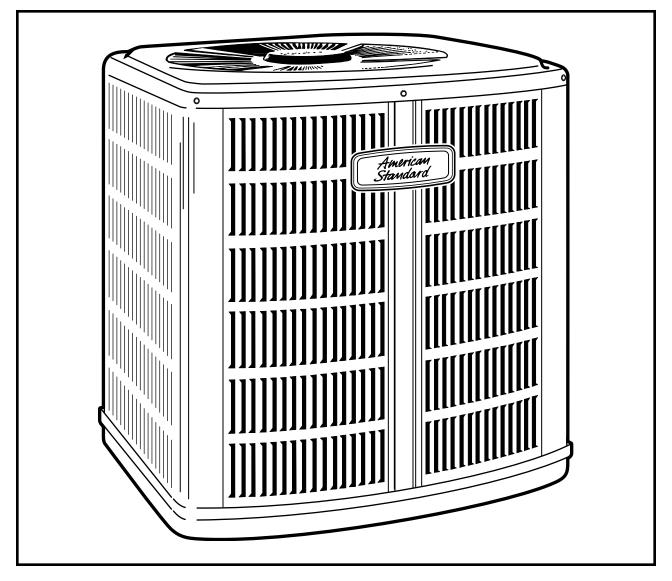
American Standard

HEATING & AIR CONDITIONING

SPLIT SYSTEM HEAT PUMP  $1\frac{1}{2}$  — 5 TON



# HERITAGE<sup>®</sup> 13 MODELS 4A6H3018-060A

PUB. NO. 12-1248-02 June 2008

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

# Features and Benefits

- ◆ Duration<sup>™</sup> compressor
- ◆ All aluminum Spine Fin<sup>™</sup> coil
- ♦ Easy-Sess™ service access and refrigerant connections with full coil protection
- ◆ DuraBase<sup>™</sup> base pan won't rust, drains completely
- ◆ Comfort "R"™ mode approved
- Polyslate gray cabinet
- Corrosion resistant finish and fasteners
- Liquid line filter drier
- Compressor Sump Heat
- ♦ 018, 024, 030 and 060 ship with Start Kit

- Internal compressor high/low pressure and temperature protection
- R-410 refrigerant
- Low ambient cooling to 55°F as shipped
- Low ambient cooling to 30°F with EDC accessory AY28X084 and TXV
- S.E.E.T. design testing
- ♦ 100% line run test
- Electronic demand defrost control
- ♦ 10 Year limited warranty on compressor, coil, and 5 years on parts (Residential Use)
- Extended warranties available

# Contents

## **Manufacturing Control**

American Standard Heating & Air Conditioning'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.

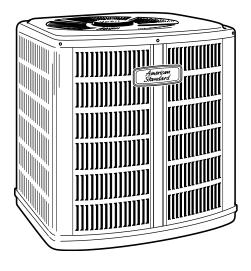
### **Designing the Details**

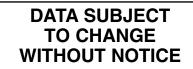
Careful attention was given to designing the details — from control wiring to the access panels. American Standard Heating & Air Conditioning units feature time-saving color-coded wiring and removable panels which allow complete access to all major components and controls. All outdoor units feature external high and low pressure gauge ports for easy diagnosing and servicing of the unit.

### **UL Listed**

American Standard Heating & Air Conditioning 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.

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

# General Data

Product Specifications						
Model No. 1	4A6H3018A1	4A6H3024A1	4A6H3030A1	4A6H3036A1		
Electrical Data V/Ph/Hz 2	200/230/1/60	200/230/1/60	200/230/1/60	208/230/1/60		
Min Cir Ampacity	10	12	15	21		
Max Fuse Size (Amps)	15	20	25	35		
Compressor	DURATION™	DURATION™	DURATION™	DURATION™ - SCROLL		
RL Amps - LR Amps	7.7 - 38.6	9.4 - 63	11.7 - 68.2	15.4 - 83		
Outdoor Fan FL Amps	0.7	0.7	0.7	1.3		
Fan HP	1/8	1/8	1/8	1/4		
Fan Dia (inches)	23.0	23.0	23.0	27.6		
Coil	Spine Fin™	Spine Fin™	Spine Fin™	Spine Fin™		
Refrigerant R-410A	5/12-LB/OZ	5/12-LB/OZ	6/01-LB/OZ	7/15-LB/OZ		
Line Size - (in.) O.D. Gas 3	1/2	5/8	3/4	3/4		
Line Size - (in.) O.D. Liquid	3 1/4	5/16	5/16	3/8		
Charge Spec. Subcooling	10°	<b>11</b> °	11°	10°		
Dimensions H x W x D (Crat	ted)34 x 30.1 x 33	34 x 30.1 x 33	42 x 30.1 x 33	42.4 x 35.1 x 38.7		
Weight - Shipping	214	217	231	271		
Weight - Net	187	190	203	236		
Start Components	YES	YES	YES	NO		
Sound Enclosure	YES	YES	YES	NO		
Compressor Sump Heat	NO	YES	YES	YES		
Optional Accessories: ④						
Anti-short Cycle Timer	TAYASCT501A	TAYASCT501A	TAYASCT501A	TAYASCT501A		
Evaporator Defrost Control	AY28X084	AY28X084	AY28X084	AY28X084		
Rubber Isolator Kit	BAYISLT101	BAYISLT101	BAYISLT101	BAYISLT101		
Snow Leg - Base & Cap 4" High	BAYLEGS002	BAYLEGS002	BAYLEGS002	BAYLEGS002		
Snow Leg-4" Extension	BAYLEGS003	BAYLEGS003	BAYLEGS003	BAYLEGS003		
Start Kit				BAYKSKT260		
Crankcase Heater Kit	BAYCCHT300					
Seacoast Kit	BAYSEAC001	BAYSEAC001	BAYSEAC001	BAYSEAC001		
Low Ambient Kit	BAYLOAM103	BAYLOAM103	BAYLOAM103	BAYLOAM103		
Extreme Condition Mounting	g KitBAYECMT023	BAYECMT023	BAYECMT023	BAYECMT004		
Refrigerant Lineset 5	TAYREFLN5*	TAYREFLN6*	TAYREFLN2*	TAYREFLN7*		
() Cartified in accordance with the Air	0 II 1 II I D			0/040		

## Product Specifications

Certified in accordance with the Air-Source Unitary Heat Pump equipment certification program which is based on ARI Standard 210/240.
Calculated in accordance with N.E.C. Only use HACR circuit breakers or fuses.
Standard line lengths - 60' Standard lift - 60' Suction and Liquid line. For Greater lengths and lifts refer to refrigerant piping software Pub# 32-3312-0<sup>†</sup>. (<sup>†</sup>denotes latest revision)
For accessory description and usage, see page 5.
\* = 15, 20, 25, 30, 40 and 50 foot lineset available.

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

	SOUND POWER	A-W	EIGHTED	FULL OC	TAVE SOL	JND POWE	ER LEVEL	dB - [dB(	A)]
MODEL	LEVEL [dB(A)]	63	125	250	500	1000	2000	4000 `	<sup>7</sup> 8000
4A6H3018A1	76	47.7	61.8	66.1	71.2	70.7	68.2	57.7	49.4
4A6H3024A1	76	45.5	59.9	66.2	70.1	70.6	69.2	61.7	59.6
4A6H3030A1	76	45.3	58.7	65.1	69.3	69.3	66.7	57.9	53.3
4A6H3036A1	75	47.5	57.2	59.1	66.8	68.2	62.9	56.7	52.9
4A6H3042A1	75	48.2	56.2	60.4	66.6	69.3	63.7	57.2	49.3
4A6H3048A1	76	46.3	56.5	66.3	72.9	72.6	68.7	60.3	48.3
4A6H3060A1	76	54.7	54.7	59.9	67.2	70.7	66.7	61.4	52.8

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

# General Data

Product Specifications						
Model No. 1	4A6H3042A1	4A6H3048A1	4A6H3060A1			
Electrical Data V/Ph/Hz 2	208/230/1/60	208/230/1/60	208/230/1/60			
Min Cir Ampacity	25	30	36			
Max Fuse Size (Amps)	40	50	60			
Compressor	DURATION™ - SCROLL	DURATION™ - SCROLL	DURATION™ - SCROLL			
RL Amps - LR Amps	18.6 - 105	23.1 - 134	27.6 - 158			
Outdoor Fan FL Amps	1.3	1.3	1.3			
Fan HP	1/4	1/4	1/4			
Fan Dia (inches)	27.6	27.6	27.6			
Coil	Spine Fin™	Spine Fin™	Spine Fin™			
Refrigerant R-410A	8/03-LB/OZ	8/10-LB/OZ	9/07-LB/OZ			
Line Size - (in.) O.D. Gas ③	3/4	7/8	7/8			
Line Size - (in.) O.D. Liquid ③	3/8	3/8	3/8			
Charge Spec. Subcooling	10°	10°	13°			
Dimensions H x W x D (Crated)	42.4 x 35.1 x 38.7	46.4 x 35.1 x 38.7	46.4 x 35.1 x 38.7			
Weight - Shipping	272	285	308			
Weight - Net	237	249	272			
Start Components	NO	NO	YES			
Sound Enclosure	NO	NO	NO			
Compressor Sump Heat	YES	YES	YES			
Optional Accessories: ④						
Anti-short Cycle Timer	TAYASCT501A	TAYASCT501A	TAYASCT501A			
Evaporator Defrost Control	AY28X084	AY28X084	AY28X084			
Rubber Isolator Kit	BAYISLT101	BAYISLT101	BAYISLT101			
Snow Leg - Base & Cap 4" High	BAYLEGS002	BAMLEGS002	BAYLEGS002			
Snow Leg - 4" Extension	BAYLEGS003	BAMLEGS003	BAYLEGS003			
Start Kit	BAYKSKT260	BAYKSKT260				
Crankcase Heater Kit						
Seaccast Kit	BAYSEAC001	BAYSEAC001	BAYSEAC001			
Low Ambient Kit	BAYLOAM103	BAYLOAM103	BAYLOAM103			
Extreme Condition Mounting Kit	BAYECMT004	BAYECMT004	BAYECMT004			
Refrigerant Lineset 5	TAYREFLN7*	TAYREFLN3*	TAYREFLN3*			

Product Specifications

## 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.

**Evaporator Defrost Control** — SPST Temperature actuated switch that cycles the condenser off as indoor coil reaches freeze-up conditions. Used for low ambient cooling to 30°F with TXV.

**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.

**Hard Start Kit** — Start capacitor and relay to assist compressor motor startup. Use in areas with marginal power supply, on long linesets, low ambient conditions, etc.

**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.

## 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.



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

#### Model Nomenclature 6 H 3 0 3 6 A 1 0 0 0 A 4 Α A **Outdoor Units** T T T 7 A Refrigerant Type 2 = R-22 4 = R-410A AMERICAN STANDARD 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 9 = 19 2 = 12 5 = 15 Split System Connections 1-6 Tons 0 = BrazedNominal 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

#### Air Handlers -4 T E E 3 F 3 6 A 1 0 0 0 A A T T T T T Residential Refrigerant Type 4 = R-410A 2 = R-22Application TE = Fully Convertible TG = Semi Convertible TF = Front Return TV = Vertical Product Family E = Leadership - Variable Speed P = LeadershipC = 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

High Efficiency	<u>A</u> U	D	1	B	0	8	0	A	9	Н	3	1	A	A
Furnaces	<b>A</b>					1			1			1		
Furnace Configuration     AU = Upflow / Horizontal     AD = Downflow / Horizontal														
<b>Type</b> D = 80% Premium X = 90% Premium														
Number of Heating Stages 1 = Single Stage 2 = Two Stage 3 = Three Stage														
Cabinet Width $A = 14.5^{\circ}$ Cabinet Width $B = 17.5^{\circ}$ Cabinet Width $C = 21.0^{\circ}$ Cabinet Width $D = 24.5^{\circ}$ Cabinet Width														
Heating Input														
Major Design Change ————														
Power Supply / Fuel 9 = 115 Volts / Natural Gas														
Airflow Capacity for Cooling 36 = 3 Ton Standard PSC Motor H3 = 3 Ton High Efficiency Motor V3 = 3 Ton Variable Speed Motor														
Draft Inducer Speeds 1 = Single Speed 2 = Two Speed V = Variable Speed														
Minor Design Change														
Service Digit – Not Orderable														

Heat Pump / Cooling Coils2 T X C B 0 3 6 A C 3 H C A
Refrigerant Type
Product Family T = Premium (Heat Pump or Convertible Coil) C = Standard (Cooling Only)
Coil Design X = Direct Expansion Evaporator Coil
Product Family C = Cased A Coil A = Uncased A Coil F = Cased Horizontal Flat Coil
Coil Width (Cased / Uncased) A = 14.5" / 13.3" C = 21.0" / 19.8" H = 10.5" B = 17.5" / 16.3" D = 24.5" / 23.3"
Refrigerant Line Coupling
Nominal Capacity in 000s of BTUs
Major Design Change
Efficiency C = Standard S = Hi Efficiency
3 = TXV – Non-Bleed
Coil Circuitry
Airflow Configuration A = Upflow Only U = Upflow / Downflow H = Horizontal Only C = Convertible – Upflow, Downflow, Left Airflow M = Convertible – Upflow, Downflow, Left or Right Airflow
Minor Design Change
Unit Parts Identifier

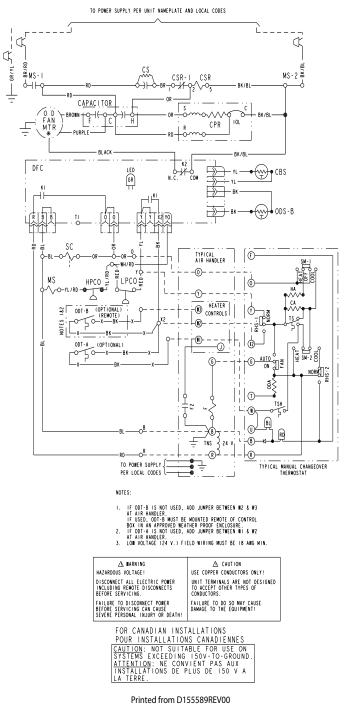
American Standard Heating & Air Conditioning, Tyler, TX 75711-9010

# Typical Wiring

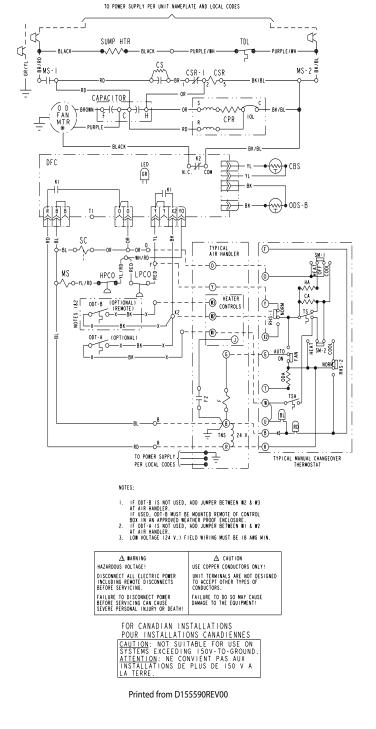
# SCHEMATIC DIAGRAMS

(SEE LEGEND)

## 4A6H3018A



# 4A6H3024,030A



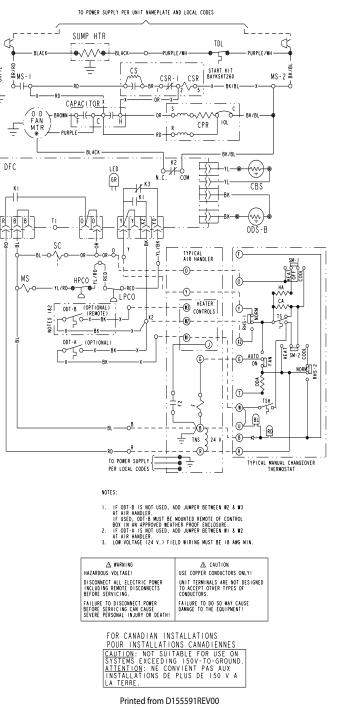
American Standard Heating & Air Conditioning, Tyler, TX 75711-9010

# Typical Wiring

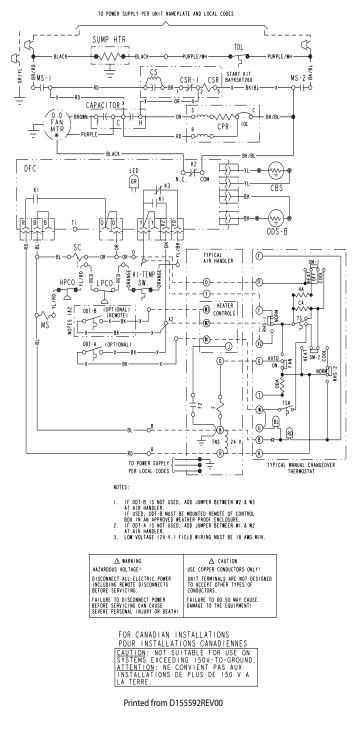
# SCHEMATIC DIAGRAMS

(SEE LEGEND)

# 4A6H3036,042A



## 4A6H3048A

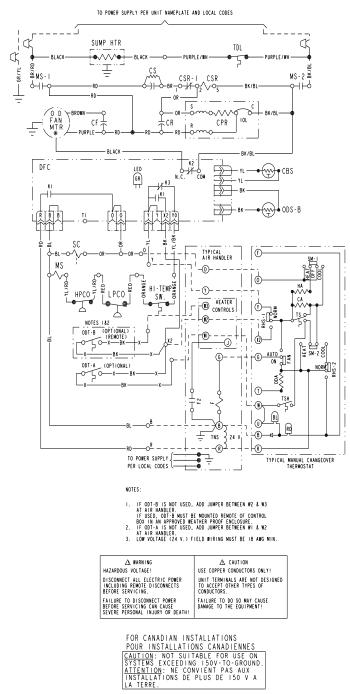


American Standard Heating & Air Conditioning, Tyler, TX 75711-9010

# Typical Wiring

# SCHEMATIC DIAGRAMS

## 4A6H3060A



Printed from D155593REV00

## LEGEND

BLUE	MARKER
ΥL	YELLOW
GR	GREEN
PR	PURPLE
	GR

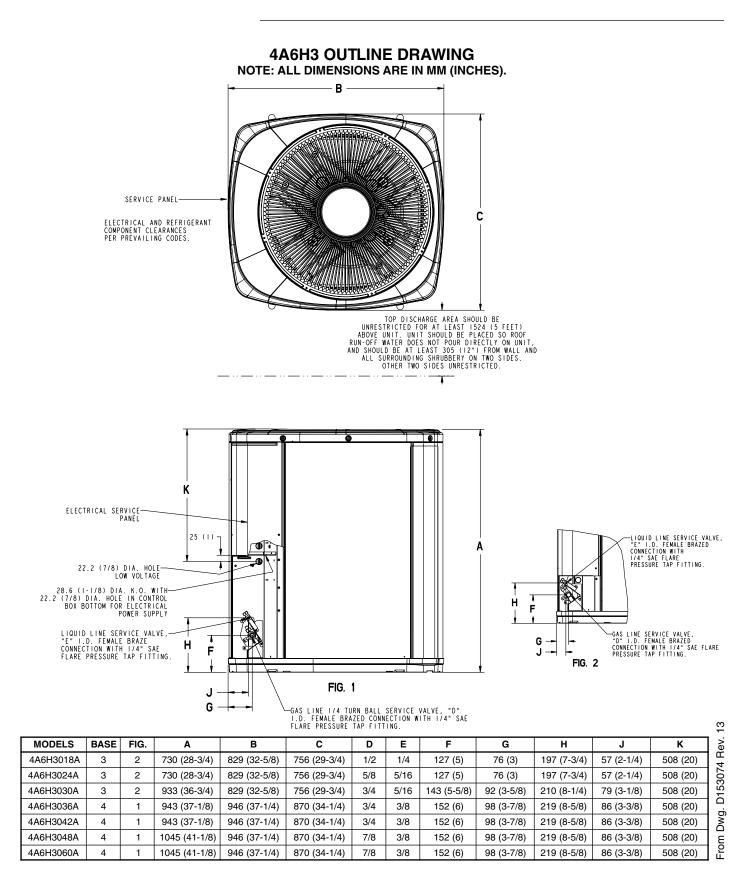
## SYMBOLS

ι	24 V. INE V.
-	24 V. .INE V. FIELD WIRING
	FIELD INSTALLED FACTORY WIRING
<u> </u>	GROUND
0	JUNCTION
$\Box$	WIRE NUT OR CONNECTOR
-^~	COIL
$\rightarrow \vdash$	CAPACITOR
$\dashv\vdash$	RELAY CONTACT (N.O.)
-11-	RELAY CONTACT (N.C.)
	THERMISTOR
60	INTERNAL OVERLOAD PROTECTOR
oLo	PRESSURE ACTUATED SWITCH
مح ہ	TEMP. ACTUATED SWITCH
- <u>- </u> 2	POL. PLUG FEMALE HOUSING (MALE TERM.)
<u> </u>	POL. PLUG MALE HOUSING (FEMALE TERM.)
~~~~	RESISTOR OR HEATING ELEMENT
0000	MOTOR WINDING
0	TERMINAL
COOLING ANTIC COIL BOTTOM SE FAN CAPACITOR	

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	OF T	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
ΗA	HEATING ANTICIPATOR	TNS	TRANSFORMER
HPCO	HIGH PRESSURE CUTOUT SW.	TS	HEATING-COOLING THERMOSTAT
IOL	INTERNAL OVERLOAD PROTECTOR	TSH	HEATING THERMOSTAT

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

# Dimensional Data



# Mechanical Specifications

#### General

These models shall be fully charged from the factory for matched indoor section and up to 15 feet of piping. This unit must be designed to operate at outdoor ambient temperatures as high as 115°F. Cooling capacities shall be matched with a wide selection of air handlers and furnace coils that are ARI certified. The unit shall be UL listed. Exterior must be designed for outdoor application.

#### Casing

Unit casing is constructed of heavy gauge, galvanized steel and painted with a weather-resistant powder paint finish on all louvered panels. Corrosion and weatherproof CMBP-G30 DuraBase™ base.

#### **Refrigerant Controls**

Refrigeration system controls include condenser fan and compressor contactor. High and low pressure controls are inherent to the compressor. Unit also has high pressure switch. Another standard feature is the liquid line drier.

#### Compressor

The Duration<sup>™</sup> compressor features internal over temperature and pressure protector, dipped hermetic motor and sump heater. Other features include: roto lock suction and discharge refrigerant connections, centrifugal oil pump, and low vibration and noise. The Duration<sup>™</sup> compressor features a 10-year limited warranty.

### **Condenser Coil**

The Spine Fin<sup>™</sup> coil shall be continuously wrapped, corrosion resistant all aluminum with minimum brazed joints. This coil is 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. The addition of an evaporator defrost control permits operation to 40°F. The addition of an evaporator defrost control with TXV permits low ambient cooling to 30°F.

#### Accessories

#### Thermostats -

Heat/cooling (manual and automatic changeover). Sub-base to match thermostat and locking thermostat cover.

## Evaporator Defrost Control —

See Low Ambient Cooling.

Outdoor Thermostat — Supplemental heat outdoor ambient lockout from 46 to  $-10^{\circ}$ F.

Since the manufacturer has a policy of continuous product and product data improvement, it reserves the right to change design and specifications without notice.

Technical Literature - Printed in U.S.A.

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