

Hipertec® Wall

WALL

FIRE RESISTANCE

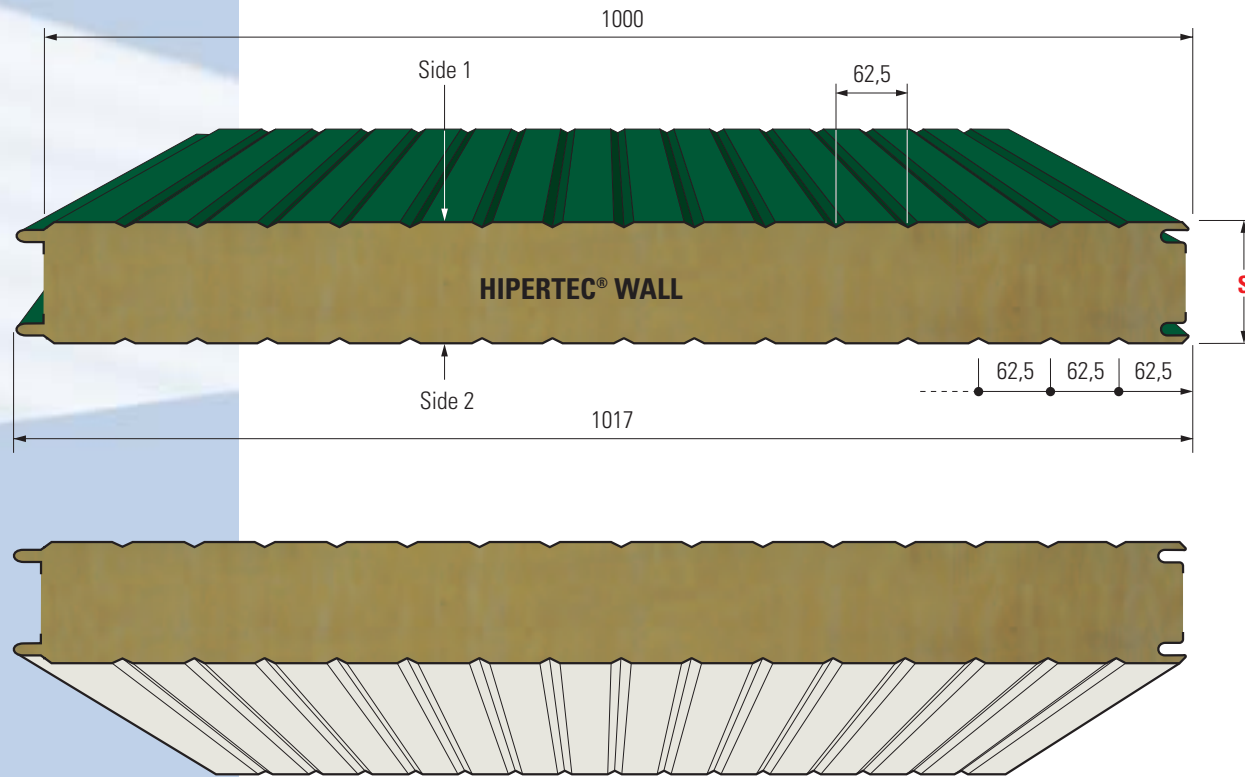


Self-supporting metal panel system insulated with rockwool for wall and partition applications, which require a high degree of fire resistance and acoustic insulation.

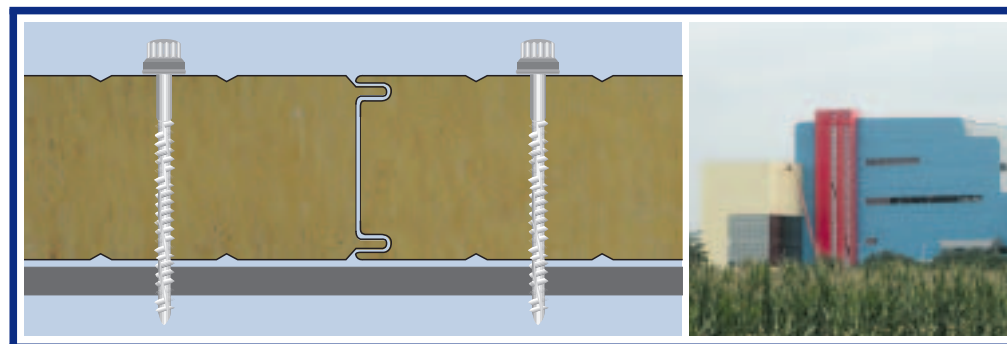
The HIPERTEC® WALL panel, manufactured in accordance with a system patented by Metecno, consists of two micro-ribbed steel sheets, with an insulation core of orientated fibre high density rockwool, arranged perpendicularly to the plane of the panel and positioned in strips, laid longitudinally with off-set joints and transversely compacted, in such a way as to completely fill the space between the metal facings.

Maximum panel length: 15,500 mm.

For additional technical information, before to the HIPERTEC® WALL technical manual.



IMPORTANT: In the assembly stage, attention to the correct positioning of the painted side: the side marked with "INTERNAL" must face the internal side.



Profiled wall system, insulated with fire resistant rockwool insulation

PRODUCED IN:
ITALY
PORTUGAL



Resistance to fire

The fire-resistance of a product is measured by means of a furnace brought up to a temperature of more than 1000°C in accordance with a given standardised curve. The test measures the product's capacity to conserve through time certain significant parameters, such as:

MECHANICAL STRENGTH (R) IMPERMEABILITY TO GAS (E) THERMAL INSULATION (I)

The HIPERTEC® WALL panel was tested at the Istituto Giordano S.p.A. on an unloaded structure in compliance with circular no. 91 of 14/9/61 and the following results were obtained:

- HIPERTEC® WALL thickness 100 REI 120 certificate n° 108394 / 1664 RF
- HIPERTEC® WALL thickness 80 REI 60 certificate n° 108395 / 1665 RF
- HIPERTEC® WALL thickness 50 REI 30 certificate n° 108396 / 1666 RF

- Test have been also made at foreign institutes with the following results:
- HIPERTEC® WALL thickness 120 F-120' Germany, certificate M.P.A. 3713/4891
 - HIPERTEC® WALL thickness 100 F-90' Germany, certificate M.P.A. 3713/4891
 - HIPERTEC® WALL thickness 100 F-90' Austria, certificate IBS 3811/98
 - HIPERTEC® WALL thickness 100 120' Holland, certificate T.N.O. 2000-CVB-R01872
 - HIPERTEC® WALL thickness 80 30' France, certificate C.S.T.B. RS 99 - 069
 - HIPERTEC® WALL thickness 80 F-60' Germany, certificate M.P.A. 3713/4891

HIPERTEC® WALL panels have been tested at the RINA Institute for conformity with EN 1364-1, obtaining the following results:
HIPERTEC® WALL thickness 150 EI 120 n° 11314/05 RINA

MAJOR PRODUCT TECHNICAL APPROVALS

- Agrément Technico ICITE 518 / 98
- Zulassung DIBT Z - 10.4 - 237

Reaction to fire

Reaction to fire is the degree in which a material resists combustion. With regard to this, materials are assigned a class (0, 1, 2, 3, 4, and 5): the higher the class, the higher the degree of combustion. HIPERTEC® WALL panels, thicknesses 50 - 80 - 100 mm, tested:

- At the Istituto Giordano S.p.A., pursuant to the Ministerial Decree of 26/6/84, were classified 0/1 for reaction to fire in the wall position.
- At the MPA Dresden according to EN 13823 and EN 11925-2 for reaction to fire, have been classified, according to EN 13501-1 as A₂ S₁ D₀. Since the panel consists of two steel sheets with a layer of rockwool inbetween, the class 0 refers to the external parameter and the class 1 to the insulation. Tests have been also made at foreign Institutes with the following results:

Germany: Panel class B1, insulation class A1 - France: class M0.

Sound insulation

The sound insulation of a material (for example, a panel) is given by the ability to reduce the passage of sound energy between two places.

The HIPERTEC® WALL panel has been tested to UNI 140/3/78 and ISO 717/82 standards and, for the thicknesses 50 - 80 - 100 mm, obtained valuation indices of **R_w** = 30-30.5 dB.

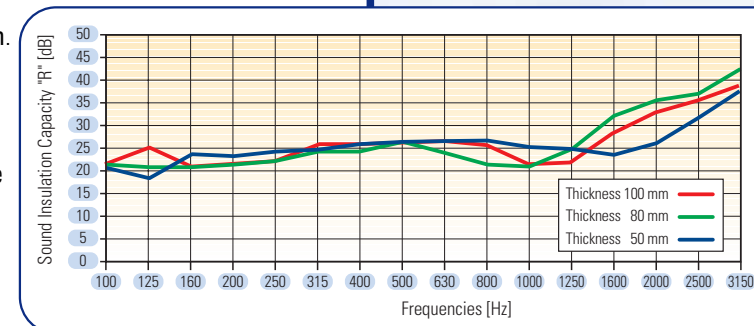
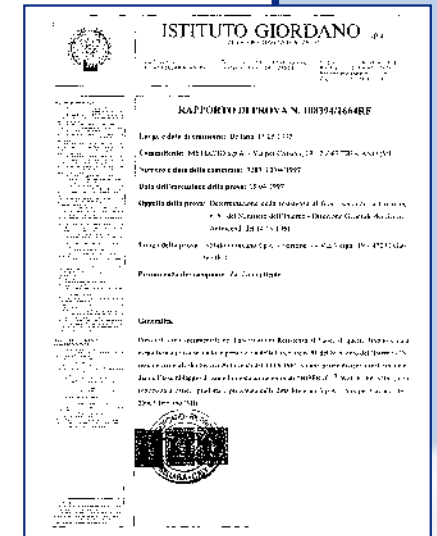


Table of safe spans

Values guaranteed with 0.6 + 0.6 mm thick steel sheets. **l** spans (in meters) relevant to a uniformly distributed overload **p** (daN/m²) were taken from structural tests that were carried out at ITC laboratories for 50, 80, 100, and 120 mm thick panels, and at our laboratories for 150 mm thick panels. Spans were calculated in such a way as to guarantee simultaneously:

- max. deflection: $f = l/200$;
- working stress: 1/25 of the limit moment and 1/2.5 of the limit shear.

S mm	K		Panel weight kg/m ² 0,6 + 0,6	Color group of external metal sheet	p = (daN/m ²)						p						
	Kcal m ² h °C	Watt m ² °C			40	60	80	100	120	150	40	60	80	100	120	150	
50	0,65	0,75	16,05	I	l =	5,33	3,75	2,84	2,31	1,94	1,57	4,75	3,97	3,33	2,67	2,24	1,81
80	0,42	0,49	19,05	I	l =	5,33	5,33	4,50	3,65	3,08	2,48	6,17	5,05	4,38	3,91	3,54	2,88
100	0,34	0,40	21,05	I	l =	5,33	5,33	5,33	4,55	3,82	3,09	6,92	5,65	4,89	4,38	3,99	3,56
120	0,29	0,34	23,05	I	l =	5,33	5,33	5,33	5,33	4,58	3,71	7,60	6,17	5,34	4,80	4,38	3,92
150	0,23	0,27	26,05	I	l =	5,33	5,33	5,33	5,33	4,66	3,77	8,44	6,89	5,97	5,34	4,87	4,34

The values in red have been limited for manufacturing reasons.