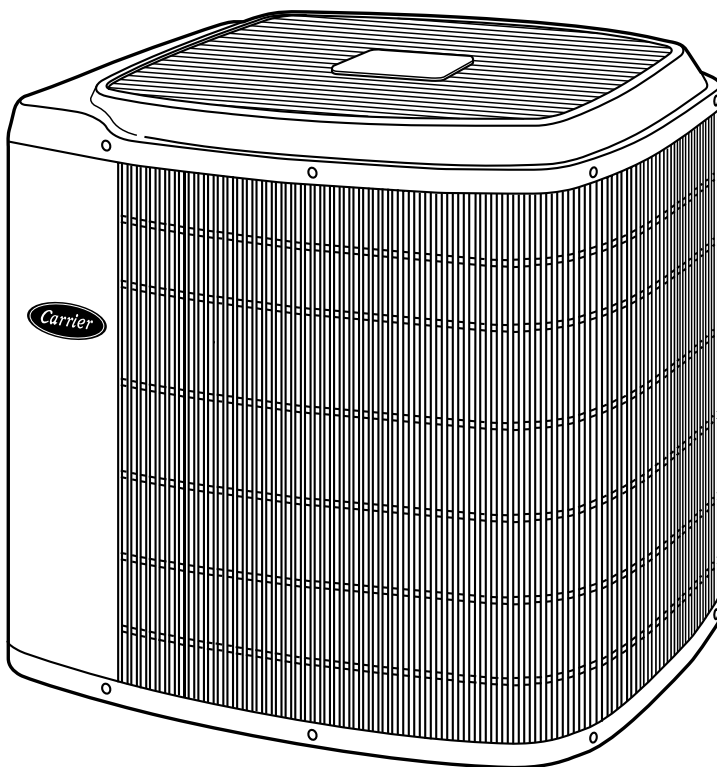




Product Data

38TUA 50 Hz Air Conditioner

Sizes 024 thru 060



Model 38TUA 50 Hertz Air Conditioner incorporates innovative technology to provide quiet, reliable summer cooling performance. Built into these units are the features most desired by consumers today, including EER ratings of up to 10.5 when used with specified Carrier equipment.

The Tech 2000 Silencer System features the Silencer System design, energy-efficient fan and motor, advanced sound hood, and isolator plate.

The Silencer Top improves airflow pattern requiring less energy.

Energy-Efficient Fan and Fan Motor adds to quiet operation while moving air more efficiently.

Sound Hood muffles noise from operation.

Isolator Plate eliminates compressor vibration transmission to base pan ensuring quiet operation.

FEATURES/BENEFITS

Electrical Range — 024 size units are offered in 230v single phase and sizes 036, 048 and 060 are offered in 400v three phase.

Wide Range of Sizes — Available in nominal sizes 024, 036, 048, and 060 to meet the needs of residential and light commercial applications.

WeatherArmor III System is a three component system — The casing steel is galvanized and coated with a layer of zinc phosphate. A modified polyester powder coating is then applied and baked on, providing each unit with a hard, smooth finish that will last for many years.

The screws on the cabinet exterior are SermaGuard™ coated for a long lasting, rust-resistant, quality appearance.

The coil is protected with an enhanced coil guard. With spacing of 3/8 in. and construction of coated 12 gage wire, the guard helps to protect from inclement weather (hail), vandalism, and incidental damage.

Totally Enclosed Fan Motor — Means greater reliability under adverse weather conditions and dependable performance for many years. The permanent-split-capacitor type motor was designed for optimum efficiency. The motor was tested and qualified under extreme conditions to ensure the greatest reliability.

Unit Design — Copper tube and enhanced aluminum fin coil are designed for optimum heat transfer. Vertical air discharge carries sound and hot condenser air up and away from adjacent patio areas and foliage. Heat pump style drain pan allows for easy removal of water, dirt and leaves.

Application Versatility — The 38TUA can be combined with a wide variety of evaporator coils and blower packages to provide quiet, dependable comfort. Unit can be installed on a roof or at ground level.

External Service Valves — Both service valves are brass, back seating type with sweat connections. Valves are externally located so refrigerant tube connections can be made quickly and easily. Each valve has a service port for ease of checking operating refrigerant pressures.

Easy Serviceability — One access panel provides access to electrical control box and compressor. Removal of wire dome gives access to fan motor and removal of the top gives access to the coil. All models are equipped with a compressor terminal plug.

Pressure Switches — All units are equipped with high and low pressure switches.

Additional Compressor Protection— Each compressor is protected with internal temperature- and current-sensitive overloads.

Safety — All units are designed and manufactured in accordance with Underwriters Laboratories (UL 1995) safety standard for heating and cooling equipment.

Standard Features — All units are equipped with the Tech 2000 Silencer System consisting of energy efficient fan and motor, advanced sound hood, and compressor vibration isolator plate. Units are also equipped with high- and low-pressure switches and a crankcase heater.

3-Phase Monitor Board — Control board that monitors the electrical phase and prevents operation if wired incorrectly.

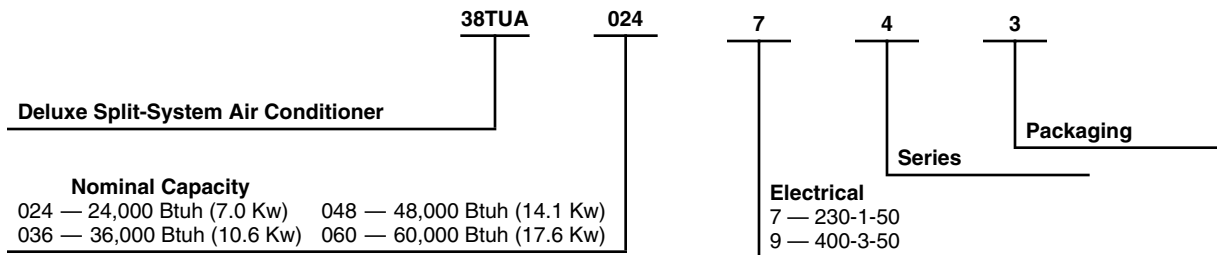
Quality Assurance



APPROVALS
ISO 9001
EN 29001
BS 5750 PART 1
ANSI/ASQC Q91

REGISTERED QUALITY SYSTEM

Model number nomenclature



System Design

1. Intended for outdoor installation with free air inlet and outlet. Outdoor fan external static pressure available is less than 0.01-in. wg.
2. Minimum outdoor operating air temperature without low-ambient operation accessory is 55°F (12.8°C).
3. Maximum outdoor operating air temperature is 125°F (51.7°C).
4. For reliable operation, unit should be level in all horizontal planes.
5. Maximum elevation of indoor coil above or below base of outdoor unit is: indoor coil above = 50 ft (15.24m), indoor coil below = 150 ft (45.72m).
6. For interconnecting refrigerant tube lengths greater than 50 ft (15.24m) or 20 ft (6.1m) vertical differential, consult the Residential Split-System Long-Line Application Guideline available from equipment distributor.
7. Crankcase heater required when interconnecting refrigerant tube length exceeds 50 ft (15.24m).
8. If any refrigerant tubing is buried, provide a minimum 6 in. (152mm) vertical rise to the valve connections at the unit. Refrigerant tubing lengths up to 36 in. (912mm) may be buried without further consideration. For buried lines longer than 3 ft (912mm), consult your local distributor.
9. Use only copper wire for electric connection at unit. Aluminum and clad aluminum are not acceptable for the type of connector provided.
10. Mix-matches of indoor coil capacity more than 1 size larger than outdoor unit capacity may result in inadequate indoor comfort.
11. Do not apply capillary tube indoor coils to these units.

Physical data

UNIT SIZE	024-74, 75	036-95	048-95, 96	060-95, 96
OPERATING WEIGHT (Lb/kg)	140 / 63.5	235 / 106.6	254 / 115.2	302 / 137.0
COMPRESSOR Manufacturer Type	Copeland Scroll			
REFRIGERANT Control Charge (Lb/kg) @ 15 ft (4.57m)	3.71 / 1.68	5.13 / 2.33	6.25 / 2.83	10.88 / 4.93
CONDENSER FAN Air Discharge Air Qty (CFM / l/s) Motor HP Motor RPM (50 Hz)	1400 / 660 1/10 850	2750 / 1300 1/4 900	2750 / 1300 1/4 900	2750 / 1300 1/4 900
CONDENSER COIL Face Area (Sq Ft/m ²) Fins per In./Fins per cm Rows Circuits	8.7 / 0.81 25 / 10 1 2	12.0 / 1.11 25 / 10 1 3	15.2 / 1.41 25 / 10 1 4	18.3 / 1.70 20 / 8 2 6
CONNECTION (In./mm ID) Vapor Liquid	5/8 / 15.875	3/4 / 19.05	Sweat 7/8 / 22.225 3/8 / 9.525	7/8 / 22.225
REFRIGERANT TUBES* (In./mm OD) Vapor (0-50 Ft/0-15.24m Tube Length) Vapor (Max Diameter for Long-Line Applications) Liquid (0-50 Ft/0-15.24m Tube Length) Liquid (For Long-Line Applications)	5/8 / 15.875 3/4 / 19.05	3/4 / 19.05 7/8 / 22.225	7/8 / 22.225 1-1/8 / 28.575 3/8 / 9.525 3/8 / 9.525	1-1/8 / 28.575 1-1/8 / 28.575

* Tube sizes are for lengths up to 50 ft (15.24m). For lengths over 50 ft (15.24m) or 20 ft (6.1m) vertical differential, consult Residential Split System Long-Line Application Guideline.

NOTE: See unit Installation Instructions for proper installation.

ACCURATER® PISTON CHART

UNIT SIZE-SERIES	PISTON* IDENTIFICATION NO.
024-74, 75	61
036-95	76
048-95, 96	90
060-95, 96	98

* Piston listed is for any approved non-capillary tube coil combination. Piston is shipped with outdoor unit and must be installed in approved indoor coil.

CHARGING SUBCOOLING (TXV-TYPE EXPANSION DEVICE)

UNIT SIZE-SERIES	REQUIRED SUBCOOLING (°F / °C)
024-74, 75	13 / 7.2
036-95	14 / 7.8
048-95, 96	14 / 7.8
060-95, 96	15 / 8.3

Accessories

ORDERING NUMBER	DESCRIPTION
KAATD0101TDR	Time-Delay Relay — All Sizes
KSACY0101AAA	Cycle Protector— All Sizes
KSALA0201R22	Low-Ambient Pressure Switch — All Sizes
32LT660004 (RCD)	MotorMaster® Control — Sizes 024
32LT660005 (RCD)	MotorMaster® Control — Sizes 036–060
KAFT0101AAA*	Evaporator Freeze Thermostat — All Sizes
KAAWS0101AAA*	Winter Start Control — All Sizes
KSAHS1501AAA	Start Assist — Capacitor and Relay — Size 024
KAACS0201PTC	Start Assist — PTC — Size 024
KAATX0301RPB	TXV Kit (RPB) — Size 024
KAATX0501RPB	TXV Kit (RPB) — Size 036
KAATX0601RPB	TXV Kit (RPB) — Size 048
KAATX0701RPB	TXV Kit (RPB) — Size 060
KSATX0601HSO	TXV Kit (Hard Shutoff) — Sizes 024, 036
KSATX0701HSO	TXV Kit (Hard Shutoff) — Sizes 048, 060
KH45LD065	Filter Drier — Sizes 024, 036 (94)
KH43LE062	Filter Drier — Sizes 048, 060
KAALS0101LLS	Liquid-Line Solenoid Valve — All Sizes
KSASF0101AAA	Support Feet — All Sizes
KAACF0601SML	Coastal Filter — Size 024
KAACF0201MED	Coastal Filter — Sizes 036–060

* Use with low-ambient controller.

THERMOSTAT	DESCRIPTION
TSTATCCNAC01-B	Thermostat — Auto Changeover, Non-Programmable, °F/°C, 1-Stage Heat, 1-Stage Cool
TSTATCCPAC01-B	Thermostat — Auto Changeover, 7-Day Programmable, °F/°C, 1-Stage Heat, 1-Stage Cool
TSTATCCPRH01-B	Thermostat™ Control — Programmable/Non-Programmable Thermostat with Humidity Control
TSTATCCBAC01-B	Builder's Thermostat — Manual Changeover, Non-Programmable, °F/°C, 1-Stage Heat, 1-Stage Cool
TSTATCCSAC01	Thermostat, Manual Changeover, 5-2 Day Programmable, °F/°C, 1-Stage Heat/1-Stage Cool, 50/60 Hz, 24 Vac
TSTATXXSEN01-B	Outdoor Air Temperature Sensor
TSTATXXNBP01	Backplate for Non-Programmable Thermostat
TSTATXXPBP01	Backplate for Programmable Thermostat
TSTATXXBBP01	Backplate for Builder's Thermostat
TSTATXXSBP01	Backplate for Standard Programmable Thermostat
TSTATXXCNV01	Thermostat Conversion Kit (4 to 5 Wire) — Pack of 10

Accessory usage guideline

ACCESSORY	REQUIRED FOR LOW-AMBIENT APPLICATIONS (Below 55°F)	REQUIRED FOR LONG-LINE APPLICATIONS* (Over 50 Ft)	REQUIRED FOR SEA COAST APPLICATIONS (Within 2 Miles)
Crankcase Heater	Yes	Yes	No
Evaporator Freeze Thermostat	Yes	No	No
Winter Start Control	Yes†	No	No
Accumulator	No	No	No
Compressor Start Assist Capacitor and Relay	Yes	Yes	No
MotorMaster® Control or Low-Ambient Pressure Switch	Yes	No	No
Wind Baffle	See low-ambient instructions	No	No
Coastal Filter	No	No	Yes
Support Feet	Recommended	No	Recommended
Liquid-Line Solenoid Valve or Hard Shutoff TXV	No	See Long-Line Application Guideline	No

* For tubing line sets between 50 and 175 ft and/or 20 ft vertical differential, refer to the Residential Split-System Long-Line Application Guideline.

† Only when low-pressure switch is used.

Accessory description and usage (Listed alphabetically)

1. Coastal Filter

A mesh screen inserted under the top cover and inside the base pan to protect the condenser coil from salt damage without restricting airflow.

SUGGESTED USE: In geographic areas where salt damage could occur.

2. Compressor Start Assist — Capacitor and Relay

Start capacitor and start relay which give a “hard” boost to compressor motor at each start-up.

SUGGESTED USE: Installations where interconnecting tube length exceeds 50 ft (15.24m).

Installations where outdoor design temperature exceeds 105°F (40.6°C).

Installations where Liquid-Line Solenoid Valve has been added.

3. Compressor Start Assist — PTC

Solid-state electrical device which gives a “soft” boost to compressor motor at each start-up.

SUGGESTED USE: Installations with marginal power supply.

Replacement installations with rapid pressure balance (RPB) expansion valve on indoor coil.

4. Cycle Protector

Solid-state timing device which prevents compressor rapid recycling. Control provides an approximate 5-minute delay after power to the compressor has been interrupted for any reason, including normal room thermostat cycling.

SUGGESTED USE: Installations in areas where power interruptions are frequent.

Where user is likely to “play” with the room thermostat.

All commercial installations.

Installations where interconnecting tube length exceeds 50 ft. (15.24m).

High-rise applications.

5. Evaporator Freeze Thermostat

An SPST temperature actuated switch which stops unit operation when evaporator reaches freeze-up conditions.

SUGGESTED USE: All units where Winter Start Control has been added. Use with Low-Ambient Controller.

6. Filter Drier

A device for removing contaminants from refrigerant circulating in an air conditioner: 1 direction flow.

SUGGESTED USE: All field-connected split-system air conditioners.

7. Liquid-Line Solenoid Valve (LSV)

An electrically operated shutoff valve to be installed at the outdoor or indoor unit (depending on tubing configuration) which stops and starts refrigerant liquid flow in response to compressor operation. Maintains a column of refrigerant liquid ready for action at next compressor operation cycle.

SUGGESTED USE: For improved system performance in air conditioners for certain combinations of indoor and outdoor units. Refer to ARI Unitary Directory.

In certain long-line applications. Refer to the Residential Split-System Long-Line Application Guideline.

8. Low-Ambient Pressure Switch

A long life pressure switch which is mounted to outdoor unit service valve. It is designed to cycle the outdoor fan motor in order to maintain head pressure within normal operating limits (approximately 100 psig to 225 psig). The control will maintain working head pressure at low-ambient temperatures down to 0°F (-17.8°C) when properly installed.

SUGGESTED USE: Cooling operation at outdoor temperatures below 55°F (12.8°C).

9. MotorMaster® Control

A fan speed control device activated by a temperature sensor. Designed to control condenser fan motor speed in response to the saturated, condensing temperature during operation in cooling mode only. For outdoor temperatures down to -20°F (-28.9°C), it maintains condensing temperature at 100°F ± 10°F (37.8°C ± 5.5°C).

SUGGESTED USE: Cooling operation at outdoor temperatures below 55°F (12.8°C).

All commercial installations.

10. Outdoor Air Temperature Sensor

A device that allows the temperature at a remote location (outdoors) to be displayed at the thermostat.

SUGGESTED USE: All Carrier programmable thermostats.

11. Support Feet

Four stick-on plastic feet which raise the unit 4 in. (102mm) above the mounting pad. This allows sand, dirt, and other debris to be flushed from the unit base, minimizing corrosion.

SUGGESTED USE: Coastal installations.

Windy areas or where debris is normally circulating.

Rooftop installations.

12. Thermostatic Expansion Valve (TXV)

A modulating flow control valve which meters refrigerant liquid flow rate into the evaporator in response to the superheat of the refrigerant gas leaving the evaporator. Kit includes valve, adapter tubes, and external equalizer tube. Both hard shutoff and RPB type valves are available. Do not use hard shutoff TXV with Liquid-Line Solenoid Valve.

SUGGESTED USE: For improved system performance in cooling mode for certain combinations of indoor and outdoor units. Refer to ARI Unitary Directory.

Required for use on all zoning systems.

13. Time-Delay Relay

An SPST delay relay which briefly continues operation of the indoor blower motor to provide additional cooling after the compressor cycles off.

SUGGESTED USE: For improved efficiency ratings for certain combinations of indoor and outdoor units. Refer to ARI Unitary Directory.

Required for use on all zoning systems.

14. Winter Start Control

An SPST delay relay which bypasses the low-pressure switch for approximately 3 minutes to permit start-up for cooling operation under low-load conditions.

SUGGESTED USE: All air conditioners which have low-pressure switch and where Low-Ambient Controller has been added.

Electrical data

UNIT SIZE-SERIES	V/PH	OPER VOLTS*		COMPR		FAN FLA	MCA	60°C MIN WIRE SIZE†	75°C MIN WIRE SIZE†	MAX LENGTH (FT) 60°/75°C‡	MAX LENGTH (m) 60°/75°C‡	MAX FUSE** OR CKT BKR AMPS
		Max	Min	LRA	RLA							
024-74, 75	230-1	253	207	72.5	15.0	0.6	19.4	14	14	39/37	9.9/9.4	30
036-95	400-3	440	360	49.5	8.2	0.7	10.9	14	14	165/157	41.9/39.9	15
048-95, 96				63.0	7.9	0.7	10.7	14	14	165/157	41.9/39.9	15
060-95, 96				74.0	9.0	0.7	11.9	14	14	152/144	38.6/36.5	20

* Permissible limits of the voltage range at which the unit will operate satisfactorily. Operation outside these limits may result in unit failure. If wire is applied at ambient greater than 30°C (86°F), consult Table 310-16 of the NEC (ANSI/NFPA 70).
 † The ampacity of nonmetallic-sheathed cable (NM), trade name ROMEX, shall be that of 60°C (140°F) conductors, per the NEC (ANSI/NFPA 70) Article 336-26.
 ‡ All motors/compressors contain internal overload protection.
 † American wire gage.
 ‡ Length shown is as measured 1 way along wire path between unit and service panel for a voltage drop not to exceed 2%.
 ** Time-delay fuse.

FLA — Full Load Amps
LRA — Locked Rotor Amps
MCA — Minimum Circuit Amps
RLA — Rated Load Amps

Performance summary

UNIT SIZE	INDOOR MODEL	NOMINAL AIRFLOW		COOLING CAP @ 95°F (35°C)				COOLING CAP 115°F (46°C)		
				Rated Capacity		Power kW	Rated EER	Rated Capacity		Power kW
		CFM	L/S	BTUH	kW			BTUH	kW	
024-74, 75	F(A,B)4(A,B)SF024*	800	380	23,000	6.7	2.34	10.30	20,700	6.1	2.87
	F(A,B)4(A,B)SF030	800	380	24,000	7.0	2.33	10.40	21,031	6.2	2.86
	FG3ASA024	800	380	23,000	6.7	2.40	9.70	20,023	5.9	2.95
036-95	F(A,B)4(A,B)SF036*	1200	560	35,000	10.3	3.76	10.40	31,600	9.3	4.56
	F(A,B)4(A,B)S(F,B)042	1200	560	36,000	10.5	3.71	10.50	32,320	9.5	4.50
	FG3ASA036	1200	560	35,000	10.3	3.69	9.80	29,395	8.6	4.48
048-95, 96	F(A,B)4(A,B)S(F,B)048*	1600	750	47,000	13.8	5.12	9.50	42,400	12.4	6.20
	F(A,B)4(A,B)S(F,B)060	1600	750	48,000	14.1	5.26	9.50	43,540	12.8	6.37
	FG3ASA048	1600	750	46,000	13.5	5.20	9.10	41,100	12.0	6.30
	FG3ASA060	1600	750	47,000	13.8	5.25	9.20	42,179	12.4	6.35
060-95, 96	F(A,B)4(A,B)S(F,B)060*	1850	950	57,500	16.8	6.03	9.50	52,100	15.3	7.26
	FB4(A,B)SB070	1850	950	59,000	17.3	6.14	9.50	53,364	15.6	7.39
	FG3ASA060	1850	950	56,500	16.6	6.00	9.40	51,286	15.0	7.23

* Tested Combination

NOTES:


1. Ratings are net values reflecting the effects of circulating fan motor heat. Supplemental electric heat is not included.
2. Tested outdoor/indoor combinations have been tested in accordance with DOE test procedures for central air conditioners. Ratings for other combinations are determined under DOE computer simulation procedures.
3. Determine actual CFM values obtainable for your system by referring to fan performance data in fan coil or furnace coil literature.

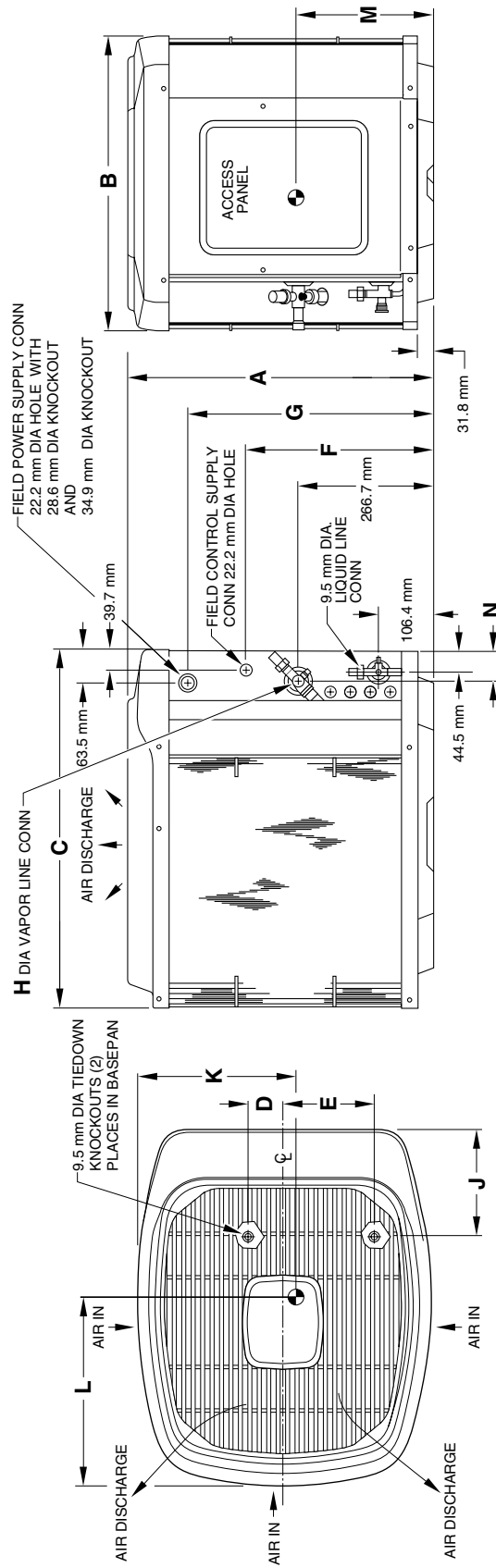
Sound power (dBA) (A-WTG, Non Pure Tone Corrected)

UNIT SIZE	SOUND RATING (dBA)	A-WEIGHTED SOUND POWER LEVELS WITHIN OCTAVE BAND SHOWN (Hz)						
		125	250	500	1000	2000	4000	8000
024	72	53.5	63.0	65.0	67.0	63.5	59.0	50.5
036	74	58.0	64.0	67.5	67.0	66.0	64.5	59.0
048	75	55.5	63.0	66.5	68.0	68.0	65.0	59.5
060	75	55.5	64.0	69.0	67.0	67.5	65.5	60.0

Dimensions (S.I.)

NOTES:

1. Allow 762.0 mm clearance to service side of unit, 1219.2 mm above unit, 152.4 mm on one side, 304.8 mm on remaining side, and 609.6 mm between units for proper airflow.
2. Minimum outdoor operating ambient in cooling mode is 13°C (unless low ambient control is used) max 52°C.
3. Series designation is the 13th position of the unit model number.
4. Center of gravity .




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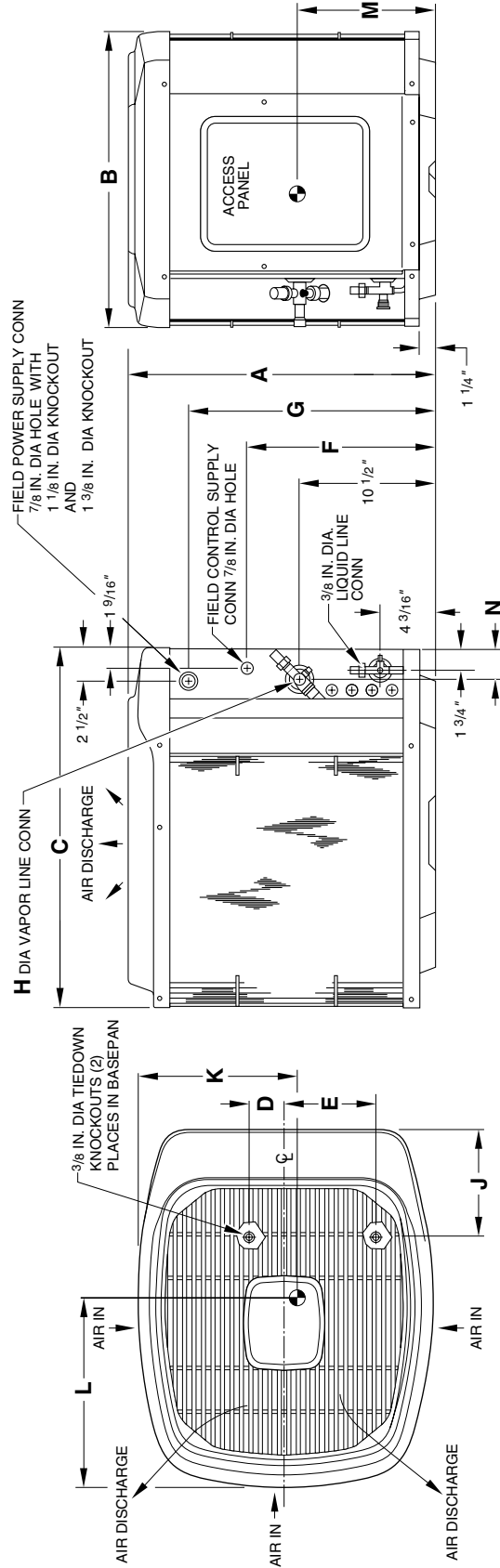
DIMENSIONS (MM)

UNIT SIZE	SERIES	A	B	C	D	E	F	G	H	J	K	L	M	N	MINIMUM MOUNTING PAD DIMENSIONS
024	74, 75	706.4	571.5	698.5	71.4	176.2	393.7	555.6	15.9	208.0	304.8	371.5	279.4	60.3	508.0 x 685.8
036	95	706.4	762.0	887.4	101.4	247.7	393.7	555.6	19.1	208.0	412.8	260.4	285.8	74.6	660.4 x 812.8
048	95, 96	858.8	762.0	887.4	101.4	247.7	546.1	708.0	22.2	208.0	422.3	266.7	342.9	74.6	660.4 x 812.8
060	95, 96	1011.2	762.0	887.4	101.4	247.7	698.5	860.4	22.2	208.0	425.5	263.5	384.2	74.6	660.4 x 812.8

Dimensions (English)

NOTES:

1. Allow 30 in. clearance to service side of unit, 48 in. above unit, 6 in. on one side, 12 in. on remaining side, and 24 in. between units for proper airflow.
2. Minimum outdoor operating ambient in cooling mode is 55°F (unless low ambient control is used) max 125°F.
3. Series designation is the 13th position of the unit model number.
4. Center of gravity .



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DIMENSIONS (In.)

UNIT SIZE	SERIES	A	B	C	D	E	F	G	H	J	K	L	M	N	MINIMUM MOUNTING PAD DIMENSIONS
024	74, 75	27-13/16	22-1/2	27-1/2	2-13/16	6-15/16	15-1/2	21-7/8	5/8	8-3/16	12	14-5/8	11	2-3/8	20 x 27
036	95	27-13/16	30	34-15/16	4	9-3/4	15-1/2	21-7/8	3/4	8-3/16	16-1/4	10-1/4	11-1/4	2-15/16	26 x 32
048	95, 96	33-13/16	30	34-15/16	4	9-3/4	21-1/2	27-7/8	7/8	8-3/16	16-5/8	10-1/2	13-1/2	2-15/16	26 x 32
060	95, 96	39-13/16	30	34-15/16	4	9-3/4	27-1/2	33-7/8	7/8	8-3/16	16-3/4	10-3/8	15-1/8	2-15/16	26 x 32

Detailed cooling capacities* (S.I.)

EVAP. AIR		CONDENSER ENTERING AIR TEMPERATURES °C																				
		28		32			36			40			44			48			52			
L/S	(C) EWB	Capacity† (kW)		Comp. Power kW**	Capacity† (kW)		Comp. Power kW**	Capacity† (kW)		Comp. Power kW**	Capacity† (kW)		Comp. Power kW**	Capacity† (kW)		Comp. Power kW**	Capacity† (kW)		Comp. Power kW**	Capacity† (kW)		Comp. Power kW**
		Total	Sens‡		Total	Sens‡		Total	Sens‡		Total	Sens‡		Total	Sens‡		Total	Sens‡		Total	Sens‡	
38TUA024-74, 75 Outdoor Section with F(A,B)4(A,B)SF024 Indoor Section																						
340	22	7.62	3.96	2.06	7.40	3.87	2.23	7.17	3.79	2.40	6.93	3.70	2.59	6.67	3.61	2.79	6.41	3.51	3.00	6.15	3.42	3.22
	20	7.16	4.71	2.03	6.94	4.62	2.19	6.72	4.53	2.36	6.49	4.44	2.55	6.25	4.35	2.75	6.00	4.25	2.96	5.76	4.16	3.17
	18	6.72	5.44	1.99	6.52	5.35	2.16	6.31	5.25	2.33	6.10	5.15	2.51	5.88	5.04	2.71	5.65	4.93	2.92	5.43	4.80	3.14
	16	6.40	6.00	1.97	6.21	5.89	2.13	6.02	5.77	2.31	5.83	5.65	2.49	5.63	5.52	2.69	5.43	5.37	2.90	5.22	5.22	3.11
	14	6.26	6.24	1.96	6.11	6.09	2.13	5.94	5.93	2.30	5.77	5.76	2.49	5.59	5.59	2.69	5.41	5.41	2.89	5.22	5.22	3.11
380	22	7.73	4.12	2.10	7.50	4.03	2.26	7.26	3.95	2.44	7.01	3.86	2.62	6.75	3.77	2.82	6.49	3.67	3.04	6.21	3.58	3.26
	20	7.26	4.94	2.06	7.04	4.86	2.22	6.81	4.77	2.40	6.58	4.67	2.58	6.33	4.58	2.78	6.08	4.48	2.99	5.82	4.38	3.21
	18	6.84	5.74	2.03	6.63	5.64	2.19	6.42	5.54	2.36	6.20	5.43	2.55	5.98	5.30	2.75	5.76	5.16	2.96	5.53	5.00	3.17
	16	6.54	6.30	2.01	6.35	6.18	2.17	6.16	6.06	2.34	5.96	5.92	2.53	5.76	5.75	2.73	5.57	5.57	2.94	5.37	5.37	3.15
	14	6.46	6.45	2.00	6.30	6.19	2.17	6.12	6.12	2.34	5.95	5.94	2.52	5.76	5.76	2.72	5.57	5.57	2.94	5.37	5.37	3.15
420	22	7.82	4.27	2.13	7.59	4.19	2.29	7.34	4.10	2.47	7.08	4.01	2.66	6.82	3.92	2.86	6.55	3.83	3.07	6.27	3.73	3.29
	20	7.35	5.17	2.09	7.12	5.09	2.25	6.89	5.00	2.43	6.65	4.90	2.61	6.40	4.81	2.81	6.14	4.71	3.02	5.88	4.61	3.24
	18	6.93	6.01	2.06	6.73	5.90	2.22	6.52	5.78	2.40	6.30	5.64	2.58	6.08	5.49	2.78	5.86	5.34	2.99	5.63	5.18	3.21
	16	6.66	6.57	2.04	6.47	6.43	2.20	6.28	6.27	2.38	6.09	6.09	2.56	5.90	5.90	2.76	5.70	5.70	2.97	5.49	5.49	3.19
	14	6.63	6.62	2.04	6.46	6.45	2.20	6.28	6.28	2.38	6.09	6.09	2.56	5.90	5.90	2.76	5.70	5.70	2.97	5.49	5.49	3.19

Multipliers for Determining the Performance With Other Indoor Sections

Indoor Section	Size	Cooling		Indoor Section	Size	Cooling	
		Capacity	Power			Capacity	Power
F(A,B)4(A,B)SF	024	1.00	1.00	FG3ASA	024	0.97	1.03
	030	1.02	1.00		—	—	—

38TUA036-95 Outdoor Section with F(A,B)4(A,B)SF036 Indoor Section

500	22	11.6	5.82	3.37	11.2	5.69	3.60	10.9	5.56	3.86	10.5	5.42	4.13	10.1	5.28	4.43	9.74	5.14	4.75	9.34	4.99	5.08
	20	10.8	6.87	3.29	10.5	6.74	3.52	10.2	6.60	3.78	9.84	6.46	4.06	9.48	6.32	4.35	9.11	6.17	4.66	8.73	6.02	4.98
	18	10.2	7.90	3.22	9.86	7.76	3.46	9.54	7.62	3.71	9.21	7.47	3.99	8.88	7.32	4.28	8.54	7.16	4.59	8.19	7.00	4.90
	16	9.62	8.75	3.17	9.34	8.59	3.41	9.05	8.42	3.66	8.75	8.24	3.94	8.45	8.05	4.23	8.14	7.86	4.53	7.83	7.66	4.85
	14	9.31	9.26	3.14	9.07	9.03	3.38	8.83	8.80	3.64	8.57	8.55	3.92	8.31	8.29	4.21	8.04	8.03	4.52	7.77	7.76	4.84
560	22	11.7	6.04	3.44	11.4	5.91	3.67	11.0	5.78	3.92	10.7	5.64	4.20	10.3	5.50	4.50	9.86	5.36	4.82	9.46	5.21	5.14
	20	11.0	7.21	3.35	10.7	7.07	3.59	10.3	6.93	3.84	9.98	6.79	4.12	9.61	6.64	4.42	9.23	6.50	4.73	8.84	6.35	5.05
	18	10.3	8.33	3.28	10.0	8.19	3.52	9.70	8.04	3.78	9.37	7.88	4.05	9.03	7.72	4.35	8.68	7.54	4.65	8.33	7.35	4.97
	16	9.83	9.20	3.23	9.54	9.03	3.47	9.25	8.84	3.73	8.94	8.65	4.01	8.63	8.45	4.30	8.32	8.23	4.60	8.01	7.99	4.93
	14	9.61	9.58	3.22	9.37	9.34	3.46	9.11	9.09	3.72	8.84	8.83	3.99	8.57	8.56	4.29	8.28	8.28	4.60	7.99	7.99	4.93
640	22	11.9	6.33	3.52	11.6	6.20	3.76	11.2	6.06	4.01	10.8	5.93	4.28	10.4	5.78	4.59	9.99	5.64	4.90	9.57	5.49	5.23
	20	11.2	7.63	3.44	10.9	7.50	3.67	10.5	7.36	3.92	10.1	7.21	4.20	9.75	7.06	4.50	9.35	6.91	4.81	8.95	6.76	5.13
	18	10.5	8.87	3.37	10.2	8.71	3.60	9.89	8.55	3.86	9.54	8.37	4.13	9.20	8.16	4.43	8.85	7.94	4.74	8.51	7.70	5.06
	16	10.1	9.74	3.32	9.78	9.54	3.56	9.47	9.34	3.81	9.16	9.11	4.09	8.86	8.84	4.39	8.55	8.55	4.70	8.25	8.25	5.03
	14	9.96	9.94	3.31	9.70	9.68	3.55	9.42	9.42	3.81	9.14	9.14	4.09	8.85	8.85	4.39	8.55	8.55	4.70	8.25	8.25	5.03

Multipliers for Determining the Performance With Other Indoor Sections

Indoor Section	Size	Cooling		Indoor Section	Size	Cooling	
		Capacity	Power			Capacity	Power
F(A,B)4(A,B)SF	036	1.00	1.00	FG3ASA	036	0.93	0.98
F(A,B)4(A,B)S(F,B)	042	1.02	0.99		—	—	—

See notes on pg. 11.

Detailed cooling capacities* (S.I.) continued

EVAP. AIR		CONDENSER ENTERING AIR TEMPERATURES °C																				
		28			32			36			40			44			48			52		
		Capacity† (kW)		Comp. Power kW**	Capacity† (kW)		Comp. Power kW**	Capacity† (kW)		Comp. Power kW**	Capacity† (kW)		Comp. Power kW**	Capacity† (kW)		Comp. Power kW**	Capacity† (kW)		Comp. Power kW**	Capacity† (kW)		Comp. Power kW**
L/S	(C) EWB	Total	Sens‡	Total	Sens‡	Total	Sens‡	Total	Sens‡	Total	Sens‡	Total	Sens‡	Total	Sens‡	Total	Sens‡	Total	Sens‡	Total	Sens‡	
38TUA048-95, 96 Outdoor Section with F(A,B)4(A,B)S(F,B)048 Indoor Section																						
650	22	15.5	7.89	4.72	15.1	7.72	5.02	14.6	7.54	5.33	14.1	7.36	5.67	13.6	7.18	6.03	13.1	6.99	6.41	12.6	6.81	6.81
	20	14.5	9.31	4.61	14.1	9.13	4.90	13.7	8.95	5.21	13.2	8.77	5.54	12.7	8.58	5.89	12.2	8.40	6.26	11.8	8.21	6.66
	18	13.6	10.7	4.51	13.2	10.5	4.79	12.8	10.3	5.10	12.4	10.1	5.42	11.9	9.95	5.76	11.5	9.75	6.13	11.0	9.55	6.52
	16	12.9	11.8	4.43	12.5	11.6	4.71	12.1	11.4	5.01	11.8	11.2	5.33	11.4	10.9	5.68	11.0	10.7	6.04	10.6	10.5	6.43
	14	12.5	12.5	4.39	12.2	12.2	4.68	11.9	11.8	4.98	11.6	11.5	5.30	11.2	11.2	5.66	10.9	10.9	6.03	10.5	10.5	6.42
750	22	15.8	8.29	4.82	15.3	8.12	5.12	14.9	7.94	5.44	14.3	7.76	5.78	13.8	7.57	6.14	13.3	7.38	6.52	12.8	7.20	6.92
	20	14.8	9.90	4.71	14.4	9.72	5.00	13.9	9.54	5.31	13.4	9.35	5.64	12.9	9.16	5.99	12.4	8.97	6.37	11.9	8.78	6.76
	18	13.9	11.5	4.61	13.5	11.3	4.90	13.1	11.1	5.20	12.6	10.9	5.52	12.2	10.6	5.87	11.7	10.4	6.25	11.3	10.1	6.64
	16	13.3	12.6	4.53	12.9	12.4	4.82	12.5	12.1	5.12	12.1	11.9	5.45	11.7	11.6	5.80	11.3	11.3	6.17	10.9	10.9	6.57
	14	13.0	13.0	4.51	12.7	12.7	4.80	12.4	12.3	5.11	12.0	12.0	5.44	11.7	11.6	5.79	11.3	11.3	6.17	10.9	10.9	6.57
850	22	16.1	8.69	4.92	15.6	8.51	5.22	15.1	8.33	5.54	14.5	8.15	5.87	14.0	7.96	6.23	13.5	7.77	6.62	12.9	7.58	7.01
	20	15.1	10.5	4.80	14.6	10.3	5.10	14.1	10.1	5.41	13.6	9.93	5.74	13.1	9.73	6.09	12.6	9.53	6.47	12.1	9.34	6.86
	18	14.2	12.2	4.70	13.7	12.0	4.99	13.3	11.7	5.30	12.9	11.4	5.63	12.4	11.2	5.98	12.0	10.9	6.36	11.5	10.6	6.76
	16	13.6	13.3	4.63	13.2	13.0	4.92	12.8	12.7	5.23	12.4	12.4	5.56	12.0	12.0	5.92	11.6	11.6	6.30	11.2	11.2	6.70
	14	13.5	13.5	4.63	13.1	13.1	4.92	12.8	12.8	5.23	12.4	12.4	5.56	12.0	12.0	5.92	11.6	11.6	6.30	11.2	11.2	6.70

Multipliers for Determining the Performance With Other Indoor Sections

Indoor Section	Size	Cooling		Indoor Section	Size	Cooling	
		Capacity	Power			Capacity	Power
F(A,B)4(A,B)S(F,B)	048	1.00	1.00	FG3ASA	048	0.97	1.02
	060	1.03	1.03		060	0.99	1.02

38TUA060-95, 96 Outdoor Section With F(A,B)4(A,B)S(F,B)060 Indoor Section

850	22	19.4	10.0	5.51	18.8	9.81	5.90	18.1	9.59	6.32	17.5	9.36	6.75	16.9	9.14	7.21	16.2	8.91	7.70	15.6	8.68	8.21
	20	18.2	12.0	5.39	17.6	11.8	5.77	17.0	11.6	6.18	16.4	11.4	6.60	15.9	11.1	7.06	15.3	10.9	7.54	14.6	10.6	8.04
	18	17.1	14.0	5.27	16.6	13.7	5.65	16.0	13.5	6.05	15.5	13.2	6.47	15.0	13.0	6.93	14.4	12.7	7.41	13.8	12.3	7.91
	16	16.3	15.4	5.19	15.8	15.1	5.56	15.3	14.9	5.96	14.9	14.6	6.39	14.4	14.2	6.84	13.9	13.8	7.32	13.3	13.3	7.82
	14	16.0	16.0	5.16	15.6	15.6	5.54	15.2	15.2	5.94	14.8	14.8	6.37	14.3	14.3	6.84	13.8	13.8	7.32	13.3	13.3	7.82
950	22	19.6	10.4	5.63	19.0	10.2	6.02	18.3	9.98	6.44	17.7	9.76	6.87	17.0	9.53	7.33	16.4	9.30	7.82	15.7	9.07	8.33
	20	18.4	12.6	5.50	17.8	12.4	5.89	17.2	12.2	6.29	16.6	11.9	6.72	16.0	11.7	7.18	15.4	11.5	7.66	14.8	11.2	8.16
	18	17.3	14.7	5.39	16.8	14.5	5.77	16.3	14.2	6.17	15.7	13.9	6.60	15.2	13.5	7.06	14.6	13.2	7.54	14.1	12.8	8.05
	16	16.6	16.2	5.31	16.1	15.9	5.69	15.6	15.5	6.10	15.2	15.1	6.52	14.7	14.7	6.99	14.2	14.2	7.48	13.7	13.7	7.98
	14	16.5	16.5	5.30	16.0	16.0	5.68	15.6	15.6	6.09	15.2	15.2	6.52	14.7	14.7	6.99	14.2	14.2	7.48	13.7	13.7	7.98
1000	22	19.7	10.6	5.69	19.1	10.4	6.08	18.4	10.2	6.49	17.8	9.94	6.93	17.1	9.72	7.39	16.4	9.49	7.88	15.8	9.26	8.39
	20	18.5	12.9	5.56	17.9	12.7	5.94	17.3	12.5	6.35	16.7	12.2	6.78	16.1	12.0	7.24	15.4	11.7	7.72	14.8	11.5	8.22
	18	17.4	15.1	5.45	16.9	14.8	5.83	16.4	14.5	6.23	15.8	14.1	6.66	15.3	13.8	7.12	14.8	13.4	7.61	14.2	13.0	8.11
	16	16.8	16.5	5.37	16.3	16.2	5.76	15.8	15.8	6.16	15.3	15.3	6.59	14.9	14.9	7.06	14.4	14.4	7.55	13.9	13.9	8.06
	14	16.7	16.7	5.37	16.2	16.2	5.75	15.8	15.8	6.16	15.3	15.3	6.59	14.9	14.9	7.06	14.4	14.4	7.55	13.9	13.9	8.06

Multipliers for Determining the Performance With Other Indoor Sections

Indoor Section	Size	Cooling		Indoor Section	Size	Cooling	
		Capacity	Power			Capacity	Power
F(A,B)4(A,B)S(F,B)	060	1.00	1.00	FG3ASA	060	0.98	1.00
FB4(A,B)SB	070	1.02	1.02		—	—	—

NOTE: When the required data fall between the published data, interpolation may be performed. Extrapolation is not an acceptable practice.

* Detailed cooling capacities are based on indoor and outdoor unit at the same elevation per ARI Standard 210/240-94 and connected by 7.62m of tubing. If other than 7.62m 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 27°C entering air at the indoor coil. For sensible capacities at other than 27°C, deduct 245 kW per 480 L/S CFM of indoor coil air for each degree below 27°C, or add 235 kW per 480 l/s of indoor coil air per degree above 27°C. When the required data falls between the published data, interpolation may be performed.

** System kW is total of indoor and outdoor unit kilowatts.

Detailed cooling capacities* (English)

INDOOR COIL AIR		OUTDOOR COIL ENTERING AIR TEMPERATURES °F																	
		75			85			95			105			115			125		
		Gross Capacity† (MBtuh)		Comp. Power kW**	Gross Capacity† (MBtuh)		Comp. Power kW**	Gross Capacity† (MBtuh)		Comp. Power kW**	Gross Capacity† (MBtuh)		Comp. Power kW**	Gross Capacity† (MBtuh)		Comp. Power kW**	Gross Capacity† (MBtuh)		Comp. Power kW**
CFM	(F)	Total	Sens‡		Total	Sens‡		Total	Sens‡		Total	Sens‡		Total	Sens‡		Total	Sens‡	
38TUA024-74, 75 Outdoor Section with F(A,B)4(A,B)SF024 Indoor Section																			
700	72	26.8	13.4	1.90	25.8	13.0	2.11	24.7	12.6	2.35	23.6	12.2	2.61	22.4	11.7	2.89	21.1	11.3	3.20
	67	24.6	16.9	1.85	23.6	16.5	2.06	22.6	16.0	2.30	21.6	15.6	2.55	20.4	15.2	2.83	19.3	14.7	3.13
	62	22.5	20.2	1.81	21.7	19.8	2.02	20.7	19.3	2.25	19.8	18.9	2.51	18.8	18.3	2.79	17.8	17.7	3.09
	57	21.7	21.7	1.80	21.0	21.0	2.01	20.2	20.2	2.24	19.4	19.4	2.50	18.6	18.6	2.78	17.7	17.7	3.08
800	72	27.3	14.0	1.95	26.3	13.6	2.16	25.1	13.2	2.39	24.0	12.8	2.65	22.7	12.3	2.93	21.4	11.9	3.24
	67	25.0	17.9	1.89	24.1	17.5	2.10	23.0	17.1	2.34	21.9	16.6	2.59	20.7	16.2	2.87	19.5	15.7	3.17
	62	23.0	21.6	1.85	22.1	21.2	2.06	21.2	20.6	2.30	20.2	20.1	2.55	19.3	19.3	2.83	18.4	18.4	3.13
	57	22.5	22.5	1.84	21.8	21.8	2.05	21.0	21.0	2.29	20.2	20.2	2.55	19.3	19.3	2.83	18.4	18.4	3.13
900	72	27.7	14.6	1.99	26.6	14.2	2.19	25.5	13.8	2.43	24.2	13.4	2.69	23.0	12.9	2.97	21.6	12.5	3.28
	67	25.4	18.9	1.93	24.4	18.5	2.14	23.3	18.1	2.37	22.2	17.6	2.63	21.0	17.2	2.91	19.8	16.7	3.21
	62	23.5	22.9	1.89	22.6	22.3	2.10	21.7	21.6	2.33	20.8	20.8	2.59	19.8	19.8	2.87	18.9	18.9	3.18
	57	23.3	23.3	1.89	22.5	22.5	2.10	21.6	21.6	2.33	20.8	20.8	2.59	19.8	19.8	2.87	18.9	18.9	3.18
Multipliers for Determining the Performance With Other Indoor Sections																			
Indoor Section		Size	Cooling				Indoor Section		Size	Cooling									
F(A,B)4(A,B)SF			Capacity		Power		FG3ASA			Capacity		Power							
		024	1.00		1.00				0.97		1.03								
		030	1.02		1.00				—		—								
38TUA036-95 Outdoor Section with F(A,B)4(A,B)SF036 Indoor Section																			
1050	72	40.8	19.8	3.15	39.3	19.2	3.45	37.6	18.6	3.79	35.9	18.0	4.18	34.1	17.3	4.60	32.2	16.6	5.05
	67	37.3	24.8	3.04	35.9	24.2	3.34	34.4	23.5	3.68	32.7	22.9	4.07	31.0	22.2	4.48	29.3	21.5	4.93
	62	34.1	29.6	2.95	32.8	29.0	3.25	31.3	28.3	3.60	29.9	27.6	3.98	28.4	26.8	4.38	26.8	26.0	4.82
	57	32.4	32.4	2.90	31.3	31.3	3.22	30.2	30.2	3.57	29.0	29.0	3.95	27.8	27.8	4.36	26.5	26.5	4.81
1200	72	41.6	20.7	3.23	40.0	20.1	3.53	38.3	19.5	3.87	36.5	18.8	4.26	34.6	18.1	4.68	32.7	17.5	5.13
	67	38.1	26.3	3.12	36.6	25.7	3.42	35.0	25.0	3.76	33.3	24.3	4.14	31.6	23.6	4.56	29.7	22.9	5.00
	62	34.9	31.7	3.02	33.5	31.0	3.33	32.0	30.2	3.67	30.5	29.4	4.05	29.0	28.5	4.46	27.5	27.4	4.91
	57	33.7	33.7	2.99	32.6	32.6	3.30	31.4	31.4	3.65	30.1	30.1	4.04	28.8	28.8	4.46	27.4	27.4	4.91
1350	72	42.2	21.5	3.31	40.6	20.9	3.61	38.8	20.3	3.95	37.0	19.6	4.33	35.0	18.9	4.76	33.0	18.3	5.21
	67	38.7	27.7	3.19	37.1	27.1	3.49	35.5	26.4	3.83	33.7	25.7	4.21	31.9	25.0	4.63	30.1	24.2	5.08
	62	35.5	33.5	3.10	34.1	32.7	3.40	32.6	31.9	3.74	31.1	30.9	4.13	29.6	29.6	4.54	28.2	28.2	4.99
	57	34.8	34.8	3.08	33.6	33.6	3.38	32.3	32.3	3.74	31.0	31.0	4.13	29.6	29.6	4.54	28.2	28.2	4.99
Multipliers for Determining the Performance With Other Indoor Sections																			
Indoor Section		Size	Cooling				Indoor Section		Size	Cooling									
F(A,B)4(A,B)SF			Capacity		Power		FG3ASA			Capacity		Power							
		036	1.00		1.00				0.93		0.98								
		042	1.02		0.99				—		—								

See notes on pg. 13.

Detailed cooling capacities* (English) continued

INDOOR COIL AIR		OUTDOOR COIL ENTERING AIR TEMPERATURES °F																	
		75			85			95			105			115			125		
		CFM	(F)	Gross Capacity† (MBtuh)		Comp. Power kW**	Gross Capacity† (MBtuh)		Comp. Power kW**	Gross Capacity† (MBtuh)		Comp. Power kW**	Gross Capacity† (MBtuh)		Comp. Power kW**	Gross Capacity† (MBtuh)		Comp. Power kW**	
Total	Sens‡			Total	Sens‡		Total	Sens‡		Total	Sens‡		Total	Sens‡					
38TUA048-95, 96 Outdoor Section with F(A,B)4(A,B)S(F,B)048 Indoor Section																			
1400	72	55.0	27.1	4.45	52.9	26.3	4.85	50.6	25.5	5.28	48.3	24.6	5.74	45.9	23.8	6.25	43.4	22.9	6.81
	67	50.2	34.0	4.30	48.2	33.1	4.69	46.2	32.3	5.10	44.0	31.4	5.56	41.8	30.5	6.05	39.5	29.6	6.60
	62	45.8	40.6	4.18	44.1	39.8	4.55	42.1	38.8	4.95	40.2	37.9	5.40	38.3	36.9	5.88	36.3	35.8	6.41
	57	43.9	43.9	4.12	42.4	42.4	4.50	41.0	41.0	4.91	39.4	39.4	5.36	37.8	37.8	5.86	36.2	36.2	6.41
1600	72	56.1	28.3	4.55	53.9	27.5	4.94	51.5	26.7	5.38	49.1	25.8	5.84	46.6	25.0	6.35	44.0	24.1	6.91
	67	51.2	36.1	4.39	49.2	35.2	4.78	47.0	34.3	5.20	44.8	33.5	5.65	42.4	32.5	6.15	40.1	31.6	6.69
	62	46.9	43.4	4.27	45.1	42.5	4.64	43.1	41.5	5.05	41.1	40.4	5.50	39.2	39.1	5.99	37.4	37.4	6.54
	57	45.7	45.7	4.23	44.2	44.2	4.62	42.6	42.6	5.03	40.9	40.9	5.49	39.2	39.2	5.99	37.4	37.4	6.54
1800	72	56.9	29.5	4.64	54.7	28.7	5.03	52.3	27.9	5.47	49.7	27.0	5.93	47.1	26.1	6.44	44.5	25.2	7.00
	67	52.0	38.1	4.48	49.9	37.2	4.87	47.7	36.4	5.29	45.3	35.5	5.74	43.0	34.5	6.24	40.6	33.6	6.79
	62	47.8	46.0	4.36	45.9	44.9	4.74	44.0	43.7	5.15	42.1	42.1	5.61	40.3	40.3	6.11	38.5	38.5	6.66
	57	47.2	47.2	4.34	45.6	45.6	4.73	43.9	43.9	5.15	42.1	42.1	5.61	40.3	40.3	6.11	38.5	38.5	6.67

Multipliers for Determining the Performance With Other Indoor Sections

Indoor Section	Size	Cooling		Indoor Section	Size	Cooling	
		Capacity	Power			Capacity	Power
F(A,B)4(A,B)S(F,B)	048	1.00	1.00	FG3ASA	048	0.97	1.02
	060	1.03	1.03		060	0.99	1.02

38TUA060-95, 96 Outdoor Section with F(A,B)4(A,B)S(F,B)060 Indoor Section

1750	72	68.4	33.9	5.12	65.6	32.9	5.63	62.6	31.8	6.19	59.7	30.8	6.80	56.7	29.7	7.45	53.7	28.6	8.15
	67	62.6	43.2	4.95	60.0	42.1	5.45	57.3	41.0	6.00	54.7	40.0	6.59	52.0	38.9	7.23	49.0	37.7	7.93
	62	57.4	52.2	4.80	55.1	51.0	5.29	52.7	49.9	5.83	50.4	48.6	6.42	47.9	47.3	7.06	45.2	45.2	7.74
	57	55.6	55.6	4.75	53.7	53.7	5.25	51.7	51.7	5.80	49.8	49.8	6.40	47.7	47.7	7.05	45.2	45.2	7.74
1800	72	68.6	34.3	5.15	65.8	33.2	5.66	62.8	32.1	6.22	59.9	31.1	6.83	56.9	30.0	7.48	53.8	28.9	8.18
	67	62.8	43.7	4.98	60.2	42.7	5.48	57.5	41.6	6.03	54.8	40.5	6.62	52.1	39.4	7.26	49.1	38.2	7.96
	62	57.6	52.9	4.83	55.3	51.7	5.32	52.9	50.5	5.86	50.6	49.3	6.45	48.2	47.8	7.09	45.5	45.5	7.78
	57	56.0	56.0	4.79	54.1	54.1	5.29	52.1	52.1	5.84	50.2	50.2	6.43	48.0	48.0	7.08	45.5	45.5	7.78
2000	72	69.5	35.5	5.27	66.5	34.4	5.77	63.5	33.3	6.34	60.4	32.3	6.94	57.4	31.2	7.59	54.2	30.1	8.30
	67	63.6	45.8	5.09	60.9	44.8	5.59	58.1	43.6	6.14	55.4	42.6	6.73	52.6	41.4	7.37	49.6	40.3	8.07
	62	58.5	55.7	4.94	56.2	54.4	5.44	53.8	53.1	5.98	51.5	51.4	6.57	49.2	49.2	7.23	46.8	46.8	7.93
	57	57.6	57.6	4.92	55.6	55.6	5.42	53.5	53.5	5.97	51.4	51.4	6.57	49.3	49.3	7.23	46.8	46.8	7.93
2150	72	70.0	36.3	5.35	67.0	35.3	5.85	63.9	34.2	6.42	60.8	33.1	7.02	57.6	32.0	7.67	54.4	31.0	8.38
	67	64.1	47.4	5.17	61.3	46.3	5.67	58.5	45.2	6.22	55.7	44.1	6.81	52.8	42.9	7.45	49.9	41.7	8.15
	62	59.1	57.6	5.03	56.8	56.2	5.52	54.4	54.4	6.07	52.3	52.3	6.67	50.0	50.0	7.33	47.6	47.6	8.04
	57	58.6	58.6	5.01	56.6	56.6	5.52	54.4	54.4	6.07	52.3	52.3	6.67	50.0	50.0	7.33	47.6	47.6	8.04
Indoor Section	Size	Cooling		Indoor Section	Size	Cooling													
FB4(A,B)SB	070	1.02	1.02	FG3ASA	060	0.98	1.00												

NOTE: When the required data fall between the published data, interpolation may be performed. Extrapolation is not an acceptable practice.

* Detailed cooling capacities are based on indoor and outdoor unit at the same elevation per ARI Standard 210/240-94 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 Btuh per 1000 CFM of indoor coil air for each degree below 80°F, or add 835 Btuh per 1000 CFM of indoor coil air per degree above 80°F. When the required data falls between the published data, interpolation may be performed.

** System kW is total of indoor and outdoor unit kilowatts.

Condenser only ratings (S.I.)

SST °C		CONDENSER ENTERING AIR TEMPERATURES °C								
		20	24	28	32	36	40	44	48	52
38TUA024-74, 75										
-2	TCG	5.75	5.55	5.34	5.13	4.90	4.67	4.43	4.19	3.94
	KW	1.38	1.53	1.69	1.85	2.03	2.22	2.41	2.61	2.81
	SDT	28.5	33.2	37.7	42.1	46.4	50.6	54.8	58.9	63.0
0	TCG	6.15	5.94	5.73	5.50	5.27	5.03	4.79	4.53	4.28
	KW	1.38	1.52	1.68	1.85	2.03	2.22	2.42	2.62	2.83
	SDT	28.5	33.2	37.8	42.2	46.6	50.8	55.0	59.2	63.3
2	TCG	6.57	6.36	6.13	5.90	5.66	5.41	5.16	4.89	4.63
	KW	1.37	1.52	1.68	1.86	2.04	2.23	2.43	2.64	2.85
	SDT	28.5	33.4	38.0	42.5	46.8	51.1	55.3	59.5	63.6
4	TCG	7.01	6.78	6.55	6.30	6.06	5.80	5.54	5.27	4.99
	KW	1.37	1.52	1.68	1.86	2.04	2.23	2.44	2.65	2.87
	SDT	28.6	33.5	38.2	42.7	47.1	51.4	55.7	59.8	63.9
6	TCG	7.46	7.23	6.98	6.73	6.47	6.20	5.93	5.65	5.36
	KW	1.37	1.52	1.69	1.86	2.05	2.24	2.45	2.66	2.89
	SDT	28.6	33.6	38.4	43.0	47.4	51.8	56.0	60.2	64.3
8	TCG	7.93	7.69	7.43	7.16	6.89	6.62	6.33	6.04	5.74
	KW	1.37	1.52	1.69	1.86	2.05	2.25	2.46	2.68	2.90
	SDT	28.6	33.8	38.6	43.2	47.8	52.1	56.4	60.6	64.7
10	TCG	8.42	8.17	7.90	7.62	7.34	7.05	6.75	6.45	6.14
	KW	1.37	1.52	1.69	1.87	2.06	2.26	2.47	2.69	2.92
	SDT	28.6	33.9	38.7	43.5	48.1	52.5	56.8	61.0	65.2
38TUA036-95										
-2	TCG	9.08	8.75	8.41	8.07	7.73	7.38	7.02	6.65	6.29
	KW	2.15	2.35	2.57	2.80	3.05	3.30	3.57	3.85	4.14
	SDT	31.2	35.5	39.7	43.9	48.0	52.0	56.0	60.0	64.0
0	TCG	9.74	9.40	9.04	8.68	8.32	7.95	7.57	7.19	6.80
	KW	2.16	2.36	2.59	2.83	3.07	3.33	3.61	3.89	4.19
	SDT	31.6	35.9	40.1	44.3	48.5	52.5	56.5	60.5	64.5
2	TCG	10.4	10.0	9.67	9.29	8.91	8.52	8.13	7.73	7.33
	KW	2.18	2.38	2.61	2.85	3.10	3.36	3.64	3.93	4.23
	SDT	32.0	36.3	40.5	44.8	48.9	53.0	57.0	61.0	65.0
4	TCG	11.1	10.7	10.3	9.94	9.53	9.13	8.71	8.29	7.87
	KW	2.20	2.40	2.63	2.87	3.12	3.39	3.68	3.97	4.28
	SDT	32.4	36.8	41.0	45.2	49.4	53.5	57.5	61.5	65.5
6	TCG	11.8	11.4	11.0	10.6	10.2	9.75	9.32	8.88	8.44
	KW	2.22	2.42	2.65	2.89	3.15	3.43	3.71	4.01	4.32
	SDT	32.9	37.2	41.5	45.7	49.9	54.1	58.1	62.1	66.1
8	TCG	12.6	12.2	11.7	11.3	10.9	10.4	9.95	9.49	9.02
	KW	2.24	2.45	2.67	2.92	3.18	3.46	3.75	4.06	4.37
	SDT	33.4	37.7	42.0	46.3	50.5	54.6	58.7	62.7	66.7
10	TCG	13.3	12.9	12.5	12.0	11.6	11.1	10.6	10.1	9.63
	KW	2.26	2.47	2.70	2.95	3.21	3.49	3.79	4.10	4.42
	SDT	33.8	38.3	42.6	46.8	51.0	55.2	59.3	63.3	67.3
38TUA048-95, 96										
-2	TCG	11.7	11.3	10.9	10.5	10.0	9.58	9.16	8.77	8.43
	KW	3.22	3.45	3.69	3.94	4.20	4.47	4.77	5.09	5.41
	SDT	33.5	37.6	41.7	45.8	49.9	54.0	58.1	62.0	65.9
0	TCG	12.7	12.3	11.8	11.4	10.9	10.5	10.0	9.59	9.20
	KW	3.29	3.52	3.77	4.03	4.29	4.57	4.88	5.20	5.54
	SDT	34.3	38.4	42.5	46.6	50.7	54.8	58.8	62.8	66.7
2	TCG	13.7	13.3	12.8	12.3	11.8	11.4	10.9	10.4	9.97
	KW	3.36	3.60	3.85	4.12	4.39	4.68	4.99	5.32	5.66
	SDT	35.0	39.2	43.3	47.4	51.5	55.6	59.6	63.6	67.6
4	TCG	14.7	14.2	13.8	13.3	12.8	12.2	11.7	11.2	10.7
	KW	3.43	3.67	3.93	4.20	4.49	4.78	5.11	5.44	5.79
	SDT	35.8	40.0	44.1	48.2	52.3	56.4	60.4	64.4	68.4
6	TCG	15.7	15.2	14.7	14.2	13.7	13.1	12.6	12.0	11.5
	KW	3.49	3.74	4.01	4.29	4.58	4.89	5.22	5.56	5.92
	SDT	36.5	40.8	44.9	49.0	53.1	57.2	61.2	65.2	69.2
8	TCG	16.7	16.2	15.7	15.1	14.6	14.0	13.4	12.8	12.3
	KW	3.56	3.82	4.09	4.38	4.68	4.99	5.33	5.68	6.05
	SDT	37.3	41.5	45.7	49.8	53.9	58.0	62.0	66.0	70.0
10	TCG	17.7	17.2	16.6	16.1	15.5	14.9	14.3	13.7	13.0
	KW	3.63	3.89	4.17	4.47	4.78	5.10	5.44	5.80	6.18
	SDT	38.1	42.3	46.5	50.6	54.7	58.8	62.8	66.8	70.9
38TUA060-95, 96										
-2	TCG	13.9	13.4	13.0	12.6	12.1	11.7	11.2	10.7	10.3
	KW	3.26	3.55	3.87	4.22	4.57	4.94	5.35	5.79	6.24
	SDT	31.9	36.1	40.3	44.5	48.5	52.4	56.3	60.3	64.3
0	TCG	15.1	14.6	14.1	13.7	13.2	12.7	12.2	11.7	11.2
	KW	3.36	3.65	3.98	4.33	4.69	5.06	5.48	5.92	6.38
	SDT	32.6	36.9	41.1	45.3	49.4	53.2	57.2	61.1	65.1
2	TCG	16.3	15.8	15.3	14.8	14.2	13.7	13.2	12.6	12.1
	KW	3.47	3.76	4.09	4.44	4.81	5.19	5.61	6.05	6.51
	SDT	33.4	37.7	41.9	46.1	50.2	54.1	58.0	61.9	65.9
4	TCG	17.5	16.9	16.4	15.8	15.3	14.7	14.1	13.6	13.0
	KW	3.57	3.87	4.20	4.55	4.93	5.31	5.73	6.18	6.65
	SDT	34.1	38.4	42.7	46.9	51.0	54.9	58.8	62.8	66.7
6	TCG	18.7	18.1	17.5	16.9	16.3	15.7	15.1	14.5	13.9
	KW	3.68	3.97	4.31	4.67	5.04	5.44	5.86	6.31	6.78
	SDT	34.9	39.2	43.5	47.7	51.8	55.7	59.7	63.6	67.5
8	TCG	19.9	19.3	18.7	18.0	17.4	16.8	16.1	15.5	14.8
	KW	3.78	4.08	4.42	4.78	5.16	5.56	5.99	6.44	6.92
	SDT	35.7	40.0	44.3	48.5	52.6	56.6	60.5	64.4	68.3
10	TCG	21.0	20.4	19.8	19.1	18.5	17.8	17.1	16.4	15.7
	KW	3.89	4.19	4.53	4.89	5.28	5.68	6.12	6.58	7.05
	SDT	36.4	40.8	45.0	49.3	53.4	57.4	61.4	65.3	69.1

SST — Saturated Temperature Entering Compressor (°C)
TCG — Gross Cooling Capacity (kW)
KW — Total Power (kW)
SDT — Saturated Temperature Leaving Compressor (°C)

Condenser only ratings (English)

SST °F		CONDENSER ENTERING AIR TEMPERATURES °F							
		55	65	75	85	95	105	115	125
38TUA024-74, 75									
30	TCG	21.4	20.5	19.6	18.5	17.5	16.4	15.2	14.0
	KW	1.14	1.32	1.52	1.74	1.99	2.24	2.52	2.80
	SDT	67.3	79.8	91.5	103.0	114.0	124.0	135.0	145.0
35	TCG	23.5	22.5	21.5	20.4	19.3	18.1	16.9	15.7
	KW	1.13	1.31	1.52	1.74	1.99	2.25	2.53	2.83
	SDT	66.9	79.8	91.8	103.0	114.0	125.0	135.0	146.0
40	TCG	25.6	24.6	23.5	22.4	21.2	20.0	18.7	17.4
	KW	1.13	1.31	1.51	1.74	1.99	2.26	2.55	2.85
	SDT	66.4	79.8	92.1	104.0	115.0	126.0	136.0	147.0
45	TCG	27.8	26.8	25.6	24.4	23.2	21.9	20.6	19.2
	KW	1.13	1.31	1.52	1.75	2.00	2.27	2.57	2.88
	SDT	66.0	79.7	92.4	104.0	116.0	127.0	137.0	148.0
50	TCG	30.2	29.1	27.9	26.6	25.3	23.9	22.5	21.0
	KW	1.14	1.31	1.52	1.75	2.01	2.28	2.58	2.90
	SDT	66.0	79.6	92.7	105.0	117.0	128.0	138.0	149.0
55	TCG	32.6	31.4	30.2	28.8	27.4	26.0	24.5	22.9
	KW	1.14	1.31	1.52	1.75	2.01	2.29	2.60	2.93
	SDT	66.2	79.3	93.0	105.0	117.0	128.0	139.0	150.0
38TUA036-95									
30	TCG	34.0	32.5	30.9	29.2	27.6	25.9	24.1	22.3
	KW	1.82	2.07	2.35	2.66	3.00	3.35	3.73	4.14
	SDT	74.3	85.2	95.9	106.0	117.0	127.0	137.0	147.0
35	TCG	37.2	35.6	33.9	32.2	30.4	28.6	26.7	24.8
	KW	1.84	2.09	2.37	2.68	3.03	3.39	3.78	4.20
	SDT	75.2	86.2	97.0	108.0	118.0	128.0	138.0	148.0
40	TCG	40.7	38.9	37.1	35.3	33.3	31.4	29.4	27.4
	KW	1.87	2.12	2.40	2.71	3.06	3.44	3.84	4.26
	SDT	76.1	87.3	98.1	109.0	119.0	130.0	140.0	150.0
45	TCG	44.3	42.4	40.5	38.6	36.5	34.4	32.3	30.1
	KW	1.89	2.15	2.43	2.75	3.10	3.49	3.89	4.33
	SDT	77.2	88.4	99.4	110.0	121.0	131.0	141.0	151.0
50	TCG	48.1	46.1	44.1	42.0	39.8	37.6	35.3	33.0
	KW	1.92	2.18	2.46	2.78	3.14	3.53	3.95	4.39
	SDT	78.3	89.6	101.0	111.0	122.0	132.0	143.0	152.0
55	TCG	52.1	50.1	47.9	45.6	43.3	40.9	38.4	36.0
	KW	1.96	2.21	2.50	2.83	3.18	3.58	4.01	4.46
	SDT	79.4	91.0	102.0	113.0	123.0	134.0	144.0	154.0
38TUA048-95, 96									
30	TCG	43.8	42.1	40.1	38.1	35.9	33.8	31.8	30.0
	KW	2.87	3.16	3.48	3.81	4.17	4.56	4.98	5.44
	SDT	79.2	89.8	100.0	110.0	121.0	131.0	141.0	151.0
35	TCG	48.6	46.8	44.7	42.6	40.3	38.0	35.7	33.7
	KW	2.95	3.25	3.58	3.93	4.30	4.70	5.14	5.61
	SDT	81.0	91.7	102.0	112.0	123.0	133.0	143.0	153.0
40	TCG	53.5	51.5	49.4	47.1	44.6	42.2	39.7	37.4
	KW	3.03	3.34	3.68	4.05	4.43	4.85	5.30	5.79
	SDT	82.9	93.6	104.0	114.0	125.0	135.0	145.0	155.0
45	TCG	58.3	56.2	54.0	51.6	49.0	46.4	43.7	41.0
	KW	3.11	3.43	3.78	4.16	4.56	5.00	5.46	5.97
	SDT	84.7	95.5	106.0	116.0	127.0	137.0	147.0	157.0
50	TCG	63.2	61.0	58.6	56.0	53.4	50.5	47.6	44.7
	KW	3.19	3.52	3.88	4.28	4.70	5.14	5.62	6.14
	SDT	86.5	97.3	108.0	118.0	129.0	139.0	149.0	159.0
55	TCG	68.2	65.9	63.4	60.7	57.9	54.9	51.7	48.6
	KW	3.27	3.62	3.99	4.39	4.83	5.29	5.79	6.32
	SDT	88.4	99.3	110.0	120.0	131.0	141.0	151.0	161.0
38TUA060-95, 96									
30	TCG	52.0	49.8	47.7	45.5	43.4	41.1	38.8	36.5
	KW	2.83	3.18	3.58	4.04	4.53	5.05	5.63	6.27
	SDT	76.1	86.8	97.4	108.0	118.0	128.0	138.0	148.0
35	TCG	57.9	55.5	53.2	50.8	48.4	45.9	43.4	40.9
	KW	2.97	3.33	3.73	4.19	4.69	5.22	5.81	6.45
	SDT	77.8	88.6	99.4	110.0	120.0	130.0	140.0	150.0
40	TCG	63.8	61.3	58.7	56.1	53.4	50.7	48.0	45.2
	KW	3.11	3.47	3.88	4.34	4.85	5.39	5.99	6.64
	SDT	79.6	90.5	101.0	112.0	122.0	132.0	142.0	152.0
45	TCG	69.7	67.0	64.2	61.4	58.5	55.6	52.6	49.5
	KW	3.25	3.62	4.03	4.50	5.02	5.57	6.17	6.83
	SDT	81.3	92.4	103.0	114.0	124.0	134.0	144.0	154.0
50	TCG	75.5	72.7	69.7	66.7	63.5	60.4	57.1	53.8
	KW	3.39	3.76	4.18	4.65	5.18	5.74	6.35	7.01
	SDT	83.1	94.3	105.0	116.0	126.0	136.0	146.0	156.0
55	TCG	81.6	78.6	75.4	72.1	68.7	65.3	61.8	58.3
	KW	3.54	3.91	4.33	4.81	5.34	5.92	6.54	7.21
	SDT	84.9	96.2	107.0	118.0	128.0	138.0	148.0	158.0

SST — Saturated Temperature Entering Compressor (°F)
TCG — Gross Cooling Capacity (1000 Btuh)
KW — Total Power (kW)
SDT — Saturated Temperature Leaving Compressor (°F)

System design

1. Intended for outdoor installation with free air inlet and outlet. Outdoor fan external static pressure available is less than 0.01-in. wc.
2. Minimum outdoor operating air temperature without low-ambient operation accessory is 55°F (12.8°C).
3. Maximum outdoor operating air temperature is 125°F (51.7°C).
4. For reliable operation, unit should be level in all horizontal planes.
5. Maximum elevation of indoor coil above or below base of outdoor unit is: indoor coil above = 50 ft, indoor coil below = 150 ft.
6. For interconnecting refrigerant tube lengths of 50 to 175 ft or 20 ft vertical differential, consult Long-Line Application Guideline available from equipment distributor.
7. Crankcase heater required when interconnecting refrigerant tube length exceeds 50 ft.
8. If any refrigerant tubing is buried, provide a minimum 6-in. vertical rise to the valve connections at the unit. Refrigerant tubing lengths up to 36 in. may be buried without further consideration. For buried lines longer than 3 ft, consult your local distributor.
9. Use only copper wire for electric connection at unit. Aluminum and clad aluminum are not acceptable for the type of connector provided.
10. Mismatches of indoor coil capacity more than 1 size larger than outdoor unit capacity may result in inadequate indoor comfort.

Guide specifications

Air-Cooled, Split-System Air Conditioner 38TUA 2 to 5 Tons Nominal (7 to 17.5 kW)

GENERAL

System Description

Outdoor-mounted, air-cooled, split-system air conditioner unit suitable for ground or rooftop installation. Unit consists of a hermetic compressor, an air-cooled coil, propeller-type condenser fan, and a control box. Unit will discharge supply air upward as shown on contract drawings. Unit will be used in a refrigeration circuit to match up to a packaged fan coil or coil unit.

Quality Assurance

Unit shall be manufactured in a facility registered to ISO9001/BS5750 Part II, International Standard for quality systems.

Unit will be rated in accordance with the latest edition of ARI Standard 210.

Unit construction will comply with latest edition of ANSI/ASHRAE and with NEC (U.S.A. Standard).

Unit will be constructed in accordance with UL standards.

Unit cabinet will be capable of withstanding Federal Test Method Standard No. 141 (Method 6061) 500-hr salt spray test (U.S.A. Standard).

Air-cooled condenser coils will be leak tested at 150 psig (1034 KPa) and pressure tested at 300 psig (2068 KPa).

Delivery, Storage, and Handling

Unit will be shipped as single package only and is stored and handled per unit manufacturer's recommendations.

PRODUCTS

Equipment

Factory assembled, single piece, air-cooled air conditioner unit. Contained within the unit enclosure is all factory wiring, piping, controls, compressor, refrigerant charge (R-22), and special features required prior to field start-up.

Unit Cabinet

Unit cabinet will be constructed of galvanized steel, bonderized, and coated with a powder coat paint.

Fans

Condenser fan will be direct-drive propeller type, discharging air upward.

Condenser fan motors will be totally enclosed, 1-phase type with class B insulation and permanently lubricated bearings.

Shafts will be corrosion resistant.

Fan blades will be statically and dynamically balanced.

Condenser fan openings will be equipped with PVC-coated steel wire safety guards.

Compressor

Compressor will be hermetically sealed.

Compressor will be mounted on rubber vibration isolators.

Condenser Coil

Condenser coil will be air cooled.

Coil will be constructed of aluminum fins mechanically bonded to copper tubes which are then cleaned, dehydrated, and sealed.

Refrigeration Components

Refrigeration circuit components will include liquid line shutoff valve with sweat connections, suction shutoff valves with sweat connections, system charge of refrigerant R-22, and compressor oil.

Operating Characteristics

The capacity of the unit will meet or exceed _____ Btuh (kw) at a suction temperature of _____ °F (°C). The power consumption at full load will not exceed _____ kW.

Combination of the unit and the evaporator or fan coil unit will have a total net cooling capacity of _____ Btuh (kw) or greater at conditions of _____ CFM (L/S) entering air temperature at the evaporator at _____ °F (°C) wet bulb and _____ °F (°C) dry bulb, and air entering the unit at _____ °F (°C).

Electrical Requirements

Nominal unit electrical characteristics will be _____ v, _____ phase, 50 hz. The unit will be capable of satisfactory operation within voltage limits of _____ v to _____ v.

Unit electrical power will be single point connection.

Control circuit will be 24v.

Special Features

Refer to section of this literature identifying accessories and descriptions for specific features and available enhancements.

