KeepRite®

ACE Series

11 - 13 SEER
CONDENSING UNITS
3 thru 5 Ton
SPECIFICATIONS

FEATURES:

- High efficiency scroll compressors on all models
- Copper tube / aluminum fin coil
- Prepainted condenser fins
- Top air discharge for quieter operation
- G-90 Galvanized steel cabinet with integral base rails
- Triple step paint process
- Coated inlet and discharge grilles ruggedly built for enhanced coil protection
- Numerous service friendly features
- Service valves on all models with $3^{-1}/_{2}$" stubs
- External refrigerant connections
- High and Low pressure switches for compressor protection
- Low Ambient Control
- Fan motor in-line disconnect plug
- Coil Guard
- 1 Year parts, 5 year compressor limited warranties
- 12+ SEER with Expansion Valve coils



Commercial Comfort™

3 PHASE

THREE PHASE

MANUFACTURER CERTIFIED TO ARI AS COMPLYING WITH UNITARY AIR-CONDITIONING EQUIPMENT CERTIFICATION SECTIONS OF ARI STANDARD 210

c UL us LISTED

Rated in accordance with ARI Standard 210. Certification applies only when used with proper components as listed with ARI.

International Comfort Products Corporation (USA)
650 Heil Quaker Ave.
Lewisburg, Tennessee 37091

501 56 1701 01
10/02

UNIT SPECIFICATIONS

	MODELS - ACE											
Cooling	**036HA**	**036LA**	**036SA**	**042HA**	**042LA**	**042SA**	**048HA**	**048LA**	**048SA**	**060HA**	**060LA**	**060SA**
Capacity BTUH - Range	33,400 to 35,600			39,000 to 42,500			45,000 to 48,500			55,500 to 59,000		
SEER	11.1-13.0			11.5-13.1			11.3-13.0			11.3-12.3		
Electrical												
Volts / Phase / Hertz	230/3/60	460/3/60	575/3/60	230/3/60	460/3/60	575/3/60	230/3/60	460/3/60	575/3/60	230/3/60	460/3/60	575/3/60
Voltage Min - Max	197-253	414-506	517-633	197-253	414-506	517-633	197-253	414-506	517-633	197-253	414-506	517-633
Total Unit Amps	12.2	5.87	4.8	14..3	6.83	5.38	16.2	7.90	5.80	18.8	9.80	7.70
Min. Circuit Amp.	14.7	7.2	5.9	17.5	8.4	6.6	19.9	9.7	7.1	23.1	12.1	9.5
Minimum Fuse Size	20	15	15	25	15	15	25	15	15	30	15	15
Max. Fuse	20	15	15	25	15	15	30	15	15	40	20	15
Compressor												
RLA	10.3	5.13	4.23	12.4	6.09	4.81	14.74	7.05	5.13	17.31	8.97	7.05
LRA	77.0	39.0	31.0	88.0	44.0	34.0	91.0	50.0	37.0	123.0	62.0	50.0
Type	Scroll	Scroll	Scroll	Scroll	Scroll	Scroll	Scroll	Scroll	Scroll	Scroll	Scroll	Scroll
Condenser Fan Data												
Quantity	1	1	1	1	1	1	1	1	1	1	1	1
Volts/Phase/Hertz	230/1/60	460/1/60	575/1/60	230/1/60	460/1/60	575/1/60	230/1/60	460/1/60	575/1/60	230/1/60	460/1/60	575/1/60
FLA	1.9	0.74	0.57	1.9	0.74	0.57	1.5	0.87	0.68	1.5	0.87	0.68
LRA	3.7	2.15	1.88	3.7	2.15	1.88	2.9	1.8	1.65	2.9	1.8	1.65
Blades/Diameter/Pitch	3/20/28	3/20/28	3/20/28	3/20/28	3/20/28	3/20/28	3/26/28	3/26/28	3/26/28	3/26/28	3/26/28	3/26/28
Hp - Rpm - Speeds	1/3-1075-1	1/3-1100-1	1/3-1100-1	1/3-1075-1	1/3-1100-1	1/3-1100-1	1/4-840-1	1/4-840-1	1/4-840-1	1/4-840-1	1/4-840-1	1/4-840-1
Bearing Type	Sleeve	Sleeve	Sleeve	Sleeve	Sleeve	Sleeve	Sleeve	Sleeve	Sleeve	Sleeve	Sleeve	Sleeve
Rotation (Shaft End)	CW	CW	CW	CW	CW	CW	CW	CW	CW	CW	CW	CW
Max. CFM	2800	2800	2800	2800	2800	2800	3400	3400	3400	3400	3400	3400
Condenser Coil												
Rows / Fins per Inch	1 / 20	1 / 20	1 / 20	1 / 22	1 / 22	1 / 22	1 / 22	1 / 22	1 / 22	1 / 22	1 / 22	1 / 22
Total Face Area-Sq, ft.	18.94	18.94	18.94	21.31	21.31	21.31	22.72	22.72	22.72	24.06	24.06	24.06
Tube Diameter	3/8	3/8	3/8	3/8	3/8	3/8	3/8	3/8	3/8	3/8	3/8	3/8
Refrigerant												
Type	R-22	R-22	R-22	R-22	R-22	R-22	R-22	R-22	R-22	R-22	R-22	R-22
Ounces *	113			125			148			182		
Supplied Optional Orifice Size	.070	.070	.070	.079	.079	.079	.082	.082	.082	.090	.090	.090
Line Size Suction I.D. (in.)	3/4	3/4	3/4	3/4	3/4	3/4	7/8	7/8	7/8	7/8	7/8	7/8
Line Size Liquid I.D. (in.)	3/8	3/8	3/8	3/8	3/8	3/8	3/8	3/8	3/8	3/8	3/8	3/8
Controls												
Compressor IPR Valve (psi) Average	500	500	500	500	500	500	500	500	500	500	500	500
High Press. Switch Auto Reset - Open / Close psi	420-300	420-300	420-300	420-300	420-300	420-300	420-300	420-300	420-300	420-300	420-300	420-300
Low Press. Switch Auto Reset - Open- Close psi	5 - 20	5 - 20	5 - 20	5 - 20	5 - 20	5 - 20	5 - 20	5 - 20	5 - 20	5 - 20	5 - 20	5 - 20
Misc.												
Shipping Weight	191	191	191	203	203	203	255	255	255	275	275	275

* Unit shipped with holding charge.

MODEL NUMBER IDENTIFICATION GUIDE

MODEL NUMBER	A	C	E	036	H	A	

PRODUCT TYPE
A = Air Conditioning

PRODUCT FAMILY
C = Condenser

SERIES
E = Series

SALES CODE

ELECTRICAL

CODE	VOLTS	PHASE	CYCLE
H	208/230	3	60
L	460	3	60
S	575	3	60

CAPACITY MBTUH
036 = 36,000, 042 = 42,000, 048 = 48,000, 060 = 60,000

EXTENDED REFRIGERANT LINE CORRECTION FACTORS

Varying Line Length in Feet (m) vs. Total Capacity Multiplier					
25 (8)	**50 (15)**	**75 (23)**	**100 (30)**	**125 (38)**	**150 (46)**
1.00	.99	.98	.96	.94	.92

REFRIGERANT CHARGE DATA
Refrigerant charge correction per foot (305mm) of line:
1/4″ O.D. = .25 oz.; 5/16″ O.D. = .45 oz.; 3/8″ O.D. = .60 oz.;
1/2″ O.D. = 1.2 oz.

VOLTAGE CORRECTION FACTORS

Volts	Capacity	Watts
208	.98	.99

INDOOR AIRFLOW CORRECTION TABLE

% Rated Air	90	95	100	105	110
Total Cap. Mult.	.98	.99	1.00	1.01	1.03
Sens Cap. Mult.	.95	.98	1.00	1.03	1.05

INDOOR TEMPERATURE CORRECTION TABLE
(Based on 95°F Ambient)

Indoor D.B. °F (°C).	Correction Factor	Entering Indoor Wet Bulb °F (°C).						
		59 (15)	**61 (16)**	**63 (17)**	**65 (18)**	**67 (19)**	**69 (20)**	**71 (21)**
70 (21)	Total Cap. Mult.	**.90**	.93	.96	.99	1.02	-	-
	Sens Cap. Mult.	**.86**	.85	.82	.77	.70	-	-
75 (24)	Total Cap. Mult.	.89	.92	**.95**	.98	1.01	1.04	-
	Sens Cap. Mult.	1.04	1.03	**1.00**	.95	.88	.78	-
80 (26)	Total Cap. Mult.	.88	.91	.94	.97	**1.00**	1.03	1.06
	Sens Cap. Mult.	1.18	1.17	1.14	1.08	**1.00**	.89	.73
85 (29)	Total Cap. Mult.	-	.90	.93	.96	.99	1.02	**1.05**
	Sens Cap. Mult.	-	1.29	1.26	1.20	1.11	.98	**.81**

Bold Type = approximately 50% Relative Humidity

CONDENSING UNIT SPLIT SYSTEM 12 - 13 SEER

Outdoor Model	Indoor Model	Cooling 95 F Btuh	SEER	S/T	EER	WATTS	CFM	Pin/TXV
ACE036	EP*48J****+TXV3+EV(MV)16J22****	35600	13.0	0.74	11.7	3043	1200	TXV
	EP*42J****+TXV3+EV(MV)16J22****	35600	13.0	0.76	11.7	3043	1200	TXV
	EP*48N****+TXV3+NTVM125	35600	13.0	0.74	11.3	3150	1200	TXV
	EP*48J****+TXV3+NTVM100	35600	12.6	0.74	11.1	3207	1200	TXV
	EP*48F****+TXV3+NTVM050	35600	12.3	0.74	10.8	3296	1200	TXV
	EP*48F****+TXV3	35600	12.0	0.73	10.7	3327	1200	TXV
	EP*48J****+TXV3	35600	12.0	0.73	10.7	3327	1200	TXV
	EP*48N****+TXV3	35600	12.0	0.73	10.7	3327	1200	TXV
	EP*48F****+TD1	35600	11.8	0.73	10.7	3327	1200	0.070
	EP*48J****+TD1	35600	11.8	0.73	10.7	3327	1200	0.070
	EP*48N****+TD1	35600	11.8	0.73	10.7	3327	1200	0.070
	EMH48F****	35600	11.5	0.73	10.7	3327	1200	0.070
	EP*48F****	35600	11.5	0.73	10.7	3327	1200	0.070
	EP*48J****	35600	11.5	0.73	10.7	3327	1200	0.070
	EP*48N****	35600	11.5	0.73	10.7	3327	1200	0.070
	EP*36J****+NTVM100	35400	12.6	0.74	11.0	3218	1200	TXV
	EP*42J****+TXV3+NTVM100	35400	12.5	0.76	11.1	3189	1200	TXV
	EX*36F****+EV(MV)12F19****	35200	13.0	0.74	11.1	3171	1200	TXV
	EX*36J****+EV(MV)16J22****	35200	13.0	0.74	11.1	3171	1200	TXV
	EP*42F****+TXV3+NTVM050	35200	12.2	0.76	10.8	3259	1200	TXV
	EX*36F****+TD1	35200	12.1	0.73	10.6	3321	1200	TXV
	EX*36J****+TD1	35200	12.1	0.73	10.6	3321	1200	TXV
	EX*36F****	35200	12.0	0.73	10.6	3321	1200	TXV
	EX*36J****	35200	12.0	0.73	10.6	3321	1200	TXV
	FCX36****	35200	12.0	0.73	10.5	3352	1200	TXV
	EAH5536**+TD1	35200	12.0	0.75	11.0	3200	1200	0.070
	EP*42F****+TXV3	35200	12.0	0.75	10.7	3290	1200	TXV
	EP*42J****+TXV3	35200	12.0	0.75	10.7	3290	1200	TXV
	EP*42F****+TD1	35200	11.7	0.75	10.7	3290	1200	0.070
	EP*42J****+TD1	35200	11.7	0.75	10.7	3290	1200	0.070
	EMH42F****	35200	11.4	0.75	10.7	3290	1200	0.070
	EP*42F****	35200	11.4	0.75	10.7	3290	1200	0.070
	EP*42J****	35200	11.4	0.75	10.7	3290	1200	0.070
	EP*36F****+TXV3+EV(MV)12F19****	33600	12.1	0.74	10.6	3170	1200	TXV
	EP*36J****+TXV3+EV(MV)16J22****	33600	12.1	0.74	10.6	3170	1200	TXV
	EP*36J****+TXV3+NTVM100	33600	12.1	0.74	10.5	3200	1200	TXV
	EP*36F****+TXV3+NTVM050	33400	11.5	0.74	10.2	3275	1200	TXV
	EP*36B****+TXV3	33400	11.2	0.73	10.1	3307	1200	TXV
	EP*36F****+TXV3	33400	11.2	0.73	10.1	3307	1200	TXV
	EP*36J****+TXV3	33400	11.2	0.73	10.1	3307	1200	TXV
	EP*36B****+TD1	33400	11.1	0.73	10.1	3307	1200	0.070
	EP*36F****+TD1	33400	11.1	0.73	10.1	3307	1200	0.070
	EP*36J****+TD1	33400	11.1	0.73	10.1	3307	1200	0.070
	EMH36F****	33400	11.0	0.73	10.1	3307	1200	0.070
	EP*36B****	33400	11.0	0.73	10.1	3307	1200	0.070
	EP*36F****	33400	11.0	0.73	10.1	3307	1200	0.070
	EP*36J****	33400	11.0	0.73	10.1	3307	1200	0.070

Many matches require a pin change. Always check pin size to insure maximum performance. PIN=Refrigerant orifice PIN size. TD1=AMA001TDA Indoor Blower Time Delay Kit, required to make SEER indicated. All products using an electronic fan control satisfy TD1 requirements. TXV=Thermostatic Expansion Valve, TXV153 (AMF153) replaces HTXV1,2 or 3 where listed in ratings, TXV335 (AMF335) Replaces HTXV4 or 5 where listed in ratings. EP* = EPA, EPD, EPM series of coils. EX* = EXA, EXD, EXM series of coils. EE* = EEA OR EED series of coils.

SPECIFICATIONS SUBJECT TO CHANGE WITHOUT NOTICE

CONDENSING UNIT SPLIT SYSTEM 12 - 13 SEER

Outdoor Model	Indoor Model	Cooling 95 F Btuh	SEER	S/T	EER	WATTS	CFM	Pin/TXV
ACE042	EP*48J****+TD1	42500	12.0	0.73	10.9	3917	1400	0.079
	EP*48N****+TD1	42500	12.0	0.73	10.9	3917	1400	0.079
	EP*48J****	42500	11.7	0.73	10.9	3917	1400	0.079
	EP*48N****	42500	11.7	0.73	10.9	3917	1400	0.079
	EP*48J****+TXV4+EV(MV)16J22****	42000	13.1	0.74	11.3	3717	1400	TXV
	EX*42J****+EV(MV)16J22****	41500	13.1	0.74	11.2	3705	1400	TXV
	FCV48****	41500	13.1	0.74	11.2	3705	1400	TXV
	EP*48N****+TXV4+NTVM125	41500	13.0	0.74	11.1	3739	1400	TXV
	EP*48J****+TXV4+NTVM100	41500	12.4	0.74	10.7	3879	1400	TXV
	EP*48J****+TXV4	41500	12.2	0.73	10.7	3897	1400	TXV
	EP*48N****+TXV4	41500	12.2	0.73	10.7	3897	1400	TXV
	EAH5548**+TD1	41500	12.0	0.75	11.1	3739	1400	0.079
	EP*48F****+TD1	41500	11.9	0.73	10.8	3860	1300	0.079
	EMH48F****	41500	11.6	0.73	10.8	3860	1300	0.079
	EP*48F****	41500	11.6	0.73	10.8	3860	1300	0.079
	EX*42J****+NTVM100	41500	12.3	0.74	10.6	3915	1400	TXV
	EP*48F****+TXV4	41500	12.0	0.73	10.7	3879	1300	TXV
	EX*42J****	41500	12.0	0.74	10.6	3934	1400	TXV
	FCX48****	41500	12.0	0.74	10.5	3952	1400	TXV
	EAH5548**+TXV4+TD1	41000	12.0	0.75	10.5	3905	1400	0.079
	EP*42F****+TD1	40500	11.8	0.73	10.7	3803	1225	0.078
	EP*42J****+TD1	40500	11.8	0.73	10.7	3803	1225	0.078
	EMH42F****	40500	11.5	0.73	10.7	3803	1225	0.078
	EP*42F****	40500	11.5	0.73	10.7	3803	1225	0.078
	EP*42J****	40500	11.5	0.73	10.7	3803	1225	0.078
	EP*42J****+TXV4+TD1+EV(MV)16J22****	40000	13.0	0.74	11.2	3571	1225	TXV
	EP*42J****+TXV4+NTVM100	40000	12.2	0.74	10.6	3774	1400	TXV
	EP*42F****+TXV4+TD1	40000	12.0	0.73	10.5	3810	1225	TXV
	EP*42J****+TXV4+TD1	40000	12.0	0.73	10.5	3810	1225	TXV
	EP*48N****+TXV4+NTVM125	39000	13.8	0.74	12.2	3197	1400	TXV

Many matches require a pin change. Always check pin size to insure maximum performance. PIN=Refrigerant orifice PIN size. TD1=AMA001TDA Indoor Blower Time Delay Kit, required to make SEER indicated. All products using an electronic fan control satisfy TD1 requirements. TXV=Thermostatic Expansion Valve, TXV153 (AMF153) replaces HTXV1,2 or 3 where listed in ratings, TXV335 (AMF335) Replaces HTXV4 or 5 where listed in ratings. EP* = EPA, EPD, EPM series of coils. EX* = EXA, EXD, EXM series of coils. EE* = EEA OR EED series of coils.

SPECIFICATIONS SUBJECT TO CHANGE WITHOUT NOTICE

CONDENSING UNIT SPLIT SYSTEM 12 - 13 SEER

Outdoor Model	Indoor Model	Cooling 95 F Btuh	SEER	S/T	EER	WATTS	CFM	Pin/TXV
ACE048	EX*48N****+NTVM125	48500	12.5	0.73	10.8	4491	1600	TXV
	EX*48N****+EV(MV)20N26****	48500	13.0	0.74	11.0	4409	1600	TXV
	FCV48****	48500	13.0	0.74	11.0	4409	1600	TXV
	EX*48N****	48000	12.0	0.73	10.6	4528	1600	TXV
	FCX48****	48000	12.0	0.73	10.5	4571	1600	TXV
	EP*60J****+TD1	48000	11.7	0.71	10.4	4638	1600	0.082
	EP*60N****+TD1	48000	11.7	0.71	10.4	4638	1600	0.082
	EP*60J****	48000	11.5	0.71	10.4	4638	1600	0.082
	EP*60N****	48000	11.5	0.71	10.4	4638	1600	0.082
	EP*60N****+TXV4+NTVM125	47500	12.3	0.72	10.6	4481	1600	TXV
	EP*60J****+TXV4	47500	12.0	0.71	10.4	4567	1600	TXV
	EP*60N****+TXV4	47500	12.0	0.71	10.4	4567	1600	TXV
	EAH5548**+TXV4	47500	12.0	0.74	10.9	4358	1600	0.082
	EAH5560**+TXV4+TD1	47000	12.0	0.76	10.3	4585	1600	TXV
	EP*48J****+TD1	47000	11.6	0.71	10.3	4585	1600	0.082
	EP*48N****+TD1	47000	11.6	0.71	10.3	4585	1600	0.082
	EP*48J****	47000	11.4	0.71	10.3	4585	1600	0.082
	EP*48N****	47000	11.4	0.71	10.3	4585	1600	0.082
	EP*48J****+TXV4+EV(MV)16J22****	46500	12.4	0.72	10.7	4346	1600	TXV
	EP*48N****+TXV4+NTVM125	46500	12.2	0.72	10.5	4429	1600	TXV
	EP*48J****+TXV4	46500	11.8	0.71	10.3	4515	1600	TXV
	EP*48N****+TXV4	46500	11.8	0.71	10.3	4515	1600	TXV
	EP*48F****+TD1	46000	11.6	0.71	10.4	4423	1300	0.082
	EMH48F****	46000	11.3	0.71	10.4	4423	1300	0.082
	EP*48F****	46000	11.3	0.71	10.4	4423	1300	0.082
	EP*48F****+TXV4	45000	11.8	0.71	10.4	4348	1300	TXV
ACE060	EAH5560**+TXV5	59000	12.0	0.72	11.0	5364	1800	TXV
	EX*60N****+EV(MV)20N26****	58500	12.3	0.69	10.7	5467	1800	TXV
	FCV60****	58500	12.3	0.7	10.7	5467	1800	TXV
	EX*60N****	58500	12.0	0.7	10.5	5571	1800	TXV
	FCX60****	58500	11.6	0.72	10.5	5571	1800	TXV
	EP*60N****+TD1	57500	11.5	0.69	10.2	5665	1800	0.090
	EP*60N****	57500	11.3	0.69	10.2	5665	1800	0.090
	EAH5560**+TXV5+TD1	57000	11.9	0.72	10.1	5644	1900	TXV
	EP*60N****+TXV5+EV(MV)20N26****	56500	12.0	0.7	10.3	5485	1800	TXV
	EP*60N****+TXV5	56500	11.7	0.69	10.1	5594	1800	TXV
	EP*60J****+TD1	56500	11.5	0.69	10.2	5567	1625	0.090
	EP*60J****	56500	11.4	0.69	10.2	5567	1625	0.090
	EP*60J****+TXV5	55500	11.7	0.69	10.1	5522	1625	TXV

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SPECIFICATIONS SUBJECT TO CHANGE WITHOUT NOTICE

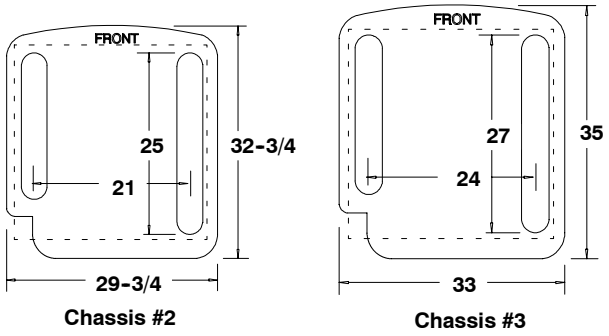
DIMENSIONS AND ACCESSORIES

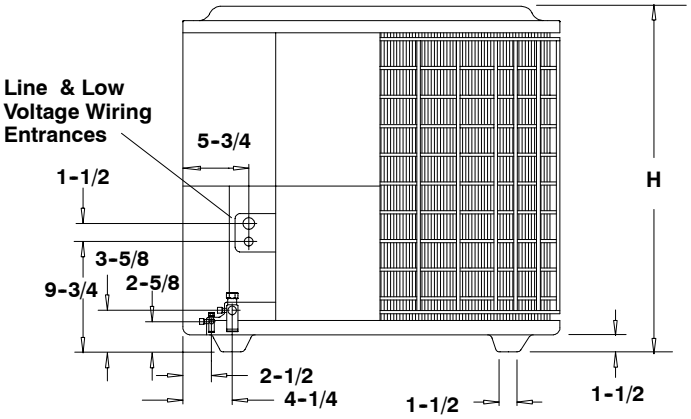
Dimensions			OPTIONAL*
Model	Chassis	Height (H)	Enhanced Coil Guard
036	2	34-5/8	AMB234CGA
042	2	38-5/8	AMB238CGA
048	3	36-5/8	---
060	3	38-5/8	---

* Packages of 6 Only

Minimum Mounting Pad Sizes with pad starting at 9" from structure for minimum clearance of 6".

Chassis #2 24" W X 26" D
Chassis #3 27" W X 28" D





ALL DIMENSIONS IN INCHES

Accessory	Description	Used On
AMF153TKB	Expansion Valve Kit	3 Ton
AMF355TKB	Expansion Valve Kit	3 1/2 - 5 Ton
AMA001TDA	Indoor Blower Time Delay	All Models
24370800 *	Compressor Anti-short cycle 24 Volt 3 Min. Time Delay	All Models
1070822*	Compressor Anti-short cycle 24 Volt 5 Min. Time Delay	All Models
1053477 *	Compressor Crankcase Heater Solid State "Stick On" Type	All Models
1148113 *	Compressor Crankcase Heater "Wrap-around" Type	All Models
1060833*	Compressor Sound Jacket (Small Scroll)	3 Ton
1060834 *	Compressor Sound Jacket (Large Scroll)	3 1/2 - 5 Ton

* Order from Service Parts