Jet Diffusers

Introduction

KMC Diffuse - a - Jet diffuser is a high capacity diffuser with jet type air flow specifically designed for spot heating or cooling in high ceiling applications.

The elegant design is best suited for architectural high end appearance and provides a modern alternative to any traditional diffusers while upholding the trusted performance characteristics.

Application

- "Spot" type supply air outlet with a reversible nozzle for jet or diffused air patterns
- Recommended for HVAC installations which require long or short throw pattern flexibility with trajectory control
- Ideally suited for predictable directional control of conditioned air within large spaces such as malls, exhibit halls, sports arenas, industrial and manufacturing facilities, atrium areas, and large office building entrances
- Spot air distribution ideal for industrial heating, ventilating or cooling
- Side wall, ceiling or duct mounted applications
- Rapid temperature equalization eliminates stratification

Product Features

- Reversible, rotating nozzle provides a long throw jet pattern, or diffused, short throw pattern – without using volume dampers
- Field adjustable pattern and direction – from the face of the outlet
- Directional control within a 60° arc 200mm, 250mm, 300mm, 375mm diameter nozzles
- 1, 2, 3, or 4 nozzle panel assembly permits multi-directional, as well as mixed jet and diffused patterns from one location.
- Welded, heavy gauge, Aluminium, all steel construction.

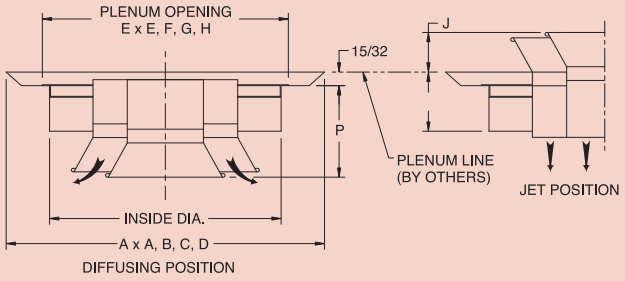
To Adjust The Diffuse - A - Jet

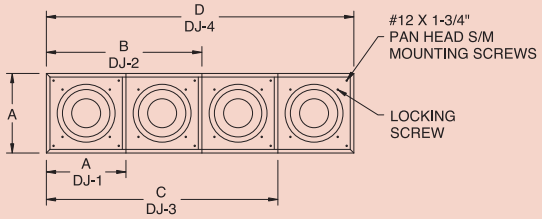
For jet stream or diffused air pattern, simply loosen the two axis shaft lockscrews, rotate the inner assembly 180°, and tighten lockscrews

To Set The Air Discharge Direction

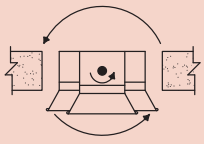
First loosen the four lockscrews on the faceplate, and turn the diffuser inner assembly until the axis shaft is in its proper plane.

Second, to set the inner assembly at the desired angle, loosen the axis shaft lockscrews, position the inner assembly, and tighten all lockscrews.





Size (Inside Dia)	KDJ - 1		KDJ - 2		KDJ - 3		KDJ - 4		J	P	S
	A x A	E x E	A x B	E x F	A x C	E x G	A x D	E x H			
200mm	275 x 275	215 x 215	275 x 550	215 x 490	275 x 825	215 x 765	275 x 1100	215 x 1040	30	80	50
250mm	350 x 350	265 x 265	350 x 675	265 x 590	350 x 995	265 x 900	350 x 1315	265 x 1225	45	110	55
300mm	415 x 415	315 x 315	415 x 785	315 x 675	415 x 1155	315 x 1155	415 x 1510	315 x 1400	75	135	65
375mm	450 x 450	390 x 390	450 x 900	390 x 850	450 x 1350	390 x 1305	450 x 1800	390 x 1750	100	175	80



Product Selection Check List

- Select Unit length based on desired performance characteristics.
- Select outlet type by Model Number
- Select Finish

200 mm Nozzle Diameter

KDJ-1-200 (1 NOZZLE)	CMH	221			323			425			510			595			680			731			765			816			850		
	Ps	7.5			12.5			22.5			35			45			60			70			75			87.5			95		
	NC	<20			<20			26			32			37			42			44			46			48			49		
	Throw - Jet	1.8	3.7	7.0	2.4	5.2	10.1	3.4	6.7	11.6	4.0	8.2	12.8	4.9	9.5	13.7	5.5	10.4	14.6	5.8	10.7	15.2	6.1	11.0	15.5	6.4	11.3	16.2	6.7	11.6	16.5
	Throw - Diff	0.9	1.8	3.7	1.2	2.7	5.5	1.8	3.7	6.1	2.1	4.3	6.7	2.4	5.2	7.3	2.7	5.5	7.6	3.0	5.8	7.9	3.4	5.8	8.2	3.4	6.1	8.5	3.7	6.1	8.5
KDJ-2-200 (2 NOZZLE)	CMH	425			646			850			1020			1190			1360			1445			1530			1615			1700		
	Ps	5			12.5			22.5			35			45			60			67.5			75			85			95		
	NC	<20			<20			26			32			37			42			44			46			48			49		
	Throw - Jet	2.4	4.9	9.8	3.7	7.3	14.3	4.9	9.8	16.5	5.8	11.6	18.0	6.7	13.4	19.2	7.6	14.6	20.7	8.2	14.9	21.3	8.5	15.5	22.0	9.1	15.9	22.6	9.8	16.5	23.2
	Throw - Diff	1.2	2.4	5.2	1.8	4.0	7.6	2.4	5.2	8.5	3.0	6.1	9.5	3.7	7.0	10.4	4.0	7.6	11.0	4.3	7.9	11.3	4.6	8.2	11.6	4.9	8.5	11.9	5.2	8.5	12.2
KDJ-3-200 (3 NOZZLE)	CMH	646			952			1275			1530			1785			2040			2176			2295			2431			2550		
	Ps	5			12.5			22.5			32.5			42.5			57.5			65			72.5			80			90		
	NC	<20			<20			26			32			37			42			44			46			48			49		
	Throw - Jet	3.0	6.1	11.9	4.3	8.8	17.4	5.8	11.9	20.1	7.0	14.0	22.0	8.2	16.5	23.8	9.5	18.0	25.3	10.1	18.6	26.2	10.7	18.9	26.8	11.3	19.5	27.7	11.9	20.1	28.4
	Throw - Diff	1.5	3.0	6.4	2.4	4.6	9.1	3.0	6.1	10.7	3.7	7.3	11.6	4.3	8.8	12.5	4.9	9.5	13.4	5.2	9.8	13.7	5.5	10.1	14.3	5.8	10.4	14.6	6.1	10.7	14.9
KDJ-4-200 (4 NOZZLE)	CMH	850			1275			1700			2040			2380			2720			2890			3060			3230			3400		
	Ps	5			12.5			22.5			32.5			45			60			67.5			75			82.5			92.5		
	NC	<20			<20			26			32			37			42			44			46			48			49		
	Throw - Jet	3.4	6.7	13.7	5.2	10.1	20.1	6.7	13.7	23.2	8.2	16.2	25.3	9.5	18.9	27.4	11.0	20.7	29.3	11.6	21.3	30.2	12.2	22.0	31.1	12.8	22.6	32.0	13.7	23.2	32.6
	Throw - Diff	1.8	3.7	7.3	2.7	5.5	10.7	3.7	7.3	12.2	4.3	8.5	13.4	5.2	10.1	14.6	5.8	11.0	15.5	6.1	11.3	15.9	6.4	11.6	16.5	6.7	11.9	16.8	7.3	12.2	17.4

250 mm Nozzle Diameter

KDJ-1-250 (1 NOZZLE)	CMH	629			748			1003			1139			1258			1513			1632			1768			1887			2006		
	Ps	12.5			17.5			32.5			40			50			72.5			85			100			112.5			127.5		
	NC	<20			<20			26			32			37			42			44			46			48			49		
	Throw - Jet	3.7	7.0	14.0	4.3	8.2	16.8	5.5	11.3	21.3	6.4	12.8	22.9	7.0	14.0	24.1	8.5	16.8	26.2	9.1	18.3	27.4	9.8	19.8	28.4	10.7	20.7	29.3	11.3	21.3	30.2
	Throw - Diff	1.8	3.7	7.3	2.1	4.3	8.8	3.0	5.8	11.3	3.4	6.7	11.9	3.7	7.3	12.5	4.6	8.8	13.7	4.9	9.5	14.3	5.2	10.4	14.9	5.5	11.0	15.5	5.8	11.3	15.9
KDJ-2-250 (2 NOZZLE)	CMH	1258			1513			2006			2261			2516			3026			3264			3519			3774			4029		
	Ps	12.5			17.5			32.5			40			50			72.5			82.5			97.5			110			127.5		
	NC	<20			<20			26			32			37			42			44			46			48			49		
	Throw - Jet	4.9	10.1	19.8	6.1	11.9	23.8	7.9	15.9	30.2	8.8	18.0	32.0	10.1	19.8	33.8	11.9	23.8	37.2	12.8	25.9	38.7	14.0	27.7	39.9	14.9	29.3	41.5	15.9	30.2	43.0
	Throw - Diff	2.7	5.2	10.4	3.0	6.4	12.5	4.3	8.2	15.9	4.6	9.5	16.8	5.2	10.4	17.7	6.4	12.5	19.5	6.7	13.4	20.4	7.3	14.6	21.0	7.9	15.5	22.0	8.2	15.9	22.6
KDJ-3-250 (3 NOZZLE)	CMH	1887			2261			3026			3400			3774			4522			4913			5287			5661			6035		
	Ps	12.5			17.5			32.5			40			50			72.5			85			97.5			112.5			127.5		
	NC	<20			<20			26			32			37			42			44			46			48			49		
	Throw - Jet	6.1	12.2	24.4	7.3	14.6	29.3	9.8	19.5	37.2	11.0	22.0	39.3	12.2	24.4	41.5	14.6	29.3	45.4	15.9	31.7	47.3	17.1	34.1	49.1	18.3	36.0	50.9	19.5	37.2	52.4
	Throw - Diff	3.0	6.4	12.8	4.0	7.6	15.2	5.2	10.4	19.5	5.8	11.6	20.7	6.4	12.8	22.0	7.6	15.2	23.8	8.2	16.8	25.0	8.8	18.0	25.9	9.5	18.9	26.8	10.4	19.5	27.4
KDJ-4-250 (4 NOZZLE)	CMH	2516			3026			4029			4522			5032			6035			6545			7038			7548			8058		
	Ps	12.5			17.5			32.5			40			50			72.5			85			100			115			130		
	NC	<20			<20			26			32			37			42			44			46			48			49		
	Throw - Jet	7.0	14.0	28.0	8.5	16.8	33.8	11.3	22.6	43.0	12.5	25.3	45.4	14.0	28.0	47.9	16.8	33.8	52.4	18.3	36.6	54.6	19.8	39.3	56.7	21.0	41.5	58.8	22.6	43.0	60.7
	Throw - Diff	3.7	7.3	14.6	4.6	8.8	17.7	5.8	11.9	22.6	6.7	13.4	23.8	7.3	14.6	25.3	8.8	17.7	27.4	9.8	19.2	28.7	10.4	20.7	29.9	11.0	22.0	30.8	11.9	22.6	32.0

300 mm Nozzle Diameter

KDJ-1-300 (1 NOZZLE)	CMH	816			986			1139			1309			1632			1955			2278			2618			2771			2941		
	Ps	10			12.5			17.5			22.5			37.5			52.5			72.5			95			107.5			120		
	NC	20			25			29			32			37			42			46			49			50			52		
	Throw - Jet	4.0	7.6	15.2	4.6	9.1	18.6	5.2	10.7	21.3	6.1	12.2	23.5	7.6	15.2	25.9	9.1	18.3	28.7	10.7	21.3	30.8	12.2	23.5	32.9	13.1	24.1	33.8	13.7	24.7	35.1
	Throw - Diff	2.1	4.0	8.2	2.4	4.9	10.1	2.7	5.8	11.6	3.4	6.7	12.5	4.0	8.2	14.0	4.9	9.8	15.2	5.8	11.6	16.5	6.7	12.5	17.7	7.0	12.8	18.3	7.3	13.4	18.9
KDJ-2-300 (2 NOZZLE)	CMH	1632			1955			2278			2618			3264			3910			4573			5219			5542			5882		
	Ps	0.04			0.05			0.07			0.1			0.15			0.22			0.3			0.38			0.43			0.49		
	NC	24			28			32			35			41			45			49			52			54			55		
	Throw - Jet	5.5	10.7	21.6	6.4	12.8	25.9	7.6	14.9	30.2	8.5	17.4	32.9	10.7	21.6	36.9	12.8	25.9	40.2	15.2	30.2	43.6	17.4	32.9	46.6	18.3	33.8	47.9	19.5	35.1	49.4
	Throw - Diff	3.0	5.8	11.6	3.4	7.0	14.0	4.0	8.2	16.2	4.6	9.5	17.7	5.8	11.6	19.8	7.0	14.0	21.6	8.2	16.2	23.5	9.1	17.7	25.0	9.8	18.3	25.6	10.4	18.9	26.5
KDJ-3-300 (3 NOZZLE)	CMH	2448			2941			3434			3910			4896			5882			6851			7837			8330			8806		
	Ps	0.04			0.05			0.07			0.09			0.15			0.21			0.28			0.37			0.42			0.47		
	NC	24			28			32			35			41			45			49			52			54			55		
	Throw - Jet	6.7	13.1	26.5	7.9	15.9	31.7	9.1	18.6	37.2	10.7	21.0	40.2	13.1	26.5	45.1	15.9	31.7	49.4	18.6	37.2	53.4	21.3	40.2	57.0	22.6	41.5	58.8	23.8	42.7	60.4
	Throw - Diff	3.7	7.0	14.3	4.3	8.5	17.1	4.9	10.1	19.8	5.8	11.3	21.6	7.0	14.3	24.1	8.5	17.1	26.5	10.1	19.8	28.7	11.3	21.6	30.5	12.2	22.3	31.7	12.8	22.9	32.3
KDJ-4-300 (4 NOZZLE)	CMH	3264			3910			4573			5219			6528			7837			9146			10438			11101			11747		
	Ps	0.04			0.05			0.07			0.09			0.15			0.21			0.29			0.38			0.43			0.48		
	NC	26			30			34			38			43			48			51			55			56			57		
	Throw - Jet	7.6	15.2	30.5	9.1	18.3	36.6	10.7	21.3	43.0	12.2	24.4	46.6	15.2	30.5	52.1	18.3	36.6	57.0	21.3	43.0	61.6	24.4	46.6	65.9	25.9	48.2	68.0	27.4	49.4	69.8
	Throw - Diff	4.0	8.2	16.5	4.9	9.8	19.5	5.8	11.6	22.9	6.7	13.1	25.0	8.2	16.5	28.0	9.8	19.8	30.5	11.6	22.9	33.2	13.1	25.0	35.4	14.0	25.9	36.6	14.6	26.5	37.5

*In the interest of product development, KMC reserves the right to make changes without notice.

375 mm Nozzle Diameter

KDJ-1-375 (1 NOZZLE)	CMH	1105			1326			1547			1768			2210			2652			3094			3536			3978			4420		
	Ps	0.03			0.04			0.05			0.07			0.11			0.16			0.21			0.28			0.35			0.43		
	NC	<20			20			24			27			33			38			42			45			48			51		
	Throw - Jet	4.6	9.1	18.3	5.5	11.0	22.0	6.4	12.8	25.6	7.3	14.6	28.0	9.1	18.3	31.1	11.0	22.0	34.1	12.8	25.6	36.9	14.6	28.0	39.6	16.5	29.6	41.8	18.3	31.1	44.2
	Throw - Diff	2.4	4.9	9.5	2.7	5.8	11.6	3.4	6.7	13.4	4.0	7.6	14.6	4.9	9.5	16.2	5.8	11.6	17.7	6.7	13.4	19.2	7.6	14.6	20.4	8.5	15.5	22.0	9.5	16.2	22.9
KDJ-2-375 (2 NOZZLE)	CMH	2210			2652			3094			3536			4420			5304			6188			7072			7956			8840		
	Ps	0.03			0.04			0.05			0.07			0.11			0.16			0.22			0.28			0.36			0.44		
	NC	<20			24			28			31			36			41			45			48			51			53		
	Throw - Jet	6.4	12.8	25.9	7.6	15.5	31.1	9.1	18.0	36.3	10.4	20.7	39.6	12.8	25.9	44.2	15.5	31.1	48.5	18.0	36.3	52.1	20.7	39.6	55.8	23.2	41.8	59.1	25.9	44.2	62.5
	Throw - Diff	3.4	6.7	13.4	4.0	8.2	16.2	4.6	9.5	18.9	5.5	10.7	20.4	6.7	13.4	22.9	8.2	16.2	25.3	9.5	18.9	27.1	10.7	20.4	29.0	12.2	22.0	30.8	13.4	22.9	32.6
KDJ-3-375 (3 NOZZLE)	CMH	3315			3978			4641			5304			6630			7956			9282			10608			11934			13260		
	Ps	0.03			0.04			0.05			0.07			0.11			0.15			0.21			0.27			0.35			0.43		
	NC	20			25			29			32			37			42			46			49			52			54		
	Throw - Jet	7.9	15.9	31.7	9.5	18.9	38.1	11.0	22.3	44.5	12.8	25.3	48.5	15.9	31.7	54.0	18.9	38.1	59.1	22.3	44.5	64.0	25.3	48.5	68.3	28.7	51.2	72.6	31.7	54.0	76.5
	Throw - Diff	4.3	8.2	16.5	4.9	10.1	19.8	5.8	11.6	23.2	6.7	13.1	25.3	8.2	16.5	28.0	10.1	19.8	30.8	11.6	23.2	33.2	13.1	25.3	35.7	14.9	26.8	37.8	16.5	28.0	39.9
KDJ-4-375 (4 NOZZLE)	CMH	4420			5304			6188			7072			8840			10608			12376			14144			15912			17680		
	Ps	0.03			0.04			0.05			0.07			0.11			0.15			0.21			0.28			0.35			0.43		
	NC	23			27			31			34			40			44			48			51			54			57		
	Throw - Jet	9.1	18.3	36.6	11.0	22.0	43.9	12.8	25.6	51.2	14.6	29.3	55.8	18.3	36.6	62.5	22.0	43.9	68.3	25.6	51.2	73.8	29.3	55.8	79.0	32.9	59.1	83.8	36.6	62.5	88.4
	Throw - Diff	4.9	9.5	19.2	5.8	11.6	22.9	6.7	13.4	26.8	7.6	15.2	29.0	9.5	19.2	32.6	11.6	22.9	35.7	13.4	26.8	38.4	15.2	29.0	41.2	17.1	30.8	43.6	19.2	32.6	46.0

Notes :

Test Standard

ANSI / ASHRAE standard 70

Sound Levels

NC is noise criteria curve that will not be exceeded at the operating point. This is determined by assuming a 10dB (ref: 10-12 watts) room attenuation that is subtracted from the power levels in each of the 2nd thru 7th octave bands

Throw

The numbers shown are throw distances, in meters, measured along the jet trajectory axis relating to terminal velocities of 1.0, 0.5, & 0.25 m/s, for a free, unbounded jet (no surface effects). Throws are shown for both the Jet air pattern and Diffused air pattern.

Terminal velocity is the air speed, in meters per second, measured in the supply air stream.

Pressure

PS represents Static Pressure, Pa

Vk, Jet Velocity

Meters per second (m/s), measured at the discharge of the diffuser

Notes