

## ACCU-TONE® STUDIO ABSORBERS

IAC Bulletin ASA/1.02

**IAC Accu-Tone® studio absorbers have been specifically developed to condition or 'tune' the acoustics of broadcasting and other studio interiors. Typically they are fixed to studio walls/ceilings - in either large banks or clusters - to control reverberation and echo effects.**

**A wide range of cost-effective, laboratory-tested standard sizes is available but special, customised units can also be developed, when required.**

- Proven, effective reverberation control for studio environments
- Acoustically tested and rated in accordance with BS 3638
- Used extensively in TV, Radio, Post-Production, Audio and other studio environments
- Wide range of standard models offering low, mid, high or broad band frequency control
- Special (customised) sizes/designs also available
- Wide choice of finishes
- Rapidly and simply installed
- BS EN ISO 9001 quality registered



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product datasheet

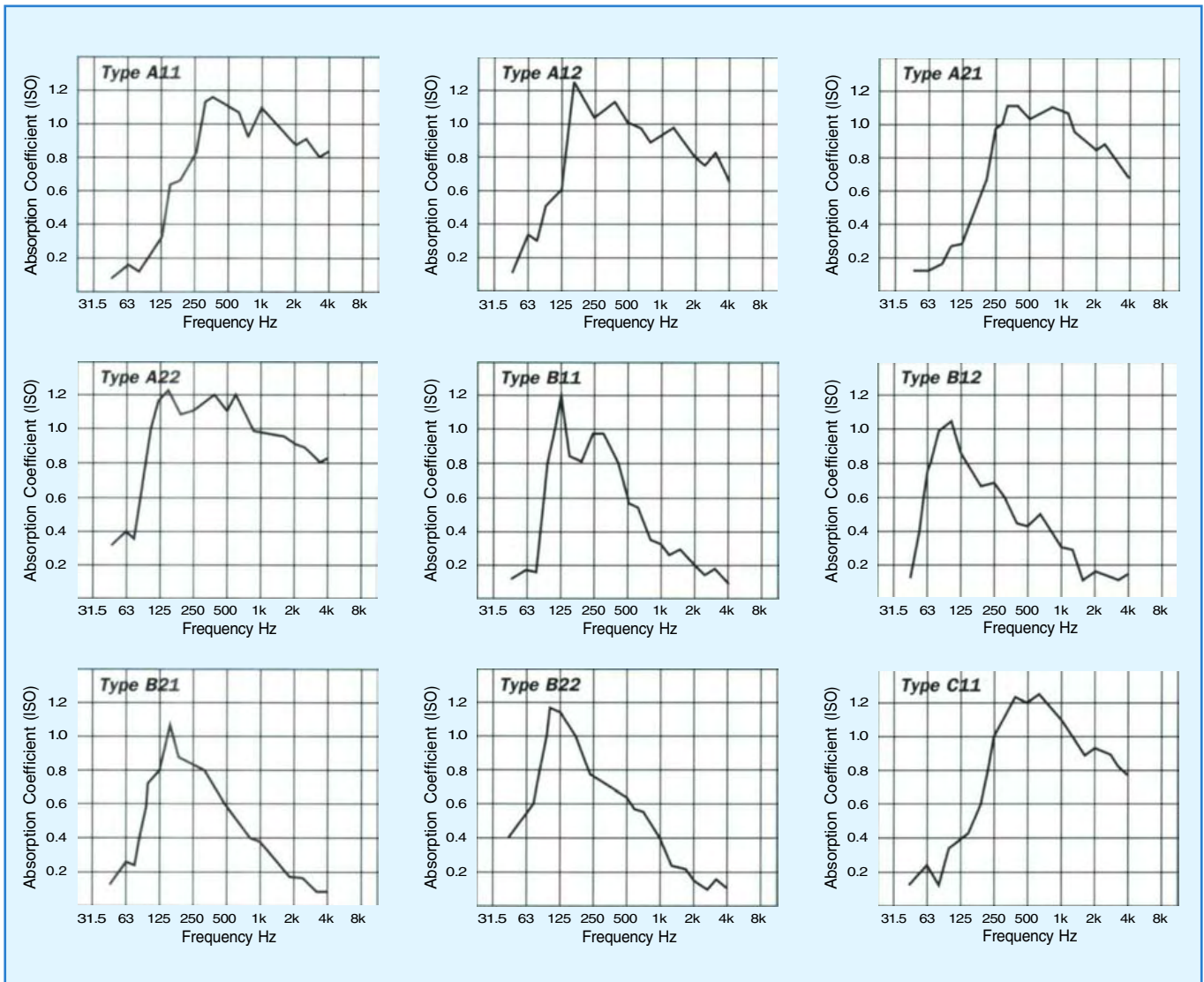
## LABORATORY TESTED

### Sound Absorption Coefficients in One Third Octave Mid Band Frequencies (Hz)

The graphs and tables below show the sound absorption coefficients of IAC Accu-Tone studio absorbers when tested in accordance with BS 3638 (Measurement of Sound Absorption Coefficients in a Reverberation Room).

Test Set-Up: 25 absorbers of 580mm x 580mm cross-section were supported 25mm above the floor of the reverberation room. A 20mm gap surrounded each absorber, creating a 600mm matrix. The effective sound-absorbing surface area for the purpose of the test was 8.88m<sup>2</sup>.

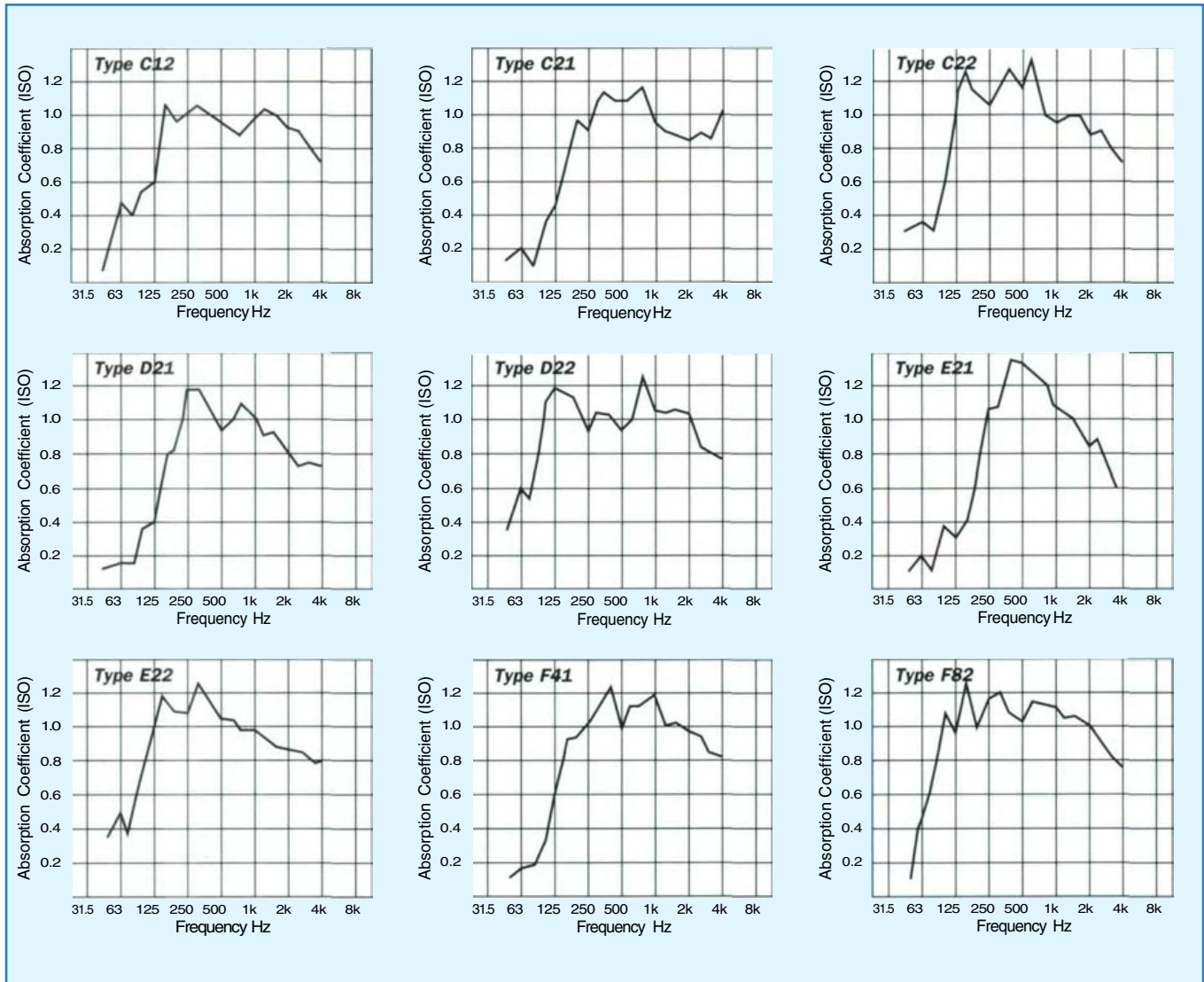
Note: The British Standard 3638 test method aims to include the effects of practical mounting conditions and, for this reason, absorption co-efficients greater than unity are possible.



One Third Octave Mid Band Frequencies (Hz)																				Weights	
Type	50	63	80	100	125	160	200	250	315	400	500	630	800	1k	1.25k	1.6k	2k	2.5k	3.15k	4k	Kg
A11	0.1	0.17	0.11	0.21	0.3	0.63	0.66	0.82	1.13	1.16	1.11	1.05	0.92	1.08	1.01	0.94	0.86	0.9	0.8	0.83	5.2
A12	0.1	0.34	0.3	0.5	0.62	1.24	1.1	1.02	1.09	1.13	1.0	0.9	0.89	0.94	0.97	0.88	0.82	0.77	0.83	0.65	6.4
A21	0.1	0.11	0.15	0.26	0.28	0.47	0.64	0.95	1.09	1.09	1.02	1.05	1.08	1.05	0.95	0.9	0.84	0.88	0.78	0.67	5.3
A22	0.33	0.41	0.35	0.74	1.16	1.22	1.07	1.08	1.14	1.2	1.08	1.2	0.98	0.98	0.97	0.96	0.91	0.87	0.8	0.82	6.5
B11	0.1	0.15	0.14	0.83	1.17	0.82	0.8	0.98	0.98	0.83	0.58	0.53	0.36	0.33	0.25	0.28	0.19	0.15	0.17	0.1	7.9
B12	0.1	0.75	0.98	1.03	0.87	0.75	0.64	0.66	0.59	0.44	0.42	0.49	0.4	0.28	0.28	0.1	0.15	0.13	0.1	0.15	8.9
B21	0.1	0.23	0.22	0.7	0.79	1.05	0.87	0.82	0.8	0.68	0.58	0.51	0.4	0.38	0.28	0.24	0.16	0.17	0.11	0.1	7.8
B22	0.38	0.49	0.60	1.14	1.12	1.02	0.89	0.75	0.71	0.67	0.63	0.55	0.53	0.38	0.25	0.23	0.13	0.1	0.16	0.1	9.0
C11	0.1	0.23	0.1	0.29	0.38	0.43	0.65	1.0	1.13	1.22	1.2	1.24	1.19	1.07	0.97	0.87	0.93	0.92	0.82	0.78	7.2

## PRODUCT SELECTION AND SPECIFICATIONS

To select the appropriate type of IAC absorber (for low, mid, high and broad band frequency control) please see also the table on the back page of this datasheet. Full details of standard sizes, construction materials, finishes etc can also be found overleaf.



Type	One Third Octave Mid Band Frequencies (Hz)																			Weights	
	50	63	80	100	125	160	200	250	315	400	500	630	800	1k	1.25k	1.6k	2k	2.5k	3.15k	4k	Kg
C12	0.1	0.46	0.4	0.55	0.6	1.05	0.94	1.0	1.05	1.01	0.96	0.93	0.88	0.98	1.04	1.0	0.92	0.88	0.8	0.71	8.4
C21	0.14	0.21	0.11	0.35	0.45	0.74	0.96	0.92	1.06	1.13	1.07	1.07	1.14	0.97	0.9	0.88	0.85	0.9	0.86	1.0	7.3
C22	0.31	0.37	0.32	0.82	1.09	1.25	1.11	1.03	1.14	1.27	1.12	1.25	0.98	0.93	0.99	0.99	0.88	0.91	0.78	0.7	8.5
D21	0.1	0.13	0.13	0.38	0.41	0.78	0.82	1.17	1.17	1.07	0.93	0.98	1.08	1.02	0.91	0.93	0.82	0.74	0.76	0.74	7.8
D22	0.33	0.6	0.55	1.06	1.17	1.13	1.1	0.93	1.04	1.02	0.93	1.0	1.25	1.05	1.03	1.05	1.03	0.83	0.78	0.75	9.0
E21	0.1	0.2	0.1	0.38	0.33	0.43	0.74	1.03	1.04	1.35	1.34	1.26	1.2	1.07	1.03	0.97	0.87	0.92	0.79	0.60	7.3
E22	0.34	0.5	0.37	0.76	0.96	1.17	1.1	1.09	1.26	1.15	1.05	1.04	0.96	0.96	0.93	0.87	0.85	0.85	0.78	0.80	8.5
F41	0.1	0.16	0.18	0.3	0.69	0.91	0.92	1.02	1.12	1.23	0.96	1.11	1.11	1.19	1.0	1.01	0.97	0.93	0.85	0.83	5.2
F82	0.1	0.44	0.59	1.08	0.94	1.29	0.97	1.16	1.21	1.09	1.02	1.15	1.13	1.12	1.04	1.06	1.03	0.93	0.82	0.77	6.9

# SPECIFICATION FOR IAC ACCU-TONE STUDIO ABSORBERS

OTHER IAC ACOUSTIC  
STRUCTURES AND PRODUCTS

## Product Range

Several standard absorber designs are available, in a range of facings, giving a wide choice of acoustic performance and aesthetic appearance. Special sizes/specifications can be supplied, on request.

## Sizes

There are two basic standard designs, to cover walls and ceiling areas in 600mm x 600mm and 1200mm x 600mm modules, when mounted with a 20mm air gap between units. The nominal cross-section dimensions of each type are 580mm x 580mm and 1180mm x 580mm. Each cross section is available in depths of 100mm and 200mm, with corresponding acoustic performance.

*Note:* Where an additional covering is required (see 'Finishes') the depth dimension is increased by a nominal amount in the region of 15mm.

## Materials and Construction

The absorbers are constructed from pregalvanised steel sheet sides and back and the acoustic absorbing front face is either pregalvanised perforated metal or Eurolon. Eurolon is a patented faced glass fibre acoustic material having a Class 1 Spread of Flame specification (as measured to BS 476:Part 7:1971).

Metal to metal contact is avoided by using resilient adhesive tape between metal surfaces.

## Finishes

For a different appearance, absorbers may be covered with an approved range of fire retardant fabrics. For practical reasons, absorbers may also be fitted with a weldmesh protective guard. This is especially useful for units mounted at low level.

## INSTALLATION

### Fixings

Units are provided with four sheet metal lugs situated off centre for fixing onto walls or ceilings via a Unistrut fixing channel or timber framing. A gap of 25mm exists between the back of each unit and the fixing surfaces.



*Modular studios, control/editing rooms and voice-booths*



*Noise-Lock® acoustic doors, windows and wall linings*



IAC is a BS EN  
ISO 9001 quality  
registered company



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Type	General Absorption Characteristic	Depth (mm)	Front Facing Material
A 11	Middle & High Frequencies	100	Eurolon*
A12	Middle & High Frequencies	200	Eurolon
A21	Middle & High Frequencies	100	Eurolon
C 11	Middle & High Frequencies	100	Perforated Metal
C12	Middle & High Frequencies	200	Perforated Metal
C21	Middle & High Frequencies	100	Perforated Metal
D21	Middle & High Frequencies	100	Eurolon
F41	Middle & High Frequencies	100	Eurolon
B 11	Low Frequencies	100	Perforated Metal
B12	Low Frequencies	200	Perforated Metal
B21	Low Frequencies	100	Perforated Metal
B22	Low Frequencies	200	Perforated Metal
A22	Broad Band Frequencies	200	Eurolon
C22	Broad Band Frequencies	200	Perforated Metal
D22	Broad Band Frequencies	200	Perforated Metal
E22	Broad Band Frequencies	200	Eurolon
F82	Broad Band Frequencies	200	Eurolon
E21	Middle Frequencies	100	Eurolon

\*See "Materials and Construction "