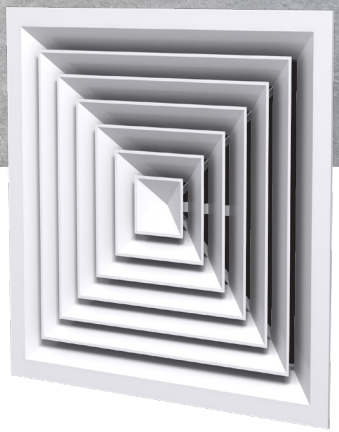
SMD/AMD

MODULAR LOUVERED FACE DIFFUSER

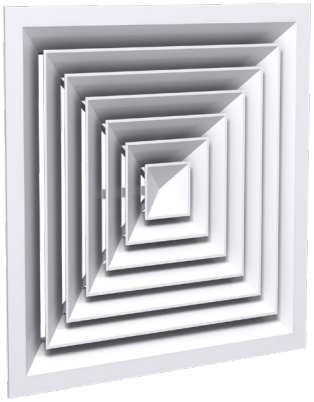




price | DIFFUSERS

SMD/AMD
Modular Louvered Face Diffuser

High capacity, modular louvered face directional diffusers blend harmoniously with architectural details and are available with a wide array of frame styles for easy integration with modular ceiling systems. The SMD/AMD features large square and rectangular inlets for reduced inlet velocity, resulting in low sound and pressure drop even at high airflows. The modular louvered face diffuser is highly configurable with multiple core styles, airflow patterns, and optional features to tailor this product to specific applications.



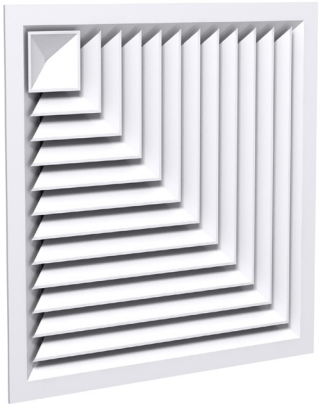
4-way discharge



3-way discharge



2-way discharge



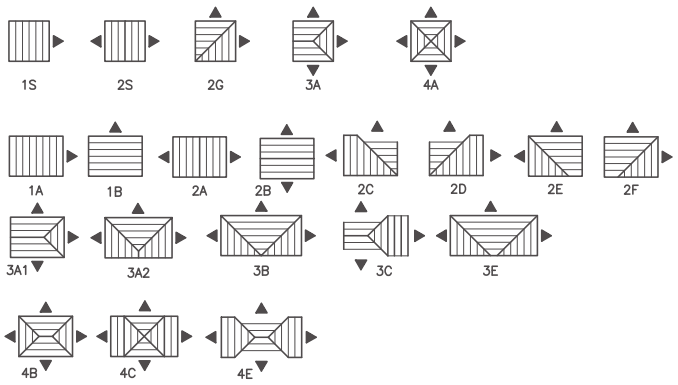
2-way corner discharge



1-way discharge

VARIETY OF CORE STYLES

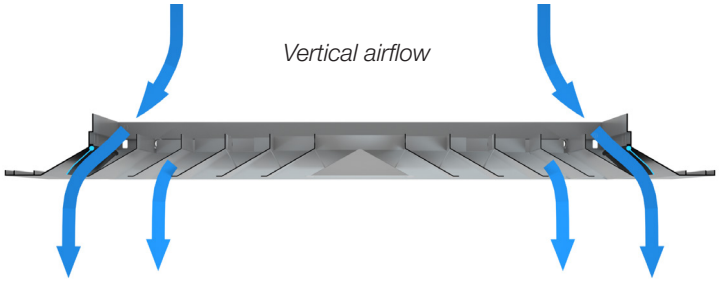
+ Available in a wide variety of core styles, the modular design of this diffuser allows for the customization of each unit to accommodate specific airflow requirements.
+ The various core styles allow for 1-way, 2-way, 2-way corner, 3-way, or 4-way airflow.
+ The directional core is easily removable at the diffuser face without the need for special tools.



ADJUSTABLE PATTERN DEFLECTORS

Optional pattern deflectors provide horizontal or vertical air pattern. The pattern deflectors allow for field adjustment of the diffuser to optimize thermal comfort.





TYPICAL APPLICATIONS

The SMD/AMD is well suited to applications that require large volumes of airflow at low sound and pressure drop. Concentrated airflow is discharged from each active side of the diffuser, resulting in longer throws that are ideal for high ceiling applications.

CONSTRUCTION

+ Material
  - Steel (SMD)
  - Aluminum (AMD)
  - Extruded Aluminum (AMDE)
+ Options
  - Adjustable pattern deflectors (SMDA/AMDA)
  - High induction construction (SMX/AMX/AMEX)
  - Plaque face construction (SMDP)
  - Security construction (MSD)
  - Light commercial construction (LCMD)
  - Fire rated construction (SMD-FR/SMDA-FR/SMX-FR)

HIGH INDUCTION CONSTRUCTION



The high induction louvered directional diffusers are designed for high cooling load applications. Internally mounted discharge vanes are engineered to create a high rate of induction that will rapidly mix warm room air with cool supply air. This rapid mixing quickly equalizes the temperature differential between the two air masses, minimizing the chance of uncomfortable drafts.

PLAQUE FACE CONSTRUCTION



The plaque face construction combines a simple and unobtrusive plaque design with louvered slots that deliver large volumes of air with relatively low sound and pressure drop.

The louvered plaque ceiling diffuser is compatible with 24 in. x 24 in. ceiling grids and is available with 1, 2, or 3 slots in order to meet a wide range of performance requirements.

SECURITY CONSTRUCTION



For minimum-security areas, such as mental health facilities, offices, and public areas, the SMD diffuser can be combined with a lattice faceplate to prevent access to ductwork and protects pattern controllers from damage and removal. The minimum security SMD can be mounted using either security screws or an optional rear mounting plate with tamperproof bolts.

LIGHT COMMERCIAL CONSTRUCTION

The light commercial modular diffuser is an economical option that features extruded aluminum construction, 1 in. louver spacing and an easy to remove, spring-loaded core for concealed mounting.



FIRE RATED CONSTRUCTION

Optional Fire Rated Assembly listing in the UL Fire Resistance Directory. Fire rated models meet UL time vs. temperature test criteria and NFPA 90A requirements.

Fire rated construction incorporates a thermal blanket and fire damper for use in fire rated T-bar ceiling applications. The butterfly-type fire damper is available with either a 165°F or 212°F fusible link.





PERFORMANCE DATA

SMD/AMD

Neck Velocity (fpm)			300		400		500		600		700		800		900	
Velocity Pressure (in. w.g.)			0.006		0.01		0.016		0.022		0.031		0.04		0.05	
Total Pressure (in. w.g.)			0.036		0.065		0.099		0.144		0.196		0.256		0.324	
Duct Size 6 in. x 6 in.		Flow Rate (cfm)	75		100		125		150		175		200		225	
		Sound (NC)	-		-		17		23		27		31		36	
			A	B	A	B	A	B	A	B	A	B	A	B	A	B
Duct Area 0.25 ft²	4A	cfm/Side	19		25		31		38		44		50		56	
		Throw (ft)	4-6-12		5-8-15		7-10-16		8-12-18		9-14-19		11-15-21		12-16-22	
	3A	cfm/Side	19	28	25	38	31	47	38	56	44	66	50	75	56	84
		Throw (ft)	4-6-12	5-7-14	5-8-15	6-10-16	7-10-16	8-12-18	8-12-18	10-14-20	9-14-19	11-15-22	11-15-21	13-16-23	12-16-22	14-17-25
	2S, 2G	cfm/Side	38		50		63		75		88		100		113	
		Throw (ft)	6-8-15		7-11-18		9-14-20		11-15-22		13-17-24		15-18-25		15-19-27	
	1S	cfm/Side	75		100		125		150		175		200		225	
		Throw (ft)	8-12-19		11-15-22		13-17-24		15-19-27		17-20-29		18-22-31		19-23-33	
Duct Size 9 in. x 9 in.		Flow Rate (cfm)	169		225		282		338		394		450		507	
		Sound (NC)	-		-		21		27		31		35		39	
			A	B	A	B	A	B	A	B	A	B	A	B	A	B
Duct Area 0.56 ft²	4A	cfm/Side	42		56		71		85		99		113		127	
		Throw (ft)	6-9-16		8-12-18		10-15-21		12-16-23		14-17-24		15-18-26		16-20-28	
	3A	cfm/Side	42	63	56	84	71	106	85	127	99	148	113	169	127	190
		Throw (ft)	6-9-16	7-11-18	8-12-18	10-15-21	10-15-21	12-16-23	12-16-23	15-18-25	14-17-24	16-19-27	15-18-26	17-21-29	16-20-28	18-22-31
	2S, 2G	cfm/Side	85		113		141		169		197		225		254	
		Throw (ft)	.8-13-19		11-16-22		14-18-25		16-19-28		17-21-30		18-22-32		19-24-34	
	1S	cfm/Side	169		225		282		338		394		450		507	
		Throw (ft)	12-17-24		16-19-27		18-22-31		19-24-34		21-26-36		22-27-39		21-29-41	
Duct Size 12 in. x 12 in.		Flow Rate (cfm)	300		400		500		600		700		800		900	
		Sound (NC)	-		17		24		30		34		38		42	
			A	B	A	B	A	B	A	B	A	B	A	B	A	B
Duct Area 1.00 ft²	4A	cfm/Side	75		100		125		150		175		200		225	
		Throw (ft)	8-12-19		11-15-22		13-17-24		15-19-27		17-20-29		18-22-31		19-23-33	
	3A	cfm/Side	75	113	100	150	125	188	150	225	175	263	200	300	225	338
		Throw (ft)	8-12-19	10-15-21	11-15-22	13-17-24	13-17-24	16-19-27	15-19-27	17-21-30	17-20-29	19-23-32	18-22-31	20-24-35	19-23-33	21-26-37
	2S, 2G	cfm/Side	150		200		250		300		350		400		450	
		Throw (ft)	11-16-23		15-19-26		17-21-30		19-23-32		20-25-35		22-26-37		23-28-40	
	1S	cfm/Side	300		400		500		600		700		800		900	
		Throw (ft)	16-20-28		19-23-32		21-26-36		23-28-40		25-30-43		26-32-46		28-34-48	
Duct Size 15 in. x 15 in.		Flow Rate (cfm)	468		625		781		938		1094		1250		1406	
		Sound (NC)	-		19		26		32		35		40		44	
			A	B	A	B	A	B	A	B	A	B	A	B	A	B
Duct Area 1.56 ft²	4A	cfm/Side	117		156		195		234		273		313		352	
		Throw (ft)	10-15-21		13-17-25		16-20-28		17-21-30		19-23-33		20-25-35		21-26-37	
	3A	cfm/Side	117	176	156	234	195	293	234	352	273	410	313	469	352	527
		Throw (ft)	10-15-21	12-17-24	13-17-25	16-20-28	16-20-28	18-22-31	17-21-30	20-24-34	19-23-33	21-26-37	20-25-35	23-28-39	21-26-37	24-29-42
	2S, 2G	cfm/Side	234		313		391		469		547		625		703	
		Throw (ft)	14-18-26		17-21-30		19-24-34		21-26-37		23-28-40		25-30-43		26-32-45	
	1S	cfm/Side	468		625		781		938		1094		1250		1406	
		Throw (ft)	18-22-32		21-26-37		24-29-41		26-32-45		28-34-48		30-37-52		32-39-55	
Duct Size 18 in. x 18 in.		Flow Rate (cfm)	675		900		1125		1350		1575		1800		2025	
		Sound (NC)	-		21		28		34		38		42		46	
			A	B	A	B	A	B	A	B	A	B	A	B	A	B
Duct Area 2.25 ft²	4A	cfm/Side	169		225		281		338		394		450		506	
		Throw (ft)	12-17-24		16-19-27		18-22-31		19-24-34		21-26-36		22-27-39		24-29-41	
	3A	cfm/Side	169	253	225	338	281	422	338	506	394	591	450	675	506	759
		Throw (ft)	12-17-24	15-19-27	16-19-27	18-22-31	18-22-31	20-24-34	19-24-34	22-27-38	21-26-36	23-29-41	22-27-39	25-31-43	24-29-41	27-33-46
	2S, 2G	cfm/Side	338		450		563		675		788		900		1013	
		Throw (ft)	17-20-29		19-24-33		22-26-37		24-29-41		25-31-44		27-33-47		29-35-50	
	1S	cfm/Side	675		900		1125		1350		1575		1800		2025	
		Throw (ft)	20-25-35		23-29-41		26-32-45		29-35-50		31-38-54		33-41-58		35-43-61	
Duct Size 21 in. x 21 in.		Flow Rate (cfm)	919		1225		1531		1838		2144		2450		2756	
		Sound (NC)	-		23		30		36		40		44		48	
			A	B	A	B	A	B	A	B	A	B	A	B	A	B
Duct Area 3.06 ft²	4A	cfm/Side	230		306		383		459		536		613		689	
		Throw (ft)	14-18-26		17-21-30		19-24-33		21-26-37		23-28-40		24-30-42		26-32-45	
	3A	cfm/Side	230	345	306	459	383	574	459	689	536	804	613	919	689	1034
		Throw (ft)	14-18-26	17-21-29	17-21-30	19-24-34	19-24-33	22-27-38	21-26-37	24-29-41	23-28-40	26-31-44	24-30-42	27-34-47	26-32-45	29-36-50
	2S, 2G	cfm/Side	459		613		766		919		1072		1225		1378	
		Throw (ft)	18-22-32		21-26-36		24-29-41		26-32-45		28-34-48		30-36-52		32-39-55	
	1S	cfm/Side	918		1225		1531		1837		2143		2450		2756	
		Throw (ft)	22-27-38		26-31-44		29-35-50		31-38-54		34-42-59		36-44-63		38-47-67	

For Performance Notes and Return Factors, see end of section.

Core Style Legend



PERFORMANCE DATA

SMD/AMD

Neck Velocity (fpm)			300		400		500		600		700		800		900	
Velocity Pressure (in. w.g.)			0.006		0.01		0.016		0.022		0.031		0.04		0.05	
Total Pressure (in. w.g.)			0.036		0.065		0.099		0.144		0.196		0.256		0.324	
Duct Size	**Flow Rate (cfm)**		**1200**		**1600**		**2000**		**2400**		**2800**		**3200**		**3600**	
24 in. x 24 in.	**Sound (NC)**		**15**		**24**		**31**		**37**		**41**		**45**		**49**	
			A	**B**	**A**	**B**	**A**	**B**	**A**	**B**	**A**	**B**	**A**	**B**	**A**	**B**
Duct Area 4.00 ft²	**4A**	cfm/Side	300		400		500		600		700		800		900	
		Throw (ft)	16-20-28		19-23-32		21-26-36		23-28-40		25-30-43		26-32-46		28-34-48	
	3A	cfm/Side	300	450	400	600	500	750	600	900	700	1050	800	1200	900	1350
		Throw (ft)	16-20-28	18-22-31	19-23-32	21-26-36	21-26-36	23-29-41	23-28-40	26-31-44	25-30-43	28-34-48	26-32-46	30-36-51	28-34-48	31-38-54
	2S, 2G	cfm/Side	600		800		1000		1200		1400		1600		1800	
		Throw (ft)	20-24-34		23-28-39		25-31-44		28-34-48		30-37-52		32-39-56		34-42-59	
	1S	cfm/Side	1200		1600		2000		2400		2800		3200		3600	
		Throw (ft)	24-29-41		28-34-48		31-38-54		34-41-59		37-45-63		39-48-68		41-51-72	
Duct Size	**Flow Rate (cfm)**		**112**		**150**		**187**		**225**		**263**		**300**		**337**	
9 in. x 6 in.	**Sound (NC)**		**-**		**-**		**20**		**26**		**30**		**34**		**38**	
			A	**B**	**A**	**B**	**A**	**B**	**A**	**B**	**A**	**B**	**A**	**B**	**A**	**B**
Duct Area 0.38 ft²	**4B**	cfm/Side	37	18	50	25	62	31	75	37	87	44	100	50	112	56
		Throw (ft)	6-8-15	4-6-12	7-11-18	5-8-15	9-14-20	7-10-16	11-15-22	8-12-18	13-17-24	9-14-20	15-18-25	11-15-21	15-19-27	12-16-22
	3A2	cfm/Side	35	42	47	55	58	70	70	84	82	98	94	112	105	126
		Throw (ft)	5-8-15	6-9-16	7-11-18	8-12-18	9-13-20	10-15-21	11-15-21	12-16-22	13-16-23	14-17-24	14-18-25	15-18-26	15-19-26	16-19-28
	2A, 2B	cfm/Side	56		75		93		112		131		150		168	
		Throw (ft)	7-10-17		9-14-20		11-16-22		14-17-24		15-19-26		16-20-28		17-21-30	
	2E, 2F	cfm/Side	75	37	100	50	125	62	150	75	175	87	200	100	225	112
		Throw (ft)	8-12-19	6-8-15	11-15-22	7-11-18	13-17-24	9-14-20	15-19-27	11-15-22	17-20-29	13-17-24	18-22-31	15-18-25	19-23-33	15-19-27
	1A, 1B	cfm/Side	112		150		187		225		263		300		337	
		Throw (ft)	10-14-21		13-17-24		16-19-27		17-21-30		19-23-32		20-24-35		21-26-37	
Duct Size	**Flow Rate (cfm)**		**150**		**200**		**250**		**300**		**350**		**400**		**450**	
12 in. x 6 in.	**Sound (NC)**		**-**		**-**		**21**		**27**		**31**		**35**		**39**	
			A	**B**	**A**	**B**	**A**	**B**	**A**	**B**	**A**	**B**	**A**	**B**	**A**	**B**
Duct Area 0.5 ft²	**4B**	cfm/Side	56	18	75	25	94	31	113	37	131	44	150	50	169	56
		Throw (ft)	7-10-17	4-6-12	9-14-20	5-8-15	12-16-22	7-10-16	14-17-25	8-12-18	15-19-27	9-14-20	16-20-28	11-15-21	17-21-30	12-16-22
	3A1	cfm/Side	66	18	87	25	109	31	131	37	153	44	175	50	197	56
		Throw (ft)	7-11-18	4-6-12	10-15-21	5-8-15	12-16-23	7-10-16	15-18-26	8-12-18	16-20-28	9-14-20	17-21-30	11-15-21	18-22-31	12-16-22
	3B	cfm/Side	75	37	100	50	126	62	150	75	176	67	200	100	226	112
		Throw (ft)	8-12-19	6-8-15	11-15-22	7-11-18	13-17-24	9-14-20	15-19-27	11-15-22	17-20-29	10-15-21	18-22-31	15-18-25	19-23-33	15-19-27
	2A, 2B	cfm/Side	75		100		125		150		175		200		225	
		Throw (ft)	8-12-19		11-15-22		13-17-24		15-19-27		17-20-29		18-22-31		19-23-33	
	2E, 2F	cfm/Side	112	37	160	50	188	62	225	75	263	87	300	100	338	112
		Throw (ft)	10-14-21	6-8-15	14-18-25	7-11-18	16-19-27	9-14-20	17-21-30	11-15-22	19-23-32	13-17-24	20-24-35	15-18-25	21-26-37	15-19-27
	1A, 1B	cfm/Side	150		200		250		300		350		400		450	
		Throw (ft)	11-16-23		15-19-26		17-21-30		19-23-32		20-25-35		22-26-37		23-28-40	
Duct Size	**Flow Rate (cfm)**		**188**		**250**		**312**		**375**		**438**		**500**		**563**	
15 in. x 6 in.	**Sound (NC)**		**-**		**15**		**22**		**28**		**32**		**36**		**40**	
			A	**B**	**A**	**B**	**A**	**B**	**A**	**B**	**A**	**B**	**A**	**B**	**A**	**B**
Duct Area 0.63 ft²	**4B**	cfm/Side	75	18	100	25	125	31	150	37	175	44	200	50	225	56
		Throw (ft)	8-12-19	4-6-11	11-15-22	5-8-15	13-17-24	7-10-16	15-19-27	8-12-18	17-20-29	9-14-19	18-22-31	11-15-21	19-23-33	12-15-22
	3A1	cfm/Side	84	18	112	25	140	31	169	37	197	44	225	50	253	56
		Throw (ft)	8-13-19	4-6-11	11-16-22	5-8-15	14-18-25	7-10-16	16-19-28	8-12-18	17-21-30	9-14-19	18-22-32	11-15-21	19-24-34	12-15-22
	2A, 2B	cfm/Side	94		125		156		187		219		250		281	
		Throw (ft)	9-13-20		12-16-23		15-18-26		16-20-28		18-22-31		19-23-33		20-25-35	
	2E, 2F	cfm/Side	150	37	200	50	250	62	300	75	350	87	400	100	450	112
		Throw (ft)	11-16-23	6-8-15	15-19-26	7-11-18	17-21-30	9-14-20	19-23-32	11-15-22	20-25-35	13-17-24	22-26-37	15-18-25	23-28-40	15-19-27
	1A, 1B	cfm/Side	188		250		312		375		438		500		563	
		Throw (ft)	13-17-24		16-20-28		18-22-32		20-24-35		22-26-37		23-28-40		24-30-42	
Duct Size	**Flow Rate (cfm)**		**225**		**300**		**375**		**450**		**525**		**600**		**675**	
18 in. x 6 in.	**Sound (NC)**		**-**		**16**		**23**		**29**		**33**		**37**		**41**	
			A	**B**	**A**	**B**	**A**	**B**	**A**	**B**	**A**	**B**	**A**	**B**	**A**	**B**
Duct Area 0.75 ft²	**4B**	cfm/Side	94	18	125	25	156	31	188	37	218	44	250	50	281	56
		Throw (ft)	9-13-20	4-6-12	12-16-23	5-8-15	15-18-26	7-10-16	16-20-28	8-12-18	18-22-31	9-14-20	19-23-33	20-25-35	12-16-22	
	3A1	cfm/Side	103	18	137	25	172	31	206	37	240	44	275	50	309	56
		Throw (ft)	9-14-21	4-6-12	12-17-24	5-8-15	15-19-27	7-10-16	17-21-29	8-12-18	18-22-31	9-14-20	19-24-34	11-15-21	21-25-36	12-16-22
	2A, 2B	cfm/Side	112		150		187		225		262		300		337	
		Throw (ft)	10-14-21		13-17-24		16-19-27		17-21-30		19-23-32		20-24-35		21-26-37	
	2E, 2F	cfm/Side	187	37	250	50	313	62	375	75	438	87	500	100	563	112
		Throw (ft)	12-17-24	6-8-15	16-20-28	8-11-18	18-22-32	9-14-20	20-24-35	11-16-22	22-26-37	13-17-24	23-28-40	15-18-25	24-30-42	16-19-27
	1A, 1B	cfm/Side	225		300		375		450		525		600		675	
		Throw (ft)	14-18-26		17-21-30		19-24-33		21-26-36		23-28-39		24-30-42		26-32-45	

For Performance Notes and Return Factors, see end of section.

Core Style Legend



PERFORMANCE DATA

SMD/AMD

Neck Velocity (fpm)			300		400		500		600		700		800		900	
Velocity Pressure (in. w.g.)			0.006		0.01		0.016		0.022		0.031		0.04		0.05	
Total Pressure (in. w.g.)			0.036		0.065		0.099		0.144		0.196		0.256		0.324	
Duct Size	**Flow Rate (cfm)**		**262**		**350**		**437**		**525**		**612**		**700**		**787**	
21 in. x 6 in.	**Sound (NC)**		**-**		**16**		**23**		**29**		**33**		**37**		**41**	
			A	**B**	**A**	**B**	**A**	**B**	**A**	**B**	**A**	**B**	**A**	**B**	**A**	**B**
Duct Area 0.88 ft²	**4B**	cfm/Side	112	18	150	25	187	31	225	37	262	44	300	50	337	56
		Throw (ft)	10-14-21	4-6-11	13-17-24	5-8-15	16-19-27	7-10-16	17-21-30	8-12-18	19-23-32	9-14-20	20-24-34	11-15-21	21-26-37	12-16-22
	3A1	cfm/Side	122	18	162	25	203	31	244	37	284	44	325	50	365	56
		Throw (ft)	10-15-22	4-6-11	13-18-25	5-8-15	16-20-28	7-10-16	18-22-31	8-12-18	19-23-33	9-14-20	20-25-35	11-15-21	22-26-37	12-16-22
	2A, 2B	cfm/Side	131		175		218		262		306		350		393	
		Throw (ft)	10-16-22		14-18-25		16-20-28		18-22-31		19-24-34		21-25-36		22-27-38	
	2E, 2F	cfm/Side	225	37	300	50	375	62	450	75	525	87	600	100	675	112
		Throw (ft)	14-18-26	6-8-15	17-21-30	8-11-18	19-23-33	9-14-20	21-26-36	11-16-22	23-28-39	13-17-24	24-30-42	15-18-25	26-32-45	15-19-27
	1A, 1B	cfm/Side	262		350		437		525		612		700		787	
		Throw (ft)	15-19-27		18-22-31		20-25-35		22-27-38		24-29-41		25-31-44		27-33-47	
Duct Size	**Flow Rate (cfm)**		**300**		**400**		**500**		**600**		**700**		**800**		**900**	
24 in. x 6 in.	**Sound (NC)**		**-**		**17**		**24**		**30**		**34**		**38**		**42**	
			A	**B**	**A**	**B**	**A**	**B**	**A**	**B**	**A**	**B**	**A**	**B**	**A**	**B**
Duct Area 1.00 ft²	**4B**	cfm/Side	131	18	175	25	219	31	263	37	306	44	350	50	394	56
		Throw (ft)	10-16-22	4-6-12	14-18-25	5-8-15	16-20-28	7-10-16	18-22-31	8-12-18	19-24-34	9-14-20	21-25-36	11-15-21	22-27-38	12-16-22
	3A1	cfm/Side	141	18	187	25	234	31	281	37	328	44	375	50	422	56
		Throw (ft)	11-16-23	4-6-12	14-18-26	5-8-15	17-21-29	7-10-16	18-22-32	8-12-18	20-24-34	9-14-20	21-26-37	11-15-21	23-28-39	12-16-22
	2A, 2B	cfm/Side	150		200		250		300		350		400		450	
		Throw (ft)	11-16-23		15-19-26		17-21-30		19-23-32		20-25-35		22-26-37		23-28-40	
	2E, 2F	cfm/Side	260	37	350	50	438	62	525	75	613	87	700	100	788	112
		Throw (ft)	15-19-27	6-8-15	18-22-31	8-11-18	20-25-35	9-14-20	22-27-38	11-16-22	24-29-41	13-17-24	25-31-44	15-18-25	27-33-47	16-19-27
	1A, 1B	cfm/Side	300		400		500		600		700		800		900	
		Throw (ft)	16-20-28		19-23-32		21-26-36		23-28-40		25-30-43		26-32-46		28-34-48	
Duct Size	**Flow Rate (cfm)**		**225**		**300**		**375**		**450**		**525**		**600**		**675**	
12 in. x 9 in.	**Sound (NC)**		**-**		**16**		**23**		**29**		**33**		**37**		**41**	
			A	**B**	**A**	**B**	**A**	**B**	**A**	**B**	**A**	**B**	**A**	**B**	**A**	**B**
Duct Area 0.75 ft²	**4B**	cfm/Side	70	42	94	56	117	70	141	84	164	98	188	112	211	126
		Throw (ft)	8-11-18	6-9-16	10-15-21	8-12-18	13-17-24	10-15-21	15-19-26	12-16-22	16-20-28	14-17-24	17-21-30	15-18-26	19-23-32	16-19-28
	3A1	cfm/Side	91	42	121	56	152	70	183	84	213	98	244	112	274	126
		Throw (ft)	9-13-20	6-9-16	12-16-23	8-12-18	15-18-26	10-15-21	16-20-28	12-16-22	18-22-31	14-17-24	19-23-33	15-18-26	20-24-35	16-19-28
	3A2	cfm/Side	75	75	100	100	125	125	150	150	175	175	200	200	225	225
		Throw (ft)	8-12-19	8-12-19	11-15-22	11-15-22	13-17-24	13-17-24	15-19-27	15-19-27	17-20-29	17-20-29	18-22-31	18-22-31	19-23-33	19-23-33
	2A, 2B	cfm/Side	112		150		187		225		262		300		337	
		Throw (ft)	10-14-21		13-17-24		16-19-27		17-21-30		19-23-32		20-24-35		21-26-37	
	2E, 2F	cfm/Side	141	84	188	112	234	141	281	169	328	197	375	225	422	253
		Throw (ft)	11-16-23	8-13-19	14-18-26	11-16-22	17-21-29	14-18-25	18-22-32	16-20-28	20-24-34	17-21-30	21-26-37	18-23-32	22-28-39	20-24-34
	1A, 1B	cfm/Side	225		300		375		450		525		600		675	
		Throw (ft)	14-18-26		17-21-30		19-24-33		21-26-36		23-28-39		24-30-42		26-32-45	
Duct Size	**Flow Rate (cfm)**		**281**		**375**		**470**		**563**		**656**		**750**		**845**	
15 in. x 9 in.	**Sound (NC)**		**-**		**17**		**24**		**30**		**34**		**38**		**42**	
			A	**B**	**A**	**B**	**A**	**B**	**A**	**B**	**A**	**B**	**A**	**B**	**A**	**B**
Duct Area 0.94 ft²	**4B**	cfm/Side	98	42	131	56	165	70	198	84	230	98	263	112	296	126
		Throw (ft)	9-14-20	6-9-16	12-17-23	8-12-18	15-19-26	10-15-21	17-20-29	12-16-23	18-22-31	14-17-24	19-24-33	15-18-26	20-25-35	16-20-28
	3A1	cfm/Side	120	42	159	56	200	70	240	84	279	98	319	112	359	126
		Throw (ft)	10-15-21	6-9-16	13-17-25	8-12-18	16-20-28	10-15-21	18-21-30	12-16-23	19-23-33	14-17-24	20-25-35	15-18-26	21-26-37	16-20-28
	3A2	cfm/Side	82	117	110	155	137	196	165	233	192	272	219	312	247	351
		Throw (ft)	8-12-19	10-15-21	11-16-22	13-17-25	14-18-25	16-20-28	16-19-27	17-21-30	17-21-30	19-23-33	18-22-32	20-25-35	19-24-34	21-26-37
	2A, 2B	cfm/Side	140		187		235		281		328		375		422	
		Throw (ft)	11-16-22		14-18-26		17-21-29		18-23-32		20-24-34		21-26-37		23-28-39	
	2E, 2F	cfm/Side	197	84	263	112	329	141	394	169	459	197	525	225	592	253
		Throw (ft)	13-18-25	8-13-19	17-20-29	11-16-22	19-23-32	14-18-25	20-25-35	16-19-28	22-27-38	17-21-30	23-29-40	18-22-32	25-30-43	19-24-34
	1A, 1B	cfm/Side	281		375		470		563		656		750		845	
		Throw (ft)	15-19-27		18-22-32		20-25-35		22-27-39		24-30-42		26-32-45		27-34-48	
Duct Size	**Flow Rate (cfm)**		**337**		**450**		**562**		**675**		**787**		**900**		**1012**	
18 in. x 9 in.	**Sound (NC)**		**-**		**18**		**25**		**31**		**35**		**39**		**43**	
			A	**B**	**A**	**B**	**A**	**B**	**A**	**B**	**A**	**B**	**A**	**B**	**A**	**B**
Duct Area 1.13 ft²	**4B**	cfm/Side	126	42	169	56	211	70	254	84	296	98	338	112	380	126
		Throw (ft)	10-15-22	6-9-16	14-18-25	8-12-19	16-20-28	10-15-21	18-22-31	12-16-23	19-24-34	14-17-25	21-25-36	15-19-26	22-27-38	16-20-28
	3A1	cfm/Side	147	42	197	56	246	70	295	84	345	98	394	112	443	126
		Throw (ft)	11-16-23	6-9-16	15-19-26	8-12-19	17-21-29	10-15-21	19-23-32	12-16-23	20-25-35	14-17-25	22-26-37	15-19-26	23-28-40	16-20-28
	3B	cfm/Side	168	84	225	112	281	141	337	169	394	197	450	225	506	253
		Throw (ft)	12-17-24	8-13-19	16-19-27	11-16-22	18-22-31	14-18-25	19-24-34	16-19-28	21-26-36	17-21-30	22-27-39	18-22-32	24-29-41	19-24-34
	2A, 2B	cfm/Side	168		225		281		337		394		450		506	
		Throw (ft)	12-17-24		16-19-27		18-22-31		19-24-34		21-26-36		22-27-39		24-29-41	
	2E, 2F	cfm/Side	253	84	338	112	421	141	506	169	591	197	675	225	759	253
		Throw (ft)	15-19-27	8-13-19	18-22-31	11-16-22	20-24-34	14-18-25	22-27-38	16-19-28	23-29-41	17-21-30	25-31-43	18-22-32	27-33-46	19-24-34
	1A, 1B	cfm/Side	337		450		562		675		787		900		1012	
		Throw (ft)	17-20-29		19-24-33		22-26-37		24-29-41		25-31-44		27-33-47		29-35-50	

For Performance Notes and Return Factors, see end of section.

PERFORMANCE DATA

SMD/AMD

Neck Velocity (fpm)			300		400		500		600		700		800		900	
Velocity Pressure (in. w.g.)			0.006		0.01		0.016		0.022		0.031		0.04		0.05	
Total Pressure (in. w.g.)			0.036		0.065		0.099		0.144		0.196		0.256		0.324	
Duct Size 21 in. x 9 in.	**Flow Rate (cfm)**		393		524		655		786		917		1050		1180	
	Sound (NC)		-		18		25		31		35		39		43	
			A	B	A	B	A	B	A	B	A	B	A	B	A	B
Duct Area 1.31 ft²	4B	cfm/Side	154	42	206	56	258	70	309	84	360	98	413	112	464	126
		Throw (ft)	11-16-23	6-9-16	15-19-27	8-12-18	17-21-30	10-14-20	19-23-33	12-16-22	20-25-35	14-17-24	22-27-38	15-18-26	23-28-40	16-19-27
	3A1	cfm/Side	175	42	234	56	292	70	351	84	410	98	468	112	527	126
		Throw (ft)	12-17-24	6-9-16	16-20-28	8-12-18	18-22-31	10-14-20	20-24-34	12-16-22	21-26-37	14-17-24	23-28-39	15-18-26	24-29-41	16-19-27
	2A, 2B	cfm/Side	196		262		327		393		458		525		590	
		Throw (ft)	13-17-25		17-20-29		18-23-32		20-25-35		22-27-38		23-29-40		25-30-43	
	2E, 2F	cfm/Side	308	84	412	112	514	141	617	169	720	197	825	225	927	253
		Throw (ft)	16-20-28	8-13-20	19-23-33	11-16-23	21-26-36	14-18-25	23-28-40	16-20-28	25-30-43	17-21-30	27-33-46	18-23-32	28-35-49	20-24-34
	1A, 1B	cfm/Side	393		524		655		786		917		1050		1180	
		Throw (ft)	17-21-30		20-25-35		22-28-39		25-30-43		27-33-46		28-35-49		30-37-52	
Duct Size 24 in. x 9 in.	**Flow Rate (cfm)**		450		600		750		900		1050		1200		1350	
	Sound (NC)		-		19		26		32		36		40		44	
			A	B	A	B	A	B	A	B	A	B	A	B	A	B
Duct Area 1.50 ft²	4B	cfm/Side	183	42	244	56	305	70	366	84	427	98	488	112	549	126
		Throw (ft)	12-17-24	6-9-16	16-20-28	8-12-19	18-22-31	10-15-21	20-24-34	12-16-23	21-26-37	14-17-25	23-28-40	15-19-26	24-30-42	16-20-28
	3A1	cfm/Side	204	42	272	56	340	70	408	84	476	98	544	112	612	126
		Throw (ft)	13-18-25	6-9-16	17-20-29	8-12-19	19-23-32	10-15-21	20-25-35	12-16-23	22-27-38	14-17-25	24-29-41	15-19-26	25-31-43	16-20-28
	2A, 2B	cfm/Side	225		300		375		450		525		600		675	
		Throw (ft)	14-18-26		17-21-30		19-24-33		21-26-36		23-28-39		24-30-42		26-32-45	
	2E, 2F	cfm/Side	365	84	488	112	609	141	731	169	853	197	975	225	1097	253
		Throw (ft)	17-21-30	8-12-19	20-24-34	11-16-22	22-27-38	14-18-25	24-30-42	16-19-27	26-32-45	17-21-30	28-34-48	18-22-32	30-36-51	19-24-34
	1A, 1B	cfm/Side	450		600		750		900		1050		1200		1350	
		Throw (ft)	18-22-31		21-26-36		23-29-41		26-31-44		28-34-48		30-36-51		31-38-54	
Duct Size 15 in. x 12 in.	**Flow Rate (cfm)**		375		500		625		750		875		1000		1125	
	Sound (NC)		-		19		26		32		36		40		44	
			A	B	A	B	A	B	A	B	A	B	A	B	A	B
Duct Area 1.25 ft²	4B	cfm/Side	112	75	150	100	187	125	225	150	262	175	300	200	337	225
		Throw (ft)	10-14-21	8-12-19	13-17-24	11-15-22	16-19-27	13-17-24	17-21-30	15-19-27	19-23-32	17-20-29	20-24-35	18-22-31	21-26-37	19-23-33
	3A1	cfm/Side	150	75	200	100	250	125	300	150	350	175	400	200	450	225
		Throw (ft)	11-16-23	8-12-19	15-19-26	11-15-22	17-21-30	13-17-24	19-23-32	15-19-27	20-25-35	17-20-29	22-26-37	18-22-31	23-28-40	19-23-33
	3A2	cfm/Side	129	117	172	156	215	195	258	234	301	273	344	312	387	351
		Throw (ft)	10-16-22	10-15-21	14-18-25	13-17-25	16-20-28	16-20-28	18-22-31	17-21-30	19-24-34	19-23-33	21-25-36	20-25-35	22-27-38	21-26-37
	2A, 2B	cfm/Side	187		250		312		375		437		500		562	
		Throw (ft)	12-17-24		16-20-28		18-22-32		20-24-35		22-26-37		23-28-40		24-30-42	
	2E, 2F	cfm/Side	225	150	300	200	375	250	450	300	525	350	600	400	675	450
		Throw (ft)	14-18-26	11-16-23	17-21-30	15-19-26	19-24-33	17-21-30	21-26-36	19-23-32	23-28-39	20-25-35	24-30-42	22-26-37	26-32-45	23-28-40
	1A, 1B	cfm/Side	375		500		625		750		875		1000		1125	
		Throw (ft)	17-21-30		20-24-34		22-27-38		24-30-42		26-32-45		28-34-49		30-36-52	
Duct Size 18 in. x 12 in.	**Flow Rate (cfm)**		450		600		750		900		1050		1200		1350	
	Sound (NC)		-		20		27		33		37		41		45	
			A	B	A	B	A	B	A	B	A	B	A	B	A	B
Duct Area 1.50 ft²	4B	cfm/Side	150	75	200	100	250	125	300	150	350	175	400	200	450	225
		Throw (ft)	11-16-23	8-12-19	15-19-27	10-15-22	17-21-30	13-17-24	19-23-33	15-19-27	20-25-35	17-20-29	22-27-38	18-22-31	23-28-40	19-23-32
	3A1	cfm/Side	187	75	250	100	312	125	375	150	437	175	500	200	562	225
		Throw (ft)	12-17-24	8-12-19	16-20-28	10-15-22	18-22-31	13-17-24	20-24-35	15-19-27	22-26-37	17-20-29	23-28-40	18-22-31	24-30-42	19-23-32
	3A2	cfm/Side	141	168	187	225	234	281	281	337	328	394	375	450	422	506
		Throw (ft)	11-16-23	12-17-24	14-18-26	16-19-27	17-21-29	18-22-31	18-23-32	19-24-34	20-24-34	21-26-36	21-26-37	22-27-39	23-28-39	24-29-41
	2A, 2B	cfm/Side	225		300		375		450		525		600		675	
		Throw (ft)	14-18-26		17-21-30		19-24-33		21-26-36		23-28-39		24-30-42		26-32-45	
	2E, 2F	cfm/Side	300	150	400	200	500	250	600	300	700	350	800	400	900	450
		Throw (ft)	16-20-28	11-16-23	19-23-32	15-19-27	21-25-36	17-21-30	23-28-39	19-23-33	25-30-43	20-25-35	26-32-46	22-27-38	28-34-48	23-28-40
	1A, 1B	cfm/Side	450		600		750		900		1050		1200		1350	
		Throw (ft)	18-22-31		21-26-36		23-29-41		26-31-44		28-34-48		30-36-51		31-38-54	
Duct Size 21 in. x 12 in.	**Flow Rate (cfm)**		525		700		875		1050		1225		1400		1575	
	Sound (NC)		-		20		27		33		37		41		45	
			A	B	A	B	A	B	A	B	A	B	A	B	A	B
Duct Area 1.75 ft²	4B	cfm/Side	187	75	250	100	312	125	375	150	437	175	500	200	562	225
		Throw (ft)	12-17-24	8-12-19	16-20-28	11-15-22	18-22-31	13-17-24	20-24-35	15-19-27	22-26-37	17-20-29	23-28-40	18-22-31	24-30-42	19-23-33
	3A1	cfm/Side	225	75	300	100	375	125	450	150	525	175	600	200	675	225
		Throw (ft)	14-18-26	8-12-19	17-21-30	11-15-22	19-23-33	13-17-24	21-26-36	15-19-27	23-28-39	17-20-29	24-30-42	18-22-31	26-32-45	19-23-33
	3A2	cfm/Side	148	230	197	306	246	382	295	460	345	535	394	612	443	688
		Throw (ft)	11-16-23	14-18-26	15-19-26	17-21-30	17-21-30	19-24-33	19-23-32	21-26-37	20-25-35	23-28-39	22-26-37	24-30-42	23-28-40	26-32-45
	2A, 2B	cfm/Side	262		350		437		525		612		700		787	
		Throw (ft)	15-19-27		18-22-31		20-25-35		22-27-38		24-29-41		25-31-44		27-33-47	
	2E, 2F	cfm/Side	375	150	500	200	625	250	750	300	875	350	1000	400	1125	450
		Throw (ft)	17-21-30	11-16-23	20-24-34	15-19-26	22-27-39	17-21-30	24-30-42	19-23-32	26-32-46	20-25-35	28-34-49	22-26-37	30-37-52	23-28-40
	1A, 1B	cfm/Side	525		700		875		1050		1225		1400		1575	
		Throw (ft)	19-23-33		22-27-38		24-30-42		27-33-46		29-35-50		31-38-54		33-40-57	

For Performance Notes and Return Factors, see end of section.

PERFORMANCE DATA

SMD/AMD

Neck Velocity (fpm)			300		400		500		600		700		800		900	
Velocity Pressure (in. w.g.)			0.006		0.01		0.016		0.022		0.031		0.04		0.05	
Total Pressure (in. w.g.)			0.036		0.065		0.099		0.144		0.196		0.256		0.324	
Duct Size 24 in. x 12 in.	Flow Rate (cfm)		600		800		1000		1200		1400		1600		1800	
	Sound (NC)		-		21		28		34		38		42		46	
			A	B	A	B	A	B	A	B	A	B	A	B	A	B
Duct Area 2.00 ft²	4B	cfm/Side	225	75	300	100	375	125	450	150	525	175	600	200	675	225
		Throw (ft)	14-18-26	8-12-19	17-21-30	10-15-22	19-23-33	13-17-24	21-26-36	15-19-26	23-28-39	16-20-29	24-30-42	18-22-30	26-31-44	19-23-32
	3A1	cfm/Side	262	75	350	100	437	175	525	150	612	175	700	200	787	225
		Throw (ft)	15-19-27	8-12-19	18-22-31	10-15-22	20-25-35	16-20-29	22-27-38	15-19-26	24-29-41	16-20-29	25-31-44	18-22-30	27-33-47	19-23-32
	3B	cfm/Side	300	150	400	200	500	250	600	300	700	350	800	400	900	450
		Throw (ft)	16-20-28	11-16-23	19-23-32	15-19-26	21-26-36	17-21-30	23-28-40	19-23-32	25-30-43	20-25-35	26-32-46	22-26-37	28-34-48	23-28-40
	2A, 2B	cfm/Side	300		400		500		600		700		800		900	
		Throw (ft)	16-20-28		19-23-32		21-26-36		23-28-40		25-30-43		26-32-46		28-34-48	
	2E, 2F	cfm/Side	450	150	600	200	750	250	900	300	1050	350	1200	400	1350	450
		Throw (ft)	18-22-31	11-16-23	21-26-36	15-19-26	23-29-41	17-21-30	26-31-44	19-23-32	28-34-48	20-25-35	30-36-51	22-26-37	31-38-54	23-28-40
	1A, 1B	cfm/Side	600		800		1000		1200		1400		1600		1800	
		Throw (ft)	20-24-34		23-28-39		25-31-44		28-34-48		30-37-52		32-39-56		34-42-59	
Duct Size 18 in. x 15 in.	Flow Rate (cfm)		562		750		937		1125		1312		1500		1687	
	Sound (NC)		-		21		28		34		38		42		46	
			A	B	A	B	A	B	A	B	A	B	A	B	A	B
Duct Area 1.88 ft²	4B	cfm/Side	164	117	219	156	273	195	328	234	383	273	438	312	492	351
		Throw (ft)	12-17-24	10-15-21	16-19-27	13-17-25	18-21-30	16-19-28	19-24-33	17-21-30	21-25-36	19-23-33	22-27-38	20-25-35	24-29-41	21-26-37
	3A1	cfm/Side	222	117	297	156	371	195	445	234	519	273	594	312	668	351
		Throw (ft)	14-18-26	10-15-21	17-21-30	13-17-25	19-23-33	16-19-28	21-26-36	17-21-30	23-28-39	19-23-33	24-30-42	20-25-35	26-31-44	21-26-37
	3A2	cfm/Side	197	168	262	225	328	281	394	337	459	394	525	450	590	506
		Throw (ft)	13-18-25	12-17-24	17-20-29	16-19-27	18-23-32	18-22-31	20-25-35	19-24-34	22-27-38	21-26-36	23-29-40	22-27-39	25-30-43	24-29-41
	2A, 2B	cfm/Side	281		375		468		562		656		750		843	
		Throw (ft)	15-19-27		18-22-32		20-25-35		22-27-39		24-30-42		26-32-45		27-34-48	
	2E, 2F	cfm/Side	329	234	438	312	547	390	657	468	766	546	876	624	985	702
		Throw (ft)	16-20-29	14-18-26	19-23-33	17-21-30	21-26-37	19-24-34	23-29-40	21-26-37	25-31-44	23-28-40	27-33-47	24-30-42	29-35-50	26-32-45
	1A, 1B	cfm/Side	562		750		937		1125		1312		1500		1687	
		Throw (ft)	19-24-33		22-27-39		25-31-43		27-33-47		29-36-51		32-39-55		33-41-58	
Duct Size 21 in. x 15 in.	Flow Rate (cfm)		655		875		1092		1312		1532		1750		1970	
	Sound (NC)		-		21		28		34		38		42		46	
			A	B	A	B	A	B	A	B	A	B	A	B	A	B
Duct Area 2.19 ft²	4B	cfm/Side	210	117	281	156	351	195	422	234	493	273	563	312	634	351
		Throw (ft)	13-18-25	10-15-21	17-21-29	13-17-25	19-23-33	16-19-28	21-25-36	17-21-30	22-27-39	19-23-33	24-29-41	20-25-35	25-31-44	21-26-37
	3A1	cfm/Side	269	117	359	156	448	195	539	234	629	273	719	312	809	351
		Throw (ft)	15-19-27	10-15-21	18-22-31	13-17-25	20-25-35	16-19-28	22-27-38	17-21-30	24-29-41	19-23-33	26-31-44	20-25-35	27-33-47	21-26-37
	3A2	cfm/Side	213	230	284	306	355	382	426	460	498	535	569	612	641	688
		Throw (ft)	13-18-25	14-18-26	17-21-29	17-21-30	19-23-33	19-24-33	21-25-36	21-26-37	22-27-39	23-28-40	24-29-41	24-30-42	25-31-44	26-32-45
	2A, 2B	cfm/Side	327		437		596		656		766		875		985	
		Throw (ft)	16-20-29		19-23-33		22-27-39		23-29-41		25-31-44		27-33-47		29-35-50	
	2E, 2F	cfm/Side	422	234	563	312	702	390	844	468	986	546	1126	624	1268	702
		Throw (ft)	18-22-31	14-18-26	21-25-36	17-21-30	23-28-40	19-24-34	25-31-44	21-26-37	27-33-47	23-28-40	29-36-50	24-30-42	31-38-53	26-32-45
	1A, 1B	cfm/Side	655		875		1092		1312		1532		1750		1970	
		Throw (ft)	20-25-35		23-29-40		26-32-45		29-35-49		31-38-53		33-40-57		35-43-61	
Duct Size 24 in. x 15 in.	Flow Rate (cfm)		750		1000		1250		1500		1750		2000		2250	
	Sound (NC)		-		22		29		35		39		43		47	
			A	B	A	B	A	B	A	B	A	B	A	B	A	B
Duct Area 2.50 ft²	4B	cfm/Side	258	117	344	156	430	195	516	234	602	273	688	312	774	351
		Throw (ft)	15-19-27	10-15-21	18-22-31	13-17-25	20-25-35	16-19-27	22-27-38	17-21-30	24-29-41	19-23-32	25-31-44	20-25-35	27-33-46	21-26-37
	3A1	cfm/Side	316	117	422	156	527	195	633	234	738	273	844	312	949	351
		Throw (ft)	16-20-28	10-15-21	19-23-33	13-17-25	21-26-37	16-19-27	23-28-40	17-21-30	25-31-43	19-23-32	27-33-46	20-25-35	28-35-49	21-26-37
	3A2	cfm/Side	225	300	300	400	375	500	450	600	525	700	600	800	675	900
		Throw (ft)	14-18-26	16-20-28	17-21-30	19-23-32	19-24-33	21-26-36	21-26-36	23-28-40	23-28-39	25-30-43	24-30-42	26-32-46	26-32-45	28-34-48
	2A, 2B	cfm/Side	375		500		625		750		875		1000		1125	
		Throw (ft)	17-21-30		20-24-34		22-27-38		24-30-42		26-32-45		28-34-49		30-36-52	
	2E, 2F	cfm/Side	516	234	688	312	860	390	1032	468	1204	546	1376	624	1548	702
		Throw (ft)	19-23-33	14-18-26	22-27-38	17-21-30	24-30-42	19-24-34	27-33-46	21-26-37	29-35-50	23-28-40	31-38-53	25-30-43	33-40-56	26-32-45
	1A, 1B	cfm/Side	750		1000		1250		1500		1750		2000		2250	
		Throw (ft)	21-26-36		24-30-42		27-33-47		30-36-51		32-39-55		34-42-59		36-44-63	

For Performance Notes and Return Factors, see end of section.

Core Style Legend



PERFORMANCE DATA

SMD/AMD

Neck Velocity (fpm)			300		400		500		600		700		800		900	
Velocity Pressure (in. w.g.)			0.006		0.01		0.016		0.022		0.031		0.04		0.05	
Total Pressure (in. w.g.)			0.036		0.065		0.099		0.144		0.196		0.256		0.324	
Duct Size 21 in. x 18 in.	Flow Rate (cfm)		787		1050		1310		1575		1840		2100		2360	
	Sound (NC)		-		22		29		36		39		43		47	
			A	B	A	B	A	B	A	B	A	B	A	B	A	B
Duct Area 2.63 ft²	4B	cfm/Side	225	169	300	225	374	281	450	337	526	394	600	450	674	506
		Throw (ft)	14-18-26	12-17-24	17-21-30	16-19-28	19-23-33	18-22-31	21-26-36	19-24-34	23-28-39	21-26-36	24-30-42	22-28-39	26-31-44	24-29-41
	3A1	cfm/Side	309	169	412	225	514	281	619	337	723	394	825	450	927	506
		Throw (ft)	16-20-28	12-17-24	19-23-33	16-19-28	21-26-36	18-22-31	23-28-40	19-24-34	25-31-43	21-26-36	27-33-46	22-28-39	28-35-49	24-29-41
	3B	cfm/Side	279	230	372	306	464	382	557	460	652	535	744	612	836	688
		Throw (ft)	15-19-27	14-18-26	18-22-32	17-21-30	20-25-35	19-24-33	22-27-39	21-26-37	24-30-42	23-28-40	26-32-45	24-30-42	27-34-48	26-32-45
	2A, 2B	cfm/Side	393		525		655		787		920		1050		1180	
		Throw (ft)	17-21-30		20-25-35		22-28-39		25-30-43		27-33-46		28-35-49		30-37-52	
	2E, 2F	cfm/Side	450	338	600	450	750	560	900	675	1060	790	1200	900	1350	1010
		Throw (ft)	18-22-31	17-20-29	21-26-36	19-24-33	23-29-41	21-26-37	26-31-44	24-29-41	28-34-48	26-31-44	30-36-51	27-33-47	31-38-54	29-35-50
	1A, 1B	cfm/Side	787		1050		1310		1575		1840		2100		2360	
		Throw (ft)	21-26-37		25-30-42		27-34-47		30-37-52		32-40-56		35-42-60		37-45-64	

Duct Size 24 in. x 18 in.	Flow Rate (cfm)		900		1200		1500		1800		2100		2400		2700	
	Sound (NC)		-		23		30		36		40		44		48	
			A	B	A	B	A	B	A	B	A	B	A	B	A	B
Duct Area 3.00 ft²	4B	cfm/Side	281	169	375	225	469	281	563	337	656	394	750	450	844	506
		Throw (ft)	15-19-27	12-17-24	18-22-32	16-19-27	20-25-35	18-22-31	22-27-39	19-24-33	24-30-42	21-26-36	26-32-45	22-27-39	27-34-48	24-29-41
	3A1	cfm/Side	366	169	487	225	609	281	731	337	853	394	975	450	1098	506
		Throw (ft)	17-21-30	12-17-24	20-24-34	16-19-27	22-27-38	18-22-31	24-30-42	19-24-33	26-32-45	21-26-36	28-34-48	22-27-39	30-36-51	24-29-41
	3B	cfm/Side	300	300	400	400	500	500	600	600	700	700	800	800	900	900
		Throw (ft)	16-20-28	16-20-28	19-23-32	19-23-32	21-26-36	21-26-36	23-28-40	23-28-40	25-30-43	25-30-43	26-32-46	26-32-46	28-34-49	28-34-49
	2A, 2B	cfm/Side	450		600		750		900		1050		1200		1350	
		Throw (ft)	18-22-31		21-26-36		23-29-41		26-31-44		28-34-48		30-36-51		31-38-54	
	2E, 2F	cfm/Side	562	338	750	450	938	562	1125	675	1313	787	1500	900	1688	1012
		Throw (ft)	19-24-33	17-20-29	22-27-39	19-24-33	25-31-43	21-26-37	27-33-47	24-29-41	30-36-51	25-31-44	32-39-55	27-33-47	33-41-58	29-35-50
	1A, 1B	cfm/Side	900		1200		1500		1800		2100		2400		2700	
		Throw (ft)	22-27-38		25-31-44		28-35-49		31-38-54		34-41-58		36-44-62		38-47-66	
Duct Size 24 in. x 21 in.	Flow Rate (cfm)		1050		1400		1750		2100		2450		2800		3150	
	Sound (NC)		15		24		31		37		41		45		49	
			A	B	A	B	A	B	A	B	A	B	A	B	A	B
Duct Area 3.50 ft²	4B	cfm/Side	295	230	394	306	493	382	590	460	690	535	788	612	887	688
		Throw (ft)	16-20-28	14-18-26	19-23-32	17-21-30	21-25-36	19-24-33	23-28-39	21-26-37	25-30-43	23-28-39	26-32-45	24-30-42	28-34-48	26-32-45
	3A1	cfm/Side	410	230	547	306	684	382	820	460	957	535	1094	612	1231	688
		Throw (ft)	18-22-31	14-18-26	20-25-35	17-21-30	23-28-39	19-24-33	25-31-43	21-26-37	27-33-47	23-28-39	29-35-50	24-30-42	31-37-53	26-32-45
	3B	cfm/Side	375	300	500	400	625	400	750	600	875	700	1000	800	1125	900
		Throw (ft)	17-21-30	16-20-28	20-24-34	19-23-32	22-27-38	19-23-32	24-30-42	23-28-39	26-32-45	25-30-43	28-34-49	26-32-45	30-36-52	28-34-48
	2A, 2B	cfm/Side	525		700		875		1050		1225		1400		1575	
		Throw (ft)	19-23-33		22-27-38		24-30-42		27-33-46		29-35-50		31-38-54		33-40-57	
	2E, 2F	cfm/Side	591	459	788	612	986	764	1180	920	1380	1070	1576	1224	1774	1376
		Throw (ft)	20-24-34	18-22-32	23-28-39	21-26-36	25-31-44	23-29-41	28-34-48	26-32-45	30-37-52	28-34-48	32-39-55	30-36-51	34-42-59	31-39-55
	1A, 1B	cfm/Side	1050		1400		1750		2100		2450		2800		3150	
		Throw (ft)	23-28-40		27-33-46		30-36-52		33-40-56		35-43-61		38-46-65		40-49-69	

SMD/AMD Return Factors

Duct Size	"-" SP	NC	Duct Size	"-" SP	NC	Duct Size	"-" SP	NC	Duct Size	"-" SP	NC
6 x 6	0.73 x Listed TP	Listed NC	9 x 6	0.87 x Listed TP	Listed NC – 1	15 x 9	1.20 x Listed TP	Listed NC + 3	24 x 12	1.80 x Listed TP	Listed NC + 5
9 x 9	0.87 x Listed TP	Listed NC + 2	12 x 6	1.13 x Listed TP	Listed NC + 1	18 x 9	1.47 x Listed TP	Listed NC + 3	18 x 15	1.40 x Listed TP	Listed NC + 4
12 x 12	0.93 x Listed TP	Listed NC + 4	15 x 6	1.33 x Listed TP	Listed NC + 1	21 x 9	1.73 x Listed TP	Listed NC + 4	21 x 15	1.47 x Listed TP	Listed NC + 5
15 x 15	1.27 x Listed TP	Listed NC + 4	18 x 6	1.87 x Listed TP	Listed NC + 2	24 x 9	2.00 x Listed TP	Listed NC + 4	24 x 15	1.80 x Listed TP	Listed NC + 6
18 x 18	1.47 x Listed TP	Listed NC + 6	21 x 6	2.27 x Listed TP	Listed NC + 3	15 x 12	1.13 x Listed TP	Listed NC + 2	21 x 18	1.53 x Listed TP	Listed NC + 5
21 x 21	1.80 x Listed TP	Listed NC + 8	24 x 6	2.73 x Listed TP	Listed NC + 4	18 x 12	1.33 x Listed TP	Listed NC + 3	24 x 18	1.73 x Listed TP	Listed NC + 6
24 x 24	1.89 x Listed TP	Listed NC + 8	12 x 9	2.73 x Listed TP	Listed NC + 4	21 x 12	1.53 x Listed TP	Listed NC + 5	24 x 21	1.47 x Listed TP	Listed NC + 7

Performance Notes:

1. Tested in accordance with ASHRAE Standard 70 – 2023 Method of Testing for Rating the Performance of Air Outlets and Inlets.
2. Airflow is in cubic feet per minute [cfm].
3. NC, sound pressure levels, are based on a room absorption of 10 dB re 10^{-12} Watts, and a single diffuser/grille.
4. Blanks "-" indicate an NC level below 15.
5. All pressures are in inches of water column [in. w.g.].
6. Pressures not listed can be calculated using the following formula:
   $P_{total} = P_{static} + P_{velocity}$
7. Throw data is based on supply air and room air being at isothermal conditions.
8. Throw data is given in feet [ft] to terminal velocities of:
   150 fpm (minimum)
   100 fpm (middle)
   50 fpm (maximum)
9. Performance Data is tabulated for supply air applications.
10. Performance Data assumes the SMD / AMD is ceiling mounted for maximum ceiling effect. When no ceiling is present, the horizontal flow will be reduced by approximately 25%, producing a downward projection.
11. Does not include effects of ceiling radiation damper (SMD-FR).

PERFORMANCE DATA

SMD/AMD with SR

Size		Duct Velocity (fpm) Velocity Pressure (in w.g.)	400 0.010	500 0.016	600 0.022	700 0.031	800 0.040	900 0.050	1000 0.062	1100 0.075	1200 0.090
SMD 6 x 6	6" Inlet	Flow Rate (cfm)	79	98	118	137	157	177	196	216	236
		Static Pressure (in w.g.)	0.041	0.047	0.055	0.063	0.073	0.084	0.097	0.112	0.129
		Sound (NC)	-	-	15	18	20	23	26	29	31
		Throw (ft.)	5-8-12	6-9-13	8-10-15	9-11-16	10-12-17	10-13-18	11-13-19	11-14-20	12-15-21
SMD 9 x 9	6" Inlet	Flow Rate (cfm)	79	98	118	137	157	177	196	216	236
		Static Pressure (in w.g.)	0.029	0.031	0.033	0.035	0.037	0.039	0.041	0.044	0.046
		Sound (NC)	-	-	-	-	-	17	20	23	25
		Throw (ft.)	2-3-5	2-3-7	3-4-8	3-5-10	4-5-11	4-6-12	5-7-13	5-7-14	5-8-14
	8" Inlet	Flow Rate (cfm)	140	175	209	244	279	314	349	384	419
		Static Pressure (in w.g.)	0.037	0.042	0.047	0.053	0.060	0.068	0.076	0.086	0.096
		Sound (NC)	-	-	17	19	23	27	31	34	37
		Throw (ft.)	4-6-11	5-7-13	6-8-14	7-10-15	7-11-16	8-12-17	9-13-18	10-13-19	11-14-20
SMD 12 x 12	8" Inlet	Flow Rate (cfm)	140	175	209	244	279	314	349	384	419
		Static Pressure (in w.g.)	0.030	0.032	0.034	0.037	0.039	0.042	0.045	0.048	0.051
		Sound (NC)	-	-	-	-	17	20	23	26	29
		Throw (ft.)	2-3-5	2-3-7	3-4-8	3-5-9	4-5-11	4-6-12	4-7-13	5-7-14	5-8-15
	10" Inlet	Flow Rate (cfm)	218	273	327	382	436	491	545	600	654
		Static Pressure (in w.g.)	0.037	0.041	0.046	0.052	0.058	0.065	0.073	0.082	0.091
		Sound (NC)	-	17	19	21	26	30	34	37	40
		Throw (ft.)	4-5-11	4-7-13	5-8-15	6-9-16	7-11-17	8-12-18	9-13-19	10-14-20	11-15-21
	12" Inlet	Flow Rate (cfm)	314	393	471	550	628	707	785	864	942
		Static Pressure (in w.g.)	0.047	0.055	0.066	0.078	0.093	0.111	0.132	0.157	0.187
		Sound (NC)	-	18	24	29	33	37	39	42	44
		Throw (ft.)	6-10-16	8-12-18	10-14-20	11-15-22	13-16-23	14-17-24	15-18-26	16-19-27	16-20-28
SMD 15 x 15	12" Inlet	Flow Rate (cfm)	314	393	471	550	628	707	785	864	942
		Static Pressure (in w.g.)	0.037	0.042	0.047	0.053	0.060	0.067	0.076	0.085	0.096
		Sound (NC)	16	19	21	23	28	32	36	39	42
		Throw (ft.)	5-8-15	7-10-17	8-12-19	9-14-20	11-15-22	12-16-23	13-17-24	15-18-25	15-19-27
	14" Inlet	Flow Rate (cfm)	428	535	641	748	855	962	1069	1176	1283
		Static Pressure (in w.g.)	0.046	0.054	0.064	0.076	0.090	0.106	0.126	0.149	0.176
		Sound (NC)	16	19	24	30	34	38	41	43	45
		Throw (ft.)	9-13-21	11-16-23	13-18-25	16-19-28	17-21-29	18-22-31	19-23-33	20-24-35	21-25-36
SMD 18 x 18	6" Inlet	Flow Rate (cfm)	79	98	118	137	157	177	196	216	236
		Static Pressure (in w.g.)	0.024	0.024	0.024	0.024	0.024	0.024	0.025	0.025	0.025
		Sound (NC)	-	-	-	-	16	19	21	24	26
		Throw (ft.)	1-2-6	2-4-7	2-4-9	3-5-10	4-6-11	4-6-13	5-7-14	5-8-15	6-9-16
	10" Inlet	Flow Rate (cfm)	218	273	327	382	436	491	545	600	654
		Static Pressure (in w.g.)	0.029	0.030	0.032	0.034	0.036	0.038	0.040	0.042	0.045
		Sound (NC)	-	-	-	17	20	23	26	29	32
		Throw (ft.)	1-3-8	2-5-10	3-6-12	5-7-14	5-8-15	6-9-16	7-10-17	7-11-18	8-12-18
	12" Inlet	Flow Rate (cfm)	314	393	471	550	628	707	785	864	942
		Static Pressure (in w.g.)	0.033	0.036	0.039	0.043	0.047	0.051	0.056	0.061	0.067
		Sound (NC)	-	-	-	18	22	25	28	31	34
		Throw (ft.)	3-5-11	4-7-13	5-8-15	6-9-16	7-11-18	8-12-19	9-13-20	10-15-21	11-15-21
	14" Inlet	Flow Rate (cfm)	428	535	641	748	855	962	1069	1176	1283
		Static Pressure (in w.g.)	0.039	0.044	0.050	0.057	0.064	0.073	0.083	0.095	0.107
		Sound (NC)	18	20	23	25	30	34	37	40	43
		Throw (ft.)	5-8-15	6-10-16	8-12-18	9-13-19	10-15-21	12-16-22	13-16-23	14-17-24	15-18-25
	16" Inlet	Flow Rate (cfm)	559	698	838	977	1117	1257	1396	1536	1676
		Static Pressure (in w.g.)	0.046	0.055	0.066	0.078	0.093	0.111	0.131	0.156	0.186
		Sound (NC)	18	21	25	30	35	38	41	43	45
		Throw (ft.)	8-11-18	9-14-20	11-15-22	13-16-23	14-18-25	15-19-26	16-20-28	17-21-29	18-22-30

Performance Notes:

1. Tested in accordance with ASHRAE Standard 70 – 2023 Method of Testing for Rating the Performance of Air Outlets and Inlets.
2. Airflow is in cubic feet per minute [cfm].
3. NC, sound pressure levels, are based on a room absorption of 10 dB re 10^{-12} Watts, and a single diffuser/grille.
4. Blanks "-" indicate an NC level below 15.
5. All pressures are in inches of water column [in. w.g.].
6. Pressures not listed can be calculated using the following formula:
   $P_{total} = P_{static} + P_{velocity}$
7. Throw data is based on supply air and room air being at isothermal conditions.
8. Throw data is given in feet [ft] to terminal velocities of:
   150 fpm (minimum)
   100 fpm (middle)
   50 fpm (maximum)
9. Performance Data is tabulated for supply air applications.
10. Performance Data assumes the SMD / AMD is ceiling mounted for maximum ceiling effect. When no ceiling is present, the horizontal flow will be reduced by approximately 25%, producing a downward projection.
11. Does not include effects of ceiling radiation damper (SMD-FR).
12. Throw data is based on a 4-way pattern.

PERFORMANCE DATA

SMDA/AMDA – Adjustable Pattern Controllers

Louvered Face Directional Diffuser with Adjustable Pattern Controllers Performance Factors

Duct Size	Sound NC (Add)		Pressure TP (Multiply)		Throw Vertical (Multiply)			
					Cooling ΔT °F		Heating ΔT °F	
	H	V	H	V	20	0	20	40
6 x 6	3	7	1.3	1.6	1.3	1.1	0.8	0.6
9 x 9	3	7	1.5	2.3	1.5	1.2	0.9	0.6
12 x 12	3	7	1.5	2.3	1.6	1.3	1.0	0.6
15 x 15	3	7	1.5	2.3	1.7	1.3	1.0	0.6
18 x 18	3	7	1.5	2.3	1.7	1.3	0.9	0.6
21 x 21	3	7	1.5	2.3	1.7	1.3	0.8	0.5
24 x 24	3	7	1.5	2.3	1,5	1.1	0.7	0.5

Performance Notes:

To obtain performance data for the SMD diffuser with adjustable pattern controllers, apply the correction factors listed opposite to the data listed for square SMD, core style 4A.

Correction factors apply as follows:

1. Sound: NC = listed + correction factor.
2. Pressure drop: TP = listed x correction factor.
3. Does not include effects of ceiling radiation damper (SMDA-FR)

Note: The throw factor is applied only to the listed throw at 50 fpm terminal velocity (V_T).

Example, Imperial Units:

SMD with adjustable pattern controllers, 12 in. x 12 in., 600 cfm, heating application, 40 °F ΔT, vertical projection.

NC = 30+7 = 37

TP = 0.144 x 2.3 - 0.33

Throw = 27 x 0.6 = 16ft V_T 50 fpm.

Note: Total pressure and throw obtained from performance data.

Core Style Legend



PERFORMANCE DATA

SMX/AMX – High Induction Construction

Neck Velocity (fpm)			300		400		500		600		700		800		900	
Velocity Pressure (in. w.g.)			0.006		0.01		0.016		0.022		0.031		0.04		0.05	
Total Pressure (in. w.g.)			0.038		0.068		0.106		0.153		0.208		0.272		0.344	
Duct Size		Flow Rate (cfm)	75		100		125		150		175		200		225	
6 in. x 6 in.			A	B	A	B	A	B	A	B	A	B	A	B	A	B
		cfm/Side	19		25		31		38		44		50		56	
	4A	Sound (NC)	-		-		-		20		25		30		33	
		Throw (ft)	3-4-8		3-5-10		4-6-13		5-8-14		6-9-15		7-10-16		8-11-17	
		cfm/Side	19	28	25	38	31	47	38	56	44	66	50	75	56	84
	3A	Sound (NC)	-		-		-		20		25		30		33	
Duct Area		Throw (ft)	3-4-8	3-5-9	3-5-10	4-6-12	4-6-13	5-8-14	5-8-14	6-9-16	6-9-15	7-11-17	7-10-16	8-12-18	8-11-17	9-14-19
0.25 ft²		cfm/Side	38		50		63		75		88		100		113	
	2S, 2G	Sound (NC)	-		-		20		26		30		35		38	
		Throw (ft)	4-5-11		5-7-14		6-9-16		7-11-17		8-13-19		10-14-20		11-15-21	
		cfm/Side	75		100		125		150		175		200		225	
	1S	Sound (NC)	-		-		21		27		32		36		40	
		Throw (ft)	5-8-15		7-10-17		8-13-19		10-15-21		12-16-23		14-17-24		15-18-26	
Duct Size		Flow Rate (cfm)	169		225		281		338		394		450		506	
9 in. x 9 in.			A	B	A	B	A	B	A	B	A	B	A	B	A	B
		cfm/Side	42		56		70		84		98		113		127	
	4A	Sound (NC)	-		-		21		27		32		37		41	
		Throw (ft)	4-6-11		5-8-15		6-10-16		8-11-18		9-13-19		10-15-21		11-15-22	
		cfm/Side	42	63	56	84	70	105	84	127	98	148	113	169	127	190
	3A	Sound (NC)	-		-		21		27		32		37		41	
Duct Area		Throw (ft)	4-6-11	5-7-14	5-8-15	6-9-16	6-10-16	8-12-18	8-11-18	9-14-20	9-13-19	11-15-22	10-15-21	12-16-23	11-15-22	14-17-25
0.56 ft²		cfm/Side	84		113		141		169		197		225		253	
	2S, 2G	Sound (NC)	-		19		26		32		37		41		45	
		Throw (ft)	5-8-15		7-11-18		9-13-20		11-15-22		13-17-24		14-18-25		15-19-27	
		cfm/Side	169		225		281		338		394		450		506	
	1S	Sound (NC)	-		20		27		33		38		42		45	
		Throw (ft)	8-11-19		10-15-22		13-17-25		15-19-27		17-21-29		18-22-31		19-23-33	
Duct Size		Flow Rate (cfm)	300		400		500		600		700		800		900	
12 in. x 12 in.			A	B	A	B	A	B	A	B	A	B	A	B	A	B
		cfm/Side	75		100		125		150		175		200		225	
	4A	Sound (NC)	-		19		26		32		37		42		46	
		Throw (ft)	5-8-15		7-10-17		8-13-19		10-15-21		12-16-23		14-17-24		15-18-26	
		cfm/Side	75	113	100	150	125	188	150	225	175	263	200	300	225	338
	3A	Sound (NC)	-		19		26		32		37		42		46	
Duct Area		Throw (ft)	5-8-15	6-9-17	7-10-17	8-12-19	8-13-19	10-15-22	10-15-21	12-17-24	12-16-23	14-18-26	14-17-24	16-19-28	15-18-26	17-21-29
1 ft²		cfm/Side	150		200		250		300		350		400		450	
	2S, 2G	Sound (NC)	-		23		30		36		41		45		49	
		Throw (ft)	7-11-18		10-14-21		12-17-24		14-18-26		16-20-28		17-21-30		18-23-32	
		cfm/Side	300		400		500		600		700		800		900	
	1S	Sound (NC)	15		24		31		36		41		46		49	
		Throw (ft)	10-15-23		14-18-26		17-21-29		18-23-32		20-24-35		21-26-37		23-28-39	
Duct Size		Flow Rate (cfm)	469		625		781		938		1094		1250		1406	
15 in. x 15 in.			A	B	A	B	A	B	A	B	A	B	A	B	A	B
		cfm/Side	117		156		195		234		273		313		352	
	4A	Sound (NC)	-		23		30		36		41		46		50	
		Throw (ft)	6-10-17		8-13-20		11-16-22		13-17-24		15-18-26		16-20-28		17-21-30	
		cfm/Side	117	176	156	234	195	293	234	352	273	410	313	469	352	527
	3A	Sound (NC)	-		23		30		36		41		46		50	
Duct Area		Throw (ft)	6-10-17	8-12-19	8-13-20	10-16-22	11-16-22	13-18-25	13-17-24	16-19-27	15-18-26	17-21-29	16-20-28	18-22-31	17-21-30	19-24-33
1.56 ft²		cfm/Side	234		313		391		469		547		625		703	
	2S, 2G	Sound (NC)	18		27		34		39		44		49		52	
		Throw (ft)	9-13-21		12-17-24		15-19-27		17-21-30		19-23-32		20-24-34		21-26-36	
		cfm/Side	469		625		781		938		1094		1250		1406	
	1S	Sound (NC)	18		27		34		39		44		49		52	
		Throw (ft)	13-18-26		17-21-30		19-24-33		21-26-37		23-28-40		24-30-42		26-32-45	

For Performance Notes and Return Factors, see end of section.

Core Style Legend



PERFORMANCE DATA

SMX/AMX — High Induction Construction

Neck Velocity (fpm)			300		400		500		600		700		800		900	
Velocity Pressure (in. w.g.)			0.006		0.01		0.016		0.022		0.031		0.04		0.05	
Total Pressure (in. w.g.)			0.038		0.068		0.106		0.153		0.208		0.272		0.344	
Duct Size		Flow Rate (cfm)	675		900		1125		1350		1575		1800		2025	
18 in. x 18 in.			A	B	A	B	A	B	A	B	A	B	A	B	A	B
		cfm/Side	169		225		281		338		394		450		506	
	4A	Sound (NC)	17		26		34		40		45		49		53	
		Throw (ft)	8-11-19		10-15-22		13-17-25		15-19-27		17-21-29		18-22-31		19-23-33	
		cfm/Side	169	253	225	338	281	422	338	506	394	591	450	675	506	759
	3A	Sound (NC)	17		26		34		40		45		49		53	
Duct Area		Throw (ft)	8-11-19	9-14-22	10-15-22	12-18-25	13-17-25	16-20-28	15-19-27	18-22-30	17-21-29	19-23-33	18-22-31	20-25-35	19-23-33	22-26-37
2.25 ft²		cfm/Side	338		450		563		675		788		900		1013	
	2S, 2G	Sound (NC)	20		29		36		42		47		51		55	
		Throw (ft)	11-16-23		14-19-27		17-21-30		19-23-33		21-25-36		22-27-38		23-29-41	
		cfm/Side	675		900		1125		1350		1575		1800		2025	
	1S	Sound (NC)	20		29		36		42		47		51		55	
		Throw (ft)	15-20-29		19-24-33		22-26-37		24-29-41		25-31-44		27-33-47		29-35-50	
Duct Size		Flow Rate (cfm)	919		1225		1532		1838		2144		2450		2757	
21 in. x 21 in.			A	B	A	B	A	B	A	B	A	B	A	B	A	B
		cfm/Side	230		306		383		459		536		613		689	
	4A	Sound (NC)	19		29		36		42		48		52		56	
		Throw (ft)	9-13-21		12-17-24		15-19-27		17-21-30		18-23-32		20-24-34		21-26-36	
		cfm/Side	230	345	306	459	383	574	459	689	536	804	613	919	689	1034
	3A	Sound (NC)	19		29		36		42		48		52		56	
Duct Area		Throw (ft)	9-13-21	11-16-24	12-17-24	14-19-27	15-19-27	18-22-30	17-21-30	19-24-33	18-23-32	21-25-36	20-24-34	22-27-39	21-26-36	24-29-41
3.06 ft²		cfm/Side	459		613		766		919		1072		1225		1378	
	2S, 2G	Sound (NC)	23		32		39		45		49		54		57	
		Throw (ft)	13-18-26		17-21-30		19-23-33		21-26-36		23-28-39		24-30-42		26-32-45	
		cfm/Side	919		1225		1532		1838		2144		2450		2757	
	1S	Sound (NC)	23		32		39		45		49		54		57	
		Throw (ft)	18-22-32		21-26-37		24-29-41		26-32-45		28-34-48		30-37-52		32-39-55	
Duct Size		Flow Rate (cfm)	1200		1600		2000		2400		2800		3200		3600	
24 in. x 24 in.			A	B	A	B	A	B	A	B	A	B	A	B	A	B
		cfm/Side	300		400		500		600		700		800		900	
	4A	Sound (NC)	22		31		39		45		50		54		58	
		Throw (ft)	10-15-23		14-18-26		17-21-29		18-23-32		20-24-35		21-26-37		23-28-39	
		cfm/Side	300	450	400	600	500	750	600	900	700	1050	800	1200	900	1350
	3A	Sound (NC)	22		31		39		45		50		54		58	
Duct Area		Throw (ft)	10-15-23	12-18-26	14-18-26	17-21-30	17-21-29	19-23-33	18-23-32	21-26-36	20-24-35	23-28-39	21-26-37	24-30-42	23-28-39	26-31-44
4 ft²		cfm/Side	600		800		1000		1200		1400		1600		1800	
	2S, 2G	Sound (NC)	25		34		41		47		51		56		59	
		Throw (ft)	14-20-28		19-23-32		21-25-36		23-28-39		25-30-43		26-32-46		28-34-48	
		cfm/Side	1200		1600		2000		2400		2800		3200		3600	
	1S	Sound (NC)	25		34		41		47		51		56		59	
		Throw (ft)	20-24-34		23-28-40		26-31-44		28-34-49		30-37-52		32-40-56		34-42-59	
Duct Size		Flow Rate (cfm)	113		150		188		225		263		300		338	
9 in. x 6 in.			A	B	A	B	A	B	A	B	A	B	A	B	A	B
		cfm/Side	37	18	50	24	62	30	74	36	87	42	99	48	111	54
	4B	Sound (NC)	-		-		18		24		29		33		37	
		Throw (ft)	4-5-2011	2-4-07	5-7-14	3-5-10	6-9-16	4-6-12	7-11-17	5-7-14	8-12-18	6-9-15	10-14-20	7-10-16	11-15-21	7-11-17
		cfm/Side	35	43	47	57	58	71	70	86	81	100	93	114	105	128
	3A2	Sound (NC)	-		-		18		24		29		33		37	
Duct Area		Throw (ft)	3-5-2010	4-6-11	5-7-14	5-8-15	6-9-15	6-10-16	7-10-17	8-11-18	8-12-18	9-13-19	9-14-19	10-15-21	10-15-21	11-15-22
0.38 ft²		cfm/Side	56		75		94		113		131		150		169	
	2A, 2B	Sound (NC)	-		16		23		29		34		38		41	
		Throw (ft)	4-7-13		6-9-16		7-11-18		9-13-19		10-15-21		12-16-22		13-17-24	
		cfm/Side	113		150		188		225		263		300		338	
	1A, 1B	Sound (NC)	-		17		24		30		35		39		43	
		Throw (ft)	6-9-17		8-12-19		10-15-22		12-17-24		14-18-26		16-19-28		17-21-29	

For Performance Notes and Return Factors, see end of section.

Core Style Legend



PERFORMANCE DATA

SMX/AMX — High Induction Construction

Neck Velocity (fpm)			300		400		500		600		700		800		900	
Velocity Pressure (in. w.g.)			0.006		0.01		0.016		0.022		0.031		0.04		0.05	
Total Pressure (in. w.g.)			0.038		0.068		0.106		0.153		0.208		0.272		0.344	
Duct Size		Flow Rate (cfm)	150		200		250		300		350		400		450	
12 in. x 6 in.			A	B	A	B	A	B	A	B	A	B	A	B	A	B
		cfm/Side	56	18	74	24	93	30	111	36	130	42	148	48	167	54
	4B	Sound (NC)	-		-		20		26		31		36		40	
		Throw (ft)	4-7-13	2-4-07	6-9-16	3-5-10	7-11-18	4-6-12	9-13-19	5-7-14	10-15-21	6-9-15	12-16-22	7-10-16	13-17-24	7-11-17
		cfm/Side	75	38	100	50	125	63	150	75	175	88	200	100	225	113
	3B	Sound (NC)	-		-		20		26		31		36		40	
Duct Area		Throw (ft)	5-8-15	4-5-11	7-10-17	5-7-14	8-13-19	6-9-16	10-15-21	7-11-17	12-16-23	8-13-19	14-17-24	10-14-20	15-18-26	11-15-21
0.5 ft²		cfm/Side	75		100		125		150		175		200		225	
	2A, 2B	Sound (NC)	-		18		25		31		36		40		44	
		Throw (ft)	5-8-15		7-10-17		8-13-19		10-15-21		12-16-23		14-17-24		15-18-26	
		cfm/Side	150		200		250		300		350		400		450	
	1A, 1B	Sound (NC)	-		19		26		32		37		41		45	
		Throw (ft)	7-11-18		10-14-21		12-17-24		14-18-26		16-20-28		17-21-30		18-23-32	
Duct Size		Flow Rate (cfm)	188		250		313		375		438		500		563	
15 in. x 6 in.			A	B	A	B	A	B	A	B	A	B	A	B	A	B
		cfm/Side	75	19	100	25	125	31	150	38	175	44	200	50	225	56
	4B	Sound (NC)	-		15		22		28		33		38		42	
		Throw (ft)	5-8-15	3-4-08	7-10-17	3-5-10	8-13-19	4-6-13	10-15-21	5-8-14	12-16-23	6-9-15	14-17-24	7-10-16	15-18-26	8-11-17
		cfm/Side	84	19	113	25	141	31	169	38	197	44	225	50	253	56
	3A1	Sound (NC)	-		15		22		28		33		38		42	
Duct Area		Throw (ft)	5-8-15	3-4-08	7-11-18	3-5-10	9-13-20	4-6-13	11-15-22	5-8-14	13-17-24	6-9-15	14-18-25	7-10-16	15-19-27	8-11-17
0.63 ft²		cfm/Side	94		125		156		188		219		250		281	
	2A, 2B	Sound (NC)	-		20		27		32		37		42		45	
		Throw (ft)	6-9-16		8-11-18		9-14-21		11-16-23		13-17-24		15-18-26		16-20-28	
		cfm/Side	188		250		313		375		438		500		563	
	1A, 1B	Sound (NC)	-		21		28		33		38		42		46	
		Throw (ft)	8-12-20		11-16-23		13-18-25		16-20-28		17-21-30		19-23-32		20-24-34	
Duct Size		Flow Rate (cfm)	225		300		375		450		525		600		675	
18 in. x 6 in.			A	B	A	B	A	B	A	B	A	B	A	B	A	B
		cfm/Side	95	18	126	24	158	30	189	36	221	42	252	48	284	54
	4B	Sound (NC)	-		16		24		30		35		39		43	
		Throw (ft)	6-9-16	2-4-07	8-11-18	3-5-10	9-14-21	4-6-12	11-16-23	5-7-14	13-17-24	6-9-15	15-18-26	7-10-16	16-20-28	7-11-17
		cfm/Side	104	18	138	24	173	30	207	36	242	42	276	48	311	54
	3A1	Sound (NC)	-		16		24		30		35		39		43	
Duct Area		Throw (ft)	6-9-16	2-4-07	8-12-19	3-5-10	10-15-21	4-6-12	12-16-23	5-7-14	14-18-25	6-9-15	16-19-27	7-10-16	16-20-28	7-11-17
0.75 ft²		cfm/Side	113		150		188		225		263		300		338	
	2A, 2B	Sound (NC)	-		21		28		34		39		43		47	
		Throw (ft)	6-9-17		8-12-19		10-15-22		12-17-24		14-18-26		16-19-28		17-21-29	
		cfm/Side	225		300		375		450		525		600		675	
	1A, 1B	Sound (NC)	-		22		29		35		39		44		47	
		Throw (ft)	9-13-21		12-17-24		15-19-27		17-21-29		18-22-32		20-24-34		21-25-36	
Duct Size		Flow Rate (cfm)	225		300		375		450		525		600		675	
12 in. x 9 in.			A	B	A	B	A	B	A	B	A	B	A	B	A	B
		cfm/Side	70	43	93	57	116	71	140	86	163	100	186	114	209	128
	4B	Sound (NC)	-		16		24		30		35		39		43	
		Throw (ft)	5-7-15	4-6-11	7-10-17	5-8-15	8-12-19	6-10-16	10-15-21	8-11-18	11-16-22	9-13-19	13-17-24	10-15-21	15-18-25	11-15-22
		cfm/Side	74	74	99	99	124	124	149	149	173	173	198	198	223	223
	3A2	Sound (NC)	-		16		24		30		35		39		43	
Duct Area		Throw (ft)	5-8-15	5-8-15	7-10-17	7-10-17	8-13-19	8-13-19	10-15-21	10-15-21	12-16-23	12-16-23	13-17-24	13-17-24	15-18-26	15-18-26
0.75 ft²		cfm/Side	113		150		188		225		263		300		338	
	2A, 2B	Sound (NC)	-		21		28		34		39		43		47	
		Throw (ft)	6-9-17		8-12-19		10-15-22		12-17-24		14-18-26		16-19-28		17-21-29	
		cfm/Side	225		300		375		450		525		600		675	
	1A, 1B	Sound (NC)	-		22		29		35		39		44		47	
		Throw (ft)	9-13-21		12-17-24		15-19-27		17-21-29		18-22-32		20-24-34		21-25-36	

Performance Notes:

1. Tested in accordance with ASHRAE Standard 70 – 2023 Method of Testing for Rating the Performance of Air Outlets and Inlets.
2. Airflow is in cubic feet per minute [cfm].
3. NC, sound pressure levels, are based on a room absorption of 10 dB re 10^{-12} Watts, and a single diffuser/grille.
4. Blanks "-" indicate an NC level below 15.
5. All pressures are in inches of water column [in. w.g.].
6. Pressures not listed can be calculated using the following formula:
   Ptotal = Pstatic + Pvelocity
7. Throw data is based on supply air and room air being at isothermal conditions
8. Throw data is given in feet [ft] to terminal velocities of:
   150 fpm (minimum)
   100 fpm (middle)
   50 fpm (maximum)
9. Additional performance data for other patterns and rectangular sizes available upon request.
10. Does not include effects of ceiling radiation damper (SMX-FR).

Core Style Legend



PERFORMANCE DATA

MSD – Security Construction

Neck Size	Neck Velocity (fpm) / Velocity Pressure (in. w.g.) / Total Pressure (in. w.g.)	300 / 0.006 / 0.042	400 / 0.01 / 0.074	500 / 0.016 / 0.115	600 / 0.022 / 0.166	700 / 0.031 / 0.226	800 / 0.04 / 0.296	900 / 0.05 / 0.374
6 x 6	Flow Rate (cfm)	75	100	125	150	175	200	225
	Sound (NC)	-	-	21	28	33	38	42
	Throw (ft)	2-5-9	4-6-10	5-8-11	6-9-13	7-10-14	8-10-15	9-11-15
9 x 9	Flow Rate (cfm)	169	225	281	338	394	450	506
	Sound (NC)	-	18	26	33	38	43	47
	Throw (ft)	3-5-11	5-7-15	6-9-17	7-11-19	9-13-20	10-15-22	11-16-23
12 x 12	Flow Rate (cfm)	300	400	500	600	700	800	900
	Sound (NC)	-	22	30	36	41	46	50
	Throw (ft)	3-6-13	5-8-17	7-10-21	8-13-25	10-15-27	11-17-29	13-19-31
15 x 15	Flow Rate (cfm)	469	625	781	938	1094	1250	1406
	Sound (NC)	-	24	32	39	44	49	53
	Throw (ft)	3-7-14	6-9-19	8-12-23	9-14-28	11-16-32	12-19-36	14-21-38
18 x 18	Flow Rate (cfm)	675	900	1125	1350	1575	1800	2025
	Sound (NC)	17	27	35	41	46	51	55
	Throw (ft)	4-8-15	6-10-20	8-13-25	10-15-30	12-18-35	13-20-40	15-23-45
21 x 21	Flow Rate (cfm)	919	1225	1531	1838	2144	2450	2756
	Sound (NC)	18	29	36	43	48	53	57
	Throw (ft)	4-8-16	7-11-22	9-14-27	11-16-32	13-19-38	14-22-43	16-24-49
24 x 24	Flow Rate (cfm)	1200	1600	2000	2400	2800	3200	3600
	Sound (NC)	20	30	38	44	50	55	59
	Throw (ft)	4-9-17	7-12-23	10-14-29	12-17-35	13-20-40	15-23-46	17-26-52

Performance Notes:

1. Tested in accordance with ASHRAE Standard 70-2023 "Method of testing for Rating the Performance of Alr Outlets and Inlets."
2. Air flow is in cfm.
3. All pressures are in in. w.g.
4. Throw values are measured in feet for terminal velocities of 150 fpm (minimum), 100 fpm (middle) and 50 fpm (maximum).
5. Throw data is based on supply air and room air being at isothermal conditions.
6. NC values are based on a room absorption of -10 dB, re 10^{-12} watt s and one diffuser.
7. Performance data is tabulated for supply air applications.
8. Blanks "-" indicate an NC level below 15.
9. Corrections for return application: add 5 To listed NC; multiply listed total pressure by 1.40 to obtain negative static pressure.
10. Performance data is based on L4 faceplate pattern.

PERFORMANCE DATA

SMDP – Plaque Face, 1 Slot

6	**Flow Rate (cfm)**	**39**	**59**	**79**	**98**	**118**	**137**	**157**	**196**	**236**
	Neck Velocity (fpm)	200	300	400	500	600	700	800	1000	1200
	Total Pressure (in. w.g.)	0.006	0.014	0.025	0.039	0.056	0.077	0.100	0.156	0.225
	Velocity Pressure (in. w.g.)	0.002	0.006	0.010	0.016	0.022	0.031	0.040	0.062	0.090
	Sound (NC)	-	-	-	-	-	18	22	28	33
	Throw (ft) 150, 100, 50	0-1-2	1-1-4	1-2-5	2-3-7	2-4-8	3-5-9	4-5-10	4-7-11	5-8-13
8	**Flow Rate (cfm)**	**70**	**105**	**140**	**174**	**209**	**244**	**279**	**349**	**419**
	Neck Velocity (fpm)	200	300	400	500	600	700	800	1000	1200
	Total Pressure (in. w.g.)	0.014	0.032	0.058	0.090	0.130	0.176	0.230	0.360	0.518
	Velocity Pressure (in. w.g.)	0.002	0.006	0.010	0.016	0.022	0.031	0.040	0.062	0.090
	Sound (NC)	-	-	-	21	26	30	33	40	45
	Throw (ft) 150, 100, 50	1-2-5	2-4-7	3-5-9	4-6-11	5-7-12	5-8-13	6-9-14	8-11-15	9-12-17
10	**Flow Rate (cfm)**	**109**	**164**	**218**	**273**	**327**	**382**	**436**	**545**	**654**
	Neck Velocity (fpm)	200	300	400	500	600	700	800	1000	1200
	Total Pressure (in. w.g.)	0.027	0.062	0.110	0.172	0.247	0.337	0.440	0.687	0.990
	Velocity Pressure (in. w.g.)	0.002	0.006	0.010	0.016	0.022	0.031	0.040	0.062	0.090
	Sound (NC)	-	16	24	30	35	39	43	49	54
	Throw (ft) 150, 100, 50	2-4-7	4-5-10	5-7-12	6-9-14	7-10-15	9-11-16	10-12-17	11-14-19	12-15-21

SMDP – Plaque Face, 2 Slot

6	**Flow Rate (cfm)**	**39**	**59**	**79**	**98**	**118**	**137**	**157**	**196**	**236**
	Neck Velocity (fpm)	200	300	400	500	600	700	800	1000	1200
	Total Pressure (in. w.g.)	0.004	0.009	0.016	0.025	0.036	0.049	0.064	0.100	0.144
	Velocity Pressure (in. w.g.)	0.002	0.006	0.010	0.016	0.022	0.031	0.040	0.062	0.090
	Sound (NC)	-	-	-	-	-	-	16	22	27
	Throw 150, 100, 50	0-0-1	0-0-2	0-1-3	0-1-4	1-2-5	1-2-6	1-3-7	2-4-9	3-5-11
8	**Flow Rate (cfm)**	**70**	**105**	**140**	**174**	**209**	**244**	**279**	**349**	**419**
	Neck Velocity (fpm)	200	300	400	500	600	700	800	1000	1200
	Total Pressure (in. w.g.)	0.007	0.016	0.028	0.044	0.063	0.086	0.112	0.175	0.252
	Velocity Pressure (in. w.g.)	0.002	0.006	0.010	0.016	0.022	0.031	0.040	0.062	0.090
	Sound (NC)	-	-	-	-	18	22	26	32	37
	Throw (ft) 150, 100, 50	0-1-2	1-1-5	1-2-6	2-3-8	2-5-10	3-6-11	4-6-13	5-8-15	6-10-17
10	**Flow Rate (cfm)**	**109**	**164**	**218**	**273**	**327**	**382**	**436**	**545**	**654**
	Neck Velocity (fpm)	200	300	400	500	600	700	800	1000	1200
	Total Pressure (in. w.g.)	0.011	0.024	0.043	0.067	0.097	0.132	0.172	0.269	0.387
	Velocity Pressure (in. w.g.)	0.002	0.006	0.010	0.016	0.022	0.031	0.040	0.062	0.090
	Sound (NC)	-	-	15	21	26	30	34	39	44
	Throw (ft) 150, 100, 50	1-1-5	1-3-7	2-5-10	4-6-12	5-7-15	6-9-16	7-10-17	8-12-19	10-15-21
12	**Flow Rate (cfm)**	**157**	**236**	**314**	**393**	**471**	**550**	**628**	**785**	**942**
	Neck Velocity (fpm)	200	300	400	500	600	700	800	1000	1200
	Total Pressure (in. w.g.)	0.015	0.034	0.061	0.096	0.138	0.187	0.245	0.382	0.550
	Velocity Pressure (in. w.g.)	0.002	0.006	0.010	0.016	0.022	0.031	0.040	0.062	0.090
	Sound (NC)	-	-	21	27	32	36	40	46	51
	Throw (ft) 150, 100, 50	1-3-7	3-5-11	5-7-14	6-9-16	7-11-18	8-13-19	10-14-21	12-16-23	14-18-25

Performance Notes:

1. Tested in accordance with ASHRAE Standard 70-2023 "Method of testing for Rating the Performance of Air Outlets and Inlets."
2. Air flow is in cfm.
3. All pressures are in in. w.g.
4. Throw values are measured in feet for terminal velocities of 150 fpm (minimum), 100 fpm (middle) and 50 fpm (maximum).
5. Throw data is based on supply air and room air being at isothermal conditions.
6. NC values are based on a room absorption of -10 dB, re 10^{-12} watt s and one diffuser.
7. Blanks "-" indicate an NC level below 15.

Core Style Legend



PERFORMANCE DATA

SMDP – Plaque Face, 3 Slot

8	**Flow Rate (cfm)**	**70**	**105**	**140**	**174**	**209**	**244**	**279**	**349**	**419**
	Neck Velocity (fpm)	200	300	400	500	600	700	800	1000	1200
	Total Pressure (in. w.g.)	0.006	0.013	0.023	0.035	0.051	0.069	0.090	0.141	0.203
	Velocity Pressure (in. w.g.)	0.002	0.006	0.010	0.016	0.022	0.031	0.040	0.062	0.090
	Sound (NC)	-	-	-	16	21	25	29	35	40
	Throw (ft) 150, 100, 50	0-0-2	0-1-4	1-2-6	1-3-7	-4-9	2-5-10	3-6-12	5-7-15	6-9-17
10	**Flow Rate (cfm)**	**109**	**164**	**218**	**273**	**327**	**382**	**436**	**545**	**654**
	Neck Velocity (fpm)	200	300	400	500	600	700	800	1000	1200
	Total Pressure (in. w.g.)	0.007	0.017	0.030	0.046	0.067	0.091	0.119	0.186	0.268
	Velocity Pressure (in. w.g.)	0.002	0.006	0.010	0.016	0.022	0.031	0.040	0.062	0.090
	Sound (NC)	-	-	-	19	24	28	32	37	42
	Throw (ft) 150, 100, 50	0-1-4	1-2-7	2-4-9	3-6-12	4-7-14	5-8-16	6-9-17	8-12-19	9-14-21
12	**Flow Rate (cfm)**	**157**	**236**	**314**	**393**	**471**	**550**	**628**	**785**	**942**
	Neck Velocity (fpm)	200	300	400	500	600	700	800	1000	1200
	Total Pressure (in. w.g.)	0.009	0.021	0.037	0.058	0.084	0.114	0.149	0.233	0.335
	Velocity Pressure (in. w.g.)	0.002	0.006	0.010	0.016	0.022	0.031	0.040	0.062	0.090
	Sound (NC)	-	-	16	21	26	30	34	40	45
	Throw (ft) 150, 100, 50	1-2-7	2-5-10	4-7-13	6-8-16	7-10-18	8-12-19	9-13-21	11-16-23	13-18-25
14	**Flow Rate (cfm)**	**214**	**321**	**427**	**534**	**641**	**748**	**855**	**1068**	**1282**
	Neck Velocity (fpm)	200	300	400	500	600	700	800	1000	1200
	Total Pressure (in. w.g.)	0.011	0.025	0.045	0.070	0.101	0.138	0.180	0.281	0.405
	Velocity Pressure (in. w.g.)	0.002	0.006	0.010	0.016	0.022	0.031	0.040	0.062	0.090
	Sound (NC)	-	-	17	23	28	32	36	42	47
	Throw (ft) 150, 100, 50	2-4-9	4-7-14	6-9-17	8-11-19	9-14-21	11-16-22	12-17-24	15-19-27	17-21-29

Performance Notes:

1. Tested in accordance with ASHRAE Standard 70-2023 "Method of testing for Rating the Performance of Air Outlets and Inlets."
2. Air flow is in cfm.
3. All pressures are in in. w.g.
4. Throw values are measured in feet for terminal velocities of 150 fpm (minimum), 100 fpm (middle) and 50 fpm (maximum).
5. Throw data is based on supply air and room air being at isothermal conditions.
6. NC values are based on a room absorption of -10 dB, re 10^{-12} watt s and one diffuser.
7. Blanks "-" indicate an NC level below 15.

Core Style Legend



PERFORMANCE DATA

LCMD – Light Commercial Construction

Neck Velocity (fpm)			300		400		500		600		700		800		900	
Velocity Pressure (in. w.g.)			0.006		0.01		0.016		0.022		0.031		0.04		0.05	
Total Pressure (in. w.g.)			0.049		0.086		0135		0.195		0.265		0.346		0.438	
Duct Size 6 in. x 6 in.		Flow Rate (cfm)	75		100		125		150		175		200		225	
		Sound (NC)	-		18		23		26		30		33		35	
			A	B	A	B	A	B	A	B	A	B	A	B	A	B
Duct Area 0.25 ft²	4A	cfm/Side	19		25		31		38		44		50		56	
		Throw (ft)	3-4-9		4-6-12		5-7-15		6-9-17		7-10-20		8-12-21		9-13-23	
	3A	cfm/Side	19	28	25	38	31	47	38	56	44	66	50	75	56	84
		Throw (ft)	3-4-9	4-5-11	4-6-12	5-7-14	5-7-15	6-9-18	6-9-17	7-11-21	7-10-20	8-12-23	8-12-21	10-14-24	9-13-23	11-16-26
	2S, 2G	cfm/Side	38		50		63		75		88		100		113	
		Throw (ft)	4-6-12		5-8-16		7-10-21		8-12-23		10-14-24		11-16-26		12-19-28	
	1S	cfm/Side	75		100		125		150		175		200		225	
		Throw (ft)	6-9-17		8-12-23		10-15-25		12-17-28		14-20-30		16-23-32		17-24-34	
Duct Size 8 in. x 8 in.		Flow Rate (cfm)	133		178		222		266		311		355		400	
		Sound (NC)	-		21		26		30		33		36		38	
			A	B	A	B	A	B	A	B	A	B	A	B	A	B
Duct Area 0.444 ft²	4A	cfm/Side	33		45		56		67		78		89		100	
		Throw (ft)	4-6-12		5-8-16		6-10-19		8-12-22		9-14-24		10-16-25		12-17-27	
	3A	cfm/Side	33	50	45	67	56	83	67	100	78	117	89	133	100	150
		Throw (ft)	4-6-12	5-7-14	5-8-16	6-10-19	6-10-19	8-12-22	8-12-22	9-14-25	9-14-24	11-17-27	10-16-25	13-19-28	12-17-27	14-21-30
	2S, 2G	cfm/Side	67		89		111		133		156		178		200	
		Throw (ft)	5-8-16		7-11-22		9-14-24		11-16-27		13-19-29		15-22-31		16-23-33	
	1S	cfm/Side	133		178		222		266		311		355		400	
		Throw (ft)	8-12-23		10-16-27		13-19-30		16-23-32		18-25-35		21-27-37		23-28-40	
Duct Size 10 in. x 10 in.		Flow Rate (cfm)	208		278		347		416		486		555		625	
		Sound (NC)	17		23		28		32		35		38		41	
			A	B	A	B	A	B	A	B	A	B	A	B	A	B
Duct Area 0.694 ft²	4A	cfm/Side	52		70		87		104		122		139		156	
		Throw (ft)	5-7-15		6-10-19		8-12-23		10-15-25		11-17-27		13-19-29		15-22-30	
	3A	cfm/Side	52	78	70	104	87	130	104	156	122	182	139	208	156	234
		Throw (ft)	5-7-15	6-9-18	6-10-19	8-12-23	8-12-23	10-15-25	10-15-25	12-18-28	11-17-27	14-21-30	13-19-29	16-23-32	15-22-30	18-24-34
	2S, 2G	cfm/Side	104		139		174		208		243		278		313	
		Throw (ft)	7-10-21		9-14-25		11-17-28		14-21-30		16-23-33		18-25-35		21-26-37	
	1S	cfm/Side	208		278		347		416		486		555		625	
		Throw (ft)	10-15-26		13-19-30		16-24-34		19-26-37		23-28-40		25-30-43		26-32-45	
Duct Size 12 in. x 12 in.		Flow Rate (cfm)	300		400		500		600		700		800		900	
		Sound (NC)	19		25		30		34		37		40		43	
			A	B	A	B	A	B	A	B	A	B	A	B	A	B
Duct Area 1 ft²	4A	cfm/Side	75		100		125		150		175		200		225	
		Throw (ft)	6-9-17		8-12-23		10-15-25		12-17-28		14-20-30		16-23-32		17-24-34	
	3A	cfm/Side	75	113	100	150	125	188	150	225	175	263	200	300	225	338
		Throw (ft)	6-9-17	7-11-21	8-12-23	10-14-25	10-15-25	12-18-28	12-17-28	14-21-31	14-20-30	17-24-33	16-23-32	19-25-36	17-24-34	21-27-38
	2S, 2G	cfm/Side	150		200		250		300		350		400		450	
		Throw (ft)	8-12-24		11-16-27		14-21-31		16-24-34		19-26-36		22-27-39		24-29-41	
	1S	cfm/Side	300		400		500		600		700		800		900	
		Throw (ft)	12-17-29		16-23-33		19-26-37		23-29-41		26-31-44		27-33-47		29-35-50	
Duct Size 14 in. x 14 in.		Flow Rate (cfm)	408		544		680		816		952		1088		1224	
		Sound (NC)	21		27		32		36		39		42		44	
			A	B	A	B	A	B	A	B	A	B	A	B	A	B
Duct Area 1.36 ft²	4A	cfm/Side	102		136		170		204		238		272		306	
		Throw (ft)	7-10-20		9-14-25		11-17-27		14-20-30		16-23-33		18-25-35		20-26-37	
	3A	cfm/Side	102	153	136	204	170	255	204	306	238	357	272	408	306	459
		Throw (ft)	7-10-20	8-12-24	9-14-25	11-17-28	11-17-27	14-21-31	14-20-30	17-24-34	16-23-33	19-26-36	18-25-35	22-28-39	20-26-37	24-29-41
	2S, 2G	cfm/Side	204		272		340		408		476		544		612	
		Throw (ft)	10-14-26		13-19-30		16-24-33		19-26-37		22-28-40		24-30-42		26-32-45	
	1S	cfm/Side	408		544		680		816		952		1088		1224	
		Throw (ft)	14-20-32		18-26-36		23-29-41		26-32-45		28-34-48		30-36-52		32-39-55	
Duct Size 16 in. x 16 in.		Flow Rate (cfm)	531		708		885		1062		1239		1416		1593	
		Sound (NC)	22		29		33		37		40		43		46	
			A	B	A	B	A	B	A	B	A	B	A	B	A	B
Duct Area 1.77 ft²	4A	cfm/Side	133		177		221		266		310		354		398	
		Throw (ft)	8-12-23		10-15-26		13-19-30		15-23-32		18-25-35		21-26-37		23-28-40	
	3A	cfm/Side	133	199	177	266	221	332	266	398	310	465	354	531	398	597
		Throw (ft)	8-12-23	9-14-26	10-15-26	13-19-30	13-19-30	16-23-33	15-23-32	19-26-36	18-25-35	22-28-39	21-26-37	24-30-42	23-28-40	26-32-45
	2S, 2G	cfm/Side	266		354		443		531		620		708		797	
		Throw (ft)	11-16-28		15-22-32		18-25-36		22-28-39		25-30-43		26-32-46		28-34-48	
	1S	cfm/Side	531		708		885		1062		1239		1416		1593	
		Throw (ft)	15-23-34		21-28-39		25-31-44		28-34-48		30-37-52		32-39-56		34-42-59	

For Performance Notes and Return Factors, see end of section.

Core Style Legend



PERFORMANCE DATA

LCMD – Light Commercial Construction

Neck Velocity (fpm)			300		400		500		600		700		800		900	
Velocity Pressure (in. w.g.)			0.006		0.01		0.016		0.022		0.031		0.04		0.05	
Total Pressure (in. w.g.)			0.049		0.086		0135		0.195		0.265		0.346		0.438	
Duct Size 18 in. x 18 in.		**Flow Rate (cfm) Sound (NC)**	**675 24**		**900 30**		**1125 35**		**1350 38**		**1575 42**		**1800 45**		**2025 47**	
			A	**B**	**A**	**B**	**A**	**B**	**A**	**B**	**A**	**B**	**A**	**B**	**A**	**B**
Duct Area 2.25 ft²	**4A**	**cfm/Side**	169		225		281		338		44	394	450		506	
		Throw (ft)	9-13-25		12-17-28		15-22-32		17-25-35		20-27-38		23-28-40		25-30-43	
	3A	**cfm/Side**	169	253	225	338	281	422	338	506	394	591	450	675	506	759
		Throw (ft)	9-13-25	11-16-28	12-17-28	14-21-32	15-22-32	18-25-36	17-25-35	21-28-39	20-27-38	24-30-42	23-28-40	26-32-45	25-30-43	28-34-48
	2S, 2G	**cfm/Side**	338		450		563		675		788		900		1013	
		Throw (ft)	12-19-30		16-24-35		21-27-39		24-30-42		26-32-46		28-35-49		30-37-52	
	1S	**cfm/Side**	675		900		1125		1350		1575		1800		2025	
		Throw (ft)	17-26-36		23-30-42		27-33-47		30-36-52		32-39-56		34-42-60		36-45-63	
Duct Size 20 in. x 20 in.		**Flow Rate (cfm) Sound (NC)**	**831 25**		**1108 31**		**1385 36**		**1162 40**		**1939 43**		**2216 46**		**2493 48**	
			A	**B**	**A**	**B**	**A**	**B**	**A**	**B**	**A**	**B**	**A**	**B**	**A**	**B**
Duct Area 2.77 ft²	**4A**	**cfm/Side**	208		277		346		416		485		554		623	
		Throw (ft)	10-15-26		13-19-30		16-24-34		19-26-37		23-28-40		25-30-43		26-32-45	
	3A	**cfm/Side**	208	312	277	416	346	519	416	623	485	727	554	831	623	935
		Throw (ft)	10-15-26	12-18-29	13-19-30	16-24-34	16-24-34	20-27-38	19-26-37	24-29-41	23-28-40	26-32-45	25-30-43	28-34-48	26-32-45	29-36-51
	2S, 2G	**cfm/Side**	416		554		693		831		970		1108		1247	
		Throw (ft)	14-21-32		18-26-37		23-29-41		26-32-45		28-34-48		30-37-52		32-39-55	
	1S	**cfm/Side**	831		1108		1385		1662		1939		2216		2493	
		Throw (ft)	19-27-39		26-32-45		29-35-50		32-39-55		34-42-59		36-45-63		39-47-67	
Duct Size 22 in. x 22 in.		**Flow Rate (cfm) Sound (NC)**	**1008 26**		**1344 32**		**1680 37**		**2016 41**		**2352 44**		**2688 47**		**3024 49**	
			A	**B**	**A**	**B**	**A**	**B**	**A**	**B**	**A**	**B**	**A**	**B**	**A**	**B**
Duct Area 3.36 ft²	**4A**	**cfm/Side**	252		336		420		504		588		672		756	
		Throw (ft)	11-16-28		14-21-32		18-25-36		21-28-39		24-30-42		26-32-45		28-34-48	
	3A	**cfm/Side**	252	378	336	504	420	630	504	756	588	882	672	1008	756	1134
		Throw (ft)	11-16-28	13-20-31	14-21-32	17-25-36	18-25-36	22-28-40	21-28-39	25-31-44	24-30-42	27-33-47	26-32-45	29-36-50	28-34-48	31-38-54
	2S, 2G	**cfm/Side**	504		672		840		1008		1176		1344		1512	
		Throw (ft)	15-23-34		20-27-39		25-31-43		27-34-47		30-36-51		32-39-55		34-41-58	
	1S	**cfm/Side**	1008		1344		1680		2016		2352		2688		3024	
		Throw (ft)	21-29-41		27-33-47		30-37-53		33-41-58		36-44-62		39-47-67		41-50-71	
Duct Size 24 in. x 24 in.		**Flow Rate (cfm) Sound (NC)**	**1200 27**		**1600 33**		**2000 38**		**2400 42**		**2800 45**		**3200 48**		**3600 50**	
			A	**B**	**A**	**B**	**A**	**B**	**A**	**B**	**A**	**B**	**A**	**B**	**A**	**B**
Duct Area 4 ft²	**4A**	**cfm/Side**	300		400		500		600		700		800		900	
		Throw (ft)	12-17-29		16-23-33		19-26-37		23-29-41		26-31-44		27-33-47		29-35-50	
	3A	**cfm/Side**	300	450	400	600	500	750	600	900	700	1050	800	1200	900	1350
		Throw (ft)	12-17-29	14-21-32	16-23-33	19-27-38	19-26-37	24-30-42	23-29-41	27-32-46	26-31-44	29-35-50	27-33-47	31-38-53	29-35-50	32-40-56
	2S, 2G	**cfm/Side**	600		800		1000		1200		1400		1600		1800	
		Throw (ft)	16-25-35		22-29-41		26-32-46		29-35-50		31-38-54		33-41-58		35-43-61	
	1S	**cfm/Side**	1200		1600		2000		2400		2800		3200		3600	
		Throw (ft)	23-30-43		29-35-50		32-39-55		35-43-61		38-46-66		41-50-70		43-53-74	

Performance Notes:

1. Tested in accordance with ASHRAE Standard 70-2023 "Method of testing for Rating the Performance of Air Outlets and Inlets."
2. Air flow is in cfm.
3. All pressures are in in. w.g.
4. Throw values are measured in feet for terminal velocities of 150-100-50 fpm.
5. Throw data is based on supply air and room air being at isothermal conditions.
6. NC values are based on a room absorption of -10 dB, re 10^{-12} watt s and one diffuser.
7. Blanks "-" indicate an NC level below 15.

Core Style Legend



price | DIFFUSERS

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