50	7.4			
	28GH006	2175	62	58	57	55	51	7.4			
	40VU006	2175	65	58	60	57	53	7.3			
	40HH006	2175	65	58	60	57	53	7.3			
	28CB008	2250	65	60	57	55	50	7.4			
	40RR008	2285	65	61	58	56	52	7.4			
	40BA009	2250	65	60	57	55	50	7.2			

NOTES:

- Combination ratings are based on evaporators and condensing units at the same elevation and connected by 25 ft of tubing. If other than 25 ft of tubing is used and/or evaporator is installed above condensing unit, a slight capacity variation may occur. For maximum allowable vertical separation of condensing unit and evaporator, see Application Data section for Field-Supplied Piping Data table.
- Systems will operate at desert conditions (125 F air entering condenser, 80 F edb, 60 F ewb, 500 cfm/ton).
- Net capacities shown include a deduction for evaporator fan motor heat.
- Direct interpolation is permissible. Do not extrapolate.



Rated in accordance with ARI Standards 210-74 and 270-75

MINIMUM OUTDOOR OPERATING TEMP (38GR Condensing Units)

WITHOUT ACCESSORY 32 MOTORMASTER®	WITH ACCESSORY 32 MOTORMASTER*
45 F	-20 F

ARI evaporator air quantity, total capacity, EER and SRN. ARI ratings are at high condenser fan speed.

EER — Energy Efficiency Ratio (Btuh) Ewb — Entering Wet-Bulb (F)
Edb — Entering Dry-Bulb (F) SRN — Sound Rating Number

*ARI listed as models 38GR045-1, 38GR005-1 and 38GR006-1

†See 38 Series condensing unit Application Data booklet for expanded combination ratings

‡An SRN is shown for condensing unit operation at both high and low condenser fan speeds

*Requires winter start provisions that consist of installing a liquid line low-pressure switch (Carrier part no HK02AB026) at the liquid line service valve, and electrically jumpering out the factory-installed suction line low-pressure switch. A freeze-up thermostat must be added to the evaporator coil (Carrier part no 50BB900001). See 32 Series Motormaster Installation Instructions for further details.

Performance data

CONDENSING UNIT CAPACITIES

UNIT	SST (F)	TEMP AIR ENTERING COND (F)																	
		80			90			95			100			105			115		
		Cap.	SCT	Kw	Cap.	SCT	Kw	Cap.	SCT	Kw	Cap.	SCT	Kw	Cap.	SCT	Kw	Cap.	SCT	Kw
38GR002	30	22.8	101	2.4	20.8	111	2.4	19.9	115	2.5	18.7	120	2.5	17.8	125	2.5	15.7	135	2.6
	35	25.7	102	2.5	23.6	112	2.6	22.6	117	2.6	21.5	122	2.7	20.4	126	2.7	18.2	136	2.8
	40	28.7	103	2.6	26.4	113	2.7	25.3	118	2.8	24.2	123	2.8	23.1	128	2.9	20.8	137	3.0
	45	31.8	105	2.8	29.4	115	2.9	28.3	119	2.9	27.1	125	3.0	25.8	129	3.1	23.4	138	3.2
	50	35.0	106	2.9	32.5	116	3.0	31.2	120	3.1	29.9	126	3.2	28.7	131	3.2	26.0	140	3.3
38GR003	30	28.0	104	3.0	25.9	114	3.1	24.8	117	3.2	23.7	123	3.2	22.6	127	3.3	20.3	136	3.3
	35	31.5	106	3.2	29.1	115	3.3	28.1	120	3.4	26.7	125	3.4	25.7	130	3.5	23.1	139	3.6
	40	35.0	107	3.4	32.5	117	3.5	31.4	122	3.6	30.0	126	3.7	28.7	131	3.7	26.1	140	3.8
	45	38.5	109	3.6	36.0	120	3.8	34.7	124	3.8	33.4	129	3.9	31.9	133	4.0	29.0	142	4.1
	50	42.1	111	3.8	39.5	122	4.0	38.1	126	4.1	36.4	130	4.1	35.1	135	4.2	32.1	145	4.4
38GR004	30	33.1	102	3.8	30.4	112	3.9	29.4	114	4.0	28.1	120	4.0	26.8	124	4.1	24.3	135	4.1
	35	36.6	103	4.0	33.9	113	4.1	33.0	115	4.2	31.7	121	4.3	30.3	125	4.3	27.6	136	4.4
	40	40.5	104	4.3	37.8	114	4.4	37.0	117	4.6	35.6	122	4.5	34.2	127	4.6	31.1	137	4.7
	45	44.4	105	4.5	41.7	116	4.7	40.8	118	4.7	39.3	123	4.8	37.8	128	4.9	35.0	138	5.0
	50	48.1	106	4.7	45.6	118	4.9	45.0	120	5.0	43.4	125	5.1	41.8	130	5.2	38.3	139	5.3
38GR045	30	37.3	102	4.4	34.6	112	4.5	33.8	115	4.5	32.5	121	4.5	31.1	126	4.6	28.3	136	4.7
	35	41.1	104	4.6	38.5	114	4.7	37.9	117	4.7	36.5	123	4.8	35.0	127	4.9	31.9	137	5.0
	40	45.4	106	4.8	42.5	116	5.0	42.1	119	5.0	40.6	124	5.1	38.8	128	5.2	36.0	139	5.4
	45	49.6	107	5.1	46.6	117	5.3	46.4	120	5.3	44.9	125	5.4	43.2	130	5.5	40.0	140	5.7
	50	53.9	108	5.5	51.1	119	5.6	50.6	121	5.7	49.3	127	5.8	47.6	132	5.9	44.5	142	6.1
38GR005	30	46.2	103	4.4	42.4	113	4.6	41.1	116	4.7	39.2	121	4.8	37.3	125	4.9	33.5	135	5.0
	35	51.7	106	4.7	47.4	115	4.9	46.0	118	5.0	44.0	123	5.1	41.9	128	5.2	37.8	137	5.4
	40	57.0	107	5.0	52.7	117	5.2	51.2	119	5.3	48.9	124	5.4	46.7	129	5.5	42.3	138	5.7
	45	62.8	109	5.2	57.9	118	5.5	56.7	122	5.6	54.3	126	5.7	51.9	131	5.9	47.1	139	6.1
	50	68.8	111	5.5	63.7	121	5.9	62.2	123	5.9	59.6	127	6.1	57.1	132	6.2	52.1	141	6.5
38GR006	30	56.1	110	6.2	51.6	119	6.4	50.4	122	6.4	48.2	126	6.5	46.0	131	6.6	42.0	140	6.8
	35	62.2	112	6.6	57.4	122	6.8	56.4	124	6.9	54.0	129	7.0	51.7	133	7.1	47.2	143	7.3
	40	68.7	115	7.0	63.4	124	7.3	62.5	126	7.3	60.0	131	7.5	57.4	136	7.6	52.1	144	7.8
	45	74.9	117	7.5	69.4	126	7.8	68.7	128	7.8	66.1	133	8.0	63.3	138	8.1	57.6	147	8.4
	50	81.6	120	8.0	75.6	129	8.3	74.8	130	8.3	71.8	135	8.5	68.7	140	8.7	62.5	148	8.9

Cap. — Capacity (1000 Btuh)

Kw — Compressor Motor Power Input

SCT — Saturated Condensing Temperature

SST — Saturated Suction Temperature shown corresponds to the pressure at the compressor. Actual suction temperature is higher due to superheat.

NOTES:

- 1 Interpolation is permissible. Do not extrapolate.
- 2 Use 15 F subcooling when selecting thermal expansion valve.

Application

38GR units are recommended for use with Carrier evaporators; however, they can be matched with other manufacturers' evaporators. Install each unit in accordance with the following special requirements:

38GR condensing units connected to Carrier approved evaporators with Carrier accessory tubing — System refrigerant charge is correct when evaporator is the same size, or one size larger than condensing unit. Check system refrigerant charge on other systems. See Installation, Start-Up and Service Instructions for details.

On systems where evaporator is more than one size larger than condensing unit (i.e. 38GR002/28GS036), it is recommended that a thermal expansion valve be used for refrigerant control.

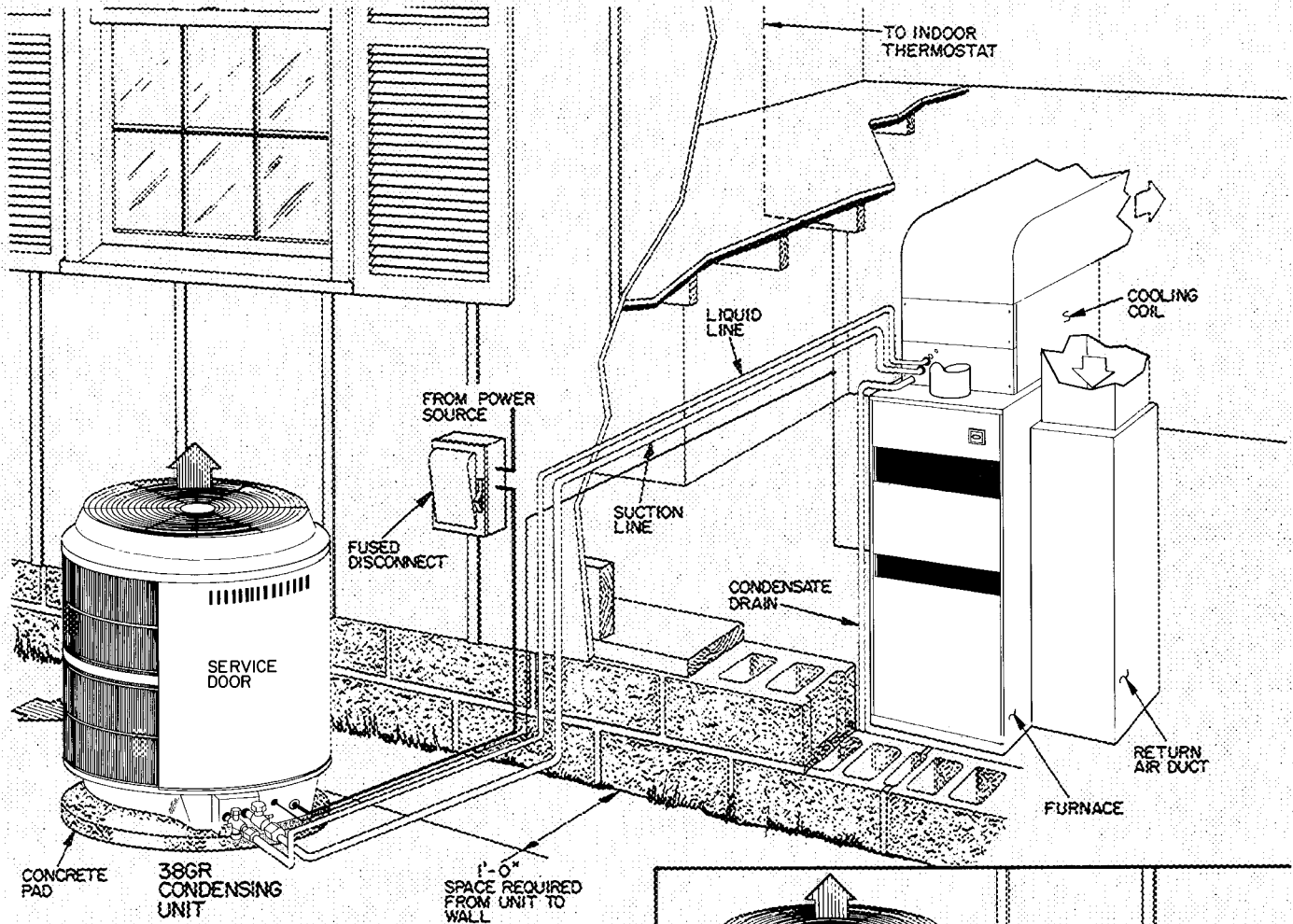
38GR condensing units connected to non-Carrier evaporators — Check refrigerant charge when the 38GR is added to a system in

which other than a Carrier approved evaporator is being used or where the evaporator has been previously installed. *Ensure non-Carrier evaporator coil is equipped with bleed type expansion device when used with the 38GR unit.*

Field-supplied refrigerant piping must be in accordance with Field-Supplied Piping Data table, page 8. When evaporator is 20 ft or more below condensing unit, reduce liquid line diameter by 1/8-in OD (minimum 1/4-in OD).

Unit location — Normal installation does not require sound treatment. Vertical discharge may reduce directional sound problems normally associated with horizontal discharge. Locate unit where it will not disturb neighbors. On occasion, local conditions or building construction may be such that special consideration should be given to reducing sound level.

Typical piping and wiring



LEGEND

PIPING

POWER WIRING

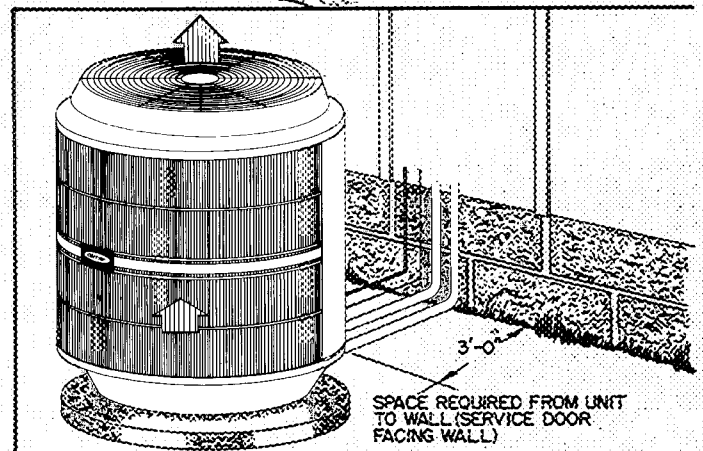
CONTROL WIRING

AIR FLOW

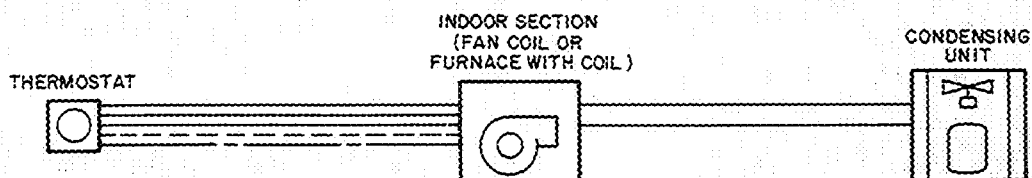
CONDENSER AIR FLOW

NOTES:

1. Unit placement dependent on space requirement for service and air flow. See Dimensions.
2. Illustration shown is a general guide only and is not intended for or to include all details for any specific installation.
3. Control relay which starts and stops condensing unit must be powered externally. Typical system control wiring shown below uses indoor section 40VA control circuit (24 v) transformer as power source:



TYPICAL SYSTEM CONTROL WIRING



- Wiring necessary for cooling without heating
- Add to cooling wiring for cooling with one-stage heating
- Add to cooling with one-stage heating wiring for cooling with 2-stage heating

Field-supplied piping data

COND UNIT	REFRIG CONTROL	MAX COND UNIT HT (ft)		REFRIGERANT LINE LENGTH (ft)									
		Above Evap	Below Evap	25-50		51-75		76-100		101-125		126-150	
				Suct	Liq	Suct	Liq	Suct	Liq	Suct	Liq	Suct	Liq
38GR002	TXV	90	90										
	Cap. Tube or AccuRater™	150	50	¾	⅜	¾	⅜	¾	⅜	¾	⅜	¾	⅜
38GR003	TXV	90	90										
	Cap. Tube or AccuRater	150	50	¾	⅜	¾	⅜	¾	⅜	¾	⅜	⅞	⅜
38GR004	TXV	90	90										
	Cap. Tube or AccuRater	150	50	¾	⅜	¾	⅜	⅞	⅜	⅞	½	⅞	½
38GR045	TXV	90	90										
	Cap. Tube or AccuRater	150	50	⅞	⅜	⅞	½	⅞	½	⅞	½	⅞	½
38GR005	TXV	90	90										
	Cap. Tube or AccuRater	150	50	1⅛	⅜	1⅛	½	1⅛	½	1⅛	½	1⅛	⅝
38GR006	TXV	90	90										
	Cap. Tube or AccuRater	150	50	1⅛	⅜	1⅛	⅝	1⅛	⅝	1⅛	⅝	1⅛	⅝

Cap. Tube — Capillary Tube
TXV — Thermal Expansion Valve

NOTES:

- 1 Systems with over 50 ft separation between condensing unit and evaporator require refrigerant charge adjustment to ensure the proper superheat at compressor. Oil charge

adjustment may also be required. See 38GR Installation, Start-Up and Service Instructions for details.

- 2 When evaporator is 20 ft or more below condensing unit, reduce liquid line diameter by 1/8-in. OD (min 1/4-in. OD).

REFRIG LINE LENGTH (ft)	25	50	75	100	150
NET TOTAL CAPACITY %	100	100	98.3	96.7	95.0

Guide specifications

Furnish and install where indicated on plans an air-cooled condensing unit with a Sound Rating Number (SRN) of _____ or less at full capacity. The unit shall contain sufficient refrigerant (R-22) charge for complete system and be equipped with refrigerant line fittings which permit mechanical or sweat connections. Brass service valves with fittings and gage ports shall be located on exterior of unit.

Total cooling capacity shall be _____ Btuh or greater with an evaporator air quantity of _____ cfm and entering wet-bulb temperature of _____ F coincident with _____ F dry-bulb temperature of air entering condenser. Unit cooling per watt of electric power shall be _____ Btuh or more.

Saturated suction temperature at the compressor shall be _____ F. Saturated condensing temperature shall not exceed _____ F.

Compressor shall be of the welded-hermetic type with internal vibration isolation and be covered with a shield to muffle operating sound. Compressor motor power input shall not exceed _____ kw at specified operating conditions.

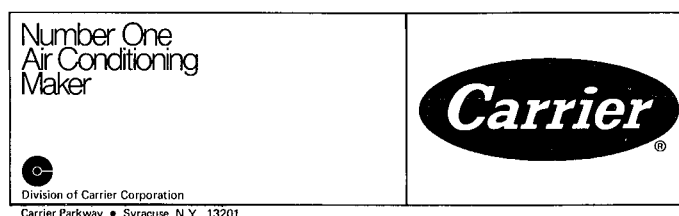
Condenser coil shall be of circular construction. Tubes shall be nonferrous with mechanically bonded aluminum plate fins. Con-

denser fan shall be propeller-type, direct-driven, and arranged for vertical air discharge. Fan motor shall be factory lubricated, inherently protected and resiliently mounted. Two-speed fan motor on single-phase units shall automatically switch to high speed at 90 F outdoor temperature.

Controls shall be factory wired and located in a readily accessible location on unit swing-out service door. Compressor motor shall have both thermal and current-sensitive overload devices. Solid-state compressor protection control system shall prevent short cycling on safety devices or power interruption by limiting compressor starts at 4- to 6-minute intervals depending on reason for shutdown. Other protective devices shall include: crankcase heater, high- and low-pressure safety switches, filter-drier, and liquid line sight glass. Plug-in wiring connections to controls shall be provided.

Dimensions — The entire assembly shall have a width of not more than _____ in., a depth of not more than _____ in., and an overall height of not more than _____ inches.

Accessories shall include (Solid-State Head Pressure Control), (Indoor Fan Relay), (Thermostat with Subbase), (Tubing Package).



Manufacturer reserves the right to discontinue, or change at any time, specifications or designs without notice and without incurring obligations.

Tab 4

Form 38GR-3P Supersedes 38GR-2P

Printed in U.S.A.

277

9-75

PC 101

Catalog No. 523-800

Book	1	2
Tab	3a	1a