



1400, 1400FR, 51400, M1400 & M51400
These supply diffusers feature a round neck and four cones.



1400A & 51400A
These supply diffusers feature a round neck, four cones, and adjustable pattern controllers.



1450, 51450, M1450, & M51450
These supply diffusers feature a round neck and three cones.



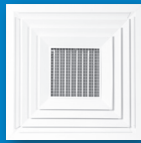
1450A & 51450A
These supply diffusers feature a round neck, three cones, and adjustable pattern controllers.



SH, 5SH, SHFR, MSH, SHV, 5SHV, SHR, 5SHR, SHRV, 5SHRV, SHFB, & 5SHFB
These supply diffusers feature a square neck, fixed louvered blades (1-way to 4-way), and removable core.



SHPC, 5SHPC, SHPCR, & 5SHPCR
These supply diffusers feature a square neck, fixed louvered blades (1-way to 4-way), removable core, and adjustable pattern controllers.



5SH/CAD & 5SHR/CAD
These supply diffusers feature fixed louvered blades with a center downblow.



SHRPLQ
This supply diffuser features fixed louvered blades (1, 2, or 3 slots) with center plaque faceplate.



7000
This combination supply/return diffuser features fixed louvered blades with removable egg-crate center frame.

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Introduction: SHPC, 5SHPC

The SHPC/5SHPC series square diffusers are available in various sizes and discharge air patterns to meet engineering requirements for capacity and directional throw in addition to a variety of frame styles to meet architectural requirements of today's ceilings. They feature a 1/4" horizontal lip on all sides of the louvered core, which results in a tight horizontal pattern at the ceiling and a higher discharge velocity at the face. This creates a high induction region just below the face of the diffuser, which improves room air mixing. Further, they include manually adjustable pattern controllers mounted between the core and frame to provide vertical discharge when required. Because they have higher discharge face velocities, they are an excellent choice for variable air volume systems with above normal temperature differentials. Also, the pattern controllers make them a great choice for use in high ceiling applications with ceiling heights ranging from 10 - 20 feet. At typical flow rates, isothermal throws of 18 - 30 feet make them ideal for mounting centrally in many spaces with high load requirements while providing high mixing rates in the space.

MODELS

SHPC - Steel Louvered Diffuser

5SHPC - Aluminum Louvered Diffuser

PANEL SIZES

- 12"x12"
- 24"x24"
- 24"x48"

FINISHES

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



SHPC face view with horizontal setting (above) and vertical setting (right).

FEATURES

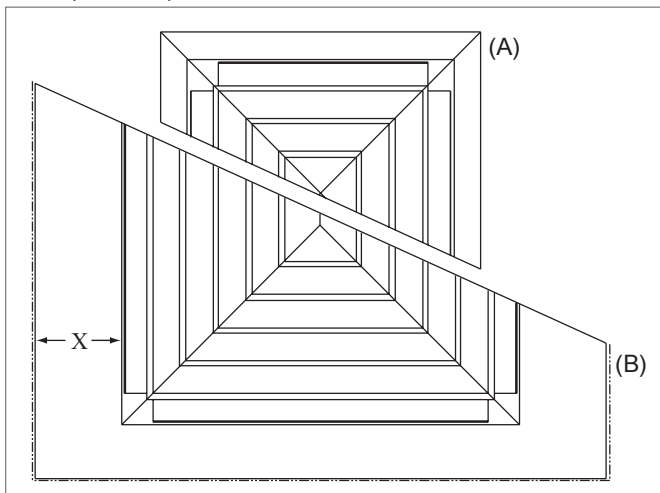
- Square duct connections.
- Adjustable pattern controllers for vertical throw.
- Core is removable from face of diffuser.
- Maintains a horizontal discharge air pattern from maximum to minimum CFM.
- Excellent choice for VAV applications with high loads.
- Excellent choice for high ceiling applications.

ACCESSORIES

- Optional straightening grids.
- Optional face mounted damper.

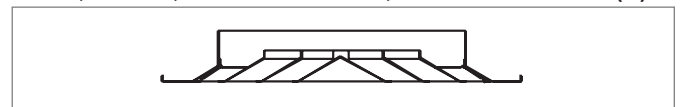
SHPC, 5SHPC Dimensional Information

SHPC, 5SHPC, FACE VIEW

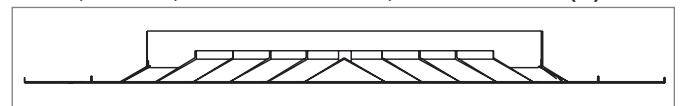


NOTE: Dimension 'X' will vary with neck sizes for Frames 23, 24, 27, and 98.

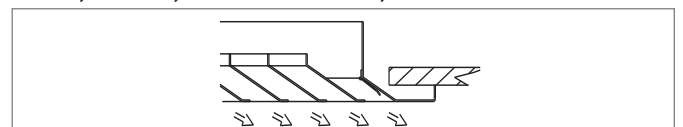
SHPC, 5SHPC, CROSS SECTION, SURFACE MOUNT (A)



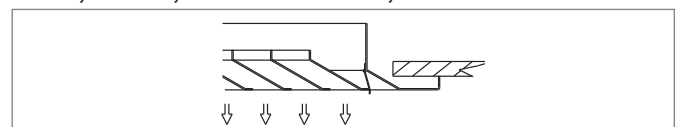
SHPC, 5SHPC, CROSS SECTION, LAY-IN T-BAR (B)



SHPC, 5SHPC, CROSS SECTION, HORIZONTAL SETTING

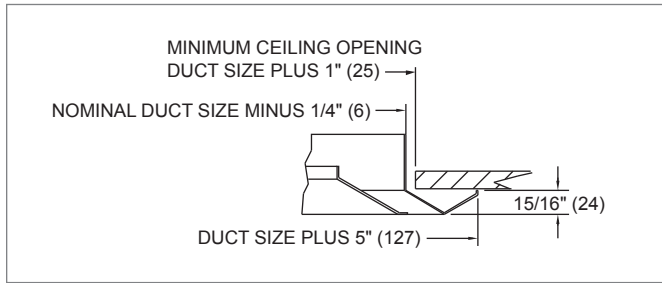


SHPC, 5SHPC, CROSS SECTION, VERTICAL SETTING

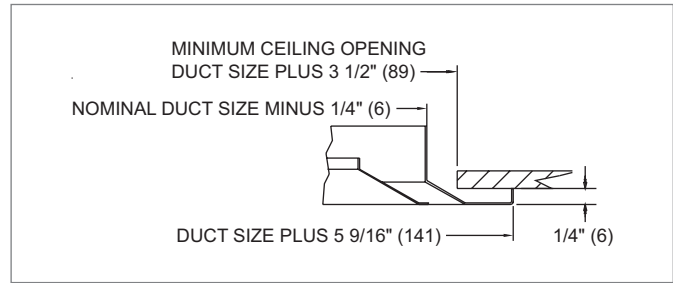


SHPC, 5SHPC Frame Styles

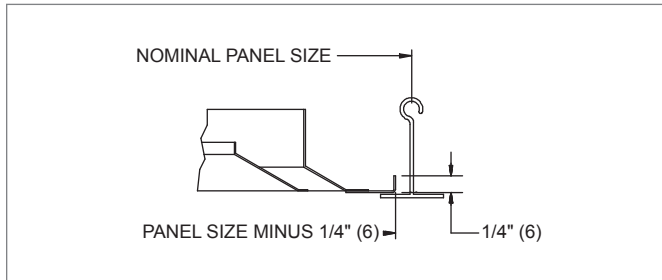
SHPC, 5SHPC, FRAME 21, SURFACE MOUNT, BEVELED



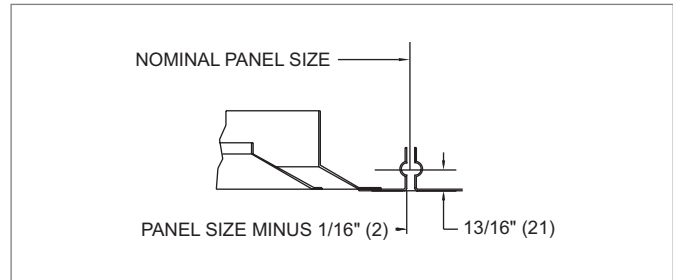
SHPC, 5SHPC, FRAME 22, SURFACE MOUNT, FLAT



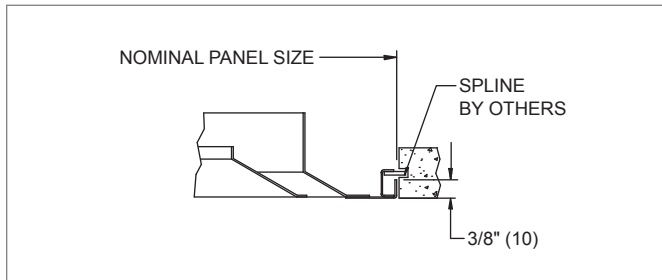
SHPC, 5SHPC, FRAME 23, LAY-IN T-BAR



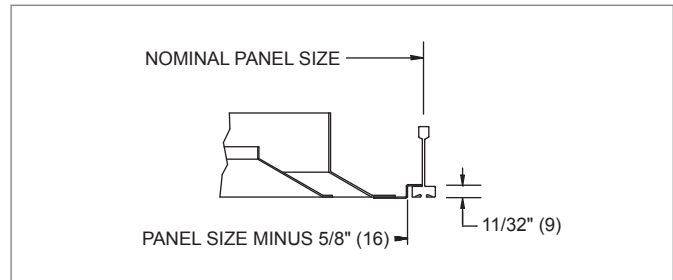
SHPC, 5SHPC, FRAME 24, SNAP-IN T-BAR



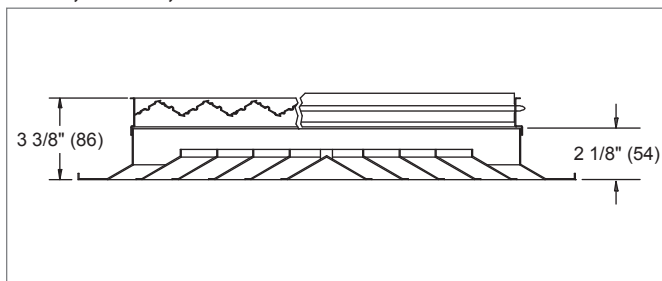
SHPC, 5SHPC, FRAME 27, SPLINE



SHPC, 5SHPC, FRAME 98, NARROW-T



SHPC, 5SHPC, DAMPER DETAIL



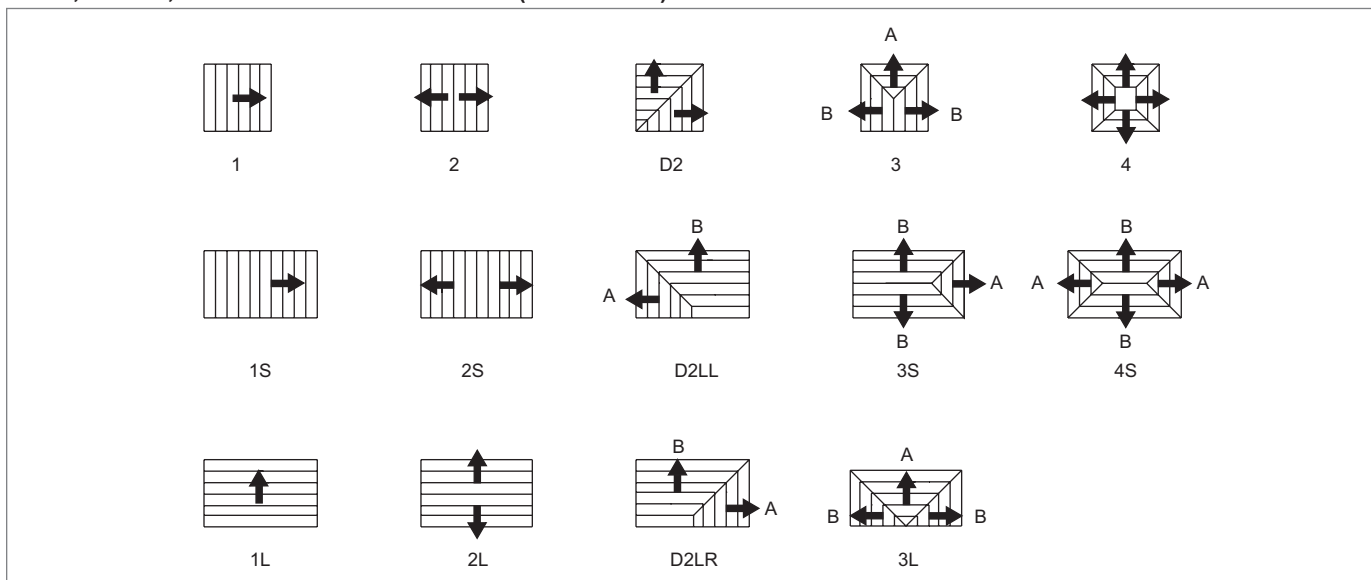
SHPC, 5SHPC, AVAILABLE NECK SIZES

Frame Style	Panel Size	Minimum Inlet Dim1 x Dim2	Maximum Inlet Dim1 x Dim2
21	-	6"x6" (152x152)	21"x21" (533x533)
23	12"x12" (305x305)	6"x6" (152x152)	6"x6" (152x152)
24	24"x24" (610x610)	6"x6" (152x152)	18"x18" (457x457)
27	24"x48" (310x1219)	12"x12" (305x305)	18"x18" * (457x457)

NOTES: Dimensions in parentheses are mm. Core removal is the same as the SH series of diffusers. See page B1-38 for details.
* Available in 4-way discharge air pattern, 5SHPC only.

SHPC, 5SHPC Discharge Air Patterns

SHPC, 5SHPC, DISCHARGE AIR PATTERNS (FACE VIEW)

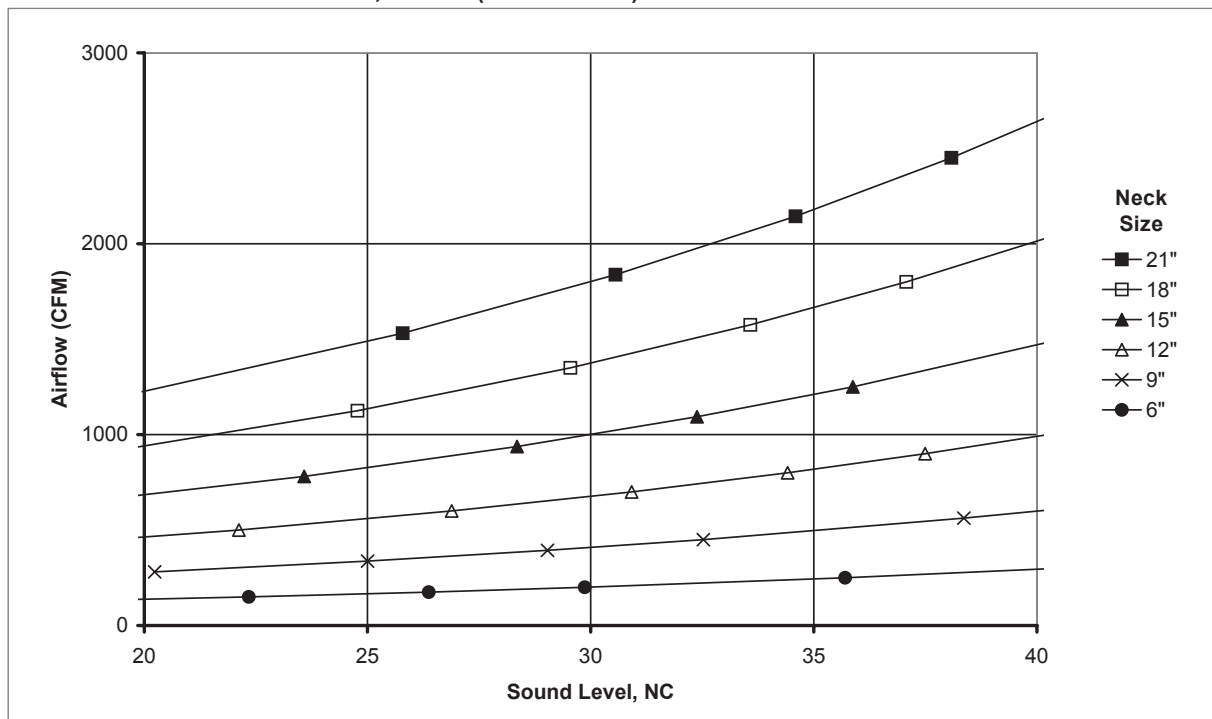


NOTE: 'A' & 'B' notations correspond to performance data.

LOUVERED FACE DIFFUSERS

SHPC, 5SHPC Reference Chart

AIRFLOW VS. NC LEVEL: SHPC, 5SHPC (NO DAMPER)

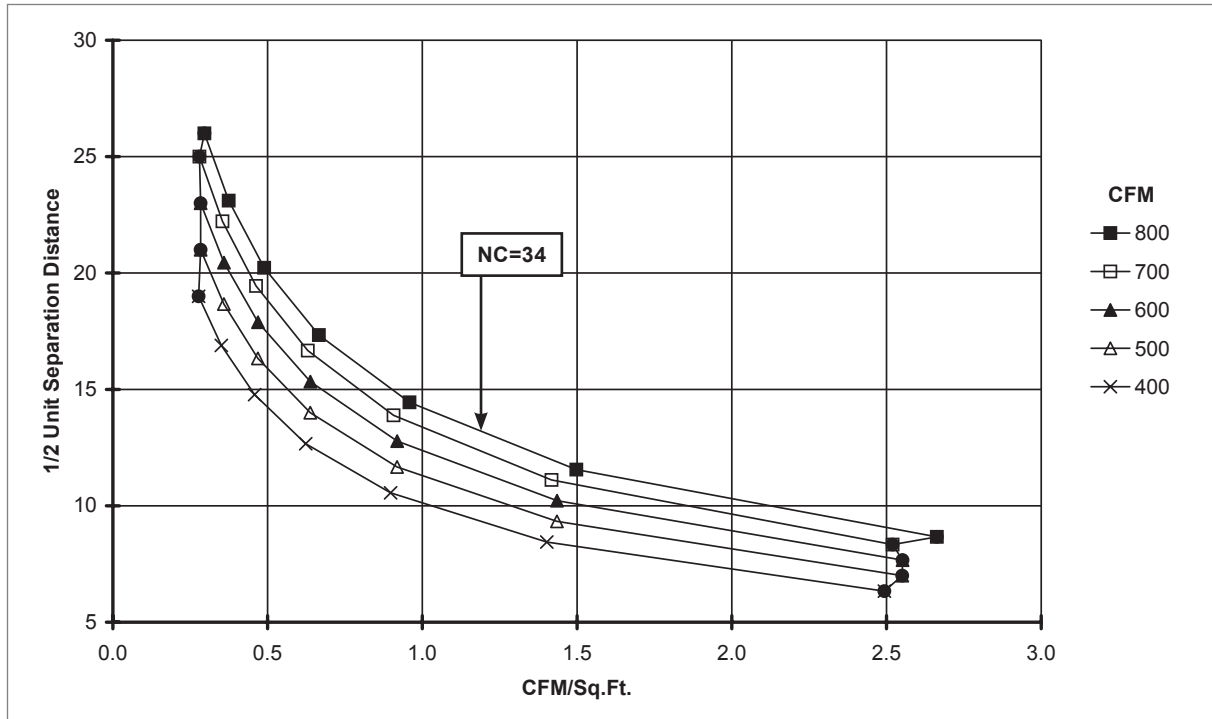


SHPC - 5SHPC

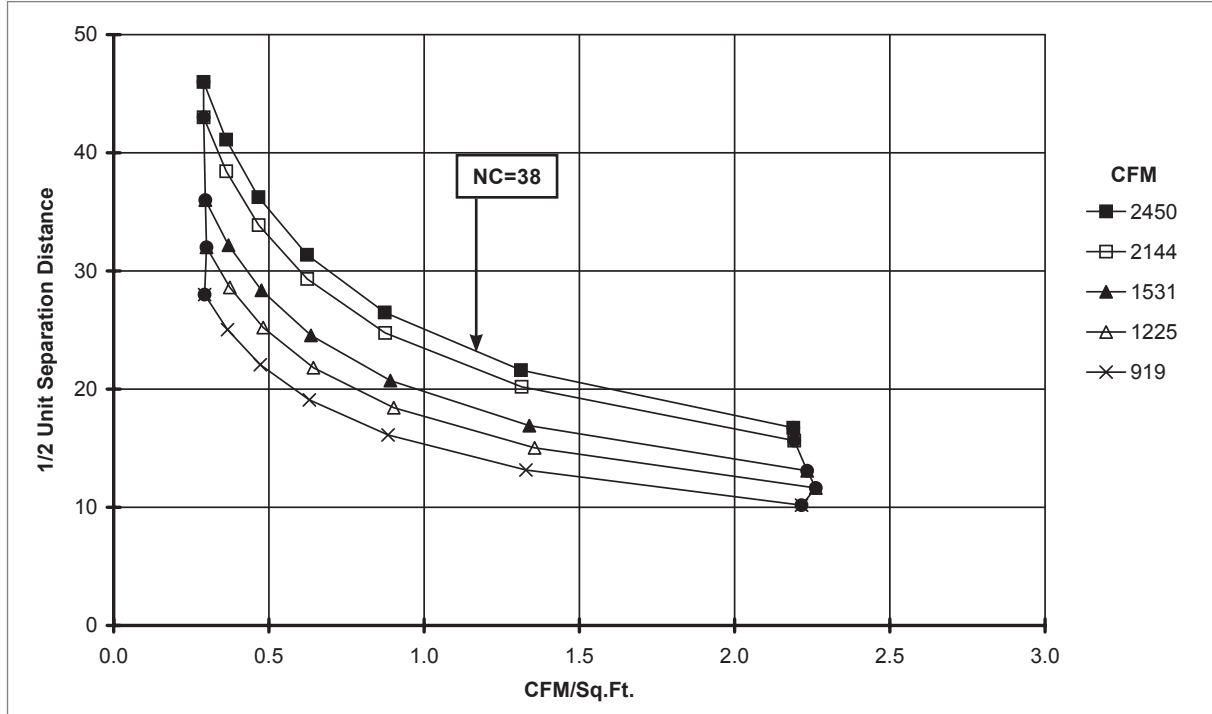
SHPC, 5SHPC Reference Charts: Horizontal Throw

LOUVERED FACE DIFFUSERS

DIFFUSER SPACING FOR 80% ADPI: SHPC, 5SHPC, 12"x12" NECK, 4-WAY (NO DAMPER)



DIFFUSER SPACING FOR 80% ADPI: SHPC, 5SHPC, 21"x21" NECK, 4-WAY (NO DAMPER)



NOTES: Charts are at 20 BTUH/ft² loads. See the Engineering section of this catalog for instructions on how to read these charts and additional ADPI information.

SHPC - 5SHPC

SHPC, 5SHPC Performance Data: Horizontal Throw

IP DATA: SHPC, 5SHPC (NO DAMPER)

Neck Dim in.	Neck Vel FPM	Total Pres "WG	Static Pres "WG	Total Flow CFM	NC	Discharge Air Pattern						
						1-Way Throw ft	2-Way Throw ft	3 - Side A		3 - Side B		4-Way Throw ft
								Flow CFM	Throw ft	Flow CFM	Throw ft	
6" x 6"	400	0.090	0.080	100	12	9 - 11 - 16	5 - 8 - 12	25	4 - 7 - 9	38	5 - 7 - 11	4 - 7 - 9
	500	0.141	0.125	125	18	10 - 13 - 18	6 - 10 - 14	31	6 - 7 - 10	47	5 - 7 - 11	6 - 7 - 10
	600	0.202	0.180	150	22	11 - 14 - 20	8 - 10 - 15	38	7 - 8 - 11	56	6 - 9 - 12	7 - 8 - 11
	700	0.275	0.245	175	26	12 - 15 - 21	9 - 11 - 16	44	7 - 9 - 12	66	7 - 9 - 13	7 - 9 - 12
	800	0.360	0.320	200	30	13 - 16 - 23	10 - 12 - 17	50	8 - 9 - 13	75	8 - 10 - 14	8 - 9 - 13
	1000	0.562	0.500	250	36	15 - 18 - 25	11 - 14 - 19	63	8 - 10 - 15	94	9 - 11 - 16	8 - 10 - 15
1200	0.809	0.720	300	40	16 - 20 - 28	12 - 15 - 21	75	9 - 11 - 16	113	10 - 12 - 17	9 - 11 - 16	
9" x 9"	400	0.090	0.080	225	14	14 - 17 - 24	8 - 11 - 18	56	7 - 10 - 14	84	7 - 11 - 16	7 - 10 - 14
	500	0.141	0.125	281	20	16 - 19 - 27	10 - 14 - 20	70	8 - 11 - 16	105	9 - 13 - 18	8 - 11 - 16
	600	0.202	0.180	338	25	17 - 21 - 30	11 - 16 - 22	84	10 - 12 - 17	127	11 - 14 - 20	10 - 12 - 17
	700	0.275	0.245	394	29	18 - 23 - 32	13 - 17 - 24	98	11 - 13 - 18	148	12 - 15 - 21	11 - 13 - 18
	800	0.360	0.320	450	33	20 - 24 - 34	15 - 18 - 26	113	11 - 14 - 20	169	13 - 16 - 23	11 - 14 - 20
	1000	0.562	0.500	563	38	22 - 27 - 38	17 - 20 - 29	141	13 - 16 - 22	211	15 - 18 - 25	13 - 16 - 22
1100	0.680	0.605	619	41	23 - 28 - 40	17 - 21 - 30	155	13 - 16 - 23	232	15 - 19 - 27	13 - 16 - 23	
12" x 12"	400	0.090	0.080	400	16	19 - 23 - 32	10 - 15 - 24	100	9 - 13 - 19	150	10 - 15 - 21	9 - 13 - 19
	500	0.141	0.125	500	22	21 - 25 - 36	13 - 19 - 27	125	11 - 15 - 21	188	12 - 17 - 24	11 - 15 - 21
	600	0.202	0.180	600	27	23 - 28 - 39	15 - 21 - 30	150	13 - 16 - 23	225	15 - 18 - 26	13 - 16 - 23
	700	0.275	0.245	700	31	25 - 30 - 43	18 - 23 - 32	175	14 - 17 - 25	263	16 - 20 - 28	14 - 17 - 25
	800	0.360	0.320	800	34	26 - 32 - 46	20 - 24 - 34	200	15 - 19 - 26	300	17 - 21 - 30	15 - 19 - 26
	900	0.455	0.405	900	37	28 - 34 - 48	21 - 26 - 36	225	16 - 20 - 28	338	18 - 23 - 32	16 - 20 - 28
1000	0.562	0.500	1000	40	29 - 36 - 51	22 - 27 - 38	250	17 - 21 - 29	375	19 - 24 - 34	17 - 21 - 29	
15" x 15"	300	0.051	0.045	469	-	19 - 25 - 35	10 - 14 - 26	117	7 - 12 - 20	176	9 - 14 - 23	7 - 12 - 20
	400	0.090	0.080	625	18	23 - 29 - 40	13 - 19 - 30	156	11 - 16 - 23	234	12 - 18 - 27	11 - 16 - 23
	500	0.141	0.125	781	24	26 - 32 - 45	16 - 24 - 34	195	14 - 18 - 26	293	15 - 21 - 30	14 - 18 - 26
	600	0.202	0.180	938	28	29 - 35 - 49	19 - 26 - 37	234	16 - 20 - 28	352	18 - 23 - 33	16 - 20 - 28
	700	0.275	0.245	1094	32	31 - 38 - 53	22 - 28 - 40	273	18 - 22 - 31	410	20 - 25 - 35	18 - 22 - 31
	800	0.360	0.320	1250	36	33 - 40 - 57	25 - 30 - 43	313	19 - 23 - 33	469	22 - 27 - 38	19 - 23 - 33
18" x 18"	300	0.051	0.045	675	11	23 - 30 - 42	11 - 17 - 31	169	9 - 15 - 24	253	11 - 17 - 28	9 - 15 - 24
	400	0.090	0.080	900	19	28 - 34 - 48	15 - 23 - 36	225	13 - 20 - 28	338	15 - 22 - 32	13 - 20 - 28
	500	0.141	0.125	1125	25	31 - 38 - 54	19 - 29 - 41	281	17 - 22 - 31	422	18 - 25 - 36	17 - 22 - 31
	600	0.202	0.180	1350	30	34 - 42 - 59	23 - 31 - 44	338	20 - 24 - 34	506	22 - 28 - 39	20 - 24 - 34
	700	0.275	0.245	1575	34	37 - 45 - 64	27 - 34 - 48	394	21 - 26 - 37	591	24 - 30 - 42	21 - 26 - 37
	800	0.360	0.320	1800	37	39 - 48 - 68	30 - 36 - 51	450	23 - 28 - 39	675	26 - 32 - 45	23 - 28 - 39
900	0.455	0.405	2025	40	42 - 51 - 73	31 - 38 - 54	506	24 - 30 - 42	759	28 - 34 - 48	24 - 30 - 42	
21" x 21"	300	0.051	0.045	919	12	27 - 35 - 49	13 - 20 - 37	230	10 - 17 - 28	345	13 - 19 - 32	10 - 17 - 28
	400	0.090	0.080	1225	20	33 - 40 - 56	18 - 27 - 42	306	16 - 23 - 32	459	17 - 26 - 37	16 - 23 - 32
	500	0.141	0.125	1531	26	36 - 45 - 63	22 - 33 - 47	383	19 - 26 - 36	574	21 - 30 - 42	19 - 26 - 36
	600	0.202	0.180	1838	31	40 - 49 - 69	27 - 37 - 52	459	23 - 28 - 40	689	26 - 32 - 46	23 - 28 - 40
	700	0.275	0.245	2144	35	43 - 53 - 75	31 - 40 - 56	536	25 - 30 - 43	804	29 - 35 - 49	25 - 30 - 43
	800	0.360	0.320	2450	38	46 - 56 - 80	35 - 42 - 60	613	27 - 32 - 46	919	31 - 37 - 53	27 - 32 - 46
900	0.455	0.405	2756	41	49 - 60 - 85	37 - 45 - 63	689	28 - 34 - 49	1034	32 - 40 - 56	28 - 34 - 49	

NOTES: Throw values are given for isothermal conditions and terminal velocities of 150, 100, and 50 FPM. NC values are based on octave band 2 - 7 sound power levels minus a room absorption of 10dB, re 10⁻¹² Watts. Dash in space denotes a NC value of less than 10. Data was obtained from tests conducted in accordance with ANSI/ASHRAE Standard 70. The throw values given for 1-Throw is for [Total CFM] CFM per side. The throw values given for 2-Throw is for [(Total CFM)/2] CFM per side. The throw values given for 4-Throw is for [(Total CFM)/4] CFM per side. Reference page B1-60 for 'Side A' and 'Side B' detail. See Krueger's selection software for performance data not shown, including octave band data and different core styles.

LOUVERED FACE DIFFUSERS

SHPC - 5SHPC

SHPC, 5SHPC Performance Data: Vertical Throw

IP DATA: SHPC, 5SHPC (NO DAMPER)

LOUVERED FACE DIFFUSERS

Neck Dim	Neck Vel	Total Pres	Static Pres	Total Flow	NC	Discharge Air Pattern			
						Vert Δ + 40°F	Vert Δ + 20°F	Vert Δ + 0°F	Vert Δ - 20°F
						Throw	Throw	Throw	Throw
in.	FPM	"WG	"WG	CFM		ft	ft	ft	ft
6" x 6"	400	0.138	0.128	100	16	3 - 4 - 5	3 - 5 - 7	4 - 6 - 9	5 - 7 - 11
	500	0.215	0.200	125	22	3 - 4 - 6	4 - 6 - 8	5 - 7 - 11	6 - 9 - 12
	600	0.310	0.288	150	26	4 - 5 - 7	5 - 6 - 9	6 - 8 - 12	7 - 10 - 14
	700	0.422	0.392	175	30	4 - 5 - 7	5 - 7 - 9	7 - 9 - 12	8 - 10 - 15
	800	0.552	0.512	200	34	4 - 5 - 8	6 - 7 - 10	8 - 9 - 13	9 - 11 - 16
	1000	0.862	0.800	250	40	5 - 6 - 9	6 - 8 - 11	9 - 11 - 15	10 - 12 - 18
1200	1.241	1.151	300	44	5 - 7 - 10	7 - 9 - 12	9 - 12 - 16	11 - 14 - 19	
9" x 9"	400	0.138	0.128	225	18	4 - 6 - 8	5 - 8 - 11	6 - 10 - 14	7 - 11 - 17
	500	0.215	0.200	281	24	5 - 7 - 9	6 - 8 - 12	8 - 11 - 16	9 - 13 - 19
	600	0.310	0.288	338	29	6 - 7 - 10	8 - 9 - 13	10 - 12 - 17	11 - 14 - 20
	700	0.422	0.392	394	33	6 - 8 - 11	8 - 10 - 14	11 - 13 - 19	13 - 16 - 22
	800	0.552	0.512	450	37	7 - 8 - 12	9 - 11 - 15	12 - 14 - 20	14 - 17 - 24
	1000	0.862	0.800	563	42	8 - 9 - 13	10 - 12 - 17	13 - 16 - 22	15 - 19 - 26
1100	1.043	0.967	619	45	8 - 10 - 14	10 - 12 - 18	14 - 17 - 23	16 - 20 - 28	
12" x 12"	400	0.138	0.128	400	20	5 - 8 - 11	7 - 10 - 14	8 - 13 - 19	10 - 15 - 22
	500	0.215	0.200	500	26	6 - 9 - 12	8 - 11 - 16	11 - 15 - 21	12 - 18 - 25
	600	0.310	0.288	600	31	8 - 10 - 13	10 - 12 - 17	13 - 16 - 23	15 - 19 - 27
	700	0.422	0.392	700	35	8 - 10 - 15	11 - 13 - 19	14 - 18 - 25	17 - 21 - 29
	800	0.552	0.512	800	38	9 - 11 - 16	12 - 14 - 20	15 - 19 - 27	18 - 22 - 31
	900	0.698	0.648	900	41	10 - 12 - 16	12 - 15 - 21	16 - 20 - 28	19 - 24 - 33
1000	0.862	0.800	1000	44	10 - 12 - 17	13 - 16 - 22	17 - 21 - 30	20 - 25 - 35	
15" x 15"	300	0.078	0.072	469	14	5 - 7 - 12	6 - 9 - 15	8 - 12 - 20	9 - 14 - 24
	400	0.138	0.128	625	22	6 - 10 - 14	8 - 13 - 18	11 - 16 - 24	12 - 18 - 28
	500	0.215	0.200	781	28	8 - 11 - 15	10 - 14 - 20	13 - 19 - 26	15 - 22 - 31
	600	0.310	0.288	938	32	10 - 12 - 17	13 - 15 - 22	16 - 20 - 29	18 - 24 - 34
	700	0.422	0.392	1094	36	10 - 13 - 18	14 - 17 - 23	18 - 22 - 31	21 - 26 - 37
	800	0.552	0.512	1250	40	11 - 14 - 19	14 - 18 - 25	19 - 24 - 33	23 - 28 - 39
1000	0.862	0.800	1563	46	13 - 15 - 22	16 - 20 - 28	22 - 26 - 37	25 - 31 - 44	
18" x 18"	300	0.078	0.072	675	15	6 - 9 - 14	8 - 11 - 18	10 - 14 - 24	11 - 16 - 29
	400	0.138	0.128	900	23	8 - 12 - 16	10 - 15 - 21	13 - 19 - 28	15 - 22 - 33
	500	0.215	0.200	1125	29	10 - 13 - 18	13 - 17 - 24	16 - 22 - 32	18 - 26 - 37
	600	0.310	0.288	1350	34	12 - 14 - 20	15 - 18 - 26	19 - 24 - 35	22 - 29 - 41
	700	0.422	0.392	1575	38	13 - 15 - 22	16 - 20 - 28	22 - 26 - 37	25 - 31 - 44
	800	0.552	0.512	1800	41	13 - 16 - 23	17 - 21 - 30	23 - 28 - 40	27 - 33 - 47
900	0.698	0.648	2025	44	14 - 17 - 25	18 - 23 - 32	24 - 30 - 42	29 - 35 - 50	
21" x 21"	300	0.078	0.072	919	16	7 - 10 - 17	9 - 13 - 21	11 - 17 - 29	13 - 19 - 34
	400	0.138	0.128	1225	24	9 - 14 - 19	12 - 18 - 25	15 - 22 - 33	17 - 25 - 39
	500	0.215	0.200	1531	30	11 - 15 - 22	15 - 20 - 28	19 - 26 - 37	21 - 31 - 43
	600	0.310	0.288	1838	35	14 - 17 - 24	18 - 21 - 30	22 - 29 - 40	25 - 34 - 48
	700	0.422	0.392	2144	39	15 - 18 - 25	19 - 23 - 33	25 - 31 - 44	30 - 36 - 51
	800	0.552	0.512	2450	42	16 - 19 - 27	20 - 25 - 35	27 - 33 - 47	32 - 39 - 55
900	0.698	0.648	2756	45	17 - 20 - 29	21 - 26 - 37	29 - 35 - 49	34 - 41 - 58	

NOTES: Throw values are given for temperature differences shown and terminal velocities of 150, 100, and 50 FPM. NC values are based on octave band 2 - 7 sound power levels minus a room absorption of 10dB, re 10⁻¹² Watts. Dash in space denotes a NC value of less than 10. Data was obtained from tests conducted in accordance with ANSI/ASHRAE Standard 70. See Krueger's selection software for performance data not shown, including octave band data and different core styles. Data based off 4-way discharge air pattern with pattern controllers set to vertical blow position.

S H P C - 5 S H P C

SHPC, 5SHPC Performance Data: Horizontal Throw
METRIC DATA: SHPC, 5SHPC (NO DAMPER)

Neck Dim	Neck Vel	Total Pres	Static Pres	Total Flow	NC	Discharge Air Pattern						
						1-Way Throw	2-Way Throw	3 - Side A		3 - Side B		4-Way Throw
								Flow	Throw	Flow	Throw	
mm	m/s	Pa	Pa	L/s		m	m	L/s	m	L/s	m	m
152 x 152	2.03	22.4	19.9	47	12	2.8 - 3.5 - 4.9	1.5 - 2.3 - 3.7	12	1.3 - 2.0 - 2.8	18	1.5 - 2.2 - 3.2	1.3 - 2.0 - 2.8
	2.54	35.0	31.1	59	18	3.2 - 3.9 - 5.5	1.9 - 2.9 - 4.1	15	1.7 - 2.2 - 3.2	22	1.5 - 2.2 - 3.4	1.7 - 2.2 - 3.2
	3.05	50.4	44.8	71	22	3.5 - 4.2 - 6.0	2.3 - 3.2 - 4.5	18	2.0 - 2.4 - 3.5	27	1.8 - 2.6 - 3.7	2.0 - 2.4 - 3.5
	3.56	68.6	61.0	83	26	3.7 - 4.6 - 6.5	2.7 - 3.4 - 4.9	21	2.2 - 2.6 - 3.7	31	2.1 - 2.8 - 4.0	2.2 - 2.6 - 3.7
	4.06	89.6	79.6	94	30	4.0 - 4.9 - 6.9	3.0 - 3.7 - 5.2	24	2.3 - 2.8 - 4.0	35	2.4 - 3.0 - 4.3	2.3 - 2.8 - 4.0
	5.08	140.0	124.4	118	36	4.5 - 5.5 - 7.7	3.4 - 4.1 - 5.8	29	2.6 - 3.2 - 4.5	44	2.8 - 3.4 - 4.8	2.6 - 3.2 - 4.5
6.10	201.5	179.2	142	40	4.9 - 6.0 - 8.5	3.7 - 4.5 - 6.4	35	2.8 - 3.5 - 4.9	53	3.0 - 3.7 - 5.2	2.8 - 3.5 - 4.9	
229 x 229	2.03	22.4	19.9	106	14	4.2 - 5.2 - 7.4	2.3 - 3.5 - 5.5	27	2.0 - 3.0 - 4.2	40	2.2 - 3.4 - 4.9	2.0 - 3.0 - 4.2
	2.54	35.0	31.1	133	20	4.7 - 5.8 - 8.2	2.9 - 4.3 - 6.2	33	2.5 - 3.3 - 4.7	50	2.8 - 3.8 - 5.4	2.5 - 3.3 - 4.7
	3.05	50.4	44.8	159	25	5.2 - 6.4 - 9.0	3.5 - 4.8 - 6.7	40	3.0 - 3.7 - 5.2	60	3.4 - 4.2 - 6.0	3.0 - 3.7 - 5.2
	3.56	68.6	61.0	186	29	5.6 - 6.9 - 9.7	4.0 - 5.2 - 7.3	46	3.2 - 4.0 - 5.6	70	3.7 - 4.6 - 6.4	3.2 - 4.0 - 5.6
	4.06	89.6	79.6	212	33	6.0 - 7.4 - 10.4	4.5 - 5.5 - 7.8	53	3.5 - 4.2 - 6.0	80	4.0 - 4.9 - 6.9	3.5 - 4.2 - 6.0
	5.08	140.0	124.4	265	38	6.7 - 8.2 - 11.6	5.0 - 6.2 - 8.7	66	3.9 - 4.7 - 6.7	100	4.4 - 5.4 - 7.7	3.9 - 4.7 - 6.7
5.59	169.4	150.6	292	41	7.0 - 8.6 - 12.2	5.3 - 6.5 - 9.1	73	4.1 - 5.0 - 7.0	110	4.7 - 5.7 - 8.1	4.1 - 5.0 - 7.0	
305 x 305	2.03	22.4	19.9	189	16	5.7 - 6.9 - 9.8	3.1 - 4.6 - 7.3	47	2.7 - 4.0 - 5.6	71	3.0 - 4.5 - 6.5	2.7 - 4.0 - 5.6
	2.54	35.0	31.1	236	22	6.3 - 7.7 - 11.0	3.9 - 5.8 - 8.2	59	3.4 - 4.5 - 6.3	88	3.7 - 5.1 - 7.3	3.4 - 4.5 - 6.3
	3.05	50.4	44.8	283	27	6.9 - 8.5 - 12.0	4.6 - 6.4 - 9.0	71	4.0 - 4.9 - 6.9	106	4.5 - 5.6 - 8.0	4.0 - 4.9 - 6.9
	3.56	68.6	61.0	330	31	7.5 - 9.2 - 13.0	5.4 - 6.9 - 9.7	83	4.3 - 5.3 - 7.5	124	5.0 - 6.1 - 8.6	4.3 - 5.3 - 7.5
	4.06	89.6	79.6	378	34	8.0 - 9.8 - 13.9	6.0 - 7.3 - 10.4	94	4.6 - 5.6 - 8.0	142	5.3 - 6.5 - 9.2	4.6 - 5.6 - 8.0
	4.57	113.4	100.8	425	37	8.5 - 10.4 - 14.7	6.4 - 7.8 - 11.0	106	4.9 - 6.0 - 8.5	159	5.6 - 6.9 - 9.7	4.9 - 6.0 - 8.5
5.08	140.0	124.4	472	40	8.9 - 11.0 - 15.5	6.7 - 8.2 - 11.6	118	5.1 - 6.3 - 8.9	177	5.9 - 7.3 - 10.3	5.1 - 6.3 - 8.9	
381 x 381	1.52	12.6	11.2	221	-	5.8 - 7.5 - 10.6	2.9 - 4.3 - 7.9	55	2.3 - 3.8 - 6.1	83	2.8 - 4.2 - 7.0	2.3 - 3.8 - 6.1
	2.03	22.4	19.9	295	18	7.1 - 8.7 - 12.3	3.9 - 5.8 - 9.2	74	3.4 - 5.0 - 7.1	111	3.7 - 5.6 - 8.1	3.4 - 5.0 - 7.1
	2.54	35.0	31.1	369	24	7.9 - 9.7 - 13.7	4.8 - 7.2 - 10.3	92	4.2 - 5.6 - 7.9	138	4.7 - 6.4 - 9.1	4.2 - 5.6 - 7.9
	3.05	50.4	44.8	442	28	8.7 - 10.6 - 15.0	5.8 - 7.9 - 11.2	111	5.0 - 6.1 - 8.6	166	5.6 - 7.0 - 9.9	5.0 - 6.1 - 8.6
	3.56	68.6	61.0	516	32	9.4 - 11.5 - 16.2	6.7 - 8.6 - 12.1	129	5.4 - 6.6 - 9.3	194	6.2 - 7.6 - 10.7	5.4 - 6.6 - 9.3
	4.06	89.6	79.6	590	36	10.0 - 12.3 - 17.3	7.5 - 9.2 - 13.0	147	5.8 - 7.1 - 10.0	221	6.6 - 8.1 - 11.5	5.8 - 7.1 - 10.0
5.08	140.0	124.4	737	42	11.2 - 13.7 - 19.4	8.4 - 10.3 - 14.5	184	6.4 - 7.9 - 11.1	277	7.4 - 9.1 - 12.8	6.4 - 7.9 - 11.1	
457 x 457	1.52	12.6	11.2	319	11	7.0 - 9.0 - 12.7	3.5 - 5.2 - 9.5	80	2.7 - 4.6 - 7.3	119	3.4 - 5.0 - 8.4	2.7 - 4.6 - 7.3
	2.03	22.4	19.9	425	19	8.5 - 10.4 - 14.7	4.6 - 6.9 - 11.0	106	4.0 - 6.0 - 8.5	159	4.5 - 6.7 - 9.7	4.0 - 6.0 - 8.5
	2.54	35.0	31.1	531	25	9.5 - 11.6 - 16.4	5.8 - 8.7 - 12.3	133	5.1 - 6.7 - 9.5	199	5.6 - 7.7 - 10.9	5.1 - 6.7 - 9.5
	3.05	50.4	44.8	637	30	10.4 - 12.7 - 18.0	6.9 - 9.5 - 13.5	159	6.0 - 7.3 - 10.4	239	6.7 - 8.4 - 11.9	6.0 - 7.3 - 10.4
	3.56	68.6	61.0	743	34	11.2 - 13.8 - 19.5	8.1 - 10.3 - 14.6	186	6.5 - 7.9 - 11.2	279	7.4 - 9.1 - 12.9	6.5 - 7.9 - 11.2
	4.06	89.6	79.6	850	37	12.0 - 14.7 - 20.8	9.0 - 11.0 - 15.6	212	6.9 - 8.5 - 12.0	319	8.0 - 9.7 - 13.8	6.9 - 8.5 - 12.0
4.57	113.4	100.8	956	40	12.7 - 15.6 - 22.1	9.5 - 11.7 - 16.5	239	7.3 - 9.0 - 12.7	358	8.4 - 10.3 - 14.6	7.3 - 9.0 - 12.7	
533 x 533	1.52	12.6	11.2	434	12	8.1 - 10.5 - 14.9	4.0 - 6.1 - 11.1	108	3.2 - 5.3 - 8.5	163	3.9 - 5.9 - 9.8	3.2 - 5.3 - 8.5
	2.03	22.4	19.9	578	20	9.9 - 12.1 - 17.2	5.4 - 8.1 - 12.9	145	4.7 - 7.0 - 9.9	217	5.2 - 7.8 - 11.4	4.7 - 7.0 - 9.9
	2.54	35.0	31.1	723	26	11.1 - 13.6 - 19.2	6.7 - 10.1 - 14.4	181	5.9 - 7.8 - 11.0	271	6.5 - 9.0 - 12.7	5.9 - 7.8 - 11.0
	3.05	50.4	44.8	867	31	12.1 - 14.9 - 21.0	8.1 - 11.1 - 15.7	217	7.0 - 8.5 - 12.1	325	7.8 - 9.8 - 13.9	7.0 - 8.5 - 12.1
	3.56	68.6	61.0	1012	35	13.1 - 16.0 - 22.7	9.4 - 12.0 - 17.0	253	7.5 - 9.2 - 13.1	379	8.7 - 10.6 - 15.0	7.5 - 9.2 - 13.1
	4.06	89.6	79.6	1156	38	14.0 - 17.2 - 24.3	10.5 - 12.9 - 18.2	289	8.1 - 9.9 - 14.0	434	9.3 - 11.4 - 16.1	8.1 - 9.9 - 14.0
4.57	113.4	100.8	1301	41	14.9 - 18.2 - 25.7	11.1 - 13.6 - 19.3	325	8.5 - 10.5 - 14.8	488	9.8 - 12.0 - 17.0	8.5 - 10.5 - 14.8	

NOTES: Throw values are given for isothermal conditions and terminal velocities of 0.75, 0.50, and 0.25 m/s. NC values are based on octave band 2 - 7 sound power levels minus a room absorption of 10dB, re 10⁻¹² Watts. Dash in space denotes a NC value of less than 10. Data was obtained from tests conducted in accordance with ANSI/ASHRAE Standard 70. The throw values given for 1-Throw is for [Total L/s] L/s per side. The throw values given for 2-Throw is for [(Total L/s)/2] L/s per side. The throw values given for 4-Throw is for [(Total L/s)/4] L/s per side. Reference page B1-60 for 'Side A' and 'Side B' detail. See Krueger's selection software for performance data not shown, including octave band data and different core styles. Data based off 4-way discharge air pattern with pattern controllers set to vertical blow position.

SHPC, 5SHPC Performance Data: Vertical Throw

METRIC DATA: SHPC, 5SHPC (NO DAMPER)

LOUVERED FACE DIFFUSERS

Neck Dim	Neck Vel	Total Pres	Static Pres	Total Flow	NC	Discharge Air Pattern			
						Vert Δ + 22°C	Vert Δ + 11°C	Vert Δ + 0°C	Vert Δ - 11°C
						Throw	Throw	Throw	Throw
mm	m/s	Pa	Pa	L/s		m	m	m	m
152 x 152	2.03	34.3	31.9	47	16	0.8 - 1.2 - 1.7	1.0 - 1.5 - 2.1	1.3 - 1.9 - 2.9	1.5 - 2.2 - 3.4
	2.54	53.7	49.8	59	22	1.0 - 1.3 - 1.9	1.3 - 1.7 - 2.4	1.6 - 2.3 - 3.2	1.8 - 2.7 - 3.8
	3.05	77.3	71.7	71	26	1.2 - 1.4 - 2.0	1.5 - 1.9 - 2.6	1.9 - 2.5 - 3.5	2.2 - 2.9 - 4.1
	3.56	105.2	97.6	83	30	1.3 - 1.6 - 2.2	1.6 - 2.0 - 2.8	2.2 - 2.7 - 3.8	2.6 - 3.2 - 4.5
	4.06	137.3	127.4	94	34	1.4 - 1.7 - 2.4	1.8 - 2.1 - 3.0	2.3 - 2.9 - 4.1	2.8 - 3.4 - 4.8
	5.08	214.6	199.1	118	40	1.5 - 1.9 - 2.6	2.0 - 2.4 - 3.4	2.6 - 3.2 - 4.5	3.1 - 3.8 - 5.3
6.10	309.0	286.7	142	44	1.7 - 2.0 - 2.9	2.1 - 2.6 - 3.7	2.9 - 3.5 - 5.0	3.4 - 4.1 - 5.8	
229 x 229	2.03	34.3	31.9	106	18	1.2 - 1.8 - 2.5	1.5 - 2.3 - 3.2	1.9 - 2.9 - 4.3	2.2 - 3.3 - 5.1
	2.54	53.7	49.8	133	24	1.5 - 2.0 - 2.8	1.9 - 2.5 - 3.6	2.4 - 3.4 - 4.8	2.8 - 4.0 - 5.7
	3.05	77.3	71.7	159	29	1.8 - 2.2 - 3.1	2.3 - 2.8 - 3.9	2.9 - 3.7 - 5.3	3.3 - 4.4 - 6.2
	3.56	105.2	97.6	186	33	1.9 - 2.3 - 3.3	2.5 - 3.0 - 4.3	3.3 - 4.0 - 5.7	3.9 - 4.7 - 6.7
	4.06	137.3	127.4	212	37	2.0 - 2.5 - 3.5	2.6 - 3.2 - 4.6	3.5 - 4.3 - 6.1	4.1 - 5.1 - 7.2
	5.08	214.6	199.1	265	42	2.3 - 2.8 - 4.0	2.9 - 3.6 - 5.1	3.9 - 4.8 - 6.8	4.6 - 5.7 - 8.0
5.59	259.7	240.9	292	45	2.4 - 2.9 - 4.2	3.1 - 3.8 - 5.3	4.1 - 5.0 - 7.1	4.9 - 5.9 - 8.4	
305 x 305	2.03	34.3	31.9	189	20	1.6 - 2.4 - 3.3	2.0 - 3.0 - 4.3	2.6 - 3.9 - 5.7	2.9 - 4.4 - 6.8
	2.54	53.7	49.8	236	26	2.0 - 2.6 - 3.7	2.5 - 3.4 - 4.8	3.2 - 4.5 - 6.4	3.7 - 5.3 - 7.6
	3.05	77.3	71.7	283	31	2.4 - 2.9 - 4.1	3.0 - 3.7 - 5.3	3.9 - 5.0 - 7.0	4.4 - 5.8 - 8.3
	3.56	105.2	97.6	330	35	2.6 - 3.1 - 4.4	3.3 - 4.0 - 5.7	4.4 - 5.4 - 7.6	5.2 - 6.3 - 8.9
	4.06	137.3	127.4	378	38	2.7 - 3.3 - 4.7	3.5 - 4.3 - 6.1	4.7 - 5.7 - 8.1	5.5 - 6.8 - 9.6
	4.57	173.8	161.3	425	41	2.9 - 3.5 - 5.0	3.7 - 4.6 - 6.4	5.0 - 6.1 - 8.6	5.8 - 7.2 - 10.1
5.08	214.6	199.1	472	44	3.1 - 3.7 - 5.3	3.9 - 4.8 - 6.8	5.2 - 6.4 - 9.1	6.2 - 7.6 - 10.7	
381 x 381	1.52	19.3	17.9	221	14	1.5 - 2.2 - 3.6	1.9 - 2.9 - 4.7	2.4 - 3.6 - 6.2	2.8 - 4.1 - 7.3
	2.03	34.3	31.9	295	22	2.0 - 2.9 - 4.2	2.5 - 3.8 - 5.4	3.2 - 4.8 - 7.2	3.7 - 5.5 - 8.4
	2.54	53.7	49.8	369	28	2.5 - 3.3 - 4.7	3.2 - 4.2 - 6.0	4.0 - 5.7 - 8.0	4.6 - 6.7 - 9.4
	3.05	77.3	71.7	442	32	2.9 - 3.6 - 5.1	3.8 - 4.7 - 6.6	4.8 - 6.2 - 8.8	5.5 - 7.3 - 10.3
	3.56	105.2	97.6	516	36	3.2 - 3.9 - 5.5	4.1 - 5.0 - 7.1	5.5 - 6.7 - 9.5	6.4 - 7.9 - 11.2
	4.06	137.3	127.4	590	40	3.4 - 4.2 - 5.9	4.4 - 5.4 - 7.6	5.9 - 7.2 - 10.1	6.9 - 8.4 - 11.9
5.08	214.6	199.1	737	46	3.8 - 4.7 - 6.6	4.9 - 6.0 - 8.5	6.5 - 8.0 - 11.3	7.7 - 9.4 - 13.4	
457 x 457	1.52	19.3	17.9	319	15	1.8 - 2.7 - 4.3	2.3 - 3.4 - 5.6	2.9 - 4.3 - 7.4	3.3 - 5.0 - 8.8
	2.03	34.3	31.9	425	23	2.4 - 3.5 - 5.0	3.0 - 4.6 - 6.4	3.9 - 5.8 - 8.6	4.4 - 6.6 - 10.1
	2.54	53.7	49.8	531	29	2.9 - 4.0 - 5.6	3.8 - 5.1 - 7.2	4.8 - 6.8 - 9.6	5.5 - 8.0 - 11.3
	3.05	77.3	71.7	637	34	3.5 - 4.3 - 6.1	4.6 - 5.6 - 7.9	5.8 - 7.4 - 10.5	6.6 - 8.8 - 12.4
	3.56	105.2	97.6	743	38	3.8 - 4.7 - 6.6	4.9 - 6.0 - 8.5	6.6 - 8.0 - 11.4	7.7 - 9.5 - 13.4
	4.06	137.3	127.4	850	41	4.1 - 5.0 - 7.1	5.3 - 6.4 - 9.1	7.0 - 8.6 - 12.2	8.3 - 10.1 - 14.3
4.57	173.8	161.3	956	44	4.3 - 5.3 - 7.5	5.6 - 6.8 - 9.7	7.4 - 9.1 - 12.9	8.8 - 10.7 - 15.2	
533 x 533	1.52	19.3	17.9	434	16	2.1 - 3.1 - 5.1	2.7 - 4.0 - 6.5	3.4 - 5.1 - 8.7	3.9 - 5.8 - 10.2
	2.03	34.3	31.9	578	24	2.7 - 4.1 - 5.8	3.5 - 5.3 - 7.5	4.5 - 6.8 - 10.0	5.2 - 7.7 - 11.8
	2.54	53.7	49.8	723	30	3.4 - 4.6 - 6.5	4.4 - 5.9 - 8.4	5.6 - 7.9 - 11.2	6.4 - 9.3 - 13.2
	3.05	77.3	71.7	867	35	4.1 - 5.1 - 7.2	5.3 - 6.5 - 9.2	6.8 - 8.7 - 12.3	7.7 - 10.2 - 14.5
	3.56	105.2	97.6	1012	39	4.5 - 5.5 - 7.7	5.7 - 7.0 - 10.0	7.7 - 9.4 - 13.3	9.0 - 11.1 - 15.6
	4.06	137.3	127.4	1156	42	4.8 - 5.8 - 8.3	6.1 - 7.5 - 10.6	8.2 - 10.0 - 14.2	9.7 - 11.8 - 16.7
4.57	173.8	161.3	1301	45	5.1 - 6.2 - 8.8	6.5 - 8.0 - 11.3	8.7 - 10.6 - 15.0	10.2 - 12.5 - 17.7	

NOTES: Throw values are given for temperature differences shown and terminal velocities of 0.75, 0.50, and 0.25 m/s. NC values are based on octave band 2 - 7 sound power levels minus a room absorption of 10dB, re 10⁻¹² Watts. Dash in space denotes a NC value of less than 10. Data was obtained from tests conducted in accordance with ANSI/ASHRAE Standard 70. See Krueger's selection software for performance data not shown, including octave band data and different core styles.

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SHPC, 5SHPC Suggested Specification & Configuration
1. SERIES: (XXXXX)

- SHPC - Square/Rectangular Neck with Pattern Controllers, Steel Ceiling Diffuser
- 5SHPC - Square/Rectangular Neck with Pattern Controllers, Aluminum Ceiling Diffuser

2. PATTERN: (XX)

- 01 - 1-Way
- 02 - 2-Way
- 03 - 3-Way
- 04 - 4-Way

3. WIDTH: (XX)

- 6" - 21" in 3" Increments

4. HEIGHT: (XX)

- 6" - 21" in 3" Increments

5. FRAME: (XXX) *

- F21 - Surface Mount, Beveled
- F22 - Surface Mount, Flat
- F23 - Lay-in T-Bar
- F24 - Snap-in T-Bar
- F27 - Spline
- F98 - 5/16" Step Down

6. PANEL: (XX)x(XX) **

- None
- 12"x12"
- 24"x24"
- 24"x48"

7. DAMPER: (XX)

- 00 - None
- 02 - OBDFA (Steel Damper)
- 18 - 5OBDFA (Aluminum Damper)

8. ACCESSORIES: (XX) (XX)

- 00 - None
- S - Square Straightening Grid
- T - Long Straightening Grid
- W - Short Straightening Grid

9. FINISH: (XX)

- 01 - Mill
- 10 - Alumican
- 35 - Black
- 44 - British White

* If Frame 23, 24, 27, or 98 are specified, specify panel size.

** Reference page B1-60 for panel and neck size availability. Specify Panel 'None' if Frame 21 or 22 has been selected.

SHPC, 5SHPC

The ceiling diffuser shall be Krueger model SHPC (steel) or 5SHPC (aluminum) louver face with adjustable pattern controllers for horizontal or vertical discharge airflow. The pattern controllers shall be accessible from the face. These diffusers shall have a square or rectangular neck of the sizes and frame styles shown on the drawing or job schedule. The square or rectangular neck shall be an integral part of the backpan and a square-to-round adapter will be an available option to accommodate round duct connections. The diffuser shall have an easily removable core with fixed blades in 1, 2, 3, or 4-way configurations.

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.