

PERFORMANCE DATA:

MODELS 6500 AND 6200 • ROUND NECK

NOMINAL NECK SIZE	BLOW PATTERNS		NECK VELOCITY TP	400 .026	600 .058	800 .103	900 .130	1000 .161	1200 .231	1400 .315
18 x 18 6" ROUND	RETURN FACTORS	—SP=0.7 TP NC + 0	CFM NC	78 — A B	118 11 A B	157 19 A B	176 21 A B	196 25 A B	235 30 A B	274 35 A B
	 4A	CFM/SIDE THROW, FT.	20 2-4-6	29 4-7-10	39 6-8-11	44 7-8-12	49 7-8-13	59 8-9-14	69 8-10-15	
	 3A	CFM/SIDE THROW, FT.	20 29 2-4-6 2-4-7	29 44 4-7-10 4-8-11	39 59 6-8-11 7-9-12	44 66 7-8-12 8-9-13	49 74 7-8-13 8-9-14	59 88 8-9-14 9-10-15	69 103 8-10-15 9-11-17	
	 2S  2G	CFM/SIDE THROW, FT.	39 3-4-9	59 5-6-13	78 6-9-15	88 6-10-16	98 7-11-17	118 8-13-18	137 9-14-20	
	 1S	CFM/SIDE THROW, FT.	78 4-7-14	118 6-10-18	157 9-14-21	176 10-15-23	196 11-16-24	235 12-18-26	274 13-19-28	
18 x 18 8" ROUND	RETURN FACTORS	—SP=0.8 TP NC + 0	CFM NC	140 — A B	209 13 A B	279 21 A B	314 23 A B	349 27 A B	419 32 A B	489 37 A B
	 4A	CFM/SIDE THROW, FT.	35 4-8-10	52 6-9-13	70 8-10-15	79 9-11-15	87 9-12-17	105 10-13-19	122 11-14-20	
	 3A	CFM/SIDE THROW, FT.	35 52 4-8-10 4-9-11	52 79 6-9-13 7-10-14	70 105 8-10-15 9-11-17	79 118 9-11-15 10-12-17	87 131 9-12-17 10-13-19	105 157 10-13-19 11-14-21	122 183 11-14-20 12-15-22	
	 2S  2G	CFM/SIDE THROW, FT.	70 5-17-14	105 6-9-17	140 8-13-20	157 9-14-22	175 10-15-23	209 12-17-25	244 10-13-1	
	 1S	CFM/SIDE THROW, FT.	140 7-12-19	209 9-14-24	279 13-19-28	314 14-21-30	349 15-22-32	419 16-24-34	489 17-26-37	
18 x 18 10" ROUND	RETURN FACTORS	—SP=0.9 TP NC + 2	CFM NC	218 — A B	327 16 A B	436 24 A B	491 26 A B	545 30 A B	654 35 A B	763 40 A B
	 4A	CFM/SIDE THROW, FT.	55 4-8-12	82 8-11-17	109 10-13-19	123 11-14-20	136 12-15-21	164 12-16-23	191 13-17-24	
	 3A	CFM/SIDE THROW, FT.	55 82 4-8-12 4-9-13	82 123 8-11-17 9-12-19	109 164 10-13-19 11-14-21	123 184 11-14-20 12-15-22	136 204 12-15-21 13-17-23	164 245 12-16-23 13-18-25	191 286 13-17-24 14-19-26	
	 2S  2G	CFM/SIDE THROW, FT.	109 5-7-15	164 7-11-22	218 10-15-25	245 12-17-27	273 13-19-28	327 14-21-30	382 15-23-34	
	 1S	CFM/SIDE THROW, FT.	218 7-12-22	327 12-17-31	436 15-23-25	491 17-26-37	545 19-27-39	654 20-29-42	763 22-32-45	
18 x 18 12" ROUND	RETURN FACTORS	—SP=1.0 TP NC + 3	CFM NC	314 — A B	471 18 A B	628 26 A B	707 28 A B	785 32 A B	942 37 A B	1099 42 A B
	 4A	CFM/SIDE THROW, FT.	79 6-9-15	118 8-11-18	157 10-15-23	177 13-17-24	196 14-18-25	236 15-20-28	275 17-21-30	
	 3A	CFM/SIDE THROW, FT.	79 118 6-9-15 7-10-17	118 177 8-11-18 9-12-20	157 236 10-15-23 11-17-25	177 265 13-17-24 14-19-26	196 294 14-18-25 15-20-28	236 353 15-20-28 17-23-31	275 412 17-21-30 19-23-33	
	 2S  2G	CFM/SIDE THROW, FT.	157 6-9-19	236 9-14-26	314 11-16-29	353 14-21-32	393 15-23-34	471 16-24-38	550 18-27-40	
	 1S	CFM/SIDE THROW, FT.	314 9-14-28	471 14-21-37	628 19-28-42	707 21-32-45	785 23-34-47	942 24-36-51	1099 27-39-55	
18 x 18 14" ROUND	RETURN FACTORS	—SP=1.1 TP NC + 4	CFM NC	427 — A B	641 20 A B	854 28 A B	961 30 A B	1068 34 A B	1282 39 A B	1495 44 A B
	 4A	CFM/SIDE THROW, FT.	107 7-10-19	160 10-15-23	214 14-19-26	240 15-20-29	267 17-21-30	320 19-23-32	374 21-26-38	
	 3A	CFM/SIDE THROW, FT.	107 160 7-10-19 8-11-21	160 240 10-15-23 11-17-25	214 320 14-19-26 15-21-29	240 360 15-20-29 17-22-32	267 401 17-21-30 19-23-33	320 481 19-23-32 21-25-35	374 561 21-26-38 23-29-42	
	 2S  2G	CFM/SIDE THROW, FT.	214 7-11-22	320 11-16-31	427 14-22-36	481 16-24-38	534 18-27-40	641 19-28-43	748 21-31-47	
	 1S	CFM/SIDE THROW, FT.	427 11-16-32	641 16-24-42	854 24-33-50	961 24-37-52	1068 27-39-55	1282 29-42-60	1495 33-45-65	
18 x 18 16" ROUND	RETURN FACTORS	—SP=1.3 TP NC + 6	CFM NC	558 — A B	837 22 A B	1116 30 A B	1256 32 A B	1395 36 A B	1674 41 A B	1953 46 A B
	 4A	CFM/SIDE THROW, FT.	140 8-12-21	209 12-19-26	279 17-21-31	314 19-23-32	349 20-25-35	419 22-28-42	488 24-30-48	
	 3A	CFM/SIDE THROW, FT.	140 209 8-12-21 9-13-23	209 314 12-19-26 13-21-29	279 419 17-21-31 19-23-34	314 471 19-23-32 21-25-35	349 523 20-25-35 22-28-39	419 628 22-28-42 24-31-46	488 732 24-30-48 26-33-53	
	 2S  2G	CFM/SIDE THROW, FT.	279 8-13-25	419 13-19-35	558 16-25-41	628 19-28-43	698 20-30-45	837 23-34-49	977 26-37-54	
	 1S	CFM/SIDE THROW, FT.	558 13-19-38	837 19-28-49	1116 25-38-57	1256 28-42-60	1395 31-44-63	1674 36-48-69	1953 42-52-75	

For performance notes, see page D37.

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CEILING DIFFUSERS

PERFORMANCE DATA:

MODELS 6500 AND 6200 • RECTANGULAR NECK

NOMINAL NECK SIZE	BLOW PATTERNS	NECK VELOCITY TP	300 .033	400 .058	500 .090	600 .130	700 .177	800 .231	900 .293
36 x 24 6.0 SQ. FT.	RETURN FACTORS —SP=3.3 TP NC + 8	CFM NC	1800 18	2400 25	3000 31	3600 36	4200 40	4800 43	5400 46
			A B	A B	A B	A B	A B	A B	A B
	4B 4C	CFM/SIDE THROW, FT.	600 300 29-37-51 19-22-31	800 400 34-41-58 22-25-37	1000 500 39-48-66 25-29-41	1200 600 41-51-70 27-31-44	1400 700 44-54-75 29-32-48	1600 800 49-59-80 31-37-51	1800 900 53-63-85 32-37-54
	4E	CFM/SIDE THROW, FT.	450 450 25-31-42 24-31-42	600 600 29-37-51 29-37-51	750 750 32-41-58 32-41-58	900 900 35-44-61 35-44-61	1050 1050 37-48-66 37-48-66	1200 1200 41-51-71 41-51-71	1350 1350 42-54-75 42-54-75
	3A1	CFM/SIDE THROW, FT.	750 300 31-37-54 19-22-31	1000 400 37-42-61 22-25-37	1250 500 41-49-70 25-29-41	1500 600 44-54-75 27-31-44	1750 700 48-58-80 29-32-48	2000 800 51-61-85 31-37-51	2250 900 54-65-90 32-37-54
	3A2	CFM/SIDE THROW, FT.	676 562 27-32-48 24-29-41	900 750 34-37-54 27-32-48	1125 937 34-42-61 31-37-54	1350 1125 37-48-66 32-39-58	1575 1312 39-51-71 35-42-61	1800 1500 42-54-75 37-44-66	2025 1687 48-58-80 41-49-70
	2A	CFM/SIDE THROW, FT.	900 32-41-56	1200 37-48-65	1500 42-54-73	1800 48-58-78	2100 51-61-85	2400 54-66-90	2700 58-70-97
	2B	CFM/SIDE THROW, FT.	900 32-41-56	1200 37-48-65	1500 42-54-73	1800 48-58-78	2100 51-61-85	2400 54-66-90	2700 58-70-97
	2C 2D	CFM/SIDE THROW, FT.	1200 600 37-42-63 25-31-42	1600 800 41-51-71 29-37-51	2000 1000 48-58-82 32-41-58	2400 1200 51-61-87 35-44-61	2800 1400 54-66-95 37-48-66	3200 1600 58-71-99 41-51-71	3600 1800 63-75-107 42-54-75
	2E	CFM/SIDE THROW, FT.	1200 600 37-42-63 25-31-42	1600 800 41-51-71 29-37-51	2000 1000 48-58-82 32-41-58	2400 1200 51-61-87 35-44-61	2800 1400 54-66-95 37-48-66	3200 1600 58-71-99 41-51-71	3600 1800 63-75-107 42-54-75
36 x 30 7.5 SQ. FT.	RETURN FACTORS —SP=3.4 TP NC + 8	CFM NC	2250 19	3000 26	3750 32	4500 37	5250 41	6000 44	6750 47
			A B	A B	A B	A B	A B	A B	A B
	4B 4C	CFM/SIDE THROW, FT.	657 468 29-37-51 20-25-34	875 625 34-41-58 24-29-39	1093 782 39-48-66 27-32-44	1313 937 41-51-70 29-37-49	1532 1093 44-54-75 31-37-53	1750 1250 49-59-80 32-41-56	1969 1406 53-63-85 37-42-59
	3A1	CFM/SIDE THROW, FT.	890 468 32-41-56 20-25-34	1187 625 37-48-65 24-29-39	1484 782 42-54-73 27-32-44	1781 937 48-58-78 29-37-49	2078 1093 51-61-85 31-37-53	2375 1250 54-66-90 32-41-56	2672 1406 58-70-97 37-42-59
	3A2	CFM/SIDE THROW, FT.	787 675 31-37-54 22-27-37	1050 900 37-42-61 25-31-42	1312 1125 41-49-70 29-34-49	1575 1350 44-54-75 31-37-54	1837 1575 48-58-80 32-39-58	2100 1800 51-61-85 37-42-61	2362 2025 54-65-90 37-48-65
	2A	CFM/SIDE THROW, FT.	1125 34-42-59	1500 39-49-68	1875 44-56-76	2250 49-59-83	2625 53-65-88	3000 56-68-97	3375 59-73-102
	2B	CFM/SIDE THROW, FT.	1125 34-42-59	1500 39-49-68	1875 44-56-76	2250 49-59-83	2625 53-65-88	3000 56-68-97	3375 59-73-102
	2C 2D	CFM/SIDE THROW, FT.	1312 938 37-42-63 29-37-51	1750 1250 41-51-71 34-41-58	2188 1562 48-58-82 39-48-66	2625 1875 51-61-87 41-51-70	3063 2187 54-66-95 44-54-75	3500 2500 58-71-99 49-59-80	3938 2812 63-75-107 53-63-85
	2E	CFM/SIDE THROW, FT.	1312 938 37-42-63 29-37-51	1750 1250 41-51-71 34-41-58	2188 1562 48-58-82 39-48-66	2625 1875 51-61-87 41-51-70	3063 2187 54-66-95 44-54-75	3500 2500 58-71-99 49-59-80	3938 2812 63-75-107 53-63-85
	1A 1B	CFM/SIDE THROW, FT.	2250 48-60-82	3000 56-68-94	3750 64-78-106	4500 68-82-116	5250 72-88-124	6000 78-94-134	6750 82-100-144

Notes:

- Core style 4E is sized to give equal flow as near as possible in directions A and B.
- For core styles 1A, 1B, 2A and 2B, the "A" direction is shown. Throw correction factor for "B" direction is: $A \times .82 = B$.

CFM - cubic feet per minute
TP - total pressure - inches w.g.
T - throw in feet
NC - Noise Criteria (values) based on 10 dB room absorption, re 10⁻¹² watts.
Neck Velocity – feet per minute

Performance Notes:

- Throw values are given for terminal velocities of 150, 100 and 50 fpm under isothermal conditions. Data applies to ceiling mounted units when the maximum coanda effect applies. When no ceiling is present (exposed duct), throws are reduced by approximately 25%.
- Sound levels in performance tables are for steel construction – **Model 6500**. Apply the following corrections for aluminum construction – **Model 6200**.
 TP = Listed value x 1.25.
 NC = Listed value + 4.

- Performance data as tabulated is for supply air conditions. Correction factors for return air application - see next page.
- Correction factors for adjustable models - see next page.
- Correction factors for round inlets - see next page.
- Data derived from tests conducted in accordance with ANSI/ASHRAE Standard 70 – 2023.

PERFORMANCE DATA CORRECTIONS:

MODELS 6500 AND 6200

CORRECTION FACTORS FOR RETURN INLET

If the unit is used as a return inlet, the performance data is obtained by applying the return corrections, as follows:

- Add the NC correction at the left side of the table to the NC value listed in the performance table.
- Multiply the listed SP factor at the left side of the table by the total pressure (TP) listed at the top of the table.

CORRECTION FACTORS FOR MODELS 6550 AND 6250 (ADJUSTABLE PATTERN CONTROLLERS) – TABLE 2

Refer to the performance data for the **Models 6500 and 6200**. Apply the corrections from Table 2 to the data for square, 4-way core styles, as follows:

- NC = listed + correction
- Total Pressure = listed x factor
- Horizontal Throw = listed
- Vertical Throw = listed x factor

Apply the throw factor to the 50 fpm terminal velocity throw only.

Example:

18" x 18", **Model 6500**, 1350 cfm, 20°F temperature difference heating, vertical projection, (Page D23).

- NC = 31 + 6 = 37
- TP = .13 x 2.1 = .273
- Throw = 36 x .9 = 32.4 feet @ 50 fpm terminal velocity.

CORRECTION FACTORS WITH SQUARE TO ROUND INLET ADAPTOR – TABLE 3

- Add the NC correction factor from Table 3 and the NC value listed in the performance tables.
- Multiply the correction factor from Table 3 by the listed total pressure in the performance tables.
- Multiply the correction factor from Table 3 by the listed throws in the performance tables.

Example:

12" x 12" unit with 10" round adaptor handling 500 cfm supply air. (Page D23).

- NC = 23 + 7 = 30
- Total Pressure = .09 x 1.65 = 0.149
- Throw = 21 x 1.15 = 24.15 feet @ 50 fpm terminal velocity.

Example:

12" x 12" unit handling 600 cfm of return air. (Page D23).

- Return NC = 28 + 4 = 32.
- Return negative SP = 1.3 x (– .13) = – .169.

TABLE 2 Correction Factors 6550/6250 Adjustable

NECK SIZE	NC (add)		TOTAL PRESSURE (multiply)		VERTICAL THROW (multiply)			
					COOLING, ΔT	HEATING, ΔT		
	H	V	H	V	20°F	0°F	20°F	40°F
6 x 6	2	6	1.2	1.5	1.3	1.1	0.8	0.6
9 x 9	2	6	1.4	2.1	1.5	1.2	0.9	0.6
12 x 12	2	6	1.4	2.1	1.6	1.3	1.0	0.6
15 x 15	2	6	1.4	2.1	1.7	1.3	1.0	0.6
18 x 18	2	6	1.4	2.1	1.7	1.3	0.9	0.6
21 x 21	2	6	1.4	2.1	1.7	1.3	0.8	0.5
24 x 24	2	6	1.6	2.2	1.5	1.1	0.7	0.3

TABLE 3 Correction Factors for SR Adaptors

SQUARE INLET	ROUND INLET	NC (add)	TP (multiply)	THROW (multiply)		
				150	100	50
6 x 6	5	7	1.65	1.10	1.10	1.15
9 x 9	6	17	3.50	1.15	1.15	1.20
9 x 9	8	4	1.40	1.10	1.10	1.10
12 x 12	8	17	3.50	1.15	1.15	1.20
12 x 12	10	7	1.65	1.10	1.10	1.15
15 x 15	10	17	3.50	1.15	1.15	1.20
15 x 15	12	9	1.90	1.10	1.10	1.15
15 x 15	14	3	1.25	1.05	1.05	1.10
18 x 18	12	17	3.50	1.15	1.15	1.20
18 x 18	14	10	2.00	1.10	1.10	1.15
18 x 18	16	5	1.45	1.10	1.10	1.10
21 x 21	14	17	3.70	1.15	1.15	1.20
21 x 21	16	11	2.25	1.10	1.10	1.15
21 x 21	18	6	1.60	1.10	1.10	1.10
21 x 21	20	3	1.20	1.05	1.05	1.10
24 x 24	16	17	3.50	1.15	1.15	1.20
24 x 24	18	12	2.35	1.10	1.10	1.15
24 x 24	20	7	1.65	1.10	1.10	1.15
24 x 24	22	4	1.33	1.05	1.05	1.10