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diffusers



duct mounted



retrofit



MRI compatible



open ceiling



wood grains



energy solutions



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OMNI / OMNI-AA

- The Titus OMNI diffuser satisfies architectural as well as engineering criteria. Its strong, clean, unobtrusive lines harmonize with the ceiling system, without sacrificing performance.
- The curvature of the OMNI backpan works with the formed edges of the face panel to deliver a uniform 360° horizontal air pattern, without excessive noise or pressure drop
- The OMNI diffuser is an excellent choice for variable air volume systems. The air pattern remains tight and horizontal for effective room air distribution, even when the volume varies over a wide range.
- The face panel is constructed from 22-gauge steel or heavy gauge aluminum. The edges of the face panel are formed to a radius for a solid, crisp appearance. The formed edges also stiffen the face panel and assure a straight and level surface.



OMNI / OMNI-AA



retrofit

MRI compatible

wood grains

metric sizes

MODELS:

OMNI / Steel

OMNI-AA / Aluminum

FINISHES:

Standard Finish - #26 White

Optional Finish - Wood grains (See Wood grains Brochure for Finishes)

OVERVIEW

Square Plaque

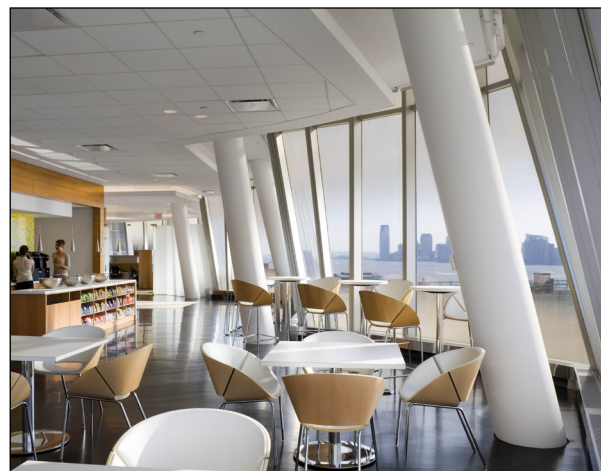
The Titus OMNI (steel plaque) & OMNI-AA (all-aluminum plaque) face diffusers that satisfy architectural and engineering criteria. Their strong, clean, unobtrusive lines harmonize with ceiling systems without sacrificing performance. The curvature of the OMNI & OMNI-AA backpans work with the formed edges of the face panel to deliver a uniform 360 degree horizontal air pattern, without excessive noise or pressure drop. They are an excellent selection for variable air volume systems.

ADDITIONAL FEATURES

- The face panel of the OMNI is laser-welded to the four hanger brackets. This process provides the OMNI face with a smooth finish under any lighting conditions.
- The OMNI-AA is entirely constructed of aluminum, perfect for MRI applications.



See website for Specifications



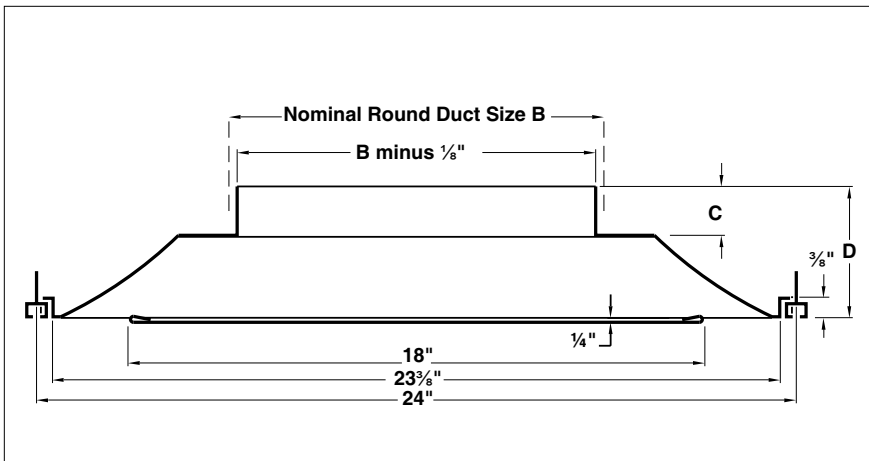
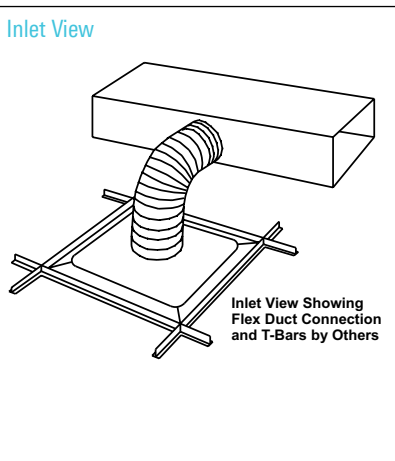
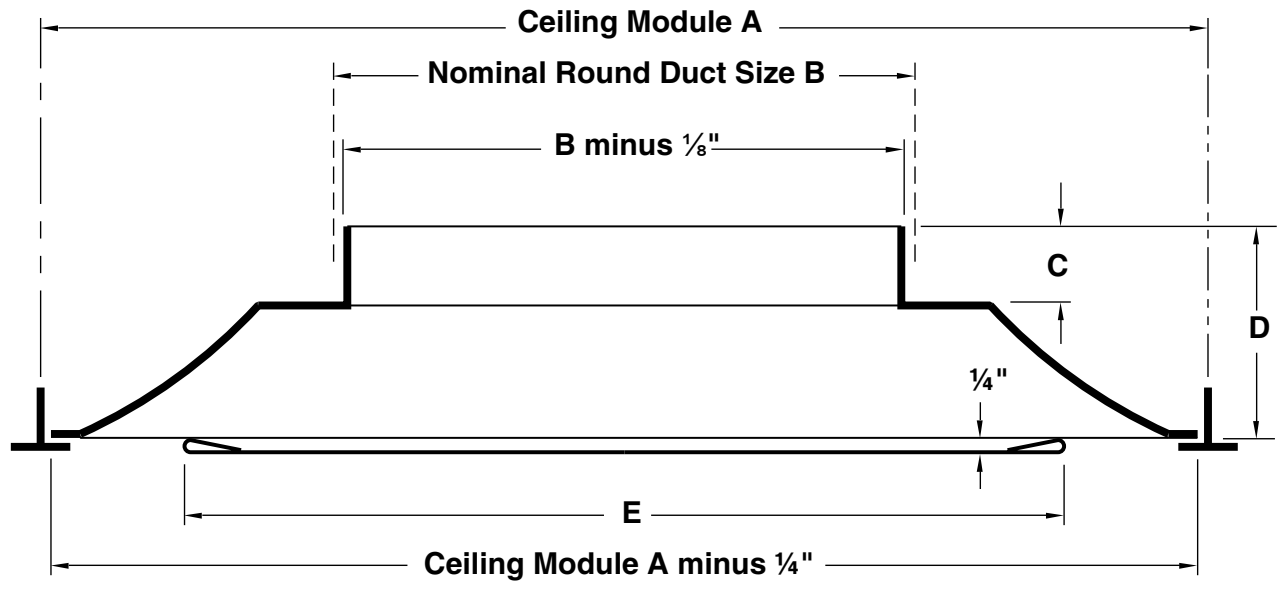
Several OMNI diffusers installed in the breakroom of a corporate office

- The face panel is held in place by four hook brackets that positively engage into slots in the backpan. The panel can be removed from the backpan for easy installation of the diffuser or for access to the optional damper.
- Optional factory-insulated R-6 foil-backed insulation available for 24 x 24" full face models, neck sizes 6-15.

DIMENSIONS

OMNI / OMNI-AA DIMENSIONS

Frame Type 3
(Lay-In) Full Face



Ceiling Module A	Nominal Round Duct Size B	C	D	E
12 x 12 (note 2)	4, 5 (note 1)	2 7/8	4	9
	6, 7	1 1/8	2 1/4	
	8	1 1/4	2 3/8	
20 x 20	4, 5 (note 1)	2 3/4	5 1/4	13 5/8
	6, 8, 10	3/4	3 1/4	
24 x 24	6, 8	1 1/4	3 3/4	18
	10, 12, 14, 15	1 3/8	3 7/8	

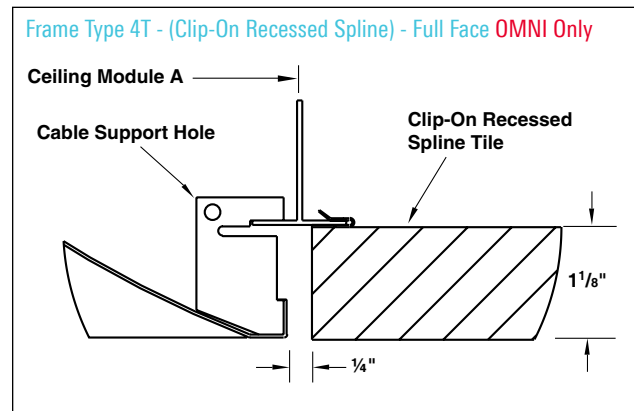
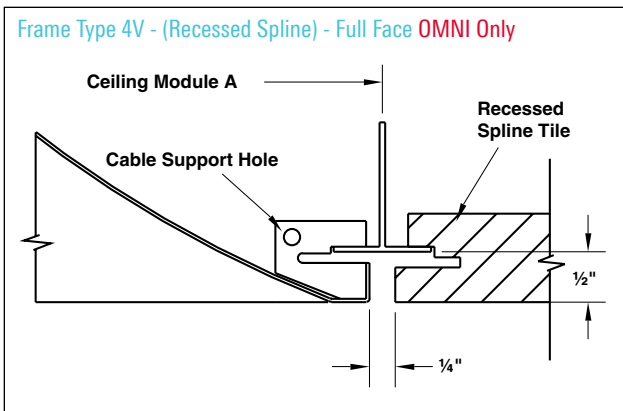
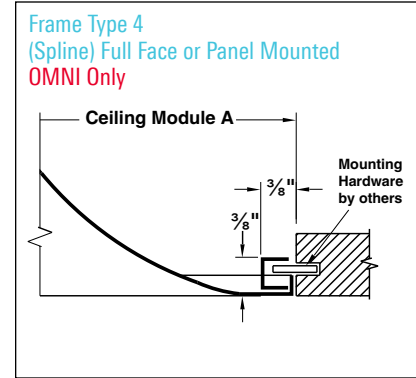
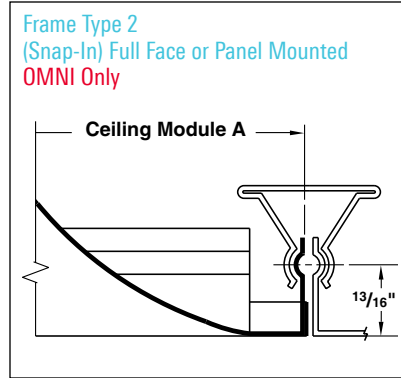
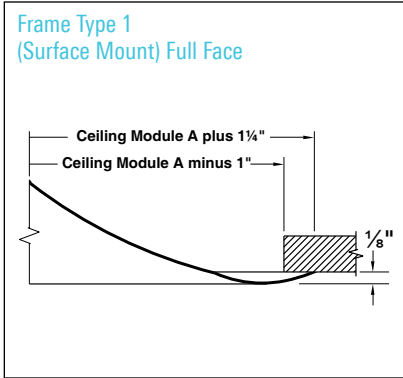
Note 1: Adapter is provided for sizes 4 and 5

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DIMENSIONS

ADDITIONAL FRAME TYPES



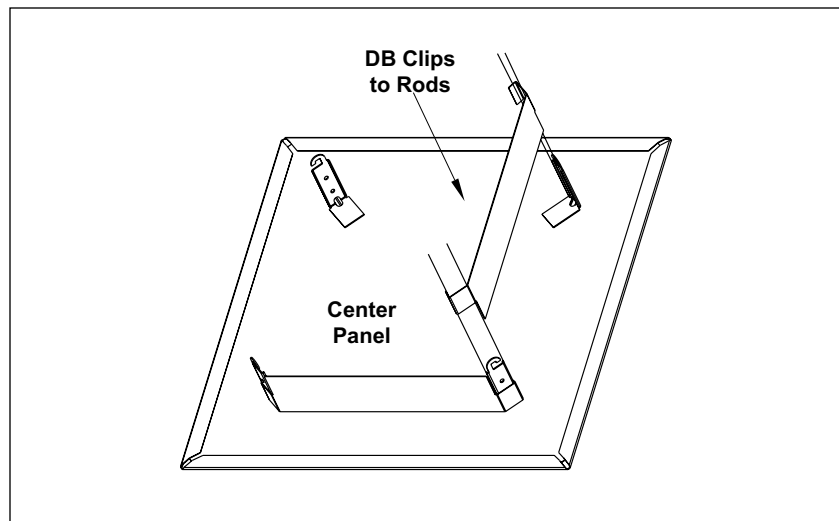
Note: If Border 4V is adjacent to a light fixture a gap will be visible above the backpan. A T-bar extender is available to fill this void, available from the ceiling manufacturer.

Borders 4V and 4T have four mounting clips. Two clips on opposed sides with holes to attach mounting wire from above.

OPTIONAL DIRECTIONAL BLOW CLIPS

Available Model:
DB

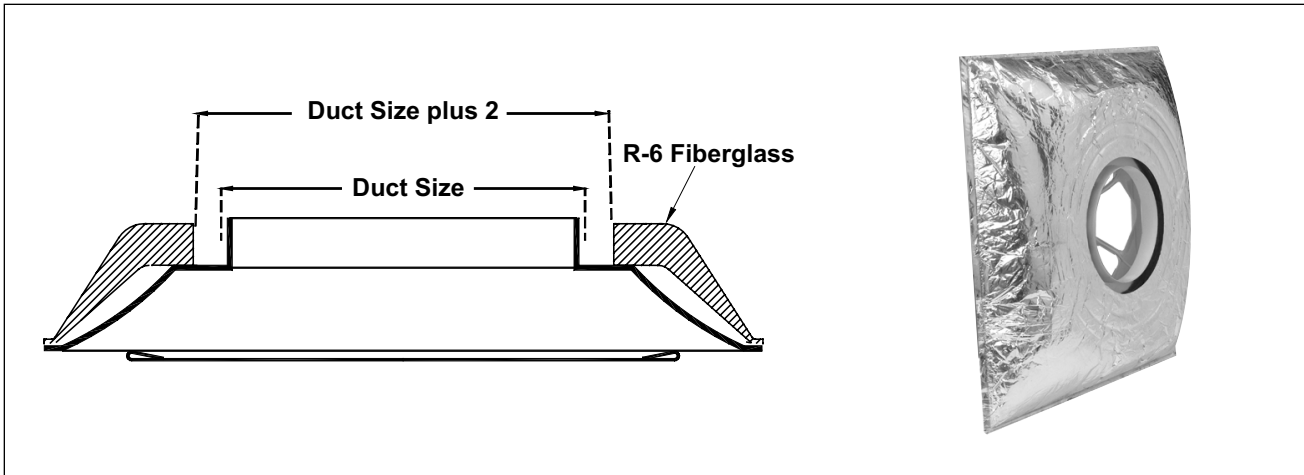
- Converts OMNI diffuser from standard 4-way blow to 1-, 2- or 3-way
- Clips attach to hanger brackets on upper face of center panel



DIMENSIONS

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OPTIONAL MOLDED INSULATION BLANKET



Insulation is R-6 where blanket has the most depth. One inch clearance on each side of neck is left for insulated duct connection. 24 x 24" full face models only.

REMOVING AND REPLACING FACE PANEL - ADJUSTING OPTIONAL DAMPER

Installing Face Panel

1. Insert the hook brackets into the slots in the backpan
2. Rotate the face panel clockwise until...
3. The hooks positively engage in the secondary slots in the backpan

Removing Face Panel

1. Lift the faceplate towards the backpan to disengage the hook brackets from the backpan slots
2. Rotate the faceplate counterclockwise
3. Lower the faceplate away from the backpan

Adjusting Optional Damper

1. Remove face panel as above
2. Use flat blade screwdriver to turn operator shaft at center of damper
3. Replace face panel

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DIMENSIONS

OMNI / OMNI-AA - ARCHITECTURAL CEILING / SQUARE PLAQUE

		Neck Velocity	400	500	600	700	800	900	1000	1200	1400
		Velocity Pressure	0.010	0.016	0.022	0.031	0.040	0.051	0.062	0.090	0.122
12" x 12" Module Size	4" Round Neck	Airflow, cfm	35	44	52	61	70	79	87	105	122
		Total Pressure, Inches WG	0.034	0.053	0.076	0.103	0.134	0.170	0.210	0.303	0.412
		Throw Feet	1-2-3	1-2-4	2-2-5	2-3-6	2-3-6	2-4-7	3-4-8	3-5-10	4-6-11
		NC (Noise Criteria)	-	-	12	17	21	24	27	33	38
	5" Round Neck	Airflow, cfm	55	68	82	95	109	123	136	164	191
		Total Pressure, Inches WG	0.040	0.063	0.091	0.124	0.161	0.204	0.252	0.363	0.494
		Throw Feet	2-2-5	2-3-6	2-3-7	3-4-8	3-5-9	3-5-10	4-6-12	5-7-14	5-8-15
		NC (Noise Criteria)	-	-	12	17	21	24	28	33	38
	6" Round Neck	Airflow, cfm	78	98	118	137	157	176	196	235	274
		Total Pressure, Inches WG	0.049	0.076	0.109	0.149	0.194	0.246	0.303	0.437	0.594
		Throw Feet	2-3-6	3-4-8	3-5-9	4-5-11	4-6-12	5-7-14	5-8-15	6-9-17	7-11-18
		NC (Noise Criteria)	-	-	12	17	21	24	28	33	38
7" Round Neck	Airflow, cfm	107	134	160	187	214	240	267	320	374	
	Total Pressure, Inches WG	0.058	0.091	0.131	0.178	0.233	0.295	0.364	0.524	0.714	
	Throw Feet	3-4-8	3-5-9	4-6-11	4-7-13	5-8-15	6-9-17	6-9-18	8-11-20	9-13-21	
	NC (Noise Criteria)	-	-	12	17	21	24	28	33	38	
8" Round Neck	Airflow, cfm	140	175	209	244	279	314	349	419	489	
	Total Pressure, Inches WG	0.070	0.109	0.156	0.213	0.278	0.352	0.434	0.626	0.852	
	Throw Feet	3-5-9	4-6-11	5-7-14	5-8-16	6-9-18	7-10-19	8-11-20	9-14-22	11-16-24	
	NC (Noise Criteria)	-	-	12	17	21	24	28	33	38	
20" x 20" Module Size	6" Dia.	Airflow, cfm	78	98	118	137	157	173	196	235	274
		Total Pressure	0.016	0.025	0.036	0.049	0.063	.080	0.100	0.142	0.193
		NC (Noise Criteria)	-	-	-	16	20	24	28	34	39
		Throw feet	1-1-3	1-1-4	1-2-4	1-3-5	1-3-6	2-3-6	2-4-7	3-5-8	3-5-8
	8" Dia.	Airflow, cfm	140	175	209	244	279	314	349	419	489
		Total Pressure	0.019	0.030	0.043	0.058	0.075	.096	0.118	0.169	0.229
		NC (Noise Criteria)	-	-	-	18	22	26	30	36	41
		Throw feet	1-2-4	2-3-6	2-4-6	3-4-7	3-5-7	3-5-8	4-6-8	5-6-9	5-7-10
	10" Dia.	Airflow, cfm	218	273	327	382	436	491	545	654	763
		Total Pressure	0.024	0.038	0.055	0.074	0.096	.123	0.151	0.215	0.292
		NC (Noise Criteria)	-	-	-	18	23	27	31	37	42
		Throw feet	3-4-6	3-4-7	4-5-8	4-6-8	5-6-9	5-7-9	6-7-10	6-8-11	7-9-12
24" x 24" Module Size	6" Round Neck	Airflow, cfm	78	98	118	137	157	176	196	235	274
		Total Pressure, Inches WG	0.011	0.017	0.025	0.034	0.044	0.056	0.069	0.099	0.135
		Throw Feet	1-1-4	1-2-4	1-3-5	2-3-6	2-4-7	3-4-8	3-4-9	4-5-11	4-6-11
		NC (Noise Criteria)	-	-	-	-	13	17	21	28	34
	8" Round Neck	Airflow, cfm	140	175	209	244	279	314	349	419	489
		Total Pressure, Inches WG	0.018	0.028	0.040	0.055	0.072	0.091	0.112	0.162	0.220
		Throw Feet	2-3-6	2-4-7	3-4-9	3-5-10	4-6-12	4-6-12	5-7-13	6-9-14	7-10-15
		NC (Noise Criteria)	-	-	-	12	17	21	25	32	38
	10" Round Neck	Airflow, cfm	218	273	327	382	436	491	545	654	763
		Total Pressure, Inches WG	0.027	0.042	0.060	0.082	0.107	0.136	0.168	0.241	0.329
		Throw Feet	3-4-8	3-5-10	4-6-12	5-7-13	5-8-14	6-9-15	7-10-16	8-12-18	10-13-19
		NC (Noise Criteria)	-	-	-	15	20	24	28	35	41
12" Round Neck	Airflow, cfm	314	393	471	550	628	707	785	942	1099	
	Total Pressure, Inches WG	0.038	0.059	0.085	0.115	0.151	0.191	0.235	0.339	0.461	
	Throw Feet	4-5-11	5-7-14	5-8-15	6-9-16	7-11-17	8-12-18	9-14-19	11-15-21	13-16-23	
	NC (Noise Criteria)	-	-	12	18	23	27	31	38	43	
14" Round Neck	Airflow, cfm	428	535	641	748	855	962	1069	1283	1497	
	Total Pressure, Inches WG	0.051	0.079	0.114	0.155	0.202	0.256	0.316	0.455	0.619	
	Throw Feet	4-7-13	6-8-16	7-10-17	8-12-19	9-13-20	10-15-21	11-16-23	13-17-25	15-19-27	
	NC (Noise Criteria)	-	-	14	20	25	29	33	40	45	
15" Round Neck	Airflow, cfm	491	614	736	859	982	1104	1227	1472	1718	
	Total Pressure, Inches WG	0.058	0.090	0.130	0.177	0.231	0.292	0.360	0.519	0.706	
	Throw Feet	5-7-15	6-9-17	7-11-19	9-13-20	10-15-22	11-16-23	12-17-24	15-19-26	17-20-29	
	NC (Noise Criteria)	-	-	15	21	26	30	34	41	46	



- 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 Engineering Guidelines section of this catalog for additional information.
- If the diffuser is mounted on an exposed duct, the throw values are 70% of those listed in the table
- Throw values are given for terminal velocities of 150, 100 and 50 fpm and for isothermal conditions. See the section, Engineering Guidelines for catalog throw data information.
- NC values based on octave band 2 to 7 sound power levels minus a room absorption of 10 dB
- Dash (-) in space denotes an NC value of less than 10
- Each NC value represents the noise criteria curve which 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

