WWW.KRUEGER-HVAC.COM

1900 SERIES
LINEAR SLOT DIFFUSER

Installation, Operation, and
Maintenance Manual

KRUEGER®

TABLE OF CONTENTS

Frame Style Identification 3
Diffuser Mounting 3
- Frame Style A 3
- Frame Style B 4
- Frame Style C 4
- Frame Style D 6
- Frame Style E 6
- Frame Style F 7
- Frame Style I 7
- Frame Style J 7
- Frame Style K 7
- Frame Style M 8

Installing Plenum Boots 10
Aligning Multiple Sections 10
Installing Inactive Sections 10
End Treatments 10
Cutting Diffusers To Length 11

FRAME STYLE IDENTIFICATION

The 1900 Series Linear Slot diffuser is available in nine frame styles. The installation of each frame style varies, and is described below.

An identification label is affixed to the side of each 1900 diffuser frame. This label contains the model, the size, the number of slots and the frame style. Referring to the illustration below, identify the frame style.

After identifying the frame style, refer to the following sections describing installation for that frame style.

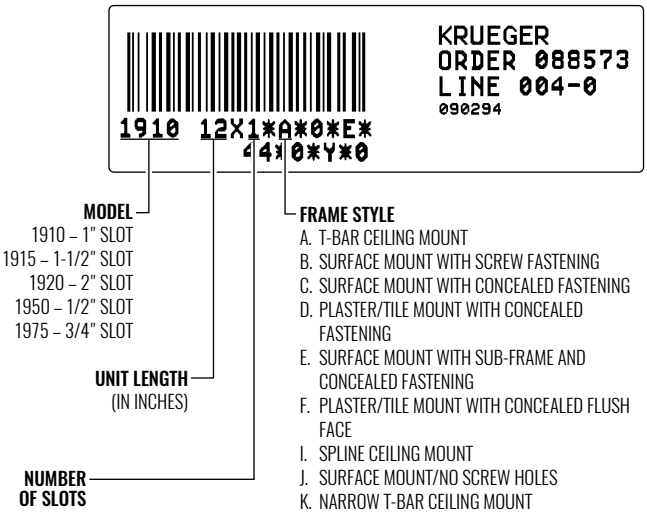


Figure 1 – 1900 frame style identification

DIFFUSER MOUNTING

FRAME STYLE A

Frame style A is designed so that the diffuser rests on the tops of the tees of standard 15/16" tee-bar ceiling systems, as shown in Figure 2.

Ductwork is sized so that it slides over the diffuser. Fasten ductwork to diffuser with sheet metal screws (1/2" max) through the duct and frame, located as shown in Figure 2. Refer to Submittal Dwg. DS0700 for recommended duct sizes.

To meet local code requirements, it may be necessary to hang the diffusers from structural members, as shown in Figure 3.

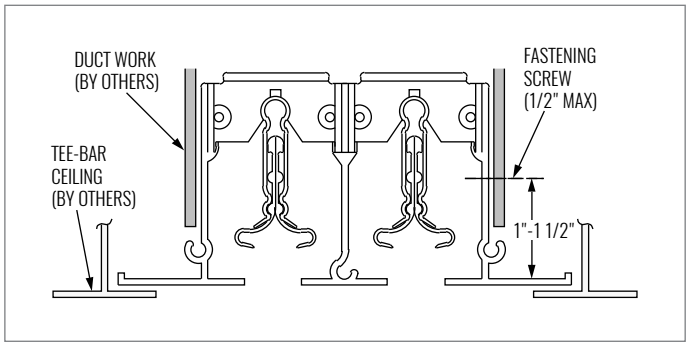


Figure 2 – Mounting frame style A

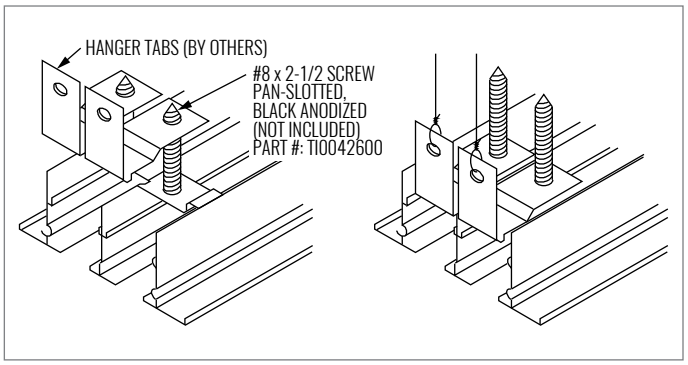


Figure 3 – Mounting frame style A, hanging from structural member

DIFFUSER MOUNTING (CONTINUED)

FRAME STYLE B

Frame style B is designed so that the diffuser mounts flush against the ceiling or wall surface. The diffuser is supported by screws which are installed through the pre-drilled holes in the diffuser frame, into the 3/4" (20 mm) duct flange, by others. Refer to Figure 4.

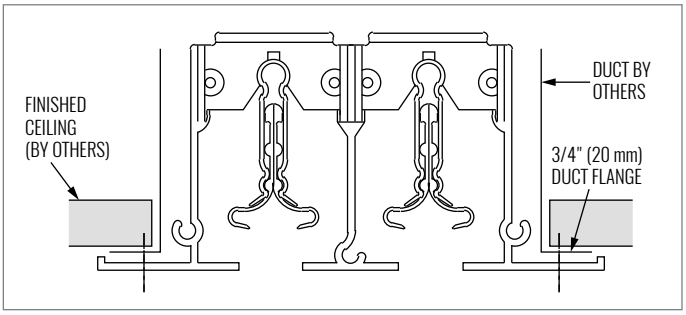


Figure 4 – Mounting frame style B

FRAME STYLE C

Frame style C is designed so that the diffuser mounts flush against the ceiling or wall surface. The diffuser is supported by a concealed fastener, which requires preassembly. First, refer to Figure 5 for parts identification.

Install the ductwork with the ends hemmed in as shown in Figure 6. The hemmed edges should be parallel to, and approximately 1/4" above, the top of finished ceiling.

The diffuser ships with the spacers welded to the frame. The hanger assembly* (hanger bar plus arms) must be attached to the diffuser prior to installation of the diffuser into the ceiling or wall.

Rotate the blades in, toward the center of the diffuser (or snap blades out for easier access), as shown in Figure 6. (Blades may be removed completely, if required, by sliding them out of the blade clip).

Start the #8 x 2-1/2" screws through the outer screw hole in the spacer from the bottom of the diffuser. Repeat for the opposite side of the diffuser, and for each hanger assembly.

Slide the punched end of the hanger arm into the slot of the hanger bracket. Repeat for the second hanger arm. Align this hanger assembly over the screws started above. The arms should be facing down, they will serve to support the diffuser when installed into the ductwork. Start the screws into the hanger.

Push the diffuser into the hemmed ductwork, until the hanger arm snaps into place inside the ductwork.

Tighten the screws so that the diffuser is flush with the face of the ceiling and the boot is snug to the surface. Repeat for all hanger brackets supplied. Replace or rotate the blades back to their original position.

**Note: The hanger assembly is a one piece bracket on single slot units.*

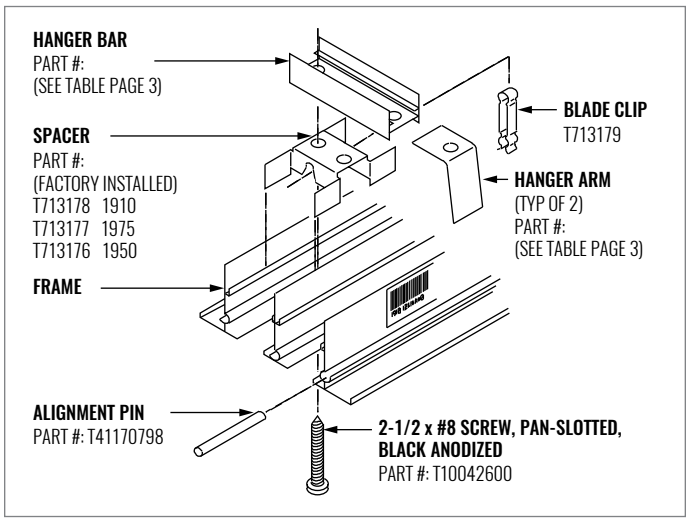


Figure 5 – Identification of diffuser components

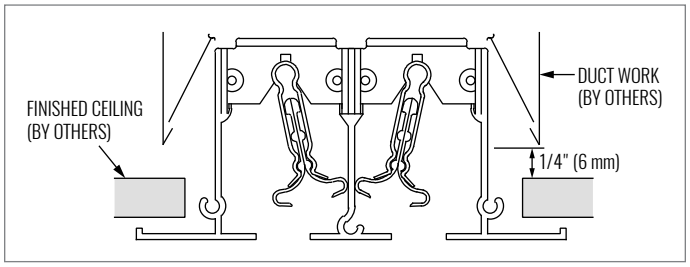


Figure 6 – Rotating the diffuser blades

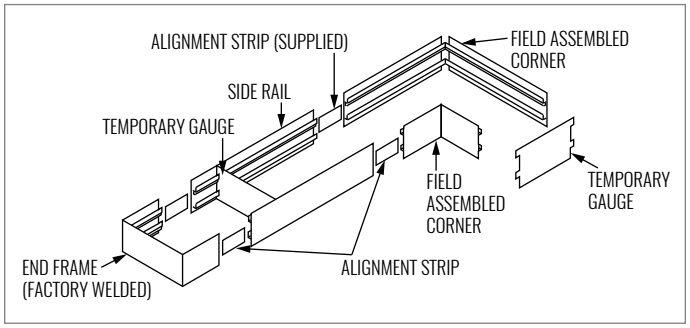


Figure 7 – Assembling the sub-frame in the field

DIFFUSER MOUNTING (CONTINUED)

TABLE 1 – CONCEALED FASTENING HANGER BRACKET PART NUMBERS								
# OF SLOTS	FRAME STYLE		MODEL 1950	QUANTITY REQUIRED	MODEL 1975	QUANTITY REQUIRED	MODEL 1910	QUANTITY REQUIRED
1	D, E	HANGER BRACKET	T71473601	2	T71473602	2	T71473603	2
	C	HANGER BRACKET	T71473501	2	T71473502	2	T71473503	2
2	D, E & C	HANGER BAR	T71458701	2	T71458801	2	T71458901	2
	D, E	HANGER ARM	T71458601	4	T71458601	4	T71458601	4
	C	HANGER ARM	T71468101	4	T71468101	4	T71468101	4
3	D, E & C	HANGER BAR	T71458702	2	T71458802	2	T71458902	2
	D, E	HANGER ARM	T71458601	4	T71458601	4	T71458601	4
	C	HANGER ARM	T71468101	4	T71468101	4	T71468101	4
4	D, E & C	HANGER BAR	T71458703	2	T71458803	2	T71458903	2
	D, E	HANGER ARM	T71458601	4	T71458601	4	T71458601	4
	C	HANGER ARM	T71468101	4	T71468101	4	T71468101	4
5	D, E & C	HANGER BAR	T71458704	2	T71458804	2	T71458904	2
	D, E	HANGER ARM	T71458601	4	T71458601	4	T71458601	4
	C	HANGER ARM	T71468101	4	T71468101	4	T71468101	4
6	D, E & C	HANGER BAR	T71458705	2	T71458805	2	T71458905	2
	D, E	HANGER ARM	T71458601	4	T71458601	4	T71458601	4
	C	HANGER ARM	T71468101	4	T71468101	4	T71468101	4
7	D, E & C	HANGER BAR	T71458706	2	T71458806	2	T71458906	2
	D, E	HANGER ARM	T71458601	4	T71458601	4	T71458601	4
	C	HANGER ARM	T71468101	4	T71468101	4	T71468101	4
8	D, E & C	HANGER BAR	T71458707	2	T71458807	2	T71458907	2
	D, E	HANGER ARM	T71458601	4	T71458601	4	T71458601	4
	C	HANGER ARM	T71468101	4	T71468101	4	T71468101	4

TABLE 1 – CONCEALED FASTENING HANGER BRACKET PART NUMBERS						
# OF SLOTS	FRAME STYLE		MODEL 1915	QUANTITY REQUIRED	MODEL 1920	QUANTITY REQUIRED
1	C	HANGER BRACKET	T714735-04	2	T714735-05	2
	D, E	HANGER BRACKET	T714736-04	2	T714736-05	2
2	C	HANGER ARM	T714681-00	2	T714681-00	2
	D, E	HANGER ARM	T714586-00	4	T714586-00	4
	C, D, E	HANGER BAR	T717803-01	4	T717804-01	4
3	C	HANGER ARM	T714681-00	2	T714681-00	2
	D, E	HANGER ARM	T714586-00	4	T714586-00	4
	C, D, E	HANGER BAR	T717803-02	4	T717804-02	4
4	C	HANGER ARM	T714681-00	2	T714681-00	2
	D, E	HANGER ARM	T714586-00	4	T714586-00	4
	C, D, E	HANGER BAR	T717803-03	4	T717804-03	4

NOTES: Frame styles A, B, I, J do not require hanger brackets.
Hanger brackets shown on this table consists of (1) hanger bar, (2) hanger arms, (3) screws.

DIFFUSER MOUNTING (CONTINUED)

FRAME STYLE D
Frame style D is designed similar to frame style C, only the diffuser is pushed up into a sub-frame provided with the diffuser.

The sub-frame is cut to length in the field, and should be installed prior to finishing the ceiling or wall surface. Figure 7 shows cutting the sub-frame in the field. The temporary gauge, block of wood, or other suitable device, is used to fix the spacing of the sub-frame during the finishing of the ceiling.

End frames are supplied factory welded. Alignment strips are provided with the diffuser to align multiple pieces of sub-frame.

The sub-frame should be mounted to the ductwork, with the ductwork running outside the frame, as shown in Figure 8. Size ductwork according to Submittal Dwg. DS0703 for frame style D.

Assemble the concealed fastener assembly as described for frame style C.

After finishing the ceiling, push the diffuser into the subframe as shown in Figure 9.

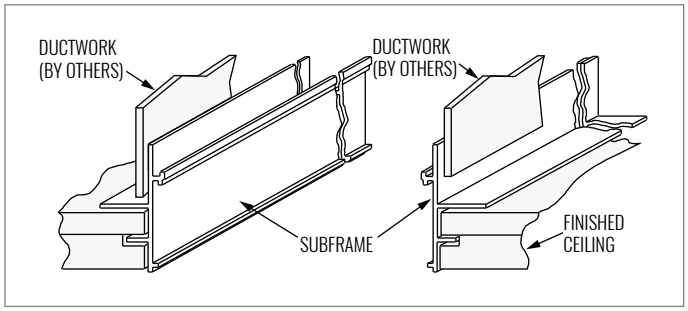


Figure 8 – Installing the subframe into the ductwork

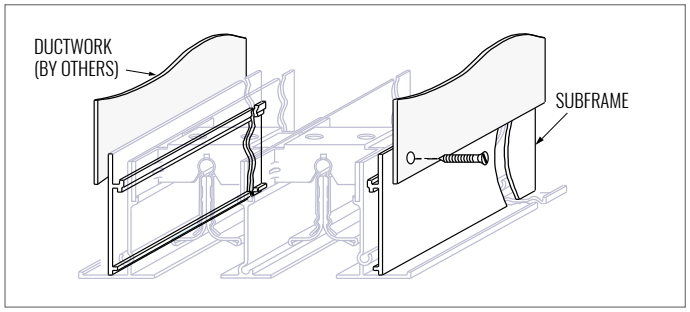


Figure 9 – Installing the subframe into the ductwork

FRAME STYLE E
Frame style E is designed to provide surface mounting for the 1900 diffuser, using the concealed fastening method described for frame style C, and a subframe similar to that described for frame style D.

The subframe is designed to be installed before the ceiling, mounted by screwing through the subframe into the ductwork, as shown in Figure 9.

Cut the subframe to length in the field as described above (refer to Figure 7). Mount the subframe to the ductwork so that the bottom of the frame is flush with the ceiling line.

Assemble the concealed fastener assembly as described for frame style C.

After finishing the ceiling, push the diffuser into the subframe.

DIFFUSER MOUNTING (CONTINUED)

FRAME STYLE F
Frame style F is designed so that, when completely installed, the mounting frame is concealed behind the plaster finish.

Refer to Figure 10, and Submittal DS0705. The flange of the frame is designed to rest on the drywall. The diffuser may also be suspended from structural members as shown in Figure 3, or from the ductwork as shown in Figure A. Tape the joint between the drywall and diffuser frame. Plaster over drywall and the joint up to the 1/16" border. Finish the plaster per the job specifications, masking all exposed surfaces of the diffuser. (Shims may be used under the frame flange for installations with drywall only. Shim until 1/16" border is level with drywall surface.)

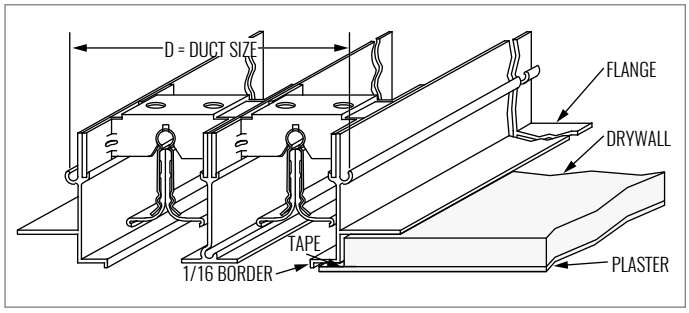


Figure 10 – Installing diffuser with frame style F

FRAME STYLE I
Frame style I is designed to provide mounting for the 1900 diffuser in a spline ceiling, as shown in Figure 10.

Mount the ductwork so that it will nest in the channel on the outside of the frame, as shown in Figure 11.

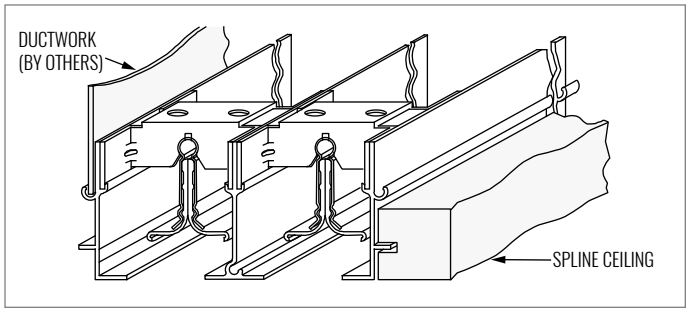


Figure 11 – Installing diffuser with frame style I

FRAME STYLE J
Frame style J is designed to mount the diffuser against a hard surface without screwholes appearing on the face, by fixing the frame of the diffuser to the ductwork.

Mount the diffuser to the ductwork so that the ductwork nests in the channel on the outside of the frame, as shown in Figure 12.

The ductwork must be positioned so that the frame of the diffuser butts against the finished wall or ceiling surface.

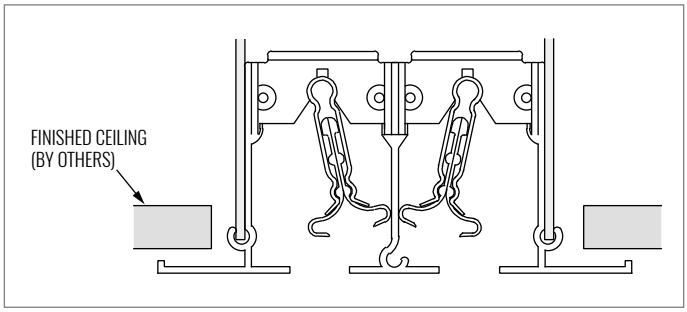


Figure 12 – Installing diffuser with frame style J

FRAME STYLE K
Frame style K is designed so that the diffuser rests on the tops of the tees of a narrow-tee ceiling system as shown in Figure 13. If required, secure per Figure 3.

Ductwork is sized so that the diffuser slides inside the duct.

Fasten ductwork to diffuser with sheet metal screws (1/2" max) through the duct and frame, located as shown. Refer to Submittal drawing DS0708 for duct sizing.

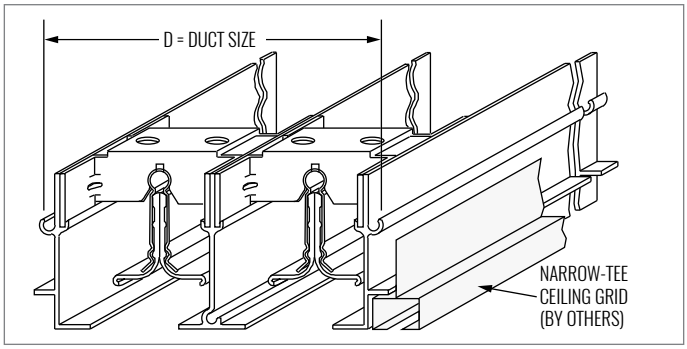
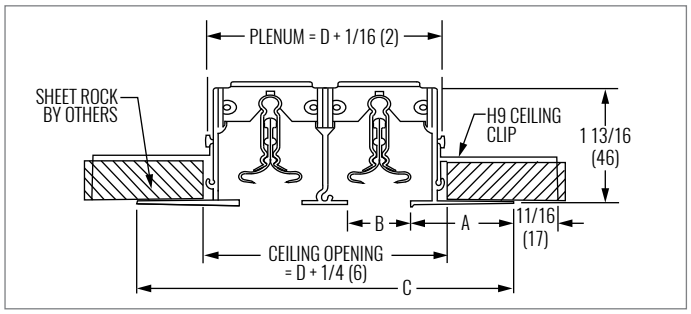


Figure 13 – Installing diffuser with frame style K

DIFFUSER MOUNTING (CONTINUED)

FRAME M INSTALLATION INSTRUCTIONS

The 1900 Frame M, linear slot diffuser, is to be installed as follows. Please note that the 1900 Frame M must be installed before hard ceiling installation.



1) Construct Ceiling Framework (by others)

a. Before installing drywall, a framed opening must be constructed to support the 1900 Frame M diffuser.

b. It is recommended that the framework be continuous to accommodate the hard ceiling, H9, clip spacing requirements.

c. The framing material must be suitable to hold the diffuser in place when attached with screws through the 1900 Frame M, H9 mounting clips.

2) Attach Factory-Provided Mounting Clips

a. Hard Ceiling Clips are shipped loose for field attachment to the 1900 Frame M diffuser.

b. Slide the Hard Ceiling Clips into the lower bosses of each diffuser frame rail.

c. Position the clips at a maximum of 10” intervals along the diffuser frame rail.

d. The Hard Ceiling clips must be secured to a subframing member using supplied screws.

e. These mounting clips should be attached to the ceiling framework at a maximum of 10” intervals.

3) Attach Plenums to Linear

a. If plenums were mounted earlier, attach the plenum by sliding the neck of the linear into the opening in the bottom of the plenum.

b. If plenums were not mounted earlier, lift the plenums into place and slide them over the neck of the 1900 Frame M at this time.

c. Plenums may need support with ceiling wire to the building structure per code requirements.

4) Attach Inlet Damper

a. Attach optional inlet damper assembly (if supplied) to the inlet collar. Position the lever inside the plenum on the bottom of the inlet collar.

b. Install the inlet duct on the plenum inlet collar using the methods prescribed by the sheet metal specification.

5) Install Drywall

a. Slide the drywall tightly between the mounting clips and the 1900 Frame M flange. For ease of installation, insert the tapered edge of the drywall into this opening. For the best fit, slide the edge of the drywall all the way to the vertical leg of the frame.

b. Fasten drywall to subframing per job requirements. For ease of taping and finishing the wall, a 1” gap (minimum) is recommended between the diffuser flange and drywall screws.

6) Confirm Secure Installation By Checking That:

a. The 1900 Frame M diffuser is secure and straight.

b. For units longer than twelve feet, a 1/8” gap between sections is recommended to allow for thermal expansion.

c. Do not run the HVAC system during the finishing procedures. This could cause premature drying of the compounds, making them more prone to cracking.

DIFFUSER MOUNTING (CONTINUED)

7) Finish the Surface

a. Thoroughly wipe the entire finishing flange with solvent/degreaser such as Rust-Oleum Ready-To-Use Cleaner/Degreaser to remove any oils or residue.

b. Prepare the finishing flange by sanding it with medium-grit sandpaper, creating a roughened surface for optimal compound adhesion.

c. Install one coat of bonding agent, such as Plaster Weld made by Larsen Products Corp., onto the entire surface of the finishing flange. Follow the manufacturer's instructions. (These products are readily available from plaster supply houses.) The bonding agent makes an extremely strong bond so the compound will not delaminate from the flange.

d. Embed a 4" wide mesh tape into the first coat. The mesh should cover all of the aluminum and extend at least 2" onto the sheetrock surface. If 4" wide mesh tape is not available, overlap multiple pieces of narrower tape to cover the 4" width. Apply the first coat of finishing compound. Use a "durabond" setting type compound.

e. After the first coat dries, apply two coats of standard finishing compound and let dry.

f. Sand smooth, prime, and paint as scheduled.

1915M (1-1/2" SPACING)				
SLOT	A	B	C	D
1	1-5/8 (41)	1-1/2 (38)	4-3/4 (121)	2-3/8 (60)
2	1-5/8 (41)	1-1/2 (38)	7 (178)	4-5/8 (117)
3	1-5/8 (41)	1-1/2 (38)	9-1/4 (235)	6-7/8 (175)
4	1-5/8 (41)	1-1/2 (38)	11-1/2 (292)	9-1/8 (232)

1975M (3/4" SPACING)				
SLOT	A	B	C	D
1	1-5/8 (41)	3/4 (19)	4 (102)	1-5/8 (41)
2	1-5/8 (41)	3/4 (19)	5-1/2 (140)	3-1/8 (79)
3	1-5/8 (41)	3/4 (19)	7 (178)	4-5/8 (117)
4	1-5/8 (41)	3/4 (19)	8-1/2 (216)	6-1/8 (156)
5	1-5/8 (41)	3/4 (19)	10 (254)	7-5/8 (194)
6	1-5/8 (41)	3/4 (19)	11-1/2 (292)	9-1/8 (232)
7	1-5/8 (41)	3/4 (19)	13 (330)	10-5/8 (270)
8	1-5/8 (41)	3/4 (19)	14-1/2 (368)	12-1/8 (308)

1910M (1" SPACING)				
SLOT	A	B	C	D
1	1-5/8 (41)	1 (25)	4-1/4 (108)	1-7/8 (48)
2	1-5/8 (41)	1 (25)	6 (152)	3-5/8 (92)
3	1-5/8 (41)	1 (25)	7-3/4 (197)	5-3/8 (137)
4	1-5/8 (41)	1 (25)	9-1/2 (241)	7-1/8 (181)
5	1-5/8 (41)	1 (25)	11-1/4 (286)	8-7/8 (225)
6	1-5/8 (41)	1 (25)	13 (330)	10-5/8 (270)
7	1-5/8 (41)	1 (25)	14-3/4 (375)	12-3/8 (314)
8	1-5/8 (41)	1 (25)	16-1/2 (419)	14-1/8 (359)

INSTALLING PLENUM BOOTS

Plenum boots are optional devices that provide a convenient method of connecting flex-duct to the diffuser. The boots themselves consist of a sealed plenum, sized to fit the diffuser, with a round or oval inlet and optional quadrant damper for balancing airflow.

For installation purposes, the boot can be treated like ductwork. Simply follow the instructions given above, and substitute the boot for every reference to ductwork above.

ALIGNING MULTIPLE SECTIONS

The maximum length of asingle section of diffuser is 72". Longer, unlimited, runs are made possible using factory supplied alignment pins and multiple diffuser sections. These pins slide into the frame extrusion, as shown in Figure 14.

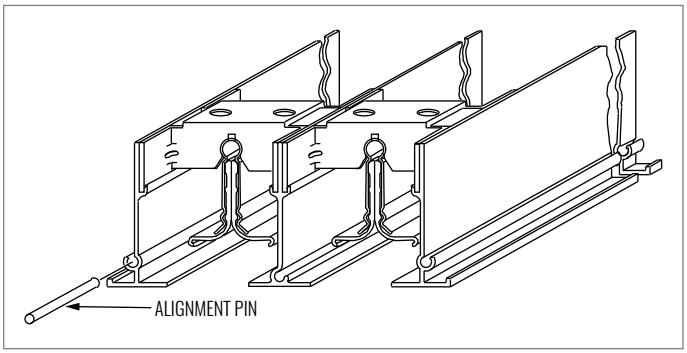


Figure 14 – Aligning multiple sections

INSTALLING INACTIVE SECTIONS

It is often desireable to make sections of a run of linear diffuser inactive. In this case, the diffuser serves as an architectural element only. In other cases, one or more of the slots is not required to achieve desired airflow.

Optional blank off strips can be factory supplied to seal-off the unused sections. Model BOS is a steelstrip with formed edges, designed to fit over the back, or duct, side of the diffuser. Sheet metal screws hold the BOS in place.

END TREATMENTS

End treatments are generally factory applied only when ordered. Should end caps or end plates be required, they can be ordered from Krueger using the part numbers on Table 2.

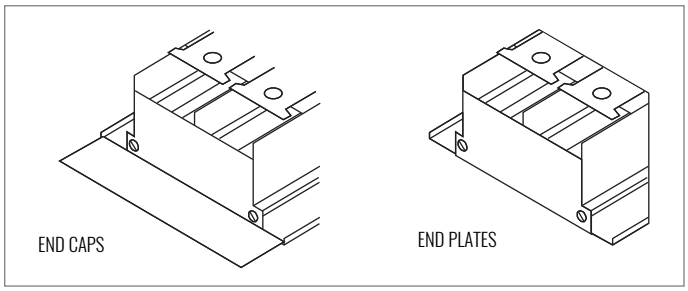


Figure 15 – End treatments

TABLE 2 – END TREATMENT PART NUMBERS

MODEL	FRAME STYLE	END CAP	END PLATE
1950	A	463xx1629	462xx1619
1975	A	463xx1630	462xx1620
1910	A	463xx1631	462xx1621
1915	A	750006-xx	750009-xx
1920	A	750003-xx	750008-xx
1950	B, C, D, E, J	463xx1612	462xx1619*
1975	B, C, D, E, J	463xx1613	462xx1620*
1910	B, C, D, E, J	463xx1614	462xx1621*
1915	B, C, D, E, J	750007-xx	750009-xx*
1920	B, C, D, E, J	750004-xx	750008-xx*
1950	F	N/A	750065-xx
1975	F	N/A	750066-xx
1910	F	N/A	750067-xx
1915	F	N/A	750063-xx
1920	F	N/A	750064-xx
1950	I	704691-xx	N/A
1975	I	704692-xx	N/A
1910	I	704693-xx	N/A
1915	I	750099-xx	N/A
1920	I	750103-xx	N/A
1950	K	717428-**	N/A
1975	K	717428-**	N/A
1910	K	717428-**	N/A
1915	K	750101-xx	N/A
1920	K	750105-xx	N/A

xx = # of slots e.g. 02 = 2 slots
* End plates not available on frames D and E
** Dash # 01-08 for 1-8 slots, 1950
** Dash # 10-17 for 1-8 slots, 1975
** Dash # 20-27 for 1-8 slots, 1910

CUTTING DIFFUSERS TO LENGTH

If it is desireable to cut the diffuser to a specific length, be certain that the cut diffuser has at least two spacers (refer to Figure 5). Without this assembly, the blade position cannot be fixed, and the diffuser rails may be “wobbly”.

The holder assembly consists of a universal blade-clip fixed inside a spacer. Both parts can be ordered from Krueger, and assembled in the field.

Force the blade clip into the spacer using the shaft of a screwdriver. Hold the spacer with a pair of vise grips. With the vise grips, fit the spacer between the rails, down and into the grooves in the side rails. Once in place, you may wish

to run a screw (3/4” max length) through the rail into the spacer.

Insert the blades into the clip and you have a finished product!

Ordering spacers and clips is easy. Refer to the part numbers below:

TABLE 3 – SPACER PART NUMBERS

PART DESCRIPTION	PART NUMBER
1910 SPACER*	713178
1950 SPACER*	713176
1975 SPACER*	713177
1915 SPACER	750001-00
1920 SPACER	750000-00
1900 BLADE CLIP+	713179 rev E

* Each spacer holds 1 blade clip, and supports 1 pair of blades. Order one spacer for each slot.

\+ 1900 blade clip is universal, and works for 1910, 1915, 1920, 1950 and 1975 blades.

CONNECT WITH US!

YOUR RESOURCE FOR AIR DISTRIBUTION AND EQUIPMENT SOLUTIONS

Let us know how we can assist you in your next building application. For more information, contact your local Krueger representative or visit us on the web at www.krueger-hvac.com.

DIFFUSERS
- Plaque & Architectural
- Louvered
- Perforated
- Modular Core
- Linear Slot
- Plenum Slot
- Round
- Air Nozzles

GRILLES & REGISTERS
- Supply
- Return
- Linear Bar
- Security
- Industrial
- Duct Mounted
- Transfer
- Stainless Steel

TERMINAL UNITS
- Single Duct
- Fan Powered
- Dual Duct
- Bypass & Retrofit

FAN COILS & BLOWER COILS
- Horizontal
- Vertical / Stack

AIR CLEANERS

LABORATORY SOLUTIONS

OPERATING ROOM SOLUTIONS

CHILLED BEAMS

DISPLACEMENT VENTILATION

KRUEGER®

1401 N. Plano Rd.
Richardson, TX 75081
tel: 972.680.9136
www.krueger-hvac.com
kruegerinfo@krueger-hvac.com
1900 IOM: 07/2026
©ADTI 2026. All Rights Reserved.