

Acoustic Cladding Systems WCAC 40 & WCAC 30

Usage

The noise level measured at any given point within a plant enclosure or plantroom will be made up of the direct noise level from the enclosed machinery and the reverberant noise level which reflects off the walls of the enclosure. If the enclosure is hard faced, concrete or of brick or blockwork construction, then the reflected reverberant noise level can make a considerable additional contribution to the final overall noise level in the plant area. By fitting sufficient EMTEC WCAC Acoustic Cladding to plant space enclosures it is possible to reduce the reverberant element of the sound pressure level to close to that of the direct component only, thus reducing the final noise level within the plant room.



The EMTEC WCAC Acoustic Cladding System is therefore used to introduce acoustic absorption into reverberant spaces in order to reduce the reverberation time of the contained volume. The EMTEC WCAC Acoustic Cladding Systems are mechanically robust as they are fabricated from galvanised sheet steel components and therefore offer protection against hazardous environments.

The EMTEC WCAC Acoustic Cladding Systems are used where large items of plant are contained within a plantroom or open topped plant area and the enclosing structure is of hard faced material such as brick, blockwork or plastered walls. The EMTEC WCAC Acoustic Cladding System can be fixed to these surfaces to form an absorbent finish to the walls of the enclosure.

Construction

Two types of EMTEC WCAC Acoustic Cladding Systems are available:

- WCAC 40 The EMTEC WCAC 40 Acoustic Cladding System is made up of 100mm deep mineral wool slabs retained behind a framework of channels, Z-section rails and perforated metal trays.
- WCAC 30 The EMTEC WCAC 30 Acoustic Cladding System is made up of 50mm deep mineral wool slabs retained behind a framework of channels, Z-section rails and perforated metal trays.

In both systems the main components are made up from galvanised sheet steel and the mineral wool slabs are tissue faced to ensure that no fibre migration occurs.

The perforated trays are 600mm high and either 900mm or 1200mm wide. The upper and lower channel rails and intermediate Z-section rails are manufactured to any length up to a maximum of 3000mm. Cladding areas of any width or height can be made up by adding more trays and rails as necessary.

Typical Specification

In order to lower the reverberant field within the plant enclosure the walls and roof will be covered in EMTEC WCAC 40 Acoustic Cladding Panels. The panels will be arranged so as to cover at least 75% of the total surface area of the walls and roof of the plant enclosure. The panels will be finished externally in a polyester powder coating to a standard BS4800 or RAL colour.



Acoustic Performance

Acoustic Cladding System	Absorption coefficient of internal surface at Octave band centre frequencies (Hz)							
	63	125	250	500	1k	2k	4k	8k
WCAC 40	0.4	0.6	0.9	0.95	0.95	0.95	0.85	0.8
WCAC 30	0.2	0.4	0.8	0.9	0.95	0.9	0.8	0.7

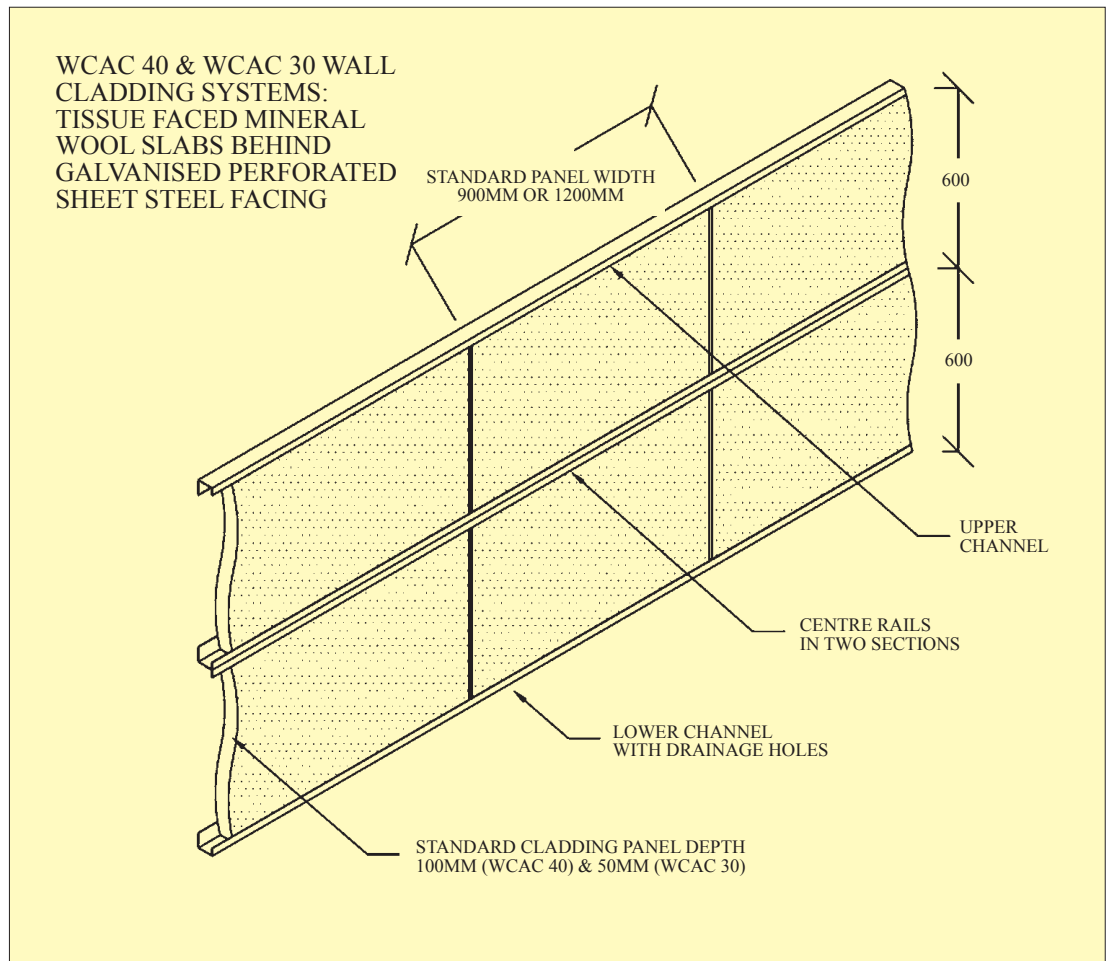
Physical Properties

EMTEC WCAC 40 and WCAC 30 Acoustic Cladding Systems are fabricated from pre-galvanised sheet steel and can either be supplied self colour or polyester powder coated to any standard BS4800 or RAL colour.

EMTEC WCAC 40 and WCAC 30 Acoustic Cladding Systems can be fixed to almost any clean flat surface using appropriate plug and screw type fixings.

The EMTEC WCAC 40 Acoustic Cladding System weighs approximately 15kgs/m² and the EMTEC WCAC 30 Acoustic Cladding System weighs approximately 12kgs/m².

EMTEC WCAC Acoustic Cladding Systems can be used inside or outside but if external use is envisaged then drain holes need to be incorporated into the rails to ensure any moisture that enters the cladding panels is allowed to dissipate.



Emtec Products Ltd., Enterprise House, Blyth Road, Hayes, Middlesex, UB3 1DD. Tel: 020 8848 3031. Fax: 020 8573 3605. Email: sales@emtecproducts.co.uk

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