

# ***SUBMITTAL***

*Job Title:* **Scotch and Soda**

*Elevation: (ft)* 203

*Date:* 08/30/13

*Submitted By:* Michael Muhle

**JOHNSON AIR PRODUCTS**

2220 SE NINTH AVE

PORTLAND, OR 97214-4661

US

Phone: (503)234-5071

Fax: (503)233-0451

Email Address: mmuhle@johnsonair.com

**SUBMITTAL NOTES:**

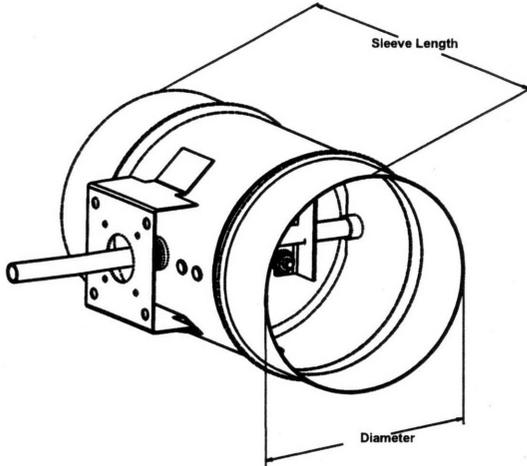
\*\*\*Please verify actuator type and voltage\*\*\*

13-204890-FA



P.O. Box 410 Schofield, WI 54476 (715) 359-6171 FAX (715) 355-2399 [www.greenheck.com](http://www.greenheck.com)

Nominal diameter <=14, Sleeve Length = 8.25 inches  
Nominal diameter >14, Sleeve Length = 11.625 inches



# VCDR-53

## Round Volume Control Damper

### Application & Design

The model VCDR-53 is a low leakage round control damper used to control pressure, temperature or flow in an HVAC system. The VCDR-53 is available with a variety of optional actuators for either manual, electric or pneumatic operation.

**RATINGS**  
Pressure: 4 in. wg  
Velocity: 3,000 ft/min  
Leakage: 4 CFM/ft<sup>2</sup> @ 1 in. wg  
Temperature: 250.0 F.

Installation instructions available at [www.greenheck.com](http://www.greenheck.com).

Notes: All dimensions shown are in units of inches.

D furnished approximately 0.125 in. undersized

Electrical accessory wiring terminates at the accessory.  
Field wiring is required to individual components.

### CONSTRUCTION FEATURES

<b>Blade Seal:</b>	Silicone	<b>Actuator Mount:</b>	External
<b>Axle Material:</b>	Steel	<b>Fail Position:</b>	Closed
<b>Axle Bearings:</b>	Bronze	<b>Material:</b>	Galvanized
<b>Sizing:</b>	Nominal	<b>Cycle:</b>	60 Cycle
<b>Actuator Type:</b>	120 VAC	<b>Frame Thickness (ga):</b>	20

ID #	Tag	Qty	Dia. (in.)	Actuator
1-1		1	6.000	TFB120

## Belimo TFB120, 120-S, 24, and 24-S Actuators

### Application

The TFB series actuators provide true spring return operation for reliable fail-safe application and positive close off on air tight dampers. The spring return system provides consistent torque to the damper with and without power applied to the actuator. The TFBxxx-S version is provided with one built in auxiliary switches.

### Torque rating (at rating voltage)

22 in. lb (2.5N•m) constant

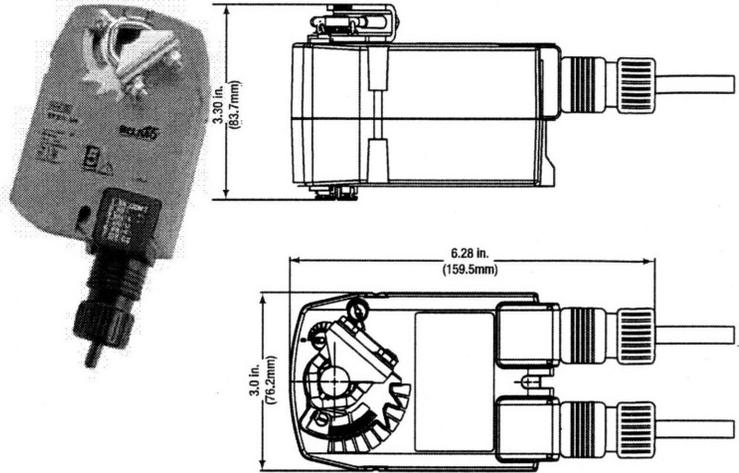
### Timing (at rated torque and voltage)

Motor: Less than 75 seconds; (TFB24-SR & -S is 95 seconds)

Spring : Less than 25 seconds

### Environmental Protection Ratings:

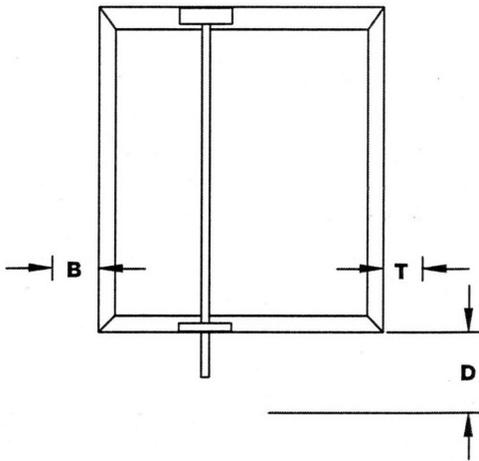
Nema 2



Model	Auxiliary Switch	Power Consumption		Voltage Input in Vac
		Running	Holding	
TFB24	No	2W	1.3W	24 VAC, 24 VDC
TFB24-S	Yes			
TFB120	No	2.5W	1.3W	100-240 VAC
TFB120-S	Yes			

### Space Envelopes for VCD Series

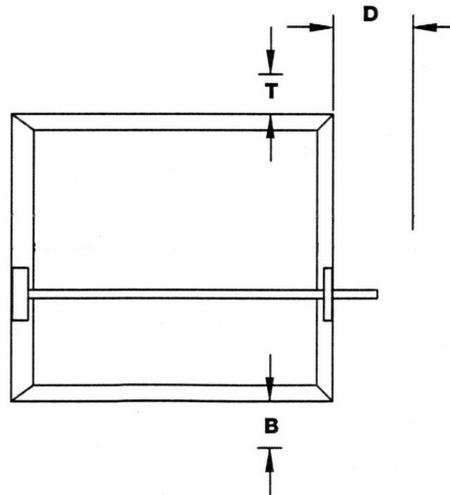
#### For Vertical Blade



Width	"T"	"B"	"D"
≥6 (152) to <10 (254)	0	3.5 (89)	6 (152)
≥10 (254)	0	0	6 (152)

Dimensions are in inches (mm).

#### For Horizontal Blade



Height	"T"	"B"	"D"
≥6 (152) to <10 (254)	0	3.5 (89)	6 (152)
≥10 (254)	0	0	6 (152)

Dimensions are in inches (mm).

Due to continuous product improvement, the actuator manufacturer reserves the right to change specifications without notice. For the most up-to-date information and maintenance, go to [www.belimo.us](http://www.belimo.us)

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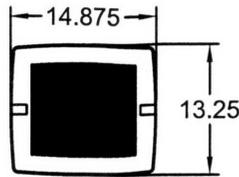
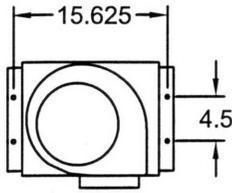
**Email Address: mmuhle@johnsonair.com**

**SUBMITTAL NOTES:**

**\*\*Submitting Greenheck to meet scheduled static pressure\*\***



P.O. Box 410    Schofield, WI 54476    (715) 359-6171    FAX (715) 355-2399    [www.greenheck.com](http://www.greenheck.com)



**Model: SP-B150**

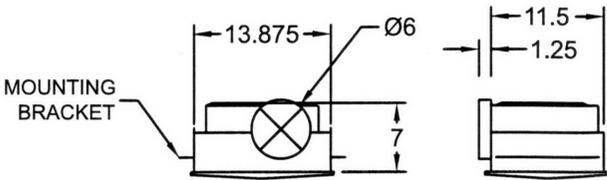
**Ceiling Exhaust Fan**

**Standard Construction Features:**

- Corrosion resistant galvanized steel scroll and housing - White designer non-yellowing grille - Round outlet duct collar with integral backdraft damper - Single inlet forward curved wheel - Plug type disconnect - Adjustable mounting brackets

**Options & Accessories:**

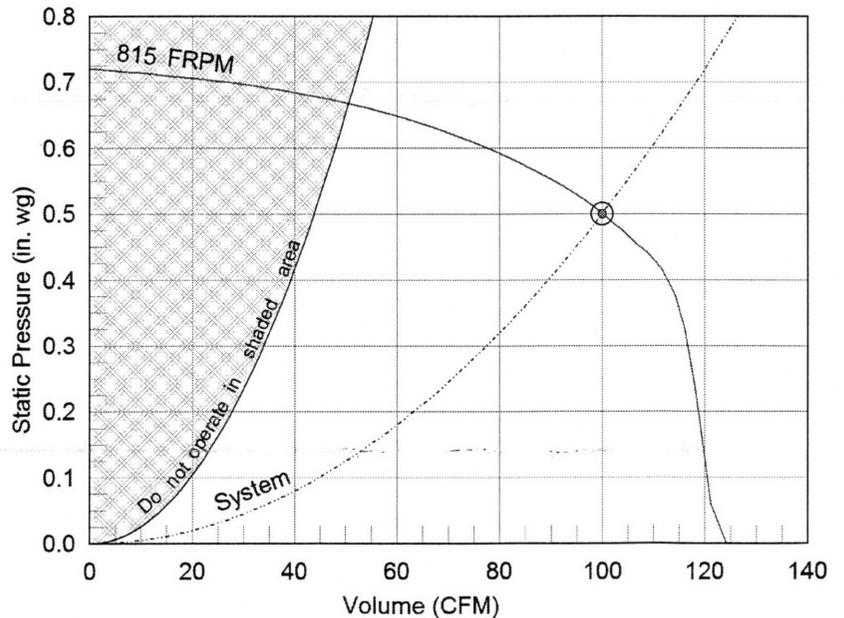
- UL/cUL 507 Listed - Electric Fan
- Solid State Speed Control, 5 Amp (PN 385031) Shipped Loose
- Designer Grille
- Round Duct Connection
- Polypropylene Wheel Material



Dimensional	
Quantity	1
Weight w/o Acc's (lb)	10
Weight w/ Acc's (lb)	11

Performance	
Requested Volume (CFM)	100
Actual Volume (CFM)	100
External SP (in. wg)	0.5
Total SP (in. wg)	0.5
Fan RPM	815
Watts (W)	150
Amps (A)	1.7
Elevation (ft)	203
Airstream Temp.(F)	70
Air Density (ft3)	0.074

Motor	
Motor Mounted	Yes
Watts (W)	150
V/C/P	115/60/1
Enclosure	ODP
NEC FLA* (Amps)	NA



- △ Operating Bhp point
- Operating point at Total SP
- Operating point at External SP
- Fan curve
- - - System curve
- - - Brake horsepower curve

**Notes:**

All dimensions shown are in units of in..  
\*FLA is approximate and will vary slightly with the motor.  
LwA - A weighted sound power level, based on ANSI S1.4  
dBA - A weighed sound pressure level, based on 11.5 dB attenuation per Octave band at 5.0 ft  
Sones - calculated using AMCA 301 at 5.0 ft  
AMCA certified ratings seal applies to some ratings only.

**Sound Power by Octave Band**

Sound Data	62.5	125	250	500	1000	2000	4000	8000	LwA	dBA	Sones
Inlet	60	52	51	51	49	43	39	34	53	38	2.2

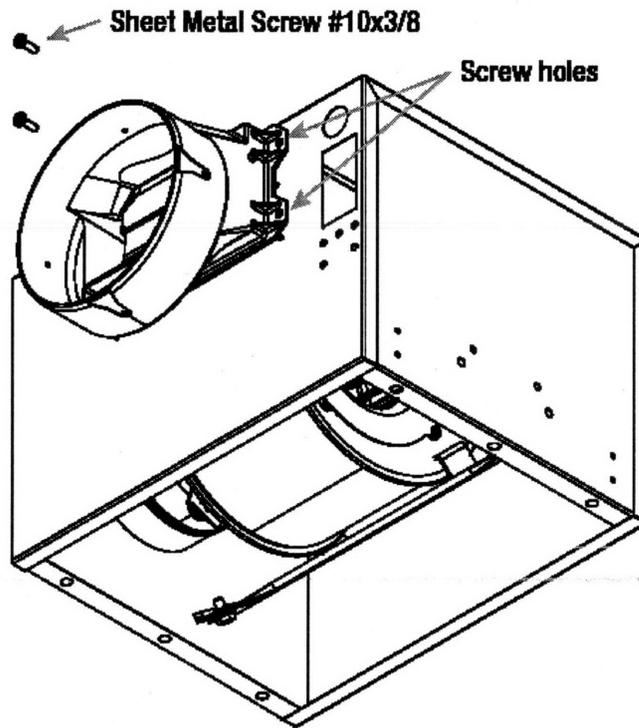


## Round Duct Connector

Model: RDC

### Standard Construction Features:

-Constructed of Polypropylene - Replaces the square discharge duct connector and damper using the existing mounting holes



Notes: All dimensions shown are in units of in.



# SUBMITTAL

**Job Name:** Scotch and Soda

**Date Printed:** 8/30/2013

**Spec Section:** 15 - HVAC

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



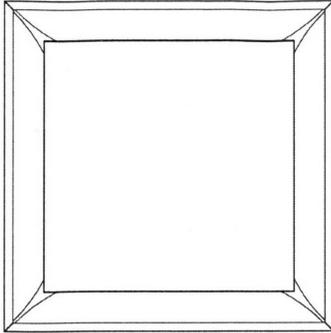
**All-In-One  
Detailed Submittal Schedule  
Grilles/Registers/Diffusers**

Date Printed: 8/30/2013  
Job Name: Scotch and Soda

#	Qty	Model	Tag	Inlet Size	Border	Pattern	Panel Size	Finish	Accessories	Submittal
1	2	SPD	S-3	8	31		24, 24	B12		218786
Desc.: 31 - T-Bar Lay-In 1" and 9/16" Flat Tee Applications   B12 - White - Powder Coat										
2	6	JS215	S-2	48.000, 1	21	STRAIGHT	0.000	B12	XX, MP	241834
Desc.: 21 - Exposed Frame for ASP/ASPI/JSP/JSPI/OTHERS (order separately)   STRAIGHT - Straight Section   B12 - White - Powder Coat   XX - 2 Factory Mitered ends (Standard)   MP - Mounting Plate - Field Bent										
3	6	JSP215	S-2 PLENUM	48, 1	1	STRAIGHT	8, 0.000			227472
Desc.: 1 - Plenum with Side Plenum Clips mounts to Type 21 22   STRAIGHT - Straight Section   8 - 8" Round Inlet										
4	2	JS215	S-1	24.000, 1	21	STRAIGHT	0.000	B12	XX, MP	241834
Desc.: 21 - Exposed Frame for ASP/ASPI/JSP/JSPI/OTHERS (order separately)   STRAIGHT - Straight Section   B12 - White - Powder Coat   XX - 2 Factory Mitered ends (Standard)   MP - Mounting Plate - Field Bent										
5	2	JSP215	S-1 PLENUM	48, 1	1	STRAIGHT	8, 0.000			227472
Desc.: 1 - Plenum with Side Plenum Clips mounts to Type 21 22   STRAIGHT - Straight Section   8 - 8" Round Inlet										
6	2	530	R-1	22.000, 22.000	F	L		B12	LI	219695
Desc.: F - 1 1/4" (32) Flat Frame   L - Front Louver Blades parallel to Long Dimension   B12 - White - Powder Coat   LI - T-Bar Lay-in										
7	2	530	T-1	10.000, 10.000	F	L		B12	SW	219695
Desc.: F - 1 1/4" (32) Flat Frame   L - Front Louver Blades parallel to Long Dimension   B12 - White - Powder Coat   SW - Sidewall										

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.

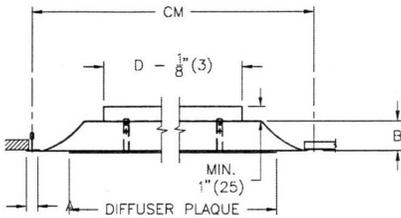
**SPD Steel Square Plaque Diffuser**



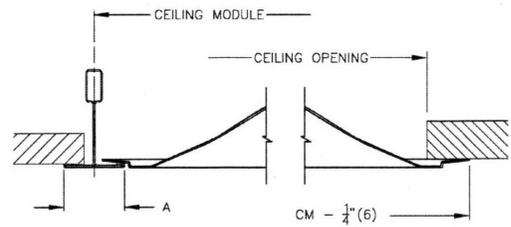
Duct Diameter (in.): 8  
 Backpan Height (B): 2.5"  
 Nom Ceiling Module: 24"x24"  
 Nom Ceiling Opening:  
 (Surface Mount App) 22"x22"

**Border:** 31

T-Bar Lay-In 1" and 9/16" Flat Tee Applications (A) / Surface Mount



**Frame Detail:**



**Notes:**

- 360° radial horizontal air pattern
- Removable face panel
- Factory tolerance  $\pm 1/32"$  (1)

**Material:**

- Diffuser: Steel

**Finish:**

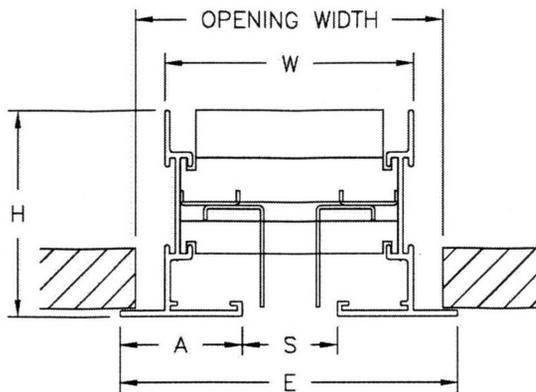
- B12: White Powder Coat

**PROJECT:** Scotch and Soda  
**ENGINEER:**  
**DESCRIPTION:** Square Plaque Diffuser-Steel  
 SPD//I/8//31//24/24///B12

**SUBMITTAL NO:** 258503  
**CUSTOMER:**

**SUBMITTAL DATE:** 8/30/2013

**JS215 Custom Flow Jet-Slot Linear Diffuser with 1 1/2" Slot**



**1 Slot**

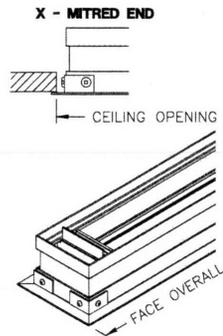
S	SlotQty	E	W	OpeningWidth*	A	H
1.5"	1 Slot	4 9/16"	3 5/8"	4 1/4"	1 17/32"	2 7/16"

\*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 = 48.000"

**End Conditions**

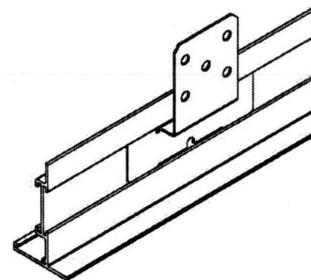
**XX** Factory Mitered both ends



**Border/Mounting**

**21** Exposed Frame

**MP** Mounting Plate - Field Bent



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: B12 White Powder Coat

**Notes**

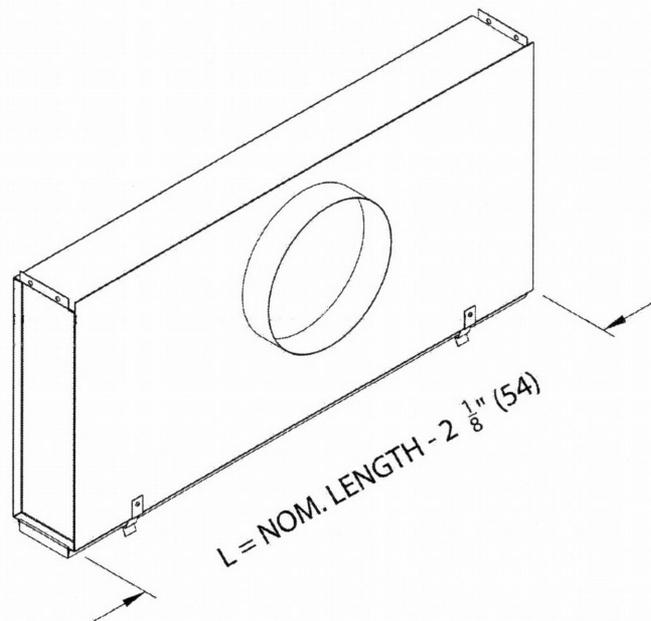
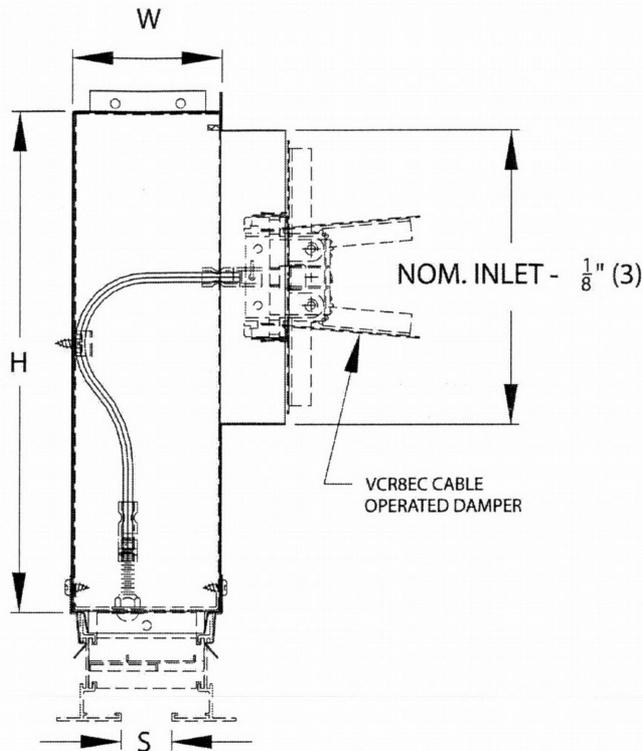
- Minimum Length 24" (610)
- Maximum Section Length 120" (3048)
- For ASP/JSP plenums use type 21 or 21P
- DPC: Dual layer pattern controllers (pattern and volume adjustable)
- For T-Bar installation see II00035
- For drywall applications see installation instruction II00033

**PROJECT:** Scotch and Soda  
**ENGINEER:**  
**DESCRIPTION:** Custom Flow Jet-Slot Linear, 1 1/2" Slot  
JS215//1/48.000/1/21/STRAIGHT/0.000//XX/MP////DPC//B12

**SUBMITTAL NO:** 258086-A  
**CUSTOMER:**

**SUBMITTAL DATE:** 8/30/2013

**JSP215**  
**Plenum Type 1**



S Slot Width	SlotQty	H	W
1 1/2" (38)	1 Slot	10" (254)	4" (102)

Nominal Length	Nominal Inlet Size
48"	8" Round Inlet

**Material**

- Coated Steel

**Finish**

- Mill Finish

**Damper**

- 8EC - VCR8EC cable operated damper (Neck Mounted, Round Inlets Only)

**Notes**

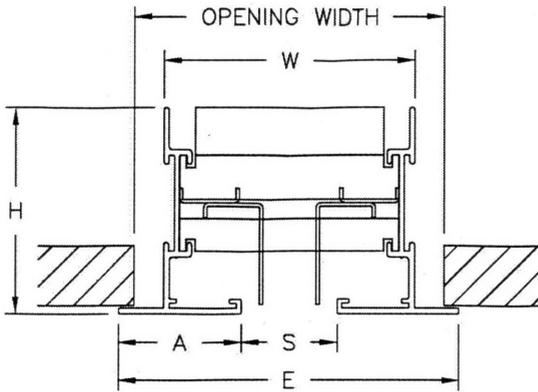
- When plenum endcaps are not positioned directly over the diffuser spacer bar, install MB blankoff from plenum endcap to next spacer bar
- Use with AS/JS Types 21 or 22
- See Installation instruction I100033 for installation in drywall ceilings

**PROJECT:** Scotch and Soda  
**ENGINEER:**  
**DESCRIPTION:** Custom Flow Engineered Plenum For JS215  
JSP215//1/48/1/1/STRAIGHT/8/0.000//8EC//

**SUBMITTAL NO:** 258087  
**CUSTOMER:**

**SUBMITTAL DATE:** 8/30/2013

**JS215 Custom Flow Jet-Slot Linear Diffuser with 1 1/2" Slot**



**1 Slot**

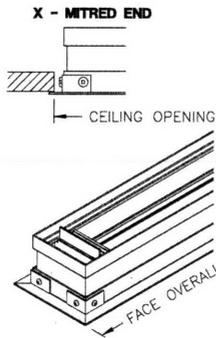
S	SlotQty	E	W	OpeningWidth*	A	H
1.5"	1 Slot	4 9/16"	3 5/8"	4 1/4"	1 17/32"	2 7/16"

\*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 = 24.000"

**End Conditions**

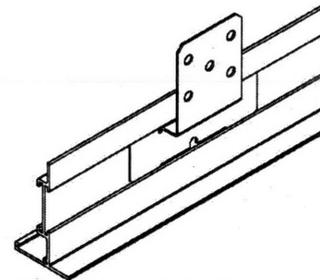
**XX** Factory Mitered both ends



**Border/Mounting**

**21** Exposed Frame

**MP** Mounting Plate - Field Bent



MOUNTING PLATES (FIELD BEND)

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: B12 White Powder Coat

**Notes**

- Minimum Length 24" (610)
- 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 I100035
- For drywall applications see installation instruction I100033

**PROJECT:** Scotch and Soda  
**ENGINEER:**  
**DESCRIPTION:** Custom Flow Jet-Slot Linear, 1 1/2" Slot  
JS215///24.000/1/21/STRAIGHT/0.000//XX/MP///DPC//B12

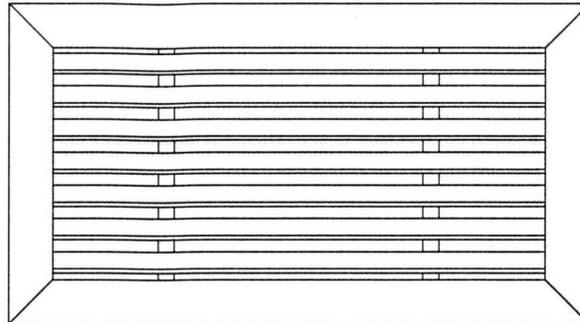
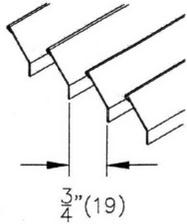
**SUBMITTAL NO:** 258086-A  
**CUSTOMER:**

**SUBMITTAL DATE:** 8/30/2013

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

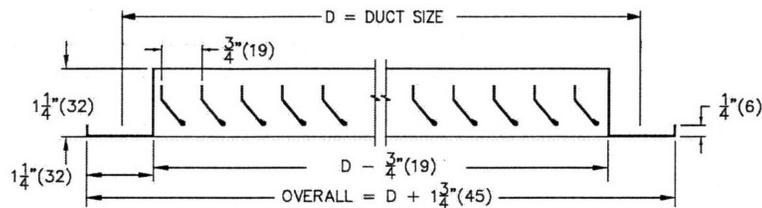
**Core Style:**

Single Deflection



**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
- Factory tolerance  $\pm 1/32"$  (1)

**PROJECT:** Scotch and Soda  
**ENGINEER:**  
**DESCRIPTION:** Steel Return Grille, 45° Blades, 3/4" Spacing  
530//1/22.000/22.000/F/L//0//LI/B12

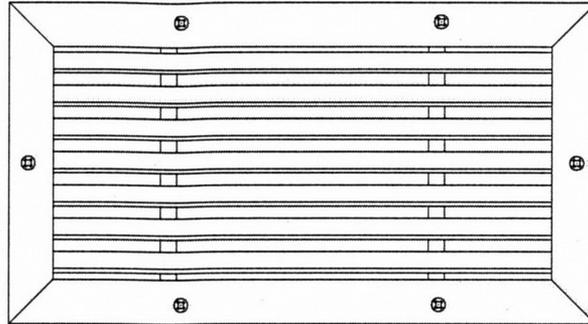
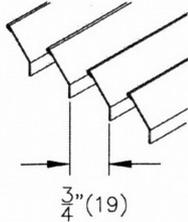
**SUBMITTAL NO:** 258306  
**CUSTOMER:**

**SUBMITTAL DATE:** 8/30/2013

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

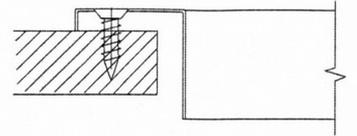
**Core Style:**

Single Deflection



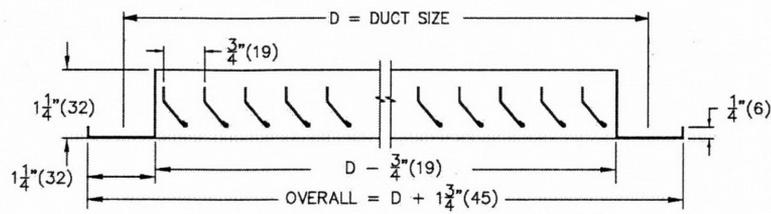
**Fastening:**

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

**PROJECT:** Scotch and Soda  
**ENGINEER:**  
**DESCRIPTION:** Steel Return Grille, 45° Blades, 3/4" Spacing  
530//1/10.000/10.000/F/L//A/SW/B12

**SUBMITTAL NO:** 258306  
**CUSTOMER:**

**SUBMITTAL DATE:** 8/30/2013



# CITY OF PORTLAND, OREGON - BUREAU OF DEVELOPMENT SERVICES

1900 SW Fourth Avenue, Suite 5000 • Portland, Oregon 97201 • www.portlandonline.com/bds • Fax 503-823-7425



10  
2

## Facility Permit Plan Intake Form

<b>FOR INTAKE, STAFF USE ONLY</b>		Building/Mechanical	SCOTT	1
Date Received	9/15/13	Electrical	JOHN	3
Building Registration #		Plumbing		
Fixed Bid		Fire	JERRY	2
Bin #	F3	Planning		
Building Permit #	13-191114-FA	BES		
Mechanical #	13-204890-FA	PDOT		
Plumbing Permit #		Structural		
Electrical Permit #		Other		

**APPLICANT: Complete all sections below that apply to the project. Please print legibly.**

Print Name Jacobs Heating Sign Name Erin Deschermeier  
 Street Address 4474 SE Milwaukie Ave.  
 City Portland State OR Zip Code 97202  
 Day Phone 503 234 7331 FAX 503 296 5351 email Erin@JacobsHeating.com

**Plans / permits available for pick up at 1900 SW 4th Avenue, 2nd floor between 8:00 am to 5:00 pm**

Contact Name for plan/permit pick up Erin Deschermeier  
 Day Phone 503 234 7331 email Erin@JacobsHeating.com

Project Building Name / # \_\_\_\_\_  
 Project Address or Location 888 SW 5th Ave Portland, OR 97205  
 Project Name and Description Scotch and Soda

Total Project Value \_\_\_\_\_ Project Reference #/Billing ID # \_\_\_\_\_  
 Building Contractor \_\_\_\_\_ CCB # \_\_\_\_\_  
 Mechanical Contractor Jacobs Heating & AC CCB # 1441  
 Electrical Contractor \_\_\_\_\_ CCB# \_\_\_\_\_ License # \_\_\_\_\_  
 Plumbing Contractor \_\_\_\_\_ CCB# \_\_\_\_\_ License # \_\_\_\_\_

**Building Permit**

No. of Stories \_\_\_\_\_ [Y] [N] Alarms Required  
 Const. Type \_\_\_\_\_ [Y] [N] Smoke Det. Req'd  
 [Y] [N] Sprinklers Req'd  
 [Y] [N] Struct. Eng / Calcs Submitted

**Electrical Permit**

Please provide a completed standard electrical permit application form. You may mail or deliver it to 1900 SW 4th Avenue, Portland, Oregon 97201 or FAX to 503-823-7425.

**Mechanical Permit**

Mechanical Valuation 7254.00  
 Description Install DDF, grilles + Ductwork (1) motorized damper

**Plumbing Permit**

Number of Fixtures \_\_\_\_\_  
 Back Flow Devices \_\_\_\_\_  
 Water Service (# of Feet) \_\_\_\_\_  
 Medical Gas \_\_\_\_\_  
 Other \_\_\_\_\_

13-204890-FA

F-3