

SLOT PATTERN ADJUSTMENT



Perpendicular



Parallel Left



Parallel Right



Blank Off



Parallel One-Way
Multiple Slot



Parallel Two-Way
Multiple Slot

Features

- Extruded Aluminum Construction
- Low Silhouette Design
- Excellent Horizontal Pattern at Low CFM
- Choice of 1/2", 3/4" or 1" Wide Slots
- Available to Eight Slots Wide
- Choice of Four Frame Border Widths
- Adjustable Combination Damper and Pattern Control in Each Slot
- Models for Plaster, T-bar or Spline Ceilings
- Single Unit Lengths to Six Feet Long
- Continuous Appearance to Any Length
- White Painted Frame with Black or White Pattern Control
- Durandoic and Color Anodizes are Available
- Equally Efficient for Supply and Return Applications
- 90° or 135° Mitered Corners for Perimeter Applications
- Five Optional Mounting Frame Arrangements
- Insulated or Uninsulated Plenums

DESCRIPTION

Carnes Series CH Channelaire is an extruded aluminum low silhouette adjustable pattern linear slot diffuser. It is available with 1/2", 3/4" or 1" wide slots up to eight slots wide. Each slot is equipped with an individually adjustable pattern control that controls the direction of air discharge either parallel with or perpendicular to the diffuser face. The adjustment from the face of the diffuser allows for pattern control in a full 180° range for either right or left parallel, intermediate or perpendicular air flow. The unique design of the Channelaire allows the same vane which controls the air pattern to also be adjustable for control of air flow rate. This dampening is accomplished without upsetting the air pattern. The Channelaire units are available with either a 13/16" or a 1-1/8" wide frame border.

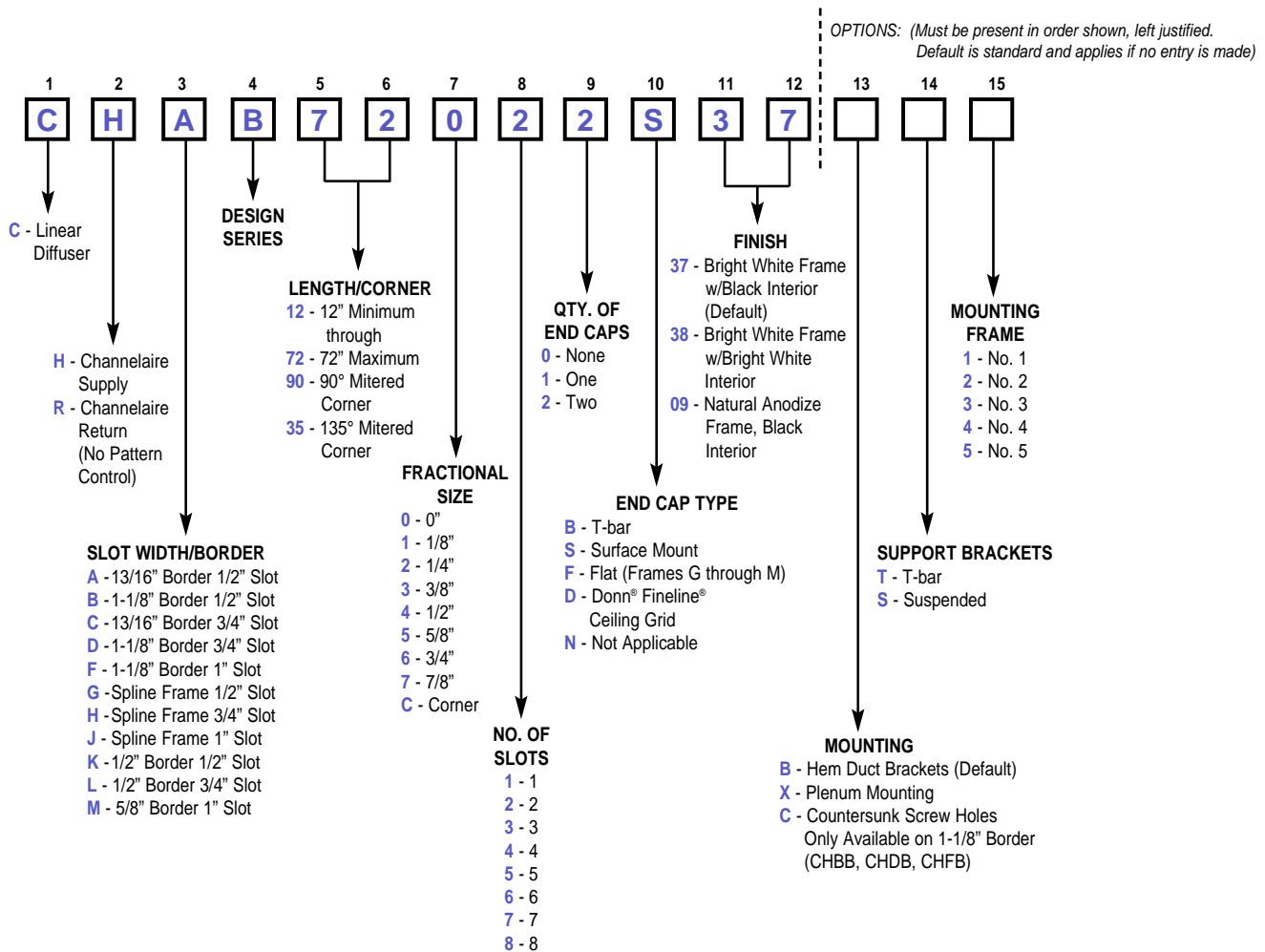
Carnes Channelaire diffusers have a pleasing aesthetic appearance when installed in either a

plaster, T-bar or spline ceiling. Mitered corners are available in 90° or 135° for perimeter application. The maximum single unit length is 72 inches. Continuous appearance to any length can be accomplished by butting two or more sections together. Joint splines are furnished to insure proper alignment. Five optional mounting frame arrangements are available to meet most ceiling applications.

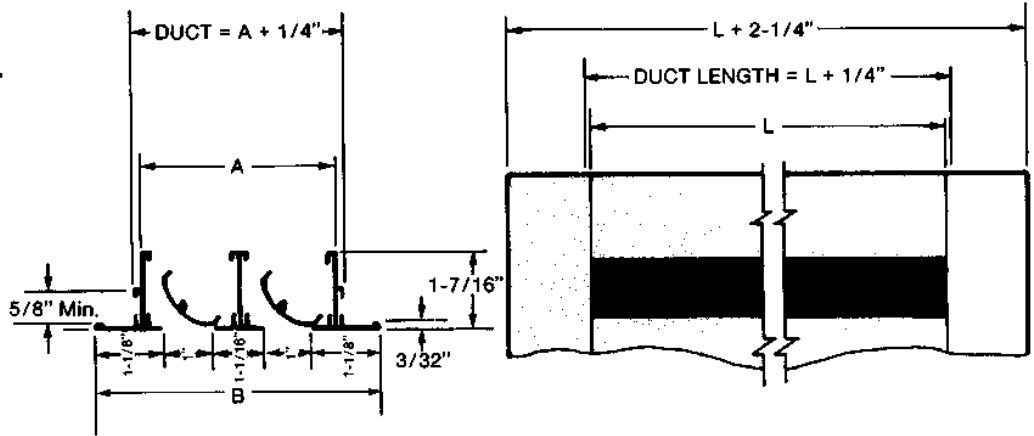
The Channelaire diffusers are available with natural anodized frames with black painted pattern control, frame painted white with black pattern control or white frame with white pattern control.

A full line of insulated or uninsulated plenums are available. The insulation is 1/2" 1-1/2" pound density fiberglass with matter face to prevent erosion. It meets the UL 181 and NFPA 90A requirements.

▼ Diffusers

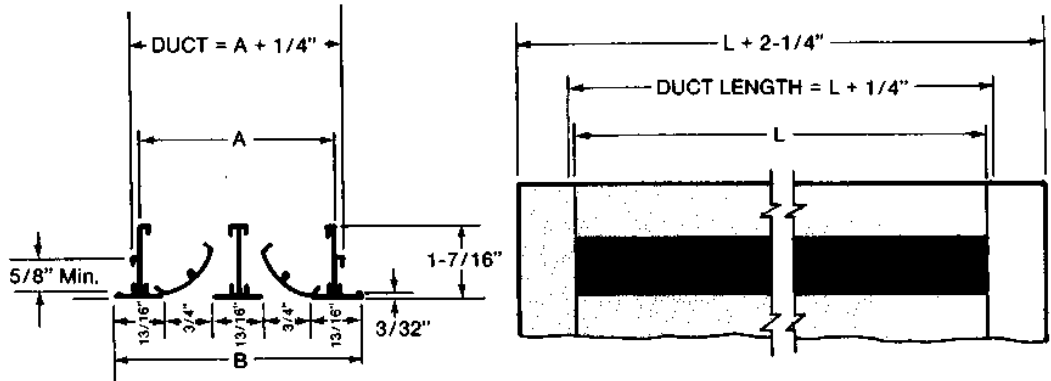


Model CHFB
 1-1/8" Border
 1" Slot



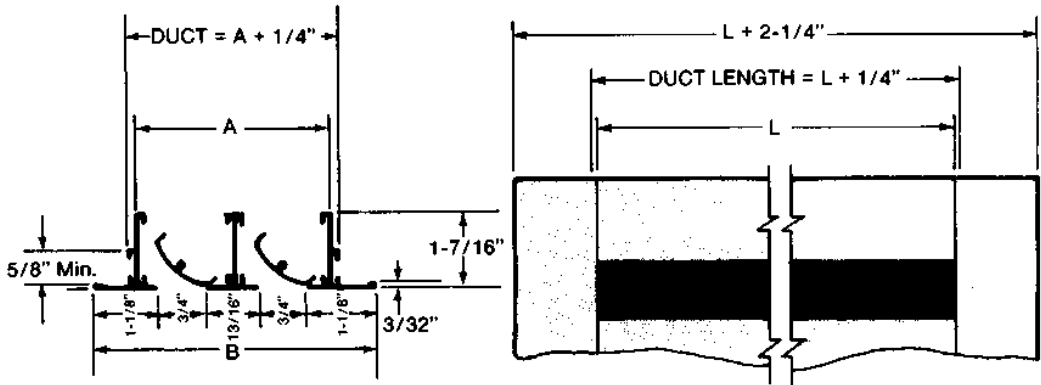
Dim.	No. of Slots							
	1	2	3	4	5	6	7	8
A	2-1/8	4-3/16	6-1/4	8-5/16	10-3/8	12-7/16	14-1/2	16-9/16
B	3-1/4	5-5/16	7-3/8	9-7/16	11-1/2	13-9/16	15-5/8	17-11/16

Model CHCB
 13/16" Border
 3/4" Slot

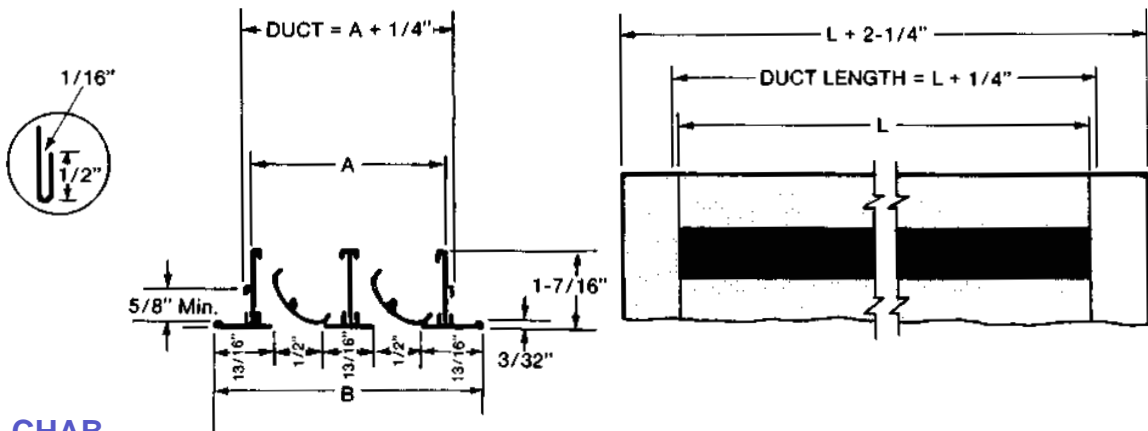


Dim.	No. of Slots							
	1	2	3	4	5	6	7	8
A	1-5/8	3-3/16	4-3/4	6-5/16	7-7/8	9-7/16	11	12-9/16
B	2-3/8	3-15/16	5-1/2	7-1/16	8-5/8	10-3/16	11-3/4	13-5/16

Model CHDB
 1-1/8" Border
 3/4" Slot

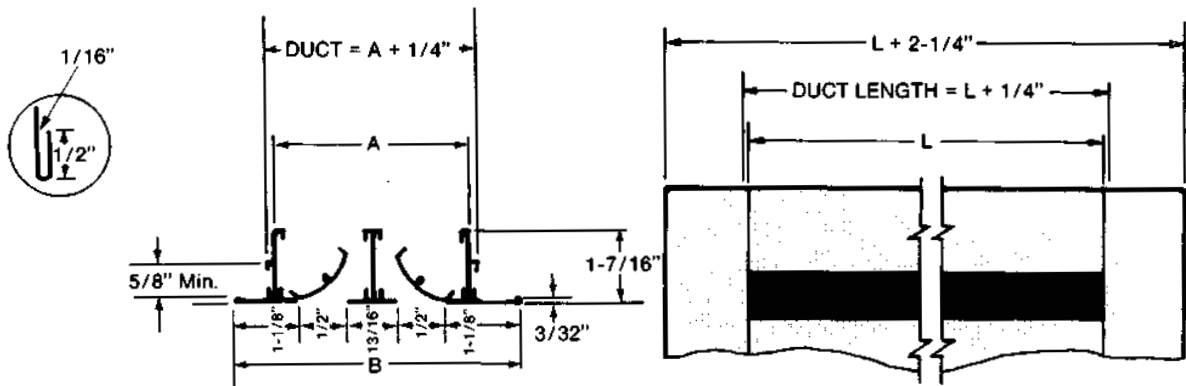


Dim.	No. of Slots							
	1	2	3	4	5	6	7	8
A	1-5/8	3-3/16	4-3/4	6-5/16	7-7/8	9-7/16	11	12-9/16
B	3	4-9/16	6-1/8	7-11/16	9-1/4	10-13/16	12-3/8	13-15/16



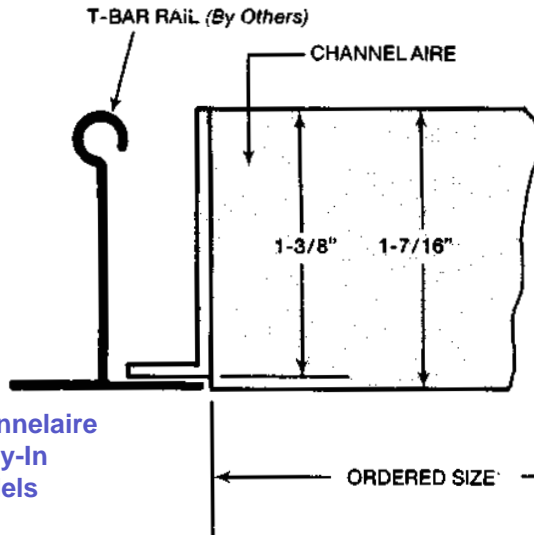
Model CHAB
 13/16" Border
 1/2" Slot

Dim.	No. of Slots							
	1	2	3	4	5	6	7	8
A	1-3/8	2-11/16	4	5-5/16	6-5/8	7-15/16	9-1/4	10-9/16
B	2-1/8	3-7/16	4-3/4	6-1/16	7-3/8	8-11/16	10	11-5/16



Model CHBB
 1-1/8" Border
 1/2" Slot

Dim.	No. of Slots							
	1	2	3	4	5	6	7	8
A	1-3/8	2-11/16	4	5-5/16	6-5/8	7-15/16	9-1/4	10-9/16
B	2-3/4	4-1/16	5-3/8	6-11/16	8	9-5/16	10-5/8	11-15/16

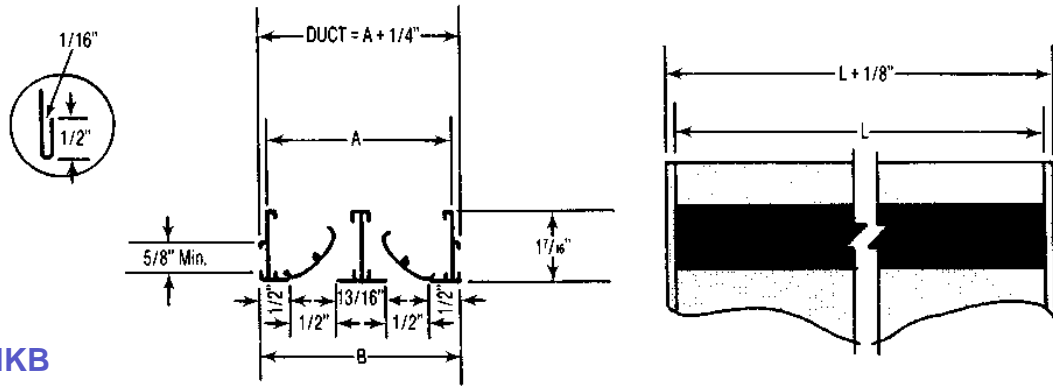


Typical Channelaire
 T-bar Lay-In
 All Models

NOTES:

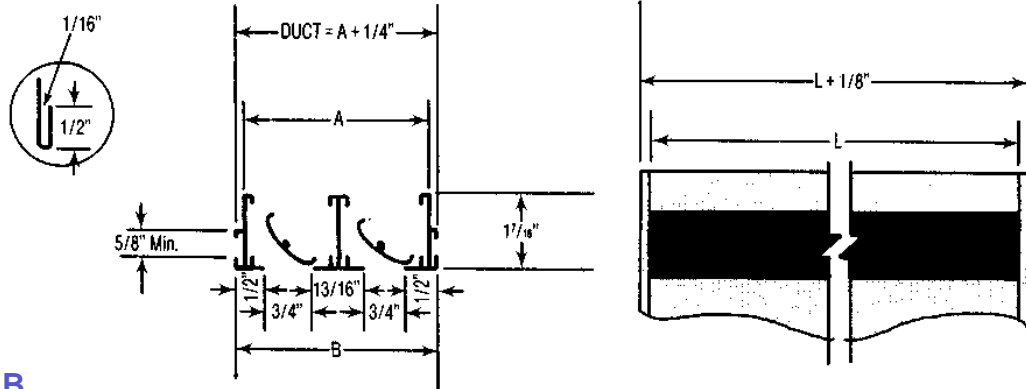
1. Maximum ordered size for piece construction is 72".
2. Available in all frame styles and slot widths.
3. Ordered size of Channelaire is 1" shorter than ceiling grid centers. (Example: For T-bars on 48" centers, order 47" long diffuser.)

Model CHKB
1/2" Border
1/2" Slot



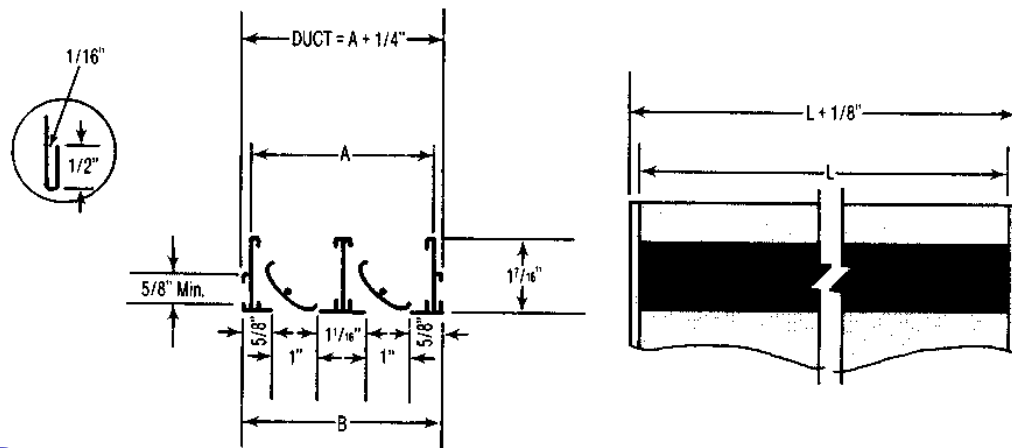
Dim.	No. of Slots							
	1	2	3	4	5	6	7	8
A	1-3/8	2-11/16	4	5-5/16	6-5/8	7-15/16	9-1/4	10-9/16
B	1-1/2	2-13/16	4-1/8	5-7/16	6-3/4	8-1/16	9-3/8	10-11/16

Model CHLB
1/2" Border
3/4" Slot

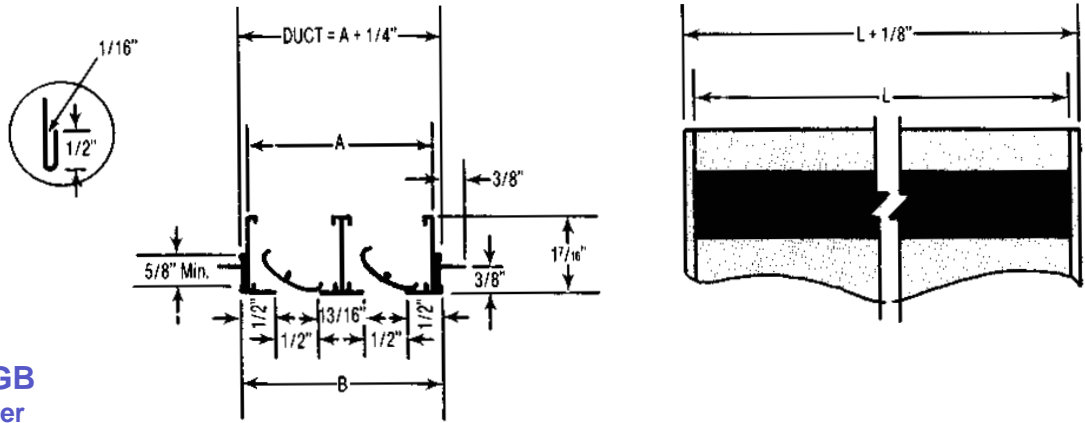


Dim.	No. of Slots							
	1	2	3	4	5	6	7	8
A	1-5/8	3-3/16	4-3/4	6-5/16	7-7/8	9-7/16	11	12-9/16
B	1-3/4	3-5/16	4-7/8	6-7/16	8	9-9/16	11-1/8	12-11/16

Model CHMB
5/8" Border
1" Slot

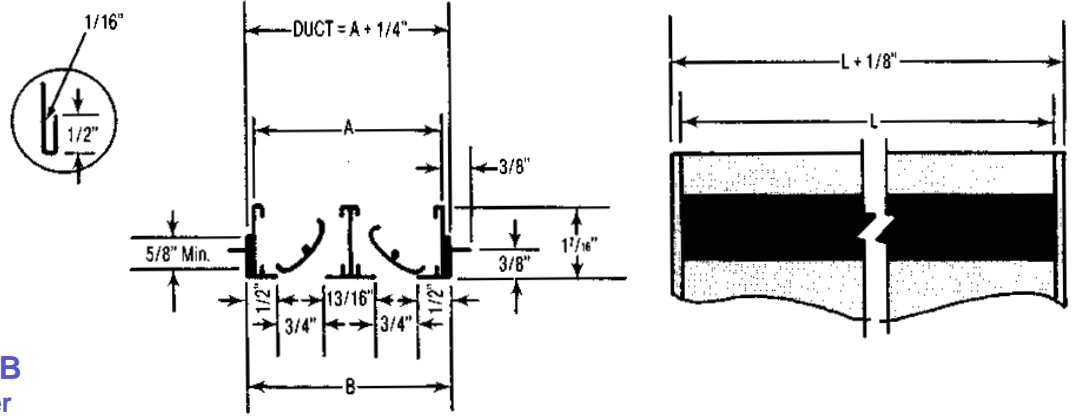


Dim.	No. of Slots							
	1	2	3	4	5	6	7	8
A	2-1/8	4-3/16	6-1/4	8-5/16	10-3/8	12-7/16	14-1/2	16-9/16
B	2-1/4	4-5/16	6-3/8	8-7/16	10-1/2	12-9/16	14-5/8	16-11/16



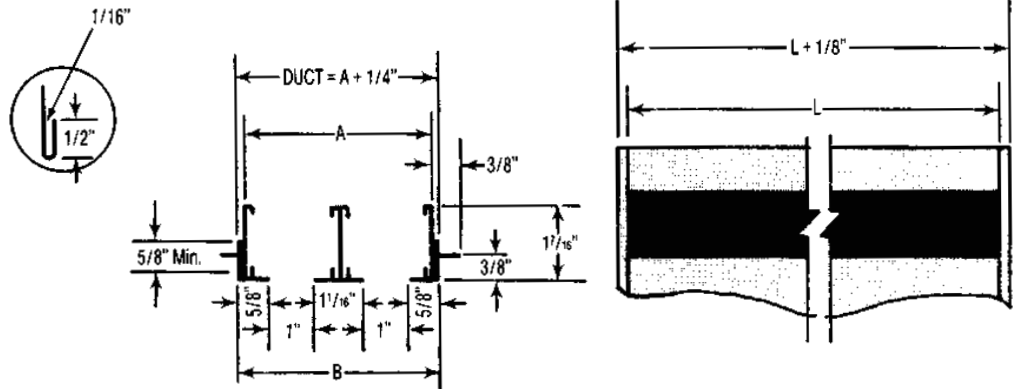
Model CHGB
Spline Border
1/2" Slot

Dim.	No. of Slots							
	1	2	3	4	5	6	7	8
A	1-3/8	2-11/16	4	5-5/16	6-5/8	7-15/16	9-1/4	10-9/16
B	1-1/2	2-13/16	4-1/8	5-7/16	6-3/4	8-1/16	9-3/8	10-11/16



Model CHHB
Spline Border
3/4" Slot

Dim.	No. of Slots							
	1	2	3	4	5	6	7	8
A	1-5/8	3-3/16	4-3/4	6-5/16	7-7/8	9-7/16	11	12-9/16
B	1-3/4	3-5/16	4-7/8	6-7/16	8	9-9/16	11-1/8	12-11/16



Model CHJB
Spline Border
1" Slot

Dim.	No. of Slots							
	1	2	3	4	5	6	7	8
A	2-1/8	4-3/16	6-1/4	8-5/16	10-3/8	12-7/16	14-1/2	16-9/16
B	2-1/4	4-5/16	6-3/8	8-7/16	10-1/2	12-9/16	14-5/8	16-11/16

Guide Specifications

Diffusers shall be adjustable slot type of extruded aluminum construction with one or more parallel slots. Each slot shall contain pattern controls, adjustable from the face of the diffuser to deflect the discharge air along a selected axis within a semi-circle of 180°. The same pattern controls shall function as volume control dampers without affecting the air discharge pattern.

For continuous installations, butted units shall be provided with alignment splines. Screws or other fasteners shall not be visible after installation.

Definition of Terms

TOTAL PRESSURE (*Inches of Water*)

Total pressure is equal to static pressure + velocity pressure immediately upstream of the diffuser with pattern control set for minimum resistance (i.e., in each slot the pattern control is set at 3/8" opening).

THROW (*Feet*)

Throws are based on supply air temperature equal to room temperature; thus, chilled supply air will result in throw values less than tabulated.

Throw data is shown for terminal velocities of 150, 100 and 50 feet per minute.

Throw data is based on a 6 foot length of diffuser as a continuous installation in a 9 foot ceiling. For higher ceilings reduce the throw rating by 1 foot for each 1 foot increase in ceiling height.

Throw data is based on all slots discharging air in the same direction. For 2-way pattern, select throws on the basis of CFM/Foot per number of slots blowing in each direction.

SOUND DATA

NC = Noise Criteria, db based on 10 db room attenuation. (Rating "L" means lower than 20 db.)

Sound ratings are based on a 4 foot long unit. For greater lengths add correction to rating.

No. of 4 Foot Lengths	db To Be Added
1	0
2	3
3	5
4	6
6	8
10	10

If pattern control is in dampering position, sound levels will be increased as follows:

Slot Opening	Effective Damper Opening %	Total Resistance %	db To Be Added
3/8	100	100 Minimum	0
5/16	80	150	6
1/4	65	220	13
3/16	50	420	20

Finish shall consist of natural anodized exterior surfaces and flat black finish on visible interior deflector member.

Mounting frames, where specified, shall contain flanges for attaching to framing members and flanges for engaging plaster or spline type tile. Frames shall also contain alignment spline sockets.

Plenums, if required, shall be Carnes Model CXPB either insulated or uninsulated.

PERPENDICULAR DISCHARGE

When pattern control is adjusted for discharge perpendicular to the face of the diffuser, (i.e., in neutral attitude and positioned 3/8" from face of diffuser) these factors apply to the performance data.

Total Pressure:

Slot Width	Multiply Tabulated Data By
1/2"	0.90
3/4"	0.80
1"	0.70

Slot Width	Subtract from Tabulated NC
1/2"	2 db
3/4"	3 db
1"	4 db

RETURN AIR

When Channelaire is used as an air return, either ducted or plenum, the pattern control is used for dampering only. With pattern control set at wide open, (i.e., 7/16") these correction factors apply to the performance data.

Slot Width	Multiply Tabulated Data By
1/2"	0.65
3/4"	0.60
1"	0.55

Slot Width	Subtract from Tabulated NC
1/2" & 3/4"	7 db
1"	8 db

No. of Slot	CFM/Foot	1/2" Slot					3/4" Slot					1" Slot				
		Pt	NC	Throw-FPM			Pt	NC	Throw-FPM			Pt	NC	Throw-FPM		
				150	100	50			150	100	50			150	100	50
1	10	.01	L	1	3	6	.01	L	1	2	5	.01	L	1	2	3
	15	.03	L	4	6	12	.02	L	3	5	10	.01	L	2	4	8
	20	.05	L	6	10	17	.03	L	5	9	15	.02	L	4	7	12
	25	.07	L	9	13	22	.05	L	8	12	19	.02	L	7	10	16
	30	.11	22	12	16	25	.07	L	11	15	23	.04	L	9	12	19
	40	.19	30	16	21	30	.13	25	15	20	28	.06	20	12	17	24
	50	.30	37	19	24	34	.20	31	18	23	32	.10	27	15	19	27
	70						.29	37	20	25	35	.15	32	18	22	31
70											.20	36	19	24	34	
2	20	.01	L	2	4	10	.01	L	2	3	8	.01	L			
	25	.02	L	4	7	14	.01	L	4	6	13	.01	L	2	4	8
	30	.03	L	5	9	18	.02	L	5	8	16	.01	L	3	6	11
	40	.05	L	8	13	23	.03	L	8	12	21	.02	L	6	10	17
	50	.07	20	11	16	27	.05	L	11	15	25	.02	L	9	13	21
	60	.11	25	14	20	30	.07	20	13	18	28	.04	L	11	16	24
	70	.14	30	16	22	33	.10	24	15	21	31	.05	L	13	18	27
	80	.19	34	19	25	36	.13	28	17	23	33	.06	23	16	21	30
	90	.24	37	21	27	38	.16	31	19	26	36	.08	26	17	23	32
	100	.29	40	22	28	40	.20	34	21	27	38	.10	30	19	24	34
	120						.29	40	23	30	41	.15	35	21	27	37
	140											.20	39	23	29	40
3	30	.01	L	3	6	14	.01	L	3	5	12		L			
	40	.02	L	6	10	20	.01	L	5	8	17	.01	L	4	7	14
	50	.03	L	8	13	24	.02	L	7	11	21	.01	L	6	10	18
	60	.05	L	10	16	27	.03	L	9	15	25	.02	L	8	12	21
	70	.06	20	12	18	30	.04	L	11	17	28	.02	L	10	15	24
	80	.08	23	14	20	32	.06	L	13	19	30	.03	L	11	16	26
	90	.11	27	16	22	34	.07	21	15	21	32	.03	L	13	18	28
	100	.13	30	18	24	36	.09	24	17	23	34	.04	20	15	20	30
	120	.19	35	20	27	39	.13	30	20	27	38	.06	25	18	24	34
	140	.25	40	23	30	42	.17	34	22	28	40	.09	30	19	26	36
	160	.33	44	25	32	45	.23	38	24	30	42	.11	33	22	28	39
	180						.29	42	26	32	45	.15	37	23	20	41
200											.18	40	25	31	43	
4	40	.01	L	4	7	17	.01	L	4	6	15		L			
	50	.02	L	6	10	21	.01	L	5	9	19	.01	L	4	7	15
	60	.03	L	7	12	24	.02	L	7	11	22	.01	L	6	10	19
	70	.03	L	9	15	27	.02	L	8	14	25	.01	L	7	12	21
	80	.05	L	11	17	30	.03	L	10	16	28	.02	L	9	14	24
	90	.06	20	12	19	32	.04	L	12	18	30	.02	L	10	16	26
	100	.07	23	14	21	34	.05	L	13	20	32	.02	L	12	17	28
	120	.10	28	17	24	37	.07	23	16	23	35	.03	L	14	20	31
	140	.14	33	20	27	40	.10	27	19	26	38	.05	22	17	23	34
	160	.18	37	22	29	42	.13	31	21	28	40	.06	26	19	26	37
	180	.23	40	24	31	44	.16	34	23	30	42	.08	30	21	27	38
	200	.28	43	25	33	46	.20	38	24	31	44	.10	33	22	28	40
	220						.24	40	26	33	46	.11	35	24	30	42
	240						.29	43	27	35	48	.15	38	25	32	44
260											.17	40	26	32	45	
280											.20	42	26	33	46	
5	50	.01	L	5	8	20										
	60	.02	L	6	11	24	.01	L	6	10	22					
	70	.03	L	8	13	26	.01	L	8	13	15	.01	L	6	11	21
	80	.03	L	9	15	29	.02	L	9	14	27	.01	L	7	12	23
	90	.04	L	11	17	31	.02	L	10	16	29	.01	L	9	14	25
	100	.05	L	12	19	33	.03	L	11	18	31	.02	L	10	16	27
	120	.07	23	14	22	36	.05	L	14	21	34	.02	L	12	18	30
	140	.10	27	17	25	39	.06	22	16	23	37	.03	L	15	21	33
	160	.13	31	19	26	40	.08	26	18	25	38	.04	21	16	23	35
	180	.16	34	22	29	43	.10	29	21	28	41	.05	24	19	25	37
	200	.19	37	23	32	45	.12	32	22	30	43	.06	27	20	27	39
	220	.23	40	25	33	47	.15	35	23	31	44	.08	30	22	29	41
	240	.27	43	26	34	48	.18	38	25	33	46	.09	33	23	31	43
	260	.31	45	27	35	49	.21	40	26	33	47	.11	35	24	31	44
	280						.26	42	27	35	48	.12	37	25	32	45
	300											.15	39	26	33	46
325											.17	42	27	34	47	
350											.20	44	28	35	49	

No. of Slot	CFM/Foot	Pt	NC	1/2" Slot			3/4" Slot					1" Slot				
				Throw-FPM			Pt	NC	Throw-FPM			Pt	NC	Throw-FPM		
				150	100	50			150	100	50			150	100	50
6	60	.01	L	6	10	24										
	70	.02	L	7	12	26	.01	L	7	12	25					
	80	.02	L	8	14	29	.01	L	8	13	27	.01	L	6	11	23
	90	.03	L	9	16	31	.02	L	9	15	29	.01	L	8	13	25
	100	.04	L	11	18	32	.02	L	10	17	30	.01	L	9	15	27
	120	.05	L	13	20	35	.03	L	12	19	33	.02	L	11	17	30
	140	.07	23	15	23	38	.04	L	14	22	36	.02	L	13	20	32
	160	.09	27	17	25	40	.05	22	16	24	38	.03	L	15	21	34
	180	.11	30	19	27	42	.07	25	18	26	40	.03	20	17	23	36
	200	.13	33	21	29	44	.08	28	20	27	41	.04	23	18	25	38
	220	.16	36	23	31	45	.10	31	22	30	43	.05	26	20	27	39
	240	.19	38	24	33	47	.12	33	23	31	44	.06	29	21	29	41
	260	.22	41	25	34	48	.14	36	24	32	46	.07	31	22	29	42
	280	.25	43	26	35	49	.16	38	25	33	47	.08	34	23	31	43
	300	.29	45	28	36	50	.19	40	26	34	48	.10	36	25	32	45
	325						.22	42	27	35	49	.12	38	25	33	46
	350						.26	45	29	36	50	.13	40	26	34	47
375						.30	47	30	37	52	.15	42	27	35	48	
400											.18	44	28	35	49	
7	70	.01	L	6	11	26										
	80	.02	L	8	13	29	.01	L	7	12	27					
	90	.02	L	9	15	31	.01	L	9	14	29	.01	L	8	12	25
	100	.03	L	10	16	32	.01	L	10	15	30	.01	L	9	14	27
	120	.04	L	12	19	35	.02	L	11	18	33	.01	L	10	17	30
	140	.05	20	14	22	38	.03	L	13	21	36	.02	L	12	19	32
	160	.06	23	16	24	40	.04	L	15	23	38	.02	L	13	20	34
	180	.08	27	17	25	41	.05	20	16	24	39	.03	L	15	22	36
	200	.10	30	19	28	43	.06	23	18	26	41	.03	L	17	24	38
	220	.12	33	21	29	44	.07	26	20	27	42	.04	21	18	25	39
	240	.14	35	22	30	45	.09	29	22	29	44	.05	24	20	27	40
	260	.16	37	24	32	47	.10	31	23	31	45	.05	26	21	29	42
	280	.18	39	25	34	48	.12	33	24	32	46	.06	28	22	30	43
	300	.21	41	26	35	49	.14	35	25	33	47	.07	30	24	31	44
	325	.25	44	27	36	50	.17	38	26	34	48	.09	33	24	32	45
	350	.29	46	28	36	51	.20	40	28	36	50	.10	35	25	33	46
	375						.22	42	29	37	51	.12	37	26	34	47
400						.25	44	29	37	52	.13	39	27	35	48	
425						.29	46	30	37	52	.15	41	28	35	49	
450											.17	43	29	36	50	
8	80	.01	L	7	12	29										
	90	.02	L	8	14	31										
	100	.02	L	9	16	32	.01	L	8	15	30					
	120	.03	L	11	18	35	.02	L	10	17	33	.01	L	9	15	30
	140	.04	L	12	20	37	.02	L	12	19	35	.01	L	11	18	32
	160	.05	20	14	23	39	.03	L	13	21	37	.01	L	12	20	34
	180	.06	23	16	25	41	.04	L	15	23	39	.02	L	14	22	36
	200	.08	26	18	26	42	.05	20	17	24	40	.02	L	16	23	37
	220	.09	28	19	28	44	.06	23	18	26	42	.03	L	17	25	39
	240	.11	31	21	29	45	.07	25	20	28	43	.03	20	18	26	40
	260	.13	33	22	31	46	.08	28	21	29	44	.04	23	20	27	41
	280	.15	35	24	32	47	.09	30	23	31	45	.05	25	21	29	42
	300	.17	38	24	34	48	.11	32	23	32	46	.05	27	22	30	43
	325	.20	40	25	35	49	.13	34	24	33	47	.06	29	23	31	44
	350	.22	42	27	36	50	.15	36	25	34	48	.08	32	24	32	45
	375	.26	44	29	37	52	.17	38	27	35	49	.09	34	25	33	46
	400	.30	46	30	38	54	.20	40	28	36	50	.10	36	26	33	47
425						.22	42	29	37	51	.11	37	27	35	48	
450						.25	44	29	37	52	.13	39	27	35	49	
475						.29	46	30	38	53	.14	41	29	36	50	
500						.32	47	30	38	53	.16	42	29	37	51	

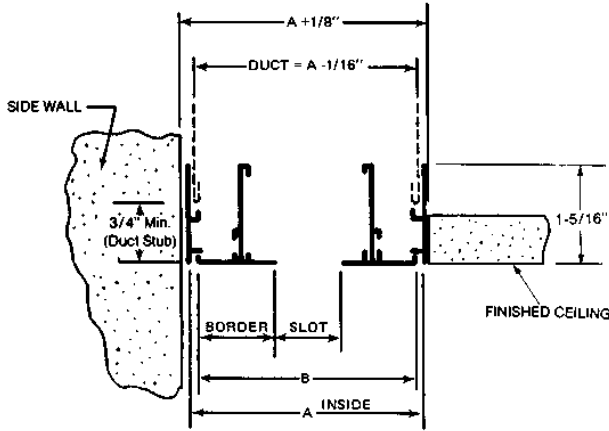
Notes on Performance Data

- Performance data is based on tests conducted in accordance with ANSI/ASHRAE Standard 70-1991.
- Actual performance in the field may vary.
- Tests were conducted in isothermal conditions.
- Sound levels are based on a room absorption of 10 db re 10⁻¹² watts.

Notes on Units of Measure Used

- Air flow is given in cubic feet per minute (CFM).
- Static Pressure is given in inches of water (w.g.).
- Throws are given in feet to terminal velocities of 150, 100 and 50 fpm, respectively.
- L indicates an NC of less than 20.

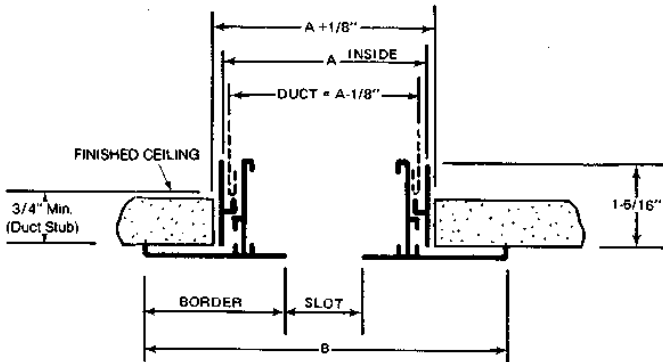
Mounting Frame Option No. 1



Model: CH \square B**** \square

Border	Slot Size	Dim.	No. of Slots							
			1	2	3	4	5	6	7	8
13/16	1/2	A	2 3/16	3 1/2	4 13/16	6 1/8	7 7/16	8 3/4	10 1/16	11 3/8
		B	2 7/8	3 7/16	4 3/4	6 1/16	7 3/8	8 11/16	10	11 5/16
	3/4	A	2 7/16	4	5 9/16	7 1/8	8 11/16	10 1/4	11 13/16	13 3/8
		B	2 3/8	3 15/16	5 1/2	7 1/16	8 5/8	10 3/16	11 3/4	13 5/16
	1	A	NOT AVAILABLE							
		B	NOT AVAILABLE							
1 1/8	1/2	A	2 13/16	4 1/8	5 7/16	6 3/4	8 1/16	9 3/8	10 11/16	12
		B	2 3/4	4 1/16	5 3/8	6 11/16	8	9 5/16	10 7/8	11 15/16
	3/4	A	3 1/16	4 4/8	6 3/16	7 3/4	9 5/16	10 7/8	12 7/16	14
		B	3	4 9/16	6 1/8	7 11/16	9 1/4	10 13/16	12 3/8	13 15/16
	1	A	3 9/16	5 3/8	7 1/16	9 1/2	11 9/16	13 5/8	15 11/16	17 3/4
		B	3 1/4	5 5/16	7 3/8	9 7/16	11 1/2	13 9/16	15 5/8	17 11/16

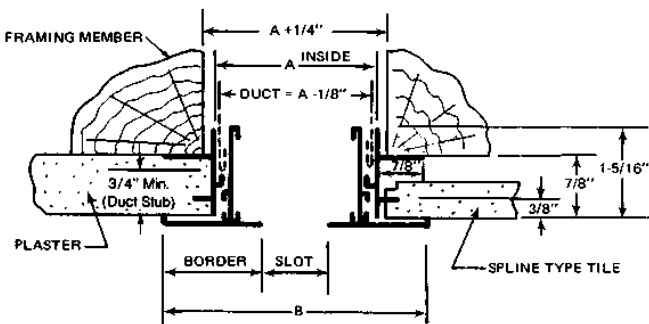
Mounting Frame Option No. 2



Model: CH \square B**** \square

Border	Slot Size	Dim.	No. of Slots								
			1	2	3	4	5	6	7	8	9
13/16	1/2	A	1 3/4	3 1/16	4 3/8	5 11/16	7	8 5/16	9 5/8	10 15/16	
		B	2 1/8	3 7/16	4 3/4	6 1/16	7 3/8	8 11/16	10	11 5/16	
	3/4	A	2	3 9/16	5 1/8	6 13/16	8 1/4	9 13/16	11 3/4	12 15/16	
		B	2 3/8	3 15/16	5 1/2	7 1/16	8 5/8	10 3/16	11 3/4	13 5/16	
	1	A	NOT AVAILABLE								
		B	NOT AVAILABLE								
1 1/8	1/2	A	1 3/4	3 1/16	4 3/8	5 11/16	7	8 5/16	9 5/8	10 15/16	
		B	2 3/8	4 1/16	5 3/8	6 11/16	8	9 5/16	10 5/8	11 15/16	
	3/4	A	2	3 9/16	5 1/8	6 11/16	8 1/4	9 13/16	11 3/4	12 15/16	
		B	3	4 9/16	6 1/8	7 11/16	9 1/4	10 13/16	12 3/8	13 15/16	
	1	A	2 1/2	4 9/16	6 5/8	8 11/16	10 3/4	12 13/16	14 7/8	16 15/16	
		B	3 1/4	5 5/16	7 3/8	9 7/16	11 1/2	13 9/16	15 5/8	17 11/16	

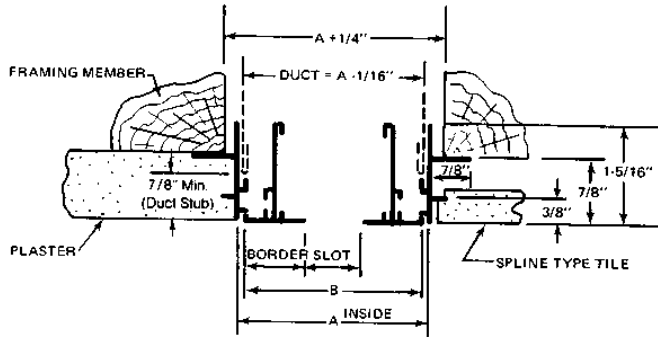
Mounting Frame Option No. 3



Model: CH \square B**** \square

Border	Slot Size	Dim.	No. of Slots							
			1	2	3	4	5	6	7	8
13/16	1/2	A	1 3/4	3 1/16	4 3/8	5 11/16	7	8 5/16	9 5/8	10 15/16
		B	2 1/8	3 7/16	4 3/4	6 1/16	7 3/8	8 11/16	10	11 5/16
	3/4	A	2	3 9/16	5 1/8	6 13/16	8 1/4	9 13/16	11 3/4	12 15/16
		B	2 3/8	3 15/16	5 1/2	7 1/16	8 5/8	10 3/16	11 3/4	13 5/16
	1	A	NOT AVAILABLE							
		B	NOT AVAILABLE							
1 1/8	1/2	A	1 3/4	3 1/16	4 3/8	5 11/16	7	8 5/16	9 5/8	10 15/16
		B	2 3/8	4 1/16	5 3/8	6 11/16	8	9 5/16	10 5/8	11 15/16
	3/4	A	2	3 9/16	5 1/8	6 11/16	8 1/4	9 13/16	11 3/4	12 15/16
		B	3	4 9/16	6 1/8	7 11/16	9 1/4	10 13/16	12 3/8	13 15/16
	1	A	2 1/2	4 9/16	6 5/8	8 11/16	10 3/4	12 13/16	14 7/8	16 15/16
		B	3 1/4	5 5/16	7 3/8	9 7/16	11 1/2	13 9/16	15 5/8	17 11/16

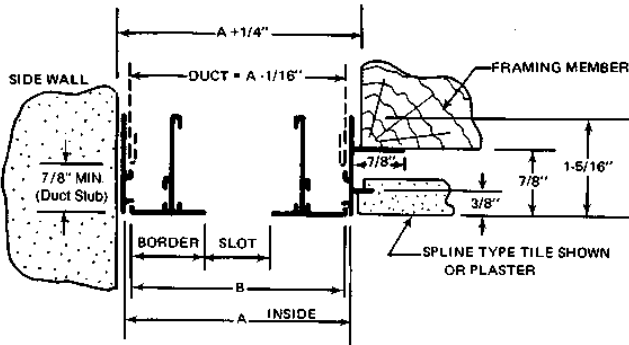
Mounting Frame Option No. 4



Model: CH B****

Border	Slot Size	Dim.	No. of Slots								
			1	2	3	4	5	6	7	8	
13/16	1/2	A	2 3/16	3 1/2	4 13/16	5 1/8	6 1/8	7 1/8	8 5/8	10 1/16	11 3/8
		B	2 1/8	3 7/16	4 3/4	5 1/8	6 1/8	7 3/8	8 11/16	10	11 5/16
	3/4	A	2 7/16	4	5 9/16	7 1/8	8 11/16	10 1/4	11 13/16	13 3/8	
1 1/8	1/2	A	2 13/16	4 1/8	5 7/16	6 3/4	8 1/16	9 3/8	10 11/16	12	
		B	2 3/8	4 1/16	5 3/8	6 11/16	8	9 5/16	10 9/16	11 15/16	
	3/4	A	3 1/16	4 5/8	6 3/16	7 3/4	9 1/16	10 7/8	12 1/16	14	
1 1/4	1/2	A	3 5/16	5 3/8	7 1/16	9 1/2	11 9/16	13 5/8	15 11/16	17 3/4	
		B	3 1/4	5 5/16	7 3/8	9 7/16	11 1/2	13 9/16	15 5/8	17 11/16	
	3/4	A	3 9/16	5 7/8	7 1/2	9 1/4	11 1/4	13 1/4	15 3/4	17 3/4	
1 1/2	1/2	A	3 13/16	5 1/2	7 1/8	9 1/4	11 1/4	13 1/4	15 3/4	17 3/4	
		B	3 1/2	5 5/8	7 3/8	9 1/4	11 1/4	13 1/4	15 3/4	17 3/4	
	3/4	A	3 7/8	5 7/8	7 3/4	9 3/4	11 3/4	13 3/4	15 3/4	17 3/4	
1 5/8	1/2	A	4 1/8	6 1/8	8 1/8	10 1/8	12 1/8	14 1/8	16 1/8	18 1/8	
		B	4 1/16	6 1/16	8 1/16	10 1/16	12 1/16	14 1/16	16 1/16	18 1/16	
	3/4	A	4 5/16	6 5/16	8 5/16	10 5/16	12 5/16	14 5/16	16 5/16	18 5/16	
1 7/8	1/2	A	4 5/8	6 5/8	8 5/8	10 5/8	12 5/8	14 5/8	16 5/8	18 5/8	
		B	4 3/4	6 3/4	8 3/4	10 3/4	12 3/4	14 3/4	16 3/4	18 3/4	
	3/4	A	5 1/16	7 1/16	9 1/16	11 1/16	13 1/16	15 1/16	17 1/16	19 1/16	
1 9/16	1/2	A	4 9/16	6 9/16	8 9/16	10 9/16	12 9/16	14 9/16	16 9/16	18 9/16	
		B	4 7/8	6 7/8	8 7/8	10 7/8	12 7/8	14 7/8	16 7/8	18 7/8	
	3/4	A	5 1/8	7 1/8	9 1/8	11 1/8	13 1/8	15 1/8	17 1/8	19 1/8	
1 11/16	1/2	A	4 13/16	6 13/16	8 13/16	10 13/16	12 13/16	14 13/16	16 13/16	18 13/16	
		B	4 3/4	6 3/4	8 3/4	10 3/4	12 3/4	14 3/4	16 3/4	18 3/4	
	3/4	A	5 1/4	7 1/4	9 1/4	11 1/4	13 1/4	15 1/4	17 1/4	19 1/4	
1 13/16	1/2	A	4 3/4	6 3/4	8 3/4	10 3/4	12 3/4	14 3/4	16 3/4	18 3/4	
		B	4 5/8	6 5/8	8 5/8	10 5/8	12 5/8	14 5/8	16 5/8	18 5/8	
	3/4	A	5 1/8	7 1/8	9 1/8	11 1/8	13 1/8	15 1/8	17 1/8	19 1/8	
1 15/16	1/2	A	4 7/8	6 7/8	8 7/8	10 7/8	12 7/8	14 7/8	16 7/8	18 7/8	
		B	4 5/4	6 5/4	8 5/4	10 5/4	12 5/4	14 5/4	16 5/4	18 5/4	
	3/4	A	5 1/4	7 1/4	9 1/4	11 1/4	13 1/4	15 1/4	17 1/4	19 1/4	
1 17/16	1/2	A	4 15/16	6 15/16	8 15/16	10 15/16	12 15/16	14 15/16	16 15/16	18 15/16	
		B	4 3/2	6 3/2	8 3/2	10 3/2	12 3/2	14 3/2	16 3/2	18 3/2	
	3/4	A	5 3/8	7 3/8	9 3/8	11 3/8	13 3/8	15 3/8	17 3/8	19 3/8	

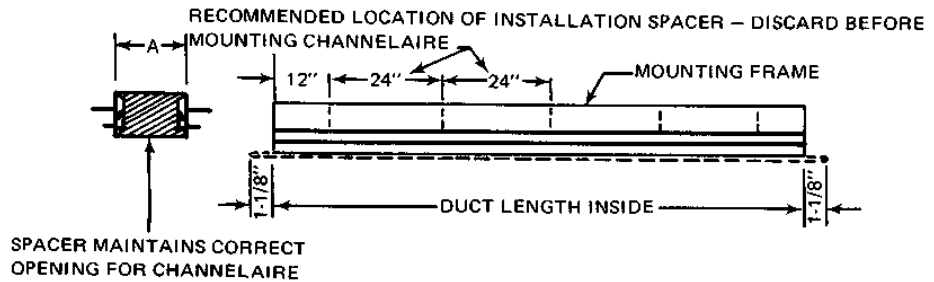
Mounting Frame Option No. 5

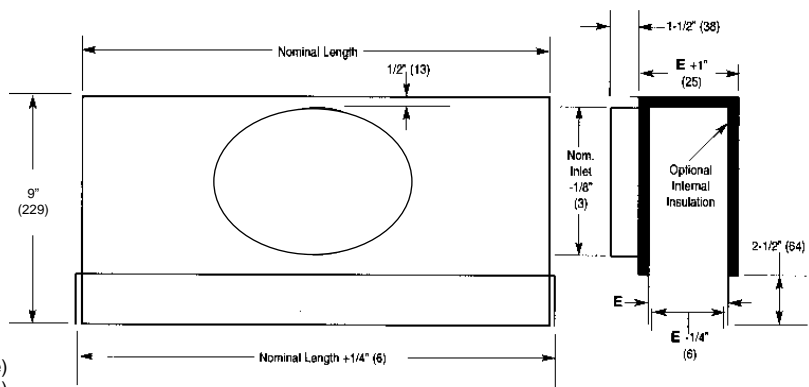


Model: CH B****

Border	Slot Size	Dim.	No. of Slots								
			1	2	3	4	5	6	7	8	
13/16	1/2	A	2 3/16	3 1/2	4 13/16	5 1/8	6 1/8	7 1/8	8 5/8	10 1/16	11 3/8
		B	2 1/8	3 7/16	4 3/4	5 1/8	6 1/8	7 3/8	8 11/16	10	11 5/16
	3/4	A	2 7/16	4	5 9/16	7 1/8	8 11/16	10 1/4	11 13/16	13 3/8	
1 1/8	1/2	A	2 13/16	4 1/8	5 7/16	6 3/4	8 1/16	9 3/8	10 11/16	12	
		B	2 3/8	4 1/16	5 3/8	6 11/16	8	9 5/16	10 9/16	11 15/16	
	3/4	A	3 1/16	4 5/8	6 3/16	7 3/4	9 1/16	10 7/8	12 1/16	14	
1 1/4	1/2	A	3 5/16	5 3/8	7 1/16	9 1/2	11 9/16	13 5/8	15 11/16	17 3/4	
		B	3 1/4	5 5/16	7 3/8	9 7/16	11 1/2	13 9/16	15 5/8	17 11/16	
	3/4	A	3 9/16	5 7/8	7 1/2	9 1/4	11 1/4	13 1/4	15 3/4	17 3/4	
1 1/2	1/2	A	3 13/16	5 1/2	7 1/8	9 1/4	11 1/4	13 1/4	15 3/4	17 3/4	
		B	3 1/2	5 5/8	7 3/8	9 1/4	11 1/4	13 1/4	15 3/4	17 3/4	
	3/4	A	3 7/8	5 7/8	7 3/4	9 3/4	11 3/4	13 3/4	15 3/4	17 3/4	
1 5/8	1/2	A	4 1/8	6 1/8	8 1/8	10 1/8	12 1/8	14 1/8	16 1/8	18 1/8	
		B	4 1/16	6 1/16	8 1/16	10 1/16	12 1/16	14 1/16	16 1/16	18 1/16	
	3/4	A	4 5/16	6 5/16	8 5/16	10 5/16	12 5/16	14 5/16	16 5/16	18 5/16	
1 7/8	1/2	A	4 5/8	6 5/8	8 5/8	10 5/8	12 5/8	14 5/8	16 5/8	18 5/8	
		B	4 3/4	6 3/4	8 3/4	10 3/4	12 3/4	14 3/4	16 3/4	18 3/4	
	3/4	A	5 1/16	7 1/16	9 1/16	11 1/16	13 1/16	15 1/16	17 1/16	19 1/16	
1 9/16	1/2	A	4 9/16	6 9/16	8 9/16	10 9/16	12 9/16	14 9/16	16 9/16	18 9/16	
		B	4 7/8	6 7/8	8 7/8	10 7/8	12 7/8	14 7/8	16 7/8	18 7/8	
	3/4	A	5 1/8	7 1/8	9 1/8	11 1/8	13 1/8	15 1/8	17 1/8	19 1/8	
1 11/16	1/2	A	4 13/16	6 13/16	8 13/16	10 13/16	12 13/16	14 13/16	16 13/16	18 13/16	
		B	4 3/4	6 3/4	8 3/4	10 3/4	12 3/4	14 3/4	16 3/4	18 3/4	
	3/4	A	5 1/4	7 1/4	9 1/4	11 1/4	13 1/4	15 1/4	17 1/4	19 1/4	
1 13/16	1/2	A	4 3/4	6 3/4	8 3/4	10 3/4	12 3/4	14 3/4	16 3/4	18 3/4	
		B	4 5/8	6 5/8	8 5/8	10 5/8	12 5/8	14 5/8	16 5/8	18 5/8	
	3/4	A	5 1/8	7 1/8	9 1/8	11 1/8	13 1/8	15 1/8	17 1/8	19 1/8	
1 15/16	1/2	A	4 7/8	6 7/8	8 7/8	10 7/8	12 7/8	14 7/8	16 7/8	18 7/8	
		B	4 5/4	6 5/4	8 5/4	10 5/4	12 5/4	14 5/4	16 5/4	18 5/4	
	3/4	A	5 1/4	7 1/4	9 1/4	11 1/4	13 1/4	15 1/4	17 1/4	19 1/4	

Typical Mounting Frame Installation Detail





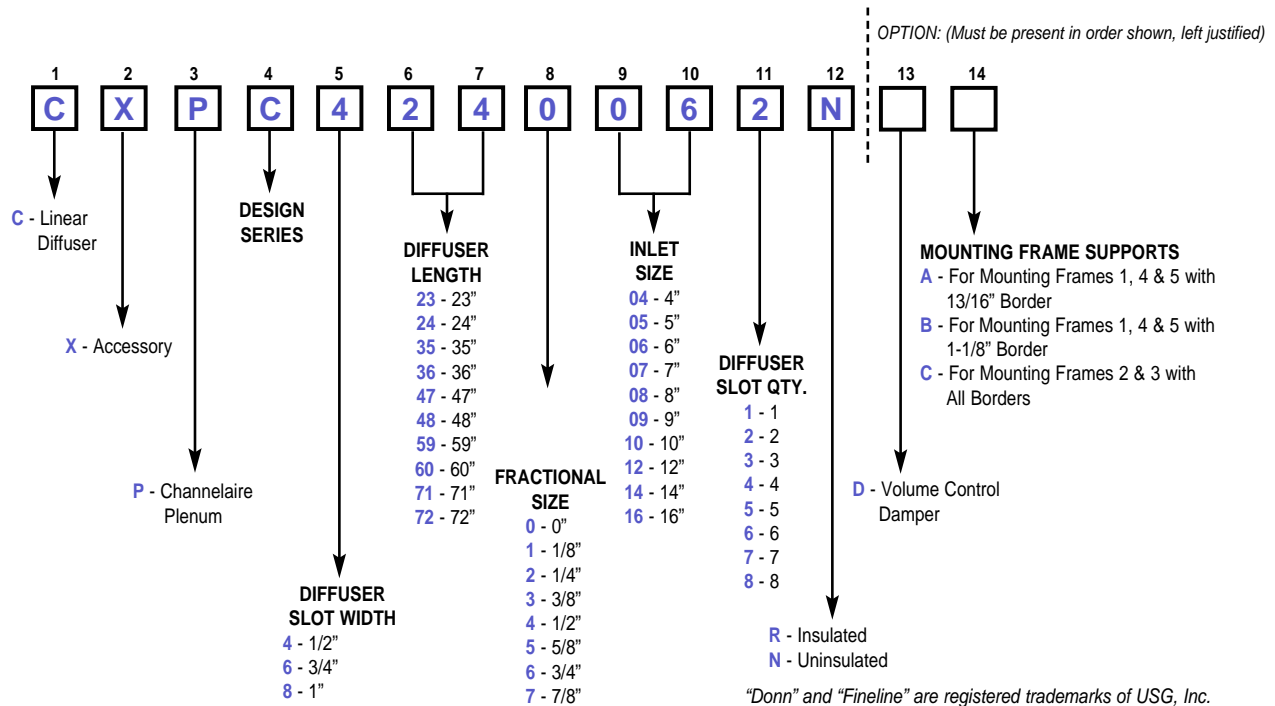
Model CXPC 4 (For use with 1/2" (13) Slot Channelaire)
Model CXPC 6 (For use with 3/4" (19) Slot Channelaire)
Model CXPC 8 (For use with 1" (25) Slot Channelaire)

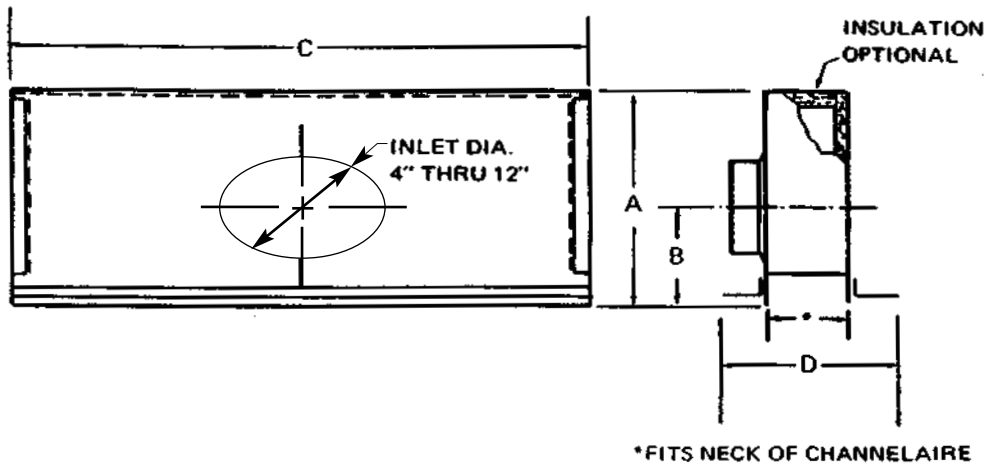
INLET LOCATION — "E" DIMENSIONS							
04 (102)	05 (127)	06 (152)	07 (178)	08 (203)	09 (229)	10 (254)	12 (305)
2-1/4" (57)	2-3/4" (70)	3-1/4" (83)	3-3/4" (95)	4-1/4" (108)	4-3/4" (121)	5-1/4" (133)	6-1/4" (159)

Nominal Inlet Size	A	B	Listed Length of Plenum in Inches (Millimeters)									
			"C" Dimension									
			23 (584)	24 (610)	35 (889)	36 (914)	47 (1194)	48 (1219)	59 (1499)	60 (1524)	71 (1803)	72 (1829)
04 (102) - 05 (127)	12-1/4 (311)	7-1/4 (184)	22-7/8 (581)	23-7/8 (606)	34-7/8 (886)	35-7/8 (911)	46-7/8 (1191)	47-7/8 (1216)	58-7/8 (1495)	59-7/8 (1521)	70-7/8 (1800)	71-7/8 (1823)
06 (152) - 07 (178)												
08 (203)	14-1/4 (362)	8-1/4 (210)										
09 (229) - 10 (254)	16-1/4 (413)	9-1/4 (235)										
12 (305)												

Model	No. of Slots of Channelaire "D" Dimensions Listed in Inches (Millimeters)							
	1	2	3	4	5	6	7	8
CXPC 4	1-3/8 (35)	2-11/16 (68)	4 (102)	5-5/16 (135)	6-5/8 (168)	7-15/16 (202)	9-1/4 (235)	10-9/16 (268)
CXPC 6	1-5/8 (41)	3-3/16 (81)	4-3/4 (121)	6-5/16 (160)	7-7/8 (200)	9-7/16 (240)	11 (279)	12-9/16 (319)
CXPC 8	2-1/8 (54)	4-3/16 (106)	6-1/4 (159)	8-5/16 (211)	10-3/4 (273)	12-7/16 (316)	14-1/2 (368)	16-9/16 (421)

▼ Model Numbering System - PLENUMS



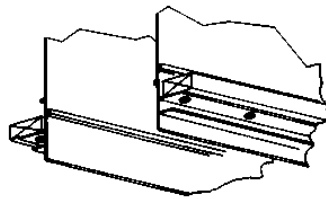
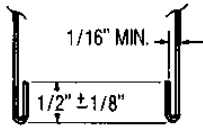


*FITS NECK OF CHANNELAIRE

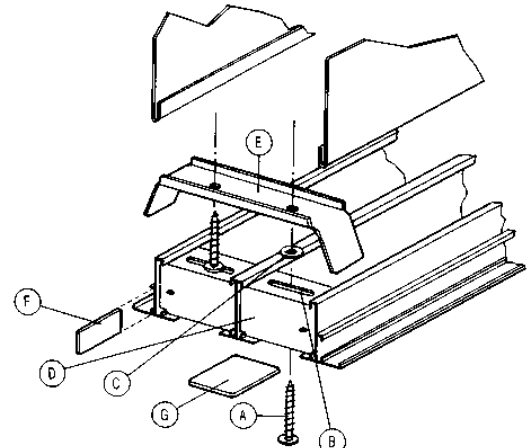
Nominal Inlet Size	A	B	Listed Length of Plenum "C" Dimension									
			23	24	35	36	47	48	59	60	71	72
04 - 05 06 - 07 08	9	7-1/4	22-3/4	23-3/4	34-3/4	35-3/4	46-3/4	47-3/4	58-3/4	59-3/4	70-3/4	71-3/4
09 - 10	9	8-1/4										
12	9	9-1/4										

"D" Dimension										
Option 14	Channelaire		Slot Quantity							
	Border	Slot	1	2	3	4	5	6	7	8
A	13/16	1/2	N/A	3-7/16	4-3/4	6-1/16	7-3/8	8-11/16	10	11-5/16
		3/4	N/A	3-15/16	5-1/2	7-1/16	8-5/8	10-3/16	11-3/4	13-15/16
		1	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
B	1-1/8	1/2	2-3/4	4-1/16	5-3/8	6-11/16	8	9-5/16	10-5/8	11-15/16
		3/4	3	4-9/16	6-1/8	7-11/16	9-1/4	10-13/16	12-3/8	13-15/16
		1	3-1/4	5-5/16	7-3/8	9-7/16	11-1/2	13-9/16	15-5/8	17-11/16

"D" Dimension										
Option 14	Channelaire		Slot Quantity							
	Border	Slot	1	2	3	4	5	6	7	8
C	13/16	1/2	N/A	3	4-5/16	5-5/8	6-15/16	8-1/4	9-9/16	10-7/8
		3/4	N/A	3-1/2	5-1/16	6-5/8	8-3/16	9-3/4	11-5/16	12-7/8
		1	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
C	1-1/8	1/2	N/A	3	4-5/16	5-5/8	6-15/16	8-1/4	9-9/16	10-7/8
		3/4	N/A	3-1/2	5-1/16	6-5/8	8-3/16	9-3/4	11-5/16	12-7/8
		1	N/A	4-1/2	6-9/16	8-5/8	10-11/16	12-3/4	14-13/16	16-7/8



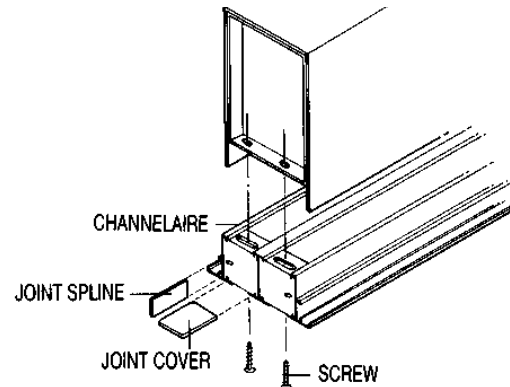
1. Hem duct as shown should be installed 3/4" above finished ceiling.
2. If mounting frame is used, fasten it to ceiling.
3. Place screws 'A' through slot 'B' and turn retaining washers 'C' on to screws until threads are completely extended above end bracket 'D'.
4. Engage two threads of each screw in mounting bracket 'E'.
5. Place diffuser section in duct opening and insert mounting brackets 'E' into duct hem.
6. Install joint splines 'F' to align butted sections.
7. Draw diffuser into place with screws.
8. Snap joint cover 'G' into slot under bracket 'D'.



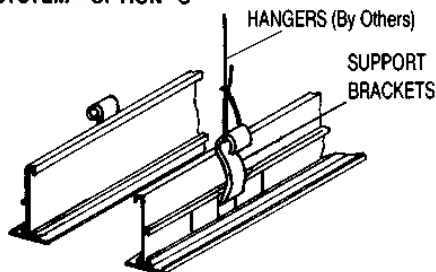
For butted units
1/32" space must be provided
at joints to allow for thermal expansion

PLENUM

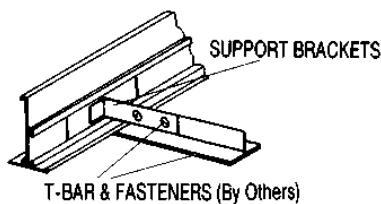
1. Plenums should be installed a minimum of 3/4" above the finished ceiling.
2. Plenums must be the same listed length as the diffuser section they are to be mounted on.
3. To attach the plenum, insert the screws through the end bracket in the outside slots of the Channelaire.
4. The screws will line up with pierced holes in the plenum ends.
5. Tighten screws until the diffuser is tight to the ceiling.



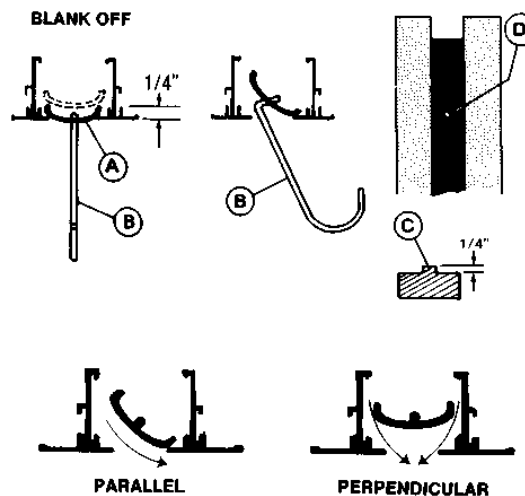
SUPPORT BRACKETS FOR SUSPENSION SYSTEM - OPTION "S"



SUPPORT BRACKETS FOR T-BAR - OPTION "T"



PATTERN ADJUSTMENT



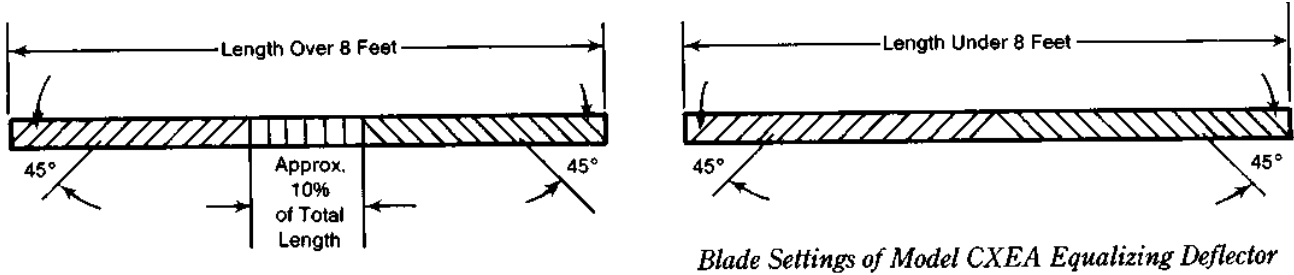
Parallel Discharge

1. Set pattern control 'A' in neutral attitude and position at 1/4" from face of diffuser. (This can be done by pulling to full closed with furnished hook 'B', and then using suggested template 'C', push pattern control into position at each adjustment hole 'D'.)
2. Insert tip of hook halfway into hole and rotate control in desired direction until one side of slot is completely closed. This position will result in an opening of 3/8" on which all catalog data is based.

Perpendicular Discharge

1. Same as for parallel discharge except position of pattern control is 3/8" from diffuser face.

The Model CXEA equalizing deflector, installed directly above the Channelaire, will increase the spread from discontinuous diffusers, or from continuous diffusers whose length is less than 80% of the wall-to-wall distance.



▼ MODEL NUMBERING SYSTEM – Equalizing Deflector

