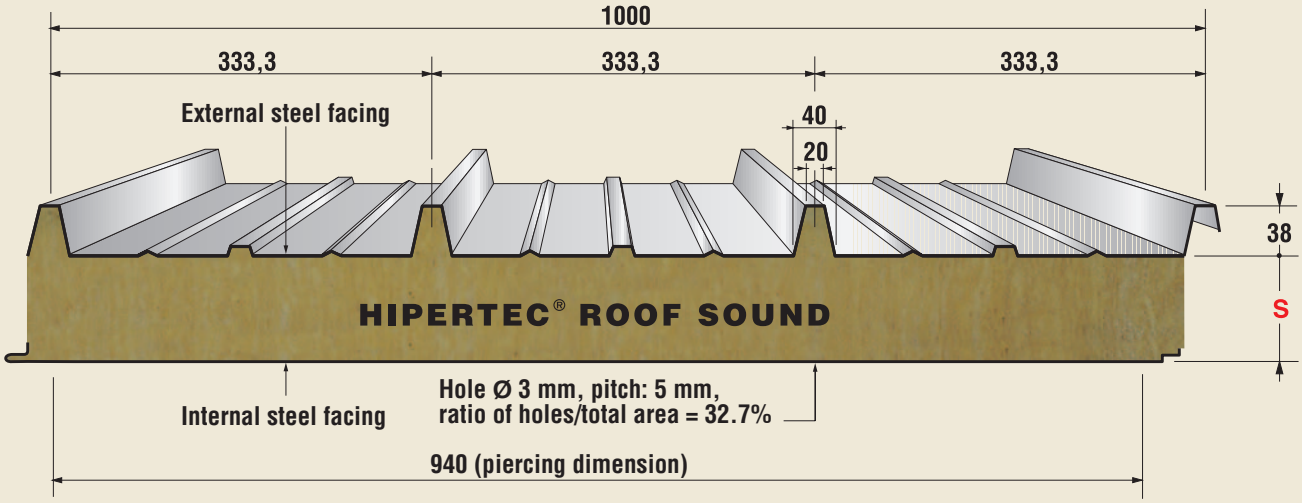
HIPERTEC® ROOF SOUND

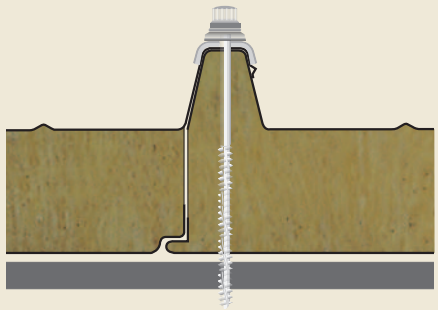
Profiled roof system, p ≥ 7% isolated with sound absorbent Rockwool.

Self-supporting panel system, insulated with Rockwool for roof and wall applications, requiring a high degree of resistance to fire, combined with sound absorption.

The **HIPERTEC® ROOF SOUND** panel is manufactured in accordance with a system patented by Metecno and consists of a profiled external steel facing, an internal flat, but perforated liner, with an insulation core of high density orientated Rockwool, arranged perpendicular to the plane of the panel and positioned in strips, laid longitudinally with off-set joints and transversally compacted, in such a way as to completely fill the void between the two metal facings, including the profiled trapezoidals.



Joint detail



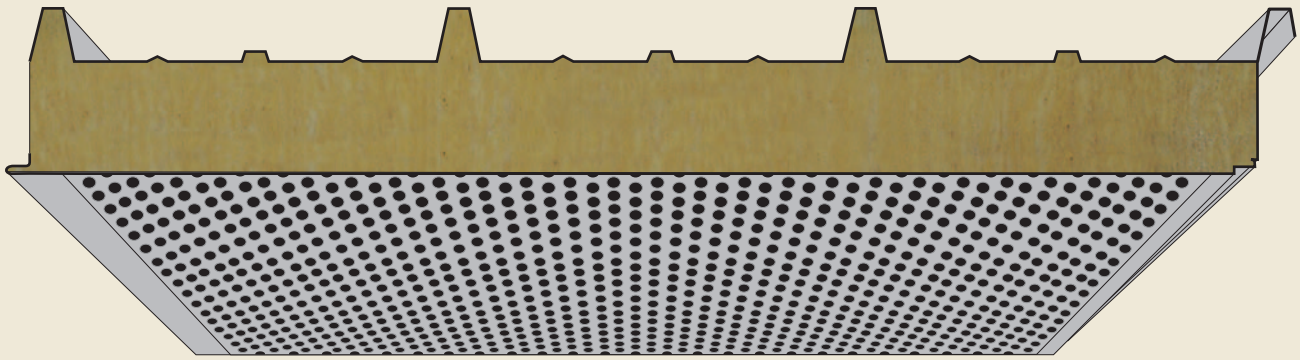


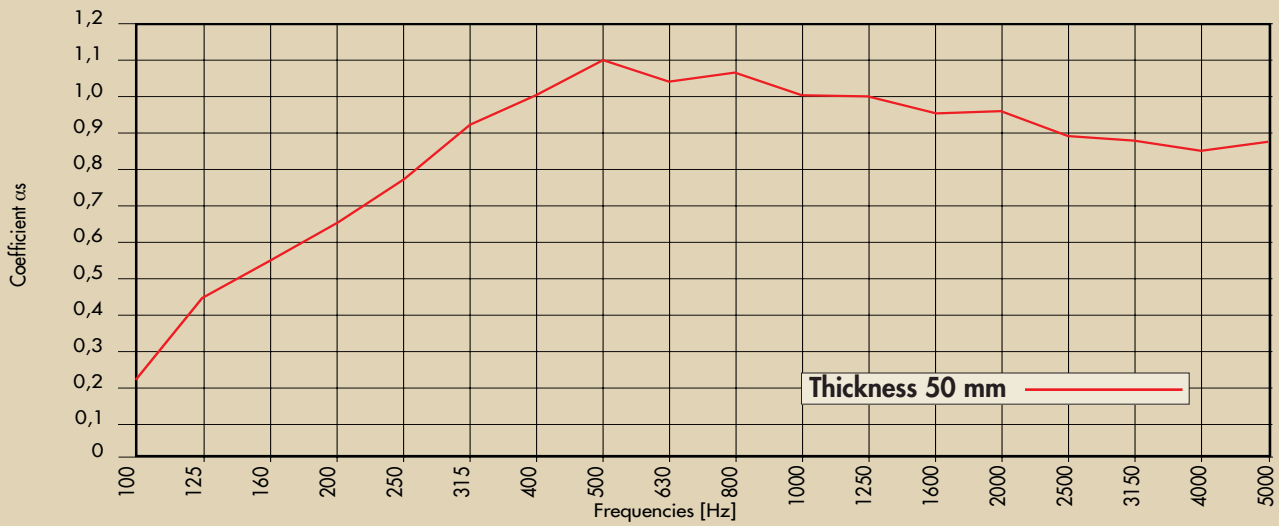
TABLE OF SAFE SPANS

Minimum values with steel sheets, thickness 0.6 + 0.5 mm. The spans *l* in metres, as a function of a uniformly distributed load **p** (daN/m²), have been obtained from tests carried out in Metecno laboratories and calculated to provide a deflection limit: f ≤ *l*/200 of the span and a minimum safety coefficient that complies with the UEAtc standards for insulated panels, which have been established and are implemented by primary European Certifying Organizations.

S mm	K Kcal/m²h°C	K Watt/m²°C	Panel weight kg/m²		p = daN/m²	80	100	120	150	200	250	300	80	100	120	150	200	250	300
						p p p							p						
						△ *l* △ *l* △ *l* △							△ *l* △						
			0,6+0,5																
50	0,61	0,71	14,79		*l* =	3,56	3,18	2,90	2,59	2,25	2,01	1,84	3,18	2,84	2,56	2,32	2,01	1,80	1,64
80	0,41	0,47	17,79		*l* =	4,14	3,70	3,35	3,02	2,62	2,34	2,13	3,70	3,31	3,00	2,70	2,34	2,10	1,91
100	0,33	0,39	19,79		*l* =	4,48	4,01	3,67	3,27	2,84	2,54	2,31	4,01	3,58	3,25	2,93	2,54	2,27	2,07

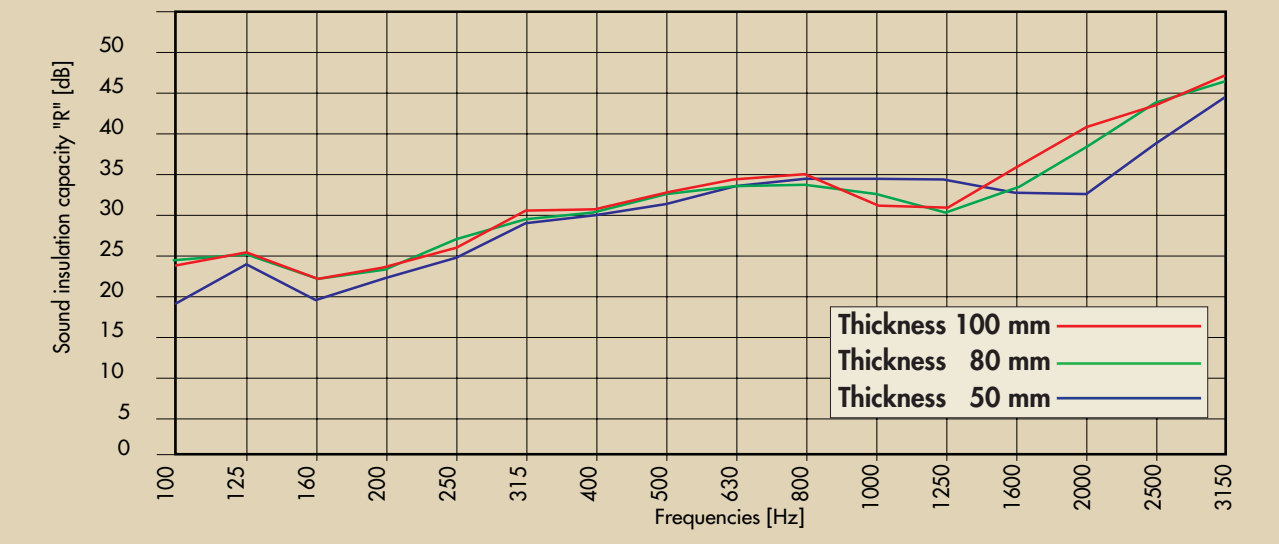
SOUND ABSORPTION

The **HIPERTEC® ROOF SOUND** panel is particularly suitable for **acoustic control**, providing excellent sound absorption qualities over a wide range frequency spectrum.
Tests in echo chambers conducted to ISO 354/85 standards on 50, 80 and 100 mm thick panels produced **DELTA LA** sound absorption indices of between **12 and 19 dB (A)**.
The graph below shows the curve of the absorption coefficients at the various frequencies for the 50 mm thick panel.



SOUND INSULATION

The **HIPERTEC® ROOF SOUND** panel has been tested to ISO 717/82 standards and obtained indices of RW = 33.5-35 dB for the 50, 80 and 100 mm thick panels.
The curves of the absorption coefficients of the 100, 80 and 50 mm thick **HIPERTEC® ROOF SOUND** panels at the various frequencies are shown in the graph below.



RESISTANCE TO FIRE

HIPERTEC® ROOF SOUND panels have been tested at the Istituto Giordana S.p.A. on an unloaded structure in accordance with Circular no. 91 of 14/9/61 and obtained the following results:

HIPERTEC® ROOF Thickness 100 REI 90 certificate no. 111478 / 1718 RF
HIPERTEC® ROOF Thickness 80 REI 60 certificate no. 111479 / 1719 RF