



## 38AE Series

*Air Cooled Condensing Unit*

Nominal Capacity : 202,000-604,000 Btuh

TT Air Engineering



## 38AE Series

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▲ 38AE020-040



▲ 38AE050-060

### *High Quality Condensing Units for Diversified Commercial Use*

- *High operating efficiency*
- *Years of trouble-free operation*
- *High system application flexibility*

## Features & benefits

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*These dependable outdoor sections match Carrier's indoor air handlers and direct-expansion coils for a wide selection of commercial cooling solutions.*

### **Constructed for long life**

Models 38AE are designed and built to last. The copper tube-aluminum fin outdoor coil construction provides years of trouble-free operation. (Where conditions require them, copper fin coils are also available.) Cabinets are constructed of prepainted galvanized steel, delivering unparalleled protection from surface rust. Inside and outside surfaces are protected to ensure long life, good looks, and corrosion resistance. Solid-state safety controls are used for enhanced system reliability.

### **Reliable operation**

Building owners will appreciate the high unit EERs (Energy Efficiency Ratios) offered by the 38AE units. These units provide greater efficiency than similar units in the marketplace, which translates into year-round operating savings.

## Physical Data

Description		Air Cooled Condensing Unit						
Product Model		38AE020	38AE025	38AE030	38AE040	38AE050	38AE060	
Nominal Cooling Capacity	W	58,900	82,300	94,000	118,100	160,600	177,200	
	Btu/hr.	201,000	281,000	321,000	403,000	548,000	604,900	
Power Consumption	W	19,370	26,360	28,360	39,860	52,450	58,050	
Power Supply	V/Ph/Hz	380/3/50						
Operating Current	Amp.	44.05	54.84	59.38	85.12	108.68	120.42	
Compressor	Model	06E2250611	06E2265611	06E627506	06E6299681	06E2265611	06E627506	
	Type	Semi-Hermetic Reciprocating						
	Quantity	1	1	1	1	2	2	
	RLA	36	48.8	53.4	79.1	2 x 48.8	2 x 53.4	
	LRA	173	223	253	345	2 x 223	2 x 253	
Coil	Type	Copper Tube / Aluminium Fin						
	Row	1.5	3	3	3	3	3	
	Fin / Inch	15	15	15	15	15	15	
	Face Area	sq.ft.	42.94	42.94	54.00	54.00	73.23	73.23
Fan Motor	Power Supply	V/Ph/Hz	380/3/50					
	Power Output	Hp	1	2	2	2	2	2
	RLA	Amp.	2 x 4.31	2 x 3.30	2 x 3.30	2 x 3.30	3 x 4.95	3 x 4.95
	Power Input	W	2,200	2,700		4,030		
	Fan Type	Propeller						
	Drive Type	Direct						
	Fan Diameter	inch	28	27	30	30	27	30
	Quantity		2	2	2	2	3	3
	Nominal Air Flow	CFM	20,000	21,200	23,200	23,200	33,000	33,000
	Safety Device	Hi-Pressure Switch	psig	395 / 275 (Cut out / Cut in) - Auto Restart type				
Low-Pressure Switch		psig	30 / 60 (Cut out / Cut in) - Auto Restart type					
Oil-Pressure Switch		psig	6 / 14 (Cut out / Cut in) - Auto Restart type					
Capacity Step Control (By Unload)	%	0/50/100	0/66/100	0/66/100	0/66/100	0/33/50/83/100	0/33/50/83/100	
Starter	Part Winding							
Electrical Controls	Time Guard Control Module							
Refrigerant	Type	R-22						
	Pre-Charging from Factory	kg.	0.30					
Piping Connections	Liquid	inch	7/8	7/8	7/8	7/8	2.....7/8	2.....7/8
	Suction	inch	1...5/8	1...5/8	2...1/8	2...1/8	2.....1 5/8	2.....2 1/8
Weight	lb.(kg.)	1,155 (524)	1,286 (583)	1,367 (620)	1,435 (651)	1,950 (885)	2,125 (966)	

\* RATING CONDITION: OUTDOOR AMBIENT TEMPERATURE 95°F, SATURATED SUCTION TEMPERATURE 45°F

\*\* UNIT SUPPLIED FROM FACTORY ONLY PRE-CHARGE

## Performance Data

### Performance Data: 38AE020

Model	SST (°F)	Air Temperature Entering Condenser (°F)														
		80			90			95			100			110		
		TC	KW	CDT	TC	KW	CDT	TC	KW	CDT	TC	KW	CDT	TC	KW	CDT
38AE020	30	164.0	14.1	109	152.0	14.9	117	145.0	15.2	122	139.0	15.5	126	125.0	16.2	135
	35	182.0	14.8	111	169.0	15.7	120	162.0	16.1	124	156.0	16.4	128	142.0	17.3	137
	40	202.0	15.5	114	188.0	16.5	122	181.0	17.0	126	173.0	17.5	131	159.0	18.6	139
	45	223.0	16.2	116	208.0	17.3	125	201.0	17.9	129	193.0	18.4	133	176.0	19.9	141
	50	245.0	16.9	119	230.0	18.2	127	222.0	18.9	132	214.0	19.5	136	202.0	20.5	143

### Performance Data: 38AE025

Model	SST (°F)	Air Temperature Entering Condenser (°F)														
		80			90			95			100			110		
		TC	KW	CDT	TC	KW	CDT	TC	KW	CDT	TC	KW	CDT	TC	KW	CDT
38AE025	30	229.0	18.5	105	213.0	19.7	114	204.0	20.2	118	196.0	20.7	123	180.0	21.8	132
	35	255.0	19.4	107	237.0	20.7	116	228.0	21.4	121	219.0	21.9	125	201.0	23.2	134
	40	282.0	20.3	110	263.0	21.8	118	254.0	22.5	123	244.0	23.2	127	224.0	24.6	136
	45	314.0	21.2	112	292.0	22.9	121	281.0	23.6	125	271.0	24.4	129	249.0	26.1	138
	50	344.0	22.1	114	322.0	23.9	123	311.0	24.7	127	300.0	25.5	132	274.0	27.6	140

- : OUT OF RANGE

TC : TOTAL COOLING CAPACITY (1,000 BTU/Hr)

KW : COMPRESSOR INPUT (KW)

CDT : SATURATED DISCHARGE TEMPERATURE AT COMPRESSOR (°F)

SST : SATURATED SUCTION TEMPERATURE (°F)

\*\*\*\* ASSUME 10°F SUPERHEAT AND 15°F SUBCOOLING \*\*\*\*

# Performance Data

Performance Data: 38AE030

Model	SST (°F)	Air Temperature Entering Condenser (°F)														
		80			90			95			100			110		
		TC	KW	CDT	TC	KW	CDT	TC	KW	CDT	TC	KW	CDT	TC	KW	CDT
38AE030	30	260.0	20.3	101	242.0	21.8	110	234.0	22.4	115	225.0	23.0	119	208.0	23.9	128
	35	288.0	21.2	103	270.0	22.8	112	261.0	23.4	116	251.0	24.1	121	233.0	25.3	130
	40	319.0	22.0	104	300.0	23.7	113	289.0	24.5	118	280.0	25.3	123	260.0	26.7	132
	45	352.0	22.7	106	331.0	24.7	115	321.0	25.6	120	310.0	26.4	124	289.0	28.1	133
	50	387.0	23.5	108	365.0	25.6	117	354.0	26.6	122	343.0	27.5	126	320.0	29.5	135

Performance Data: 38AE040

Model	SST (°F)	Air Temperature Entering Condenser (°F)														
		80			90			95			100			110		
		TC	KW	CDT	TC	KW	CDT	TC	KW	CDT	TC	KW	CDT	TC	KW	CDT
38AE040	30	329.0	29.4	106	308.0	30.9	115	298.0	31.7	120	289.0	32.3	124	267.0	33.6	133
	35	364.0	30.9	108	341.0	32.6	117	330.0	33.4	122	319.0	34.2	126	297.0	35.8	135
	40	401.0	32.5	111	377.0	34.4	120	365.0	35.2	124	353.0	36.1	128	326.0	38.3	139
	45	441.0	34.0	113	416.0	36.1	122	403.0	37.1	126	390.0	38.2	131	363.0	40.4	140
	50	484.0	35.6	116	457.0	37.9	124	443.0	39.1	129	429.0	40.3	133	408.0	42.0	143

Performance Data: 38AE050

Model	SST (°F)	Air Temperature Entering Condenser (°F)														
		80			90			95			100			110		
		TC	KW	CDT	TC	KW	CDT	TC	KW	CDT	TC	KW	CDT	TC	KW	CDT
38AE050	30	448.6	37.7	108	416.5	39.9	116	399.6	41.0	121	384.0	41.9	125	359.0	43.5	132
	35	498.4	39.8	110	463.5	42.2	119	445.7	43.4	123	428.6	44.5	127	405.9	46.1	133
	40	552.2	41.6	112	514.2	44.5	121	495.3	45.8	125	476.4	47.1	130	437.8	50.0	138
	45	610.9	43.7	115	568.7	46.8	124	548.2	48.3	128	527.6	49.8	132	496.2	52.1	139
	50	670.4	45.7	118	626.9	49.0	126	604.6	50.6	131	582.2	52.4	135	549.5	54.9	142

Performance Data: 38AE060

Model	SST (°F)	Air Temperature Entering Condenser (°F)														
		80			90			95			100			110		
		TC	KW	CDT	TC	KW	CDT	TC	KW	CDT	TC	KW	CDT	TC	KW	CDT
38AE060	30	494.8	42.8	107	461.6	45.2	116	443.9	46.4	121	427.1	47.2	125	393.1	49.2	134
	35	548.2	44.9	110	512.6	47.5	118	494.1	48.8	123	476.1	49.9	127	439.9	52.5	136
	40	605.1	46.9	112	566.6	50.0	121	547.5	51.4	125	528.4	52.7	130	490.0	55.8	138
	45	666.0	49.0	115	625.6	52.4	123	604.9	53.9	128	584.4	55.6	132	553.8	58.0	139
	50	730.4	51.1	117	687.5	54.8	126	665.6	56.7	130	644.1	58.7	135	611.7	61.5	142

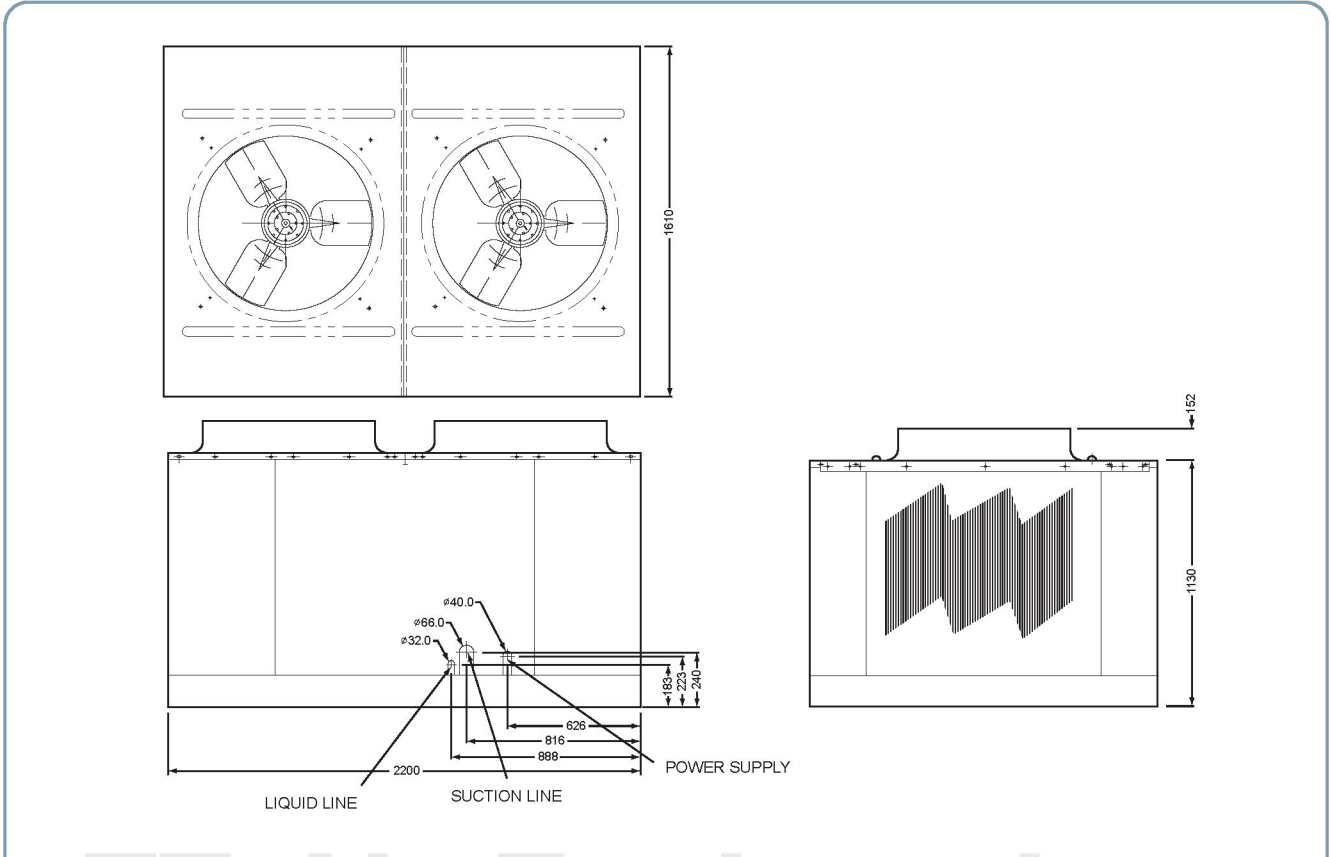
- : OUT OF RANGE  
 TC : TOTAL COOLING CAPACITY (1,000 BTU/Hr)  
 KW : COMPRESSOR INPUT (KW)

CDT : SATURATED DISCHARGE TEMPERATURE AT COMPRESSOR (°F)  
 SST : SATURATED SUCTION TEMPERATURE (°F)

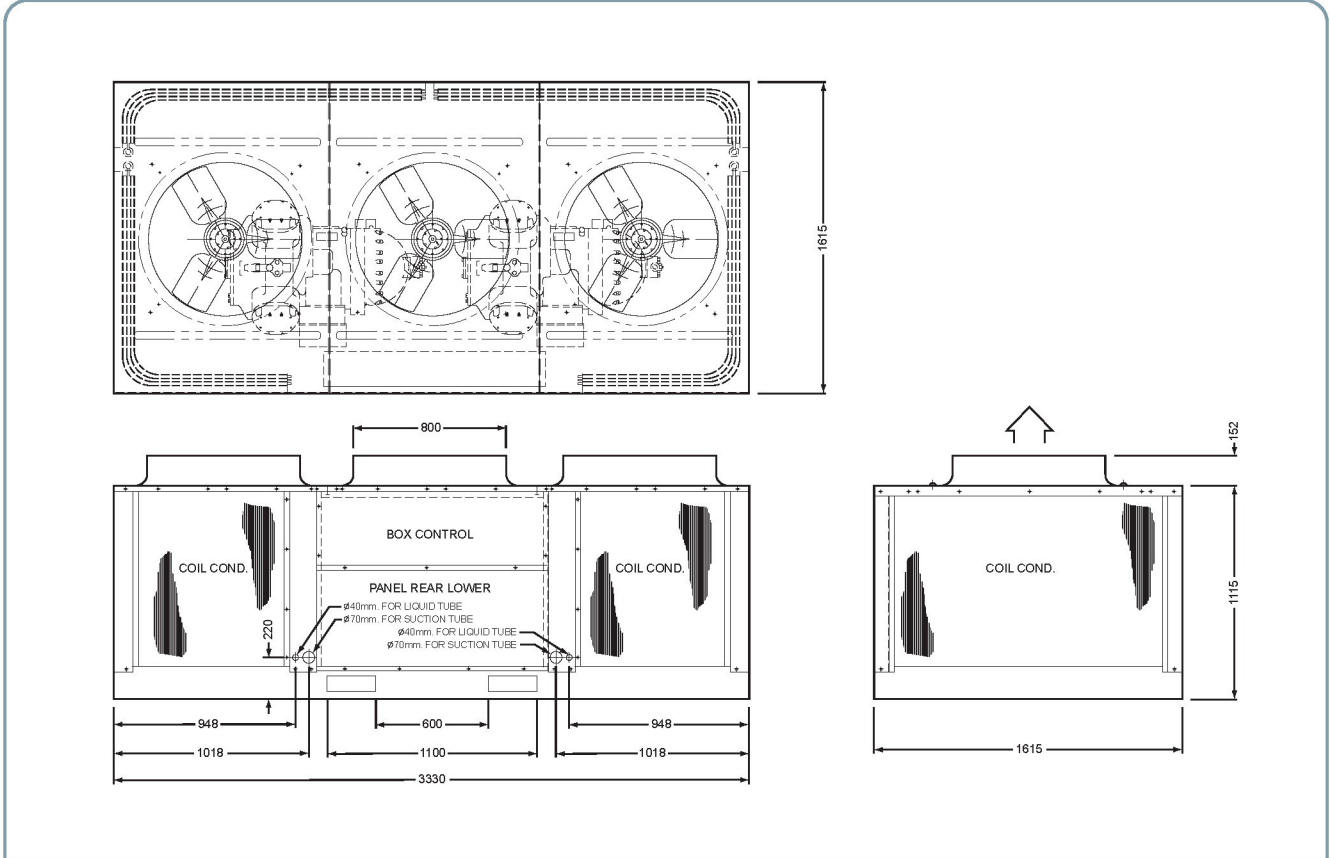
\*\*\*\* ASSUME 10°F SUPERHEAT AND 15°F SUBCOOLING \*\*\*\*



# Unit dimensions



Model : 38AE020-040 **TT Air Engineering**



Model : 38AE050-060



# TT Air Engineering

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Carrier reserves the right to make changes in specifications without prior notice.  
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38AE/06/15