ASONA BAFFLE BEAM PANEL™ ACOUSTIC CEILING SYSTEM

1. GENERAL

Related work

1.1 RELATED SECTIONS
Refer to ~ for ~.

Documents

1.2 DOCUMENTS
Documents referred to in this section are:

NZS 1170	Structural design actions, Earthquake actions – New Zealand
ISO 5660.1	Cone calorimeter test reaction to fire tests for heat release, smoke production and mass loss rate.
NZBC C/AS1	Fire Safety
AS/NZS 2785	Suspended ceilings - Design and installation
AS 2946	Suspended ceilings, recessed luminaries and air diffusers - Interface requirements for physical compatibility
NZS 4219	Seismic resistance of engineering systems in buildings
ISO 354	Test method for sound absorption by reverberant room method
ISO 11654	Weighted sound absorption ratings
ASTM C423	Test method for sound absorption and sound absorption coefficients by the reverberation room method
ASTM E1414	Standard test method for airborne sound attenuation between rooms sharing a common ceiling plenum (two room method)
ASTM C 635	Standard specification for the manufacture, performance and testing of metal suspension systems for acoustical tile and lay-in panel ceilings
ASTM C636	Standard practice for installation of metal ceiling suspension systems for acoustical tile and lay-in panels
ASTM E413-87	Test method for airborne sound transmission STC

Documents listed above and cited in the clauses that follow are part of this specification. However, this specification takes precedence in the event of it being at variance with the cited document.

1.3 MANUFACTURER'S DOCUMENTS
Manufacturer's and supplier's documents relating to work in this section are:

Asona Baffle Beam Panel acoustic panel data sheet ref: Baffle Beam

Copies of the above literature are available online at www.asona.co.nz.
For lead times and pricing contact Asona Ltd, 7 Cain Road, Penrose, Auckland.
Email: info@asona.co.nz
Telephone: 09 525 6575

Requirements

1.4 SAMPLE SECTION
Allow to erect a sample section of the Baffle Beam ceiling system offered. Subject to confirmation in writing, the sample section may form part of the completed installation. Refer to 4. SELECTIONS for location.

1.5 INSTALLATION
Minimum installation standard to AS/NZS 2785 and ASTM C636. Installation to be only by the manufacturer's accredited installer, using the manufacturer's technical services. Accredited installers to be members of the Association of Wall and Ceiling Industries of New Zealand (AWCI) Provide evidence of experience, listing completed projects of similar size and complexity.

Installation to comply with the requirements of NZS 4219; with related building services installations complying specifically with clauses 2.22, 2.25 and 2.29.

1.6 CLEANING INSTRUCTIONS
Clean using soft bristled brush, vacuum or a damp cloth or as noted in product data sheet.

1.7 SPARES
Provide spare matching ceiling elements in the quantities specified below. Deliver into a dry store at the site or elsewhere as directed and at agreed times. Refer to 4. SELECTIONS for quantity.

1.8 SUPPLY WARRANTY
Supply a manufacturer's 5 year warranty against manufacturing defects and durability compliance per NZBC B2 of 5 years.

1.9 NO SUBSTITUTIONS
Substitutions are not permitted to any specified Asona system, or associated components and products.

Performance

1.10 LOADING CODE REQUIREMENT
Comply with the requirements of NZS 4203 clause 4.12 or NZS 1170, section 8.

1.11 CERTIFICATION
Provide:
- certification of compliance with NZS 4203, clause 4.12 or NZS 1170, section 8 for evaluation
- certificates and other evidence that the system offered complies with the standards of performance specified
- a Producer Statement on completion.

1.12 ACOUSTIC REQUIREMENTS
Verify material sound absorption performance. Submit a copy of a full scale sound absorption test report to ISO 354 E200 as tested by Auckland Uni Services or other independent testing authority. Refer to 4. SELECTIONS for acoustic performance requirements.

1.13 REACTION TO FIRE PROPERTIES
Reaction to fire properties of the ceiling system must meet the acceptable solutions to all risk groups C/AS1 to C/AS7. Risk groups: SH,SM,SI,CA,WB,WS,VP
ASONA PRODUCT FIRE GROUP NUMBER RATINGS
1S = Highest rating Ref: ISO 5660-1 Cone Calorimeter test

ASONA PRODUCTS	TYPE OF MATERIAL	GROUP NUMBER
Baffle Beam	Glass fibre ceiling panels	1S
Baffle Panel	Glass fibre ceiling panels	1S

1.14 ENVIRONMENTAL REQUIREMENTS
Design the ceiling system for use over its expected life without deterioration within the required temperature and humidity range. Refer to 4. SELECTIONS for details.

1.15 LIGHT REFLECTANCE
To ASTM C1477. Refer to 4 SELECTIONS for reflectance and colour.

2. PRODUCTS

Materials – Baffle Ceiling System

2.1 SUSPENSION COMPONENT
Supplied by Asona Ltd tel:09 525 6575
Type: (25) (40) (50) mm aluminium C channel

Colour: (Powder coated white), (other)

2.2 BAFFLE BEAM PANEL – GLASS FIBRE ACOUSTIC PANELS
Manufactured and supplied by Asona Ltd tel:09 525 6575
Type: Asona Baffle panel glass fibre high sound absorbing panel from pre finished Sonatex™ dual layer composite acoustical facer wrapped to high density resin bonded bio soluble glass fibre absorber core, made in NZ

3. EXECUTION

Conditions

3.1 CO-ORDINATE SERVICES
Co-ordinate and co-operate with electrical and mechanical work to avoid conflict between panels and luminaires, diffusers, pipework and ducting. Confirm the provision of extra hangers and fixings as required.

Ensure co-operation with work in and above the ceiling, including the marking of specific baffle panels below major access points to above-ceiling services.

3.2 SITE CONDITIONS
Do not begin installation until the building is closed in, fully glazed, the roof watertight, and mechanical and electrical duct work above the ceiling completed.

3.3 COMPLY
Comply with AS 2946 for interface requirements for physical compatibility.

3.4 RESPONSIBILITY
Ensure that conditions are suitable for the ceiling installation. Arrange for the programming of the work to suit required practice.

Application

3.5 INSTALL
Install the system to AS/NZS 2785 minimum standards and the ceiling manufacturer's requirements. (ensure flat head screws are used to secure C channel)

3.6 ACCESSIBILITY
Provide access to the ceiling system and the in-ceiling and above-ceiling services so that maintenance and removal of any part can be carried out without damage to the baffle panels.

3.7 PROTECT EXISTING WORK
Protect adjacent existing work from damage during the installation.

Completion

3.8 REPLACE
Replace or repair damaged or marked elements. Recycle material, consult manufacturer for replacement facers or painting procedure.

3.9 LEAVE
Leave work to the standard required by following procedures.

3.10 REMOVE
Remove debris, unused elements and elements from the site.

3.11 CLEAN
Clean soiled or marked units.

4. SELECTIONS

Requirements

4.1 SAMPLE SECTION
Location: ~
Size: ~ m x ~ m

Performance

4.2 ACOUSTIC REQUIREMENTS
Practical sound absorption properties per ISO 354 E200, ratings per ISO 11654

Frequency	125 Hz	250 Hz	500 Hz	1000 Hz	2000 Hz	4000 Hz
αP	0.45	0.85	1.00	0.95	1.00	1.00

Sound absorption class: A
Weighted sound absorption coefficient αW: 1.00 minimum
NRC per ASTM C423-99: 0.95 minimum

4.3 ENVIRONMENTAL REQUIREMENTS
Range: 10 - 45°C
Relative humidity: 95 % maximum

4.4 REFLECTANCE
Reflectance: LR1 per ASTM 1477, 75 % minimum
For (colour): White

4.5 FIRE
Group Number: 1S (IS0 5660.1 Cone calorimeter test)

Materials

4.6 SCHEDULE

Area	Product Ref.	Finish
~	Asona Baffle Beam	Sonatex

Materials - Accessible panel with suspended grid systems

4.7 CEILING PANEL
Brand/product: Asona Baffle Panel
Manufacturer: Asona Ltd, 7 Cain Road, Penrose, Auckland
Tel: 09 525 6575, Fax: 09 525 6579, email: info@asona.co.nz
Material Type: Composite soft fibre acoustical panel from bio soluble resin bonded glass fibre core laminated and wrapped in Sonatex 250 kg/m^3 dual layer glass mat composite facer, with optional foil backing, made in NZ from 80% recycled glass waste. Panels butt joined on site to create continuous lengths
Thickness,

Size	Thickness		
Depth	**25mm**	**40mm**	**50mm**
90 mm	(~)	(~)	(~)
100 mm	(~)	(~)	(~)
150 mm	(~)	(~)	(~)
200 mm	(~)	(~)	(~)
280 mm		(~)	(~)
380 mm		(~)	(~)
500 mm		(~)	(~)
Custom	(~)	(~)	(~)

	length:	(2390mm)(butt joined to (~) mm)
	Edge:	Square
	Finish:	Sonatex acoustic laminate
	Colour:	Standard White; RAL 6032 (Signal Green); RAL 7045 (Telegrey); RAL 3020 (Traffic red); RAL 3031 (Orient red); RAL 6027(Light green); RAL 1014 (Ivory); RAL 9011 (Black); Ton 1125 “Maple Structure”; RAL 7040 and Wood Wool structure (H+); RAL 6013 (Reed Green)
4.8	SUSPENSION	
	Type:	(APC25) (APC40) (APC50) C channel top fix (ensure flat head screws are used to secure C channel)
	Material:	Galvanized steel body with (pre-painted) (tissue faced) capping
	Finish/colour:	(Powder coat white) (TFX tissue wrapped, white)
	Hanger:	(Suspended hanger wire) (direct fix clip)
4.9	SPARES	
	Panels:	Supply ~ cartons on completion.