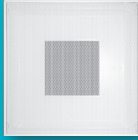




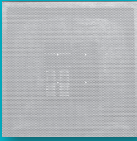

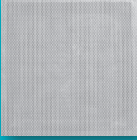



	<p><b>6100, 6150 56100, 56150</b> These perforated supply ceiling diffusers feature a neck mounted rotatable core with either a round or square neck. Aluminum or steel perforated face is available.</p>		<p><b>6490, 56490</b> These perforated ceiling returns feature a square neck. Aluminum or steel perforated face is available.</p>
	<p><b>6200, 56200 6200FR, 6290F</b> These perforated supply, ceiling diffusers feature neck mounted curved blades with a square neck. Aluminum or steel perforated face is available. Fire rated or filter return variations available.</p>		<p><b>6600, 56600, 6600FR</b> These perforated supply ceiling diffusers feature face mounted deflectors with a round neck. Aluminum or steel perforated face is available. A fire rated variation is also available.</p>
	<p><b>6500, 56500 6500FR, 6590FR</b> These perforated supply, ceiling diffusers feature neck mounted curved blades with a round neck. Aluminum or steel perforated face is available. Fire rated supply and return variations available.</p>		<p><b>6690, 56690</b> These perforated ceiling returns feature a round neck. Aluminum or steel perforated face is available.</p>
	<p><b>6300</b> This perforated supply, ceiling diffuser features face mounted deflectors and a prescored fiberglass backpan for field cutting. Available in steel construction only.</p>		<p><b>6790, 56790</b> These aluminum or steel perforated screen ceiling panels with no backpan are great for non-ducted return or exhaust applications.</p>
	<p><b>6390</b> This perforated return features a prescored fiberglass backpan for field cutting. Available in steel construction only.</p>		<p><b>1100, 51100</b> These architectural, perforated, supply ceiling diffusers feature neck mounted curved blades with a square or rectangular neck. Available in steel or aluminum construction. A metric version is also available.</p>
	<p><b>6400, 56400, 6400FR</b> These perforated supply ceiling diffusers feature face mounted deflectors with a square neck. Aluminum or steel perforated face as well as a fire rated variations are available.</p>		<p><b>1190, 51190</b> These architectural, perforated, ceiling returns feature a square or rectangular neck. Available in steel or aluminum construction.</p>

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**6150, 56150 (Supply)**  
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**6290FR, 6290F (Return)**  
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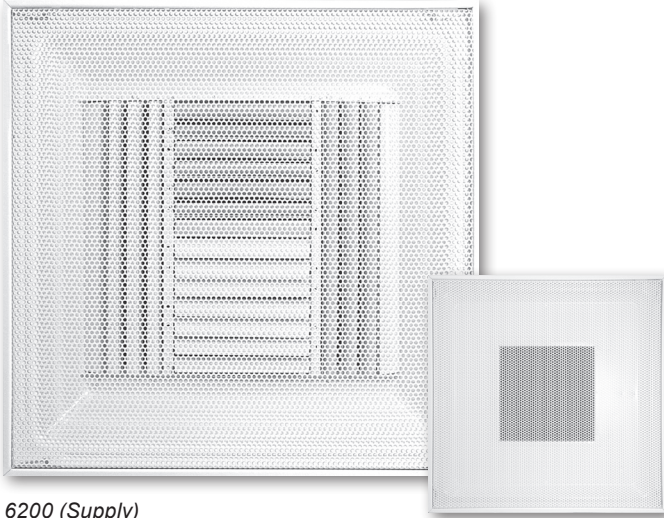
**6500, 56500, 6500FR (Supply)**  
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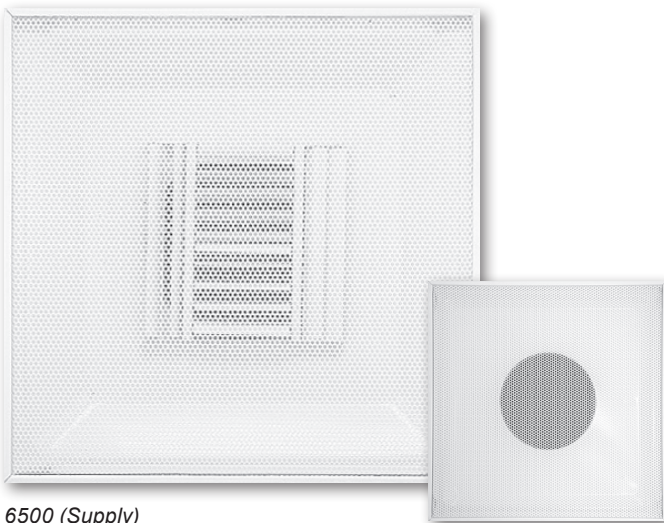
**6600, 56600, 6600FR (Supply)**  
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PERFORATED FACE DIFFUSERS



6200 (Supply)

6490 (Return)  
See page C1-52 for more information.



6500 (Supply)

6690 (Return)  
See page C1-52 for more information.

**Introduction: 6200, 6500 Series**

The 6200/6500 series perforated diffusers use blade-type pattern deflectors mounted on the backpan and are available in pre-selected 1, 2, 3, or 4-way blow patterns. Individually adjustable curved blades allow field adjustment of the air pattern in each direction, which may be field set to any position between a vertical throw and a tight ceiling, long throw pattern. The pattern deflectors on the backpan create aspiration of secondary air through the perforated face where it is mixed with primary air that is then discharged through the perforated face. This aspiration and mixing effect reduces the discharge air temperature to avoid cold air drafts. Additionally, it removes smudging material from the secondary air by impingement on the perforated face. Ceiling smudging of adjacent, hard to clean ceiling surfaces is greatly reduced. The 6200/6500 series diffusers exhibit typical isothermal throws of 8' to 20' for 4-way air distribution and 21' to 50' for 1-way air distribution making this diffuser an excellent choice for irregular room shapes. Matching returns are the 6490 and 6690 series.

**MODELS**

- 6200 - Steel Construction, Square Neck, Supply Diffuser
- 6200FR - Fire Rated, Steel Construction, Square Neck, Supply Diffuser
- 6290F - Steel Construction, Designed for Standard 20"x20"x1" Filter (By Others), Square Neck, Filter Return
- 6290FR - Fire Rated, Steel Construction, Square Neck Return
- 56200 - Aluminum Perforation with Steel Backpan, Square Neck, Supply Diffuser
- 6500 - Steel Construction, Round Neck, Supply Diffuser
- 6500FR - Fire Rated, Steel Construction, Round Neck, Supply Diffuser
- 56500 - Aluminum Perforation with Steel Backpan, Round Neck, Supply Diffuser
- 6590FR - Fire Rated, Steel Construction, Round Neck Return

**FEATURES**

- Individually adjustable curved blade pattern deflectors for horizontal to vertical throw.
- Variety of air discharge patterns available.
- Removable perforated face and core for easy cleaning.

**PANEL SIZES**

- 12"x12"
- 20"x20"
- 24"x24"
- 16"x16"
- 12"x24"
- 24"x48"

**ACCESSORIES**

- Optional Round Damper
- Optional Opposed Blade Damper (Model OBD)
- Optional Straightening Grid
- Optional Insulated Backpan

**FINISHES**

- Standard finish is #44 British White.
- Optional finishes available.

6200-6500

6500FR, 6590FR | Curved Blade, Fire Rated

**6500FR, 6590FR (Fire Rated Supply/Return) Dimensional Information**

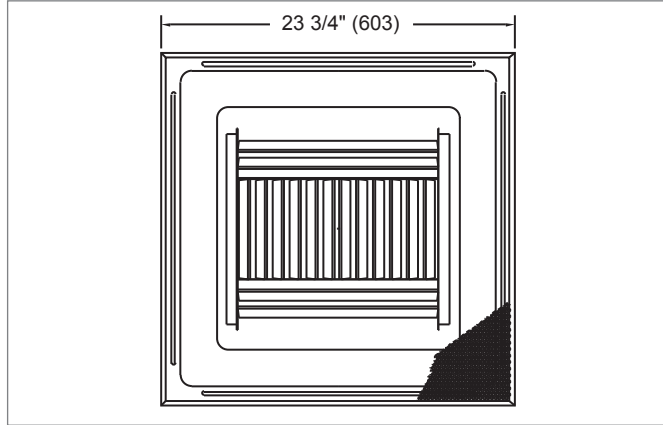
The 6500FR/6590FR offers the safety of fire rated performance with the proven 6500/6590 series diffuser. It is intended for use with Lay-in T-Bar application involving fire rated ceiling designs. It combines this flexibility with all of the features of the standard 6500/6590 and is available exclusively in steel.

6500FR/6590FR comes standard as a UL 263 classified assembly which incorporates a 3-hour rated fire damper and a 1/2" thick ceramic fiber blanket.

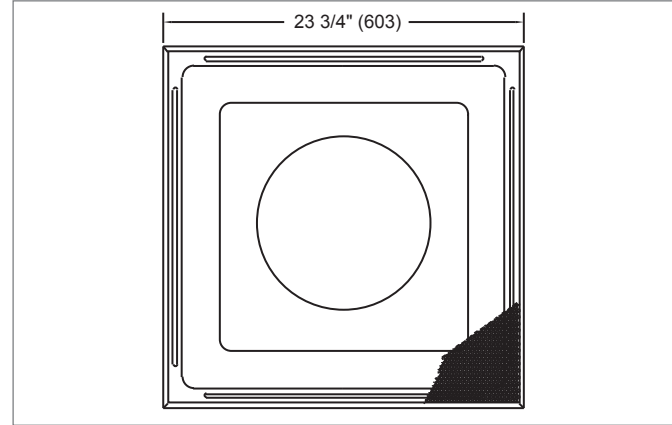


PERFORATED FACE DIFFUSERS

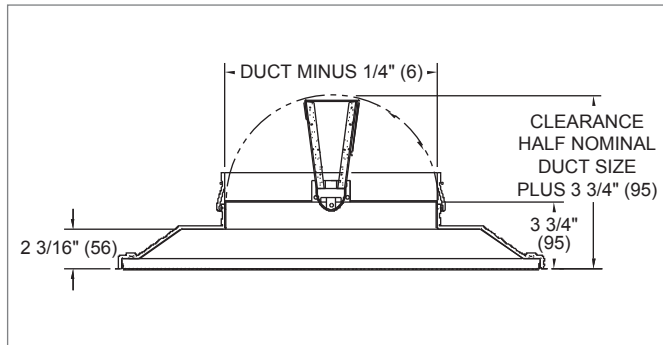
**6500FR, SUPPLY FACE VIEW (24"x24" PANEL)**



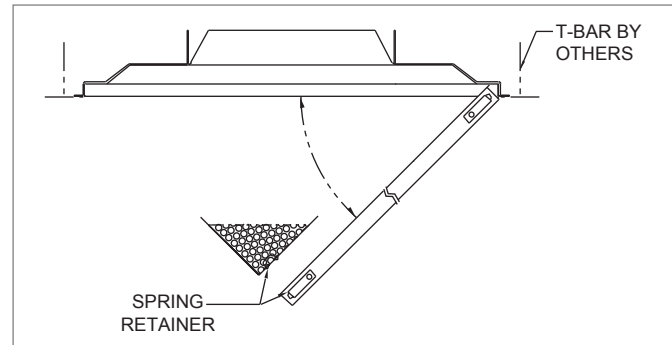
**6590FR, RETURN FACE VIEW (24"x24" PANEL)**



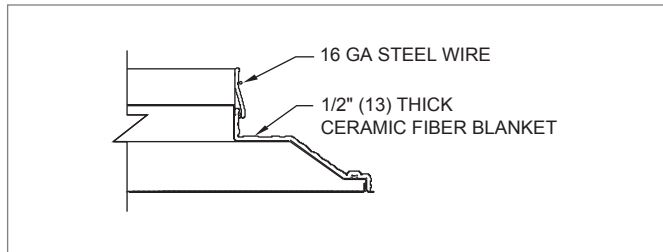
**6500FR, 6590FR, CROSS SECTION**



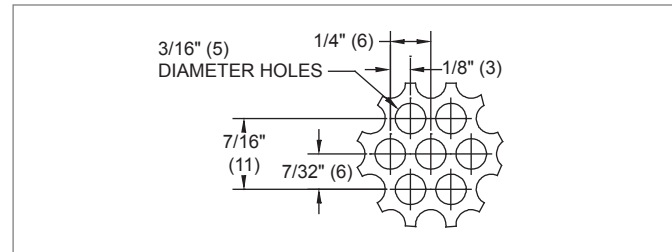
**6500FR, 6590FR, HINGE DETAIL**



**6500FR, 6590FR, FIRE BLANKET DETAIL**



**6500FR, 6590FR, PERFORATION DETAIL**

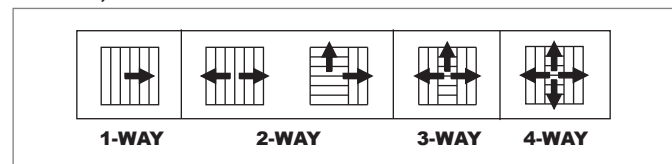


**6500FR, 6590FR, AVAILABLE INLET SIZES**

	INLET SIZES
NOMINAL PANEL 24" x 24" (610 x 610)	6" (152)
	8" (203)
	10" (254)
	12" (305)
	14" (356)

NOTE: Dimensions in parentheses are mm.

**6500FR, DISCHARGE AIR PATTERNS**



6500FR

© KRUEGER 2012

6590FR | Curved Blade, Fire Rated

**6590FR (Fire Rated Return) Performance Data**

IP/METRIC DATA: 6590FR, 24"x24" PANEL (NO DAMPER)

	IP Data				NC	Metric Data				Octave Band, dB						
	Neck Vel	Air Flow	Pv	Ps		Neck Vel	Air Flow	Pv	Ps	2	3	4	5	6	7	
	FPM	CFM	"WG	"WG		m/s	L/s	Pa	Pa							
6"	300	59	0.006	-0.006	-	1.52	28	1.4	-1.5	37	12	-	-	-	-	
	400	78	0.010	-0.011	-	2.03	37	2.5	-2.7	39	17	-	-	-	-	
	500	98	0.016	-0.017	-	2.54	46	3.9	-4.2	41	21	15	-	-	-	
	600	118	0.022	-0.024	-	3.05	56	5.6	-6.0	42	24	18	-	-	-	
	700	137	0.031	-0.033	-	3.56	65	7.6	-8.2	44	26	22	11	-	-	
	800	157	0.040	-0.043	-	4.06	74	9.9	-10.7	45	28	24	14	-	-	
	900	177	0.051	-0.054	-	4.57	83	12.6	-13.6	46	30	27	17	-	-	
	1000	196	0.062	-0.067	12	5.08	93	15.5	-16.8	46	32	29	19	-	-	
8"	300	105	0.006	-0.007	-	1.52	49	1.4	-1.8	38	14	-	-	-	-	
	400	140	0.010	-0.013	-	2.03	66	2.5	-3.2	41	19	13	-	-	-	
	500	174	0.016	-0.020	-	2.54	82	3.9	-5.0	42	23	17	-	-	-	
	600	209	0.022	-0.029	-	3.05	99	5.6	-7.2	44	26	21	12	-	-	
	700	244	0.031	-0.040	-	3.56	115	7.6	-9.9	45	29	24	16	-	-	
	800	279	0.040	-0.052	13	4.06	132	9.9	-12.9	46	31	27	19	-	-	
	900	314	0.051	-0.065	15	4.57	148	12.6	-16.3	47	33	29	22	12	-	
	1000	349	0.062	-0.081	18	5.08	165	15.5	-20.1	48	35	32	24	15	-	
10"	300	164	0.006	-0.009	-	1.52	77	1.4	-2.2	39	16	-	-	-	-	
	400	218	0.010	-0.016	-	2.03	103	2.5	-3.9	42	21	15	-	-	-	
	500	273	0.016	-0.025	-	2.54	129	3.9	-6.1	43	25	19	12	-	-	
	600	327	0.022	-0.035	11	3.05	154	5.6	-8.8	45	28	23	16	-	-	
	700	382	0.031	-0.048	15	3.56	180	7.6	-12.0	46	30	26	20	12	-	
	800	436	0.040	-0.063	17	4.06	206	9.9	-15.7	47	33	29	23	16	-	
	900	491	0.051	-0.080	20	4.57	231	12.6	-19.8	48	35	32	26	20	-	
	1000	545	0.062	-0.098	22	5.08	257	15.5	-24.5	49	36	34	28	23	14	
12"	300	235	0.006	-0.011	-	1.52	111	1.4	-2.7	40	18	11	-	-	-	
	400	314	0.010	-0.019	-	2.03	148	2.5	-4.8	42	23	17	-	-	-	
	500	392	0.016	-0.030	-	2.54	185	3.9	-7.4	44	26	21	16	-	-	
	600	471	0.022	-0.043	15	3.05	222	5.6	-10.7	45	29	25	20	14	-	
	700	549	0.031	-0.059	18	3.56	259	7.6	-14.6	47	32	28	23	18	-	
	800	628	0.040	-0.077	21	4.06	296	9.9	-19.1	48	34	31	26	22	14	
	900	706	0.051	-0.097	24	4.57	333	12.6	-24.1	49	36	33	29	25	18	
	1000	785	0.062	-0.120	26	5.08	370	15.5	-29.8	49	38	36	31	28	22	
14"	300	320	0.006	-0.013	-	1.52	151	1.4	-3.2	41	19	12	-	-	-	
	400	427	0.010	-0.023	-	2.03	202	2.5	-5.8	43	24	18	13	-	-	
	500	534	0.016	-0.036	14	2.54	252	3.9	-9.0	45	28	23	18	14	-	
	600	641	0.022	-0.052	18	3.05	302	5.6	-13.0	46	31	26	22	19	-	
	700	748	0.031	-0.071	21	3.56	353	7.6	-17.7	47	33	30	26	23	15	
	800	855	0.040	-0.093	24	4.06	403	9.9	-23.1	48	35	32	29	27	20	
	900	961	0.051	-0.117	27	4.57	454	12.6	-29.2	49	37	35	32	30	25	
	1000	1068	0.062	-0.145	29	5.08	504	15.5	-36.0	50	39	37	34	33	29	
1100	1175	0.075	-0.175	31	5.59	555	18.8	-43.6	51	41	39	36	36	33		

NOTES: NC values are based on octave band 2 - 7 sound power levels minus a room absorption of 10dB, re 10<sup>-12</sup> Watts. Dash in space denotes a NC or dB value of less than 10. Data was obtained from tests conducted in accordance with ANSI/ASHRAE Standard 70, ISO Standard 5219, and ISO Standard 3741. See Krueger's selection software for performance data not shown, including octave band data.

PERFORATED FACE DIFFUSERS

6590FR

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6200FR, 6290FR | Curved Blade, Fire Rated

**6200FR, 6290FR (Fire Rated Supply/Return) Suggested Specification & Configuration**

**6200FR**

The perforated face fire rated supply diffuser shall be Krueger model 6200FR. The diffuser must be UL classified fire rated ceiling diffuser assembly listed in Underwriters Laboratories [Fire Resistance Directory](#). The diffuser shall be tested in accordance with UL 263 and must meet NFPA 90 requirements. The diffuser must be able to operate in three-hour fire-rated, exposed grid suspended ceiling. The diffusers shall have a perforated face with 3/16" diameter holes on 1/4" centers resulting in a 51% free area. The diffuser backpan shall be constructed of heavy gage steel and provide a square neck.

The diffuser shall have individually adjustable curved blade deflectors mounted at the neck of the diffuser. The curved blade deflectors shall allow vertical or 1, 2, 3, or 4-way horizontal projection of air in to the room. The perforated face must be easily removable from the backpan for access to the adjustable curved blades.

**6290FR**

The perforated face fire rated return diffuser shall be Krueger model 6290FR. The diffuser must be UL classified fire rated ceiling diffuser assembly listed in Underwriters Laboratories [Fire Resistance Directory](#). The diffuser shall be tested in accordance with UL 263 and must meet NFPA 90 requirements. The diffuser must be able to operate in three-hour fire-rated, exposed grid suspended ceiling. The diffusers shall have a perforated face with 3/16" diameter holes on 1/4" centers resulting in a 51% free area. The diffuser backpan shall be constructed of heavy gage steel and provide a square neck.

The return diffuser shall match the Krueger model 6200FR diffuser in appearance. The perforated face must be easily removable from the backpan.

**PERFORMANCE**

The manufacturer shall provide published (printed or electronic) performance data for the diffuser. Performance data shall include 2 - 7 octave band sound power levels. The diffuser shall be tested in accordance to the data standards at the time of product introduction or ANSI/ASHRAE Standard 70.

**FINISH**

The paint finish shall be #44 British White and be an anodic acrylic paint, baked at 315° for 30 minutes. The paint thickness shall be 0.8 - 1.0 mils, gloss at 60° per ASTM D523-89 of 50 - 85%, pencil hardness per ASTM D3363-92A of HB - H, crosshatch adhesion per ASTM D3359-83 of 4B - 5B, impact per ASTM D2794-93 of direct impact >100 in/lb and reverse impact >80 in/lb, salt spray per ASTM B117-9048 of 96 hours, humidity per ASTM D2247-92 of >500 hours and water soak per ASTM D870-92 of 250 hours.

- 1. SERIES: (XXXXXX)**  
6200FR - Perforated, Square Neck with Backpan Mounted Adjustable Curved Blades, Steel Fire Rated Supply Diffuser  
6290FR - Perforated, Square Neck, Steel Fire Rated Return
- 2. PATTERN: (XXX)**  
01 - 1-Way  
02 - 2-Way  
03 - 3-Way  
04 - 4-Way  
02C - 2-Way Corner  
90 - Return
- 3. WIDTH: SQUARE NECK ONLY (XX)**  
6" - 14" in 2" Increments
- 4. HEIGHT: SQUARE NECK ONLY (XX)**  
6" - 14" in 2" Increments
- 5. FRAME: (XXX)**  
F23 - Lay-in T-Bar
- 6. PANEL: (XX)x(XX)**  
24"x24"
- 7. FINISH: (XX)**  
01 - Mill  
10 - Alumican  
35 - Black  
44 - British White



PERFORATED FACE DIFFUSERS

6200FR - 6290FR

**SAMPLE CONFIGURATION: 6200FR - 04 - 14x14 - F23 - 24x24 - 44**