

SUBMITTAL REVIEW COMMENTS

Project		Project No.	Date
E.E. Waddell High School Renovation		602716	4/11/2022
		Section	Reviewed By
233600-001 Air Terminal Units		23 36 00	LTB
		Submittal No.	23 36 00 -001

NOTES

IF THIS SUBMITTAL CONTAINS DEVIATIONS FROM THE CONTRACT DOCUMENTS, IT IS THE RESPONSIBILITY OF THE CONTRACTOR TO SPECIFICALLY INFORM THE ARCHITECT IN WRITING OF ALL SUCH DEVIATIONS; AND ALL SUCH DEVIATIONS SHALL BE INCORPORATED INTO THE CONTRACT DOCUMENTS BY THE ISSUANCE OF ONE OF THE FOLLOWING AUTHORIZING SUCH DEVIATIONS, PRIOR TO PROCEEDING WITH FABRICATION, MANUFACTURE AND/OR CONSTRUCTION:

- 1) Field Clarification (or other form used to convey minor changes to the Work);
- 2) Change Order; or
- 3) Construction Change Directive

This review and these comments are subject to the limitations indicated in the *General Conditions of the Contract for Construction*, and as follows:

- 1) Architect's review is for the limited purpose of checking for conformance with information given and the design concept expressed in the Contract Documents;
- 2) Architect's review is not conducted for the purpose of determining the accuracy and completeness of other details such as dimensions and quantities, or for substantiating instructions for installation or performance of equipment or systems, all of which shall remain the responsibility of the Contractor as required by the Contract Documents;
- 3) Architect's review shall not constitute approval of safety precautions or of any construction means, methods, techniques, sequences, or procedures; and
- 4) Architect's approval as noted of a specific item shall not indicate approval as noted of an assembly of which the item is a component.

Notations indicated on this submittal do not relieve the Contractor from complying with the requirements of the Contract Documents.

The Contractor shall verify that all necessary approvals as noted are obtained prior to proceeding with the fabrication, manufacturing, purchasing, and/or construction of any item, component, system, or assembly.

The Contractor's responsibilities include, but are not limited to, the following:

- 1) Correlation and confirmation of dimensions and quantities;
- 2) Means, methods, techniques, sequences, and procedures of construction;
- 3) Coordination of the Work of all trades; and
- 4) Performance of all Work in a safe and satisfactory manner

ACTION TAKEN:

- | | |
|---|---|
| <input checked="" type="checkbox"/> Approved as Noted | <input type="checkbox"/> Revise and Resubmit |
| <input type="checkbox"/> Rejected/Resubmit | <input type="checkbox"/> Resubmit for Record |
| <input type="checkbox"/> Not Submitted | <input type="checkbox"/> Color Selection Required |

REMARKS

No Comments

Notes regarding Submittal Review Action Taken:

Approved as Noted: The Contractor is advised that fabrication, manufacturing, purchasing, and/or construction may proceed based on this submittal provided that the work is in full compliance with the Contract Documents.

Revise and Resubmit: The Contractor is advised that fabrication, manufacturing, purchasing, and/or construction may **not** proceed based on this submittal. Provide revised submittal until such time **Approved as Noted** is received from the Architect.

Rejected / Resubmit: The Contractor is advised that fabrication, manufacturing, purchasing, and/or construction may **not** proceed based on this submittal. Provide new submittal which is in full compliance with the Contract Documents until such time **Approved as Noted** is received from the Architect.

Color Selection Required: The Contractor is advised that color selections for the entire project, or portion thereof, will be provided after receipt of **all** color charts / samples required for the Project.

Not Reviewed / No Action Taken: Contractor is advised that this submittal has not been reviewed.

Not Submitted: Contractor is advised that the Contract Documents require a submittal for this Work. Provide a submittal which is in full compliance with the Contract Documents until such time **Approved as Noted** is received from the Architect.



RAND LPH

BUILDERS, INC.

**Mailing: P.O. Box 410283
Charlotte, NC 28241**

**Shipping: 1010 Culp Road
Pineville, NC 28134**

Phone (704) 588-7116 Fax: (704) 588-8280

More Than Bricks & Mortar

Date: 04/07/2022

Project: E.E. Waddell High School
Renovations

Submittal: 233600 - Air Terminal Units

SHOP DRAWING REVIEW		
<input type="checkbox"/>	NO EXCEPTION TAKEN	
<input type="checkbox"/>	APPROVED AS NOTED	
<input type="checkbox"/>	REVISE AND RESUBMIT	
<input type="checkbox"/>	REJECTED	
<small>REVIEW IS FOR GENERAL COMPLIANCE WITH THE INTENT OF THE CONTRACT DOCUMENTS. MECHANICAL CONTRACTOR SHALL ASSUME RESPONSIBILITY FOR CORRECTNESS, DIMENSIONS, DETAILS, QUANTITIES AND ALL COST ASSOCIATED WITH SUBSTITUTED EQUIPMENT, INCLUDING STRUCTURAL AND ELECTRICAL CHANGES, MAINTENANCE ACCESS, CLEARANCES, BUILDING ALTERATIONS, PIPING, SHEET METAL, REPLACEMENT OF OTHER SYSTEM COMPONENTS, ETC.</small>		
BY SDaley		DATE 4/11/2022

Submittal and/or Shop Drawing(s) complies with the requirements of the Contract Document and has been reviewed, Checked and verified with respect to manufacturer, product and dimensions, and information contained within has been coordinated with other parts of the work	
APPROVED	X
MAKE CORRECTIONS NOTED	
AMEND & RESUBMIT	
REJECTED SEE REMARKS	
SEE NOTES AND OR COMMENTS	
RANDOLPH & SON BUILDERS, INC.	
Date: 04/07/2022	By: KUH
Div: 23 Scope: Air Terminal Units	

Date	March 22, 2022
Hoffman & Hoffman Order #	125.351.11113
Branch Office	Charlotte, NC
Salesman	Spencer Jones



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PROJECT: EE Waddell HS Renovations
Charlotte, NC

CONTRACTOR: Action Mechanical
Charlotte, NC

ENGINEER: Optima Engineering
Charlotte, NC

EQUIPMENT: VAV Terminal Unit by Price

General Notes: *Above per the attached data and cut sheets*

- 1) VAV units provided with 115-24v controls transformer, airflow sensor, toggle disconnect switch, NEMA-1 controls enclosure, internal insulation, standalone factory mounted controls
- 2) All sizes, quantities, performance, and handings to be verified
- 3) Control transformer voltage to be confirmed
- 4) We don't include any controls, sensors, access doors, valves, circuit setters, piping packages, piping, isolators, hanging hardware, power or control wiring
- 5) Control sequence to be verified

FOR APPROVAL

HOFFMAN & HOFFMAN, INC.

HVAC Manufacturers Representative

Website: www.hoffman-hoffman.com

<p>Asheville, NC (828) 252-5782</p> <p>Charlotte, NC (704) 364-4700</p> <p>Raleigh, NC (919) 781-8011</p> <p>Wilmington, NC (910) 791-4775</p> <p>Chattanooga, TN (423) 693-2890</p> <p>Knoxville, TN (865) 450-9770</p> <p>Corporate: Greensboro, NC (336) 292-8777</p>	<p>Charleston, SC (843) 884-3201</p> <p>Columbia, SC (803) 765-9360</p> <p>Greenville, SC (864) 676-1888</p> <p>Chesapeake, VA (757) 548-1700</p> <p>Richmond, VA (804) 272-1500</p> <p>Roanoke, VA (540) 725-8701</p>
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We have exercised care in the preparation of this submittal. We believe it satisfies our interpretation of the designer's intent and scope. It contains the list of materials, quantities, sizes, style and the finish as we propose to furnish for this job. Please examine and check carefully that all items are exactly as required and that our interpretation of the applicable plans and/or specifications are consistent with the design. Approval by the engineer and purchaser will be required before release of this equipment for production. If any discrepancies are discovered, please notify us as soon as possible.



**All-In-One
Terminals**

Entered By Danna Patrick
Rep Job No
Location
Customer

Contractor
Engineer
Sales Person
Units Imperial

Tag	3.10
Model	SDV
Unit Size	10
Max Primary (CFM)	1250
Min Primary (CFM)	320
Reheat (CFM)	630
Differential PD (in. w.g.)	0.12
Min Oper PD (in. w.g.)	0.64
EAT (°F)	55.00
Max Coil APD (in. w.g.)	0.63
LAT (°F)	85.90
WC Capacity (MBH)	21.00
Fluid Flow (GPM)	0.62
FPD (ft. w.g.)	0.11
EWT (°F)	180.00
LWT (°F)	110.80
Rows	2L
Max Dis NC	--
Max Rad NC	--
Fluid Type	WTR
Weight (lbs)	29

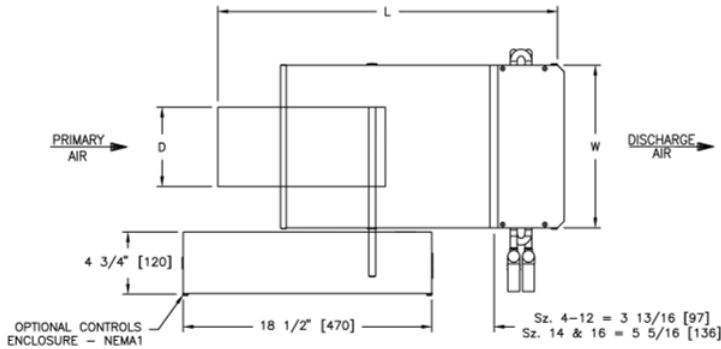


Performance Notes

Date Printed: 3/21/2022

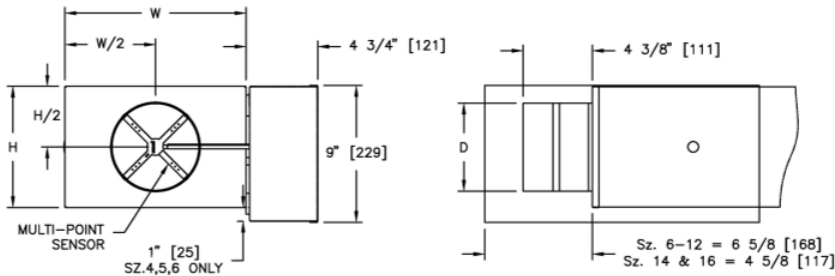
1. Dashes (--) indicate NC values less than 20.
2. NC values are calculated based on procedures outlined in AHRI Standard 885-2008, "A Procedure for Estimating Occupied Space Sound Levels in the Application of Air Terminals and Air Outlets."
3. Sound power levels are given in decibels (dB).
4. Dashes (--) indicate sound power levels below 36-29-26-22-19-17 for each octave band; values below these sound power levels are considered below significance per AHRI 880.
5. Minimum operating pressure is the minimum static pressure required to operate the terminal item assembly at maximum primary flow with a wide open damper.
6. Airflow is given in cubic feet per minute (cfm).
7. Air pressure drop is given in inches water gauge (in. w.g.), and water pressure drop is given in feet of water gauge (ft. w.g.).
8. NC values are derived from sound power levels obtained in accordance with ASHRAE Standard 130-2016 and AHRI Standard 880-2017, which include duct end reflection corrections.
9. Water coil performance is rated and certified in accordance with the latest edition of AHRI Standard 410.

SDV Single Duct w/ Hot Water Coil



Unit Size	Casing Size	Max CFM	Inlet		Casing		Length
			D	E	W	H	L
10	10	1800 CFM	9 7/8	N/A	14	12 1/2	25 1/8

Controls Type



- Multi-point, center averaging airflow sensor.
- For left hand controls, unit orientation is mirrored from main image.
- Controls are supplied and factory mounted by Price.
- Price thermostat factory supplied and field mounted.
- DSW - Disconnect switch included.
- 115-24V control transformer included.
- PS - Nema 1 controls enclosure included.
- Pressure independent

PROJECT: EE Waddell HS Renovations

ENGINEER:

DESCRIPTION: Single Duct Variable Volume

SDV-1-1//10/EHP//CFM/CLH/FG50//22GA/PS/WC/2L//0.00//0.0//320/1250/210/630/630/AD/4x6//115-24V/DSW//DIG/PIC-SD/L CD/F/NETc35//PRB//60Hz//1815

SUBMITTAL NO: 269757-B

CUSTOMER:

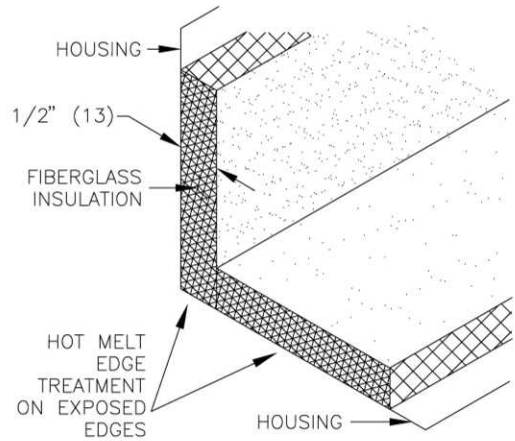
SUBMITTAL DATE: 3/21/2022

Notes

- 22 Gauge zinc coated steel housing. Mechanically sealed, leak resistant construction.
- Rectangular discharge opening with slip and drive cleat duct connection.
- Assembly ETL certified to UL873.
- Damper blade constructed of two layers of galvanized steel with a sandwiched peripheral gasket.
- 1/2" (13) diameter zinc coated damper shaft with position indicator.
- Units not to be used for temporary heat or ventilation during construction.
- AD - Bottom access door with screws.

Insulation: FG50

- Internal Insulation – Fiberglass 1/2" (13mm) thick, 1.75 lb/cu.ft density, meets requirements of NFPA90A and UL 181.
- R-Value=2.1



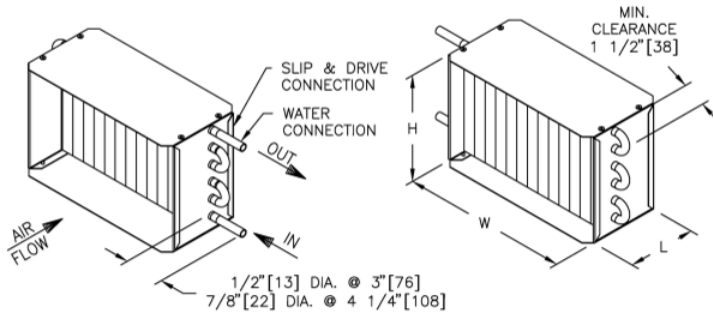
PROJECT: EE Waddell HS Renovations
ENGINEER:
DESCRIPTION: Single Duct Variable Volume
 SDV-1-1-1-10/EHP-1/CFM/CLH/FG50-22GA/PS/WC/2L-0.00-0.0-0.0-320/1250/210/630/630/AD/4x6-115-24V/DSW-DIG/PIC-SD/L
 CD/F/NETc35-PRB-60Hz-1815

SUBMITTAL NO: 269757-B
CUSTOMER:

SUBMITTAL DATE: 3/21/2022

Water Coil: 2L

2 Row Left Hand



Unit Size	Coil Rows	W	H	L	Coil Connection
10	2	14	12 1/2	5	7/8

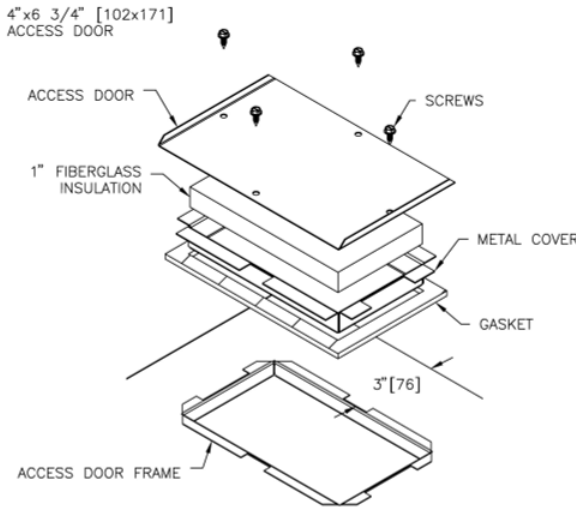
*Hand of water coil connections is determined when viewed from air inlet side.

Water Coil Notes

- Fabricated from 22 gauge galvanized steel. Mechanically sealed, leak resistant construction.
- Hot water coils have copper tubes and aluminum fins with O.D. sweat connections.
- Refer to submitted terminal unit schedule for air volumes and reheat coil capacities.
- Method of venting reheat coil is to be provided by installing contractor.
- Water coil handing matches unit handing.
- Configuration of coil connection varies with size & rows of coil.
- Water coil performance rated and certified in accordance with the current edition of AHRI standard 410.
- Standard coils supplied with 10 fins per inch.

Access Door: AD

Insulated Access Door c/w Screws



PROJECT: EE Waddell HS Renovations

ENGINEER:

DESCRIPTION: Single Duct Variable Volume

SDV-1-1-1/10/EHP//CFM/CLH/FG50//22GA/PS/WC/2L//0.00//0.0//320/1250/210/630/630/AD/4x6//115-24V/DSW//DIG/PIC-SD/L CD/F/NETc35//PRB//60Hz//1815

SUBMITTAL NO: 269757-B

CUSTOMER:

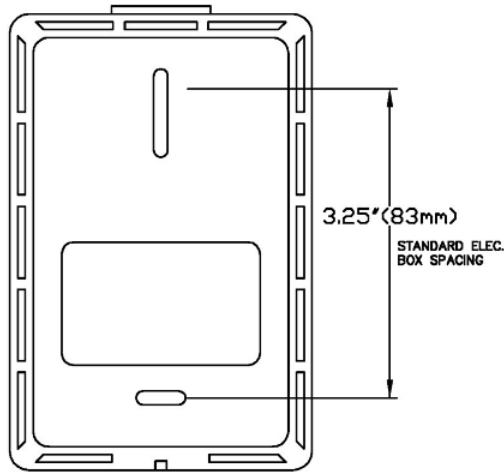
SUBMITTAL DATE: 3/21/2022

Thermostat: LCD

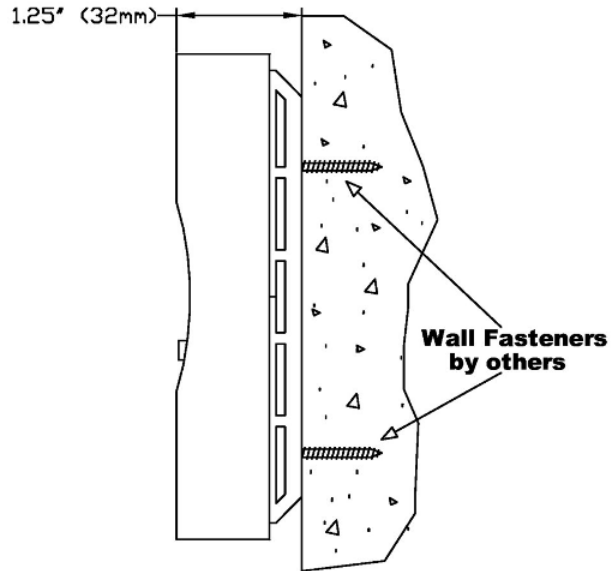
LCD Thermostat

**Price LCD Thermostat
PT# 250052-100**

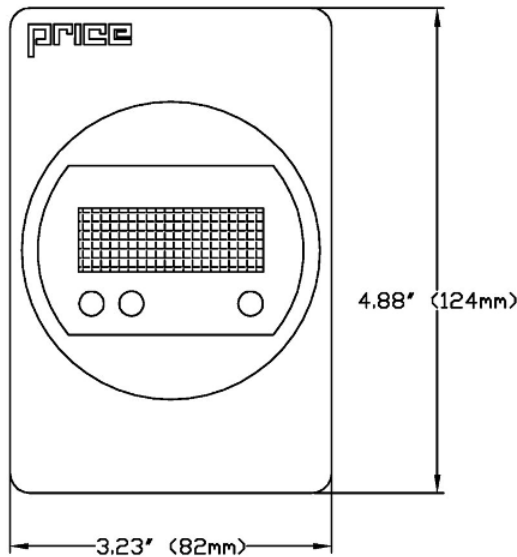
Backplate - Rear View



Surface Mount Detail



Face View



SPECIFICATIONS:

POWER REQUIREMENTS:

- POWER IS SUPPLIED FROM THE MAIN CONTROLLER (PIC, PRODIGY, ETC.)

COMMUNICATION PORT:

- RJ-45 CONNECTION TO THE MAIN CONTROLLER
- RJ-12 CONNECTION TO THE PRICE USB LINKER SETUP TOOL

FEATURES:

- ROOM TEMPERATURE IS MEASURED BY AN INTERNAL 10K TYPE J THERMISTOR WITH AN ACCURACY OF +/- 0.5°F FROM 55°F TO 85°F (+/- 0.25°C FROM 13°C TO 25°C)
- LCD SCREEN WITH COOL-BLUE BACKLIGHT
- PUSH BUTTON SETPOINT ADJUSTMENT
- SYSTEM SETUP AND BALANCING DIRECTLY FROM THERMOSTAT

PROJECT: EE Waddell HS Renovations

ENGINEER:

DESCRIPTION: Single Duct Variable Volume

SDV-1-1//10/EHP//CFM/CLH/FG50//22GA/PS/WC/2L//0.00//0.0//0.0//320/1250/210/630/630/AD/4x6//115-24V/DSW//DIG/PIC-SD/L CD/F/NETc35//PRB//60Hz//1815

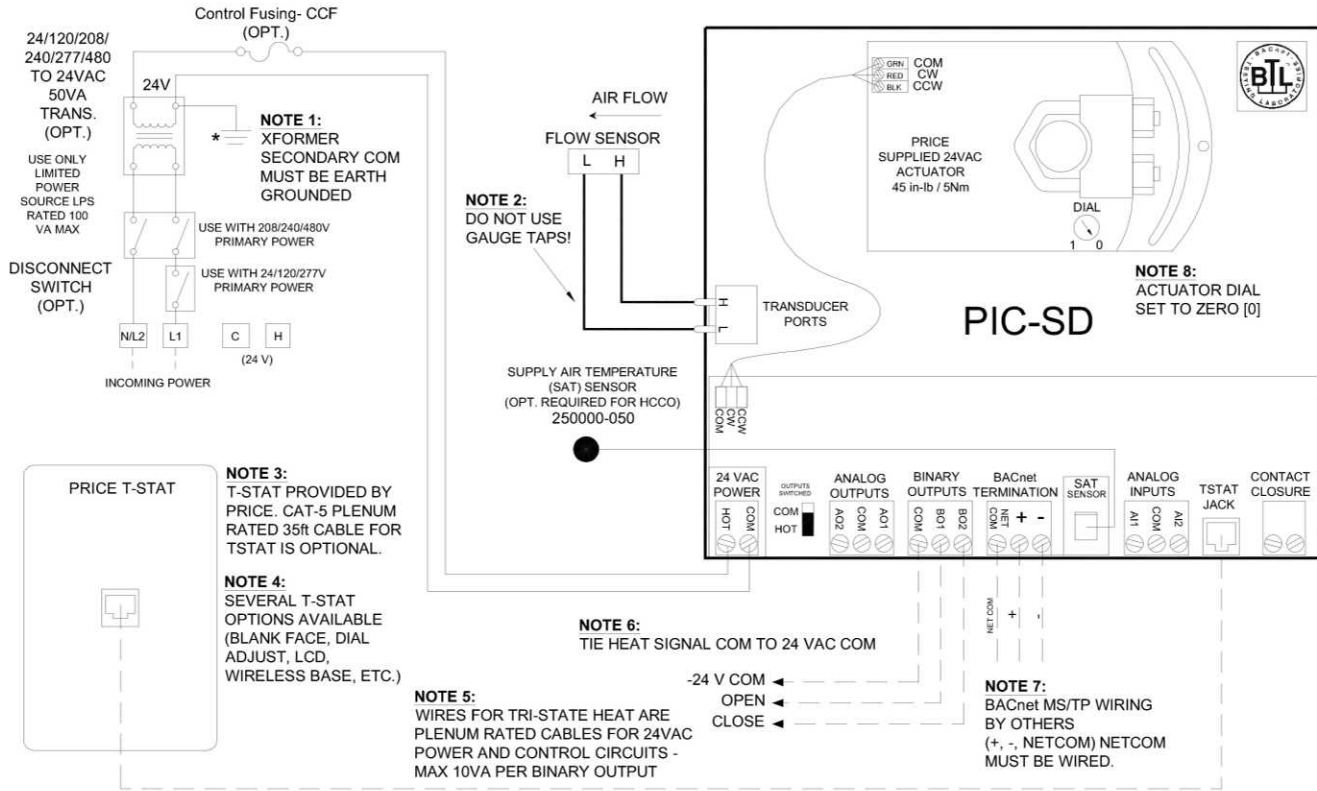
SUBMITTAL NO: 269757-B

CUSTOMER:

SUBMITTAL DATE: 3/21/2022

Control Sequence 1815

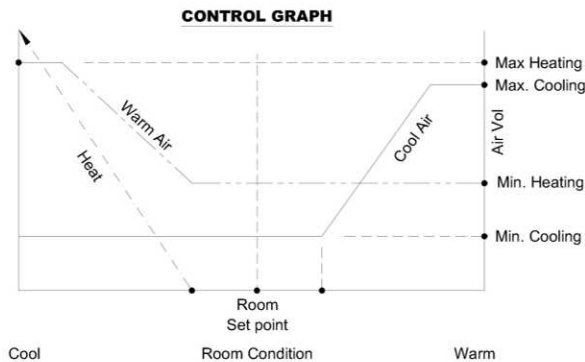
PIC-SD - Pressure Independent Heat/Cool Changeover or Cooling Only, With Tri-State Modulating Hot Water Reheat, Field Wired



LEGEND

- FACTORY FLOW SENSOR TUBING
- FACTORY ELECTRICAL WIRING
- FIELD ELECTRICAL WIRING

Calibration note: Suitable min and max heating flows must be selected in order to maintain flow through energized electric coils of at least 200 fpm and at least 70 cfm/kW throughout the entire operating range.



Sequence of Operation (PIC-SD) -- Heat/cool changeover OR Cooling with Tri-State Modulating HW Reheat - Pressure Independent

On power up the damper will calibrate closed for 2 minutes.
 If no SAT sensor is present, the controller assumes Cool supply air at all times

Cool supply air: On an increase in space temperature the controller regulates the actuator to open the VAV damper and increase the flow of cool air. On an increase of space temperature greater than the cooling proportional band, the airflow is maintained at its pre-selected maximum setting.
 On a decrease in space temperature the controller regulates the actuator to close the VAV damper and reduce the flow of cool air. If the space temperature decreases to less than the cooling proportional band, the airflow is maintained at the pre-selected minimum setting.

Warm supply air: On a decrease in space temperature the controller regulates the actuator to open the VAV damper and increase the flow of warm air. On a decrease of space temperature greater than the heating proportional band, the airflow is maintained at its pre-selected maximum setting.
 On an increase in space temperature the controller regulates the actuator to close the VAV damper and reduce the flow of warm air. If the space temperature increases above the heating proportional band, the airflow is maintained at the pre-selected minimum setting.

Reheat Operation: On a decrease in space temperature, the heating valve is modulated to increase heat proportionally to the room demand.

PROJECT: EE Waddell HS Renovations

ENGINEER:

DESCRIPTION: Single Duct Variable Volume

SDV-1-1///10/EHP///CFM/CLH/FG50//22GA/PS/WC/2L///0.00//////////0.0//////////320/1250/210/630/630/AD/4x6///115-24V/DSW/////////DIG/PIC-SD/L CD/F/NETc35//PRB//60Hz////////1815

SUBMITTAL NO: 269757-B

CUSTOMER:

SUBMITTAL DATE: 3/21/2022

Price Industries warrants and guarantees for a period limited to one (1) year from date of shipment that the products manufactured by Price Industries are manufactured in accordance with Price Industries' published catalog specifications and of specified material. Terminal units will be 18 months from date of shipment.

Since product improvement is a continuing endeavor at Price Industries, catalog specifications are subject to change without notice. Price Industries shall provide the representative with current specifications.

In the event the goods supplied do not comply with published catalog specifications and/or material quality standards within the warranty period, Price Industries will either repair the goods supplied or provide free replacement of such goods from their factory. This decision is made at the discretion of Price Industries. In either case, Price Industries will not be responsible for labor and freight charges incurred in replacing goods, nor will they be responsible for incidental, consequential or punitive damages.

In the event Price Industries elects to repair the goods supplied, the representative will assist by providing Price Industries with all details of the problem and a written quotation for the costs of such work to be carried out. If the repair is authorized by Price Industries, then the representative will assist by coordinating and supervising the repair work.

Price Industries makes no warranty whatsoever with respect to components or items supplied which may be warranted separately by their manufacturer. Price Industries does not warrant factory mounted controls and components supplied and owned by a third party for mounting by Price. Backcharges to Price Industries for equipment under warranty by others will only be accepted if prior written approval is given by Price Industries.

The warranties and liabilities set forth in the prior paragraphs are the only warranties or liabilities of Price Industries, and are in lieu of all other warranties and liabilities, express or implied, whether arising from contract or negligence, in law or in fact; Price Industries makes no warranties of merchantability or fitness for particular purpose or use.

The foregoing warranty shall not take effect unless the representative shall inform Price Industries in writing of any flaw, defect or deficiency in the product promptly after such flaw, defect or deficiency becomes apparent and, in any case, within one year from date of shipment.

The representative will be responsible for notifying its clients of this policy. Unauthorized repair by others of equipment claimed to be defective will void the warranty and/or guarantee of Price Industries.

Warranty - Replacement HE, HEPA, and ULPA Filters Introduction Replaceable HE, HEPA, and ULPA media filters used in Price's cleanroom product families are extremely delicate. Any contact with the filter media either by hands or object can easily cause the filter to fail the installed leakage qualification testing. Specific installation instructions must be followed to prevent damaging the filter media.

Replacement Policy:

Shipping Damage:

Visible: Prior to installation, a freight claim should be immediately initiated by the customer should there be any visible damage noticed to the filter packaging and the filters in their packaging.

Concealed: If there is visible damage to filters when removed from their packaging according to the product manufacturer's instructions, a freight claim should be filed with the carrier. A claim for concealed damage **MUST** be initiated within 15 days of receiving the material.

Filter Damage After Installation or Filters Failing Leak Qualification Testing:

Due to the delicate nature of these filters, Price will not replace filters under warranty that have been installed and are reported to have damage or failing through the filter media. 100% of filters are tested by the filter supplier and certified as passing their leakage test.

This policy matches our filter suppliers policy for filter warranty. Price is not able to claim back for any filters with damage to the filter face.