

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) | |
| 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 (ft ²) | 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.ft ² .°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 (ft ²) | 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 |

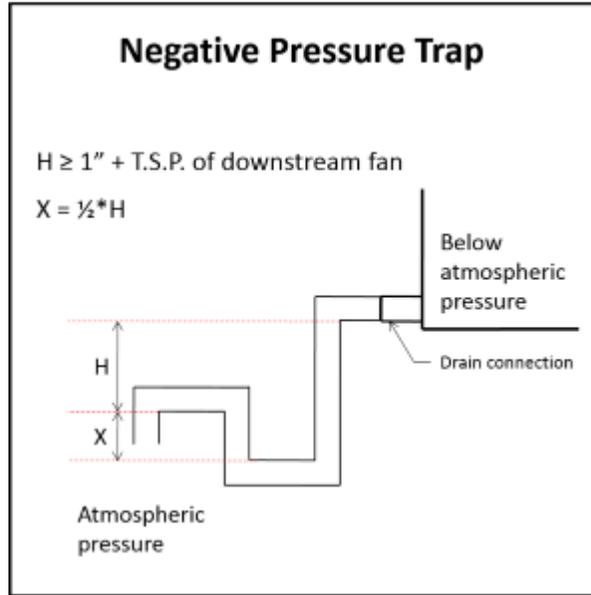
Notes

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.

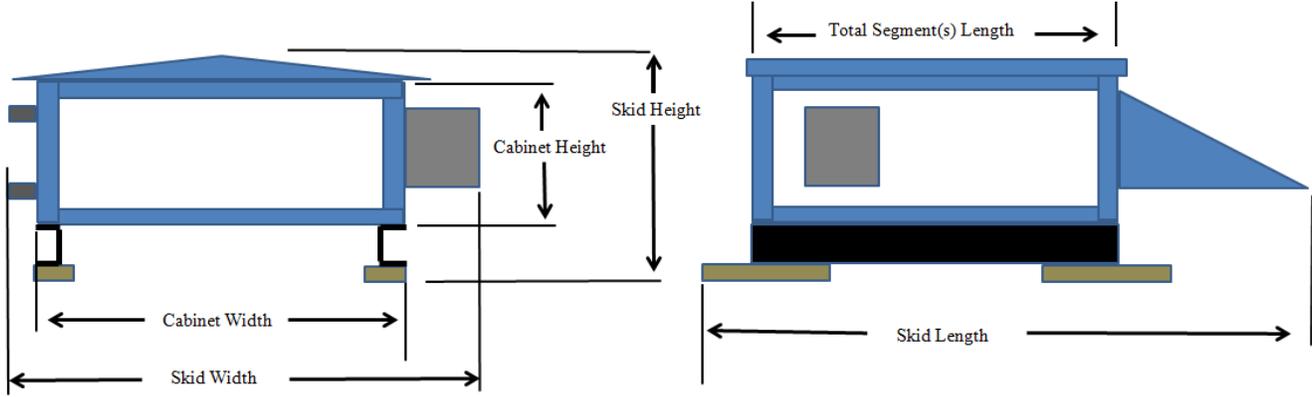
Statement of Compliance

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, outrigging extensions, isolation dampers, inlet baskets).