

Submittal Cover Sheet

CHS Field House

1 Pirate Place
Charlestown IN 47111


Architect: Fanning Howey

Engineer: N/A

HVAC: Perfection Group, Inc.

Item: Split System

Spec. No. _____

 <p>PerfectionGroup — Delivering Legendary Service Since 1951 —</p> <p><input type="checkbox"/> Approved as Submitted <input type="checkbox"/> Approved as Noted <input type="checkbox"/> Revise and Resubmit Job Date: 5/25/2023_</p> <p>Signed: _____ Jeremy Carrier</p>

AC-1 (2T) PAGE 5

AC-5 (3T) PAGE 14

AC-2, 3,4 (5T) PAGE 23



SUBMITTAL

Project

Charlestown Field House

Date

Tuesday, January 17, 2023

Jeff Gries
Habegger Corp,

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Project: Charlestown Field House
Prepared By: Jeff Gries

01/17/2023

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2 Ton HP System

Project: Charlestown Field House
Prepared By: Jeff Gries

01/17/2023

2 Ton HP System

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

Unit Report For 2 Ton HP System

Project: Charlestown Field House
 Prepared By: Jeff Gries

01/17/2023



AC-1 (2T)

Outdoor Unit Parameters

Unit Model:.....25TPA
 Unit Size:.....2 Tons (Size 24)
 Voltage:.....208/230-1-60 V-Ph-Hz

Indoor Coil Parameters

Unit Model:.....FV4C

Unit Size:.....Size 002 (18 - 36,000 Btuh)
 Cabinet Insulation:Single-piece cabinet with 1-in. super thick insulation
 Voltage:.....208-1-60 V-Ph-Hz
 Refrigerant Type:.....Puron
 Heating Size:.....No Heat

Outdoor Unit Dimensions and Weight

Unit Length:.....35 in
 Unit Width:.....35 in
 Unit Height:.....35.5 in
 Unit Shipping Weight:.....255. lb

Indoor Coil Dimensions and Weight

Unit Length:.....22.0625 in
 Unit Width:.....17.625 in
 Unit Height:.....42.6875 in
 Unit Shipping Weight:.....135. 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		
25TPA724A003	25TPA Performance 2 Stage Heat Pump with Puron Refrigerant 2 Tons Cooling 17 SEER @ ARI Conditions	1
Accessories		
KSALA0301410	Low-Ambient Pressure Switch for Outdoor Unit	1
KHAIR0201AAA	Isolation Relay for Outdoor Unit	1
KSAFT0101AAA	Evaporator Freeze Thermostat for Outdoor Unit	1
KSAHS2501AAA	Hard Start Kit for Outdoor Unit	1
Indoor Coil		

Unit Report For 2 Ton HP System

Project: Charlestown Field House
Prepared By: Jeff Gries

01/17/2023

FV4CNF002L00	FV4C Performance Series Fan Coil with Puron 2 Tons Cooling 208/230-1-60	1
	Single-piece cabinet with 1-in. super thick insulation	
	Aluminum	
Accessories		
KFCEH2401C05	5 kW Electric Heater with Circuit Breaker for Indoor Unit	

The Product and Ratings Data in this program is subject to change at any time and without notice. Please refer to the latest product literature and the AHRI directory at www.ahridirectory.org for the most up-to-date information.

Performance Summary For 2 Ton HP System

Project: Charlestown Field House
Prepared By: Jeff Gries

01/17/2023

System Performance

System:.....**25TPA/FV4C**
System Quantity:.....**1**
Altitude:.....**0.0** ft
Linear Pipe Length:.....**0.0** ft
COP @ 47 F:.....**4.24**
COP @ 17 F:.....**2.98**
SEER @ ARI Conditions:.....**18.0**
EER @ ARI Conditions:.....**13.5**
HSPF @ ARI Conditions:.....**9.5**

Actual Clg Airflow:.....**800.0** CFM
Standard Clg Airflow:.....**800.0** CFM
Total Net Clg Capacity:.....**23.04** MBH
Net Sensible Clg Capacity:.....**17.66** MBH
Htg HP Capacity:.....**23.46** MBH
Htg HP Integrated Capacity:.....**23.46** MBH
Heating HP Compressor Power:.....**1.65** kW
Total System Power:.....**1.85** kW

System Parameters

Outdoor Unit Parameters

Unit Model:.....**25TPA724A003**
Unit Size (Nominal):.....**2 Tons (Size 24)**
Voltage:.....**208/230-1-60** V-Ph-Hz
Clg Ent Air DB Ambient:.....**95.0** °F
Htg Ent Air DB Ambient:.....**47.0** °F

Indoor Coil Parameters

Unit Model:.....**FV4CNF002L00**
Unit Size (Nominal):.....**Size 002 (18 - 36,000 Btu/h)**
Voltage:.....**208-1-60** V-Ph-Hz
Ent Air DB:.....**80.00** °F
Ent Air WB:.....**67.00** °F
Ent Enthalpy:.....**31.44** BTU/lb
Lvg Air DB:.....**59.57** °F
Lvg Air WB:.....**58.01** °F
Lvg Enthalpy:.....**25.04** BTU/lb
Htg Ent Air DB:.....**70.0** °F
Htg Lvg Air DB:.....**97.2** °F
Heating Size (Nominal):.....**No Heat**
Total External Static Pressure:.....**0.50** in wg
Clg Coil Note:***Airflow adjusted to high (400 cfm/ton).

Electrical Data

Outdoor Electrical Data

Unit Voltage:.....**208/230-1-60** V-Ph-Hz
Fan Motor FLA:.....**0.50** Amps
MCA:.....**16.5** Amps
Max Fuse:.....**25** Amps
Operating Range Min:.....**197** V
Operating Range Max:.....**253** V
Compressor RLA:.....**10.9** Amps
Compressor LRA:.....**61.0** Amps

Indoor Electrical Data

Unit Voltage:.....**208-1-60** V-Ph-Hz
Motor HP:.....**1/2** HP
Motor FLA:.....**4.3** Amps

Accessory Electric Heater Data

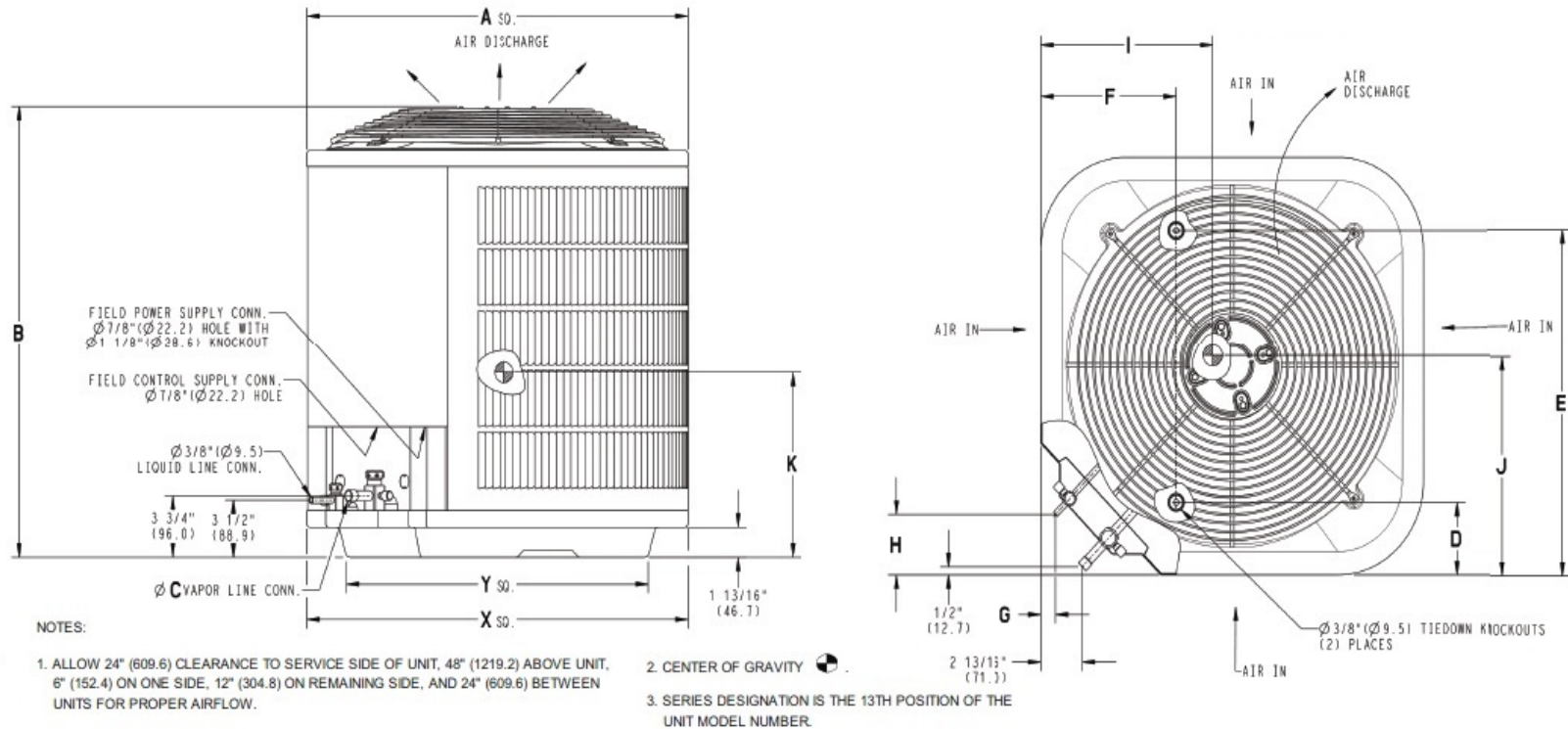
EH Part Number:.....**KFCEH2401C05**
Electric Heater kW:.....**3.8** kW
For 2 wire operation (single circuit):
Heater Amps:.....**18.1** Amps
Heater + Motor MCA:.....**31.2** Amps
Heater + Motor MOCP:.....**35** Amps
Accessory Voltage:.....**208-1-60** V-Ph-Hz

The Product and Ratings Data in this program is subject to change at any time and without notice. Please refer to the latest product literature and the AHRI directory at www.ahridirectory.org for the most up-to-date information.

Certified Drawing For 2 Ton HP System

Project: Charlestown Field House
Prepared By: Jeff Gries

01/17/2023



Outdoor Model

Unit Model:.....**25TPA**
 Unit Size:.....**2 Tons (Size 24)**
 Voltage:.....**208/230-1-60** V-Ph-Hz
 SEER:.....**17**
 PartNumber:.....**25TPA724A003**

Shipping Dimensions and Weights	Outdoor Unit
Height	40.75 in
Width	37.81 in
Length	37.81 in
Operating Weight	227. lb
Shipping Weight	255. lb

Dimensions										
A	B	C	D	E	F	G	H	I	J	K
35.00 in	35.50 in	0.75 in	6.56 in	28.40 in	9.13 in	1.13 in	3.81 in	17.00 in	17.00 in	16.50 in

The Product and Ratings Data in this program is subject to change at any time and without notice. Please refer to the latest product literature and the AHRI directory at www.ahridirectory.org for the most up-to-date information.

Certified Drawing For 2 Ton HP System

Project: Charlestown Field House
Prepared By: Jeff Gries

01/17/2023

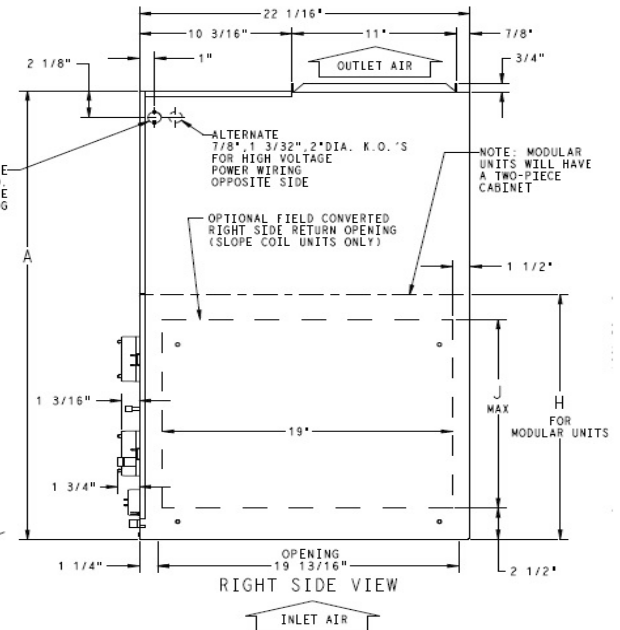
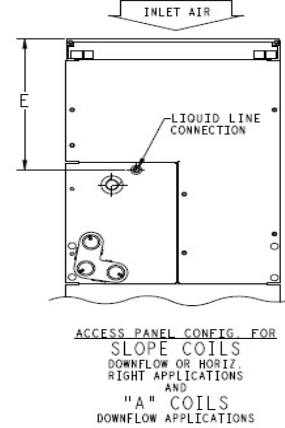
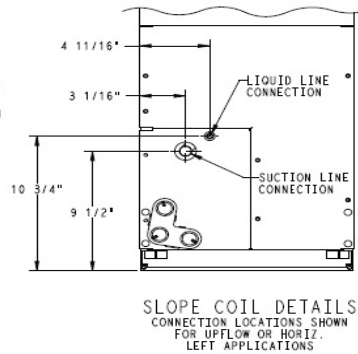
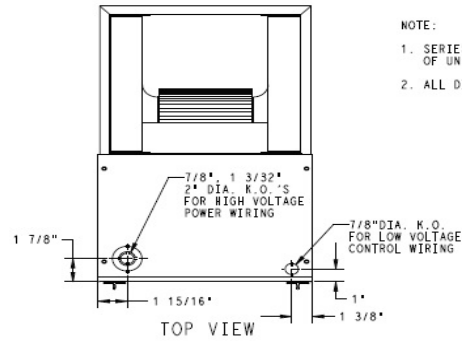
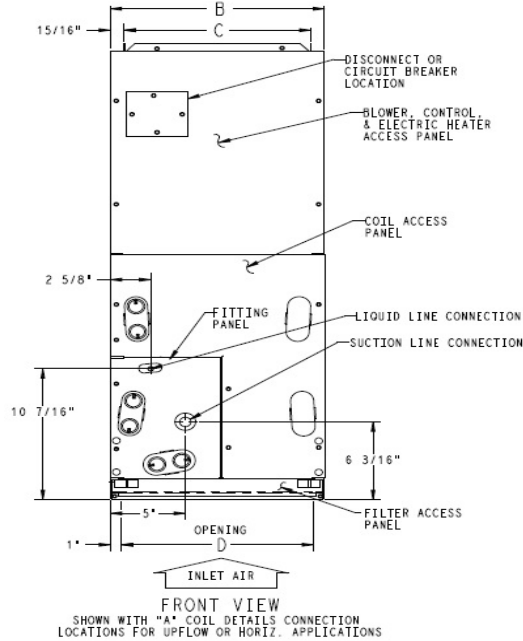
UNIT CONNECTION SIZES

SUCTION: 018 & 024 - 5/8" I.D. SWEAT
030 & 036 - 3/4" I.D. SWEAT
042 THRU 060 - 7/8" I.D. SWEAT
LIQUID: 3/8" I.D. SWEAT
CONDENSATE: 3/4" FPT

NOTE:

- SERIES DESIGNATION IS THE 14TH POSITION OF UNIT PRODUCT NUMBER
- ALL DIMENSIONS ARE IN "INCHES" UNLESS NOTED.

NOTE: ALLOW 21" FROM FRONT FOR SERVICE



Indoor Coil

Unit Model:..... **FV4C**
 Unit Size:..... **Size 002 (18 - 36,000 Btuh)**
 Voltage:..... **208-1-60** V-Ph-Hz
 Cabinet Insulation: **Single-piece cabinet with 1-in. super thick insulation**
 PartNumber:..... **FV4CNF002L00**

Dimensions and Weights		Indoor Coil
Height		42.69 in
Width		17.63 in
Length		22.06 in
Shipping Weight		135. lb

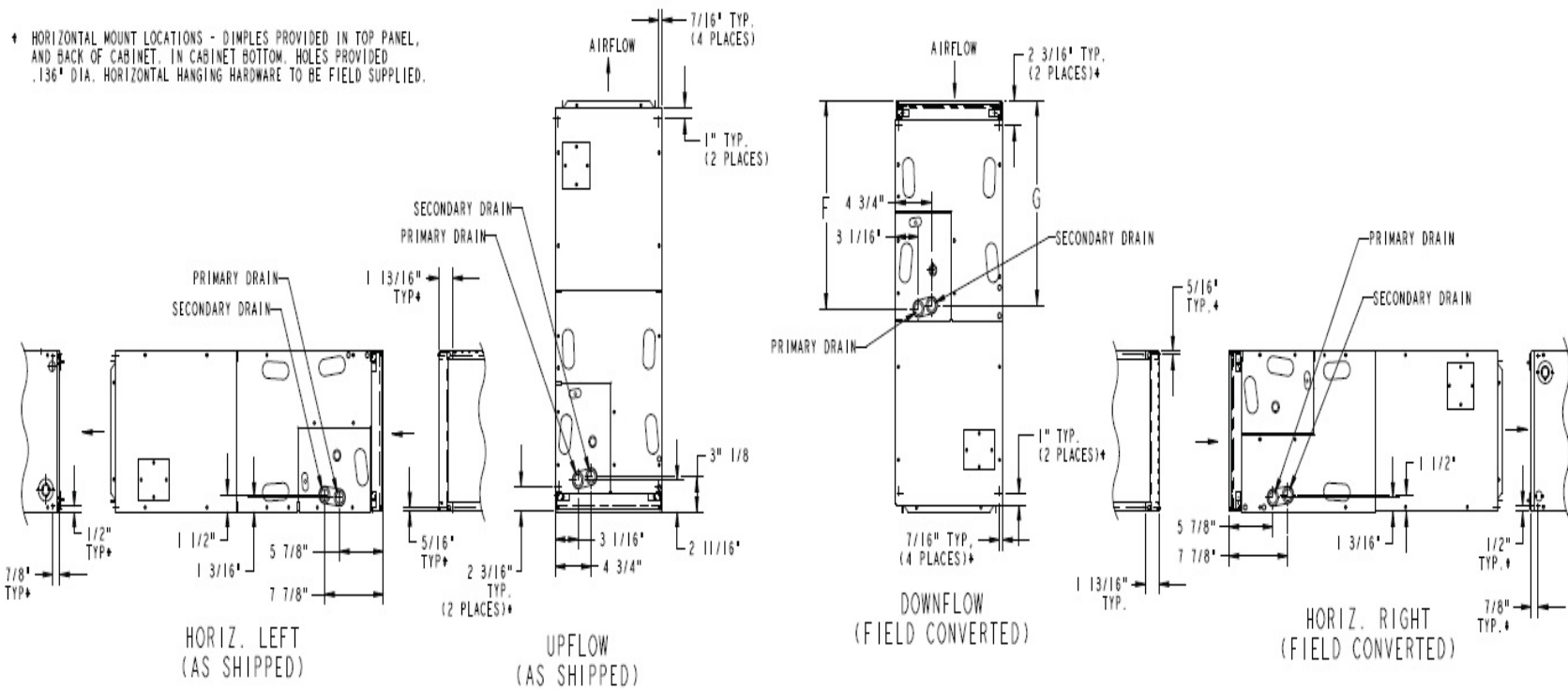
Dimensions									
A	B	C	D	E	F	G	H	J	
42.69 in	17.63 in	15.75 in	15.63 in	10.75 in	--	--	--	--	--

The Product and Ratings Data in this program is subject to change at any time and without notice. Please refer to the latest product literature and the AHRI directory at www.ahridirectory.org for the most up-to-date information.

Certified Drawing For 2 Ton HP System

Project: Charlestown Field House
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01/17/2023



A-COIL

Indoor Coil

Unit Model:.....**FV4C**
 Unit Size:.....**Size 002 (18 - 36,000 Btuh)**
 Voltage:.....**208-1-60** V-Ph-Hz
 PartNumber:.....**FV4CNF002L00**

The Product and Ratings Data in this program is subject to change at any time and without notice. Please refer to the latest product literature and the AHRI directory at www.ahrirectory.org for the most up-to-date information.

**25TPA7
Performance Series 2-Stage Heat Pump
with Puron® Refrigerant
2 To 5 Tons**



Product Data



This unit has been designed utilizing Carrier's Puron refrigerant. The environmentally sound refrigerant allows you to make a responsible decision in the protection of the earth's ozone layer.

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

- Up to 17.0 SEER2 (18.5 SEER) / Up to 13.0 EER2 (14 EER) / Up to 8.1 HSPF2 (9.5 HSPF)
- Microtube Technology refrigeration system
- Indoor air quality accessories available

Sound

- Sound level as low as 70dBA

Comfort

- System supports Thermostat or standard 2-stage thermostat controls

Reliability

- Puron refrigerant - environmentally sound, won't deplete the ozone layer and low lifetime service cost.
- Front-seating service valves
- 2-stage scroll compressor
- Internal pressure relief valve
- Internal thermal overload
- Low pressure switch
- High pressure switch
- Filter drier
- Balanced refrigeration system for maximum reliability

Durability

WeatherArmor™ Ultra Protection Package:

- Solid, Durable sheet metal construction
- Steel louver coil guard
- Baked-on, complete outer coverage, powder paint

Applications

- Long-line - up to 250 feet (76.2 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 cooling (down to 0°F / -17.8°C) with approved low ambient accessory kits.

FV4C
Performance™ Series Fan Coil
Sizes 002 Thru 006



Product Data



PREMIUM ENVIRONMENTALLY RESPONSIBLE FAN COIL

The FV4C is the premium air handler combining the proven technology of Carrier fan coils with environmentally balanced Puron® refrigerant. The FV4C achieves an operational advantage when the ECM (Electronically Commutated Motor) is combined with a Carrier Performance™ heat pump with Puron® refrigerant.

With attention to quiet, efficient, and comfortable operation, Carrier has developed a new benchmark for superior indoor comfort and control.

Carrier's heat pump and air conditioning systems now feature Puron® refrigerant (R-410A), the chlorine-free refrigerant that is the future for the residential heating and cooling industry. The FV4C using Puron® refrigerant maximizes performance for environmentally balanced systems. In addition to environmental safety, these systems are 30 to 40% more efficient than standard heating and cooling systems, thereby combining excellence in efficiency and environmental responsibility.

The FV4C provides these benefits due to Carrier's command of ECM technology. These motors are extremely efficient at all speeds, and enable the FV4C to operate at the correct speed to deliver airflow precisely, ensuring proper performance across a wide range of duct static pressures. This adaptive efficiency also makes installation quality easier to achieve for today's demanding homeowner.

Carrier's command of ECM technology may be most evident in the comfort advantages that ECM can deliver. Operation set up steps on the Easy Select™ Board provide the installing technician with alternatives to maximize comfort and efficiency. For true indoor comfort, the homeowner can achieve command of both temperature and humidity in cooling and heating modes.

Another feature which sets the FV4C apart is the factory-installed TXV, which enhances efficiency and provides compressor protecting operation at all recommended conditions. Grooved tubing, louvered aluminum fins, and the large face areas of the FV4C refrigerant coils also provide superior efficiency, for high SEER and HSPF performance. Carrier leads the way in condensate control, a hallmark of these multipoise fan coils. All of these featured components are protected within a rugged, prepainted metal cabinet lined with super thick, high density insulation. For neat, high quality installations the unit exterior features sweat refrigerant connections for simple leak free performance, and multiple electrical entry for both high and low voltage service.

The design of these fan coils meet cabinet air leakage of less than 2% at 0.5 inches W.C., and cabinet air leakage less than 1.4% at 0.5 inches W.C. when tested in accordance with ASHRAE 193 standard.

3 Ton HP System

Project: Charlestown Field House
Prepared By: Jeff Gries

01/17/2023

3 Ton HP System

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

Unit Report For 3 Ton HP System

Project: Charlestown Field House
 Prepared By: Jeff Gries

01/17/2023



AC-5 (3T)

Outdoor Unit Parameters

Unit Model:.....25TPA
 Unit Size:.....3 Tons (Size 36)
 Voltage:.....208/230-1-60 V-Ph-Hz

Indoor Coil Parameters

Unit Model:.....FV4C

Unit Size:.....Size 003 (24 - 42,000 Btuh)
 Cabinet Insulation:Single-piece cabinet with 1-in. super thick insulation
 Voltage:.....208-1-60 V-Ph-Hz
 Refrigerant Type:.....Puron
 Heating Size:.....No Heat

Outdoor Unit Dimensions and Weight

Unit Length:.....35 in
 Unit Width:.....35 in
 Unit Height:.....38.875 in
 Unit Shipping Weight:.....273. lb

Indoor Coil Dimensions and Weight

Unit Length:.....22.0625 in
 Unit Width:.....21.125 in
 Unit Height:.....53.4375 in
 Unit Shipping Weight:.....150. 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		
25TPA736A003	25TPA Performance 2 Stage Heat Pump with Puron Refrigerant 3 Tons Cooling 17 SEER @ ARI Conditions	1
Accessories		
KSALA0301410	Low-Ambient Pressure Switch for Outdoor Unit	1
KHAIR0201AAA	Isolation Relay for Outdoor Unit	1
KSAFT0101AAA	Evaporator Freeze Thermostat for Outdoor Unit	1
KSAHS2501AAA	Hard Start Kit for Outdoor Unit	1
Indoor Coil		

Unit Report For 3 Ton HP System

Project: Charlestown Field House
Prepared By: Jeff Gries

01/17/2023

FV4CNF003L00	FV4C Performance Series Fan Coil with Puron 3 Tons Cooling 208/230-1-60	1
	Single-piece cabinet with 1-in. super thick insulation	
	Aluminum	
Accessories		
KFCEH2601C10	10 kW Electric Heater with Circuit Breaker for Indoor Unit	

The Product and Ratings Data in this program is subject to change at any time and without notice. Please refer to the latest product literature and the AHRI directory at www.ahridirectory.org for the most up-to-date information.

Performance Summary For 3 Ton HP System

Project: Charlestown Field House
 Prepared By: Jeff Gries

01/17/2023

System Performance

System:.....**25TPA/FV4C**
 System Quantity:.....**1**
 Altitude:.....**0.0** ft
 Linear Pipe Length:.....**50.0** ft
 COP @ 47 F:.....**3.64**
 COP @ 17 F:.....**2.62**
 SEER2 @ ARI Conditions:.....**15.0**
 EER2 @ ARI Conditions:.....**11.7**
 HSPF @ ARI Conditions:.....**7.8**

Actual Clg Airflow:.....**1200.0** CFM
Standard Clg Airflow:.....**1200.0** CFM
Total Net Clg Capacity:.....**34.18** MBH
Net Sensible Clg Capacity:.....**26.20** MBH
Htg HP Capacity:.....**34.78** MBH
Htg HP Integrated Capacity:.....**34.78** MBH
Heating HP Compressor Power:.....**2.76** kW
Total System Power:.....**2.92** kW

System Parameters

Outdoor Unit Parameters

Unit Model:.....**25TPA736A003**
 Unit Size (Nominal):.....**3 Tons (Size 36)**
 Voltage:.....**208/230-1-60** V-Ph-Hz
 Clg Ent Air DB Ambient:.....**95.0** °F
 Htg Ent Air DB Ambient:.....**47.0** °F

Indoor Coil Parameters

Unit Model:.....**FV4CNF003L00**
 Unit Size (Nominal):.....**Size 003 (24 - 42,000 Btu/h)**
 Voltage:.....**208-1-60** V-Ph-Hz
 Ent Air DB:.....**80.00** °F
 Ent Air WB:.....**67.00** °F
 Ent Enthalpy:.....**31.44** BTU/lb
 Lvg Air DB:.....**59.79** °F
 Lvg Air WB:.....**58.12** °F
 Lvg Enthalpy:.....**25.11** BTU/lb
 Htg Ent Air DB:.....**70.0** °F
 Htg Lvg Air DB:.....**96.8** °F
 Heating Size (Nominal):.....**No Heat**
Total External Static Pressure:.....**0.50** in wg
 Clg Coil Note:*****Airflow adjusted to high (400 cfm/ton).**

Electrical Data

Outdoor Electrical Data

Unit Voltage:.....**208/230-1-60** V-Ph-Hz
 Fan Motor FLA:.....**0.60** Amps
 MCA:.....**19** Amps
 Max Fuse:.....**40** Amps
 Operating Range Min:.....**197** V
 Operating Range Max:.....**253** V
 Compressor RLA:.....**19.7** Amps
 Compressor LRA:.....**92.0** Amps

Indoor Electrical Data

Unit Voltage:.....**208-1-60** V-Ph-Hz
 Motor HP:.....**1/2** HP
 Motor FLA:.....**4.3** Amps

Accessory Electric Heater Data

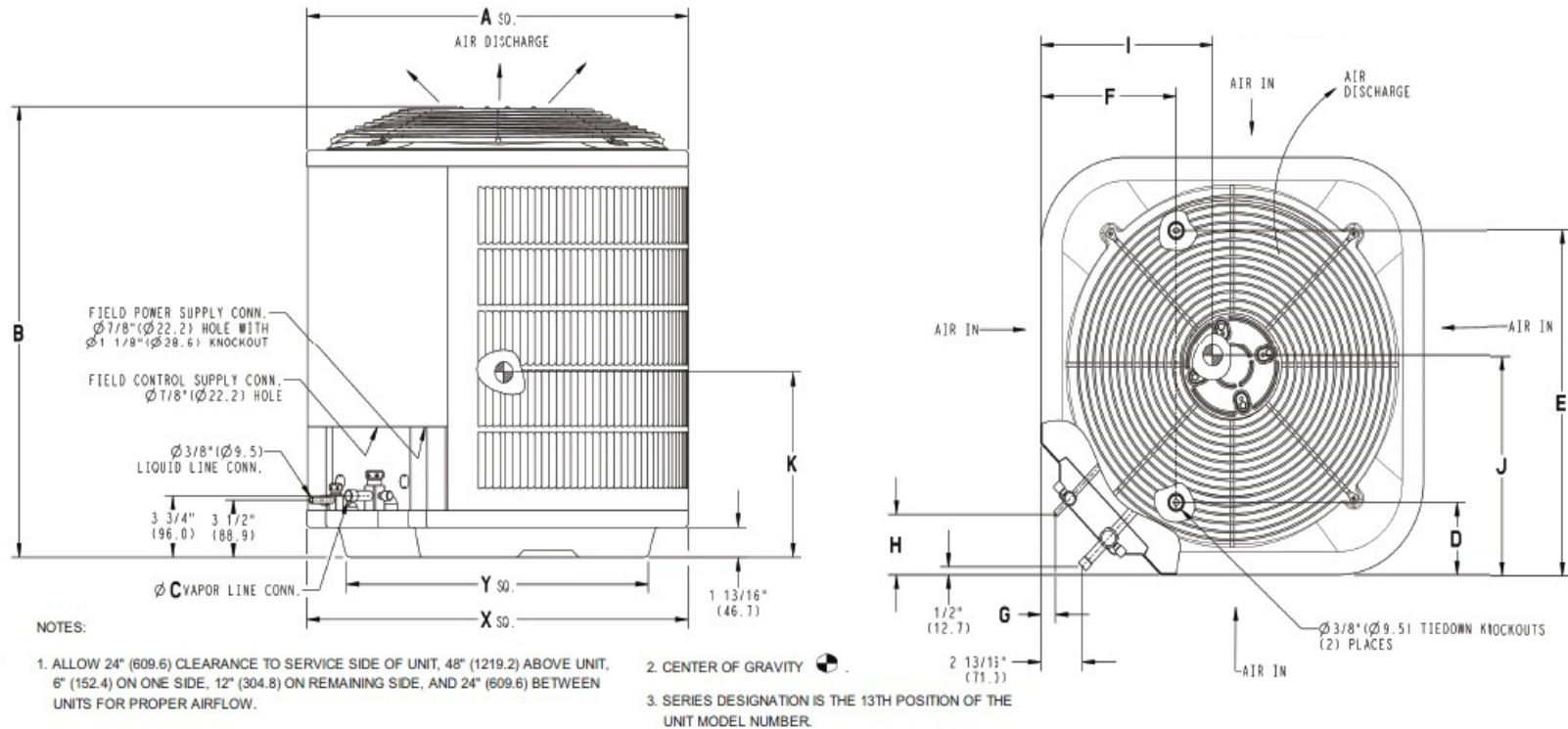
EH Part Number:.....**KFCEH2601C10**
 Electric Heater kW:.....**7.5** kW
For 2 wire operation (single circuit):
 Heater Amps:.....**36.2** Amps
 Heater + Motor MCA:.....**53.8** Amps
 Heater + Motor MOCP:.....**60** Amps
 Accessory Voltage:.....**208-1-60** V-Ph-Hz

The Product and Ratings Data in this program is subject to change at any time and without notice. Please refer to the latest product literature and the AHRI directory at www.ahridirectory.org for the most up-to-date information.

Certified Drawing For 3 Ton HP System

Project: Charlestown Field House
Prepared By: Jeff Gries

01/17/2023



Outdoor Model

Unit Model:.....**25TPA**
 Unit Size:.....**3 Tons (Size 36)**
 Voltage:.....**208/230-1-60** V-Ph-Hz
 SEER:.....**17**
 PartNumber:.....**25TPA736A003**

Shipping Dimensions and Weights	Outdoor Unit
Height	44.13 in
Width	37.81 in
Length	37.81 in
Operating Weight	244. lb
Shipping Weight	273. lb

Dimensions										
A	B	C	D	E	F	G	H	I	J	K
35.00 in	38.88 in	0.88 in	6.56 in	28.40 in	9.13 in	1.10 in	3.81 in	18.00 in	16.00 in	19.00 in

The Product and Ratings Data in this program is subject to change at any time and without notice. Please refer to the latest product literature and the AHRI directory at www.ahridirectory.org for the most up-to-date information.

Certified Drawing For 3 Ton HP System

Project: Charlestown Field House
Prepared By: Jeff Gries

01/17/2023

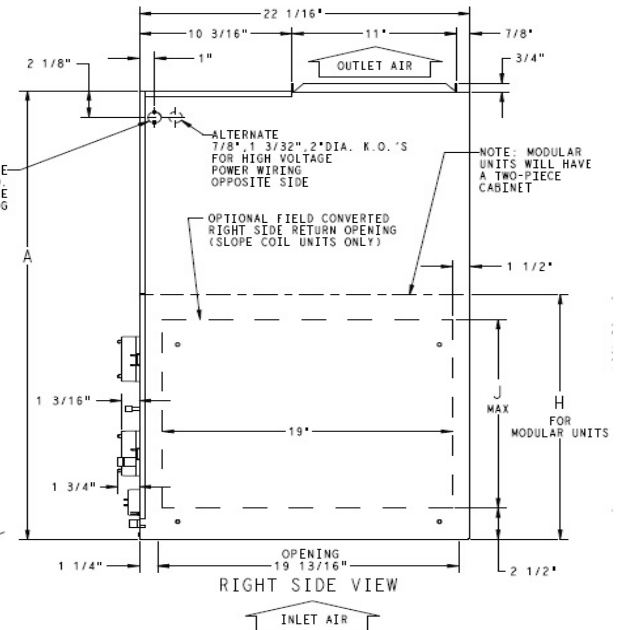
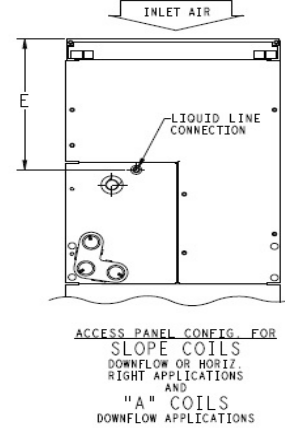
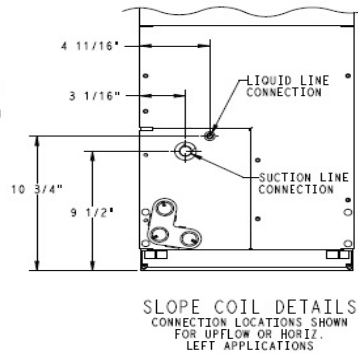
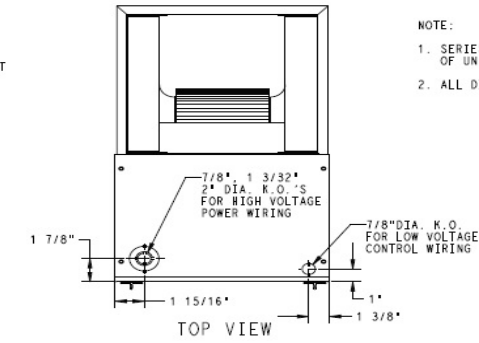
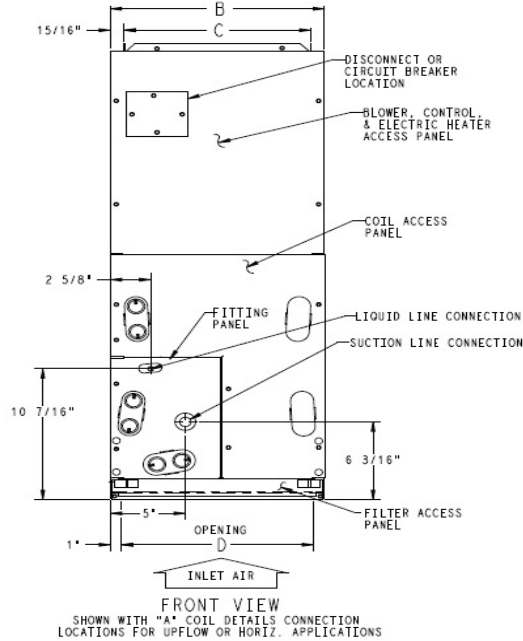
UNIT CONNECTION SIZES

SUCTION: 018 & 024 - 5/8" I.D. SWEAT
030 & 036 - 3/4" I.D. SWEAT
042 THRU 060 - 7/8" I.D. SWEAT
LIQUID: 3/8" I.D. SWEAT
CONDENSATE: 3/4" FPT

NOTE:

- SERIES DESIGNATION IS THE 14TH POSITION OF UNIT PRODUCT NUMBER
- ALL DIMENSIONS ARE IN "INCHES" UNLESS NOTED.

NOTE: ALLOW 21" FROM FRONT FOR SERVICE



Indoor Coil

Unit Model:..... **FV4C**
Unit Size:..... **Size 003 (24 - 42,000 Btuh)**
Voltage:..... **208-1-60** V-Ph-Hz
Cabinet Insulation: **Single-piece cabinet with 1-in. super thick insulation**
PartNumber:..... **FV4CNF003L00**

Dimensions and Weights		Indoor Coil
Height		53.44 in
Width		21.13 in
Length		22.06 in
Shipping Weight		150. lb

Dimensions									
A	B	C	D	E	F	G	H	J	
53.44 in	21.13 in	19.25 in	19.13 in	19.19 in	--	--	--	19.00 in	

The Product and Ratings Data in this program is subject to change at any time and without notice. Please refer to the latest product literature and the AHRI directory at www.ahrirectory.org for the most up-to-date information.

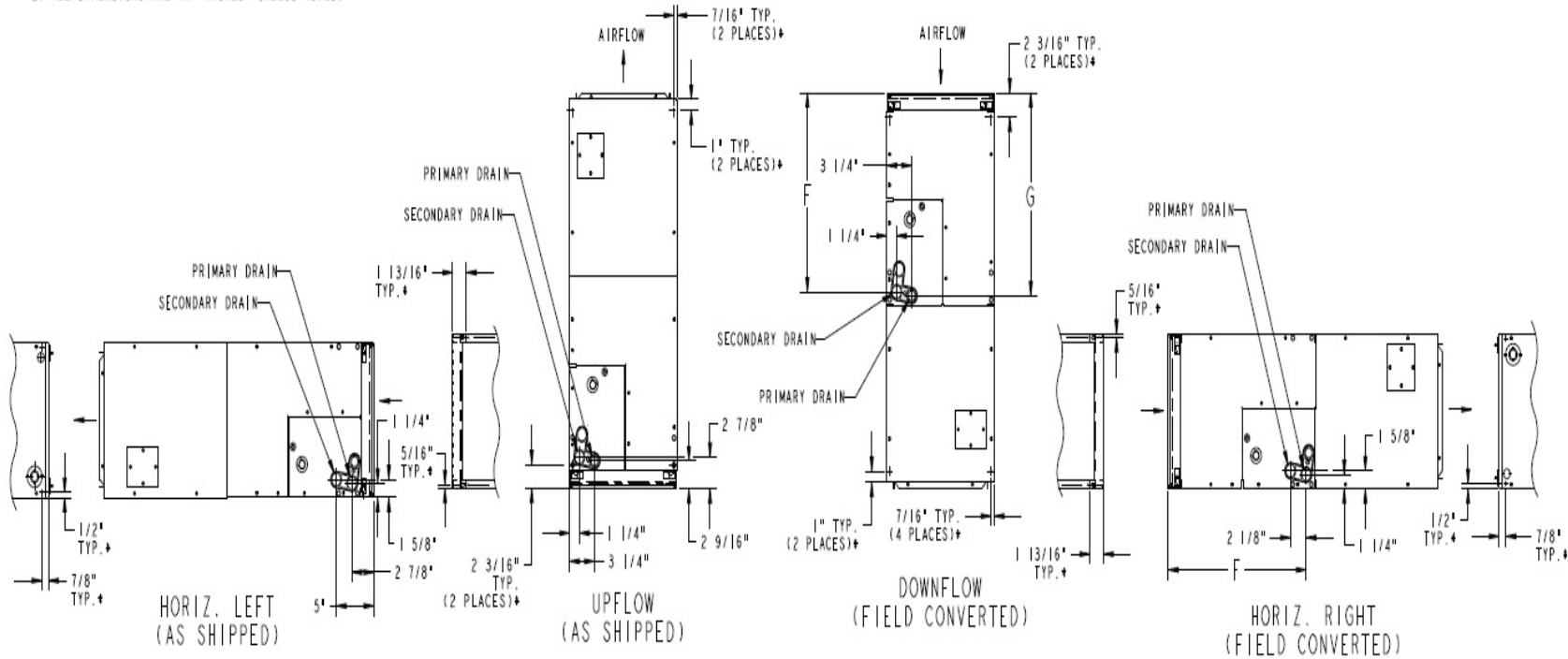
Certified Drawing For 3 Ton HP System

Project: Charlestown Field House
Prepared By: Jeff Gries

01/17/2023

- NOTES:
1. CONDENSATE PAN DRAIN CAPS NOT SHOWN FOR CLARITY.
2. ALL DIMENSIONS ARE IN "INCHES" UNLESS NOTED.

SLOPE COIL



Indoor Coil

Unit Model:.....**FV4C**
 Unit Size:.....**Size 003 (24 - 42,000 Btuh)**
 Voltage:.....**208-1-60** V-Ph-Hz
 PartNumber:.....**FV4CNF003L00**

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**25TPA7
Performance Series 2-Stage Heat Pump
with Puron® Refrigerant
2 To 5 Tons**



Product Data



This unit has been designed utilizing Carrier's Puron refrigerant. The environmentally sound refrigerant allows you to make a responsible decision in the protection of the earth's ozone layer.

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Industry leading Features / Benefits

Efficiency

- Up to 17.0 SEER2 (18.5 SEER) / Up to 13.0 EER2 (14 EER) / Up to 8.1 HSPF2 (9.5 HSPF)
- Microtube Technology refrigeration system
- Indoor air quality accessories available

Sound

- Sound level as low as 70dBA

Comfort

- System supports Thermidistat or standard 2-stage thermostat controls

Reliability

- Puron refrigerant - environmentally sound, won't deplete the ozone layer and low lifetime service cost.
- Front-seating service valves
- 2-stage scroll compressor
- Internal pressure relief valve
- Internal thermal overload
- Low pressure switch
- High pressure switch
- Filter drier
- Balanced refrigeration system for maximum reliability

Durability

WeatherArmor™ Ultra Protection Package:

- Solid, Durable sheet metal construction
- Steel louver coil guard
- Baked-on, complete outer coverage, powder paint

Applications

- Long-line - up to 250 feet (76.2 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 cooling (down to 0°F / -17.8°C) with approved low ambient accessory kits.

**FV4C
Performance™ Series Fan Coil
Sizes 002 Thru 006**



Product Data



PREMIUM ENVIRONMENTALLY RESPONSIBLE FAN COIL

The FV4C is the premium air handler combining the proven technology of Carrier fan coils with environmentally balanced Puron® refrigerant. The FV4C achieves an operational advantage when the ECM (Electronically Commutated Motor) is combined with a Carrier Performance™ heat pump with Puron® refrigerant.

With attention to quiet, efficient, and comfortable operation, Carrier has developed a new benchmark for superior indoor comfort and control.

Carrier's heat pump and air conditioning systems now feature Puron® refrigerant (R-410A), the chlorine-free refrigerant that is the future for the residential heating and cooling industry. The FV4C using Puron® refrigerant maximizes performance for environmentally balanced systems. In addition to environmental safety, these systems are 30 to 40% more efficient than standard heating and cooling systems, thereby combining excellence in efficiency and environmental responsibility.

The FV4C provides these benefits due to Carrier's command of ECM technology. These motors are extremely efficient at all speeds, and enable the FV4C to operate at the correct speed to deliver airflow precisely, ensuring proper performance across a wide range of duct static pressures. This adaptive efficiency also makes installation quality easier to achieve for today's demanding homeowner.

Carrier's command of ECM technology may be most evident in the comfort advantages that ECM can deliver. Operation set up steps on the Easy Select™ Board provide the installing technician with alternatives to maximize comfort and efficiency. For true indoor comfort, the homeowner can achieve command of both temperature and humidity in cooling and heating modes.

Another feature which sets the FV4C apart is the factory-installed TXV, which enhances efficiency and provides compressor protecting operation at all recommended conditions. Grooved tubing, louvered aluminum fins, and the large face areas of the FV4C refrigerant coils also provide superior efficiency, for high SEER and HSPF performance. Carrier leads the way in condensate control, a hallmark of these multipoise fan coils. All of these featured components are protected within a rugged, prepainted metal cabinet lined with super thick, high density insulation. For neat, high quality installations the unit exterior features sweat refrigerant connections for simple leak free performance, and multiple electrical entry for both high and low voltage service.

The design of these fan coils meet cabinet air leakage of less than 2% at 0.5 inches W.C., and cabinet air leakage less than 1.4% at 0.5 inches W.C. when tested in accordance with ASHRAE 193 standard.

5 Ton HP System

Project: Charlestown Field House
Prepared By: Jeff Gries

01/17/2023

5 Ton HP System

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

Unit Report For 5 Ton HP System

Project: Charlestown Field House
 Prepared By: Jeff Gries

01/17/2023



AC-2, 3,4 (5T)

Outdoor Unit Parameters

Unit Model:.....25TPA
 Unit Size:.....5 Tons (Size 60)
 Voltage:.....208/230-1-60 V-Ph-Hz

Indoor Coil Parameters

Unit Model:.....FV4C

Unit Size:.....Size 006 (30 - 60,000 Btuh)
 Cabinet Insulation:Modular with 1-in. super thick

insulation

Voltage:.....208-1-60 V-Ph-Hz

Refrigerant Type:.....Puron
 Heating Size:.....No Heat

Outdoor Unit Dimensions and Weight

Unit Length:.....35 in
 Unit Width:.....35 in
 Unit Height:.....45.6875 in
 Unit Shipping Weight:.....325. lb

Indoor Coil Dimensions and Weight

Unit Length:.....22.0625 in
 Unit Width:.....24.6875 in
 Unit Height:.....59.1875 in
 Unit Shipping Weight:.....207. 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		
25TPA760A003	25TPA Performance 2 Stage Heat Pump with Puron Refrigerant 5 Tons Cooling 17 SEER @ ARI Conditions	3
Accessories		
KSALA0301410	Low-Ambient Pressure Switch for Outdoor Unit	3
KHAIR0201AAA	Isolation Relay for Outdoor Unit	3
KSAFT0101AAA	Evaporator Freeze Thermostat for Outdoor Unit	3
KSAHS2801AAA	Start Assist - Capacitor/Relay Type for Outdoor Unit	3
Indoor Coil		

Unit Report For 5 Ton HP System

Project: Charlestown Field House
Prepared By: Jeff Gries

01/17/2023

FV4CNB006L00	FV4C Performance Series Fan Coil with Puron 6 Tons Cooling 208/230-1-60	3
	Modular with 1-in. super thick insulation	
	Aluminum	
Accessories		
KFCEH3101C15	15 kW Electric Heater with Circuit Breaker and Relays for Indoor Unit	

The Product and Ratings Data in this program is subject to change at any time and without notice. Please refer to the latest product literature and the AHRI directory at www.ahridirectory.org for the most up-to-date information.

Performance Summary For 5 Ton HP System

Project: Charlestown Field House
 Prepared By: Jeff Gries

01/17/2023

System Performance

System:.....**25TPA/FV4C**
 System Quantity:.....**3**
 Altitude:.....**0.0** ft
 Linear Pipe Length:.....**50.0** ft
 COP @ 47 F:.....**3.64**
 COP @ 17 F:.....**2.74**
 SEER2 @ ARI Conditions:.....**16.0**
 EER2 @ ARI Conditions:.....**12.0**
 HSPF @ ARI Conditions:.....**8.1**

Actual Clg Airflow:.....**1750.0** CFM
Standard Clg Airflow:.....**1750.0** CFM
Total Net Clg Capacity:.....**56.50** MBH
Net Sensible Clg Capacity:.....**41.65** MBH
Htg HP Capacity:.....**58.00** MBH
Htg HP Integrated Capacity:.....**58.00** MBH
Heating HP Compressor Power:.....**4.66** kW
Total System Power:.....**4.71** kW

System Parameters

Outdoor Unit Parameters

Unit Model:.....**25TPA760A003**
 Unit Size (Nominal):.....**5 Tons (Size 60)**
 Voltage:.....**208/230-1-60** V-Ph-Hz
 Clg Ent Air DB Ambient:.....**95.0** °F
 Htg Ent Air DB Ambient:.....**47.0** °F

Indoor Coil Parameters

Unit Model:.....**FV4CNB006L00**
 Unit Size (Nominal):.....**Size 006 (30 - 60,000 Btuh)**
 Voltage:.....**208-1-60** V-Ph-Hz
 Ent Air DB:.....**80.00** °F
 Ent Air WB:.....**67.00** °F
 Ent Enthalpy:.....**31.44** BTU/lb
 Lvg Air DB:.....**57.96** °F
 Lvg Air WB:.....**56.79** °F
 Lvg Enthalpy:.....**24.26** BTU/lb
 Htg Ent Air DB:.....**70.0** °F
 Htg Lvg Air DB:.....**100.7** °F
 Heating Size (Nominal):.....**No Heat**
 Total External Static Pressure:.....**0.50** in wg
 Clg Coil Note:***Airflow adjusted to nominal (350
 cfm/ton).....

Electrical Data

Outdoor Electrical Data

Unit Voltage:.....**208/230-1-60** V-Ph-Hz
 Fan Motor FLA:.....**1.50** Amps
 MCA:.....**33.4** Amps
 Max Fuse:.....**60** Amps
 Operating Range Min:.....**197** V
 Operating Range Max:.....**253** V
 Compressor RLA:.....**26.9** Amps
 Compressor LRA:.....**158.0** Amps

Indoor Electrical Data

Unit Voltage:.....**208-1-60** V-Ph-Hz
 Motor HP:.....**3/4** HP
 Motor FLA:.....**6.8** Amps

Accessory Electric Heater Data

EH Part Number:.....**KFCEH3101C15**
 Electric Heater kW:.....**11.3** kW
For 4 wire operation (dual circuit):
 Heater Amps L1/L2:.....**36.2** Amps
 Heater + Motor MCA L1/L2:.....**53.8** Amps
 Heater + Motor MOCP L1/L2:.....**60** Amps
 Heater Amps L3/L4:.....**18.1** Amps
 Heater + Motor MCA L3/L4:.....**22.7** Amps
 Heater + Motor MOCP L3/L4:.....**25** Amps
 Accessory Voltage:.....**208-1-60** V-Ph-Hz

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Performance Summary For 5 Ton HP System

Project: Charlestown Field House
Prepared By: Jeff Gries

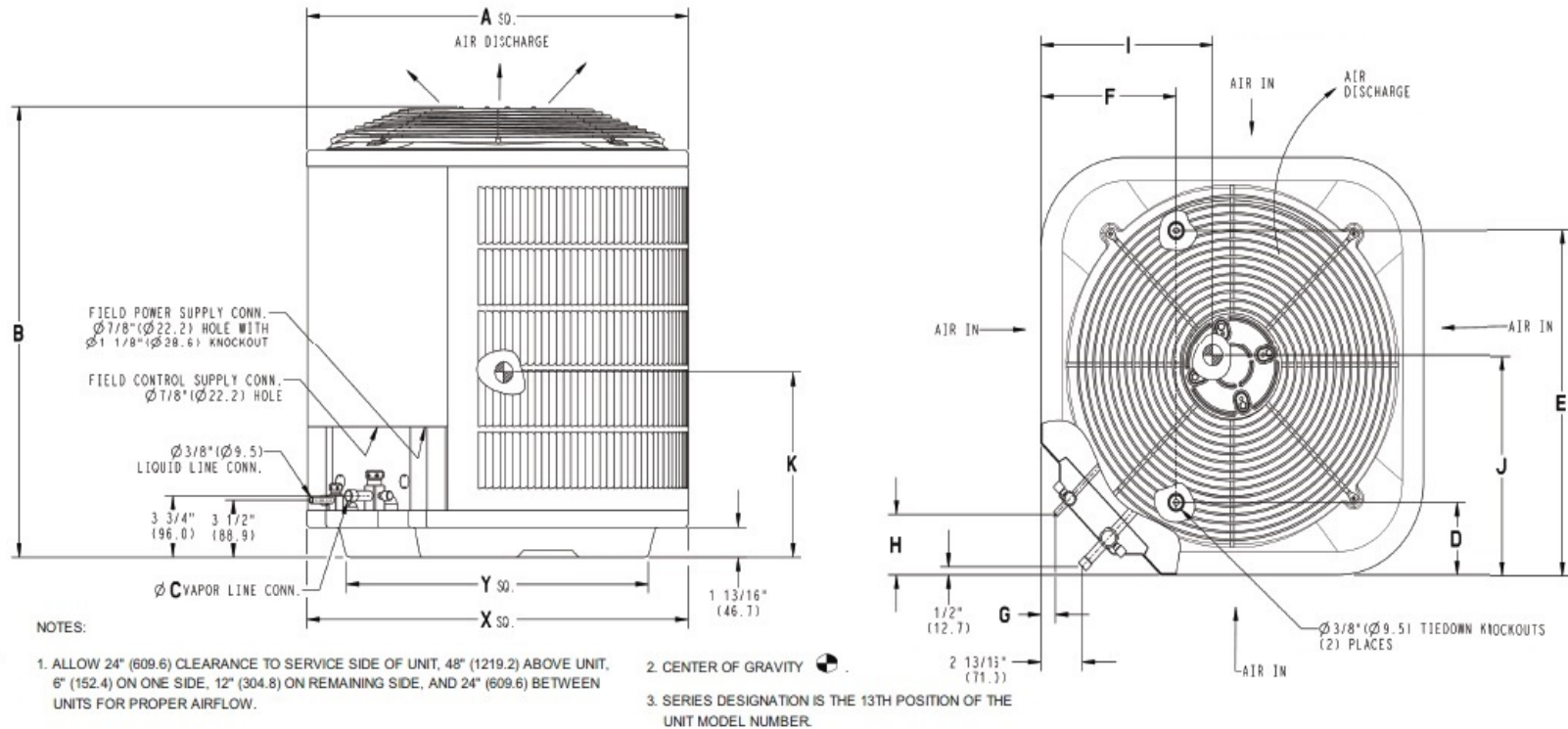
01/17/2023

and the AHRI directory at www.ahridirectory.org for the most up-to-date information.

Certified Drawing For 5 Ton HP System

Project: Charlestown Field House
Prepared By: Jeff Gries

01/17/2023



Outdoor Model

Unit Model:.....**25TPA**
 Unit Size:.....**5 Tons (Size 60)**
 Voltage:.....**208/230-1-60** V-Ph-Hz
 SEER:.....**17**
 PartNumber:.....**25TPA760A003**

Shipping Dimensions and Weights	Outdoor Unit
Height	51.00 in
Width	37.81 in
Length	37.81 in
Operating Weight	295. lb
Shipping Weight	325. lb

Dimensions										
A	B	C	D	E	F	G	H	I	J	K
35.00 in	45.69 in	0.88 in	6.56 in	28.44 in	9.13 in	1.10 in	3.81 in	17.00 in	15.50 in	24.00 in

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Certified Drawing For 5 Ton HP System

Project: Charlestown Field House
Prepared By: Jeff Gries

01/17/2023

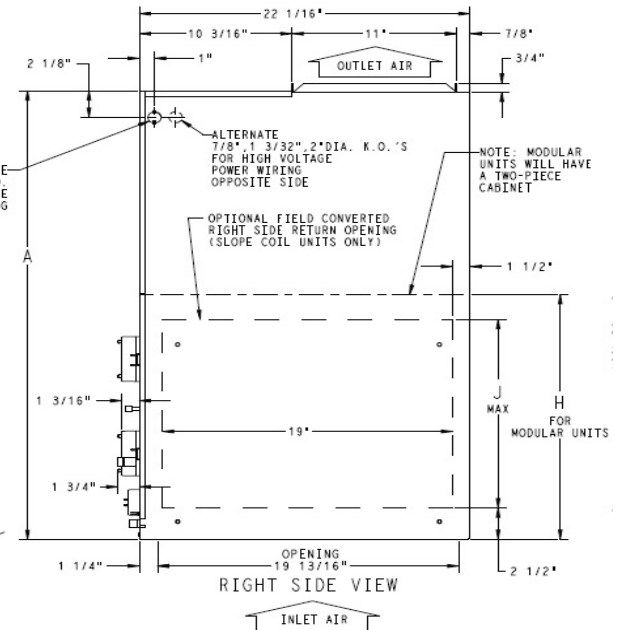
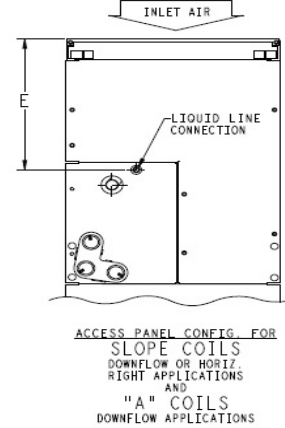
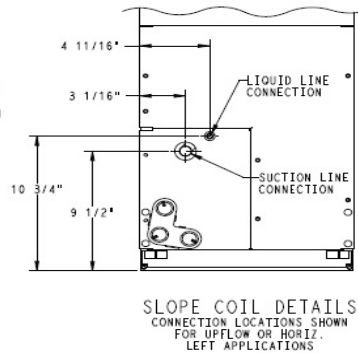
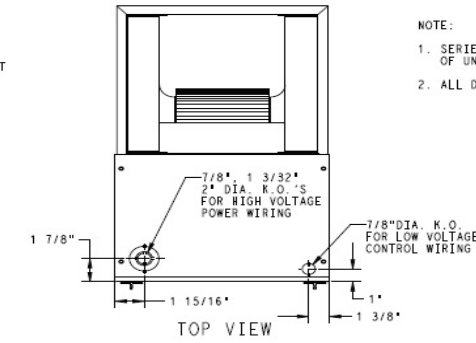
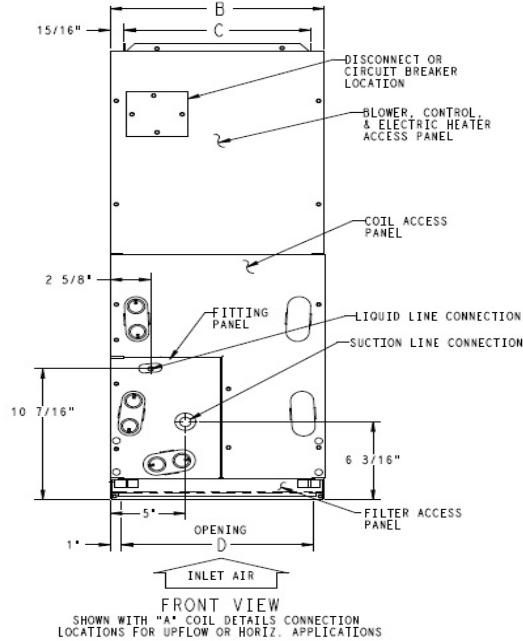
UNIT CONNECTION SIZES

SUCTION: 018 & 024 - 5/8" I.D. SWEAT
030 & 036 - 3/4" I.D. SWEAT
042 THRU 060 - 7/8" I.D. SWEAT
LIQUID: 3/8" I.D. SWEAT
CONDENSATE: 3/4" FPT

NOTE:

- SERIES DESIGNATION IS THE 14TH POSITION OF UNIT PRODUCT NUMBER
- ALL DIMENSIONS ARE IN "INCHES" UNLESS NOTED.

NOTE: ALLOW 21" FROM FRONT FOR SERVICE



Indoor Coil

Unit Model:..... **FV4C**
Unit Size:..... **Size 006 (30 - 60,000 Btuh)**
Voltage:..... **208-1-60** V-Ph-Hz
Cabinet Insulation: **Modular with 1-in. super thick insulation**
Part Number:..... **FV4CNB006L00**

Dimensions and Weights		Indoor Coil
Height		59.19 in
Width		24.69 in
Length		22.06 in
Shipping Weight		207. lb

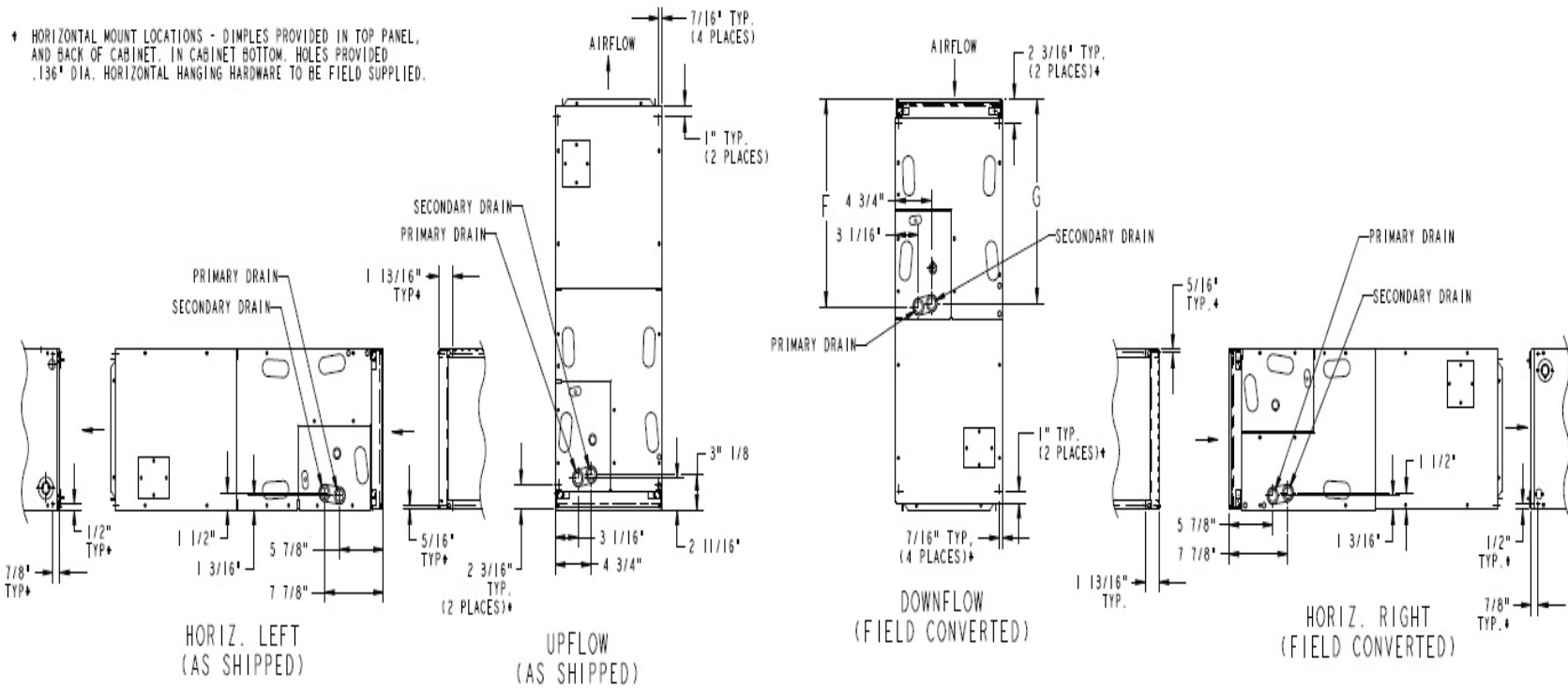
Dimensions									
A	B	C	D	E	F	G	H	J	
59.19 in	24.69 in	22.75 in	22.69 in	25.25 in	--	--	34.06 in	--	

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Certified Drawing For 5 Ton HP System

Project: Charlestown Field House
 Prepared By: Jeff Gries

01/17/2023



A-COIL

Indoor Coil

Unit Model:.....**FV4C**
 Unit Size:.....**Size 006 (30 - 60,000 Btuh)**
 Voltage:.....**208-1-60** V-Ph-Hz
 PartNumber:.....**FV4CNB006L00**

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**25TPA7
Performance Series 2-Stage Heat Pump
with Puron® Refrigerant
2 To 5 Tons**



Product Data



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Industry leading Features / Benefits

Efficiency

- Up to 17.0 SEER2 (18.5 SEER) / Up to 13.0 EER2 (14 EER) / Up to 8.1 HSPF2 (9.5 HSPF)
- Microtube Technology refrigeration system
- Indoor air quality accessories available

Sound

- Sound level as low as 70dBA

Comfort

- System supports Thermidistat or standard 2-stage thermostat controls

Reliability

- Puron refrigerant - environmentally sound, won't deplete the ozone layer and low lifetime service cost.
- Front-seating service valves
- 2-stage scroll compressor
- Internal pressure relief valve
- Internal thermal overload
- Low pressure switch
- High pressure switch
- Filter drier
- Balanced refrigeration system for maximum reliability

Durability

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- Steel louver coil guard
- Baked-on, complete outer coverage, powder paint

Applications

- Long-line - up to 250 feet (76.2 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 cooling (down to 0°F / -17.8°C) with approved low ambient accessory kits.

Product Data



PREMIUM ENVIRONMENTALLY RESPONSIBLE FAN COIL

The FV4C is the premium air handler combining the proven technology of Carrier fan coils with environmentally balanced Puron® refrigerant. The FV4C achieves an operational advantage when the ECM (Electronically Commutated Motor) is combined with a Carrier Performance™ heat pump with Puron® refrigerant.

With attention to quiet, efficient, and comfortable operation, Carrier has developed a new benchmark for superior indoor comfort and control.

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Another feature which sets the FV4C apart is the factory-installed TXV, which enhances efficiency and provides compressor protecting operation at all recommended conditions. Grooved tubing, louvered aluminum fins, and the large face areas of the FV4C refrigerant coils also provide superior efficiency, for high SEER and HSPF performance. Carrier leads the way in condensate control, a hallmark of these multipoise fan coils. All of these featured components are protected within a rugged, prepainted metal cabinet lined with super thick, high density insulation. For neat, high quality installations the unit exterior features sweat refrigerant connections for simple leak free performance, and multiple electrical entry for both high and low voltage service.

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