



SUBMITTAL

Project

COMMERCIAL REVIEW

Date

Thursday, November 1, 2018

Dealer

GARY ROACH

Rod Wells

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Project: COMMERCIAL REVIEW
Prepared By: Rod Wells

11/01/2018

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5 TON SPLIT

**Submittal Cover Sheet
Unit Report
Performance Summary Report
Acoustic Summary
Certified Drawings
Feature Sheet**

Unit Report For 5 TON SPLIT

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Outdoor Unit Parameters

Unit Model:..... **24ABB**
Unit Size:..... **5 Tons (Size 60)**
Voltage:..... **208/230-3-60** V-Ph-Hz

Indoor Coil Parameters

Unit Model:..... **CNPV**
Unit Size:..... **5 Tons (Size 60)**
Cabinet Finish:..... **Painted**
Cabinet Width:..... **24 inch**
Refrigerant Type:..... **Puron**

Outdoor Unit Dimensions and Weight

Unit Length:..... **31.1875** in
Unit Width:..... **31.1875** in
Unit Height:..... **28.6875** in
Unit Shipping Weight:..... **230.** lb

Indoor Coil Dimensions and Weight

Unit Length:..... **21** in
Unit Width:..... **24.5** in
Unit Height:..... **26.875** in
Unit Shipping Weight:..... **78.** lb

RESIDENTIAL APPLICATIONS

This warranty is to the original purchasing owner and subsequent owners only to the extent and as stated in the Warranty Conditions and below. The limited warranty period in years, depending on the part and the claimant, is as shown in the table below.

Limited Warranty (Years)		
Item	Original Owner	Subsequent Owner
Parts	10* (or 5)	5
Compressor	10* (or 5)	5

*If properly registered within 90 days of original installation, otherwise 5 years (except in California and Quebec and other jurisdictions that prohibit warranty benefits conditioned on registration). See Warranty Conditions below.

OTHER APPLICATIONS

The warranty period is five (5) years on the compressor, and one (1) year on all other parts. The warranty is the original owner only and is not available for subsequent owners.

Ordering Information

Part Number	Description	Quantity
Outdoor Unit		
24ABB360A005	24ABB Comfort Series Air Conditioner with Puron Refrigerant 5 Tons Cooling 13 SEER @ ARI Conditions Dense Grille	1
Indoor Coil		
CNPVP6024ALA	Cased Vertical N-Coil Evaporator Coil with Puron Painted 24 inch Aluminum	1
Furnace		
59SC2C120S24--20	59SC2 Comfort +92 Single Stage Gas Furnace 120,000 Btuh (Size 120) Up to 2000 Cfg CFM on Evap Coil 24.5 inches	1

Unit Report For 5 TON SPLIT

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Furnace Parameters and Dimensions and Weight

Furnace:.....**Non-SEER Enhancing Furnace**
Furnace Model:.....**59SC**
Furnace Efficiency:.....**+92 AFUE**
Htg Capacity:.....**120,000 Btuh (Size 120)**
Airflow:.....**Up to 2000 Cfg CFM on Evap Coil**
Unit Length:.....**29.50** in
Unit Width:.....**24.50** in
Unit Height:.....**35.00** in
Unit Shipping Weight:.....**184.** lb

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Performance Summary For 5 TON SPLIT

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System Performance

System:	24ABB/CNPV	Actual Clg Airflow:.....	2022.0	CFM
System Quantity:.....	1	Standard Clg Airflow:.....	1950.0	CFM
Altitude:.....	1000.0 ft	Total Net Clg Capacity:.....	57.61	MBH
Furnace Type:.....	Carrier Non-SEER Enhancing	Net Sensible Clg Capacity:.....	42.46	MBH
Linear Pipe Length:.....	0.0 ft	Total System Power:.....	5.27	kW
SEER @ ARI Conditions:.....	13.0			
EER @ ARI Conditions:.....	11.0			

System Parameters

Outdoor Unit Parameters

Unit Model:..... **24ABB360A005**
Unit Size (Nominal):..... **5 Tons (Size 60)**
Voltage:..... **208/230-3-60** V-Ph-Hz
Clg Ent Air DB Ambient:..... **95.0** °F

Indoor Coil Parameters

Unit Model:..... **CNPVP6024ALA**
Unit Size (Nominal):..... **5 Tons (Size 60)**
Ent Air DB:..... **80.00** °F
Ent Air WB:..... **67.00** °F
Ent Enthalpy:..... **32.02** BTU/lb
Lvg Air DB:..... **59.84** °F
Lvg Air WB:..... **58.01** °F
Lvg Enthalpy:..... **25.46** BTU/lb
Total External Static Pressure:..... **0.50** in wg

Furnace Ratings

Furnace:..... **59SC2C120S24--20**
Furnace Efficiency:..... **+92 AFUE**
Input Max Heat:..... **120,000** BTU/hr
Output Max Heat:..... **112,000** BTU/hr

Furnace Performance

Certified Temp High Rise Range:..... **45-75** F

The customer must ensure the specified airflow and static pressure are within furnace capabilities.

Electrical Data

Outdoor Electrical Data

Unit Voltage:..... **208/230-3-60** V-Ph-Hz
Fan Motor FLA:..... **1.40** Amps
MCA:..... **21.4** Amps
Max Fuse:..... **30** Amps
Operating Range Min:..... **187** V
Operating Range Max:..... **253** V
Compressor RLA:..... **16.0** Amps
Compressor LRA:..... **110.0** Amps

Furnace Electrical Data

Unit Voltage:..... **115-1-60** V-Ph-Hz
Unit MCA:..... **11.9** Amps
Unit MOCP:..... **20** Amps

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Acoustic Summary For 5 TON SPLIT

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Outdoor Unit Parameters:

Unit Model: **24ABB**
Unit Size: **5 Tons (Size 60)**
Variations: **Dense Grille**

Octave Band Center Frequency, Hz	125	250	500	1k	2k	4k	8k	dBA
Sound Power,dB	59.0	67.5	71.5	73.5	69.0	66.0	63.5	
A-Weighted Sound Power, dBA								78.0

Indoor Coil Parameters:

Unit Model: **CNPV**
Unit Size: **5 Tons (Size 60)**
Cabinet Finish: **Painted**
Cabinet Width: **24 inch**

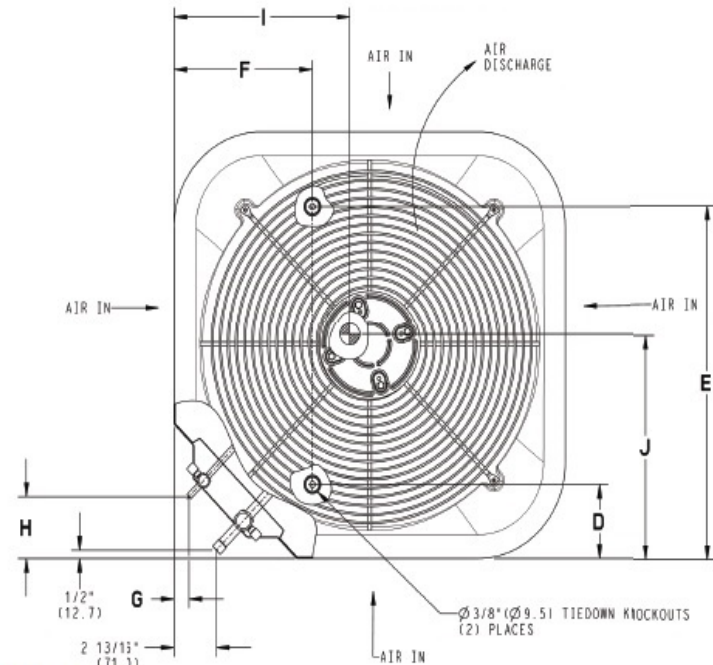
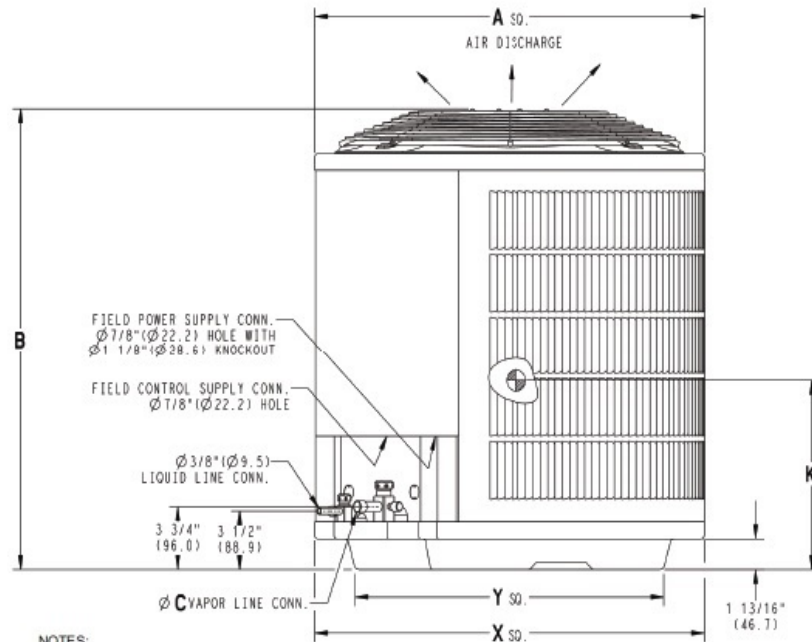
No Indoor sound data available.

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Certified Drawing For 5 TON SPLIT

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NOTES:

1. ALLOW 24" (609.6) CLEARANCE TO SERVICE SIDE OF UNIT, 48" (1219.2) ABOVE UNIT, 6" (152.4) ON ONE SIDE, 12" (304.8) ON REMAINING SIDE, AND 24" (609.6) BETWEEN UNITS FOR PROPER AIRFLOW.
2. CENTER OF GRAVITY
3. SERIES DESIGNATION IS THE 13TH POSITION OF THE UNIT MODEL NUMBER.

Outdoor Model

Unit Model: **24ABB**
 Unit Size: **5 Tons (Size 60)**
 Voltage: **208/230-3-60** V-Ph-Hz
 SEER: **13**
 PartNumber: **24ABB360A005**

Shipping Dimensions and Weights	Outdoor Unit
Height	33.19 in
Width	33.31 in
Length	33.31 in
Operating Weight	198. lb
Shipping Weight	230. lb

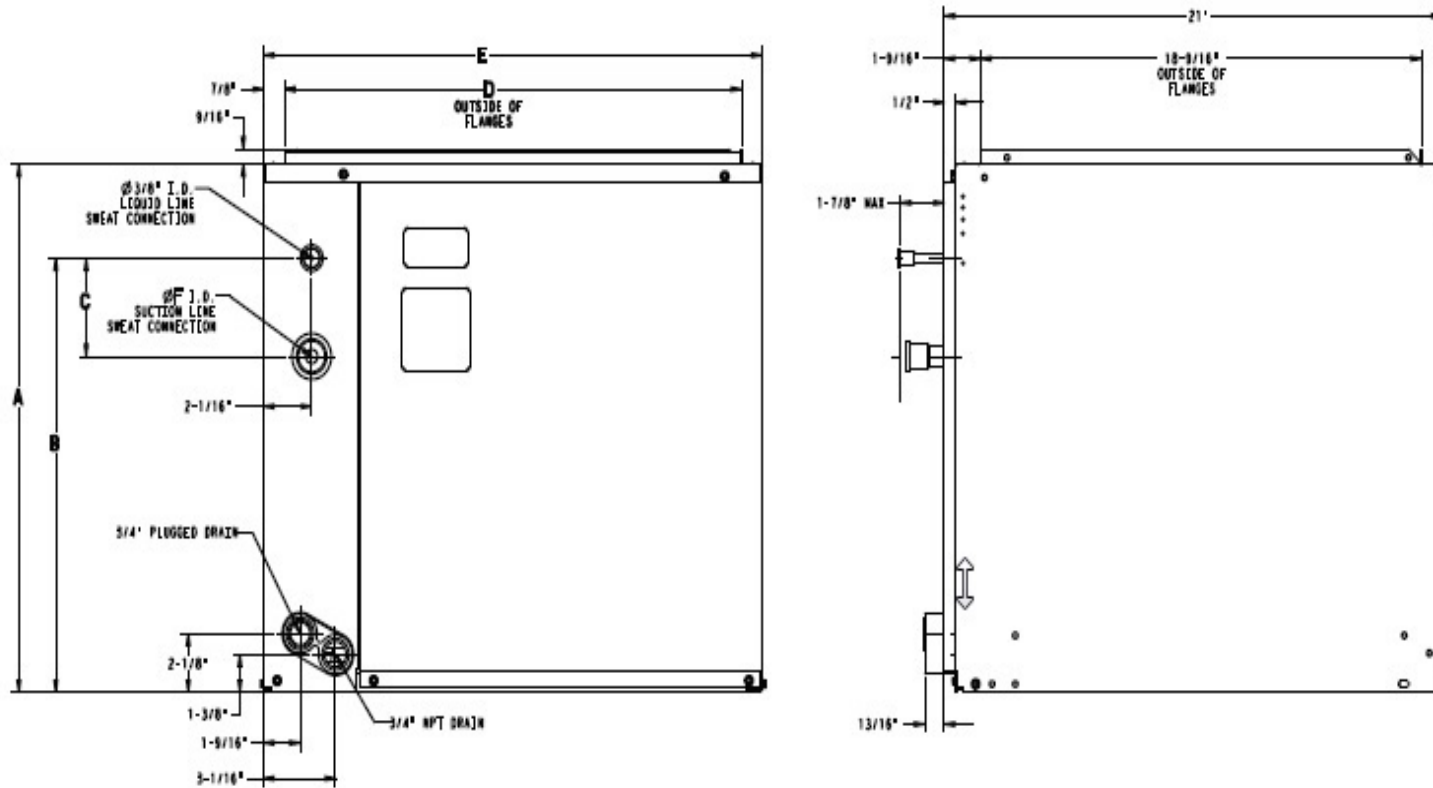
Dimensions											
A	B	C	D	E	F	G	H	I	J	K	
31.19 in	28.69 in	0.88 in	6.56 in	24.69 in	9.13 in	0.31 in	3.00 in	16.00 in	15.50 in	12.75 in	

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Certified Drawing For 5 TON SPLIT

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Indoor Coil

Unit Model:.....**CNPV**
 Unit Size:.....**5 Tons (Size 60)**
 Cabinet Finish:.....**Painted**
 Cabinet Width:.....**24 inch**
 PartNumber:.....**CNPVP6024ALA**

Dimensions and Weights	Indoor Coil
Height	26.88 in
Width	24.50 in
Length	21.00 in
Shipping Weight	78. lb

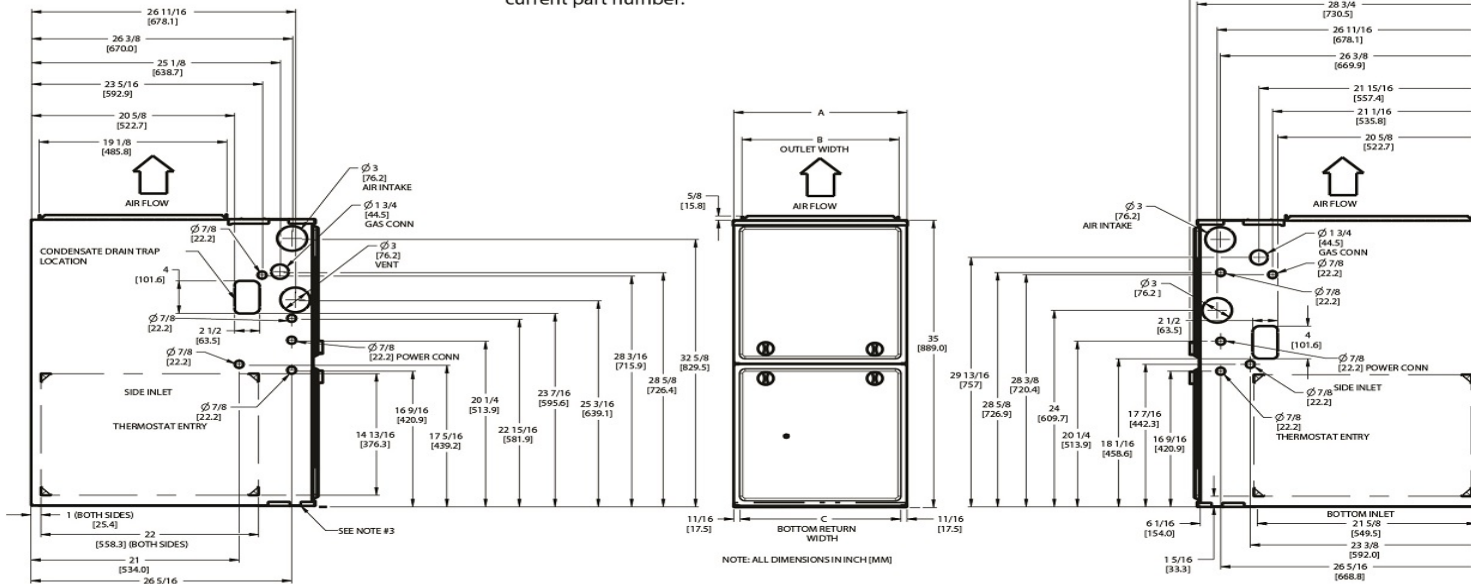
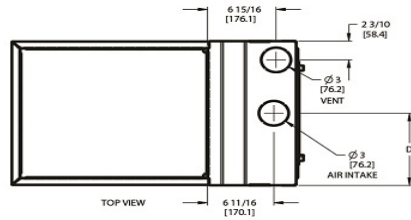
Dimensions					
A	B	C	D	E	F
26.88 in	17.94 in	3.56 in	22.75 in	24.50 in	0.88 in

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Certified Drawing For 5 TON SPLIT

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- NOTES:**
- Doors may vary by model.
 - Minimum return-air openings at furnace, based on metal duct. If flex duct is used, see flex duct manufacturer's recommendations for equivalent diameters.
 - For 800 CFM-16-in. (406 mm) round or 14 1/2 x 12-in. (368 x 305 mm) rectangle.
 - For 1200 CFM-20-in. (508 mm) round or 14 1/2 x 19 1/2-in. (368 x 495 mm) rectangle.
 - For 1600 CFM-22-in. (559 mm) round or 14 1/2 x 22 1/16-in. (368 x 560mm) rectangle.
 - Return air above 1800 CFM at 0.5 in. w.c. ESP on 24.5" casing, requires one of the following configurations: 2 sides, 1 side and a bottom or bottom only. See Air Delivery table in this document for specific use to allow for sufficient airflow to the furnace.
 - Vent and Combustion air pipes through blower compartment must use accessory "Vent Kit - Through the Cabinet". See accessory list for current part number.

Furnace Model:.....**59SC**
Furnace Efficiency:.....**+92 AFUE**
Htg Capacity:.....**120,000 Btuh (Size 120)**

Airflow:.....**Up to 2000 Cig CFM on Evap Coil**
PartNumber:.....**59SC2C120S24--20**

Dimensions				
A	B	C	D	Shipping Wgt
24.50 in	22.88 in	23.00 in	12.25 in	184.00 in

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**24ABB3
Comfort™ 13 Air Conditioner
with Puron® Refrigerant
1–1/2 to 5 Nominal Tons**



Product Data



Comfort
SERIES

Carrier's Air Conditioners with Puron® refrigerant provide a collection of features unmatched by any other family of equipment. The 24ABB has been designed utilizing Carrier's non-ozone depleting Puron refrigerant.

NOTE: Ratings contained in this document are subject to change at any time. Always refer to the AHRI directory (www.ahridirectory.org) for the most up-to-date ratings information.

INDUSTRY LEADING FEATURES / BENEFITS

Efficiency

- 13 SEER/ up to 11 EER
(based on tested combinations)
- Microtube Technology™ refrigeration system
- Indoor air quality accessories available

Sound

- Sound level as low as 71 dBA

Comfort

- System supports Edge® Thermidistat™ or standard thermostat controls

Reliability

- Non-ozone depleting Puron® refrigerant
- Scroll compressor
- Internal pressure relief valve
- Internal thermal overload
- Filter drier
- Balanced refrigeration system for maximum reliability

Durability

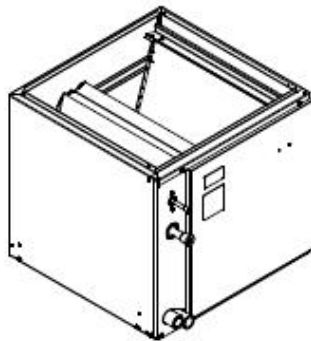
WeatherArmor™ protection package:

- Solid, durable sheet metal construction
- Dense wire coil guard
- Baked-on, complete outer coverage, powder paint

Applications

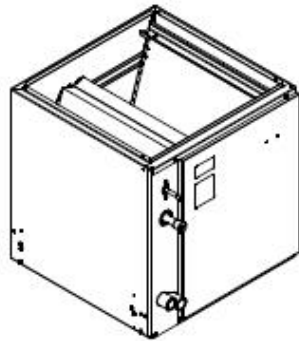
- Long-line - up to 250 feet (76.20 m) total equivalent length, up to 200 feet (60.96 m) condenser above evaporator, or up to 80 ft. (24.38 m) evaporator above condenser (See Longline Guide for more information.)
- Low ambient (down to -20°F/-28.9°C) with accessory kit

Product Data



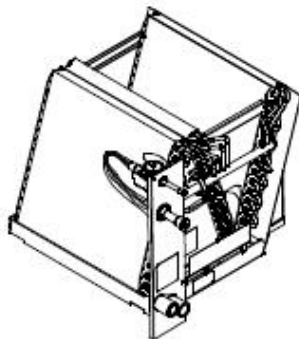
CN(P,R)VP

A05006



CN(P,R)VT (Transition)

A05007



CN(P,R)VU

A05004

This vertical design N-coil is a furnace coil designed to provide the highest standards of reliability and durability. The coils are available for use in Puron[®], R-410A refrigerant and R-22 systems.

Both designs have a painted case and come with factory-installed thermostatic expansion valves (TXV). The coils are offered in different width configurations for use in multiple installation applications. Additionally, they are offered in a transition configuration, a design which simplifies making field-supplied transition duct configurations. Easy maintenance is provided as the coil slides out of the cabinet after removing the access door and service panel. The coils are available in sizes 018 through 061 (1-1/2 to 5 tons).

Transition coil models CNPVT and CNRVT are designed for use with one size smaller width furnaces without field modifications.

CN(P,R)V(P,T) and CNPVU are available in tin-plated copper coil models. These coils are built with special hairpins which are tin-plated to resist both general pitting corrosion and excessive indoor corrosion-formicary corrosion. (Formicary corrosion is an industry phenomenon.)

STANDARD FEATURES

Water Management — These coil designs do an excellent job of water management. The coils are designed to avoid water blow-off into the ducts by directing condensate away from the fins and into the drain pan.

Durable Condensate Pan — Each coil is equipped with a corrosion-resistant condensate drain pan. The condensate drain pan is designed with a slope to help ensure proper drainage, improved moisture removal, and home comfort.

Compact Design — Unique design offers as much as 2 to 4 in. (51 to 102 mm) less in height to aid in tight installations.

Brass Inserts — Every condensate pan features two 3/4 in. female threaded brass insert connections. The unique brass inserts provide for a leak-free condensate line connection to prevent water damage.

Refrigerant Connections — The coils are provided with proven sweat-connections for leak-free operation maintaining system reliability.

Burst Pressures — These coils meet or exceed burst pressure of 2100 psi which is at least three to five times the pressure they will see in actual application.

Thermostatic Expansion Valves (TXV) — All Carrier[®] coils have refrigerant-specific factory-installed TXVs.

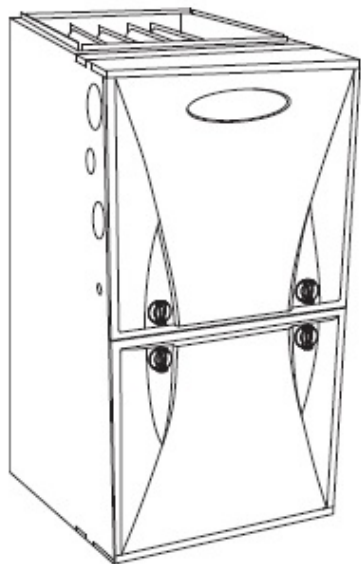
Teflon Ring — The ring, installed inside the liquid line connection at the TXV, is the best option for preventing refrigerant leaks and future service calls. Teflon works with both Puron, R-410A, the environmentally friendly refrigerant and R-22 refrigerants.

Protective Tube Sheets — Protect the durable copper tubing from being damaged during the manufacturing and installation process.

**59SC2C ALL
59SC2B SIZE 04080 ONLY
Comfort™ Series Single-Stage
4-Way Multipoise
Condensing Gas Furnace
Series 1**



Product Data



A11283

The 59SC2 Multipoise Comfort Series Condensing Gas Furnace features energy efficiency of 92.1% AFUE gas efficiency and workhorse PSC blower motor. This gas furnace also features 4-way multipoise installation flexibility, and is available in eight model sizes. The 59SC2 can be vented for direct vent/two-pipe, ventilated combustion air, or single-pipe applications. All units meet California Air Quality Management District emission requirements, are design certified in Canada, and are certified for mobile/manufactured home use.

STANDARD FEATURES

- 4-Way multipoise design for upflow, downflow or horizontal installation.

- Installation flexibility with a 360-degree rotating elbow.
- More than twelve different venting options, including optional through-the cabinet downflow and horizontal venting.
- Ideal condensing furnace height 35" cabinet: short enough for taller coils, but still allows enough room for service.
- Silicon Nitride Power Heat™ Hot Surface Igniter.
- Aluminized-steel primary heat exchanger.
- Stainless steel condensing secondary heat exchanger.
- High-quality corrosion-resistant prepainted steel cabinet with hemmed edges for safety.
- Factory-configured ready for upflow applications.
- Direct-vent/sealed combustion, single-pipe venting or ventilated combustion air.
- PSC blower motor, single-speed inducer motor, and single-stage gas valve.
- Self-diagnostics with SuperBrite LED.
- Approved for Twinning applications (060-12 through 120-20 sizes, only)
- Propane convertible (see accessory list).
- Approved for Manufactured Housing/Mobile Home applications with MH accessory kit.
- Convenient Air Purifier and Humidifier electrical connections.
- Residential installations may be eligible for consumer financing through the Retail Credit program.
- Certified to leak 2% or less of nominal air conditioning CFM delivered when pressurized to 1-in. water column with all present air inlets, air outlets, and condensate drain port(s) sealed.

**Comfort
SERIES**



Use of the AHRI Certified™ Mark indicates a manufacturer's participation in the program. For verification of certification for individual products, go to www.ahrifactory.org.

