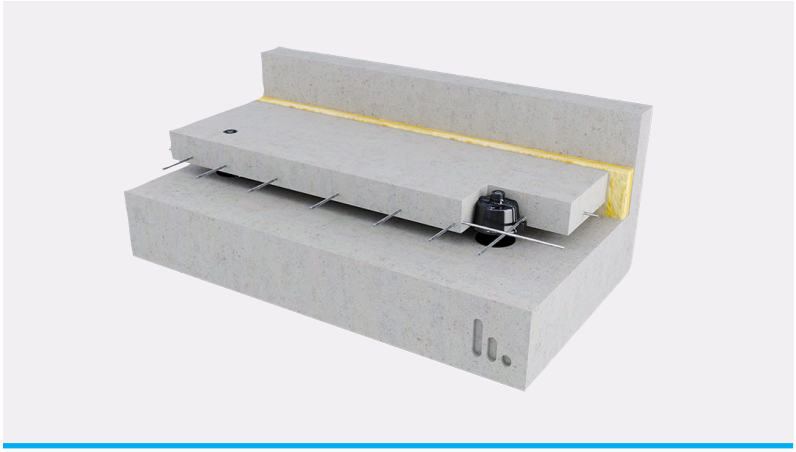

Stravifloor Jackup-E

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 (11 kips)
- Standard solutions available with moulded natural rubber resilient pads in two standard grades: Pad-L (low stifness), Pad-M (medium stifness)
- Resilient pads with a maximum service load up to 11 kN (2.495 lbs)
- Standard design is for 85 mm (3-3/8") 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
- 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

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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 (3/8")].

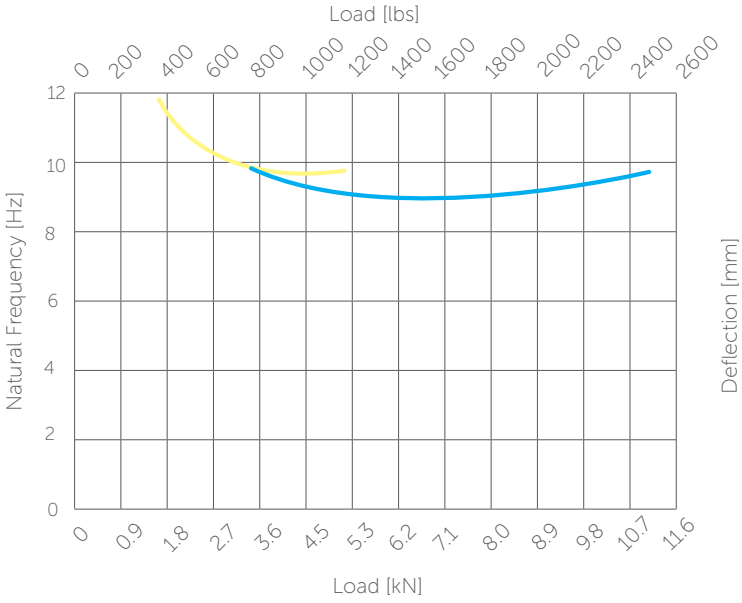
PHYSICAL AND MECHANICAL PROPERTIES OF MOULDED NATURAL RUBBER BEARINGS

Type	Design load ADL = DL+LL/4 [kN (lbs)]	Max. service load TL = DL+LL [kN (lbs)]	Colour code**	Height* [mm (inch)]
Pad-L	4 (900)	5.1 (1146)	Yellow (RAL1021)	53 (2-1/16)
Pad-M	8.5 (1910)	11.1 (2495)	Blue (RAL5012)	

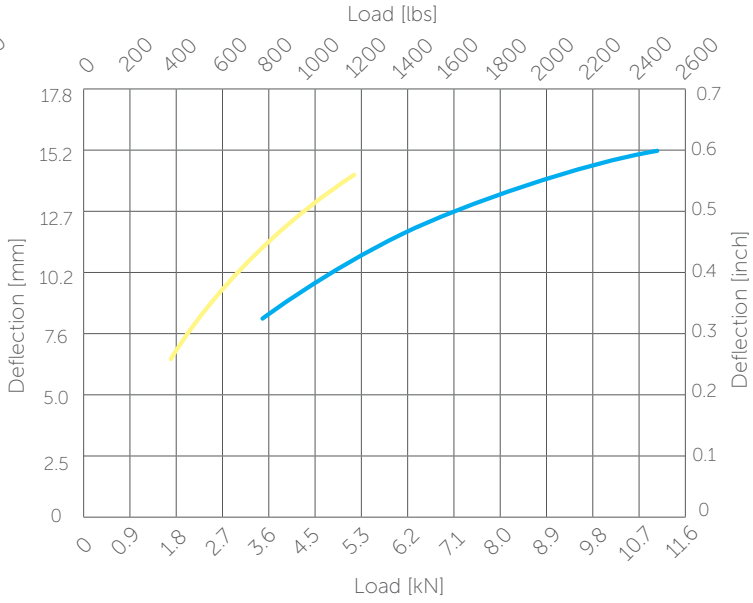
*including embedded steel load plate with an indent to locate the jacking bolt

**coloured metal plate with electrophoretic deposition and powder coating

Natural Frequency vs Load



Deflection vs Load



Minimum recommended reinforcement

CDM Stravitec provides the following minimum recommended reinforcement for the Stravifloor Jackup-E. The following should be referenced as a minimum recommendation and should be always confirmed by the project structural engineer of record:

- Work shall conform to the minimum standards of the "Building Code Requirements for Structural Concrete", ACI 318, & the "International Building Code", IBC, latest editions.
- Deformed reinforcing bars shall conform to the requirements of ASTM A615 Grade 60.
- The concrete compressive strength shall be at least 25 MPa (4000 psi) at 28 days.
- Slabs with a thickness < 150 mm (6") shall be reinforced with minimum one layer of #4@10", each way, with a clear cover of 40 mm (1-1/2") from top of slab.
- Slabs with a thickness of 150 mm (6") shall be reinforced with minimum two layer of #3@10", each way, each way, with a clear cover of at least 20 mm (3/4").
- Splices shall be at least 610 mm (24"), to be located at support lines for bottom steel and at mid span lines for top steel.
- All reinforcing bars shall be uniformly distributed across the length and width of the slab.
- All reinforcing bars shall be well secured in position prior to concrete placing.
- The contractor shall verify all dimensions prior to construction. The architect and/or structural engineer shall be notified of any discrepancies or inconsistencies.

The 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.

ACOUSTICAL RESULTS

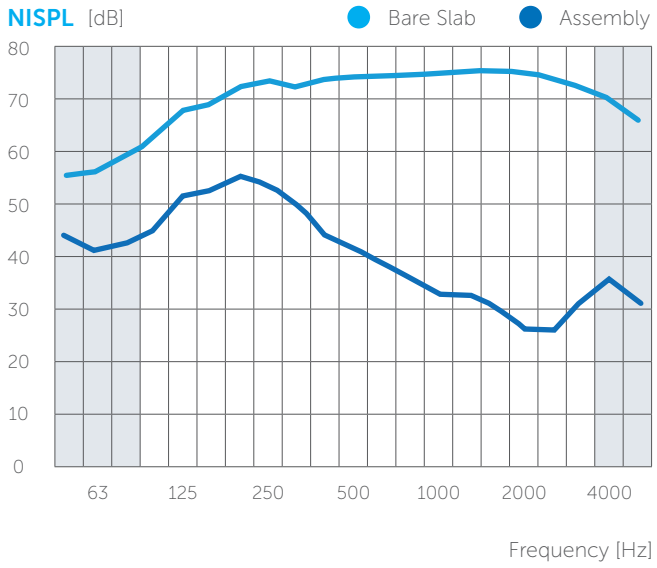
Test Setup

1. 100 mm (4”) reinforced concrete floating floor
2. Stravifloor Jackup-E housings with natural rubber isolators
3. PE-foil
4. 41 mm (1-5/8”) air void
5. 150 mm (6”) reinforced concrete slab

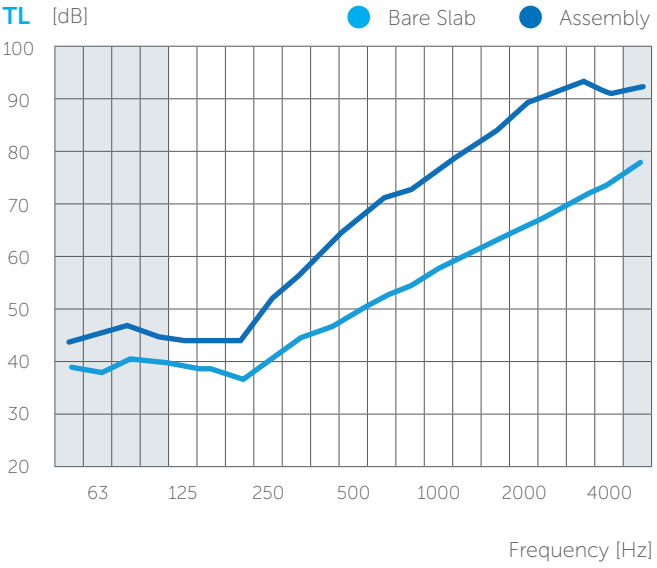
Setup	IIC	HIIC	LIIC	STC
Assembly	65	70	95	62
Bare Slab	29	28	66	53

Laboratory report available upon request
NRC Test Report A1-021983-24

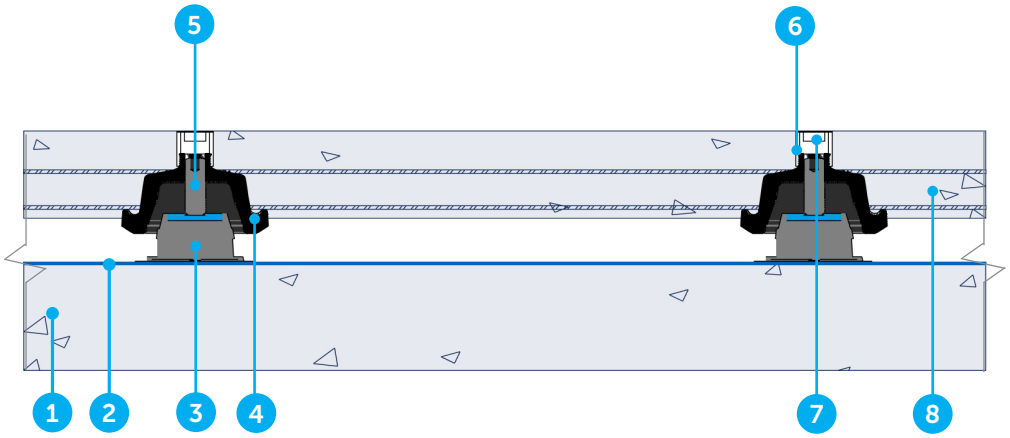
Frequency [Hz]	NISPL [dB]	
	Bare Slab	Assembly
50	55	44
63	56	41
80	59	43
100	62	45
125	67	51
160	68	52
200	71	55
250	72	53
315	71	50
400	73	44
500	73	42
630	73	39
800	73	36
1000	74	33
1250	74	33
1600	74	30
2000	74	26
2500	73	26
3150	71	32
4000	69	36
5000	65	31



Frequency [Hz]	Airborne TL [dB]	
	Bare Slab	Assembly
50	39	44
63	39	46
80	41	47
100	40	45
125	39	44
160	39	44
200	37	44
250	41	52
315	45	56
400	47	62
500	50	67
630	53	71
800	55	73
1000	58	77
1250	61	80
1600	63	84
2000	66	89
2500	68	91
3150	72	93
4000	74	91
5000	78	92



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 (3-3/8"))
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.

SCAN ME

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.

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