



REFRIGERATION SYSTEM
Turbo air

**UNIT COOLERS
CONDENSING UNITS
PACKAGE UNITS**



BEST QUALITY & PRICE
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QUICK DELIVERY FROM
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Quality Products
Competitive Price
Prompt Service

Best Customer Experience



**Turbo Air is committed to your success,
every step of the way**

- C** **Cost** Competitive Price + Freight Advantage
- D** **Delivery - Lead Time** 1 Day Delivery (11 Locations)
- Q** **Quality** Full Option Cutting Edge Design
- S** **Service** Quick Action, Saving Time (Universal Replacement Parts)



Refrigeration Reinvented REFRIGERATION SYSTEM **Turbo air**

Toll Free. 1-888-900-1002 Fax. 1-310-900-1088 tacsvc@turboairinc.com

Sales & Service Contacts



One call
brings you
a **thousand**
solutions with



Primary Contact Information

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* Should you have any question, please feel free to contact any of our team members above.

Branch / Distribution Locations

Immediate, reliable delivery nationwide

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179 Sand Island Access Rd. #B
Honolulu, HI 96819

OAKLAND



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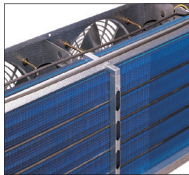


2701 SW 145th Ave. Suite 220
Miramar, FL 33027

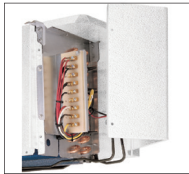
LOW PROFILE UNIT COOLERS



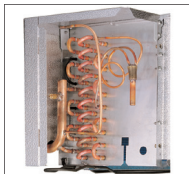
LOW PROFILE UNIT COOLER STANDARD FEATURES



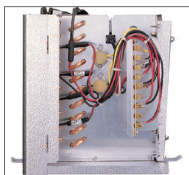
- Blue anti-corrosion-fin increases the life span of the coil.
- Air-pass guard is located at the bottom of the coil to improve heat exchange rate.
- Easy to replace defrost heater (LED model).
- Corrugated fin is used to increase heat exchange rate by expanding the surface area.



- Even in confined space, all parts can be reached easily by opening the front cover.
- Location of power connector makes replacement of motor convenient.
- **1 Year fan motor and parts warranty!**



- Seamless inner groove copper tube increases the heat exchange rate by reducing the space between the fin and the copper tube.
- Venturi type distributor and precise orifice hole are used to minimize the pressure drop and maximize the freezing capacity respectively.
- Even in confined space, all parts can be reached easily by opening the front cover.



- Thermostat is installed to prevent over temperature on heater.
- Circuit opens automatically over 70°F.
- Parts available: Expansion Valve (Sporlan) (Factory Pre-mounted)
Solenoid Valve (Sporlan) (Factory Pre-mounted)
Thermostat (Johnson Control) (Shipped Loose)



- The spiral fan guard enables cold air to be delivered efficiently and thoroughly.
- The protruding fan and motor placement substantially reduce vibration and noise.
- **EC motor (Dual speed) for high energy efficiency.**

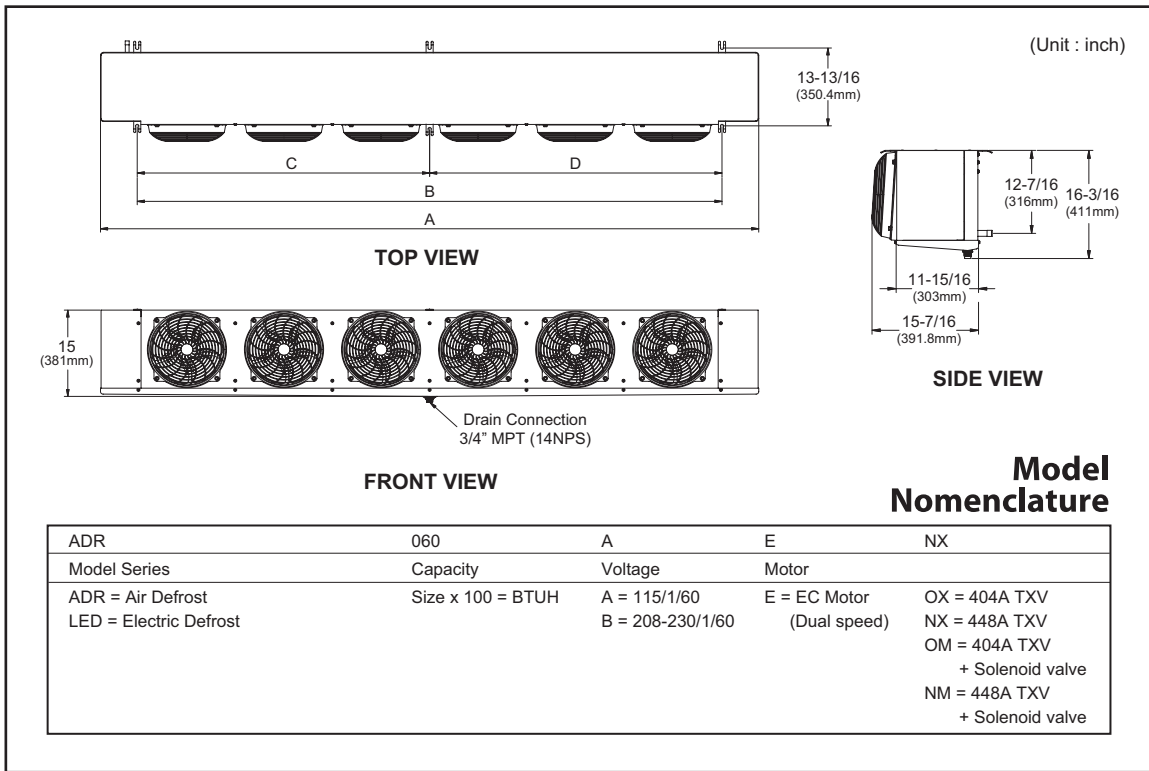


- Anti-oxidizing stainless steel mounting and bolts.

All Replacement Parts are Universal!

LOW PROFILE UNIT COOLERS

DIMENSIONAL DATA



DIMENSIONAL DATA FOR ADR/LED MODELS

Air Defrost Models 6 FPI	Electric Defrost Models 6 FPI	No. of Fans	Dimensions (Inches / mm)				Approx. Net Wt. (lbs / kg)			
			A	B	C	D	ADR	LED		
ADR060AE	LED036BE	1	29.4	747.4	17.4	443	30 / 14	32 / 15		
	LED052BE	2	45.4	1154.4	33.5	850		48 / 22		
ADR089AE		2	45.4	1154.4	33.5	850	45 / 20			
ADR112AE	LED072BE	2	45.4	1154.4	33.5	850	48 / 22	52 / 24		
ADR125AE	LED081BE	2	45.4	1154.4	33.5	850	49 / 22	53 / 24		
ADR137AE	LED090BE	3	61.4	1559.4	49.4	1255	62 / 28	67 / 31		
ADR171AE	LED114BE	3	61.4	1559.4	49.4	1255	67 / 30	73 / 33		
ADR191AE		3	61.4	1559.4	49.4	1255	68 / 31			
	LED124BE	4	77.4	1966.4	65.4	1662		86 / 39		
	LED157BE	4	77.4	1966.4	65.4	1662		93 / 42		
ADR258AE	LED176BE	4	77.4	1966.4	65.4	1662	87 / 40	95 / 43		
ADR325AE	LED225BE	5	93.5	2374.4	81.5	2070	105 / 48	116 / 52		
ADR352AE	LED244BE	6	109.5	2782.4	97.6	2478	49.0 1244	48.6 1234	124 / 56	134 / 61
ADR392AE	LED273BE	6	109.5	2782.4	97.6	2478	49.0 1244	48.6 1234	127 / 58	137 / 62

LOW PROFILE UNIT COOLERS



SPECIFICATIONS & PHYSICAL DATA

ADR Air Defrost Models 60Hz. With EC Motors (Dual Speed)

Model	EC Motor Data			Connections (Inches)				Approx. Net Weight	
	115V 1Ph 60Hz			COIL INLET	SUCTION	EQUALIZER	DRAIN	Lbs	Kg
	HP	Total Amps	Watts						
ADR060AE	1/25	0.75	25	1/2 OD	5/8 ID	1/4 OD	3/4 MPT	30	14
ADR089AE	1/25	1.50	50	1/2 OD	5/8 ID	1/4 OD	3/4 MPT	45	20
ADR112AE	1/25	1.50	50	1/2 OD	5/8 ID	1/4 OD	3/4 MPT	48	22
ADR125AE	1/25	1.50	50	1/2 OD	7/8 ID	1/4 OD	3/4 MPT	49	22
ADR137AE	1/25	2.25	75	1/2 OD	7/8 ID	1/4 OD	3/4 MPT	62	28
ADR171AE	1/25	2.25	75	1/2 OD	7/8 ID	1/4 OD	3/4 MPT	67	30
ADR191AE	1/25	2.25	75	1/2 OD	7/8 ID	1/4 OD	3/4 MPT	68	31
ADR258AE	1/25	3.00	100	1/2 OD	7/8 ID	1/4 OD	3/4 MPT	87	40
ADR325AE	1/25	3.75	125	1/2 OD	1-1/8 ID	1/4 OD	3/4 MPT	105	48
ADR352AE	1/25	4.50	150	1/2 OD	1-1/8 ID	1/4 OD	3/4 MPT	124	56
ADR392AE	1/25	4.50	150	1/2 OD	1-1/8 ID	1/4 OD	3/4 MPT	127	58

LED Electric Defrost Models 60Hz. With EC Motors (Dual Speed)

Model	EC Motor Data			Defrost Heaters			Connections (Inches)				Approx. Net Weight	
	230V 1Ph 60Hz			Watts	Total Amps		COIL INLET	SUCTION	EQUALIZER	DRAIN	Lbs	Kg
	HP	Total Amps	Watts		230/1/60	230/3/60						
LED036BE	1/25	0.45	25	1020	4.4	2.6	1/2 OD	5/8 ID	1/4 OD	3/4 MPT	32	15
LED052BE	1/25	0.90	50	2010	8.7	5.0	1/2 OD	5/8 ID	1/4 OD	3/4 MPT	48	22
LED072BE	1/25	0.90	50	2010	8.7	5.0	1/2 OD	5/8 ID	1/4 OD	3/4 MPT	52	24
LED081BE	1/25	0.90	50	2010	8.7	5.0	1/2 OD	7/8 ID	1/4 OD	3/4 MPT	53	24
LED090BE	1/25	1.35	75	3000	13.0	7.5	1/2 OD	7/8 ID	1/4 OD	3/4 MPT	67	31
LED114BE	1/25	1.35	75	3000	13.0	7.5	1/2 OD	7/8 ID	1/4 OD	3/4 MPT	73	33
LED124BE	1/25	1.80	100	3900	17.0	9.8	1/2 OD	7/8 ID	1/4 OD	3/4 MPT	86	39
LED157BE	1/25	1.80	100	3900	17.0	9.8	1/2 OD	1-1/8 ID	1/4 OD	3/4 MPT	93	42
LED176BE	1/25	1.80	100	3900	17.0	9.8	1/2 OD	1-1/8 ID	1/4 OD	3/4 MPT	95	43
LED225BE	1/25	2.25	125	4800	20.9	12.0	1/2 OD	1-1/8 ID	1/4 OD	3/4 MPT	116	52
LED244BE	1/25	2.70	150	6000	26.1	15.1	1/2 OD	1-1/8 ID	1/4 OD	3/4 MPT	134	61
LED273BE	1/25	2.70	150	6000	26.1	15.1	1/2 OD	1-1/8 ID	1/4 OD	3/4 MPT	137	62

LOW PROFILE UNIT COOLERS



AIR DEFROST PERFORMANCE DATA

ADR Air Defrost Models 60Hz. With EC Motors (Dual Speed)

Model	Capacity (R-404A)*				Capacity (R-448A / R-449A)*				Fan Data		
	10°F / 6°C TD 25°F / -4°C SST		14°F / 8°C TD 21°F / -6°C SST		10°F / 6°C TD 25°F / -4°C SST		14°F / 8°C TD 21°F / -6°C SST		CFM / m ³ H	No.	
	BTUH	Watts	BTUH	Watts	BTUH	Watts	BTUH	Watts			
ADR060AE	6058	1774	7906	2315	6022	1764	7853	2300	772	1312	1
ADR089AE	8989	2633	11756	3443	8947	2620	11694	3425	1555	2643	2
ADR112AE	11280	3304	14763	4324	11234	3290	14694	4303	1544	2623	2
ADR125AE	12609	3693	16511	4836	12561	3679	16439	4815	1544	2623	2
ADR137AE	13744	4025	18008	5274	13697	4011	17936	5253	2333	3964	3
ADR171AE	17213	5041	22565	6609	17159	5025	22484	6585	2316	3935	3
ADR191AE	19213	5627	25197	7379	19157	5611	25113	7355	2316	3935	3
ADR258AE	25883	7580	33974	9950	25821	7562	33882	9923	3088	5247	4
ADR325AE	32584	9543	42795	12534	32519	9524	42697	12505	3860	6559	5
ADR352AE	35287	10335	46354	13576	35220	10315	46253	13546	4632	7870	6
ADR392AE	39317	11515	51659	15130	39248	11495	51556	15099	4632	7870	6

ELECTRIC DEFROST PERFORMANCE DATA

LED Electric Defrost Models 60Hz. With EC Motors (Dual Speed)

Model	Capacity (R-404A)*				Capacity (R-448A)*				Fan Data		
	10°F / 6°C TD -20°F / -29°C SST		12°F / 7°C TD -22°F / -30°C SST		10°F / 6°C TD -20°F / -29°C SST		12°F / 7°C TD -22°F / -30°C SST		CFM / m ³ H	No.	
	BTUH	Watts	BTUH	Watts	BTUH	Watts	BTUH	Watts			
LED036BE	3764	1102	4432	1298	3678	1077	4325	1267	772	1312	1
LED052BE	5351	1567	6312	1849	5247	1537	6183	1811	1555	2643	2
LED072BE	7369	2158	8703	2549	7244	2121	8546	2503	1544	2623	2
LED081BE	8313	2435	9823	2877	8181	2396	9657	2828	1544	2623	2
LED090BE	9161	2683	10831	3172	9027	2644	10663	3123	2333	3964	3
LED114BE	11587	3393	13708	4015	11431	3348	13513	3958	2316	3935	3
LED124BE	12608	3693	14924	4371	12454	3647	14731	4314	3111	5285	4
LED157BE	15901	4657	18832	5515	15723	4605	18610	5450	3088	5247	4
LED176BE	17842	5225	21139	6191	17657	5171	20907	6123	3088	5247	4
LED225BE	22711	6651	26926	7886	22509	6592	26672	7812	3860	6559	5
LED244BE	24664	7224	29248	8566	24456	7162	28986	8489	4632	7870	6
LED273BE	27609	8086	32750	9592	27392	8023	32478	9512	4632	7870	6

*Cooling capacity calculation (Condensing temperature = 105°F, Superheat = 6.5°F, Subcooling = 9°F)

THIN PROFILE COOLERS

MODEL NOMENCLATURE

TTA	085	A	E	NX
Model Series	Capacity	Voltage	MOTOR	
TTA = Air Defrost TTE = Electric Defrost	Size x 100 = BTUH	A = 115/1/60 B = 208-230/1/60	E = EC Motor (Dual speed)	OX = 404A TXV NX = 448A TXV OM = 404A TXV + Solenoid valve NM = 448A TXV + Solenoid valve



SPECIFICATIONS & PHYSICAL DATA

TTA Air Defrost Models 60Hz. With EC Motors (Dual Speed)

Model	EC Motor Data			Connections (Inches)				Approx. Net Weight	
	115V 1Ph 60Hz			COIL INLET	SUCTION	EQUALIZER	DRAIN	Lbs	Kg
	HP	Total Amps	Watts						
TTA085AE	1/25	1.50	50	1/2 OD	5/8 ID	1/4 OD	3/4 MPT	44	20
TTA130AE	1/25	2.25	75	1/2 OD	5/8 ID	1/4 OD	3/4 MPT	61	28
TTA176AE	1/25	3.00	100	1/2 OD	7/8 ID	1/4 OD	3/4 MPT	80	36
TTA221AE	1/25	3.75	125	1/2 OD	7/8 ID	1/4 OD	3/4 MPT	97	44
TTA248AE	1/25	4.50	150	1/2 OD	1-1/8 ID	1/4 OD	3/4 MPT	115	52

TTE Electric Defrost Models 60Hz. With EC Motors (Dual Speed)

Model	EC Motor Data			Defrost Heaters		Connections (Inches)				Approx. Net Weight	
	230V 1Ph 60Hz			Watts	Total Amps	COIL INLET	SUCTION	EQUALIZER	DRAIN	Lbs	Kg
	HP	Total Amps	Watts		230/1/60						
TTE064BE	1/25	0.90	50	1110	4.8	1/2 OD	5/8 ID	1/4 OD	3/4 MPT	45	20
TTE102BE	1/25	1.35	75	1530	6.7	1/2 OD	5/8 ID	1/4 OD	3/4 MPT	62	28
TTE140BE	1/25	1.80	100	1950	8.5	1/2 OD	7/8 ID	1/4 OD	3/4 MPT	81	37
TTE179BE	1/25	2.25	125	2370	10.3	1/2 OD	7/8 ID	1/4 OD	3/4 MPT	99	45
TTE203BE	1/25	2.70	150	2790	12.1	1/2 OD	1-1/8 ID	1/4 OD	3/4 MPT	116	53

THIN PROFILE COOLERS

PERFORMANCE DATA

TTA Air Defrost Models 60Hz. With EC Motors (Dual Speed)

Model	Capacity (R-404A)*				Capacity (R-448A / R-449A)*				Fan Data		
	10°F / 6°C TD		14°F / 8°C TD		10°F / 6°C TD		14°F / 8°C TD				
	25°F / -4°C SST		21°F / -6°C SST		25°F / -4°C SST		21°F / -6°C SST		CFM/m³/h	No.	
	BTUH	Watts	BTUH	Watts	BTUH	Watts	BTUH	Watts			
TTA085AE	8535	2500	12502	3662	8502	2490	12447	3645	1487	2527	2
TTA130AE	13053	3823	19151	5609	13014	3812	19086	5590	2231	3791	3
TTA176AE	17595	5153	25840	7568	17553	5141	25769	7547	2975	5054	4
TTA221AE	22151	6487	32551	9533	22106	6474	32476	9511	3719	6318	5
TTA248AE	24887	7289	36583	10714	24841	7275	36504	10691	4462	7582	6

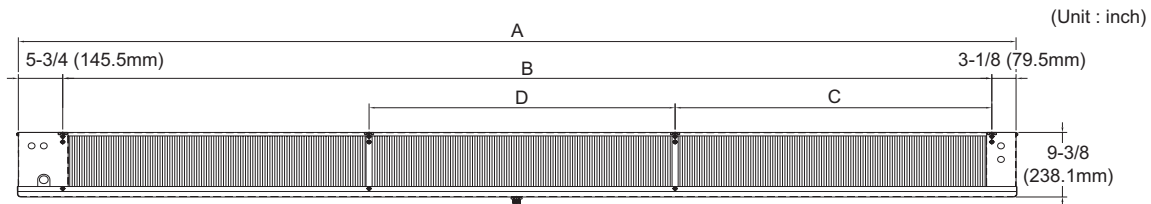
TTE Electric Defrost Models 60Hz. With EC Motors (Dual Speed)

Model	Capacity (R-404A)*				Capacity (R-448A)*				Fan Data		
	10°F / 6°C TD		12°F / 7°C TD		10°F / 6°C TD		12°F / 7°C TD				
	-20°F / -29°C SST		-22°F / -30°C SST		-20°F / -29°C SST		-22°F / -30°C SST		CFM/m³/h	No.	
	BTUH	Watts	BTUH	Watts	BTUH	Watts	BTUH	Watts			
TTE064BE	6570	1924	8070	2363	6457	1891	7924	2321	1487	2527	2
TTE102BE	10369	3037	12760	3737	10230	2996	12579	3684	2231	3791	3
TTE140BE	14240	4171	17543	5138	14082	4124	17336	5077	2975	5054	4
TTE179BE	18152	5316	22378	6554	17978	5265	22151	6487	3719	6318	5
TTE203BE	20508	6006	25292	7407	20326	5953	25054	7338	4462	7582	6

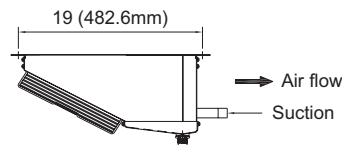
*Cooling capacity calculation (Condensing temperature = 105°F, Superheat = 6.5°F, Subcooling = 9°F)

Dimensional Data For All Models

Air Defrost Models 6 FPI	Electric Defrost Models 6 FPI	No. of Fans	Dimensions (Inches / mm)							
			A		B		C		D	
			Inch	mm	Inch	mm	Inch	mm	Inch	mm
TTA085AE	TTE064BE	2	49.7	1262	40.8	1037	-	-	-	-
TTA130AE	TTE102BE	3	69.4	1764	60.6	1539	-	-	-	-
TTA176AE	TTE140BE	4	89.2	2266	80.4	2041	40.9	1038	-	-
TTA221AE	TTE179BE	5	109.0	2768	100.1	2543	40.9	1038	-	-
TTA248AE	TTE203BE	6	128.7	3270	119.9	3045	40.9	1038	39.5	1003



FRONT VIEW



SIDE VIEW

CENTER MOUNT COOLERS

MODEL NOMENCLATURE

TCA	084	A	E	NX
Model Series	Capacity	Voltage	Motor	
TCA = Air Defrost TCE = Electric Defrost	Size x 100 = BTUH	A = 115/1/60 B = 208-230/1/60	E = EC Motor (1 speed)	OX = 404A TXV NX = 448A TXV OM = 404A TXV + Solenoid valve NM = 448A TXV + Solenoid valve



SPECIFICATIONS & PHYSICAL DATA

TCA Air Defrost Models 60Hz. With EC Motors (1 Speed)

Model	EC Motor Data			Connections (Inches)				Approx. Net Weight	
	115V 1Ph 60Hz			COIL INLET	SUCTION	EQUALIZER	DRAIN	Lbs	Kg
	HP	Total Amps	Watts						
TCA084AE	1/20	0.72	55	1/2 OD	7/8 OD	1/4 OD	3/4 MPT	66	30
TCA113AE	1/20	0.72	55	1/2 OD	7/8 OD	1/4 OD	3/4 MPT	86	39
TCA187AE	1/20	1.44	110	1/2 OD	7/8 OD	1/4 OD	3/4 MPT	108	49
TCA207AE	1/20	1.44	110	1/2 OD	1-1/8 OD	1/4 OD	3/4 MPT	137	62
TCA249AE	1/20	1.44	110	1/2 OD	1-1/8 OD	1/4 OD	3/4 MPT	141	64
TCA285AE	1/20	2.16	165	1/2 OD	1-1/8 OD	1/4 OD	3/4 MPT	150	68
TCA338AE	1/20	2.88	220	1/2 OD	1-1/8 OD	1/4 OD	3/4 MPT	187	85
TCA381AE	1/20	2.88	220	1/2 OD	1-3/8 OD	1/4 OD	3/4 MPT	192	87
TCA477AE	1/20	3.60	275	1/2 OD	1-3/8 OD	1/4 OD	3/4 MPT	231	105

TCE Electric Defrost Models 60Hz. With EC Motors (1 Speed)

Model	EC Motor Data			Defrost Heaters		Connections (Inches)				Approx. Net Weight	
	230V 1Ph 60Hz			Watts	Total Amps	COIL INLET	SUCTION	EQUALIZER	DRAIN	Lbs	Kg
	HP	Total Amps	Watts		230/1/60						
TCE066BE	1/20	0.72	55	2120	9.2	1/2 OD	7/8 OD	1/4 OD	3/4 MPT	67	30
TCE093BE	1/20	0.72	55	3020	13.1	1/2 OD	7/8 OD	1/4 OD	3/4 MPT	87	39
TCE156BE	1/20	1.44	110	3020	13.1	1/2 OD	7/8 OD	1/4 OD	3/4 MPT	109	49
TCE175BE	1/20	1.44	110	4200	18.3	1/2 OD	1-1/8 OD	1/4 OD	3/4 MPT	138	63
TCE214BE	1/20	1.44	110	4200	18.3	1/2 OD	1-1/8 OD	1/4 OD	3/4 MPT	143	65
TCE241BE	1/20	2.16	165	4200	18.3	1/2 OD	1-1/8 OD	1/4 OD	3/4 MPT	151	69
TCE288BE	1/20	2.88	220	5480	23.8	1/2 OD	1-1/8 OD	1/4 OD	3/4 MPT	189	86
TCE325BE	1/20	2.88	220	5480	23.8	1/2 OD	1-3/8 OD	1/4 OD	3/4 MPT	194	88
TCE410BE	1/20	3.60	275	6720	29.2	1/2 OD	1-3/8 OD	1/4 OD	3/4 MPT	234	106

CENTER MOUNT COOLERS

PERFORMANCE DATA

TCA Air Defrost Models 60Hz. With EC Motors (1 Speed)

Model	Capacity (R-404A)*				Capacity (R-448A / R-449A)*				Fan Data		
	10°F / 6°C TD		14°F / 8°C TD		10°F / 6°C TD		14°F / 8°C TD		CFM/m ³ H		No.
	25°F / -4°C SST		21°F / -6°C SST		25°F / -4°C SST		21°F / -6°C SST				
	BTUH	Watts	BTUH	Watts	BTUH	Watts	BTUH	Watts			
TCA084AE	8431	2469	12370	3623	8407	2462	12329	3611	1118	1899	1
TCA113AE	11352	3325	16685	4887	11330	3318	16648	4876	1126	1913	1
TCA187AE	18827	5514	27690	8110	18798	5505	27641	8095	2240	3806	2
TCA207AE	20761	6080	30557	8949	20738	6073	30517	8938	2252	3826	2
TCA249AE	24986	7318	36785	10773	24962	7311	36744	10761	2252	3826	2
TCA285AE	28475	8340	41911	12275	28443	8330	41857	12259	3360	5709	3
TCA338AE	33843	9912	49824	14592	33809	9902	49767	14576	4480	7611	4
TCA381AE	38137	11169	56155	16446	38103	11159	56096	16429	4480	7611	4
TCA477AE	47796	13998	70395	20617	47760	13988	70333	20599	5600	9514	5

TCE Electric Defrost Models 60Hz. With EC Motors (1 Speed)

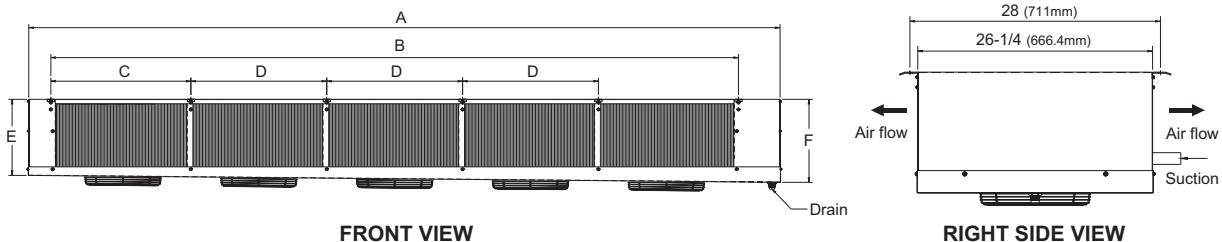
Model	Capacity (R-404A)*				Capacity (R-448A)*				Fan Data		
	10°F / 6°C TD		12°F / 7°C TD		10°F / 6°C TD		12°F / 7°C TD		CFM/m ³ H		No.
	-20°F / -29°C SST		-22°F / -30°C SST		-20°F / -29°C SST		-22°F / -30°C SST				
	BTUH	Watts	BTUH	Watts	BTUH	Watts	BTUH	Watts			
TCE066BE	6731	1971	8282	2426	6640	1945	8164	2391	1118	1899	1
TCE093BE	9398	2752	11588	3394	9311	2727	11475	3361	1126	1913	1
TCE156BE	15793	4625	19490	5708	15675	4591	19336	5663	2240	3806	2
TCE175BE	17697	5183	21860	6402	17597	5154	21729	6364	2252	3826	2
TCE214BE	21415	6272	26463	7750	21311	6241	26325	7710	2252	3826	2
TCE241BE	24247	7101	29952	8772	24113	7062	29776	8721	3360	5709	3
TCE288BE	28959	8481	35784	10480	28817	8440	35598	10426	4480	7611	4
TCE325BE	32738	9588	40461	11850	32591	9545	40269	11794	4480	7611	4
TCE410BE	41243	12079	50991	14934	41087	12033	50785	14874	5600	9514	5

Dimensional Data For for TCA/TCE Models

Air Defrost Models 6 FPI	Electric Defrost Models 6 FPI	No. of Fans	Dimensions (Inches / mm)											
			A		B		C		D		E		F	
			Inch	mm	Inch	mm	Inch	mm	Inch	mm	Inch	mm	Inch	mm
TCA084AE	TCE066BE	1	57.3	1456.0	45.3	1150.4	-	-	-	-	6.7	171.3	7.9	201.3
TCA113AE	TCE093BE	1	79.3	2015.0	67.3	1709.4	-	-	-	-	6.7	171.3	7.9	201.3
TCA187AE	TCE156BE	2	79.3	2015.0	67.3	1709.4	33.6	854.7	-	-	9.2	234.8	10.4	264.8
TCA207AE	TCE175BE	2	79.3	2015.0	67.3	1709.4	33.6	854.7	-	-	13.0	330.0	14.2	360.0
TCA249AE	TCE214BE	2	79.3	2015.0	67.3	1709.4	33.6	854.7	-	-	13.0	330.0	14.2	360.0
TCA285AE	TCE241BE	3	79.3	2015.0	67.3	1709.4	22.7	575.6	22.0	558.4	13.0	330.0	14.2	360.0
TCA338AE	TCE288BE	4	101.3	2574.0	89.3	2268.4	22.7	575.6	22.0	558.4	13.0	330.0	14.2	360.0
TCA381AE	TCE325BE	4	101.3	2574.0	89.3	2268.4	22.7	575.6	22.0	558.4	13.0	330.0	14.2	360.0
TCA477AE	TCE410BE	5	123.3	3132.0	111.3	2826.4	22.7	575.6	22.0	558.4	13.0	330.0	14.2	360.0

*Cooling capacity calculation (Condensing temperature = 105°F, Superheat = 6.5°F, Subcooling = 9°F)

(Unit : inch)



CONDENSING UNITS

CONDENSING UNIT STANDARD FEATURES



- Blue anti-corrosion fin increases the life span of the coil.
- Seamless inner groove copper tube is used to increase the heat exchange rate by reducing the space between the fin and the copper tube.



- Highest quality compressor in the world.



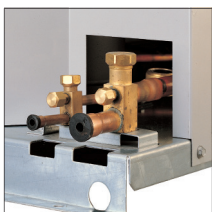
- 1 year compressor warranty (4 year extended warranty available).
- 1 year fan motor and parts warranty.



- Condenser Fan ON/OFF switch controls a condenser fan to keep condensing pressure constant in low ambient for stable operation, minimize formation of flash gas, and prevent compressor damage by controlling high pressure.
- Experienced engineers have designed the system for maximum efficiency.
- Fan blades: Specifically matched with motors and coil for maximum air movement and cooling.



- Control box is designed for easy installation.
- Dual pressure control (Low and High) is adjustable.
- All the parts are compliant with industry standards and interchangeable with readily available parts.
- Wiring: Easily accessible. Compressor comes with a wiring harness that is manufactured with connections that will not come loose with vibration.



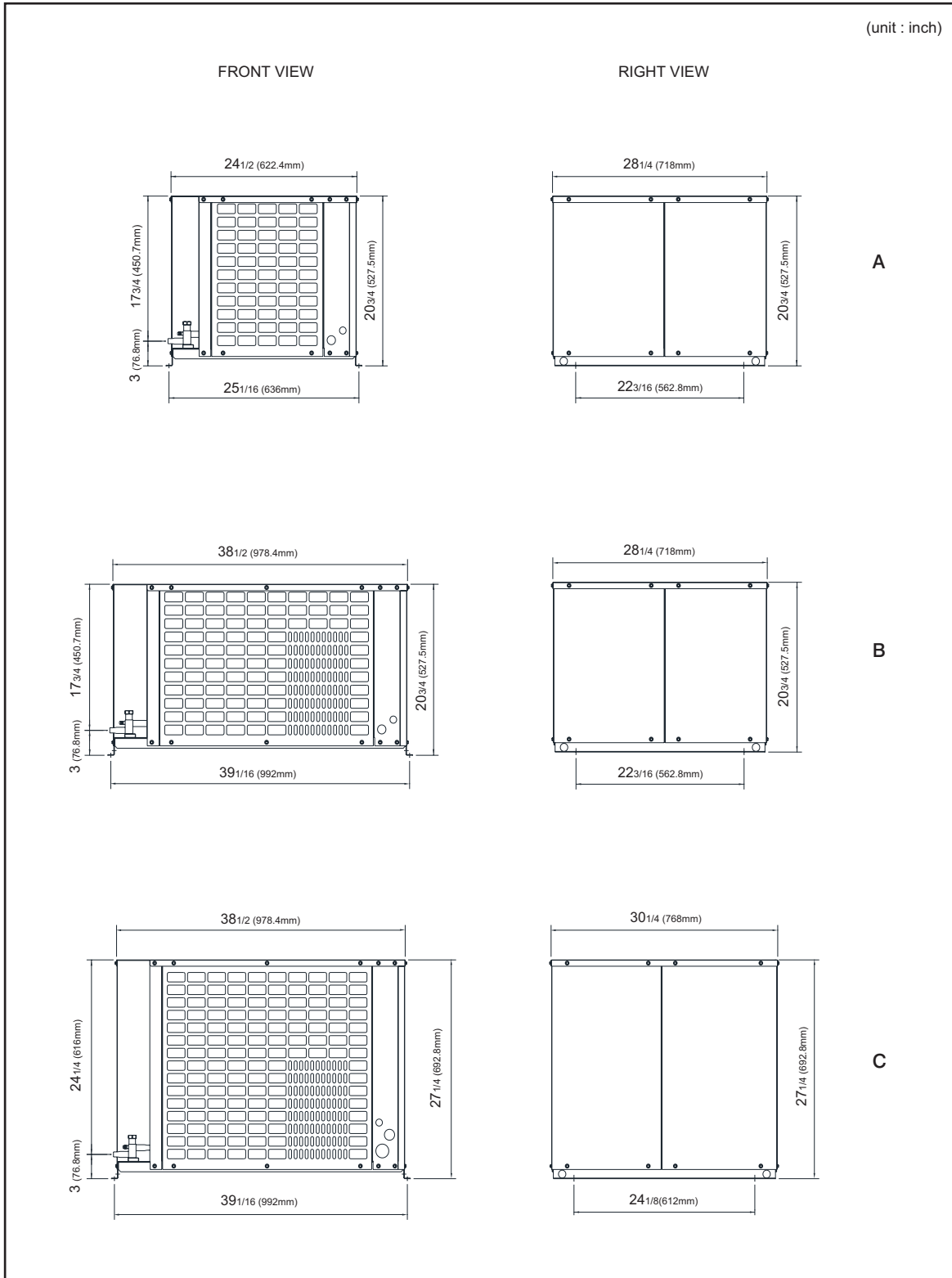
- Control box and service valves are located outside for easy service.
- Base: Heavy duty steel. Legs are 2-1/6" tall.
- Cabinet: Prepainted with galvanized body. Protects against corrosion.
- All products carry UL, cUL, ISO 9001 approvals.



All Replacement Parts are Universal!

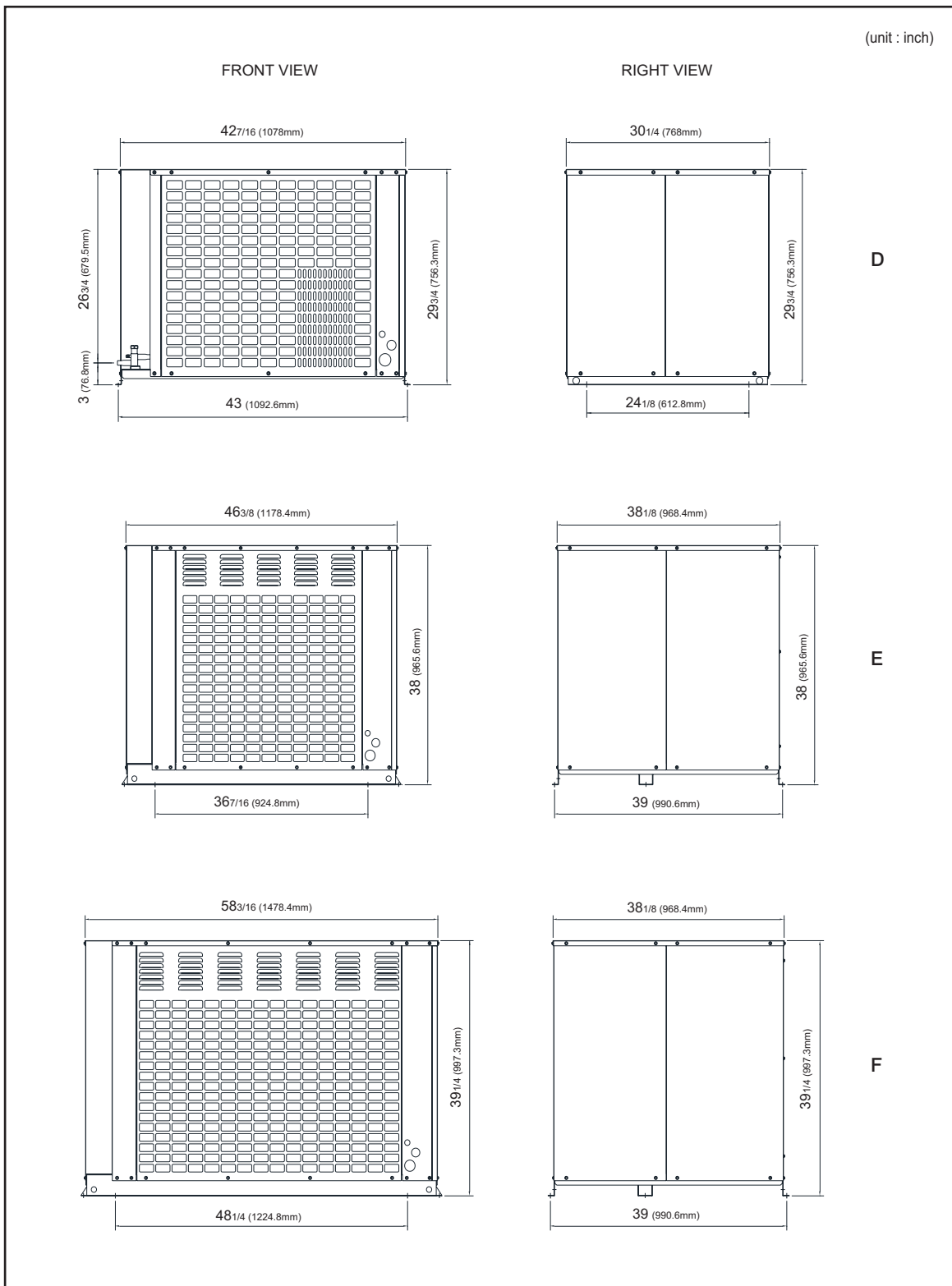
CONDENSING UNITS

DIMENSIONAL DATA



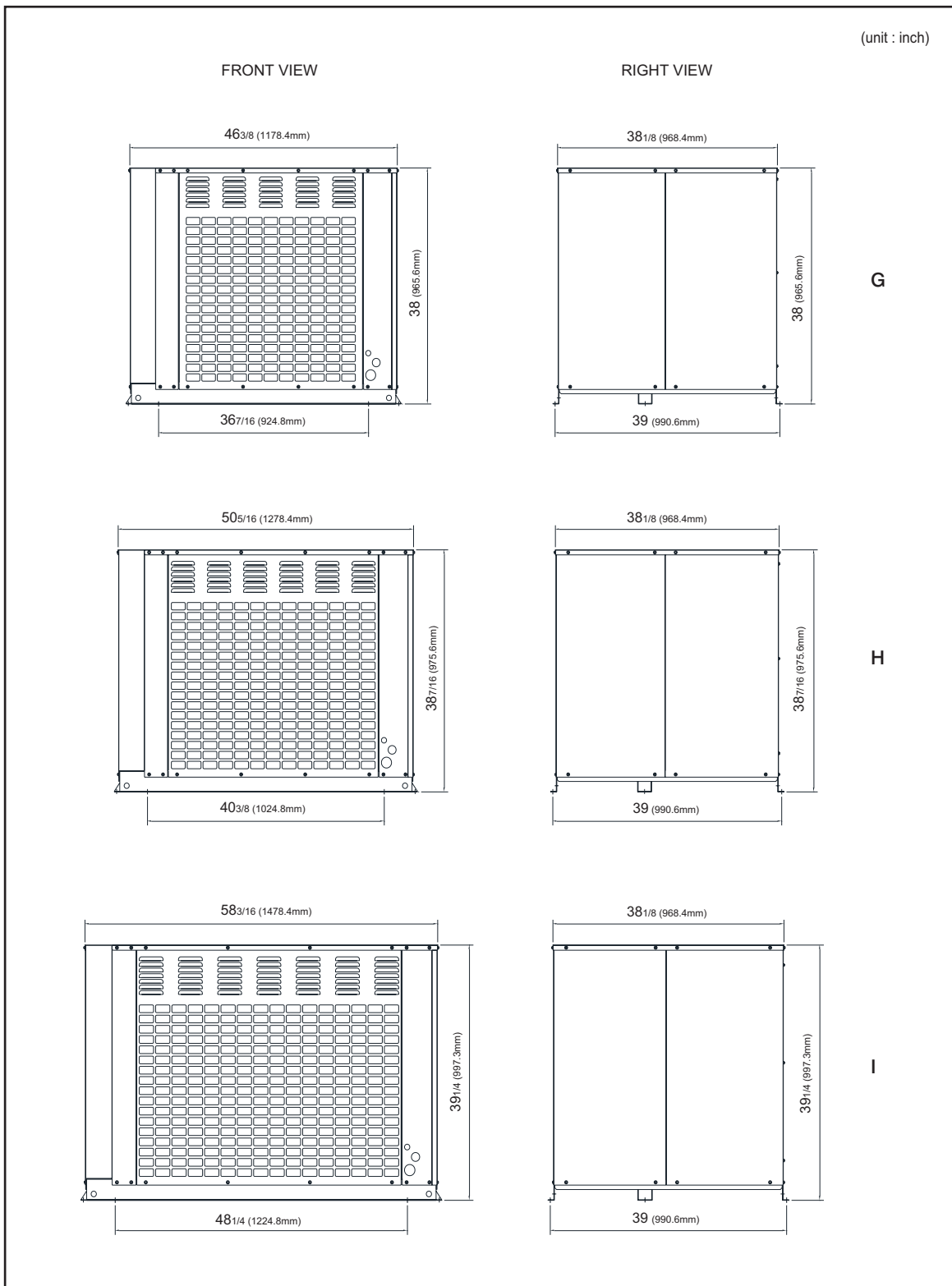
CONDENSING UNITS

DIMENSIONAL DATA



CONDENSING UNITS

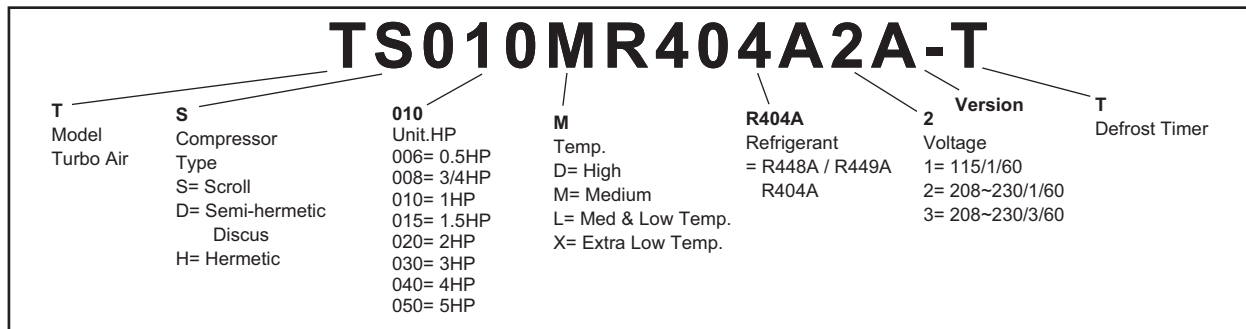
DIMENSIONAL DATA



CONDENSING UNITS

R448A/449A

MODEL NOMENCLATURE



UNIT SPEC (MEDIUM TEMP.) : SCROLL COMPRESSORS

Model	Fig. *		Connections (ID)		Receiver 90% Full (lbs)	Fan(s) Data		Dimensions			Net Weight (lbs)	Sound dBA**	AWEF
			Liquid	Suction		CFM	No.	W (in.)	D (in.)	H (in.)			
TS006MR404A#†-T	A	ZB06KAE	3/8"	5/8"	8	1503	1	28.25	24.5	20.75	174	68	7.6 / 7.6
TS008MR404A#†-T	A	ZB08KAE	3/8"	5/8"	8	1503	1	28.25	24.5	20.75	173	68	7.6 / 7.6
TS010MR404A#†-T	A	ZS09KAE	3/8"	5/8"	8	1503	1	28.25	24.5	20.75	176	68	7.6 / 7.6
TS015MR404A#†-T	B	ZS13KAE	1/2"	7/8"	15	2936	2	28.25	38.5	20.75	234	68	7.6 / 7.6
TS020MR404A#†-T	B	ZS15KAE	1/2"	7/8"	15	2936	2	28.25	38.5	20.75	234	68	7.6 / 7.6
TS025MR404A#†-T	B	ZS19KAE	1/2"	7/8"	15	2936	2	28.25	38.5	20.75	234	68	7.6 / 7.6
TS030MR404A#†-T	C	ZS21KAE	1/2"	7/8"	18	3794	1	30.25	38.5	27.25	285	74	7.6 / 7.6
TS040MR404A#†-T	C	ZS29KAE	1/2"	1-1/8"	18	3764	1	30.25	38.5	27.25	306	74	7.6 / 7.6
TS050MR404A#†-T	D	ZS38K4E	1/2"	1-1/8"	18	3809	1	30.25	42.4	29.75	347	76	7.6 / 7.6
TS060MR404A#†-T	D	ZS45K4E	1/2"	1-1/8"	18	3809	1	30.25	42.4	29.75	354	78	7.6 / 7.6
TS075MR404A#†-T	F	ZB66K5E	5/8"	1-3/8"	31	7557	2	38.1	58.2	39.25	624	81	7.6 / 7.6
TS100MR404A#†-T	F	ZB95K5E	5/8"	1-3/8"	43	7557	2	38.1	58.2	39.25	647	82	7.6 / 7.6

** : Sound pressure are measured 10 feet from the product.
 Note: # = Phase, 2 = 1Ph 208~230V 60Hz, 3 = 3Ph 208~230V 60Hz / †: Version (A, B, ~) / T: defrost timer

UNIT SPEC (EXTRA LOW TEMP.) : SCROLL COMPRESSORS

Model	Fig. *		Connections (ID)		Receiver 90% Full (lbs)	Fan(s) Data		Dimensions			Net Weight (lbs)	Sound dBA**	AWEF
			Liquid	Suction		CFM	No.	W (in.)	D (in.)	H (in.)			
TS010XR404A#†-T	A	ZF05KAE	3/8"	5/8"	8	1503	1	28.25	24.5	20.75	177	68	3.0 / 2.9
TS015XR404A#†-T	A	ZF06KAE	3/8"	5/8"	8	1503	1	28.25	24.5	20.75	178	68	3.1 / 3.1
TS020XR404A#†-T	B	ZF06K4E	1/2"	7/8"	15	2936	2	28.25	38.5	20.75	241	68	3.2 / 3.1
TS025XR404A#†-T	B	ZF08K4E	1/2"	7/8"	15	2936	2	28.25	38.5	20.75	246	68	3.2 / 3.2
TS030XR404A#†-T	B	ZF09K4E	1/2"	7/8"	15	2936	2	28.25	38.5	20.75	246	68	3.2 / 3.2
TS035XR404A#†-T	B	ZF11K4E	1/2"	7/8"	15	2936	2	28.25	38.5	20.75	250	74	3.2 / 3.2
TS045XR404A#†-T	C	ZF13K4E	1/2"	1-1/8"	18	3764	1	30.25	38.5	27.25	322	76	3.2 / 3.2
TS055XR404A#†-T	D	ZF15K4E	1/2"	1-1/8"	18	3809	1	30.25	42.4	29.75	346	76	3.2 / 3.2
TS060XR404A#†-T	D	ZF18K4E	1/2"	1-1/8"	18	3809	1	30.25	42.4	29.75	353	79	3.2 / 3.2
TS075XR404A#†-T	E	ZF25K4E	1/2"	1-1/8"	31	3839	1	38.1	46.4	38	481	80	3.2 / 3.2
TS100XR404A#†-T	E	ZF34K5E	1/2"	1-1/8"	31	3839	1	38.1	46.4	39.25	537	82	3.2 / 3.2

** : Sound pressure are measured 10 feet from the product.
 Note: # = Phase, 2 = 1Ph 208~230V 60Hz, 3 = 3Ph 208~230V 60Hz / †: Version (A, B, ~), T: Defrost timer

CONDENSING UNITS

R448A/449A

UNIT SPEC (LOW TEMP.) : SEMI-HERMETIC COMPRESSOR

Model	Fig. *	Copeland® Compressor	Connections (ID)		Receiver 90% Full (lbs)	Fan(s) Data		Dimensions			Net Weight (lbs)	Sound dBA**
			Liquid	Suction		CFM	No.	W (in.)	D (in.)	H (in.)		
TD040XR404A3	G	2DL3F20KE	1/2"	1-1/8"	18	3864	1	38.1	46.4	38	701	79
TD060XR404A3	G	3DA3F28KE	1/2"	1-1/8"	31	3849	1	38.1	46.4	38	793	79
TD075XR404A3	H	3DB3F33KE	1/2"	1-1/8"	31	3849	1	38.1	50.3	38.4	813	81
TD100XR404A3	I	3DS3F46KE	5/8"	1-3/8"	43	7557	2	38.1	58.2	39.25	941	82

** : Sound pressure are measured 10 feet from the product.
 Note: 3 = 3Ph 208-230V 60Hz

ELECTRICAL DATA (MEDIUM TEMP.) : SCROLL COMPRESSORS

Model	Copeland® Compressor	Power Supply			Compressor		Fan Motor	MCA	MOPD
		Volts	Ph	Hz	RLA	LRA	FLA		
TS006MR404A2-T	ZB06KAE-PFV	208-230	1	60	6.0	35.7	0.47	15.0	15
TS008MR404A2-T	ZB08KAE-PFV	208-230	1	60	8.0	47.2	0.47	15.0	15
TS010MR404A2-T	ZS09KAE-PFV	208-230	1	60	10.0	40.3	0.47	15.0	20
TS015MR404A2A-T	ZS13KAE-PFV	208-230	1	60	12.0	56.0	0.94	15.9	25
TS015MR404A3A-T	ZS13KAE-TF5	208-230	3	60	9.7	58.0	0.94	15.0	20
TS020MR404A2A-T	ZS15KAE-PFV	208-230	1	60	15.7	68.0	0.94	20.6	30
TS020MR404A3A-T	ZS15KAE-TF5	208-230	3	60	10.6	58.0	0.94	15.0	20
TS025MR404A2A-T	ZS19KAE-PFV	208-230	1	60	18.0	75.0	0.94	23.4	40
TS025MR404A3A-T	ZS19KAE-TF5	208-230	3	60	13.7	73.0	0.94	18.1	30
TS030MR404A2-T	ZS21KAE-PFV	208-230	1	60	23.2	112.0	2.40	31.4	50
TS030MR404A3-T	ZS21KAE-TF5	208-230	3	60	15.2	93.0	2.40	21.4	30
TS040MR404A2-T	ZS29KAE-PFV	208-230	1	60	26.1	137.0	2.40	35.0	50
TS040MR404A3-T	ZS29KAE-TF5	208-230	3	60	20.5	114.0	2.40	28.0	40
TS050MR404A2A-T	ZS38K4E-PFV	208-230	1	60	31.8	169.0	2.40	42.2	70
TS050MR404A3A-T	ZS38K4E-TF5	208-230	3	60	21.4	123.0	2.40	29.2	50
TS060MR404A3-T	ZS45K4E-TF5	208-230	3	60	23.9	156.0	2.40	32.3	50
TS075MR404A3-T	ZB66K5E-TFC	208-230	3	60	39.3	225.0	4.80	53.9	70
TS100MR404A3-T	ZB95K5E-TWC	208-230	3	60	52.9	298.0	4.80	70.9	100

ELECTRICAL DATA (EXTRA LOW TEMP.) : SCROLL COMPRESSORS

Model	Copeland® Compressor	Power Supply			Compressor		Fan Motor	MCA *	MOPD *
		Volts	Ph	Hz	RLA	LRA	FLA		
TS010XR404A2	ZF05KAE-PFV	208-230	1	60	8.7	55.0	0.47	15.0	20
TS015XR404A2	ZF06KAE-PFV	208-230	1	60	13.6	68.0	0.47	17.5	30
TS015XR404A3	ZF06KAE-TF5	208-230	3	60	8.3	58.0	0.47	15.0	20
TS020XR404A2A	ZF06K4E-PFV	208-230	1	60	13.6	61.0	0.94	17.9	30
TS020XR404A3A	ZF06K4E-TF5	208-230	3	60	8.3	58.0	0.94	15.0	20
TS025XR404A2A	ZF08K4E-PFV	208-230	1	60	16.4	73.0	0.94	21.4	30
TS025XR404A3A	ZF08K4E-TF5	208-230	3	60	9.6	63.0	0.94	15.0	20
TS030XR404A2A	ZF09K4E-PFV	208-230	1	60	14.3	88.0	0.94	18.8	30
TS030XR404A3A	ZF09K4E-TF5	208-230	3	60	9.6	77.0	0.94	15.0	20
TS035XR404A2A	ZF11K4E-PFV	208-230	1	60	18.2	109.0	0.94	23.7	40
TS035XR404A3A	ZF11K4E-TF5	208-230	3	60	12.1	88.0	0.94	16.1	30
TS045XR404A2A	ZF13K4E-PFV	208-230	1	60	25.0	129.0	2.40	33.7	60
TS045XR404A3A	ZF13K4E-TF5	208-230	3	60	13.2	99.0	2.40	18.9	30
TS055XR404A2A	ZF15K4E-PFV	208-230	1	60	27.5	169.0	2.40	36.8	60
TS055XR404A3A	ZF15K4E-TF5	208-230	3	60	18.9	123.0	2.40	26.0	40
TS060XR404A3A	ZF18K4E-TF5	208-230	3	60	21.8	156.0	2.40	29.7	50
TS075XR404A3A	ZF25K4E-TF5	208-230	3	60	26.7	224.0	2.40	35.8	60
TS100XR404A3	ZF34K5E-TFC	208-230	3	60	37.1	239.0	2.40	48.8	80

CONDENSING UNITS

R448A/449A

ELECTRICAL DATA (LOW TEMP.) : SEMI-HERMETIC COMPRESSORS

Model	Copeland [®] Compressor	Power Supply			Compressor		Fan Motor	MCA *	MOPD *
		Volts	Ph	Hz	RLA	LRA	FLA		
TD040XR404A3	2DL3F20KE	208-230	3	60	23.6	161	2.40	31.9	50
TD060XR404A3	3DA3F28KE	208-230	3	60	24.0	150	2.40	32.4	50
TD075XR404A3	3DB3F33KE	208-230	3	60	27.6	161	2.40	36.9	60
TD100XR404A3	3DS3F46KE	208-230	3	60	37.2	215	4.80	51.3	80

* : MCA Minimum Circuit Ampacity does not include evaporators electrical requirements (evaporator fan motor amps, defrost heater amps).

PERFORMANCE DATA (MEDIUM TEMP.) : SCROLL COMPRESSORS

Model	Copeland [®] Compressor	Capacity BTU/HR @ 90°F. Ambient Suction Temperature °F							
		40°F	30°F	25°F	20°F	15°F	10°F	0°F	-10°F
TS006MR404A#†-T	ZB06KAE	9606	7968	7254	6576	5924	5314	4209	3322
TS008MR404A#†-T	ZB08KAE	12880	10745	9851	8850	8012	7177	5762	4620
TS010MR404A#†-T	ZS09KAE	13740	11230	10250	9175	8326	7508	6115	4888
TS015MR404A#†-T	ZS13KAE	19640	16044	14443	12905	11600	10522	8476	-
TS020MR404A#†-T	ZS15KAE	23100	18980	17090	15273	13770	12558	10140	-
TS025MR404A#†-T	ZS19KAE	25500	20842	18943	16985	15375	14080	11395	-
TS030MR404A#†-T	ZS21KAE	35715	30025	27478	24865	22400	20385	16180	-
TS040MR404A#†-T	ZS29KAE	45990	38953	35398	32030	28880	26285	20870	-
TS050MR404A#†-T	ZS38K4E	56710	48317	44187	40113	36627	32813	26533	21240
TS060MR404A#†-T	ZS45K4E	67227	57210	52327	48120	43840	39400	31280	24267
TS075MR404A#†-T	ZB66K5E	100333	84300	76900	69250	62850	56450	44170	32820
TS100MR404A#†-T	ZB95K5E	133600	112600	101167	92567	83750	74400	57500	42620

Model	Copeland [®] Compressor	Capacity BTU/HR @ 95°F. Ambient Suction Temperature °F							
		40°F	30°F	25°F	20°F	15°F	10°F	0°F	-10°F
TS006MR404A#†-T	ZB06KAE	9198	7686	6998	6300	5672	5086	4054	3204
TS008MR404A#†-T	ZB08KAE	12343	10320	9404	8530	7732	6932	5577	4440
TS010MR404A#†-T	ZS09KAE	13175	10830	9888	8850	8052	7280	5945	4804
TS015MR404A#†-T	ZS13KAE	19021	15532	13981	12493	11180	10218	8266	-
TS020MR404A#†-T	ZS15KAE	22298	18245	16540	14688	13345	12189	9825	-
TS025MR404A#†-T	ZS19KAE	24270	20117	18163	16295	14863	13630	11058	-
TS030MR404A#†-T	ZS21KAE	34390	28933	26470	23940	21720	19740	15455	-
TS040MR404A#†-T	ZS29KAE	44700	37587	34140	30880	27805	25273	19958	-
TS050MR404A#†-T	ZS38K4E	54810	46650	42347	38680	35360	31933	25513	20640
TS060MR404A#†-T	ZS45K4E	64490	54827	50513	46020	41560	37360	29920	23200
TS075MR404A#†-T	ZB66K5E	96167	80067	73100	66500	60100	53700	41830	30680
TS100MR404A#†-T	ZB95K5E	128600	106200	96333	86767	78350	69667	54250	39720

CONDENSING UNITS

R448A/449A

PERFORMANCE DATA (MEDIUM TEMP.) : SCROLL COMPRESSORS

Model	Copeland Compressor	Capacity BTU/HR @ 100°F. Ambient Suction Temperature °F							
		40°F	30°F	25°F	20°F	15°F	10°F	0°F	-10°F
TS006MR404A#†-T	ZB06KAE	8855	7401	6738	6065	5458	4893	3898	3060
TS008MR404A#†-T	ZB08KAE	11805	9907	9108	8210	7396	6687	5350	4287
TS010MR404A#†-T	ZS09KAE	12550	10334	9480	8590	7767	7030	5770	4698
TS015MR404A#†-T	ZS13KAE	18315	14917	13518	12080	10900	9915	8014	-
TS020MR404A#†-T	ZS15KAE	21285	17485	15942	14298	12920	11746	9615	-
TS025MR404A#†-T	ZS19KAE	23170	19183	17513	15630	14350	13090	10653	-
TS030MR404A#†-T	ZS21KAE	33040	27750	25397	22990	20700	18773	14875	-
TS040MR404A#†-T	ZS29KAE	42600	35837	32843	29500	26730	24260	19045	-
TS050MR404A#†-T	ZS38K4E	52790	44650	40813	37247	33800	30533	24580	-
TS060MR404A#†-T	ZS45K4E	61640	52880	48250	43920	40040	35660	28480	-
TS075MR404A#†-T	ZB66K5E	92000	77133	69600	63167	57170	50393	39430	28380
TS100MR404A#†-T	ZB95K5E	120200	100600	91500	81933	73850	65500	-	-

Model	Copeland Compressor	Capacity BTU/HR @ 110°F. Ambient Suction Temperature °F							
		40°F	30°F	25°F	20°F	15°F	10°F	0°F	-10°F
TS006MR404A#†-T	ZB06KAE	8311	6888	6268	5638	5068	4540	3610	2817
TS008MR404A#†-T	ZB08KAE	10949	9256	8528	7698	6941	6246	5008	-
TS010MR404A#†-T	ZS09KAE	11525	9436	8720	7816	7086	6440	5355	-
TS015MR404A#†-T	ZS13KAE	16763	13783	12435	11175	10126	9264	7568	-
TS020MR404A#†-T	ZS15KAE	19445	16055	14675	13040	11840	10945	9024	-
TS025MR404A#†-T	ZS19KAE	20955	17490	16063	14350	13000	12038	9905	-
TS030MR404A#†-T	ZS21KAE	30700	25772	23583	21100	19140	17120	13430	-
TS040MR404A#†-T	ZS29KAE	39680	33333	30523	27340	24800	22225	17490	-
TS050MR404A#†-T	ZS38K4E	49400	41730	38160	34550	31360	28380	22900	-
TS060MR404A#†-T	ZS45K4E	-	49007	44650	40380	36920	33220	-	-
TS075MR404A#†-T	ZB66K5E	84100	71250	64000	57167	51070	45413	-	-
TS100MR404A#†-T	ZB95K5E	-	-	81900	73700	66150	58500	-	-

Note: # = Phase, 2 = 1Ph 208~230V 60Hz, 3 = 3Ph 208~230V 60Hz / †: Version (A, B, --) / T: Defrost timer

PERFORMANCE DATA (EXTRA LOW TEMP.) : SCROLL COMPRESSORS


Model	Copeland Compressor	Capacity BTU/HR @ 90°F. Ambient Suction Temperature °F							
		0°F	-10°F	-15°F	-20°F	-25°F	-30°F	-35°F	-40°F
TS010XR404A#†-T	ZF05KAE	7269	5747	5106	4461	3928	3406	2967	2600
TS015XR404A#†-T	ZF06KAE	9330	7492	6655	5936	5277	4640	4063	3540
TS020XR404A#†-T	ZF06K4E	11050	8815	7842	6951	6120	5407	4772	4198
TS025XR404A#†-T	ZF08K4E	12880	10690	9670	8702	7773	6850	5930	5016
TS030XR404A#†-T	ZF09K4E	14125	11540	10353	9290	8271	7332	6411	5499
TS035XR404A#†-T	ZF11K4E	17365	14060	12630	11255	10042	8920	7882	6955
TS045XR404A#†-T	ZF13K4E	22460	17980	15840	14000	12233	10740	9300	8054
TS055XR404A#†-T	ZF15K4E	26800	21380	18980	16777	14710	12990	11310	9880
TS060XR404A#†-T	ZF18K4E	32180	26100	23247	20527	18220	15960	14040	12187
TS075XR404A#†-T	ZF25K4E	40560	32280	28887	25433	22420	19753	17247	15113
TS100XR404A#†-T	ZF34K5E	50620	41120	36580	32590	28873	25207	21880	18727


Model	Copeland Compressor	Capacity BTU/HR @ 95°F. Ambient Suction Temperature °F							
		0°F	-10°F	-15°F	-20°F	-25°F	-30°F	-35°F	-40°F
TS010XR404A#†-T	ZF05KAE	6998	5532	4885	4270	3766	3268	2871	2503
TS015XR404A#†-T	ZF06KAE	8972	7172	6430	5746	5079	4472	3920	3416
TS020XR404A#†-T	ZF06K4E	10525	8492	7567	6720	5960	5280	4662	4108
TS025XR404A#†-T	ZF08K4E	12480	10330	9370	8445	7544	6648	5777	4840
TS030XR404A#†-T	ZF09K4E	13750	11210	10118	9032	8050	7145	6242	5366
TS035XR404A#†-T	ZF11K4E	16757	13603	12150	10930	9694	8602	7610	6716
TS045XR404A#†-T	ZF13K4E	21450	17180	15260	13490	11800	10373	9033	7867
TS055XR404A#†-T	ZF15K4E	25720	20540	18240	16245	14260	12623	11010	9647
TS060XR404A#†-T	ZF18K4E	30980	24960	22300	19880	17600	15460	13680	11970
TS075XR404A#†-T	ZF25K4E	39160	31180	27700	24460	21610	19200	16840	14870
TS100XR404A#†-T	ZF34K5E	48760	39770	35380	31540	27800	24300	21110	18200

CONDENSING UNITS

R448A/449A

PERFORMANCE DATA (EXTRA LOW TEMP.) : SCROLL COMPRESSORS

Model		Capacity BTU/HR @ 100°F. Ambient Suction Temperature °F							
		0°F	-10°F	-15°F	-20°F	-25°F	-30°F	-35°F	-40°F
TS010XR404A#†-T	ZF05KAE	6663	5273	4700	4110	3626	3148	2776	2418
TS015XR404A#†-T	ZF06KAE	8612	6902	6200	5513	4880	4303	3800	3290
TS020XR404A#†-T	ZF06K4E	10217	8207	7312	6450	5760	5070	4490	3986
TS025XR404A#†-T	ZF08K4E	12093	10035	9119	8230	7349	6478	5612	4648
TS030XR404A#†-T	ZF09K4E	13317	10900	9810	8805	7860	6970	6072	5196
TS035XR404A#†-T	ZF11K4E	15770	13023	11733	10496	9389	8333	7380	6511
TS045XR404A#†-T	ZF13K4E	20413	16480	14660	12940	11320	9928	8760	7734
TS055XR404A#†-T	ZF15K4E	24813	19840	17640	15720	13810	12130	10675	9444
TS060XR404A#†-T	ZF18K4E	29460	23827	21340	19100	17000	15060	13320	11790
TS075XR404A#†-T	ZF25K4E	37427	29860	26700	23660	20960	18600	16540	14720
TS100XR404A#†-T	ZF34K5E	46860	38000	33860	30247	26900	23550	20590	17700


Model		Capacity BTU/HR @ 110°F. Ambient Suction Temperature °F							
		0°F	-10°F	-15°F	-20°F	-25°F	-30°F	-35°F	-40°F
TS010XR404A#†-T	ZF05KAE	6215	4883	4358	3810	3369	2932	2576	2263
TS015XR404A#†-T	ZF06KAE	7888	6470	5786	5159	4547	4045	3560	3104
TS020XR404A#†-T	ZF06K4E	9467	7590	6762	5954	5284	4693	4123	3673
TS025XR404A#†-T	ZF08K4E	11327	9519	8657	7822	6950	6149	5272	4347
TS030XR404A#†-T	ZF09K4E	12537	10300	9270	8307	7392	6505	5629	4813
TS035XR404A#†-T	ZF11K4E	14880	12250	10983	9812	8736	7767	6930	6123
TS045XR404A#†-T	ZF13K4E	18920	15173	13413	11900	10536	9348	8380	7558
TS055XR404A#†-T	ZF15K4E	23133	18580	16583	14720	13067	11610	10237	9106
TS060XR404A#†-T	ZF18K4E	27120	22147	19900	17900	16100	14387	12873	11540
TS075XR404A#†-T	ZF25K4E	35373	28100	25080	22380	19953	17900	16100	14667
TS100XR404A#†-T	ZF34K5E	43790	35300	31520	28207	25160	22120	19360	16833


Note: # = Phase, 2 = 1Ph 208-230V 60Hz, 3 = 3Ph 208-230V 60Hz / †: Version (A, B, ~) / T: Defrost timer


CONDENSING UNITS


R448A/449A

PERFORMANCE DATA (LOW TEMP.) : SEMI-HERMETIC COMPRESSORS

Model		Capacity BTU/HR @ 90°F. Ambient Suction Temperature °F							
		0°F	-10°F	-15°F	-20°F	-25°F	-30°F	-35°F	-40°F
TD040XR404A3	2DL3F20KE	30460	24156	20996	18110	15654	13250	11143	9181
TD060XR404A3	3DA3F28KE	44532	35004	30480	26484	22892	19772	16992	14142
TD075XR404A3	3DB3F33KE	56076	43892	38764	33728	29524	25632	21648	18064
TD100XR404A3	3DS3F46KE	75992	58752	51416	44800	38808	32964	27588	23028

Model		Capacity BTU/HR @ 95°F. Ambient Suction Temperature °F							
		0°F	-10°F	-15°F	-20°F	-25°F	-30°F	-35°F	-40°F
TD040XR404A3	2DL3F20KE	29148	22540	19812	17262	14714	12450	10434	8575
TD060XR404A3	3DA3F28KE	41796	33132	28800	24924	21164	18130	15492	12952
TD075XR404A3	3DB3F33KE	53636	41732	36724	31768	27656	23880	19968	16480
TD100XR404A3	3DS3F46KE	71656	56384	49208	42200	36416	30676	25404	20900

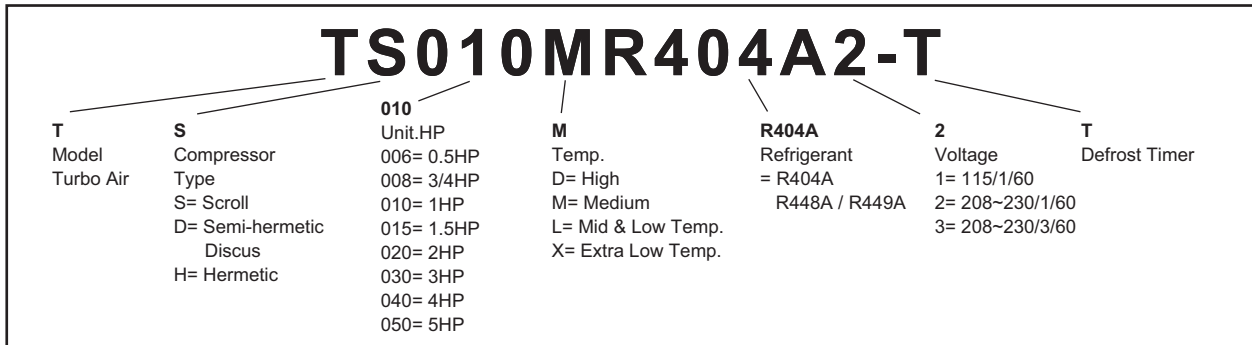
Model		Capacity BTU/HR @ 100°F. Ambient Suction Temperature °F							
		0°F	-10°F	-15°F	-20°F	-25°F	-30°F	-35°F	-40°F
TD040XR404A3	2DL3F20KE	27444	21452	18592	16186	13782	11650	9738	8003
TD060XR404A3	3DA3F28KE	39948	31212	27040	23316	19992	17026	14212	11976
TD075XR404A3	3DB3F33KE	51196	39572	34668	30200	26152	22080	18208	14480
TD100XR404A3	3DS3F46KE	67976	52704	45848	39600	33976	28788	23124	18662

Model		Capacity BTU/HR @ 110°F. Ambient Suction Temperature °F							
		0°F	-10°F	-15°F	-20°F	-25°F	-30°F	-35°F	-40°F
TD040XR404A3	2DL3F20KE	24580	19168	16844	14446	12310	10370	8682	7160
TD060XR404A3	3DA3F28KE	36660	28080	24188	20680	17528	14734	12044	9692
TD075XR404A3	3DB3F33KE	47404	36140	31340	26672	22768	19200	15408	11775
TD100XR404A3	3DS3F46KE	62016	47696	41240	35248	29360	24420	19348	14988

CONDENSING UNITS

R404A

MODEL NOMENCLATURE



PERFORMANCE DATA (MEDIUM TEMP.) : SCROLL COMPRESSORS

Model	Copeland Compressor	Capacity BTU/HR @ 90°F. Ambient Suction Temperature °F.							
		40°F	30°F	25°F	20°F	15°F	10°F	0°F	-10°F
TS006MR404A#†-T	ZB06KAE	9877	8229	7476	6760	6090	5512	4394	3530
TS008MR404A#†-T	ZB08KAE	13215	10835	9911	9010	8250	7490	6142	4814
TS010MR404A#†-T	ZS09KAE	13880	11900	11060	10113	9266	8472	6913	5447
TS015MR404A#†-T	ZS13KAE	17808	16790	15358	13890	12658	11503	9372	7510
TS020MR404A#†-T	ZS15KAE	23373	20100	18650	17075	15625	14260	11625	9111
TS025MR404A#†-T	ZS19KAE	25487	21910	20300	18600	17210	15600	12785	10107
TS030MR404A#†-T	ZS21KAE	34920	29900	27520	25420	23275	21260	17328	13543
TS040MR404A#†-T	ZS29KAE	44500	38140	35020	32100	29635	26840	22027	17290
TS050MR404A#†-T	ZS38K4E	54650	46920	43690	39910	36650	33600	27760	22800
TS060MR404A#†-T	ZS45K4E	63850	54600	50820	46860	43055	39530	33160	27280
TS075MR404A#†-T	ZB66K5E	101340	86860	80440	73700	68180	61820	50880	41020
TS100MR404A#†-T	ZB95K5E	131633	113100	104920	97127	89867	82300	67520	53320

Model	Copeland Compressor	Capacity BTU/HR @ 95°F. Ambient Suction Temperature °F.							
		40°F	30°F	25°F	20°F	15°F	10°F	0°F	-10°F
TS006MR404A#†-T	ZB06KAE	9400	7862	7154	6480	5840	5248	4214	3360
TS008MR404A#†-T	ZB08KAE	12543	10310	9377	8615	7903	7188	5860	4586
TS010MR404A#†-T	ZS09KAE	13320	11383	10495	9691	8876	8112	6673	5182
TS015MR404A#†-T	ZS13KAE	16933	15965	14620	13240	12070	10980	8894	7207
TS020MR404A#†-T	ZS15KAE	22467	19190	17657	16300	14938	13660	11133	8665
TS025MR404A#†-T	ZS19KAE	24220	20960	19447	17840	16480	15080	12248	9616
TS030MR404A#†-T	ZS21KAE	33220	28587	26340	24127	22250	20360	16590	12900
TS040MR404A#†-T	ZS29KAE	42367	36373	33427	30700	28105	25690	20925	16270
TS050MR404A#†-T	ZS38K4E	51900	44570	41540	37960	34875	32040	26540	21800
TS060MR404A#†-T	ZS45K4E	60600	52360	48800	44560	40980	37680	31700	26160
TS075MR404A#†-T	ZB66K5E	95940	82427	76487	70167	64400	59020	48530	38740
TS100MR404A#†-T	ZB95K5E	123850	106600	99020	91660	84783	77600	-	-

Note: # = Phase, 2 = 1Ph 208~230V 60Hz, 3 = 3Ph 208~230V 60Hz / †: Version (A, B, ~) / T: Defrost timer

CONDENSING UNITS

R404A

PERFORMANCE DATA (MEDIUM TEMP.) : SCROLL COMPRESSORS

Model	Copeland Compressor	Capacity BTU/HR @ 100°F. Ambient Suction Temperature °F.							
		40°F	30°F	25°F	20°F	15°F	10°F	0°F	-10°F
TS006MR404A#†-T	ZB06KAE	8830	7418	6758	6190	5582	5066	4029	3190
TS008MR404A#†-T	ZB08KAE	12013	9896	9019	8220	7558	6883	5630	4399
TS010MR404A#†-T	ZS09KAE	12620	10867	10052	9317	8554	7770	6387	4922
TS015MR404A#†-T	ZS13KAE	16011	15107	13850	12563	11471	10350	8484	6892
TS020MR404A#†-T	ZS15KAE	21107	18340	17070	15683	14380	13040	10640	8240
TS025MR404A#†-T	ZS19KAE	23207	20010	18630	17293	15880	14537	-	-
TS030MR404A#†-T	ZS21KAE	31520	27320	25240	23193	21450	19467	-	-
TS040MR404A#†-T	ZS29KAE	40233	34807	32060	29533	27050	24667	20025	15470
TS050MR404A#†-T	ZS38K4E	49150	42180	39370	36000	33100	30440	25240	20800
TS060MR404A#†-T	ZS45K4E	57300	49510	45650	42180	39280	35810	29900	24960
TS075MR404A#†-T	ZB66K5E	90540	77960	72453	67233	61050	55473	-	-
TS100MR404A#†-T	ZB95K5E	115600	99830	93010	86193	79700	72900	-	-

Model	Copeland Compressor	Capacity BTU/HR @ 110°F. Ambient Suction Temperature °F.							
		40°F	30°F	25°F	20°F	15°F	10°F	0°F	-10°F
TS006MR404A#†-T	ZB06KAE	8062	6814	6225	5656	5108	4592	3660	2839
TS008MR404A#†-T	ZB08KAE	10802	8976	8291	7500	6937	6340	5216	-
TS010MR404A#†-T	ZS09KAE	11570	10131	9343	8674	8039	7338	5925	-
TS015MR404A#†-T	ZS13KAE	14536	13547	12425	11273	10442	9438	7681	6283
TS020MR404A#†-T	ZS15KAE	19500	17030	15655	14573	13435	12260	-	-
TS025MR404A#†-T	ZS19KAE	21300	18550	17320	16030	14800	13503	-	-
TS030MR404A#†-T	ZS21KAE	29100	25260	23550	21700	20010	18267	-	-
TS040MR404A#†-T	ZS29KAE	37080	32070	29600	27433	25250	23167	-	-
TS050MR404A#†-T	ZS38K4E	44550	38300	35385	32800	30180	27490	22850	18940
TS060MR404A#†-T	ZS45K4E	-	44800	41370	38320	35350	32690	27360	22800
TS075MR404A#†-T	ZB66K5E	82820	71670	65150	60633	55690	50620	-	-
TS100MR404A#†-T	ZB95K5E	-	-	-	76700	71050	64040	-	-

Note: # = Phase, 2 = 1Ph 208~230V 60Hz, 3 = 3Ph 208~230V 60Hz / †: Version (A, B, --) / T: Defrost timer

PERFORMANCE DATA (LOW TEMP.) : SCROLL COMPRESSORS

Model	Copeland Compressor	Capacity BTU/HR @ 90°F. Ambient Suction Temperature °F.							
		0°F	-10°F	-15°F	-20°F	-25°F	-30°F	-35°F	-40°F
TS010XR404A#†-T	ZF05KAE	7644	6112	5457	4894	4327	3822	3367	2951
TS015XR404A#†-T	ZF06KAE	9660	7864	7134	6370	5718	5114	4510	3964
TS020XR404A#†-T	ZF06K4E	11500	9473	8561	7704	6846	6094	5380	4702
TS025XR404A#†-T	ZF08K4E	14150	11600	10609	9530	8533	7612	6760	5961
TS030XR404A#†-T	ZF09K4E	15560	12870	11700	10513	9511	8432	7479	6592
TS035XR404A#†-T	ZF11K4E	18700	15380	14020	12650	11430	10316	9160	8086
TS045XR404A#†-T	ZF13K4E	23500	19153	17320	15380	13653	12000	10567	9244
TS055XR404A#†-T	ZF15K4E	28640	23487	21147	19040	17033	15053	13400	11820
TS060XR404A#†-T	ZF18K4E	33130	27270	24700	22260	20120	17780	15827	13867
TS075XR404A#†-T	ZF25K4E	41820	34110	30940	27727	24760	22040	19567	17310
TS100XR404A#†-T	ZF34K5E	52000	42960	38800	35200	31740	28200	24887	21820

Model	Copeland Compressor	Capacity BTU/HR @ 95°F. Ambient Suction Temperature °F.							
		0°F	-10°F	-15°F	-20°F	-25°F	-30°F	-35°F	-40°F
TS010XR404A#†-T	ZF05KAE	7274	5817	5192	4615	4127	3648	3219	2823
TS015XR404A#†-T	ZF06KAE	9127	7452	6777	6060	5448	4838	4270	3794
TS020XR404A#†-T	ZF06K4E	11000	9092	8158	7350	6586	5864	5170	4509
TS025XR404A#†-T	ZF08K4E	13500	11100	10063	9056	8120	7314	6445	5682
TS030XR404A#†-T	ZF09K4E	14847	12320	11200	10078	9060	8035	7134	6294
TS035XR404A#†-T	ZF11K4E	17540	14640	13367	12100	10980	9812	8728	7710
TS045XR404A#†-T	ZF13K4E	22500	18360	16450	14740	13080	11500	10100	8824
TS055XR404A#†-T	ZF15K4E	27340	22460	20260	18120	16220	14480	12900	11387
TS060XR404A#†-T	ZF18K4E	31680	26120	23700	21380	19220	17140	15280	13400
TS075XR404A#†-T	ZF25K4E	40020	32660	29450	26420	23630	21245	18900	16760
TS100XR404A#†-T	ZF34K5E	48947	40980	37440	33700	30440	27050	23860	20760

CONDENSING UNITS

R404A

PERFORMANCE DATA (LOW TEMP.) : SCROLL COMPRESSORS

Model	Copeland Compressor	Capacity BTU/HR @ 100°F. Ambient Suction Temperature °F.							
		0°F	-10°F	-15°F	-20°F	-25°F	-30°F	-35°F	-40°F
TS010XR404A#†-T	ZF05KAE	6820	5458	4926	4380	3881	3432	3033	2688
TS015XR404A#†-T	ZF06KAE	8593	7039	6414	5747	5127	4608	4071	3590
TS020XR404A#†-T	ZF06K4E	10503	8630	7818	7050	6326	5634	4924	4285
TS025XR404A#†-T	ZF08K4E	12833	10578	9595	8653	7770	6942	6170	5388
TS030XR404A#†-T	ZF09K4E	14080	11620	10578	9542	8680	7700	6839	6034
TS035XR404A#†-T	ZF11K4E	16573	13873	12700	11500	10365	9371	8357	7390
TS045XR404A#†-T	ZF13K4E	21260	17560	15700	14090	12480	11000	9655	8360
TS055XR404A#†-T	ZF15K4E	25753	21200	19360	17320	15520	13880	12240	10850
TS060XR404A#†-T	ZF18K4E	29847	24720	22700	20480	18420	16490	14680	12860
TS075XR404A#†-T	ZF25K4E	37860	30927	28200	25320	22680	20315	18120	16150
TS100XR404A#†-T	ZF34K5E	46380	38880	35233	32100	28800	25640	22600	19860

Model	Copeland Compressor	Capacity BTU/HR @ 110°F. Ambient Suction Temperature °F.							
		0°F	-10°F	-15°F	-20°F	-25°F	-30°F	-35°F	-40°F
TS010XR404A#†-T	ZF05KAE	6136	4912	4440	3948	3499	3099	2744	2437
TS015XR404A#†-T	ZF06KAE	-	-	5760	5183	4647	4148	3685	3296
TS020XR404A#†-T	ZF06K4E	9633	8033	7297	6543	5882	5247	4587	3980
TS025XR404A#†-T	ZF08K4E	11633	9612	8719	7873	7080	6336	5635	4966
TS030XR404A#†-T	ZF09K4E	12853	10540	9612	8696	7930	7040	6263	5524
TS035XR404A#†-T	ZF11K4E	14960	12800	11633	10420	9387	8424	7523	6736
TS045XR404A#†-T	ZF13K4E	19500	16013	14373	12900	11467	10130	8911	7745
TS055XR404A#†-T	ZF15K4E	23567	19493	17647	15787	14180	12733	11233	9981
TS060XR404A#†-T	ZF18K4E	27340	22800	20780	18807	16980	15120	13480	11967
TS075XR404A#†-T	ZF25K4E	34620	28633	25920	23393	21040	18970	17050	15330
TS100XR404A#†-T	ZF34K5E	42160	35520	32247	29100	26100	23300	20500	18053

Note: #: Phase, 2 = 1Ph 208~230V 60Hz, 3 = 3Ph 208~230V 60Hz / †: Version (A, B, ~) / T: Defrost timer

PERFORMANCE DATA (LOW TEMP.) : SEMI-HERMETIC COMPRESSORS

Model	Copeland Compressor	Capacity BTU/HR @ 90°F. Ambient Suction Temperature °F.							
		0°F	-10°F	-15°F	-20°F	-25°F	-30°F	-35°F	-40°F
TD040XR404A3	2DL3F20KE	32207	26447	23700	21280	18700	16320	14160	12080
TD060XR404A3	3DA3F28KE	46100	38100	33820	30180	26670	23450	20500	17810
TD075XR404A3	3DB3F33KE	57500	46460	41690	37220	33050	28880	25260	21640
TD100XR404A3	3DS3F46KE	77500	63900	57500	50900	45500	40260	35340	30500

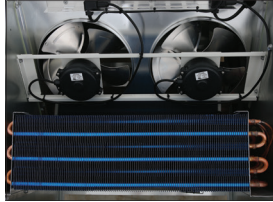
Model	Copeland Compressor	Capacity BTU/HR @ 95°F. Ambient Suction Temperature °F.							
		0°F	-10°F	-15°F	-20°F	-25°F	-30°F	-35°F	-40°F
TD040XR404A3	2DL3F20KE	29727	24813	22200	19967	17600	15300	13200	11180
TD060XR404A3	3DA3F28KE	43600	35633	31980	28547	25280	22180	19300	16660
TD075XR404A3	3DB3F33KE	54707	44700	40100	35480	31180	27480	23640	20340
TD100XR404A3	3DS3F46KE	73667	60867	55000	48740	43480	38100	33360	29000

Model	Copeland Compressor	Capacity BTU/HR @ 100°F. Ambient Suction Temperature °F.							
		0°F	-10°F	-15°F	-20°F	-25°F	-30°F	-35°F	-40°F
TD040XR404A3	2DL3F20KE	-	23180	21000	18633	16400	14260	12204	10280
TD060XR404A3	3DA3F28KE	41100	33980	30487	27133	24000	21073	18000	15420
TD075XR404A3	3DB3F33KE	51840	42060	37753	33693	29573	26000	22580	19040
TD100XR404A3	3DS3F46KE	70600	58333	52153	46280	41300	36100	31620	27440

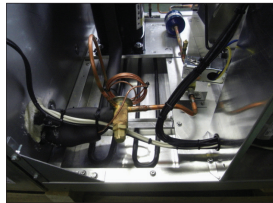
Model	Copeland Compressor	Capacity BTU/HR @ 110°F. Ambient Suction Temperature °F.							
		0°F	-10°F	-15°F	-20°F	-25°F	-30°F	-35°F	-40°F
TD040XR404A3	2DL3F20KE	-	-	-	16767	14480	12553	10636	8845
TD060XR404A3	3DA3F28KE	-	-	27500	24307	21333	18460	15807	12980
TD075XR404A3	3DB3F33KE	-	38540	34660	30513	26960	23553	20267	16773
TD100XR404A3	3DS3F46KE	-	52633	46873	41960	37300	32787	28140	23733

Note: 2=1Ph 208~230V 60Hz, 3=3Ph 208~230V 60Hz

PACKAGE UNIT STANDARD FEATURES



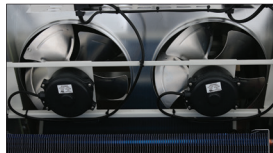
- **SM 1: Blue Anti-corrosion-fin and Coated Copper Tube**
Protects aluminum and copper pipes from toxic gases generated from foods, retards refrigerant leakage, and prolongs the cooling capacity.



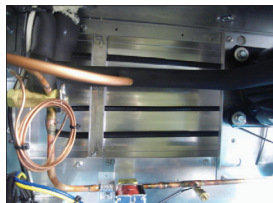
- **SM 2: Expansion Valve**
Allows safe storage of foods with a feature that self-adjusts the circulation of refrigerant as the internal temperature changes, thus recovering the required temperature quickly.



- **SM 3: Compressor Protected Solenoid Valve**
Decreases the inflow of refrigerant into the compressor when it is restarted after a stop. This extends compressor life and reduces compressor failure.
- **SM 4: 18% Bigger Condenser than the Standard**
The condenser's efficiency affects most of the refrigerator's performance. Particularly, when used in a small compartment under high ambient temperatures or a dusty area, the package unit's condenser needs to be bigger than standard ones in order to achieve the best performance. In consideration of the environments that our products may be subject to, condensers utilized in our products are 18% larger than competitors'.



- **SM 5: Energy Efficient EC Motor**
Through the use of highly efficient EC motors, our products reduce energy consumption and lower electricity costs, thus protecting the environment. Our products are designed with easy-to-replace motor and fan blades.



- **SM 6: Leak Free Patented Hot Gas Condensate System**
The hot gas condensate system is an ideal system because of its fast evaporation of condensed water and its enhancing refrigeration efficiency. In spite of these advantages, many companies have stopped the application of such a system because of the high risk of discarding the refrigerators due to the rapid corrosion of hot gas lines causing refrigerant leakage and water inflow into the cooling pipes. Such problems are completely resolved in our products, thanks to a patented technology that prevents pipes from corrosion.



- **SM 7: Highly Efficient Air Circulation Enclosure**
This system is designed to release hot air to the outside faster than competitors' and to enhance cooling efficiency. At the same time, it retards elevation of compressor temperature and keeps refrigerant pressure from increasing, thus saving energy as a result.



All Replacement Parts are Universal!

DIMENSIONAL DATA

(unit : inch)

Figure A. Panel Opening Size: 25" x 25"

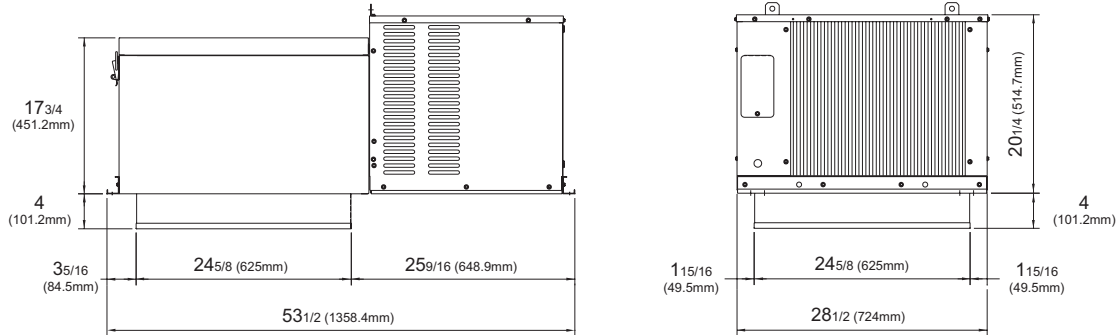
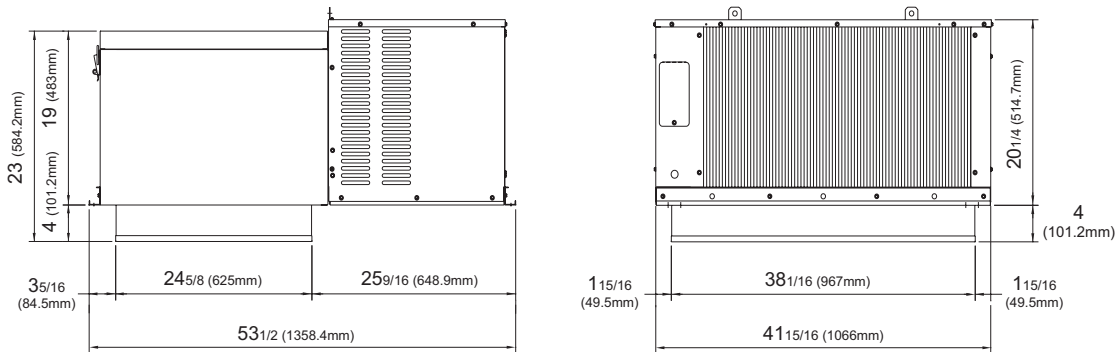


Figure B. Panel Opening Size: 25" x 38 1/2"



Note : Outdoor models are provided with a top hood.


PACKAGE REFRIGERATION UNITS

MODEL NOMENCLATURE


S	T	I	068	M	R448A / R449A	2
Model		Location	Capacity	Temp.	Refrigerant	Voltage
Turbo air Top Mount Package Unit		I= Indoor X= Outdoor	*= BTUH x 100	M= Medium Temp. L= Low Temp.	R448 / R449A	1= 115V 1PH 60Hz 2= 208-230V 1PH 60Hz 3= 208-230V 3PH 60Hz

TOP MOUNT PACKAGE UNIT

Performance Data - Medium Temperature Models, Air Defrost

Model		Capacity BTU / HR (Ambient Temp)														
		80°F			90°F			95°F			100°F			110°F		
		Room Temperature °F														
		34°F	35°F	38°F	34°F	35°F	38°F	34°F	35°F	38°F	34°F	35°F	38°F	34°F	35°F	38°F
ST*068MR448A2	ZB06KAE-PFV	7122	7301	7659	6700	6869	7254	6462	6626	6998	6220	6378	6686	5829	5929	6215
ST*075MR448A2	ZB07KAE-PFV	8284	8495	8975	7831	8033	8491	7607	7803	8186	7271	7458	7820	6823	6998	7393
ST*100MR448A2	ZS11KAE-PFV	12478	12830	13552	11815	12150	12832	11440	11690	12428	11066	11383	12023	10272	10570	11135
ST*100MR448A3	ZS11KAE-TF5	12515	12857	13558	11893	12221	12893	11556	11806	12527	11219	11460	12087	10428	10723	11277
ST*130MR448A2	ZS13KAE-PFV	13982	14292	15091	13302	13679	14443	12876	13242	13981	12449	12717	13426	11481	11812	12435
ST*130MR448A3	ZS13KAE-TF5	14139	14445	15315	13412	13783	14540	13003	13283	14107	12594	12867	13587	11606	11940	12567

Performance Data - Low Temperature Models, Electric Defrost

Model		Capacity BTU / HR (Ambient Temp)														
		80°F			90°F			95°F			100°F			110°F		
		Room Temperature °F														
		0°F	-10°F	-20°F	0°F	-10°F	-20°F	0°F	-10°F	-20°F	0°F	-10°F	-20°F	0°F	-10°F	-20°F
ST*022LR448A2	ZF03KAE-PFV	3788	3020	2399	3571	2861	2275	3451	2773	2193	3334	2667	2110	3126	2513	1988
ST*045LR448A2	ZF05KAE-PFV	5988	4644	3525	5627	4374	3331	5417	4187	3197	5164	4030	3081	4782	3736	2870
ST*055LR448A2	ZF06KAE-PFV	8263	6423	4942	7806	6126	4702	7499	5903	4568	7241	5717	4432	6769	5376	4157
ST*055LR448A3	ZF06KAE-TF5	8254	6460	4942	7796	6125	4696	7540	5939	4559	7231	5710	4395	6763	5366	4149
ST*070LR448A2	ZF07KAE-PFV	9320	7350	5731	8780	6945	5438	8414	6718	5275	8107	6488	5070	7535	6069	4761
ST*070LR448A3	ZF07KAE-TF5	9320	7350	5731	8780	6945	5438	8414	6718	5275	8107	6488	5070	7535	6069	4761

PACKAGE REFRIGERATION UNITS

UNIT SPECIFICATIONS - MEDIUM TEMPERATURE

Model	Power Supply			MCA	MOPD	Unit Amps	Evaporator fan Qty/CFM	Plug Supplied	Matching NEMA Receptacle	Dim. Fig.	Sound dBA **	Net Weight lbs (kg)	AWEF
	Voltage	PH	Hz										
ST*068MR448A2	208-230	1	60	7.5	15	6.1	510	† YES	6-15R	A	68	216 (98) / 225 (102)	5.61 / 7.6
ST*075MR448A2	208-230	1	60	7.7	15	6.3	510	† YES	6-15R	A	68	226 (103) / 236 (107)	5.61 / 7.6
ST*100MR448A2	208-230	1	60	15.3	25	12.5	890	† YES	6-20R	B	71	311 (141) / 319 (145)	5.61 / 7.6
ST*100MR448A3	208-230	3	60	12.8	25	10.5	890	NO	-	B	71	318 (145) / 327 (148)	5.61 / 7.6
ST*130MR448A2	208-230	1	60	14.7	25	12	840	NO	-	B	73	320 (145) / 329 (149)	5.61 / 7.6
ST*130MR448A3	208-230	3	60	12.1	25	9.9	840	NO	-	B	73	317 (144) / 325 (148)	5.61 / 7.6

UNIT SPECIFICATIONS - LOW TEMPERATURE

Model	Power Supply			MCA	MOPD	Unit Amps	Evaporator fan Qty/CFM	Plug Supplied	Matching NEMA Receptacle	Dim. Fig.	Sound dBA **	Net Weight lbs (kg)	AWEF
	Voltage	PH	Hz										
ST*022LR448A2	208-230	1	60	7.5	15	6.1	510	† YES	6-15R	A	67	203 (92) / 213 (97)	2.02 / 2.20
ST*045LR448A2	208-230	1	60	10.5	20	8.5	510	† YES	6-20R	A	73	238 (108) / 248 (113)	2.31 / 2.42
ST*055LR448A2	208-230	1	60	16.5	30	13.4	890	† YES	6-20R	B	69	312 (142) / 320 (145)	2.37 / 2.73
ST*055LR448A3	208-230	3	60	10.5	20	8.6	890	NO	-	B	69	308 (140) / 317 (144)	2.39 / 2.76
ST*070LR448A2	208-230	1	60	16.7	30	13.6	840	NO	-	B	76	319 (145) / 328 (149)	2.48 / 2.71
ST*070LR448A3	208-230	3	60	11.0	20	9	840	NO	-	B	76	316 (144) / 324 (147)	2.50 / 2.73

* : I For Indoor Unit, X For Outdoor Unit. †: Plug Supplied on Indoor Unit only.

PRODUCT AND SERVICE

IMPORTANT PRODUCT AND SERVICES DETAILS

We want to provide the information you need to take advantage of the great products and services in this catalog. Please check our website or call our toll free number for more information.

■ **Changes:**

- Price, products and offers in the catalog may change without notice.
- Turbo Air cannot be responsible for pricing or other errors and reserves the right to cancel orders arising from such errors.

■ **Prices:**

- Our catalog prices do not include taxes and other fees (applicable for U.S. only).

■ **Shipping and Handling Charges:**

- Turbo Air will **offer free shipping and handling** under the following conditions:
 - The amount of one order is more than U.S. \$5,000.
 - Any combination of 5 or more products.

■ **Warranties:**

- 1 year parts and 1 year compressor warranty on condensing units and unit coolers. Labor not included. (4 year extended warranty available for compressor: total 5 years)
- 2 year parts and 2 year compressor and 1 year labor on packaged refrigeration units. (Smart 7) (3 year extended warranty available for compressor: total 5 years)

For more details, please refer to the "Warranty Statement" on our website - www.turboairinc.net

■ **Exchange and Returns:**

Under the following conditions, you can return the ordered products without any charge:

- Received wrong item(s) due to our errors.
- Delivery delayed more than 3 days from promised date.
- Signs of external damage on arrival

If any of our product(s) do not meet your expectations, you may return them within 7 days after receiving the return confirmation from Turbo Air. The returned product(s) must be insured and prepaid. Please enclose your copy of the invoice or packing slip with the return. Please indicate whether you wish to exchange for another product(s), receive credit, or request a full refund of the purchase price. All products must be in new condition with original packaging and all included accessories. Please note there is a 20% restocking and repacking fee from the purchase price.

■ **Freight Damage:**

Inspection of the shipment is the consignee's obligation. Please make sure you are receiving the right merchandise in good condition upon delivery. When in doubt, write a note of "Damaged" on the delivery receipt before signing it. Notify the carrier and file a claim for any concealed damage. Please retain all cartons and product for inspection. Turbo Air is willing to assist and support you in filing your claim, but you must take the action of filing the claim.

WARRANTY STATEMENT

PACKAGE REFRIGERATION SYSTEMS (Smart 7)

Turbo Air Corp. warrants that package refrigeration products conform to the manufacturer's specifications and be free of defects in material and quality. Should any defects occur, Turbo Air Corp. will correct the defects subject to the following conditions.

PARTS: Two years from the date of installation or 30 months from the date of shipment, whichever occurs first. A proof of installation date is required if more than two years. If unit(s) is/are shipped directly to end user or installer, the warranty period is limited to two years.

COMPRESSOR: Two years from the date of installation or thirty months from the date of shipment, whichever comes first, Turbo Air, Corp. will supply a new compressor. During the two year warranty period, Turbo air, Corp. limits to one compressor ONLY. Replacement compressor comes with one year warranty covered by the supplier. If a second replacement compressor is needed within a year, the warranty must be claimed to the supplier directly. If unit(s) is/are shipped directly to end user or installer, the warranty period is limited to two years.

If the extended warranty is purchased, it is extended to three years from the end date of factory warranty. Turbo air, Corp. supplies ONLY one compressor during this period. Replacement compressor comes with one year warranty covered by the supplier as well. If a second replacement compressor is needed within a year, the warranty MUST be claimed to the supplier directly.

LABOR: For one year from date of sale or installation, Turbo Air Corp. can arrange a service technician to diagnose and resolve the issue of the unit.

PROOF OF PURCHASE: Copy of the proof of purchase is required to make this warranty valid. Alternatively, a valid manufacturer's serial number of the unit is required.

REMOTE REFRIGERATION SYSTEMS

Turbo Air Corp. warrants that remote refrigeration products conform to the manufacturer's specifications and be free of defects in material and workmanship. Should any defects occur, Turbo Air Corp. will correct the defects subject to the following conditions.

PARTS: If unit(s) is/are shipped directly to end user or installer, the warranty period is limited to one year.

COMPRESSOR: One year from the date of installation or twenty months from the date of shipment, whichever comes first, Turbo Air, Corp. will supply a new compressor. During the one year warranty period, Turbo air, Corp. limits to one compressor ONLY. Replacement compressor comes with one year warranty covered by the supplier as well. If a second replacement compressor is needed within a year, the warranty must be claimed to the supplier directly. If unit(s) is/are shipped directly to end user or installer, the warranty period is limited to one year.

If the extended warranty is purchased, it is extended to four years from the end date of factory warranty. Turbo air, Corp. supplies ONLY one compressor during this period. Replacement compressor comes with one year warranty covered by the supplier as well. If a second replacement compressor is needed within a year, the warranty MUST be claimed to the supplier directly.

PROOF OF PURCHASE: Copy of the proof of purchase is required to make this warranty valid, or a valid manufacturer's serial number of the unit is required.

THIS WARRANTY DOES NOT COVER LABOR OR:

- Shipping damage.
- System installation.
- Unpacking and/or removal of protective shipping material.
- Usage outside manufacturer's limitations as specified in the owner's manual.
- Service required as a result of improper installation, incorrect or insufficient AC supply voltage.
- Installation, set up, or adjustments of consumer controls.
- Any owner than the original owner.
- Damage from modification into other products.
- Any failure, loss, damage or personal injury due to accident, neglect, or abuse by the consumer, or to improper operation, maintenance or storage or to alteration or to failure to follow normal procedures as outlined in the instruction manual.
- Any unit purchased from an unauthorized dealer, any online retailer or not directly from Turbo Air.
- Transportation charges incurred in connection with warranty service.
- Indirect, consequential, or special damages, except as required by Federal or State laws.
- Repair or replacement of warranted part by other than qualified installer.

THE WARRANTY AND REMEDY STATED ABOVE ARE EXCLUSIVE AND IN LIEU OF ALL OTHER EXPRESS OR IMPLIED WARRANTIES INCLUDING, BUT NOT LIMITED TO, THE IMPLIED WARRANTIES OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE. SOME LAWS DO NOT ALLOW EXCLUSION OF IMPLIED WARRANTY, THEREFORE THIS WARRANTY SHALL BE DEEMED MODIFIED TO BE CONSISTENT WITH SUCH LAWS.

Some states do not allow limitation on how long an implied warranty lasts; therefore these limitations or exclusions may not apply to you. This limited warranty gives you specific legal rights. You may also have other rights that may vary from state to state. This warranty applies to the United States (AK and HI excluded).



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REFRIGERATION SYSTEM
Turbo air

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