Stravifloor Deck with elastomeric bearings

Stravifloor Deck with spring bearings

stravifloor
by CDM Stravitec

Stravifloor Deck*

Datasheet

Stravifloor Deck is a low-profile floating floor system using a proprietary dovetailed metal deck for thin concrete pours. The system's high bending stiffness allows for concrete toppings as thin as 50 mm, making this system a great solution for projects that require a low-profile or lightweight concrete floating floor. It is also suitable for areas with high live loads.

This system provides a high-performance floating floor system for excellent structure-borne and airborne noise isolation, while minimizing any impact on the available floor-ceiling height.

CHARACTERISTICS

- Stravifloor Deck standard solutions are available with resilient pads in four standard grades:
  Pad-L (low stifness), Pad-M (medium stifness), Pad-H (high stifness) and Pad-X (extra high stiffness)
- Stravifloor Deck can be changed to meet project specifications in terms of natural frequency and damping requirements, $L_{n,w}$ or R_w using non-standard bearings
- The standard range of resilient pads is available to provide load-bearing capacities from 0.1 to 3 MPa per pad
- Stravifloor Deck floor system uses elastomeric isolators with low stiffness/high resilience allowing natural frequencies as low as 6Hz, or springs allowing natural frequencies as low as 2.5Hz**
- Stravifloor Deck steel parts are galvanised
- Stravifloor Deck is a high performance floating floor system with large support spans (up to 1200 mm)
- The system allows high bending stiffness specifically for both restricted build-up height and limited extra weight applications (low permanent weight with floor system from only 86 mm total thickness: 36 mm resilient support + 50 mm steel reinforcement sheet with concrete or screed floor)
- The system is compatible with high permissible loads
- Stravifloor Deck is extremely quick to install resulting in a cost effective solution
- Stravigym Deck allows services to be installed within the air void
- Easy to incorporate underfloor heating or cooling systems
- Isolation pads, used as discrete resilient suport of the system, are mold and water resistant
- Stravifloor Deck is using moisture resistant formwork, free of autochthonous parasites or other harmfull organisms and lightweight, being easy to handle

* Previously known as CDM-QuietDECK
** Standard springs are epoxy coated, suitable for C2 environments. Springs with special coating or special spring materials are available upon request for installation in outside conditions or other special environments.

REUTENBEEK 9-11, 3090 OVERIJSE, BELGIUM
T +32 2 687 79 07 / INFO@CDM-STRAVITEC.COM / WWW.CDM-STRAVITEC.COM

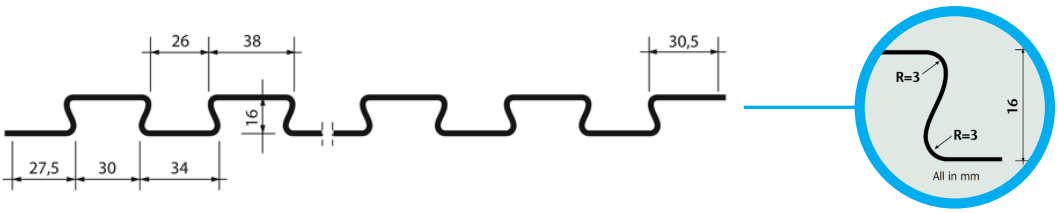
Dovetailed sheeting

Details
Profiled sheet in steel S320GD + Z100 N-A-C finishing, according to NEN-EN10147 (Z275 can be supplied upon request).

Note
Cold rolled steel sheet must be covered with a relatively thin layer (min. 'fine grade' concrete thickness: 16 mm profile height + 34 mm = 50 mm of (min.) C20/25 fine grade aggregate concrete
or CA25F4 free flowing, selflevelling, liquid screed).

The steel mesh necessary to cope with the loads in the finished floor needs to be calculated for the load cases in operation phase (service phase). This needs to be done by a structural engineer (upon request, CDM Stravitec can provide recommendations).

Steel thickness	0.5 mm
Nominal width	630 mm
Effective width	580 mm
Standard length	2200 mm[1]
Effective length	2100
Dimensional tolerances	Length: 1-4 mm ; width: 1-3 mm
Moment of Inertia	I_x = 3.6 cm^4/m
Moment of resistance	W_x = 3.0 cm^3/m



Isolated channel

Steel channel standard length
2 m

Note: the type of elastomeric pad used as discrete support and the channel spacing - which can be between 400 to 1200 mm - need to be determined by the CDM Stravitec engineering team according the (concrete or screed) floating floor thickness and the load cases in operation phase.

Perimeter Strip

Standard dimensions
50/100/150/200 mm x 10 m

Standard thickness
10 mm

Insulation material

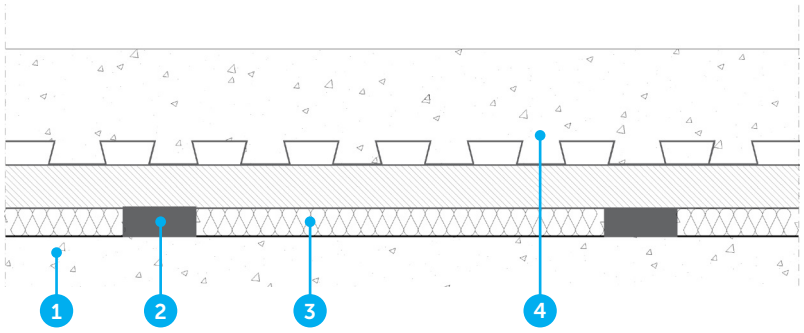
Dimensions
Defined according to project requirements

[1]Other lenghts available upon request

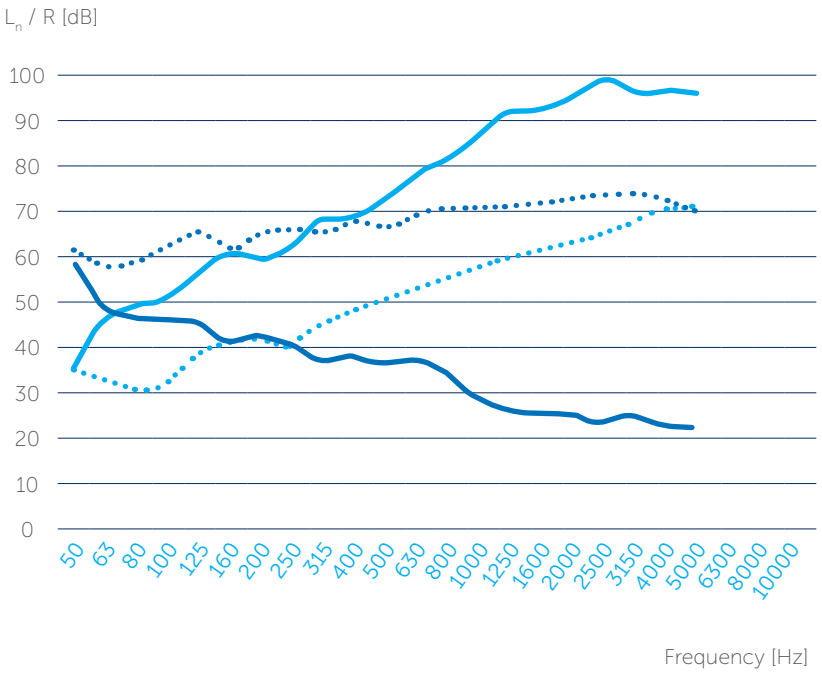
ACOUSTICAL RESULTS

Test report LA.170209.R02 by Level Acoustics&Vibration[2] - Test Setup

1. Structural floor: 140 mm reinforced concrete slab
2. Isolated channel-L50
3. Mineral wool 40 mm
4. Floating floor: deck + 50 mm (16+34 mm) concrete



Acoustical Isolation



R_0 (bare slab)
$L_{n,0}$ (bare slab)
R
L_n

R_w (C, C_{tr})[3]	ΔR_w[3]	$L_{n,T,w}$ (C_I)[4]	ΔL_w (C_I)[4]
79 (-2,-8) dB	25 dB	37 (-1) dB	39 (-1) dB

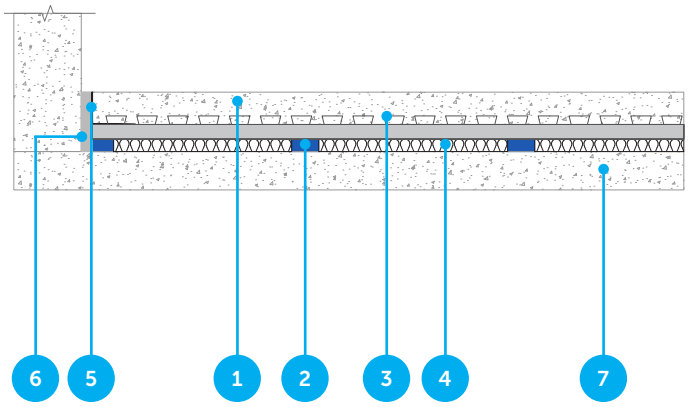
[1]Test report available upon request
[3] R_w is measured generally in accordance with ISO 10140-2 with additional vibration analyses (see report 170209.R02). Single figure ratings are determined in accordance with EN-ISO 717-1
[4] $L_{n,w}$ is measured in accordance with ISO 10140-3 - Rating in accordance with EN-ISO 717-2

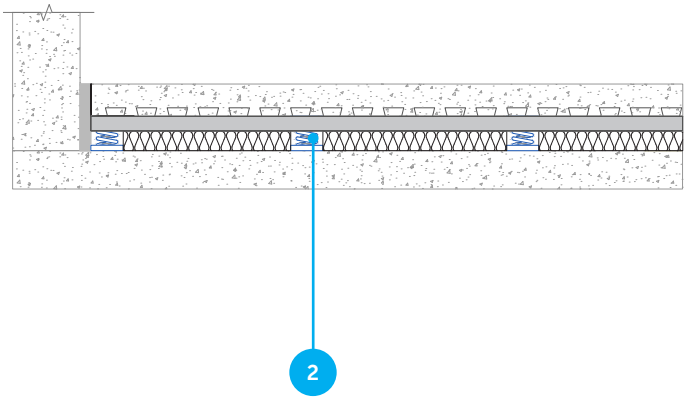
Other Stravifloor Deck assemblies available on our test data platform Stravi-dB.

SCAN ME

TYPICAL ASSEMBLY

1. Concrete/Screed floating floor
2. Isolated channel (pads OR springs)
3. Dovetailed sheeting
4. Insulation material
5. Metal edge profile
6. Perimeter Strip
7. Reinforced concrete slab





Note: an installation manual is available upon request.

DISCLAIMER

REUTENBEEK 9-11, 3090 OVERIJSE, BELGIUM
T +32 2 687 79 07 / INFO@CDM-STRAVITEC.COM / WWW.CDM-STRAVITEC.COM