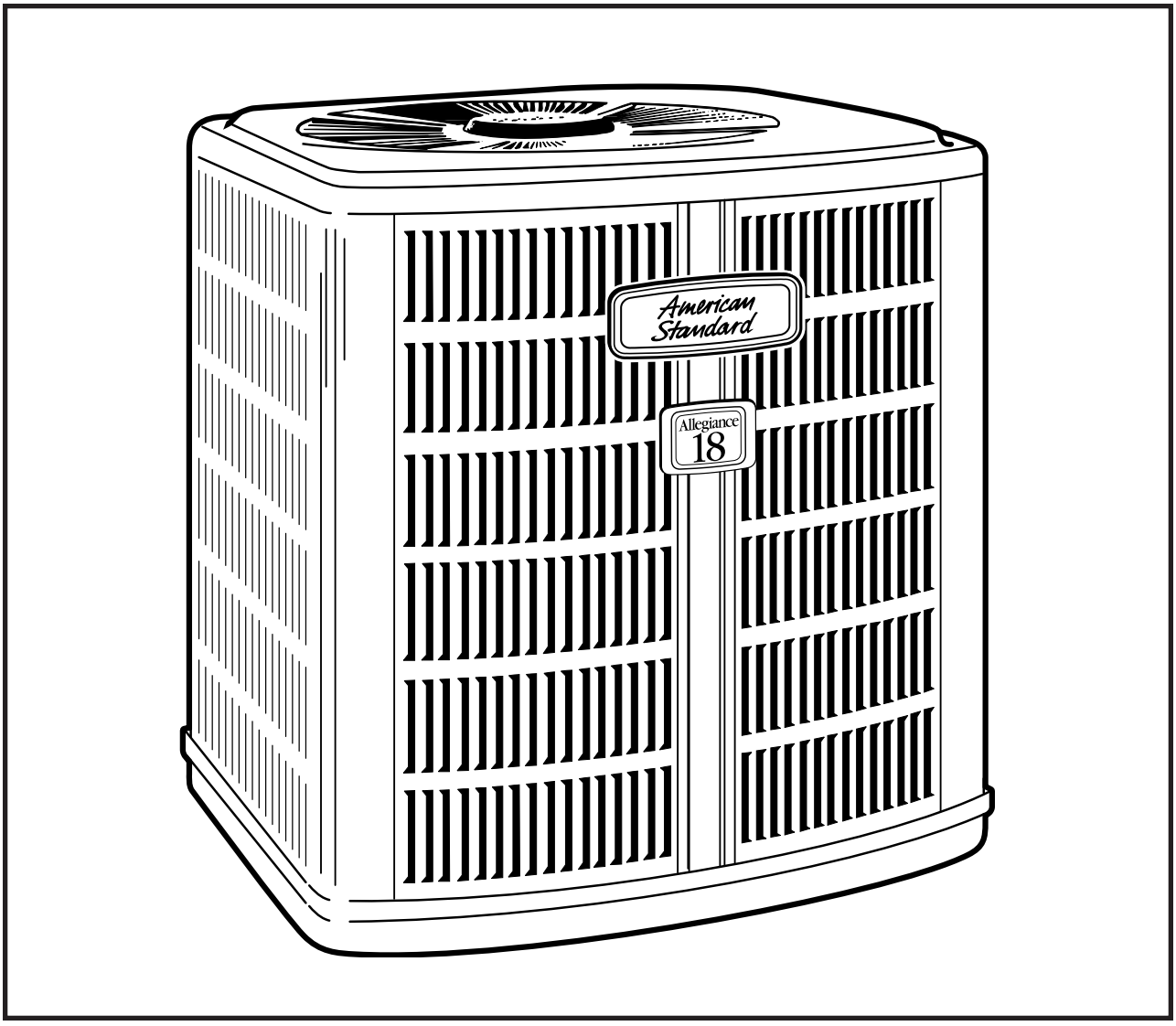
American Standard
HEATING & AIR CONDITIONING

SPLIT SYSTEM COOLING
2½, 3, 4 & 5 TON



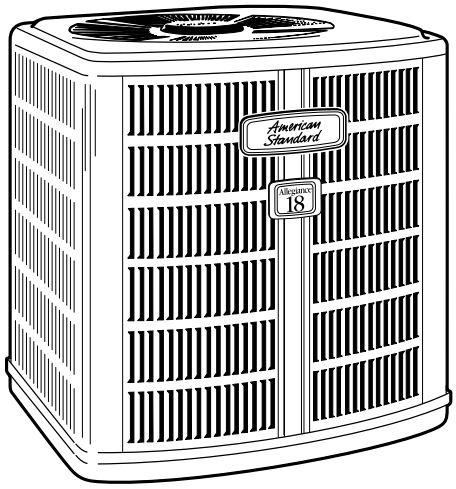
ALLEGIANCE® 18
MODELS 2A7A8030, 036, 048 & 060C
with AccuLink™ and Charge Assist™

PUB. NO. 12-1194-04
April 2009

Features and Benefits

- Two **DURATION™** Compressors
- Efficiency up to **19.50 SEER**
- All Aluminum **SPINE FIN™** coil
- Corrosion resistant fasteners
- **EASY-SESS™** cabinet, service access and refrigerant connections with full coil protection
- **DURABASE™** won't rust, drains completely
- **COMFORT"R"™** mode approved
- **ACCULINK™ SYSTEM**-Only two wire control connection
- **CHARGE ASSIST™**-Fast/accurate charging every time
- Glossy corrosion resistant finish
- Internal compressor high/low pressure & temperature protection
- Start kit standard
- 50 or 100% capacity modulation
- Compressor sump heat
- Liquid line filter/drier
- Warm gray cabinet with anthracite gray grill and cap
- Low sound with advanced fan system and compressor sound insulator
- Variable speed fan
- Electronic compressor control
- Seacoast shield
- Service valve cover
- R-22 refrigerant
- **10 year limited warranty on compressor, coil and 5 years on internal functional parts**
- **Extended warranties available**
- S.E.E.T. design testing
- 100% line run test
- Low ambient cooling to 55° as shipped

Contents



Manufacturing Control

American Standard's exclusive control over the design and manufacturing of all major components is unique in the industry. This approach assures us total control over both the quality and reliability of these components. It also allows us to custom match components to deliver the best in split system performance.

Designing the Details

Careful attention was given to designing the details — from control wiring to the access panels. These units feature time-saving color-coded wiring and removable panels which allow complete access to all major components and controls. All outdoor units feature external high and low pressure gauge port connections. Service valves for easy diagnosing and servicing of the unit are provided.

Standardized Cabinets

In addition all cabinets have been standardized; so when you are servicing an outdoor unit or an air handler all components are in the same location from unit to unit.

UL Listed

American Standard meets or exceeds all nationally recognized agency safety and design standards. Each condensing unit is UL designed, approved, and labeled in accordance to UL Standards, 1995, including approval for use in Canada. Each unit is rated in accordance with ARI Standard 210/240 and 270.

Features and Benefits 2

General Data 4

- **Product Specifications** 4
- **A-weighted Sound Power Level [dB(A)]** 4
- **Accessory Description and Usage** 5
- **ARI Standard Capacity Rating Conditions** 5

Model Nomenclature 6

Typical Wiring 7

Dimensional Data 9

Mechanical Specifications 10

DATA SUBJECT TO CHANGE WITHOUT NOTICE

General Data

Product Specifications

Model No. ①	**2A7A8030C1**	**2A7A8036C1**	**2A7A8048C1**	**2A7A8060C1**
Electrical Data V/PH/Hz ②	200/230/1/60	200/230/1/60	200/230/1/60	200/230/1/60
Min Cir Ampacity	18	22	25	37
Max Fuse Size (Amps)	30	35	40	60
Compressor	DURATION™	DURATION™	DURATION™	DURATION™
1st Stg. RL Amps - RL Amps	6.2 - 45	6.2 - 45	8.4 - 62	8.4 - 62
2nd Stg. RL Amps - RL Amps	12.4 - 65	15.1 - 85	17.6 - 107	27.7 - 145
Outdoor Fan FL Amps	2.80	2.80	2.80	2.80
Fan HP	1/3	1/3	1/3	1/3
Fan Dia (inches)	27.6	27.6	27.6	27.6
Coil	Spine Fin™	Spine Fin™	Spine Fin™	Spine Fin™
Refrigerant R-22	13/00-LB/OZ	13/00-LB/OZ	14/11-LB/OZ	13/12-LB/OZ
Line Size - IN. O.D. Gas ③	7/8	7/8	1-1/8	1-1/8
Line Size - IN. O.D. Liquid ③	3/8	3/8	3/8	3/8
Dimensions H x W x D (Crated)	46.4 x 35.1 x 38.7	46.4 x 35.1 x 38.7	46.4 x 35.1 x 38.7	46.4 x 35.1 x 38.7
Weight - Shipping	413	410	421	426
Weight - Net	377	374	386	391
Start Components	YES	YES	YES	YES
Sound Enclosure	YES	YES	YES	YES
Compressor Sump Heat	YES	YES	YES	YES
Optional Accessories: ④				
Anti-short Cycle Timer	TAYASCT501A	TAYASCT501A	TAYASCT501A	TAYASCT501A
Rubber Isolator Kit	BAYISLT101	BAYISLT101	BAYISLT101	BAYISLT101
Extreme Condition Mounting Kit	BAYECMT001	BAYECMT001	BAYECMT001	BAYECMT001
Auto Charge Solenoid Kit	BAYCAKT001	BAYCAKT001	BAYCAKT001	BAYCAKT001
24 Volt Harness Kit	BAYACHP024A	BAYACHP024A	BAYACHP024A	BAYACHP024A
Snow/Sand Legs	BAYLEGS002	BAYLEGS002	BAYLEGS002	BAYLEGS002
4" Extension	BAYLEGS003	BAYLEGS003	BAYLEGS003	BAYLEGS003
Refrigerant Lineset 5	TAYREFLN3*	TAYREFLN3*	TAYREFLN4*	TAYREFLN4*

① Certified in accordance with the Unitary Air-Conditioner equipment certification program which is based on ARI Standard 210/240.
② Calculated in accordance with N.E.C. Use only HACR circuit breakers or fuses.
③ Standard line lengths - 80'. Standard lift - 25' Suction and Liquid line.
For greater lengths and lifts refer to refrigerant piping software Pub# 32-3312-0†. (†denotes latest revision)
④ For accessory description and usage, see page 5.
⑤ * = 15, 20, 25, 30, 40 and 50 foot lineset available.

A-weighted Sound Power Level [dB(A)]

MODEL	SOUND POWER LEVEL [dB(A)]	A-WEIGHTED FULL OCTAVE SOUND POWER LEVEL dB - [dB(A)]							
		63	125	250	500	1000	2000	4000	8000
2A7A8030C1	72	52.1	57.7	64.4	65.8	64.6	62.4	57.8	50.5
2A7A8036C1	74	54.3	57.8	62.3	65.2	67.1	65.9	61.1	51.3
2A7A8048C1	73	53	60.1	63.8	67.2	66	62.9	58.5	51.6
2A7A8060C1	72	44.3	52.6	57.4	64.8	65.2	62.5	54.8	51.8

Note: Tested in accordance with ARI Standard 270.95. (Not listed with ARI)

General Data

Accessory Description and Usage

Anti-Short Cycle Timer — Solid state timing device that prevents compressor recycling until 5 minutes have elapsed after satisfying call or power interruptions. Use in area with questionable power delivery, commercial applications, long lineset, etc.

Rubber Isolators — 5 large rubber donuts to isolate condensing unit from transmitting energy into mounting frame or pad. Use on any application where sound transmission needs to be minimized.

Extreme Condition Mount Kit — Bracket kits to securely mount condensing unit to a frame or pad without removing any panels. Use in areas with high winds, or on commercial roof tops, etc.

24 Volt Wiring Harness— Use to wire a communicating outdoor unit to an existing 24 volt indoor section.

Charge Assist Solenoid Kit— Fast accurate charging every time.

ARI Standard Capacity Rating Conditions

ARI STANDARD 210/240 RATING CONDITIONS —

(A) Cooling 80°F DB, 67°F WB air entering indoor coil, 95°F DB air entering outdoor coil.

(B) High Temperature Heating 47°F DB, 43°F WB air entering outdoor coil, 70°F DB air entering indoor coil.

(C) Low Temperature Heating 17°F DB, 15°F WB air entering outdoor coil, 70°F DB air entering indoor coil.

(D) Rated indoor airflow for heating is the same as for cooling.

ARI STANDARD 270 RATING CONDITIONS — (Noise rating numbers are determined with the unit in cooling operation.) Standard Noise Rating number is at 95°F outdoor air.

ARI PERFORMANCE CERTIFIED™ C INTERTEK ETL CM LISTED US

ARI Standard 210/240 UAC

Model Nomenclature

Outdoor Units

2 A 7 A 8 0 3 6 B 1 0 0 0 A A

Refrigerant Type
2 = R-22
4 = R-410A

AMERICAN STANDARD

Product Type
6 = Split Heat Pump
7 = Split Cooling

Product Family
A = Allegiance
H = Heritage
B = Basic
C = Light Commercial

Family SEER
0 = 10 3 = 13 6 = 16
1 = 11 4 = 14 8 = 18
2 = 12 5 = 15 9 = 19

Split System Connections 1-6 Tons
0 = Brazed

Nominal Capacity in 000s of BTUs

Major Design Modifications

Power Supply
1 = 200-230/1/60 or 208-230/1/60
3 = 200-230/3/60
4 = 460/3/60

Secondary Function

Minor Design Modifications

Unit Parts Identifier

Gas Furnaces

T U Y 0 8 0 R 9 V 3 W 0

Furnace Configuration
TU = Upflow/Horizontal
TD = Downflow/Horizontal

Type
C = Condensing
D = Induced Draft
E = Electronic Ignition
X = Direct Vent Condensing
Y = Direct Vent Condensing Variable Speed

Heating Input MBTUH
080 = 80,000 BTUH

Major Design Change
C = Single Stage R = Two Stage
All other = Standard System

Power Supply and Fuel
115 Volt Natural Gas

Airflow Capacity for Cooling
Example: 36 = 3 Tons
400 CFM/Ton
400 x 3 Tons = 1200 CFM
V3 = 1 1/2 – 3 Tons, Varible Speed Motor (ICM)
V4 = 2 – 4 Tons, Varible Speed Motor (ICM)
V5 = 3 – 5 Tons, Varible Speed Motor (ICM)

Minor Design Change

Service Digit – Not Orderable

Air Handlers – Residential

4 T E E 3 F 3 6 A 1 0 0 0 A A

Refrigerant Type
4 = R-410A
2 = R-22

Application
TE = Fully Convertible
TG = Semi Convertible
TF = Front Return
TV = Vertical

Product Family
E = Leadership – Variable Speed
P = Leadership
C = Replacement/Retail
B = Basic

Flow Control
3 = Nonbleed TXV
4 = FCCV*

Feature Identifier
0 = Standard Unit
F = Air-Tite™

Nominal Capacity in 000s of BTUs

Major Design Modifications

Power Supply
1 = Single Phase

Electrical Connection
0 = Pig Tails
B = Circuit Breaker
D = Pull Disconnect

Future Option – Factory Installed Heater Nominal KW Value

Minor Design Modifications

Unit Parts Identifier

NOTE: There will be a phase-in of new model numbers for new air handlers over next 2 years.
*Shipped with R-22 FCCV

Furnace Coils

T X C 0 2 4 C 4 H P C 0

Refrigerant Type
T = R-22
R = R-410A
C = Cooling only

Furnace Coils
XA = Uncased "A" Coil Upflow/Downflow
XC = Cased Coil Upflow/Downflow/Horizontal
XH = Cased Horizontal Only
CB = Cased/Brazed Upflow – Cooling Only
UB = Uncased/Brazed Upflow – Cooling Only

Coupling
0 = Braze

Nominal Capacity
Nominal Capacity in 000s of BTUs

Product Family
C = Universal
S = High Efficiency – Nonbleed TXV
E = High Efficiency – Bleed TXV
A = Upflow Only
D = Reverse Airflow

Refrigerant Control
2 = Cap Tube
3 = Nonbleed TXV
4 = ***Accutron™*** Flow Control/Check Valve (FCCV)
5 = Bleed TXV

HP = Heat Pump
00 = Cooling only (7 1/2 to 10 ton)

Minor Design Change

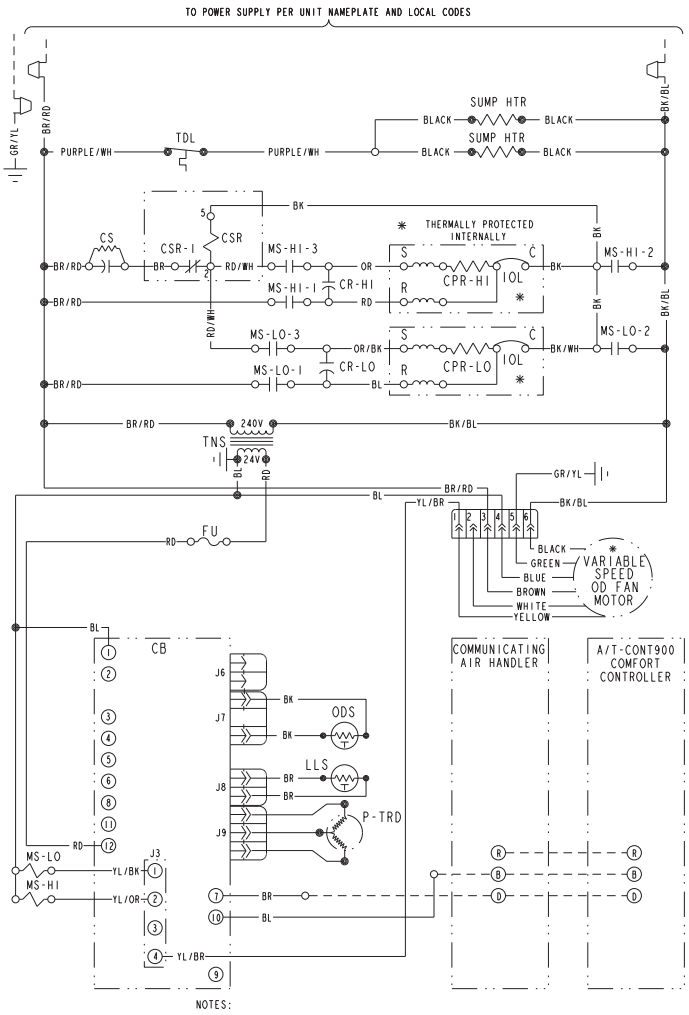
Service Digit – Not Orderable

Typical Wiring

SCHEMATIC DIAGRAMS

(SEE LEGEND)

2A7A8030C



NOTES:

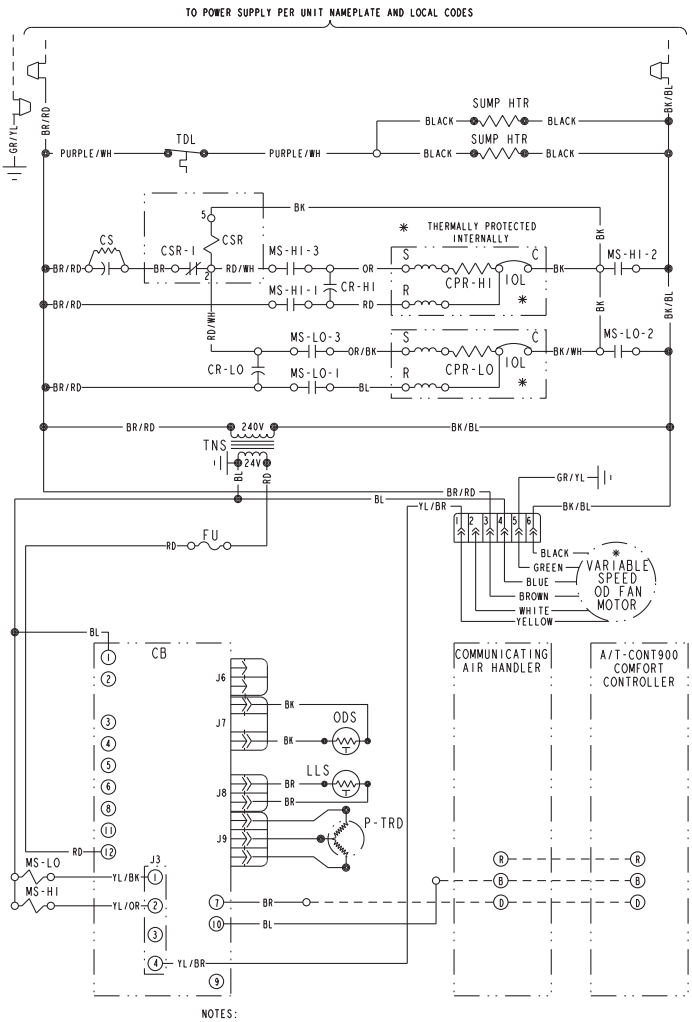
1. LOW VOLTAGE FIELD WIRING MUST BE 18 AWG MIN.

⚠ WARNING	⚠ CAUTION
HAZARDOUS VOLTAGE! DISCONNECT ALL ELECTRIC POWER INCLUDING REMOTE DISCONNECTS BEFORE SERVICING. FAILURE TO DISCONNECT POWER BEFORE SERVICING CAN CAUSE SEVERE PERSONAL INJURY OR DEATH!	USE COPPER CONDUCTORS ONLY! UNIT TERMINALS ARE NOT DESIGNED TO ACCEPT OTHER TYPES OF CONDUCTORS. FAILURE TO DO SO MAY CAUSE DAMAGE TO THE EQUIPMENT!

NOTE
THREE PHASE MOTOR (S) FACTORY SUPPLIED IN THIS EQUIPMENT PROTECTED UNDER PRIMARY SINGLE-PHASE CONDITIONS.

Printed from D154651P05 Rev 04

2A7A8036,048 & 060C



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Printed from D154656P05 Rev 04

Typical Wiring

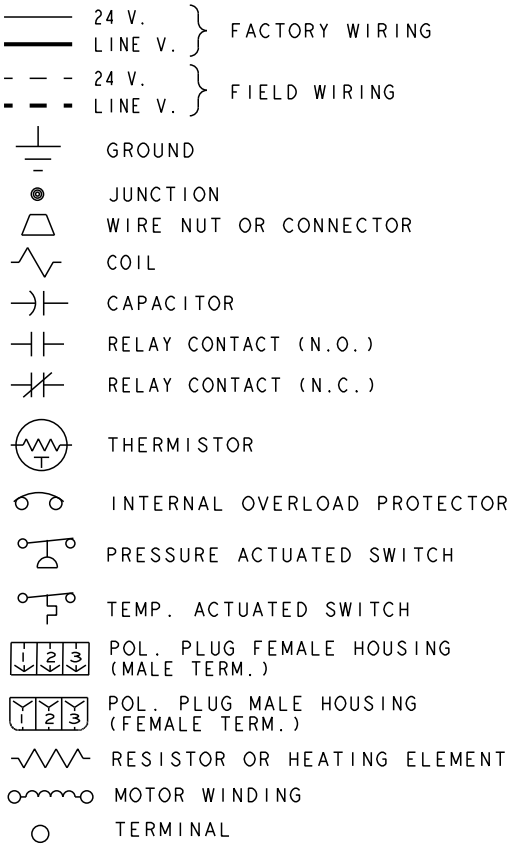
SCHEMATIC DIAGRAMS

LEGEND

COLOR OF WIRE
BK/BL BLACK WIRE WITH BLUE MARKER
COLOR OF MARKER

BK	BLACK	OR	ORANGE	YL	YELLOW
BL	BLUE	RD	RED	GR	GREEN
BR	BROWN	WH	WHITE	PR	PURPLE

SYMBOLS

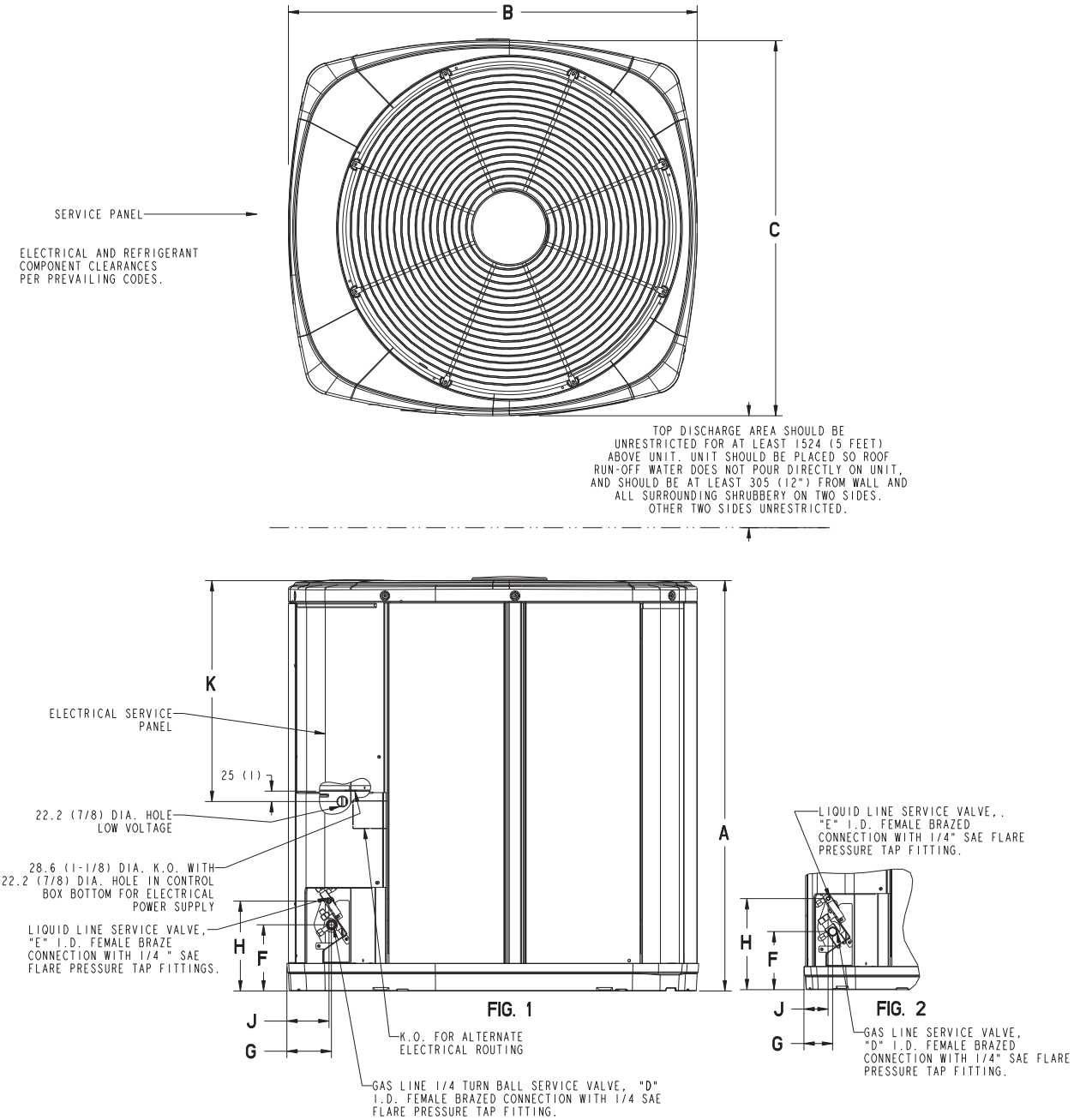


CA	COOLING ANTICIPATOR	LPCO	LOW PRESSURE CUTOUT SW.
CBS	COIL BOTTOM SENSOR	MS	COMPRESSOR MOTOR CONTACTOR
CF	FAN CAPACITOR	ODA	OUTDOOR ANTICIPATOR
CN	WIRE CONNECTOR	OFT	OUTDOOR FAN THERMOSTAT
CPR	COMPRESSOR	ODS	OUTDOOR TEMPERATURE SENSOR
CR	RUN CAPACITOR	ODT	OUTDOOR THERMOSTAT
CS	STARTING CAPACITOR	RHS	RESISTANCE HEAT SWITCH
CSR	CAPACITOR SWITCHING RELAY	SC	SWITCHOVER VALVE SOLENOID
DFC	DEFROST CONTROL	SM	SYSTEM "ON-OFF" SWITCH
F	INDOOR FAN RELAY	TDL	DISCHARGE LINE THERMOSTAT
HA	HEATING ANTICIPATOR	TNS	TRANSFORMER
HPCO	HIGH PRESSURE CUTOUT SW.	TS	HEATING-COOLING THERMOSTAT
IOL	INTERNAL OVERLOAD PROTECTOR	TSH	HEATING THERMOSTAT

Dimensional Data

2A7A8 OUTLINE DRAWING

NOTE: ALL DIMENSIONS ARE IN MM (INCHES).



MODELS	BASE	FIG.	A	B	C	D	E	F	G	H	J	K
2A7A8030C	4	1	1045 (41-1/8)	946 (37-1/4)	870 (34-1/4)	7/8	3/8	152 (6)	98 (3-7/8)	219 (8-5/8)	86 (3-3/8)	711 (28)
2A7A8036C	4	1	1045 (41-1/8)	946 (37-1/4)	870 (34-1/4)	7/8	3/8	152 (6)	98 (3-7/8)	219 (8-5/8)	86 (3-3/8)	711 (28)
2A7A8048C	4	1	1045 (41-1/8)	946 (37-1/4)	870 (34-1/4)	1-1/8	3/8	152 (6)	98 (3-7/8)	219 (8-5/8)	86 (3-3/8)	711 (28)
2A7A8060C	4	1	1045 (41-1/8)	946 (37-1/4)	870 (34-1/4)	1-1/8	3/8	152 (6)	98 (3-7/8)	219 (8-5/8)	86 (3-3/8)	711 (28)

Printed from D152862 Rev. 20

Mechanical Specifications

General

The 2A7A8 is fully charged from the factory for matched indoor section and up to 15 feet of piping. This unit is designed to operate at outdoor ambient temperatures as high as 115°F. Cooling capacities are matched with a wide selection of air handlers and furnace coils that are A.R.I. certified. The unit is certified to UL Standard 1995. Exterior is designed for outdoor application.

AccuLink™

This outdoor unit contains the AccuLink™ digital communication with 2 wire connection to outdoor and Plug-n-Play set up.

Charge Assist™

The Charge Assist™ indicates system Charge Status.

Casing

Unit casing is constructed of heavy gauge, galvanized steel and painted with a weather-resistant powder paint finish.

Refrigerant Controls

Refrigeration system controls include condenser fan and compressor contactor. Another standard feature is the liquid line drier.

Compressor

The compressor features internal over temperature and pressure protector and total dipped hermetic motor. Other features include: roto lock suction and discharge refrigerant connections, centrifugal oil pump, and low vibration and noise.

Condenser Coil

The coil shall be continuously wrapped, corrosion resistant aluminum with minimum brazed joints. This coil is 3/8 inch O.D. seamless aluminum glued to a continuous aluminum fin. Coils are lab tested to withstand 2,000 pounds of pressure per square inch.

Low Ambient Cooling

As shipped, this unit has a cooling capability to 55°F.

Comfort Control

AccuLInk™ control with Plug-n-Play set up and 3 wire connection.

Technical Literature - Printed in U.S.A.

American Standard Heating & Air Conditioning
Troup Highway
Tyler, TX 75711-9010