

SUBMITTAL SHEET

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FREE FLO CURVED ARCHITECTURAL SLOT DIFFUSERS

FLAT (F) SURFACE APPLICATIONS

PRODUCT FEATURES

- Installed on FLAT ceilings or surfaces
- Field adjustable pattern controllers to change air discharge direction from horizontal to vertical projection (no integral volume control)
- Any single piece assembly must have a constant radius (R_c)
- Diffusers with arc lengths greater than 120" will be provided with center and / or end sections
- Refer to the applicable Free Flo submittal sheets for dimensional details, border type, ceiling opening requirements
- Can be used for supply or return applications
- Contact factory for other configurations not shown - slot width, # slots, frame type
- Opening Arc Length = Diffuser Arc Length (@ Centerline) + 1/2"

Surface Frame Models (S)

- FF-C-S-10-1-F 1" Slot Width, 1 Slot
- FF-C-S-10-2-F 1" Slot Width, 2 Slots
- FF-C-S-15-1-F 1-1/2" Slot Width, 1 Slot
- FF-C-S-15-2-F 1-1/2" Slot Width, 2 Slots

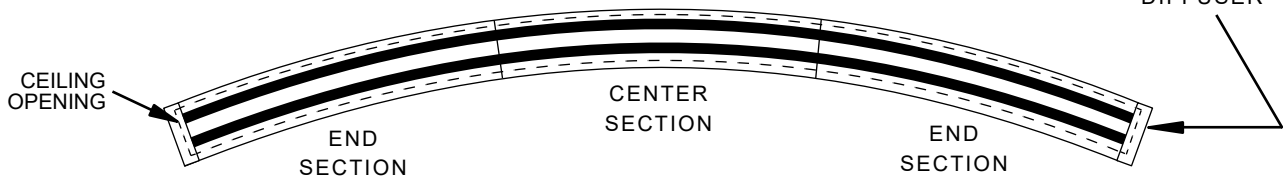
Plaster / Mud Frame Models (BF)

- FF-C-BF-10-1-F 1" Slot Width, 1 Slot
- FF-C-BF-10-2-F 1" Slot Width, 2 Slots
- FF-C-BF-15-1-F 1-1/2" Slot Width, 1 Slot
- FF-C-BF-15-2-F 1-1/2" Slot Width, 2 Slots

(RETURN MODELS WITHOUT PATTERN CONTROLLER: **FFR** REPLACES **FF**)

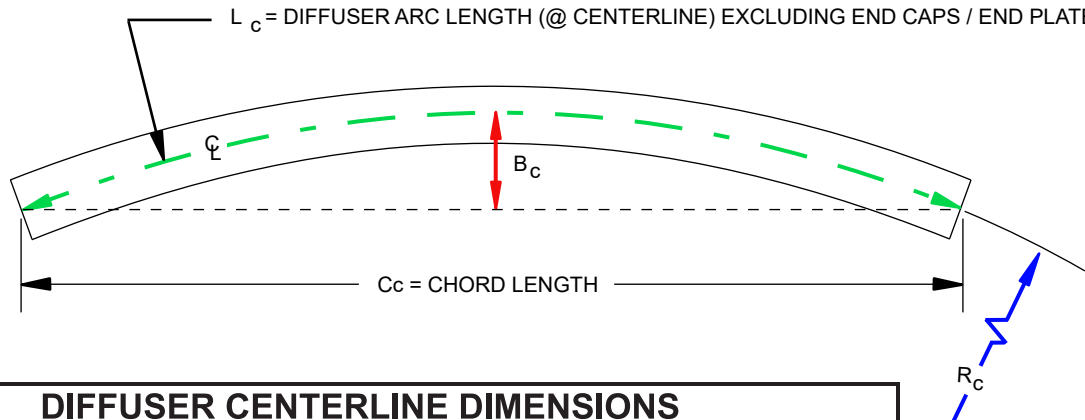
FACE VIEW (2 SLOT SHOWN)

END CAPS ARE SEPARATE AND REMOVABLE FROM DIFFUSER



HOW TO SPECIFY **DIFFUSER** DIMENSIONS

All dimensions are in inches.



DIFFUSER CENTERLINE DIMENSIONS

TAG:	Arc Length	Chord Length	Radius	Rise	Angle
	L_c	C_c	R_c	B_c	A_c

IMPORTANT: ONLY 2 OF THE 5 DIMENSIONS SHOWN ARE REQUIRED TO DEFINE DIFFUSER CURVATURE

JOB NAME:

SUBMITTED BY:



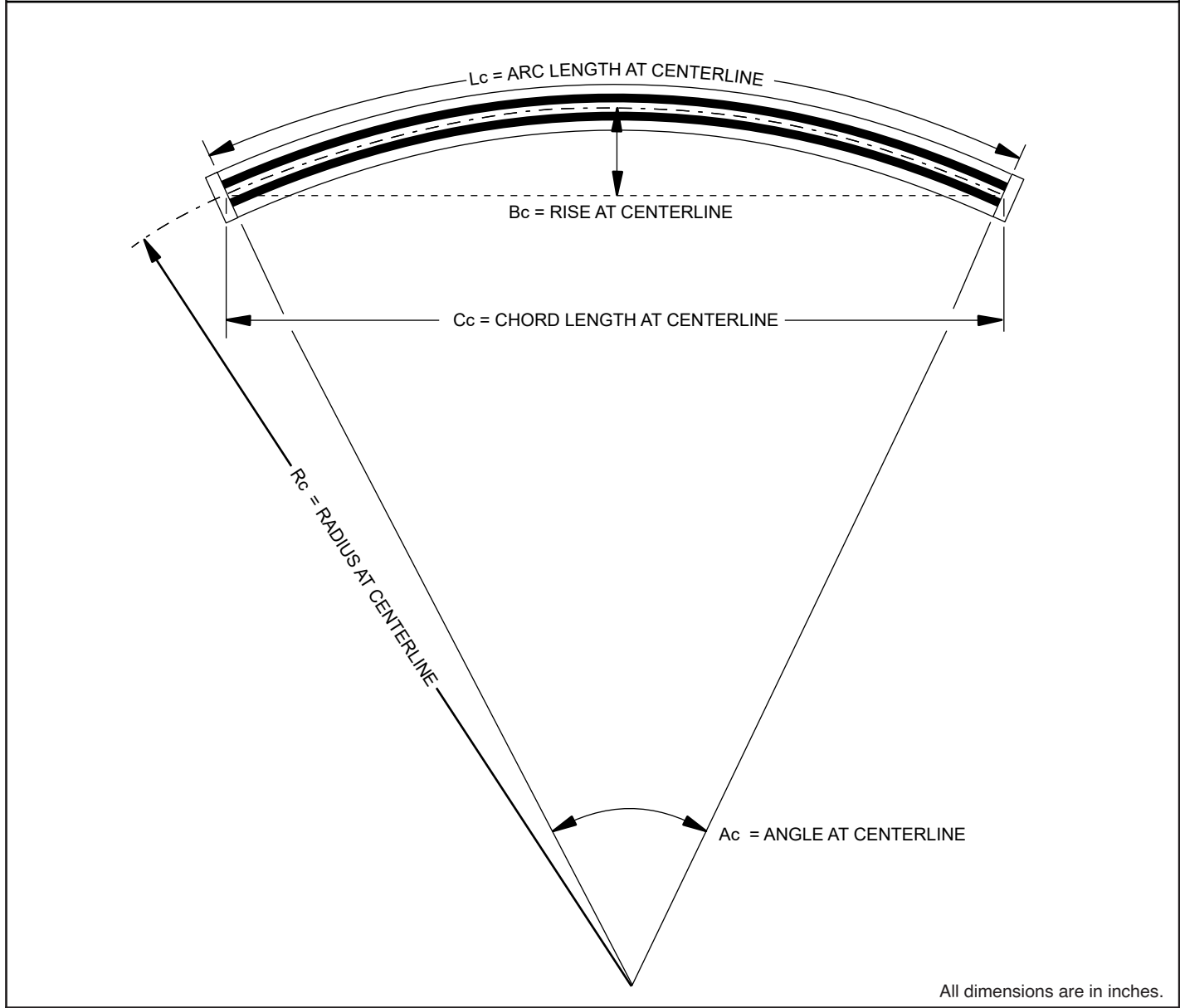
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**FREE FLO CURVED DIFFUSERS
FLAT (F) SURFACE APPLICATIONS**

CALCULATING CURVING DIMENSIONS

DIFFUSER CENTERLINE DIMENSIONS	IF YOU KNOW:
<p>Any 2 of the following 5 dimensions define the required curving for the diffuser. These dimensions reference the diffuser centerline:</p> <p><u>Example:</u></p> <p>Lc = ARC Length Lc = 102.64"</p> <p>Rc = RADIUS Rc = 130.00"</p> <p>Cc = CHORD Length (< Diameter) Cc = 100.00"</p> <p>Bc = RISE Bc = 10"</p> <p>Ac = ANGLE, degrees Ac = 45.24°</p>	<p>Cc & Bc : $R = (C^2 + 4B^2) / (8B)$ $A = 2 \times \text{Arcsin} (C/2R)$ $L = .017453 \times R \times A$</p> <p>Lc & Rc : $A = 57.296 \times L / R$ $C = 2 \times R \times \text{Sin} (A/2)$</p> <p>Lc & Ac : $R = L / (.017453 \times A)$ $C = 2 \times R \times \text{Sin} (A/2)$</p> <p>Cc & Rc : $A = 2 \times \text{Arcsin} (C/2R)$ $L = .017453 \times R \times A$</p>



All dimensions are in inches.

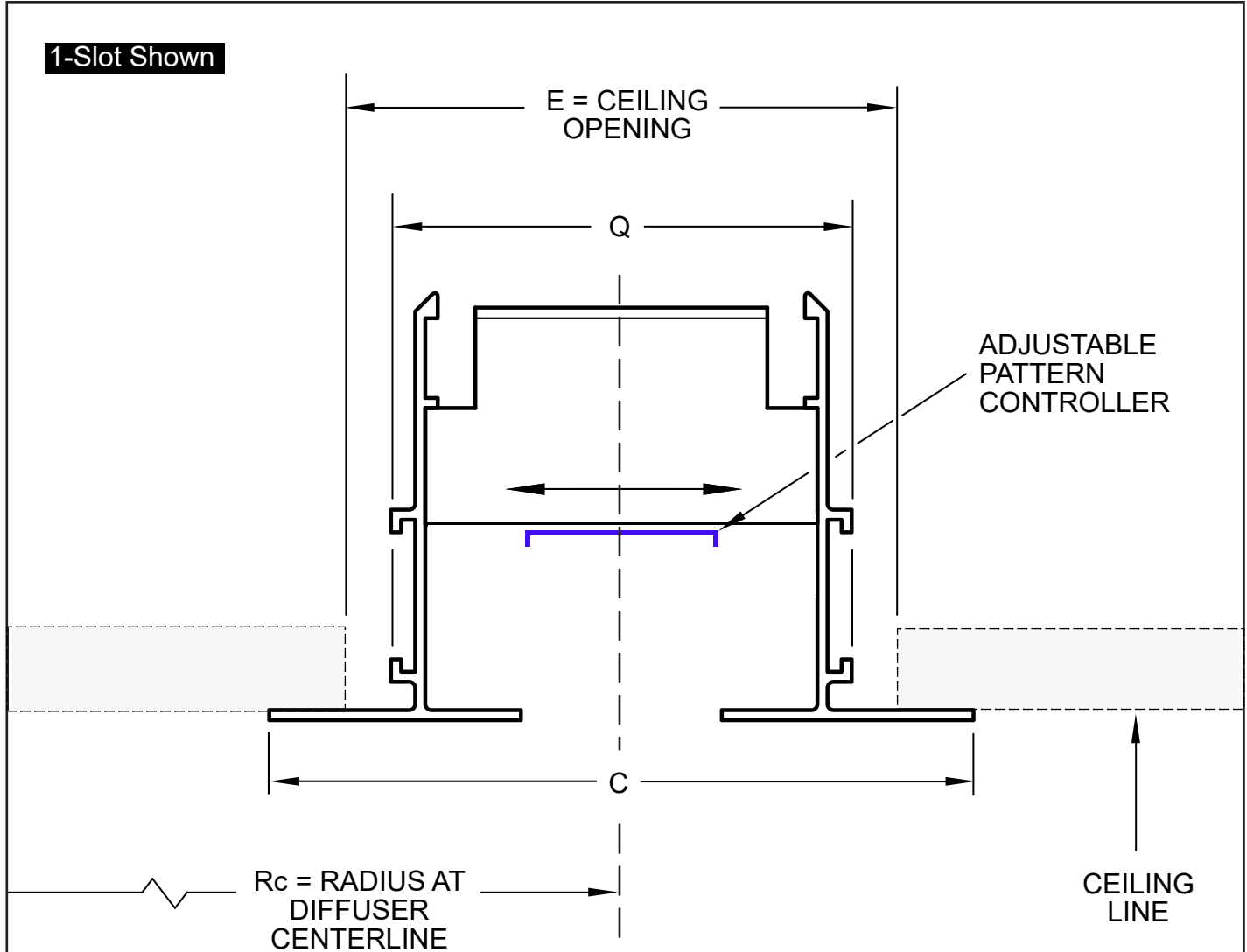
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**FREE FLO CURVED DIFFUSERS
FLAT (F) SURFACE APPLICATIONS**

CEILING OPENING DIMENSIONS



MODELS	SLOT WIDTH	# SLOTS	C	E	Q
FF-C-S-F (SURFACE FRAME)	1"	1	3-1/2	2-3/8	2-9/32
		2	5-1/2	4-3/8	4-9/32
FF-C-BF-F (PLASTER / MUD FRAME)	1-1/2"	1	4-1/2	3-3/8	3-9/32
		2	7-1/2	6-3/8	6-9/32
FF-C-BF-F (PLASTER / MUD FRAME)	2"	1	5-1/2	4-3/8	4-11/32
		2	9-1/2	8-3/8	8-11/32

Contact factory for other slot widths and quantity of slots.

All dimensions are in inches.

JOB NAME:

SUBMITTED BY: