

**O'Neill Walsh Community Builders**

**Submittal Form**

OWCB

**AHSC**

(Project)

**Submittal No. 001**

**Description:** Air Distribution

**Date:** 10/27/17 **Return By:** 11/10/17

**Division:** 23

**Section:** 23 30 00

Andersen

**Subcontract/Supplier:**

The review by O'Neill Walsh Community Builders ("OWCB") of the above Submittal shall not relieve Subcontractor/Supplier from any of its obligations under the agreement with OWCB nor give rise to any claim in favor of the Subcontractor/Supplier or third parties against OWCB or Owner.

**By:** Logan Bright

O'Neill Walsh Community Builders

Notes:

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ARCHITECT

Notes:

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ENGINEER

Revise and Resubmit.

Checking is only for general conformance with the design concept of the project and general compliance with the information given in the contract documents. Any action shown is subject to the requirements of the plans and specifications. Contractor is responsible for: Dimensions, which shall be confirmed and correlated at the job site; fabrication processes and techniques of construction; coordination of his work with that of all other trades; and the satisfactory performance of his work.

MFIA, Inc. Consulting Engineers

By: Takako Baker, Date:11/11/17

Notes:

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## **HVAC Submittals**

**Yakima Clinic  
9005 SE Foster Rd.  
Portland, OR 97203**

**Submitted To:  
O'Neill / Walsh Community Builders  
2905 SW First Ave  
Portland, OR 97201**

**Submitted By:  
Andersen Mechanical  
16285 SW 85<sup>th</sup> Ave, Suite 410  
Tigard, OR 97224**



23\_30\_00

Air Distribution



# DUCT-SEAL™ 321

## Indoor/Outdoor Water Based Duct Sealant

DUCT-SEAL 321 is an **all purpose industrial grade duct sealant** for all types of metal duct, glass fiber duct board, and flex duct, as well as duct fabric and flexible tubing runouts. It includes UV inhibitors for **extended outdoor exposure** and built-in **fiber reinforcement for added strength**. This non-toxic water based product is solvent free and is suitable for residential use.

### TECHNICAL DATA

Color.....	Gray
Consistency .....	Smooth creamy texture
Base .....	Synthetic latex
Solvent.....	Water
Weight per Gallon .....	10.6 lbs.
Solids Content.....	65%
Viscosity .....	Thixotropic
Coverage (per gal) .....	Up to 320 lin. ft. at 3" width 20 mil thickness
Shore A Hardness .....	>20
Flexibility .....	Passes 1/4 inch mandrel bend
Time to Test .....	48 hours*
Service Temperature.....	-20°F to 200°F
Weather Resistance.....	Weather resistant
Mildew Resistance .....	Mold & Mildew resistant
VOC (less water) .....	75 g/l (less water)
Pressure Classes .....	SMACNA 1/2, 1, 2, 3, 4, 6 and 10 inches w.g.
Seal Classes.....	SMACNA A, B, C
Packaging .....	11 oz. cart., 1, 2 & 5 gal. pails
Freeze/Thaw Stability .....	Passed 5 Cycles
Specifications Compliance .....	Passes ASTM D-2202, ASTM C-731. USDA, EPA and FDA Approved. LEED compliant SCAQMD Rule 1168.

\*May vary according to temperature and humidity

**CLASSIFIED**  
**UL** **US**  
**CAULKING AND SEALANTS**  
**94PF**  
SURFACE BURNING CHARACTERISTICS  
FLAME SPREAD..... 0  
SMOKE DEVELOPED..... 0

\*Applied to inorganic reinforced Cement Board \*Tested as applied in one 3 in. (76.2 mm) wide strip, on center covering 16.7 percent of the exposed test sample area) at a coverage of 80 sq. ft/ gal (2 sq. M/L).  
Flash point of finished sealant, closed cup : No flash to boiling.

**UL**  
**LISTED**  
**17NF**  
**UL 181B-M**  
Mastic closure systems for use with flexible duct systems or connectors.

City of Los Angeles Approval RR #8069

### DUCT-SEAL 321 PART NUMBERS

1 Case w/ (25) 11 oz. Cartridges .....	304159
1 Case w/ (4) 1-Gallon Pails.....	304156
1 - 2-Gallon Pail.....	304157
1 - 5-Gallon Pail.....	304158

### APPLICATION

*Apply to entire surface of duct joint*

Temperature .....	35°F. to 110°F. (1.7°C to 44°C)
Method .....	Brush, putty knife, caulk gun, pump
Preparation .....	Surface must be dry, dirt, oil and grease free.
Rate .....	Apply at joints and fasteners to 20 mil thick wet film
Clean Up Wet.....	Soap and water
Clean Up Dry .....	UN-TACK™ or Solvent (Use safe handling practices.)
Painting.....	Only latex or epoxy paints

### STORAGE - DO NOT FREEZE

Temperature .....	35°F. to 110°F. (1.7°C to 44°C)
Shelf Life.....	One year (unopened)
Flammability .....	Non-flammable

### PRECAUTIONS

Surface must be clean and free of moisture, contamination and foreign matter. Do not allow this product to freeze. Do not apply this when rain or freezing temperatures will occur within 36 hours. Do not apply this product where temperatures will exceed 200°F. Keep out of the reach of children. Review MSDS for complete safety information prior to use. **DO NOT** use where acidic or alkaline chemicals are present (ie., lab fume hood, vents, etc.)

**For Industrial Professional Use Only.**

For additional information contact:



Carlisle Coatings & Waterproofing  
Incorporated

900 Hensley Lane  
Wylie, Texas 75098

Phone: (800) 527-7092 FAX: (972) 442-0076  
www.hardcast.com



## UPC #070 25' Insulated UL 181 Class 1 Air Duct

### Description

ATCO's UPC #070 is a UL 181, Class 1 Air Duct and is manufactured with a reinforced grey polyester jacket.

The UPC #070 inner core is air-tight and is designed for low-to-medium operating pressures in HVAC systems.

### Construction

A double lamination of tough polyester which encapsulates a steel wire helix forms the air-tight inner core to ATCO's UPC #070. The double-layer core is wrapped in a thick blanket of fiberglass insulation and sheathed in a rugged and durable reinforced grey polyester jacket.

### Applications

UPC #070 is designed for indoor use as a supply and return air duct in residential and commercial low-to-medium pressure heating and air conditioning systems. ATCO's UPC #070 can be used as a complete air duct system and/or a branch duct connecting to mixing boxes, diffusers, light troffers, room inlets, or other terminal devices.

### Code Compliance\*

UL 181, UMC 10-1, SBCC, BOCA, NFPA 90A & 90B, HUD 515-2.1 (b), Cities of Chicago, New York & San Francisco, County of Dade (Florida), California State Fire Marshal.

\*ATCO recommends that you check with the local code body having jurisdiction in your area to determine applicable codes.

### Features and Benefits

- **Air-tight Inner Core**  
Energy efficient  
No fiberglass erosion into airstream
- **Encapsulated Wire Helix**  
No unraveling when cut to length  
Quick installation
- **Smooth Inner Core**  
Low friction loss  
Low operating cost
- **Thick Blanket of Fiberglass Insulation**  
Energy efficient  
Excellent thermal characteristics
- **Tough Reinforced Polyester Jacket**  
Tear and puncture resistant  
Low maintenance
- **Lightweight Compact Carton**  
Reduces warehouse and job site handling costs.

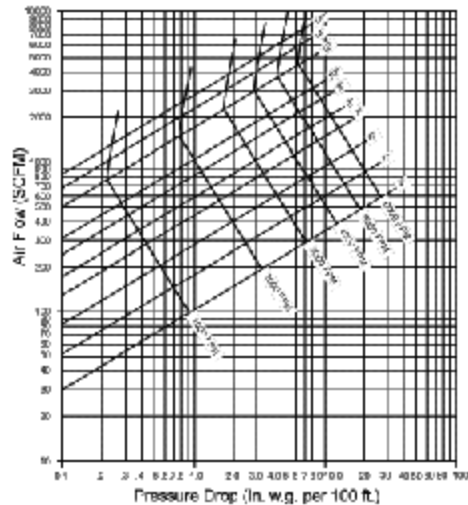




## Product and Performance Data



### Air Friction Chart \*



**STRAIGHT RUN** \* FD 72-R1 Test Code of the Air Diffusion Council. Friction loss is computed in inches of water gauge per 100 ft. of straight duct. By using CFM or FPM values for a given duct dimension, the friction loss can be determined. Conversion of CFM to FPM also can be made.

### Product Data

- Length: 25'
- Diameter: 4", 5", 6", 7", 8", 9", 10", 12", 14", 16", 18", 20"
- Vapor Barrier: Reinforced polyester
- End Treatment: 25'-plain ends
- Packaging: 1 piece per carton

### Warranty

Atco warrants that all flexible ducts will be free from defects in material and workmanship for a period of five years from the date of purchase only if the ducts are installed in accordance with Atco's installation instructions and under conditions specified in Atco's performance data. The buyer's exclusive remedies for any defect in the flexible ducts shall be replacement or refund of the purchase price, at Atco's option.

ATCO MAKES NO OTHER WARRANTIES, EXPRESS, IMPLIED, STATUTORY OR OTHERWISE. IN PARTICULAR, ATCO MAKES NO WARRANTY OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE. ATCO SHALL HAVE NO LIABILITY TO THE BUYER OR ANY THIRD PARTY FOR INCIDENTAL OR CONSEQUENTIAL DAMAGES OF ANY KIND WHATSOEVER, INCLUDING, BUT NOT LIMITED TO, PERSONAL INJURY, PROPERTY DAMAGE, LOST PROFITS OR OTHER ECONOMIC INJURY DUE TO ANY DEFECT IN THE FLEXIBLE DUCTS.

MATERIALS AND SPECIFICATIONS FOR THE FLEXIBLE DUCTS ARE SUBJECT TO CHANGE WITHOUT NOTICE.

### UPC #070

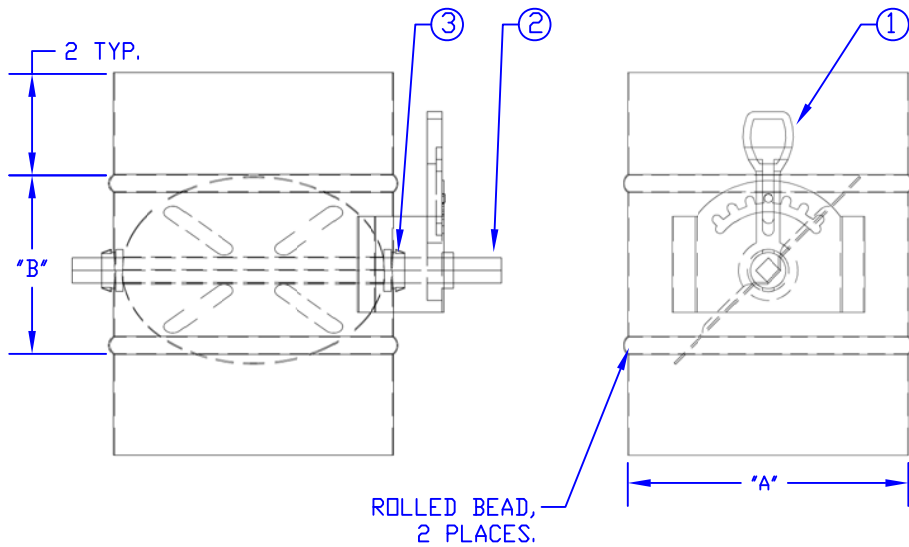
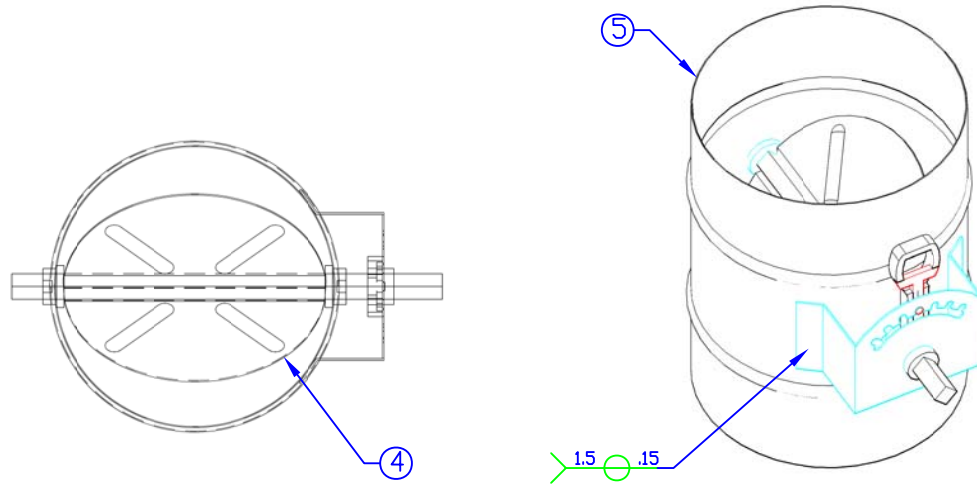
### Performance Data

- **Rated Positive Pressure:** 10" w.g. per UL-181 (UL Listed pressure ratings are determined in straight lengths @ ambient temperatures.)
- **Recommended Operating Pressures:** (Determined in a 90° bend at elevated temperatures in accordance with ADCFD 72-R1 Test Code.)
- **Maximum Positive:**  
6" w.g. - 4" thru 12" Dia.  
4" w.g. - 14" thru 20" Dia.  
(With factory installed metal collars, 2" w.g. - all diameters)
- **Maximum Negative:**  
3/4" w.g. - all diameters
- **Maximum Velocity:** 5,000 FPM
- **Vapor Transmission:** .6 perms
- **Maximum Operating Temperatures:**  
-20°F to 140°F Continuous (@ maximum pressure)  
-20°F to 180°F Continuous (@ 2" pos. w.g. max.)  
-20°F to 250°F Intermittent (@ 1/2" pos. w.g. max.)
- **R Value:** R-4.2  
(In accordance with ADC flexible duct performance and installation standards (1991) using ASTM C-518 at installed wall thickness on flat insulation only.)
- **Flame Spread:** Less than 25
- **Smoke Developed:** Less than 50

**INSTALLATION:** Air duct connections and joints shall be made per installation instructions outlined by ATCO Rubber Products, Inc. and as required by the UL 181 listing procedure. (Installation instructions are included inside of each carton.)

ATCO RUBBER PRODUCTS, INC.  
CORPORATE HEADQUARTERS  
7101 ATCO DRIVE  
FORT WORTH, TEXAS 76118-7098  
PHONE: (817) 595-2894  
1-800-USS-DUCT (1-800-877-3828)  
FAX: 1-(800)-366-3539

[Back to UPC #070](#)



Rev	Descr	Date	Sign	ECO #	REV
New Item		5/24/11	PLB		A

- BOM -  
 REFERENCE ONLY - NOT MAINTAINED!  
 - SEE DBA FOR CURRENT PARTS LIST -

BOM #	Qty	Group / P/N	Descr.
1	1	HARDWARE, Dampers	Damper,Quad,Standoff,Everlock,Zytel,1.5
2	1	RAWM, Bar	STRUC,Bar,Square,Galv,0.375
3	2	HARDWARE, Dampers	Damper,Bearing,Open,B-Snap,Zytel,0.75,0.44
4	1	HARDWARE, Dampers	Damper,Blade,Galv
5	varies	RAWM, FLAT	G90 Galvanized Steel

SPECIFICATIONS:

-VOLUME DAMPER, QUADRANT LOCK-

DATA	
"A"	"B"
5	4
6	4
7	5
8	6
9	7
10	8
12	10
14	12
16	14

- All testing for pressure drop determinations of single blade volume dampers shall be in conformance to AMCA standard 500-D.
- Performance ratings to meet or exceed minimum requirement for pressure drop per ASHRAE standard 90.1-2004 +10%/-2% wg design capacity.
- 2000 fpm maximum design capacity.
- 2" wg maximum pressure differential.
- Pressure loss <= 0.15 wg @ 2000 fpm.
- Leakage <= 4.0 cfm per sq ft of damper area per 1" wg column differential.
- Maximum design temperature = 248° F.
- Construction methods to comply with SMACNA standards S1 through S3 (HVAC-DCS 2005).
- Material gauge not less than that for longitudinal seam duct built to +10%/-2% per SMACNA tables 3-5 & 3-6.

<p>ADDRESS: 740 NORTH KNOTT ST.          PORTLAND, OR 97227          PHONE: (503) 943-6043          FAX: (503) 288-3327          E-MAIL: info@metu-streimer.com</p>	DESCRIPTION: <b>DAMPER, FASTAP, SLEEVE FITTINGS, SWR</b>	MATERIAL: <b>GALV</b>	FINISH: 	SCALE: <b>1/4</b>	PAGE: <b>1 of 1</b>
	THIS DRAWING IS THE PROPERTY OF SSHA, AND MAY NOT BE USED WITHOUT AUTHORIZATION.	DWG SIZE: <b>B</b>	DRAWN BY: <b>PLB</b>	DWG #: 	DASH #: 
		PRODUCT: <b>FTGS, SWR</b>	WHERE USED: 	PART #: 	DASH #: 





# Grilles/Registers/Diffusers Submittals

**Job Name:** Yakima Valley

**Date Printed:** 10/12/2017

**Spec Section:** 15 - HVAC

**Contact:** 2220 SE NINTH AVENUE  
PORTLAND,, OR 97214



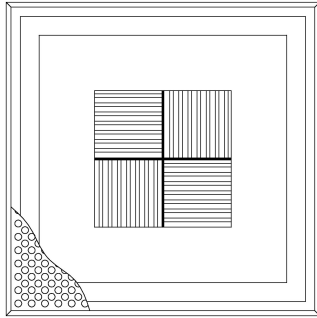
**All-In-One**  
**Detailed Submittal Schedule**  
**Grilles/Registers/Diffusers**

#	Qty	Model	Tag	Unit Sz.	Border	Pattern	Panel Sz.	Damper	Accessories
1	5	PDMC	SA	6	3		24, 24		VCR7
Desc: 3 - T-Bar Lay-In for 1" and 9/16" Flat T Applications									
2	10	PDMC	SA	8	3		24, 24		VCR7
Desc: 3 - T-Bar Lay-In for 1" and 9/16" Flat T Applications									
3	4	PDMC	SA	10	3		24, 24		VCR7
Desc: 3 - T-Bar Lay-In for 1" and 9/16" Flat T Applications									
4	5	PDMC	SA	6	3		12, 12		VCR7
Desc: 3 - T-Bar Lay-In for 1" and 9/16" Flat T Applications									
5	1	PDMC	SA 4"	6	3		12, 12		VCR7
Desc: 3 - T-Bar Lay-In for 1" and 9/16" Flat T Applications									
6	5	PDDR	RA/EA	8	3		24, 24	VCR7	DCT
Desc: 3 - T-Bar Lay-In for 1" and 9/16" Flat Tee   VCR7 - Radial Opposed Blade Damper Sizes 6-36									
7	3	PDDR	RA/EA	6	3		24, 24	VCR7	DCT
Desc: 3 - T-Bar Lay-In for 1" and 9/16" Flat Tee   VCR7 - Radial Opposed Blade Damper Sizes 6-36									
8	1	PDDR	RA/EA	10	3		24, 24	VCR7	DCT
Desc: 3 - T-Bar Lay-In for 1" and 9/16" Flat Tee   VCR7 - Radial Opposed Blade Damper Sizes 6-36									
9	1	PDDR	RA/EA	10, 10	3		24, 24	VCS3	DCT
Desc: 3 - T-Bar Lay-In for 1" and 9/16" Flat Tee   VCS3 - Opposed Blade Damper Steel Construction									
10	4	PDDR	RA/EA	6	3		12, 12	VCR7	DCT
Desc: 3 - T-Bar Lay-In for 1" and 9/16" Flat Tee   VCR7 - Radial Opposed Blade Damper Sizes 6-36									
11	4	JS220	SA SW	14.000, 2	21C	STRAIGHT	0.00		XX, C
Desc: 21C - Exposed Frame w/Concealed Mtg Bracket for plenum by OTHERS   STRAIGHT - Straight Section									
12	1	530D	EA	24.000, 24.000	F	L			SW
Desc: F - 1 1/4" (32) Flat Frame   L - Front Louver Blades parallel to Long Dimension									
13	1	530D	RA SW	36.000, 12.000	F	L			SW
Desc: F - 1 1/4" (32) Flat Frame   L - Front Louver Blades parallel to Long Dimension									
14	29	SPF		24, 24					
Desc:									
15	10	SPF		12, 12					
Desc:									

The order and sale are made pursuant to the terms of the Sales Agreement and the Sales Policies set out in the latest Customer Service Handbook.

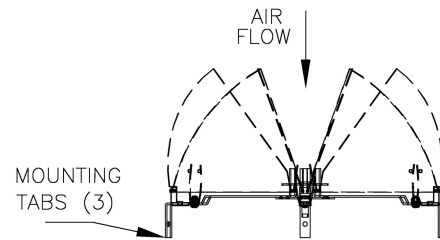
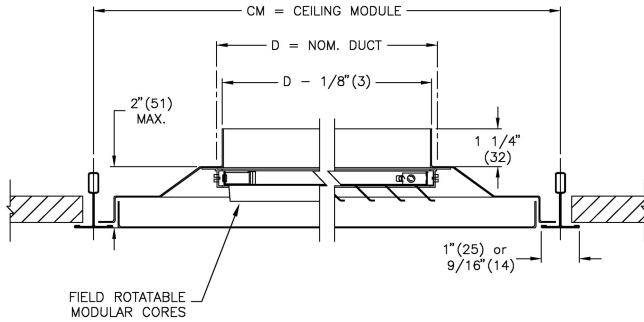
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**PDMC: Steel Perforated Diffuser with Rotatable Module Core**



**Border:** 3: T-Bar Lay-In for 1" and 9/16" Flat T Applications

**VCR7:** Radial Opposed Blade Damper (Sizes 6-36)



**Material:**

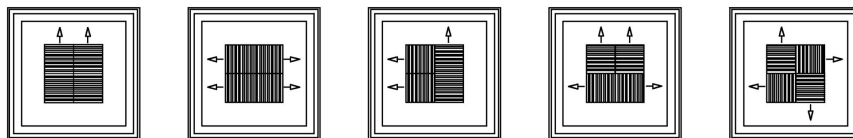
- Steel Construction
- Damper - Coated Steel

**Finish:**

- B12: White Powder Coat

**Notes:**

- Four Rotatable Module Cores Allow 1-Way, 2-Way, 2-Way Corner, 3-Way & 4-Way Air Patterns
- Core Modules are field rotatable
- Core Modules are factory preset to a 4-Way Air Deflection Pattern
- Backpan Height is 1 7/16" (37) for 12" x 12", and 16" x 16" modules
- Backpan Height is 2" (51) for 24" x 24" Nominal Size
- Factory Tolerance: ± 1/32"(1)

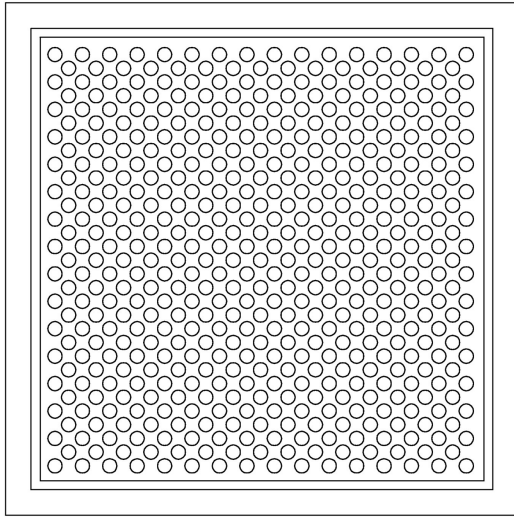


**PROJECT:** Yakima Valley  
**ENGINEER:**  
**DESCRIPTION:** Perf Diff W/Modular Core(Rotatable)-Steel  
PDMC//W6,8,10//3//24,12/24,12/VCR7///B12

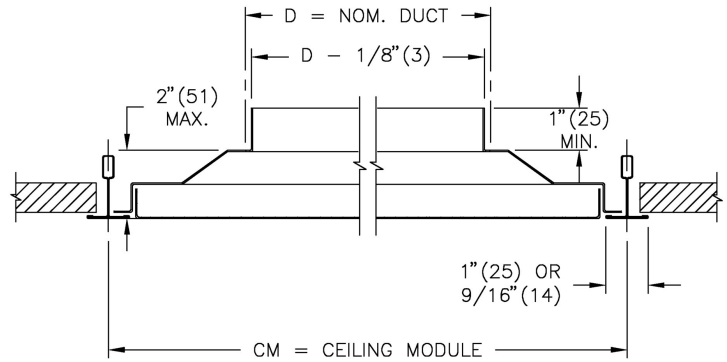
**SUBMITTAL NO:** 261214  
**CUSTOMER:**

**SUBMITTAL DATE:** 10/12/2017

**PDDR Ducted Steel Perforated Flush Face Return Diffuser**



**Ducted Return**



**Material:**

- Steel Construction

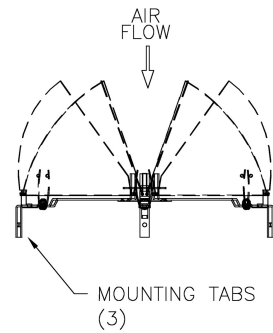
**Finish:**

- B12: White Powder Coat

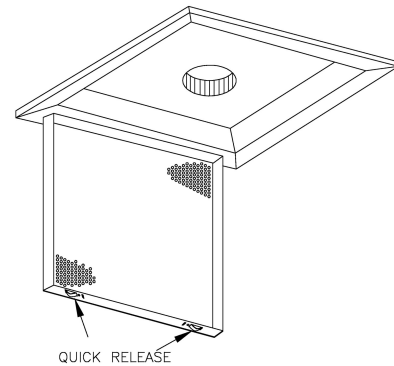
**Notes:**

- Hinged, removable perforated faceplate with quick-release spring latches
- Frame 3: T-bar lay-in for 1" and 9/16" flat tee
- Maximum backpan height is 2" (51)
- Factory tolerance  $\pm 1/32"$  (1)

**Damper:** VCR7 Radial Opposed Blade Damper (Sizes 6-36)



**Detail View:**



**PROJECT:** Yakima Valley

**ENGINEER:**

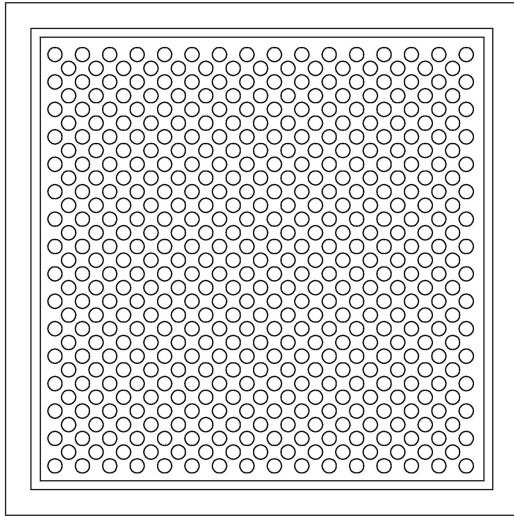
**DESCRIPTION:** Perfor Diffuser,(Non)/Ducted Return-Flush Face,Stl  
PDDR//1/8,6,10//3/DCT/24,12/24,12/VCR7///B12

**SUBMITTAL NO:** 258531-A

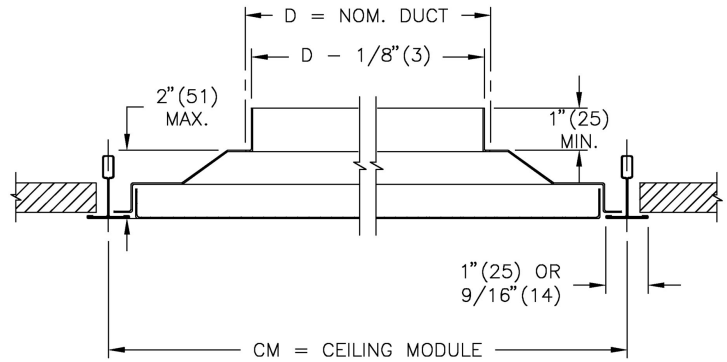
**CUSTOMER:**

**SUBMITTAL DATE:** 10/12/2017

**PDDR Ducted Steel Perforated Flush Face Return Diffuser**



**Ducted Return**



**Material:**

- Steel Construction

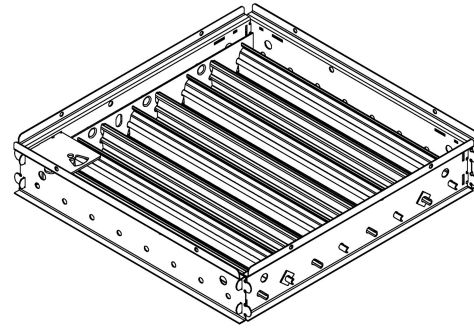
**Finish:**

- B12: White Powder Coat

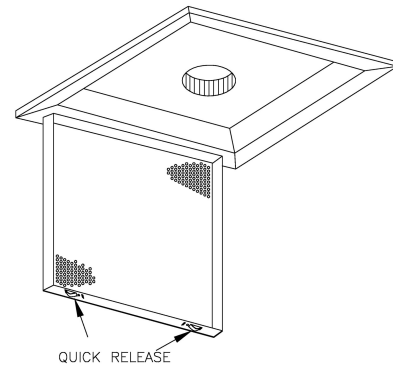
**Notes:**

- Hinged, removable perforated faceplate with quick-release spring latches
- Frame 3: T-bar lay-in for 1" and 9/16" flat tee
- Maximum backpan height is 2" (51)
- Factory tolerance  $\pm 1/32"$  (1)

**Damper:** VCS3 Opposed Blade Damper (Steel Construction)



**Detail View:**



**PROJECT:** Yakima Valley

**ENGINEER:**

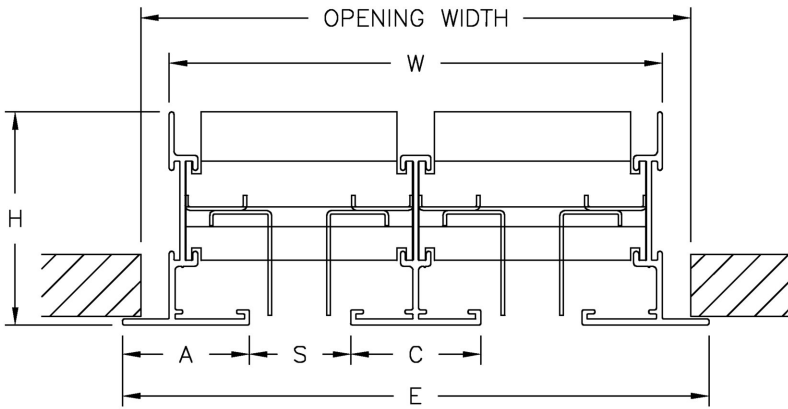
**DESCRIPTION:** Perfor Diffuser, (Non)/Ducted Return-Flush Face, Stl  
PDDR//1/10/10/3/DCT/24/24/VCS3///B12

**SUBMITTAL NO:** 258531-A

**CUSTOMER:**

**SUBMITTAL DATE:** 10/12/2017

**JS220 Custom Flow Jet-Slot Linear Diffuser with 2" Slot**



**2 Slot**

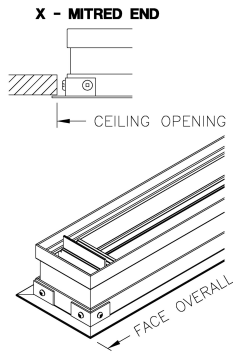
S	SlotQty	E	W	OpeningWidth*	A	C	H
2"	2 Slot	9 15/16"	9"	9 9/16"	1 25/32"	2 5/16"	2 11/16"

\*Opening width dimension is outside of field built plenum with hemmed seam. If no plenum is used, this may be reduced by up to 1/4" (6). For Type P mounting see also ASP/JSP submittal.

Nominal Length = 14.000"

**End Conditions**

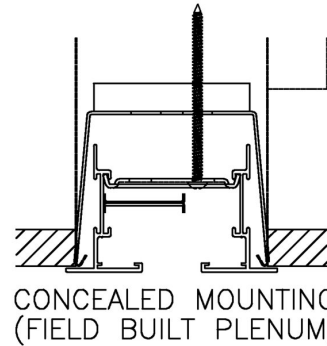
**XX** Factory Mitered both ends



**Border/Mounting**

**21C** Exposed Frame w/Concealed Mtg Bracket

**C** Concealed Mounting Bracket



End Condition	Face Overall Length	Ceiling Opening
XX	Nominal Length + 1 1/16" (27)	Nominal Length + 3/4" (19)

**Material**

- Extruded Aluminum Frame and Spacers
- Pattern Controllers are Heavy Gauge Steel

**Finish**

- Pattern Controllers: B17 Black
- Upper Frame to match diffuser face finish
- Diffuser Face: AC Clear Anodized

**Notes**

- Minimum Length 12" (305)
- Maximum Section Length 120" (3048)
- For ASP/JSP plenums use type 21 or 21P
- DPC: Dual layer pattern controllers (pattern and volume adjustable)
- For T-Bar installation see II00035
- For drywall applications see installation instruction II00028

**PROJECT:** Yakima Valley  
**ENGINEER:**  
**DESCRIPTION:** Custom Flow Jet-Slot Linear, 2" Slot  
JS220//14.000/2/21C/STRAIGHT/0.000//XX/C///DPC//AC

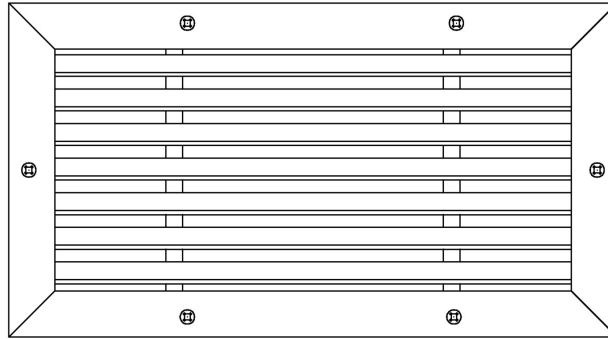
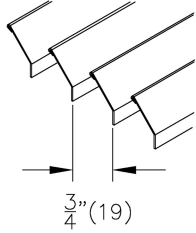
**SUBMITTAL NO:** 258086-B  
**CUSTOMER:**

**SUBMITTAL DATE:** 10/12/2017

**530D Louvered Steel Return Register – 3/4" Blade Spacing, 45° Single Deflection**

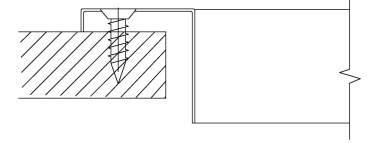
**Core Style:**

Single Deflection



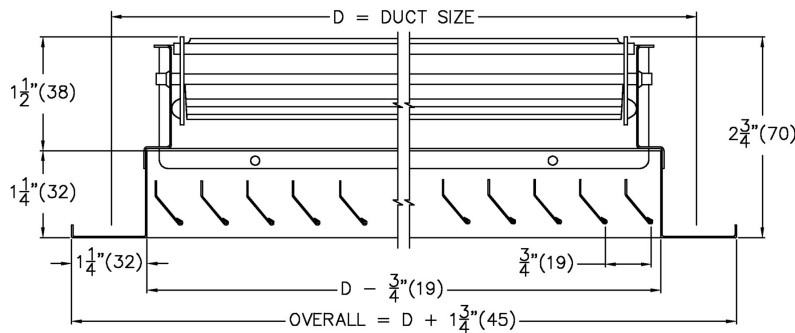
**Fastening:**

A: Countersunk Screwholes with Screws



**Border: F**

1 1/4" (32) Flat Frame



**Material:**

- Steel

**Finish:**

- B12 - White Powder Coat

**Notes:**

- Blades parallel to Long dimension
- 45° Deflection roll formed blades on 3/4" (19) centers
- VCS3 opposed blade damper, coated steel
- Factory tolerance  $\pm 1/32$ " (1)

**PROJECT:** Yakima Valley

**ENGINEER:**

**DESCRIPTION:** Steel Return Reg W/Damp, 45 Deg Blades, 3/4" Spcng

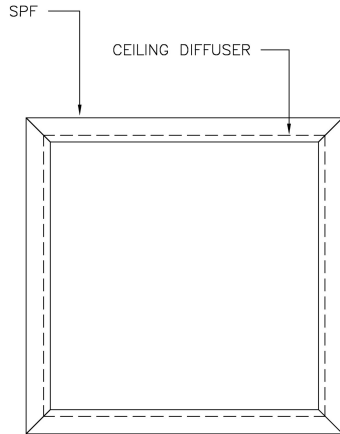
530D///24.000,36.000/24.000,12.000/F/L///A//SW/B12

**SUBMITTAL NO:** 258306

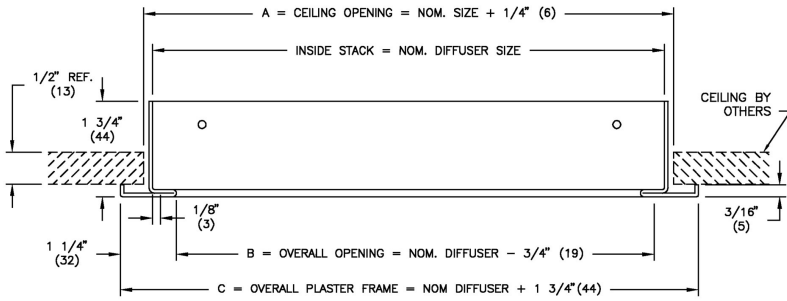
**CUSTOMER:**

**SUBMITTAL DATE:** 10/12/2017

**SPF Steel Lay-In Type Plaster Frame**



Nom. Diffuser Size	A	B	C
24 x 24	24 1/4 x 24 1/4	23 1/4 x 23 1/4	25 3/4 x 25 3/4



**Notes:**

- Factory Tolerance  $\pm 1/32$ " (1)

**Material:**

- Heavy Gauge Steel

**Finish:**

- B12: White Powder Coat

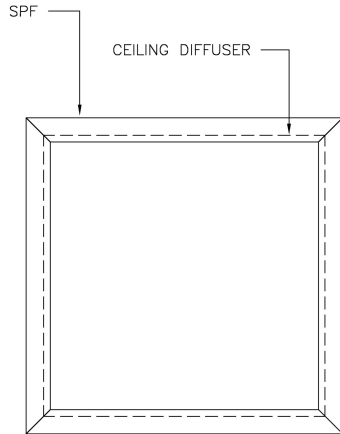
**PROJECT:** Yakima Valley  
**ENGINEER:**  
**DESCRIPTION:** Steel Plaster Frame  
 SPF///24/24/////////B12

**SUBMITTAL NO:** 261535-C  
**CUSTOMER:**

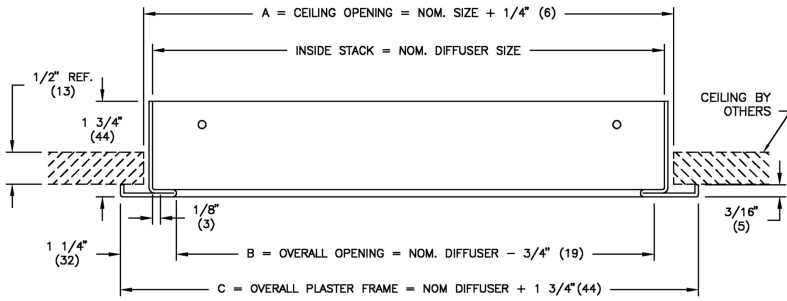
**SUBMITTAL DATE:** 10/12/2017



**SPF Steel Lay-In Type Plaster Frame**



Nom. Diffuser Size	A	B	C
12 x 12	12 1/4 x 12 1/4	11 1/4 x 11 1/4	13 3/4 x 13 3/4



**Notes:**

- Factory Tolerance  $\pm 1/32$ " (1)

**Material:**

- Heavy Gauge Steel

**Finish:**

- B12: White Powder Coat

**PROJECT:** Yakima Valley  
**ENGINEER:**  
**DESCRIPTION:** Steel Plaster Frame  
 SPF///12/12/////////B12

**SUBMITTAL NO:** 261535-C  
**CUSTOMER:**

**SUBMITTAL DATE:** 10/12/2017