



DIFFUSERS

# MULTI-DIRECTION CEILING DIFFUSER

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# MULTI-DIRECTION CEILING DIFFUSER

## MCD

Multi-direction Ceiling Diffuser is a common use of all air outlets. The diffusers are basically consist of a series of equally flared louvres which form a series of concentric air passages; and for easy installation purpose, are made in 2 parts, an outer frame with duct connection collar and an easily removable centre core.

### DESIGN AND CONSTRUCTION

With its distinctive design of a series of concentric air passages and geometrical pattern, the flush-faced diffusers blend well with any modern or conservative ceiling systems. Besides projecting an uniform and neat appearance to the interior, various air volumes can be obtained by adjusting the volume control device.

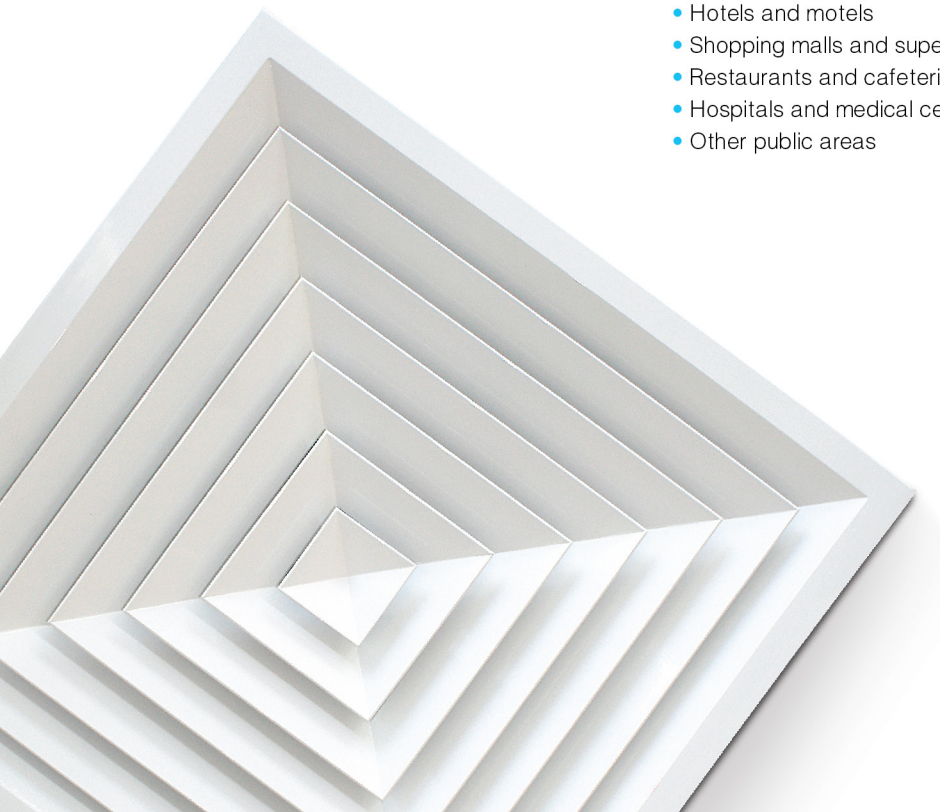
ADF Multi-direction Ceiling Diffusers come in Galvanised Steel and Aluminium construction, are available in square and rectangular shapes; finished with baked enamel or natural anodised aluminium.

### FEATURES

- Offers good air entrainment.
- Allows diffusion of large air quantity.
- Rapid temperature equalization.
- Even air distribution.
- Stable air throw pattern.
- Detachable centre core for easy maintenance.
- Volume control device can be adjusted from front.

### APPLICATIONS

- Office and factory buildings
- Hotels and motels
- Shopping malls and supermarkets
- Restaurants and cafeterias
- Hospitals and medical centres
- Other public areas

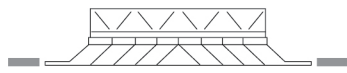


# MULTI-DIRECTION CEILING DIFFUSER 4-WAY THROW

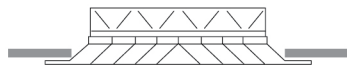
Model MCD-4T

## PHYSICAL DIMENSION

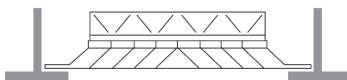
### MOUNTING GUIDE



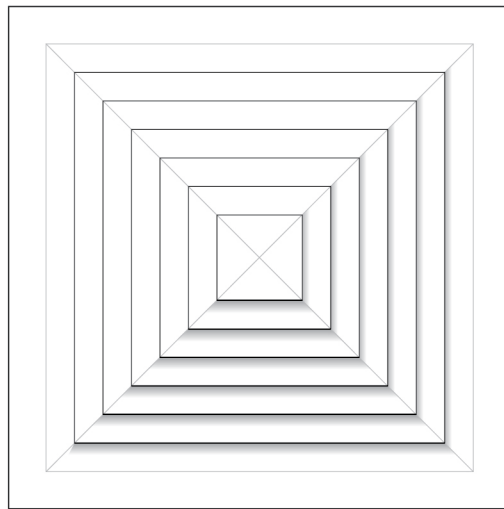
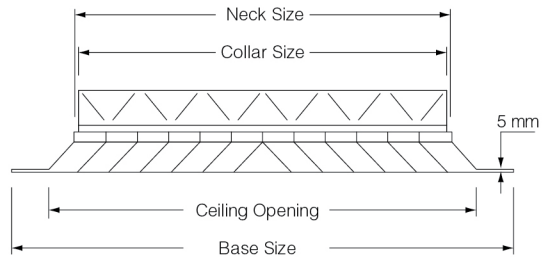
Flush Mounting



Surface Mounting



Lay-on Mounting



Neck Size mm	Collar Size mm	Base Size mm	Ceiling Opening mm
150 x 150	144 x 144	600 x 600	535 x 535
200 x 200	194 x 194	600 x 600	535 x 535
250 x 250	244 x 244	600 x 600	535 x 535
300 x 300	294 x 294	600 x 600	535 x 535
350 x 350	344 x 344	600 x 600	535 x 535
400 x 400	394 x 394	600 x 600	535 x 535
450 x 450	444 x 444	600 x 600	535 x 535
480 x 480	474 x 474	600 x 600	535 x 535

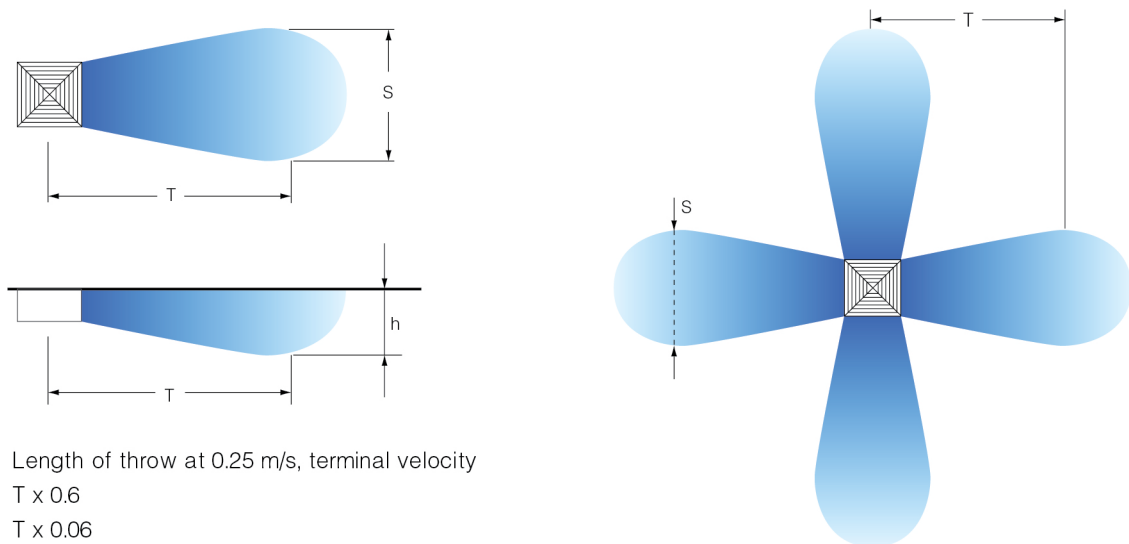
# MULTI-DIRECTION CEILING DIFFUSER 4-WAY THROW

Model MCD-4T

## PERFORMANCE DATA

Neck Size mm x mm	ΔP Pa												
		5	8	12	15	19	24	29	41	54	69	85	103
150 x 150	Air, l/s	-	-	51	60	68	77	85	102	119	136	153	170
	Throw, m	-	-	1	2	3	3	4	5	5	6	6	7
	NR	-	-	7	12	17	21	24	30	36	40	44	48
200 x 200	Air, l/s	-	-	95	110	126	142	158	189	221	252	284	315
	Throw, m	-	-	3	4	4	5	5	6	7	7	8	9
	NR	-	-	10	16	20	24	25	34	39	44	48	51
250 x 250	Air, l/s	-	124	149	173	198	223	248	297	347	396	446	495
	Throw, m	-	3	4	5	5	6	6	7	8	9	9	10
	NR	-	9	14	18	23	27	30	36	42	46	50	54
300 x 300	Air, l/s	-	176	212	247	282	317	353	423	494	564	635	705
	Throw, m	-	4	5	6	6	7	7	8	9	10	11	11
	NR	-	12	17	20	25	29	32	32	44	48	52	56
350 x 350	Air, l/s	168	210	252	294	336	378	420	504	588	672	756	840
	Throw, m	4	5	6	6	7	7	8	9	9	10	11	>11
	NR	8	13	18	22	26	30	33	39	45	49	53	57
400 x 400	Air, l/s	186	233	279	326	372	419	465	558	651	744	837	930
	Throw, m	4	5	6	6	7	8	8	9	10	11	>11	>11
	NR	9	14	19	23	26	30	34	40	45	50	54	57
450 x 450	Air, l/s	195	244	293	341	390	439	488	585	683	780	878	975
	Throw, m	4	5	6	7	7	8	8	9	10	11	>11	>11
	NR	9	15	19	23	27	30	34	40	45	50	54	57
480 x 480	Air, l/s	205	256	308	359	410	461	513	615	718	820	923	1025
	Throw, m	4	5	6	7	7	8	8	9	10	11	>11	>11
	NR	9	15	20	23	27	31	34	40	46	50	54	58

## ISOTHERMAL AIR THROW PATTERN

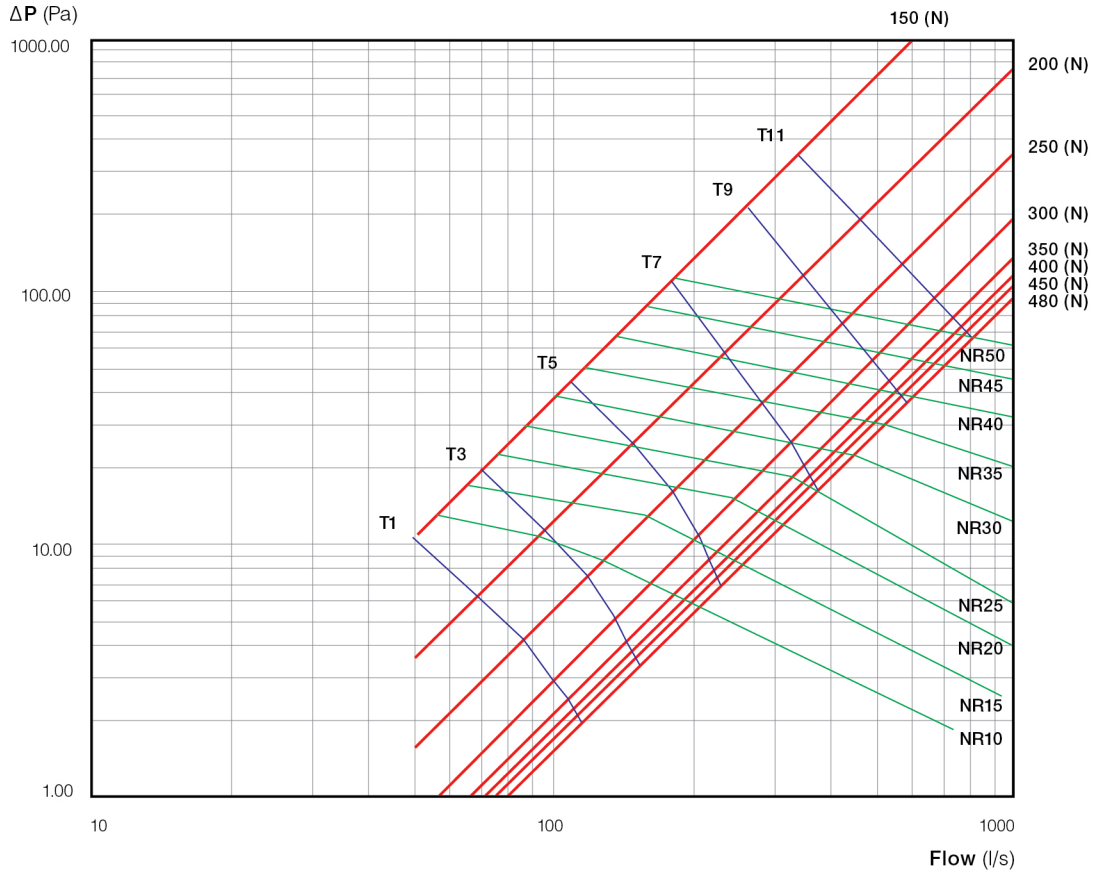


# MULTI-DIRECTION CEILING DIFFUSER 4-WAY THROW

Model MCD-4T

## SELECTION NOMOGRAPH

MODEL MCD-4T  
PRESSURE DROP vs FLOW vs THROW vs NR  
(Throw in metres, for velocity of 0.25 m/s)

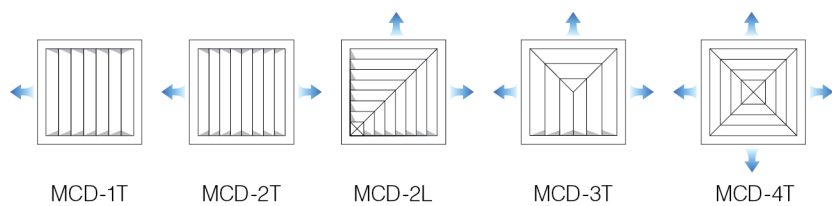


## SELECTION GUIDE

1. Select from horizontal axis the required air flow, plot a vertical line up.
2. Select the required pressure drop by plotting a horizontal line to cross-section with the plotted air flow line.
3. The cross-section point will determine the desired diffuser with the closest Neck Size, Throw and NR.

## MULTI-DIRECTIONAL CEILING DIFFUSER – SQUARE TYPE

OPTIONAL DESIGNS



# MULTI-DIRECTION CEILING DIFFUSER RECTANGULAR

Model MCD-R4T



## PHYSICAL DIMENSION

Neck Size mm	Collar Size mm	Base Size mm	Ceiling Opening mm
250 x 150	219 x 144	600 x 300	535 x 235
375 x 150	389 x 194	600 x 300	535 x 235
450 x 150	444 x 244	600 x 300	535 x 235
600 x 450	596 x 294	1200 x 600	1135 x 535

## PERFORMANCE DATA

Neck Size mm x mm	$\Delta P$ Pa												
		5	8	12	15	19	24	29	41	54	69	85	103
250 x 150	Air, l/s	45	53	62	72	80	95	105	125	160	175	187	199
	Throw, m	1	2	3	3	4	4	5	5	6	7	8	9
	NR	7	10	12	15	18	22	25	28	32	35	37	39
375 x 150	Air, l/s	65	82	100	113	126	149	163	185	225	252	270	299
	Throw, m	1.5	1.5	2	2	3	4	5	6	7	9	10	11
	NR	7	10	15	18	22	25	26	30	34	36	38	42
450 x 150	Air, l/s	85	114	138	158	172	185	203	220	290	325	350	400
	Throw, m	1.5	2	3	4	5	6	7	8	9	10	11	>11
	NR	7	13	17	20	23	25	27	32	36	38	40	45
600 x 450	Air, l/s	290	400	465	523	568	655	722	848	998	1130	1250	1375
	Throw, m	1.5	2	3	4	5	6	7	8	9	10	11	>11
	NR	7	13	17	20	23	25	27	32	36	38	40	45

## MULTI-DIRECTIONAL CEILING DIFFUSER – RECTANGULAR TYPE OPTIONAL DESIGNS

