

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 **jackup 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)
- Resilient pads with a maximum service load up to 11 kN
- Standard design is for 85 mm thick floors. 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
- Allow to change the total build-up height without having to change the thickness of the bearing, which would increase its natural frequency
- 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) 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).



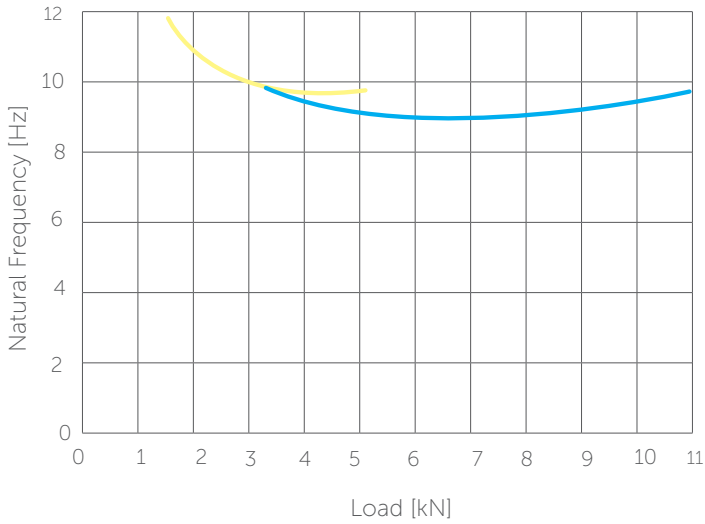
PHYSICAL AND MECHANICAL PROPERTIES OF MOULDED NATURAL RUBBER BEARINGS

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)	

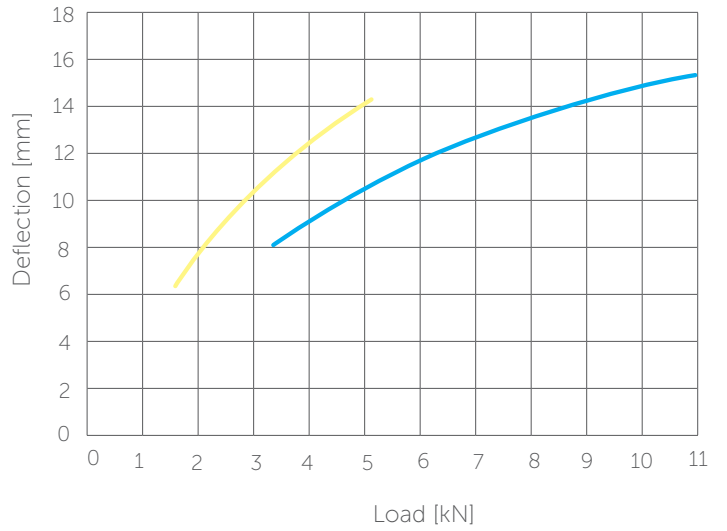
*including embedded steel load plate with an indent to locate the jacking bolt

**coloured metal plate with electrophoretic deposition and powder coating

Natural Frequency vs Load



Deflection vs Load



● Pad-L
● Pad-M

Recommend reinforcement and typical distances between boxes

Live Load (LL) = 3 kN/m²:

Floating Slab Thickness (mm)	Span* (mm)					
	800	1000	1100	1200	1300	1400
85	1x A142	1x A142	1x A252	1x A252	1x A252	1x A252
100	1x A142	1x A142	1x A252	1x A252	1x A252	NA
125	2x A252	2x A252	2x A252	2x A252	2x A252	NA
150	2x A252	2x A252	2x A252	NA	NA	NA

*Considering the biggest span, length or width wise

Live Load (LL) = 5 kN/m²:

Floating Slab Thickness (mm)	Span* (mm)					
	800	1000	1100	1200	1300	1400
85	1x A142	1x A142	1x A252	1x A252	NA	NA
100	1x A142	1x A252	1x A252	NA	NA	NA
125	2x A252	2x A252	2x A252	NA	NA	NA
150	2x A252	2x A252	NA	NA	NA	NA

*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.

Reinforcement grids

diam [mm]	o.c. Distance [mm]	reinforcement surface [mm ² /m]
6	200	142
8	200	252

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

$L_{n,r,w} (C_{l,r})$	$\Delta L_w (C_{l,\Delta})$	$R_w (C; C_{tr}; C_{50-5000}; C_{tr 50-5000})$
44 (-1) dB	34 (-10) dB	69 (-2; -7; -1;-8) dB

Laboratory report (ACL003-23 and ACL004-23 by Itecons) available upon request.

Test Setup 2:

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

$L_{n,r,w} (C_{l,r})$	$\Delta L_w (C_{l,\Delta})$	$R_w (C; C_{tr}; C_{50-5000}; C_{tr 50-5000})$
44 (-2) dB	34 (-9) dB	70 (-2; -7; -2;-9) dB

Laboratory report (ACL001-23 and ACL002-23 by Itecons) available upon request.

Test Setup 3:

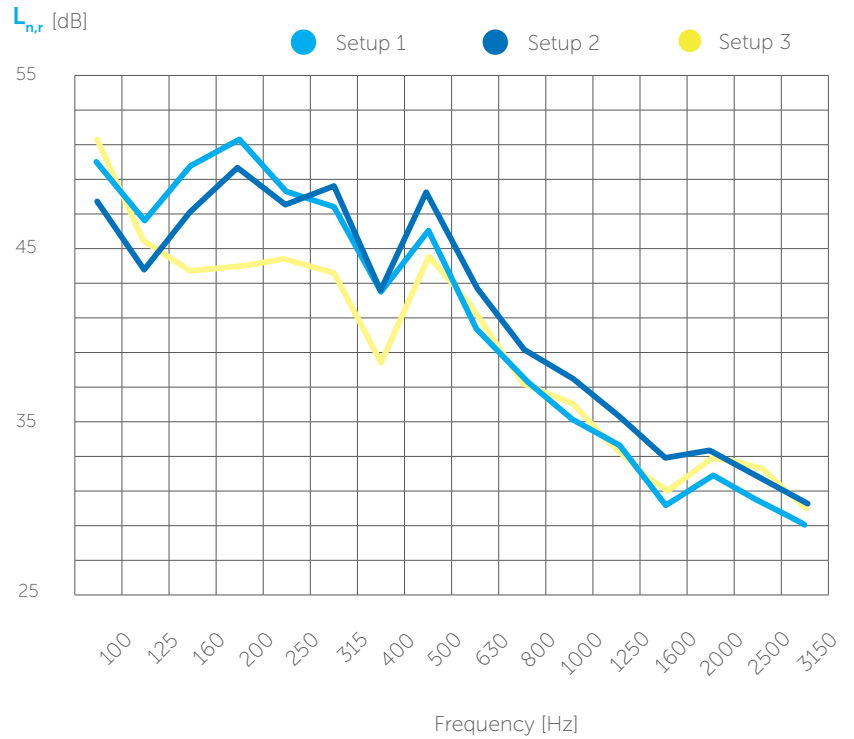
1. 140 mm reinforced concrete slab
2. 50 mm void partially filled with insulation material (20 mm)
3. PE-film
4. Cast iron housing with Pad-M
5. 100 mm concrete reinforced floating slab

$L_{n,r,w} (C_{l,r})$	$\Delta L_w (C_{l,\Delta})$	$R_w (C; C_{tr}; C_{50-5000}; C_{tr 50-5000})$
42 (-2) dB	36 (-9) dB	71 (-2; -7; -1;-8) dB

Laboratory report (ACL005-23 and ACL006-23 by Itecons) available upon request.

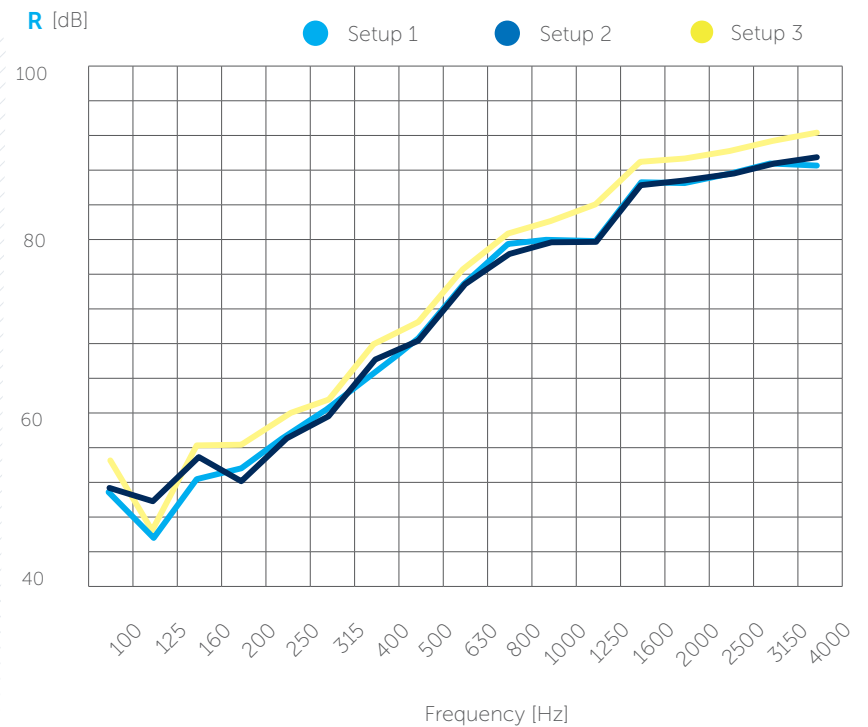
Acoustical Isolation: Impact Sound Insulation

Frequency [Hz]	$L_{n,r}$ (dB)		
	Setup 1	Setup 2	Setup 3
100	50	47,7	51,2
125	46,5	43,7	45,4
160	49,8	47,2	43,7
200	51,3	49,6	43,9
250	48,3	47,5	44,4
315	47,4	48,6	43,5
400	42,4	42,6	38,2
500	46,1	48,2	44,5
630	40,4	42,8	41,3
800	37,6	39,1	37,2
1000	35,2	37,6	36
1250	33,6	35,4	33,1
1600	30,1	32,9	31
2000	32	33,3	32,9
2500	30,3	31,7	32,3
3150	29	30,1	29,9



Airborne Sound Insulation

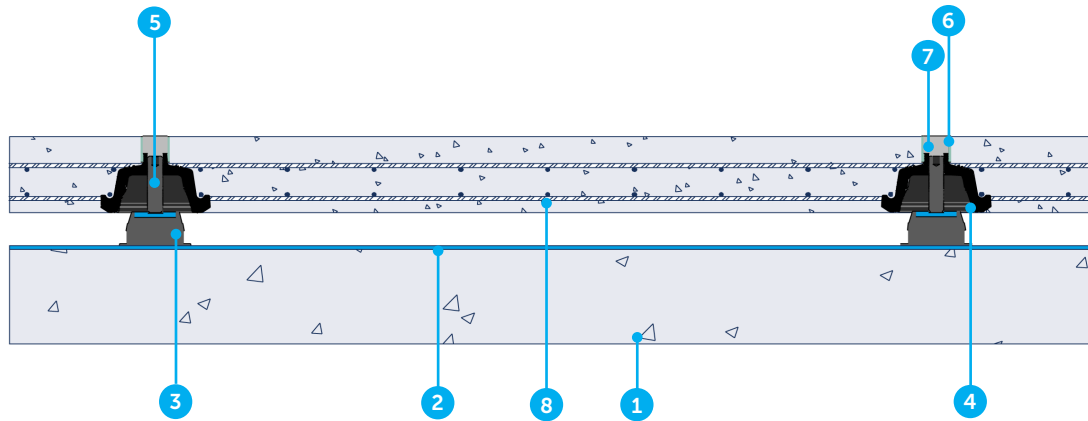
Frequency [Hz]	R (dB)		
	Setup 1	Setup 2	Setup 3
50*	48,8	50,3	45,8
63*	45,3	43,6	53,4
80*	60,2	61,2	63,7
100	51	51,3	54,6
125	45,6	49,8	46,3
160	52,5	55,1	56,1
200	53,6	52,1	56,4
250	57,5	57,2	59,7
315	60,7	59,9	61,7
400	64,8	66,2	68,3
500	68,8	68,4	70,7
630	74,9	74,5	76,4
800	79,6	78,5	80,8
1000	80	79,7	82,2
1250	79,9	79,7	84,3
1600	86,6	86,5	88,9
2000	86,5	86,9	89,4
2500	87,7	87,6	90,2
3150	88,9	88,9	91,4
4000	88,6	89,5	92,4



Data reported with * are not included in accreditation scope.



TYPICAL ASSEMBLIES



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

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.