MASTER GRILLE

ماستر غريل

MCD

Diffusers | Square Ceiling, Modular Core | Description

Square Ceiling Diffusers (continued)

Modular Core • 1, 2, 3 or 4-Way • Adjustable

MCD

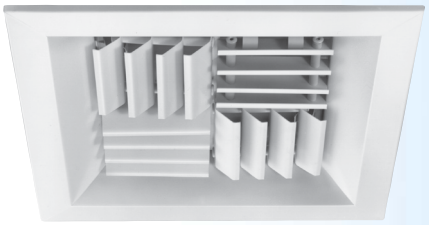
Models:

MCD • Aluminum

These Products Include:

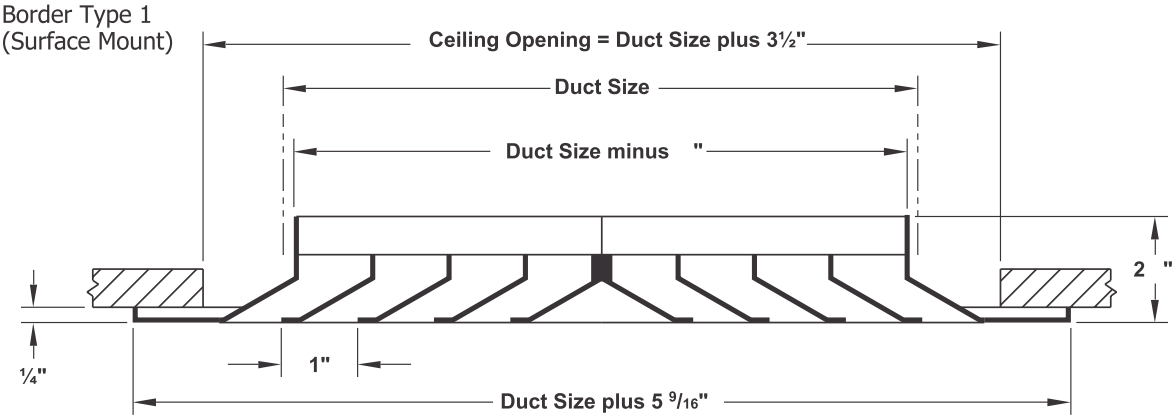
- Standard Finish: #26 White.

- Titus Model MCD modular core diffuser is extremely flexible; it can be adjusted for a one-, two-, three-, or four-way pattern after it has been installed.
- Maintains a horizontal flow pattern from maximum to minimum cfm, making the MCD an excellent choice for variable air volume systems.
- Optional AG-95 opposed blade damper is accessible for adjustment from the diffuser face by removing a core module.
- MCD is shipped with the modular core set for four-way discharge.



- Material is aluminum with miscellaneous steel parts (MCD).
- New core design results in a higher quality overall assembly, and easier changes to modular core placement.
- Now available with round neck for flex duct applications.

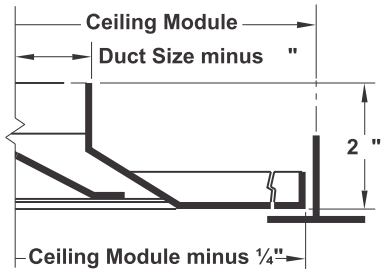
Border Type 1
(Surface Mount)



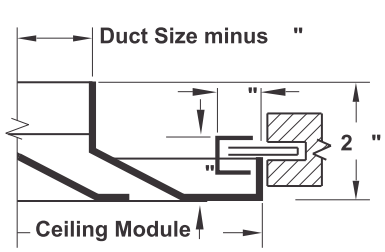
Note: Two-way opposite pattern shown.

Available Border Types

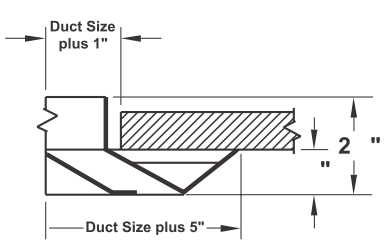
Border Type 3
(Lay-In)



Border Type 4
(Spline)



Border Type 6
(Beveled Drop Face)



Diffusers | Square Ceiling, Modular Core | Dimensions

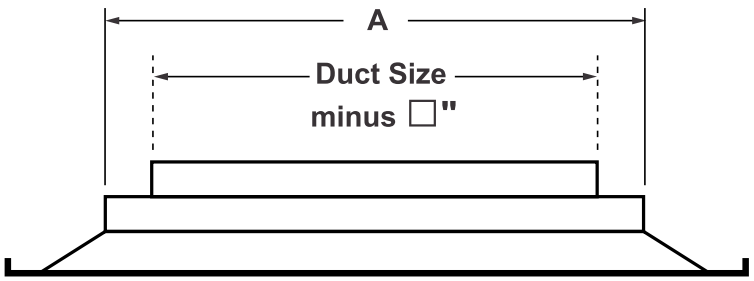
Available Duct Sizes

Border Types 1, 6			Border Types 3, 4		
Duct Sizes (inches)					Available Module Size
6x6	14x14	22x22	6x6	14x14	24 x 24
8x8	16x16	24x24	8x8	16x16	
10x10	18x18		10x10	18x18	
12x12	20x20		12x12		

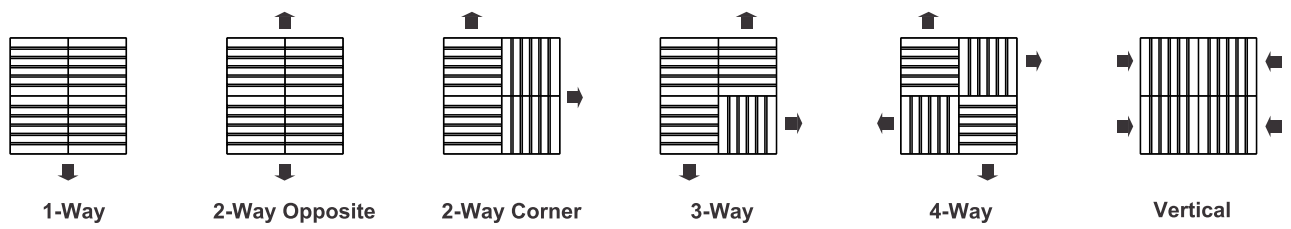
Round Duct Sizes

Border Type 3		
Available Module Size	Minimum A	Available Round Duct Size
24 x 24	6x6 12x12	6 6, 8, 10, 12

Note: Round duct sizes are available only in sizes shown.adjustable cores.



Modular Core Adjustments



Diffusers | Square Ceiling, Modular Core | Performance Data

Performance Data

MCD • Square Ceiling • Modular Core • 1-, 2-, 3- or 4-way Blow Pattern

	Neck Velocity	300	400	500	600	700	800	900	1000	1100
	Velocity Pressure	0.006	0.010	0.016	0.022	0.031	0.040	0.051	0.062	0.075
6 x 6 Neck	Airflow, cfm	75	100	125	150	175	200	225	250	275
	Total Pressure	0.011	0.019	0.030	0.043	0.059	0.077	0.097	0.120	0.145
	NC (Noise Criteria)	-	-	-	11	15	19	22	25	28
	1-Way - Horizontal Throw	8-11-16	10-13-18	12-15-21	13-16-23	14-17-24	15-18-26	16-20-28	17-21-29	18-22-30
	2-Way - Horizontal Throw	6-9-12	8-10-14	9-11-16	10-12-17	11-13-19	12-14-20	12-15-21	13-16-22	14-17-23
	3-Way - Horizontal Throw	5-8-12	7-10-13	9-11-15	10-12-16	10-13-18	11-13-19	12-14-20	12-15-21	13-16-22
	4-Way - Horizontal Throw	4-5-8	5-6-9	6-7-10	6-8-11	7-8-12	7-9-13	8-9-13	8-10-14	9-10-15
8 x 8 Neck	Airflow, cfm	133	178	222	267	311	356	400	444	489
	Total Pressure	0.013	0.023	0.036	0.053	0.071	0.093	0.118	0.146	0.177
	NC (Noise Criteria)	-	-	12	17	21	25	28	31	33
	1-Way - Horizontal Throw	10-15-21	14-17-25	16-19-27	17-21-30	19-23-32	20-25-35	21-26-37	22-27-39	23-29-41
	2-Way - Horizontal Throw	8-12-16	11-13-19	12-15-21	13-16-23	14-18-25	15-19-27	16-20-28	17-21-30	18-22-31
	3-Way - Horizontal Throw	7-11-16	10-13-18	12-14-20	13-16-22	14-17-24	15-18-25	16-19-27	16-20-28	17-21-30
	4-Way - Horizontal Throw	5-7-10	6-8-12	8-9-13	8-10-15	9-11-16	10-12-17	10-13-18	11-13-19	11-14-20
10 x 10 Neck	Airflow, cfm	208	278	347	417	486	556	625	694	764
	Total Pressure	0.016	0.029	0.045	0.065	0.088	0.115	0.145	0.179	0.217
	NC (Noise Criteria)	-	-	17	21	26	29	32	35	38
	1-Way - Horizontal Throw	13-19-27	17-22-31	20-24-34	22-27-38	23-29-41	25-31-43	27-33-46	28-34-48	29-36-51
	2-Way - Horizontal Throw	10-14-20	13-17-24	15-19-26	17-20-29	18-22-31	19-24-33	20-25-35	22-26-37	23-28-39
	3-Way - Horizontal Throw	9-14-19	12-16-22	14-18-25	16-19-27	17-21-30	18-22-32	19-24-34	20-25-35	21-26-37
	4-Way - Horizontal Throw	6-9-13	8-11-15	10-12-17	11-13-18	11-14-20	12-15-21	13-16-22	14-17-23	14-17-25
12 x 12 Neck	Airflow, cfm	300	400	500	600	700	800	900	1000	1100
	Total Pressure	0.020	0.035	0.055	0.079	0.108	0.141	0.178	0.220	0.266
	NC (Noise Criteria)	-	14	20	25	29	33	36	39	41
	1-Way - Horizontal Throw	16-23-32	21-26-37	24-29-41	26-32-45	28-34-49	30-37-52	32-39-55	34-41-58	35-43-61
	2-Way - Horizontal Throw	12-17-24	16-20-28	18-22-32	20-24-35	22-26-37	23-28-40	24-30-42	26-32-45	27-33-47
	3-Way - Horizontal Throw	11-16-23	14-19-27	17-21-30	19-23-33	21-25-36	22-27-38	23-29-40	25-30-42	26-32-45
	4-Way - Horizontal Throw	7-11-15	10-13-18	12-14-20	13-15-22	14-17-24	15-18-25	15-19-27	16-20-28	17-21-30
14 X 14 Neck	Airflow, cfm	408	544	681	817	953	1089	1225	1361	1497
	Total Pressure	0.024	0.043	0.067	0.097	0.132	0.172	0.217	0.268	0.325
	NC (Noise Criteria)	-	17	23	28	32	36	39	42	44
	1-Way - Horizontal Throw	18-26-37	24-30-43	28-34-48	30-37-53	33-40-57	35-43-61	37-46-64	39-48-68	41-50-71
	2-Way - Horizontal Throw	14-20-29	19-23-33	21-26-37	23-29-40	25-31-44	27-33-47	29-35-49	30-37-52	32-39-55
	3-Way - Horizontal Throw	13-19-27	17-22-31	20-25-35	22-27-38	24-29-41	26-31-44	27-33-47	29-35-50	30-37-52
	4-Way - Horizontal Throw	8-13-18	11-15-21	13-16-23	15-18-25	16-19-28	17-21-29	18-22-31	19-23-33	20-24-34
16 X 16 Neck	Airflow, cfm	533	711	889	1067	1244	1422	1600	1778	1956
	Total Pressure	0.029	0.052	0.081	0.117	0.159	0.207	0.263	0.324	0.392
	NC (Noise Criteria)	12	20	26	31	35	39	42	45	47
	1-Way - Horizontal Throw	21-30-42	28-35-49	32-39-55	35-42-60	37-46-65	40-49-69	42-52-74	45-55-78	47-57-81
	2-Way - Horizontal Throw	16-23-33	21-27-38	24-30-42	27-33-46	29-35-50	31-38-53	33-40-57	34-42-60	36-44-63
	3-Way - Horizontal Throw	14-22-31	19-25-36	23-28-40	25-31-44	27-34-47	29-36-51	31-38-54	33-40-57	34-42-59
	4-Way - Horizontal Throw	10-14-21	13-17-24	15-19-27	17-21-29	18-22-31	19-24-34	21-25-36	22-27-38	23-28-39
18 X18 Neck	Airflow, cfm	675	900	1125	1350	1575	1800	2025	2250	2475
	Total Pressure	0.035	0.062	0.097	0.139	0.190	0.248	0.314	0.387	0.469
	NC (Noise Criteria)	15	22	28	33	37	41	44	47	49
	1-Way - Horizontal Throw	28-34-48	32-39-55	36-44-62	39-48-68	42-52-73	45-55-78	48-59-83	50-62-87	53-65-91
	2-Way - Horizontal Throw	21-26-37	24-30-42	27-34-47	30-37-52	32-40-56	35-42-60	37-45-64	39-47-67	41-50-70
	3-Way - Horizontal Throw	20-25-35	23-29-40	26-32-45	29-35-49	31-38-53	33-40-57	35-43-60	37-45-64	39-47-67
	4-Way - Horizontal Throw	13-16-23	15-19-27	17-21-30	19-23-33	20-25-35	22-27-38	23-28-40	24-30-42	26-31-44
20 X 20 Neck	Airflow, cfm	833	1111	1389	1667	1944	2222	2500	2778	3056
	Total Pressure	0.041	0.073	0.114	0.165	0.224	0.293	0.371	0.458	0.554
	NC (Noise Criteria)	17	24	30	35	39	43	46	49	52
	1-Way - Horizontal Throw	31-38-53	35-43-61	40-48-69	43-53-75	47-57-81	50-61-87	53-65-92	56-69-97	59-72-102
	2-Way - Horizontal Throw	24-29-41	27-33-47	30-37-53	33-41-58	36-44-62	38-47-67	41-50-71	43-53-75	45-55-78
	3-Way - Horizontal Throw	22-27-39	26-32-45	29-35-50	32-39-55	34-42-59	37-45-63	39-48-67	41-50-71	43-53-74
	4-Way - Horizontal Throw	15-18-26	17-21-30	19-23-33	21-26-36	23-28-39	24-30-42	26-32-45	27-33-47	28-35-49

Diffusers | Square Ceiling, Modular Core | Performance Data

Performance Data (continued)

MCD • Square Ceiling • Modular Core • 1-, 2-, 3- or 4-way Blow Pattern

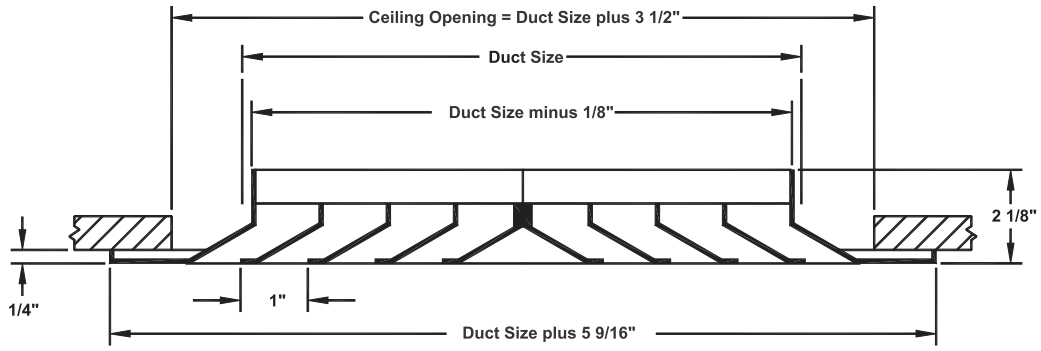
	Neck Velocity	300	400	500	600	700	800	900	1000	1100
	Velocity Pressure	0.006	0.010	0.016	0.022	0.031	0.040	0.051	0.062	0.075
22 X 22 Neck	Airflow, cfm	1008	1344	1681	2017	2353	2689	3025	3361	3697
	Total Pressure	0.048	0.086	0.134	0.193	0.263	0.343	0.434	0.536	0.648
	NC (Noise Criteria)	19	26	32	37	41	45	48	51	53
	1-Way - Horizontal Throw	34-41-58	39-48-67	44-53-75	48-58-83	51-63-89	55-67-95	58-72-101	62-75-107	65-79-112
	2-Way - Horizontal Throw	26-32-45	30-37-52	33-41-58	37-45-64	40-49-69	42-52-73	45-55-78	47-58-82	50-61-86
	3-Way - Horizontal Throw	25-30-43	28-35-49	32-39-55	35-43-60	38-46-65	40-49-70	43-52-74	45-55-78	47-58-82
	4-Way - Horizontal Throw	16-20-28	19-23-33	21-26-37	23-28-40	25-31-43	27-33-46	28-35-49	30-37-52	31-38-54
24 X 24 Neck	Airflow, cfm	1200	1600	2000	2400	2800	3200	3600	4000	4400
	Total Pressure	0.056	0.099	0.155	0.224	0.304	0.398	0.503	0.621	0.752
	NC (Noise Criteria)	20	28	34	39	43	47	50	53	55
	1-Way - Horizontal Throw	37-45-64	42-52-74	47-58-82	52-64-90	56-69-97	60-74-104	64-78-110	67-82-116	70-86-122
	2-Way - Horizontal Throw	28-35-49	33-40-57	37-45-63	40-49-69	43-53-75	46-57-80	49-60-85	52-63-89	54-66-94
	3-Way - Horizontal Throw	27-33-47	31-38-54	35-42-60	38-47-66	41-50-71	44-54-76	47-57-81	49-60-85	51-63-89
	4-Way - Horizontal Throw	18-22-31	21-25-36	23-28-40	25-31-44	27-33-47	29-36-50	31-38-53	33-40-56	34-42-59
6" Round in 6x6 Square Neck	Air Flow, cfm	60	80	100	120	140	160	180	200	220
	Total Pressure	0.016	0.029	0.046	0.066	0.089	0.117	0.148	0.182	0.221
	NC (Noise Criteria)	-	15	19	23	26	28	30	33	34
	1-way Throw	3-5-10	5-7-14	6-9-15	7-10-17	8-12-18	9-14-20	10-15-21	12-15-22	13-16-23
	2-way Throw	3-5-10	4-7-11	6-8-12	7-10-14	8-10-15	9-11-16	10-12-17	10-12-18	11-13-18
	3-way Throw	2-3-7	3-5-9	4-6-11	5-7-12	5-8-13	6-9-14	7-10-14	8-11-15	9-11-16
	4-way Throw	1-2-4	1-3-5	2-3-7	3-4-8	3-5-9	3-5-10	4-6-10	4-7-11	5-7-11
6" Round in 12x12 Square Neck	Air Flow, cfm	60	80	100	120	140	160	180	200	220
	Total Pressure	0.007	0.012	0.019	0.027	0.037	0.048	0.061	0.075	0.091
	NC (Noise Criteria)	15	22	26	30	33	36	39	41	43
	1-way Throw	1-3-9	3-6-12	4-7-13	6-9-15	7-10-16	8-12-17	9-13-18	10-13-19	11-14-20
	2-way Throw	1-2-7	2-4-9	3-6-10	4-7-11	5-8-12	6-9-13	7-10-14	8-10-14	8-11-15
	3-way Throw	1-2-6	2-4-8	3-5-9	4-6-10	5-7-11	5-8-12	6-9-12	7-9-13	7-10-14
	4-way Throw	1-2-4	1-2-5	2-3-6	2-4-7	3-4-8	3-5-8	4-5-9	4-6-9	4-7-9
8" Round in 12x12 Square Neck	Air Flow, cfm	105	140	175	209	244	279	314	349	384
	Total Pressure	0.008	0.014	0.022	0.032	0.043	0.056	0.071	0.088	0.106
	NC (Noise Criteria)	-	-	15	19	22	25	27	29	31
	1-way Throw	3-6-13	5-9-17	7-11-19	9-13-21	10-15-23	12-17-24	13-18-26	15-19-27	16-20-28
	2-way Throw	3-6-12	5-8-15	7-10-17	8-12-18	9-14-20	10-15-21	12-16-22	13-17-24	14-18-25
	3-way Throw	2-5-9	4-6-12	5-8-15	6-9-17	7-11-18	8-12-19	9-14-20	10-15-22	11-16-23
	4-way Throw	2-4-7	3-5-9	4-6-10	5-7-11	5-8-12	6-9-12	7-9-13	8-10-14	8-10-15
10" Round in 12x12 Square Neck	Air Flow, cfm	164	218	273	327	382	436	491	545	600
	Total Pressure	0.010	0.019	0.029	0.042	0.057	0.074	0.094	0.116	0.140
	NC (Noise Criteria)	-	-	14	18	22	25	28	31	33
	1-way Throw	5-10-18	8-13-20	11-16-23	13-18-25	15-19-27	17-20-29	18-22-31	19-23-32	19-24-34
	2-way Throw	3-7-15	5-10-18	8-12-20	10-15-22	11-17-24	13-18-26	15-19-27	16-20-29	17-21-30
	3-way Throw	2-4-10	4-7-13	6-8-15	7-10-16	8-12-18	9-13-19	10-14-20	11-15-21	12-16-22
	4-way Throw	2-4-8	3-5-10	4-7-11	5-8-12	6-9-13	7-10-14	8-10-14	9-11-15	9-11-16
12" Round in 12x12 Square Neck	Air Flow, cfm	236	314	393	471	550	628	707	785	864
	Total Pressure	0.014	0.025	0.040	0.057	0.078	0.101	0.128	0.158	0.192
	NC (Noise Criteria)	-	12	18	23	26	30	33	35	38
	1-way Throw	13-17-24	16-19-28	18-22-31	19-24-34	21-26-36	22-28-39	24-29-41	25-31-44	26-32-46
	2-way Throw	8-12-18	10-15-21	13-16-23	15-18-26	16-20-28	17-21-29	18-22-31	19-23-33	20-24-35
	3-way Throw	7-11-19	9-14-22	12-17-25	14-19-27	16-21-29	18-22-31	19-23-33	20-25-35	21-26-37
	4-way Throw	2-5-12	4-8-15	6-10-17	8-12-18	10-14-20	11-15-21	12-16-22	14-17-23	14-17-25

- Data obtained from tests conducted in accordance with ANSI/ASHRAE Standard 70-2006. Actual performance, with flexible duct inlet, may vary in the field. See the section, Engineering Guidelines of this catalog for additional information.
- Dash (-) in space denotes an NC value of less than 10.
- Throw values given are for terminal velocities of 150, 100 and 50 fpm and for isothermal conditions. See the section, Engineering Guidelines for the catalog throw data information.
- NC values based on octave band 2 to 7 sound power levels minus a room absorption of 10 dB.
- Each NC value represents the noise criteria curve that will not be exceeded by the sound pressure in any of the octave bands, 2 through 7, with a room absorption of 10 dB, re 10^{-12} watts.
- All pressures are given in inches of water.
- To obtain static pressure, subtract the velocity pressure from the total pressure.

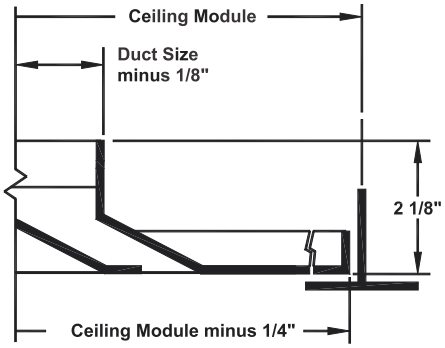
MCD 1.0

☐ **MCD** 1, 2, 3 or 4 Way Adjustable Discharge Pattern
Square Ceiling Diffusers • Modular Core • Aluminum

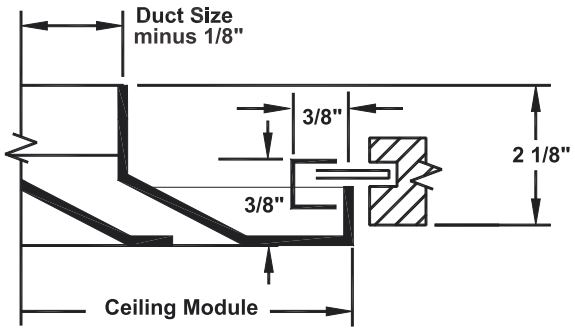
☐ Border Type 1 (Surface Mount)



☐ Border Type 3 (Lay-In)



☐ Border Type 4 (Spline)



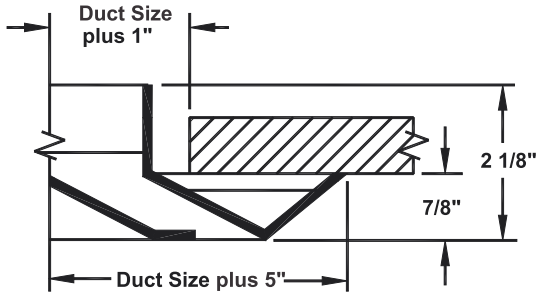
Available Duct Sizes

Border Type 1, 6		
Duct Size		
6x6	14x14	22x22
8x8	16x16	24x24
10x10	18x18	
12x12	20x20	

Border Type 3, 4	
Available odule Size	Duct Size
24x24	6x6 8x8 10x10 12x12 14x14 16x16 18x18

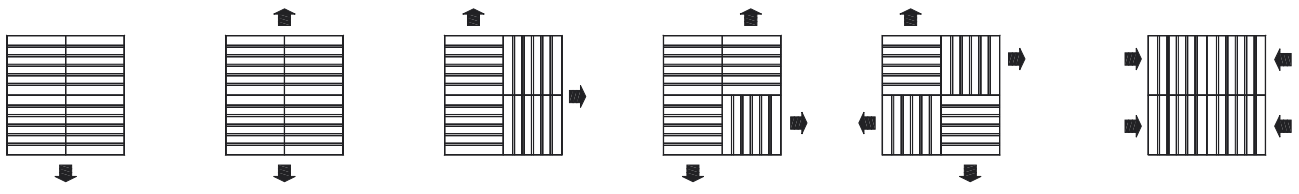
Note: All units have 4 individually adjustable cores.

☐ Border Type 6 (Beveled Drop Face)



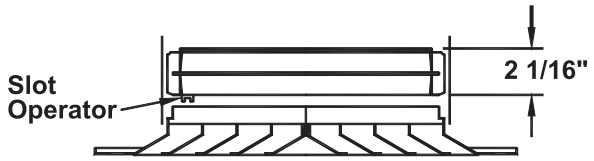
Modular Core Adjustments

Dimensions are in inches.



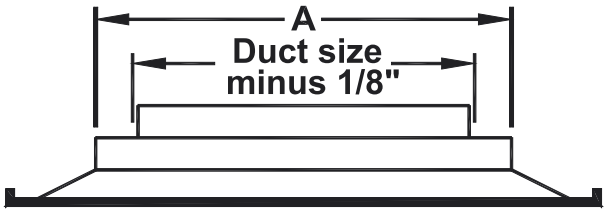
Accessories (Optional) Check ☑ if provided.

☐ Model AG-95-AA Opposed Blade Damper



Available in duct sizes 6 x 6 through 24 x 24.

Available Duct Sizes, Round Necks



Border Type 3		
Available odule Size	inimum A	Available Round Duct Size
24x24	6x6	6
	12x12	6, 8, 10, 12•

*Note: Round duct sizes are available only in sizes shown.

Standard Finish: #26 White

General Description

- The Model MCD modular core diffuser is an extremely flexible diffuser. The model MCD can be adjusted for 1, 2, 3 or 4-way air patterns after being installed.
- Model MCD diffuser maintains a horizontal flow pattern from maximum to minimum CFM making it an excellent choice for variable air volume applications.
- Optional AG-95 or AG-95-AA (square and rectangular) opposed blade damper is accessible from the face by removing a modular core.
- MCD is shipped with the modular cores set for 4-way throw.
- Material is aluminum with miscellaneous steel pieces.