

Job Summary

Project Name:	
Unit Tag(s):	AHU-1
Quantity:	1
Environment:	Indoor



Unit Overview

Model	Cabinet Performance	Airflow (CFM)	Altitude (ft)	Weight (lbs)
XTI-63x90	Solution	11,200	692	4,251

Segment Sequence

(FS CC)(HC EB RF MB)

Unit Construction

Casing Details								
Segment	Thickness (in)	Exterior Paint	Exterior Gauge and Material		Interior Gauge and Material	Insulation Thickness and Material	Bulkhead Material	
MB , RF , EB , HC , CC , FS	2	None	STD Ga. G-90 Galvanized		STD Ga. G-90 Galvanized	2" Foam	Galvanized	
Base Details								
Segment	Base		Floor					
	Gauge and Material	Paint	Gauge and Material	Paint	Insulation	Thermal Break	Attachment	Tread Plate
MB, RF, EB, HC, CC, FS	Formed Steel	None	STD Ga. G-90 Galvanized	None	N/A	-	-	None

Unit Electrical

Circuit Details					
Circuit #	Component	V/Ph/Hz	FLA (Amps)	Minimum Current Ampacity (MCA)	Maximum Overcurrent Protection (MOP)
1	Supply Fan Motor Control	460/3/60	18.6	23.3	40.0
2	Lights and Outlets	120/1/60	-	-	15.0
Electrical Details					
Minimum Unit SCCR	5 kA rms Symmetrical	ETL Label (UL1995/NEC-2002)			Yes
Unit Light Type			Unit Light Switch		
Vaporproof 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)
Lau	DDPG2	II	222-9	120	100	1	11,200	692	4.30	2.50	2,163	11.85
Max RPM	BHP w/ Drive Loss	Wheel Type	Blade Type	Wheel Material	Base Material	Fan Flow Isolation	AirFlow Monitoring	Inverter Drive Balancing	Isolation Type	Thrust Restraints		
2,454	-	SWSI	Airfoil	Aluminum	Galvanized Steel	None	-	-	1" Spring	Yes		

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

Motor Details

Type/MFG	Motor Power (HP)	V/Ph/Hz	Quantity	Insulation Class	RPM	Frame Size	FLA (Amps)	Efficiency	Location	SGR
ODP/WEG	15.0	460/3/60	1	F	1,800	254	18.60	Premium	Direct Drive	Yes

Steam Coil(s)
Performance Details

Coil	Steam Pressure (PSI)	Condensate (lb/hr)	Rows	FPI	TPC	TMBH	Dry Bulb (F°)		Airflow (CFM)	FV (ft/min)	APD	Alt. (ft)
							EAT	LAT				
HC	10.00	1009.3	1	10	1	980	-8.0	73.1	11,200	410	0.05	692

Construction Details

Coil	Location			Offset (in)		Connection Material ³		Connection Type	Supply Connection (Per Coil)		Coil Stack Rack
	Coil Index ²	Connection	Qty						Size (in)		
HC	0	Right		0		Red Brass		MPT	2	2	-
Coil	# of Coils High	Face Type	Total Fin Height (in)	Fin Length (in)	Coil Face Area (ft²)	Fin Material	Fin Thickness	Fin Type	Tube Diameter (in)	Tube Material	Tube Wall Thickness (in)
HC	1	Full	51.00	77	27.3	AL	.010	Corrugated	1	Copper	.035
Coil	Coil Coating			Dry Weight (lbs)		Header Material		Casing Material	Intermediate Drain Pan Material		Fouling Factor (hr.ft².°F/BTU)
HC	-			223		Copper		Galvanized	-		-

Notes

¹Performance is shown for the entire coil bank. Performance is not per coil.

²Coil index indicates position in segment. Example: CC-1, index 0; Spacer, index 1; CC-2, index 2

³Johnson 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: 7.7d.004

SDC Tube Spacing: 3.00

HC[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.

DX Coil(s)
Performance Summary

Coil	Fluid Type	Rows	FPI	Circuits	TMBH	SMBH	EAT (°F)		LAT (°F)		Airflow (CFM)	FV (ft/min)	APD	SST	RPD	Alt. (ft)
							DB	WB	DB	WB						
CC	R-410a	4	12	21	493	299	84.0	71.0	58.7	57.3	11,200	394	0.39	48.00	8.80	692

Construction Details

Coil	Location		Offset (in)	# of Distributors	Connection Material ³	Connection Rotation (degrees)	Connection Type	Suction Connection (Per Coil)		Liquid Connection (Per Coil)		Coil Stack Rack
	Coil Index ²	Connection						Qty	Size (in)	Qty	Size (in)	
CC	0	Left	0	4	Copper	0	-	1	1-5/8	0	7/8	-
Coil	# of Coils High	Coil Split	Face Type	Total Fin Height (in)	Fin Length (in)	Coil Face Area (ft²)	Fin Material	Fin Thickness	Fin Type	Tube Diameter (in)	Tube Material	Tube Wall Thickness (in)
CC	1	50-50	Full	52.50	78	28.4	AL	.008	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
CC	-	354	21	1.54	Copper	Galvanized	304 Stainless Steel

Notes

¹Performance is shown for the entire coil bank. Performance is not per coil.

²Coil index indicates position in segment. Example: CC-1, index 0; Spacer, index 1; CC-2, index 2

³Johnson Controls suggests using red brass or copper connectors when the coil is to be attached to a copper or brass piping system.

Ratings are for coils manufactured by Johnson Controls, Inc., 507 E. Michigan St., Milwaukee WI 53202.

Coil DLL Version: 7.7d.004

BDX Tube Spacing: 1.25 x 1.08

CC[1][0]: This coil is not certified by AHRI 410. This coil is rated in accordance with the AHRI Forced-Circulation Air-Cooling and Air-Heating Coils Certification program which is based on AHRI Standard 410. 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)	1	Pleated 30% (MERV 8)	Aluminum
RF	Primary Filter	12" Rigid	Side	60-65% Eff, (MERV 11)	1	60-65% Eff, (MERV 11)	Aluminum

Sizes

Filter Gauge Details

Segment	Filter	1 st Filter Size W x H (in)	1 st Qty	2 nd Filter Size W x H (in)	2 nd Qty	Location	Type	Range (in w.g)
RF	Pre-Filter	20x16	8	20x20	4	Door	Magnehelic	0 - 3
RF	Primary Filter	20x16	8	20x20	4	Door	Magnehelic	0 - 3

Damper(s)

Details

Segment	Air Path	H x W (in)	Total Face Velocity (ft/min)	CFM	Minimum Allowable OA CFM	Damper Type	Damper Config	Model	Material	Blade Orientation	Actuator Type	Fail Position
MB	Outside Air	25.00 x 36.00	1,792	11,200		Control	100%	CD60	Galvanized	Parallel	-	-
MB	Return Air	12.00 x 76.00	1,768	11,200	-	Control	100%	CD60	Galvanized	Parallel	-	-
EB	Supply Air	49.75 x 78.00	416	11,200	-	Control	100%	CD60	Galvanized	Opposed	-	-
EB	Bypass Air	21.00 x 72.00		11,200	-	Control	100%	CD60	Galvanized	Parallel	-	-

Door(s)

Details										
Segment	Location	Swing	Hinge Location	H x W x T (in)	View Port	Test Port	Spare Gasket	Thermal Break	Safety Latch	Noncontact Safety Interlock
MB, RF	Left	Outward	Upstream Side	57 x 18 x 2	None	-	-	-	-	-
EB	Left	Outward	Upstream Side	57 x 24 x 2	None	-	-	-	-	-
CC	Left	Outward	Downstream Side	57 x 18 x 2	None	-	-	-	-	-
FS	Left	Outward	Upstream Side	57 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 - Airmod AYK	-	460/3/60	23.0/23.0	93 %	337	NEMA 1	-	Non Fused	Yes

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.)
MB	Opening	6.3	11,200	1,768	0.53	0.00
MB	Control Galvanized (CD60)	0.0	11,200		0.12	0.00
RF	2" Pleated 30% (MERV 8)	28.9	11,200	388	0.18	0.00
RF	Dirty Filter Allowance - Prefilter	0.0	11,200		0.00	0.00
RF	12" Rigid 60-65% Eff, (MERV 11)	28.9	11,200	388	0.26	0.00
EB	Opening	26.9	11,200	416	0.03	0.00
HC	Heating 1 rows 10 fins	27.3	11,200	410	0.05	0.00
CC	Cooling 4 rows 12 fins	28.4	11,200	394	0.39	0.00
FS	Opening	9.4	11,200	1,188	0.24	0.00
FS	External Static - User Entered	0.0	11,200		2.50	0.00
Total					4.30	0.00

Dimensions and Weight

Details					
Segment	Description	Length ¹ (in)	Width ² (in)	Height (in)	Weight (lbs)
MB	Mixing Box	24	90	63	539
RF	High Efficiency Filter	21	90	63	361
EB	External Face And Bypass	30	90	63	383
HC	Heating Coil	11	90	63	495
CC	Variable Length Cooling Coil	36	90	63	1,068
FS	Supply Fan	42	90	63	1,405
Overall		164			4,251

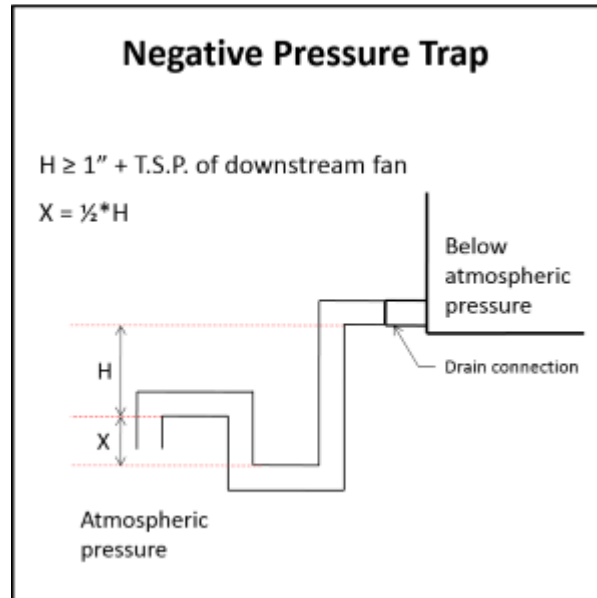
Notes

¹The length includes bottom tier segments only

²The 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.

Recommended Trap Height

Details									
Segment	Applicable Fan	Fan TSP (in w.g.)	Positive or Negative	Calculated Dimensions (in)			Calculated Dimensions (in)		Base Rail Height (in)
				H	X	H + X	H	H + X	
CC	Supply Fan	4.30	Negative	5.30	2.65	7.95	5.50	8.25	8"



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 ($I_p = 1.0$) for locations with design spectral response $S_d \leq 0.43$. 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.

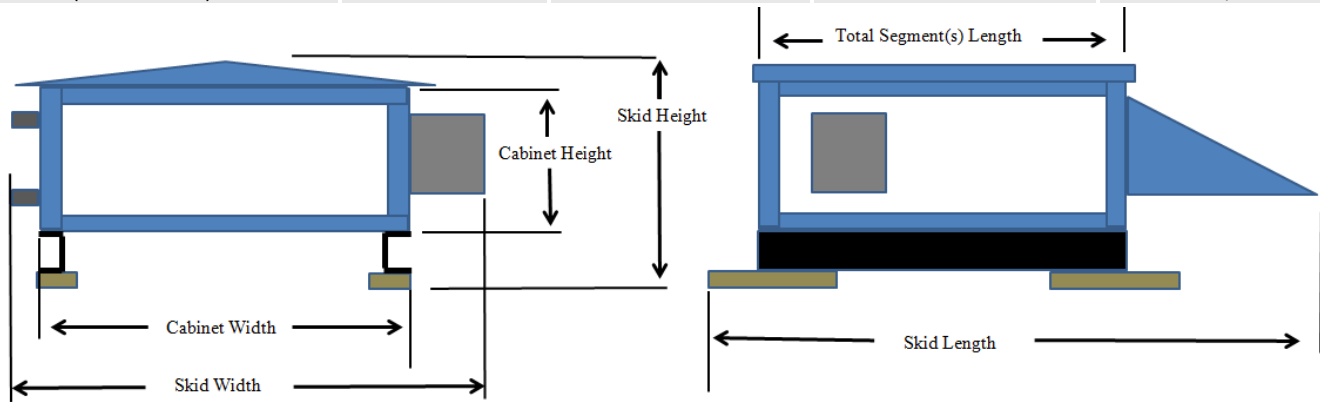
Specification of seismic requirements is the responsibility of the project design engineer. If formal certification is required, please contact your sales representative and/or application engineer for review. Certain application and site requirements may require additional cost and/or lead time.

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)	78	75	107	2,473
(HC EB RF MB)	86	75	98	1,778



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, outrigger extensions, isolation dampers, inlet baskets).