SHOP DRAWING REVIEW

One University Place
8801 J.M. Keynes Drive, Suite 240
Charlotte, North Carolina 28262
Phone 704-376-7072
www.cmta.com

PROJECT:	Mooresville Selma Burke MS (Louisville VMGS20)
PROJECT NO:	221.083
SUBMITTAL:	233600-1.0 OA VAV Terminal Boxes PD
DATE RECEIVED:	January 26, 2022

Engineer's review is for conformance with the general design concept and for general arrangement only. Review and approval shall not be construed to mean that the engineer accepts the detail calculations and dimensions shown in the submittal or any deviation from the requirements of the contract documents. Contractor is responsible for errors or omissions in the submittal; for meeting all requirements of the contract documents; for confirming and correlating job site dimensions; for information that pertains solely to fabrication processes or to techniques of construction; and for the coordination of his work with all other trades.

DISPOSITION LEGEND

EI **EXCEPTIONS INDICATED – RESUBMISSION NOT REQUIRED**
Fabrications may proceed as per notations. If Contractor cannot comply with notation, resubmit item. Otherwise, resubmission is not required. Changes to contract or contract sum are not authorized.

Reviewer: Nick Rogers **Date: 02/08/2022**

ITEM - DISPOSITION; COMMENT(S):

1. *Confirm sizes and quantities prior to ordering.*
2. *Confirm left and right-hand controls access required for proper access to unit through ceiling grid.*

END OF SHOP DRAWING REVIEW

Submittal Transmittal

LS3P | 227 West Trade Street Suite 700 Charlotte NC 28202 United States

PROJECT:	MGSD Middle School 9201-201600	DATE SENT:	1/26/2022
		RETURN BY:	2/2/2022
SUBJECT:	OA Variable Air Volume Terminal Boxes - PD	SUBMITTAL ID:	233600-1-0
TYPE:	Submittal	TRANSMITTAL ID:	00428
PURPOSE:	For Review and Comment	VIA:	Info Exchange
SPEC SECTION:	233600		

FROM

NAME	COMPANY	EMAIL	PHONE
Jacquelyn Satterwhite	LS3P	JacquelynSatterwhite@ls3p.com	704-333-6686

TO

NAME	COMPANY	EMAIL	PHONE
Heather Maness	CMTA	cltsupport@cmta.com	704-376-7072
Scott Willard	CMTA	Swillard@cmta.com	502-326-3085

REMARKS:

NOTE: Received 2 files from Procore at 09:19 AM EST on 01/24/2022. Any changes made to the Submittal in Procore after this time are not shown in Newforma.

Procore Due Date:
02/08/2022

General Description:
Product data for all products that apply.

Workflow Comments:

DESCRIPTION OF CONTENTS

QTY	DATED	TITLE	NUMBER	NOTES
1	1/24/2022	23 36 00 - 1-OA Variable Air Volume Terminal Boxes-PD-REV.pdf		
1	1/24/2022	233600-1-0 - Submittal Form.pdf		

BARNHILL CONTRACTING COMPANY

Submittal #233600-1.0 233600 - OA VARIABLE AIR VOLUME TERMINAL BOXES

Barnhill Contracting Company
706 Main Ave. NW
Hickory, North Carolina 28601
Phone: (828) 330-7126

Project: 15000420 - SELMA BURKE MIDDLE SCHOOL
235 Rinehardt Road
Mooresville , North Carolina 28115

233600 : OA Variable Air Volume Terminal Boxes - Product Data

SPEC SECTION:	233600 - OA VARIABLE AIR VOLUME TERMINAL BOXES	**SUBMITTAL MANAGER:**	Logan Ridenhour **(BARNHILL CONTRACTING COMPANY)**
STATUS:	Open	**DATE CREATED:**	11/18/2021
ISSUE DATE:		**REVISION:**	0
RESPONSIBLE CONTRACTOR:	ACTION MECHANICAL CONTRACTORS	**RECEIVED FROM:**	
RECEIVED DATE:		**SUBMIT BY:**	01/11/2022
FINAL DUE DATE:	02/8/2022	**LOCATION:**	
SUB JOB:		**COST CODE:**	
APPROVERS:	Logan Ridenhour **(BARNHILL CONTRACTING COMPANY)**, Michael Gaffney **(LS3P ASSOCIATES, LTD)**, Jacquelyn Satterwhite **(LS3P ASSOCIATES, LTD)**		

BALL IN COURT:
Michael Gaffney **(LS3P ASSOCIATES, LTD)**, Jacquelyn Satterwhite **(LS3P ASSOCIATES, LTD)**

DISTRIBUTION:

DESCRIPTION:
Product data for all products that apply.

ATTACHMENTS:

Subcontractor warrants the following:

a. We have personally investigated the proposed product and determined that it is equal in all respects to that specified and/or performance specification requirements.
b. We will provide the specified guarantee for this product.
c. We will coordinate installation of this product into the work, making such changes as may be required for the work to be complete in all aspects.
d. We have clearly indicated by marking as "Non-Complying Feature" each and every requirement of the specifications that this product does not meet.
e. And, we waive all claims for additional costs related to this product which subsequently become apparent.

SUBMITTAL WORKFLOW

NAME	SUBMITTER/ APPROVER	SENT DATE	DUE DATE	RETURNED DATE	RESPONSE	ATTACHMENTS	COMMENTS
Commie Pendergrass	Submitter		1/11/2022	1/18/2022	Submitted	23 36 00 - OA VAV Terminal Boxes Submittal.pdf	
Logan Ridenhour	Approver	1/18/2022	1/24/2022	1/24/2022	Approved	23 36 00 - 1-OA Variable Air Volume Terminal Boxes-PD-REV.pdf	
Michael Gaffney	Approver	1/24/2022	2/8/2022		Pending		
Jacquelyn Satterwhite	Approver	1/24/2022	2/8/2022		Pending		

BY **DATE** **COPIES TO**

BARNHILL CONTRACTING COMPANY

SELMA BURKE MIDDLE SCHOOL

SUBMITTAL COVER SHEET

RESPONSIBLE SUBCONTRACTOR:	Action Mechanical		
DATE SENT:	1/24/2022	**JOB NUMBER:**	15000420
DUE DATE:	2/08/2022	**LOCATION:**	235 Rinehardt Road, Mooresville, NC 2

SPEC SECTION	NO.	SUBMITTAL DESCRIPTION	TYPE
23 36 00	1	OA Variable Air Volume Terminal Boxes	☑ PRODUCT DATA ☐ SHOP DRAWINGS ☐ SAMPLES ☐

BARNHILL CONTRACTING COMPANY REVIEW

This review is for general conformance with the contract documents only. Any deviations from same not clearly noted by the Trade Contractor have not been reviewed. The Trade Contractor is responsible for confirming and correlating all dimensions at job site for tolerances, clearances, quantities, fabrication process and techniques of construction. This review does not relieve the Trade Contractor of contractual responsibility for any error or deviation from the Contract Documents.

RESPONSIBLE PARTIES

☑	LS3P - ARCHITECTURAL	☐	CMTA - FIRE PROTECTION
☐	CMTA - PLUMBING	☐	ARP - STRUCTURAL ENGINEERS
☐	CMTA - ELECTRICAL	☐	
☐	CMTA - MECHANICAL	☐	

MARKUP COLOR	MARKUP COLOR	MARKUP COLOR
RED		

BARNHILL

☒ APPROVED
☐ APPROVED AS NOTED
☐ FOR INFORMATION ONLY
☐ REVISE AND RESUBMIT
☐ REJECTED
☐ REVIEWED

REVIEWED BY: Logan Ridenhour

Logan Ridenhour

DATE: 1/24/2022

Barnhill Contracting Company is not responsible for any discrepancy between this submittal and the Contract Documents, nor for any dimension or quantity errors. Review of this submittal does not relieve the Subcontractor or Material Suppliers of their responsibility to comply with the Contract Documents.

CONTRACTOR COMMENTS	ARCHITECT COMMENTS	ENGINEER COMMENTS

Selma Burke Middle School

SUBMITTAL DATA

Date: January 18, 2022

Item: OA Variable Air Volume Terminal Boxes

Specification #: 23 36 00

AMCI Submittal#: M-16

Contractor:

Action Mechanical Contractors, Inc.
3228 Nevada Blvd
Charlotte, NC 28273
Phone: (704) 587-4450
Fax: (704) 587-4451

This submittal has been reviewed and appears to be in compliance with the specifications, unless otherwise noted.

Signed: _____
Commie L. Pendergrass
Project Manager

Owner: Mooresville Graded School District
Mooresville, NC

Architect: LS3P Associates
227 W. Trade St; Suite 700
Charlotte, NC 28202

Construction Mgr: Barnhill Contracting Co.
706 Main Ave NW
Hickory, NC 28601

~~Subcontractor~~/Supplier: Hoffman & Hoffman, Inc.

Manufacturer: Price Industries

Comments/Notes:

Date	**January 17, 2022**
Hoffman & Hoffman Order #	**125.351.11082**
Branch Office	**Charlotte, NC**
Salesman	**Spencer Jones**

SUBMITTAL

PROJECT: **Selma Burke Middle School**
Mooresville, NC

CONTRACTOR: **Action Mechanical**
Charlotte, NC

ENGINEER: **CMTA**
Prospect, KY

EQUIPMENT: **VAV Terminal Units by Price**

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

1) Single duct terminal units provided with internal 1" foil faced insulation, access door w/ screws, and 115-24v controls transformer

2) All sizes, quantities and handings must be verified

3) Transformer voltage to be confirmed

4) Controls to be provided by other and factory mounted

FOR APPROVAL

HOFFMAN & HOFFMAN, INC.

HVAC Manufacturers Representative

Website: **www.hoffman-hoffman.com**

Asheville, NC	**(828) 252-5782**	**Charleston, SC**	**(843) 884-3201**
Charlotte, NC	**(704) 364-4700**	**Columbia, SC**	**(803) 765-9360**
Raleigh, NC	**(919) 781-8011**	**Greenville, SC**	**(864) 676-1888**
Wilmington, NC	**(910) 791-4775**	**Chesapeake, VA**	**(757) 548-1700**
Chattanooga, TN	**(423) 693-2890**	**Richmond, VA**	**(804) 272-1500**
Knoxville, TN	**(865) 450-9770**	**Roanoke, VA**	**(540) 725-8701**

Corporate: Greensboro, NC (336) 292-8777

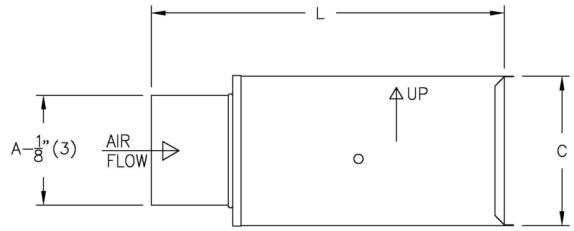
We have exercised care in the preparation of this submittal. We believe it satisfies our interpretation of the designer's intent and scope. It contains the list of materials, quantities, sizes, style and the finish as we propose to furnish for this job. Please examine and check carefully that all items 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.

price

All-In-One
Terminals

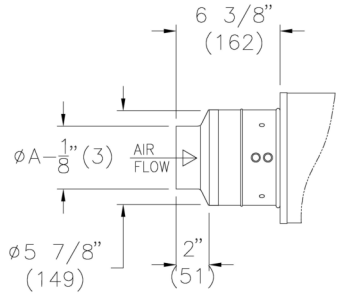
Qty	Model	Tag	Location	Inlet Dia	Handing	Max Primary (CFM)	Min Primary (CFM)	Dis. H (in)	Dis. W (in)	Terminal Liner	Transformer	Access Door	Weight (lbs)
1	SDV5	OAV-05	OA1-1	5	Left	200	60	8.00	12.00	FB1	115-24v	Door w/ Screws	13
1	SDV5	OAV-05	OA1-10	5	Left	200	60	8.00	12.00	FB1	115-24v	Door w/ Screws	13
1	SDV5	OAV-05	OA1-2	5	Left	200	60	8.00	12.00	FB1	115-24v	Door w/ Screws	13
1	SDV5	OAV-05	OB1-6A	5	Right	200	60	8.00	12.00	FB1	115-24v	Door w/ Screws	13
1	SDV5	OAV-05	OB1-6B	5	Left	200	60	8.00	12.00	FB1	115-24v	Door w/ Screws	13
1	SDV5	OAV-05	OB1-6B	5	Right	200	60	8.00	12.00	FB1	115-24v	Door w/ Screws	13
1	SDV5	OAV-05	OC1-1	5	Left	200	60	8.00	12.00	FB1	115-24v	Door w/ Screws	13
1	SDV5	OAV-05	OC1-5	5	Right	200	60	8.00	12.00	FB1	115-24v	Door w/ Screws	13
1	SDV5	OAV-05	OC1-6	5	Left	200	60	8.00	12.00	FB1	115-24v	Door w/ Screws	13
1	SDV5	OAV-05	OC2-2	5	Left	200	60	8.00	12.00	FB1	115-24v	Door w/ Screws	13
1	SDV5	OAV-05	OC2-5	5	Right	200	60	8.00	12.00	FB1	115-24v	Door w/ Screws	13
1	SDV5	OAV-05	OC2-9	5	Right	200	60	8.00	12.00	FB1	115-24v	Door w/ Screws	13
1	SDV5	OAV-05	OE1-3	5	Right	200	60	8.00	12.00	FB1	115-24v	Door w/ Screws	13
1	SDV5	OAV-06	OC1-6	6	Left	360	65	8.00	12.00	FB1	115-24v	Door w/ Screws	12
1	SDV5	OAV-06	OD1-2	6	Right	360	65	8.00	12.00	FB1	115-24v	Door w/ Screws	12
1	SDV5	OAV-08	OA1-11	8	Left	700	125	10.00	12.00	FB1	115-24v	Door w/ Screws	15
1	SDV5	OAV-08	OA1-13	8	Right	700	125	10.00	12.00	FB1	115-24v	Door w/ Screws	15
1	SDV5	OAV-08	OA1-5	8	Left	700	125	10.00	12.00	FB1	115-24v	Door w/ Screws	15
1	SDV5	OAV-08	OA1-9	8	Left	700	125	10.00	12.00	FB1	115-24v	Door w/ Screws	15
1	SDV5	OAV-08	OB1-1A	8	Left	700	125	10.00	12.00	FB1	115-24v	Door w/ Screws	15
1	SDV5	OAV-08	OB1-1B	8	Left	700	125	10.00	12.00	FB1	115-24v	Door w/ Screws	15
1	SDV5	OAV-08	OB1-2A	8	Right	700	125	10.00	12.00	FB1	115-24v	Door w/ Screws	15
1	SDV5	OAV-08	OB1-2B	8	Left	700	125	10.00	12.00	FB1	115-24v	Door w/ Screws	15
1	SDV5	OAV-08	OB1-3A	8	Right	700	125	10.00	12.00	FB1	115-24v	Door w/ Screws	15
1	SDV5	OAV-08	OB1-3B	8	Right	700	125	10.00	12.00	FB1	115-24v	Door w/ Screws	15
1	SDV5	OAV-08	OB1-4A	8	Left	700	125	10.00	12.00	FB1	115-24v	Door w/ Screws	15
1	SDV5	OAV-08	OB1-4B	8	Right	700	125	10.00	12.00	FB1	115-24v	Door w/ Screws	15
1	SDV5	OAV-08	OB1-5A	8	Left	700	125	10.00	12.00	FB1	115-24v	Door w/ Screws	15
1	SDV5	OAV-08	OB1-5B	8	Right	700	125	10.00	12.00	FB1	115-24v	Door w/ Screws	15
1	SDV5	OAV-08	OC1-2	8	Left	700	125	10.00	12.00	FB1	115-24v	Door w/ Screws	15
1	SDV5	OAV-08	OC1-3A	8	Right	700	125	10.00	12.00	FB1	115-24v	Door w/ Screws	15
1	SDV5	OAV-08	OC1-3B	8	Left	700	125	10.00	12.00	FB1	115-24v	Door w/ Screws	15
1	SDV5	OAV-08	OC1-4A	8	Right	700	125	10.00	12.00	FB1	115-24v	Door w/ Screws	15
1	SDV5	OAV-08	OC1-4B	8	Left	700	125	10.00	12.00	FB1	115-24v	Door w/ Screws	15
1	SDV5	OAV-08	OC1-7A	8	Left	700	125	10.00	12.00	FB1	115-24v	Door w/ Screws	15
1	SDV5	OAV-08	OC1-7B	8	Right	700	125	10.00	12.00	FB1	115-24v	Door w/ Screws	15
1	SDV5	OAV-08	OC1-8A	8	Left	700	125	10.00	12.00	FB1	115-24v	Door w/ Screws	15
1	SDV5	OAV-08	OC1-8B	8	Right	700	125	10.00	12.00	FB1	115-24v	Door w/ Screws	15
1	SDV5	OAV-08	OC2-1	8	Right	700	125	10.00	12.00	FB1	115-24v	Door w/ Screws	15
1	SDV5	OAV-08	OC2-3A	8	Right	700	125	10.00	12.00	FB1	115-24v	Door w/ Screws	15
1	SDV5	OAV-08	OC2-3B	8	Right	700	125	10.00	12.00	FB1	115-24v	Door w/ Screws	15
1	SDV5	OAV-08	OC2-4A	8	Right	700	125	10.00	12.00	FB1	115-24v	Door w/ Screws	15
1	SDV5	OAV-08	OC2-4B	8	Right	700	125	10.00	12.00	FB1	115-24v	Door w/ Screws	15
1	SDV5	OAV-08	OC2-7A	8	Right	700	125	10.00	12.00	FB1	115-24v	Door w/ Screws	15
1	SDV5	OAV-08	OC2-7B	8	Right	700	125	10.00	12.00	FB1	115-24v	Door w/ Screws	15
1	SDV5	OAV-08	OC2-8A	8	Right	700	125	10.00	12.00	FB1	115-24v	Door w/ Screws	15
1	SDV5	OAV-08	OC2-8B	8	Right	700	125	10.00	12.00	FB1	115-24v	Door w/ Screws	15
1	SDV5	OAV-08	OD1-3	8	Right	700	125	10.00	12.00	FB1	115-24v	Door w/ Screws	15
1	SDV5	OAV-08	OE1-1	8	Left	700	125	10.00	12.00	FB1	115-24v	Door w/ Screws	15
1	SDV5	OAV-08	OE1-2	8	Right	700	125	10.00	12.00	FB1	115-24v	Door w/ Screws	15
1	SDV5	OAV-08	OE1-5	8	Right	700	125	10.00	12.00	FB1	115-24v	Door w/ Screws	15
1	SDV5	OAV-08	OE1-6	8	Right	700	125	10.00	12.00	FB1	115-24v	Door w/ Screws	15
1	SDV5	OAV-08	OE1-7	8	Left	700	125	10.00	12.00	FB1	115-24v	Door w/ Screws	15
1	SDV5	OAV-08	OE1-9	8	Right	700	125	10.00	12.00	FB1	115-24v	Door w/ Screws	15
1	SDV5	OAV-08	OF1-1	8	Left	700	125	10.00	12.00	FB1	115-24v	Door w/ Screws	15
1	SDV5	OAV-08	OF1-2A	8	Right	700	125	10.00	12.00	FB1	115-24v	Door w/ Screws	15
1	SDV5	OAV-08	OF1-2B	8	Left	700	125	10.00	12.00	FB1	115-24v	Door w/ Screws	15
1	SDV5	OAV-08	OF1-3A	8	Left	700	125	10.00	12.00	FB1	115-24v	Door w/ Screws	15
1	SDV5	OAV-08	OF1-3B	8	Right	700	125	10.00	12.00	FB1	115-24v	Door w/ Screws	15
1	SDV5	OAV-08	OF1-4A	8	Left	700	125	10.00	12.00	FB1	115-24v	Door w/ Screws	15
1	SDV5	OAV-08	OF1-4B	8	Right	700	125	10.00	12.00	FB1	115-24v	Door w/ Screws	15
1	SDV5	OAV-10	OD1-1	10	Right	1100	210	12.50	14.00	FB1	115-24v	Door w/ Screws	19
1	SDV5	OAV-12	OA1-12	12	Right	1600	300	15.00	16.00	FB1	115-24v	Door w/ Screws	23
2	SDV5	OAV-16	OD1-4	16	Right	3000	575	18.00	24.00	FB1	115-24v	Door w/ Screws	34
2	SDV5	OAV-16	OE1-8	16	Left	3000	575	18.00	24.00	FB1	115-24v	Door w/ Screws	34

SDV5 Single Duct



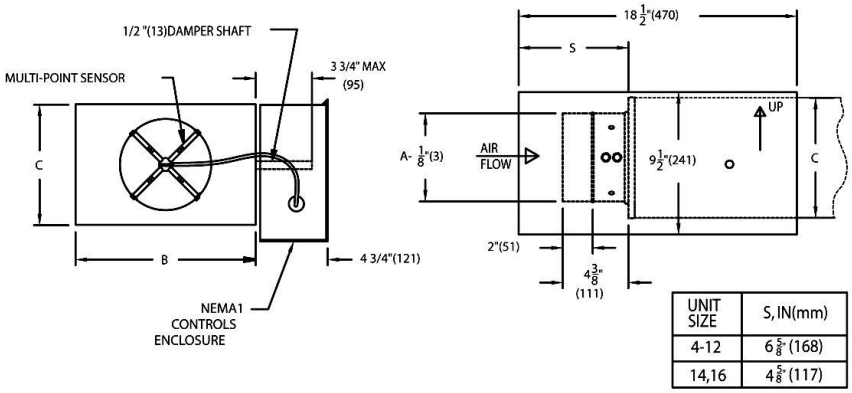
Unit Size	Max Airflow	Outlet		Inlet	Length
		B	C	A	L
5	500	12	8	5	22 1/8
6	550	12	8	6	20 1/8

Inlet Diameter Reducer Detail



Size 4 and 5 have a 6" diameter duct with inlet reducer as shown

Digital Controls



UNIT SIZE	S, IN(mm)
4-12	6 5/8"(168)
14,16	4 5/8"(117)

- Controls are factory mounted, supplied by controls contractor
- Controls Enclosure will be supplied as illustrated on right hand side unless specified otherwise
- Control assembly will be supplied on left hand side (right hand shown)
- NEMA 1 controls enclosure, Assembly ETL certified to UL873
- 115-24v Control Transformer supplied
- Multi-point Primary Airflow Sensor supplied by Price

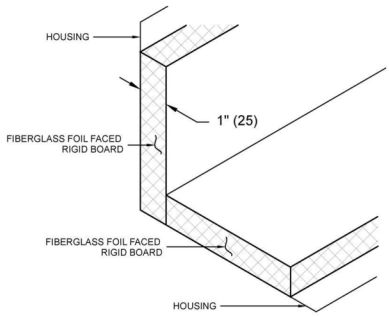
Notes

- 22 Ga. zinc coated steel housing. Mechanically sealed and gasketed, leak resistant construction
- Rectangular discharge opening with slip and drive cleat duct connection

AHRI CERTIFIED™ www.ahridirectory.org
VAV Terminals
AHRI Standard 880

Liner FB1

Internal Insulation - Foil Faced Rigid Fiberglass Board 1"(25mm) thick, min. 4 lb/cu.ft density, meets requirements of NFPA90A and UL 181.
R-Value = 4.16



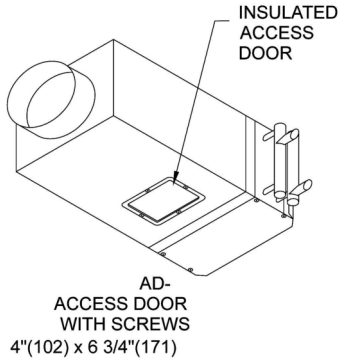
PROJECT: Selma Burke Middle School
ENGINEER:
SUBMITTAL NO: 258148-M
CUSTOMER:
SUBMITTAL DATE: 1/17/2022
DESCRIPTION: Single Duct - DDC By Others
SDV5//I/2001/5,6/FAC/CFM/115-24V//0.0/////////////FB1//PS/CLH/AD/////////////////////

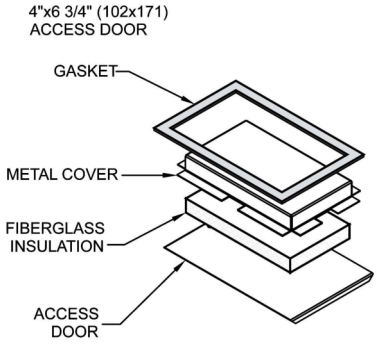
All metric dimensions () are soft converted. Imperial dimensions are converted to metric and rounded to the nearest millimeter.
Information within this document is subject to change without notice.

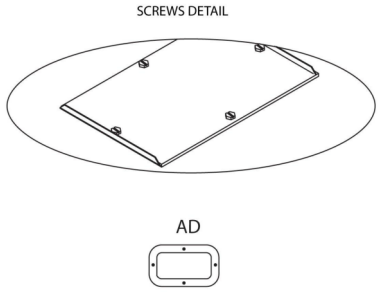
Access Door

AD

Insulated Access Door fastened with screws







PROJECT: Selma Burke Middle School
SUBMITTAL NO: 258148-M
SUBMITTAL DATE: 1/17/2022
ENGINEER:
CUSTOMER:
DESCRIPTION: Single Duct - DDC By Others
SDV5//I/2001/5,6/FAC/CFM/115-24V//0.0//////////FB1//PS/CLH/AD//////////////////////

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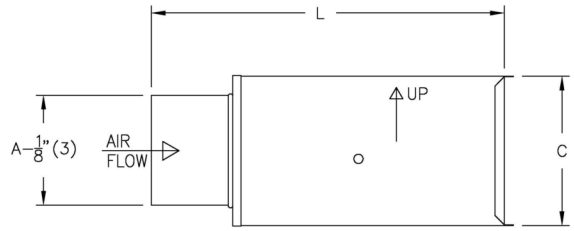
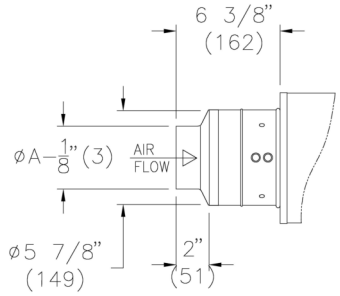
SDV5 Single Duct



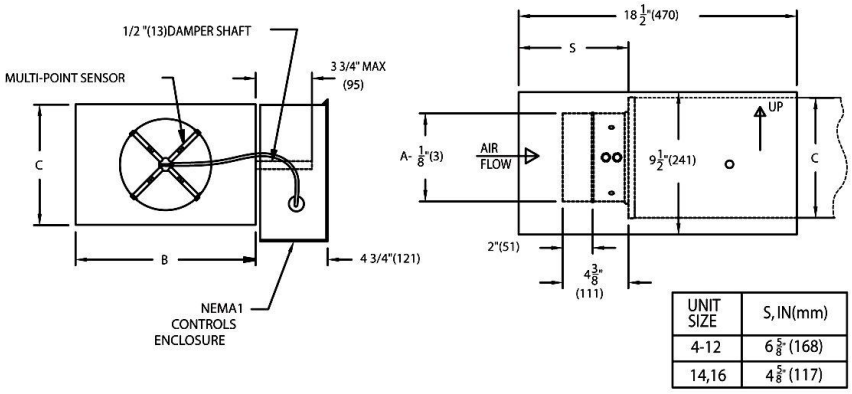
Unit Size	Max Airflow	Outlet		Inlet	Length
		B	C	A	L
5	500	12	8	5	22 1/8
6	550	12	8	6	20 1/8

Inlet Diameter Reducer Detail



Size 4 and 5 have a 6" diameter duct with inlet reducer as shown

Digital Controls



UNIT SIZE	S, IN(mm)
4-12	6 5/8"(168)
14,16	4 5/8"(117)

- Controls are factory mounted, supplied by controls contractor
- Controls Enclosure will be supplied as illustrated on right hand side unless specified otherwise
- NEMA 1 controls enclosure, Assembly ETL certified to UL873
- 115-24v Control Transformer supplied
- Multi-point Primary Airflow Sensor supplied by Price

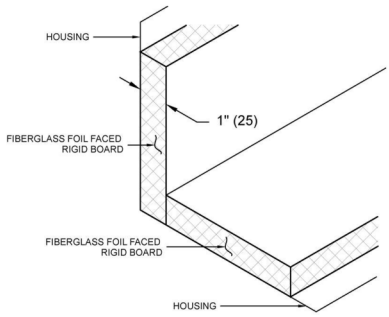
Notes

- 22 Ga. zinc coated steel housing. Mechanically sealed and gasketed, leak resistant construction
- Rectangular discharge opening with slip and drive cleat duct connection

AHRI CERTIFIED™ www.ahridirectory.org
VAV Terminals
AHRI Standard 880

Liner FB1

Internal Insulation - Foil Faced Rigid Fiberglass Board 1"(25mm) thick, min. 4 lb/cu.ft density, meets requirements of NFPA90A and UL 181.
R-Value = 4.16



PROJECT: Selma Burke Middle School
ENGINEER:
DESCRIPTION: Single Duct - DDC By Others
SDV5//I/2001/5,6/FAC/CFM/115-24V//0.0/////////////FB1//PS//AD/////////////////////

SUBMITTAL NO: 258148-M
CUSTOMER:

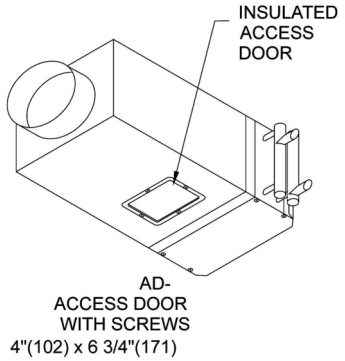
SUBMITTAL DATE: 1/17/2022

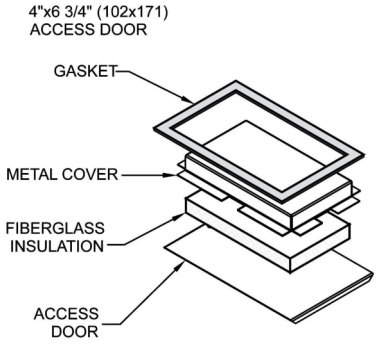
All metric dimensions () are soft converted. Imperial dimensions are converted to metric and rounded to the nearest millimeter.
Information within this document is subject to change without notice.

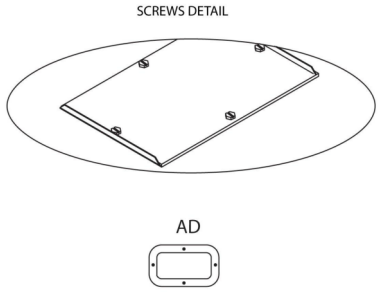
Access Door

AD

Insulated Access Door fastened with screws







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SUBMITTAL NO: 258148-M
SUBMITTAL DATE: 1/17/2022
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DESCRIPTION: Single Duct - DDC By Others
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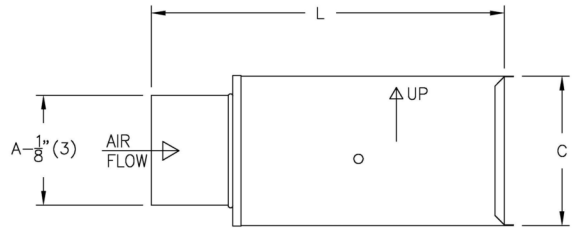
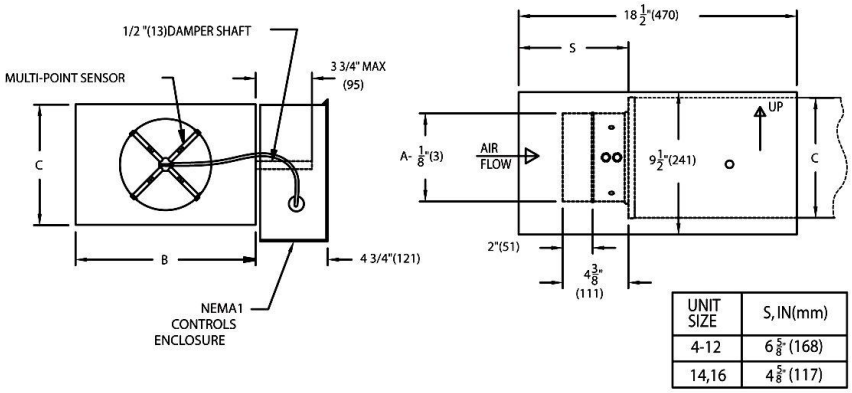
SDV5 Single Duct



Unit Size	Max Airflow	Outlet		Inlet	Length
		B	C	A	L
8	1100	12	10	8	20 1/8
16	5000	24	18	16	23 5/8

Digital Controls



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- Controls are factory mounted, supplied by controls contractor
- Controls Enclosure will be supplied as illustrated on right hand side unless specified otherwise
- Control assembly will be supplied on left hand side (right hand shown)
- NEMA 1 controls enclosure, Assembly ETL certified to UL873
- 115-24v Control Transformer supplied
- Multi-point Primary Airflow Sensor supplied by Price

Notes

- 22 Ga. zinc coated steel housing. Mechanically sealed and gasketed, leak resistant construction
- Rectangular discharge opening with slip and drive cleat duct connection

AHRI CERTIFIED™ www.ahridirectory.org VAV Terminals AHRI Standard 880

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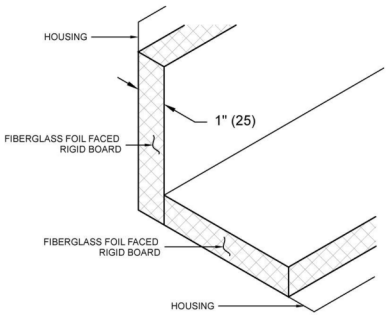
R-Value = 4.16



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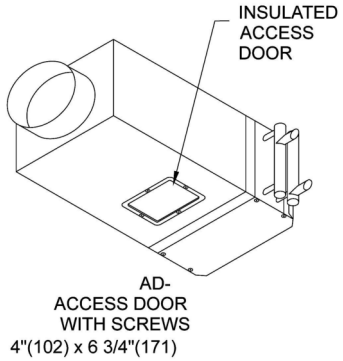
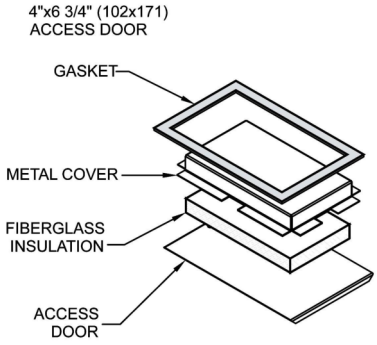
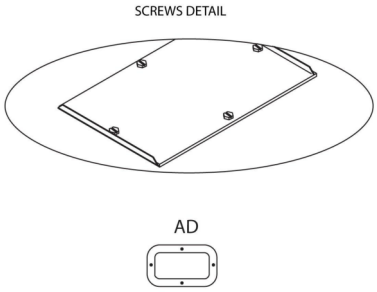
Access Door

AD

Insulated Access Door fastened with screws







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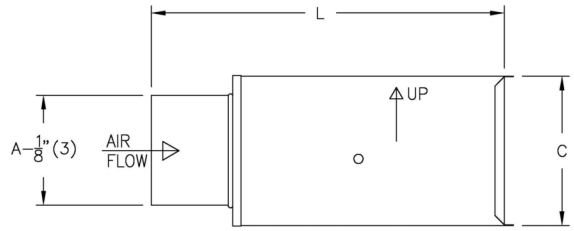
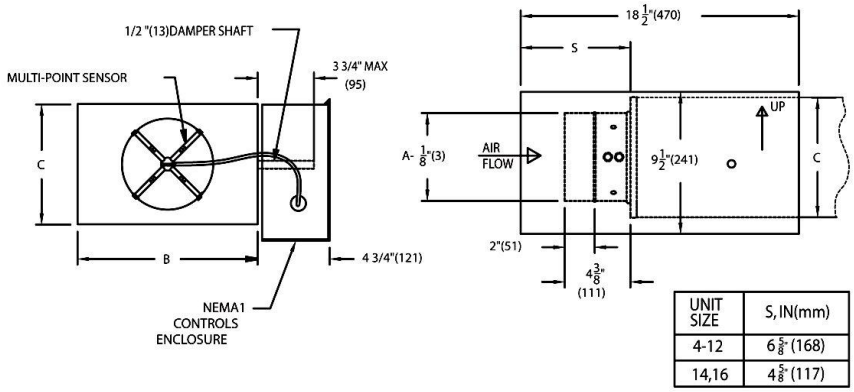
SDV5 Single Duct



Unit Size	Max Airflow	Outlet		Inlet	Length
		B	C	A	L
8	1100	12	10	8	20 1/8
10	1800	14	12 1/2	10	20 1/8
12	2600	16	15	12	20 1/8
16	5000	24	18	16	23 5/8

Digital Controls



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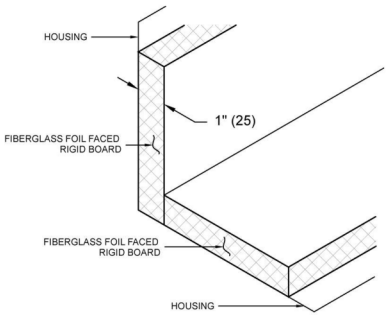

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CUSTOMER:
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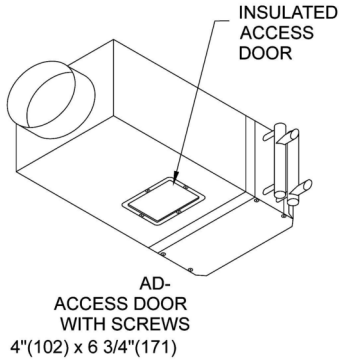

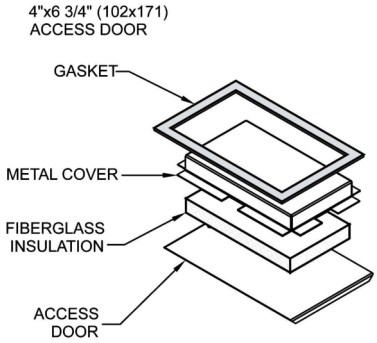

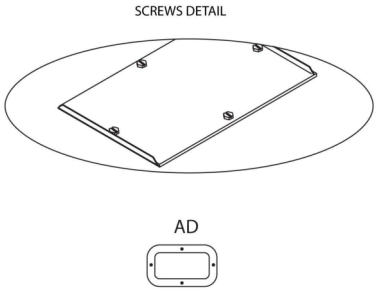

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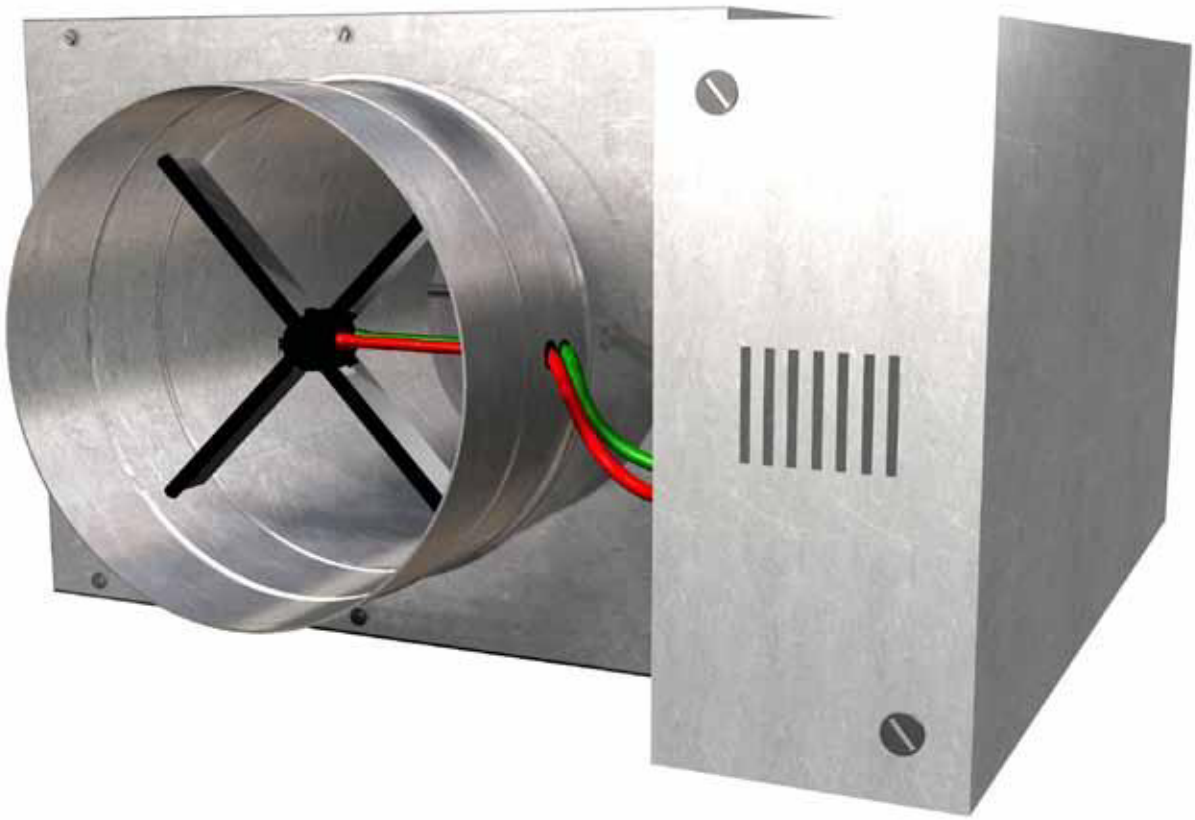

MANUAL – INSTALLATION

Single Duct Variable Volume Control Assemblies - Direct Digital Controls

SDV 5000 Series

Revision #: 01 – Issue Date: 05/28/14

SINGLE DUCT VARIABLE VOLUME CONTROL ASSEMBLIES

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SINGLE DUCT VARIABLE VOLUME CONTROL ASSEMBLIES

PRODUCT OVERVIEW

General

The SDV 5000 assembly is designed to accept Direct Digital Controls (DDC) for VAV pressure independent operation.

The terminal unit controls are supplied by the controls contractor and either factory or field mounted and wired. For information concerning controls, components, sequence of operation, etc., please refer to the documentation provided by the controls contractor.

Receiving Inspection

After unpacking the assembly, check it for shipping damage. If any shipping damage is found, report it immediately to the delivering carrier. During unpacking and installation do not handle by the inlet velocity sensor, damper shaft, or tubing. Damage may result.

Wiring

If controls have been factory mounted, a wiring diagram will be included with the unit indicating the factory mounted components. For field wiring of room sensors and other accessories, refer to the controls contractor's documentation. If the controls have been field mounted, refer to the controls contractor's documentation for all wiring information.

Damper rotation is always clockwise to the open position. An identification mark on the end of the shaft indicates the damper position.

The factory supplied sensing lines are color coded. Red indicates the total pressure or "HI" line which should be located on the upstream side. Green indicates the static pressure or "LO" line which should be located on the downstream side.

An optional protective enclosure may be provided to house the terminal unit control components. The enclosure cover is removable with two sheet metal screws.

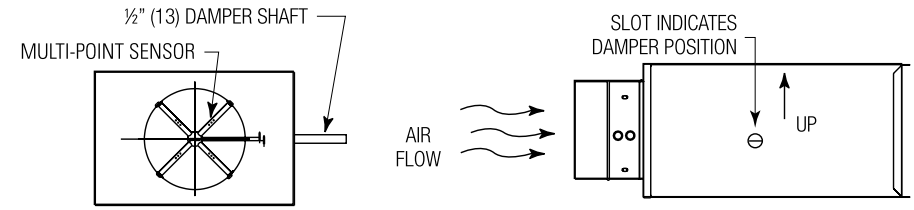
The velocity sensor is normally supplied as standard with the terminal unit. However, in some cases a flow sensing device supplied by the controls contractor may be factory or field mounted. Refer to the submittal drawing for illustration.

The air volume ranges listed are recommended for optimum performance. A minimum value of zero is also acceptable if no heating coils are attached.

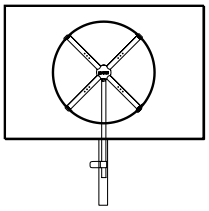
Selection of air flow limits below the listed values is not recommended. Stability and accuracy may not be acceptable at lower than recommended air flow limits. The actual performance will vary depending on the terminal unit controls supplied.

SDV 5000 ▼

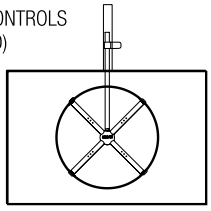
STANDARD CONFIGURATION (CONTROLS SIDE MOUNTED)



CB OPTION (CONTROLS BOTTOM MOUNTED)



CT OPTION (CONTROLS TOP MOUNTED)



SINGLE DUCT VARIABLE VOLUME CONTROL ASSEMBLIES

INSTALLATION INSTRUCTIONS

Installing the SDV 5000 Terminal Unit

The basic SDV 5000 is light enough that it can be supported by the ductwork in which it is installed. Where accessory modules, such as coils, attenuators or multiple outlets are included, the assembly should be supported directly. Use the support method prescribed for the rectangular duct in the job specifications.

NOTE: For optimum performance there should be a minimum of three duct diameters of straight inlet duct, **same size as the inlet**, between the inlet and any transition, take off or fitting.

The assembly should be mounted right side up. It should be level within ±10 degrees of horizontal, both parallel to the air flow and at right angles to the air flow. The side of the assembly is labelled with an arrow indicating UP. Do not mount the control side of the assembly tight to a wall, pipe or other obstruction. Allow sufficient room for access to the controls.

NOTE: If CB (controls bottom mounted) option is chosen, then the housing is to be installed as noted above with exception of the damper shaft being oriented to the bottom of the housing. If the CT (controls top mounted) option is chose, then the housing is to be installed as noted above with the exception of the damper shaft being oriented to the top of the housing.

To prevent excess air leakage, all joints should be sealed with an approved duct sealer. This would apply to all accessory module connections as well as the basic assembly.

Air Volume Ranges

Unit Size	CFM Min - Max	L/S Min - Max
4	50 - 225	24 - 106
5	63 - 350	30 - 165
6	66 - 450	31 - 212
7	99 - 650	47 - 307
8	132 - 800	62 - 378
9	167 - 1050	79 - 496
10	221 - 1350	104 - 637
12	304 - 2100	143 - 991
14	439 - 3000	207 - 1416
16	568 - 4000	268 - 1888
24 x 16	1187 - 8000	500 - 3776

NOTE: Factory calibrated controls must be selected within the above flow range limits. A minimum value of zero is also available. When an auxiliary flow setting is specified, the value must be greater than the minimum setting and within the range limits.

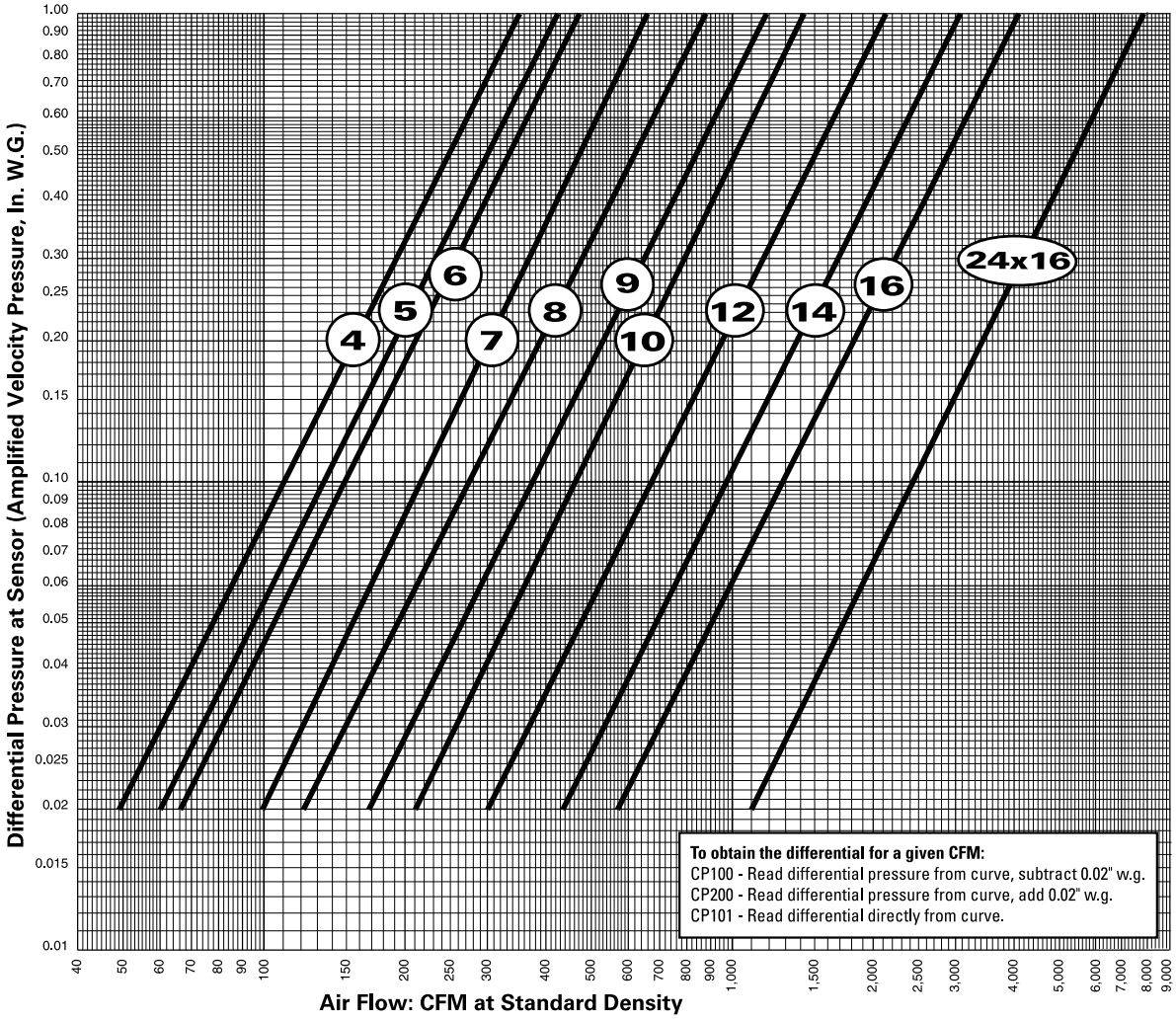
On controls mounted by Price but supplied by others, the air volume ranges are guidelines only.

Selection of air flow limits below the listed values is not recommended. Stability and accuracy may not be acceptable at lower than recommended air flow limits. The actual performance will vary depending on the terminal unit controls supplied.

SINGLE DUCT VARIABLE VOLUME CONTROL ASSEMBLIES

INSTALLATION INSTRUCTIONS

SP300 Calibration Curves



Calibration Equation

$$VP = \left(\frac{Q}{K}\right)^2$$

VP - differential pressure at sensor, inches w.g.

Q - air flow rate, cfm at standard density.

K - calibration constant

Unit Size	K
4	340
5	426
6	468
7	673
8	890
9	1155
10	1487
12	2141
14	3045
16	4074
24 x 16	7785

1. Setting flow limits for a differential pressure of less than 0.02 inches in NOT recommended. Stability and accuracy of flow limits may not be acceptable due to low velocity pressure signal. Performance will vary depending on the terminal unit controls provided.
2. For field calibration of air flow limits refer to the control contractor's documentation.

SP300 Removable Sensor Maintenance Instructions

1. Detach SP300 Hi and Low signal tubing between sensor and controls at the tee connections as shown in Figure 1.
2. Undo latches holding sensor in unit and remove sensor as shown in Figure 2.
3. Clean sensor by blowing compressed air through both HIGH and LOW signal tubing.
4. Wipe off any foreign particles with a clean rag.
5. Reinstall sensor into unit ensuring that it is in the correct orientation and fasten latches to securely hold sensor in unit.

FIGURE 1 ▼

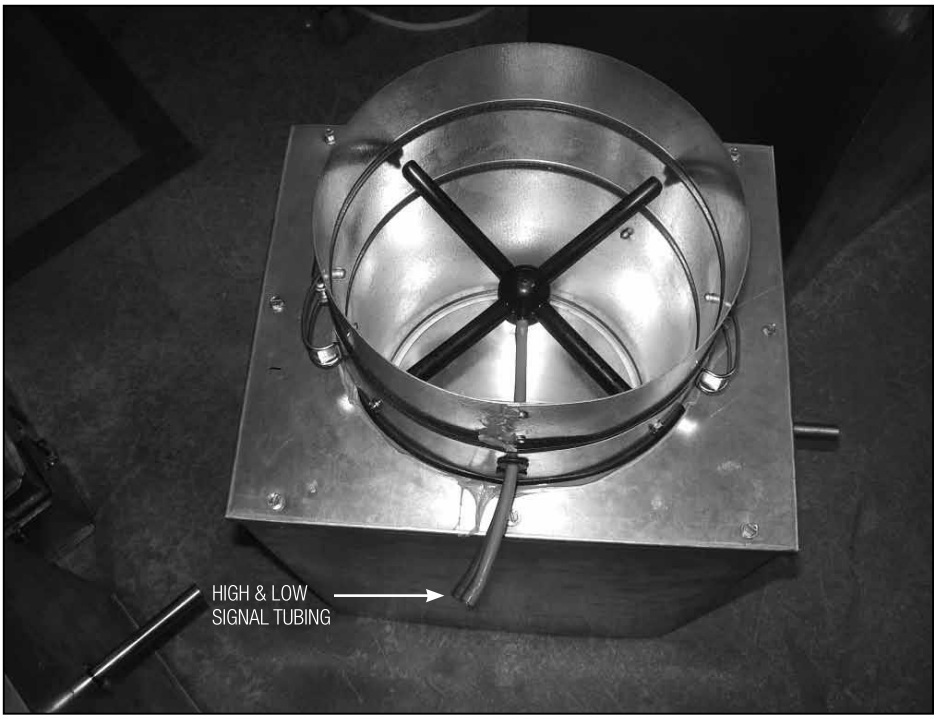
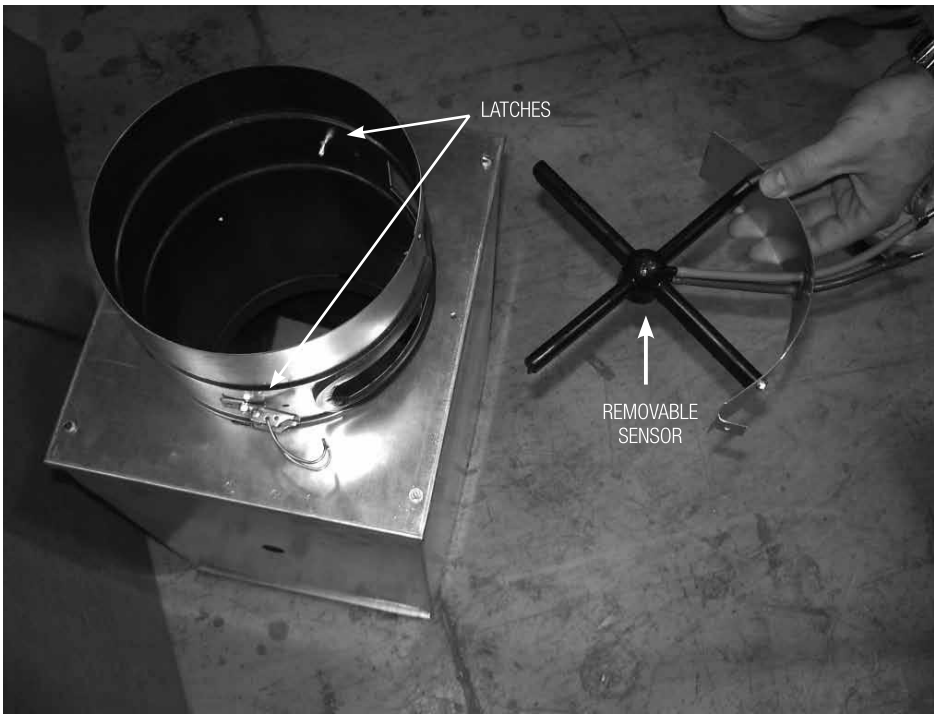


FIGURE 2 ▼



Replacement Parts

Component	Part#	Description
Removable SP300 Sensor	041688-001	Sensor SP300, Sizes 4,5 & 6
	041688-002	Sensor SP300, Size 7
	041688-003	Sensor SP300, Size 8
	041688-004	Sensor SP300, Size 9
	041688-005	Sensor SP300, Size 10
	041688-006	Sensor SP300, Size 12
	041688-007	Sensor SP300, Size 14
	041688-008	Sensor SP300, Size 16
	247072-001	Duct Cover for Removable Sensor Sizes 4,5 & 6
	247072-002	Duct Cover for Removable Sensor Size 7
	247072-003	Duct Cover for Removable Sensor Size 8
	247072-004	Duct Cover for Removable Sensor Size 9
	247072-005	Duct Cover for Removable Sensor Size 10
	247072-006	Duct Cover for Removable Sensor Size 12
	247072-007	Duct Cover for Removable Sensor Size 14
	247072-008	Duct Cover for Removable Sensor Size 16
	203132-999	.250” Green Tubing, Low Signal
	203136-999	.250” Red Tubing, High Signal
	041510-001	Rubber Grommet RB-215
	041683-001	Tee, Brass, .250” x .250” x .250”

This document contains the most current product information as of this printing.
For the most up-to-date product information, please go to priceindustries.com

P. 770.623.8050
F. 770.623.6404
W. www.price-hvac.com

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.