

Spot Diffusers

Introduction

KMC Spot diffusers are recommended for use in large spaces such as malls, exhibit hall etc., Where directional control of conditioned air is of very much important.

The adjustable nozzle models make it possible to adapt the jet discharge angle to suit differing operating conditions.

Application

- Spot diffusers provide an architecturally preferred high end appearance
- 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.
- Small nozzle sizes provide shorter throws for smaller spaces
- Spot air distribution ideal for industrial cooling, heating, or ventilating
- Side wall, ceiling, or duct mounted applications – any orientation
- Rapid temperature equalization eliminates Stratification

Product Features

- Eyeball assembly smoothly rotates in fixed mounting flange – seals prevent leakage
- Field adjustable directional control up to 75° total angle
- Single Element units are supplied as a standard
- Installation configurations include surface and end of round duct mounting.

Options

- Custom colors

Selection Procedure

The selections can be made by means of a straight read-off from the “Performance Data” for the selected Model.

- Determine the Air flow rate per outlet.
- Select the diffuser based on required Air flow rate against the outlet velocity, limiting pressure drop and sound level requirements.



Product Selection Check List

- Select unit type based on desired throw & room hangout.
- Select unit length based on desired performance characteristics.
- Select Finish

Performance Data

Nozzle Dia., (mm)	Jet Velocity	4	5	6	8	9	10	13	15	18	20
125	Static Pressure Ps	13	20	33	45	60	78	120	170	233	303
	Air Flow	45	61	76	91	107	122	153	183	214	244
	NC	<22	<22	<22	<22	<22	<22	24	28	32	36
	THROW, MAX	5	6	7	8	8	9	10	11	12	12
150	Static Pressure Ps	15	23	35	45	58	75	125	173	228	300
	Air Flow	68	85	102	119	136	153	204	238	272	323
	NC	<22	<22	<22	<22	<22	<22	23	27	31	36
	THROW, MAX	6	7	8	9	9	10	11	12	13	14
200	Static Pressure Ps	13	23	35	48	60	78	118	178	235	305
	Air Flow	102	153	187	221	255	289	357	442	510	578
	NC	<22	<22	<22	<22	22	24	29	34	38	42
	THROW, MAX	8	10	11	12	13	13	15	17	18	19
250	Static Pressure Ps	13	23	35	45	60	78	118	175	235	303
	Air Flow	204	289	357	425	493	561	697	850	986	1122
	NC	<22	<22	<22	<22	<22	23	28	33	37	40
	THROW, MAX	8	10	11	12	13	13	15	17	18	19
315	Static Pressure Ps	13	23	33	45	60	78	123	170	235	303
	Air Flow	289	391	493	595	680	782	986	1173	1377	1564
	NC	<22	<22	<22	<22	22	24	30	34	38	42
	THROW, MAX	13	16	18	19	21	22	25	27	30	31
400	Static Pressure Ps	13	23	33	45	60	78	118	170	230	300
	Air Flow	578	765	952	1139	1326	1530	1904	2278	2669	3043
	NC	<22	<22	<22	22	25	28	34	39	43	46
	THROW, MAX	19	22	24	27	29	31	35	38	41	44
500	Static Pressure Ps	13	20	33	45	60	78	120	170	233	300
	Air Flow	1037	1377	1734	2074	2414	2771	3468	4148	4845	5542
	NC	<22	<22	<22	23	26	29	35	40	44	47
	THROW, MAX	26	30	33	36	39	42	47	51	55	59

Notes :

- Jet velocity is m/s, meters per second

Test Standard

- ANSI / ASHRAE standard 70
- Isothermal conditions
- Non-uniform air flow into diffusers increase sound levels, operating pressures, and can distort the air distribution pattern into the space

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.

Pressure

- Ps represents static pressure, Pa

