EQUIPMENT SUBMITTAL FOR APPROVAL

PROJECT: Adams Fairacre Farms

LOCATION: Middletown, NY

York Indoor Air Handling Unit

EQUIPMENT	Solution XTI; AMI BCU
UNIT TAGS	AHU-1 thru AHU-9
QUANTITY	9

SOLD TO:
Adams Fairacre Farms

CONSULTING ENGINEER:
Fellenzer Engineering LLP.
22 Mulberry Street
Middletown, NY 10940

PREPARED BY:
Johnson Controls Inc.
8 Skyline Drive
Hawthorne NY 10532

DATE:
2/18/2022

REVISION:
0

Table of Contents

BILL OF MATERIAL

ITEM	QTY	TAGS	DESCRIPTION
I	8	AHU-1,2,3,4,5,6,8,9	INDOOR AIR HANDLING UNITS
II	1	AHU-7	INDOOR BLOWER COIL UNIT

EQUIPMENT DESCRIPTIONS

I INDOOR AIR HANDLING UNITS – BASIS OF DESIGN

Items Included by Johnson Controls:

- Double Wall 2” Injected Foam Walls
- 20 Ga. G-90 Galvanized Exterior Liner
- 20 Ga. G-90 Galvanized Interior Liner
- 20 Ga. G-90 Galvanized Floor Liner
- Supply Fan Segment
  - AF Fan (AHU-1, AHU-2, AHU-3, AHU-4, AHU-6)
  - APBC Fan (AHU-5)
  - FC Fan (AHU-8, AHU-9)
- 460 Volt ODP Premium Efficiency Motor
- Factory Mounted ABB VFD Fused in NEMA 1 Enclosure
- Return Fan Segment (Except AHU-5 & AHU-7)
- Economizer Segment (Except AHU-5 & AHU-7)
- Access Doors
- Cooling Coil Segment
  - IAQ Drain Pan with Stainless Steel Liner
- Heating Coil Segment
- Rigid Filter Segment (2” Merv 8 Pre-Filter & 4” Merv 14 Final Filter)
- Inlet Plenum Segment
- 6” Structural Steel Base-Rail
- Convenience Outlet in Fan Sections (Except AHU-7)
- LED Lights in Major Sections (Except AHU-7)
- Standard Warranty is 18 months parts and labor from date of shipment or 12 months from startup, whichever occurs first.
- Unit VFD Start-up by Factory-Authorized Technician

Items NOT Included by Johnson Controls:

- Unit Installation / Rigging
- Piping / Wiring
- Humidifiers
- Spare Filters
- BMS / Sensors / Valves / Controls Interface
- Air / Water Balancing
- Factory or Field Testing

II JOHNSON CONTROLS BLOWER COIL UNIT – BASIS OF DESIGN

Items Included by Johnson Controls:

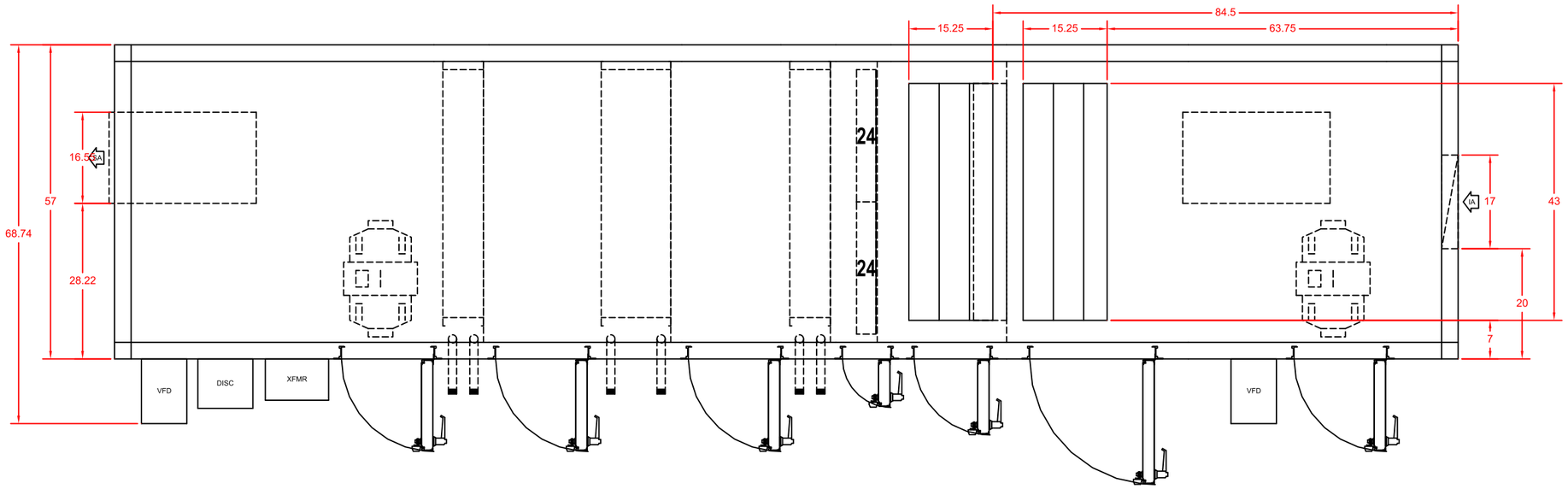
- Double Wall Construction
- Forward Curved Supply Fan
- Fan Spring Isolation
- 2” Merv 8 Pre-Filter & 4” Merv 14 Final Filter
- ODP Premium Fan Motor
- Hot Water Coil
- Chilled Water Coil

Items NOT Included by Johnson Controls

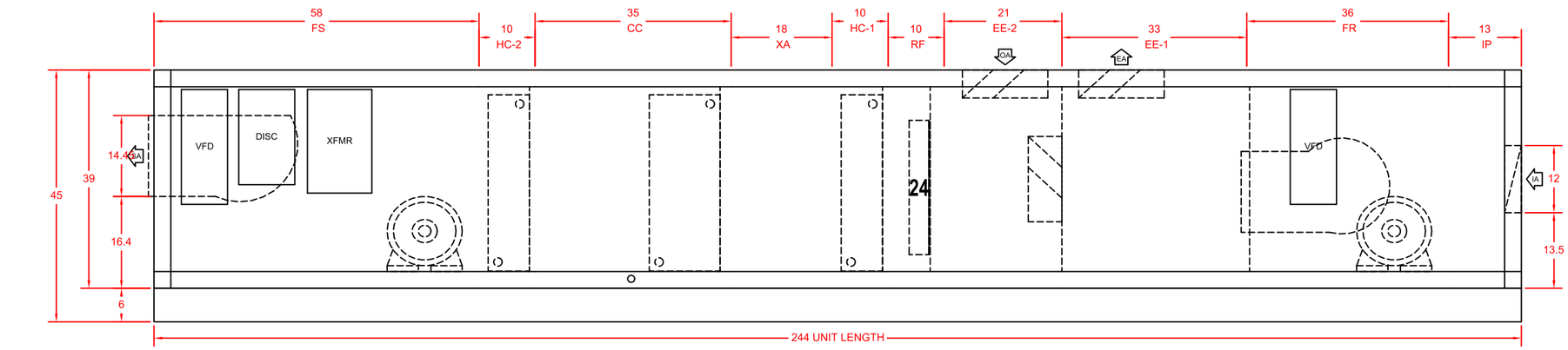
- Unit Installation / Rigging
- Piping / Wiring
- Piping Package
- BMS / Sensors / Valves / Controls Interface
- Air / Water Balancing
- Factory or Field Testing

AHU-1

60 EAST 42ND STREET
NEW YORK, NY 10165
PHONE: (646) 658-6700
FAX: (212) 370-0305



PLAN VIEW



* NOTE: MAX HEIGHT

ELEVATION VIEW

UNIT CONSTRUCTION

Model: Solution-XTI-39x57 Construction: Indoor

Motor Location:

Unit Weight: 3,689 lbs. (+/- 10%)

PLAN VIEW

Right, Rear (Supply), Front (Return), Left, AIRFLOW

NOTES

Units with a baserail and a bottom opening: Duct connection flush with the bottom of unit, not flush with bottom of baserail.

Refer to performance report for shipping split details.

Allow sufficient space around the unit for removing the access panels and various parts of the unit. A minimum clearance equal to the width of the unit must be provided on one side of the unit for removing the coil or fan assembly.

Contractor responsible for penetrations and connections of all electrical boxes and internal coil connections.

Overall dimensions account for: outdoor roof peak and overhang, motor control and/or factory package control boxes, coil connections, rain hoods, pipe chases, AMS-60 damper/EAML louver (if applicable,) base rail - in order to convey the true space requirements for the unit.

Certain items may extend beyond cabinet dimensions including: door handles, light switches, electrical boxes, lifting lugs, gas fuel system, etc.

The overall unit length includes an additional 1/4" per shipping split due to additional gasketing and split connection hardware.

Dimension tolerances: Unit (+/- 1/2"); Piping (+/- 2")

SL - Designates Shipped Loose Item(s)

PIPING CONNECTIONS
(In order of Airflow)

Segment	Type	Hand	Quantity	Supply	Return
HC	MPT	Left	1 Sup 1 Ret	1 1/2"	1 1/2"
CC	MPT	Left	1 Sup 1 Ret	1 1/2"	1 1/2"
HC	MPT	Left	1 Sup 1 Ret	1 1/2"	1 1/2"

Drain pan connection size 1 1/4" MPT SCH 40 (Connections on Left Side of unit)

SECTION LIST

SECT	DESCRIPTION
IP	Inlet Plenum
FR	Return Fan - 12-12 AF
EE-1	Economizer
EE-2	Economizer
RF	High Efficiency Filter
HC-1	Heating Coil
XA	Variable Length Access
CC	Cooling Coil
HC-2	Heating Coil
FS	Supply Fan - 12-12 AF

PRODUCT DRAWING

SOLUTION XT AIR HANDLING UNIT DETAIL
MODEL: Solution-XTI-39x57
NOT FOR CONSTRUCTION

Project Name: Adams Fairacre Farms
Location:
Engineer:
Contractor:
For:

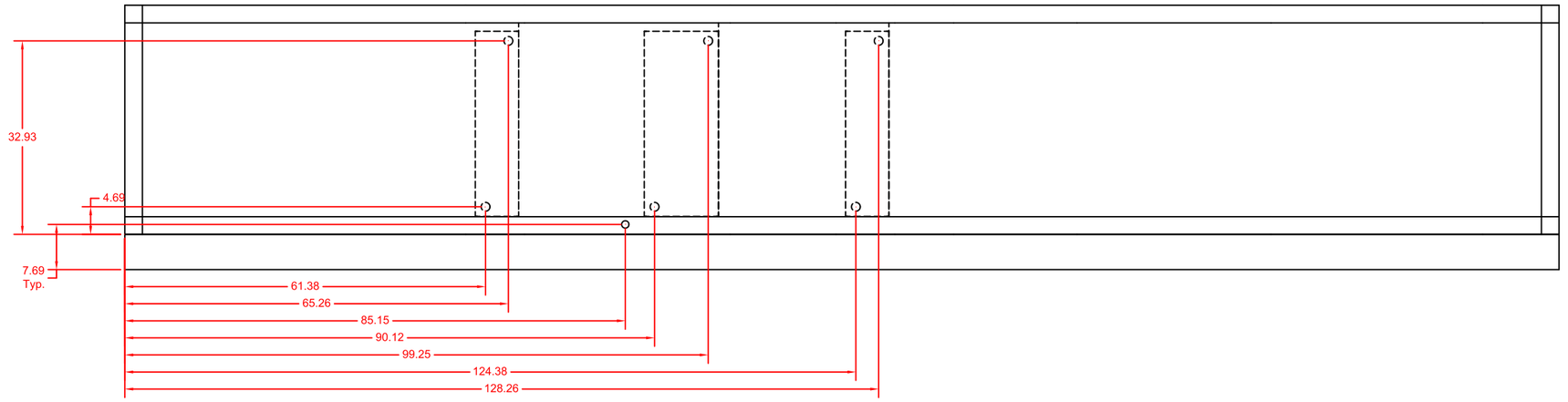
Sold To:
Cust Purch Order#:
Contract#:
UNIT TAG: AHU-1 - Sheet 1

Date: 6/8/2021 16:26:23
Version:
Form No.:
Dwg. Lev.: 5/03
Dwg. Scale: NTS

Serial Number:
SQ Database Number:
YORKworks Release:
Dwg. Name:
Dwg. Location:

Johnson Controls

YORKworks Version: 21.01b Drawing Generator Version : 01:00:16194



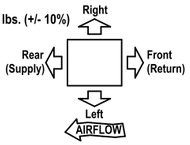
UNIT CONSTRUCTION

Model: Solution-XTI-39x57 Construction: Indoor

Motor Location:

Unit Weight: 3,689 lbs. (+/- 10%)

PLAN VIEW



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(SL) - Designates Shipped Loose Item(s)

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(In order of Airflow)

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Drain pan connection size 1 1/4" MPT SCH 40
(Connections on Left Side of unit)

SECTION LIST

SECT	DESCRIPTION
IP	Inlet Plenum
FR	Return Fan - 12-12 AF
EE-1	Economizer
EE-2	Economizer
RF	High Efficiency Filter
HC-1	Heating Coil
XA	Variable Length Access
CC	Cooling Coil
HC-2	Heating Coil
FS	Supply Fan - 12-12 AF

Coil Connections

PRODUCT DRAWING
SOLUTION XT COIL CONNECTION DETAIL
MODEL: Solution-XTI-39x57
NOT FOR CONSTRUCTION

Project Name: Adams Fairacre Farms
Location:
Engineer:
Contractor:
For:

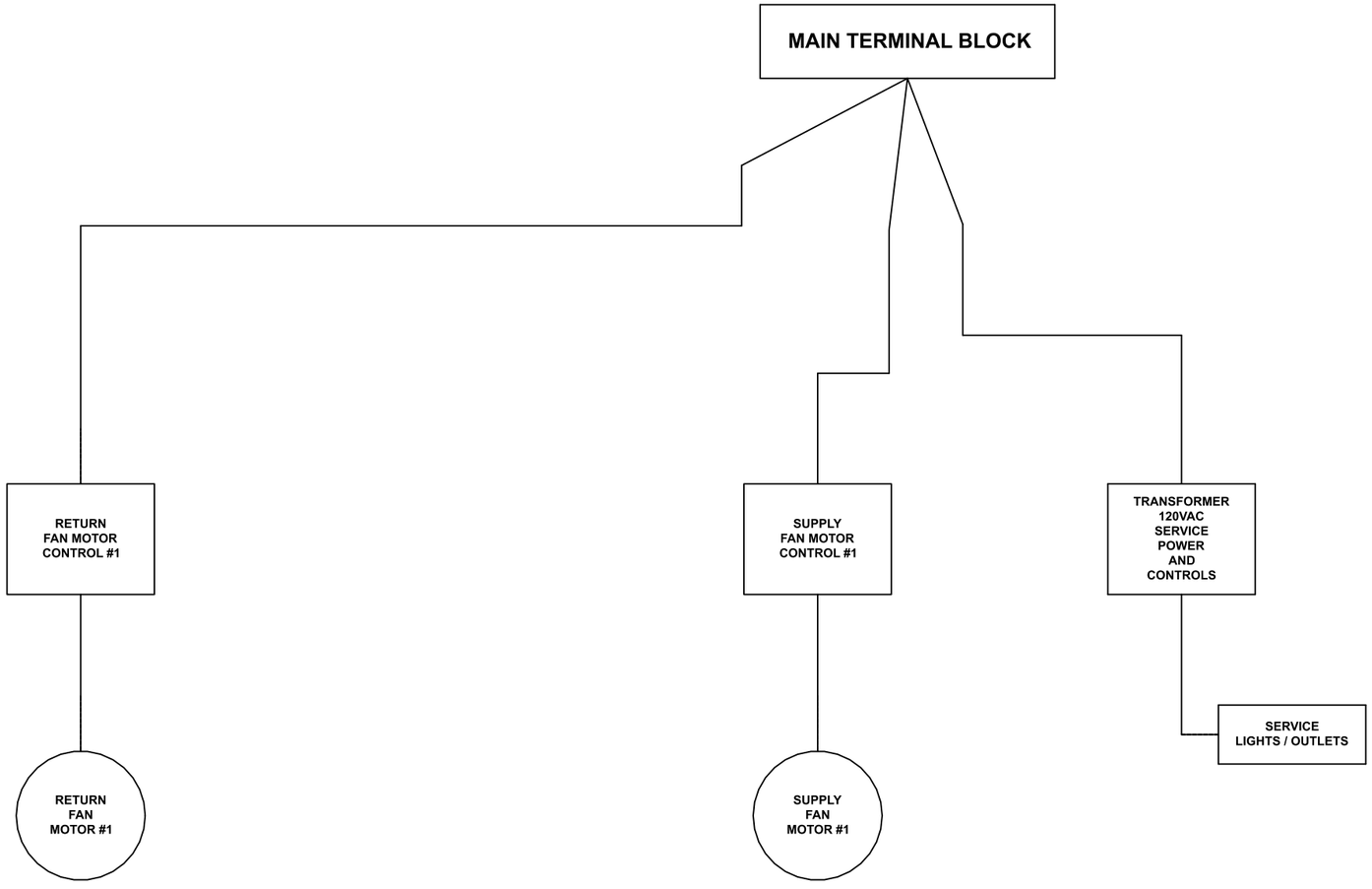
Sold To:
Cust Purch Order#:
Contract#:
UNIT TAG: AHU-1 - Sheet 2

Date: 6/8/2021 16:26:23
Version:
Form No.:
Dwg. Lev.: 5/03
Dwg. Scale: NTS

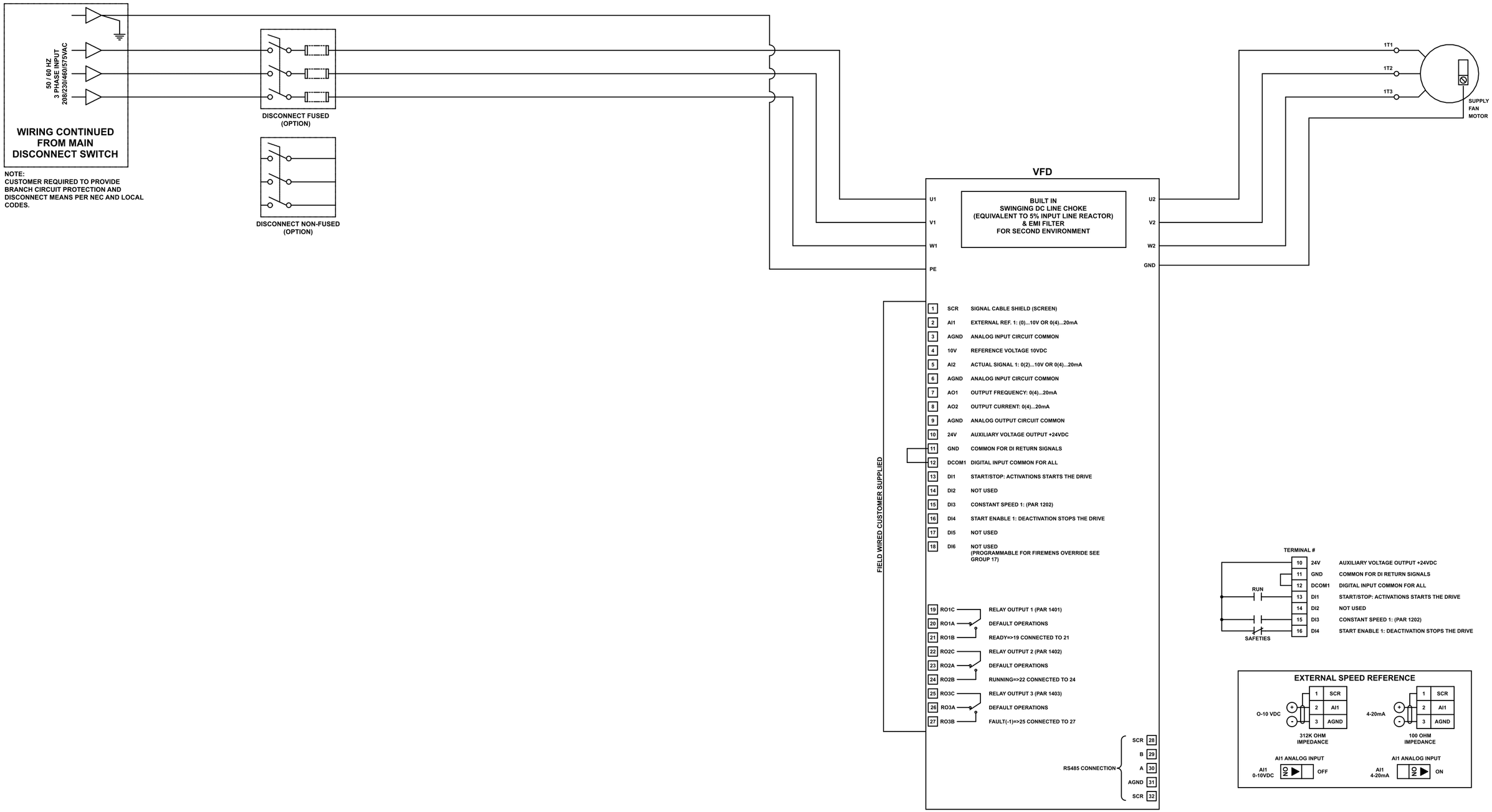
Serial Number:
SQ Database Number:
YORKworks Release:
Dwg. Name:
Dwg. Location:

Johnson Controls

YORKworks Version: 21.01b Drawing Generator Version : 01:00:16194



PRODUCT DRAWING YORK Solution XT Field Wiring MODEL: **NOT FOR CONSTRUCTION**	Project Name: Adams Fairacre Farms Location: Engineer: Contractor: For:	Sold To: Cust Purch Order#: Contract#: UNIT TAG: AHU-1 - Sheet 1	Date: 6/8/2021 16:26:23 Version: Form No.: 100.09-EG1 Dwg. Lev.: 12/03 Dwg. Scale: NTS	Serial Number: SQ Database Number: YORKworks Release: Dwg. Name: Dwg. Location:



- TERMINAL POINT
- REMOTE DEVICE (BY OTHERS)
- OPTIONAL PANEL COMPONENTS
- FIELD WIRING
- WIRE PER TRANSFORMER LABEL PER VOLTAGE.
* USE MINIMUM 75°C COPPER WIRE ONLY

PRODUCT DRAWING

YORK Solution XT Field Wiring
MODEL:
NOT FOR CONSTRUCTION

Project Name: Adams Fairacre Farms
Location:
Engineer:
Contractor:
For:

Sold To:
Cust Purch Order#:
Contract#:
UNIT TAG: AHU-1 - Sheet 2

Date: 6/8/2021 16:26:23
Version:
Form No.: 100.09-EG1
Dwg. Lev.: 12/03
Dwg. Scale: NTS

Serial Number:
SQ Database Number:
YORKworks Release:
Dwg. Name:
Dwg. Location:

Johnson Controls

YORKworks Version: 21.01b Drawing Generator Version : 01:00:21068

50 / 60 HZ
3 PHASE INPUT
208/230/460/575VAC

WIRING CONTINUED
FROM MAIN
DISCONNECT SWITCH

NOTE:
CUSTOMER REQUIRED TO PROVIDE BRANCH CIRCUIT PROTECTION AND DISCONNECT MEANS PER NEC AND LOCAL CODES.

DISCONNECT FUSED
(OPTION)

DISCONNECT NON-FUSED
(OPTION)

VFD

U1
V1
W1
PE

BUILT IN
SWINGING DC LINE CHOKE
(EQUIVALENT TO 5% INPUT LINE REACTOR)
& EMI FILTER
FOR SECOND ENVIRONMENT

U2
V2
W2
GND

1T1
1T2
1T3

RETURN / EXHAUST
FAN
MOTOR

FIELD WIRED CUSTOMER SUPPLIED POWER SUPPLIED

1	SCR	SIGNAL CABLE SHIELD (SCREEN)
2	AI1	EXTERNAL REF. 1: (0)...10V OR 0(4)...20mA
3	AGND	ANALOG INPUT CIRCUIT COMMON
4	10V	REFERENCE VOLTAGE 10VDC
5	AI2	ACTUAL SIGNAL 1: 0(2)...10V OR 0(4)...20mA
6	AGND	ANALOG INPUT CIRCUIT COMMON
7	AO1	OUTPUT FREQUENCY: 0(4)...20mA
8	AO2	OUTPUT CURRENT: 0(4)...20mA
9	AGND	ANALOG OUTPUT CIRCUIT COMMON
10	24V	AUXILIARY VOLTAGE OUTPUT +24VDC
11	GND	COMMON FOR DI RETURN SIGNALS
12	DCOM1	DIGITAL INPUT COMMON FOR ALL
13	DI1	START/STOP: ACTIVATIONS STARTS THE DRIVE
14	DI2	NOT USED
15	DI3	CONSTANT SPEED 1: (PAR 1202)
16	DI4	START ENABLE 1: DEACTIVATION STOPS THE DRIVE
17	DI5	NOT USED
18	DI6	NOT USED (PROGRAMMABLE FOR FIREMENS OVERRIDE SEE GROUP 17)

19	RO1C	RELAY OUTPUT 1 (PAR 1401)
20	RO1A	DEFAULT OPERATIONS
21	RO1B	READY=>19 CONNECTED TO 21
22	RO2C	RELAY OUTPUT 2 (PAR 1402)
23	RO2A	DEFAULT OPERATIONS
24	RO2B	RUNNING=>22 CONNECTED TO 24
25	RO3C	RELAY OUTPUT 3 (PAR 1403)
26	RO3A	DEFAULT OPERATIONS
27	RO3B	FAULT(-1)=>25 CONNECTED TO 27

RS485 CONNECTION

SCR	28
B	29
A	30
AGND	31
SCR	32

A CONTACT CLOSURE BETWEEN 10 AND 13 CAUSES THE DRIVE TO START. (10 TO 16 MUST BE CLOSED)

A CONTACT CLOSURE BETWEEN 10 AND 15 WILL CAUSE DRIVE TO RUN AT A PRESET SPEED. SET PARAMETER 1202 TO DESIRED SPEED.

A CONTACT CLOSURE BETWEEN 10 AND 16 WILL ENABLE THE MOTOR TO RUN.

TERMINAL #

10	24V	AUXILIARY VOLTAGE OUTPUT +24VDC
11	GND	COMMON FOR DI RETURN SIGNALS
12	DCOM1	DIGITAL INPUT COMMON FOR ALL
13	DI1	START/STOP: ACTIVATIONS STARTS THE DRIVE
14	DI2	NOT USED
15	DI3	CONSTANT SPEED 1: (PAR 1202)
16	DI4	START ENABLE 1: DEACTIVATION STOPS THE DRIVE

RUN
SAFETIES

EXTERNAL SPEED REFERENCE

O-10 VDC
4-20mA

1	SCR
2	AI1
3	AGND

312K OHM IMPEDANCE
100 OHM IMPEDANCE

AI1 ANALOG INPUT
AI1 0-10VDC — NO — OFF
AI1 ANALOG INPUT
AI1 4-20mA — NO — ON

FAULT RELAY

25	RO3C	RELAY OUTPUT 3 PROGRAMABLE DEFAULT "FAULT(-1)"
26	RO3A	
27	RO3B	

CONTACT RATING 12-250 VAC
30VDC 10mA-6A

OUTPUT SIGNAL

O-20mA
500 OHM

1	SCR
7	AO1
9	AGND

PROGRAMMED FOR FREQUENCY

OUTPUT CONTACT

22	RO2C	RELAY OUTPUT 2 PROGRAMABLE DEFAULT "RUNNING"
23	RO2A	
24	RO2B	

CONTACT RATING 12-250 VAC
30VDC 10mA-6A

- TERMINAL POINT
- REMOTE DEVICE (BY OTHERS)
- OPTIONAL PANEL COMPONENTS
- FIELD WIRING
- WIRE PER TRANSFORMER LABEL PER VOLTAGE.
* USE MINIMUM 75°C COPPER WIRE ONLY

PRODUCT DRAWING

YORK Solution XT Field Wiring
MODEL:
NOT FOR CONSTRUCTION

Project Name: Adams Fairacre Farms
Location:
Engineer:
Contractor:
For:

Sold To:
Cust Purch Order#:
Contract#:

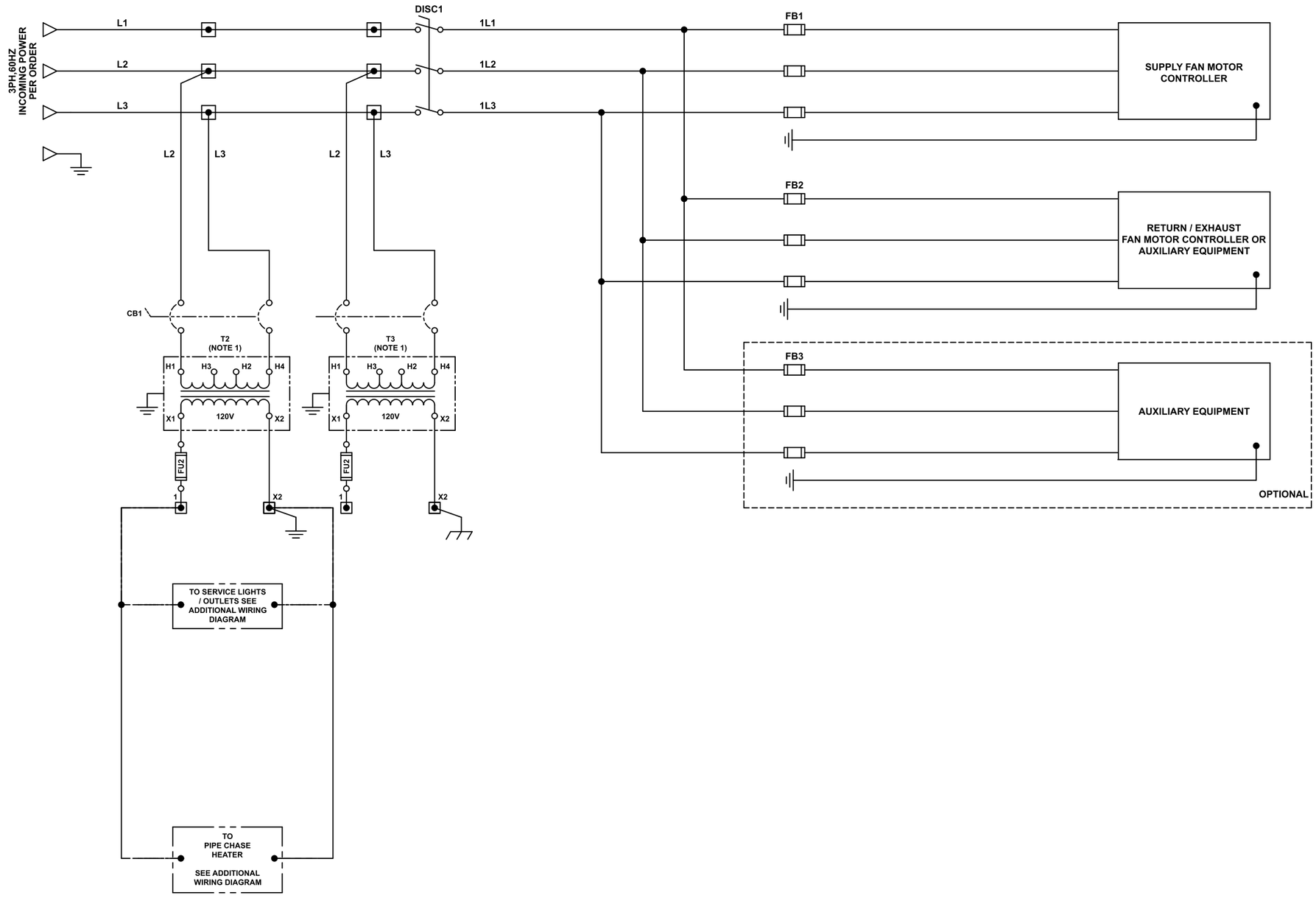
UNIT TAG: AHU-1 - Sheet 3

Date: 6/8/2021 16:26:23
Version:
Form No.: 100.09-EG1
Dwg. Lev.: 12/03
Dwg. Scale: NTS

Serial Number:
SQ Database Number:
YORKworks Release:
Dwg. Name:
Dwg. Location:

Johnson Controls

YORKworks Version: 21.01b Drawing Generator Version : 01:00:21068



NOTES:

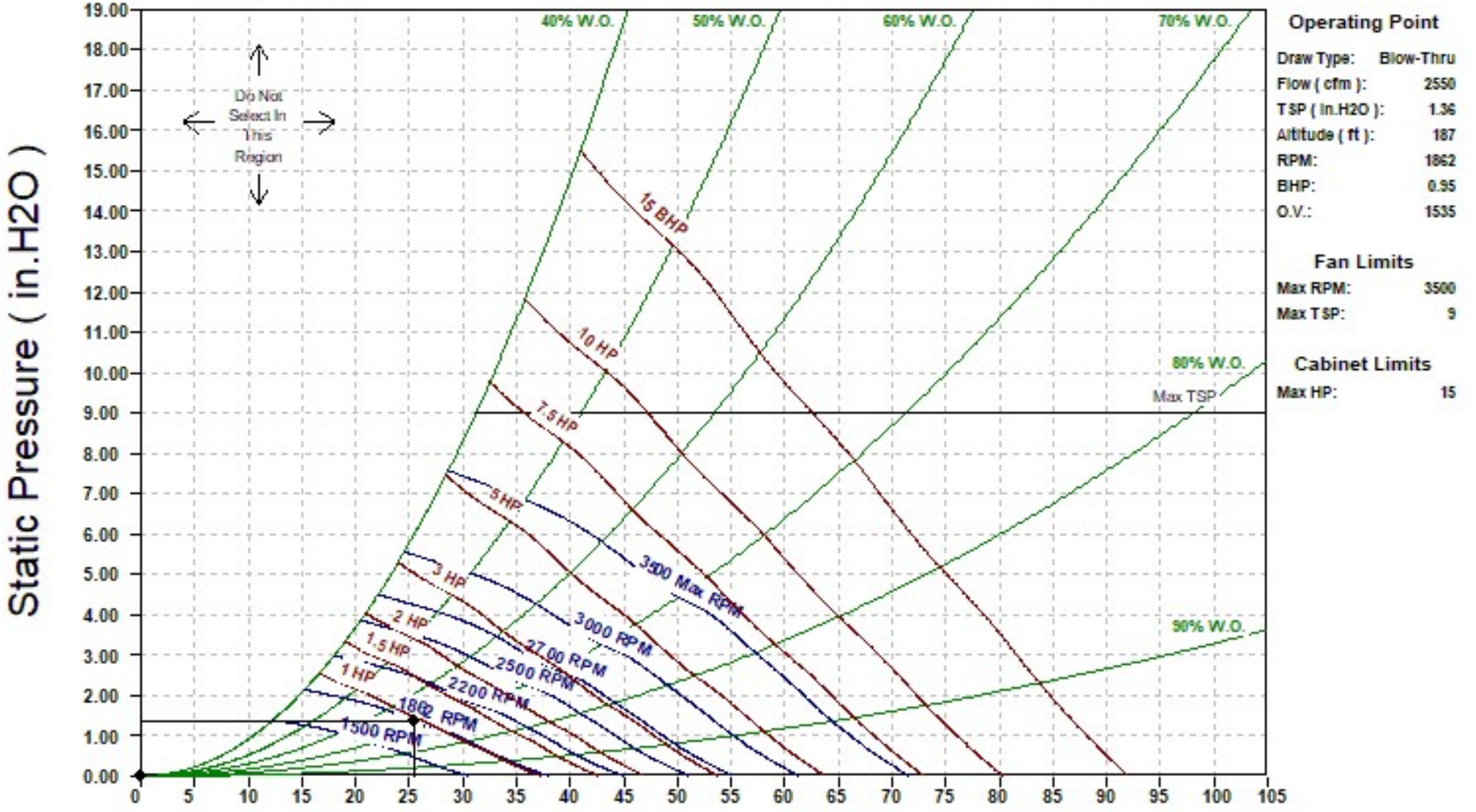
- ⊙ - TERMINAL POINT
- ▲ - REMOTE DEVICE (BY OTHERS)
- ---------- - FIELD WIRING
- 1 - WIRE PER TRANSFORMER LABEL PER VOLTAGE.
- AUXILIARY EQUIPMENT - MAY BE DEFINED AS FOLLOWS
  - ELECTRIC HEAT
  - GAS FIRED HEAT
  - ENERGY WHEEL MOTOR CONTROLLER

PRODUCT DRAWING YORK Solution XT Field Wiring MODEL: **NOT FOR CONSTRUCTION**	Project Name: Adams Fairacre Farms Location: Engineer: Contractor: For:	Sold To: Cust Purch Order#: Contract#: UNIT TAG: AHU-1 - Sheet 4	Date: 6/8/2021 16:26:23 Version: Form No.: 100.09-EG1 Dwg. Lev.: 12/03 Dwg. Scale: NTS	Serial Number: SQ Database Number: YORKworks Release: Dwg. Name: Dwg. Location:	Johnson Controls

Johnson Controls

Solution XT Fan Rating Curve

Project Name	Unit Tag	Qty	Model	Seg	Fan Type	Class	Size
Adams Fairacre Farms	AHU-1	1	XTI-39x57	FR	AF	S	12-12



Operating Point

Draw Type:	Blow-Thru
Flow (cfm):	2550
TSP (in.H2O):	1.36
Altitude (ft):	187
RPM:	1862
BHP:	0.95
O.V.:	1535

Fan Limits

Max RPM:	3500
Max TSP:	9

Cabinet Limits

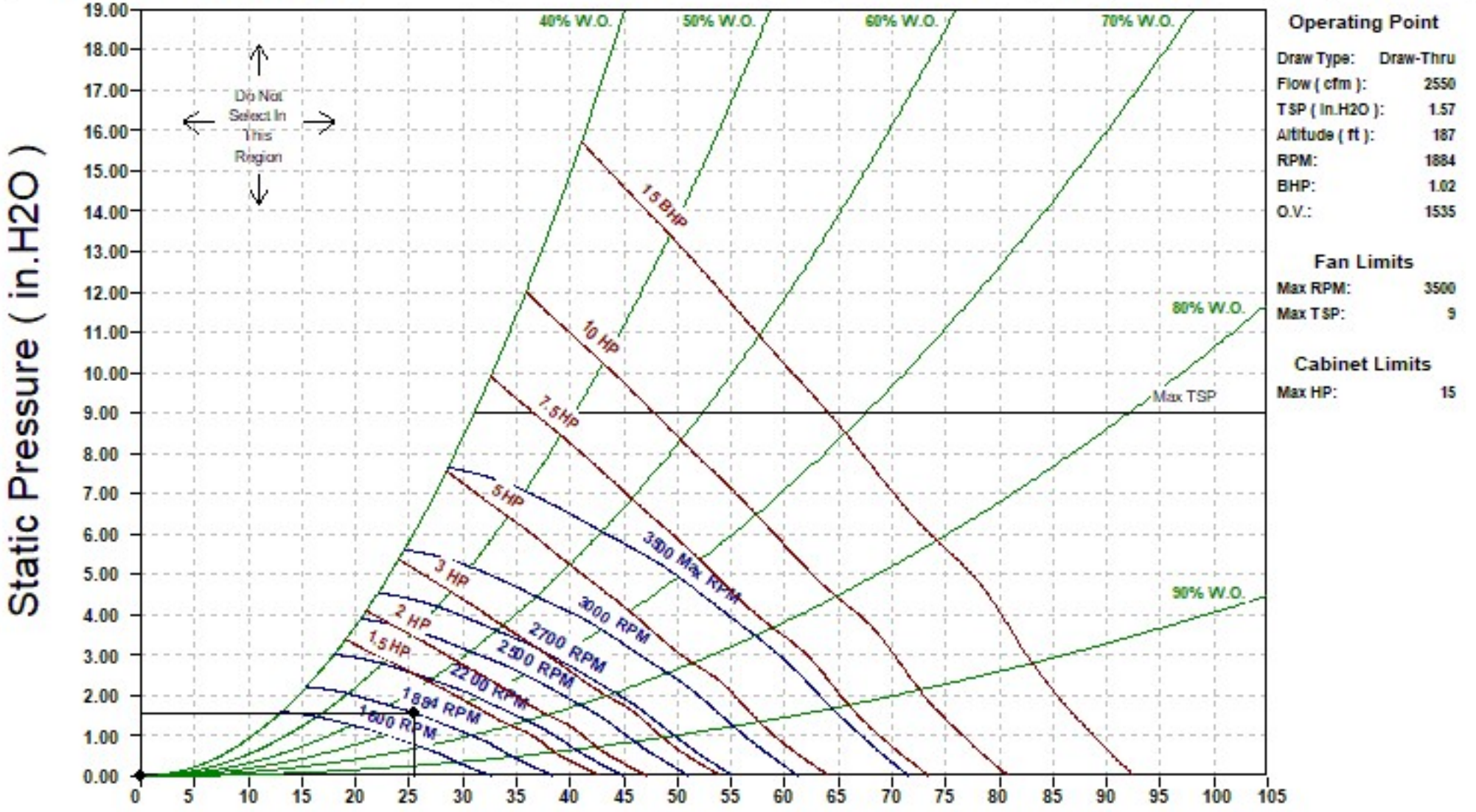
Max HP:	15

Printed: 02/18/22 @ 13:43:56
Unit Folder:

Johnson Controls

Solution XT Fan Rating Curve

Project Name	Unit Tag	Qty	Model	Seg	Fan Type	Class	Size
Adams Fairacre Farms	AHU-1	1	XTI-39x57	FS	AF	II	12-12



Operating Point

Draw Type:	Draw-Thru
Flow (cfm):	2550
TSP (in.H2O):	1.57
Altitude (ft):	187
RPM:	1884
BHP:	1.02
O.V.:	1535

Fan Limits

Max RPM:	3500
Max TSP:	9

Cabinet Limits

Max HP:	15

YORK® Solution™ Air Handling Unit Performance Report

Job Summary

Project Name:	Adams Fairacre Farms		
Unit Tag(s):	AHU-1		
Quantity:	1	**Environment:**	Indoor

Unit Overview

Model	Airflow (CFM)	Altitude (ft)	Operating Weight (lbs)
XTI-39x57	2,550	187	3,688

Segment Sequence

(FS HC-2 CC XA HC-1 RF EE EE FR IP)

Unit Construction

Casing Details

Segment(s)	Thickness (in)	Exterior Paint	Exterior Gauge and Material	Interior Gauge and Material	Insulation Thickness and Material	Bulkhead Material
IP , FR , EE , RF , HC-1 , XA , CC , HC-2 , FS	2	None	STD Ga. G-90 Galvanized	STD Ga. G-90 Galvanized	2" Foam	Galvanized

Base Details

Segment(s)	Base		Floor				
	Material	Paint	Gauge and Material	Paint	Insulation	Attachment	Tread Plate
IP , FR , EE , RF , HC-1 , XA , CC , HC-2 , FS	Standard Structural Steel	Standard Base Paint	STD Ga. G-90 Galvanized	None	N/A	-	None

Unit Electrical

Circuit Details

Circuit #	Component(s)	V/Ph/Hz	Full Load Amps (FLA)	Minimum Current Ampacity (MCA)	Maximum Overcurrent Protection (MOP)
1	Supply Fan Motor Control, Return Fan Motor Control, Lights and Outlets	460/3/60	8.8	11.0	12.0

Electrical Details

Minimum Unit SCCR	5 kA rms Symmetrical	**ETL Label (UL1995/NEC-2002)**	Yes
Unit Light Type		**Unit Light Switch**	
Standard LED		External	

Supply Fan(s)

Performance Details

Fan Manufacturer	Model	Class	Size	% Wheel Width	% Wheel Diameter	Quantity	Total Airflow (CFM)	Altitude (ft)	TSP (in w.g)	ESP (in w.g)	Fan Speed (RPM)	Fan Power (BHP)
Comefri	ATZAF	II	12-12	100	100	1	2,550	187	1.57	0.75	1,884	1.02

Drive Type	Drive SF	Wheel Type	Blade Type	Wheel Material	Base Material	Fan Flow Isolation	Isolation Type	Total Eficiency (%)	Outlet Velocity (ft/s)	Max Speed (RPM)	Fan Power (BHP) w/ Drive Loss
Belt Drive - Fixed	1.5	DWDI	Airfoil	Steel	Galvanized Steel	None	1" Spring	67.76	1,535	3,500	1.11

Motor Details

Type	Manufacturer	Motor Power (HP)	V/Ph/Hz	Quantity	Insulation Class	Motor Speed (RPM)	Frame Size	Full Load Amps (Amps)	Efficiency	Location
ODP	Baldor	1.5	460/3/60	1	H	1,800	145	2.20	Premium	Left

At Motor Synchronous Details

TSP (in w.g.)	Total Air Flow (CMF)	Fan Speed (RPM)	Motor Correction Factor(%)	Fan Power (BHP)	Total Eficiency (%)
1.57	2,550	1,884	86.5	1.02	67.76

Return Fan(s)

Performance Details

Fan Manufacturer	Model	Class	Size	% Wheel Width	% Wheel Diameter	Quantity	Total Airflow (CFM)	Altitude (ft)	TSP (in w.g)	ESP (in w.g)	Fan Speed (RPM)	Fan Power (BHP)
Comefri	ATZAF	S	12-12	100	100	1	2,550	187	1.36	0.75	1,862	1.0

Max RPM	Fan Power with Drive Loss (HP)	Wheel Type	Blade Type	Wheel Material	Base Material	Fan Flow Isolation	AirFlow Monitoring	Inverter Drive Balancing	Isolation Type	Thrust Restraints
3,500	1.04	DWDI	Airfoil	Steel	Galvanized Steel	None	-	-	1" Spring	-

Drive Type	Drive SF	Spare Belts	Spare Sheave	Inlet Screen	Fan Cage	Belt Guard	Lube Lines	Bearings	Fan Stand	Motor Removal Rail	Seismic Snubber
Belt Drive - Fixed	1.5	-	-	-	-	-	Extended Lube Lines	-	-	-	-

Motor Details

Type/MFG	Motor Power (HP)	V/Ph/Hz	Quantity	Insulation Class	RPM	Frame Size	FLA (Amps)	Efficiency	Location	SGR
ODP/Baldor	1.5	460/3/60	1	F	1,800	145	2.25	Premium	Left	-

Glycol Coil(s)

Performance[1] Details

Coil	Glycol Type	Glycol %	Rows	Fin Spacing (FPI)	TPC	TMBH	SMBH	EAT (°F)		LAT (°F)		Airflow (CFM)	FV (ft/min)	APD	Flow (GPM)	EWT (°F)	LWT (°F)	Fluid Vel. (ft/s)	WPD	Alt. (ft)
								DB	WB	DB	WB									
HC-1	Propylene	30%	1	13	4	138	138	61.0	-	110.6	-	2,550	271	0.03	14.5	180.0	160.0	4.2	4.4	187
CC	Propylene	30%	8	8	16	83	53	74.0	65.6	54.9	54.8	2,550	271	0.23	17.4	45.0	55.0	2.5	9.3	187
HC-2	Propylene	30%	1	8	2	55	55	55.0	-	74.6	-	2,550	271	0.01	5.8	160.0	140.0	.8	.2	187

Construction Details

Coil	Location		Offset (in)	Connection Material[3]	Connection Rotation (degrees)	Connection Type	Supply Connection (Per Coil)		Coil Stack Rack
	Coil Index[2]	Connection					Qty	Size	
HC-1	0	Left	0	Steel	0	MPT	1	1-1/2	-
CC	0	Left	0	Steel	0	MPT	1	1-1/2	-
HC-2	0	Left	0	Steel	0	MPT	1	1-1/2	-

Coil	# of Coils High	Face Type	Total Fin Height (in)	Fin Length (in)	Coil Face Area (ft²)	Fin Material	Fin Thickness (in)	Fin Type	Tube Diameter (in)	Tube Material	Tube Wall Thickness (in)

Coil	# of Coils High	Face Type	Total Fin Height (in)	Fin Length (in)	Coil Face Area (ft²)	Fin Material	Fin Thickness (in)	Fin Type	Tube Diameter (in)	Tube Material	Tube Wall Thickness (in)
HC-1	1	Full	30.00	45	9.4	AL	.006	Corrugated	1/2	Copper	.016
CC	1	Full	30.00	45	9.4	AL	.006	Corrugated	1/2	Copper	.016
HC-2	1	Full	30.00	45	9.4	AL	.006	Corrugated	1/2	Copper	.016

Coil	Coil Coating	Dry Weight (lbs)	Fluid Weight (lbs)	Fluid Volume (ft³)	Header Material	Casing Material	Intermediate Drain Pan Material	Fouling Factor (hr.ft².°F/BTU)
HC-1	-	56	13	0.2	Copper	Galvanized	-	-
CC	-	188	69	1.1	Copper	Galvanized	304 Stainless Steel	-
HC-2	-	52	13	0.2	Copper	Galvanized	-	-

Coil Notes

- [1]Performance is shown for the entire coil bank. Performance is not per coil.
- [2]Coil index indicates position in segment. Example: CC-1, index 0; Spacer, index 1; CC-2, index 2
- [3]Johnson Controls suggests using red brass or copper connectors when the coil is to be attached to a copper or brass piping system.
- All coils are rated with a fouling factor of 0.00000 hr.ft².°F/BTU unless otherwise noted
- Ratings are for coils manufactured by Johnson Controls, Inc., 507 E. Michigan St., Milwaukee WI 53202.
- Coil DLL Version: 7.7I
- BDW Tube Spacing: 1.25 x 1.08
- HC-1[1][0]: This coil is certified in accordance with the AHRI Forced-Circulation Air-Cooling and Air-Heating Coils Certification Program which is based on AHRI Standard 410 within the range of Standard rating conditions listed in Table 1 of the Standard. Certified units may be found in the AHRI Directory at www.ahridirectory.org.
- [1]Performance is shown for the entire coil bank. Performance is not per coil.
- [2]Coil index indicates position in segment. Example: CC-1, index 0; Spacer, index 1; CC-2, index 2
- [3]Johnson Controls suggests using red brass or copper connectors when the coil is to be attached to a copper or brass piping system.
- All coils are rated with a fouling factor of 0.00000 hr.ft².°F/BTU unless otherwise noted
- Ratings are for coils manufactured by Johnson Controls, Inc., 507 E. Michigan St., Milwaukee WI 53202.
- Coil DLL Version: 7.7I
- BDW Tube Spacing: 1.25 x 1.08
- CC[1][0]: This coil is certified in accordance with the AHRI Forced-Circulation Air-Cooling and Air-Heating Coils Certification Program which is based on AHRI Standard 410 within the range of Standard rating conditions listed in Table 1 of the Standard. Certified units may be found in the AHRI Directory at www.ahridirectory.org.
- [1]Performance is shown for the entire coil bank. Performance is not per coil.
- [2]Coil index indicates position in segment. Example: CC-1, index 0; Spacer, index 1; CC-2, index 2
- [3]Johnson Controls suggests using red brass or copper connectors when the coil is to be attached to a copper or brass piping system.
- All coils are rated with a fouling factor of 0.00000 hr.ft².°F/BTU unless otherwise noted
- Ratings are for coils manufactured by Johnson Controls, Inc., 507 E. Michigan St., Milwaukee WI 53202.
- Coil DLL Version: 7.7I
- BDW Tube Spacing: 1.25 x 1.08
- HC-2[1][0]: This coil is certified in accordance with the AHRI Forced-Circulation Air-Cooling and Air-Heating Coils Certification Program which is based on AHRI Standard 410 within the range of Standard rating conditions listed in Table 1 of the Standard. Certified units may be found in the AHRI Directory at www.ahridirectory.org.

Drain(s)

Details

Segment	Drain Pan		
	Liner Material	Connection Location	Liner Coating
CC	Stainless Steel	Left	None

Filter(s)

Details							
Segment	Type	Depth	Filter Loading	Media/MERV	# of Spares	Spare Filter Media	Frame Material
RF	Pre-Filter	2"	Side	Pleated 30% (MERV 8)	0	Pleated 30% (MERV 8)	Aluminum
RF	Primary Filter	4" Mini-Pleat	Side	90-95% Eff, (MERV 14)	0	90-95% Eff, (MERV 14)	Aluminum

Sizes				Filter Gauge Details		
Segment	Filter	1st Filter Size H x W (in)	1st Qty	Location	Type	Range (in w.g)
RF	Pre-Filter	24x24	2	Door	Magnehelic with Flag	0 - 2
RF	Primary Filter	24x24	2	Door	Magnehelic with Flag	0 - 2

Damper(s)

Details													
Segment	Air Path	H x W (in)	Qty	Total Face Velocity (ft/min)	Face Area	CFM	Minimum Allowable OA CFM	Damper Type	Damper Config	Model	Material	Blade Orientation	Actuator Type	Fail Position
EE	Exhaust Air	15.25 x 43.00		560		2,550	-	Control	100%	CD60	Galvanized	Parallel	-	-
EE	Outside Air	15.25 x 43.00		560		2,550		Control	100%	CD60	Galvanized	Parallel	-	-
EE	Mixed Air	15.25 x 43.00		560		2,550	-	Control	100%	CD60	Galvanized	Parallel	-	-

Door(s)

Details										
Segment(s)	Location	Swing	Hinge Location	H x W x T (in)	View Port	Test Port	Spare Gasket	Thermal Break	Safety Latch	Noncontact Safety Interlock
FR, XA, CC, FS	Left	Outward	Upstream Side	33 x 18 x 2	None	-	-	-	-	-
EE	Left	Outward	Upstream Side	33 x 24 x 2	None	-	-	-	Yes	-
EE	Left	Outward	Upstream Side	33 x 15 x 2	None	-	-	-	-	-
RF	Left	Outward	Upstream Side	33 x 10 x 2	None	-	-	-	-	-

Motor Control(s)

Details										
Segment	Type	MMP	V/Ph/Hz	Input/Output Amps*	Efficiency	Heat Loss (at 100% load)	Enclosure	Bypass	Disconnect Type	RFI/EMI EMC Filter
FR	ABB VFD ABB AYK580	-	460/3/60	3.0/3.0	87 %	55	NEMA 1	-	Fused	Yes
FS	ABB VFD ABB AYK580	-	460/3/60	3.0/3.0	87 %	55	NEMA 1	-	Fused	Yes

Details										
Segment	Type	MMP	V/Ph/Hz	Input/Output Amps*	Efficiency	Heat Loss (at 100% load)	Enclosure	Bypass	Disconnect Type	RFI/EMI EMC Filter

Notes
*Drives are rated for use below 3,000 ft and 104°F. Use Derating Charts in Air-Mod Engineering Guide Form 100.42-EGI (212) for use above these limits.
Storage Temperature: -40°F to 158°F
Humidity: MAX 95% RH non-condensing
Altitude: 3,300 ft. without derate (1% derate for each additional 330 ft.)
Overload Current Rating: 100% for 1 minute every 10 minutes.
The Class 10 trip rating of the MMP device will not withstand an across-the-line start of a fan and should not be used with VFDs with bypass circuits.
The customer must provide a platform or catwalk for accessing the power-disconnect.
Copper Conductors Only.
FR: Contains the following option: Swinging DC Line Choke (Equivalent to 5% Input Line Reactor)
FS: Contains the following option: Swinging DC Line Choke (Equivalent to 5% Input Line Reactor)

Face Velocity and Static Pressure

Summary						
Segment	Description	Face Area (sq. ft)	Airflow (CFM)	Face Velocity (ft/min)	Supply Fan Static Pressure (in w.g.)	Exhaust/Return Fan Static Pressure (in w.g.)
IP	Opening	1.4	2,550	1,800.00	0.00	0.55
FR	External Static - User Entered	0.0	2,550	0.00	0.00	0.75
EE	Opening	4.6	2,550	560.00	0.00	0.05
EE	Control Galvanized (CD60)	0.0	2,550	0.00	0.00	0.01
EE	Opening	4.6	2,550	560.00	0.05	0.00
EE	Control Galvanized (CD60)	0.0	2,550	0.00	0.01	0.00
RF	2" Pleated 30% (MERV 8)	8.0	2,550	319.00	0.14	0.00
RF	Dirty Filter Allowance - Prefilter	0.0	2,550	0.00	0.00	0.00
RF	4" Mini-Pleat 90-95% Eff, (MERV 14)	8.0	2,550	319.00	0.35	0.00
HC-1	Heating 1 rows 13 fins	9.4	2,550	271.00	0.03	0.00
CC	Cooling 8 rows 8 fins	9.4	2,550	271.00	0.23	0.00
HC-2	Heating 1 rows 8 fins	9.4	2,550	271.00	0.01	0.00
FS	External Static - User Entered	0.0	2,550	0.00	0.75	0.00
				Total	1.57	1.36

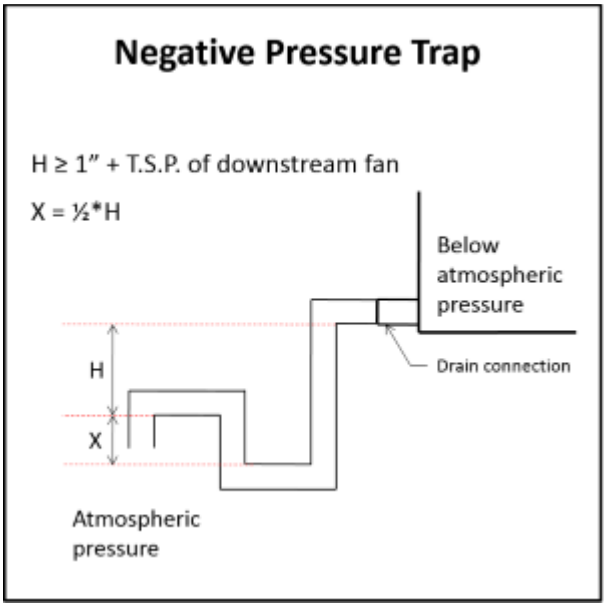
Dimensions and Weight

Details					
Segment	Description	Length[1] (in)	Width[2] (in)	Height (in)	Weight (lbs)
IP	Inlet Plenum	13	57	39	255
FR	Return Fan	36	57	39	594
EE	Economizer	54	57	39	410
RF	High Efficiency Filter	10	57	39	142
HC-1	Heating Coil	10	57	39	237
XA	Variable Length Access	18	57	39	158
CC	Variable Length Cooling Coil	35	57	39	732
HC-2	Heating Coil	10	57	39	233
FS	Supply Fan - DWDI	58	57	39	928
Overall[3]		244			3,689

Notes
[1]The length includes bottom tier segments only
[2]The width does not include coil connection extensions or door latches that extend beyond the unit casing. The width does not include the depth of any pipe chases.
[3]Unit level and other loose components may be excluded from segment weights and overall segment weights. For total unit weight reference Unit Overview.

Recommended Trap Height

Details									
Segment	Applicable Fan	Fan TSP (in w.g.)	Positive or Negative	Calculated Dimensions (in)			Recommended Dimensions (in)		Base Rail Height (in)
				H	X	H + X	H	H + X	
CC	Supply Fan	1.57	Negative	2.57	1.29	3.85	2.75	4.25	6"



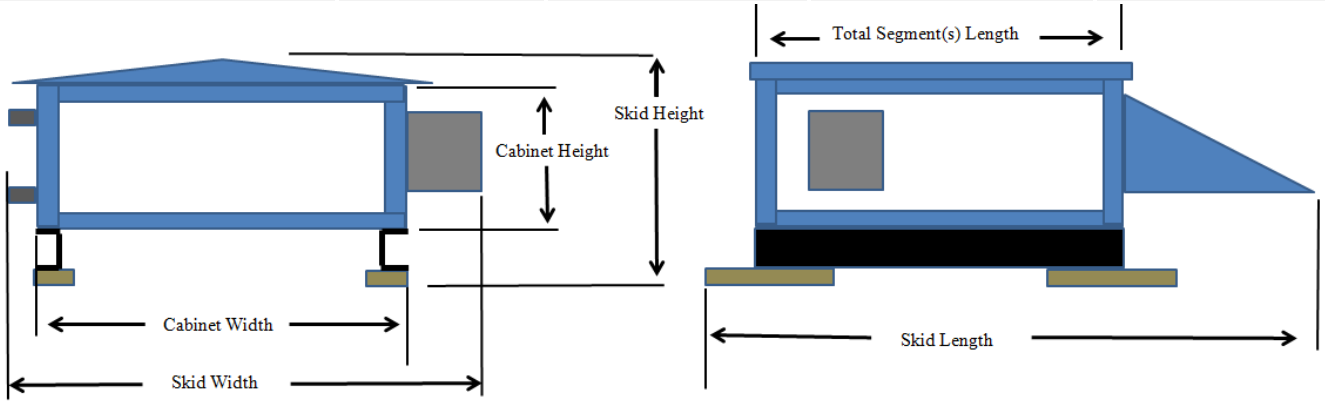
Notes
Formulas and calculations are recommendations only. Contractor shall determine actual dimensions required for each trap based on jobsite conditions, and application requirements.
Refer to the Installation Manual of the IOM for more information.

Statement of Compliance

Details
YORK® Solution XT AHU's meet IBC seismic requirements for non-critical equipment (Ip = 1.0) for locations with design spectral response Sds <= 0.43. Units must be rigid mounted.
The anchorage of the unit to the ground or building structure needs to be evaluated by and is the responsibility of the engineer of record. Specification of seismic requirements is the responsibility of the project design engineer. If formal certification is required, please contact your sales representative and/or application engineer for review. Certain application and site requirements may require additional cost and/or lead time.
Component locations are listed as Segment Hand (Unit Hand): ex. Left (Right). See SubmittalDrawing for additional details
Air handling unit parameters vary depending on conditions. Parameters such as airflows, air pressure drops, and coil capacities are shown for design conditions.

Shipping Summary

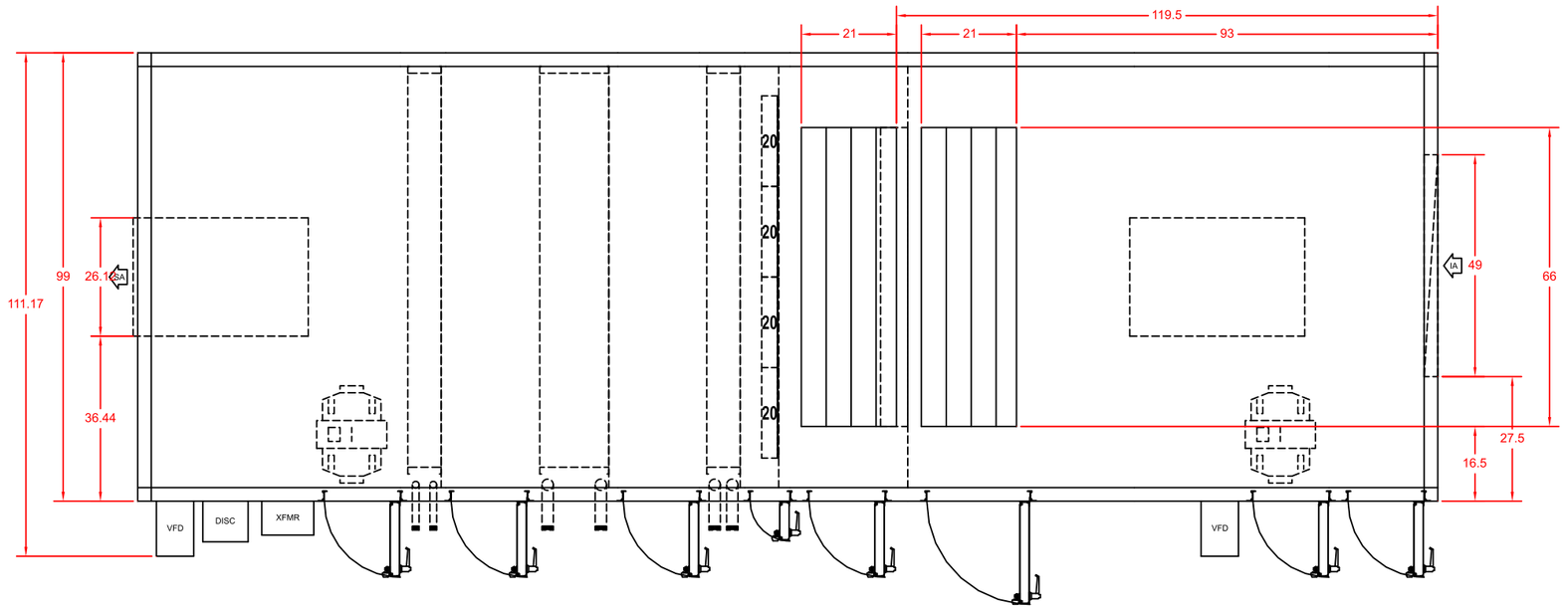
Details				
Skid	**Skid Length (in)**	**Skid Height (in)**	**Skid Width (in)**	**Skid Weight (lbs)**
(FS HC-2 CC XA HC-1 RF EE EE FR IP)	245	49	71	3,689



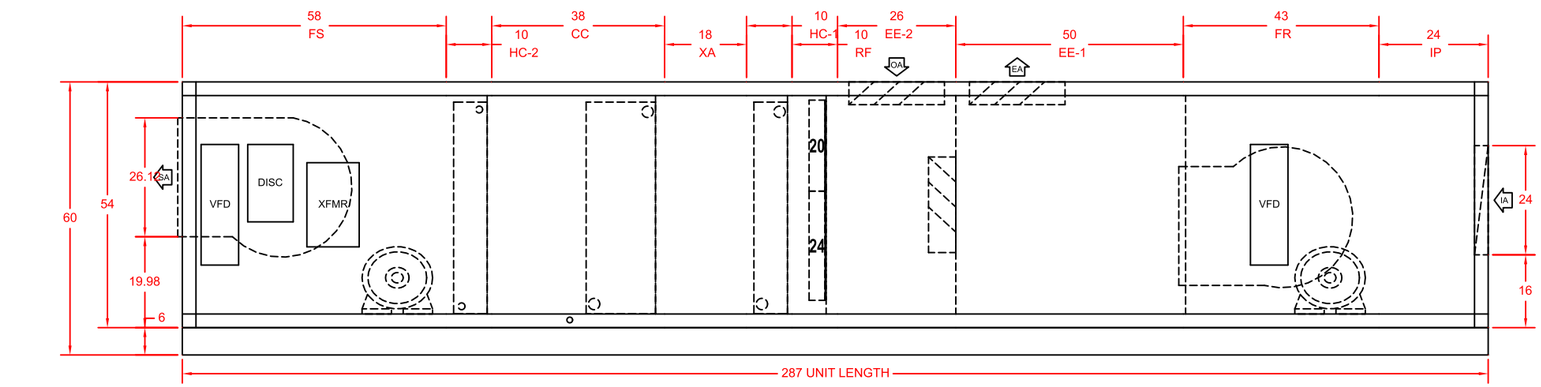
Notes
Skid Width: Total width of the shipping skid, including any items that may extend beyond the cabinet (this includes any door handles, coil connections, drain connections, lifting lugs, mounted pipe-chases, electrical/control components, tie-down brackets, side dampers).
Skid Height: Total height of the shipping skid, including any items that may extend beyond the cabinet (this includes any base-rails, shipping wood-blocks, roof peak, discharge flanges, mounted gas-furnace flue pipes).
Skid Length: Total length of the shipping skid, including any items that may extend beyond the cabinet (this includes any mounted rain-hoods, discharge flanges,tie-down brackets, shipping wood-blocks, front dampers, split connectors, electrical/control components, outrigging extensions, isolation dampers, inlet baskets).

AHU-2

60 EAST 42ND STREET
NEW YORK, NY 10165
PHONE: (646) 658-6700
FAX: (212) 370-0305



PLAN VIEW



* NOTE: MAX HEIGHT

ELEVATION VIEW

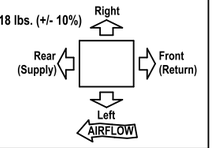
UNIT CONSTRUCTION

Model: Solution-XTI-54x99 Construction: Indoor

Motor Location:

Unit Weight: 7,118 lbs. (+/- 10%)

PLAN VIEW



NOTES

Units with a baserail and a bottom opening: Duct connection flush with the bottom of unit, not flush with bottom of baserail.

Refer to performance report for shipping split details.

Allow sufficient space around the unit for removing the access panels and various parts of the unit. A minimum clearance equal to the width of the unit must be provided on one side of the unit for removing the coil or fan assembly.

Contractor responsible for penetrations and connections of all electrical boxes and internal coil connections.

Overall dimensions account for: outdoor roof peak and overhang, motor control and/or factory package control boxes, coil connections, rain hoods, pipe chases, AMS-60 damper/EAML louver (if applicable,) base rail - in order to convey the true space requirements for the unit.

Certain items may extend beyond cabinet dimensions including: door handles, light switches, electrical boxes, lifting lugs, gas fuel system, etc.

The overall unit length includes an additional 1/4" per shipping split due to additional gasketing and split connection hardware.

Dimension tolerances: Unit (+/- 1/2"); Piping (+/- 2")

SL - Designates Shipped Loose Item(s)

PIPING CONNECTIONS
(In order of Airflow)

Segment	Type	Hand	Quantity	Supply	Return
HC	MPT	Left	1 Sup 1 Ret	2 1/2"	2 1/2"
CC	MPT	Left	1 Sup 1 Ret	2 1/2"	2 1/2"
HC	MPT	Left	1 Sup 1 Ret	1 1/2"	1 1/2"

Drain pan connection size 1 1/4" MPT SCH 40 (Connections on Left Side of unit)

SECTION LIST

SECT	DESCRIPTION
IP	Inlet Plenum
FR	Return Fan - 20-20 AF
EE-1	Economizer
EE-2	Economizer
RF	High Efficiency Filter
HC-1	Heating Coil
XA	Variable Length Access
CC	Cooling Coil
HC-2	Heating Coil
FS	Supply Fan - 20-20 AF

PRODUCT DRAWING

SOLUTION XT AIR HANDLING UNIT DETAIL
MODEL: Solution-XTI-54x99
NOT FOR CONSTRUCTION

Project Name: Adams Fairacre Farms
Location:
Engineer:
Contractor:
For:

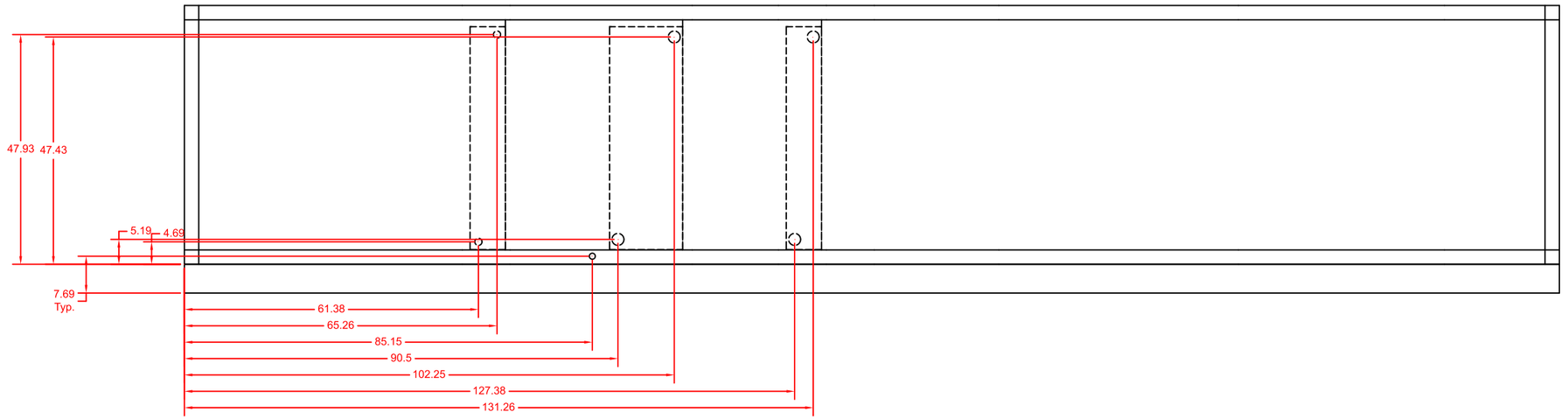
Sold To:
Cust Purch Order#:
Contract#:
UNIT TAG: AHU-2 - Sheet 1

Date: 11/15/2021 15:46:54
Version:
Form No.:
Dwg. Lev.: 5/03
Dwg. Scale: NTS

Serial Number:
SQ Database Number:
YORKworks Release:
Dwg. Name:
Dwg. Location:

Johnson Controls

YORKworks Version: 21.04 Drawing Generator Version : 01:00:16194



Coil Connections

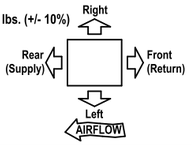
UNIT CONSTRUCTION

Model: Solution-XTI-54x99 Construction: Indoor

Motor Location:

Unit Weight: 7,118 lbs. (+/- 10%)

PLAN VIEW



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Refer to performance report for shipping split details.

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Contractor responsible for penetrations and connections of all electrical boxes and internal coil connections.

Overall dimensions account for: outdoor roof peak and overhang, motor control and/or factory package control boxes, coil connections, rain hoods, pipe chases, AMS-60 damper/EAML louver (if applicable,) base rail - in order to convey the true space requirements for the unit.

Certain items may extend beyond cabinet dimensions including: door handles, light switches, electrical boxes, lifting lugs, gas fuel system, etc.

The overall unit length includes an additional 1/4" per shipping split due to additional gasketing and split connection hardware.

Dimension tolerances: Unit (+/- 1/2"); Piping (+/- 2")

(SL) - Designates Shipped Loose Item(s)

PIPING CONNECTIONS
(In order of Airflow)

Segment	Type	Hand	Quantity	Supply	Return
HC	MPT	Left	1 Sup 1 Ret	2 1/2"	2 1/2"
CC	MPT	Left	1 Sup 1 Ret	2 1/2"	2 1/2"
HC	MPT	Left	1 Sup 1 Ret	1 1/2"	1 1/2"

Drain pan connection size 1 1/4" MPT SCH 40
(Connections on Left Side of unit)

SECTION LIST

SECT	DESCRIPTION
IP	Inlet Plenum
FR	Return Fan - 20-20 AF
EE-1	Economizer
EE-2	Economizer
RF	High Efficiency Filter
HC-1	Heating Coil
XA	Variable Length Access
CC	Cooling Coil
HC-2	Heating Coil
FS	Supply Fan - 20-20 AF

PRODUCT DRAWING
SOLUTION XT COIL CONNECTION DETAIL
MODEL: Solution-XTI-54x99
NOT FOR CONSTRUCTION

Project Name: Adams Fairacre Farms
Location:
Engineer:
Contractor:
For:

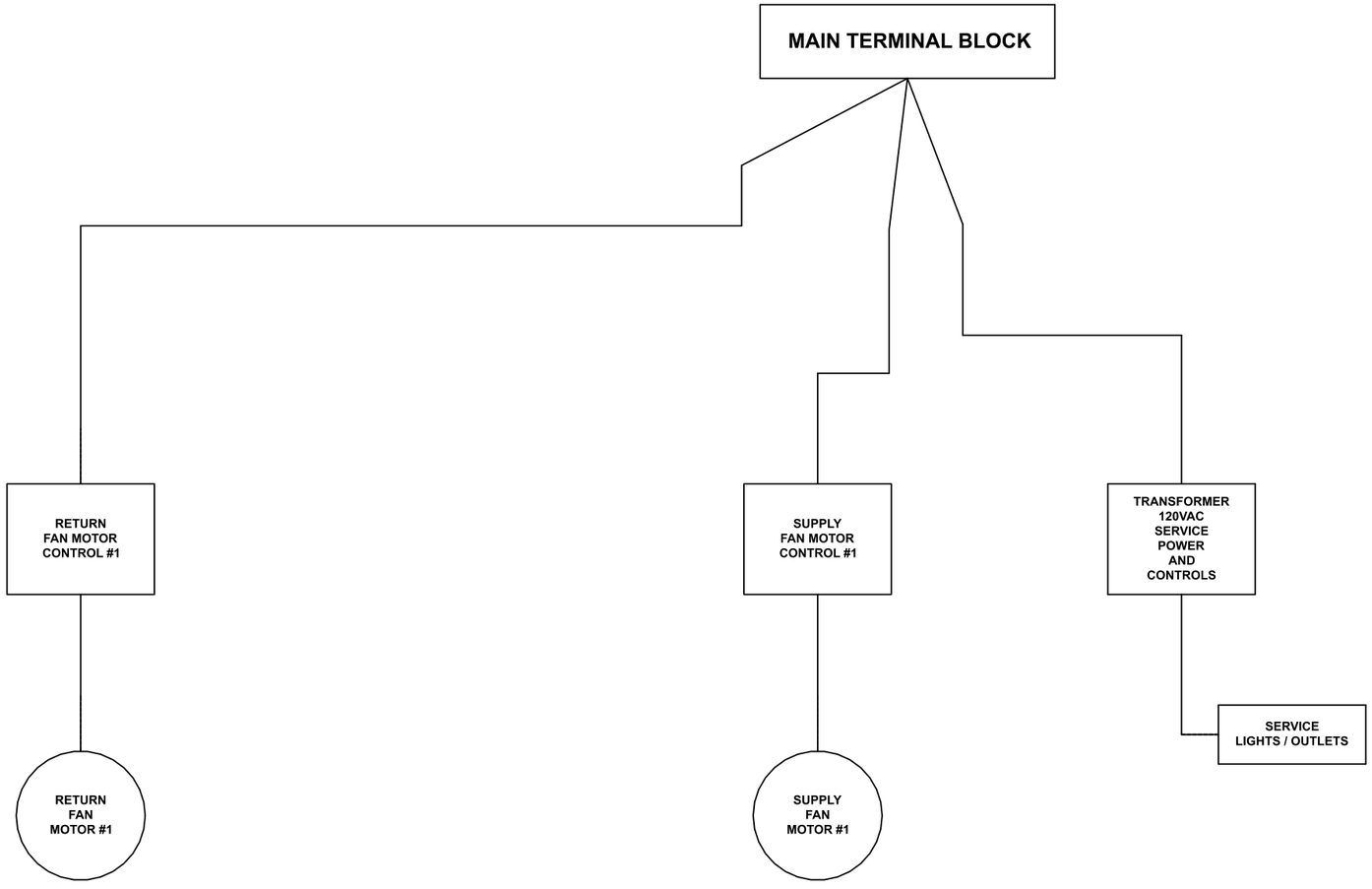
Sold To:
Cust Purch Order#:
Contract#:
UNIT TAG: AHU-2 - Sheet 2

Date: 11/15/2021 15:46:54
Version:
Form No.:
Dwg. Lev.: 5/03
Dwg. Scale: NTS

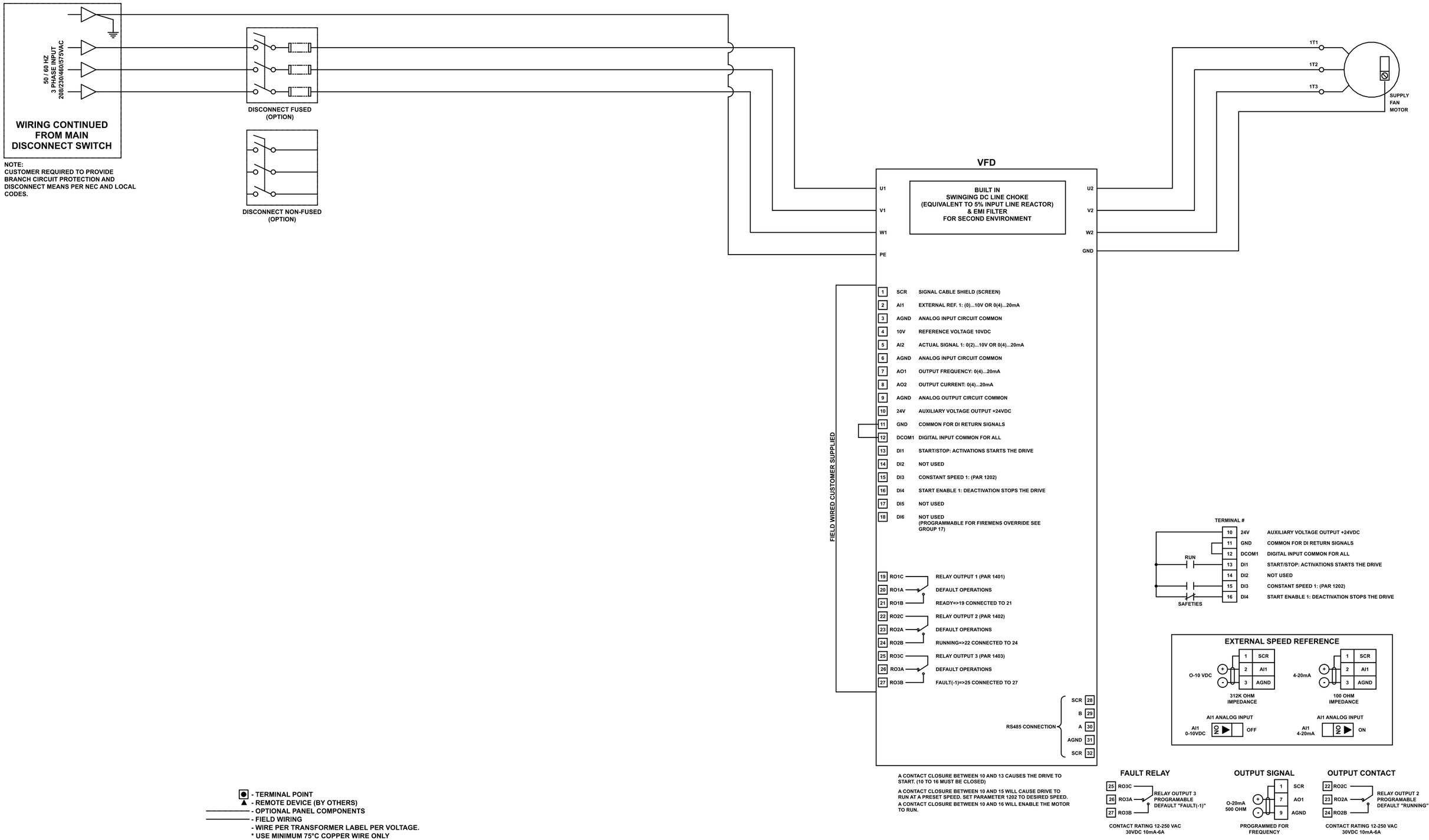
Serial Number:
SQ Database Number:
YORKworks Release:
Dwg. Name:
Dwg. Location:

Johnson Controls

YORKworks Version: 21.04 Drawing Generator Version : 01:00:16194



PRODUCT DRAWING YORK Solution XT Field Wiring MODEL: **NOT FOR CONSTRUCTION**	Project Name: Adams Fairacre Farms Location: Engineer: Contractor: For:	Sold To: Cust Purch Order#: Contract#: UNIT TAG: AHU-2 - Sheet 1	Date: 11/15/2021 15:46:54 Version: Form No.: 100.09-EG1 Dwg. Lev.: 12/03 Dwg. Scale: NTS	Serial Number: SQ Database Number: YORKworks Release: Dwg. Name: Dwg. Location:



PRODUCT DRAWING

YORK Solution XT Field Wiring
MODEL:
NOT FOR CONSTRUCTION

Project Name: Adams Fairacre Farms
Location:
Engineer:
Contractor:
For:

Sold To:
Cust Purch Order#:
Contract#:
UNIT TAG: AHU-2 - Sheet 2

Date: 11/15/2021 15:46:54
Version:
Form No.: 100.09-EG1
Dwg. Lev.: 12/03
Dwg. Scale: NTS

Serial Number:
SQ Database Number:
YORKworks Release:
Dwg. Name:
Dwg. Location:

Johnson Controls

YORKworks Version: 21.04 Drawing Generator Version : 01:00:21068

50 / 60 HZ
3 PHASE INPUT
208/230/460/575VAC

WIRING CONTINUED
FROM MAIN
DISCONNECT SWITCH

NOTE:
CUSTOMER REQUIRED TO PROVIDE BRANCH CIRCUIT PROTECTION AND DISCONNECT MEANS PER NEC AND LOCAL CODES.

DISCONNECT FUSED
(OPTION)

DISCONNECT NON-FUSED
(OPTION)

VFD

U1
V1
W1
PE

BUILT IN
SWINGING DC LINE CHOKE
(EQUIVALENT TO 5% INPUT LINE REACTOR)
& EMI FILTER
FOR SECOND ENVIRONMENT

U2
V2
W2
GND

1T1
1T2
1T3

RETURN / EXHAUST
FAN
MOTOR

FIELD WIRED CUSTOMER SUPPLIED POWER SUPPLIED

1	SCR	SIGNAL CABLE SHIELD (SCREEN)
2	AI1	EXTERNAL REF. 1: (0)...10V OR 0(4)...20mA
3	AGND	ANALOG INPUT CIRCUIT COMMON
4	10V	REFERENCE VOLTAGE 10VDC
5	AI2	ACTUAL SIGNAL 1: 0(2)...10V OR 0(4)...20mA
6	AGND	ANALOG INPUT CIRCUIT COMMON
7	AO1	OUTPUT FREQUENCY: 0(4)...20mA
8	AO2	OUTPUT CURRENT: 0(4)...20mA
9	AGND	ANALOG OUTPUT CIRCUIT COMMON
10	24V	AUXILIARY VOLTAGE OUTPUT +24VDC
11	GND	COMMON FOR DI RETURN SIGNALS
12	DCOM1	DIGITAL INPUT COMMON FOR ALL
13	DI1	START/STOP: ACTIVATIONS STARTS THE DRIVE
14	DI2	NOT USED
15	DI3	CONSTANT SPEED 1: (PAR 1202)
16	DI4	START ENABLE 1: DEACTIVATION STOPS THE DRIVE
17	DI5	NOT USED
18	DI6	NOT USED (PROGRAMMABLE FOR FIREMENS OVERRIDE SEE GROUP 17)

19	RO1C	RELAY OUTPUT 1 (PAR 1401)
20	RO1A	DEFAULT OPERATIONS
21	RO1B	READY=>19 CONNECTED TO 21
22	RO2C	RELAY OUTPUT 2 (PAR 1402)
23	RO2A	DEFAULT OPERATIONS
24	RO2B	RUNNING=>22 CONNECTED TO 24
25	RO3C	RELAY OUTPUT 3 (PAR 1403)
26	RO3A	DEFAULT OPERATIONS
27	RO3B	FAULT(-1)=>25 CONNECTED TO 27

RS485 CONNECTION

SCR	28
B	29
A	30
AGND	31
SCR	32

A CONTACT CLOSURE BETWEEN 10 AND 13 CAUSES THE DRIVE TO START. (10 TO 16 MUST BE CLOSED)

A CONTACT CLOSURE BETWEEN 10 AND 15 WILL CAUSE DRIVE TO RUN AT A PRESET SPEED. SET PARAMETER 1202 TO DESIRED SPEED.

A CONTACT CLOSURE BETWEEN 10 AND 16 WILL ENABLE THE MOTOR TO RUN.

TERMINAL #

10	24V	AUXILIARY VOLTAGE OUTPUT +24VDC
11	GND	COMMON FOR DI RETURN SIGNALS
12	DCOM1	DIGITAL INPUT COMMON FOR ALL
13	DI1	START/STOP: ACTIVATIONS STARTS THE DRIVE
14	DI2	NOT USED
15	DI3	CONSTANT SPEED 1: (PAR 1202)
16	DI4	START ENABLE 1: DEACTIVATION STOPS THE DRIVE

RUN
SAFETIES

EXTERNAL SPEED REFERENCE

O-10 VDC
4-20mA

1	SCR
2	AI1
3	AGND

312K OHM IMPEDANCE
100 OHM IMPEDANCE

AI1 ANALOG INPUT
AI1 0-10VDC — NO — OFF
AI1 ANALOG INPUT
AI1 4-20mA — NO — ON

FAULT RELAY

25	RO3C	RELAY OUTPUT 3 PROGRAMABLE DEFAULT "FAULT(-1)"
26	RO3A	
27	RO3B	

CONTACT RATING 12-250 VAC
30VDC 10mA-6A

OUTPUT SIGNAL

O-20mA
500 OHM

1	SCR	
7	AO1	
9	AGND	

PROGRAMMED FOR FREQUENCY

OUTPUT CONTACT

22	RO2C	RELAY OUTPUT 2 PROGRAMABLE DEFAULT "RUNNING"
23	RO2A	
24	RO2B	

CONTACT RATING 12-250 VAC
30VDC 10mA-6A

- TERMINAL POINT
- REMOTE DEVICE (BY OTHERS)
- OPTIONAL PANEL COMPONENTS
- FIELD WIRING
- WIRE PER TRANSFORMER LABEL PER VOLTAGE.
* USE MINIMUM 75°C COPPER WIRE ONLY

PRODUCT DRAWING

YORK Solution XT Field Wiring
MODEL:
NOT FOR CONSTRUCTION

Project Name: Adams Fairacre Farms
Location:
Engineer:
Contractor:
For:

Sold To:
Cust Purch Order#:
Contract#:

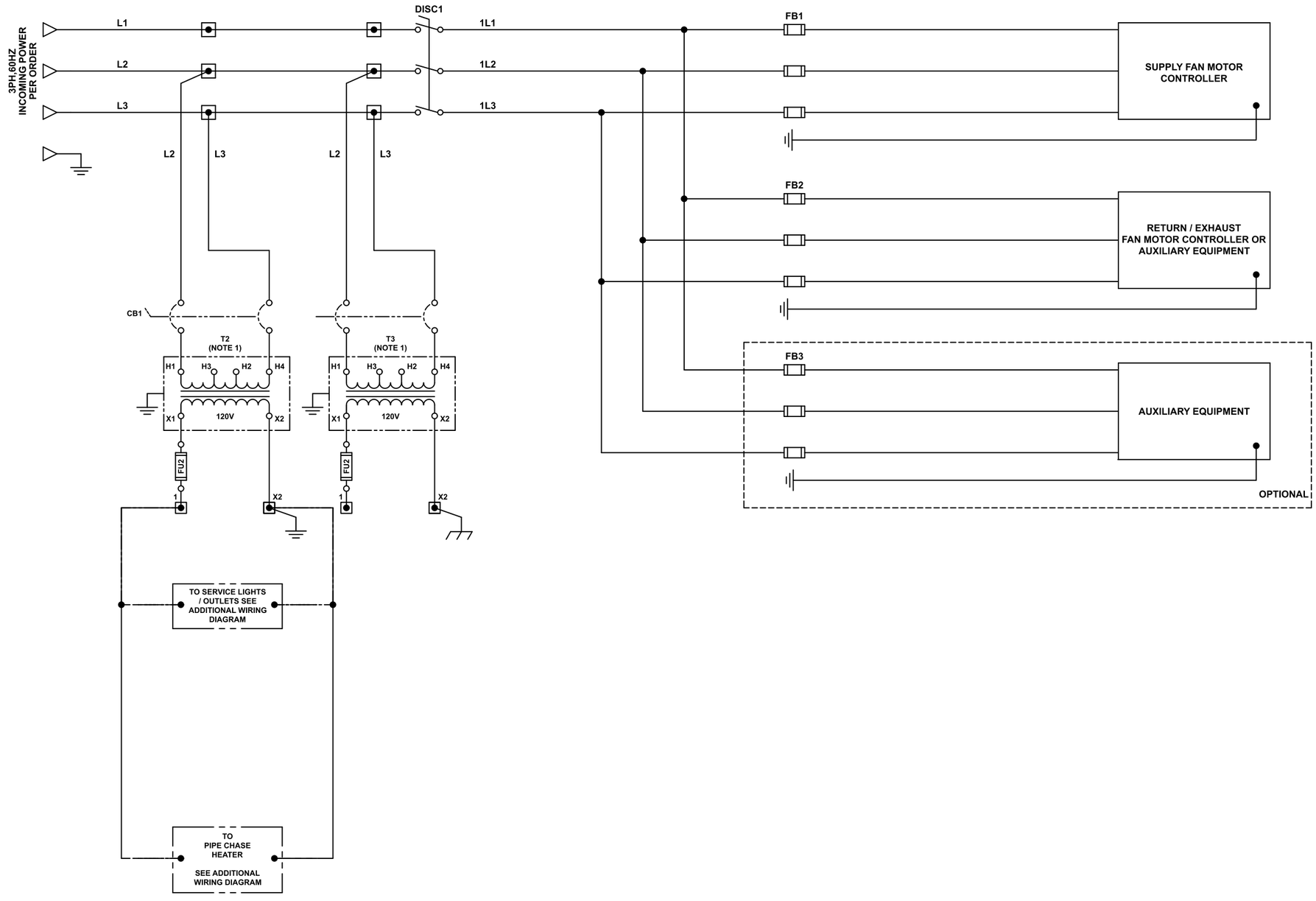
UNIT TAG: AHU-2 - Sheet 3

Date: 11/15/2021 15:46:54
Version:
Form No.: 100.09-EG1
Dwg. Lev.: 12/03
Dwg. Scale: NTS

Serial Number:
SQ Database Number:
YORKworks Release:
Dwg. Name:
Dwg. Location:

Johnson Controls

YORKworks Version: 21.04 Drawing Generator Version : 01:00:21068



NOTES:

- ⊙ - TERMINAL POINT
- ▲ - REMOTE DEVICE (BY OTHERS)
- ---------- - FIELD WIRING
- 1 - WIRE PER TRANSFORMER LABEL PER VOLTAGE.
- AUXILIARY EQUIPMENT - MAY BE DEFINED AS FOLLOWS
  - ELECTRIC HEAT
  - GAS FIRED HEAT
  - ENERGY WHEEL MOTOR CONTROLLER

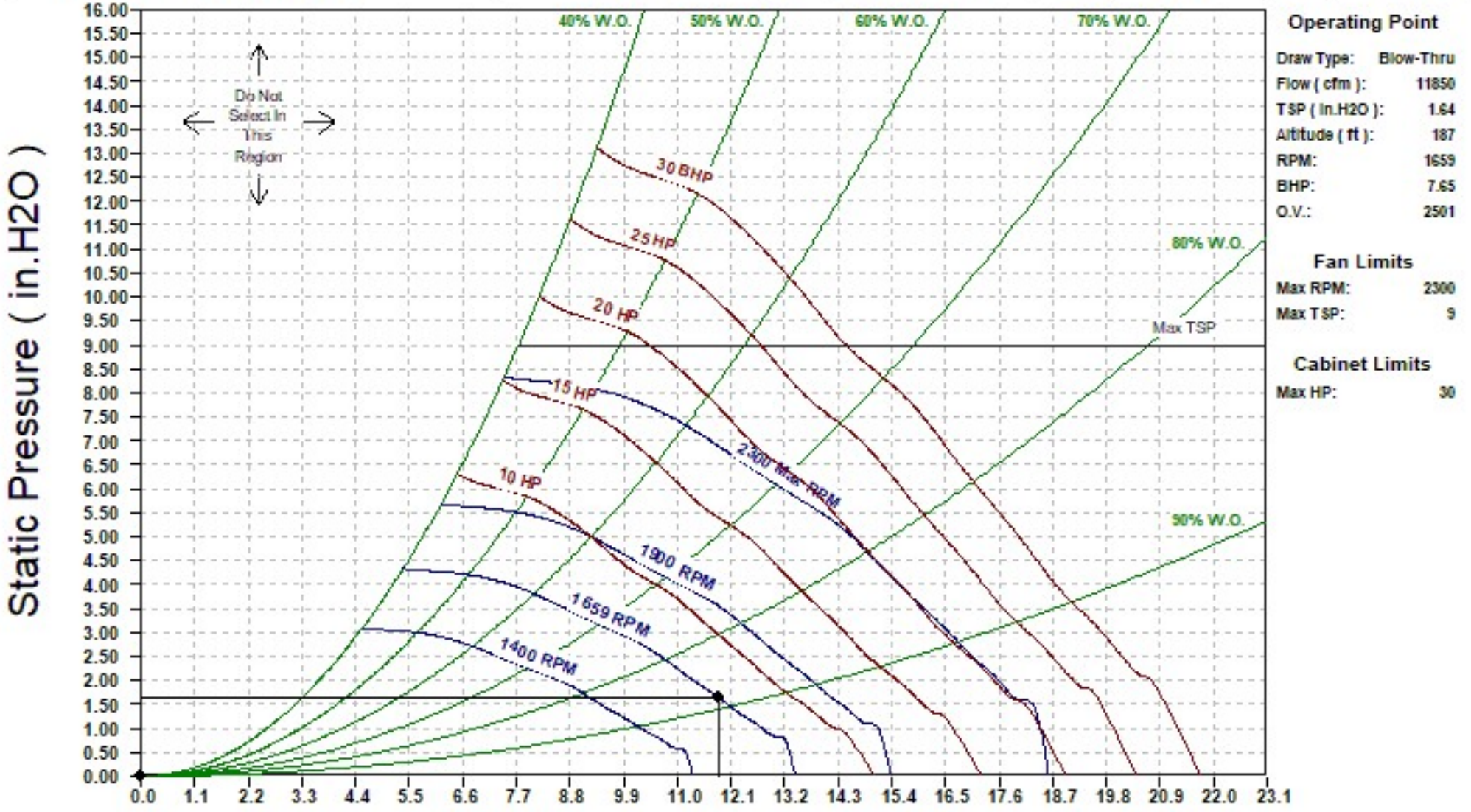
PRODUCT DRAWING YORK Solution XT Field Wiring MODEL: **NOT FOR CONSTRUCTION**	Project Name: Adams Fairacre Farms Location: Engineer: Contractor: For:	Sold To: Cust Purch Order#: Contract#: UNIT TAG: AHU-2 - Sheet 4	Date: 11/15/2021 15:46:54 Version: Form No.: 100.09-EG1 Dwg. Lev.: 12/03 Dwg. Scale: NTS	Serial Number: SQ Database Number: YORKworks Release: Dwg. Name: Dwg. Location:	Johnson Controls

YORKworks Version: 21.04 Drawing Generator Version : 01:00:21068

Johnson Controls

Solution XT Fan Rating Curve

Project Name	Unit Tag	Qty	Model	Seg	Fan Type	Class	Size
Adams Fairacre Farms	AHU-2	1	XTI-54x99	FR	AF	S	20-20



Operating Point

Draw Type:	Blow-Thru
Flow (cfm):	11850
TSP (in.H2O):	1.64
Altitude (ft):	187
RPM:	1659
BHP:	7.65
O.V.:	2501

Fan Limits

Max RPM:	2300
Max TSP:	9

Cabinet Limits

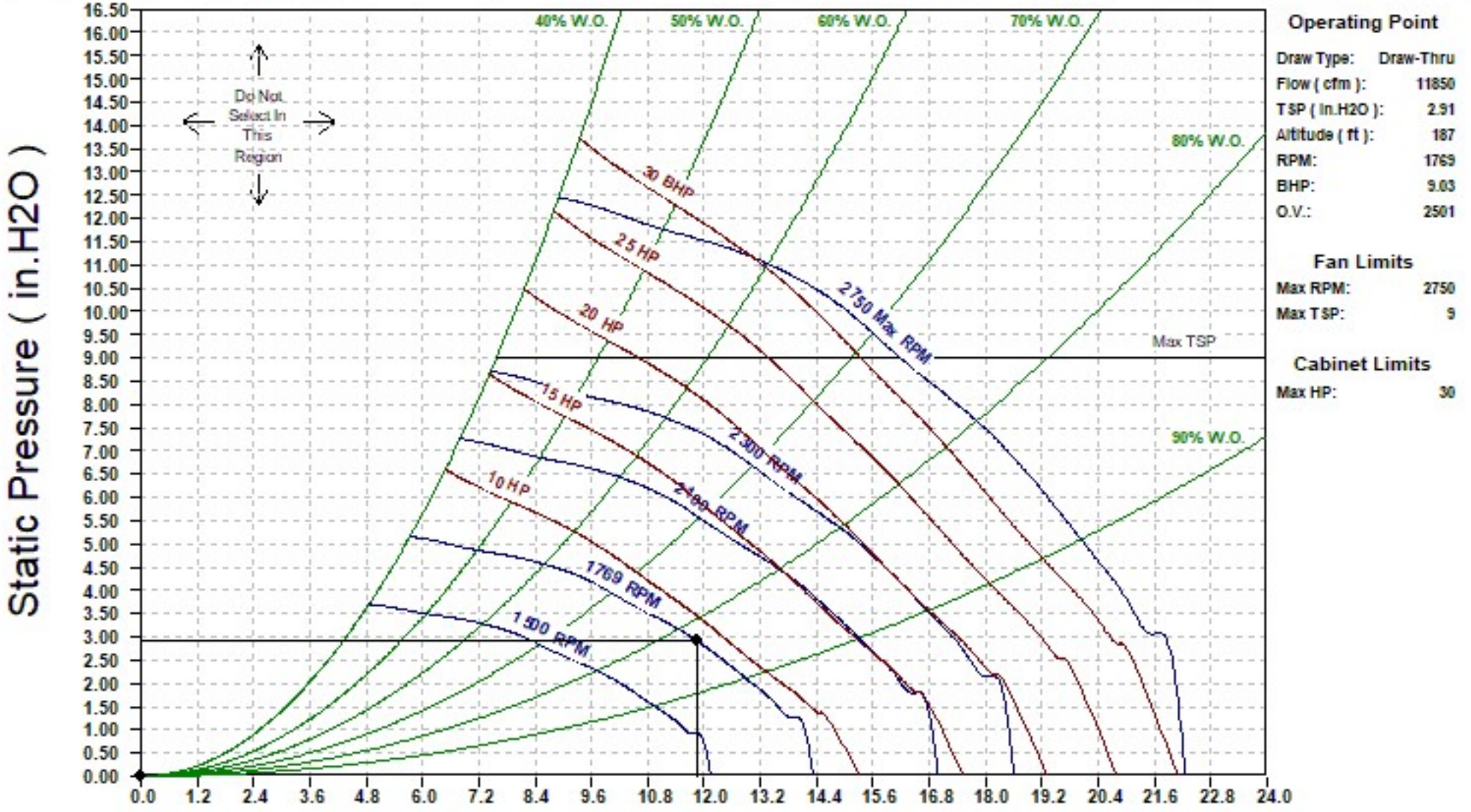
Max HP:	30

Printed: 02/18/22 @ 14:05:24
Unit Folder:

Johnson Controls

Solution XT Fan Rating Curve

Project Name	Unit Tag	Qty	Model	Seg	Fan Type	Class	Size
Adams Fairacre Farms	AHU-2	1	XTI-54x99	FS	AF	II	20-20



Operating Point

Draw Type:	Draw-Thru
Flow (cfm):	11850
TSP (in.H2O):	2.91
Altitude (ft):	187
RPM:	1769
BHP:	9.03
O.V.:	2501

Fan Limits

Max RPM:	2750
Max TSP:	9

Cabinet Limits

Max HP:	30

YORK® Solution™ Air Handling Unit Performance Report

Job Summary

Project Name:	Adams Fairacre Farms		
Unit Tag(s):	AHU-2		
Quantity:	1	**Environment:**	Indoor

Unit Overview

Model	Airflow (CFM)	Altitude (ft)	Operating Weight (lbs)
XTI-54x99	11,850	187	7,119

Segment Sequence

(FS HC-2 CC XA HC-1 RF EE EE FR IP)

Unit Construction

Casing Details

Segment(s)	Thickness (in)	Exterior Paint	Exterior Gauge and Material	Interior Gauge and Material	Insulation Thickness and Material	Bulkhead Material
IP , FR , EE , RF , HC-1 , XA , CC , HC-2 , FS	2	None	STD Ga. G-90 Galvanized	STD Ga. G-90 Galvanized	2" Foam	Galvanized

Base Details

Segment(s)	Base		Floor				
	Material	Paint	Gauge and Material	Paint	Insulation	Attachment	Tread Plate
IP , FR , EE , RF , HC-1 , XA , CC , HC-2 , FS	Standard Structural Steel	Standard Base Paint	STD Ga. G-90 Galvanized	None	N/A	-	None

Unit Electrical

Circuit Details

Circuit #	Component(s)	V/Ph/Hz	Full Load Amps (FLA)	Minimum Current Ampacity (MCA)	Maximum Overcurrent Protection (MOP)
1	Supply Fan Motor Control, Return Fan Motor Control, Lights and Outlets	460/3/60	34.5	43.2	50.0

Electrical Details

Minimum Unit SCCR	5 kA rms Symmetrical	**ETL Label (UL1995/NEC-2002)**	Yes
Unit Light Type		**Unit Light Switch**	
Standard LED		External	

Supply Fan(s)

Performance Details

Fan Manufacturer	Model	Class	Size	% Wheel Width	% Wheel Diameter	Quantity	Total Airflow (CFM)	Altitude (ft)	TSP (in w.g)	ESP (in w.g)	Fan Speed (RPM)	Fan Power (BHP)
Comefri	ATZAF	II	20-20	100	100	1	11,850	187	2.91	1.00	1,769	9.03

Drive Type	Drive SF	Wheel Type	Blade Type	Wheel Material	Base Material	Fan Flow Isolation	Isolation Type	Total Eficiency (%)	Outlet Velocity (ft/s)	Max Speed (RPM)	Fan Power (BHP) w/ Drive Loss
Belt Drive - Fixed	1.5	DWDI	Airfoil	Steel	Galvanized Steel	None	1" Spring	68.10	2,501	2,750	9.52

Motor Details

Type	Manufacturer	Motor Power (HP)	V/Ph/Hz	Quantity	Insulation Class	Motor Speed (RPM)	Frame Size	Full Load Amps (Amps)	Efficiency	Location
ODP	Baldor	15.0	460/3/60	1	H	1,800	254	17.70	Premium	Left

At Motor Synchronous Details

TSP (in w.g.)	Total Air Flow (CMF)	Fan Speed (RPM)	Motor Correction Factor(%)	Fan Power (BHP)
0.00	11,850	1,769	93.0	9.03

Return Fan(s)

Performance Details

Fan Manufacturer	Model	Class	Size	% Wheel Width	% Wheel Diameter	Quantity	Total Airflow (CFM)	Altitude (ft)	TSP (in w.g)	ESP (in w.g)	Fan Speed (RPM)	Fan Power (BHP)
Comefri	ATZAF	S	20-20	100	100	1	11,850	187	1.64	1.00	1,659	7.7

Max RPM	Fan Power with Drive Loss (HP)	Wheel Type	Blade Type	Wheel Material	Base Material	Fan Flow Isolation	AirFlow Monitoring	Inverter Drive Balancing	Isolation Type	Thrust Restraints
2,300	8.07	DWDI	Airfoil	Steel	Galvanized Steel	None	-	-	1" Spring	-

Drive Type	Drive SF	Spare Belts	Spare Sheave	Inlet Screen	Fan Cage	Belt Guard	Lube Lines	Bearings	Fan Stand	Motor Removal Rail	Seismic Snubber
Belt Drive - Fixed	1.5	-	-	-	-	-	None	-	-	-	-

Motor Details

Type/MFG	Motor Power (HP)	V/Ph/Hz	Quantity	Insulation Class	RPM	Frame Size	FLA (Amps)	Efficiency	Location	SGR
ODP/Baldor	10.0	460/3/60	1	F	1,800	215	12.50	Premium	Left	-

Glycol Coil(s)

Performance[1] Details

Coil	Glycol Type	Glycol %	Rows	Fin Spacing (FPI)	TPC	TMBH	SMBH	EAT (°F)		LAT (°F)		Airflow (CFM)	FV (ft/min)	APD	Flow (GPM)	EWT (°F)	LWT (°F)	Fluid Vel. (ft/s)	WPD	Alt. (ft)
								DB	WB	DB	WB									
HC-1	Propylene	30%	2	10	2	765	765	57.0	-	115.6	-	11,850	436	0.10	80.3	180.0	160.0	3.8	5.3	187
CC	Propylene	30%	10	8	8	387	288	76.3	64.7	53.8	53.5	11,850	436	0.59	81.6	45.0	55.0	3.1	11.8	187
HC-2	Propylene	30%	1	8	2	282	282	53.8	-	75.2	-	11,850	436	0.03	29.4	160.0	139.9	2.8	3.9	187

Construction Details

Coil	Location		Offset (in)	Connection Material[3]	Connection Rotation (degrees)	Connection Type	Supply Connection (Per Coil)		Coil Stack Rack
	Coil Index[2]	Connection					Qty	Size	
HC-1	0	Left	0	Steel	0	MPT	1	2-1/2	-
CC	0	Left	0	Steel	0	MPT	1	2-1/2	-
HC-2	0	Left	0	Steel	0	MPT	1	1-1/2	-

Coil	# of Coils High	Face Type	Total Fin Height (in)	Fin Length (in)	Coil Face Area (ft²)	Fin Material	Fin Thickness (in)	Fin Type	Tube Diameter (in)	Tube Material	Tube Wall Thickness (in)

Coil	# of Coils High	Face Type	Total Fin Height (in)	Fin Length (in)	Coil Face Area (ft²)	Fin Material	Fin Thickness (in)	Fin Type	Tube Diameter (in)	Tube Material	Tube Wall Thickness (in)
HC-1	1	Full	45.00	87	27.2	AL	.006	Corrugated	1/2	Copper	.016
CC	1	Full	45.00	87	27.2	AL	.008	Corrugated	1/2	Copper	.016
HC-2	1	Full	45.00	87	27.2	AL	.006	Corrugated	1/2	Copper	.016

Coil	Coil Coating	Dry Weight (lbs)	Fluid Weight (lbs)	Fluid Volume (ft³)	Header Material	Casing Material	Intermediate Drain Pan Material	Fouling Factor (hr.ft².°F/BTU)
HC-1	-	175	62	1.0	Copper	Galvanized	-	-
CC	-	646	245	3.8	Copper	Galvanized	304 Stainless Steel	-
HC-2	-	111	29	0.5	Copper	Galvanized	-	-

Coil Notes

- [1]Performance is shown for the entire coil bank. Performance is not per coil.
- [2]Coil index indicates position in segment. Example: CC-1, index 0; Spacer, index 1; CC-2, index 2
- [3]Johnson Controls suggests using red brass or copper connectors when the coil is to be attached to a copper or brass piping system.
- All coils are rated with a fouling factor of 0.00000 hr.ft².°F/BTU unless otherwise noted
- Ratings are for coils manufactured by Johnson Controls, Inc., 507 E. Michigan St., Milwaukee WI 53202.
- Coil DLL Version: 7.7L
- BDW Tube Spacing: 1.25 x 1.08
- HC-1[1][0]: This coil is certified in accordance with the AHRI Forced-Circulation Air-Cooling and Air-Heating Coils Certification Program which is based on AHRI Standard 410 within the range of Standard rating conditions listed in Table 1 of the Standard. Certified units may be found in the AHRI Directory at www.ahridirectory.org.
- [1]Performance is shown for the entire coil bank. Performance is not per coil.
- [2]Coil index indicates position in segment. Example: CC-1, index 0; Spacer, index 1; CC-2, index 2
- [3]Johnson Controls suggests using red brass or copper connectors when the coil is to be attached to a copper or brass piping system.
- All coils are rated with a fouling factor of 0.00000 hr.ft².°F/BTU unless otherwise noted
- Ratings are for coils manufactured by Johnson Controls, Inc., 507 E. Michigan St., Milwaukee WI 53202.
- Coil DLL Version: 7.7L
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- [1]Performance is shown for the entire coil bank. Performance is not per coil.
- [2]Coil index indicates position in segment. Example: CC-1, index 0; Spacer, index 1; CC-2, index 2
- [3]Johnson Controls suggests using red brass or copper connectors when the coil is to be attached to a copper or brass piping system.
- All coils are rated with a fouling factor of 0.00000 hr.ft².°F/BTU unless otherwise noted
- Ratings are for coils manufactured by Johnson Controls, Inc., 507 E. Michigan St., Milwaukee WI 53202.
- Coil DLL Version: 7.7L
- BDW Tube Spacing: 1.25 x 1.08
- HC-2[1][0]: This coil is certified in accordance with the AHRI Forced-Circulation Air-Cooling and Air-Heating Coils Certification Program which is based on AHRI Standard 410 within the range of Standard rating conditions listed in Table 1 of the Standard. Certified units may be found in the AHRI Directory at www.ahridirectory.org.

Drain(s)

Details

Segment	Drain Pan		
	Liner Material	Connection Location	Liner Coating
CC	Stainless Steel	Left	None

Filter(s)

Details							
Segment	Type	Depth	Filter Loading	Media/MERV	# of Spares	Spare Filter Media	Frame Material
RF	Pre-Filter	2"	Side	Pleated 30% (MERV 8)	0	Pleated 30% (MERV 8)	Aluminum
RF	Primary Filter	4" Mini-Pleat	Side	90-95% Eff, (MERV 14)	0	90-95% Eff, (MERV 14)	Aluminum

Sizes						Filter Gauge Details		
Segment	Filter	1st Filter Size H x W (in)	1st Qty	2nd Filter Size H x W (in)	2nd Qty	Location	Type	Range (in w.g)
RF	Pre-Filter	24x20	4	20x20	4	Door	Magnehelic with Flag	0 - 2
RF	Primary Filter	24x20	4	20x20	4	Door	Magnehelic with Flag	0 - 2

Damper(s)

Details													
Segment	Air Path	H x W (in)	Qty	Total Face Velocity (ft/min)	Face Area	CFM	Minimum Allowable OA CFM	Damper Type	Damper Config	Model	Material	Blade Orientation	Actuator Type	Fail Position
EE	Exhaust Air	21.00 x 66.00		1,231		11,850	-	Control	100%	CD60	Galvanized	Parallel	-	-
EE	Outside Air	21.00 x 66.00		1,231		11,850		Control	100%	CD60	Galvanized	Parallel	-	-
EE	Mixed Air	21.00 x 66.00		1,231		11,850	-	Control	100%	CD60	Galvanized	Parallel	-	-

Door(s)

Details										
Segment(s)	Location	Swing	Hinge Location	H x W x T (in)	View Port	Test Port	Spare Gasket	Thermal Break	Safety Latch	Noncontact Safety Interlock
IP, FR, EE, XA, CC, FS	Left	Outward	Upstream Side	48 x 18 x 2	None	-	-	-	-	-
EE	Left	Outward	Upstream Side	48 x 24 x 2	None	-	-	-	Yes	-
RF	Left	Outward	Upstream Side	48 x 10 x 2	None	-	-	-	-	-

Motor Control(s)

Details										
Segment	Type	MMP	V/Ph/Hz	Input/Output Amps*	Efficiency	Heat Loss (at 100% load)	Enclosure	Bypass	Disconnect Type	RFI/EMI EMC Filter
FR	ABB VFD ABB AYK580	-	460/3/60	14.0/14.0	92 %	228	NEMA 1	-	Fused	Yes
FS	ABB VFD ABB AYK580	-	460/3/60	23.0/23.0	93 %	322	NEMA 1	-	Fused	Yes

Details										
Segment	Type	MMP	V/Ph/Hz	Input/Output Amps*	Efficiency	Heat Loss (at 100% load)	Enclosure	Bypass	Disconnect Type	RFI/EMI EMC Filter

Notes
*Drives are rated for use below 3,000 ft and 104°F. Use Derating Charts in Air-Mod Engineering Guide Form 100.42-EGI (212) for use above these limits.
Storage Temperature: -40°F to 158°F
Humidity: MAX 95% RH non-condensing
Altitude: 3,300 ft. without derate (1% derate for each additional 330 ft.)
Overload Current Rating: 100% for 1 minute every 10 minutes.
The Class 10 trip rating of the MMP device will not withstand an across-the-line start of a fan and should not be used with VFDs with bypass circuits.
The customer must provide a platform or catwalk for accessing the power-disconnect.
Copper Conductors Only.
FR: Contains the following option: Swinging DC Line Choke (Equivalent to 5% Input Line Reactor)
FS: Contains the following option: Swinging DC Line Choke (Equivalent to 5% Input Line Reactor)

Face Velocity and Static Pressure

Summary						
Segment	Description	Face Area (sq. ft)	Airflow (CFM)	Face Velocity (ft/min)	Supply Fan Static Pressure (in w.g.)	Exhaust/Return Fan Static Pressure (in w.g.)
IP	Opening	8.2	11,850	1,451.00	0.00	0.35
FR	External Static - User Entered	0.0	11,850	0.00	0.00	1.00
EE	Opening	9.6	11,850	1,231.00	0.00	0.26
EE	Control Galvanized (CD60)	0.0	11,850	0.00	0.00	0.03
EE	Opening	9.6	11,850	1,231.00	0.26	0.00
EE	Control Galvanized (CD60)	0.0	11,850	0.00	0.03	0.00
RF	2" Pleated 30% (MERV 8)	24.4	11,850	485.00	0.26	0.00
RF	Dirty Filter Allowance - Prefilter	0.0	11,850	0.00	0.00	0.00
RF	4" Mini-Pleat 90-95% Eff, (MERV 14)	24.4	11,850	485.00	0.64	0.00
HC-1	Heating 2 rows 10 fins	27.2	11,850	436.00	0.10	0.00
CC	Cooling 10 rows 8 fins	27.2	11,850	436.00	0.59	0.00
HC-2	Heating 1 rows 8 fins	27.2	11,850	436.00	0.03	0.00
FS	External Static - User Entered	0.0	11,850	0.00	1.00	0.00
				Total	**2.91**	**1.64**

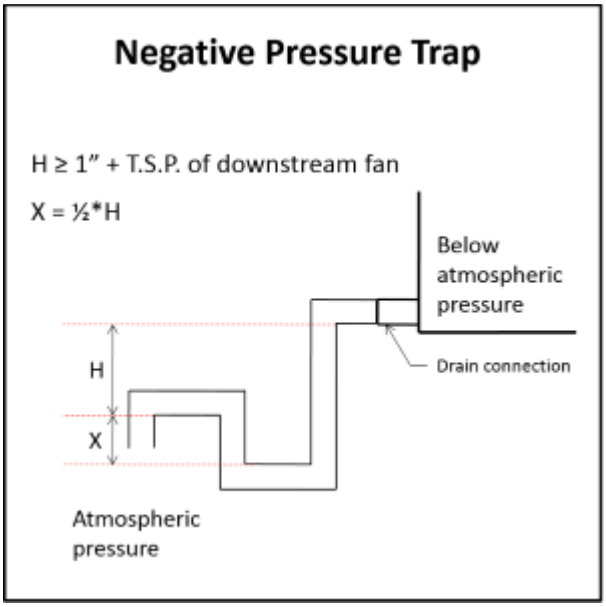
Dimensions and Weight

Details					
Segment	Description	Length[1] (in)	Width[2] (in)	Height (in)	Weight (lbs)
IP	Inlet Plenum	24	99	54	573
FR	Return Fan	43	99	54	1,243
EE	Economizer	76	99	54	891
RF	High Efficiency Filter	10	99	54	244
HC-1	Heating Coil	10	99	54	393
XA	Variable Length Access	18	99	54	224
CC	Variable Length Cooling Coil	38	99	54	1,356
HC-2	Heating Coil	10	99	54	329
FS	Supply Fan - DWDI	58	99	54	1,866
	Overall[3]	**287**			**7,119**

Notes
[1]The length includes bottom tier segments only
[2]The width does not include coil connection extensions or door latches that extend beyond the unit casing. The width does not include the depth of any pipe chases.
[3]Unit level and other loose components may be excluded from segment weights and overall segment weights. For total unit weight reference Unit Overview.

Recommended Trap Height

Details									
Segment	Applicable Fan	Fan TSP (in w.g.)	Positive or Negative	Calculated Dimensions (in)			Recommended Dimensions (in)		Base Rail Height (in)
				H	X	H + X	H	H + X	
CC	Supply Fan	2.91	Negative	3.91	1.96	5.87	4.00	6.00	6"



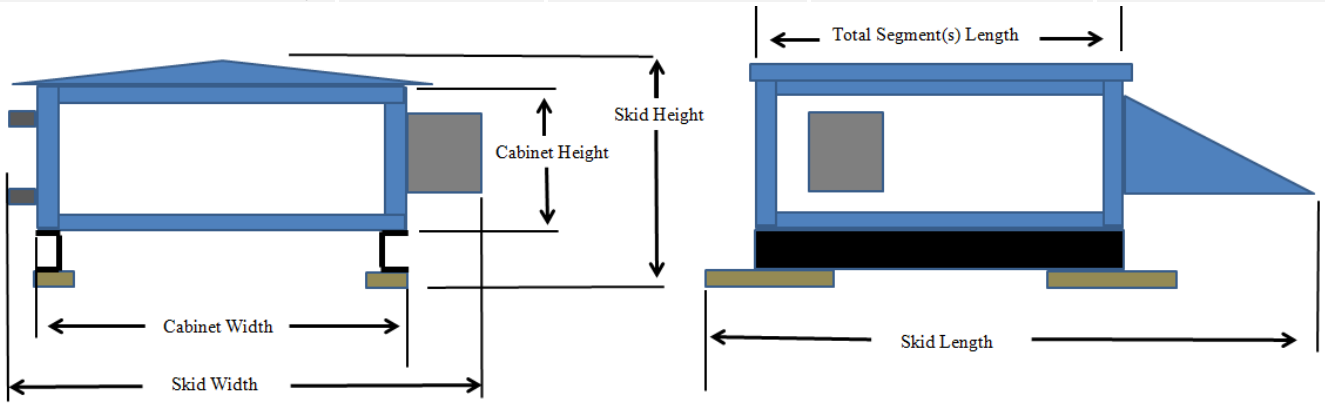
Notes
Formulas and calculations are recommendations only. Contractor shall determine actual dimensions required for each trap based on jobsite conditions, and application requirements.
Refer to the Installation Manual of the IOM for more information.

Statement of Compliance

Details
YORK® Solution XT AHU's meet IBC seismic requirements for non-critical equipment (Ip = 1.0) for locations with design spectral response Sds <= 0.43. Units must be rigid mounted.
The anchorage of the unit to the ground or building structure needs to be evaluated by and is the responsibility of the engineer of record. Specification of seismic requirements is the responsibility of the project design engineer. If formal certification is required, please contact your sales representative and/or application engineer for review. Certain application and site requirements may require additional cost and/or lead time.
Component locations are listed as Segment Hand (Unit Hand): ex. Left (Right). See SubmittalDrawing for additional details
Air handling unit parameters vary depending on conditions. Parameters such as airflows, air pressure drops, and coil capacities are shown for design conditions.

Shipping Summary

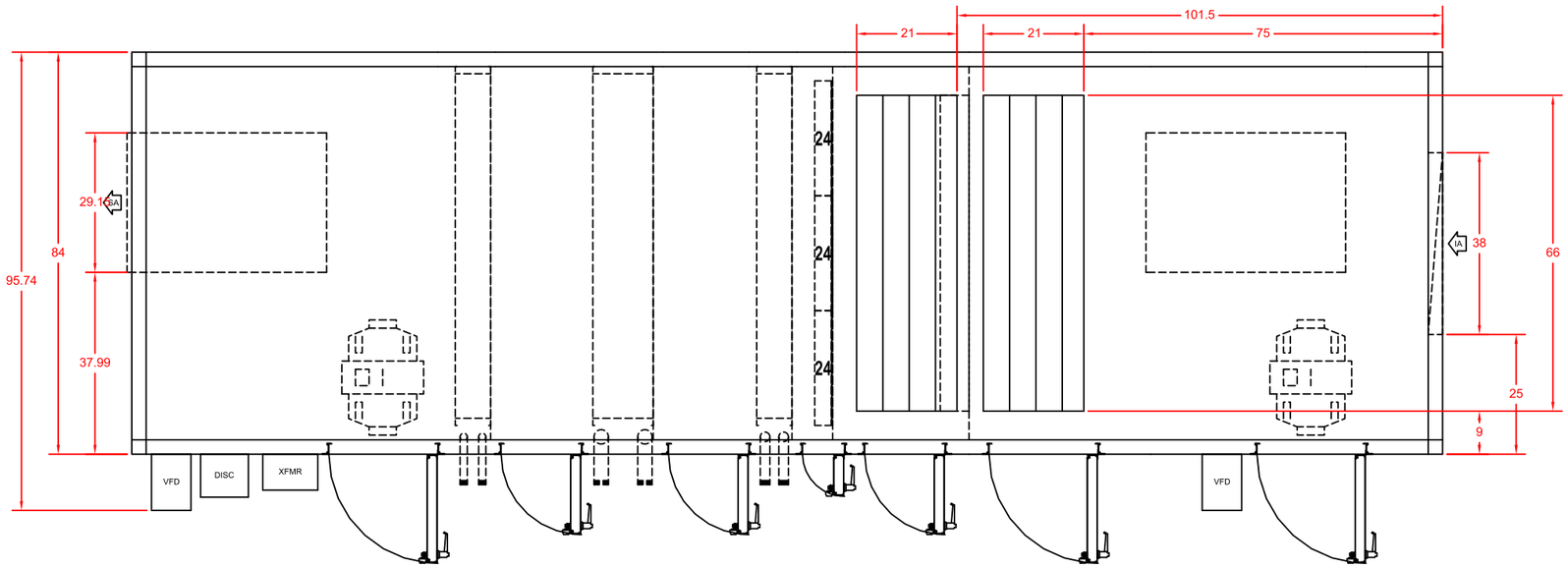
Details				
Skid	**Skid Length (in)**	**Skid Height (in)**	**Skid Width (in)**	**Skid Weight (lbs)**
(FS HC-2 CC XA HC-1 RF EE EE FR IP)	288	64	113	7,118



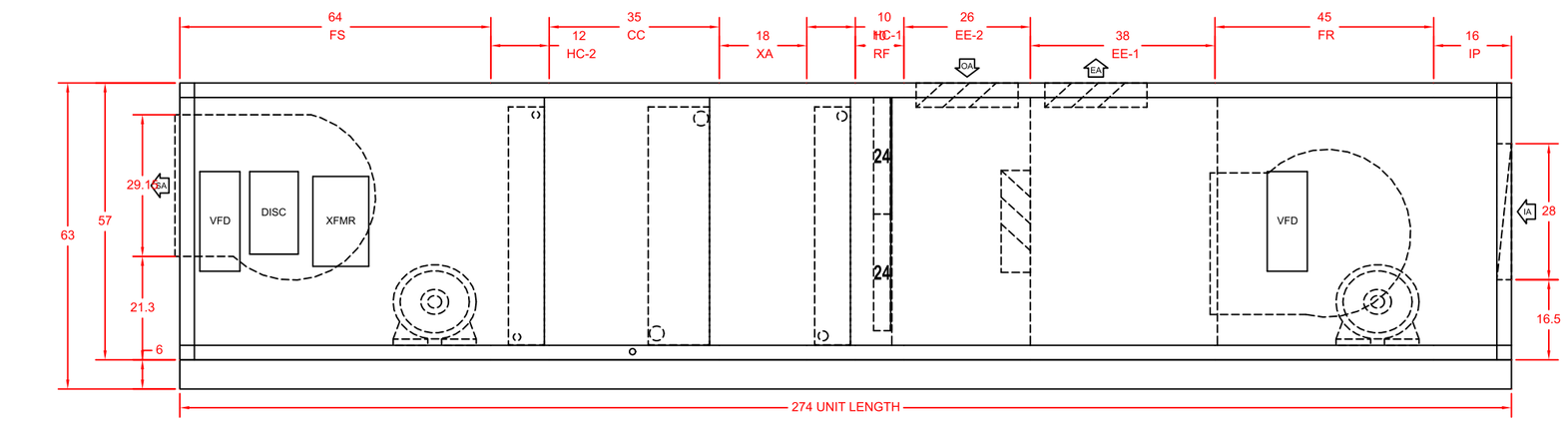
Notes
Skid Width: Total width of the shipping skid, including any items that may extend beyond the cabinet (this includes any door handles, coil connections, drain connections, lifting lugs, mounted pipe-chases, electrical/control components, tie-down brackets, side dampers).
Skid Height: Total height of the shipping skid, including any items that may extend beyond the cabinet (this includes any base-rails, shipping wood-blocks, roof peak, discharge flanges, mounted gas-furnace flue pipes).
Skid Length: Total length of the shipping skid, including any items that may extend beyond the cabinet (this includes any mounted rain-hoods, discharge flanges,tie-down brackets, shipping wood-blocks, front dampers, split connectors, electrical/control components, outrigging extensions, isolation dampers, inlet baskets).

AHU-3

60 EAST 42ND STREET
NEW YORK, NY 10165
PHONE: (646) 658-6700
FAX: (212) 370-0305



PLAN VIEW



* NOTE: MAX HEIGHT

ELEVATION VIEW

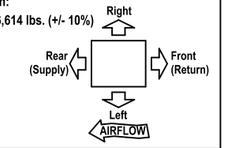
UNIT CONSTRUCTION

Model: Solution-XTI-57x84 Construction: Indoor

Motor Location:

Unit Weight: 6,614 lbs. (+/- 10%)

PLAN VIEW



NOTES

Units with a baserail and a bottom opening: Duct connection flush with the bottom of unit, not flush with bottom of baserail.

Refer to performance report for shipping split details.

Allow sufficient space around the unit for removing the access panels and various parts of the unit. A minimum clearance equal to the width of the unit must be provided on one side of the unit for removing the coil or fan assembly.

Contractor responsible for penetrations and connections of all electrical boxes and internal coil connections.

Overall dimensions account for: outdoor roof peak and overhang, motor control and/or factory package control boxes, coil connections, rain hoods, pipe chases, AMS-60 damper/EAML louver (if applicable,) base rail - in order to convey the true space requirements for the unit.

Certain items may extend beyond cabinet dimensions including: door handles, light switches, electrical boxes, lifting lugs, gas fuel system, etc.

The overall unit length includes an additional 1/4" per shipping split due to additional gasketing and split connection hardware.

Dimension tolerances: Unit (+/- 1/2"); Piping (+/- 2")

SL - Designates Shipped Loose Item(s)

PIPING CONNECTIONS
(In order of Airflow)

Segment	Type	Hand	Quantity	Supply	Return
HC	MPT	Left	1 Sup 1 Ret	2"	2"
CC	MPT	Left	1 Sup 1 Ret	3"	3"
HC	MPT	Left	1 Sup 1 Ret	1 1/2"	1 1/2"

Drain pan connection size 1 1/4" MPT SCH 40 (Connections on Left Side of unit)

SECTION LIST

SECT	DESCRIPTION
IP	Inlet Plenum
FR	Return Fan - 22-22 AF
EE-1	Economizer
EE-2	Economizer
RF	High Efficiency Filter
HC-1	Heating Coil
XA	Variable Length Access
CC	Cooling Coil
HC-2	Heating Coil
FS	Supply Fan - 22-22 AF

PRODUCT DRAWING

SOLUTION XT AIR HANDLING UNIT DETAIL
MODEL: Solution-XTI-57x84
NOT FOR CONSTRUCTION

Project Name: Adams Fairacre Farms
Location:
Engineer:
Contractor:
For:

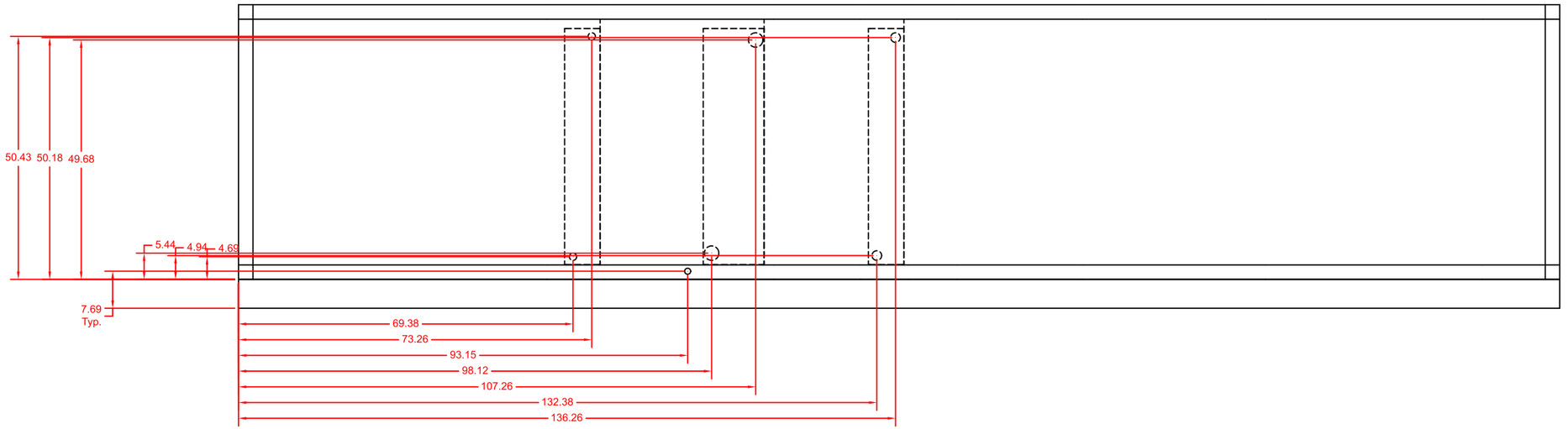
Sold To:
Cust Purch Order#:
Contract#:
UNIT TAG: AHU-3 - Sheet 1

Date: 2/18/2022 13:11:11
Version:
Form No.:
Dwg. Lev.: 5/03
Dwg. Scale: NTS

Serial Number:
SQ Database Number:
YORKworks Release:
Dwg. Name:
Dwg. Location:

Johnson Controls

YORKworks Version: 21.04c Drawing Generator Version : 01:00:21068



Coil Connections

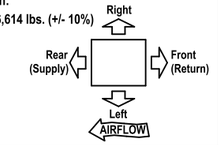
UNIT CONSTRUCTION

Model: Solution-XTI-57x84 Construction: Indoor

Motor Location:

Unit Weight: 6,614 lbs. (+/- 10%)

PLAN VIEW



NOTES

Units with a baserail and a bottom opening: Duct connection flush with the bottom of unit, not flush with bottom of baserail.

Refer to performance report for shipping split details.

Allow sufficient space around the unit for removing the access panels and various parts of the unit. A minimum clearance equal to the width of the unit must be provided on one side of the unit for removing the coil or fan assembly.

Contractor responsible for penetrations and connections of all electrical boxes and internal coil connections.

Overall dimensions account for: outdoor roof peak and overhang, motor control and/or factory package control boxes, coil connections, rain hoods, pipe chases, AMS-60 damper/EAML louver (if applicable,) base rail - in order to convey the true space requirements for the unit.

Certain items may extend beyond cabinet dimensions including: door handles, light switches, electrical boxes, lifting lugs, gas fuel system, etc.

The overall unit length includes an additional 1/4" per shipping split due to additional gasketing and split connection hardware.

Dimension tolerances: Unit (+/- 1/2"); Piping (+/- 2")

(SL) - Designates Shipped Loose Item(s)

PIPING CONNECTIONS
(In order of Airflow)

Segment	Type	Hand	Quantity	Supply	Return
HC	MPT	Left	1 Sup 1 Ret	2"	2"
CC	MPT	Left	1 Sup 1 Ret	3"	3"
HC	MPT	Left	1 Sup 1 Ret	1 1/2"	1 1/2"

Drain pan connection size 1 1/4" MPT SCH 40
(Connections on Left Side of unit)

SECTION LIST

SECT	DESCRIPTION
IP	Inlet Plenum
FR	Return Fan - 22-22 AF
EE-1	Economizer
EE-2	Economizer
RF	High Efficiency Filter
HC-1	Heating Coil
XA	Variable Length Access
CC	Cooling Coil
HC-2	Heating Coil
FS	Supply Fan - 22-22 AF

PRODUCT DRAWING
SOLUTION XT COIL CONNECTION DETAIL
MODEL: Solution-XTI-57x84
NOT FOR CONSTRUCTION

Project Name: Adams Fairacre Farms
Location:
Engineer:
Contractor:
For:

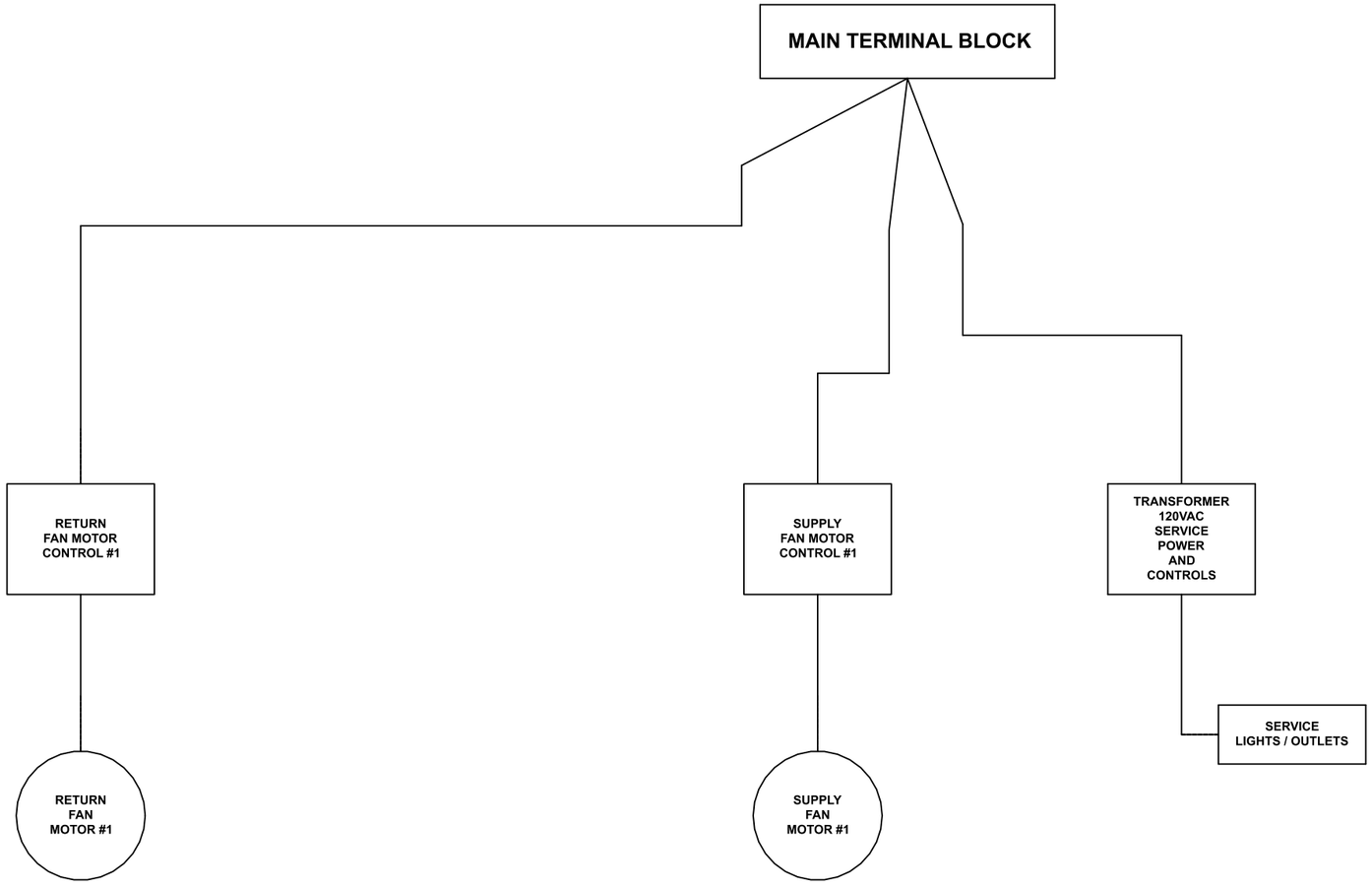
Sold To:
Cust Purch Order#:
Contract#:
UNIT TAG: AHU-3 - Sheet 2

Date: 2/18/2022 13:11:11
Version:
Form No.:
Dwg. Lev.: 5/03
Dwg. Scale: NTS

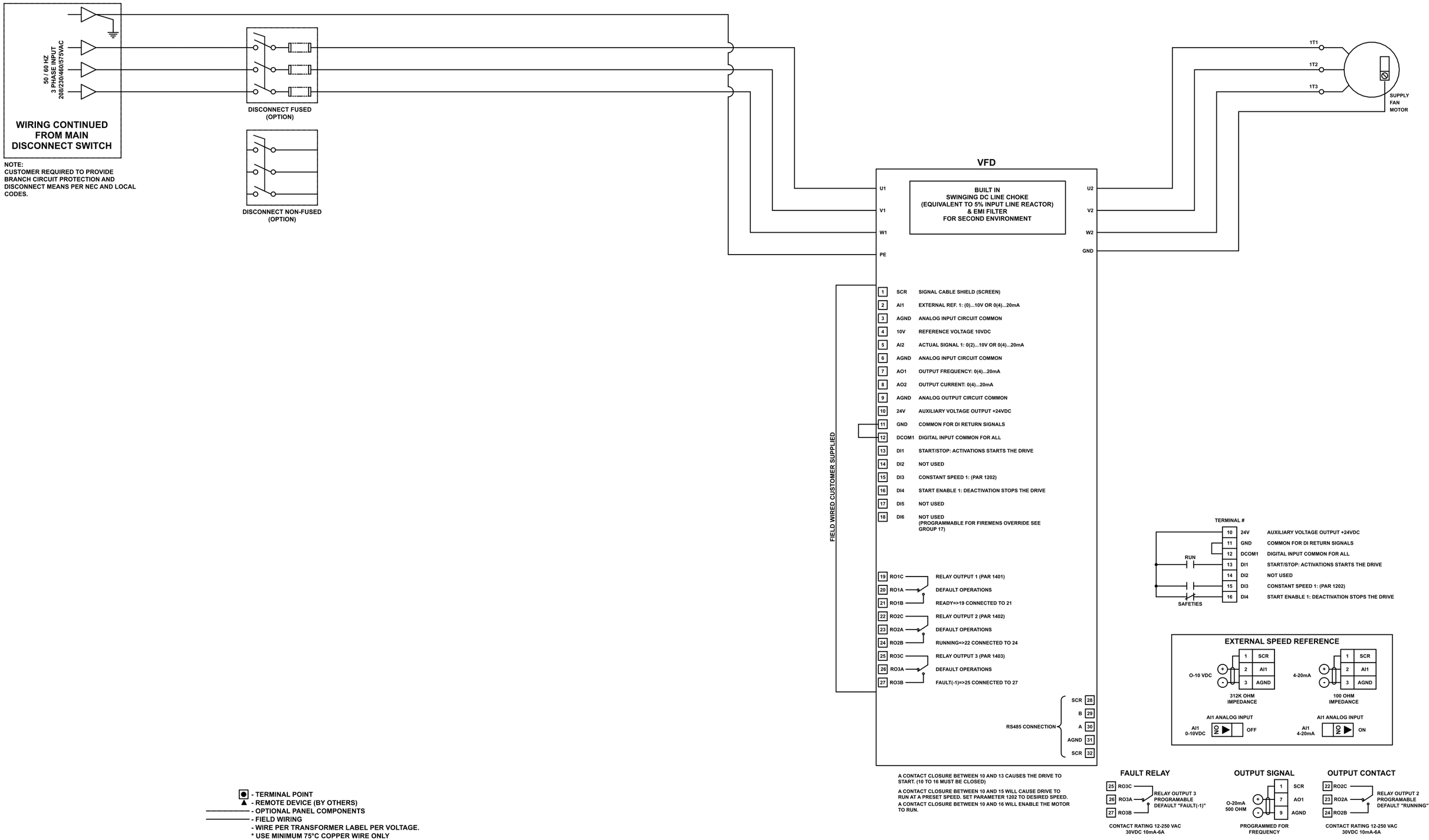
Serial Number:
SQ Database Number:
YORKworks Release:
Dwg. Name:
Dwg. Location:

Johnson Controls

YORKworks Version: 21.04c Drawing Generator Version : 01:00:21068



PRODUCT DRAWING YORK Solution XT Field Wiring MODEL: **NOT FOR CONSTRUCTION**	Project Name: Adams Fairacre Farms Location: Engineer: Contractor: For:	Sold To: Cust Purch Order#: Contract#: UNIT TAG: AHU-3 - Sheet 1	Date: 2/18/2022 13:11:11 Version: Form No.: 100.09-EG1 Dwg. Lev.: 12/03 Dwg. Scale: NTS	Serial Number: SQ Database Number: YORKworks Release: Dwg. Name: Dwg. Location:	Johnson Controls



PRODUCT DRAWING

YORK Solution XT Field Wiring
MODEL:
NOT FOR CONSTRUCTION

Project Name: Adams Fairacre Farms
Location:
Engineer:
Contractor:
For:

Sold To:
Cust Purch Order#:
Contract#:
UNIT TAG: AHU-3 - Sheet 2

Date: 2/18/2022 13:11:11
Version:
Form No.: 100.09-EG1
Dwg. Lev.: 12/03
Dwg. Scale: NTS

Serial Number:
SQ Database Number:
YORKworks Release:
Dwg. Name:
Dwg. Location:

Johnson Controls

YORKworks Version: 21.04c Drawing Generator Version : 01:00:21068

50 / 60 HZ
3 PHASE INPUT
208/230/460/575VAC

WIRING CONTINUED
FROM MAIN
DISCONNECT SWITCH

NOTE:
CUSTOMER REQUIRED TO PROVIDE BRANCH CIRCUIT PROTECTION AND DISCONNECT MEANS PER NEC AND LOCAL CODES.

DISCONNECT FUSED
(OPTION)

DISCONNECT NON-FUSED
(OPTION)

VFD

U1
V1
W1
PE

BUILT IN
SWINGING DC LINE CHOKE
(EQUIVALENT TO 5% INPUT LINE REACTOR)
& EMI FILTER
FOR SECOND ENVIRONMENT

U2
V2
W2
GND

1T1
1T2
1T3

RETURN / EXHAUST
FAN
MOTOR

FIELD WIRED CUSTOMER SUPPLIED POWER SUPPLIED

1	SCR	SIGNAL CABLE SHIELD (SCREEN)
2	AI1	EXTERNAL REF. 1: (0)...10V OR 0(4)...20mA
3	AGND	ANALOG INPUT CIRCUIT COMMON
4	10V	REFERENCE VOLTAGE 10VDC
5	AI2	ACTUAL SIGNAL 1: 0(2)...10V OR 0(4)...20mA
6	AGND	ANALOG INPUT CIRCUIT COMMON
7	AO1	OUTPUT FREQUENCY: 0(4)...20mA
8	AO2	OUTPUT CURRENT: 0(4)...20mA
9	AGND	ANALOG OUTPUT CIRCUIT COMMON
10	24V	AUXILIARY VOLTAGE OUTPUT +24VDC
11	GND	COMMON FOR DI RETURN SIGNALS
12	DCOM1	DIGITAL INPUT COMMON FOR ALL
13	DI1	START/STOP: ACTIVATIONS STARTS THE DRIVE
14	DI2	NOT USED
15	DI3	CONSTANT SPEED 1: (PAR 1202)
16	DI4	START ENABLE 1: DEACTIVATION STOPS THE DRIVE
17	DI5	NOT USED
18	DI6	NOT USED (PROGRAMMABLE FOR FIREMENS OVERRIDE SEE GROUP 17)

19	RO1C	RELAY OUTPUT 1 (PAR 1401)
20	RO1A	DEFAULT OPERATIONS
21	RO1B	READY=>19 CONNECTED TO 21
22	RO2C	RELAY OUTPUT 2 (PAR 1402)
23	RO2A	DEFAULT OPERATIONS
24	RO2B	RUNNING=>22 CONNECTED TO 24
25	RO3C	RELAY OUTPUT 3 (PAR 1403)
26	RO3A	DEFAULT OPERATIONS
27	RO3B	FAULT(-1)=>25 CONNECTED TO 27

RS485 CONNECTION

SCR	28
B	29
A	30
AGND	31
SCR	32

A CONTACT CLOSURE BETWEEN 10 AND 13 CAUSES THE DRIVE TO START. (10 TO 16 MUST BE CLOSED)

A CONTACT CLOSURE BETWEEN 10 AND 15 WILL CAUSE DRIVE TO RUN AT A PRESET SPEED. SET PARAMETER 1202 TO DESIRED SPEED.

A CONTACT CLOSURE BETWEEN 10 AND 16 WILL ENABLE THE MOTOR TO RUN.

TERMINAL #

10	24V	AUXILIARY VOLTAGE OUTPUT +24VDC
11	GND	COMMON FOR DI RETURN SIGNALS
12	DCOM1	DIGITAL INPUT COMMON FOR ALL
13	DI1	START/STOP: ACTIVATIONS STARTS THE DRIVE
14	DI2	NOT USED
15	DI3	CONSTANT SPEED 1: (PAR 1202)
16	DI4	START ENABLE 1: DEACTIVATION STOPS THE DRIVE

RUN
SAFETIES

EXTERNAL SPEED REFERENCE

O-10 VDC
4-20mA

1	SCR
2	AI1
3	AGND

312K OHM IMPEDANCE
100 OHM IMPEDANCE

AI1 ANALOG INPUT
AI1 0-10VDC — NO — OFF
AI1 ANALOG INPUT
AI1 4-20mA — NO — ON

FAULT RELAY

25	RO3C	RELAY OUTPUT 3 PROGRAMABLE DEFAULT "FAULT(-1)"
26	RO3A	
27	RO3B	

CONTACT RATING 12-250 VAC
30VDC 10mA-6A

OUTPUT SIGNAL

O-20mA
500 OHM

1	SCR
7	AO1
9	AGND

PROGRAMMED FOR FREQUENCY

OUTPUT CONTACT

22	RO2C	RELAY OUTPUT 2 PROGRAMABLE DEFAULT "RUNNING"
23	RO2A	
24	RO2B	

CONTACT RATING 12-250 VAC
30VDC 10mA-6A

- TERMINAL POINT
- REMOTE DEVICE (BY OTHERS)
- OPTIONAL PANEL COMPONENTS
- FIELD WIRING
- WIRE PER TRANSFORMER LABEL PER VOLTAGE.
* USE MINIMUM 75°C COPPER WIRE ONLY

PRODUCT DRAWING

YORK Solution XT Field Wiring
MODEL:
NOT FOR CONSTRUCTION

Project Name: Adams Fairacre Farms
Location:
Engineer:
Contractor:
For:

Sold To:
Cust Purch Order#:
Contract#:

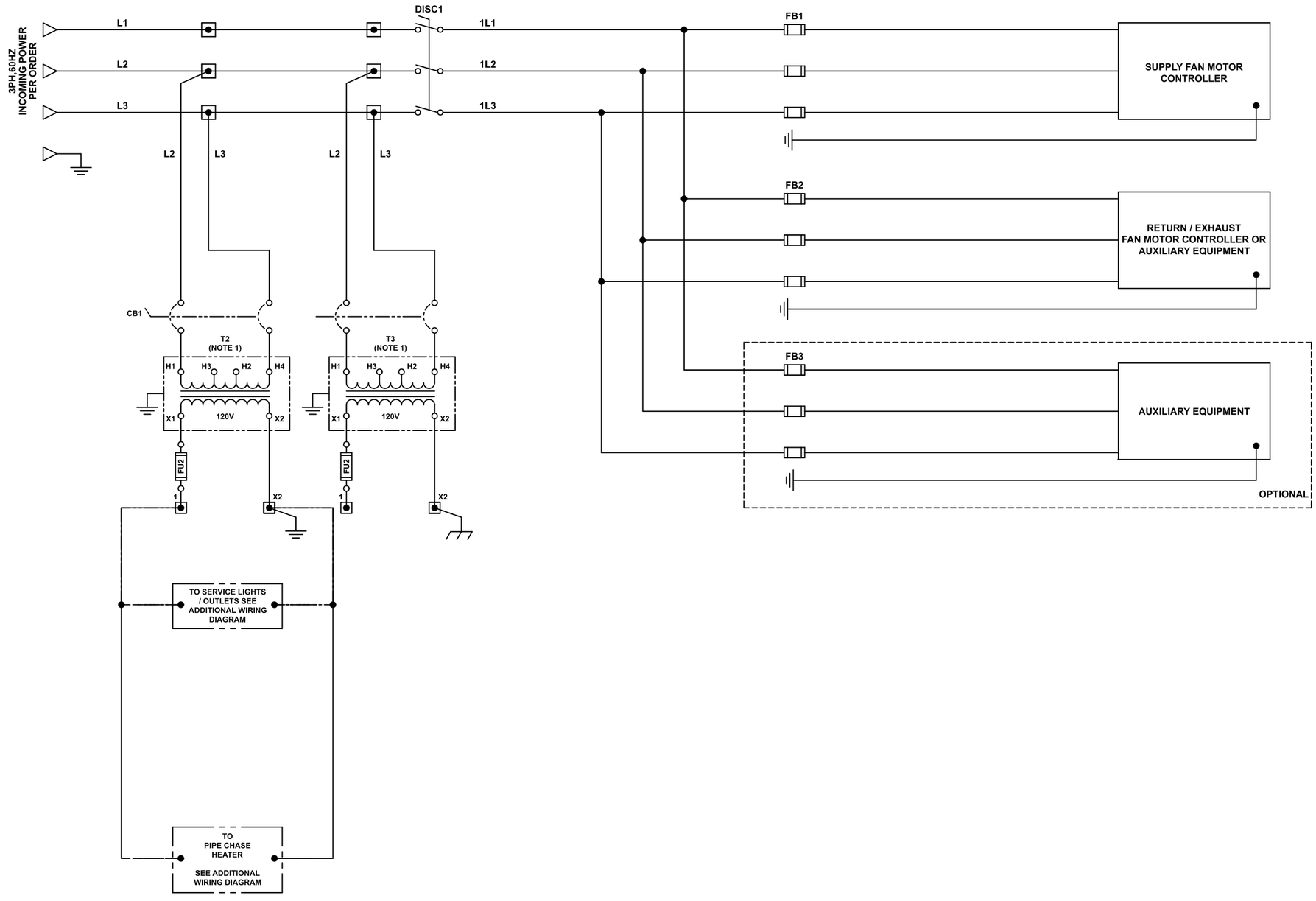
UNIT TAG: AHU-3 - Sheet 3

Date: 2/18/2022 13:11:11
Version:
Form No.: 100.09-EG1
Dwg. Lev.: 12/03
Dwg. Scale: NTS

Serial Number:
SQ Database Number:
YORKworks Release:
Dwg. Name:
Dwg. Location:

Johnson Controls

YORKworks Version: 21.04c Drawing Generator Version : 01:00:21068



NOTES:

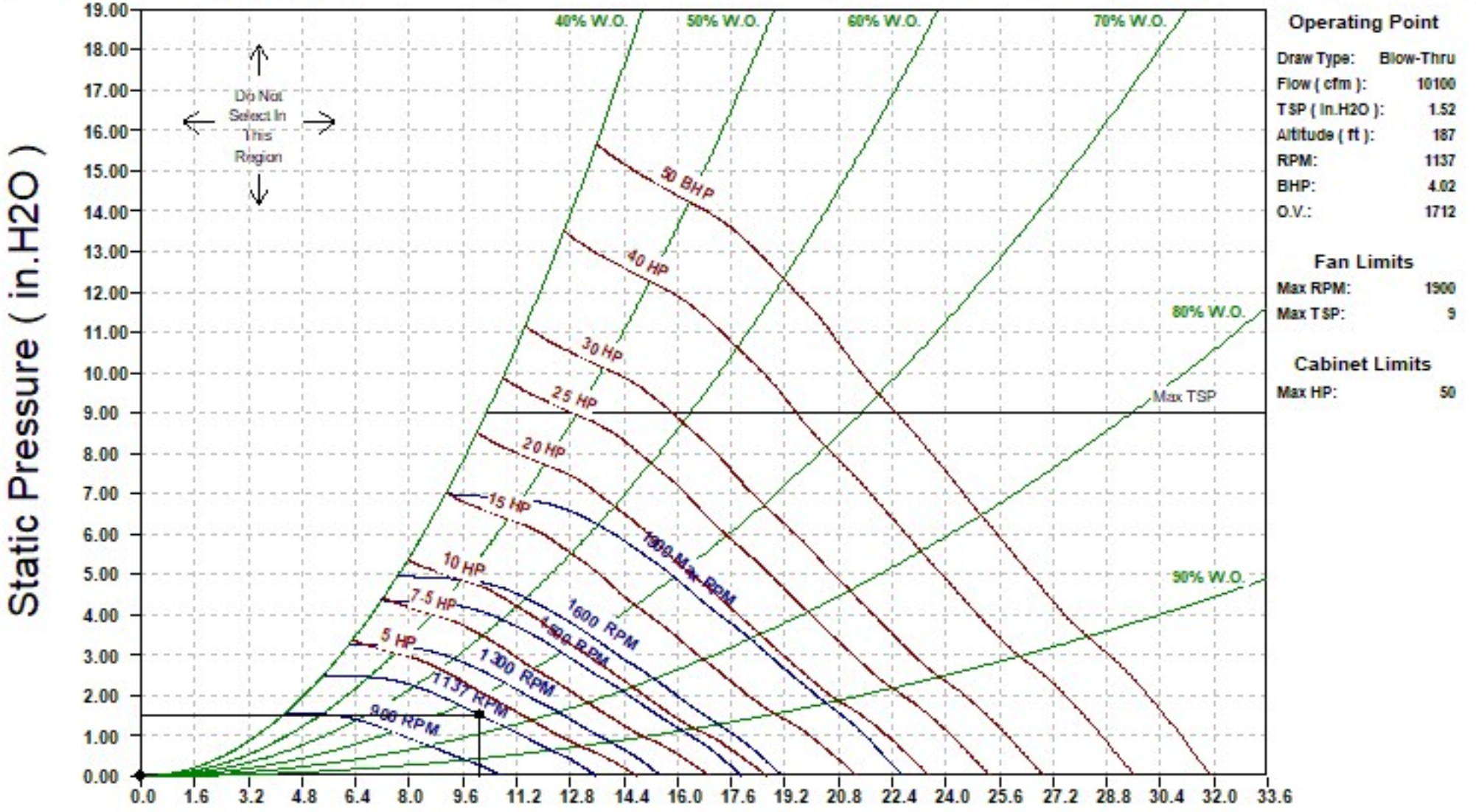
- ⊙ - TERMINAL POINT
- ▲ - REMOTE DEVICE (BY OTHERS)
- ---------- - FIELD WIRING
- 1 - WIRE PER TRANSFORMER LABEL PER VOLTAGE.
- AUXILIARY EQUIPMENT - MAY BE DEFINED AS FOLLOWS
  - ELECTRIC HEAT
  - GAS FIRED HEAT
  - ENERGY WHEEL MOTOR CONTROLLER

PRODUCT DRAWING YORK Solution XT Field Wiring MODEL: **NOT FOR CONSTRUCTION**	Project Name: Adams Fairacre Farms Location: Engineer: Contractor: For:	Sold To: Cust Purch Order#: Contract#: UNIT TAG: AHU-3 - Sheet 4	Date: 2/18/2022 13:11:11 Version: Form No.: 100.09-EG1 Dwg. Lev.: 12/03 Dwg. Scale: NTS	Serial Number: SQ Database Number: YORKworks Release: Dwg. Name: Dwg. Location:	Johnson Controls

Johnson Controls

Solution XT Fan Rating Curve

Project Name	Unit Tag	Qty	Model	Seg	Fan Type	Class	Size
Adams Fairacre Farms	AHU-3	1	XTI-57x84	FR	AF	S	22-22



Operating Point

Draw Type:	Blow-Thru
Flow (cfm):	10100
TSP (in.H2O):	1.52
Altitude (ft):	187
RPM:	1137
BHP:	4.02
O.V.:	1712

Fan Limits

Max RPM:	1900
Max TSP:	9

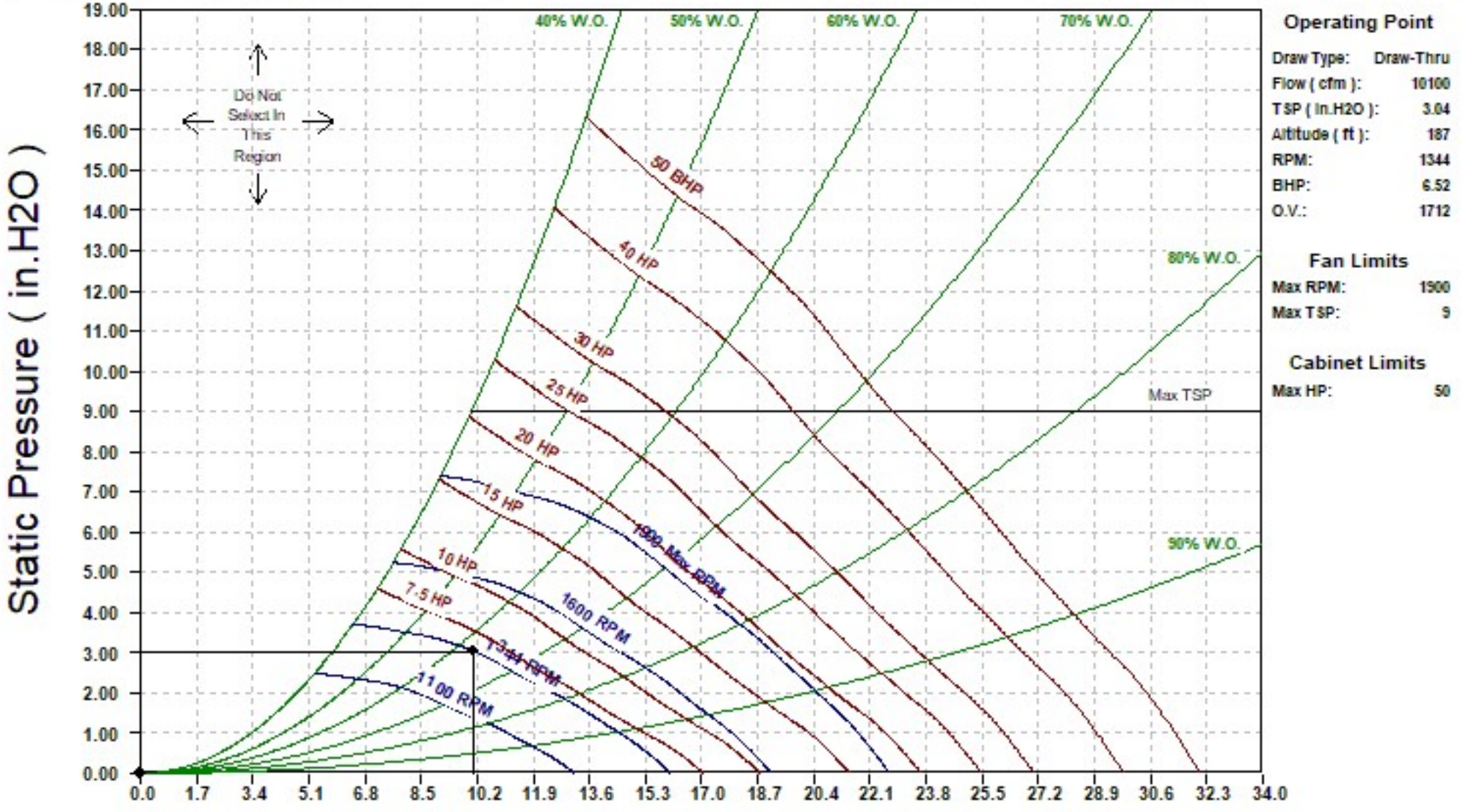
Cabinet Limits

Max HP:	50

Johnson Controls

Solution XT Fan Rating Curve

Project Name	Unit Tag	Qty	Model	Seg	Fan Type	Class	Size
Adams Fairacre Farms	AHU-3	1	XTI-57x84	FS	AF	S	22-22



Operating Point

Draw Type:	Draw-Thru
Flow (cfm):	10100
TSP (in.H2O):	3.04
Altitude (ft):	187
RPM:	1344
BHP:	6.52
O.V.:	1712

Fan Limits

Max RPM:	1900
Max TSP:	9

Cabinet Limits

Max HP:	50

YORK® Solution™ Air Handling Unit Performance Report

Job Summary

Project Name:	Adams Fairacre Farms		
Unit Tag(s):	AHU-3		
Quantity:	1	**Environment:**	Indoor

Unit Overview

Model	Airflow (CFM)	Altitude (ft)	Operating Weight (lbs)
XTI-57x84	10,100	187	6,614

Segment Sequence

(FS HC-2 CC XA HC-1 RF EE EE FR IP)

Unit Construction

Casing Details

Segment(s)	Thickness (in)	Exterior Paint	Exterior Gauge and Material	Interior Gauge and Material	Insulation Thickness and Material	Bulkhead Material
IP , FR , EE , RF , HC-1 , XA , CC , HC-2 , FS	2	None	STD Ga. G-90 Galvanized	STD Ga. G-90 Galvanized	2" Foam	Galvanized

Base Details

Segment(s)	Base		Floor				
	Material	Paint	Gauge and Material	Paint	Insulation	Attachment	Tread Plate
IP , FR , EE , RF , HC-1 , XA , CC , HC-2 , FS	Standard Structural Steel	Standard Base Paint	STD Ga. G-90 Galvanized	None	N/A	-	None

Unit Electrical

Circuit Details

Circuit #	Component(s)	V/Ph/Hz	Full Load Amps (FLA)	Minimum Current Ampacity (MCA)	Maximum Overcurrent Protection (MOP)
1	Supply Fan Motor Control, Return Fan Motor Control, Lights and Outlets	460/3/60	20.5	25.6	30.0

Electrical Details

Minimum Unit SCCR	5 kA rms Symmetrical	**ETL Label (UL1995/NEC-2002)**	Yes
Unit Light Type		**Unit Light Switch**	
Standard LED		External	

Supply Fan(s)

Performance Details

Fan Manufacturer	Model	Class	Size	% Wheel Width	% Wheel Diameter	Quantity	Total Airflow (CFM)	Altitude (ft)	TSP (in w.g)	ESP (in w.g)	Fan Speed (RPM)	Fan Power (BHP)
Comefri	ATZAF	S	22-22	100	100	1	10,100	187	3.04	1.00	1,344	6.52

Drive Type	Drive SF	Wheel Type	Blade Type	Wheel Material	Base Material	Fan Flow Isolation	Isolation Type	Total Eficiency (%)	Outlet Velocity (ft/s)	Max Speed (RPM)	Fan Power (BHP) w/ Drive Loss
Belt Drive - Fixed	1.5	DWDI	Airfoil	Steel	Galvanized Steel	None	1" Spring	78.49	1,712	1,900	6.88

Motor Details

Type	Manufacturer	Motor Power (HP)	V/Ph/Hz	Quantity	Insulation Class	Motor Speed (RPM)	Frame Size	Full Load Amps (Amps)	Efficiency	Location
ODP	TECO	7.5	460/3/60	1	F	1,800	213	9.55	Premium	Left

At Motor Synchronous Details

TSP (in w.g.)	Total Air Flow (CMF)	Fan Speed (RPM)	Motor Correction Factor(%)	Fan Power (BHP)
0.00	10,100	1,344	91.0	6.52

Return Fan(s)

Performance Details

Fan Manufacturer	Model	Class	Size	% Wheel Width	% Wheel Diameter	Quantity	Total Airflow (CFM)	Altitude (ft)	TSP (in w.g)	ESP (in w.g)	Fan Speed (RPM)	Fan Power (BHP)
Comefri	ATZAF	S	22-22	100	100	1	10,100	187	1.52	1.00	1,137	4.0

Max RPM	Fan Power with Drive Loss (HP)	Wheel Type	Blade Type	Wheel Material	Base Material	Fan Flow Isolation	AirFlow Monitoring	Inverter Drive Balancing	Isolation Type	Thrust Restraints
1,900	4.30	DWDI	Airfoil	Steel	Galvanized Steel	None	-	-	1" Spring	-

Drive Type	Drive SF	Spare Belts	Spare Sheave	Inlet Screen	Fan Cage	Belt Guard	Lube Lines	Bearings	Fan Stand	Motor Removal Rail	Seismic Snubber
Belt Drive - Fixed	1.5	-	-	-	-	-	None	-	-	-	-

Motor Details

Type/MFG	Motor Power (HP)	V/Ph/Hz	Quantity	Insulation Class	RPM	Frame Size	FLA (Amps)	Efficiency	Location	SGR
ODP/Baldor	5.0	460/3/60	1	F	1,800	184	6.60	Premium	Left	-

Glycol Coil(s)

Performance[1] Details

Coil	Glycol Type	Glycol %	Rows	Fin Spacing (FPI)	TPC	TMBH	SMBH	EAT (°F)		LAT (°F)		Airflow (CFM)	FV (ft/min)	APD	Flow (GPM)	EWT (°F)	LWT (°F)	Fluid Vel. (ft/s)	WPD	Alt. (ft)
								DB	WB	DB	WB									
HC-1	Propylene	30%	2	9	2	629	629	57.0	-	113.6	-	10,100	424	0.09	66.2	180.0	160.1	3.0	5.3	187
CC	Propylene	30%	8	14	4	349	267	76.9	64.3	52.3	52.3	10,100	424	0.98	136.0	45.0	50.4	3.1	7.2	187
HC-2	Propylene	30%	1	8	4	247	247	52.3	-	75.5	-	10,100	424	0.03	25.8	160.0	140.0	4.9	8.7	187

Construction Details

Coil	Location		Offset (in)	Connection Material[3]	Connection Rotation (degrees)	Connection Type	Supply Connection (Per Coil)		Coil Stack Rack
	Coil Index[2]	Connection					Qty	Size	
HC-1	0	Left	0	Steel	0	MPT	1	2	-
CC	0	Left	0	Steel	0	MPT	1	3	-
HC-2	0	Left	0	Steel	0	MPT	1	1-1/2	-

Coil	# of Coils High	Face Type	Total Fin Height (in)	Fin Length (in)	Coil Face Area (ft²)	Fin Material	Fin Thickness (in)	Fin Type	Tube Diameter (in)	Tube Material	Tube Wall Thickness (in)

Coil	# of Coils High	Face Type	Total Fin Height (in)	Fin Length (in)	Coil Face Area (ft²)	Fin Material	Fin Thickness (in)	Fin Type	Tube Diameter (in)	Tube Material	Tube Wall Thickness (in)
HC-1	1	Full	47.50	72	23.8	AL	.008	Corrugated	1/2	Copper	.016
CC	1	Full	47.50	72	23.8	AL	.010	Corrugated	1/2	Copper	.016
HC-2	1	Full	47.50	72	23.8	AL	.006	Corrugated	1/2	Copper	.016

Coil	Coil Coating	Dry Weight (lbs)	Fluid Weight (lbs)	Fluid Volume (ft³)	Header Material	Casing Material	Intermediate Drain Pan Material	Fouling Factor (hr.ft².°F/BTU)
HC-1	-	161	51	0.8	Copper	Galvanized	-	-
CC	-	672	188	2.9	Copper	Galvanized	304 Stainless Steel	-
HC-2	-	101	25	0.4	Copper	Galvanized	-	-

Coil Notes

- [1]Performance is shown for the entire coil bank. Performance is not per coil.
- [2]Coil index indicates position in segment. Example: CC-1, index 0; Spacer, index 1; CC-2, index 2
- [3]Johnson Controls suggests using red brass or copper connectors when the coil is to be attached to a copper or brass piping system.
- All coils are rated with a fouling factor of 0.00000 hr.ft².°F/BTU unless otherwise noted
- Ratings are for coils manufactured by Johnson Controls, Inc., 507 E. Michigan St., Milwaukee WI 53202.
- Coil DLL Version: 7.7L
- BDW Tube Spacing: 1.25 x 1.08
- HC-1[1][0]: This coil is certified in accordance with the AHRI Forced-Circulation Air-Cooling and Air-Heating Coils Certification Program which is based on AHRI Standard 410 within the range of Standard rating conditions listed in Table 1 of the Standard. Certified units may be found in the AHRI Directory at www.ahridirectory.org.
- [1]Performance is shown for the entire coil bank. Performance is not per coil.
- [2]Coil index indicates position in segment. Example: CC-1, index 0; Spacer, index 1; CC-2, index 2
- [3]Johnson Controls suggests using red brass or copper connectors when the coil is to be attached to a copper or brass piping system.
- All coils are rated with a fouling factor of 0.00000 hr.ft².°F/BTU unless otherwise noted
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- [1]Performance is shown for the entire coil bank. Performance is not per coil.
- [2]Coil index indicates position in segment. Example: CC-1, index 0; Spacer, index 1; CC-2, index 2
- [3]Johnson Controls suggests using red brass or copper connectors when the coil is to be attached to a copper or brass piping system.
- All coils are rated with a fouling factor of 0.00000 hr.ft².°F/BTU unless otherwise noted
- Ratings are for coils manufactured by Johnson Controls, Inc., 507 E. Michigan St., Milwaukee WI 53202.
- Coil DLL Version: 7.7L
- BDW Tube Spacing: 1.25 x 1.08
- HC-2[1][0]: This coil is certified in accordance with the AHRI Forced-Circulation Air-Cooling and Air-Heating Coils Certification Program which is based on AHRI Standard 410 within the range of Standard rating conditions listed in Table 1 of the Standard. Certified units may be found in the AHRI Directory at www.ahridirectory.org.

Drain(s)

Details

Segment	Drain Pan		
	Liner Material	Connection Location	Liner Coating
CC	Stainless Steel	Left	None

Filter(s)

Details							
Segment	Type	Depth	Filter Loading	Media/MERV	# of Spares	Spare Filter Media	Frame Material
RF	Pre-Filter	2"	Side	Pleated 30% (MERV 8)	0	Pleated 30% (MERV 8)	Aluminum
RF	Primary Filter	4" Mini-Pleat	Side	90-95% Eff, (MERV 14)	0	90-95% Eff, (MERV 14)	Aluminum

Sizes				Filter Gauge Details		
Segment	Filter	1st Filter Size H x W (in)	1st Qty	Location	Type	Range (in w.g)
RF	Pre-Filter	24x24	6	Door	Magnehelic with Flag	0 - 2
RF	Primary Filter	24x24	6	Door	Magnehelic with Flag	0 - 2

Damper(s)

Details													
Segment	Air Path	H x W (in)	Qty	Total Face Velocity (ft/min)	Face Area	CFM	Minimum Allowable OA CFM	Damper Type	Damper Config	Model	Material	Blade Orientation	Actuator Type	Fail Position
EE	Exhaust Air	21.00 x 66.00		1,049		10,100	-	Control	100%	CD60	Galvanized	Parallel	-	-
EE	Outside Air	21.00 x 66.00		1,049		10,100		Control	100%	CD60	Galvanized	Parallel	-	-
EE	Mixed Air	21.00 x 66.00		1,049		10,100	-	Control	100%	CD60	Galvanized	Parallel	-	-

Door(s)

Details										
Segment(s)	Location	Swing	Hinge Location	H x W x T (in)	View Port	Test Port	Spare Gasket	Thermal Break	Safety Latch	Noncontact Safety Interlock
FR, FS	Left	Outward	Upstream Side	51 x 24 x 2	None	-	-	-	-	-
EE	Left	Outward	Upstream Side	51 x 24 x 2	None	-	-	-	Yes	-
EE, XA, CC	Left	Outward	Upstream Side	51 x 18 x 2	None	-	-	-	-	-
RF	Left	Outward	Upstream Side	51 x 10 x 2	None	-	-	-	-	-

Motor Control(s)

Details										
Segment	Type	MMP	V/Ph/Hz	Input/Output Amps*	Efficiency	Heat Loss (at 100% load)	Enclosure	Bypass	Disconnect Type	RFI/EMI EMC Filter
FR	ABB VFD ABB AYK580	-	460/3/60	7.6/7.6	90 %	133	NEMA 1	-	Fused	Yes
FS	ABB VFD ABB AYK580	-	460/3/60	12.0/12.0	91 %	174	NEMA 1	-	Fused	Yes

Details										
Segment	Type	MMP	V/Ph/Hz	Input/Output Amps*	Efficiency	Heat Loss (at 100% load)	Enclosure	Bypass	Disconnect Type	RFI/EMI EMC Filter

Notes
*Drives are rated for use below 3,000 ft and 104°F. Use Derating Charts in Air-Mod Engineering Guide Form 100.42-EGI (212) for use above these limits.
Storage Temperature: -40°F to 158°F
Humidity: MAX 95% RH non-condensing
Altitude: 3,300 ft. without derate (1% derate for each additional 330 ft.)
Overload Current Rating: 100% for 1 minute every 10 minutes.
The Class 10 trip rating of the MMP device will not withstand an across-the-line start of a fan and should not be used with VFDs with bypass circuits.
The customer must provide a platform or catwalk for accessing the power-disconnect.
Copper Conductors Only.
FR: Contains the following option: Swinging DC Line Choke (Equivalent to 5% Input Line Reactor)
FS: Contains the following option: Swinging DC Line Choke (Equivalent to 5% Input Line Reactor)

Face Velocity and Static Pressure

Summary						
Segment	Description	Face Area (sq. ft)	Airflow (CFM)	Face Velocity (ft/min)	Supply Fan Static Pressure (in w.g.)	Exhaust/Return Fan Static Pressure (in w.g.)
IP	Opening	7.4	10,100	1,367.00	0.00	0.31
FR	External Static - User Entered	0.0	10,100	0.00	0.00	1.00
EE	Opening	9.6	10,100	1,049.00	0.00	0.19
EE	Control Galvanized (CD60)	0.0	10,100	0.00	0.00	0.02
EE	Opening	9.6	10,100	1,049.00	0.19	0.00
EE	Control Galvanized (CD60)	0.0	10,100	0.00	0.02	0.00
RF	2" Pleated 30% (MERV 8)	24.0	10,100	421.00	0.21	0.00
RF	Dirty Filter Allowance - Prefilter	0.0	10,100	0.00	0.00	0.00
RF	4" Mini-Pleat 90-95% Eff, (MERV 14)	24.0	10,100	421.00	0.52	0.00
HC-1	Heating 2 rows 9 fins	23.8	10,100	424.00	0.09	0.00
CC	Cooling 8 rows 14 fins	23.8	10,100	424.00	0.98	0.00
HC-2	Heating 1 rows 8 fins	23.8	10,100	424.00	0.03	0.00
FS	External Static - User Entered	0.0	10,100	0.00	1.00	0.00
				Total	**3.04**	**1.52**

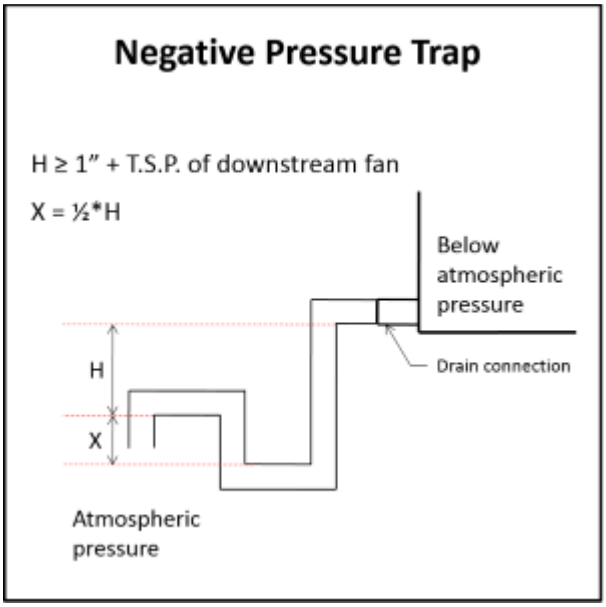
Dimensions and Weight

Details					
Segment	Description	Length[1] (in)	Width[2] (in)	Height (in)	Weight (lbs)
IP	Inlet Plenum	16	84	57	435
FR	Return Fan	45	84	57	1,270
EE	Economizer	64	84	57	697
RF	High Efficiency Filter	10	84	57	218
HC-1	Heating Coil	10	84	57	372
XA	Variable Length Access	18	84	57	210
CC	Variable Length Cooling Coil	35	84	57	1,317
HC-2	Heating Coil	12	84	57	335
FS	Supply Fan - DWDI	64	84	57	1,762
	Overall[3]	**274**			**6,616**

Notes
[1]The length includes bottom tier segments only
[2]The width does not include coil connection extensions or door latches that extend beyond the unit casing. The width does not include the depth of any pipe chases.
[3]Unit level and other loose components may be excluded from segment weights and overall segment weights. For total unit weight reference Unit Overview.

Recommended Trap Height

Details									
Segment	Applicable Fan	Fan TSP (in w.g.)	Positive or Negative	Calculated Dimensions (in)			Recommended Dimensions (in)		Base Rail Height (in)
				H	X	H + X	H	H + X	
CC	Supply Fan	3.04	Negative	4.04	2.02	6.06	4.25	6.50	6"



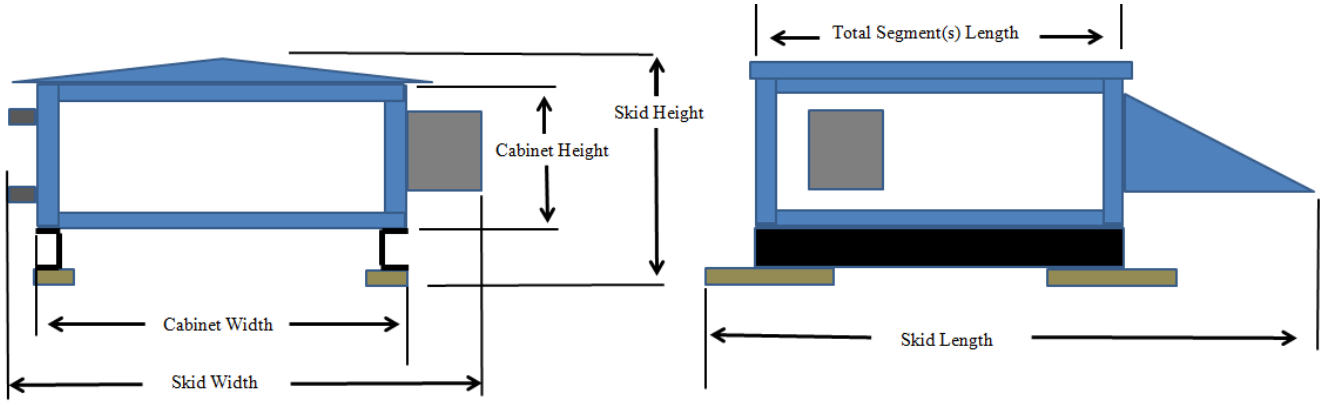
Notes
Formulas and calculations are recommendations only. Contractor shall determine actual dimensions required for each trap based on jobsite conditions, and application requirements.
Refer to the Installation Manual of the IOM for more information.

Statement of Compliance

Details
YORK® Solution XT AHU's meet IBC seismic requirements for non-critical equipment (Ip = 1.0) for locations with design spectral response Sds <= 0.43. Units must be rigid mounted.
The anchorage of the unit to the ground or building structure needs to be evaluated by and is the responsibility of the engineer of record. Specification of seismic requirements is the responsibility of the project design engineer. If formal certification is required, please contact your sales representative and/or application engineer for review. Certain application and site requirements may require additional cost and/or lead time.
Component locations are listed as Segment Hand (Unit Hand): ex. Left (Right). See SubmittalDrawing for additional details
Air handling unit parameters vary depending on conditions. Parameters such as airflows, air pressure drops, and coil capacities are shown for design conditions.

Shipping Summary

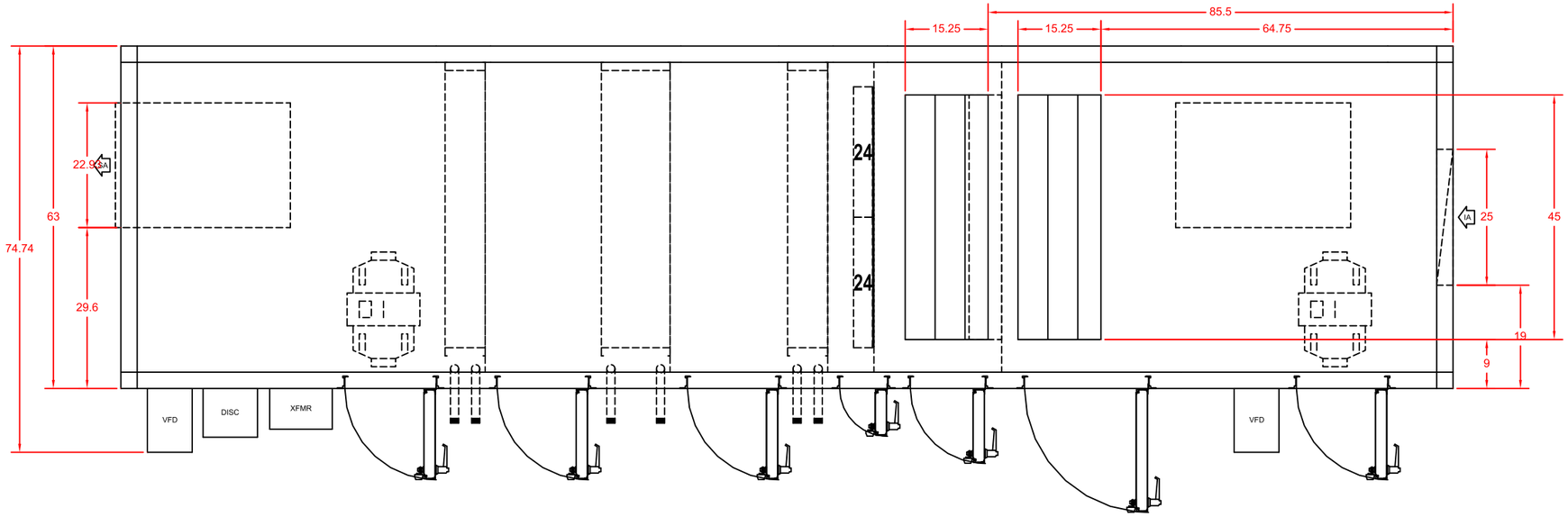
Details				
Skid	**Skid Length (in)**	**Skid Height (in)**	**Skid Width (in)**	**Skid Weight (lbs)**
(FS HC-2 CC XA HC-1 RF EE EE FR IP)	275	67	98	6,614



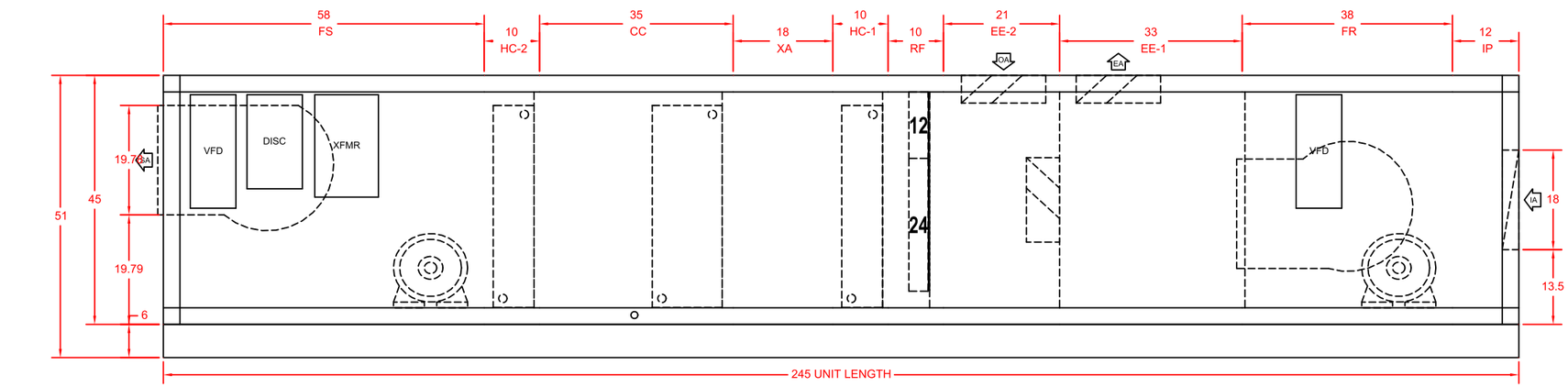
Notes
Skid Width: Total width of the shipping skid, including any items that may extend beyond the cabinet (this includes any door handles, coil connections, drain connections, lifting lugs, mounted pipe-chases, electrical/control components, tie-down brackets, side dampers).
Skid Height: Total height of the shipping skid, including any items that may extend beyond the cabinet (this includes any base-rails, shipping wood-blocks, roof peak, discharge flanges, mounted gas-furnace flue pipes).
Skid Length: Total length of the shipping skid, including any items that may extend beyond the cabinet (this includes any mounted rain-hoods, discharge flanges,tie-down brackets, shipping wood-blocks, front dampers, split connectors, electrical/control components, outrigging extensions, isolation dampers, inlet baskets).

AHU-4

60 EAST 42ND STREET
NEW YORK, NY 10165
PHONE: (646) 658-6700
FAX: (212) 370-0305



PLAN VIEW



* NOTE: MAX HEIGHT

ELEVATION VIEW

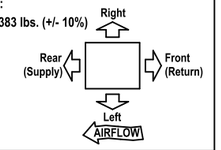
UNIT CONSTRUCTION

Model: Solution-XTI-45x63 Construction: Indoor

Motor Location:

Unit Weight: 4,383 lbs. (+/- 10%)

PLAN VIEW



NOTES

Units with a baserail and a bottom opening: Duct connection flush with the bottom of unit, not flush with bottom of baserail.

Refer to performance report for shipping split details.

Allow sufficient space around the unit for removing the access panels and various parts of the unit. A minimum clearance equal to the width of the unit must be provided on one side of the unit for removing the coil or fan assembly.

Contractor responsible for penetrations and connections of all electrical boxes and internal coil connections.

Overall dimensions account for: outdoor roof peak and overhang, motor control and/or factory package control boxes, coil connections, rain hoods, pipe chases, AMS-60 damper/EAML louver (if applicable,) base rail - in order to convey the true space requirements for the unit.

Certain items may extend beyond cabinet dimensions including: door handles, light switches, electrical boxes, lifting lugs, gas fuel system, etc.

The overall unit length includes an additional 1/4" per shipping split due to additional gasketing and split connection hardware.

Dimension tolerances: Unit (+/- 1/2"); Piping (+/- 2")

SL - Designates Shipped Loose Item(s)

PIPING CONNECTIONS

(In order of Airflow)

Segment	Type	Hand	Quantity	Supply	Return
HC	MPT	Left	1 Sup 1 Ret	1 1/2"	1 1/2"
CC	MPT	Left	1 Sup 1 Ret	1 1/2"	1 1/2"
HC	MPT	Left	1 Sup 1 Ret	1 1/2"	1 1/2"

Drain pan connection size 1 1/4" MPT SCH 40 (Connections on Left Side of unit)

SECTION LIST

SECT	DESCRIPTION
IP	Inlet Plenum
FR	Return Fan - 18-18 AF
EE-1	Economizer
EE-2	Economizer
RF	High Efficiency Filter
HC-1	Heating Coil
XA	Variable Length Access
CC	Cooling Coil
HC-2	Heating Coil
FS	Supply Fan - 18-18 AF

PRODUCT DRAWING

SOLUTION XT AIR HANDLING UNIT DETAIL

MODEL: Solution-XTI-45x63

NOT FOR CONSTRUCTION

Project Name: Adams Fairacre Farms
Location:
Engineer:
Contractor:
For:

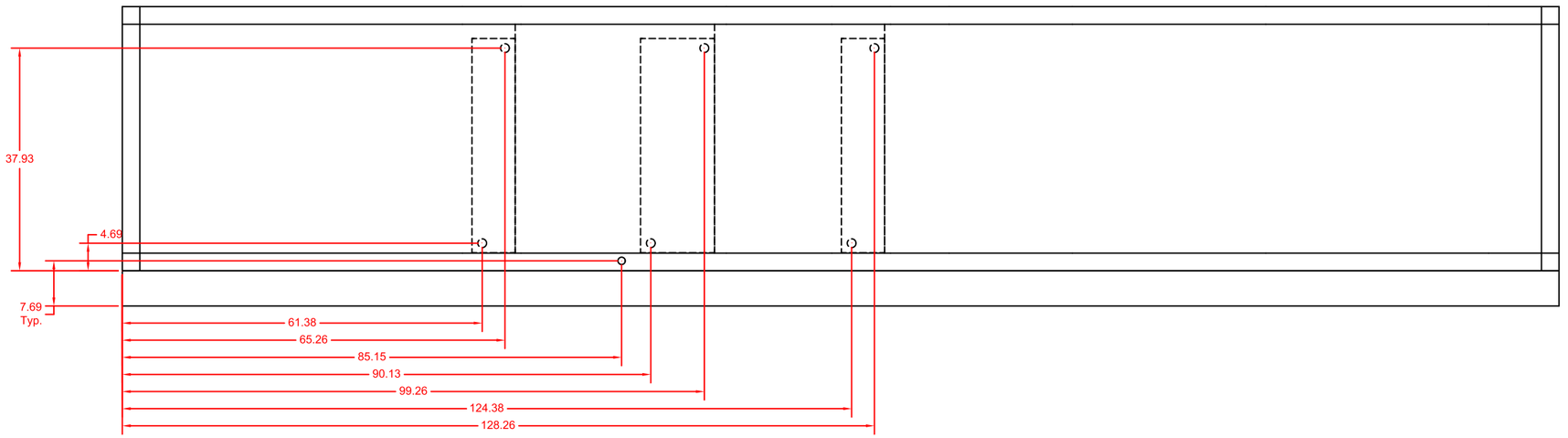
Sold To:
Cust Purch Order#:
Contract#:
UNIT TAG: AHU-4 - Sheet 1

Date: 6/15/2021 10:38:2
Version:
Form No.:
Dwg. Lev.: 5/03
Dwg. Scale: NTS

Serial Number:
SQ Database Number:
YORKworks Release:
Dwg. Name:
Dwg. Location:

Johnson Controls

YORKworks Version: 21.01b Drawing Generator Version : 01:00:16194



Coil Connections

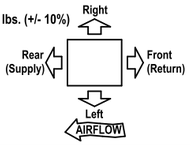
UNIT CONSTRUCTION

Model: Solution-XTI-45x63 Construction: Indoor

Motor Location:

Unit Weight: 4,383 lbs. (+/- 10%)

PLAN VIEW



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Overall dimensions account for: outdoor roof peak and overhang, motor control and/or factory package control boxes, coil connections, rain hoods, pipe chases, AMS-60 damper/EAML louver (if applicable,) base rail - in order to convey the true space requirements for the unit.

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The overall unit length includes an additional 1/4" per shipping split due to additional gasketing and split connection hardware.

Dimension tolerances: Unit (+/- 1/2"); Piping (+/- 2")

(SL) - Designates Shipped Loose Item(s)

PIPING CONNECTIONS
(In order of Airflow)

Segment	Type	Hand	Quantity	Supply	Return
HC	MPT	Left	1 Sup 1 Ret	1 1/2"	1 1/2"
CC	MPT	Left	1 Sup 1 Ret	1 1/2"	1 1/2"
HC	MPT	Left	1 Sup 1 Ret	1 1/2"	1 1/2"

Drain pan connection size 1 1/4" MPT SCH 40
(Connections on Left Side of unit)

SECTION LIST

SECT	DESCRIPTION
IP	Inlet Plenum
FR	Return Fan - 18-18 AF
EE-1	Economizer
EE-2	Economizer
RF	High Efficiency Filter
HC-1	Heating Coil
XA	Variable Length Access
CC	Cooling Coil
HC-2	Heating Coil
FS	Supply Fan - 18-18 AF

PRODUCT DRAWING
SOLUTION XT COIL CONNECTION DETAIL
MODEL: Solution-XTI-45x63
NOT FOR CONSTRUCTION

Project Name: Adams Fairacre Farms
Location:
Engineer:
Contractor:
For:

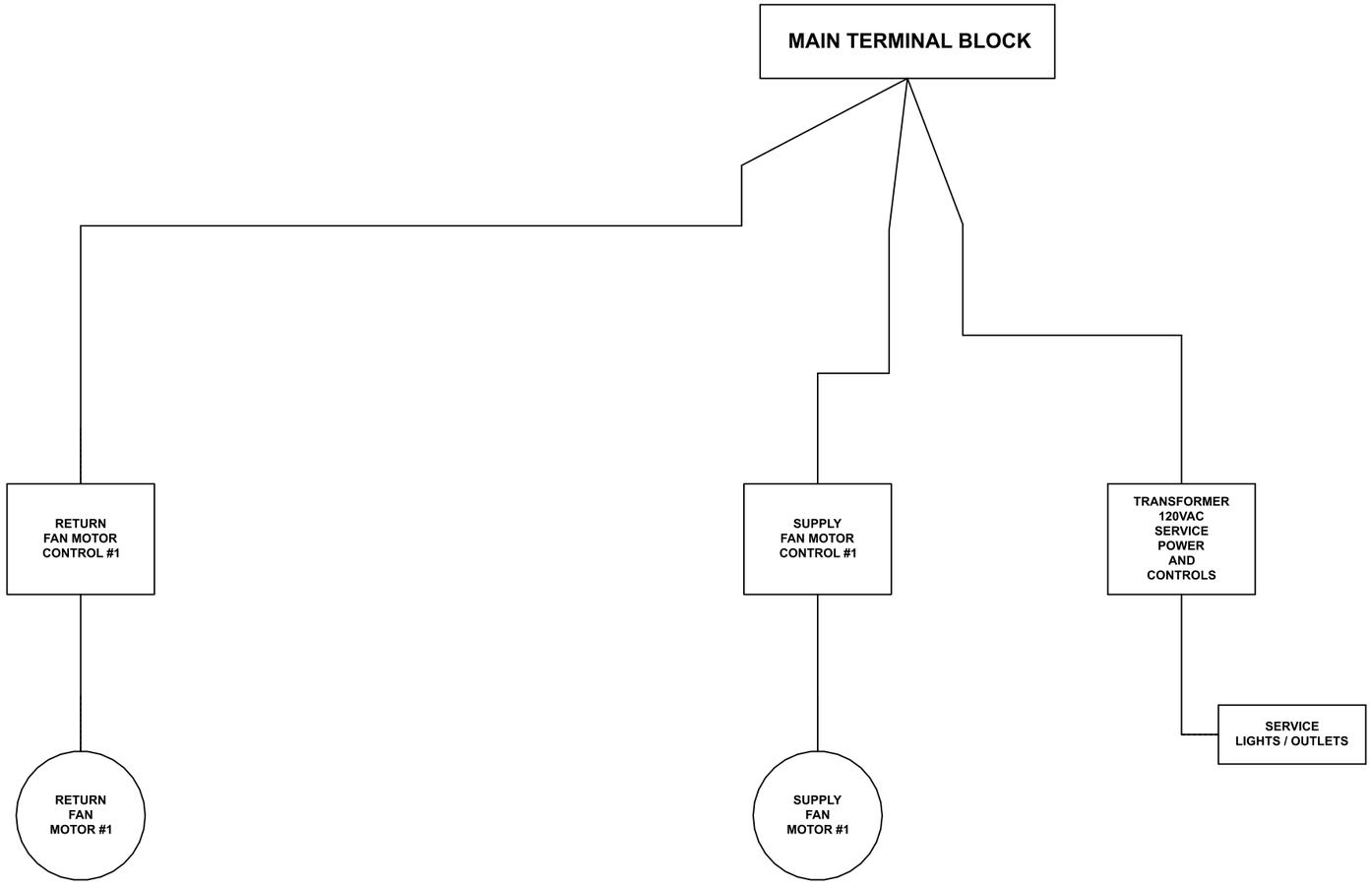
Sold To:
Cust Purch Order#:
Contract#:
UNIT TAG: AHU-4 - Sheet 2

Date: 6/15/2021 10:38:2
Version:
Form No.:
Dwg. Lev.: 5/03
Dwg. Scale: NTS

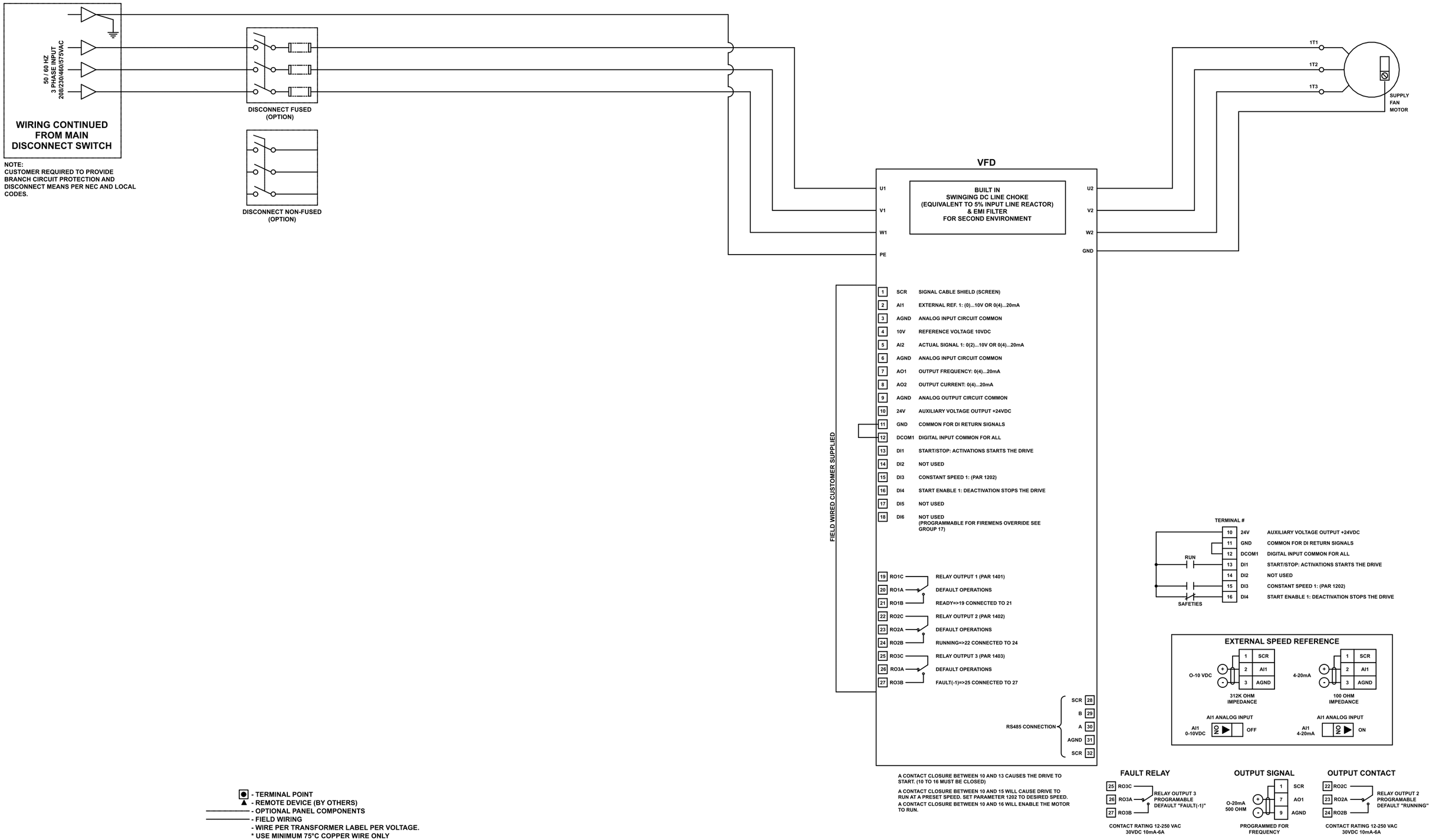
Serial Number:
SQ Database Number:
YORKworks Release:
Dwg. Name:
Dwg. Location:

Johnson Controls

YORKworks Version: 21.01b Drawing Generator Version : 01:00:16194



PRODUCT DRAWING YORK Solution XT Field Wiring MODEL: **NOT FOR CONSTRUCTION**	Project Name: Adams Fairacre Farms Location: Engineer: Contractor: For:	Sold To: Cust Purch Order#: Contract#: UNIT TAG: AHU-4 - Sheet 1	Date: 6/15/2021 10:38:2 Version: Form No.: 100.09-EG1 Dwg. Lev.: 12/03 Dwg. Scale: NTS	Serial Number: SQ Database Number: YORKworks Release: Dwg. Name: Dwg. Location:	Johnson Controls



PRODUCT DRAWING

YORK Solution XT Field Wiring
MODEL:
NOT FOR CONSTRUCTION

Project Name: Adams Fairacre Farms
Location:
Engineer:
Contractor:
For:

Sold To:
Cust Purch Order#:
Contract#:
UNIT TAG: AHU-4 - Sheet 2

Date: 6/15/2021 10:38:2
Version:
Form No.: 100.09-EG1
Dwg. Lev.: 12/03
Dwg. Scale: NTS

Serial Number:
SQ Database Number:
YORKworks Release:
Dwg. Name:
Dwg. Location:

Johnson Controls

YORKworks Version: 21.01b Drawing Generator Version : 01:00:21068

50 / 60 HZ
3 PHASE INPUT
208/230/460/575VAC

WIRING CONTINUED
FROM MAIN
DISCONNECT SWITCH

NOTE:
CUSTOMER REQUIRED TO PROVIDE BRANCH CIRCUIT PROTECTION AND DISCONNECT MEANS PER NEC AND LOCAL CODES.

DISCONNECT FUSED
(OPTION)

DISCONNECT NON-FUSED
(OPTION)

VFD

U1
V1
W1
PE

BUILT IN
SWINGING DC LINE CHOKE
(EQUIVALENT TO 5% INPUT LINE REACTOR)
& EMI FILTER
FOR SECOND ENVIRONMENT

U2
V2
W2
GND

1T1
1T2
1T3

RETURN / EXHAUST
FAN
MOTOR

FIELD WIRED CUSTOMER SUPPLIED

1	SCR	SIGNAL CABLE SHIELD (SCREEN)
2	AI1	EXTERNAL REF. 1: (0)...10V OR 0(4)...20mA
3	AGND	ANALOG INPUT CIRCUIT COMMON
4	10V	REFERENCE VOLTAGE 10VDC
5	AI2	ACTUAL SIGNAL 1: 0(2)...10V OR 0(4)...20mA
6	AGND	ANALOG INPUT CIRCUIT COMMON
7	AO1	OUTPUT FREQUENCY: 0(4)...20mA
8	AO2	OUTPUT CURRENT: 0(4)...20mA
9	AGND	ANALOG OUTPUT CIRCUIT COMMON
10	24V	AUXILIARY VOLTAGE OUTPUT +24VDC
11	GND	COMMON FOR DI RETURN SIGNALS
12	DCOM1	DIGITAL INPUT COMMON FOR ALL
13	DI1	START/STOP: ACTIVATIONS STARTS THE DRIVE
14	DI2	NOT USED
15	DI3	CONSTANT SPEED 1: (PAR 1202)
16	DI4	START ENABLE 1: DEACTIVATION STOPS THE DRIVE
17	DI5	NOT USED
18	DI6	NOT USED (PROGRAMMABLE FOR FIREMENS OVERRIDE SEE GROUP 17)

19	RO1C	RELAY OUTPUT 1 (PAR 1401)
20	RO1A	DEFAULT OPERATIONS
21	RO1B	READY=>19 CONNECTED TO 21
22	RO2C	RELAY OUTPUT 2 (PAR 1402)
23	RO2A	DEFAULT OPERATIONS
24	RO2B	RUNNING=>22 CONNECTED TO 24
25	RO3C	RELAY OUTPUT 3 (PAR 1403)
26	RO3A	DEFAULT OPERATIONS
27	RO3B	FAULT(-1)=>25 CONNECTED TO 27

RS485 CONNECTION

SCR	28
B	29
A	30
AGND	31
SCR	32

A CONTACT CLOSURE BETWEEN 10 AND 13 CAUSES THE DRIVE TO START. (10 TO 16 MUST BE CLOSED)

A CONTACT CLOSURE BETWEEN 10 AND 15 WILL CAUSE DRIVE TO RUN AT A PRESET SPEED. SET PARAMETER 1202 TO DESIRED SPEED.

A CONTACT CLOSURE BETWEEN 10 AND 16 WILL ENABLE THE MOTOR TO RUN.

TERMINAL #

10	24V	AUXILIARY VOLTAGE OUTPUT +24VDC
11	GND	COMMON FOR DI RETURN SIGNALS
12	DCOM1	DIGITAL INPUT COMMON FOR ALL
13	DI1	START/STOP: ACTIVATIONS STARTS THE DRIVE
14	DI2	NOT USED
15	DI3	CONSTANT SPEED 1: (PAR 1202)
16	DI4	START ENABLE 1: DEACTIVATION STOPS THE DRIVE

RUN
SAFETIES

EXTERNAL SPEED REFERENCE

O-10 VDC

1	SCR
2	AI1
3	AGND

312K OHM
IMPEDANCE

4-20mA

1	SCR
2	AI1
3	AGND

100 OHM
IMPEDANCE

AI1 ANALOG INPUT
AI1 0-10VDC — NO — OFF

AI1 ANALOG INPUT
AI1 4-20mA — NO — ON

FAULT RELAY

25	RO3C	RELAY OUTPUT 3 PROGRAMABLE DEFAULT "FAULT(-1)"
26	RO3A	
27	RO3B	

CONTACT RATING 12-250 VAC
30VDC 10mA-6A

OUTPUT SIGNAL

O-20mA
500 OHM

1	SCR
7	AO1
9	AGND

PROGRAMMED FOR
FREQUENCY

OUTPUT CONTACT

22	RO2C	RELAY OUTPUT 2 PROGRAMABLE DEFAULT "RUNNING"
23	RO2A	
24	RO2B	

CONTACT RATING 12-250 VAC
30VDC 10mA-6A

- TERMINAL POINT
- REMOTE DEVICE (BY OTHERS)
- OPTIONAL PANEL COMPONENTS
- FIELD WIRING
- WIRE PER TRANSFORMER LABEL PER VOLTAGE.
* USE MINIMUM 75°C COPPER WIRE ONLY

PRODUCT DRAWING

YORK Solution XT Field Wiring
MODEL:
NOT FOR CONSTRUCTION

Project Name: Adams Fairacre Farms
Location:
Engineer:
Contractor:
For:

Sold To:
Cust Purch Order#:
Contract#:

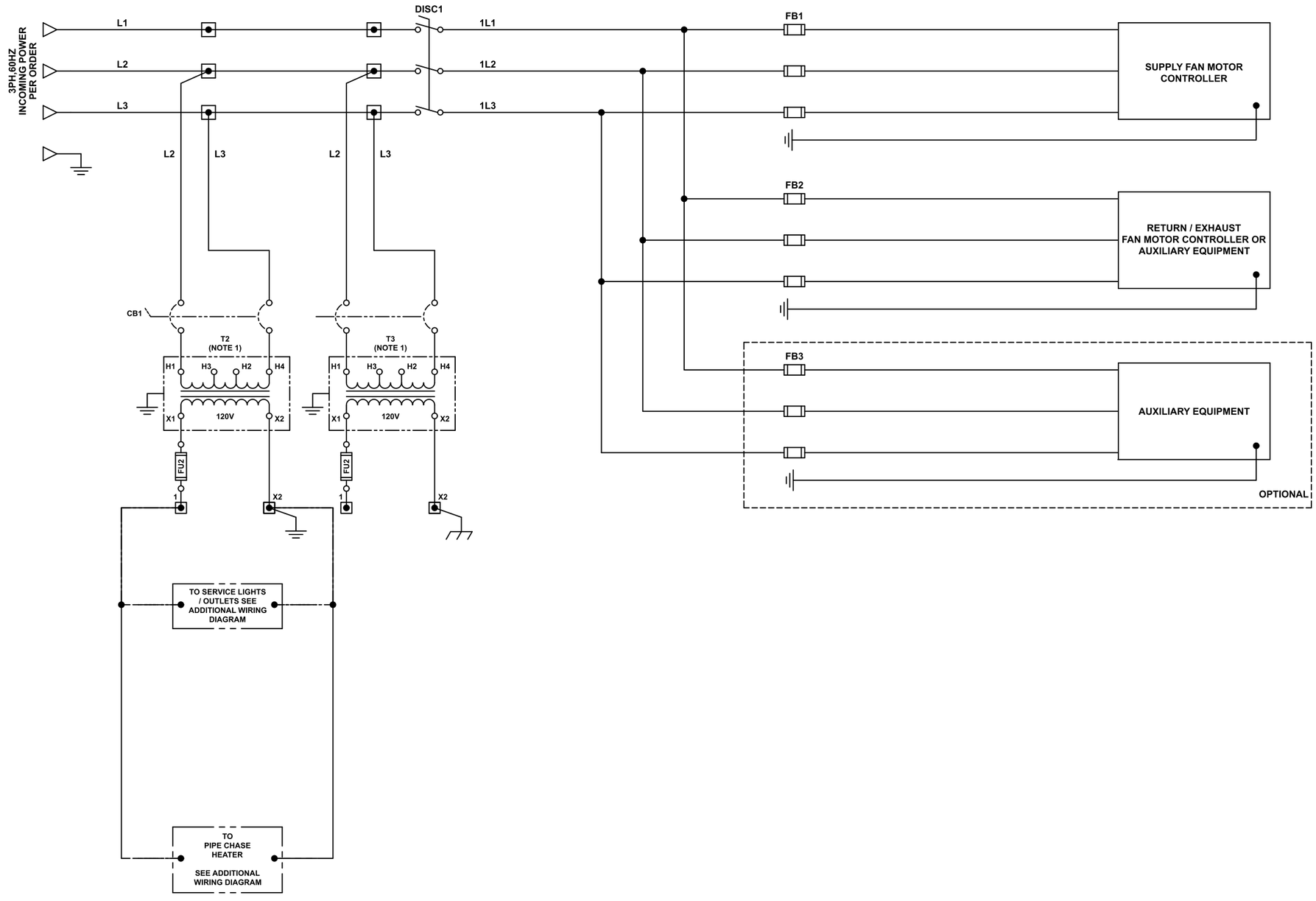
UNIT TAG: AHU-4 - Sheet 3

Date: 6/15/2021 10:38:2
Version:
Form No.: 100.09-EG1
Dwg. Lev.: 12/03
Dwg. Scale: NTS

Serial Number:
SQ Database Number:
YORKworks Release:
Dwg. Name:
Dwg. Location:

Johnson Controls

YORKworks Version: 21.01b Drawing Generator Version : 01:00:21068



NOTES:

- ⊙ - TERMINAL POINT
- ▲ - REMOTE DEVICE (BY OTHERS)
- ---------- - FIELD WIRING
- 1 - WIRE PER TRANSFORMER LABEL PER VOLTAGE.
- AUXILIARY EQUIPMENT - MAY BE DEFINED AS FOLLOWS
  - ELECTRIC HEAT
  - GAS FIRED HEAT
  - ENERGY WHEEL MOTOR CONTROLLER

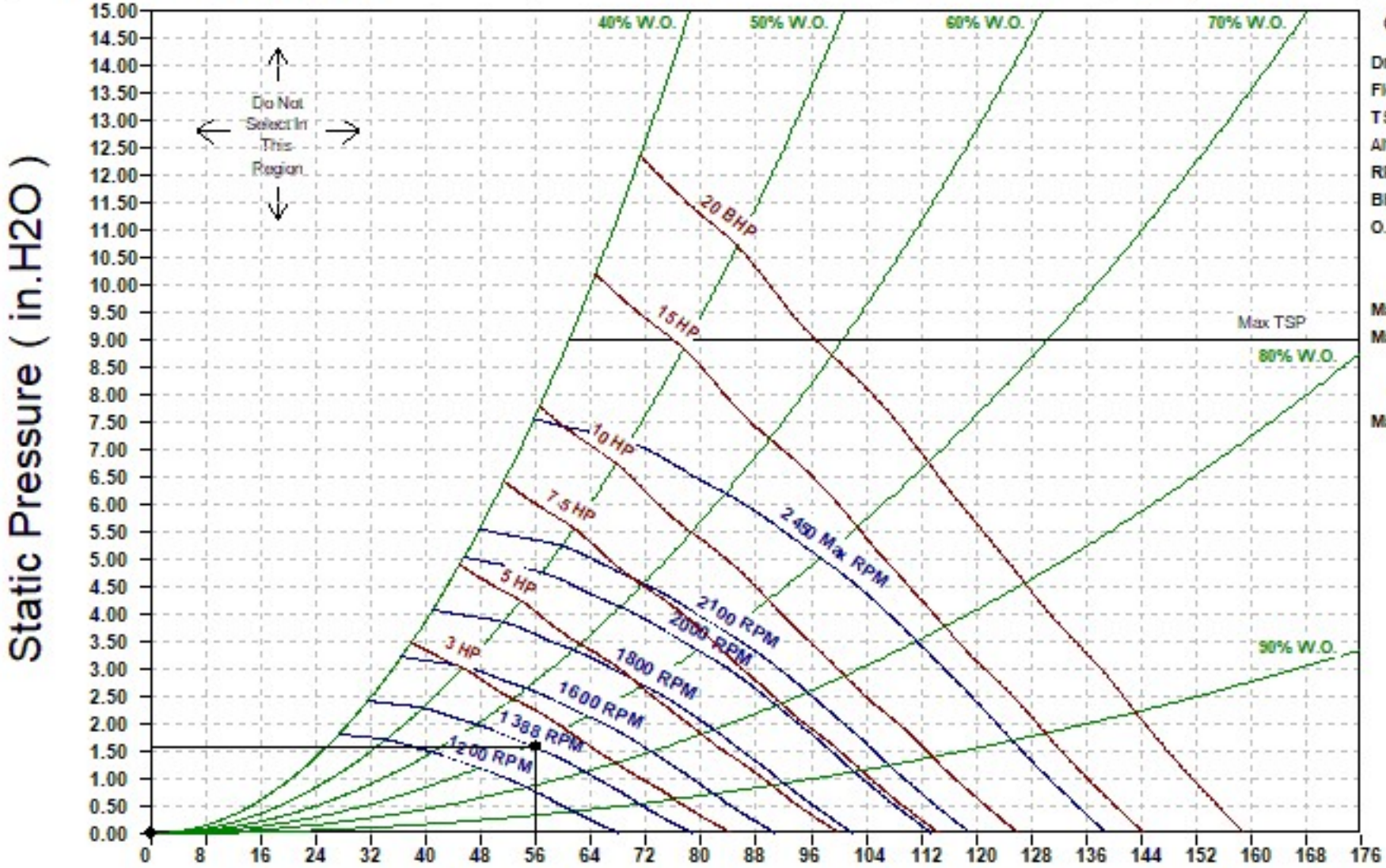
PRODUCT DRAWING YORK Solution XT Field Wiring MODEL: **NOT FOR CONSTRUCTION**	Project Name: Adams Fairacre Farms Location: Engineer: Contractor: For:	Sold To: Cust Purch Order#: Contract#: UNIT TAG: AHU-4 - Sheet 4	Date: 6/15/2021 10:38:2 Version: Form No.: 100.09-EG1 Dwg. Lev.: 12/03 Dwg. Scale: NTS	Serial Number: SQ Database Number: YORKworks Release: Dwg. Name: Dwg. Location:	Johnson Controls

YORKworks Version: 21.01b Drawing Generator Version : 01:00:21068

Johnson Controls

Solution XT Fan Rating Curve

Project Name	Unit Tag	Qty	Model	Seg	Fan Type	Class	Size
Adams Fairacre Farms	AHU-4	1	XTI-45x63	FR	AF	S	18-18



Operating Point

Draw Type:	Blow-Thru
Flow (cfm):	5600
TSP (in.H2O):	1.57
Altitude (ft):	187
RPM:	1388
BHP:	2.35
O.V.:	1778

Fan Limits

Max RPM:	2450
Max TSP:	9

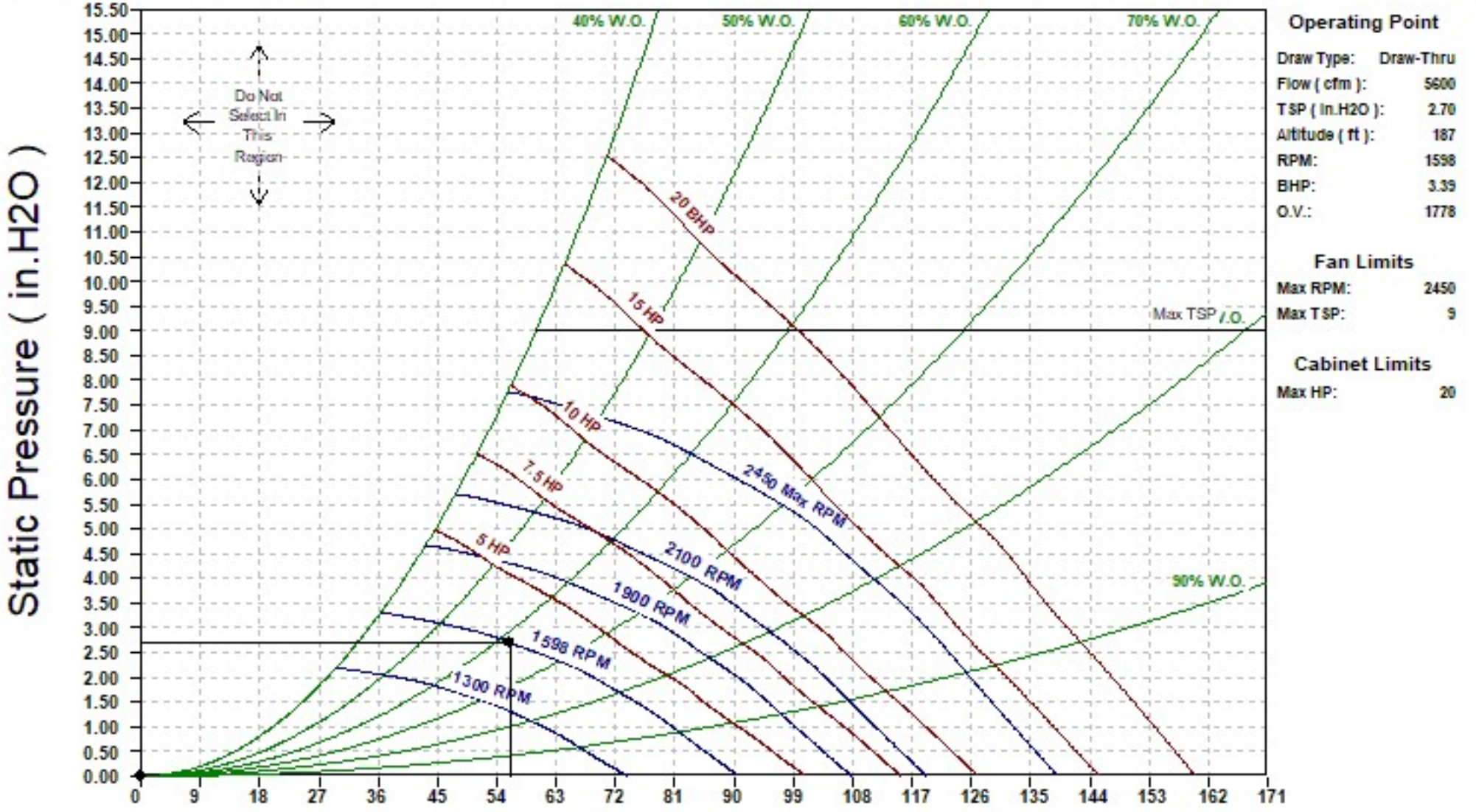
Cabinet Limits

Max HP:	20

Johnson Controls

Solution XT Fan Rating Curve

Project Name	Unit Tag	Qty	Model	Seg	Fan Type	Class	Size
Adams Fairacre Farms	AHU-4	1	XTI-45x63	FS	AF	S	18-18



Operating Point

Draw Type:	Draw-Thru
Flow (cfm):	5600
TSP (in.H2O):	2.70
Altitude (ft):	187
RPM:	1598
BHP:	3.39
O.V.:	1778

Fan Limits

Max RPM:	2450
Max TSP:	9

Cabinet Limits

Max HP:	20

YORK® Solution™ Air Handling Unit Performance Report

Job Summary

Project Name:	Adams Fairacre Farms		
Unit Tag(s):	AHU-4		
Quantity:	1	**Environment:**	Indoor

Unit Overview

Model	Airflow (CFM)	Altitude (ft)	Operating Weight (lbs)
XTI-45x63	5,600	187	4,383

Segment Sequence

(FS HC-2 CC XA HC-1 RF EE EE FR IP)

Unit Construction

Casing Details

Segment(s)	Thickness (in)	Exterior Paint	Exterior Gauge and Material	Interior Gauge and Material	Insulation Thickness and Material	Bulkhead Material
IP , FR , EE , RF , HC-1 , XA , CC , HC-2 , FS	2	None	STD Ga. G-90 Galvanized	STD Ga. G-90 Galvanized	2" Foam	Galvanized

Base Details

Segment(s)	Base		Floor				
	Material	Paint	Gauge and Material	Paint	Insulation	Attachment	Tread Plate
IP , FR , EE , RF , HC-1 , XA , CC , HC-2 , FS	Standard Structural Steel	Standard Base Paint	STD Ga. G-90 Galvanized	None	N/A	-	None

Unit Electrical

Circuit Details

Circuit #	Component(s)	V/Ph/Hz	Full Load Amps (FLA)	Minimum Current Ampacity (MCA)	Maximum Overcurrent Protection (MOP)
1	Supply Fan Motor Control, Return Fan Motor Control, Lights and Outlets	460/3/60	15.2	19.1	20.0

Electrical Details

Minimum Unit SCCR	5 kA rms Symmetrical	**ETL Label (UL1995/NEC-2002)**	Yes
Unit Light Type		**Unit Light Switch**	
Standard LED		External	

Supply Fan(s)

Performance Details

Fan Manufacturer	Model	Class	Size	% Wheel Width	% Wheel Diameter	Quantity	Total Airflow (CFM)	Altitude (ft)	TSP (in w.g)	ESP (in w.g)	Fan Speed (RPM)	Fan Power (BHP)
Comefri	ATZAF	S	18-18	100	100	1	5,600	187	2.70	0.75	1,598	3.39

Drive Type	Drive SF	Wheel Type	Blade Type	Wheel Material	Base Material	Fan Flow Isolation	Isolation Type	Total Eficiency (%)	Outlet Velocity (ft/s)	Max Speed (RPM)	Fan Power (BHP) w/ Drive Loss
Belt Drive - Fixed	1.5	DWDI	Airfoil	Steel	Galvanized Steel	None	1" Spring	75.29	1,778	2,450	3.62

Motor Details

Type	Manufacturer	Motor Power (HP)	V/Ph/Hz	Quantity	Insulation Class	Motor Speed (RPM)	Frame Size	Full Load Amps (Amps)	Efficiency	Location
ODP	Baldor	5.0	460/3/60	1	H	1,800	184	6.60	Premium	Left

At Motor Synchronous Details

TSP (in w.g.)	Total Air Flow (CMF)	Fan Speed (RPM)	Motor Correction Factor(%)	Fan Power (BHP)	Total Eficiency (%)
2.70	5,600	1,598	89.5	3.39	75.29

Return Fan(s)

Performance Details

Fan Manufacturer	Model	Class	Size	% Wheel Width	% Wheel Diameter	Quantity	Total Airflow (CFM)	Altitude (ft)	TSP (in w.g)	ESP (in w.g)	Fan Speed (RPM)	Fan Power (BHP)
Comefri	ATZAF	S	18-18	100	100	1	5,600	187	1.57	0.75	1,388	2.4

Max RPM	Fan Power with Drive Loss (HP)	Wheel Type	Blade Type	Wheel Material	Base Material	Fan Flow Isolation	AirFlow Monitoring	Inverter Drive Balancing	Isolation Type	Thrust Restraints
2,450	2.51	DWDI	Airfoil	Steel	Galvanized Steel	None	-	-	1" Spring	-

Drive Type	Drive SF	Spare Belts	Spare Sheave	Inlet Screen	Fan Cage	Belt Guard	Lube Lines	Bearings	Fan Stand	Motor Removal Rail	Seismic Snubber
Belt Drive - Fixed	1.5	-	-	-	-	-	None	-	-	-	-

Motor Details

Type/MFG	Motor Power (HP)	V/Ph/Hz	Quantity	Insulation Class	RPM	Frame Size	FLA (Amps)	Efficiency	Location	SGR
ODP/TECO	3.0	460/3/60	1	F	1,800	182	4.30	Premium	Left	-

Glycol Coil(s)

Performance[1] Details

Coil	Glycol Type	Glycol %	Rows	Fin Spacing (FPI)	TPC	TMBH	SMBH	EAT (°F)		LAT (°F)		Airflow (CFM)	FV (ft/min)	APD	Flow (GPM)	EWT (°F)	LWT (°F)	Fluid Vel. (ft/s)	WPD	Alt. (ft)
								DB	WB	DB	WB									
HC-1	Propylene	30%	2	8	4	290	290	64.0	-	111.6	-	5,600	452	0.09	30.5	180.0	160.1	3.8	5.9	187
CC	Propylene	30%	8	12	12	159	139	77.9	63.5	53.5	53.0	5,600	452	0.70	32.0	45.0	55.6	3.1	11.6	187
HC-2	Propylene	30%	1	8	4	135	135	53.0	-	74.7	-	5,600	452	0.03	14.1	160.0	140.0	3.5	3.7	187

Construction Details

Coil	Location		Offset (in)	Connection Material[3]	Connection Rotation (degrees)	Connection Type	Supply Connection (Per Coil)		Coil Stack Rack
	Coil Index[2]	Connection					Qty	Size	
HC-1	0	Left	0	Steel	0	MPT	1	1-1/2	-
CC	0	Left	0	Steel	0	MPT	1	1-1/2	-
HC-2	0	Left	0	Steel	0	MPT	1	1-1/2	-

Coil	# of Coils High	Face Type	Total Fin Height (in)	Fin Length (in)	Coil Face Area (ft²)	Fin Material	Fin Thickness (in)	Fin Type	Tube Diameter (in)	Tube Material	Tube Wall Thickness (in)

Coil	# of Coils High	Face Type	Total Fin Height (in)	Fin Length (in)	Coil Face Area (ft²)	Fin Material	Fin Thickness (in)	Fin Type	Tube Diameter (in)	Tube Material	Tube Wall Thickness (in)
HC-1	1	Full	35.00	51	12.4	AL	.006	Corrugated	1/2	Copper	.016
CC	1	Full	35.00	51	12.4	AL	.008	Corrugated	1/2	Copper	.016
HC-2	1	Full	35.00	51	12.4	AL	.006	Corrugated	1/2	Copper	.016

Coil	Coil Coating	Dry Weight (lbs)	Fluid Weight (lbs)	Fluid Volume (ft³)	Header Material	Casing Material	Intermediate Drain Pan Material	Fouling Factor (hr.ft².°F/BTU)
HC-1	-	83	26	0.4	Copper	Galvanized	-	-
CC	-	296	87	1.4	Copper	Galvanized	304 Stainless Steel	-
HC-2	-	62	16	0.3	Copper	Galvanized	-	-

Coil Notes

- [1]Performance is shown for the entire coil bank. Performance is not per coil.
- [2]Coil index indicates position in segment. Example: CC-1, index 0; Spacer, index 1; CC-2, index 2
- [3]Johnson Controls suggests using red brass or copper connectors when the coil is to be attached to a copper or brass piping system.
- All coils are rated with a fouling factor of 0.00000 hr.ft².°F/BTU unless otherwise noted
- Ratings are for coils manufactured by Johnson Controls, Inc., 507 E. Michigan St., Milwaukee WI 53202.
- Coil DLL Version: 7.7I
- BDW Tube Spacing: 1.25 x 1.08
- HC-1[1][0]: This coil is certified in accordance with the AHRI Forced-Circulation Air-Cooling and Air-Heating Coils Certification Program which is based on AHRI Standard 410 within the range of Standard rating conditions listed in Table 1 of the Standard. Certified units may be found in the AHRI Directory at www.ahridirectory.org.
- [1]Performance is shown for the entire coil bank. Performance is not per coil.
- [2]Coil index indicates position in segment. Example: CC-1, index 0; Spacer, index 1; CC-2, index 2
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- [2]Coil index indicates position in segment. Example: CC-1, index 0; Spacer, index 1; CC-2, index 2
- [3]Johnson Controls suggests using red brass or copper connectors when the coil is to be attached to a copper or brass piping system.
- All coils are rated with a fouling factor of 0.00000 hr.ft².°F/BTU unless otherwise noted
- Ratings are for coils manufactured by Johnson Controls, Inc., 507 E. Michigan St., Milwaukee WI 53202.
- Coil DLL Version: 7.7I
- BDW Tube Spacing: 1.25 x 1.08
- HC-2[1][0]: This coil is certified in accordance with the AHRI Forced-Circulation Air-Cooling and Air-Heating Coils Certification Program which is based on AHRI Standard 410 within the range of Standard rating conditions listed in Table 1 of the Standard. Certified units may be found in the AHRI Directory at www.ahridirectory.org.

Drain(s)

Details

Segment	Drain Pan		
	Liner Material	Connection Location	Liner Coating
CC	Stainless Steel	Left	None

Filter(s)

Details							
Segment	Type	Depth	Filter Loading	Media/MERV	# of Spares	Spare Filter Media	Frame Material
RF	Pre-Filter	2"	Side	Pleated 30% (MERV 8)	0	Pleated 30% (MERV 8)	Aluminum
RF	Primary Filter	4" Mini-Pleat	Side	90-95% Eff, (MERV 14)	0	90-95% Eff, (MERV 14)	Aluminum

Sizes						Filter Gauge Details		
Segment	Filter	1st Filter Size H x W (in)	1st Qty	2nd Filter Size H x W (in)	2nd Qty	Location	Type	Range (in w.g)
RF	Pre-Filter	24x24	2	12x24	2	Door	Magnehelic with Flag	0 - 2
RF	Primary Filter	24x24	2	12x24	2	Door	Magnehelic with Flag	0 - 2

Damper(s)

Details													
Segment	Air Path	H x W (in)	Qty	Total Face Velocity (ft/min)	Face Area	CFM	Minimum Allowable OA CFM	Damper Type	Damper Config	Model	Material	Blade Orientation	Actuator Type	Fail Position
EE	Exhaust Air	15.25 x 45.00		1,175		5,600	-	Control	100%	CD60	Galvanized	Parallel	-	-
EE	Outside Air	15.25 x 45.00		1,175		5,600		Control	100%	CD60	Galvanized	Parallel	-	-
EE	Mixed Air	15.25 x 45.00		1,175		5,600	-	Control	100%	CD60	Galvanized	Parallel	-	-

Door(s)

Details										
Segment(s)	Location	Swing	Hinge Location	H x W x T (in)	View Port	Test Port	Spare Gasket	Thermal Break	Safety Latch	Noncontact Safety Interlock
FR, XA, CC, FS	Left	Outward	Upstream Side	39 x 18 x 2	None	-	-	-	-	-
EE	Left	Outward	Upstream Side	39 x 24 x 2	None	-	-	-	Yes	-
EE	Left	Outward	Upstream Side	39 x 15 x 2	None	-	-	-	-	-
RF	Left	Outward	Upstream Side	39 x 10 x 2	None	-	-	-	-	-

Motor Control(s)

Details										
Segment	Type	MMP	V/Ph/Hz	Input/Output Amps*	Efficiency	Heat Loss (at 100% load)	Enclosure	Bypass	Disconnect Type	RFI/EMI EMC Filter
FR	ABB VFD ABB AYK580	-	460/3/60	4.8/4.8	90 %	84	NEMA 1	-	Fused	Yes
FS	ABB VFD ABB AYK580	-	460/3/60	7.6/7.6	90 %	133	NEMA 1	-	Fused	Yes

Details										
Segment	Type	MMP	V/Ph/Hz	Input/Output Amps*	Efficiency	Heat Loss (at 100% load)	Enclosure	Bypass	Disconnect Type	RFI/EMI EMC Filter

Notes
*Drives are rated for use below 3,000 ft and 104°F. Use Derating Charts in Air-Mod Engineering Guide Form 100.42-EGI (212) for use above these limits.
Storage Temperature: -40°F to 158°F
Humidity: MAX 95% RH non-condensing
Altitude: 3,300 ft. without derate (1% derate for each additional 330 ft.)
Overload Current Rating: 100% for 1 minute every 10 minutes.
The Class 10 trip rating of the MMP device will not withstand an across-the-line start of a fan and should not be used with VFDs with bypass circuits.
The customer must provide a platform or catwalk for accessing the power-disconnect.
Copper Conductors Only.
FR: Contains the following option: Swinging DC Line Choke (Equivalent to 5% Input Line Reactor)
FS: Contains the following option: Swinging DC Line Choke (Equivalent to 5% Input Line Reactor)

Face Velocity and Static Pressure

Summary						
Segment	Description	Face Area (sq. ft)	Airflow (CFM)	Face Velocity (ft/min)	Supply Fan Static Pressure (in w.g.)	Exhaust/Return Fan Static Pressure (in w.g.)
IP	Opening	3.1	5,600	1,792.00	0.00	0.54
FR	External Static - User Entered	0.0	5,600	0.00	0.00	0.75
EE	Opening	4.8	5,600	1,175.00	0.00	0.23
EE	Control Galvanized (CD60)	0.0	5,600	0.00	0.00	0.05
EE	Opening	4.8	5,600	1,175.00	0.23	0.00
EE	Control Galvanized (CD60)	0.0	5,600	0.00	0.05	0.00
RF	2" Pleated 30% (MERV 8)	12.0	5,600	467.00	0.24	0.00
RF	Dirty Filter Allowance - Prefilter	0.0	5,600	0.00	0.00	0.00
RF	4" Mini-Pleat 90-95% Eff, (MERV 14)	12.0	5,600	467.00	0.61	0.00
HC-1	Heating 2 rows 8 fins	12.4	5,600	452.00	0.09	0.00
CC	Cooling 8 rows 12 fins	12.4	5,600	452.00	0.70	0.00
HC-2	Heating 1 rows 8 fins	12.4	5,600	452.00	0.03	0.00
FS	External Static - User Entered	0.0	5,600	0.00	0.75	0.00
				Total	**2.70**	**1.57**

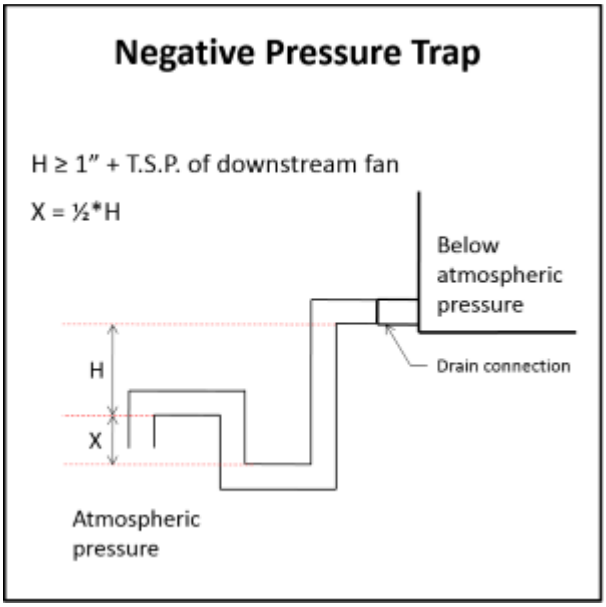
Dimensions and Weight

Details					
Segment	Description	Length[1] (in)	Width[2] (in)	Height (in)	Weight (lbs)
IP	Inlet Plenum	12	63	45	284
FR	Return Fan	38	63	45	757
EE	Economizer	54	63	45	463
RF	High Efficiency Filter	10	63	45	172
HC-1	Heating Coil	10	63	45	272
XA	Variable Length Access	18	63	45	172
CC	Variable Length Cooling Coil	35	63	45	868
HC-2	Heating Coil	10	63	45	251
FS	Supply Fan - DWDI	58	63	45	1,144
Overall[3]		**245**			**4,383**

Notes
[1]The length includes bottom tier segments only
[2]The width does not include coil connection extensions or door latches that extend beyond the unit casing. The width does not include the depth of any pipe chases.
[3]Unit level and other loose components may be excluded from segment weights and overall segment weights. For total unit weight reference Unit Overview.

Recommended Trap Height

Details									
Segment	Applicable Fan	Fan TSP (in w.g.)	Positive or Negative	Calculated Dimensions (in)			Recommended Dimensions (in)		Base Rail Height (in)
				H	X	H + X	H	H + X	
CC	Supply Fan	2.70	Negative	3.70	1.85	5.55	3.75	5.75	6"



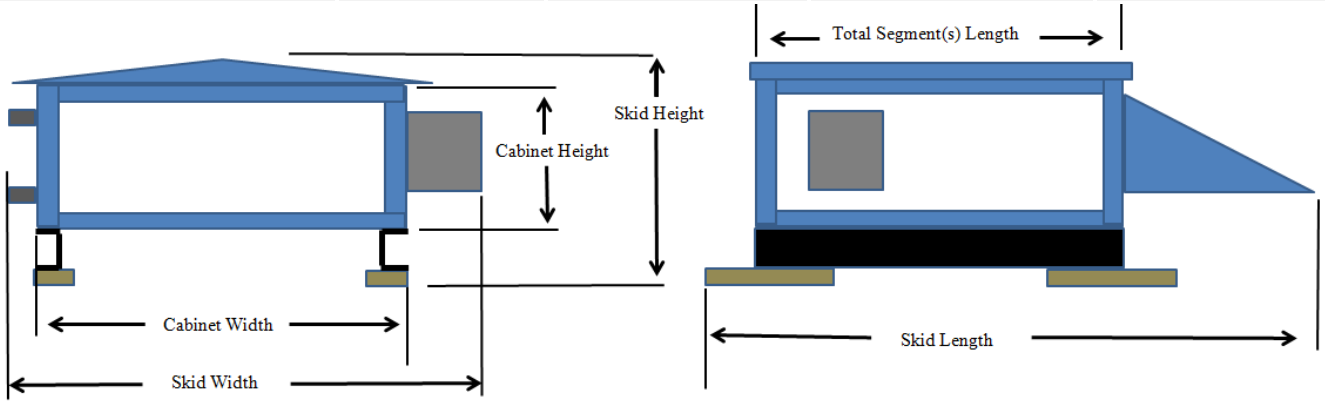
Notes
Formulas and calculations are recommendations only. Contractor shall determine actual dimensions required for each trap based on jobsite conditions, and application requirements.
Refer to the Installation Manual of the IOM for more information.

Statement of Compliance

Details
YORK® Solution XT AHU's meet IBC seismic requirements for non-critical equipment (Ip = 1.0) for locations with design spectral response Sds <= 0.43. Units must be rigid mounted.
The anchorage of the unit to the ground or building structure needs to be evaluated by and is the responsibility of the engineer of record. Specification of seismic requirements is the responsibility of the project design engineer. If formal certification is required, please contact your sales representative and/or application engineer for review. Certain application and site requirements may require additional cost and/or lead time.
Component locations are listed as Segment Hand (Unit Hand): ex. Left (Right). See SubmittalDrawing for additional details
Air handling unit parameters vary depending on conditions. Parameters such as airflows, air pressure drops, and coil capacities are shown for design conditions.

Shipping Summary

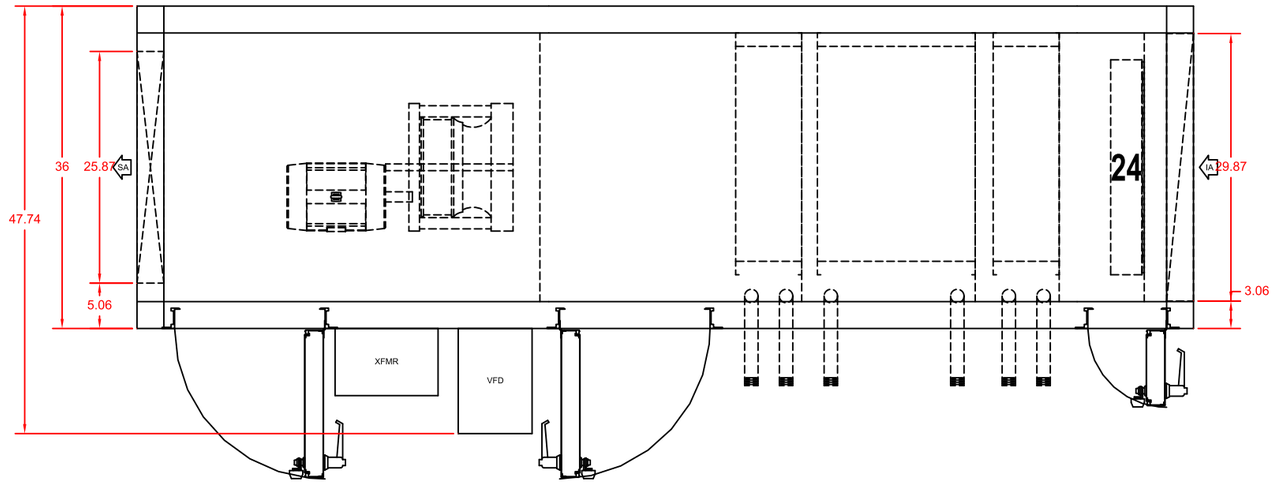
Details				
Skid	**Skid Length (in)**	**Skid Height (in)**	**Skid Width (in)**	**Skid Weight (lbs)**
(FS HC-2 CC XA HC-1 RF EE EE FR IP)	246	55	77	4,383



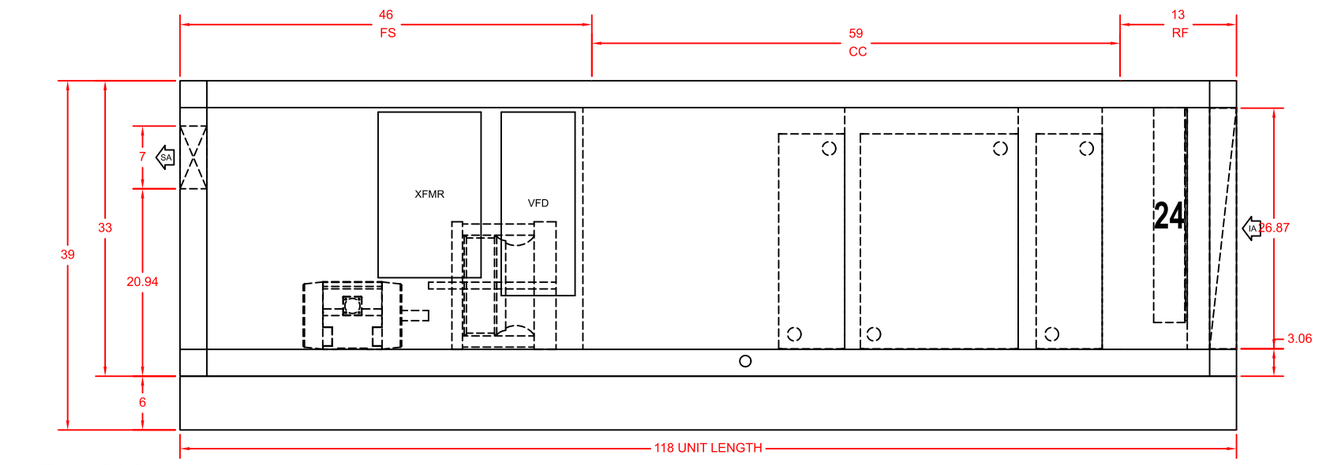
Notes
Skid Width: Total width of the shipping skid, including any items that may extend beyond the cabinet (this includes any door handles, coil connections, drain connections, lifting lugs, mounted pipe-chases, electrical/control components, tie-down brackets, side dampers).
Skid Height: Total height of the shipping skid, including any items that may extend beyond the cabinet (this includes any base-rails, shipping wood-blocks, roof peak, discharge flanges, mounted gas-furnace flue pipes).
Skid Length: Total length of the shipping skid, including any items that may extend beyond the cabinet (this includes any mounted rain-hoods, discharge flanges,tie-down brackets, shipping wood-blocks, front dampers, split connectors, electrical/control components, outrigging extensions, isolation dampers, inlet baskets).

AHU-5

60 EAST 42ND STREET
NEW YORK, NY 10165
PHONE: (646) 658-6700
FAX: (212) 370-0305



PLAN VIEW



* NOTE: MAX HEIGHT

ELEVATION VIEW

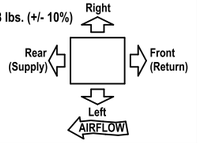
UNIT CONSTRUCTION

Model: Solution-XTI-33x36 Construction: Indoor

Motor Location:

Unit Weight: 1,708 lbs. (+/- 10%)

PLAN VIEW



NOTES

Units with a baserail and a bottom opening: Duct connection flush with the bottom of unit, not flush with bottom of baserail.

Refer to performance report for shipping split details.

Allow sufficient space around the unit for removing the access panels and various parts of the unit. A minimum clearance equal to the width of the unit must be provided on one side of the unit for removing the coil or fan assembly.

Contractor responsible for penetrations and connections of all electrical boxes and internal coil connections.

Overall dimensions account for: outdoor roof peak and overhang, motor control and/or factory package control boxes, coil connections, rain hoods, pipe chases, AMS-60 damper/EAML louver (if applicable,) base rail - in order to convey the true space requirements for the unit.

Certain items may extend beyond cabinet dimensions including: door handles, light switches, electrical boxes, lifting lugs, gas fuel system, etc.

The overall unit length includes an additional 1/4" per shipping split due to additional gasketing and split connection hardware.

Dimension tolerances: Unit (+/- 1/2"); Piping (+/- 2")

SL - Designates Shipped Loose Item(s)

PIPING CONNECTIONS
(In order of Airflow)

Segment	Type	Hand	Quantity	Supply	Return
CC	MPT	Left	1 Sup 1 Ret	1 1/2"	1 1/2"
CC	MPT	Left	1 Sup 1 Ret	1 1/2"	1 1/2"
CC	MPT	Left	1 Sup 1 Ret	1 1/2"	1 1/2"

Drain pan connection size 1 1/4" MPT SCH 40 (Connections on Left Side of unit)

SECTION LIST

SECT	DESCRIPTION
RF	High Efficiency Filter
CC	Cooling Coil
FS	Supply Fan - 11APBC

PRODUCT DRAWING

SOLUTION XT AIR HANDLING UNIT DETAIL
MODEL: Solution-XTI-33x36
NOT FOR CONSTRUCTION

Project Name: Adams Fairacre Farms
Location:
Engineer:
Contractor:
For:

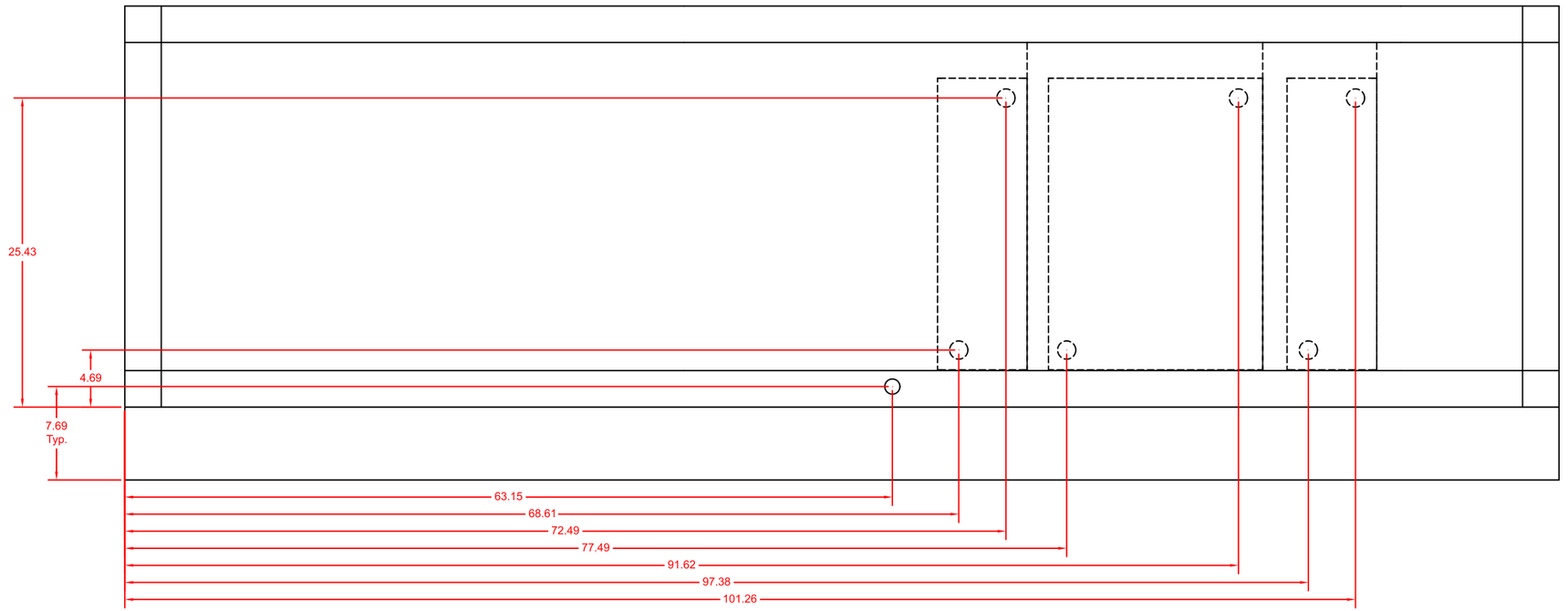
Sold To:
Cust Purch Order#:
Contract#:
UNIT TAG: AHU-5 - Sheet 1

Date: 11/5/2021 12:40:14
Version:
Form No.:
Dwg. Lev.: 5/03
Dwg. Scale: NTS

Serial Number:
SQ Database Number:
YORKworks Release:
Dwg. Name:
Dwg. Location:

Johnson Controls

YORKworks Version: 21.03 Drawing Generator Version : 01:00:16194



Coil Connections

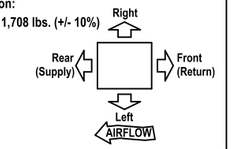
UNIT CONSTRUCTION

Model: Solution-XTI-33x36 Construction: Indoor

Motor Location:

Unit Weight: 1,708 lbs. (+/- 10%)

PLAN VIEW



NOTES

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Refer to performance report for shipping split details.

Allow sufficient space around the unit for removing the access panels and various parts of the unit. A minimum clearance equal to the width of the unit must be provided on one side of the unit for removing the coil or fan assembly.

Contractor responsible for penetrations and connections of all electrical boxes and internal coil connections.

Overall dimensions account for: outdoor roof peak and overhang, motor control and/or factory package control boxes, coil connections, rain hoods, pipe chases, AMS-60 damper/EAML louver (if applicable,) base rail - in order to convey the true space requirements for the unit.

Certain items may extend beyond cabinet dimensions including: door handles, light switches, electrical boxes, lifting lugs, gas fuel system, etc.

The overall unit length includes an additional 1/4" per shipping split due to additional gasketing and split connection hardware.

Dimension tolerances: Unit (+/- 1/2"); Piping (+/- 2")

(SL) - Designates Shipped Loose Item(s)

PIPING CONNECTIONS
(In order of Airflow)

Segment	Type	Hand	Quantity	Supply	Return
CC	MPT	Left	1 Sup 1 Ret	1 1/2"	1 1/2"
CC	MPT	Left	1 Sup 1 Ret	1 1/2"	1 1/2"
CC	MPT	Left	1 Sup 1 Ret	1 1/2"	1 1/2"

Drain pan connection size 1 1/4" MPT SCH 40 (Connections on Left Side of unit)

SECTION LIST

SECT	DESCRIPTION
RF	High Efficiency Filter
CC	Cooling Coil
FS	Supply Fan - 11APBC

PRODUCT DRAWING

SOLUTION XT COIL CONNECTION DETAIL
MODEL: Solution-XTI-33x36
NOT FOR CONSTRUCTION

Project Name: Adams Fairacre Farms
Location:
Engineer:
Contractor:
For:

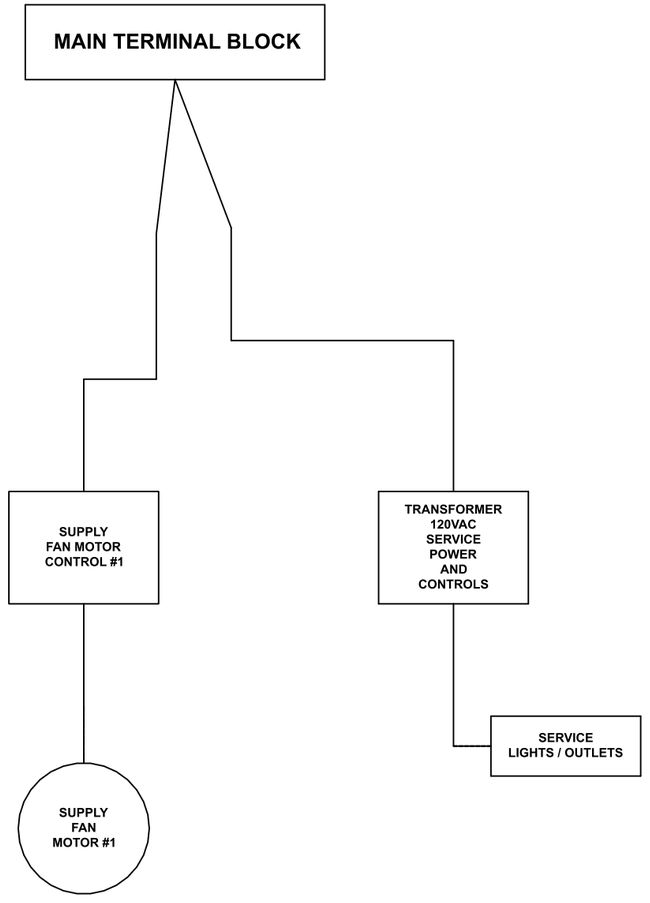
Sold To:
Cust Purch Order#:
Contract#:
UNIT TAG: AHU-5 - Sheet 2

Date: 11/5/2021 12:40:14
Version:
Form No.:
Dwg. Lev.: 5/03
Dwg. Scale: NTS

Serial Number:
SQ Database Number:
YORKworks Release:
Dwg. Name:
Dwg. Location:

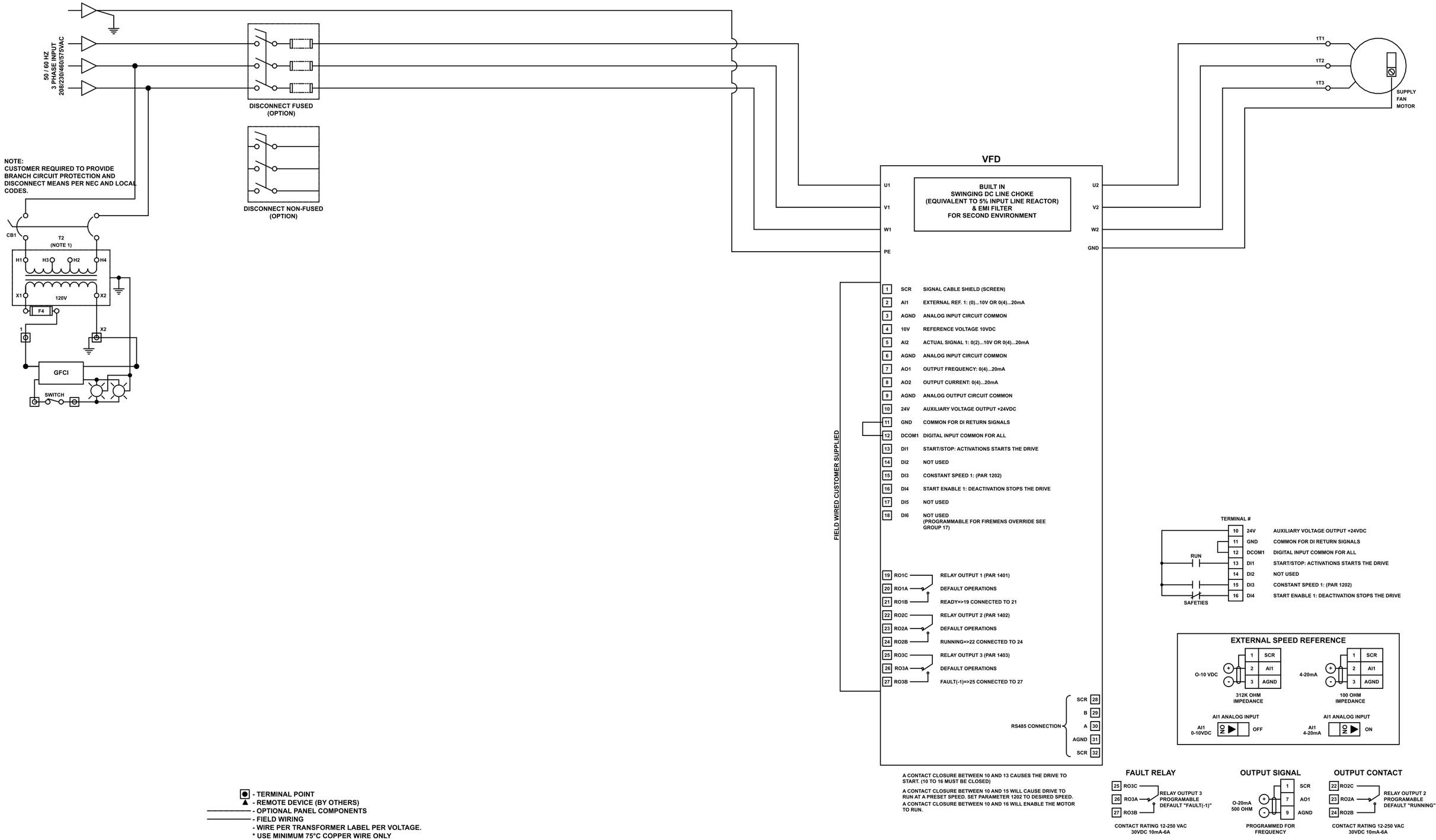
Johnson Controls

YORKworks Version: 21.03 Drawing Generator Version : 01:00:16194



PRODUCT DRAWING YORK Solution XT Field Wiring MODEL: **NOT FOR CONSTRUCTION**	Project Name: Adams Fairacre Farms Location: Engineer: Contractor: For:	Sold To: Cust Purch Order#: Contract#: UNIT TAG: AHU-5 - Sheet 1	Date: 11/5/2021 12:40:14 Version: Form No.: 100.09-EG1 Dwg. Lev.: 12/03 Dwg. Scale: NTS	Serial Number: SQ Database Number: YORKworks Release: Dwg. Name: Dwg. Location:	Johnson Controls

YORKworks Version: 21.03 Drawing Generator Version : 01:00:21068



PRODUCT DRAWING

YORK Solution XT Field Wiring
MODEL:
NOT FOR CONSTRUCTION

Project Name: Adams Fairacre Farms
Location:
Engineer:
Contractor:
For:

Sold To:
Cust Purch Order#:
Contract#:
UNIT TAG: AHU-5 - Sheet 2

Date: 11/5/2021 12:40:14
Version:
Form No.: 100.09-EG1
Dwg. Lev.: 12/03
Dwg. Scale: NTS

Serial Number:
SQ Database Number:
YORKworks Release:
Dwg. Name:
Dwg. Location:

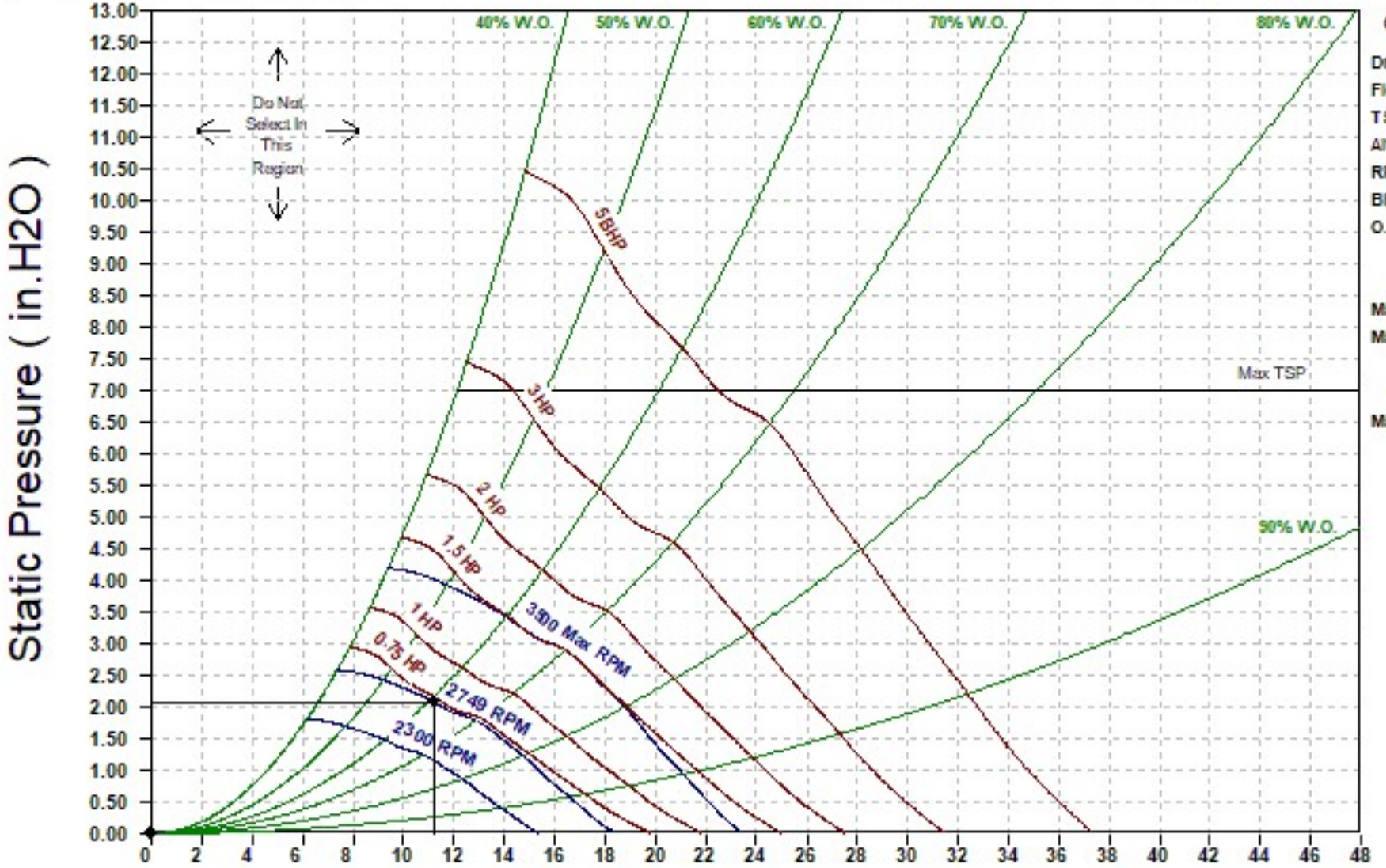
Johnson Controls

YORKworks Version: 21.03 Drawing Generator Version : 01:00:21068

Johnson Controls

Solution XT Fan Rating Curve

Project Name	Unit Tag	Qty	Model	Seg	Fan Type	Class	Size
Adams Fairacre Farms	AHU-5	1	XTI-33x36	FS	PL-APBC	II	11



Operating Point

Draw Type:	Draw-Thru
Flow (cfm):	1120
TSP (in.H2O):	2.08
Altitude (ft):	187
RPM:	2749
BHP:	0.72
O.V.:	N/A

Fan Limits

Max RPM:	3500
Max TSP:	7

Cabinet Limits

Max HP:	5

YORK® Solution™ Air Handling Unit Performance Report

Job Summary

Project Name:	Adams Fairacre Farms		
Unit Tag(s):	AHU-5		
Quantity:	1	**Environment:**	Indoor

Unit Overview

Model	Airflow (CFM)	Altitude (ft)	Operating Weight (lbs)
XTI-33x36	1,120	187	1,708

Segment Sequence

(FS CC RF)

Unit Construction

Casing Details

Segment(s)	Thickness (in)	Exterior Paint	Exterior Gauge and Material	Interior Gauge and Material	Insulation Thickness and Material	Bulkhead Material
RF , CC , FS	2	None	STD Ga. G-90 Galvanized	STD Ga. G-90 Galvanized	2" Foam	Galvanized

Base Details

Segment(s)	Base		Floor				
	Material	Paint	Gauge and Material	Paint	Insulation	Attachment	Tread Plate
RF , CC , FS	Standard Structural Steel	Standard Base Paint	STD Ga. G-90 Galvanized	None	N/A	-	None

Unit Electrical

Circuit Details

Circuit #	Component(s)	V/Ph/Hz	Full Load Amps (FLA)	Minimum Current Ampacity (MCA)	Maximum Overcurrent Protection (MOP)
1	Supply Fan Motor Control, Lights and Outlets	460/3/60	5.9	7.4	8.0

Electrical Details

Minimum Unit SCCR	5 kA rms Symmetrical	**ETL Label (UL1995/NEC-2002)**	Yes
Unit Light Type		**Unit Light Switch**	
Standard LED		External	

Supply Fan(s)

Performance Details

Fan Manufacturer	Model	Class	Size	% Wheel Width	% Wheel Diameter	Quantity	Total Airflow (CFM)	Altitude (ft)	TSP (in w.g)	ESP (in w.g)	Fan Speed (RPM)	Fan Power (BHP)
Comefri	APBC	II	11	100	100	1	1,120	187	2.08	0.75	2,749	.72

Drive Type	Drive SF	Wheel Type	Blade Type	Wheel Material	Base Material	Fan Flow Isolation	Isolation Type	Total Eficiency (%)	Outlet Velocity (ft/s)	Max Speed (RPM)	Fan Power (BHP) w/ Drive Loss
Belt Drive - Fixed	1.5	SWSI	Backward Curved	Steel	Galvanized Steel	None	1" Spring	50.60	890	3,500	0.80

Motor Details

Type	Manufacturer	Motor Power (HP)	V/Ph/Hz	Quantity	Insulation Class	Motor Speed (RPM)	Frame Size	Full Load Amps (Amps)	Efficiency	Location
ODP	Baldor	1.0	460/3/60	1	H	1,800	143	1.60	Premium	Left

At Motor Synchronous Details

TSP (in w.g.)	Total Air Flow (CMF)	Fan Speed (RPM)	Motor Correction Factor(%)	Fan Power (BHP)
0.00	1,120	2,749	85.5	0.72

Glycol Coil(s)

Performance[1] Details

Coil	Glycol Type	Glycol %	Rows	Fin Spacing (FPI)	TPC	TMBH	SMBH	EAT (°F)		LAT (°F)		Airflow (CFM)	FV (ft/min)	APD	Flow (GPM)	EWT (°F)	LWT (°F)	Fluid Vel. (ft/s)	WPD	Alt. (ft)
								DB	WB	DB	WB									
CC	Propylene	30%	2	8	6	72	72	53.7	-	111.8	-	1,120	295	0.05	7.6	180.0	160.0	2.2	1.2	187
CC	Propylene	30%	12	13	12	39	28	76.9	65.7	54.1	54.1	1,120	295	0.71	8.2	45.0	54.9	.8	.9	187
CC	Propylene	30%	1	10	2	26	26	54.1	-	75.2	-	1,120	295	0.02	2.7	160.0	140.0	.5	.1	187

Construction Details

Coil	Location		Offset (in)	Connection Material[3]	Connection Rotation (degrees)	Connection Type	Supply Connection (Per Coil)		Coil Stack Rack
	Coil Index[2]	Connection					Qty	Size	
CC	0	Left	0	Steel	0	MPT	1	1-1/2	-
CC	2	Left	0	Steel	0	MPT	1	1-1/2	-
CC	4	Left	0	Steel	0	MPT	1	1-1/2	-

Coil	# of Coils High	Face Type	Total Fin Height (in)	Fin Length (in)	Coil Face Area (ft²)	Fin Material	Fin Thickness (in)	Fin Type	Tube Diameter (in)	Tube Material	Tube Wall Thickness (in)
CC	1	Full	22.50	24	3.8	AL	.006	Corrugated	1/2	Copper	.016
CC	1	Full	22.50	24	3.8	AL	.008	Corrugated	1/2	Copper	.016
CC	1	Full	22.50	24	3.8	AL	.006	Corrugated	1/2	Copper	.016

Coil	Coil Coating	Dry Weight (lbs)	Fluid Weight (lbs)	Fluid Volume (ft³)	Header Material	Casing Material	Intermediate Drain Pan Material	Fouling Factor (hr.ft².°F/BTU)
CC	-	38	10	0.2	Copper	Galvanized	304 Stainless Steel	-
CC	-	164	45	0.7	Copper	Galvanized	304 Stainless Steel	-
CC	-	32	7	0.1	Copper	Galvanized	304 Stainless Steel	-

Coil	# of Coils High	Face Type	Total Fin Height (in)	Fin Length (in)	Coil Face Area (ft²)	Fin Material	Fin Thickness (in)	Fin Type	Tube Diameter (in)	Tube Material	Tube Wall Thickness (in)

Coil Notes

- [1]Performance is shown for the entire coil bank. Performance is not per coil.
- [2]Coil index indicates position in segment. Example: CC-1, index 0; Spacer, index 1; CC-2, index 2
- [3]Johnson Controls suggests using red brass or copper connectors when the coil is to be attached to a copper or brass piping system.
- All coils are rated with a fouling factor of 0.00000 hr.ft².°F/BTU unless otherwise noted
- Ratings are for coils manufactured by Johnson Controls, Inc., 507 E. Michigan St., Milwaukee WI 53202.
- Coil DLL Version: 7.7L
- BDW Tube Spacing: 1.25 x 1.08
- BDW Tube Spacing: 1.25 x 1.08
- BDW Tube Spacing: 1.25 x 1.08
- CC[1][0]: This coil is certified in accordance with the AHRI Forced-Circulation Air-Cooling and Air-Heating Coils Certification Program which is based on AHRI Standard 410 within the range of Standard rating conditions listed in Table 1 of the Standard. Certified units may be found in the AHRI Directory at www.ahridirectory.org.
- CC[1][2]: This coil is certified in accordance with the AHRI Forced-Circulation Air-Cooling and Air-Heating Coils Certification Program which is based on AHRI Standard 410 within the range of Standard rating conditions listed in Table 1 of the Standard. Certified units may be found in the AHRI Directory at www.ahridirectory.org.
- CC[1][4]: This coil is certified in accordance with the AHRI Forced-Circulation Air-Cooling and Air-Heating Coils Certification Program which is based on AHRI Standard 410 within the range of Standard rating conditions listed in Table 1 of the Standard. Certified units may be found in the AHRI Directory at www.ahridirectory.org.

Drain(s)

Details

Segment	Drain Pan		
	Liner Material	Connection Location	Liner Coating
CC	Stainless Steel	Left	None

Coil Spacer(s)

Details

Segment	Location	Length (in)	Material
CC	1	2	Galvanized
CC	3	2	Galvanized

Filter(s)

Details

Segment	Type	Depth	Filter Loading	Media/MERV	# of Spares	Spare Filter Media	Frame Material
RF	Pre-Filter	2"	Side	Pleated 30% (MERV 8)	0	Pleated 30% (MERV 8)	Aluminum
RF	Primary Filter	4" Mini-Pleat	Side	90-95% Eff, (MERV 14)	0	90-95% Eff, (MERV 14)	Aluminum

Sizes				Filter Gauge Details		
Segment	Filter	1st Filter Size H x W (in)	1st Qty	Location	Type	Range (in w.g)
RF	Pre-Filter	24x24	1	Door	Magnehelic with Flag	0 - 2
RF	Primary Filter	24x24	1	Door	Magnehelic with Flag	0 - 2

Door(s)

Details										
Segment(s)	Location	Swing	Hinge Location	H x W x T (in)	View Port	Test Port	Spare Gasket	Thermal Break	Safety Latch	Noncontact Safety Interlock
RF	Left	Outward	Upstream Side	27 x 10 x 2	None	-	-	-	-	-
CC	Left	Outward	Downstream Side	27 x 18 x 2	None	-	-	-	-	-
FS	Left	Outward	Upstream Side	27 x 18 x 2	None	-	-	-	Yes	-

Motor Control(s)

Details										
Segment	Type	MMP	V/Ph/Hz	Input/Output Amps*	Efficiency	Heat Loss (at 100% load)	Enclosure	Bypass	Disconnect Type	RFI/EMI EMC Filter
FS	ABB VFD ABB AYK580	-	460/3/60	2.1/2.1	86 %	45	NEMA 1	-	Fused	Yes
FS Single Point Power Main Disconnect	External Main Disconnect	-	460/3/60	0.0/0.0	86 %	0	NEMA 3R	-	External Non Fused	No

Notes
*Drives are rated for use below 3,000 ft and 104°F. Use Derating Charts in Air-Mod Engineering Guide Form 100.42-EGI (212) for use above these limits.
Storage Temperature: -40°F to 158°F
Humidity: MAX 95% RH non-condensing
Altitude: 3,300 ft. without derate (1% derate for each additional 330 ft.)
Overload Current Rating: 100% for 1 minute every 10 minutes.
The Class 10 trip rating of the MMP device will not withstand an across-the-line start of a fan and should not be used with VFDs with bypass circuits.
The customer must provide a platform or catwalk for accessing the power-disconnect.
Copper Conductors Only.
FS: Contains the following option: Swinging DC Line Choke (Equivalent to 5% Input Line Reactor)

Face Velocity and Static Pressure

Summary						
Segment	Description	Face Area (sq. ft)	Airflow (CFM)	Face Velocity (ft/min)	Supply Fan Static Pressure (in w.g.)	Exhaust/Return Fan Static Pressure (in w.g.)
RF	2" Pleated 30% (MERV 8)	4.0	1,120	280.00	0.12	0.00
RF	Dirty Filter Allowance - Prefilter	0.0	1,120	0.00	0.00	0.00
RF	4" Mini-Pleat 90-95% Eff, (MERV 14)	4.0	1,120	280.00	0.30	0.00
CC	Heating 2 rows 8 fins	3.8	1,120	295.00	0.05	0.00
CC	Cooling 12 rows 13 fins	3.8	1,120	295.00	0.71	0.00
CC	Heating 1 rows 10 fins	3.8	1,120	295.00	0.02	0.00
FS	Opening	1.3	1,120	890.00	0.13	0.00
FS	External Static - User Entered	0.0	1,120	0.00	0.75	0.00
				Total	2.08	0.00

Dimensions and Weight

Details					
Segment	**Description**	**Length[1] (in)**	**Width[2] (in)**	**Height (in)**	**Weight (lbs)**
RF	High Efficiency Filter	13	36	33	209
CC	Variable Length Cooling Coil	59	36	33	878
FS	Supply Fan - SWSI	46	36	33	621
Overall[3]		**118**			**1,708**

Notes

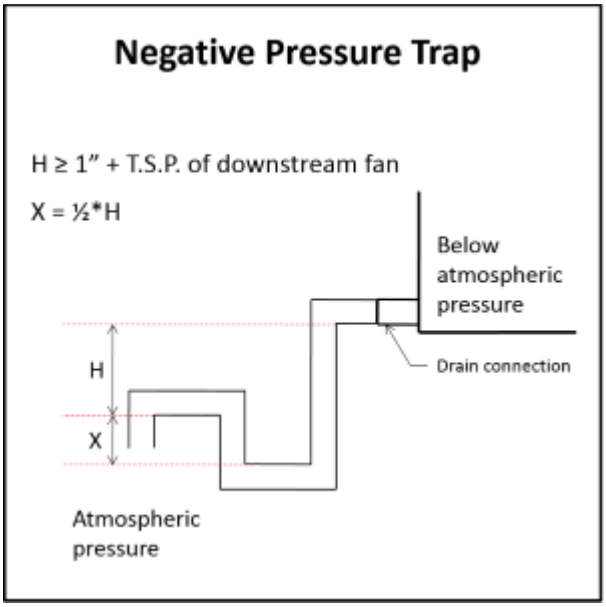
[1]The length includes bottom tier segments only

[2]The width does not include coil connection extensions or door latches that extend beyond the unit casing. The width does not include the depth of any pipe chases.

[3]Unit level and other loose components may be excluded from segment weights and overall segment weights. For total unit weight reference Unit Overview.

Recommended Trap Height

Details									
Segment	Applicable Fan	Fan TSP (in w.g.)	Positive or Negative	Calculated Dimensions (in)			Recommended Dimensions (in)		Base Rail Height (in)
				H	X	H + X	H	H + X	
CC	Supply Fan	2.08	Negative	3.08	1.54	4.62	3.25	5.00	6"



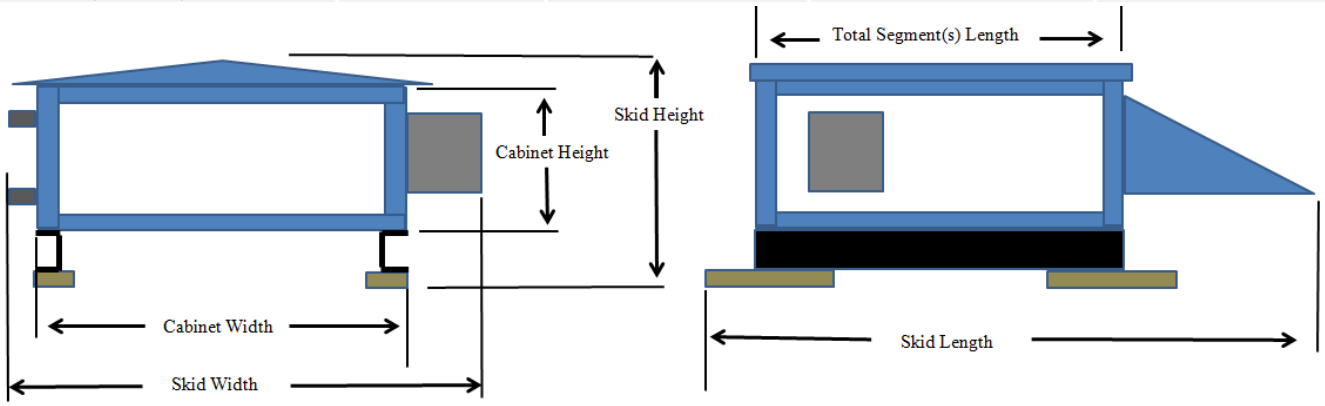
Notes
Formulas and calculations are recommendations only. Contractor shall determine actual dimensions required for each trap based on jobsite conditions, and application requirements.
Refer to the Installation Manual of the IOM for more information.

Statement of Compliance

Details
YORK® Solution XT AHU's meet IBC seismic requirements for non-critical equipment (Ip = 1.0) for locations with design spectral response Sds <= 0.43. Units must be rigid mounted.
The anchorage of the unit to the ground or building structure needs to be evaluated by and is the responsibility of the engineer of record. Specification of seismic requirements is the responsibility of the project design engineer. If formal certification is required, please contact your sales representative and/or application engineer for review. Certain application and site requirements may require additional cost and/or lead time.
Component locations are listed as Segment Hand (Unit Hand): ex. Left (Right). See SubmittalDrawing for additional details
Air handling unit parameters vary depending on conditions. Parameters such as airflows, air pressure drops, and coil capacities are shown for design conditions.

Shipping Summary

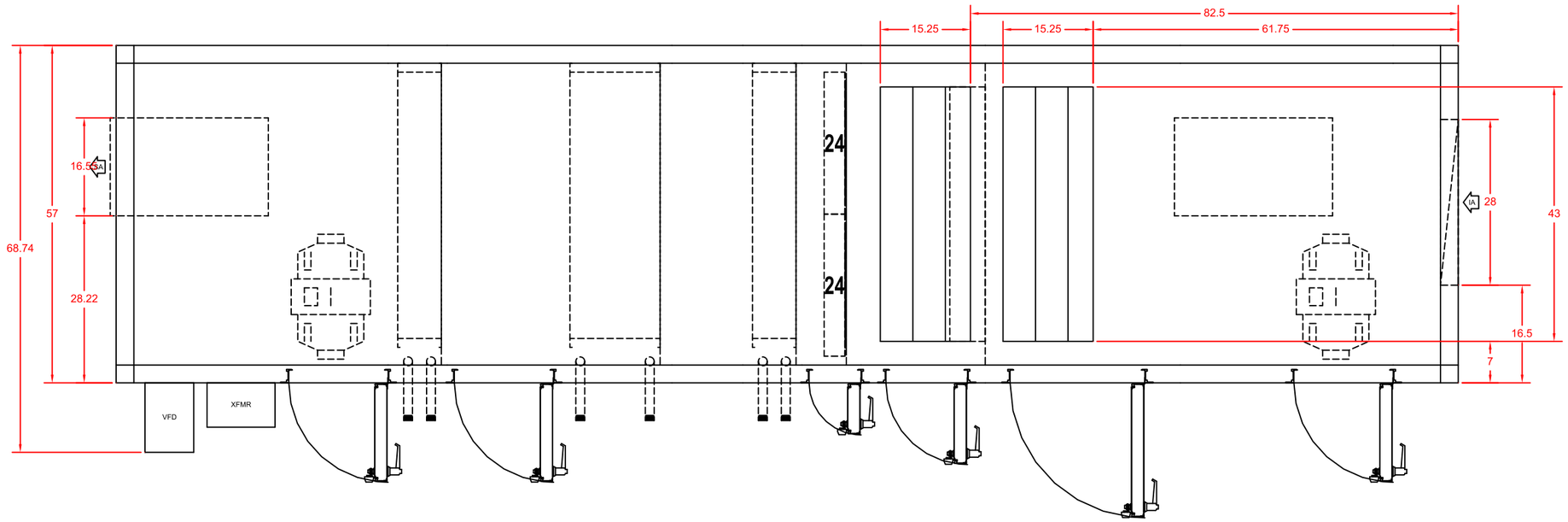
Details				
Skid	**Skid Length (in)**	**Skid Height (in)**	**Skid Width (in)**	**Skid Weight (lbs)**
(FS CC RF)	118	43	50	1,708



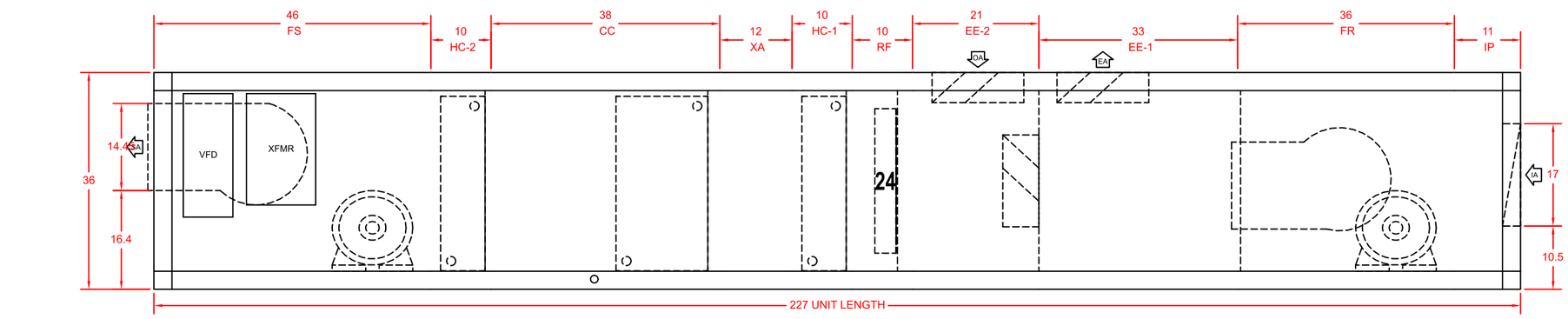
Notes
Skid Width: Total width of the shipping skid, including any items that may extend beyond the cabinet (this includes any door handles, coil connections, drain connections, lifting lugs, mounted pipe-chases, electrical/control components, tie-down brackets, side dampers).
Skid Height: Total height of the shipping skid, including any items that may extend beyond the cabinet (this includes any base-rails, shipping wood-blocks, roof peak, discharge flanges, mounted gas-furnace flue pipes).
Skid Length: Total length of the shipping skid, including any items that may extend beyond the cabinet (this includes any mounted rain-hoods, discharge flanges,tie-down brackets, shipping wood-blocks, front dampers, split connectors, electrical/control components, outrigging extensions, isolation dampers, inlet baskets).

AHU-6

60 EAST 42ND STREET
NEW YORK, NY 10165
PHONE: (646) 658-6700
FAX: (212) 370-0305



PLAN VIEW



* NOTE: MAX HEIGHT

ELEVATION VIEW

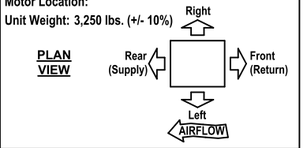
UNIT CONSTRUCTION

Model: Solution-XTI-36x57 Construction: Indoor

Motor Location:

Unit Weight: 3,250 lbs. (+/- 10%)

PLAN VIEW



NOTES

Units with a baserail and a bottom opening: Duct connection flush with the bottom of unit, not flush with bottom of baserail.

Refer to performance report for shipping split details.

Allow sufficient space around the unit for removing the access panels and various parts of the unit. A minimum clearance equal to the width of the unit must be provided on one side of the unit for removing the coil or fan assembly.

Contractor responsible for penetrations and connections of all electrical boxes and internal coil connections.

Overall dimensions account for: outdoor roof peak and overhang, motor control and/or factory package control boxes, coil connections, rain hoods, pipe chases, AMS-60 damper/EAML louver (if applicable,) base rail - in order to convey the true space requirements for the unit.

Certain items may extend beyond cabinet dimensions including: door handles, light switches, electrical boxes, lifting lugs, gas fuel system, etc.

The overall unit length includes an additional 1/4" per shipping split due to additional gasketing and split connection hardware.

Dimension tolerances: Unit (+/- 1/2"); Piping (+/- 2")

SL - Designates Shipped Loose Item(s)

PIPING CONNECTIONS
(In order of Airflow)

Segment	Type	Hand	Quantity	Supply	Return
HC	MPT	Left	1 Sup 1 Ret	1 1/2"	1 1/2"
CC	MPT	Left	1 Sup 1 Ret	1 1/2"	1 1/2"
HC	MPT	Left	1 Sup 1 Ret	1 1/2"	1 1/2"

Drain pan connection size 1 1/4" MPT SCH 40 (Connections on Left Side of unit)

SECTION LIST

SECT	DESCRIPTION
IP	Inlet Plenum
FR	Return Fan - 12-12 AF
EE-1	Economizer
EE-2	Economizer
RF	High Efficiency Filter
HC-1	Heating Coil
XA	Variable Length Access
CC	Cooling Coil
HC-2	Heating Coil
FS	Supply Fan - 12-12 AF

PRODUCT DRAWING

SOLUTION XT AIR HANDLING UNIT DETAIL
MODEL: Solution-XTI-36x57
NOT FOR CONSTRUCTION

Project Name: Adams Fairacre Farms
Location:
Engineer:
Contractor:
For:

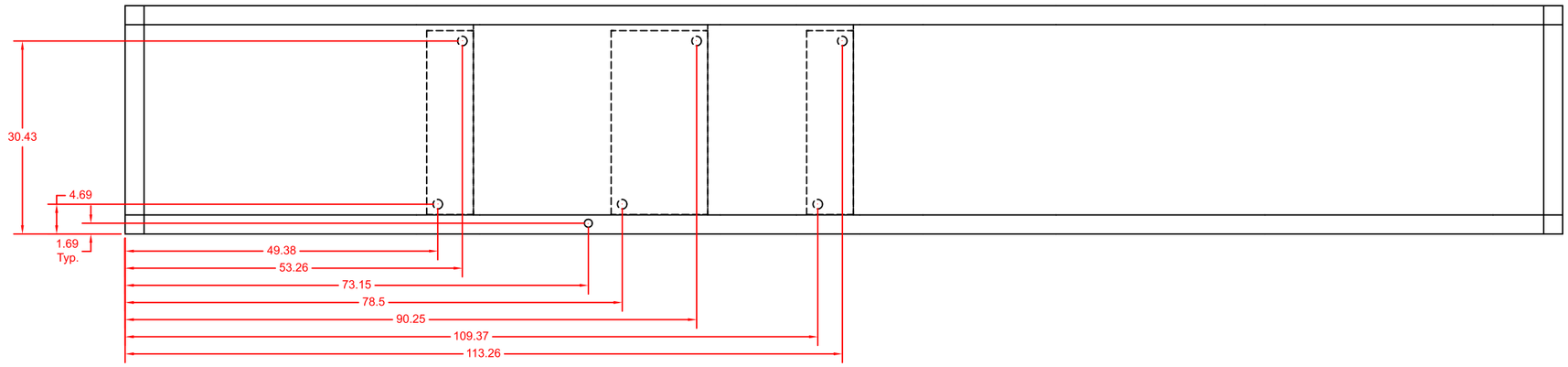
Sold To:
Cust Purch Order#:
Contract#:
UNIT TAG: AHU-6 - Sheet 1

Date: 11/5/2021 13:3:19
Version:
Form No.:
Dwg. Lev.: 5/03
Dwg. Scale: NTS

Serial Number:
SQ Database Number:
YORKworks Release:
Dwg. Name:
Dwg. Location:

Johnson Controls

YORKworks Version: 21.03 Drawing Generator Version : 01:00:16194



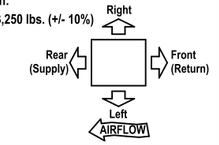
UNIT CONSTRUCTION

Model: Solution-XTI-36x57 Construction: Indoor

Motor Location:

Unit Weight: 3,250 lbs. (+/- 10%)

PLAN VIEW



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Contractor responsible for penetrations and connections of all electrical boxes and internal coil connections.

Overall dimensions account for: outdoor roof peak and overhang, motor control and/or factory package control boxes, coil connections, rain hoods, pipe chases, AMS-60 damper/EAML louver (if applicable,) base rail - in order to convey the true space requirements for the unit.

Certain items may extend beyond cabinet dimensions including: door handles, light switches, electrical boxes, lifting lugs, gas fuel system, etc.

The overall unit length includes an additional 1/4" per shipping split due to additional gasketing and split connection hardware.

Dimension tolerances: Unit (+/- 1/2"); Piping (+/- 2")

SL - Designates Shipped Loose Item(s)

PIPING CONNECTIONS
(In order of Airflow)

Segment	Type	Hand	Quantity	Supply	Return
HC	MPT	Left	1 Sup 1 Ret	1 1/2"	1 1/2"
CC	MPT	Left	1 Sup 1 Ret	1 1/2"	1 1/2"
HC	MPT	Left	1 Sup 1 Ret	1 1/2"	1 1/2"

Drain pan connection size 1 1/4" MPT SCH 40
(Connections on Left Side of unit)

SECTION LIST

SECT	DESCRIPTION
IP	Inlet Plenum
FR	Return Fan - 12-12 AF
EE-1	Economizer
EE-2	Economizer
RF	High Efficiency Filter
HC-1	Heating Coil
XA	Variable Length Access
CC	Cooling Coil
HC-2	Heating Coil
FS	Supply Fan - 12-12 AF

Coil Connections

PRODUCT DRAWING
SOLUTION XT COIL CONNECTION DETAIL
MODEL: Solution-XTI-36x57
NOT FOR CONSTRUCTION

Project Name: Adams Fairacre Farms
Location:
Engineer:
Contractor:
For:

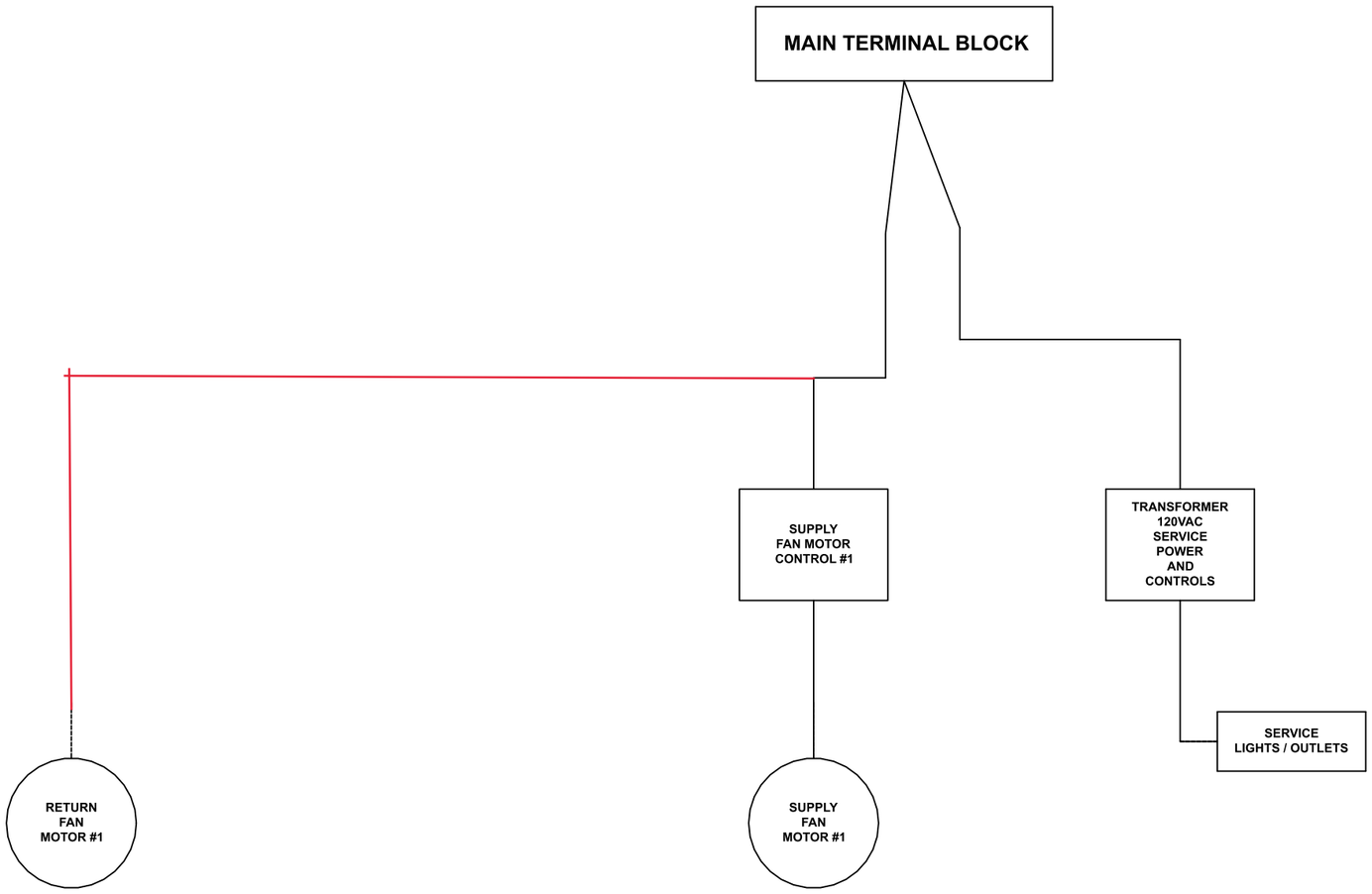
Sold To:
Cust Purch Order#:
Contract#:
UNIT TAG: AHU-6 - Sheet 2

Date: 11/5/2021 13:3:19
Version:
Form No.:
Dwg. Lev.: 5/03
Dwg. Scale: NTS

Serial Number:
SQ Database Number:
YORKworks Release:
Dwg. Name:
Dwg. Location:

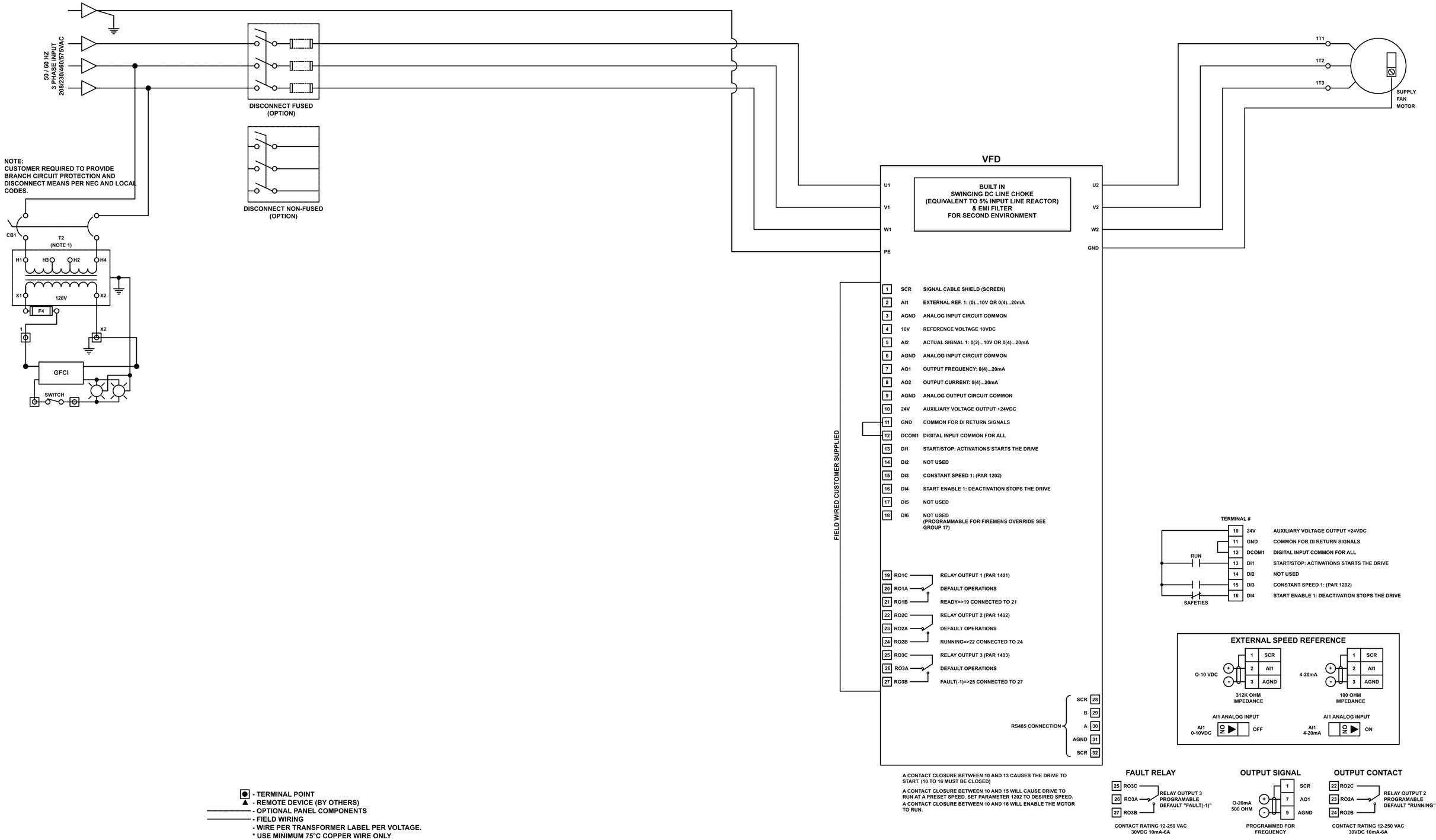
Johnson Controls

YORKworks Version: 21.03 Drawing Generator Version : 01:00:16194



PRODUCT DRAWING YORK Solution XT Field Wiring MODEL: **NOT FOR CONSTRUCTION**	Project Name: Adams Fairacre Farms Location: Engineer: Contractor: For:	Sold To: Cust Purch Order#: Contract#: UNIT TAG: AHU-6 - Sheet 1	Date: 11/5/2021 13:3:19 Version: Form No.: 100.09-EG1 Dwg. Lev.: 12/03 Dwg. Scale: NTS	Serial Number: SQ Database Number: YORKworks Release: Dwg. Name: Dwg. Location:

YORKworks Version: 21.03 Drawing Generator Version : 01:00:21068



- TERMINAL POINT
- REMOTE DEVICE (BY OTHERS)
- OPTIONAL PANEL COMPONENTS
- FIELD WIRING
- WIRE PER TRANSFORMER LABEL PER VOLTAGE.
* USE MINIMUM 75°C COPPER WIRE ONLY

PRODUCT DRAWING

YORK Solution XT Field Wiring
MODEL:
NOT FOR CONSTRUCTION

Project Name: Adams Fairacre Farms
Location:
Engineer:
Contractor:
For:

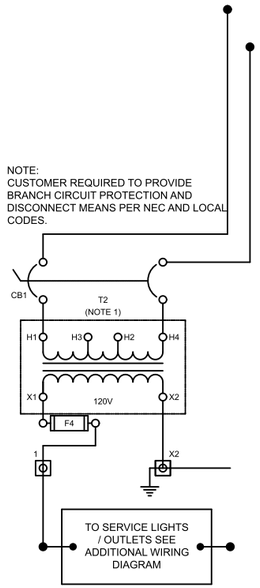
Sold To:
Cust Purch Order#:
Contract#:
UNIT TAG: AHU-6 - Sheet 2

Date: 11/5/2021 13:3:19
Version:
Form No.: 100.09-EG1
Dwg. Lev.: 12/03
Dwg. Scale: NTS

Serial Number:
SQ Database Number:
YORKworks Release:
Dwg. Name:
Dwg. Location:

Johnson Controls

YORKworks Version: 21.03 Drawing Generator Version : 01:00:21068



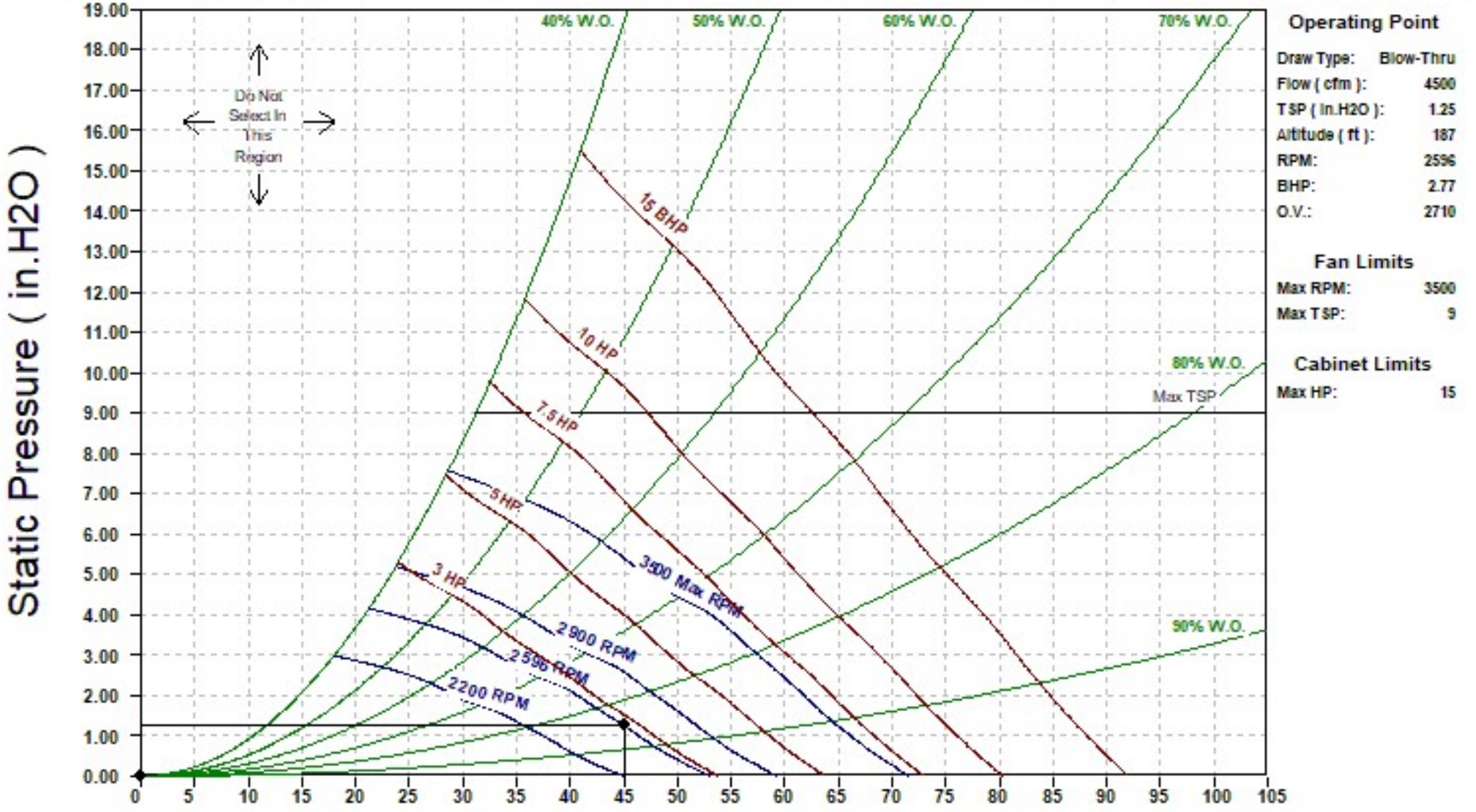
- TERMINAL POINT
- REMOTE DEVICE (BY OTHERS)
- OPTIONAL PANEL COMPONENTS
- FIELD WIRING
- WIRE PER TRANSFORMER LABEL PER VOLTAGE.
* USE MINIMUM 75°C COPPER WIRE ONLY

PRODUCT DRAWING YORK Solution XT Field Wiring MODEL: **NOT FOR CONSTRUCTION**	Project Name: Adams Fairacre Farms Location: Engineer: Contractor: For:	Sold To: Cust Purch Order#: Contract#: UNIT TAG: AHU-6 - Sheet 3	Date: 11/5/2021 13:3:19 Version: Form No.: 100.09-EG1 Dwg. Lev.: 12/03 Dwg. Scale: NTS	Serial Number: SQ Database Number: YORKworks Release: Dwg. Name: Dwg. Location:	Johnson Controls

Johnson Controls

Solution XT Fan Rating Curve

Project Name	Unit Tag	Qty	Model	Seg	Fan Type	Class	Size
Adams Fairacre Farms	AHU-6	1	XTI-36x57	FR	AF	S	12-12



Operating Point

Draw Type:	Blow-Thru
Flow (cfm):	4500
TSP (in.H2O):	1.25
Altitude (ft):	187
RPM:	2596
BHP:	2.77
O.V.:	2710

Fan Limits

Max RPM:	3500
Max TSP:	9

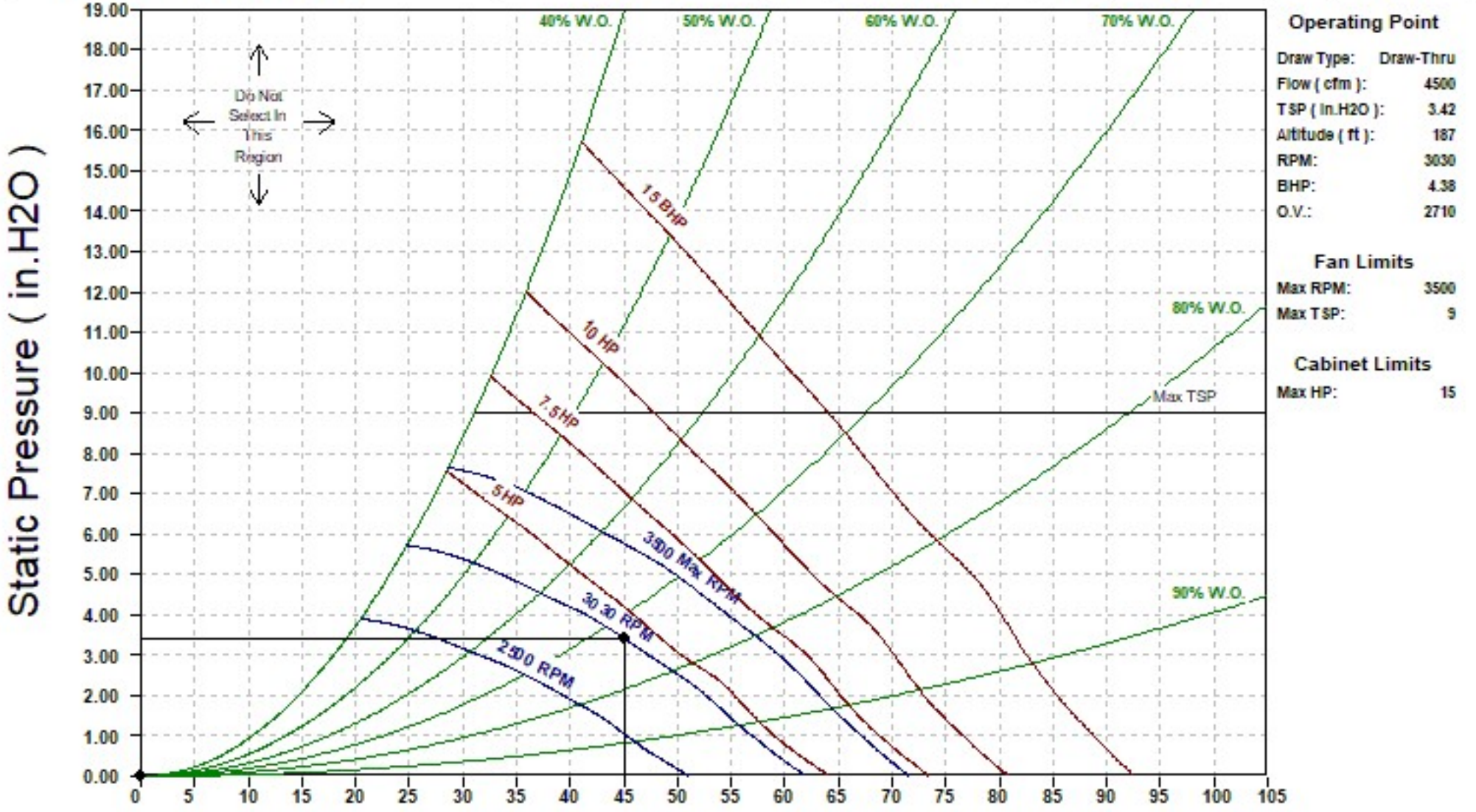
Cabinet Limits

Max HP:	15

Johnson Controls

Solution XT Fan Rating Curve

Project Name	Unit Tag	Qty	Model	Seg	Fan Type	Class	Size
Adams Fairacre Farms	AHU-6	1	XTI-36x57	FS	AF	S	12-12



Operating Point

Draw Type:	Draw-Thru
Flow (cfm):	4500
TSP (in.H2O):	3.42
Altitude (ft):	187
RPM:	3030
BHP:	4.38
O.V.:	2710

Fan Limits

Max RPM:	3500
Max TSP:	9

Cabinet Limits

Max HP:	15

YORK® Solution™ Air Handling Unit Performance Report

Job Summary

Project Name:	Adams Fairacre Farms		
Unit Tag(s):	AHU-6		
Quantity:	1	**Environment:**	Indoor

Unit Overview

Model	Airflow (CFM)	Altitude (ft)	Operating Weight (lbs)
XTI-36x57	4,500	187	3,250

Segment Sequence

(FS HC-2 CC XA HC-1 RF EE EE FR IP)

Unit Construction

Casing Details

Segment(s)	Thickness (in)	Exterior Paint	Exterior Gauge and Material	Interior Gauge and Material	Insulation Thickness and Material	Bulkhead Material
IP , FR , EE , RF , HC-1 , XA , CC , HC-2 , FS	2	None	STD Ga. G-90 Galvanized	STD Ga. G-90 Galvanized	2" Foam	Galvanized

Base Details

Segment(s)	Base		Floor				
	Material	Paint	Gauge and Material	Paint	Insulation	Attachment	Tread Plate
IP , FR , EE , RF , HC-1 , XA , CC , HC-2 , FS	None None	None	STD Ga. G-90 Galvanized	None	N/A	-	None

Unit Electrical

Circuit Details

Circuit #	Component(s)	V/Ph/Hz	Full Load Amps (FLA)	Minimum Current Ampacity (MCA)	Maximum Overcurrent Protection (MOP)
1	Supply Fan Motor Control, Lights and Outlets	460/3/60	10.9	13.7	17.5

Electrical Details

Minimum Unit SCCR	5 kA rms Symmetrical	**ETL Label (UL1995/NEC-2002)**	Yes
Unit Light Type		**Unit Light Switch**	
Standard LED		External	

Supply Fan(s)

Performance Details

Fan Manufacturer	Model	Class	Size	% Wheel Width	% Wheel Diameter	Quantity	Total Airflow (CFM)	Altitude (ft)	TSP (in w.g)	ESP (in w.g)	Fan Speed (RPM)	Fan Power (BHP)
Comefri	ATZAF	S	12-12	100	100	1	4,500	187	3.42	0.75	3,030	4.38

Drive Type	Drive SF	Wheel Type	Blade Type	Wheel Material	Base Material	Fan Flow Isolation	Isolation Type	Total Eficiency (%)	Outlet Velocity (ft/s)	Max Speed (RPM)	Fan Power (BHP) w/ Drive Loss
Belt Drive - Fixed	1.5	DWDI	Airfoil	Steel	Galvanized Steel	None	1" Spring	62.65	2,710	3,500	4.68

Motor Details

Type	Manufacturer	Motor Power (HP)	V/Ph/Hz	Quantity	Insulation Class	Motor Speed (RPM)	Frame Size	Full Load Amps (Amps)	Efficiency	Location
ODP	Baldor	5.0	460/3/60	1	F	1,800	184	6.60	Premium	Left

At Motor Synchronous Details

TSP (in w.g.)	Total Air Flow (CMF)	Fan Speed (RPM)	Motor Correction Factor(%)	Fan Power (BHP)
0.00	4,500	3,030	89.5	4.38

Return Fan(s)

Performance Details

Fan Manufacturer	Model	Class	Size	% Wheel Width	% Wheel Diameter	Quantity	Total Airflow (CFM)	Altitude (ft)	TSP (in w.g)	ESP (in w.g)	Fan Speed (RPM)	Fan Power (BHP)
Comefri	ATZAF	S	12-12	100	100	1	4,500	187	1.25	0.75	2,596	2.8

Max RPM	Fan Power with Drive Loss (HP)	Wheel Type	Blade Type	Wheel Material	Base Material	Fan Flow Isolation	AirFlow Monitoring	Inverter Drive Balancing	Isolation Type	Thrust Restraints
3,500	2.96	DWDI	Airfoil	Steel	Galvanized Steel	None	-	-	1" Spring	-

Drive Type	Drive SF	Spare Belts	Spare Sheave	Inlet Screen	Fan Cage	Belt Guard	Lube Lines	Bearings	Fan Stand	Motor Removal Rail	Seismic Snubber
Belt Drive - Fixed	1.5	-	-	-	-	-	Extended Lube Lines	-	-	-	-

Motor Details

Type/MFG	Motor Power (HP)	V/Ph/Hz	Quantity	Insulation Class	RPM	Frame Size	FLA (Amps)	Efficiency	Location	SGR
ODP/Baldor	5.0	460/3/60	1	F	1,800	184	6.60	Premium	Left	-

Glycol Coil(s)

Performance[1] Details

Coil	Glycol Type	Glycol %	Rows	Fin Spacing (FPI)	TPC	TMBH	SMBH	EAT (°F)		LAT (°F)		Airflow (CFM)	FV (ft/min)	APD	Flow (GPM)	EWT (°F)	LWT (°F)	Fluid Vel. (ft/s)	WPD	Alt. (ft)
								DB	WB	DB	WB									
HC-1	Propylene	30%	2	10	4	278	278	54.9	-	110.8	-	4,500	523	0.14	29.1	180.0	160.0	4.6	6.8	187
CC	Propylene	30%	10	11	12	138	102	76.7	65.5	55.0	54.9	4,500	523	1.14	30.0	45.0	55.0	2.9	10.2	187
HC-2	Propylene	30%	1	10	2	101	101	55.0	-	75.3	-	4,500	523	0.06	10.6	160.0	140.0	1.7	.7	187

Construction Details

Coil	Location		Offset (in)	Connection Material[3]	Connection Rotation (degrees)	Connection Type	Supply Connection (Per Coil)		Coil Stack Rack
	Coil Index[2]	Connection					Qty	Size	
HC-1	0	Left	0	Steel	0	MPT	1	1-1/2	-
CC	0	Left	0	Steel	0	MPT	1	1-1/2	-
HC-2	0	Left	0	Steel	0	MPT	1	1-1/2	-

Coil	# of Coils High	Face Type	Total Fin Height (in)	Fin Length (in)	Coil Face Area (ft²)	Fin Material	Fin Thickness (in)	Fin Type	Tube Diameter (in)	Tube Material	Tube Wall Thickness (in)

Coil	# of Coils High	Face Type	Total Fin Height (in)	Fin Length (in)	Coil Face Area (ft²)	Fin Material	Fin Thickness (in)	Fin Type	Tube Diameter (in)	Tube Material	Tube Wall Thickness (in)
HC-1	1	Full	27.50	45	8.6	AL	.006	Corrugated	1/2	Copper	.016
CC	1	Full	27.50	45	8.6	AL	.008	Corrugated	1/2	Copper	.016
HC-2	1	Full	27.50	45	8.6	AL	.006	Corrugated	1/2	Copper	.016

Coil	Coil Coating	Dry Weight (lbs)	Fluid Weight (lbs)	Fluid Volume (ft³)	Header Material	Casing Material	Intermediate Drain Pan Material	Fouling Factor (hr.ft².°F/BTU)
HC-1	-	67	19	0.3	Copper	Galvanized	-	-
CC	-	256	77	1.2	Copper	Galvanized	304 Stainless Steel	-
HC-2	-	51	12	0.2	Copper	Galvanized	-	-

Coil Notes

- [1]Performance is shown for the entire coil bank. Performance is not per coil.
- [2]Coil index indicates position in segment. Example: CC-1, index 0; Spacer, index 1; CC-2, index 2
- [3]Johnson Controls suggests using red brass or copper connectors when the coil is to be attached to a copper or brass piping system.
- All coils are rated with a fouling factor of 0.00000 hr.ft².°F/BTU unless otherwise noted
- Ratings are for coils manufactured by Johnson Controls, Inc., 507 E. Michigan St., Milwaukee WI 53202.
- Coil DLL Version: 7.7L
- BDW Tube Spacing: 1.25 x 1.08
- HC-1[1][0]: This coil is certified in accordance with the AHRI Forced-Circulation Air-Cooling and Air-Heating Coils Certification Program which is based on AHRI Standard 410 within the range of Standard rating conditions listed in Table 1 of the Standard. Certified units may be found in the AHRI Directory at www.ahridirectory.org.
- [1]Performance is shown for the entire coil bank. Performance is not per coil.
- [2]Coil index indicates position in segment. Example: CC-1, index 0; Spacer, index 1; CC-2, index 2
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- [1]Performance is shown for the entire coil bank. Performance is not per coil.
- [2]Coil index indicates position in segment. Example: CC-1, index 0; Spacer, index 1; CC-2, index 2
- [3]Johnson Controls suggests using red brass or copper connectors when the coil is to be attached to a copper or brass piping system.
- All coils are rated with a fouling factor of 0.00000 hr.ft².°F/BTU unless otherwise noted
- Ratings are for coils manufactured by Johnson Controls, Inc., 507 E. Michigan St., Milwaukee WI 53202.
- Coil DLL Version: 7.7L
- BDW Tube Spacing: 1.25 x 1.08
- HC-2[1][0]: This coil is certified in accordance with the AHRI Forced-Circulation Air-Cooling and Air-Heating Coils Certification Program which is based on AHRI Standard 410 within the range of Standard rating conditions listed in Table 1 of the Standard. Certified units may be found in the AHRI Directory at www.ahridirectory.org.

Drain(s)

Details

Segment	Drain Pan		
	Liner Material	Connection Location	Liner Coating
CC	Stainless Steel	Left	None

Filter(s)

Details							
Segment	Type	Depth	Filter Loading	Media/MERV	# of Spares	Spare Filter Media	Frame Material
RF	Pre-Filter	2"	Side	Pleated 30% (MERV 8)	0	Pleated 30% (MERV 8)	Aluminum
RF	Primary Filter	4" Mini-Pleat	Side	90-95% Eff, (MERV 14)	0	90-95% Eff, (MERV 14)	Aluminum

Sizes				Filter Gauge Details		
Segment	Filter	1st Filter Size H x W (in)	1st Qty	Location	Type	Range (in w.g)
RF	Pre-Filter	24x24	2	-	-	-
RF	Primary Filter	24x24	2	-	-	-

Damper(s)

Details													
Segment	Air Path	H x W (in)	Qty	Total Face Velocity (ft/min)	Face Area	CFM	Minimum Allowable OA CFM	Damper Type	Damper Config	Model	Material	Blade Orientation	Actuator Type	Fail Position
EE	Exhaust Air	15.25 x 43.00		988		4,500	-	Control	100%	CD60	Galvanized	Parallel	-	-
EE	Outside Air	15.25 x 43.00		988		4,500		Control	100%	CD60	Galvanized	Parallel	-	-
EE	Mixed Air	15.25 x 43.00		988		4,500	-	Control	100%	CD60	Galvanized	Parallel	-	-

Door(s)

Details										
Segment(s)	Location	Swing	Hinge Location	H x W x T (in)	View Port	Test Port	Spare Gasket	Thermal Break	Safety Latch	Noncontact Safety Interlock
FR, CC, FS	Left	Outward	Upstream Side	30 x 18 x 2	None	-	-	-	-	-
EE	Left	Outward	Upstream Side	30 x 24 x 2	None	-	-	-	Yes	-
EE	Left	Outward	Upstream Side	30 x 15 x 2	None	-	-	-	-	-
RF	Left	Outward	Upstream Side	30 x 10 x 2	None	-	-	-	-	-

Motor Control(s)

Details										
Segment	Type	MMP	V/Ph/Hz	Input/Output Amps*	Efficiency	Heat Loss (at 100% load)	Enclosure	Bypass	Disconnect Type	RFI/EMI EMC Filter
FS	ABB VFD ABB AYK580	-	460/3/60	7.6/7.6	90 %	133	NEMA 1	-	Fused	Yes
FS Single Point Power Main Disconnect	External Main Disconnect	-	460/3/60	0.0/0.0	90 %	0	NEMA 3R	-	External Non Fused	No

Details										
Segment	Type	MMP	V/Ph/Hz	Input/Output Amps*	Efficiency	Heat Loss (at 100% load)	Enclosure	Bypass	Disconnect Type	RFI/EMI EMC Filter

Notes
*Drives are rated for use below 3,000 ft and 104°F. Use Derating Charts in Air-Mod Engineering Guide Form 100.42-EGI (212) for use above these limits.
Storage Temperature: -40°F to 158°F
Humidity: MAX 95% RH non-condensing
Altitude: 3,300 ft. without derate (1% derate for each additional 330 ft.)
Overload Current Rating: 100% for 1 minute every 10 minutes.
The Class 10 trip rating of the MMP device will not withstand an across-the-line start of a fan and should not be used with VFDs with bypass circuits.
The customer must provide a platform or catwalk for accessing the power-disconnect.
Copper Conductors Only.
FS: Contains the following option: Swinging DC Line Choke (Equivalent to 5% Input Line Reactor)

Face Velocity and Static Pressure

Summary						
Segment	Description	Face Area (sq. ft)	Airflow (CFM)	Face Velocity (ft/min)	Supply Fan Static Pressure (in w.g.)	Exhaust/Return Fan Static Pressure (in w.g.)
IP	Opening	3.3	4,500	1,361.00	0.00	0.31
FR	External Static - User Entered	0.0	4,500	0.00	0.00	0.75
EE	Opening	4.6	4,500	988.00	0.00	0.16
EE	Control Galvanized (CD60)	0.0	4,500	0.00	0.00	0.03
EE	Opening	4.6	4,500	988.00	0.16	0.00
EE	Control Galvanized (CD60)	0.0	4,500	0.00	0.03	0.00
RF	2" Pleated 30% (MERV 8)	8.0	4,500	563.00	0.33	0.00
RF	Dirty Filter Allowance - Prefilter	0.0	4,500	0.00	0.00	0.00
RF	4" Mini-Pleat 90-95% Eff, (MERV 14)	8.0	4,500	563.00	0.81	0.00
HC-1	Heating 2 rows 10 fins	8.6	4,500	523.00	0.14	0.00
CC	Cooling 10 rows 11 fins	8.6	4,500	523.00	1.14	0.00
HC-2	Heating 1 rows 10 fins	8.6	4,500	523.00	0.06	0.00
FS	External Static - User Entered	0.0	4,500	0.00	0.75	0.00
				Total	**3.42**	**1.25**

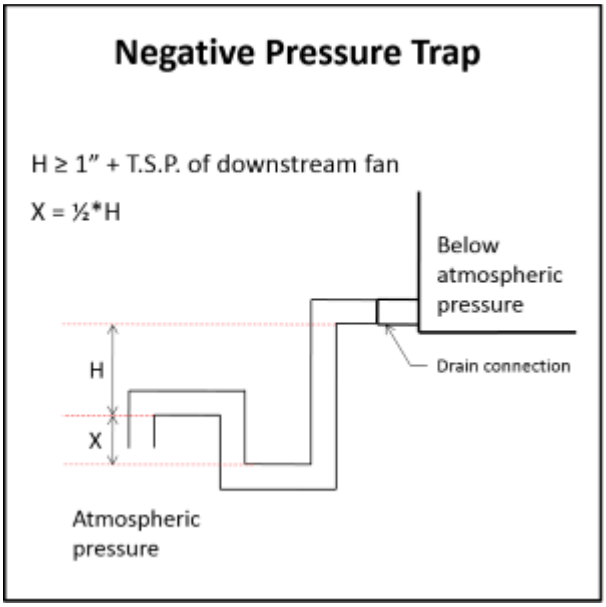
Dimensions and Weight

Details					
Segment	Description	Length[1] (in)	Width[2] (in)	Height (in)	Weight (lbs)
IP	Inlet Plenum	11	57	36	166
FR	Return Fan	36	57	36	543
EE	Economizer	54	57	36	396
RF	High Efficiency Filter	10	57	36	122
HC-1	Heating Coil	10	57	36	230
XA	Variable Length Access	12	57	36	84
CC	Variable Length Cooling Coil	38	57	36	759
HC-2	Heating Coil	10	57	36	214
FS	Supply Fan	46	57	36	736
Overall[3]		**227**			**3,250**

Notes
[1]The length includes bottom tier segments only
[2]The width does not include coil connection extensions or door latches that extend beyond the unit casing. The width does not include the depth of any pipe chases.
[3]Unit level and other loose components may be excluded from segment weights and overall segment weights. For total unit weight reference Unit Overview.

Recommended Trap Height

Details									
Segment	Applicable Fan	Fan TSP (in w.g.)	Positive or Negative	Calculated Dimensions (in)			Recommended Dimensions (in)		Base Rail Height (in)
				H	X	H + X	H	H + X	
CC	Supply Fan	3.42	Negative	4.42	2.21	6.63	4.50	6.75	None



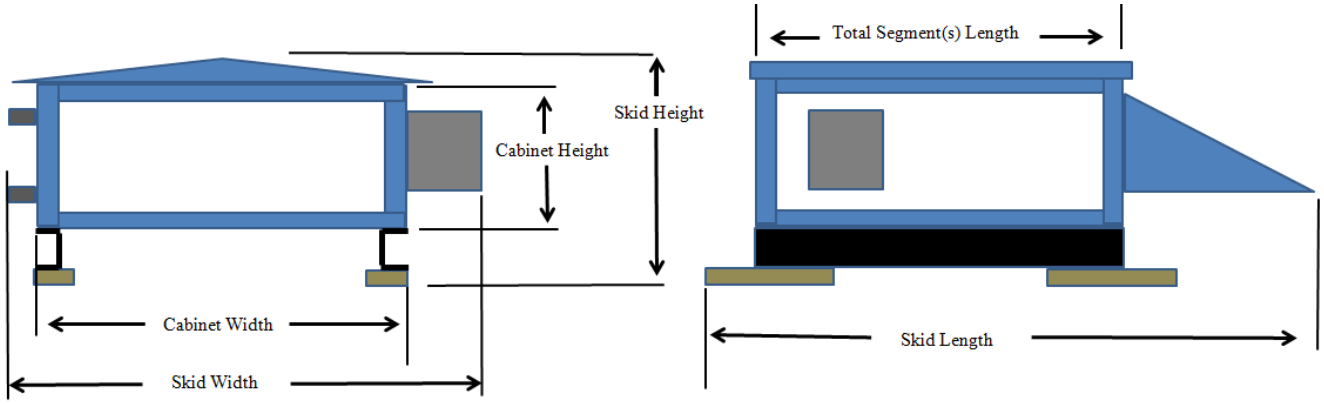
Notes
Formulas and calculations are recommendations only. Contractor shall determine actual dimensions required for each trap based on jobsite conditions, and application requirements.
Refer to the Installation Manual of the IOM for more information.

Statement of Compliance

Details
YORK® Solution XT AHU's meet IBC seismic requirements for non-critical equipment (Ip = 1.0) for locations with design spectral response Sds <= 0.43. Units must be rigid mounted.
The anchorage of the unit to the ground or building structure needs to be evaluated by and is the responsibility of the engineer of record. Specification of seismic requirements is the responsibility of the project design engineer. If formal certification is required, please contact your sales representative and/or application engineer for review. Certain application and site requirements may require additional cost and/or lead time.
Component locations are listed as Segment Hand (Unit Hand): ex. Left (Right). See SubmittalDrawing for additional details
Air handling unit parameters vary depending on conditions. Parameters such as airflows, air pressure drops, and coil capacities are shown for design conditions.

Shipping Summary

Details				
Skid	**Skid Length (in)**	**Skid Height (in)**	**Skid Width (in)**	**Skid Weight (lbs)**
(FS HC-2 CC XA HC-1 RF EE EE FR IP)	228	40	73	3,250



Notes
Skid Width: Total width of the shipping skid, including any items that may extend beyond the cabinet (this includes any door handles, coil connections, drain connections, lifting lugs, mounted pipe-chases, electrical/control components, tie-down brackets, side dampers).
Skid Height: Total height of the shipping skid, including any items that may extend beyond the cabinet (this includes any base-rails, shipping wood-blocks, roof peak, discharge flanges, mounted gas-furnace flue pipes).
Skid Length: Total length of the shipping skid, including any items that may extend beyond the cabinet (this includes any mounted rain-hoods, discharge flanges,tie-down brackets, shipping wood-blocks, front dampers, split connectors, electrical/control components, outrigging extensions, isolation dampers, inlet baskets).

AHU-7

60 EAST 42ND STREET
NEW YORK, NY 10165
PHONE: (646) 658-6700
FAX: (212) 370-0305

Johnson Controls

Performance Data Sheet

Project Name:	Adam Fairacre	JCI Contract No:	Contract #
Location:		Coil Version:	4.28a
Consultant/Engineer:		Printed Date:	11/11/2021 1:49:41 PM
Contractor:		Selection Date:	
Sold To:		Last Revision Date:	
P.O. No:	PO		

Unit Tag	Qty	Model	Air Flow	Total Duty	Sensible Duty	Weight
AHU-7	1	AMI-H02	770 CFM	28.3 MBH	20.3 MBH	531 lb

Unit Data

Model Size	: 02	Motor Type	: ODP Premium	Filter	: 4" 85% Pleated (MERV 14)	Coil Tube Dia.	[in.] 0.52
Type	: Indoor Air-Handling Unit	(Motor) HP	: 1	Filter2	: 2" 30% Pleated (MERV 8)	Tube Wall	[in.] 0.016
Fan Type	: Forward Curved Fan	Motor FLA	: 1.51	Filter (Qty) Size	: (1)16x20x2	Coil Face Area	[ft²] 2.1
				Filter Face Area	[ft²] 2.2		

Segments : SFM-SAM-SCM-FCM

Output Data

Altitude	[Ft.]	0
Air Flow Rate	[CFM]	770
ESP	[in.wg]	0.75
TSP	[in.wg]	2.06
BHP	[Hp]	0.74

Chilled Water Coil Data

EAT DB/WB	[°F]	79.4/ 67.4
LAT DB/WB	[°F]	55.8/ 55.7
Total Capacity	[MBH]	28.3
Sensible Capacity	[MBH]	20.3
EWT/LWT	[°F]	45.0/55.0
Fluid Flow	[gpm]	6.00
Fluid P.D	[ft.wg]	10.13
Fluid Velocity	[fps]	2.60
Fluid Type	:	Water w/ Propylene Glycol
Pct Glycol	[pct]	30
Rows / FPI / Circuits	:	8 Row/ 14 FPI / 4 Ckt
Coil Connection Size:	[in.]	0.750

Hot Water Coil (Pre-Heat) Data

EAT DB	[°F]	45.1
LAT DB	[°F]	113.9
Sensible Capacity	[MBH]	57.3
EWT/LWT	[°F]	180.0/ 160.0
Fluid Flow	[gpm]	5.90
Fluid P.D	[ft.wg]	1.27
Fluid Velocity	[fps]	2.50
Rows / FPI / Circuits	:	2 Row/ 12 FPI / 4 Ckt
Coil Connection Size:	[in.]	1.000

Electric Heat Data

V/P/HZ	:	460/3/60
KW	:	-
Steps	:	
Temp Rise	[°F]	0.00
Amp Draw	:	-

Options

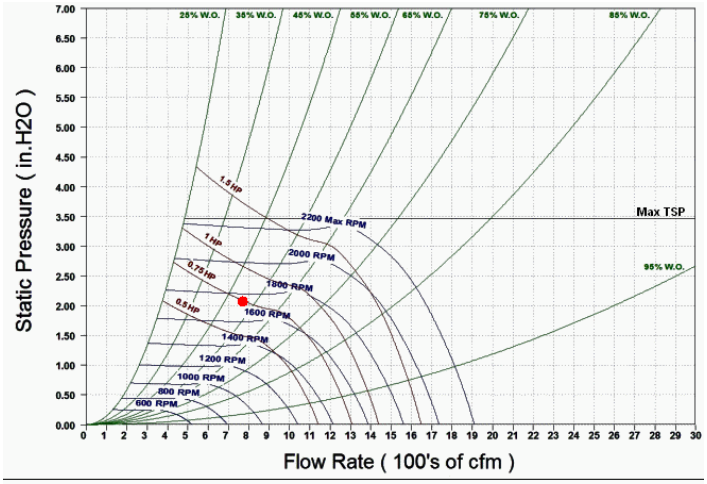
Casing Options- Double Wall
Disconnect Switch- No Disconnect - High Voltage Line Block
Fan Access- Standard Access
Fan Arrangement- Fan Arr. 1 (Horiz. Top Front)
Fan Control Package- Junction Box
Fan Isolation- Spring Isolation
Fan Type- Forward Curved Fan
Filter Access Module- 15" Access Segment
Filter Access Option- Standard Access
Filter Type- 2" 30% Pleated (MERV 8), 4" 85% Pleated (MERV 14)
Inlet Option- None
Motor Handing- Right Hand Motor
Motor Type- ODP Premium
Spare 2" Filter- 2" 30% Pleated (MERV 8) (1)
Spare 4" Filter- 4" 85% Pleated (MERV 14) (1)
Hot Water Coil:Air Vent- Manual Air Vent
Hot Water Coil:Coil Access Module- None
Hot Water Coil:Coil Casing- Galvanized Casing
~~Hot Water Coil:Coil Handing- Right Hand~~
Hot Water Coil:Tube Wall- 0.016"
Chilled Water Coil:Air Vent- Manual Air Vent
Chilled Water Coil:Coil Access Module- None
Chilled Water Coil:Coil Casing- Galvanized Casing
Chilled Water Coil:Coil Drain Pan- Galvanized Drain pan
Chilled Water Coil:Coil Handing- Right Hand
Chilled Water Coil:Tube Wall- 0.016"

Special Quote (SQ)#	**Special Quote (SQ)#**	**Special Quote (SQ)#**
Special Quote (SQ)#	**Special Quote (SQ)#**	**Special Quote (SQ)#**

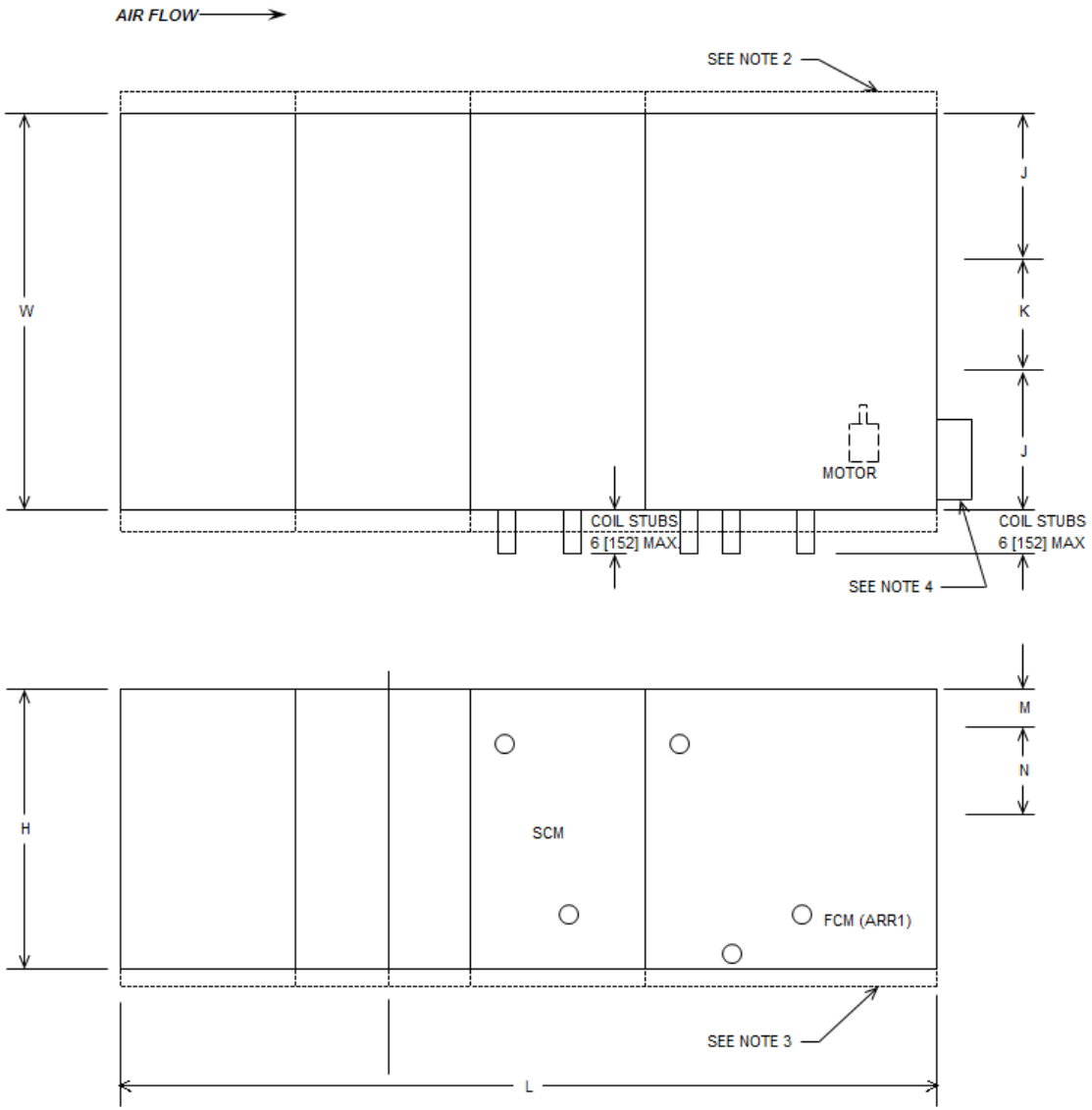
Electrical Data

V/P/HZ	**:**	**460/3/60**
Total Full Load Amps	**:**	**1.51**
MCA / MSCP	**:**	**1.89 / 15.00**
Fan Power Input	**[Watts]**	**646**

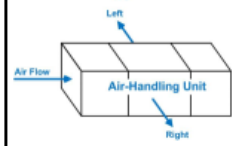
- **Unit weight includes unit wet coil(s) as selected.**
- **Coils are manufactured in accordance with AHRI-410.**



Unit Operating Conditions						
Unit Size	Fan Type	Airflow		Mechanical		
		CFM	TSP	RPM	BHP	SE
02	FC	770	2.06	1748	0.74	0.34



SEE NOTES ON PAGE 2

UNIT TAGS	UNIT HANDING	UNIT DIMENSIONS
AHU-7		

L	W	H	HA	CFM	ESP	TSP	
91.00 [2,311]	30.00 [762]	22.00 [559]	-	770 [363]	0.75 [186.63]	2.06 [512.61]	
A	**B**	**C**	**D**	**E**	**F**	**G**	**J**
-	-	-	-	-	-	-	11.75 [298]
K	**M**	**N**	**P**	**Q**	**R**	**T**	**V**
7.13 [181]	2.38 [60]	10.50 [267]	-	-	-	-	-

PROJECT: Adam Fairacre			
ITEM: AMI-H	**QUANTITY:** 1	**BASE RAIL:**	
SIZE: 02	**CASING:** DW	**UNIT WEIGHT:** 531 [240.9]	

Johnson Controls

DRN BY: WebSelect	**SCALE:** None
PAGE: 1 of 9	**PRINT DATE:** 11/11/2021
DWG: -	

REFERENCE DIMENSIONS AND DRAWINGS

Module	Length	Weight	Module Details	Coil Connection Details
SFM	15.00 [381]	75 [34.0]	65-80009	
SAM	15.00 [381]	50 [22.7]	65-80002	
SCM	15.00 [381]	57 [25.9]	65-80020	65-80030
FCM	46.00 [1,168]	205 [93.0]	65-80000	65-80030
TOTAL UNIT WEIGHT:		531 [240.9]		

Base Rail Details	
-	
Weight	-
Motor Weight Reference	
65-80016	
Weight Mtr 1	40 [18.1]
Coil Weight Reference	
65-80018	
Weight Coil 1	21 [9.5]
Weight Coil 2	83 [37.6]

NOTES:

1) Electric heat enclosure, fan motors and coils specified left or right with air to back.
2) The base rail option will add 8" (4" each side) to the total width of the unit.
3) The base rail option will add 4" to the total height of the unit.
4) Control enclosure and/or VFD location.
   The VFD will be located on the drive side of the plenum box on all vertical stacked units with a VFD. Add 8" to the total width of the unit.
   All other units, add a maximum of 8" to the total length of the unit.
   EH Units: Control enclosure is integral to the heater.
   VFD Units: VFD located as shown (except where noted above for vertical stacked units), with or without EH.
   (With unit sizes 02, 03 and 04 that have a VFD and no EH, the VFD will be on the opposite side of the fan discharge due to dimensional restrictions.)
5) All dimensions are inches [millimeters]. All dimensions are ± 1/8" [3mm]. All metric values are rounded to the nearest millimeter.
6) All drawings are subject to change without prior notice.
7) Motor/drive and coil connection locations are specified left or right with air to back. Control enclosure matches motor position.
8) Panel with coil connection penetrations is not removable.
9) Coil and drain connections shown on sketch for reference only. Each coil shall have a supply and return connection.
10) Weight is LB [kg].
11) Control enclosure and/or VFD location. Add a maximum of 8" to the total width of the unit.
    EH Units: Control enclosure is integral to the heater.
12) Vertical stacked units height is: H + H + base rail height.

TAGS: AHU-7

Johnson Controls

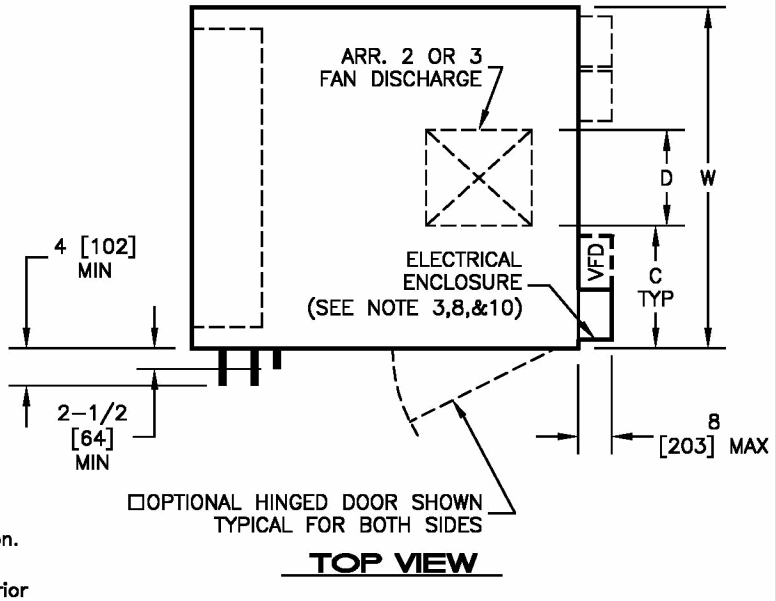
PROJECT: Adam Fairacre		
ITEM: AMI-H	**QUANTITY:** 1	**BASE RAIL:**
SIZE: 02	**CASING:** DW	**UNIT WEIGHT:** 531 [240.9]

DO NOT SCALE DRAWING
DIMENSIONS AND DATA ARE SUBJECT TO CHANGE WITHOUT NOTICE. CONTACT FACTORY FOR CERTIFIED DRAWINGS.

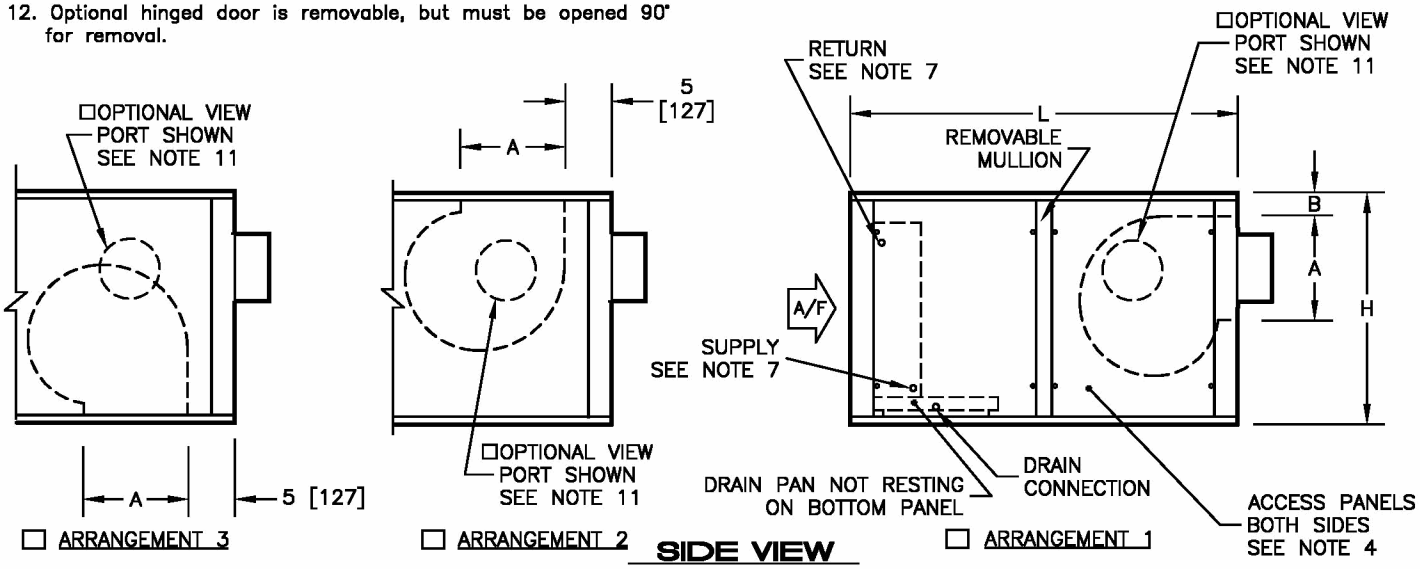
DRN BY: WebSelect	**SCALE:** None
PAGE: 2 of 9	**PRINT DATE:** 11/11/2021
DWG: -	

NOTES:

1. All dimensions are inches [millimeters]. All dimensions are ±1/8" [3mm]. All metric values are rounded to the nearest millimeter.
2. All drawings subject to change without prior notice.
3. Motor/drive location specified left or right with air to back. Standard control enclosure location matches motor/drive position. Right hand unit shown.
4. Panel with coil connection penetrations is not removable. Panel opposite coil connection is removable.
5. Weight does not include coil and motor weights. See 65-80018-J for coil & 65-80016-J for motor weights
6. Coil and drain connections specified left or right with air to back.
7. One coil shown. Two coils available.
8. Contol enclosure will be mounted on supply fan module.
9. Alternate control enclosure and VFD locations are subjected to compliance with NEC 2002 Article 110.26 and are limited. Contact Factory for available alternate location by application.
10. Optional VFD will be located on the same side of the unit as control enclosure. VFD shall be mounted adjacent to or as close to control enclosure as possible, depending upon unit size.
11. A) Optional viewport is only available with double wall option.
    B) Optional viewport is 8" diameter, double pane, clear polycarbonate, UV Resistant, with both interior and exterior gasketing.
12. Optional hinged door is removable, but must be opened 90° for removal.



TOP VIEW



SIDE VIEW

DIMENSIONS - In [mm]

UNIT SIZE	H	W	L	A	B	C	D	ACCESS PANEL H X W	WEIGHT (NOTE 5) SINGLE WALL lbs [kg]	WEIGHT (NOTE 5) DOUBLE WALL lbs [kg]
02	22 [559]	30 [762]	46 [1168]	10-1/2 [267]	2-3/8 [603]	11-7/16 [291]	7-1/8 [181]	20 X 19 [508 X 483]	160 [73]	205 [93]
03	22 [559]	36 [914]	46 [1168]	10-1/2 [267]	2-3/8 [603]	13-3/4 [349]	8-1/2 [216]	20 X 19 [508 X 483]	170 [77]	220 [100]
04	22 [559]	44 [1118]	46 [1168]	11-5/8 [295]	2-3/8 [603]	17-1/16 [433]	9-7/8 [251]	20 X 19 [508 X 483]	185 [84]	245 [111]
06	30 [762]	44 [1118]	50 [1270]	13-3/4 [349]	3 [76]	15-3/4 [400]	12-1/2 [318]	28 X 21 [711 X 533]	220 [100]	295 [134]
08	34 [864]	48 [1219]	50 [1270]	13-3/4 [349]	3 [76]	16-1/16 [408]	15-7/8 [403]	32 X 21 [813 X 533]	235 [107]	320 [145]
10	34 [864]	58 [1473]	50 [1270]	16-1/8 [410]	3-3/8 [86]	21-9/16 [548]	14-7/8 [378]	32 X 21 [813 X 533]	285 [130]	380 [173]
12	44 [1118]	66 [1676]	53 [1346]	19-1/8 [486]	8 [203]	24-3/16 [614]	17-5/8 [448]	42 X 22-1/2 [1067 X 572]	365 [166]	475 [216]
14	44 [1118]	70 [1778]	53 [1346]	19-1/8 [486]	8 [203]	23-15/16 [608]	22-1/8 [562]	42 X 22-1/2 [1067 X 572]	375 [170	490 [223]
17	44 [1118]	82 [2083]	53 [1346]	19-1/8 [486]	8 [203]	29-15/16 [760]	22-1/8 [562]	42 X 22-1/2 [1067 X 572]	400 [182]	545 [248]

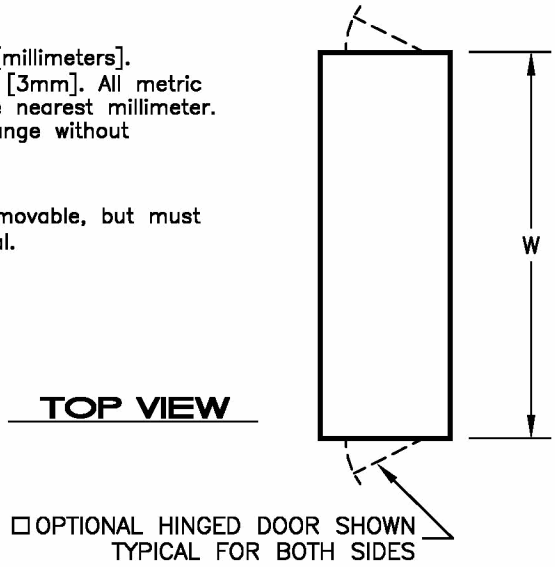
Johnson Controls

TITLE: MODEL AMI
INDOOR AIR HANDLING UNIT
FC FAN AND COIL COMBINATION
(FCM)

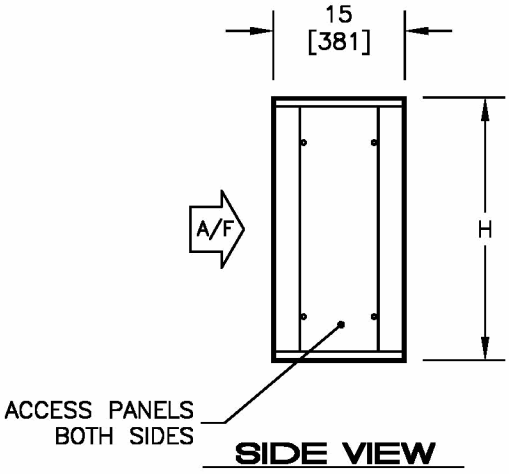
DRN BY:	DATE:	SCALE:	DRAWING NO.
CV	9/10/01	N/A	65-80000-J
CKD BY: DOUG S	DATE: 7/2/07	REV: 09	

NOTES:

1. All dimensions are Inches [millimeters]. All dimensions are ±1/8" [3mm]. All metric values are rounded to the nearest millimeter.
2. All drawings subject to change without prior notice.
3. Right hand unit shown.
4. Optional hinged door is removable, but must be opened 90° for removal.



TOP VIEW



SIDE VIEW

DIMENSIONS – In [mm]

UNIT SIZE	H	W	ACCESS PANEL H X W	WEIGHT SINGLE WALL lbs [kg]	WEIGHT DOUBLE WALL lbs [kg]
02	22 [559]	30 [762]	20 X 9 [508 X 229]	40 [18]	55 [25]
03	22 [559]	36 [914]	20 X 9 [508 X 229]	45 [20]	60 [27]
04	22 [559]	44 [1118]	20 X 9 [508 X 229]	50 [23]	65 [30]
06	30 [762]	44 [1118]	28 X 9 [711 X 229]	55 [25]	75 [34]
08	34 [864]	48 [1219]	32 X 9 [813 X 229]	60 [27]	80 [36]
10	34 [864]	58 [1473]	32 X 9 [813 X 229]	65 [30]	90 [41]
12	44 [1118]	66 [1676]	42 X 9 [1067 X 229]	75 [34]	105 [48]
14	44 [1118]	70 [1778]	42 X 9 [1067 X 229]	80 [36]	110 [50]
17	44 [1118]	82 [2083]	42 X 9 [1067 X 229]	90 [41]	120 [46]

Johnson Controls

TITLE: MODEL AMI
INDOOR AIR HANDLING UNIT
SMALL ACCESS
(SAM)

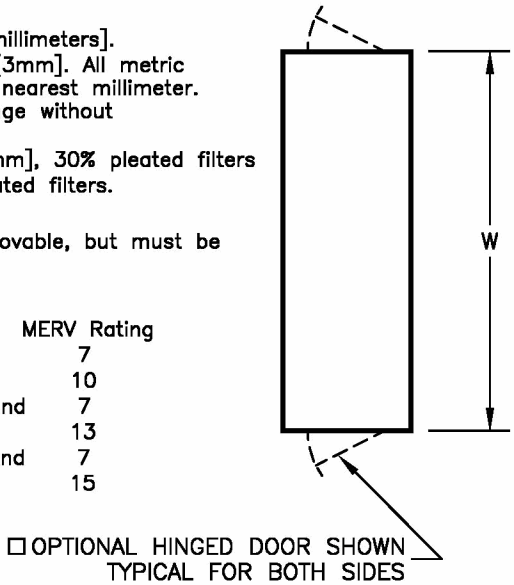
DRN BY:	DATE:	SCALE:	DRAWING NO.
CV	04/24/01	N/A	65-80002-J
CKD BY:	DATE:	REV:	
	10/6/05	02	

DO NOT SCALE DRAWING
DIMENSIONS AND DATA ARE SUBJECT TO CHANGE WITHOUT NOTICE.
CONTACT FACTORY FOR CERTIFIED DRAWINGS.

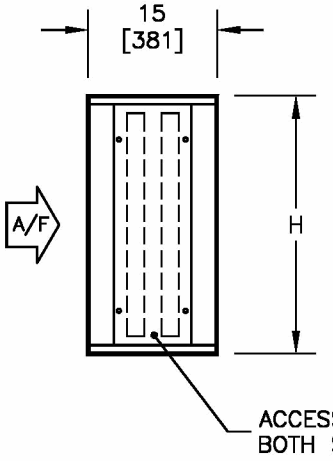
NOTES:
1. All dimensions are Inches [millimeters]. All dimensions are ±1/8" [3mm]. All metric values are rounded to the nearest millimeter.
2. All drawings subject to change without prior notice.
3. Weight is based on 2" [51mm], 30% pleated filters and 4" [102mm], 85% pleated filters.
4. Right hand unit shown.
5. Optional hinged door is removable, but must be opened 90° for removal.

Available Filter Options: MERV Rating

- ☐ A. 2" [51mm], 30% pleated. 7
- ☐ B. 4" [102mm], 65% pleated. 10
- ☐ C. 2" [51mm], 30% pleated and 4" [102mm], 85% pleated. 7 13
- ☐ D. 2" [51mm], 30% pleated and 4" [102mm], 95% pleated. 7 15



TOP VIEW



SIDE VIEW

DIMENSIONS – In [mm]

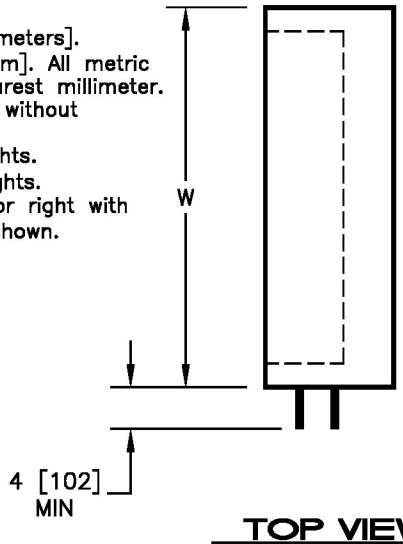
UNIT SIZE	H	W	ACCESS PANEL H X W	WEIGHT (SEE NOTE 3) SINGLE WALL lbs [kg]	WEIGHT (SEE NOTE 3) DOUBLE WALL lbs [kg]	FILTER SIZES 2 [51]	FILTER SIZES 4 [102]
02	22 [559]	30 [762]	20 X 9 [508 X 229]	65 [30]	75 [34]	(1)16x20 [406x508]	(1)16x20 [406x508]
03	22 [559]	36 [914]	20 X 9 [508 X 229]	70 [32]	80 [36]	(1)16X25 [406X635]	(1)16X25 [406X635]
04	22 [559]	44 [1118]	20 X 9 [508 X 229]	75 [34]	90 [41]	(2)16X20 [406X508]	(2)16X20 [406X508]
06	30 [762]	44 [1118]	28 X 9 [711 X 229]	80 [36]	100 [45]	(2)20X25 [508X635]	(2)20X25 [508X635]
08	34 [864]	48 [1219]	32 X 9 [813 X 229]	95 [43]	115 [52]	(2)20X25 [508X635]	(2)20X25 [508X635]
10	34 [864]	58 [1473]	32 X 9 [813 X 229]	105 [48]	130 [59]	(1)16X25 [406X635] (2)20X25 [508X635]	(1)16X25 [406X635] (2)20X25 [508X635]
12	44 [1118]	66 [1676]	42 X 9 [1067 X 229]	160 [73]	190 [86]	(4)20X25 [508X635]	(4)20X25 [508X635]
14	44 [1118]	70 [1778]	42 X 9 [1067 X 229]	170 [77]	200 [91]	(8)16X20 [406X508]	(8)16X20 [50806]
17	44 [1118]	82 [2083]	42 X 9 [1067 X 229]	185 [84]	215 [98]	(6)20X25 [508X635]	(6)20X25 [508X635]

Johnson Controls

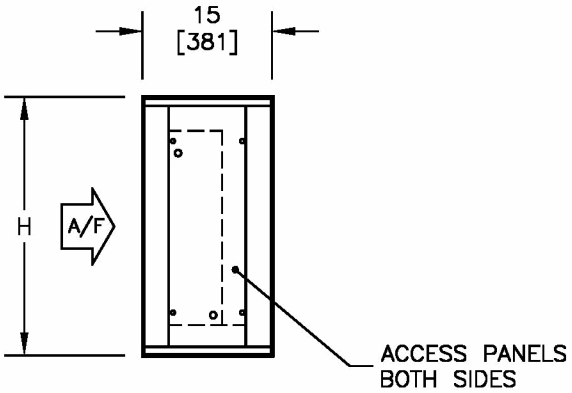
TITLE: MODEL AMI
INDOOR AIR HANDLING UNIT
SMALL FLAT FILTERS
(SFM)

DRN BY:	DATE:	SCALE:	DRAWING NO.
CV	08/06/01	N/A	65-80009-J
CKD BY: S.LEWIS	DATE: 10/6/05	REV: 04	

NOTES:
1. All dimensions are Inches [millimeters]. All dimensions are ±1/8" [3mm]. All metric values are rounded to the nearest millimeter.
2. All drawings subject to change without prior notice.
3. Weight do not include coil weights. See 65–80018–J for coil weights.
4. Coil connections specified left or right with air to back. Right hand unit shown.



TOP VIEW



SIDE VIEW

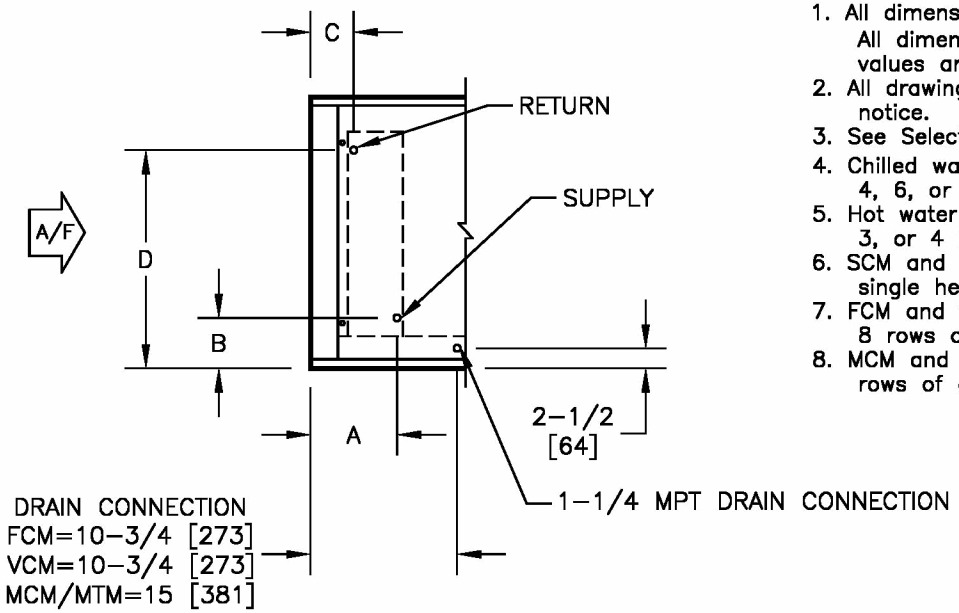
DIMENSIONS – In [mm]

UNIT SIZE	H	W	ACCESS PANEL H X W	WEIGHT (SEE NOTE 3) SINGLE WALL lbs [kg]	DOUBLE WALL lbs [kg]
02	22 [559]	30 [762]	20 X 9 [508 X 229]	42 [19]	57 [26]
03	22 [559]	36 [914]	20 X 9 [508 X 229]	47 [21]	62 [28]
04	22 [559]	44 [1118]	20 X 9 [508 X 229]	52 [24]	67 [30]
06	30 [762]	44 [1118]	28 X 9 [711 X 229]	58 [26]	78 [35]
08	34 [864]	48 [1219]	32 X 9 [813 X 229]	63 [29]	83 [38]
10	34 [864]	58 [1473]	32 X 9 [813 X 229]	68 [31]	93 [42]
12	44 [1118]	66 [1676]	42 X 9 [1067 X 229]	79 [36]	109 [49]
14	44 [1118]	70 [1778]	42 X 9 [1067 X 229]	84 [38]	114 [52]
17	44 [1118]	82 [2083]	42 X 9 [1067 X 229]	94 [43]	124 [56]

Johnson Controls

TITLE: MODEL AMI
INDOOR AIR HANDLING UNIT
SMALL COIL
(SCM)

DRN BY:	DATE:	SCALE:	DRAWING NO.
CV	8/29/01	N/A	65–80020–J
CKD BY: SAMS	DATE: 10/6/05	REV: 02	



SIDE VIEW

NOTES:

1. All dimensions are inches [millimeters]. All dimensions are ±1/8" [3mm]. All metric values are rounded to the nearest millimeter.
2. All drawings subject to change without prior notice.
3. See Selection Program for connection sizes.
4. Chilled water coils are only available in 4, 6, or 8 rows.
5. Hot water coils are only available in 1, 2, 3, or 4 rows.
6. SCM and STM can have up to 4 rows of a single heating coil and no drain connection.
7. FCM and VCM can have up to a total of 8 rows of coil.
8. MCM and MTM can have up to a total of 10 rows of coil.

DIMENSIONS — In [mm]

UNIT SIZE	1 ROW				2 ROW				3 ROW				4 ROW				6 ROW				8 ROW			
	A	B	C	D	A	B	C	D	A	B	C	D	A	B	C	D	A	B	C	D	A	B	C	D
02	7-1/4 [185]	6-1/4 [159]	5 [127]	16-3/4 [425]	7 [178]	6-1/4 [159]	5 [127]	16-3/4 [425]	8 [204]	6-1/4 [159]	5-3/4 [146]	16-3/4 [425]	9 [229]	6-1/4 [159]	6 [152]	16-3/4 [425]	9-3/4 [248]	6-1/4 [159]	6-1/4 [159]	16-3/4 [425]	11-3/4 [299]	6-1/4 [159]	6-1/4 [159]	16-3/4 [425]
03	7-1/4 [185]	6-1/4 [159]	5 [127]	16-3/4 [425]	7 [178]	6-1/4 [159]	5 [127]	16-3/4 [425]	8 [204]	6-1/4 [159]	5-3/4 [146]	16-3/4 [425]	9 [229]	6-1/4 [159]	6 [152]	16-3/4 [425]	9-3/4 [248]	6-1/4 [159]	6-1/4 [159]	16-3/4 [425]	11-3/4 [299]	6-1/4 [159]	6-1/4 [159]	16-3/4 [425]
04	7-1/4 [185]	6-1/2 [165]	5 [127]	17 [432]	7 [178]	6-1/2 [165]	5 [127]	17 [432]	8 [204]	6-1/2 [165]	5-3/4 [146]	17 [432]	9 [229]	6-1/2 [165]	6 [152]	17 [432]	9-3/4 [248]	6-1/2 [165]	6-1/4 [159]	17 [432]	11-3/4 [299]	6-1/2 [165]	6-1/4 [159]	17 [432]
06	7-1/4 [185]	6-1/2 [165]	5 [127]	24-1/2 [622]	7 [178]	6-1/2 [165]	5 [127]	24-1/2 [622]	8 [204]	6-1/2 [165]	5-3/4 [146]	24-1/2 [622]	9 [229]	6-1/2 [165]	6 [152]	24-1/2 [622]	9-3/4 [248]	6-1/2 [165]	6-1/4 [159]	24-1/2 [622]	11-3/4 [299]	6-1/2 [165]	6-1/4 [159]	24-1/2 [622]
08	7-1/4 [185]	6-3/4 [171]	5 [127]	29-3/4 [756]	7 [178]	6-3/4 [171]	5 [127]	29-3/4 [756]	8 [204]	6-3/4 [171]	5-3/4 [146]	29-3/4 [756]	9 [229]	6-3/4 [171]	6 [152]	29-3/4 [756]	9-3/4 [248]	6-3/4 [171]	6-1/4 [159]	29-3/4 [756]	11-3/4 [299]	6-3/4 [171]	6-1/4 [159]	29-3/4 [756]
10	7-1/4 [185]	6-1/2 [165]	5 [127]	29-1/2 [749]	7 [178]	6-1/2 [165]	5 [127]	29-1/2 [749]	8 [204]	6-1/2 [165]	5-3/4 [146]	29-1/2 [749]	9 [229]	6-1/2 [165]	6 [152]	29-1/2 [749]	9-3/4 [248]	6-1/2 [165]	6-1/4 [159]	29-1/2 [749]	11-3/4 [299]	6-1/2 [165]	6-1/4 [159]	29-1/2 [749]
12	7-1/4 [185]	7-1/4 [184]	5 [127]	35-1/4 [895]	7 [178]	7-1/4 [184]	5 [127]	35-1/4 [895]	8 [204]	7-1/4 [184]	5-3/4 [146]	35-1/4 [895]	9 [229]	7-1/4 [184]	6 [152]	35-1/4 [895]	9-3/4 [248]	7-1/4 [184]	6-1/4 [159]	35-1/4 [895]	11-3/4 [299]	7-1/4 [184]	6-1/4 [159]	35-1/4 [895]
14	7-1/4 [185]	7-1/4 [184]	5 [127]	37-3/4 [959]	7 [178]	7-1/4 [184]	5 [127]	37-3/4 [959]	8 [204]	7-1/4 [184]	5-3/4 [146]	37-3/4 [959]	9 [229]	7-1/4 [184]	6 [152]	37-3/4 [959]	9-3/4 [248]	7-1/4 [184]	6-1/4 [159]	37-3/4 [959]	11-3/4 [299]	7-1/4 [184]	6-1/4 [159]	37-3/4 [959]
17	7-1/4 [185]	7-1/2 [191]	5 [127]	38 [965]	7 [178]	7-1/2 [191]	5 [127]	38 [965]	8 [204]	7-1/2 [191]	5-3/4 [146]	38 [965]	9 [229]	7-1/2 [191]	6 [152]	38 [965]	9-3/4 [248]	7-1/2 [191]	6-1/4 [159]	38 [965]	11-3/4 [299]	7-1/2 [191]	6-1/4 [159]	38 [965]

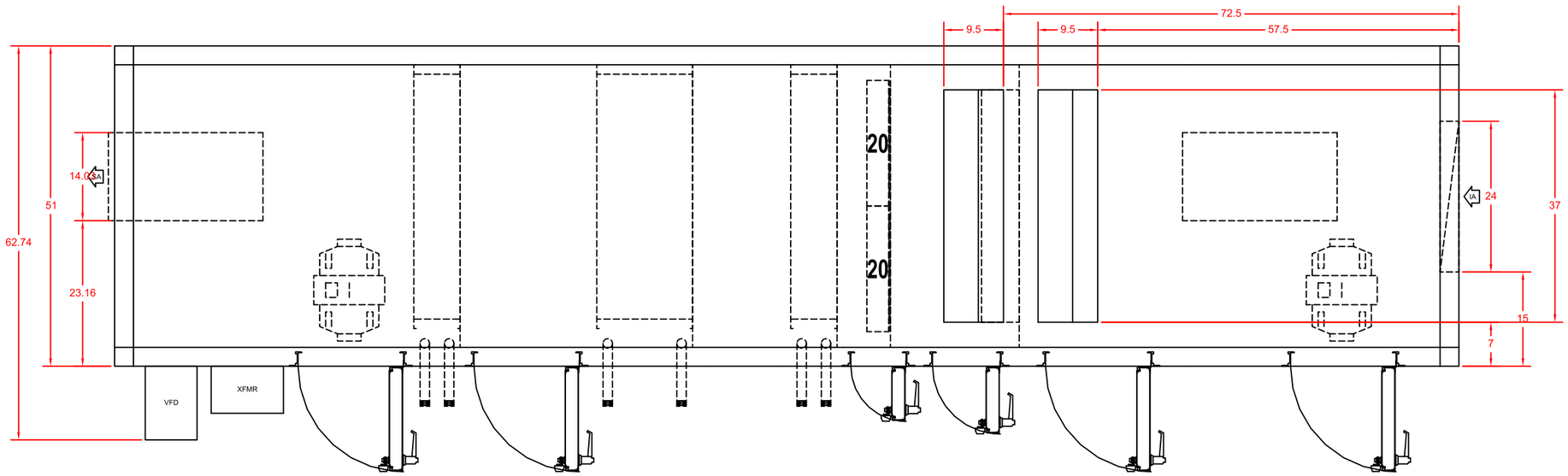
Johnson Controls

TITLE: AMI SINGLE WATER COIL CONNECTION LOCATIONSLOCATIONS SCM, MCM, FCM, VCM, STM, MTM

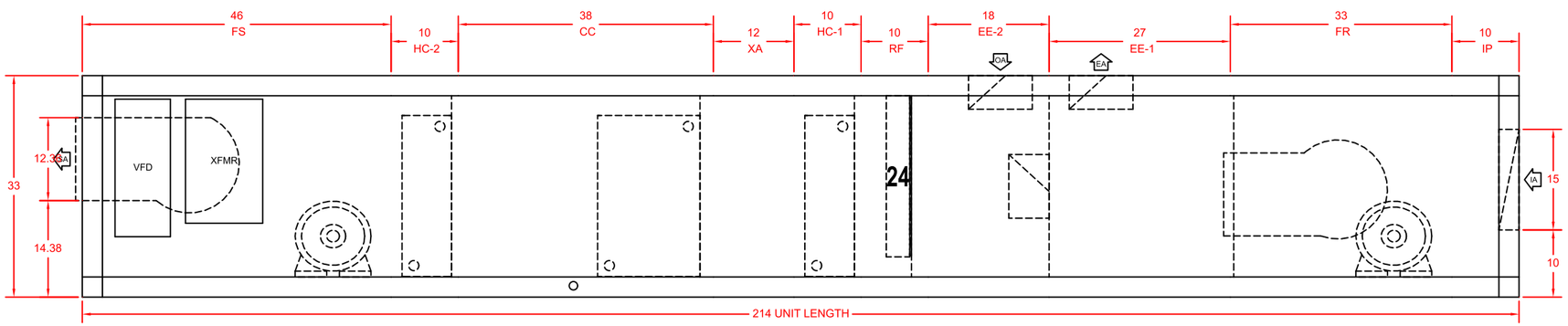
DRN BY:	DATE:	SCALE:	DRAWING NO.
JGH	01/11/02	NA	65-80030-J
CKD BY: BAINE	DATE: 10/6/05	REV: 02	

AHU-8

60 EAST 42ND STREET
NEW YORK, NY 10165
PHONE: (646) 658-6700
FAX: (212) 370-0305



PLAN VIEW



* NOTE: MAX HEIGHT

ELEVATION VIEW

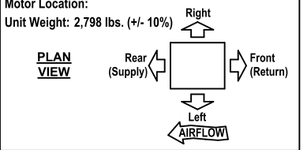
UNIT CONSTRUCTION

Model: Solution-XTI-33x51 Construction: Indoor

Motor Location:

Unit Weight: 2,798 lbs. (+/- 10%)

PLAN VIEW



NOTES

Units with a baserail and a bottom opening: Duct connection flush with the bottom of unit, not flush with bottom of baserail.

Refer to performance report for shipping split details.

Allow sufficient space around the unit for removing the access panels and various parts of the unit. A minimum clearance equal to the width of the unit must be provided on one side of the unit for removing the coil or fan assembly.

Contractor responsible for penetrations and connections of all electrical boxes and internal coil connections.

Overall dimensions account for: outdoor roof peak and overhang, motor control and/or factory package control boxes, coil connections, rain hoods, pipe chases, AMS-60 damper/EAML louver (if applicable,) base rail - in order to convey the true space requirements for the unit.

Certain items may extend beyond cabinet dimensions including: door handles, light switches, electrical boxes, lifting lugs, gas fuel system, etc.

The overall unit length includes an additional 1/4" per shipping split due to additional gasketing and split connection hardware.

Dimension tolerances: Unit (+/- 1/2"); Piping (+/- 2")

SL - Designates Shipped Loose Item(s)

PIPING CONNECTIONS
(In order of Airflow)

Segment	Type	Hand	Quantity	Supply	Return
HC	MPT	Left	1 Sup 1 Ret	1 1/2"	1 1/2"
CC	MPT	Left	1 Sup 1 Ret	1 1/2"	1 1/2"
HC	MPT	Left	1 Sup 1 Ret	1 1/2"	1 1/2"

Drain pan connection size 1 1/4" MPT SCH 40 (Connections on Left Side of unit)

SECTION LIST

SECT	DESCRIPTION
IP	Inlet Plenum
FR	Return Fan - 10-10 FC
EE-1	Economizer
EE-2	Economizer
RF	High Efficiency Filter
HC-1	Heating Coil
XA	Variable Length Access
CC	Cooling Coil
HC-2	Heating Coil
FS	Supply Fan - 10-10 FC

PRODUCT DRAWING

SOLUTION XT AIR HANDLING UNIT DETAIL
MODEL: Solution-XTI-33x51
NOT FOR CONSTRUCTION

Project Name: Adams Fairacre Farms
Location:
Engineer:
Contractor:
For:

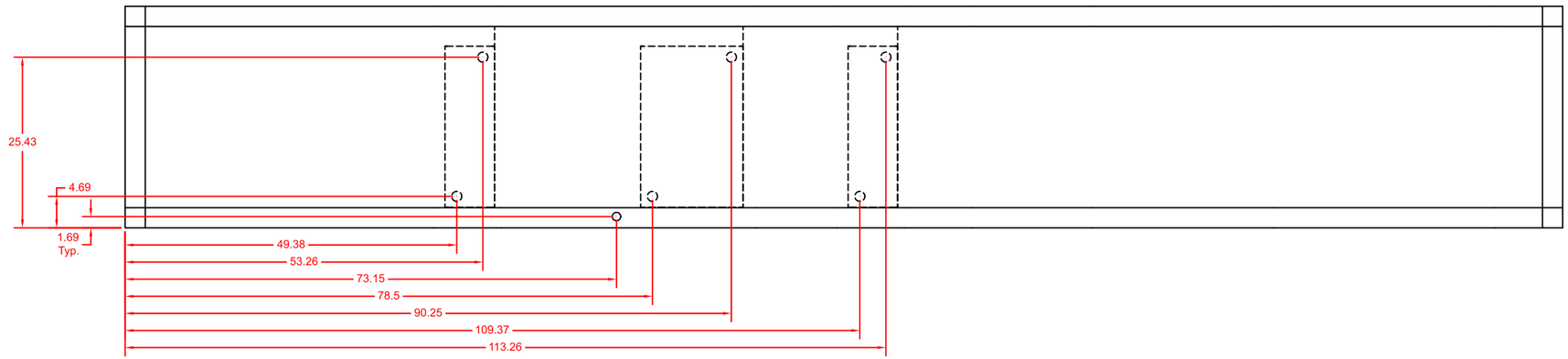
Sold To:
Cust Purch Order#:
Contract#:
UNIT TAG: AHU-8 - Sheet 1

Date: 11/5/2021 13:11:47
Version:
Form No.:
Dwg. Lev.: 5/03
Dwg. Scale: NTS

Serial Number:
SQ Database Number:
YORKworks Release:
Dwg. Name:
Dwg. Location:

Johnson Controls

YORKworks Version: 21.03 Drawing Generator Version : 01:00:16194



Coil Connections

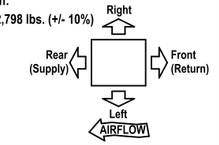
UNIT CONSTRUCTION

Model: Solution-XTI-33x51 Construction: Indoor

Motor Location:

Unit Weight: 2,798 lbs. (+/- 10%)

PLAN VIEW



NOTES

Units with a baserail and a bottom opening: Duct connection flush with the bottom of unit, not flush with bottom of baserail.

Refer to performance report for shipping split details.

Allow sufficient space around the unit for removing the access panels and various parts of the unit. A minimum clearance equal to the width of the unit must be provided on one side of the unit for removing the coil or fan assembly.

Contractor responsible for penetrations and connections of all electrical boxes and internal coil connections.

Overall dimensions account for: outdoor roof peak and overhang, motor control and/or factory package control boxes, coil connections, rain hoods, pipe chases, AMS-60 damper/EAML louver (if applicable,) base rail - in order to convey the true space requirements for the unit.

Certain items may extend beyond cabinet dimensions including: door handles, light switches, electrical boxes, lifting lugs, gas fuel system, etc.

The overall unit length includes an additional 1/4" per shipping split due to additional gasketing and split connection hardware.

Dimension tolerances: Unit (+/- 1/2"); Piping (+/- 2")

SL - Designates Shipped Loose Item(s)

PIPING CONNECTIONS
(In order of Airflow)

Segment	Type	Hand	Quantity	Supply	Return
HC	MPT	Left	1 Sup 1 Ret	1 1/2"	1 1/2"
CC	MPT	Left	1 Sup 1 Ret	1 1/2"	1 1/2"
HC	MPT	Left	1 Sup 1 Ret	1 1/2"	1 1/2"

Drain pan connection size 1 1/4" MPT SCH 40
(Connections on Left Side of unit)

SECTION LIST

SECT	DESCRIPTION
IP	Inlet Plenum
FR	Return Fan - 10-10 FC
EE-1	Economizer
EE-2	Economizer
RF	High Efficiency Filter
HC-1	Heating Coil
XA	Variable Length Access
CC	Cooling Coil
HC-2	Heating Coil
FS	Supply Fan - 10-10 FC

PRODUCT DRAWING
SOLUTION XT COIL CONNECTION DETAIL
MODEL: Solution-XTI-33x51
NOT FOR CONSTRUCTION

Project Name: Adams Fairacre Farms
Location:
Engineer:
Contractor:
For:

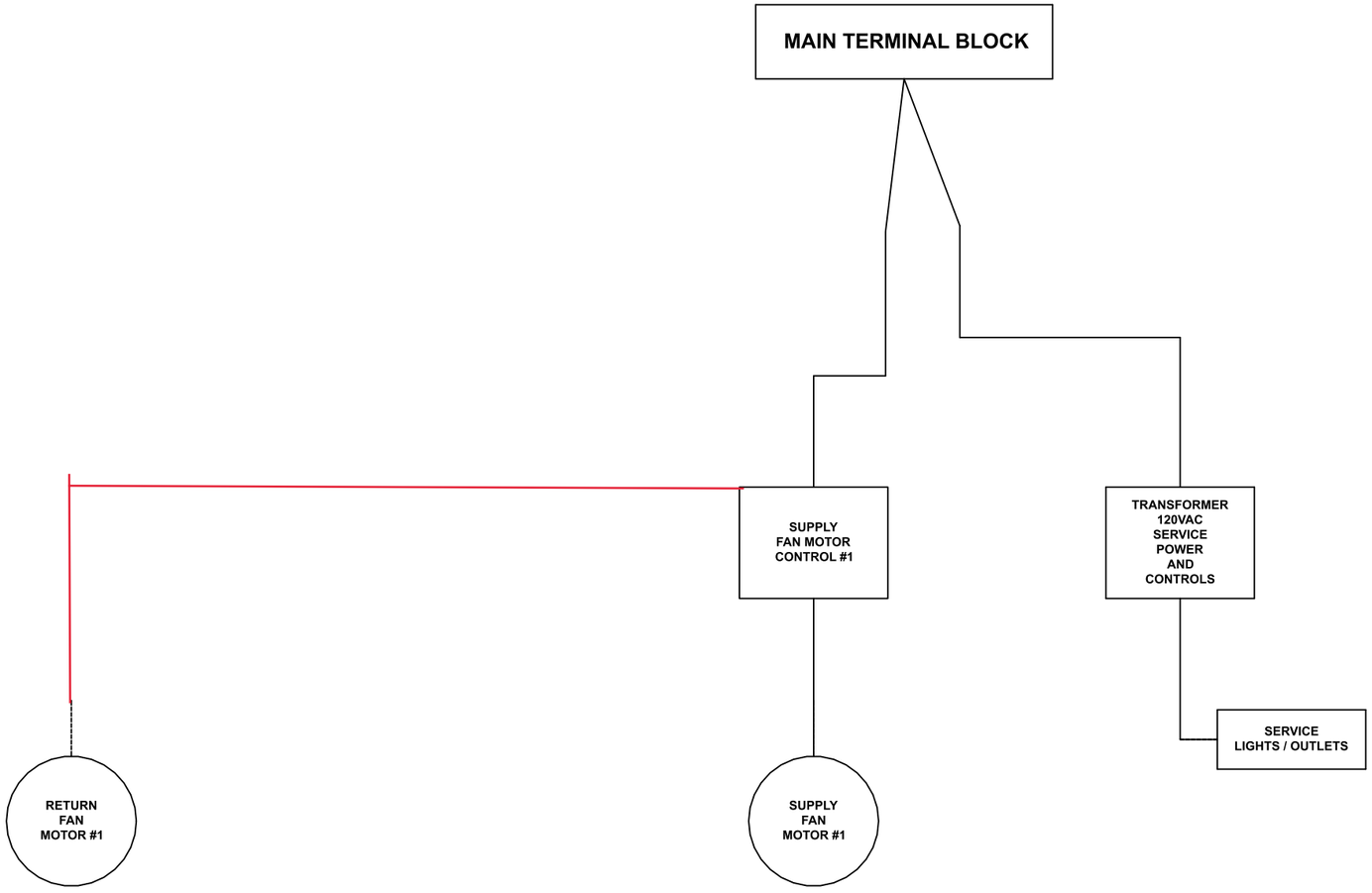
Sold To:
Cust Purch Order#:
Contract#:
UNIT TAG: AHU-8 - Sheet 2

Date: 11/5/2021 13:11:47
Version:
Form No.:
Dwg. Lev.: 5/03
Dwg. Scale: NTS

Serial Number:
SQ Database Number:
YORKworks Release:
Dwg. Name:
Dwg. Location:

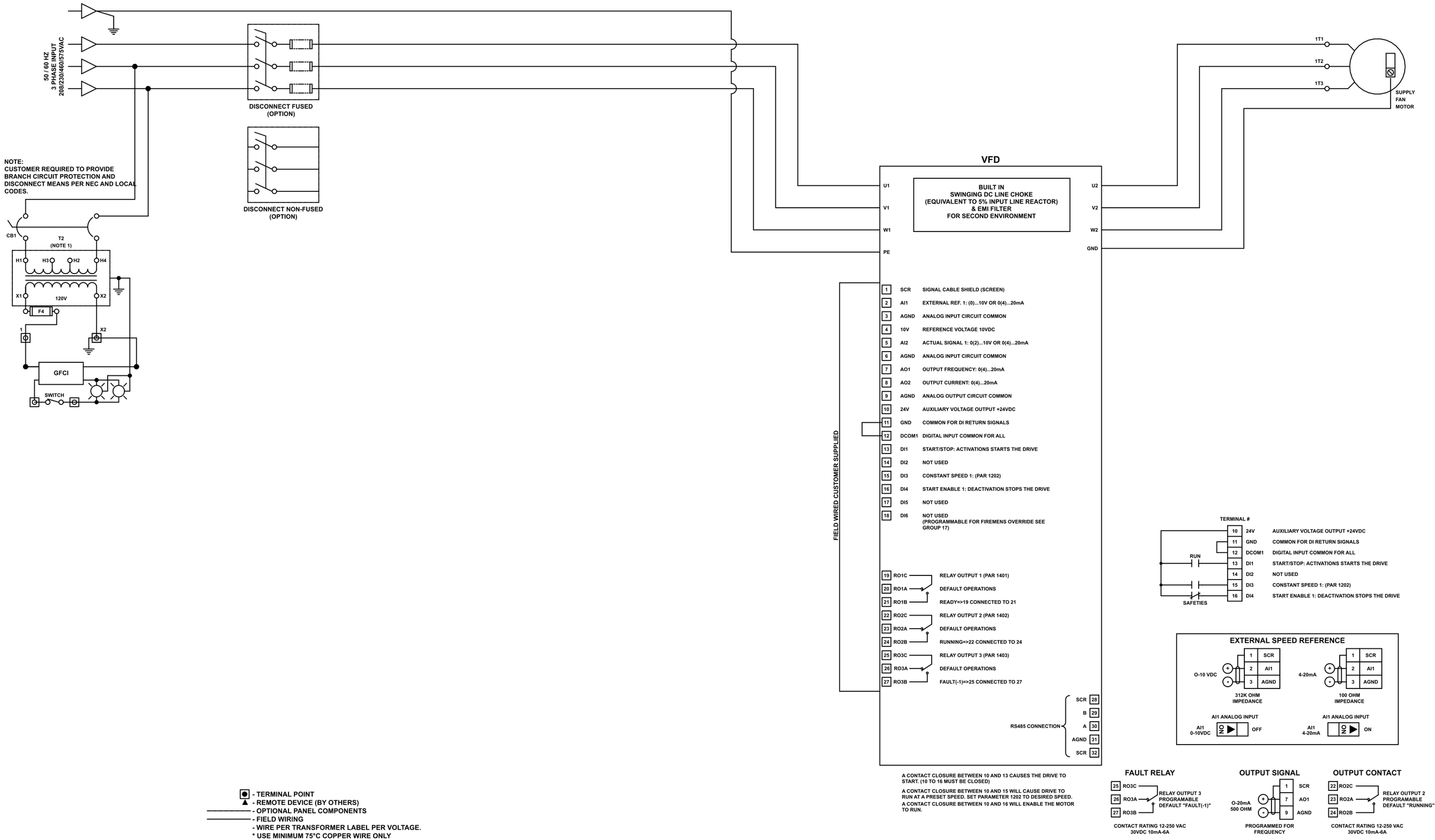
Johnson Controls

YORKworks Version: 21.03 Drawing Generator Version : 01:00:16194



PRODUCT DRAWING YORK Solution XT Field Wiring MODEL: **NOT FOR CONSTRUCTION**	Project Name: Adams Fairacre Farms Location: Engineer: Contractor: For:	Sold To: Cust Purch Order#: Contract#: UNIT TAG: AHU-8 - Sheet 1	Date: 11/5/2021 13:11:47 Version: Form No.: 100.09-EG1 Dwg. Lev.: 12/03 Dwg. Scale: NTS	Serial Number: SQ Database Number: YORKworks Release: Dwg. Name: Dwg. Location:

YORKworks Version: 21.03 Drawing Generator Version : 01:00:21068



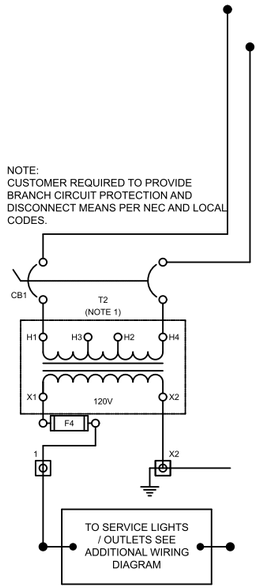
PRODUCT DRAWING

YORK Solution XT Field Wiring
MODEL:
NOT FOR CONSTRUCTION

Project Name: Adams Fairacre Farms	Sold To:	Date: 11/5/2021 13:11:47	Serial Number:
Location:	Cust Purch Order#:	Version:	SQ Database Number:
Engineer:	Contract#:	Form No.: 100.09-EG1	YORKworks Release:
Contractor:	UNIT TAG: AHU-8 - Sheet 2	Dwg. Lev.: 12/03	Dwg. Name:
For:		Dwg. Scale: NTS	Dwg. Location:

Johnson Controls

YORKworks Version: 21.03 Drawing Generator Version : 01:00:21068



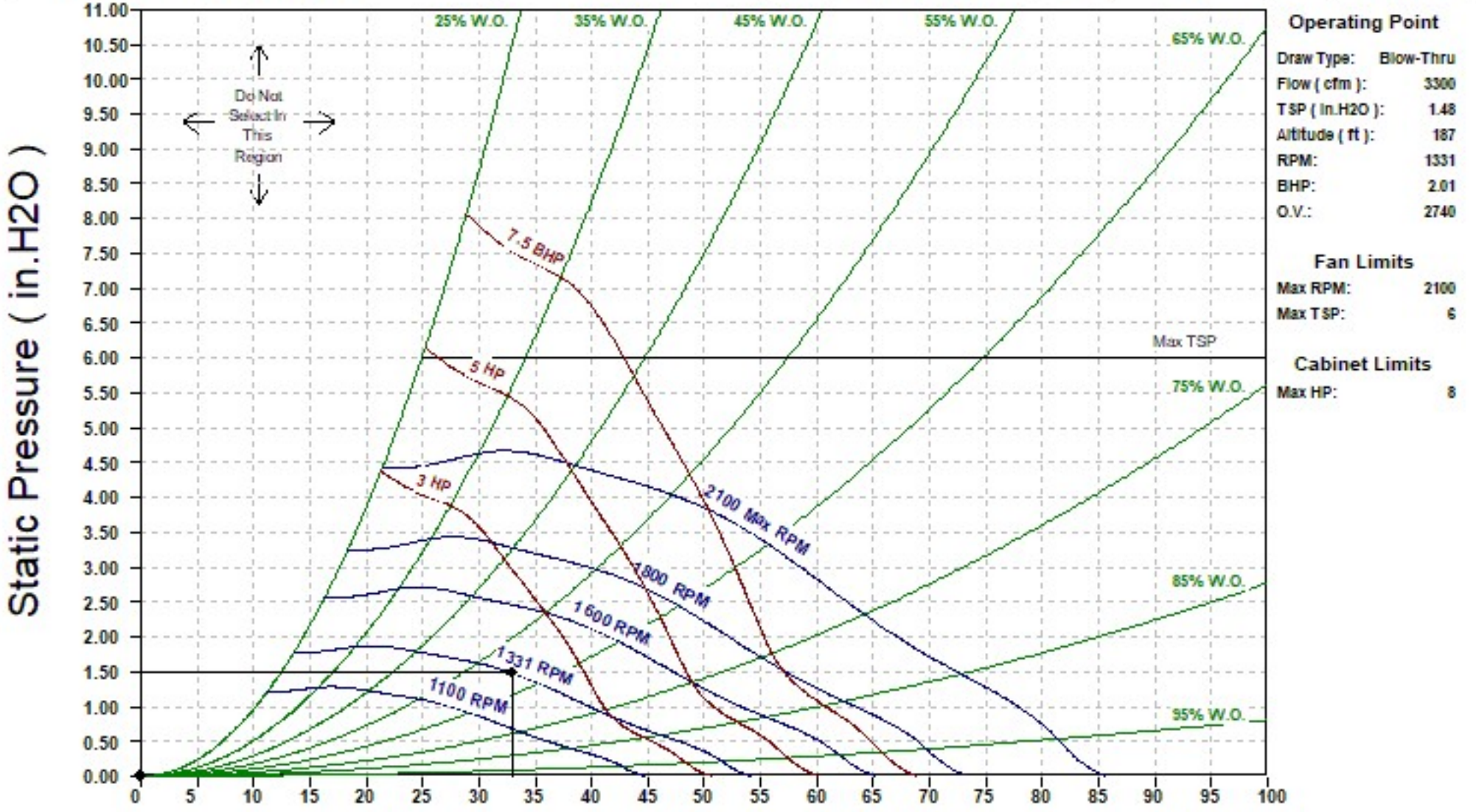
- TERMINAL POINT
- REMOTE DEVICE (BY OTHERS)
- OPTIONAL PANEL COMPONENTS
- FIELD WIRING
- WIRE PER TRANSFORMER LABEL PER VOLTAGE.
* USE MINIMUM 75°C COPPER WIRE ONLY

PRODUCT DRAWING YORK Solution XT Field Wiring MODEL: **NOT FOR CONSTRUCTION**	Project Name: Adams Fairacre Farms Location: Engineer: Contractor: For:	Sold To: Cust Purch Order#: Contract#: UNIT TAG: AHU-8 - Sheet 3	Date: 11/5/2021 13:11:47 Version: Form No.: 100.09-EG1 Dwg. Lev.: 12/03 Dwg. Scale: NTS	Serial Number: SQ Database Number: YORKworks Release: Dwg. Name: Dwg. Location:	Johnson Controls

Johnson Controls

Solution XT Fan Rating Curve

Project Name	Unit Tag	Qty	Model	Seg	Fan Type	Class	Size
Adams Fairacre Farms	AHU-8	1	XTI-33x51	FR	FC	S	10-10



Operating Point

Draw Type:	Blow-Thru
Flow (cfm):	3300
TSP (in.H2O):	1.48
Altitude (ft):	187
RPM:	1331
BHP:	2.01
O.V.:	2740

Fan Limits

Max RPM:	2100
Max TSP:	6

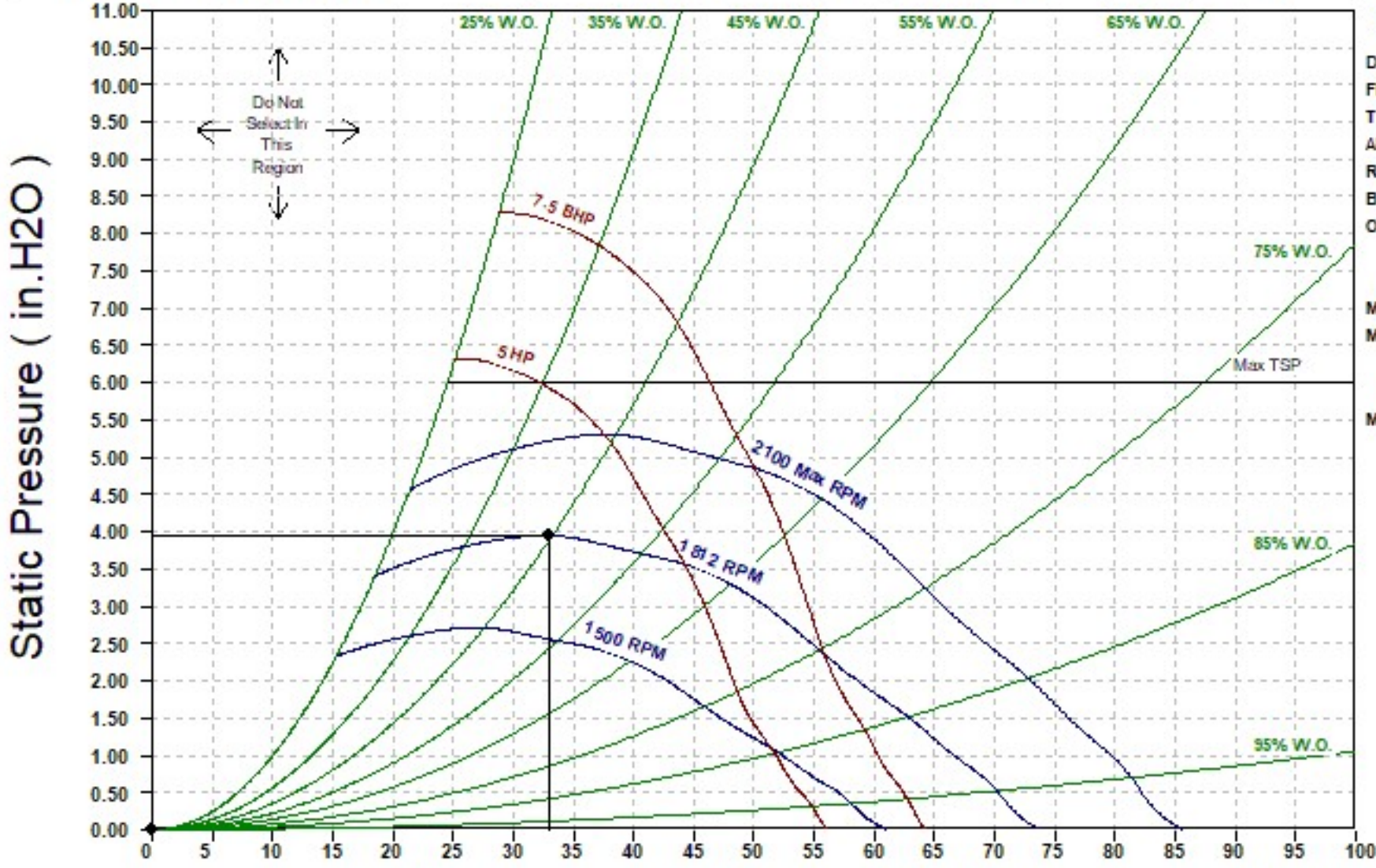
Cabinet Limits

Max HP:	8

Johnson Controls

Solution XT Fan Rating Curve

Project Name	Unit Tag	Qty	Model	Seg	Fan Type	Class	Size
Adams Fairacre Farms	AHU-8	1	XTI-33x51	FS	FC	S	10-10



Operating Point

Draw Type:	Draw-Thru
Flow (cfm):	3300
TSP (in.H2O):	3.95
Altitude (ft):	187
RPM:	1812
BHP:	3.29
O.V.:	2740

Fan Limits

Max RPM:	2100
Max TSP:	6

Cabinet Limits

Max HP:	8

YORK® Solution™ Air Handling Unit Performance Report

Job Summary

Project Name:	Adams Fairacre Farms		
Unit Tag(s):	AHU-8		
Quantity:	1	**Environment:**	Indoor

Unit Overview

Model	Airflow (CFM)	Altitude (ft)	Operating Weight (lbs)
XTI-33x51	3,300	187	2,796

Segment Sequence

(FS HC-2 CC XA HC-1 RF EE EE FR IP)

Unit Construction

Casing Details

Segment(s)	Thickness (in)	Exterior Paint	Exterior Gauge and Material	Interior Gauge and Material	Insulation Thickness and Material	Bulkhead Material
IP , FR , EE , RF , HC-1 , XA , CC , HC-2 , FS	2	None	STD Ga. G-90 Galvanized	STD Ga. G-90 Galvanized	2" Foam	Galvanized

Base Details

Segment(s)	Base		Floor				
	Material	Paint	Gauge and Material	Paint	Insulation	Attachment	Tread Plate
IP , FR , EE , RF , HC-1 , XA , CC , HC-2 , FS	None None	None	STD Ga. G-90 Galvanized	None	N/A	-	None

Unit Electrical

Circuit Details

Circuit #	Component(s)	V/Ph/Hz	Full Load Amps (FLA)	Minimum Current Ampacity (MCA)	Maximum Overcurrent Protection (MOP)
1	Supply Fan Motor Control, Lights and Outlets	460/3/60	10.9	13.7	17.5

Electrical Details

Minimum Unit SCCR	5 kA rms Symmetrical	**ETL Label (UL1995/NEC-2002)**	Yes
Unit Light Type		**Unit Light Switch**	
Standard LED		External	

Supply Fan(s)

Performance Details

Fan Manufacturer	Model	Class	Size	% Wheel Width	% Wheel Diameter	Quantity	Total Airflow (CFM)	Altitude (ft)	TSP (in w.g)	ESP (in w.g)	Fan Speed (RPM)	Fan Power (BHP)
Comefri	ATLI	S	10-10	100	100	1	3,300	187	3.95	0.75	1,812	3.29

Drive Type	Drive SF	Wheel Type	Blade Type	Wheel Material	Base Material	Fan Flow Isolation	Isolation Type	Total Eficiency (%)	Outlet Velocity (ft/s)	Max Speed (RPM)	Fan Power (BHP) w/ Drive Loss
Belt Drive - Fixed	1.5	DWDI	Forward Curved	Steel	Galvanized Steel	None	1" Spring	69.72	2,740	2,100	3.52

Motor Details

Type	Manufacturer	Motor Power (HP)	V/Ph/Hz	Quantity	Insulation Class	Motor Speed (RPM)	Frame Size	Full Load Amps (Amps)	Efficiency	Location
ODP	Baldor	5.0	460/3/60	1	F	1,800	184	6.60	Premium	Left

At Motor Synchronous Details

TSP (in w.g.)	Total Air Flow (CMF)	Fan Speed (RPM)	Motor Correction Factor(%)	Fan Power (BHP)
0.00	3,300	1,812	89.5	3.29

Return Fan(s)

Performance Details

Fan Manufacturer	Model	Class	Size	% Wheel Width	% Wheel Diameter	Quantity	Total Airflow (CFM)	Altitude (ft)	TSP (in w.g)	ESP (in w.g)	Fan Speed (RPM)	Fan Power (BHP)
Comefri	ATLI	S	10-10	100	100	1	3,300	187	1.48	0.75	1,331	2.0

Max RPM	Fan Power with Drive Loss (HP)	Wheel Type	Blade Type	Wheel Material	Base Material	Fan Flow Isolation	AirFlow Monitoring	Inverter Drive Balancing	Isolation Type	Thrust Restraints
2,100	2.15	DWDI	Forward Curved	Steel	Galvanized Steel	None	-	-	1" Spring	-

Drive Type	Drive SF	Spare Belts	Spare Sheave	Inlet Screen	Fan Cage	Belt Guard	Lube Lines	Bearings	Fan Stand	Motor Removal Rail	Seismic Snubber
Belt Drive - Fixed	1.5	-	-	-	-	-	Permanently Sealed	-	-	-	-

Motor Details

Type/MFG	Motor Power (HP)	V/Ph/Hz	Quantity	Insulation Class	RPM	Frame Size	FLA (Amps)	Efficiency	Location	SGR
ODP/TECO	3.0	460/3/60	1	F	1,800	182	4.30	Premium	Left	-

Glycol Coil(s)

Performance[1] Details

Coil	Glycol Type	Glycol %	Rows	Fin Spacing (FPI)	TPC	TMBH	SMBH	EAT (°F)		LAT (°F)		Airflow (CFM)	FV (ft/min)	APD	Flow (GPM)	EWT (°F)	LWT (°F)	Fluid Vel. (ft/s)	WPD	Alt. (ft)
								DB	WB	DB	WB									
HC-1	Propylene	30%	2	12	4	249	249	44.0	-	110.9	-	3,300	541	0.18	26.1	180.0	160.0	5.0	6.7	187
CC	Propylene	30%	10	12	12	140	91	79.9	68.1	54.3	54.2	3,300	541	1.58	29.6	45.0	54.9	3.5	13.4	187
HC-2	Propylene	30%	1	11	2	75	75	54.3	-	74.7	-	3,300	541	0.07	7.8	160.0	140.0	1.5	.5	187

Construction Details

Coil	Location		Offset (in)	Connection Material[3]	Connection Rotation (degrees)	Connection Type	Supply Connection (Per Coil)		Coil Stack Rack
	Coil Index[2]	Connection					Qty	Size	
HC-1	0	Left	0	Steel	0	MPT	1	1-1/2	-
CC	0	Left	0	Steel	0	MPT	1	1-1/2	-
HC-2	0	Left	0	Steel	0	MPT	1	1-1/2	-

Coil	# of Coils High	Face Type	Total Fin Height (in)	Fin Length (in)	Coil Face Area (ft²)	Fin Material	Fin Thickness (in)	Fin Type	Tube Diameter (in)	Tube Material	Tube Wall Thickness (in)

Coil	# of Coils High	Face Type	Total Fin Height (in)	Fin Length (in)	Coil Face Area (ft²)	Fin Material	Fin Thickness (in)	Fin Type	Tube Diameter (in)	Tube Material	Tube Wall Thickness (in)
HC-1	1	Full	22.50	39	6.1	AL	.006	Corrugated	1/2	Copper	.016
CC	1	Full	22.50	39	6.1	AL	.010	Corrugated	1/2	Copper	.020
HC-2	1	Full	22.50	39	6.1	AL	.006	Corrugated	1/2	Copper	.016

Coil	Coil Coating	Dry Weight (lbs)	Fluid Weight (lbs)	Fluid Volume (ft³)	Header Material	Casing Material	Intermediate Drain Pan Material	Fouling Factor (hr.ft².°F/BTU)
HC-1	-	55	14	0.2	Copper	Galvanized	-	-
CC	-	235	55	0.9	Copper	Galvanized	304 Stainless Steel	-
HC-2	-	42	9	0.1	Copper	Galvanized	-	-

Coil Notes

- [1]Performance is shown for the entire coil bank. Performance is not per coil.
- [2]Coil index indicates position in segment. Example: CC-1, index 0; Spacer, index 1; CC-2, index 2
- [3]Johnson Controls suggests using red brass or copper connectors when the coil is to be attached to a copper or brass piping system.
- All coils are rated with a fouling factor of 0.00000 hr.ft².°F/BTU unless otherwise noted
- Ratings are for coils manufactured by Johnson Controls, Inc., 507 E. Michigan St., Milwaukee WI 53202.
- Coil DLL Version: 7.7L
- BDW Tube Spacing: 1.25 x 1.08
- HC-1[1][0]: This coil is certified in accordance with the AHRI Forced-Circulation Air-Cooling and Air-Heating Coils Certification Program which is based on AHRI Standard 410 within the range of Standard rating conditions listed in Table 1 of the Standard. Certified units may be found in the AHRI Directory at www.ahridirectory.org.
- [1]Performance is shown for the entire coil bank. Performance is not per coil.
- [2]Coil index indicates position in segment. Example: CC-1, index 0; Spacer, index 1; CC-2, index 2
- [3]Johnson Controls suggests using red brass or copper connectors when the coil is to be attached to a copper or brass piping system.
- All coils are rated with a fouling factor of 0.00000 hr.ft².°F/BTU unless otherwise noted
- Ratings are for coils manufactured by Johnson Controls, Inc., 507 E. Michigan St., Milwaukee WI 53202.
- Coil DLL Version: 7.7L
- BDW Tube Spacing: 1.25 x 1.08
- CC[1][0]: This coil is certified in accordance with the AHRI Forced-Circulation Air-Cooling and Air-Heating Coils Certification Program which is based on AHRI Standard 410 within the range of Standard rating conditions listed in Table 1 of the Standard. Certified units may be found in the AHRI Directory at www.ahridirectory.org.
- [1]Performance is shown for the entire coil bank. Performance is not per coil.
- [2]Coil index indicates position in segment. Example: CC-1, index 0; Spacer, index 1; CC-2, index 2
- [3]Johnson Controls suggests using red brass or copper connectors when the coil is to be attached to a copper or brass piping system.
- All coils are rated with a fouling factor of 0.00000 hr.ft².°F/BTU unless otherwise noted
- Ratings are for coils manufactured by Johnson Controls, Inc., 507 E. Michigan St., Milwaukee WI 53202.
- Coil DLL Version: 7.7L
- BDW Tube Spacing: 1.25 x 1.08
- HC-2[1][0]: This coil is certified in accordance with the AHRI Forced-Circulation Air-Cooling and Air-Heating Coils Certification Program which is based on AHRI Standard 410 within the range of Standard rating conditions listed in Table 1 of the Standard. Certified units may be found in the AHRI Directory at www.ahridirectory.org.

Drain(s)

Details

Segment	Drain Pan		
	Liner Material	Connection Location	Liner Coating
CC	Stainless Steel	Left	None

Filter(s)

Details							
Segment	Type	Depth	Filter Loading	Media/MERV	# of Spares	Spare Filter Media	Frame Material
RF	Pre-Filter	2"	Side	Pleated 30% (MERV 8)	0	Pleated 30% (MERV 8)	Aluminum
RF	Primary Filter	4" Mini-Pleat	Side	90-95% Eff, (MERV 14)	0	90-95% Eff, (MERV 14)	Aluminum

Sizes				Filter Gauge Details		
Segment	Filter	1st Filter Size H x W (in)	1st Qty	Location	Type	Range (in w.g)
RF	Pre-Filter	24x20	2	-	-	-
RF	Primary Filter	24x20	2	-	-	-

Damper(s)

Details													
Segment	Air Path	H x W (in)	Qty	Total Face Velocity (ft/min)	Face Area	CFM	Minimum Allowable OA CFM	Damper Type	Damper Config	Model	Material	Blade Orientation	Actuator Type	Fail Position
EE	Exhaust Air	9.50 x 37.00		1,352		3,300	-	Control	100%	CD60	Galvanized	Parallel	-	-
EE	Outside Air	9.50 x 37.00		1,352		3,300		Control	100%	CD60	Galvanized	Parallel	-	-
EE	Mixed Air	9.50 x 37.00		1,352		3,300	-	Control	100%	CD60	Galvanized	Parallel	-	-

Door(s)

Details										
Segment(s)	Location	Swing	Hinge Location	H x W x T (in)	View Port	Test Port	Spare Gasket	Thermal Break	Safety Latch	Noncontact Safety Interlock
FR, CC, FS	Left	Outward	Upstream Side	27 x 18 x 2	None	-	-	-	-	-
EE	Left	Outward	Upstream Side	27 x 18 x 2	None	-	-	-	Yes	-
EE	Left	Outward	Upstream Side	27 x 12 x 2	None	-	-	-	-	-
RF	Left	Outward	Upstream Side	27 x 10 x 2	None	-	-	-	-	-

Motor Control(s)

Details										
Segment	Type	MMP	V/Ph/Hz	Input/Output Amps*	Efficiency	Heat Loss (at 100% load)	Enclosure	Bypass	Disconnect Type	RFI/EMI EMC Filter
FS	ABB VFD ABB AYK580	-	460/3/60	7.6/7.6	90 %	133	NEMA 1	-	Fused	Yes
FS Single Point Power Main Disconnect	External Main Disconnect	-	460/3/60	0.0/0.0	90 %	0	NEMA 3R	-	External Non Fused	No

Details										
Segment	Type	MMP	V/Ph/Hz	Input/Output Amps*	Efficiency	Heat Loss (at 100% load)	Enclosure	Bypass	Disconnect Type	RFI/EMI EMC Filter

Notes
*Drives are rated for use below 3,000 ft and 104°F. Use Derating Charts in Air-Mod Engineering Guide Form 100.42-EGI (212) for use above these limits.
Storage Temperature: -40°F to 158°F
Humidity: MAX 95% RH non-condensing
Altitude: 3,300 ft. without derate (1% derate for each additional 330 ft.)
Overload Current Rating: 100% for 1 minute every 10 minutes.
The Class 10 trip rating of the MMP device will not withstand an across-the-line start of a fan and should not be used with VFDs with bypass circuits.
The customer must provide a platform or catwalk for accessing the power-disconnect.
Copper Conductors Only.
FS: Contains the following option: Swinging DC Line Choke (Equivalent to 5% Input Line Reactor)

Face Velocity and Static Pressure

Summary						
Segment	Description	Face Area (sq. ft)	Airflow (CFM)	Face Velocity (ft/min)	Supply Fan Static Pressure (in w.g.)	Exhaust/Return Fan Static Pressure (in w.g.)
IP	Opening	2.5	3,300	1,320.00	0.00	0.29
FR	External Static - User Entered	0.0	3,300	0.00	0.00	0.75
EE	Opening	2.4	3,300	1,352.00	0.00	0.31
EE	Control Galvanized (CD60)	0.0	3,300	0.00	0.00	0.13
EE	Opening	2.4	3,300	1,352.00	0.31	0.00
EE	Control Galvanized (CD60)	0.0	3,300	0.00	0.13	0.00
RF	2" Pleated 30% (MERV 8)	6.7	3,300	495.00	0.27	0.00
RF	Dirty Filter Allowance - Prefilter	0.0	3,300	0.00	0.00	0.00
RF	4" Mini-Pleat 90-95% Eff, (MERV 14)	6.7	3,300	495.00	0.66	0.00
HC-1	Heating 2 rows 12 fins	6.1	3,300	541.00	0.18	0.00
CC	Cooling 10 rows 12 fins	6.1	3,300	541.00	1.58	0.00
HC-2	Heating 1 rows 11 fins	6.1	3,300	541.00	0.07	0.00
FS	External Static - User Entered	0.0	3,300	0.00	0.75	0.00
				Total	**3.95**	**1.48**

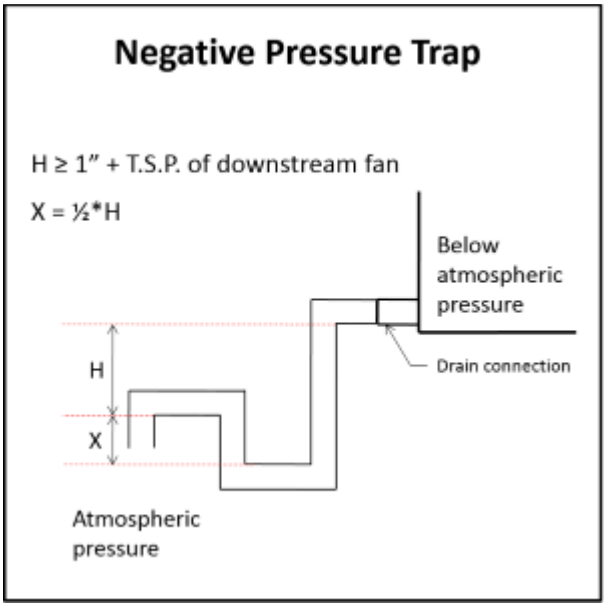
Dimensions and Weight

Details					
Segment	Description	Length[1] (in)	Width[2] (in)	Height (in)	Weight (lbs)
IP	Inlet Plenum	10	51	33	137
FR	Return Fan	33	51	33	411
EE	Economizer	45	51	33	306
RF	High Efficiency Filter	10	51	33	110
HC-1	Heating Coil	10	51	33	212
XA	Variable Length Access	12	51	33	77
CC	Variable Length Cooling Coil	38	51	33	715
HC-2	Heating Coil	10	51	33	199
FS	Supply Fan	46	51	33	632
Overall[3]		**214**			**2,799**

Notes
[1]The length includes bottom tier segments only
[2]The width does not include coil connection extensions or door latches that extend beyond the unit casing. The width does not include the depth of any pipe chases.
[3]Unit level and other loose components may be excluded from segment weights and overall segment weights. For total unit weight reference Unit Overview.

Recommended Trap Height

Details									
Segment	Applicable Fan	Fan TSP (in w.g.)	Positive or Negative	Calculated Dimensions (in)			Recommended Dimensions (in)		Base Rail Height (in)
				H	X	H + X	H	H + X	
CC	Supply Fan	3.95	Negative	4.95	2.48	7.43	5.00	7.50	None



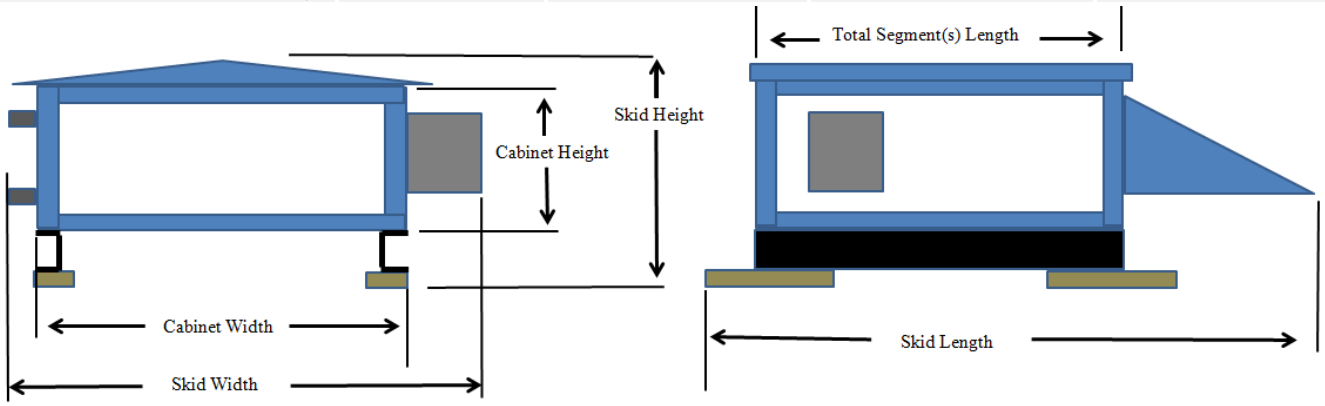
Notes
Formulas and calculations are recommendations only. Contractor shall determine actual dimensions required for each trap based on jobsite conditions, and application requirements.
Refer to the Installation Manual of the IOM for more information.

Statement of Compliance

Details
YORK® Solution XT AHU's meet IBC seismic requirements for non-critical equipment (Ip = 1.0) for locations with design spectral response Sds <= 0.43. Units must be rigid mounted.
The anchorage of the unit to the ground or building structure needs to be evaluated by and is the responsibility of the engineer of record. Specification of seismic requirements is the responsibility of the project design engineer. If formal certification is required, please contact your sales representative and/or application engineer for review. Certain application and site requirements may require additional cost and/or lead time.
Component locations are listed as Segment Hand (Unit Hand): ex. Left (Right). See SubmittalDrawing for additional details
Air handling unit parameters vary depending on conditions. Parameters such as airflows, air pressure drops, and coil capacities are shown for design conditions.

Shipping Summary

Details				
Skid	**Skid Length (in)**	**Skid Height (in)**	**Skid Width (in)**	**Skid Weight (lbs)**
(FS HC-2 CC XA HC-1 RF EE EE FR IP)	215	37	67	2,798



Notes
Skid Width: Total width of the shipping skid, including any items that may extend beyond the cabinet (this includes any door handles, coil connections, drain connections, lifting lugs, mounted pipe-chases, electrical/control components, tie-down brackets, side dampers).
Skid Height: Total height of the shipping skid, including any items that may extend beyond the cabinet (this includes any base-rails, shipping wood-blocks, roof peak, discharge flanges, mounted gas-furnace flue pipes).
Skid Length: Total length of the shipping skid, including any items that may extend beyond the cabinet (this includes any mounted rain-hoods, discharge flanges,tie-down brackets, shipping wood-blocks, front dampers, split connectors, electrical/control components, outrigging extensions, isolation dampers, inlet baskets).

AHU-9

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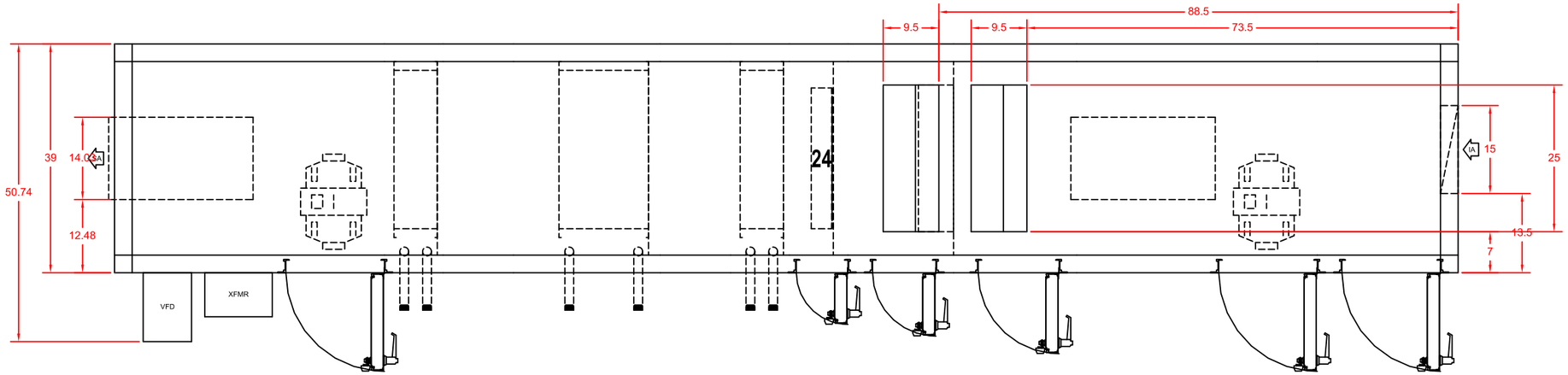
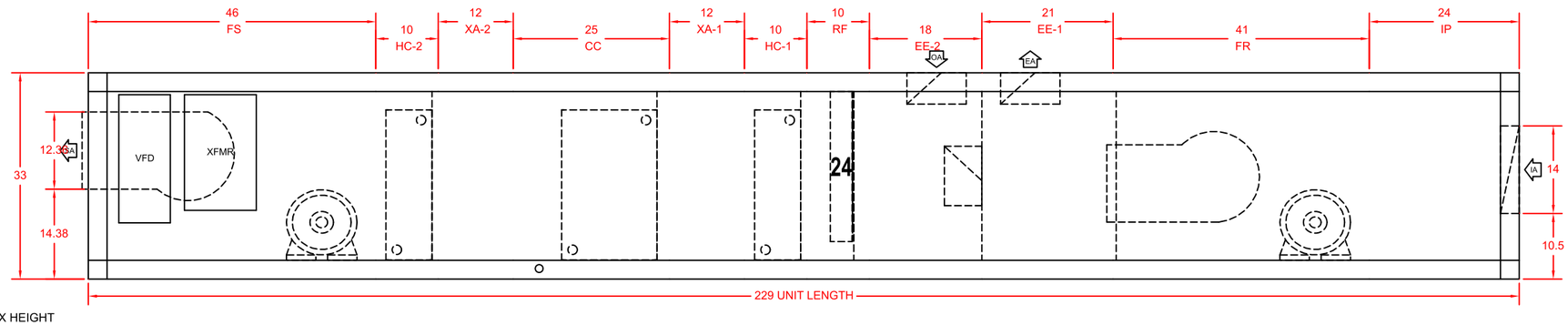
PHONE: (646) 658-6700
FAX: (212) 370-0305



PLAN VIEW



* NOTE: MAX HEIGHT

ELEVATION VIEW

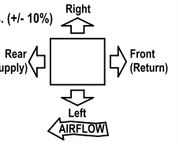
UNIT CONSTRUCTION

Model: Solution-XTI-33x39 Construction: Indoor

Motor Location:

Unit Weight: 2,479 lbs. (+/- 10%)

PLAN VIEW



NOTES

Units with a baserail and a bottom opening: Duct connection flush with the bottom of unit, not flush with bottom of baserail.

Refer to performance report for shipping split details.

Allow sufficient space around the unit for removing the access panels and various parts of the unit. A minimum clearance equal to the width of the unit must be provided on one side of the unit for removing the coil or fan assembly.

Contractor responsible for penetrations and connections of all electrical boxes and internal coil connections.

Overall dimensions account for: outdoor roof peak and overhang, motor control and/or factory package control boxes, coil connections, rain hoods, pipe chases, AMS-60 damper/EAML louver (if applicable,) base rail - in order to convey the true space requirements for the unit.

Certain items may extend beyond cabinet dimensions including: door handles, light switches, electrical boxes, lifting lugs, gas fuel system, etc.

The overall unit length includes an additional 1/4" per shipping split due to additional gasketing and split connection hardware.

Dimension tolerances: Unit (+/- 1/2"); Piping (+/- 2")

SL - Designates Shipped Loose Item(s)

PIPING CONNECTIONS
(In order of Airflow)

Segment	Type	Hand	Quantity	Supply	Return
HC	MPT	Left	1 Sup 1 Ret	1 1/2"	1 1/2"
CC	MPT	Left	1 Sup 1 Ret	1 1/2"	1 1/2"
HC	MPT	Left	1 Sup 1 Ret	1 1/2"	1 1/2"

Drain pan connection size 1 1/4" MPT SCH 40 (Connections on Left Side of unit)

SECTION LIST

SECT	DESCRIPTION
IP	Inlet Plenum
FR	Return Fan - 10-10 FC
EE-1	Economizer
EE-2	Economizer
RF	High Efficiency Filter
HC-1	Heating Coil
XA-1	Variable Length Access
CC	Cooling Coil
XA-2	Variable Length Access
HC-2	Heating Coil
FS	Supply Fan - 10-10 FC

PRODUCT DRAWING

SOLUTION XT AIR HANDLING UNIT DETAIL

MODEL: Solution-XTI-33x39

NOT FOR CONSTRUCTION

Project Name: Adams Fairacre Farms
Location:
Engineer:
Contractor:
For:

Sold To:
Cust Purch Order#:
Contract#:

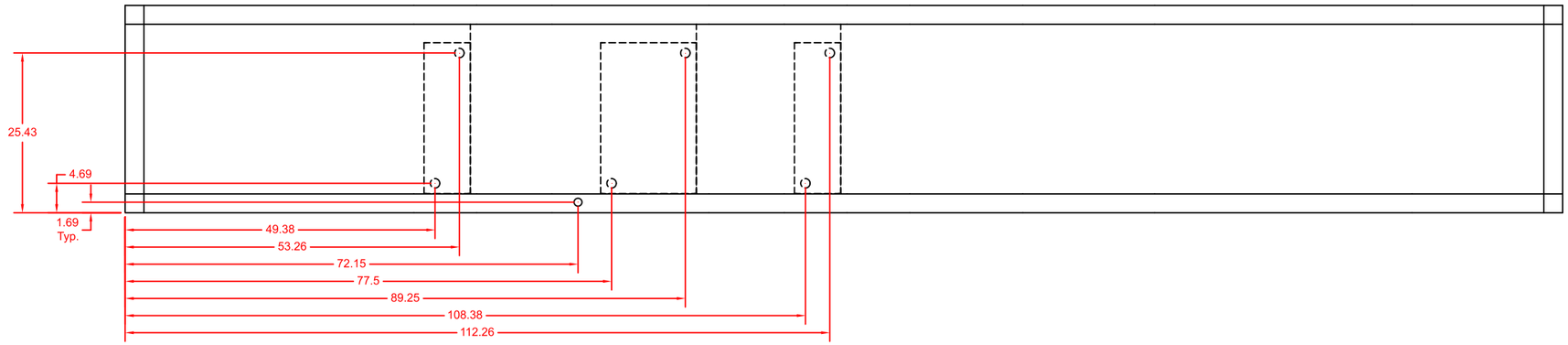
UNIT TAG: AHU-9 - Sheet 1

Date: 11/5/2021 13:19:38
Version:
Form No.:
Dwg. Lev.: 5/03
Dwg. Scale: NTS

Serial Number:
SQ Database Number:
YORKworks Release:
Dwg. Name:
Dwg. Location:

Johnson Controls

YORKworks Version: 21.03 Drawing Generator Version : 01:00:16194



Coil Connections

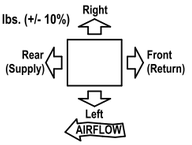
UNIT CONSTRUCTION

Model: Solution-XTI-33x39 Construction: Indoor

Motor Location:

Unit Weight: 2,479 lbs. (+/- 10%)

PLAN VIEW



NOTES

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Refer to performance report for shipping split details.

Allow sufficient space around the unit for removing the access panels and various parts of the unit. A minimum clearance equal to the width of the unit must be provided on one side of the unit for removing the coil or fan assembly.

Contractor responsible for penetrations and connections of all electrical boxes and internal coil connections.

Overall dimensions account for: outdoor roof peak and overhang, motor control and/or factory package control boxes, coil connections, rain hoods, pipe chases, AMS-60 damper/EAML louver (if applicable,) base rail - in order to convey the true space requirements for the unit.

Certain items may extend beyond cabinet dimensions including: door handles, light switches, electrical boxes, lifting lugs, gas fuel system, etc.

The overall unit length includes an additional 1/4" per shipping split due to additional gasketing and split connection hardware.

Dimension tolerances: Unit (+/- 1/2"); Piping (+/- 2")

SL - Designates Shipped Loose Item(s)

PIPING CONNECTIONS
(In order of Airflow)

Segment	Type	Hand	Quantity	Supply	Return
HC	MPT	Left	1 Sup 1 Ret	1 1/2"	1 1/2"
CC	MPT	Left	1 Sup 1 Ret	1 1/2"	1 1/2"
HC	MPT	Left	1 Sup 1 Ret	1 1/2"	1 1/2"

Drain pan connection size 1 1/4" MPT SCH 40
(Connections on Left Side of unit)

SECTION LIST

SECT	DESCRIPTION
IP	Inlet Plenum
FR	Return Fan - 10-10 FC
EE-1	Economizer
EE-2	Economizer
RF	High Efficiency Filter
HC-1	Heating Coil
XA-1	Variable Length Access
CC	Cooling Coil
XA-2	Variable Length Access
HC-2	Heating Coil
FS	Supply Fan - 10-10 FC

PRODUCT DRAWING
SOLUTION XT COIL CONNECTION DETAIL
MODEL: Solution-XTI-33x39
NOT FOR CONSTRUCTION

Project Name: Adams Fairacre Farms
Location:
Engineer:
Contractor:
For:

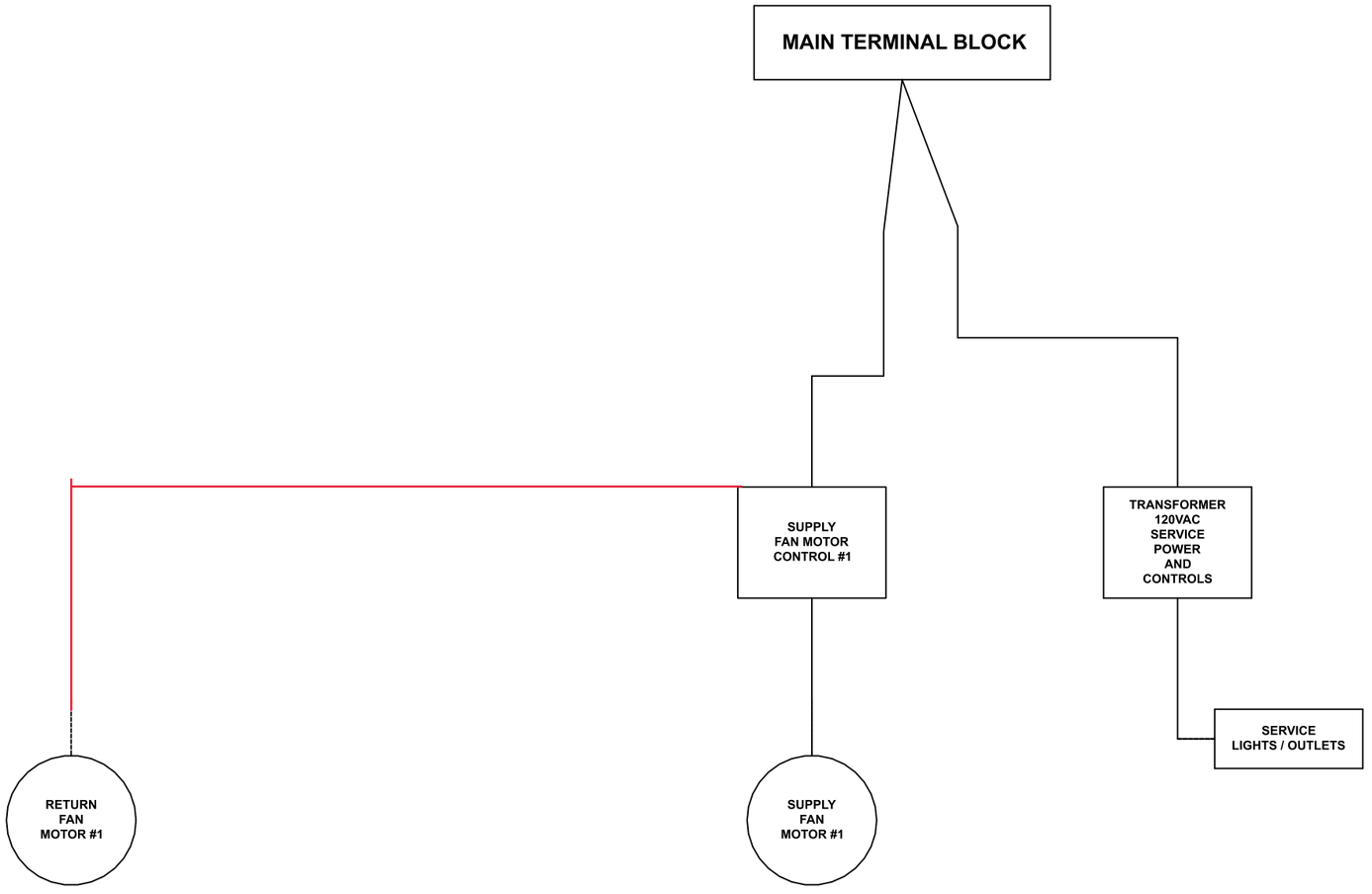
Sold To:
Cust Purch Order#:
Contract#:
UNIT TAG: AHU-9 - Sheet 2

Date: 11/5/2021 13:19:38
Version:
Form No.:
Dwg. Lev.: 5/03
Dwg. Scale: NTS

Serial Number:
SQ Database Number:
YORKworks Release:
Dwg. Name:
Dwg. Location:

Johnson Controls

YORKworks Version: 21.03 Drawing Generator Version : 01:00:16194



PRODUCT DRAWING YORK Solution XT Field Wiring MODEL: **NOT FOR CONSTRUCTION**	Project Name: Adams Fairacre Farms Location: Engineer: Contractor: For:	Sold To: Cust Purch Order#: Contract#: UNIT TAG: AHU-9 - Sheet 1	Date: 11/5/2021 13:19:38 Version: Form No.: 100.09-EG1 Dwg. Lev.: 12/03 Dwg. Scale: NTS	Serial Number: SQ Database Number: YORKworks Release: Dwg. Name: Dwg. Location:	Johnson Controls

YORKworks Version: 21.03 Drawing Generator Version : 01:00:21068

50 / 60 HZ
3 PHASE INPUT
208/230/460/575VAC

DISCONNECT FUSED
(OPTION)

DISCONNECT NON-FUSED
(OPTION)

NOTE:
CUSTOMER REQUIRED TO PROVIDE
BRANCH CIRCUIT PROTECTION AND
DISCONNECT MEANS PER NEC AND LOCAL
CODES.

CB1

T2
(NOTE 1)

H1 H3 H2 H4

X1 120V X2

F4

1 X2

GFCI

SWITCH

VFD

U1
V1
W1
PE

BUILT IN
SWINGING DC LINE CHOKE
(EQUIVALENT TO 5% INPUT LINE REACTOR)
& EMI FILTER
FOR SECOND ENVIRONMENT

U2
V2
W2
GND

1T1
1T2
1T3

SUPPLY
FAN
MOTOR

FIELD WIRED CUSTOMER SUPPLIED

1	SCR	SIGNAL CABLE SHIELD (SCREEN)
2	AI1	EXTERNAL REF. 1: (0)...10V OR 0(4)...20mA
3	AGND	ANALOG INPUT CIRCUIT COMMON
4	10V	REFERENCE VOLTAGE 10VDC
5	AI2	ACTUAL SIGNAL 1: 0(2)...10V OR 0(4)...20mA
6	AGND	ANALOG INPUT CIRCUIT COMMON
7	AO1	OUTPUT FREQUENCY: 0(4)...20mA
8	AO2	OUTPUT CURRENT: 0(4)...20mA
9	AGND	ANALOG OUTPUT CIRCUIT COMMON
10	24V	AUXILIARY VOLTAGE OUTPUT +24VDC
11	GND	COMMON FOR DI RETURN SIGNALS
12	DCOM1	DIGITAL INPUT COMMON FOR ALL
13	DI1	START/STOP: ACTIVATIONS STARTS THE DRIVE
14	DI2	NOT USED
15	DI3	CONSTANT SPEED 1: (PAR 1202)
16	DI4	START ENABLE 1: DEACTIVATION STOPS THE DRIVE
17	DI5	NOT USED
18	DI6	NOT USED (PROGRAMMABLE FOR FIREMENS OVERRIDE SEE GROUP 17)

19	RO1C	RELAY OUTPUT 1 (PAR 1401)
20	RO1A	DEFAULT OPERATIONS
21	RO1B	READY=>19 CONNECTED TO 21
22	RO2C	RELAY OUTPUT 2 (PAR 1402)
23	RO2A	DEFAULT OPERATIONS
24	RO2B	RUNNING=>22 CONNECTED TO 24
25	RO3C	RELAY OUTPUT 3 (PAR 1403)
26	RO3A	DEFAULT OPERATIONS
27	RO3B	FAULT(-1)=>25 CONNECTED TO 27

RS485 CONNECTION

SCR	28
B	29
A	30
AGND	31
SCR	32

A CONTACT CLOSURE BETWEEN 10 AND 13 CAUSES THE DRIVE TO START. (10 TO 16 MUST BE CLOSED)

A CONTACT CLOSURE BETWEEN 10 AND 15 WILL CAUSE DRIVE TO RUN AT A PRESET SPEED. SET PARAMETER 1202 TO DESIRED SPEED.

A CONTACT CLOSURE BETWEEN 10 AND 16 WILL ENABLE THE MOTOR TO RUN.

TERMINAL #

10	24V	AUXILIARY VOLTAGE OUTPUT +24VDC
11	GND	COMMON FOR DI RETURN SIGNALS
12	DCOM1	DIGITAL INPUT COMMON FOR ALL
13	DI1	START/STOP: ACTIVATIONS STARTS THE DRIVE
14	DI2	NOT USED
15	DI3	CONSTANT SPEED 1: (PAR 1202)
16	DI4	START ENABLE 1: DEACTIVATION STOPS THE DRIVE

RUN

SAFETIES

EXTERNAL SPEED REFERENCE

O-10 VDC

1	SCR
2	AI1
3	AGND

312K OHM
IMPEDANCE

4-20mA

1	SCR
2	AI1
3	AGND

100 OHM
IMPEDANCE

AI1 ANALOG INPUT
AI1 0-10VDC — NO — OFF

AI1 ANALOG INPUT
AI1 4-20mA — NO — ON

FAULT RELAY

25	RO3C	RELAY OUTPUT 3 PROGRAMABLE DEFAULT "FAULT(-1)"
26	RO3A	
27	RO3B	

CONTACT RATING 12-250 VAC
30VDC 10mA-6A

OUTPUT SIGNAL

O-20mA
500 OHM

1	SCR
7	AO1
9	AGND

PROGRAMMED FOR
FREQUENCY

OUTPUT CONTACT

22	RO2C	RELAY OUTPUT 2 PROGRAMABLE DEFAULT "RUNNING"
23	RO2A	
24	RO2B	

CONTACT RATING 12-250 VAC
30VDC 10mA-6A

- TERMINAL POINT
- REMOTE DEVICE (BY OTHERS)
- OPTIONAL PANEL COMPONENTS
- FIELD WIRING
- WIRE PER TRANSFORMER LABEL PER VOLTAGE.
* USE MINIMUM 75°C COPPER WIRE ONLY

PRODUCT DRAWING

YORK Solution XT Field Wiring
MODEL:
NOT FOR CONSTRUCTION

Project Name: Adams Fairacre Farms
Location:
Engineer:
Contractor:
For:

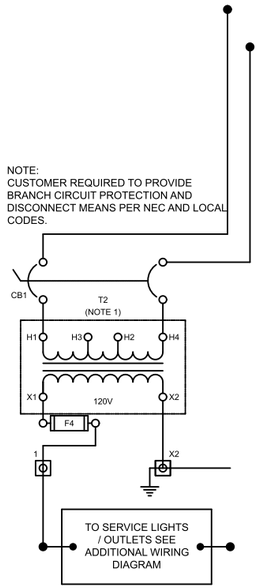
Sold To:
Cust Purch Order#:
Contract#:
UNIT TAG: AHU-9 - Sheet 2

Date: 11/5/2021 13:19:38
Version:
Form No.: 100.09-EG1
Dwg. Lev.: 12/03
Dwg. Scale: NTS

Serial Number:
SQ Database Number:
YORKworks Release:
Dwg. Name:
Dwg. Location:

Johnson Controls

YORKworks Version: 21.03 Drawing Generator Version : 01:00:21068



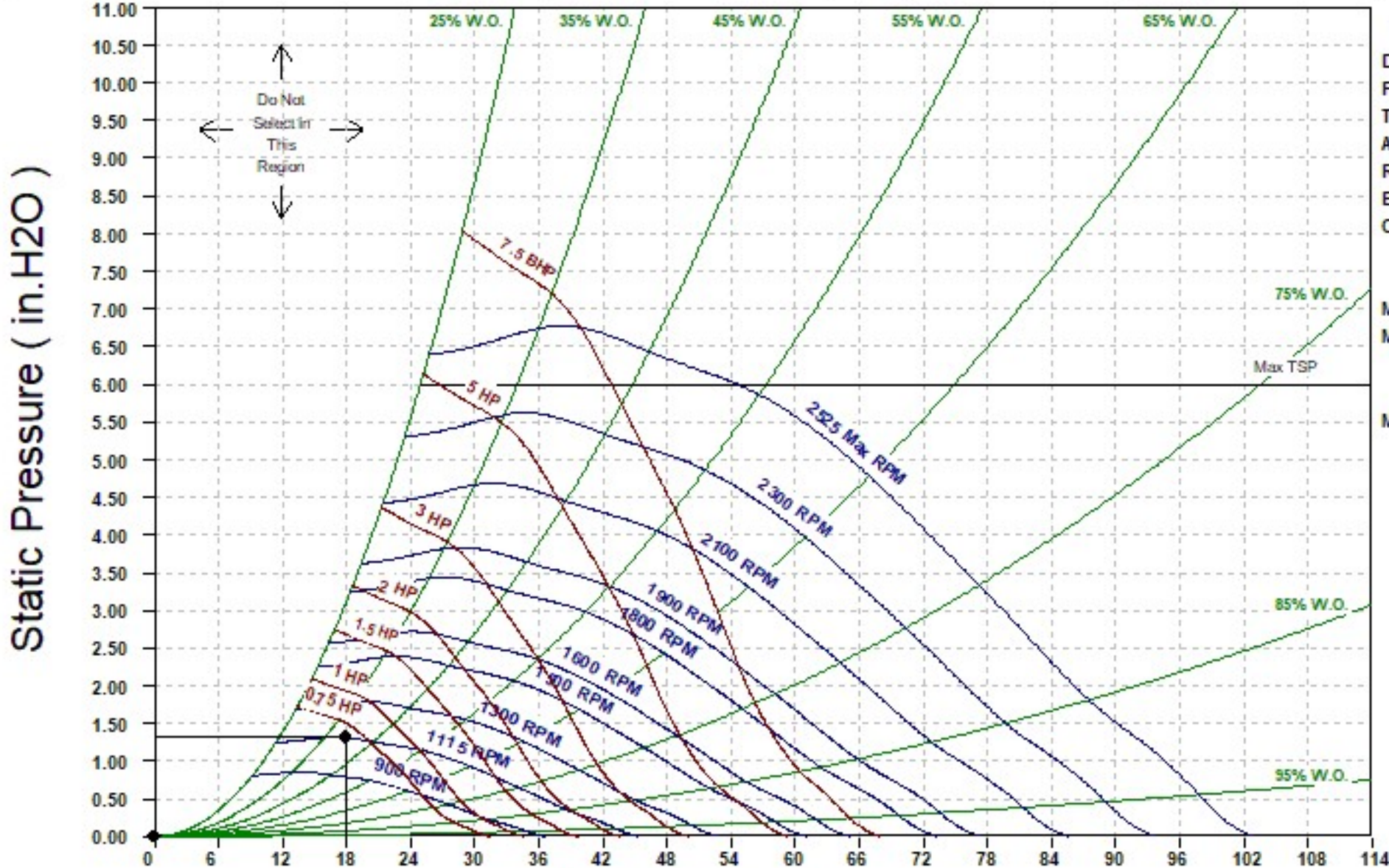
- TERMINAL POINT
- REMOTE DEVICE (BY OTHERS)
- OPTIONAL PANEL COMPONENTS
- FIELD WIRING
- WIRE PER TRANSFORMER LABEL PER VOLTAGE.
* USE MINIMUM 75°C COPPER WIRE ONLY

PRODUCT DRAWING YORK Solution XT Field Wiring MODEL: **NOT FOR CONSTRUCTION**	Project Name: Adams Fairacre Farms Location: Engineer: Contractor: For:	Sold To: Cust Purch Order#: Contract#: UNIT TAG: AHU-9 - Sheet 3	Date: 11/5/2021 13:19:38 Version: Form No.: 100.09-EG1 Dwg. Lev.: 12/03 Dwg. Scale: NTS	Serial Number: SQ Database Number: YORKworks Release: Dwg. Name: Dwg. Location:	Johnson Controls

Johnson Controls

Solution XT Fan Rating Curve

Project Name	Unit Tag	Qty	Model	Seg	Fan Type	Class	Size
Adams Fairacre Farms	AHU-9	1	XTI-33x39	FR	FC	II	10-10



Operating Point

Draw Type:	Blow-Thru
Flow (cfm):	1800
TSP (in.H2O):	1.31
Altitude (ft):	187
RPM:	1115
BHP:	0.66
O.V.:	1495

Fan Limits

Max RPM:	2525
Max TSP:	6

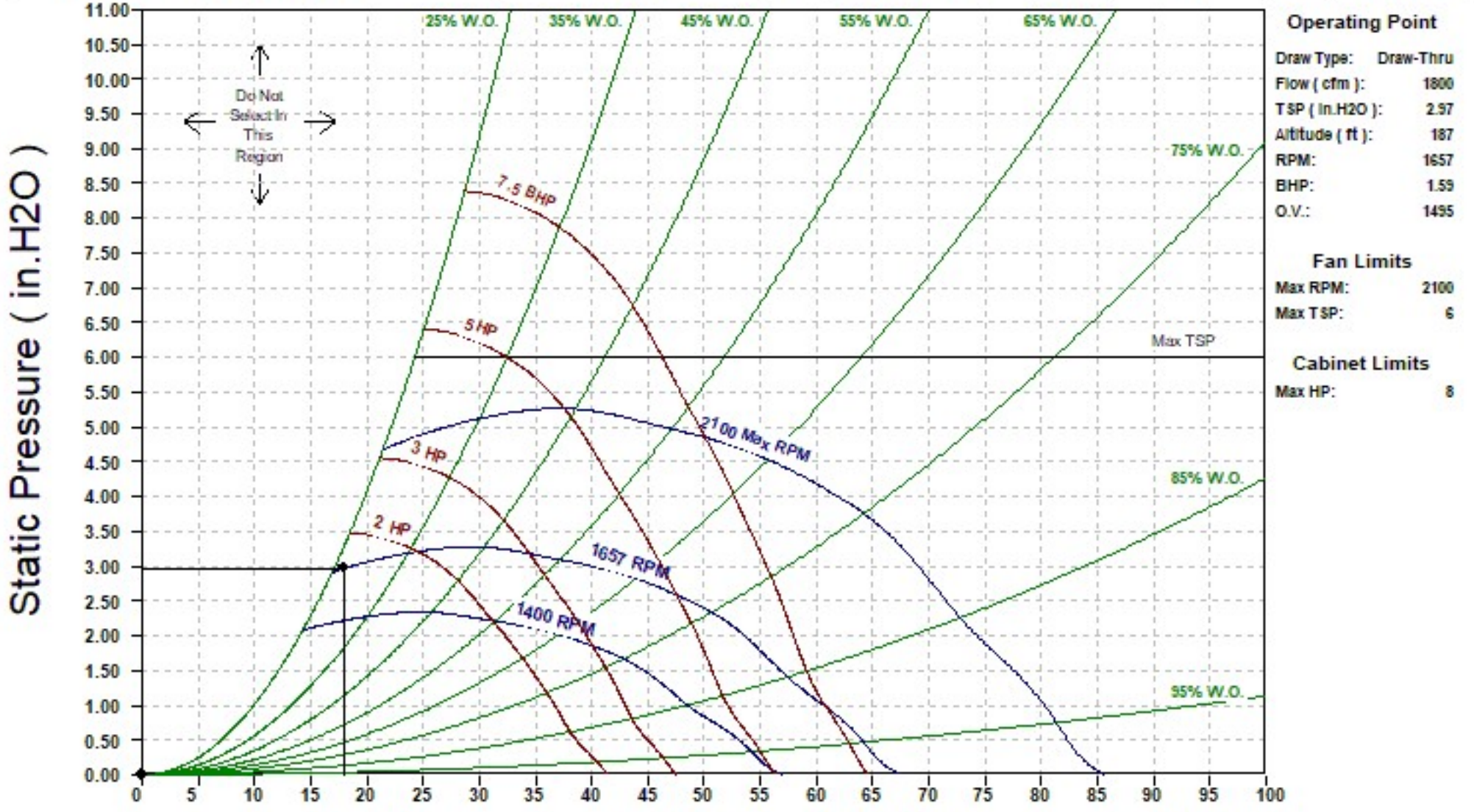
Cabinet Limits

Max HP:	8

Johnson Controls

Solution XT Fan Rating Curve

Project Name	Unit Tag	Qty	Model	Seg	Fan Type	Class	Size
Adams Fairacre Farms	AHU-9	1	XTI-33x39	FS	FC	S	10-10



Operating Point

Draw Type:	Draw-Thru
Flow (cfm):	1800
TSP (in.H2O):	2.97
Altitude (ft):	187
RPM:	1657
BHP:	1.59
O.V.:	1495

Fan Limits

Max RPM:	2100
Max TSP:	6

Cabinet Limits

Max HP:	8

YORK® Solution™ Air Handling Unit Performance Report

Job Summary

Project Name:	Adams Fairacre Farms		
Unit Tag(s):	AHU-9		
Quantity:	1	**Environment:**	Indoor

Unit Overview

Model	Airflow (CFM)	Altitude (ft)	Operating Weight (lbs)
XTI-33x39	1,800	187	2,478

Segment Sequence

(FS HC-2 XA-2 CC XA-1 HC-1 RF EE EE FR IP)

Unit Construction

Casing Details

Segment(s)	Thickness (in)	Exterior Paint	Exterior Gauge and Material	Interior Gauge and Material	Insulation Thickness and Material	Bulkhead Material
IP , FR , EE , RF , HC-1 , XA-1 , CC , XA-2 , HC-2 , FS	2	None	STD Ga. G-90 Galvanized	STD Ga. G-90 Galvanized	2" Foam	Galvanized

Base Details

Segment(s)	Base		Floor				
	Material	Paint	Gauge and Material	Paint	Insulation	Attachment	Tread Plate
IP , FR , EE , RF , HC-1 , XA-1 , CC , XA-2 , HC-2 , FS	None None	None	STD Ga. G-90 Galvanized	None	N/A	-	None

Unit Electrical

Circuit Details

Circuit #	Component(s)	V/Ph/Hz	Full Load Amps (FLA)	Minimum Current Ampacity (MCA)	Maximum Overcurrent Protection (MOP)
1	Supply Fan Motor Control, Lights and Outlets	460/3/60	7.0	8.7	10.0

Electrical Details

Minimum Unit SCCR	5 kA rms Symmetrical	**ETL Label (UL1995/NEC-2002)**	Yes
Unit Light Type		**Unit Light Switch**	
Standard LED		External	

Supply Fan(s)

Performance Details

Fan Manufacturer	Model	Class	Size	% Wheel Width	% Wheel Diameter	Quantity	Total Airflow (CFM)	Altitude (ft)	TSP (in w.g)	ESP (in w.g)	Fan Speed (RPM)	Fan Power (BHP)
Comefri	ATLI	S	10-10	100	100	1	1,800	187	2.97	0.75	1,657	1.59

Drive Type	Drive SF	Wheel Type	Blade Type	Wheel Material	Base Material	Fan Flow Isolation	Isolation Type	Total Eficiency (%)	Outlet Velocity (ft/s)	Max Speed (RPM)	Fan Power (BHP) w/ Drive Loss
Belt Drive - Fixed	1.5	DWDI	Forward Curved	Steel	Galvanized Steel	None	1" Spring	55.41	1,495	2,100	1.71

Motor Details

Type	Manufacturer	Motor Power (HP)	V/Ph/Hz	Quantity	Insulation Class	Motor Speed (RPM)	Frame Size	Full Load Amps (Amps)	Efficiency	Location
ODP	TECO	2.0	460/3/60	1	F	1,800	145	2.61	Premium	Left

At Motor Synchronous Details

TSP (in w.g.)	Total Air Flow (CMF)	Fan Speed (RPM)	Motor Correction Factor(%)	Fan Power (BHP)
0.00	1,800	1,657	86.5	1.59

Return Fan(s)

Performance Details

Fan Manufacturer	Model	Class	Size	% Wheel Width	% Wheel Diameter	Quantity	Total Airflow (CFM)	Altitude (ft)	TSP (in w.g)	ESP (in w.g)	Fan Speed (RPM)	Fan Power (BHP)
Comefri	ATLI	II	10-10	100	100	1	1,800	187	1.31	0.75	1,115	.7

Max RPM	Fan Power with Drive Loss (HP)	Wheel Type	Blade Type	Wheel Material	Base Material	Fan Flow Isolation	AirFlow Monitoring	Inverter Drive Balancing	Isolation Type	Thrust Restraints
2,525	0.73	DWDI	Forward Curved	Steel	Galvanized Steel	None	-	-	1" Spring	-

Drive Type	Drive SF	Spare Belts	Spare Sheave	Inlet Screen	Fan Cage	Belt Guard	Lube Lines	Bearings	Fan Stand	Motor Removal Rail	Seismic Snubber
Belt Drive - Fixed	1.5	-	-	-	-	-	Extended Lube Lines	-	-	-	-

Motor Details

Type/MFG	Motor Power (HP)	V/Ph/Hz	Quantity	Insulation Class	RPM	Frame Size	FLA (Amps)	Efficiency	Location	SGR
ODP/Baldor	1.0	460/3/60	1	F	1,800	143	1.50	Premium	Left	-

Glycol Coil(s)

Performance[1] Details

Coil	Glycol Type	Glycol %	Rows	Fin Spacing (FPI)	TPC	TMBH	SMBH	EAT (°F)		LAT (°F)		Airflow (CFM)	FV (ft/min)	APD	Flow (GPM)	EWT (°F)	LWT (°F)	Fluid Vel. (ft/s)	WPD	Alt. (ft)
								DB	WB	DB	WB									
HC-1	Propylene	30%	2	9	6	109	109	56.3	-	111.2	-	1,800	429	0.09	11.4	180.0	160.0	3.3	2.9	187
CC	Propylene	30%	10	14	12	48	40	76.1	64.6	55.8	55.7	1,800	429	0.99	10.1	45.0	55.0	1.2	1.7	187
HC-2	Propylene	30%	1	9	4	40	40	55.8	-	77.0	-	1,800	429	0.04	3.9	160.0	140.0	1.7	.5	187

Construction Details

Coil	Location		Offset (in)	Connection Material[3]	Connection Rotation (degrees)	Connection Type	Supply Connection (Per Coil)		Coil Stack Rack
	Coil Index[2]	Connection					Qty	Size	
HC-1	0	Left	0	Steel	0	MPT	1	1-1/2	-
CC	0	Left	0	Steel	0	MPT	1	1-1/2	-
HC-2	0	Left	0	Steel	0	MPT	1	1-1/2	-

Coil	# of Coils High	Face Type	Total Fin Height (in)	Fin Length (in)	Coil Face Area (ft²)	Fin Material	Fin Thickness (in)	Fin Type	Tube Diameter (in)	Tube Material	Tube Wall Thickness (in)

Coil	# of Coils High	Face Type	Total Fin Height (in)	Fin Length (in)	Coil Face Area (ft²)	Fin Material	Fin Thickness (in)	Fin Type	Tube Diameter (in)	Tube Material	Tube Wall Thickness (in)
HC-1	1	Full	22.50	27	4.2	AL	.006	Corrugated	1/2	Copper	.016
CC	1	Full	22.50	27	4.2	AL	.008	Corrugated	1/2	Copper	.016
HC-2	1	Full	22.50	27	4.2	AL	.006	Corrugated	1/2	Copper	.016

Coil	Coil Coating	Dry Weight (lbs)	Fluid Weight (lbs)	Fluid Volume (ft³)	Header Material	Casing Material	Intermediate Drain Pan Material	Fouling Factor (hr.ft².°F/BTU)
HC-1	-	41	11	0.2	Copper	Galvanized	-	-
CC	-	158	42	0.6	Copper	Galvanized	304 Stainless Steel	-
HC-2	-	33	7	0.1	Copper	Galvanized	-	-

Coil Notes

- [1]Performance is shown for the entire coil bank. Performance is not per coil.
- [2]Coil index indicates position in segment. Example: CC-1, index 0; Spacer, index 1; CC-2, index 2
- [3]Johnson Controls suggests using red brass or copper connectors when the coil is to be attached to a copper or brass piping system.
- All coils are rated with a fouling factor of 0.00000 hr.ft².°F/BTU unless otherwise noted
- Ratings are for coils manufactured by Johnson Controls, Inc., 507 E. Michigan St., Milwaukee WI 53202.
- Coil DLL Version: 7.7L
- BDW Tube Spacing: 1.25 x 1.08
- HC-1[1][0]: This coil is certified in accordance with the AHRI Forced-Circulation Air-Cooling and Air-Heating Coils Certification Program which is based on AHRI Standard 410 within the range of Standard rating conditions listed in Table 1 of the Standard. Certified units may be found in the AHRI Directory at www.ahridirectory.org.
- [1]Performance is shown for the entire coil bank. Performance is not per coil.
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- All coils are rated with a fouling factor of 0.00000 hr.ft².°F/BTU unless otherwise noted
- Ratings are for coils manufactured by Johnson Controls, Inc., 507 E. Michigan St., Milwaukee WI 53202.
- Coil DLL Version: 7.7L
- BDW Tube Spacing: 1.25 x 1.08
- HC-2[1][0]: This coil is certified in accordance with the AHRI Forced-Circulation Air-Cooling and Air-Heating Coils Certification Program which is based on AHRI Standard 410 within the range of Standard rating conditions listed in Table 1 of the Standard. Certified units may be found in the AHRI Directory at www.ahridirectory.org.

Drain(s)

Details

Segment	Drain Pan		
	Liner Material	Connection Location	Liner Coating
CC	Stainless Steel	Left	None

Filter(s)

Details							
Segment	Type	Depth	Filter Loading	Media/MERV	# of Spares	Spare Filter Media	Frame Material
RF	Pre-Filter	2"	Side	Pleated 30% (MERV 8)	0	Pleated 30% (MERV 8)	Aluminum
RF	Primary Filter	4" Mini-Pleat	Side	90-95% Eff, (MERV 14)	0	90-95% Eff, (MERV 14)	Aluminum

Sizes				Filter Gauge Details		
Segment	Filter	1st Filter Size H x W (in)	1st Qty	Location	Type	Range (in w.g)
RF	Pre-Filter	24x24	1	-	-	-
RF	Primary Filter	24x24	1	-	-	-

Damper(s)

Details													
Segment	Air Path	H x W (in)	Qty	Total Face Velocity (ft/min)	Face Area	CFM	Minimum Allowable OA CFM	Damper Type	Damper Config	Model	Material	Blade Orientation	Actuator Type	Fail Position
EE	Exhaust Air	9.50 x 25.00		1,091		1,800	-	Control	100%	CD60	Galvanized	Parallel	-	-
EE	Outside Air	9.50 x 25.00		1,091		1,800		Control	100%	CD60	Galvanized	Parallel	-	-
EE	Mixed Air	9.50 x 25.00		1,091		1,800	-	Control	100%	CD60	Galvanized	Parallel	-	-

Door(s)

Details										
Segment(s)	Location	Swing	Hinge Location	H x W x T (in)	View Port	Test Port	Spare Gasket	Thermal Break	Safety Latch	Noncontact Safety Interlock
IP, FR, FS	Left	Outward	Upstream Side	27 x 18 x 2	None	-	-	-	-	-
EE	Left	Outward	Upstream Side	27 x 15 x 2	None	-	-	-	Yes	-
EE	Left	Outward	Upstream Side	27 x 12 x 2	None	-	-	-	-	-
RF	Left	Outward	Upstream Side	27 x 10 x 2	None	-	-	-	-	-

Motor Control(s)

Details										
Segment	Type	MMP	V/Ph/Hz	Input/Output Amps*	Efficiency	Heat Loss (at 100% load)	Enclosure	Bypass	Disconnect Type	RFI/EMI EMC Filter
FS	ABB VFD ABB AYK580	-	460/3/60	3.0/3.0	87 %	55	NEMA 1	-	Fused	Yes

Details										
Segment	Type	MMP	V/Ph/Hz	Input/Output Amps*	Efficiency	Heat Loss (at 100% load)	Enclosure	Bypass	Disconnect Type	RFI/EMI EMC Filter

Notes
*Drives are rated for use below 3,000 ft and 104°F. Use Derating Charts in Air-Mod Engineering Guide Form 100.42-EGI (212) for use above these limits.
Storage Temperature: -40°F to 158°F
Humidity: MAX 95% RH non-condensing
Altitude: 3,300 ft. without derate (1% derate for each additional 330 ft.)
Overload Current Rating: 100% for 1 minute every 10 minutes.
The Class 10 trip rating of the MMP device will not withstand an across-the-line start of a fan and should not be used with VFDs with bypass circuits.
The customer must provide a platform or catwalk for accessing the power-disconnect.
Copper Conductors Only.
FS: Contains the following option: Swinging DC Line Choke (Equivalent to 5% Input Line Reactor)

Face Velocity and Static Pressure

Summary						
Segment	Description	Face Area (sq. ft)	Airflow (CFM)	Face Velocity (ft/min)	Supply Fan Static Pressure (in w.g.)	Exhaust/Return Fan Static Pressure (in w.g.)
IP	Opening	1.5	1,800	1,234.00	0.00	0.26
FR	External Static - User Entered	0.0	1,800	0.00	0.00	0.75
EE	Opening	1.6	1,800	1,091.00	0.00	0.20
EE	Control Galvanized (CD60)	0.0	1,800	0.00	0.00	0.10
EE	Opening	1.6	1,800	1,091.00	0.20	0.00
EE	Control Galvanized (CD60)	0.0	1,800	0.00	0.10	0.00
RF	2" Pleated 30% (MERV 8)	4.0	1,800	450.00	0.23	0.00
RF	Dirty Filter Allowance - Prefilter	0.0	1,800	0.00	0.00	0.00
RF	4" Mini-Pleat 90-95% Eff, (MERV 14)	4.0	1,800	450.00	0.57	0.00
HC-1	Heating 2 rows 9 fins	4.2	1,800	429.00	0.09	0.00
CC	Cooling 10 rows 14 fins	4.2	1,800	429.00	0.99	0.00
HC-2	Heating 1 rows 9 fins	4.2	1,800	429.00	0.04	0.00
FS	External Static - User Entered	0.0	1,800	0.00	0.75	0.00
				Total	**2.97**	**1.31**

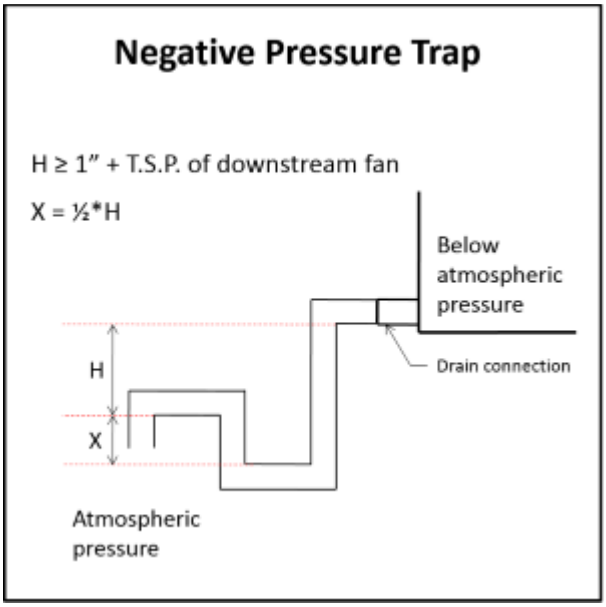
Dimensions and Weight

Details					
Segment	Description	Length[1] (in)	Width[2] (in)	Height (in)	Weight (lbs)
IP	Inlet Plenum	24	39	33	190
FR	Return Fan	41	39	33	403
EE	Economizer	39	39	33	231
RF	High Efficiency Filter	10	39	33	98
HC-1	Heating Coil	10	39	33	190
XA-1	Variable Length Access	12	39	33	67
CC	Variable Length Cooling Coil	25	39	33	534
XA-2	Variable Length Access	12	39	33	67
HC-2	Heating Coil	10	39	33	181
FS	Supply Fan	46	39	33	517
Overall[3]		**229**			**2,478**

Notes
[1]The length includes bottom tier segments only
[2]The width does not include coil connection extensions or door latches that extend beyond the unit casing. The width does not include the depth of any pipe chases.
[3]Unit level and other loose components may be excluded from segment weights and overall segment weights. For total unit weight reference Unit Overview.

Recommended Trap Height

Details									
Segment	Applicable Fan	Fan TSP (in w.g.)	Positive or Negative	Calculated Dimensions (in)			Recommended Dimensions (in)		Base Rail Height (in)
				H	X	H + X	H	H + X	
CC	Supply Fan	2.97	Negative	3.97	1.99	5.96	4.00	6.00	None



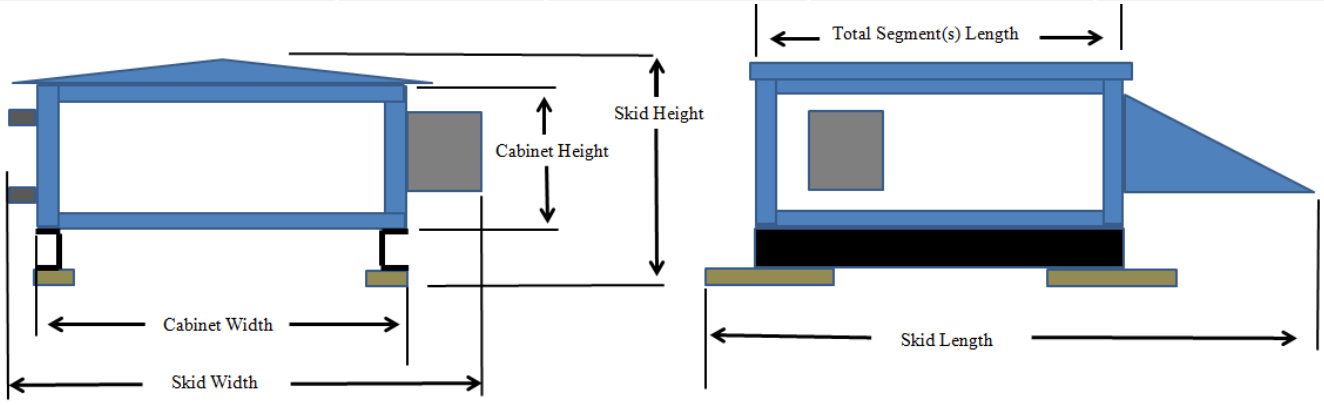
Notes
Formulas and calculations are recommendations only. Contractor shall determine actual dimensions required for each trap based on jobsite conditions, and application requirements.
Refer to the Installation Manual of the IOM for more information.

Statement of Compliance

Details
YORK® Solution XT AHU's meet IBC seismic requirements for non-critical equipment (Ip = 1.0) for locations with design spectral response Sds <= 0.43. Units must be rigid mounted.
The anchorage of the unit to the ground or building structure needs to be evaluated by and is the responsibility of the engineer of record. Specification of seismic requirements is the responsibility of the project design engineer. If formal certification is required, please contact your sales representative and/or application engineer for review. Certain application and site requirements may require additional cost and/or lead time.
Component locations are listed as Segment Hand (Unit Hand): ex. Left (Right). See SubmittalDrawing for additional details
Air handling unit parameters vary depending on conditions. Parameters such as airflows, air pressure drops, and coil capacities are shown for design conditions.

Shipping Summary

Details				
Skid	**Skid Length (in)**	**Skid Height (in)**	**Skid Width (in)**	**Skid Weight (lbs)**
(FS HC-2 XA-2 CC XA-1 HC-1 RF EE EE FR IP)	230	37	55	2,479



Notes
Skid Width: Total width of the shipping skid, including any items that may extend beyond the cabinet (this includes any door handles, coil connections, drain connections, lifting lugs, mounted pipe-chases, electrical/control components, tie-down brackets, side dampers).
Skid Height: Total height of the shipping skid, including any items that may extend beyond the cabinet (this includes any base-rails, shipping wood-blocks, roof peak, discharge flanges, mounted gas-furnace flue pipes).
Skid Length: Total length of the shipping skid, including any items that may extend beyond the cabinet (this includes any mounted rain-hoods, discharge flanges,tie-down brackets, shipping wood-blocks, front dampers, split connectors, electrical/control components, outrigging extensions, isolation dampers, inlet baskets).

Installation Information

60 EAST 42ND STREET
NEW YORK, NY 10165
PHONE: (646) 658-6700
FAX: (212) 370-0305

1.0 PRE-INSTALLATION

RECEIVING

All units leaving the plant have been inspected to ensure the shipment of quality products. All reasonable means are utilized to properly package the air handling units.

NOTICE TO CUSTOMER/CONTRACTOR PROTECT YOUR WARRANTY PRIOR TO STARTUP.

- Read and follow the Installation, Operation & Maintenance Manual provided with this equipment.
- Storage of this equipment MUST be on a flat surface and protected from the weather.
- Protect this equipment from damage, construction dirt, debris and water.

  DO NOT OPERATE DOORS WHEN UNIT IS NOT ON A FLAT SURFACE.
- Isolate this equipment from pressure testing of water, steam, gas and air piping.
- Do not test, clean and flush piping through coils in this equipment.
- Isolate this equipment from temporary building power.
- Contact local York International Service for purchase of Startup Service with two weeks advance notice. Provide current job site contact.
- To perform a careful and thorough startup verify the following:
  - Reliable power will be available for startup.
  - Duct work is complete.
  - Controls are complete.
  - Shipping splits completely re-assembled, sealed and wired.
  - Filters are installed and secured.
  - All shipping materials have been removed.

    RED METAL TAB USED TO SECURE DOOR IS A SAFETY DEVICE. <u>DO NOT DISCARD IT.</u>
  - Start up will be performed according to that outlined in Section 3 of the Installation, Operation & Maintenance Manual provided.
- Temporary use of Air Handler requires startup performed according to that outlined in Section 3 of the Installation, Operation & Maintenance Manual provided.
- A qualified startup technician must complete the "AIR HANDLING UNITS START-UP CHECK LIST" form 100.00-CL1 (303) and file a copy at the local York Service Office. This form is provided in the information package with each air handler.

YORK will not be responsible for any damage or loss of parts in shipments or at the job site. Refer to Shipping Damage Claims Form 51.15-NM

RIGGING OF INDOOR AND OUTDOOR UNITS

All lifting points must be used to avoid personal injury or death and to avoid damage to the equipment.

It is the responsibility of the receiver to handle and rig this equipment without causing damage.

Do not damage factory installed pipe chase, electrical cabinet, hoods, pipe stubs, door handles or roof overhang.

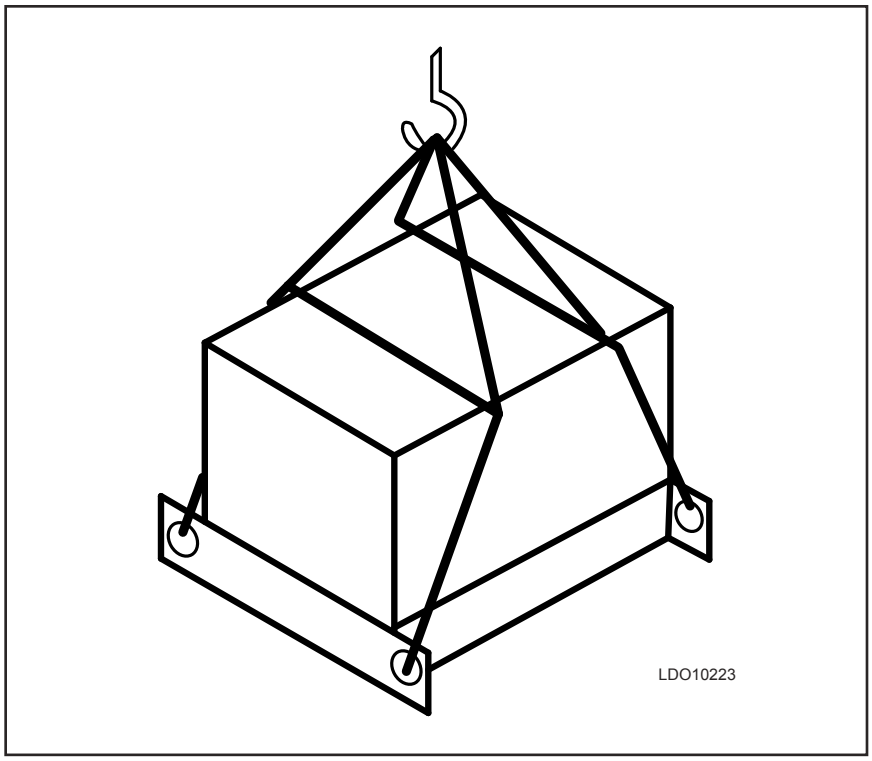


FIG. 1-1 – FOUR POINT HOOK-UP

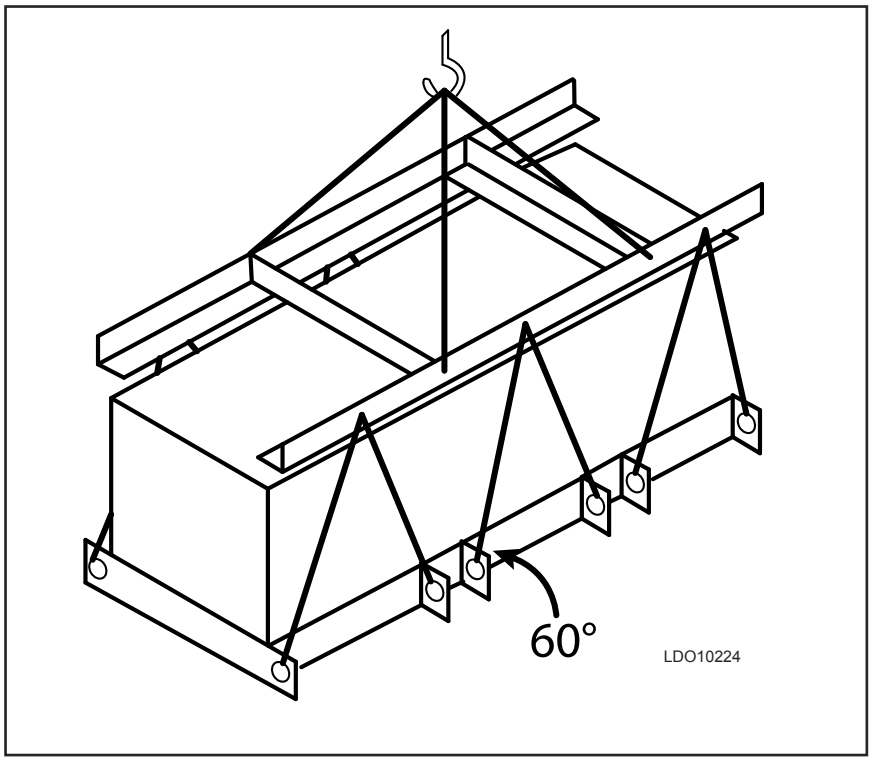


FIG. 1-2 – MULTI POINT HOOK-UP

Proper spreader bars and hoisting straps must be used when rigging to prevent damage to the unit casing (see Figures 1-1 & 1-2). When lifting long units a special system must be used to insure a minimum 60° angle between lifting lug and spreader bar/frame.It is also mandatory that an experienced and reliable rigger be selected to handle unloading and final placement of the equipment. The rigger must be advised that the unit contains internal components and that it be handled in an upright position. Care must be exercised to avoid twisting the equipment structure.

NOTE

Refer to the submittal drawing supplied with the unit for the section weights.

Unit section weights are furnished on the job submittal drawing provided with each unit. Due to the variance in weight of each unit design, it is not possible to list unit weights in this instruction. These drawings must be referred to when selecting a crane for rigging and figuring roof weight loads. Contact your YORK Sales Office if you have any questions regarding unit weights.

CRANE AND SPREADER BARS

See Figures 1-1 and 1-2.

FORK LIFT

When moving air handling equipment with a fork lift or similar means, always make sure the lifting forks are long enough to reach from the fork truck to the opposite side and slightly beyond. It is helpful to leave the shipping blocks attached to the bottom of the equipment until in its final location. There is no structural support under the equipment except what is visible from the perimeter.

COME-A-LONGS OR POWER PULL

See Figure1-3

LDO9613

FIG. 1-3 – TYPICAL COME-A-LONG TYPES

SHACKLES

Refer to Fig 1-4 for proper lifting with hook and shackle at corners. Refer to Fig 1-5 for proper lifting with hook and shackle at lifting lugs.

LDO9614

FIG. 1-4 – PROPER LIFTING WITH SHACKLE AND HOOK AT CORNER

LDO9615

FIG. 1-5 – PROPER LIFTING WITH SHACKLE AND HOOK AT LIFTING LUG

INSPECTION

Verify equipment is received as ordered.

CHECK FOR DAMAGE

Indoor Units

"It is York's intention that shrink wrap is applied to unpainted Indoor Units for protection from weather, road dirt, etc. during inland transit and that shrink wrap is removed at the time of delivery to allow for a thorough inspection, both inside and out. Visible damage should be noted on the signed and dated bill of lading with a request that the carrier inspect the damage within 72 HRS. of notification. If shrink wrap is kept intact for storage purposes, be advised that concealed damage must be reported within 15 days of delivery with a request that the carrier inspect the damage within 72 HRS. of notification. Any concealed damaged reported after 15 days will compromise a claim settlement. Inspection requests may be done by telephone or in person, but should be confirmed in writing. If assistance is needed with the claim process, contact your York Sales person."

Outdoor Units

"Outdoor Units are not fully wrapped. Exposed openings are covered for protection from weather, road dirt, etc. during inland transit. A thorough inspection, both inside and out, should be done at the time of delivery. Visible damage should be noted on the signed and dated bill of lading with a request that the carrier inspect the damage within 72 HRS. of notification. Concealed damage must be reported within 15 days of delivery with a request that the carrier inspect the damage within 72 HRS. of notification. Any concealed damaged reported after 15 days will compromise a claim settlement. Inspection requests may be done by telephone or in person, but should be confirmed in writing. If assistance is needed with the claim process, contact your York Sales person."

CHECKING FOR NON MOUNTED PARTS

- Check the packing list for non-mounted parts. (Check inside all segments.)
- Packing list will note how many and type of parts.
- Shortages must be reported within 10 days after receipt of order.

STORAGE

SHORT-TERM STORAGE

Indoor Units:

Under no circumstances should outdoor storage be used

Outdoor Units:

Be sure all shipping covers remain in tact during outdoor storage.

Short-term storage is considered six (6) months or less from date of shipment. Storage maintenance during this time is usually limited to the following.

- If the units are to be stored out-of-doors, prior to installation, special care must be taken to cover and protect the units from dust, rain, snow and rodents. The units must be protected from constant exposure to rain and snow.
- Store on a firm, flat surface to prevent distortion. Block the unit off the ground to protect components from water.

Protect all parts and porous materials from rain and other sources of moisture. Decontaminate or replace as needed to ensure microbial growth is not introduced to the air handler.

- The unit must also be protected from damage to the exterior of the cabinet or coil connections by construction vehicles and personnel.

LONG-TERM STORAGE

Long-term storage is considered any period beyond six (6) months from date of shipment. If long-term storage is anticipated, **contact the YORK Sales Office for the proper instructions and requirements for long-term storage.** It is mandatory that a detailed record be maintained during this long-term period, such as, but not limited to: proper sealing of the cabinet, rotation of the blowers and bearings, and protection of all motors from moisture. *Refer to Form 50.20-NM3.*

Preventive Maintenance Prior To Long Term Storage

The following precautions should be taken prior to extended storage:

- Fan and motor bearings are to be greased per the manufacturer's specifications.
- On belt driven fans the belt tension should be reduced to less than half the specified value for the fans design to prevent a sag/set from forming in the shafts and belts.
- The fan motor windings should be meggered at this time and recorded for comparison prior to placing in service.
- If the fan housing was supplied with a drain connection, this plug should be removed to prevent moisture from accumulating in this portion of the fan during storage.

Periodic Fan Check

On a monthly basis, the fan and motor should be rotated several times. Perpendicularly add enough grease to replenish the bearing surfaces with fresh grease (refer to fan and motor lubrication procedures, in Section 4 Maintenance).

The fan impeller should be left at approximately 180 degrees from that of the previous month to prevent the belts from taking a set position.

It will be the responsibility of the customer to submit a monthly log sheet (MS577) showing the condition of the unit and noting any discrepancies. A copy of the log sheet should be sent to the A.S. District Office, attn.: Sales Person.

Failure to perform the long-term storage requirements will void the warranty.

2.0 INSTALLATION

WARNING

Do not weld or use torches on the exterior or interior of the unit housing. The housing contains polyurethane insulation, which when under combustion will produce harmful, toxic gases resulting in personal injury or death.

NOTE

This instruction is written to provide general information. The product line allows many variations and the installer is fully responsible for adjusting his actions as needed.

CAUTION

Surface must be level on all installations.

CAUTION

If your unit has HEPA filters the filter frames, filter bulkheads and filter segment panels are factory sealed and must remain sealed for NO air bypass.

SITE PREPARATION

OUTDOOR UNITS (SITE PREP)

Location of unit(s) should be away from building flue stacks or exhaust ventilators to prevent possible introduction of contaminated air through the outside air intakes *(see Figure 2-1 for service clearances).*

CAUTION

Allow sufficient space around the unit for removing the access panels and various parts of the unit. A minimum clearance equal to the width of the unit must be provided on one side of the unit for removing the coil or fan assembly.

2

Mounting

Units must be installed in such a manor as to provide enough elvation for properly designed condensate traps *(see Section 2 "Drain - Condensate Drain Trap").*

CAUTION

• Outdoor Units must be level when mounted on a roof.

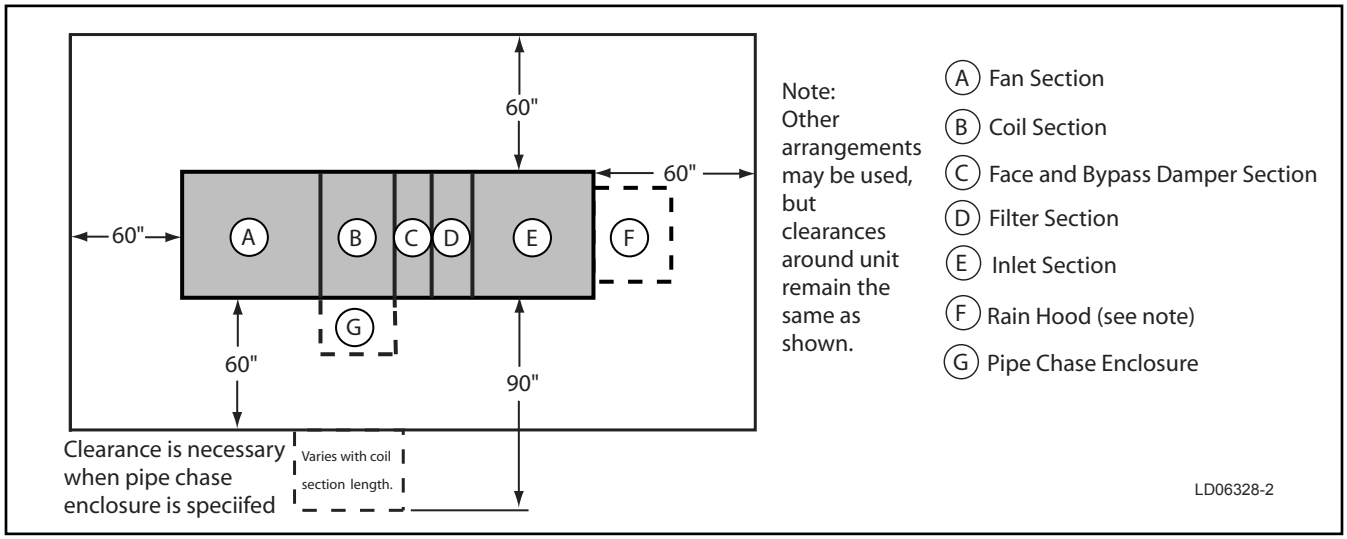


FIG. 2-1 – SERVICE CLEARANCE

CAUTION

• Installation Site: Area of roof on which curb is to be installed must be structurally adequate to support the combined weight of curb, unit and system fluids. With these combined weights in place, the curb's resting surface for the unit must be flat and level.

NOTE

Concrete pads often are not as flat as they should be. Shimming and/or grouting may be necessary. Whether under the unit base or under the curb, this is to ensure the unit base is on a perfectly flat plane.

Curb

The curb, which supports the unit, will be shipped unassembled. It will be necessary to assemble the curb parts on the job site. Each part of the curb is identified. Assembly instructions and a hardware package are shipped with each curb package. It is important the curb be installed square. If applicable, ensure pitch orientation is correct.

When installing a curb, *refer to the assembly instructions and curb parts list*, as each unit and actual curb installation may not be identical. Do not use this typical information to install your curb.

NOTE

Should there be any questions as to the number of pieces of curb parts or assembling of the curb, notify YORK immediately.

Wood or Fiber Cant Strips, Roofing Felts, Roofing Material, Caulking and Curb-To-Roof Fasteners Are To Be Field Supplied.

Be sure the supporting structures will not obstruct the duct, piping or wiring connections.

Curb Assembly & Installation Instructions

See Figure 2-2

1. Unpack shipping package, layout pieces and parts according to the exploded views and check against Bill of Materials.
2. Layout all curb walls as shown. Make certain that all curb wall tabs are located on inside of mating surface.

NOTE

Make certain that all curb walls accessories and flanges, which may have been distorted in handling are straightened before assembly.

3. Attach curb walls together to form rectangular perimeter as shown, leaving bolts loose.

CAUTION

After the curb is set in place, ensure proper consideration has been given to the air duct openings through the roof. Refer to section on Air Ducts.
Ensure the pipe chase portion is correctly located.

4. The curb installation drawing (*see Figure 2-2*) shows a gasket that is mounted between the curb and the unit. This gasket is shipped with the curb parts. Install the curb gasket before setting the unit on the curb. The gasket forms an air seal between the unit and the curb and serves as a dampener, preventing metal-to-metal contact between the unit and curb. However, the gasket should not be used as a vibration isolator where the prevention of noise and vibration transmission into the building is critical.
5. After verifying curb is square and level, tighten all bolts and then anchor as appropriate.

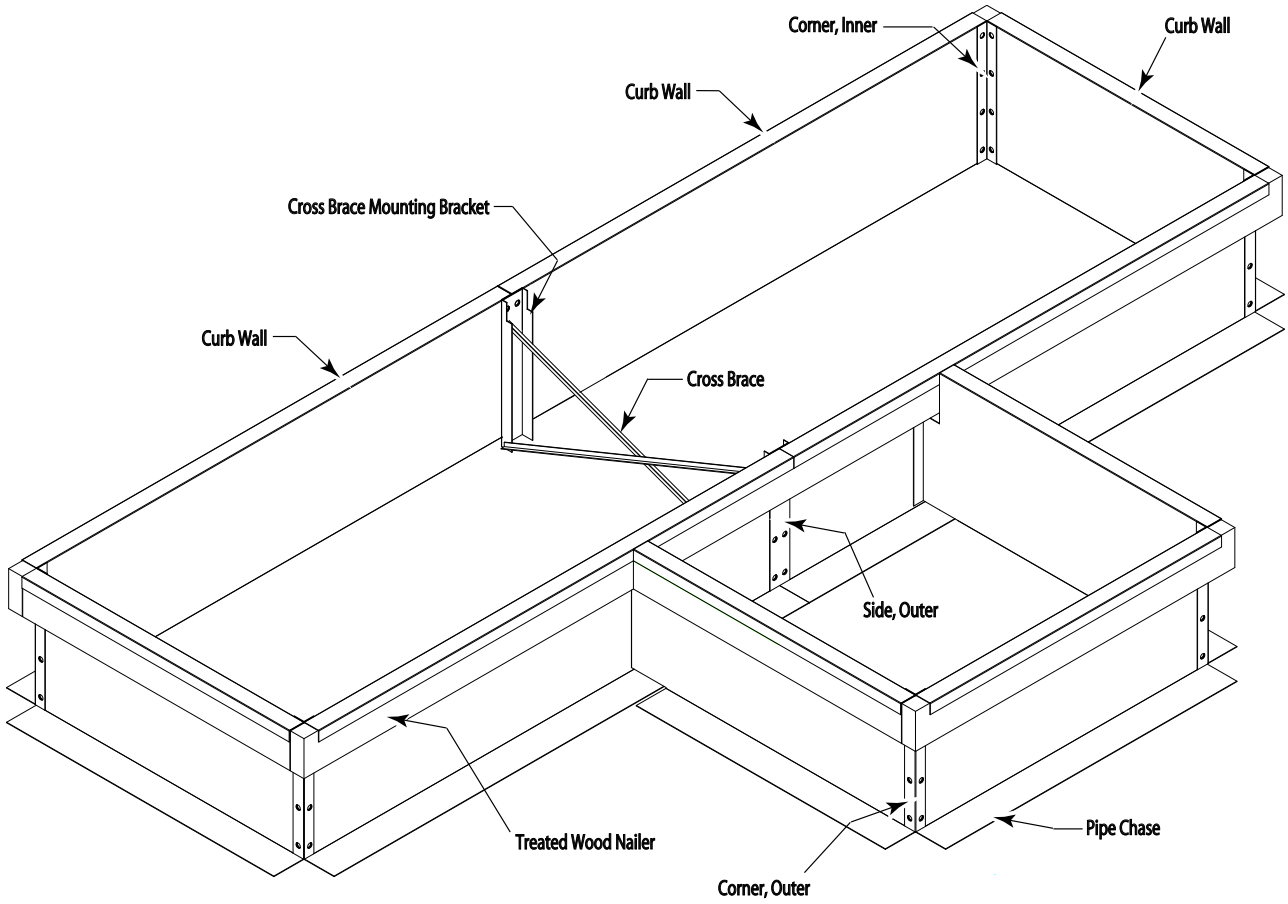
NOTE

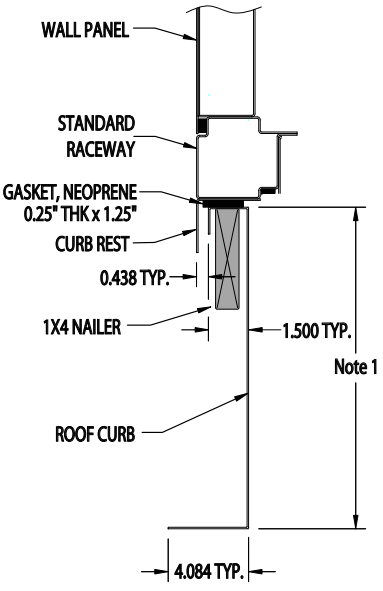
If bolts are tightened after anchoring, curb will be pulled, twisted and torqued out of square.

6. The curb should be insulated and roofed as required.

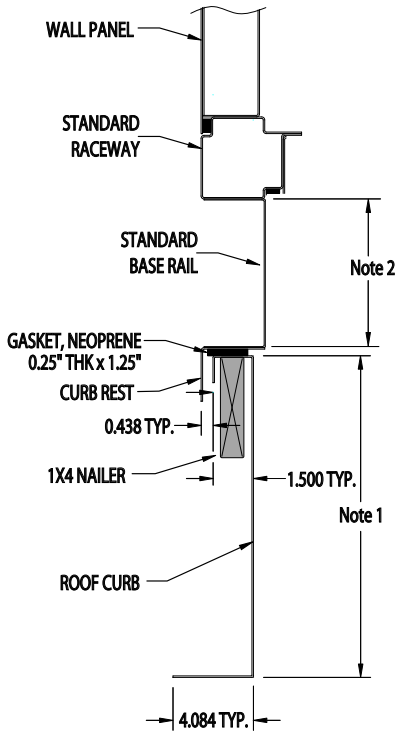
Steel Frame

When a steel frame is used to support unit it must be level, flat without uneven steel frame joints, and support the unit around the full perimeter. As a general rule, cross members should be placed every 96 in.





Typical Curb Section



Typical Curb Section With Base Rail

Caution:

Seal all joints and seams with suitable sealer such as Sikaflex - 221 (York P/N 013-02966-000) or Manus Bond 75-AM 100ZTU (York P/N 013-02966-001)

Notes:
1. Curbs available in 14", 18", 22", 26", 30" & 34" heights
2. Outdoor Base Rails are available in 6", 8" & 10" heights.

LDO9616B

FIG. 2-2 – TYPICAL CURB ASSEMBLY

INDOOR UNITS (SITE PREP)

NOTE

Concrete pads often are not as flat as they should be. Shimming and/or grouting may be necessary. Whether under the unit base or under the curb, this is to ensure the unit base is on a perfectly flat plane.

Clearance

CAUTION

Allow sufficient space around the unit for removing the access panels and various parts of the unit. A minimum clearance equal to the width of the unit must be provided on one side of the unit for removing the coil or fan assembly.

Mounting

See Section 2 "Piping Connections - "Condensate Drain Trap."

Floor

The floor must be flat and level.

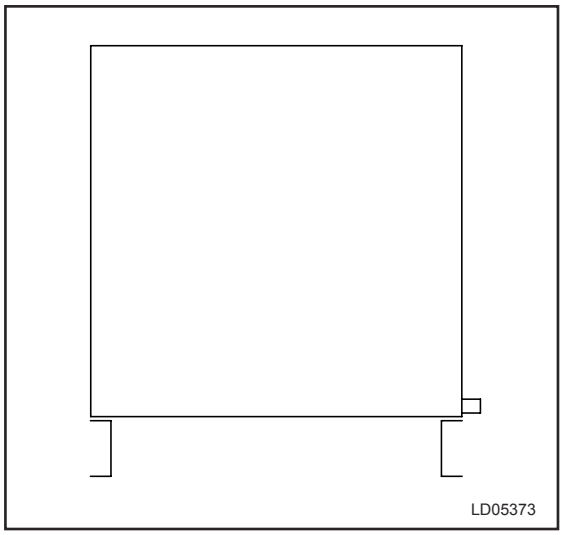


FIG. 2-4 – NO HOUSEKEEPING PAD – EXTENDED BASE RAIL REQUIRED TO ACCOMMODATE TRAP HEIGHT

Housekeeping Pad

The housekeeping pad must be flat and level (*see Figures 2-3, 2-4 & 2-5*).

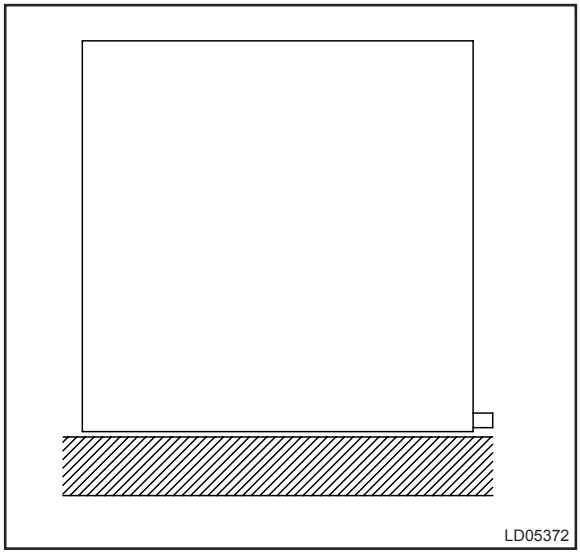


FIG. 2-3 – NO EXTENDED BASE RAIL – HOUSEKEEPING PAD REQUIRED TO ACCOMMODATE TRAP HEIGHT

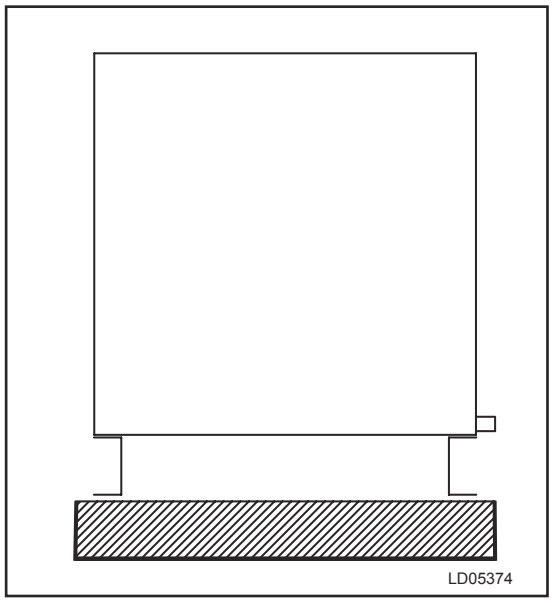


FIG. 2-5 – WITH EXTENDED BASE RAIL AND HOUSEKEEPING PAD

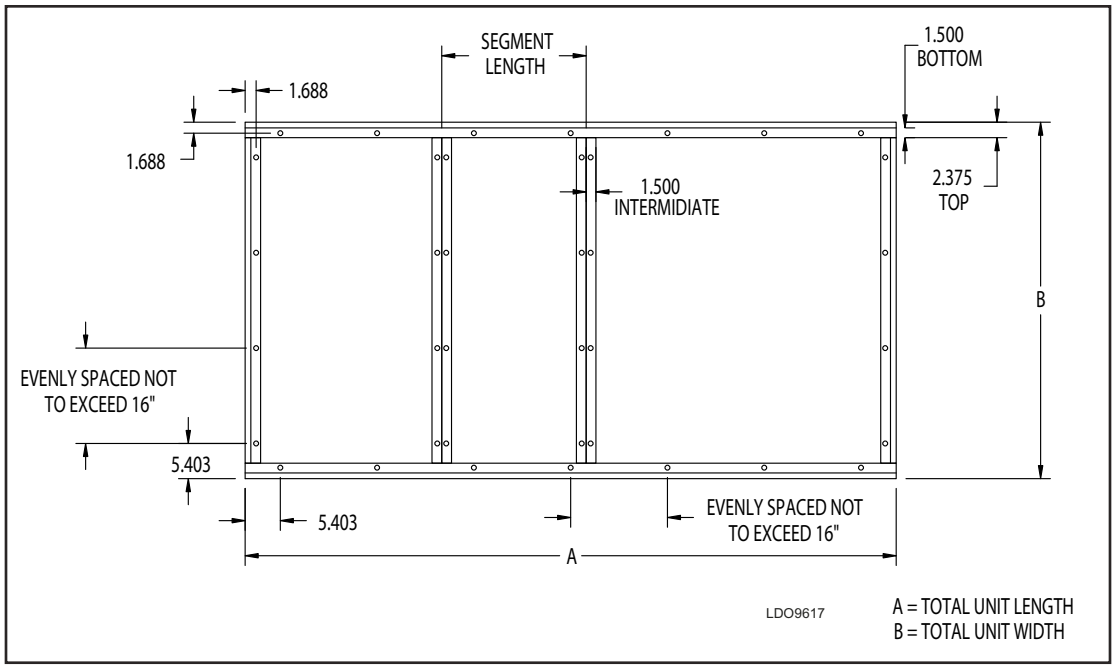


FIG. 2-6 – CEILING SUSPENDED UNIT

Ceiling Suspended Units

CAUTION

It is recommended that support is structurally engineered to prevent flexing, sagging or twisting of air handlers.

Refer to figure 2-6 "Ceiling Suspended Unit" for proper support of unit in the direction of airflow and/or perpendicular to the direction of airflow.

NOTE

Do not obstruct door operation, filter access, piping, electrical or control connections with suspension members.

General Requirements

York recommends that ceiling suspension of units be accomplished in the field with the following:

Structure Positioned Perpendicular To Airflow

The units must be supported (at a minimum) in the following locations:

- Both ends
- At each shipping split
- Upstream and downstream of each cooling coil segment.
- Under heavy components like fans, attenuators, & heating segment.

Structure Positioned In The Direction Of Airflow

The unit base must be supported continuously, on both sides of the unit.

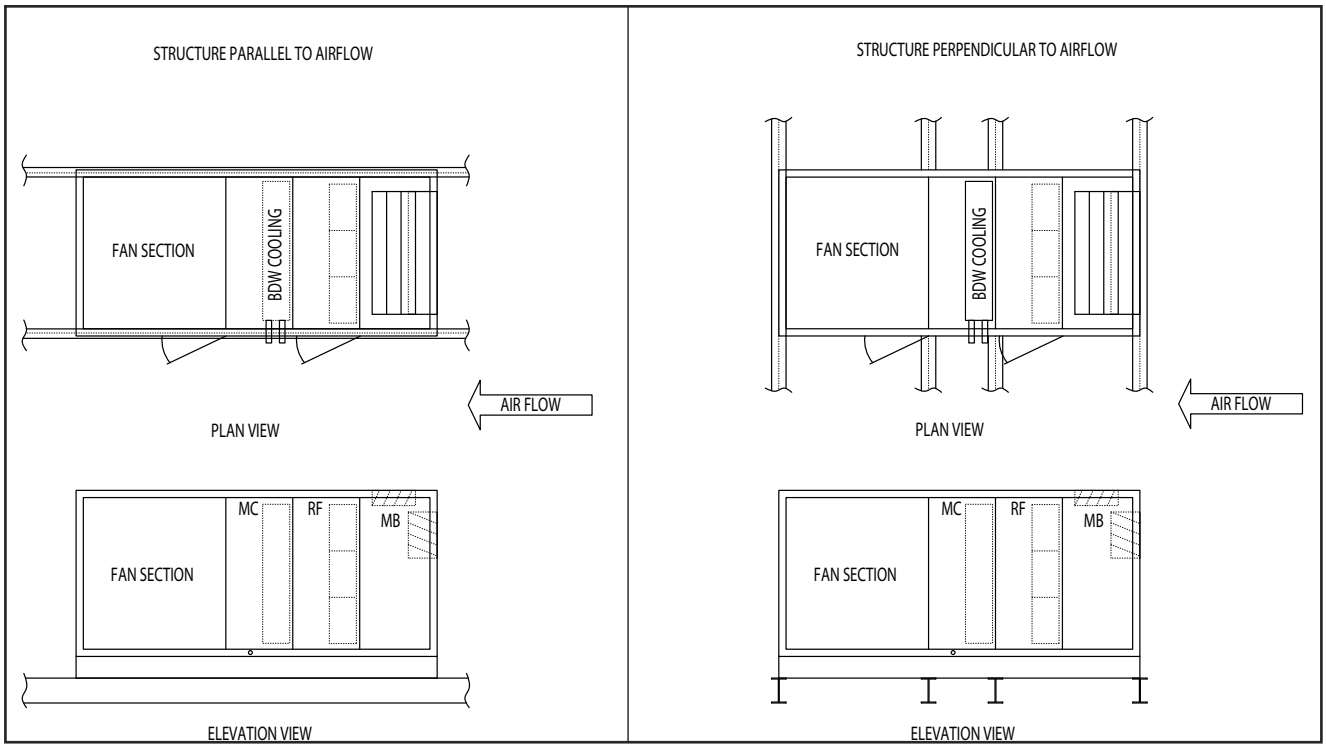


FIG. 2-6 – CEILING SUSPENDED UNIT ***(CONT.)***

LDO9619

UNIT INSTALLATION

TOOLS NEEDED:

See Figure 2-7.

FIG. 2-7 – TOOLS TYPICALLY USED FOR ASSEMBLY OF SHIPPING SPLITS

- Drill with No. 3 phillips bit for removing all panel screws.
- Three sixteenth inch hex allen head screwdriver.
- One quarter inch, 5/16", 3/8" and 9/16" nut setters or socket set for removal of all bulkhead, raceway and wireway screws.
- Wire cutters
- Four inch x four inch wood blocks
- Power pulls or come-a-longs
- Slings
- Pry bar
- Drift pins and awls
- Common hand tools
- Caulking Gun

MATERIAL REQUIRED:

(not provided by YORK)

- Sikaflex, York P/N 013-02966-000 or equivalent. (One tube per 10 feet of curb perimeter.)

ASSEMBLY OF OUTDOOR UNIT

CAUTION

See complete rigging instructions explained in detail in Section 1.

CAUTION

Do not damage factory installed pipe chase, electrical cabinet, hoods, pipe stubs, door handles or roof overhang.

Installing Single Piece Unit On Curb

- Units should not be moved over a roof covering but should be lifted from the ground onto the curb or support framework. Remove the wood shipping material from curb rest.

CAUTION

The curb gasket, which is provided, must be installed before the unit is lowered onto the curb. The gasket is shipped with the curb package.

- SEAL (to curbing): When setting the unit onto the curb, the installer should ensure that a sealing gasket is positioned between the unit and curb to provide a continuous airtight and watertight connection.
- Installation should be in accordance with local code requirements.

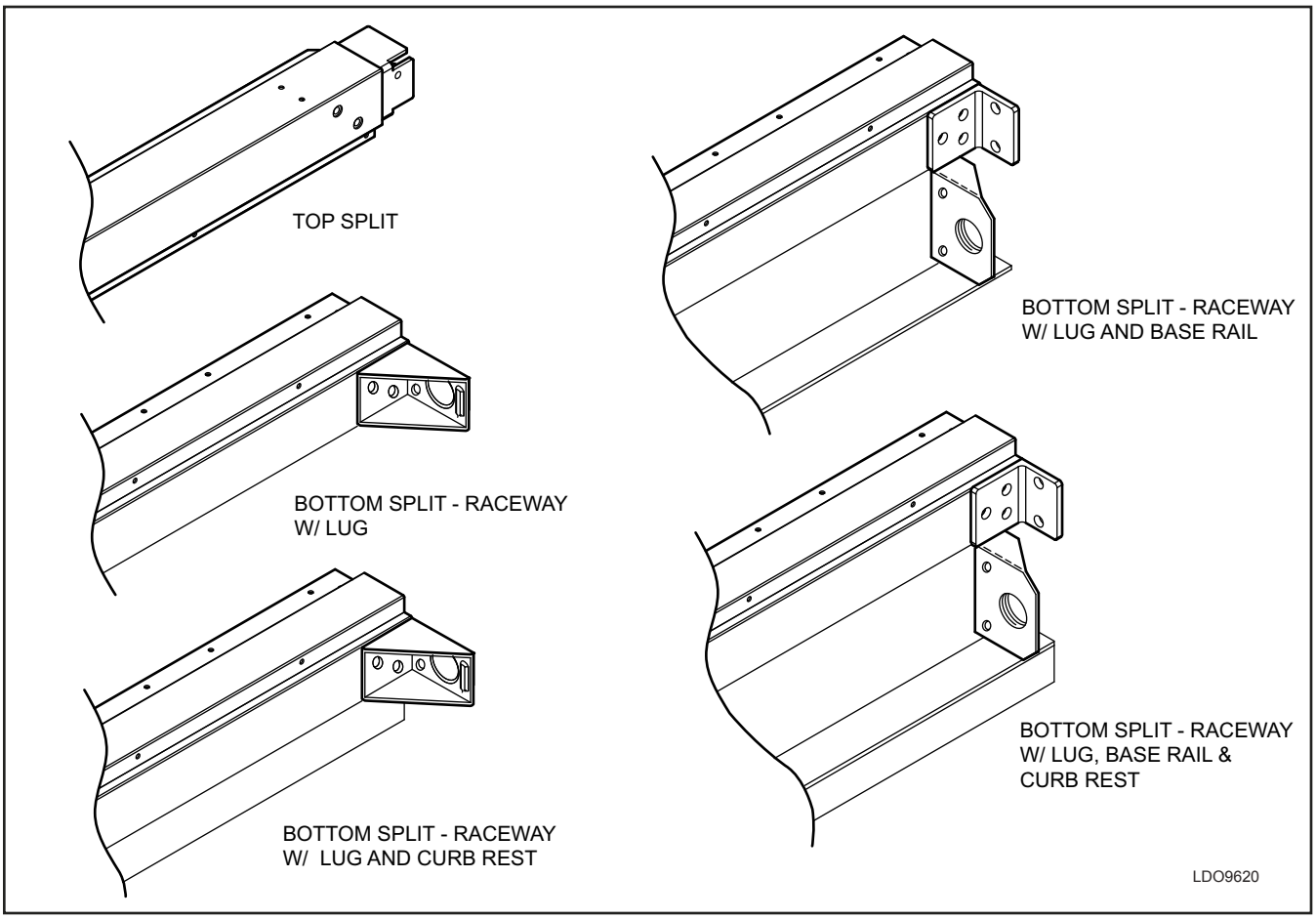


FIG. 2-8 – SHIPPING SPLIT EXAMPLES

Installing Multiple Piece Unit On Curb

See Figure 2-8 for Shipping Split Examples

NOTE

When unit is provided with shipping splits, use construction grade caulk in place of gasket (not provided). Apply the caulk on top of curb just before each section is placed on the curb. Apply the caulk with a 1/2" diameter bead to assure seal after sections are pulled together. Positive seal must be achieved. Disregard this note if shipping splits are assembled prior to placing the unit on curb.

NOTE

If assembly is done prior to setting unit sections on a curb, be sure to have units on a flat surface during the assembly process. Do not remove shipping blocks from under Curb Rests until assembled unit is ready to be lifted and placed on the curb.

1. Before placing sections on the curb:
   a) Verify the correct sections and orientation of each section.
   b) Remove cross brace(s) (shipping supports) from each section's shipping split.
   c) Remove plastic shipping covers and their supports.
   d) Remove screws from Curb Rest to release wood shipping blocks. Leave blocks under unit sections until lifted. If the unit has no Curb Rest, be sure that no debris clings to the bottom of each section when lifted for placement.
   e) Make sure all wiring and/or control tubing connection pig tails are tucked inside the wireways to prevent damage during rigging.
   f) Apply gasket material TO ONE SIDE ONLY of each shipping split. Be sure the entire perimeter is covered with gasket material. Any void, depression or protrusion will allow air or water leakage. Apply adjacent to inside edge of mating surface (nearest to interior of air handler). *Refer to Fig. 2-9.*

FIG. 2-9 – APPLYING GASKET LDO9621

   g) On sections with top raceway connectors, loosen the cap screws one full turn. This will aid in joining the sections. Be sure to retighten the cap screws after the joint is completed.
   h) Apply a ½" thick bead of caulk (not provided), to curb top surface only where the first section will be placed.
2. Place the first section on the curb while positioning it so that the over hanging Curb Rest is spaced evenly from the curb on each side and end.
3. After the first section is placed in position, anchor or block it before setting the next section.
4. Attach power pulls or come-a-longs to the first section. Use the lifting lug holes in the two outside corners (not at the shipping split).
5. Apply a ½" thick bead of caulk to curb top surface only where the next section will be placed, plus about 4".
6. Place the next section on the curb about 4" from the section already placed.

2

7. At this time feed the electrical and control connections from section to section wireways and ensure that they will be accessible after the sections are joined. If any will not be accessible, assemble the electrical connectors and/or pneumatic tubes each according to their labels before joining of sections is complete. *Refer to Fig. 2-10*

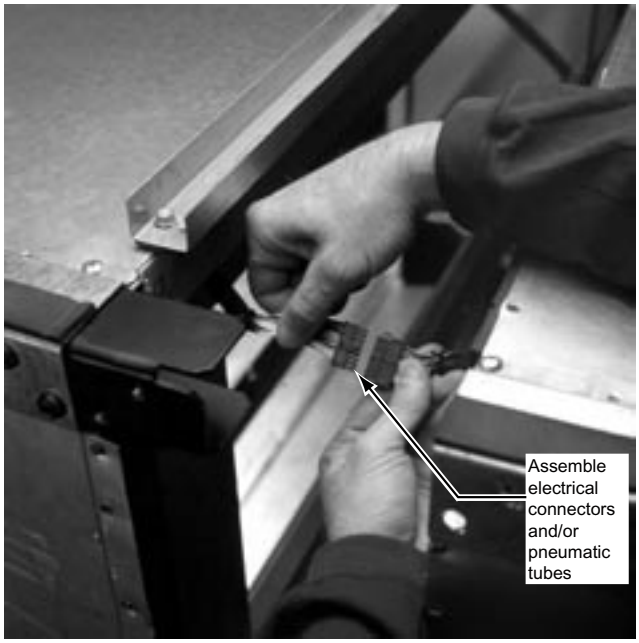


FIG. 2-10 – ELECTRICAL CONNECTIONS

8. Attach the power pulls or come-a-longs to the far end of the next section.
9. Start pulling this section toward the first section. Pull evenly on both the left and right sides.
   a) Be sure all of the electrical or control wires or tubes in the wire ways are clear.
   b) Guide the two top connectors into opposite section raceways.
   c) Guide the bottom raceway guide rails together using rods or drift pins through the bolt holes in the lifting lugs on opposite sections. Do this on each side of the unit simultaneously.
   d) If any difficulty aligning due to racking of one section or the other, use another come-a-long diagonally on the inside of that section, at or close to the shipping split.
   e) If any difficulty aligning due to top and bottom not pulling together simultaneously, apply shims under the unit sections as needed to compensate for uneven or flexing support under roof deck and curb.
10. Complete pulling the sections together.
11. Fasten bottom, lifting lugs together with bolts provided.
12. Fasten top raceway connectors with cap screws provided and retighten existing cap screws.
13. Apply butyl tape to the under side of seam caps and install over the joint using the screws provided. Seam caps are applied over the joint on the sides and roof of the exterior and on the floor only of the interior.

NOTE

If a roof seam cap has a tab on one end only, the end without the tab goes above the pipe chase location.

14. Repeat this procedure for each additional section to be placed in making up the complete unit.
15. After all the electrical and control connections are made according to their labels, assemble the wireway access covers.

Installing Multiple Piece Unit (Not Curb Mounted)

See Figure 2-8 for Shipping Split Examples

NOTE

If assembly is done prior to placing unit sections, be sure to have sections on a flat surface during the assembly process.

1. Before placing sections:
   a) Verify the correct sections and orientation of each section.
   b) Remove cross brace(s) (shipping supports) from each section's shipping split.
   c) Remove plastic shipping covers and their supports.
   d) Make sure all wiring and/or control tubing connection pigtails are tucked inside the wireways to prevent damage during rigging.

e) Apply gasket material TO ONE SIDE ONLY of each shipping split. Be sure the entire perimeter is covered with gasket material. Any void, depression or protrusion will allow air or water leakage. Apply adjacent to inside edge of mating surface (nearest to interior of air handler). *Refer to Fig. 2-9.*

f) On sections with top raceway connectors, loosen the cap screws one full turn. This will aid in joining the sections. Be sure to retighten the cap screws after the joint is completed.

2. Place the first section in its final position and anchor or block it before placing the next section.

3. Attach power pulls or come-a-longs to the first section. Use the lifting lug holes in the two outside corners (not at the shipping split).

4. Place the next section about 4" from the section(s) already placed.

5. At this time feed the electrical and control connections from section to section wireways and ensure that they will be accessible after the sections are joined. If any will not be accessible, assemble the electrical connectors and/or pneumatic tubes each according to their labels before joining of sections is complete. *Refer to Fig. 2-10*

6. Attach the power pulls or come-a-longs to the far end of the next section.

CAUTION

Ensure chain does not apply pressure to drain connection. Improper positioning of chain may cause damage to unit. See Figure 2-11

7. Start pulling the sections together. Pull evenly on both the left and right sides.

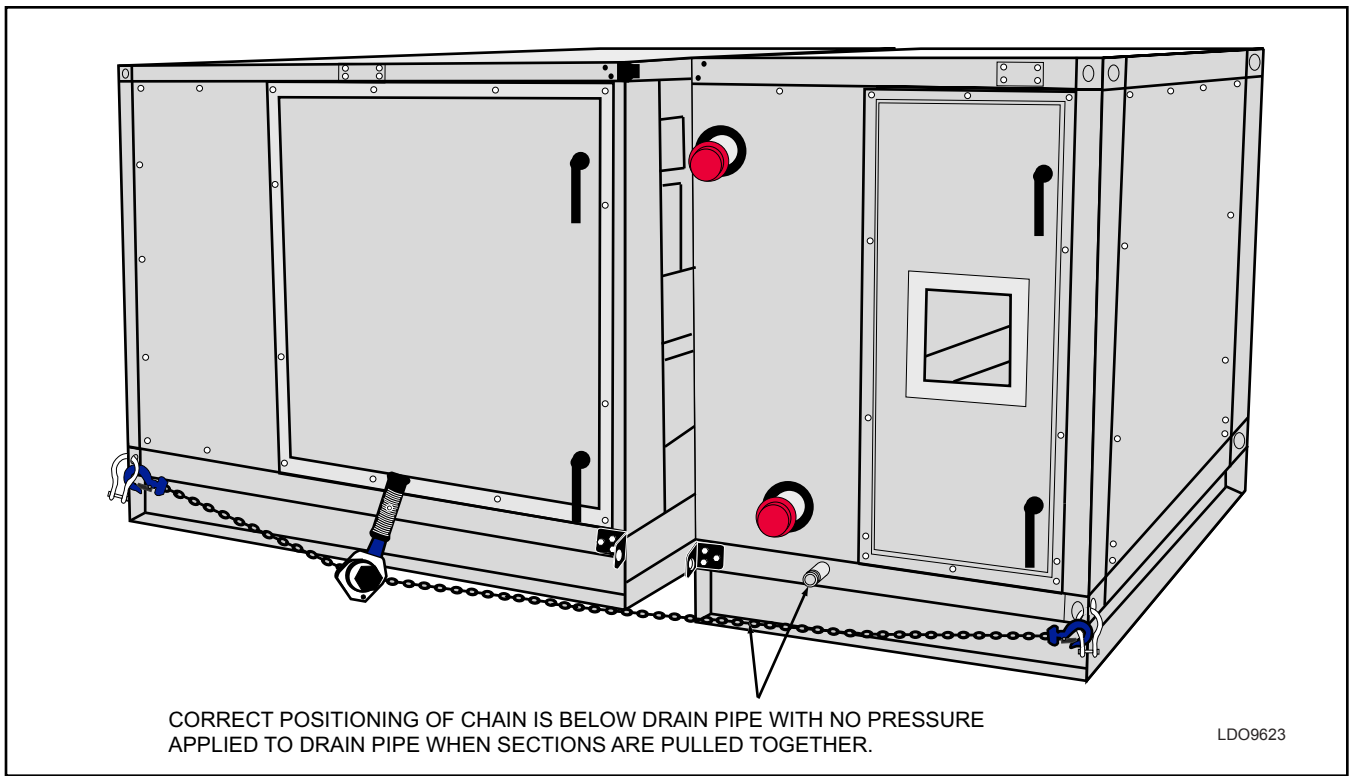
a) Be sure all of the electrical or control wires or tubes in the wire ways are clear.

b) Guide the two top connectors into the opposing section's raceways.

c) Guide the bottom raceway base rails together using rods or drift pins through the bolt holes in the lifting lugs on opposing sections. Do this on each side of the unit simultaneously.

d) If any difficulty aligning due to racking of one section or the other, use another come-a-long diagonally on the inside of that section at or close to the shipping split.

2



CORRECT POSITIONING OF CHAIN IS BELOW DRAIN PIPE WITH NO PRESSURE APPLIED TO DRAIN PIPE WHEN SECTIONS ARE PULLED TOGETHER.

LDO9623

FIG. 2-11 – PULLING SECTIONS TOGETHER WITH COME-A-LONGS

e) If any difficulty aligning due to top and bottom not pulling together simultaneously, apply shims under the unit sections as needed to compensate for uneven placement area.

8. Complete pulling the sections together.
9. Fasten bottom, lifting lugs together with bolts provided.
10. Fasten top raceway connectors with cap screws provided and retighten existing cap screws.
11. Apply butyl tape to the under side of seam caps and install over the joint using the screws provided. Seam caps are applied over the joint on the sides and roof of the exterior and on the floor only of the interior.
12. Repeat previous steps for each additional section to be placed in making up the complete unit.
13. After all of the electrical and control connections are made according to their labels, assemble the wireway access covers.

ASSEMBLY OF INDOOR UNIT

Installing Multiple Piece Unit (not curb mounted)

See Figure 2-8 for Shipping Split Examples

NOTE

If assembly is done prior to placing unit sections, be sure to have sections on a flat surface during the assembly process.

1. Before placing sections:
   a) Verify the correct sections and orientation of each section.
   b) Remove cross brace(s) (shipping supports) from each section's shipping split.
   c) Remove plastic shipping covers and their supports.
   d) Make sure all wiring and/or control tubing connection pigtails are tucked inside the wireways to prevent damage during rigging.
   e) Apply gasket material TO ONE SIDE ONLY of each shipping split. Be sure the entire perimeter is covered with gasket material. Any void, depression or protrusion will allow air or water leakage. Apply adjacent to inside edge of mating surface (nearest to interior of air handler). *Refer to Fig. 2-9.*
   f) On sections with top raceway connectors, loosen the cap screws one full turn. This will aid in joining the sections. Be sure to retighten the cap screws after the joint is completed.
2. Place the first section in its final position and anchor or block it before placing the next section.
3. Attach power pulls or come-a-longs to the first section. Use the lifting lug holes in the two outside corners (not at the shipping split).
4. Place the next section about 4" from the section(s) already placed.
5. At this time feed the electrical and control connections from section to section wireways and ensure that they will be accessible after the sections are joined. If any will not be accessible, assemble the electrical connectors and/or pneumatic tubes each according to their labels before joining of sections is complete. *Refer to Fig. 2-12.*

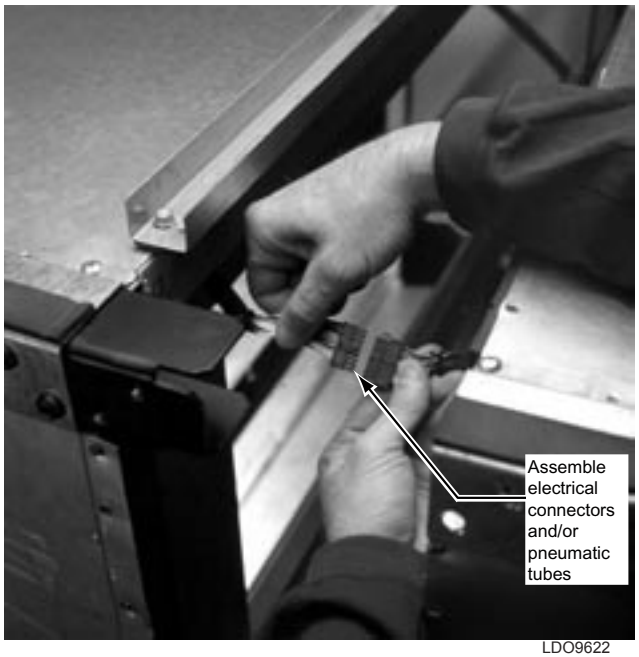


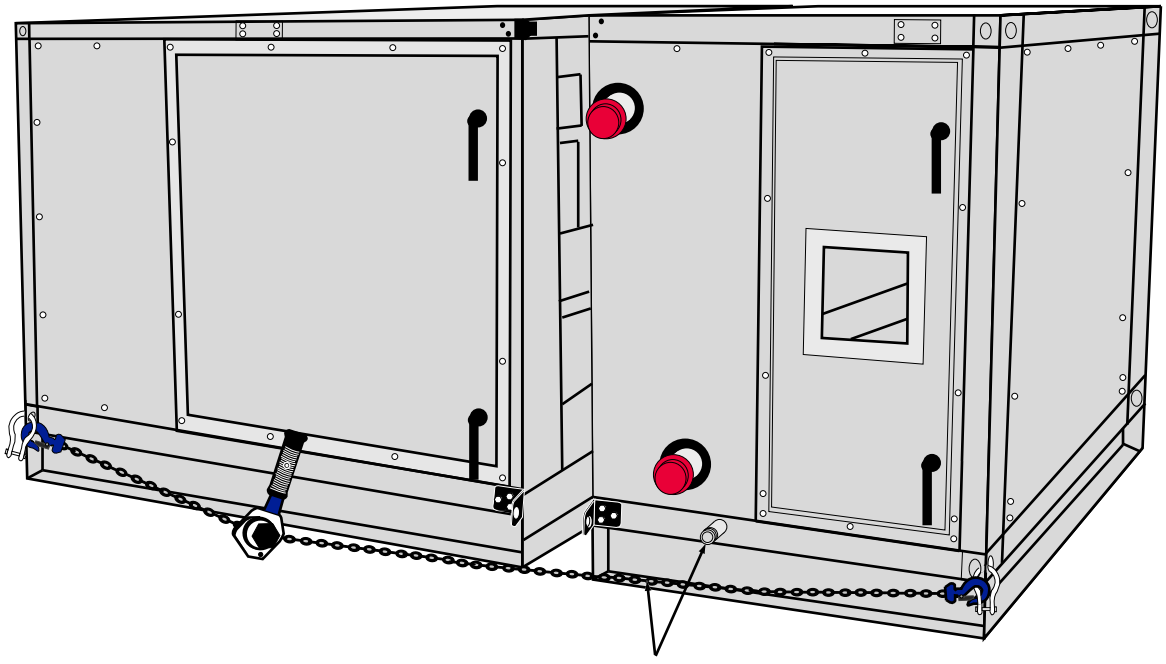
FIG. 2-12 – ELECTRICAL CONNECTIONS

6. Attach the power pulls or come-a-longs to the far end of the next section.
   a) Panels on one side of the shipping split will have a flange with a gasket already attached. This flange is to extend over the adjoining panel on the opposing section.
   b) Remove enough panel screws to allow top and side panels to be pulled outward from original position and blocked.

CAUTION

Ensure chain does not apply pressure to drain connection. Improper positioning of chain may cause damage to unit. See Figure 2-13

7. Start pulling the sections together. Pull evenly on both the left and right sides.
   a) Be sure all of the electrical or control wires or tubes in the wire ways are clear.
   b) Guide the two top connectors into the opposing section's raceways.
   c) Guide the bottom raceway base rails together using rods or drift pins through the bolt holes in the lifting lugs on opposing sections. Do this on each side of the unit simultaneously.
   d) If any difficulty aligning due to racking of one section or the other, use another come-a-long diagonally on the inside of that section at or close to the shipping split.
   e) If any difficulty aligning due to top and bottom not pulling together simultaneously, apply shims under the unit sections as needed to compensate for uneven placement area.
8. Complete pulling the sections together.
9. Fasten bottom, lifting lugs together with bolts provided.
10. Fasten top raceway connectors with cap screws provided and retighten existing cap screws. Reposition and securely fasten top and side panels that were previously loosened.
11. Apply butyl tape to the under side of seam caps and install over the joint using the screws provided. Seam caps are applied over the joint on the floor only of the interior.
12. Repeat previous steps for each additional section to be placed in making up the complete unit.
13. After all of the electrical and control connections are made according to their labels, assemble the wireway access covers.



CORRECT POSITIONING OF CHAIN IS BELOW DRAIN PIPE WITH NO PRESSURE APPLIED TO DRAIN PIPE WHEN SECTIONS ARE PULLED TOGETHER.

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FIG. 2-13 – PULLING SECTIONS TOGETHER WITH COME-A-LONGS

LDO9624

FIG. 2-14 – TIERED UNIT

Installation Of Tiered Unit

A Tiered Unit may not be factory assembled. Field assembled units are shipped with the top-tier segment skidded. This top-tier segment is equipped with brackets bolted to the bottom raceway (*see Figure 2-15*). The bottom-tier segment is equipped with brackets bolted to the top raceway.

These brackets are used to secure the top segment to the bottom segment. After final alignment, bolt the two brackets with hardware supplied.

LDO9625

FIG. 2-15 – TIERED UNIT SECURED WITH BRACKETS

NOTE

If unit sections do not fit through entrance, disassembly and reassembly may be required. See Form #102.20-FA1 (303).

1. Before placing top tier:
   a) Verify the correct orientation of top and bottom tier.
   b) Remove cross brace(s) (shipping supports) from top tier.
   c) Remove plastic shipping covers and their supports.
   d) Make sure all wiring and/or control tubing connection pigtails are tucked inside the wireways to prevent damage during rigging.
   e) Ensure gasket properly installed on bottom tier If the top tier is shorter in direction of airflow than the bottom tier, apply gasket material on the top panel of the bottom tier from raceway to raceway but not on top of raceways (see figure 2-16).

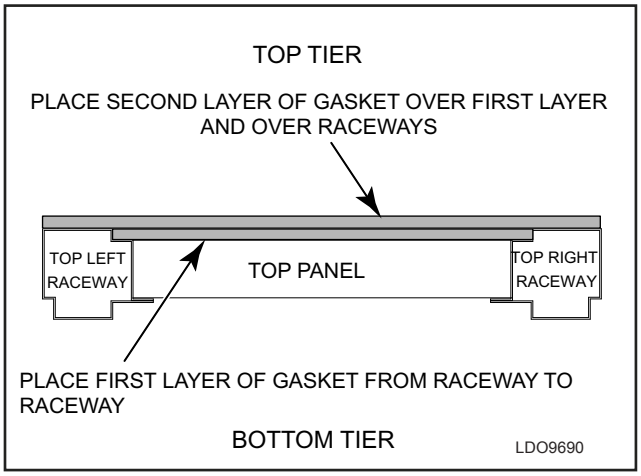

FIG. 2-16 – APPLY GASKETS TO TOP PANEL BOTTOM TIER

f) Apply second layer of gasket over top of that applied in step (e) but include the raceways. Steps (e) and (f) are necessary because the top panel of the bottom tier is slightly recessed below the height of its raceways.

g) If top tier has shipping splits, apply gasket material to each shipping split. Be sure the entire perimeter is covered with gasket material. Any void, depression or protrusion will allow air or water leakage. Apply adjacent to inside edge of mating surface (nearest to interior of air handler.) *Refer to Fig. 2-17.*

LDO9621

FIG. 2-17 – APPLYING GASKET

Be sure all of the electrical or control wires or tubes in both tiers are clear.

2. Install (4) shackles, one in each bottom corner connector.
3. Fasten sling/chain to shackles.
4. Fasten other end of sling/chain to spreader bar (as needed).
5. Lift top tier assembly with crane, forklift or overhead lift.
6. At this time feed the electrical and control connections from top tier to bottom tier and ensure that they will be accessible after the sections are joined. If any will not be accessible, assemble the electrical connectors and/or pneumatic tubes each according to their labels before joining the top and bottom tier.
7. Lower the top tier onto bottom tier so that mounting brackets mate. Guide brackets together using rods or drift pins through the bolt holes (*see Figure 2-18*).

LDO9626

FIG. 2-18 – GUIDING BRACKETS TOGETHER

8. Secure the top tier to bottom tier with mounting hardware.
9. After all of the electrical and control connections are made according to their labels, assemble the wireway access covers.

OUTSIDE AND/OR RELIEF AIR HOODS, BIRD SCREENS & MIST ELIMINATORS

See Figure 2-19

1. Identify correct hood and respective location. Correct orientation is with the tracks for bird screens to the bottom. The flanges at top and sides are predrilled.
2. When multiple stacked hoods are used, install the top hood first then the bottom then the intermediate if required.
3. Remove and save the top row of panel screws from side panel above opening.
4. Apply butyl tape (provided) to the flanges on the hood that contact the unit side panel.
5. Center the hood over the opening aligning the pre-punched holes in the top flange with the top row of holes in the side panel and reinstall the panel screws.
6. Square the hood with the opening and attach the side flanges (vertical) with hex head self-drilling screws provided.
7. Now, install the bottom hood making sure it extends 6" below the bottom of the opening.
8. Center the bottom hood over the opening and align it with the top hood.
9. Attach this hood by its top and side flanges using hex head self-drilling screws provided.
10. If there is a third hood, install it centered between the top and bottom hoods.
11. Attach this hood by its top and side flanges using hex head self-drilling screws provided.
12. Finally, install bird screens, mist eliminators or filters in the hoods.
13. Remove the clip(s) from the leading edge of the hood.
14. Slide the proper size bird screen, mist eliminator or filter into the tracks provided. The object should rest on top of the lip at the back of the hood.
15. Reinstall the clip(s) on the leading edge of the hood.

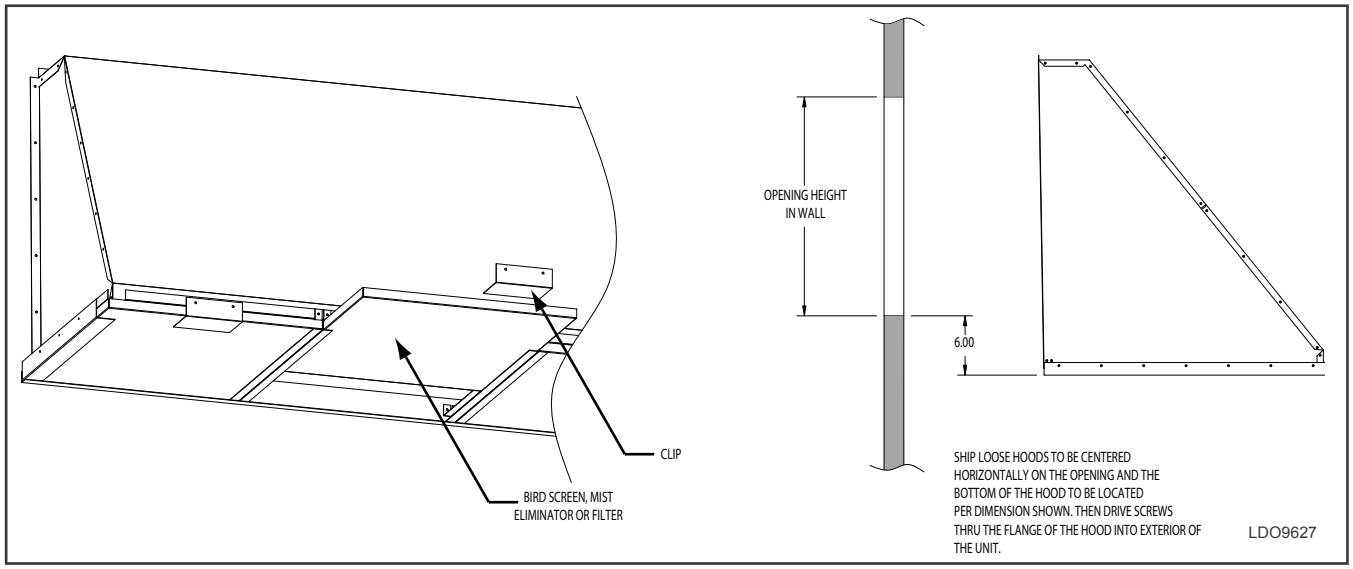

FIG. 2-19 – OUTSIDE AND/OR RELIEF AIR HOODS, BIRD SCREENS & MIST ELIMINATORS

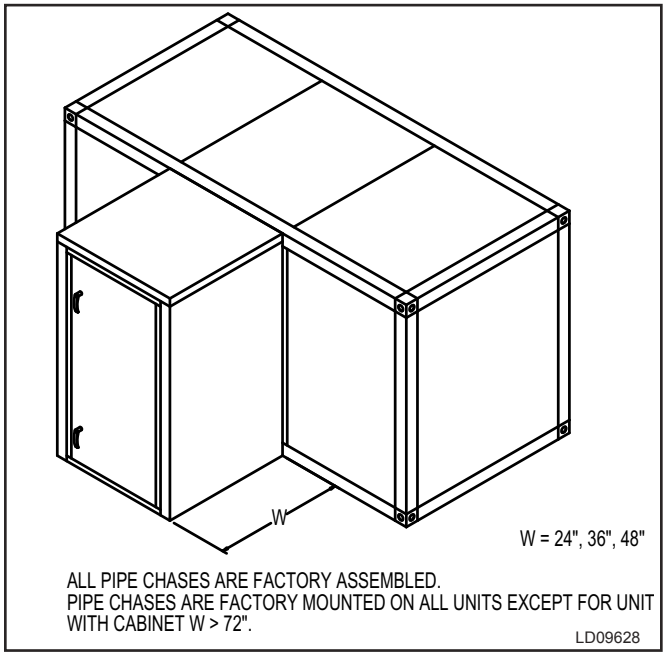

FIG. 2-20 – PIPE CHASE ENCLOSURE ASSEMBLY FOR UNITS WITH PIPE CHASE SHIPPED LOOSE

PIPE CHASE INSTALLATION

NOTE

Pipe chase must be installed before piping is connected.

TOOLS REQUIRED

- Ladder
- Tapered punch or awl
- Air or electric driver capable of 1800 to 2200 RPM
- Torque wrench
- Two-man team (pipe chase weight 100+lbs).
- Five sixteenth & three eighth inch nut setters for driver
- # 3 phillips head screw driver bit.
- Shipped loose package containing butyl tape (013-02976-000), phillips head self-threading screws (021-17722-000), hex head self-drilling screws (021-19515-000), caulking (013-02966-001).

PROCEDURE

1 Note that top and bottom flanges are inside pipe chase and vertical flanges are outside.

2 Apply butyl tape to all four flanges.

3 Be sure foam rubber gasket (supplied with curb) is on top of curb.

4 Set pipe chase on pipe chase curb ½" away from unit side panel.

5 Using tapered punch or awl, align holes in top flange with pre-punched holes in top raceway and install phillips head self-threading screws. Torque to 30 in.-lbs. Repeat for bottom flange and bottom raceway.

6 Check to be sure door closes and latches properly. If not, loosen screws, re-align and re-torque.

7 Install hex head self-drilling screws in vertical flanges outside pipe chase.

8 Apply caulking to all interior joints of pipe chase.

9 All pipe chase floor penetrations must be flashed, sealed and insulated to prevent condensation entering building.

ELECTRICAL CONNECTIONS

NOTE

All field wiring must conform to the National Electrical Code (N.E.C.) and possible local codes that may be in addition to N.E.C.

NOTE

Unit is E.T.L. Listed. Some components are U.L. labeled. Any changes in the field may affect their validity.

The current characteristics, phase, cycle and voltage are stamped on the nameplate of each component.

Electrical conduit connections made to exposed boxes on units should be made on the bottom of the box. Installation should comply with code requirements. Outdoor installation must be made watertight.

The installing contractor is responsible for electrical conduit penetrations through the building roof.

Penetrations through panels must be sealed *(see Fig. 5-31 "Pennetrations and Grommet Details").*

CAUTION

Electrical conduits that penetrate the exterior (walls, pipe chase or floors) of the unit will need to be externally and internally sealed so that unconditioned air will not be drawn into the unit through and around conduit. This unconditioned air will result in condensation that will fail components prematurely.

All accessible electrical connections must be checked for tightness prior to the actual startup. Many of the connections contain several strands of wire, and while they were tightened at the time of assembly, and checked at the time of run-in, they may have developed a "set" and should be re-tightened. The danger of a poor connection can cause overheating and component failure.

CAUTION

DO NOT PENETRATE any main or auxiliary drain pan.

A motor connection diagram may be found on the inside of the motor terminal box or on a tag attached to the motor. Be sure to make a flexible conduit connection at the motor to permit fan belt adjustment and movement of spring isolated fan assembly. *Refer to Motor Data Nameplate for all motor specifications (see Figure 2-21).*

00495VIP

FIG. 2-21 – TYPICAL MOTOR DATA / NAMEPLATE

POWER WIRING

See Section 6 for all electrical drawing applications.

CONTROL WIRING

See Section 6 for all electrical drawing applications.

Equipment Release Approval Form

SUBMITTAL NOTES

Product Type: Johnson Controls AHU

Unit Tags: AHU-1 thru AHU-9

The following table must be completed prior to releasing the equipment for fabrication. Please initial the column indicating the information contained in this submittal has been verified, or indicate to refer to a marked-up page.

SUBMITTAL VERIFICATION	
	Purchaser Initials
Electrical voltage and electrical connections are compatible with jobsite requirements.	
Piping / Ductwork connections shown in this submittal are correct.	
Unit tag designations are correct.	
Equipment dimensions (length, width, and height) and weights have been verified to comply with jobsite conditions and rigging requirements. Please indicate approval by your initials on all included drawings.	

Johnson Controls

Important Notes:

1) Actual fabrication release cannot commence until this form is signed by the customer and returned to JCI along with a release notification want date and ship to address.

2) Equipment "lead-time" does not start until confirmed release documentation is received, and the order is actually released to the factory.

3) Modifications to equipment configurations after fabrication release may impact cost and lead-time

4) Attached configurations are as shown in the approved equipment submittals or as defined in superseding customer correspondence.

5) Note that once this document is confirmed, the equipment configurations defined by this document take precedence over all other documents.

6) "Want date" and/or "ship to address" changes made after this document is confirmed may impact cost and lead-time.

Please fill out the following table and refer to the receiving/rigging instructions in this submittal to help ensure a smooth delivery and installation of the equipment.

DELIVERY INFORMATION	
	Please fill out information below
Contact name for coordinating delivery of equipment with transportation company	
Contact phone number	
Advance notice required from transportation company prior to delivering equipment (typically 48 hours)	
Ship to address:	
Other special shipping instructions or requirements	

CUSTOMER APPROVAL:

Customer Name: _____

Signature (*) _____

Date: _____