Stravifloor Deck with elastomeric bearings

Stravifloor Deck with spring bearings

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 (2"), 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

- Available with natural rubber pads as standard resilient support
- Can be changed to meet project specifications in terms of natural frequency and damping requirements, IIC or STC using non-standard bearings
- The standard range of resilient pads is available to provide load-bearing capacities from 0.1 MPa (14.5 psi) to 3 MPa (440 psi) per pad
- Uses elastomeric isolators with low stiffness/high resilience allowing natural frequencies as low as 6 Hz, or springs allowing natural frequencies as low as 2.5 Hz**
- Stravifloor Deck steel parts are galvanized
- Extremely low-profile floating floor system (allows as little as 50 mm (2") concrete topping)
- High performance floating floor system with large support spans (up to 1200 mm (48"))
- High bending stiffness
- Suitable for high live loads
- Extremely quick to install resulting in a cost effective solution
- Durable and extremely low creep rate
- Isolation pads, used as discrete resilient suport of the system, are mold and water resistant

*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.

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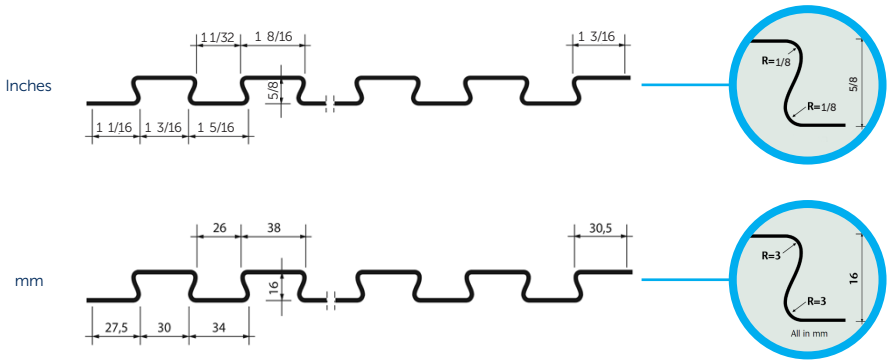
Dovetailed sheeting



Channel

Rail Standard length

2 m (6' 6-3/4")

Pad

Stravifloor Deck standard solutions are available with resilient pads in four standard grades:
Pad-L (low stiffness), Pad-M (medium stiffness), Pad-H (high stiffness) and Pad-X (extra high stiffness)

Thickness

30 mm (1-3/16") or 50 mm (2")

Note: the type of elastomeric pad as well as the channel spacing - which can be between 400 mm and 1200 mm (1'-3/8" and 48") - 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.

Pad Color Code

Natural Rubber

Pad-M (black pad marked with the company logo in blue)
Pad-H (black pad marked with the company logo in yellow)
Pad-X (black pad marked with the company logo in green)

Perimeter Strip

Resilient strips specially designed to minimize the flanking transmissions

Insulation material

Fiberglass or rock wool insulation

Note: 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).

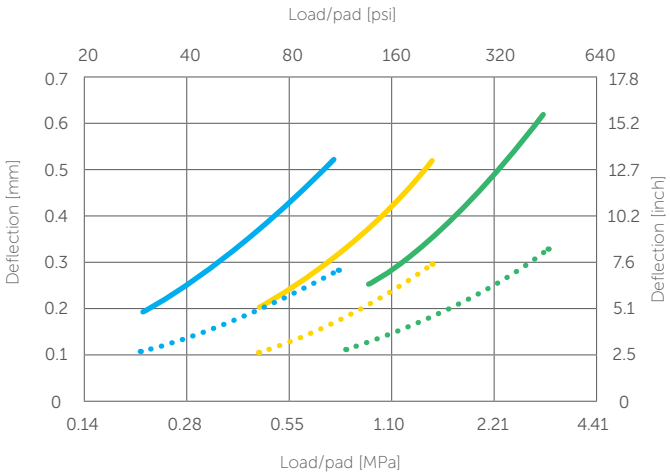
PHYSICAL & MECHANICAL PROPERTIES OF NATURAL RUBBER PADS

Type	Degree of stiffness	Color*	Shore hardness ASTM D2240	Tensile strength ISO 37	Elongation at break ISO 37	Compression set 50%/ 23°C(73°F)/70h ISO 815
Pad-M	Medium	Blue	40 A	2 MPa (290 psi)	> 300%	< 15%
Pad-H	High	Yellow	55 A	5.2 MPa (754 psi)	> 400%	< 15%
Pad-X	Extra High	Green	73 A	6 MPa (870 psi)	> 200%	< 15%

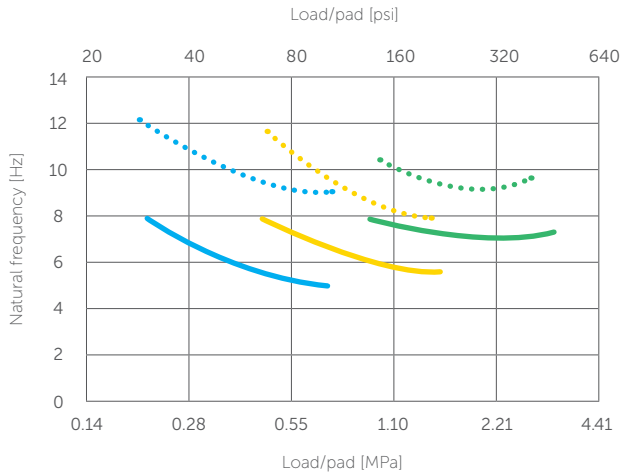
Note: working temperature between -10°C (14°F) and 100°C (212°F) (momentary higher temperatures are acceptable).

* Black pad marked with the company logo in the mentioned color.

Deflection vs Load



Natural Frequency vs Load



- Pad-M50 [50 mm (2")]
- Pad-H50 [50 mm (2")]
- Pad-X50 [50 mm (2")]
- Pad-M30 [30 mm (1-3/16")]
- Pad-H30 [30 mm (1-3/16")]
- Pad-X30 [30 mm (1-3/16")]

ACOUSTICAL RESULTS

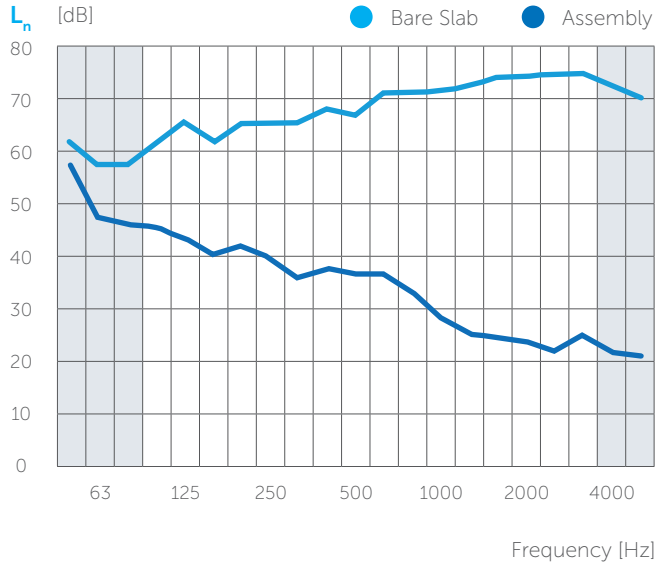
Test Setup

1. 50 mm (2") concrete floating slab, on deck sheet as formwork
2. Isolated channel with 50 mm (2") natural rubber pads
3. 40 mm (1-9/16") insulation material
4. 140 mm (5-1/2") reinforced concrete slab

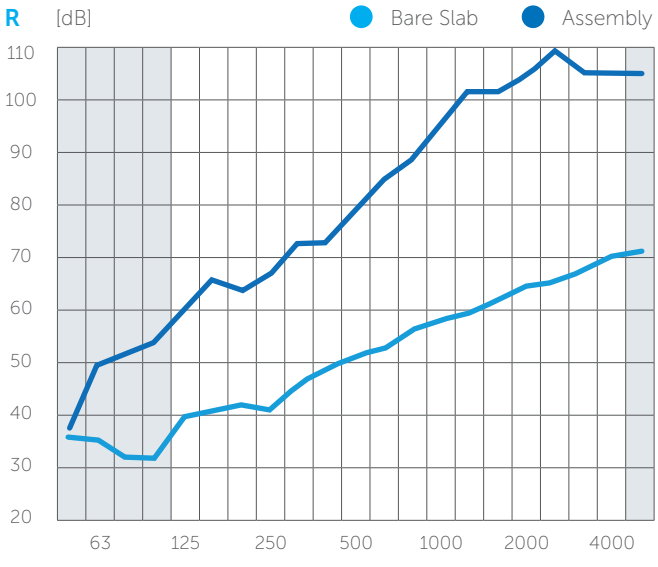
Setup	IIC	STC
Assembly	73	80
Bare Slab	25	55

Laboratory report available upon request
LA.170209.R02

Frequency [Hz]	L_n [dB]	
	Bare Slab	Assembly
50	62	58
63	57	48
80	58	46
100	62	46
125	66	44
160	62	41
200	65	42
250	66	40
315	66	36
400	68	38
500	67	37
630	71	37
800	71	34
1000	72	28
1250	72	25
1600	74	24
2000	75	24
2500	75	22
3150	75	25
4000	73	22
5000	70	21



Frequency [Hz]	R [dB]	
	Bare Slab	Assembly
50	36	38
63	35	50
80	32	52
100	32	54
125	40	59
160	41	66
200	42	64
250	41	67
315	46	73
400	49	73
500	51	79
630	53	85
800	56	89
1000	58	95
1250	60	101
1600	62	102
2000	64	105
2500	65	109
3150	68	105
4000	70	105
5000	71	105



Note: measurements in accordance with ISO standards and single-figure ratings determined in accordance with ASTM standards.

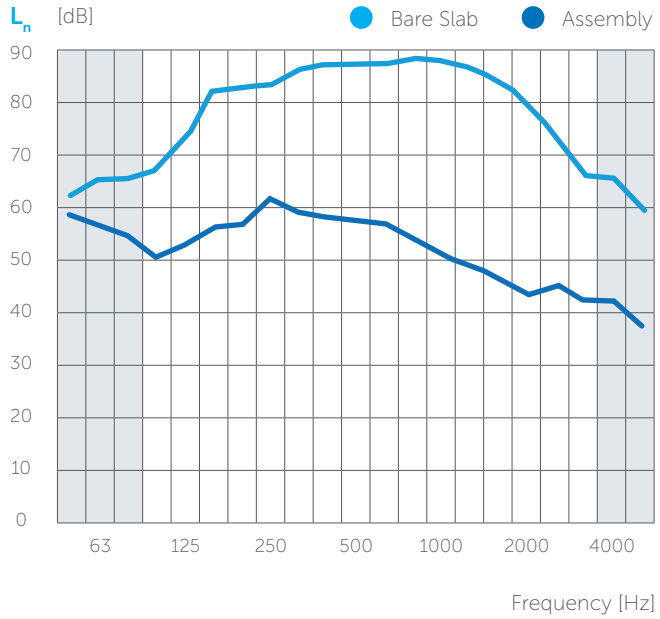
Test Setup

1. 50 mm (2") concrete floating slab, on deck sheet as formwork
2. Isolated channel with 50 mm (2") natural rubber pads
3. 40 mm (1-9/16") insulation material
4. 180 mm (7-1/16") CLT 5-ply

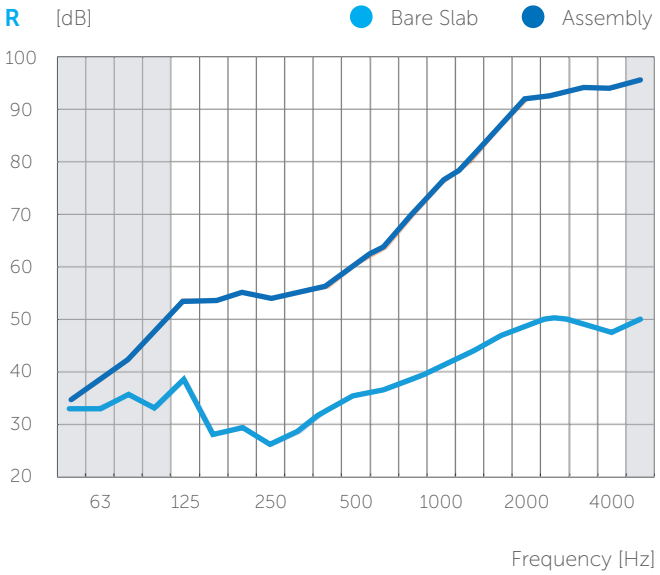
Setup	IIC	STC
Assembly	55	65
Bare Slab	23	39

Laboratory report available upon request
TS-24-277-05

Frequency [Hz]	L_n [dB]	
	Bare Slab	Assembly
50	63	59
63	65	57
80	65	55
100	67	51
125	73	53
160	82	56
200	83	57
250	83	62
315	86	59
400	87	58
500	87	58
630	87	57
800	88	54
1000	88	51
1250	86	49
1600	84	47
2000	80	44
2500	73	45
3150	66	42
4000	65	42
5000	59	38



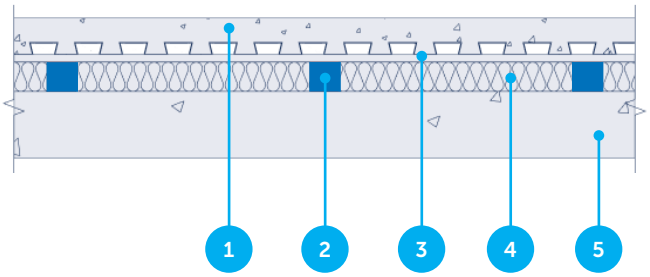
Frequency [Hz]	R [dB]	
	Bare Slab	Assembly
50	33	34
63	33	38
80	35	42
100	33	48
125	38	54
160	28	53
200	29	55
250	26	54
315	28	55
400	33	56
500	36	60
630	36	64
800	38	70
1000	41	76
1250	43	80
1600	47	86
2000	49	92
2500	50	93
3150	49	94
4000	48	94
5000	50	96

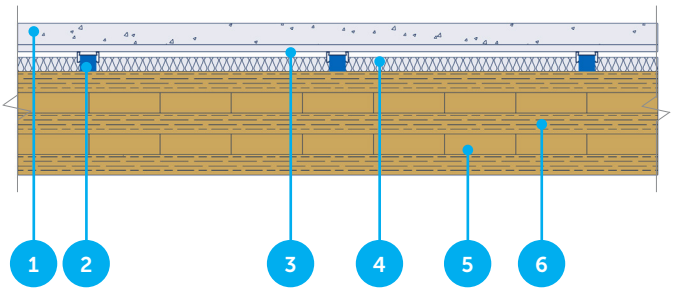


Note: measurements in accordance with ISO standards and single-figure ratings determined in accordance with ASTM standards.

TYPICAL ASSEMBLIES

1. Concrete/Screed floating floor
2. Isolated channel (pads OR springs)
3. Dovetailed sheeting
4. Insulation material
5. Reinforced concrete slab
6. Cross Laminated Timber slab





Note: an installation manual is available upon request.

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

SCAN ME

DISCLAIMER

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