Soundtec
the sound protection wall

A company
of ThyssenKrupp
Steel

ThyssenKrupp Hoesch Bausysteme

ThyssenKrupp

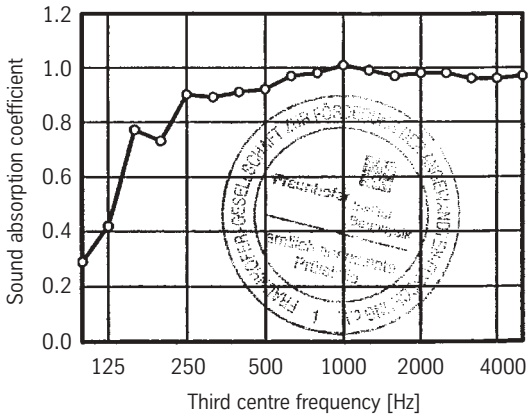
The building panel with acoustic perforation

Soundtec
the innovative product for noise protection walls

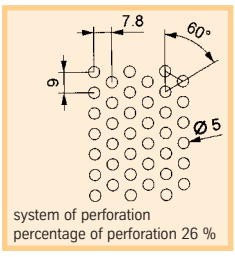
Product properties

- excellent sound reduction values
- resistant to weathering thanks to high-quality cover sheets made of stainless steel, aluminium and/or refined steel
- water-repellent mineral wool ensures a long service life
- safe even in dangerous situations by the predominant use of non combustible materials
- both horizontal and vertical installation is possible, depending on the supporting structure
- rapid and easy erection by project-related production batches in customer-specific lengths
- available in various thicknesses to suit required spans (between 60 and 120 mm)

Shapely and functional



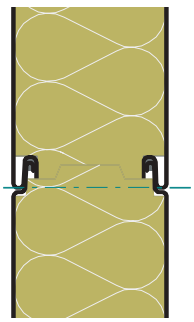
Sound absorption coefficient as per DIN EN 20354 (test certificate P-BA 27/2001)
Tested by Fraunhofer Institute for Building Physics



system of perforation
percentage of perforation 26 %

Designation of building part	Overall thickness d	Material thickness outer sheet stainless steel t_N	Material thickness inner sheet steel t_N	Weight	Material thickness outer sheet aluminium t_N	Material thickness inner sheet steel t_N	Weight	Sound reduction index R_W
	mm	mm	mm	kg/m²	mm	mm	kg/m²	dB
Soundtec	60	0.60	0.60	15.0	1.0	0.60	13.3	34
	80			17.0			15.3	
	100			19.0			17.3	
				21.0			19.3	

Other element thicknesses on request



Surface finishes to withstand all weathers

- In the standard version, the cover sheets are made from steel sheet with a metallic finish and colour coating adapted to the system (duplex system), which makes them weatherproof and ideally suitable for use along our traffic routes. The colour coating may contain a protection against graffiti, which allows easy removal (easy-to-clean). Cover sheets made from aluminium or stainless steel are available as alternatives.

Where sound absorption is required in addition to airborne noise insulation, it is recommended that one cover sheet is perforated. Perforated sheets are generally made from stainless steel or aluminium in order to ensure a long service life.

Erection

Systematic, rapid and efficient

- Other than the conventional method of assembling wall elements on site, which is still applied in many cases, Soundtec is delivered ready for erection.
- The outer and the inner sheets and the rock wool core are factory-assembled to form a unit. At the same time, the longitudinal joints, which will "interlink" the panels on site, are provided with a sealing strip. Together with a lower and upper profile, Soundtec panels simply need to be horizontally aligned and installed between vertically arranged supports. There is no assembly work and no placing of mineral wool between the sheets.
- As compared with wooden or concrete elements, Soundtec panels are lightweight. Depending on the site and the access route, a lorry-mounted crane is adequate for erection. If site conditions allow, even manual erection is possible (weight: 16 - 25 kg/m^2, depending on the design).



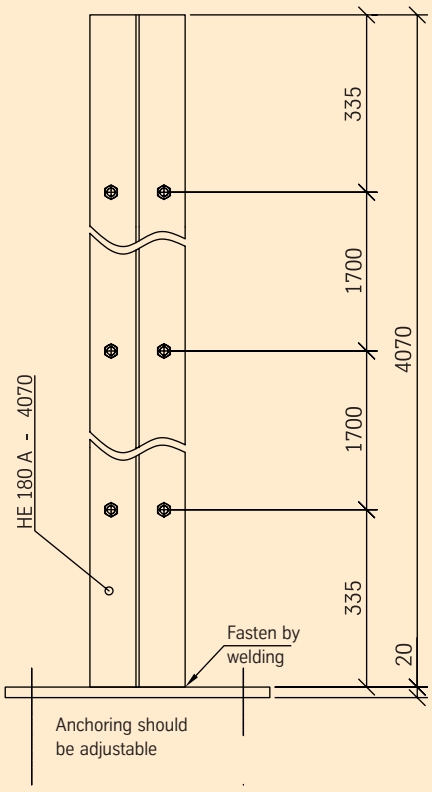

Details

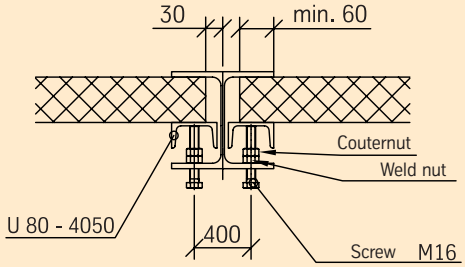
Factory assembly of the outer and the inner sheets and the rock wool core results in very good load-bearing values. Soundtec panels of sandwich design enable spans to be achieved which are larger than the spans produced by adding the values of single components. The total load-bearing capacity is of course dependent on the panel thickness and the single components used.

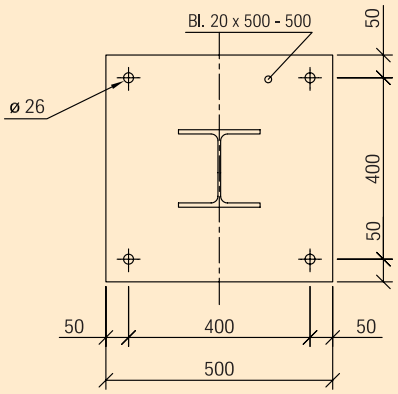
Possible spans achieved by Soundtec panels as a function of materials used are shown in the tables herein.

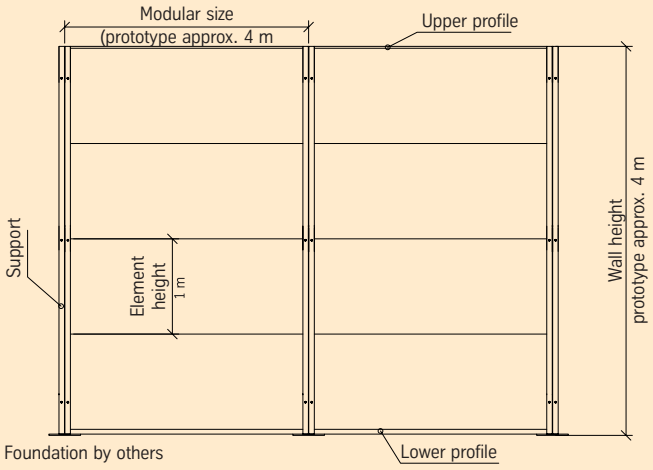
Proposed design

(Dimensions and fasteners must be determined according to local conditions)









Design tables

Building element		Soundtec LL 80 outer sheet stainless steel (perforated) $t_{N,a}$= 0,60 mm inner sheet steel $t_{N,i}$ = 0,60 mm													
Span L[m]		1.00	1.25	1.50	1.75	2.00	2.25	2.50	2.75	3.00	3.25	3.50	3.75	4.00	4.25
Single span	Width b_A [mm]	66	66	66	66	66	62	56	51	46	43	40	40	40	40
	perm. q	3.55	2.84	2.37	2.03	1.78	1.49	1.21	1.00	0.84	0.71	0.62	0.52	0.34	0.21
	Screws n_A [-]	3	3	3	3	3	3	3	3	3	3	3	3	3	3

Building element		Soundtec LL 100 outer sheet stainless steel (perforated) $t_{N,a}$= 0,60 mm inner sheet steel $t_{N,i}$ = 0,60 mm															
Span L[m]		1.00	1.25	1.50	1.75	2.00	2.25	2.50	2.75	3.00	3.25	3.50	3.75	4.00	4.25	4.50	4.75
Single span	Width b_A [mm]	74	74	74	74	74	74	70	63	58	54	50	46	44	41	40	40
	perm. q	4.01	3.21	2.67	2.29	2.00	1.78	1.51	1.25	1.05	0.89	0.77	0.67	0.59	0.52	0.47	0.39
	Screws n_A [-]	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3

Building element		Soundtec LL 120 outer sheet stainless steel (perforated) $t_{N,a}$= 0,60 mm inner sheet steel $t_{N,i}$ = 0,60 mm															
Span L[m]		1.00	1.25	1.50	1.75	2.00	2.25	2.50	2.75	3.00	3.25	3.50	3.75	4.00	4.25	4.50	4.75
Single span	Width b_A [mm]	79	79	79	79	79	79	79	76	70	64	60	56	52	49	47	44
	perm. q	4.29	3.43	2.85	2.45	2.14	1.91	1.71	1.50	1.26	1.07	0.92	0.80	0.71	0.63	0.56	0.50
	Screws n_A [-]	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3

Building element		Soundtec LL 80 outer sheet aluminium (perforated) $t_{N,a}$= 1,00 mm inner sheet steel $t_{N,i}$= 0,60 mm													
Span L[m]		1.00	1.25	1.50	1.75	2.00	2.25	2.50	2.75	3.00	3.25	3.50	3.75	4.00	4.25
Single span	Width b_A [mm]	65	66	66	65	66	65	64	58	53	49	46	43	40	40
	perm. q	3.54	2.86	2.38	2.02	1.78	1.57	1.38	1.14	0.96	0.82	0.71	0.61	0.42	0.26
	Screws n_A [-]	3	3	3	3	3	3	3	3	3	3	3	3	3	3

Building element		Soundtec LL 100 outer sheet aluminium (perforated) $t_{N,a}$= 1,00 mm inner sheet steel $t_{N,i}$= 0,60 mm															
Span L[m]		1.00	1.25	1.50	1.75	2.00	2.25	2.50	2.75	3.00	3.25	3.50	3.75	4.00	4.25	4.50	4.75
Single span	Width b_A [mm]	74	74	73	73	73	73	73	72	68	62	58	54	51	48	45	43
	perm. q	3.99	3.19	2.63	2.25	1.97	1.74	1.58	1.41	1.22	1.04	0.89	0.78	0.69	0.61	0.54	0.49
	Screws n_A [-]	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3

Building element		Soundtec LL 120 outer sheet aluminium (perforated) $t_{N,a}$= 1,00 mm inner sheet steel $t_{N,i}$ = 0,60 mm															
Span L[m]		1.00	1.25	1.50	1.75	2.00	2.25	2.50	2.75	3.00	3.25	3.50	3.75	4.00	4.25	4.50	4.75
Single span	Width b_A [mm]	79	79	79	79	79	79	79	79	79	74	69	64	60	57	53	51
	perm. q	4.26	3.42	2.84	2.44	2.13	1.90	1.71	1.55	1.42	1.23	1.06	0.92	0.81	0.72	0.64	0.58
	Screws n_A [-]	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3

Design tables “permissible q” for preliminary dimensioning.

ThyssenKrupp Hoesch Bausysteme GmbH
Hammerstrasse 11
D-57223 Kreuztal, Germany
Phone ++ 49 / 27 32 / 599 - 12 21
Fax ++ 49 / 27 32 / 599 - 12 19
e-mail: export@tks-bau.thyssenkrupp.com
Internet: www.tks-bau.com

TÜV MANAGEMENT SERVICE ISO 9001

BAUELEMENTE AUS STAHLBLECH RAL Gütezeichen

GB • Info 3.9.1 • 7.2005 • LB