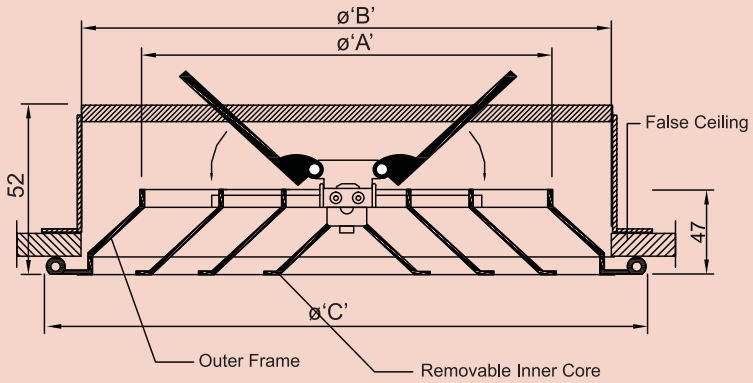
Circular Diffusers

Introduction
KMC Circular Diffusers have a circular cone with elegant styling to provide maximum air diffusion efficiency.

Application
- Recommended for supply air, constant or variable air volume heating, cooling, or ventilating
- Efficient air distribution in cooling applications at temperature differentials as high as 16° C
- 360° air pattern delivery maintains horizontal pattern with or without ceiling effect
- Expanding cone design provides excellent horizontal air discharge preventing drafts in the occupied zone

Product Features
- Removable inner cores permit easy installation and access to duct
- Optional Volume control damper
- Powder Coated to RAL 9010 as standard
- Custom colors available on request

Selection Procedure
Selections can be made by means of a straight read-off from the “Performance Data” for the selected model.
- Determine the air volume flow rate per outlet.
- Establish the required Throw (Refer Notes for Throw Pattern)
- Select the diffuser based on required Air flow rate against the limiting pressure drop and sound level requirements.



Dimensions in mm			
Nominal Dia	ΦA	ΦB	ΦC
160	159	213	247
200	199	264	287
250	249	315	337
315	314	366	402
355	354	417	442
400	399	468	487

All Stated Specifications are subject to change without notice

Product Selection Check List
- Select Unit size based on specified inlet diameter.
- Select volume control accessory, it desired.
- Select Finish.

Performance Data

Neck Size ø mm	Nom Duct Area, m^2	Neck Velocity	2.0			2.5			3.0			4.0			5.0			6.0			7.0			8.0			9.0			10.0		
		Velocity Pressure	2.5			5			5			10			15			22.5			30			40			50			62.5		
150	0.015	CMH	109			136			163			218			272			326			367			422			476			530		
		Ps	7.5			12.5			20			25			42.5			52.5			67.5			87.5			112.5			140		
		NC	<20			<20			<20			23			29			34			37			41			45			48		
		Throw	0.3	0.6	1.2	0.6	0.9	1.5	0.6	0.9	2.1	0.9	1.2	2.7	1.2	1.5	3.4	1.2	2.1	4.0	1.5	2.1	4.6	1.8	2.4	4.9	1.8	2.7	5.2	2.1	3.4	5.5
200	0.026	CMH	190			231			286			381			476			571			666			762			857			952		
		Ps	5			7.5			10			17.5			30			42.5			57.5			72.5			92.5			115		
		NC	<20			<20			<20			20			26			31			36			39			43			45		
		Throw	0.6	0.9	1.5	0.6	0.9	2.1	0.9	1.2	2.4	1.2	1.5	3.4	1.5	2.1	4.3	1.5	2.4	4.9	1.8	3.0	5.8	2.1	3.4	6.7	2.4	3.7	7.0	2.7	4.3	7.3
250	0.041	CMH	299			367			449			598			748			884			1034			1183			1333			1482		
		Ps	2.5			5			7.5			12.5			20			27.5			37.5			47.5			60			75		
		NC	<20			<20			<20			21			27			31			36			39			43			46		
		Throw	0.6	0.9	2.1	0.9	1.2	2.4	0.9	1.5	3.0	1.5	2.1	4.3	1.8	2.4	5.2	2.1	3.0	6.1	2.4	3.7	7.0	2.7	4.0	8.2	3.0	4.6	8.8	3.4	5.2	9.1
300	0.058	CMH	422			530			639			857			1074			1278			1496			1714			1918			2135		
		Ps	5			7.5			10			17.5			27.5			37.5			52.5			67.5			85			105		
		NC	<20			<20			<20			27			33			38			42			46			49			52		
		Throw	0.9	1.2	2.4	0.9	1.5	3.0	1.2	1.8	3.7	1.8	2.4	5.2	2.1	3.0	6.4	2.4	3.7	7.6	3.0	4.3	8.8	3.4	5.2	10.1	3.7	5.8	10.7	4.3	6.4	11.0
350	0.089	CMH	585			728			870			1163			1455			1748			2040			2326			2530			2829		
		Ps	5			7.5			10			17.5			27.5			37.5			52.5			67.5			85			105		
		NC	<20			<20			21			28			34			39			44			47			51			53		
		Throw	0.9	1.5	3.0	1.2	1.8	4.0	1.5	2.4	4.6	2.1	3.0	6.1	2.7	4.0	7.9	3.0	4.6	8.8	3.7	5.5	9.8	4.3	6.1	11.0	4.6	7.0	11.6	5.2	7.6	12.5
400	0.117	CMH	762			952			1142			1523			1904			2285			2666			3046			3250			3332		
		Ps	7.5			12.5			20			25			37.5			47.5			60			70			87.5			115		
		NC	<20			<20			21			28			34			39			44			47			51			53		
		Throw	0.9	1.5	3.0	1.2	1.8	4.0	1.5	2.4	4.6	2.1	3.0	6.1	2.7	4.0	7.9	3.0	4.6	8.5	3.7	5.5	9.8	4.3	6.1	10.7	4.6	7.0	11.6	5.2	7.6	13.4
450	0.132	CMH	966			1197			1442			1918			2407			2883			3359			3849			4325			4801		
		Ps	7.5			12.5			20			25			37.5			47.5			65			85			107.5			132.5		
		NC	<20			<20			23			30			37			42			46			50			53			56		
		Throw	1.5	2.1	3.7	1.8	3.0	4.6	2.4	3.7	5.8	2.7	4.3	7.6	3.0	4.6	9.5	3.7	5.8	10.7	4.3	6.7	12.2	4.9	7.6	13.1	5.8	8.5	14.0	6.4	9.5	14.6

Notes :

- Neck velocity in 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, measured along the jet trajectory axis relating to terminal velocities of 0.75 m/s, 0.5 m/s & 0.25 m/s and include a surface effect
- Terminal velocity is the air speed, in meters per second, measured in the supply air stream.
- For exposed duct installations, throws are 70% of the table values above.

Pressure

- Ps represents static pressure, Pa
- Pt total pressure can be calculated by adding the Velocity pressure and Static pressure (Ps), in Pa
- All pressures are stated and calculated in Pa

Notes