



ARABIAN THERMAL AIRE INDUSTRIES
NEW RANGE OF TESTED & CERTIFIED
SOUND ATTENUATORS



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Introduction:

ATAI is a leading manufacturer within the GCC for the supply of certified sound attenuators. This is achieved through professional engineer design, manufacturing and supply service that we provide to each of our clients, new and old.

This catalog will provide you with our range of ATAI, **Tested & Certified ARAMCO 9 COM** sound attenuator systems. These new attenuators are designed to achieve the required performances as set out in the ASTM Standards E477-06a for prefabricated attenuators.



“Arabian Thermal Aire Industries Co Ltd, certifies that the attenuators shown herein are licensed to bear the AMCA Seal. The rating shown are based on tests and procedures performed in accordance with AMCA Publication 1011 and comply with requirements of AMCA certified Rating Program. AMCA Certified Rating Seal applies dynamic insertion loss, airflow, generated noise and pressure drop”.

The following ATAI Sound Attenuator models enclosed within this document have been tested in accordance to **AMCA Certified Ratings Program and are licensed to bear the AMCA Seal.**

Manufacturing Process

Outer casings of rectangular silencer modules are constructed from of 22 gauge (0.8mm) galvanized steel in accordance with HVAC DW 144 recommended construction for high pressure rectangular duct-work. Seam shall be lock formed and mastic filled. Interior partitions for rectangular silencers shall be made of not less than 24 gauge (0.8mm) galvanized perforated steel. All splitters are aerodynamically bull nosed.

Infill Material

The infill material will be of inorganic mineral or glass fiber of a density sufficient to obtain the specified acoustic performance and be packed under not less than 5% compression to eliminate voids due to vibration and settling. Materials shall be inert, vermin and moisture proof.

Accessories

- | | |
|---|-----------------------------------|
| Slide on flanges | Integral inlet and outlet plenums |
| Casing thicknesses in a range of sizes | Fire Rated Silencers |
| Angle flanges | Bend Silencers |
| Vertical or horizontal splitter orientation | Cylindrical Silencers |
| Removable splitters | Crosstalk Silencers |
| Melinex wrapped infill Glass cloth wrapped infill | |



ATAI ASA D Model Dynamic insertion Loss ,dB										
Model & Dimension	Silencer Face Velocity	Pressure Drop	Octave Band Centre Frequency(Hz)							
WXHXL(mm)	M/S	Pa	63	125	250	500	1K	2K	4K	8K
ASA 3D Model (600mm x 600mm x 900mm)	-7.62	73	2	7	12	14	17	19	12	7
	-5.08	33	2	5	9	14	17	19	12	7
	-2.5	10	2	5	13	24	31	19	12	8
	0	2	3	5	10	18	17	18	11	9
	2.5	10	3	5	10	18	23	18	17	14
	5.08	33	2	5	13	17	22	18	17	14
	7.62	73	2	5	13	17	22	18	17	14
ASA 4D Model (600mm x 600mm x 1800mm)	-7.62	85	3	7	16	26	32	23	15	9
	-5.08	40	3	6	16	25	32	22	15	10
	-2.5	10	2	6	15	25	31	22	15	10
	0	0	3	5	14	24	32	23	16	13
	2.5	10	3	5	13	24	31	23	17	14
	5.08	38	2	5	13	23	31	23	17	14
	7.62	85	2	5	12	23	30	23	17	14
ASA 9D Model (600mm x 600mm x 2700mm)	-7.62	127	12	22	31	37	36	34	31	29
	-5.08	52	9	19	40	45	41	38	43	34
	-2.5	15	9	18	41	50	49	53	47	35
	0	0	6	16	39	51	54	54	49	38
	2.5	15	6	15	38	50	54	54	49	39
	5.08	52	5	14	31	39	41	45	47	39
	7.62	127	5	13	21	28	29	34	37	37

ATAI ASA D Model Generated Sound Power, dB										
Model & Dimension	Silencer Face Velocity	Pressure Drop	Octave Band Centre Frequency(Hz)							
WXHXL(mm)	M/S	Pa	63	125	250	500	1K	2K	4K	8K
ASA 3D Model (600mm x 600mm x 900mm)	-7.62	73	64	60	52	54	56	59	45	36
	-5.08	33	58	46	44	47	44	40	31	24
	-2.5	10	57	44	39	30	25	19	19	23
	2.5	10	57	44	30	30	25	19	19	23
	5.08	33	58	46	44	47	44	40	31	24
	7.62	73	64	60	52	54	53	59	45	36
	ASA 4D Model (600mm x 600mm x 1200mm)	-7.62	85	67	65	53	57	58	56	49
-5.08		40	62	48	48	53	50	43	34	26
-2.5		10	60	43	35	37	24	19	19	24
2.5		10	57	44	30	30	25	19	19	23
5.08		40	58	46	44	47	44	40	31	24
7.62		85	64	60	52	54	53	50	45	36
ASA 9D Model (600mm x 600mm x 2700mm)		-7.62	127	69	56	53	56	58	58	52
	-5.08	52	62	47	47	52	52	45	37	27
	-2.5	15	61	42	40	37	27	19	20	24
	2.5	15	63	48	36	29	24	18	20	24
	5.08	52	63	50	44	43	42	37	28	24
	7.62	127	66	60	52	52	51	49	44	34



Face Area Adjustment factors						
Face area M2	0.5	1	2	4	6	16
L _w Adjustment Factor dB	-3	0	+3	+6	+9	+12

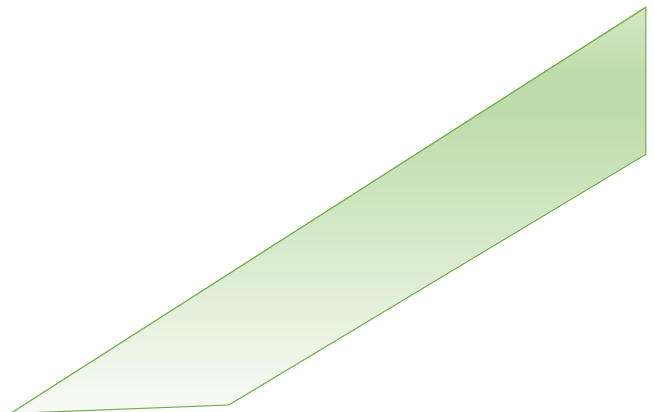
Attenuator model Diagram to be added

ATAI attenuators have been tested and certified following procedures in accordance with applicable sections of ASTM E477, 06-a.

Dynamic Insertion Loss and Self-Noise Acoustic Performance Data were obtained in AMCA, USA test facility using the duct-to-room reverberant test facility with air flowing through the silencers.

Forward Flow (+) occurs when noise and air travel in the same direction, as in a typical supply or fan discharge system.

Reverse Flow (-) occurs when noise and air travel in opposite directions, as in a typical return or intake.





Aerodynamic Performance Data						
Model			Static pressure drop N/m ²			
ASA 4D			10	40	85	159
ASA 9D			15	52	127	169
Width	Height	Silencer Face Area (m ²)	Air Flows , m ³ /s			
375	300	0.112	0.25	0.57	0.85	1.14
375	450	0.169	0.38	0.86	1.29	1.72
375	600	0.225	0.50	1.14	1.71	2.29
375	750	0.281	0.63	1.43	2.14	2.85
375	900	0.338	0.76	1.72	2.57	3.43
750	450	0.338	0.76	1.72	2.57	3.43
750	600	0.45	1.01	2.27	3.43	4.57
750	750	0.562	1.26	2.85	4.28	5.71
750	900	0.675	1.51	3.43	5.14	6.86
750	1050	0.788	1.77	4.00	6.00	8
750	1200	0.900	2.02	4.57	6.86	9.14
750	1350	1.010	2.26	5.13	7.7	10.26
750	1500	1.125	2.52	5.72	8.57	11.43
1125	450	0.510	1.14	2.56	3.89	5.18
1125	600	0.670	1.5	3.4	5.1	6.81
1125	750	0.840	1.9	4.27	6.4	8.53
1125	900	1.010	2.27	5.13	7.7	10.26
1125	1050	1.180	2.64	5.99	8.99	11.99
Static Face Velocity m/s			2.24	5.08	7.62	10.16



Arabian Thermal Aire Industries have a full range of HVAC & Noise control System, listed below are some of the system we provide;

HVAC & INDUSTRIAL AIR DISTRIBUTION SYSTEMS

- Duct (Rectangular, Spiral, Flat Oval & Flex Duct).
- Damper (Fire, Fire Smoke damper & Volume Control Damper).
- Louver (Stationary, Sand trap & Acoustic).
- Access Doors.

Noise & Vibration Control

- Acoustic Enclosures.
- Acoustic/Noise Barriers.
- Duct & Pipe Vibration isolation System.
- AHU, Fan, Generators, Chiller Vibration Isolation System.

Building Acoustic Systems

- Independent isolated wall system.
- Resiliently Hung isolated Ceiling Systems.
- Floating Acoustic Floors.
- Timber Acoustic Door & Glazed System.

Architectural Acoustic Systems

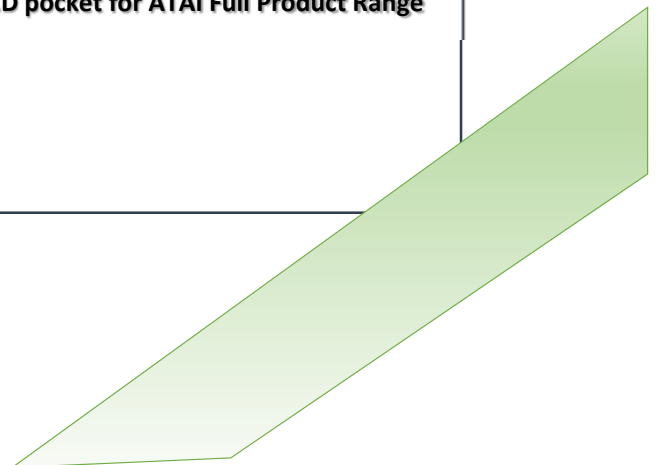
- Timber Wall & Ceiling Panel System.
- Fabric Wall & Ceiling Panel Systems.
- Acoustic Cloud Systems.
- Pro Audio Studio Acoustic Systems.

The ATAI product CD provides our full range of HVAC, Air Distribution and Noise Control system with Our technical specification for each System.

Business Card Pocket

Business Card Pocket

CD pocket for ATAI Full Product Range





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Certification



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