

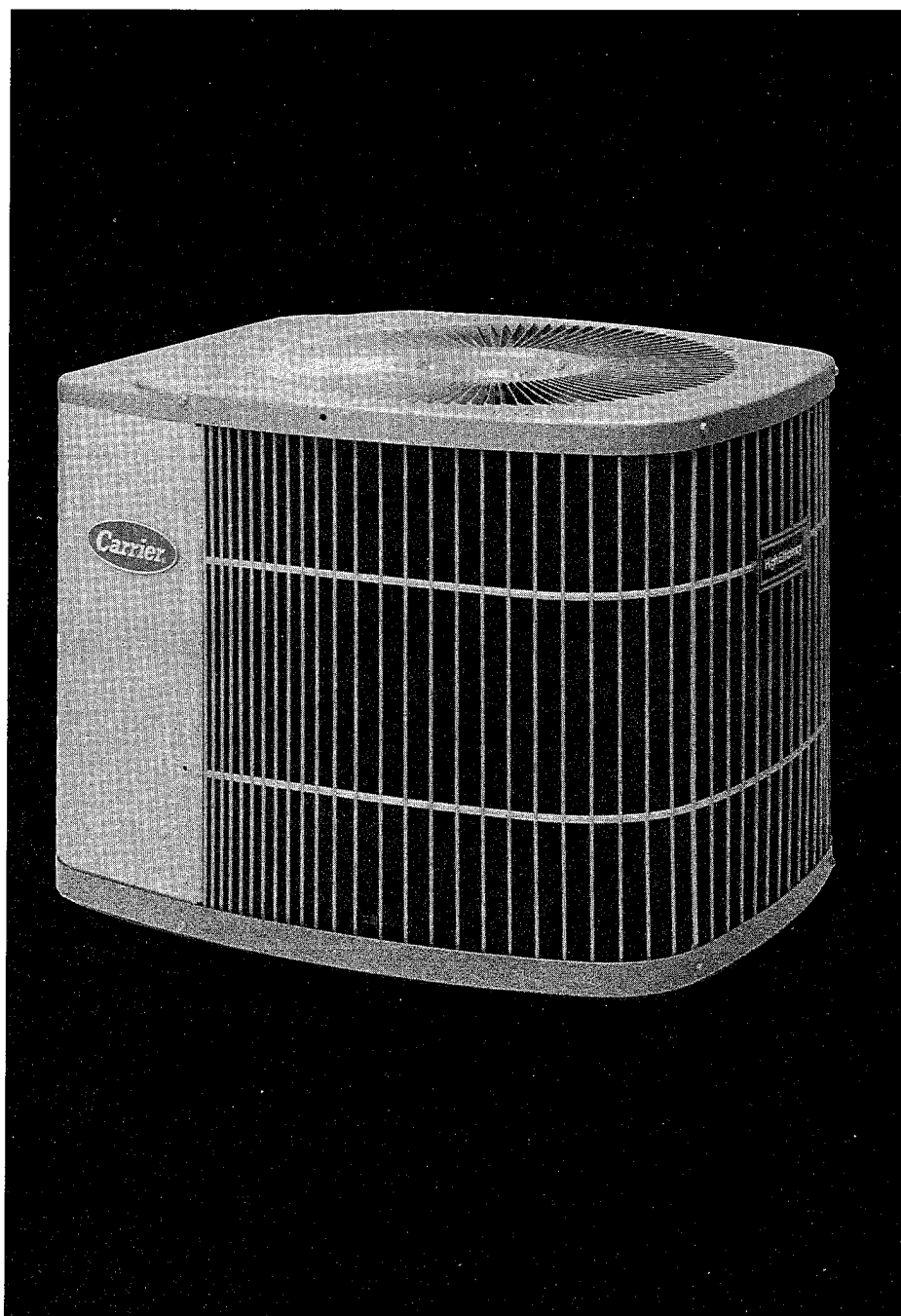


# Product Data

## 38YG (60 Hz) Heat Pump

Sizes 014 thru 060

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The 38YG Outdoor Sections of split-system heat pumps are designed for quiet, reliable heating during the winter and cooling during the summer. These heat pump systems provide economy of operation through energy conservation. They recover heat for indoor comfort from outdoor air during the heating season and, by automatically reversing the refrigerant system, remove indoor heat and excess humidity during the cooling season. All models have ARI certified ratings and are UL and CSA listed.

### FEATURES/BENEFITS

**Electrical range** — All single phase units are offered in 208/230-volts. Three phase available in both 208/230-volt (030-060 sizes) and 460-volt (036-060 sizes).

**Compressor** — Designed specifically for heat pump duty, with energy efficiency during heating and cooling operation. Each compressor is hermetically sealed against contamination to assure long life and dependable performance, internally sprung and externally mounted on rubber isolators for quiet operation. Continuous compressor operation is approved down to  $-30\text{ F}$  ( $-34\text{ C}$ ) in the heating mode, and down to  $55\text{ F}$  ( $12.8\text{ C}$ ) in the cooling mode. All models include a discharge-tube muffler to prevent sound transmission of the compressor pulsations to the indoor or outdoor coils.

### Built-In-Reliability

**Components** — Includes a suction-tube accumulator that keeps liquid refrigerant from reaching the compressor; a liquid tube low-

pressure switch that stops the compressor if refrigerant charge is lost; a crankcase heater to keep the compressor oil warm and free of refrigerant for maximum lubricity; an internal compressor relief valve for high-pressure protection; and compressor start assist components on single phase units to assure reliable operation of the units during brownout conditions and low outdoor temperatures.

**Defrost Control Board —**

Incorporates a defrost relay, defrost timer, and low-voltage terminal board. The defrost control is a time/temperature initiation/termination control which includes three field-selectable time periods of 30, 50, and 90 minutes.

**Weather-Protective Cabinet —**

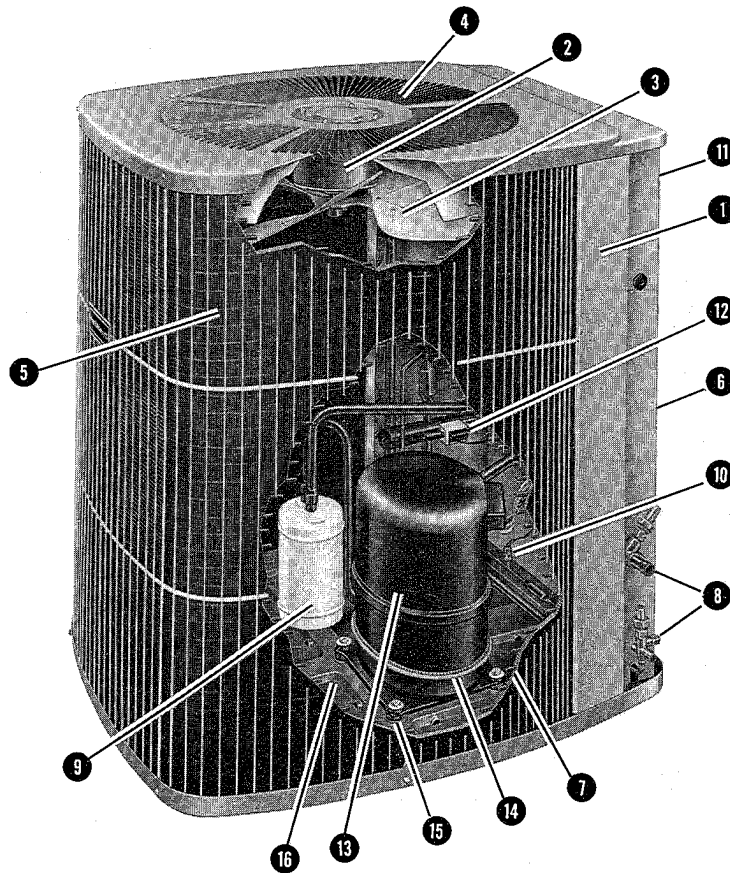
Steel is protected with a heavy coating commonly called "galvanizing," then coated with a layer of zinc phosphate to which a coat of modified polyester powder coating is applied and baked-on. This provides each unit with a hard, smooth finish that will last for many years.

All screws on cabinet exterior are coated for a long-lasting rust-resistant, quality appearance.

**Unit Design —** All units are equipped with totally enclosed fan motors for greater reliability under rain and snow conditions. (Ball bearing fan motors standard on 3-phase units.) The large, wraparound coil uses copper tube

and enhanced aluminum fin and is designed for optimum heat transfer during heating and cooling. The vertical air discharge carries the sound and air up and away from adjacent patio areas and foliage. Sufficient space is provided between rows of composite coils so they can be cleaned with a common garden hose.

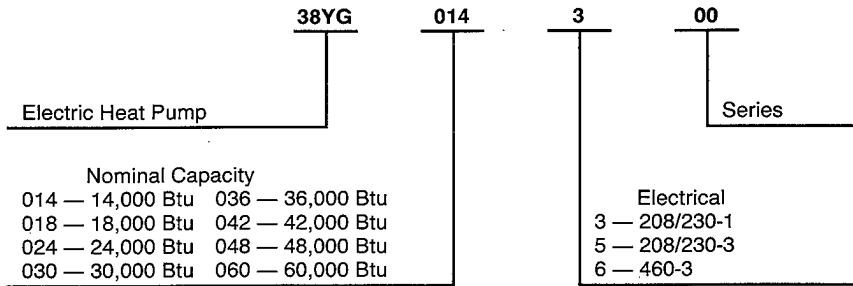
**External Service Valves —** Both service valves are brass, back seating type with sweat connections. Each valve has a service port for ease of checking operating refrigerant pressures.



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- |                                 |                                  |                               |
|---------------------------------|----------------------------------|-------------------------------|
| ① Weather Armor™ II Cabinet     | ⑦ Copper Tube/Aluminum Fin Coil  | ⑬ Heat-Pump-Tough Compressor  |
| ② High-Efficiency Fan Motor     | ⑧ Solid Brass Service Valves     | ⑭ Compressor Crankcase Heater |
| ③ Precision-Matched Fan         | ⑨ Accumulator                    | ⑮ Compressor Isolation Pads   |
| ④ Vertical Exhaust              | ⑩ Low-Pressure Switch            | ⑯ High-Relief Basepan         |
| ⑤ Heavy-Gauge Protective Grille | ⑪ Chronotemp II™ Defrost Control |                               |
| ⑥ Total Service Access          | ⑫ High-Precision Reversing Valve |                               |

# Model number nomenclature



## Physical data

MODEL 38YG	014-00	018-00	024-00	030-00	036-00	042-00	048-10	060-00		
REFRIGERANT Control Charge (lbs)	4.00	4.73	4.56	22 AccuRater™ (Bypass Type)		5.19	6.78	8.06	11.33	13.75
COND FAN Air Discharge Air Qty (Cfm)	1900			Propeller Type, Direct Drive Vertical		3000				
COND COIL Face Area (sq ft)	8.50			11.00	15.00	18.00	15.00	18.00		
CONNECT. (in. ID) Vapor Liquid	5/8		Sweat 3/4			3/8			7/8	
REFRIG TUBES* (in. OD) Vapor Liquid	5/8		3/4			3/8		7/8	1-1/8	

NOTE: See unit Installation Instructions for proper installation.

\*Tube sizes are for runs up to 50 ft.

For tube set over 50 ft, consult long line information.

## Accurater

Heat Pump Size	Outdoor Piston	Indoor* Piston
014-00	38	49
018-00	42	49
024-00	46	61
030-00	55	67
036-00	59	76
042-00	61	78
048-00	70	86
060-00	76	90

\*Piston listed is for any approved coil combination. Piston is shipped with the outdoor unit and must be installed.





# Dimensions

**NOTES:**

1. Allow two and one half feet (762) clearance to service end of unit, four feet (1219) above unit, six inches on one side (152), one foot (305) on remaining sides and two ft (610) between units for proper airflow.
2. Minimum outdoor operating ambient of 55 F for cooling mode (unless low Ambient Control is used). Maximum 125 F.
3. Maximum outdoor operating ambient of 66 F for heating mode.
4. Dimensions in parentheses are in millimeters.

**UNIT MOUNTING PATTERN**  
VIEW FROM TOP

A88147

UNIT SIZE	SERIES	OPERATING WGT (lbs)	A		B		C		D		E		F		G		H		J	
			(FT/IN.)	(mm)	(FT/IN.)	(mm)	(FT/IN.)	(mm)	(IN.)	(mm)	(IN.)	(mm)	(FT/IN.)	(mm)	(FT/IN.)	(mm)	(IN.)	(mm)	(IN.)	(mm)
014	00	150	2'-1-7/8"	656.4	1'-10-1/2"	571.5	2'-3-1/2"	699.0	2-3/4"	70.8	7"	175.8	1'-3-1/2"	392.4	1'-9-7/8"	555.4	5/8"	15.88	2-3/8"	59.9
018	00	152	2'-1-7/8"	656.4	1'-10-1/2"	571.5	2'-3-1/2"	699.0	2-3/4"	70.8	7"	175.8	1'-3-1/2"	392.4	1'-9-7/8"	555.4	5/8"	15.88	2-3/8"	59.9
024	00	156	2'-1-7/8"	656.4	1'-10-1/2"	571.5	2'-3-1/2"	699.0	2-3/4"	70.8	7"	175.8	1'-3-1/2"	392.4	1'-9-7/8"	555.4	3/4"	19.05	2-3/8"	59.9
030	00	182	2'-7-7/8"	808.8	1'-10-1/2"	571.5	2'-3-1/2"	699.0	2-3/4"	70.8	7"	175.8	1'-9-1/2"	544.8	2'-3-7/8"	707.8	3/4"	19.05	2-3/8"	59.9
036	00	225	2'-7-7/8"	808.8	2'-6"	762.0	2'-11"	886.7	4"	101.3	9-3/4"	247.2	1'-9-1/2"	544.8	2'-3-7/8"	707.8	3/4"	19.05	2-7/8"	73.7
042	00	239	3'-1-7/8"	961.2	2'-6"	762.0	2'-11"	886.7	4"	101.3	9-3/4"	247.2	2'-3-1/2"	697.2	2'-9-7/8"	860.0	7/8"	22.22	2-7/8"	73.7
048	10	270	2'-7-7/8"	808.8	2'-6"	762.0	2'-11"	886.7	4"	101.3	9-3/4"	247.2	1'-9-1/2"	544.8	2'-3-7/8"	707.8	7/8"	22.22	2-7/8"	73.7
060	00	290	3'-1-7/8"	961.2	2'-6"	762.0	2'-11"	886.7	4"	101.3	9-3/4"	247.2	2'-3-1/2"	697.2	2'-9-7/8"	860.0	7/8"	22.22	2-7/8"	73.7

# Accessories

ORDERING NUMBER	DESCRIPTION	ORDERING NUMBER	DESCRIPTION
313966-751	Time Guard™ II	HN67XZ210	Winter Start Control‡
Standard	PTC Start Assist (1Ø)	HH22UA025	Evaporator Freeze Thermostat‡
313965-761	Hard Start-Size 014 (1Ø)	314003-751	Defrost By-Pass Solenoid Kit-Sizes 018-060
313965-752	Hard Start-Sizes 018-024 (1Ø)	38YH900001	18" Snowstand-Sizes 014-030
313965-755	Hard Start-Sizes 030-042 (1Ø)	38YH900011	18" Snowstand-Sizes 036-060
313965-754	Hard Start-Size 048 (1Ø)	313076-751	Service Sentry†
313965-760	Hard Start-Size 060 (1Ø)	313074-751	Outdoor Thermostat
Standard	Low Pressure Switch	313074-752	Secondary Outdoor Thermostat
313079-751	High Pressure Switch	38YH900051	Optimizer II
Standard	Crankcase Heater	315175-75901	Bi-flow TXV (Hard Shutoff) Size 018
38TH900001	Indoor Fan Time Delay Relay	315175-75201	Bi-flow TXV (RPB) Size 018
312990-751	Sound Blanket-Size 014	315175-76001	Bi-flow TXV (Hard Shutoff) Size 024
312991-751	Sound Blanket-Sizes 018-024	315175-75301	Bi-flow TXV (RPB) Size 024
312994-751	Sound Blanket-Sizes 030-036	315175-76101	Bi-flow TXV (Hard Shutoff) Size 030
Standard	Sound Blanket-Size 042	315175-75401	Bi-flow TXV (RPB) Size 030
312997-751	Sound Blanket-Sizes 048-060	315175-76201	Bi-flow TXV (Hard Shutoff) Sizes 036-042
38TH900011	Support Feet—4 in. (4)	315175-75501	Bi-flow TXV (RPB) Sizes 036-042
32LT660004	Motormaster Control—208/230 V*	315175-76301	Bi-flow TXV (Hard Shutoff) Size 048
32LT660005	Motormaster Controller—460 V	315175-75601	Bi-flow TXV (RPB) Size 048
HC34GE231	Low Ambient Motor Sizes 024-030*‡	315175-76401	Bi-flow TXV (Hard Shutoff) Size 060
HC40GE230	Low Ambient Motor Sizes 036-060*‡	315175-75701	Bi-flow TXV (RPB) Size 060
HN61KK066	Isolation Relay‡		

\*Low Ambient motor required for all single phase units. Motor is standard on all three phase units.

†For indicator light function, thermostat specified must be used.

‡Consult low ambient Installation Instructions for application.

THERMOSTAT/SUBBASE PKG.	DESCRIPTION
HH07AT175	Thermostat—Auto/Manual—°F
HH07AT165	Thermostat—Auto/Manual—°C
HH93AZ195	Subbase-Manual
HH93AZ196	Subbase-Auto
HH07AE001	Night Setback (Includes thermostat and subbase)

## Electrical data

OUTDOOR UNIT 38YG	V/PH	OPER VOLTS*		COMPR		FAN	MCA	MIN WIRE SIZE	MAX LENGTH (FT)	MAX FUSE† OR HACR TYPE CKT BKR AMPS
		Max	Min	LRA	RLA	FLA				
014-300	208/230/1	253	187	43.0	9.4	0.8	12.6	14	58	20
018-300				52.0	9.1	0.8	12.2	14	65	20
024-300				71.0	13.5	0.8	17.7	14	65	30
030-300				82.0	16.8	0.8	21.8	12	80	35
036-300				106.0	21.8	1.4	28.7	10	95	50
042-300				127.0	21.1	1.4	27.8	10	100	45
048-310				135.0	29.6	1.4	38.4	8	110	60
060-300	142.0	30.8	1.4	39.9	8	110	60			
030-500	208/230/3	253	187	67.5	11.0	0.8	14.6	12	100	25
036-500				79.5	12.4	1.6	17.1	14	120	25
042-500				98.5	15.6	1.6	21.1	10	160	35
048-510				105.0	18.9	1.6	25.2	8	200	40
060-500				130.0	19.4	1.6	25.9	8	210	45
036-600	460/3	506	414	39.8	6.6	0.8	9.1	14	200	15
042-600				49.3	7.8	0.8	10.6	14	270	15
048-610				55.0	10.1	0.8	13.4	14	210	20
060-600				65.0	9.0	0.8	12.1	14	240	20

FLA —Full Load Amps

HACR—Heating, Air Conditioning, Refrigeration

LRA —Locked Rotor Amps

MCA —Minimum Circuit Amps

RLA —Rated Load Amps

\*Permissible limits of the voltage range at which unit will operate satisfactorily.

†Time-delay fuse.

NOTE: Control circuit is 24 v on all units and requires external power source.

If other than 60 C copper wire is used, size can be determined from unit ampacity given in above table and applicable table of National Electric Code. Wire size selected must have current capacity not less than that of copper wire specified and must not create a voltage drop between service panel and unit in excess of 2% of unit rated voltage. Must use copper wire from disconnect to unit.

## Performance data

OUTDOOR UNIT 38YG	APPROVED INDOOR UNIT	ARI STANDARD RATINGS*										Sound Bels
		Cfm	Cooling					Heating				
			TC	SEER		EER 3-ph	Hi-Temp		Lo-Temp		HSPF	
				With TDR	Without TDR		TC	COP	TC	COP		
014-00	28RD015	525	14,700	8.80	8.50	—	15,400	2.52	8,500	1.74	6.00	8.0
	28RD/RN018	525	14,700	8.80	8.50	—	15,400	2.52	8,500	1.74	6.00	8.0
	28RH018	525	14,700	8.80	8.50	—	15,400	2.52	8,500	1.74	6.00	8.0
	40DQ014	525	13,400	8.00	7.60	—	14,800	2.28	8,300	1.60	5.30	8.0
	40AQ018†	525	14,500	8.50	8.20	—	15,800	2.58	8,600	1.74	6.10	8.0
	40DQ018	525	14,500	8.50	8.00	—	15,500	2.48	8,600	1.70	5.80	8.0
	40RC018	525	14,700	8.50	8.00	—	15,800	2.58	8,700	1.74	6.00	8.0
018-00	28RD/RN018	675	17,000	8.20	8.00	—	17,600	2.56	9,700	1.76	5.80	7.8
	28RD/RN019	675	17,700	8.50	8.20	—	18,100	2.68	9,900	1.80	6.10	7.8
	28RH018	675	17,000	8.20	8.00	—	17,600	2.56	9,700	1.76	5.80	7.8
	28HQ024	675	17,500	8.30	8.10	—	18,200	2.72	9,900	1.80	6.10	7.8
	28RD/RN024	675	17,700	8.50	8.20	—	18,100	2.68	9,900	1.80	6.10	7.8
	28RH024	675	17,700	8.50	8.20	—	18,100	2.68	9,900	1.80	6.10	7.8
	28RM024	675	17,600	8.50	8.20	—	18,200	2.68	9,900	1.80	6.00	7.8
	40AQ018	675	16,600	8.00	7.70	—	18,100	2.62	9,900	1.76	6.00	7.8
	40DQ018	675	16,800	7.80	7.60	—	17,800	2.52	9,900	1.72	5.80	7.8
	40RC018	675	17,200	8.50	8.20	—	17,900	2.72	9,700	1.80	6.10	7.8
	40AQ024†	675	17,200	8.20	8.00	—	18,400	2.72	10,000	1.80	6.20	7.8
	40AQ025	675	17,900	8.50	8.20	—	18,500	2.80	10,100	1.80	6.30	7.8
	40DQ024	675	17,200	8.20	8.00	—	18,000	2.66	9,900	1.80	6.00	7.8
	40RC024	675	17,400	8.50	8.30	—	18,200	2.72	10,000	1.80	6.20	7.8
024-00	28HQ024	825	22,200	8.30	8.00	—	24,000	2.76	14,000	1.98	6.40	7.6
	28RD/RN024	900	22,800	8.30	8.00	—	24,400	2.74	14,100	2.00	6.40	7.6
	28RD/RN025	900	23,200	8.40	8.10	—	24,200	2.76	14,200	2.00	6.40	7.6
	28RH024	900	22,800	8.30	8.00	—	24,400	2.74	14,100	1.98	6.40	7.6
	28RM024	900	22,600	8.30	8.00	—	24,000	2.70	14,100	2.00	6.30	7.6
	28HQ030	900	23,000	8.30	8.00	—	24,600	2.86	14,300	2.00	6.50	7.6
	28RD030	900	23,800	8.50	8.20	—	24,600	2.84	14,400	2.04	6.60	7.6
	28RD/RN130	900	23,800	8.50	8.20	—	24,600	2.84	14,400	2.04	6.60	7.6
	28RH030	900	23,800	8.50	8.20	—	24,600	2.84	14,400	2.04	6.60	7.6
	28SL030	900	23,200	8.30	8.00	—	24,000	2.78	14,200	2.00	6.40	7.6
	40AQ024	850	21,400	7.90	7.70	—	24,400	2.76	14,200	1.98	6.30	7.6
	40AQ025	850	22,000	8.00	7.80	—	24,600	2.84	14,200	2.00	6.50	7.6
	40DQ024	900	22,000	8.00	7.70	—	23,800	2.70	14,100	1.98	6.30	7.6

# Performance data cont'd

OUTDOOR UNIT 38YG	APPROVED INDOOR UNIT	ARI STANDARD RATINGS*										Sound Bels
		Cfm	Cooling				Heating				HSPF	
			TC	SEER		EER 3-ph	Hi-Temp		Lo-Temp			
				With TDR	Without TDR		TC	COP	TC	COP		
024-00	40RC024	900	23,000	8.30	8.00	—	24,400	2.78	14,200	2.00	6.40	7.6
	40AQ030†	900	23,200	8.30	8.00	—	24,600	2.80	14,300	2.00	6.60	7.6
	40AQ031	900	24,000	8.50	8.20	—	24,800	2.94	14,400	2.06	6.70	7.6
	40DQ030	900	23,000	8.00	7.80	—	24,400	2.78	14,500	2.00	6.40	7.6
	40RC030	900	23,400	8.30	8.00	—	24,600	2.78	14,500	2.00	6.40	7.6
030-00	28HQ030	1025	27,600	8.30	8.00	7.35	29,600	2.76	18,200	2.10	6.50	8.0
	28RD030	1000	28,600	8.50	8.20	7.55	29,600	2.78	18,200	2.10	6.60	8.0
	28RD/RN130	1000	28,600	8.50	8.20	7.55	29,600	2.78	18,200	2.10	6.60	8.0
	28RH030	1000	28,600	8.50	8.20	7.55	29,600	2.78	18,200	2.10	6.60	8.0
	28SL030	1125	28,000	8.30	8.00	7.35	29,600	2.74	18,300	2.10	6.40	8.0
	28HQ/VQ036	1125	28,800	8.40	8.10	7.45	30,200	2.86	18,500	2.14	6.60	8.0
	28RD/RN036	1125	29,200	8.50	8.20	7.50	30,200	2.86	18,600	2.16	6.70	8.0
	28RD136	1125	29,200	8.50	8.20	7.50	30,200	2.86	18,600	2.16	6.70	8.0
	28RH036	1125	29,200	8.50	8.20	7.50	30,200	2.86	18,600	2.16	6.70	8.0
	28RM036	1125	28,200	8.40	8.10	7.40	30,200	2.86	18,600	2.16	6.70	8.0
	28SL036	1125	29,000	8.40	8.10	7.40	30,200	2.86	18,600	2.16	6.60	8.0
	40AQ030	1100	27,600	8.30	8.00	7.30	30,000	2.76	18,400	2.08	6.40	8.0
	40AQ031	1100	29,000	8.50	8.10	7.40	30,400	2.90	18,600	2.14	6.60	8.0
	40DQ030	1015	28,000	8.20	8.00	7.35	29,800	2.74	18,400	2.08	6.40	8.0
	40RC030	1125	28,400	8.30	8.00	7.35	30,000	2.76	18,600	2.08	6.50	8.0
	40AQ036†	1125	28,600	8.30	8.00	7.40	30,000	2.80	18,200	2.10	6.60	8.0
	036-00	28HQ/VQ036	1250	34,600	8.50	8.20	7.55	36,400	2.68	22,600	2.06	6.50
28RD/RN036		1200	35,200	8.70	8.50	7.80	36,400	2.68	22,600	2.08	6.60	8.4
28RD136		1200	35,200	8.70	8.50	7.80	36,400	2.68	22,600	2.08	6.60	8.4
28RH036		1200	35,200	8.70	8.50	7.80	36,400	2.68	22,600	2.08	6.60	8.4
28RM036		1300	34,200	8.50	8.20	7.55	36,000	2.58	22,600	2.00	6.30	8.4
28SL036		1350	35,200	8.60	8.30	7.60	36,800	2.70	23,000	2.08	6.40	8.4
28HQ/VQ042		1350	35,600	8.60	8.30	7.60	37,000	2.74	23,000	2.08	6.60	8.4
28RD/RN042		1350	35,200	8.60	8.30	7.65	36,800	2.68	23,000	2.08	6.60	8.4
28RD/RN142		1350	35,200	8.60	8.30	7.65	36,800	2.68	23,000	2.08	6.60	8.4
28RD/RN043		1350	36,400	8.80	8.50	7.80	36,800	2.80	23,000	2.10	6.70	8.4
28RD/RN143		1350	36,400	8.80	8.50	7.80	36,800	2.78	23,000	2.10	6.70	8.4
28RD/RN242		1350	36,000	8.80	8.50	7.80	36,600	2.70	22,800	2.10	6.60	8.4
28RH042		1350	35,200	8.60	8.30	7.65	36,000	2.68	23,000	2.08	6.60	8.4
28SL042		1350	35,600	8.60	8.30	7.65	36,800	2.68	23,000	2.08	6.50	8.4
40AQ036		1350	34,400	8.30	8.00	7.40	37,000	2.64	23,000	2.00	6.50	8.4
40QB/QH042†		1350	36,000	8.50	8.20	7.60	38,000	2.76	23,600	2.08	6.70	8.4
40QB/QH043		1350	36,400	8.60	8.30	7.65	38,000	2.78	23,400	2.10	6.70	8.4
042-00	28HQ/VQ042	1500	40,000	8.30	8.00	7.50	41,500	2.70	25,400	2.06	6.50	8.0
	28RD/RN042	1550	40,000	8.50	8.10	7.60	41,500	2.68	25,400	2.06	6.50	8.0
	28RD/RN142	1550	39,500	8.50	8.10	7.60	41,500	2.66	25,400	2.06	6.45	8.0
	28RD/RN043	1575	41,500	8.60	8.30	7.80	42,000	2.78	25,600	2.10	6.60	8.0
	28RD/RN143	1575	41,500	8.60	8.30	7.75	42,000	2.76	25,600	2.10	6.60	8.0
	28RD/RN242	1500	41,000	8.50	8.30	7.75	41,000	2.68	25,200	2.06	6.50	8.0
	28RH042	1550	40,000	8.50	8.10	7.60	41,500	2.68	25,400	2.06	6.50	8.0
	28SL042	1575	39,000	8.30	8.00	7.55	41,000	2.56	25,200	2.00	6.20	8.0
	28HQ/VQ048	1500	39,500	8.40	8.10	7.60	42,000	2.70	25,400	2.06	6.50	8.0
	28RD048	1575	40,500	8.50	8.20	7.65	42,500	2.78	25,800	2.10	6.60	8.0
	28RD/RN148	1575	40,500	8.50	8.20	7.70	42,500	2.78	25,800	2.10	6.60	8.0
	28RD049	1575	42,000	8.70	8.50	7.95	42,500	2.80	25,600	2.10	6.70	8.0
	28RD248	1575	41,500	8.70	8.40	7.90	42,000	2.74	25,400	2.08	6.60	8.0
	28RH048	1575	40,500	8.50	8.20	7.65	42,500	2.78	25,800	2.10	6.60	8.0
	28RM048	1575	40,500	8.40	8.10	7.60	41,500	2.72	25,600	2.08	6.50	8.0
	28SL049	1575	42,000	8.50	8.20	7.70	42,000	2.76	25,600	2.10	6.60	8.0
	40QB/QH042†	1575	40,500	8.30	8.00	7.60	43,000	2.78	26,200	2.06	6.60	8.0
40QB/QH043	1575	41,500	8.50	8.10	7.60	43,000	2.74	26,000	2.06	6.60	8.0	
40QB/QH048	1575	41,000	8.50	8.10	7.60	43,000	2.84	26,200	2.10	6.70	8.0	
40QB/QH049	1575	42,000	8.60	8.20	7.65	43,000	2.90	26,000	2.10	6.70	8.0	
048-10	28HQ/VQ048	1500	45,000	8.50	8.20	6.90	49,000	2.70	29,800	2.16	6.70	8.2
	28RD048	1800	46,500	8.70	8.40	7.10	50,500	2.80	30,800	2.20	6.85	8.2
	28RD/RN148	1800	46,500	8.70	8.40	7.10	50,500	2.80	30,800	2.20	6.85	8.2
	28RD049	1800	47,500	8.80	8.50	7.15	50,500	2.84	30,600	2.24	6.90	8.2
	28RD248	1600	47,000	8.80	8.50	7.15	49,000	2.74	29,800	2.18	6.70	8.2
	28RH048	1800	46,500	8.70	8.40	7.10	50,500	2.80	30,800	2.20	7.00	8.2
	28RM048	1600	46,000	8.70	8.40	7.05	49,000	2.70	30,000	2.16	6.85	8.2
	28SL049	1800	47,000	8.80	8.50	7.15	49,000	2.80	30,600	2.20	6.85	8.2
	28HQ/VQ060	1600	45,000	8.60	8.30	7.00	49,000	2.70	29,800	2.14	6.70	8.2
	28RD/RN057	1800	47,500	8.80	8.50	7.15	50,500	2.84	30,600	2.24	6.90	8.2
	28RD/RN060	1800	48,000	8.80	8.50	7.10	51,000	2.90	31,200	2.26	6.90	8.2
	28RD/RN061	1800	48,500	8.90	8.60	7.20	50,500	2.90	30,800	2.24	6.90	8.2
	28RH060	1800	47,500	8.80	8.50	7.15	50,500	2.84	30,600	2.24	6.90	8.2
	28SL061	1800	48,000	8.80	8.50	7.15	50,500	2.90	31,200	2.26	6.90	8.2

# Performance data cont'd

OUTDOOR UNIT 38YG	APPROVED INDOOR UNIT	ARI STANDARD RATINGS*										Sound Bels
		Cfm	Cooling				Heating				HSPF	
			TC	SEER		EER 3-ph	Hi-Temp		Lo-Temp			
				With TDR	Without TDR		TC	COP	TC	COP		
048-10	40QB/QH048†	1800	47,000	8.50	8.20	7.30	51,000	2.84	31,400	2.16	6.85	8.2
	40QB/QH049	1800	47,500	8.70	8.40	7.05	51,500	2.80	31,400	2.20	6.85	8.2
	40QB/QH060	1800	47,000	8.50	8.10	6.80	51,500	2.84	32,400	2.16	6.85	8.2
	40QB/QH062	1800	47,500	8.60	8.30	6.95	52,000	2.90	32,300	2.20	6.90	8.2
	40QB/QH063	1800	48,000	8.70	8.40	7.05	52,000	2.88	32,000	2.20	6.90	8.2
060-00	28HQ/VQ060	1600	54,500	8.50	8.10	7.85	58,000	2.78	36,000	2.30	6.60	8.2
	28RD/RN057	2000	55,500	8.50	8.20	7.95	58,000	2.80	36,800	2.30	6.60	8.2
	28RD/RN060	2050	57,500	8.60	8.30	8.00	59,000	2.90	37,600	2.36	6.70	8.2
	28RD/RN061	2050	57,500	8.70	8.40	8.15	59,000	2.88	37,200	2.36	6.70	8.2
	28RH060	2000	55,500	8.50	8.20	7.95	58,000	2.80	36,800	2.30	6.60	8.2
	28SL061	2000	58,000	8.70	8.40	8.15	59,000	2.88	37,200	2.36	6.70	8.2
	40QB/QH060	2050	56,000	8.00	7.80	7.55	60,500	2.88	39,000	2.26	6.60	8.2
	40QB/QH062†	2050	57,000	8.30	8.00	7.80	60,000	2.90	38,500	2.30	6.70	8.2
	40QB/QH063	2050	58,000	8.40	8.10	7.85	61,000	2.88	38,500	2.30	6.70	8.2

**COP** —Coefficient of Performance  
**EER** —Energy Efficiency Ratio  
**HSPF**—Heating Seasonal Performance Factory  
**SEER**—Seasonal Energy Efficiency Ratio  
**TC** —Total Capacity (Btuh)  
**TDR** —Time Delay Relay

\*Ratings are net values reflecting the effects of circulating fan heat. Supplemental electric heat is not included. Ratings are based on:  
**Cooling Standard:** 80 F db, 67 F wb indoor entering air temperature and 95 F db air entering outdoor unit.  
**Hi-Temp Heating Standard:** 70 F db indoor entering air temperature and 47 F db 43 F wb air entering outdoor unit.  
**Lo-Temp Heating Standard:** 70 F db indoor entering air temperature and 17 F db, 15 F wb air entering outdoor unit.  
 †Outdoor section/indoor section combination tested in accordance with DOE test procedures for heat pumps. Ratings for other combinations are determined under DOE computer simulation procedures.

## DETAILED COOLING CAPACITIES \*

Evaporator Air		CONDENSER ENTERING AIR TEMPERATURES F											
		85			95			105			115		
		CFM	E W B	Capacity MBtuht†		Total System KW**	Capacity MBtuht†		Total System KW**	Capacity MBtuht†		Total System KW**	Capacity MBtuht†
Total	Sens‡			Total	Sens‡		Total	Sens‡		Total	Sens‡		
<b>38YG014-00 Outdoor Section With 40AQ018 Indoor Section</b>													
470	72	16.7	8.23	1.80	15.8	7.88	1.91	14.8	7.53	2.03	13.8	7.17	2.14
	67	15.2	10.4	1.75	14.3	10.0	1.86	13.4	9.66	1.96	12.4	9.30	2.07
	62	13.8	12.5	1.70	12.9	12.1	1.81	12.1	11.6	1.91	11.3	11.2	2.01
	57	13.3	13.3	1.69	12.6	12.6	1.79	11.9	11.9	1.90	11.3	11.3	2.01
525	72	17.0	8.51	1.84	16.0	8.17	1.95	15.0	7.81	2.06	13.9	7.45	2.17
	67	15.4	10.9	1.79	14.5	10.5	1.89	13.5	10.2	2.00	12.6	9.80	2.10
	62	14.0	13.2	1.74	13.2	12.7	1.84	12.4	12.2	1.95	11.6	11.6	2.05
	57	13.7	13.7	1.73	13.0	13.0	1.84	12.3	12.3	1.94	11.6	11.6	2.05
850	72	18.1	10.1	2.03	17.0	9.73	2.13	15.8	9.39	2.26	14.7	9.04	2.37
	67	16.5	13.8	1.97	15.5	13.4	2.08	14.3	13.0	2.19	13.3	12.6	2.30
	62	15.5	15.5	1.94	14.6	14.6	2.05	13.9	13.9	2.17	13.3	13.3	2.30
	57	16.0	16.0	1.95	15.1	15.1	2.07	14.2	14.2	2.19	13.4	13.4	2.30

Multipliers for Determining the Performance With Other Indoor Sections

Indoor Section	Size	Cooling		Indoor Section	Size	Cooling	
		Capacity	Power			Capacity	Power
28RD	015	1.01	0.99	40DQ	014	0.92	0.99
28RD/RN	018	1.01	0.99		018	1.00	1.01
28RH	018	1.01	0.99	40RC	018	1.01	1.02
40AQ	018	1.00	1.00				

See notes on page 10.



**DETAILED COOLING CAPACITIES\***

Evaporator Air		CONDENSER ENTERING AIR TEMPERATURES F											
		85			95			105			115		
		CFM	E W B	Capacity MBtu/h†		Total System KW**	Capacity MBtu/h†		Total System KW**	Capacity MBtu/h†		Total System KW**	Capacity MBtu/h†
Total	Sens‡			Total	Sens‡	Total	Sens‡	Total	Sens‡	Total	Sens‡	Total	Sens‡
<b>38YG018-00 Outdoor Section With 40AQ024 Indoor Section</b>													
600	72	19.8	9.92	2.13	18.7	9.54	2.23	17.6	9.15	2.34	16.5	8.77	2.46
	67	18.0	12.7	2.05	17.0	12.3	2.15	15.9	11.8	2.25	14.9	11.4	2.36
	62	16.3	15.2	1.98	15.4	14.7	2.07	14.5	14.2	2.17	13.6	13.6	2.28
	57	15.9	15.9	1.96	15.1	15.1	2.06	14.4	14.4	2.16	13.6	13.6	2.28
675	72	20.0	10.3	2.18	19.0	9.92	2.28	17.8	9.53	2.39	16.7	9.15	2.50
	67	18.2	13.3	2.10	17.2	12.9	2.19	16.1	12.5	2.30	15.1	12.1	2.40
	62	16.6	16.1	2.02	15.7	15.5	2.12	14.8	14.8	2.23	14.1	14.1	2.34
	57	16.4	16.4	2.02	15.6	15.6	2.12	14.8	14.8	2.23	14.1	14.1	2.34
750	72	20.3	10.7	2.22	19.1	10.3	2.32	18.0	9.89	2.43	16.9	9.52	2.55
	67	18.5	14.0	2.14	17.4	13.6	2.23	16.3	13.2	2.34	15.2	12.7	2.45
	62	17.0	16.8	2.07	16.1	16.1	2.17	15.3	15.3	2.28	14.4	14.4	2.40
	57	16.9	16.9	2.07	16.1	16.1	2.17	15.3	15.3	2.28	14.4	14.4	2.40

Multipliers for Determining the Performance With Other Indoor Sections

Indoor Section	Size	Cooling		Indoor Section	Size	Cooling	
		Capacity	Power			Capacity	Power
28RD/RN	018	0.99	0.98	40AQ	018	0.97	0.99
	019	1.03	1.00		024	1.04	1.02
	024	1.03	1.00		025	1.00	1.00
28RH	018	0.99	0.98	40DQ	018	0.98	1.01
	024	1.03	1.00		024	1.00	1.00
28RM	024	1.02	1.00	40AQ	018	1.00	0.98
28HQ	024	1.02	1.00	024	1.01	1.01	

**38YG024-00 Outdoor Section With 40AQ030 Indoor Section**

800	72	26.7	13.2	3.04	25.2	12.7	3.21	23.6	12.1	3.37	22.0	11.5	3.54
	67	24.3	16.8	2.91	22.9	16.2	3.07	21.4	15.6	3.23	19.9	15.0	3.38
	62	22.1	20.2	2.80	20.8	19.5	2.95	19.5	18.8	3.10	18.3	18.0	3.25
	57	21.4	21.4	2.76	20.3	20.3	2.92	19.3	19.3	3.08	18.2	18.2	3.25
900	72	27.1	13.7	3.11	25.5	13.2	3.27	23.9	12.6	3.44	22.2	12.0	3.60
	67	24.7	17.6	2.98	23.2	17.1	3.14	21.7	16.5	3.29	20.1	15.9	3.45
	62	22.6	21.3	2.86	21.3	20.6	3.02	20.0	19.8	3.17	18.7	18.7	3.34
	57	22.1	22.1	2.84	21.0	21.0	3.01	19.9	19.9	3.17	18.7	18.7	3.34
1000	72	27.4	14.2	3.17	25.8	13.6	3.33	24.1	13.0	3.50	22.4	12.5	3.66
	67	25.0	18.5	3.04	23.5	17.9	3.20	21.9	17.3	3.35	20.3	16.7	3.51
	62	23.0	22.3	2.93	21.7	21.5	3.09	20.4	20.4	3.25	19.2	19.2	3.42
	57	22.8	22.8	2.92	21.6	21.6	3.09	20.4	20.4	3.25	19.2	19.2	3.42

Multipliers for Determining the Performance With Other Indoor Sections

Indoor Section	Size	Cooling		Indoor Section	Size	Cooling	
		Capacity	Power			Capacity	Power
28RD/RN	024	0.98	0.99	40AQ	024	0.92	0.97
	025	1.00	1.00		025	0.95	0.98
	130	1.03	1.01		030	1.00	1.00
28RD	030	1.03	1.01		031	1.03	1.03
28RH	024	0.98	0.99	40DQ	024	0.95	0.98
	030	1.03	1.01		030	0.99	1.03
28RM	024	0.97	0.99	40RC	024	0.99	0.99
28SL	030	1.00	1.00		030	1.01	1.03
28HQ	024	0.96	0.97	28HQ	030	0.99	1.00

**38YG030-00 Outdoor Section With 40AQ036 Indoor Section**

1000	72	32.9	16.5	3.70	30.9	15.8	3.95	29.0	15.1	4.18	27.0	14.4	4.42
	67	30.1	21.2	3.57	28.3	20.5	3.80	26.4	19.8	4.02	24.6	19.1	4.24
	62	27.6	25.7	3.44	25.9	24.9	3.66	24.3	23.9	3.88	22.8	22.8	4.11
	57	26.9	26.9	3.41	25.6	25.6	3.65	24.2	24.2	3.88	22.8	22.8	4.11
1125	72	33.3	17.1	3.78	31.3	16.4	4.03	29.3	15.7	4.27	27.2	15.0	4.50
	67	30.5	22.3	3.64	28.6	21.6	3.87	26.7	20.9	4.10	24.8	20.1	4.32
	62	28.1	27.1	3.53	26.4	26.1	3.75	24.9	24.9	3.98	23.4	23.4	4.22
	57	27.7	27.7	3.51	26.3	26.3	3.75	24.9	24.9	3.98	23.4	23.4	4.22
1250	72	33.6	17.7	3.86	31.5	17.0	4.10	29.5	16.3	4.34	27.4	15.6	4.57
	67	30.8	23.4	3.72	28.8	22.7	3.95	26.9	21.9	4.18	25.0	21.1	4.40
	62	28.5	28.2	3.61	27.0	27.0	3.84	25.4	25.4	4.08	23.9	23.9	4.32
	57	28.4	28.4	3.60	27.0	27.0	3.84	25.4	25.4	4.08	23.9	23.9	4.32

Multipliers for Determining the Performance With Other Indoor Sections

Indoor Section	Size	Cooling		Indoor Section	Size	Cooling	
		Capacity	Power			Capacity	Power
28HQ/VQ	036	1.01	0.99	28HQ	030	0.97	0.96
28RD	030	1.00	0.97	28SL	030	0.98	0.98
	136	1.02	1.00		036	1.01	0.99
28RD/RN	130	1.00	0.97	40AQ	030	0.97	0.98
	036	1.02	1.00		031	1.01	1.00
28RH	030	1.00	0.97		036	1.00	1.00
	036	1.02	1.00	40DQ	030	0.98	0.99
28RM	036	0.99	0.98	40RC	030	0.99	1.00

See notes on page 10.



**DETAILED COOLING CAPACITIES\***

Evaporator Air		CONDENSER ENTERING AIR TEMPERATURES F											
		85			95			105			115		
CFM	E W B	Capacity MBtu/h†		Total System KW**	Capacity MBtu/h†		Total System KW**	Capacity MBtu/h†		Total System KW**	Capacity MBtu/h†		Total System KW**
		Total	Sens‡		Total	Sens‡		Total	Sens‡		Total	Sens‡	
<b>38YG036-00 Outdoor Section With 40QB/QH042 Indoor Section</b>													
1200	72	41.4	20.6	4.47	39.0	19.8	4.77	36.7	18.9	5.06	34.3	18.1	5.34
	67	37.7	26.4	4.33	35.6	25.5	4.60	33.4	24.7	4.88	31.2	23.8	5.15
	62	34.5	31.9	4.19	32.5	30.9	4.46	30.6	29.9	4.73	28.7	28.6	5.00
	57	33.5	33.5	4.15	31.9	31.9	4.43	30.3	30.3	4.71	28.7	28.7	4.99
1350	72	42.0	21.4	4.57	39.5	20.5	4.87	37.1	19.7	5.16	34.6	18.8	5.45
	67	38.3	27.8	4.42	36.0	26.9	4.71	33.7	26.0	4.98	31.5	25.2	5.26
	62	35.1	33.7	4.30	33.2	32.6	4.57	31.2	31.2	4.84	29.5	29.5	5.13
	57	34.6	34.6	4.28	32.9	32.9	4.56	31.2	31.2	4.85	29.5	29.5	5.13
1500	72	42.3	22.2	4.67	39.8	21.3	4.97	37.3	20.4	5.26	34.8	19.6	5.24
	67	38.7	29.2	4.52	36.3	28.3	4.80	34.0	27.3	5.08	31.7	26.5	5.36
	62	35.7	35.2	4.40	33.8	33.8	4.68	32.0	32.0	4.97	30.2	30.2	5.26
	57	35.5	35.5	4.39	33.8	33.8	4.68	32.0	32.0	4.97	30.2	30.2	5.26

Multipliers for Determining the Performance With Other Indoor Sections

Indoor Section	Size	Cooling		Indoor Section	Size	Cooling		
		Capacity	Power			Capacity	Power	
28HQ/VQ	036	0.96	0.95	28RH	036	0.98	0.95	
	042	0.99	0.97		042	0.98	0.97	
28RD	136	0.98	0.95	28RM	036	0.95	0.95	
28RD/RN	036	0.98	0.95	28SL	036	0.98	0.97	
	042	0.98	0.97		042	0.99	0.97	
	142	0.98	0.97	40AQ	036	0.96	0.98	
	043	1.01	0.99		40QB/QH	042	1.00	1.00
	143	1.01	0.99			043	1.01	1.01
	242	1.00	0.98					

**38YG042-00 Outdoor Section With 40QB/QH042 Indoor Section**

1400	72	46.4	23.1	5.12	43.8	22.2	5.45	41.2	21.2	5.77	38.6	20.3	6.09
	67	42.4	29.5	4.94	40.0	28.6	5.25	37.5	27.6	5.56	35.1	26.6	5.87
	62	38.7	35.7	4.77	36.5	34.6	5.07	34.4	33.4	5.37	32.3	32.1	5.68
	57	37.6	37.6	4.72	35.8	35.8	5.04	34.0	34.0	5.35	32.2	32.2	5.67
1575	72	47.0	24.0	5.24	44.4	23.0	5.56	41.7	22.0	5.89	38.9	21.1	6.21
	67	43.0	31.1	5.05	40.5	30.1	5.36	38.0	29.1	5.68	35.4	28.1	5.98
	62	39.4	37.7	4.89	37.2	36.4	5.20	35.1	34.9	5.51	33.1	33.1	5.83
	57	38.8	38.8	4.86	36.9	36.9	5.18	35.0	35.0	5.51	33.1	33.1	5.83
1750	72	47.5	24.7	5.34	44.7	23.8	5.67	42.0	22.8	6.00	39.2	21.9	6.32
	67	43.4	32.5	5.16	40.9	31.5	5.47	38.3	30.5	5.78	35.7	29.5	6.09
	62	40.1	39.3	5.00	37.9	37.8	5.32	35.9	35.9	5.64	33.9	33.9	5.97
	57	39.8	39.8	5.00	37.9	37.9	5.32	35.9	35.9	5.64	33.9	33.9	5.97

Multipliers for Determining the Performance With Other Indoor Sections

Indoor Section	Size	Cooling		Indoor Section	Size	Cooling	
		Capacity	Power			Capacity	Power
28HQ/VQ	042	0.99	0.96	28RH	042	0.99	0.97
	048	0.98	0.97		048	1.00	0.98
28RD	048	1.00	0.98	28RM	048	1.00	0.98
	049	1.04	1.00		28SL	042	0.96
	248	1.02	0.99	049		1.04	0.99
28RD/RN	042	0.99	0.97	40QB/QH	042	1.00	1.00
	142	0.98	0.97		043	1.02	1.01
	043	1.02	0.99		048	1.01	1.00
	143	1.02	0.99		049	1.04	1.01
	242	1.01	0.98				
	148	1.00	0.98				

See notes on page 10.

**DETAILED COOLING CAPACITIES\***

Evaporator Air		CONDENSER ENTERING AIR TEMPERATURES F											
		85			95			105			115		
CFM	E W B	Capacity MBtuht†		Total System KW**	Capacity MBtuht†		Total System KW**	Capacity MBtuht†		Total System KW**	Capacity MBtuht†		Total System KW**
		Total	Sens‡		Total	Sens‡		Total	Sens‡		Total	Sens‡	

**38YG048-10 Outdoor Section With 40QB/QH048 Indoor Section**

1600	72	53.6	26.3	5.82	50.7	25.2	6.15	47.4	24.1	6.47	44.6	22.9	6.77
	67	49.1	33.4	5.63	46.3	32.3	5.94	43.6	31.2	6.24	40.8	30.0	6.52
	62	44.8	40.4	5.44	42.3	39.1	5.74	39.8	37.8	6.02	37.3	36.4	6.30
	57	43.1	43.1	5.37	41.1	41.1	5.68	39.1	39.1	5.98	37.0	37.0	6.28
1800	72	54.4	27.2	5.96	51.3	26.1	6.28	48.2	25.0	6.60	45.0	23.8	6.90
	67	49.8	35.1	5.76	47.0	33.9	6.07	44.1	32.8	6.38	41.2	31.7	6.67
	62	45.6	42.6	5.58	43.1	41.2	5.88	40.6	39.8	6.17	38.1	38.0	6.46
	57	44.5	44.5	5.53	42.4	42.4	5.85	40.3	40.3	6.16	38.1	38.1	6.46
2000	72	54.9	28.0	6.08	51.8	26.9	6.40	48.6	25.8	6.73	45.3	24.6	7.02
	67	50.4	36.7	5.89	47.5	35.5	6.20	44.5	34.3	6.50	41.5	33.1	6.79
	62	46.3	44.6	5.71	43.8	43.0	6.02	41.3	41.3	6.32	39.0	39.0	6.63
	57	45.7	45.7	5.69	43.5	43.5	6.01	41.3	41.3	6.32	39.0	39.0	6.62

**Multipliers for Determining the Performance With Other Indoor Sections**

Indoor Section	Size	Cooling		Indoor Section	Size	Cooling	
		Capacity	Power			Capacity	Power
28HQ/VQ	048	0.96	0.94	28RM	048	0.98	0.95
	060	0.96	0.94		28SL	049	1.00
28RD	048	0.99	0.97	40QB/QH		061	1.02
	049	1.01	0.98		048	1.01	1.02
	248	1.00	0.96		049	1.00	1.00
28RD/RN	148	0.99	0.97		060	1.00	1.05
	057	1.01	0.98		062	1.01	1.03
	060	1.02	0.99		063	1.02	1.04
28RH	061	1.03	1.00				
	048	0.99	0.97				
	060	1.01	0.98				

**38YG060-00 Outdoor Section With 40QB/QH062 Indoor Section**

1800	72	65.1	32.2	7.01	61.5	30.9	7.39	57.8	29.5	7.74	54.1	28.2	8.10
	67	59.6	41.4	6.76	56.2	40.0	7.12	52.9	38.6	7.45	49.6	37.3	7.79
	62	54.5	50.1	6.52	51.6	48.6	6.87	48.6	47.1	7.21	45.7	54.3	7.53
	57	53.0	53.0	6.46	50.6	50.6	6.82	48.1	48.1	7.17	45.6	45.6	7.52
2000	72	65.7	33.3	7.15	62.0	31.9	7.53	58.3	30.5	7.89	54.5	29.3	8.25
	67	60.3	43.3	6.91	56.9	42.0	7.26	53.4	40.6	7.61	50.0	39.2	7.95
	62	55.4	52.7	6.68	52.5	51.1	7.04	49.5	49.2	7.38	46.7	46.7	7.72
	57	54.6	54.6	6.64	52.0	52.0	7.01	49.4	49.4	7.37	46.8	46.8	7.72
2200	72	66.2	34.3	7.29	62.5	32.9	7.67	58.6	31.5	8.03	54.8	30.2	8.38
	67	60.9	45.2	7.04	57.4	43.8	7.41	53.8	42.4	7.75	50.4	41.0	8.08
	62	56.3	55.0	6.83	53.3	53.0	7.19	50.5	50.5	7.55	47.7	47.7	7.91
	57	55.9	55.9	6.82	53.2	53.2	7.19	50.5	50.5	7.55	47.7	47.7	7.91

**Multipliers for Determining the Performance With Other Indoor Sections**

Indoor Section	Size	Cooling		Indoor Section	Size	Cooling	
		Capacity	Power			Capacity	Power
28HQ/VQ	060	0.96	0.91	28SL	061	1.02	0.97
28RD/RN	057	0.97	0.95	40QB/QH	060	0.98	1.02
	060	1.01	0.96		062	1.02	1.01
	061	1.01	0.97		063	1.00	1.00
28RH	060	0.97	0.95				

\*Detailed cooling capacities are based on indoor and outdoor unit at the same elevation and connected by 25 ft of tubing. If other than 25 ft of tubing is used and/or indoor unit is located above outdoor unit, a slight variation in capacity may occur.

†Total and sensible capacities are net capacities. Blower motor heat has been subtracted.

‡Sensible capacities shown are based on 80 F entering air at the indoor coil. For sensible capacities at other than 80 F, deduct 835 Btu per 1000 Cfm of indoor coil air for each degree below 80 F, or add 835 Btu per 1000 Cfm of indoor coil air per degree above 80 F.

\*\*System KW is total of indoor and outdoor unit KW's.

EWB = Entering Wet Bulb.

## HEAT PUMP HEATING PERFORMANCE

38YG014-00/ 40AQ018	Indoor Coil Airflow Cfm * 525	EDB 70°	OUTDOOR COIL ENTERING AIR TEMPERATURE F							
			- 3	7	17	27	37	47	57	67
Instantaneous Capacity (MBtuh)			5.17	6.79	8.60	10.7	13.1	15.8	19.0	22.6
Integrated Capacity (MBtuh)†			4.76	6.24	7.84	9.48	11.9	15.8	19.0	22.6
Total Power Input (KW)‡			1.29	1.39	1.49	1.59	1.70	1.82	1.98	2.15

Multipliers for Determining the Performance With Other Indoor Sections

Indoor Section	Size	Heating		Indoor Section	Size	Heating	
		Capacity	Power			Capacity	Power
28RD	015	0.97	1.00	40DQ	014	0.94	1.06
28RD/RN	018	0.97	1.00		018	0.98	1.02
28RH	018	0.97	1.00		40RC	018	1.00
40AQ	018	1.00	1.00				

38YG018-00/ 40AQ024	Indoor Coil Airflow Cfm * 675	EDB 70°	OUTDOOR COIL ENTERING AIR TEMPERATURE F							
			- 3	7	17	27	37	47	57	67
Instantaneous Capacity (MBtuh)			5.65	7.78	10.0	12.5	15.3	18.4	22.4	26.6
Integrated Capacity (MBtuh)†			5.20	7.15	9.12	11.1	13.9	18.4	22.4	26.6
Total Power Input (KW)‡			1.40	1.51	1.63	1.74	1.86	1.99	2.17	2.37

Multipliers for Determining the Performance With Other Indoor Sections

Indoor Section	Size	Heating		Indoor Section	Size	Heating	
		Capacity	Power			Capacity	Power
28RD/RN	018	0.96	1.02	40AQ	018	0.98	1.02
	019	0.98	1.00		024	1.01	0.98
	024	0.98	1.00		025	1.00	1.00
28RH	018	0.96	1.02	40DQ	018	0.97	1.04
	024	0.98	1.00		024	0.98	1.00
28RM	024	0.99	1.00	40RC	018	0.97	0.97
28HQ	024	0.99	0.99		024	0.99	0.99

38YG024-00/ 40AQ030	Indoor Coil Airflow Cfm * 900	EDB 70°	OUTDOOR COIL ENTERING AIR TEMPERATURE F							
			- 3	7	17	27	37	47	57	67
Instantaneous Capacity (MBtuh)			9.28	11.6	14.3	17.2	20.5	24.6	29.8	35.1
Integrated Capacity (MBtuh)†			8.53	10.7	13.0	15.3	18.7	24.6	29.8	35.1
Total Power Input (KW)‡			1.79	1.94	2.09	2.24	2.40	2.60	2.86	3.15

Multipliers for Determining the Performance With Other Indoor Sections

Indoor Section	Size	Heating		Indoor Section	Size	Heating	
		Capacity	Power			Capacity	Power
28RD/RN	024	0.99	1.01	40AQ	024	0.99	1.01
	025	0.98	1.00		025	1.00	0.99
	130	1.00	0.99		030	1.00	1.00
28RD	030	1.00	0.99		031	1.01	0.96
28RH	024	0.99	1.01	40DQ	024	0.97	1.00
	030	1.00	0.99		030	0.99	1.00
28RM	024	0.98	1.01	40RC	024	0.99	1.00
28SL	030	0.98	0.98		030	1.00	1.01
28HQ	024	0.98	0.99				
	030	1.00	0.98				

See notes on page 13.

## HEAT PUMP HEATING PERFORMANCE

38YG030-00/ 40AQ036	Indoor Coil Airflow Cfm* 1125	EDB 70°	OUTDOOR COIL ENTERING AIR TEMPERATURE F							
			- 3	7	17	27	37	47	57	67
Instantaneous Capacity (MBtuh)			12.4	15.2	18.2	21.6	25.3	30.0	35.8	41.8
Integrated Capacity (MBtuh)†			11.4	14.0	16.6	19.2	23.0	30.0	35.8	41.8
Total Power Input (KW)‡			2.27	2.43	2.60	2.78	2.97	3.21	3.51	3.85

Multipliers for Determining the Performance With Other Indoor Sections

Indoor Section	Size	Heating		Indoor Section	Size	Heating	
		Capacity	Power			Capacity	Power
28HQ/VQ	036	1.01	0.99	28SL	030	0.99	1.01
28RD	030	0.99	0.99		036	1.01	0.99
		136	1.01	0.99	28HQ	030	0.99
28RD/RN	130	0.99	0.99	40AQ	030	1.00	1.01
	036	1.01	0.99		031	1.01	0.98
28RH	030	0.99	0.99		036	1.00	1.00
	036	1.01	0.99	40DQ	030	0.99	1.02
28RM	036	0.99	1.01	40RC	030	1.00	1.01

38YG036-00/ 40QB/QH042	Indoor Coil Airflow Cfm* 1350	EDB 70°	OUTDOOR COIL ENTERING AIR TEMPERATURE F							
			- 3	7	17	27	37	47	57	67
Instantaneous Capacity (MBtuh)			16.2	19.8	23.6	22.8	32.5	38.0	45.1	52.4
Integrated Capacity (MBtuh)†			14.9	18.2	21.5	24.7	29.5	38.0	45.1	52.4
Total Power Input (KW)‡			2.86	3.08	3.32	3.56	3.82	4.12	4.54	5.00

Multipliers for Determining the Performance With Other Indoor Sections

Indoor Section	Size	Heating		Indoor Section	Size	Heating		
		Capacity	Power			Capacity	Power	
28HQ/VQ	036	0.96	0.99	28RH	036	0.96	0.99	
	042	0.97	0.98		042	0.97	1.00	
28RD	136	0.96	0.99	28RM	036	0.95	1.01	
28RD/RN	036	0.96	0.99	28SL	036	0.97	0.99	
	042	0.97	1.00		042	0.97	1.00	
	142	0.97	1.00	40AQ	036	0.97	1.02	
	043	0.97	0.95		40QB/QH	042	1.00	1.00
	143	0.97	0.96			043	1.00	0.99
	242	0.96	0.98					

38YG042-00/ 40QB/QH042	Indoor Coil Airflow Cfm* 1575	EDB 70°	OUTDOOR COIL ENTERING AIR TEMPERATURE F							
			- 3	7	17	27	37	47	57	67
Instantaneous Capacity (MBtuh)			17.9	21.8	26.2	31.0	36.4	43.0	51.3	59.9
Integrated Capacity (MBtuh)†			16.5	20.1	23.9	27.6	33.1	43.0	51.3	59.9
Total Power Input (KW)‡			3.18	3.44	3.70	3.98	4.28	4.64	5.13	5.69

Multipliers for Determining the Performance With Other Indoor Sections

Indoor Section	Size	Heating		Indoor Section	Size	Heating	
		Capacity	Power			Capacity	Power
28HQ/VQ	042	0.97	0.99	28RH	042	0.97	1.00
	048	0.98	1.01		048	0.99	0.99
28RD	048	0.99	0.99	28RM	048	0.97	0.99
	049	0.99	0.98	28SL	042	0.95	1.04
	248	0.98	0.99		049	0.98	0.98
28RD/RN	042	0.97	1.00	40QB/QH	042	1.00	1.00
	142	0.97	1.01		043	1.00	1.01
	043	0.98	0.98		048	1.00	0.98
	143	0.98	0.98		049	1.00	0.99
	242	0.95	0.99				
	148	0.99	0.99				

See notes on page 13.



## HEAT PUMP HEATING PERFORMANCE

38YG048-10/ 40QB/QH048	Indoor Coil Airflow Cfm * 1800	EDB 70°	OUTDOOR COIL ENTERING AIR TEMPERATURE F							
			- 3	7	17	27	37	47	57	67
<b>Instantaneous Capacity (MBtuh)</b>			21.4	26.3	31.4	36.9	43.2	51.0	60.3	69.8
<b>Integrated Capacity (MBtuh)†</b>			19.7	24.2	28.6	32.8	39.3	51.0	60.3	69.8
<b>Total Power Input (KW)‡</b>			3.68	3.97	4.26	4.55	4.87	5.26	5.75	6.29

Multipliers for Determining the Performance With Other Indoor Sections

Indoor Section	Size	Heating		Indoor Section	Size	Heating		
		Capacity	Power			Capacity	Power	
28HQ/VQ	048	0.96	1.01	28RM	048	0.96	1.01	
	060	0.96	1.01		049	0.96	0.97	
28RD	048	0.99	1.00	28SL	061	0.99	0.97	
	049	0.99	0.99		40QB/QH	048	1.01	1.02
	048	0.96	1.00			049	1.00	1.00
28RD/RN	148	0.99	1.00	40QB/QH	060	1.01	1.01	
	057	0.99	0.99		062	1.02	1.00	
	060	1.00	0.98		40QB/QH	063	1.02	1.01
	061	0.99	0.97					
28RH	048	0.99	1.00					
	060	0.99	0.99					

38YG060-00/ 40QB/QH062	Indoor Coil Airflow Cfm * 2000	EDB 70°	OUTDOOR COIL ENTERING AIR TEMPERATURE F							
			- 3	7	17	27	37	47	57	67
<b>Instantaneous Capacity (MBtuh)</b>			27.0	32.7	38.4	44.2	51.3	59.8	69.9	79.9
<b>Integrated Capacity (MBtuh)†</b>			24.8	30.0	35.0	39.3	46.7	59.8	69.9	79.9
<b>Total Power Input (KW)‡</b>			4.23	4.56	4.89	5.22	5.60	6.05	6.62	7.24

Multipliers for Determining the Performance With Other Indoor Sections

Indoor Section	Size	Heating		Indoor Section	Size	Heating	
		Capacity	Power			Capacity	Power
28HQ/VQ	060	0.97	1.01	28SL	061	0.98	0.99
28RD/RN	057	0.97	1.00	40QB/QH	060	1.01	1.02
	060	0.98	0.98		062	1.02	1.02
	061	0.98	0.99		063	1.00	1.00
28RH	060	0.97	1.00				

\*See the Heating Performance Correction Factors Table for Cfm and indoor coil entering air temperature adjustments.

†The Btuh heating capacity values shown are net "integrated" values from which the defrost effect has been subtracted. The Btuh heating from supplement heaters should be added to those values to obtain total system capacity.

‡The KW values include the compressor, outdoor fan motor, and indoor blower motor. The KW from supplement heaters should be added to these values to obtain total system KW.

EDB = Entering Dry Bulb

### HEATING PERFORMANCE CORRECTION FACTORS

Indoor Coil Cfm per 12,000 Btuh of ARI Cooling Capacity	Correction Factors	
	Capacity	Power
400	0.99	1.01
450	1.00	1.00
500	1.01	0.99
Indoor Coil Entering Air Temp F (DB)		
65	1.01	0.97
70	1.00	1.00
75	0.99	1.03

## System Design

1. Intended for outdoor installation with free air inlet and outlet. Outdoor fan external static pressure available is less than 0.01 ins. water column.
2. Minimum outdoor operating air temperature for cooling mode without low ambient operation accessory is 55 F (12.8 C).
3. Maximum outdoor operating air temperature for cooling mode is 125 F (51.7 C).
4. Maximum outdoor operating air temperature for heating mode is 66 F (18.9 C).
5. For reliable operation, unit should be level in all horizontal planes.
6. Maximum elevation of indoor coil above or below base of outdoor unit is: indoor coil above = 50 ft. Indoor coil below = 150 ft. (See items 7 and 8 following.)
7. For inter-connecting refrigerant tube lengths greater than 50 ft, consult long tube application bulletin available from equipment distributor.
8. Not more than 3 ft of refrigerant tube should be buried in the ground. If necessary to bury tubes under a sidewalk, provide a minimum 6-in. vertical rise to the valve connections at the unit.
9. Use only copper wire for electric connection at unit. Aluminum and clad aluminum are not acceptable for the type of connector provided.
10. Mixmatches of indoor coil capacity more than one size larger than outdoor unit capacity may result in inadequate indoor comfort.

