

Stravifloor Jackup-E Datasheet



Stravifloor Jackup-E is an isolated floating floor system using moulded natural rubber within bell-shaped cast iron housings cast into concrete and **jacked up after the concrete has cured**, to provide the required void depth.

Once the concrete has cured, the isolated slab is raised off the structure to the required void depth. Stravifloor Jackup-E boxes allow for easy adjustment of the final floor height.

Stravifloor Jackup-E is a cost-effective solution with minimal risk of acoustic bridging between the floating floor slab and the subfloor.



CHARACTERISTICS

- Using cast iron housing with load capacity up to 49 kN
- Standard solutions available with moulded natural rubber resilient pads in two standard grades: Pad-L (low stiffness), Pad-M (medium stiffness), Pad-H (high stiffness)
- Resilient pads with a maximum service load up to 17 kN
- Standard design is for 85 mm thick floating slab. The housing can be fitted with a height extension unit for thicker floating floors
- Two levels of positioning support for reinforcing bars
- Elastomers identified with a colour code to minimize possible installation errors



BENEFITS

- No need for formwork
- The spacing between the bearings isn't depending on the bending strength of the formwork panels, and therefore the distance between the isolators is determined by the thickness of the floating floor slab and its reinforcement, as well as by the load bearing capacity and the box in which they are placed
- Ensure that the floating floor is decoupled from the substrate to reduce the risk of acoustical bridging. The whole slab is lifted (there is no opportunity for any debris to be left in the cavity and any bridging is broken when the slab is lifted up)
- Before the slab is raised, the area can be used as storage during construction or heavy equipment can be rolled into position, without compromising the system's performance
- System total build-up height is not dependent on the thickness of the bearing (since elastomeric isolator is located within the housing), allowing for low-profile floating floor systems
- Easy to install and low labour cost, no need to fit unusual contours
- Fewer components and lower volumes to be transported, meaning a smaller transport cost and a positive impact on the environment
- Adjustable air void
- Possible solution for vibration, sound and impact isolation



SYSTEM COMPONENTS



- 1. Cast Iron Housing
- 2. Housing plug
- 3. Bolt*



- 4. Bearing (Pad-L, Pad-M, Pad-H) with a colourful embedded steel load plate with an indent to locate the jacking bolt

- 5. Housing extension
- 6. Housing extension plug

*hexagon socket set screw with headless end (inner size 10 mm).



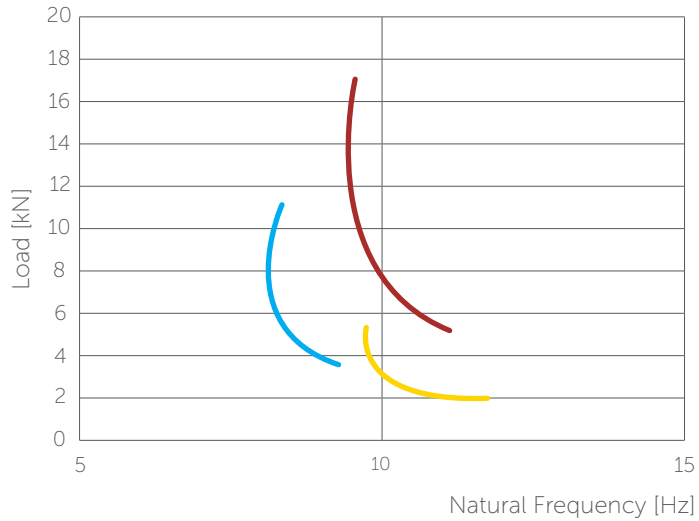
PHYSICAL AND MECHANICAL PROPERTIES OF MOULDED NATURAL RUBBER BEARINGS

Type	Design load ADL = DL+LL/3 (kN)	Max. service load TL = DL+LL (kN)	Colour code**	Height* (mm)
Pad-L	4	5.1	Yellow (RAL1021)	53
Pad-M	8.5	11.1	Blue (RAL5012)	
Pad-H	11	17	Red (RAL3000)	

*including embedded steel load plate with an indent to locate the jacking bolt

**coloured metal plate with electrophoretic deposition and powder coating

Natural Frequency vs Load

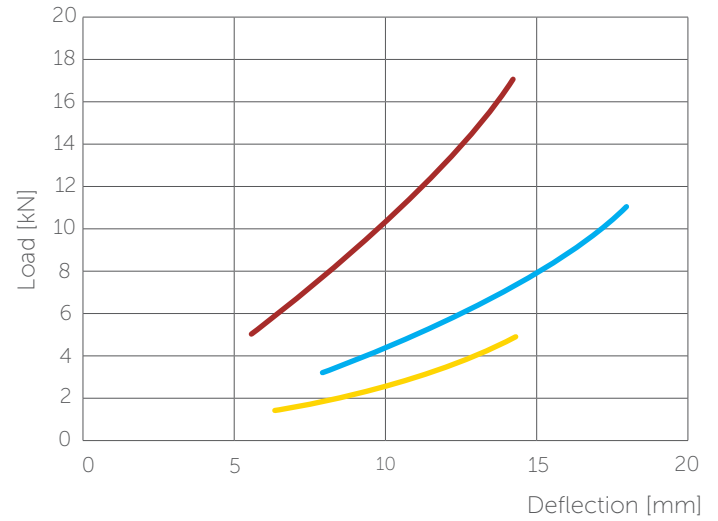


● Pad-L

● Pad-M

● Pad-H

Deflection vs Load



Recommend reinforcement and typical distances between boxes

Live Load (LL) = 3 kN/m²:

Floating Slab Thickness (mm)	Span* (mm)									
	800	900	1000	1100	1200	1300	1400	1500	1600	1700
85	A142	A142	A252	A252	A252	A252	A252	A393	A393	A393
100	A142	A142	A252	A252	A252	A252	A393	A393	A393	-
125	2x A142	2x A252	2x A252	2x A252	2x A252	2x A393	2x A393	2x A393	2x A393	-
150	2x A142	2x A252	2x A252	2x A252	2x A252	2x A393	2x A393	2x A393	-	-

*Considering the biggest span, length or width wise

Live Load (LL) = 5 kN/m²:

Floating Slab Thickness (mm)	Span* (mm)						
	800	900	1000	1100	1200	1300	1400
85	A142	A252	A252	A252	A252	A393	A393
100	A142	A252	A252	A252	A393	A393	A393
125	2x A252	2x A252	2x A252	2x A252	2x A393	2x A393	2x A393
150	2x A252	2x A252	2x A252	2x A393	2x A393	2x A393	-

*Considering the biggest span, length or width wise

Notes:

1x indicates a single mesh of reinforcement.

2x indicates top and bottom mesh of reinforcement.

Single mesh reinforcement option uses a bottom mesh with 30 mm bottom clean cover.

Double mesh reinforcement option uses a top and bottom mesh with 20 mm and minimum 60 mm bottom clean cover.

Bursting and punching shear loads must be covered with 2 local Ø8mm reinforcement bars (≥ 260mm long) at each housing location, placed in the housing lugs.

Reinforcement grids

diam [mm]	o.c. Distance [mm]	reinforcement surface [mm²/m]
6	200	142
8	200	252
10	200	393

The hereby suggested distances between the Stravifloor Jackup-E boxes (and distances to the floor edges), as well as the possibly suggested steel reinforcement of the floating floor, should be considered as general guidelines for design & construction and are therefore solely given for information purposes. CDM Stravitec cannot be held responsible for any implementation in a specific project. For each project a specific calculation must be made by the stability engineers appointed by the client, in function of the particularities of the project, the required dead and live loads, etc.



Test Setup 1

1. 140 mm reinforced concrete slab
2. 50 mm air void
3. PE-film
4. Cast iron housing with Pad-M
5. 100 mm concrete reinforced floating slab

Setup

 $L_{n,w}$ (dB) R_w (dB) ΔL_w (dB)

Assembly

44

70

34

Bare Slab

78

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Laboratory report available upon request
Test Report ACL 002/23 & ACL 001/23

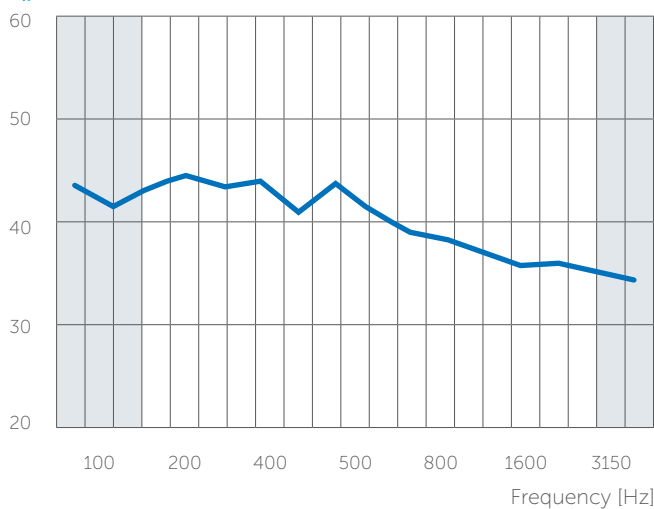
Frequency
[Hz] L_n [dB]

Assembly

Frequency [Hz]	L_n [dB] Assembly
100	48
125	44
160	47
200	50
250	48
315	49
400	43
500	48
630	43
800	39
1000	38
1250	35
1600	33
2000	33
2500	32
3150	30

 L_n [dB]

● Assembly

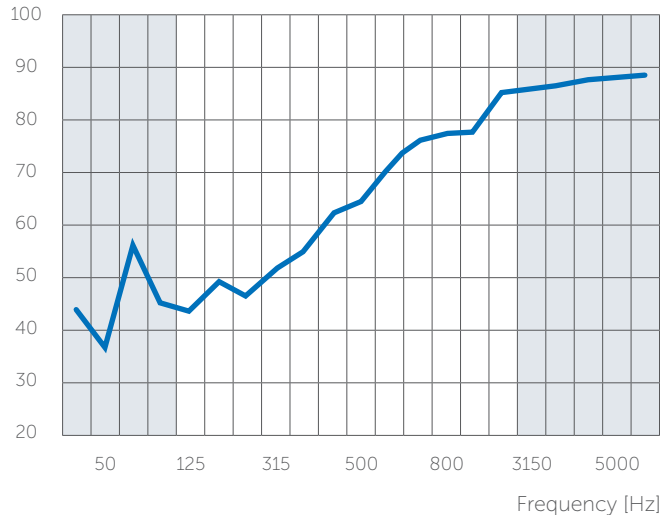
Frequency
[Hz] R [dB]

Assembly

Frequency [Hz]	R [dB] Assembly
50	50
63	44
80	61
100	51
125	50
160	55
200	52
250	57
315	60
400	66
500	68
630	75
800	79
1000	80
1250	80
1600	87
2000	87
2500	88
3150	89
4000	90
5000	90

 R [dB]

● Assembly



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



Test Setup 2

1. 140 mm reinforced concrete slab
2. 50 mm void partially filled with insulation material (20 mm)
3. PE-film
4. Cast iron housing with Pad-M
5. 100 mm concrete reinforced floating slab

Setup

 $L_{n,w}$ (dB) R_w (dB) ΔL_w (dB)

Assembly

42

71

36

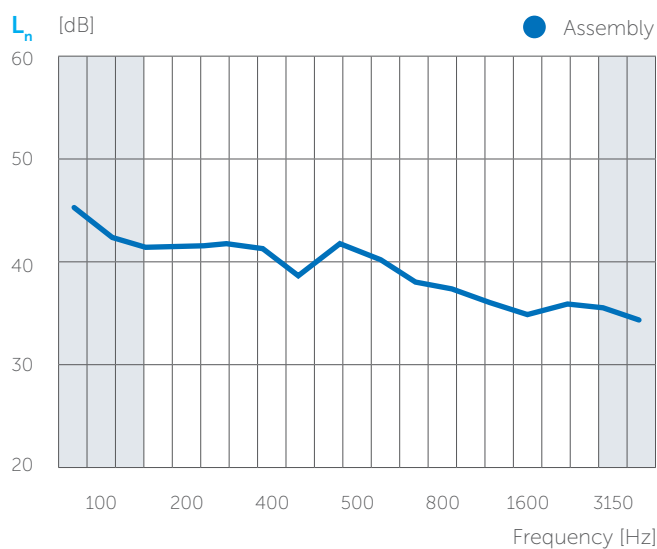
Bare Slab

78

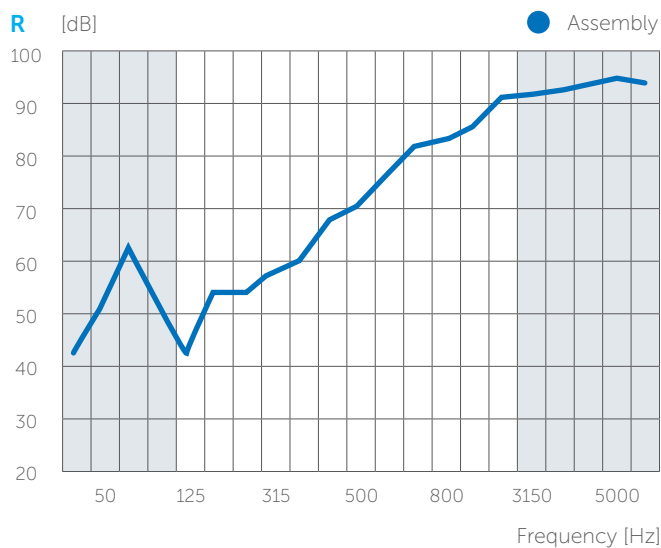
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Laboratory report available upon request
Test Report ACL 005/23 & ACL 006/23

Frequency [Hz]	L_n [dB]
	Assembly
100	51
125	45
160	44
200	44
250	44
315	44
400	38
500	45
630	41
800	37
1000	36
1250	33
1600	31
2000	33
2500	32
3150	30



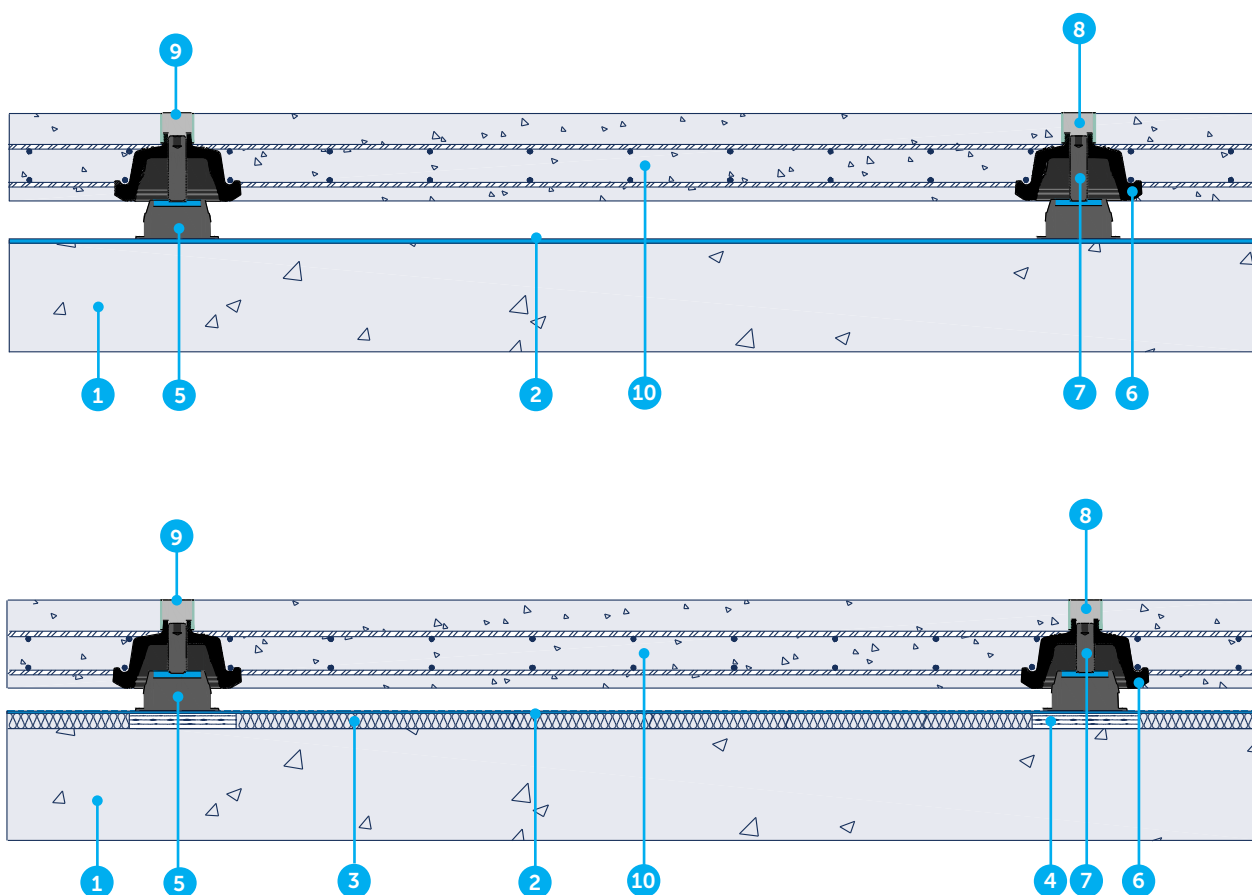
Frequency [Hz]	R [dB]
	Assembly
50	46
63	53
80	64
100	55
125	46
160	56
200	56
250	60
315	62
400	68
500	71
630	76
800	81
1000	82
1250	84
1600	89
2000	89
2500	90
3150	91
4000	92
5000	92



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



TYPICAL ASSEMBLIES



- | | |
|----------------------------|--|
| 1. Structural slab | 7. Bolt |
| 2. PE-film (poly sheeting) | 8. Housing extension (only applicable for floating slabs thicker than 85 mm) |
| 3. Insulation | 9. Grout |
| 4. Overheight | 10. Reinforced concrete floating slab |
| 5. Bearing | |
| 6. Housing | |

Note: an installation manual is available upon request.



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



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DISCLAIMER

This information is accurate to the best of our knowledge at the time of issue. Information, data and recommendations provided are based on industry accepted testing and prior product usage. It is intended as descriptive of the general capabilities and performance of our products and does not endorse applicability for any particular project. We reserve the right to change products, performance, and data without notice. This document replaces all information supplied prior to the publication hereof.