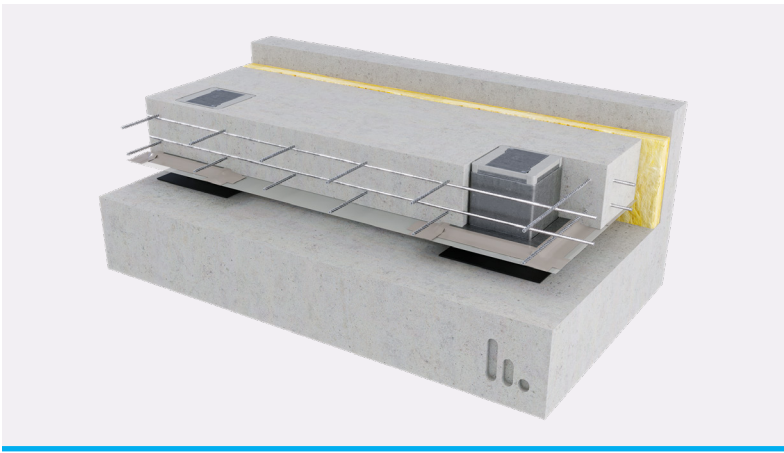


# Stravifloor Jackup-R Datasheet



Stravifloor Jackup-R is an isolated floating floor system using reinforced steel boxes 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-R boxes allow for easy adjustment of the final floor height as well as replacement or inspection of isolators, should the use of the room or load conditions change in the future.

Stravifloor Jackup-R boxes have an extremely high load capacity and, therefore, allow for larger spans and fewer support points than traditional jack-up systems, to provide a cost-effective solution. Stravifloor Jackup-R reduces the risk of acoustic bridging between the floating floor slab and the subfloor.



## CHARACTERISTICS

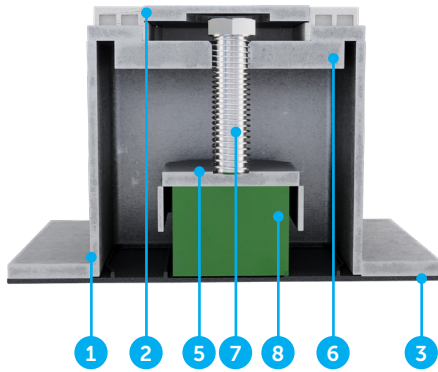
- Can be provided with elastomer bearings giving a natural frequency as low as 6Hz, or spring mounts giving a natural frequency 4.5Hz or 3Hz\*
- Standard box heights are 4" (100 mm), 6" (150 mm) and 8" (200 mm) (any height from 4" (100 mm) upwards can be manufactured to special order or project requirement)
- Stravifloor Jackup-R boxes have an extremely high load capacity, allowing for larger spans
- Steel components are centrifugal hot-dip galvanized
- Spring or elastomeric isolators are accessible and replaceable even after installation and concrete pour
- Jack-up systems provide the lowest risk of acoustical bridges through poured concrete
- Stravifloor Jackup-R systems can have a shallow or adjustable air gap
- Can take high loads before the slab is raised (e.g. used as a storage area during construction)
- Eliminates the cost and need for formwork

\* 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.



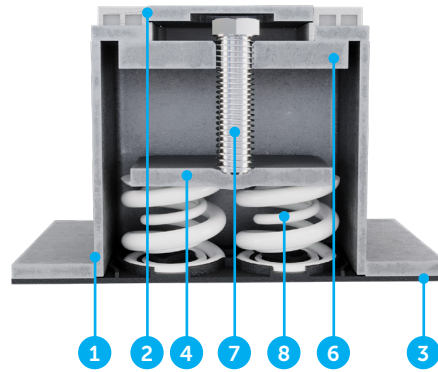
## SYSTEM COMPONENTS

Stravifloor Jackup-R box (elastomers)  
Weight: 30 lbs (13.6 kg) (excl. elastomers)



- 1. Reinforced steel box
- 2. Box lid
- 3. Bottom plate
- 4. Spring plate
- 5. Bearing cap
- 6. Adjustment plate

Stravifloor Jackup-R box (springs)  
Weight: 30 lbs (13.6 kg) (excl. springs)



- 7. Bolt
- 8. Isolator (elastomer or spring)



## PHYSICAL & MECHANICAL PROPERTIES

### Standard Elastomeric Pads

Quantity (units)	Type	Dimensions [inch (mm)]	ADL = DL + LL/4 [lbs (kN)]	$f_{res}$ @ ADL (Hz)	TL = DL + LL [lbs (kN)]
1	Pad-H	3-9/16x3-9/16x2 (64x64x50)	922 (4.1)	6	1,102 (4.9)
1	Pad-H	3-9/16x4-1/8x2 (64x105x50)	1,506 (6.7)	6	1,821 (8.1)
1	Pad-X	3-9/16x3-9/16x2 (64x64x50)	1,843 (8.2)	7	2,765 (12.3)
1	Pad-X	3-9/16x4-1/8x2 (64x105x50)	3,012 (13.4)	7	4,541 (20.2)
1	Pad-U	2-3/16x2-3/16x2 (55x55x50)	4,429 (19.7)	10	5,440 (24.2)
1	Pad-U	3-9/16x3-9/16x2 (64x64x50)	5,980 (26.6)	10	7,374 (32.8)
1	Pad-U	3-9/16x4-1/8x2 (64x105x50)	9,667 (43.7)	10	12,095 (53.8)

## Standard Spring Solutions

Spring 899lbs (4kN)/4.5Hz [h = 2" (50 mm)]	Spring 304lbs (1.35kN)/4.5Hz [h = 2" (50 mm)]	Spring 1,237lbs (5.5kN)/3.15Hz [h = 3-9/16" (87.5 mm)]	Spring 4,496 (20kN)/3Hz [h = 45/8" (118 mm)]	ADL = DL+LL/4 [lbs (kN)]	TL = DL+LL [lbs (kN)]
4	4			4,811 (21.4)	5,823 (25.9)
4	2			4,201 (18.7)	5,126 (22.8)
4				3,597 (16)	4,406 (19.6)
2	4			3,012 (13.4)	3,619 (16.1)
2	2			2,406 (10.7)	2,923 (13)
2				1,799 (8)	2,203 (9.8)
			1	4,496 (20)	5,845 (26)
		4		4,946 (22)	5,620 (25)
		2		2,473 (11)	2,810 (12.5)

### Maximum distance between boxes and recommended concrete reinforcement

Maximum distance between boxes and distances to the floor edges is a consequence of load conditions of the project and maximum loads possible to accommodate by the boxes and bearing type selected. CDM Stravitec recommends the following minimum requirements for all phases of work pertaining to the construction of the reinforced concrete jack-up slabs:

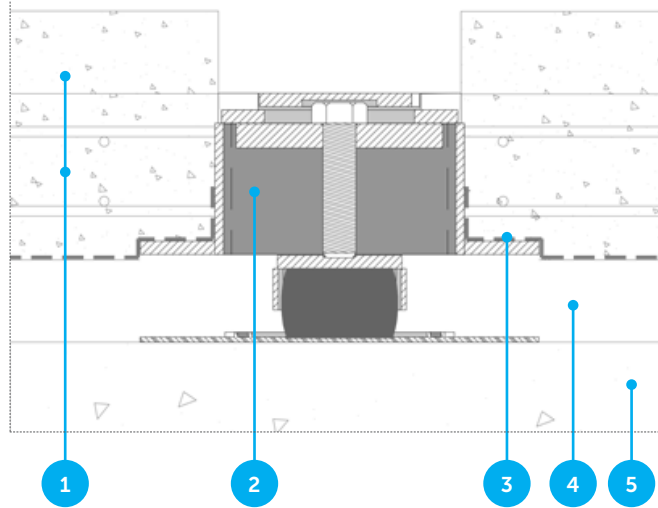
- Work shall conform to the minimum standards of the "Building Code Requirements for Structural Concrete", ACI 318, & the "International Building Code", IBC, latest editions.
- Deformed reinforcing bars shall conform to the requirements of ASTM A615 Grade 60.
- The concrete compressive strength shall be at least 4,000psi at 28 days.
- Slabs with a thickness of 4" (100 mm) & 5" (125 mm) shall be reinforced with one layer of #4@10", each way, with a clear cover of 1-1/2" (40 mm) from top of slab.
- Slabs with a thickness of 6" (150 mm) & 8" (200 mm) shall be reinforced with two layers of #3@10", each way, with a clear cover of at least 3/4" (20 mm).
- Splices shall be at least 24" (610 mm), 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.*



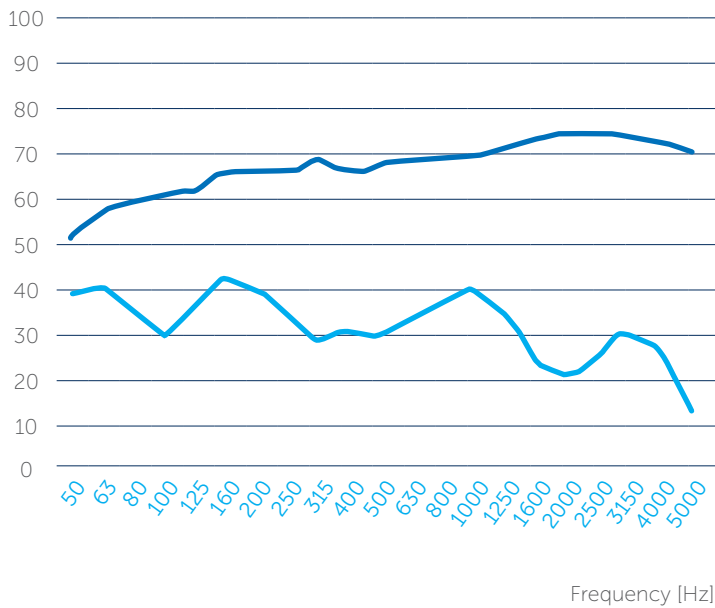
Test Report AC-20-067-06 & AC-20-067-17 by Belgium Building Research Institute<sup>(1)</sup> - Test Setup

- 1. 6" (150 mm) [4" (100 mm) + 2" (50 mm)] reinforced concrete floating floor
- 2. Reinforced steel box with PAD-X50
- 3. PE-foil
- 4. 2" (50 mm) air void
- 5. 5-1/2" (140 mm) reinforced concrete slab



Acoustical Isolation

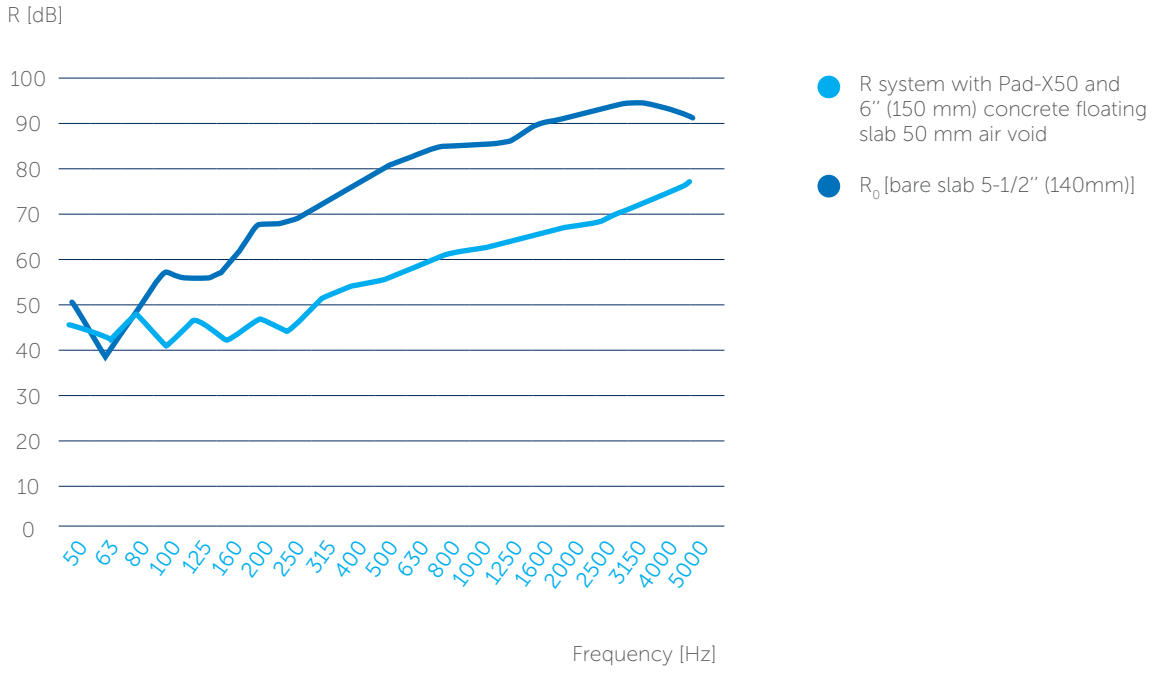
$L_n$  [dB]



- $L_n$  system with Pad-X50 and 6" (150 mm) concrete floating slab 2" (50 mm) air void
- $L_{n,0}$  [bare slab 5-1/2" (140mm)]

\*Test report available upon request

## Acoustical Isolation

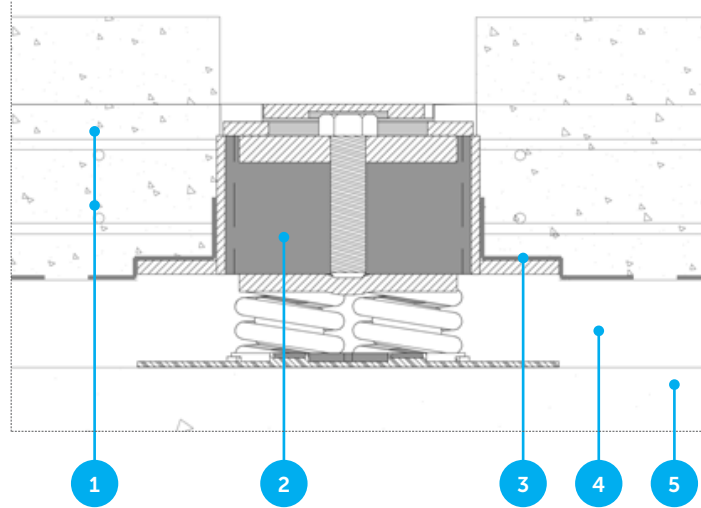


Setup	IIC	STC
System	78	78
Bare Slab	25	58

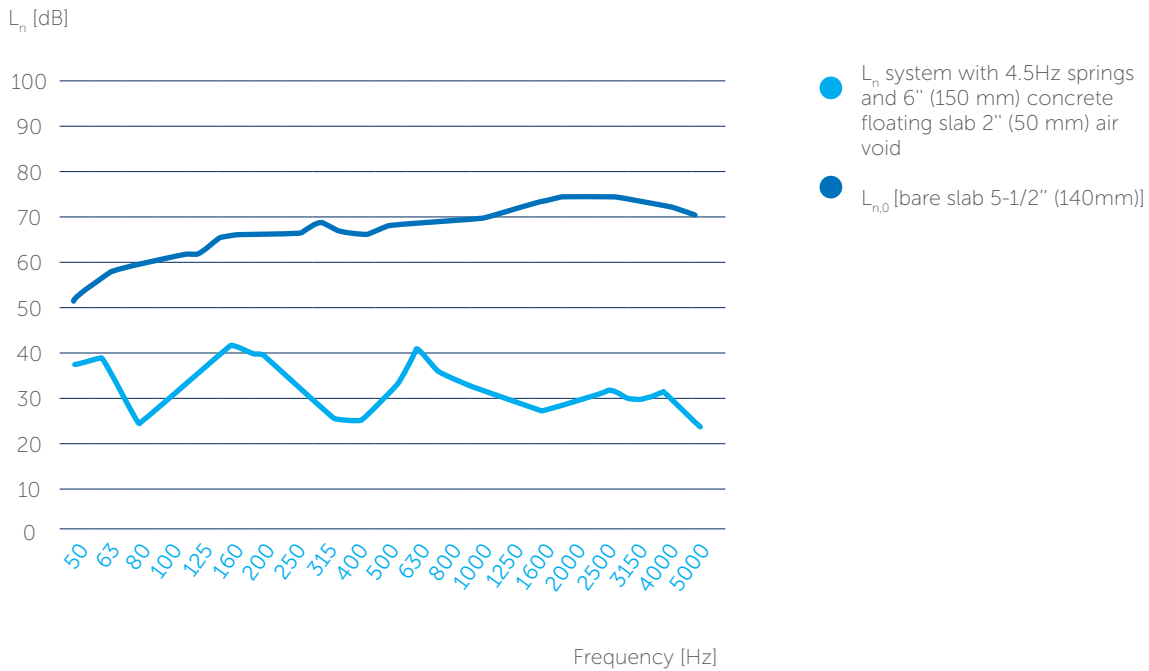


Test Report AC-20-067-07 & AC-20-067-18 by Belgium Building Research Institute<sup>(1)</sup> - Test Setup

- 1. 6" (150 mm) [4" (100 mm) + 2" (50 mm)] reinforced concrete floating floor
- 2. Reinforced steel box with 4.5Hz springs
- 3. PE-foil
- 4. 2" (50 mm) air void
- 5. 5.5" (140 mm) reinforced concrete slab

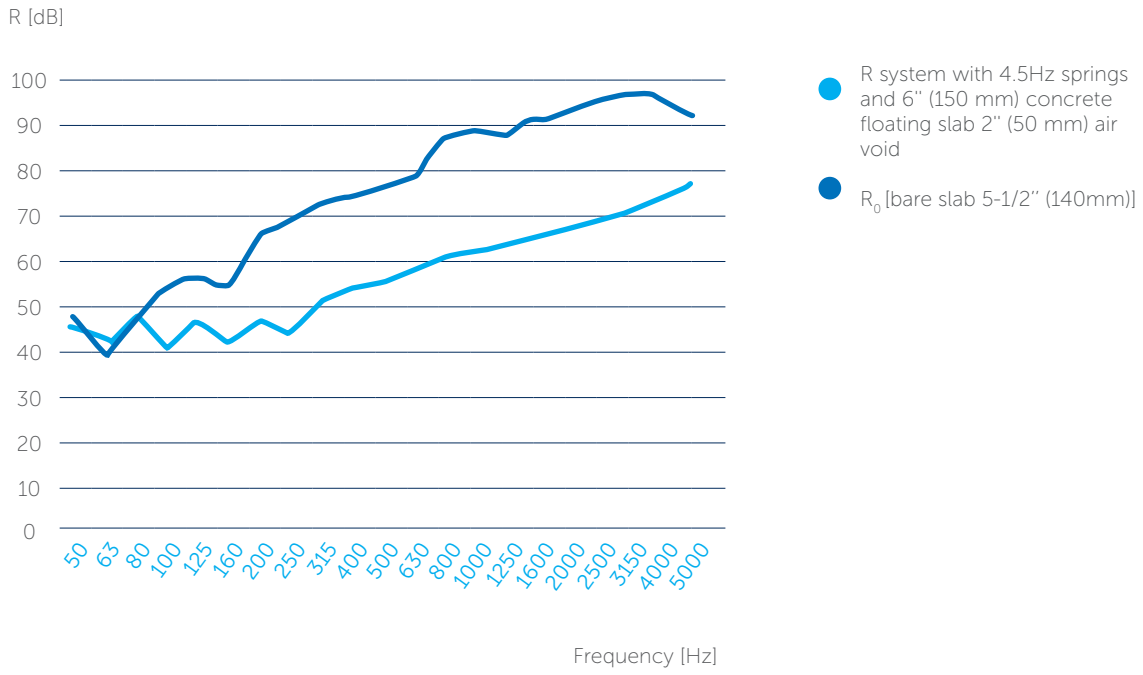


Acoustical Isolation



\*Test report available upon request

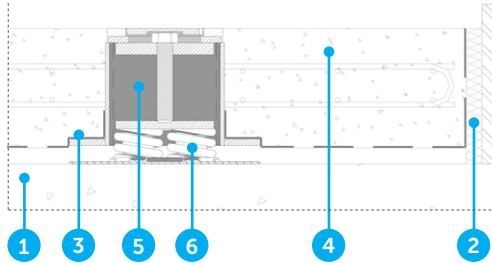
## Acoustical Isolation



Setup	IIC	STC
System	71	75
Bare Slab	25	58

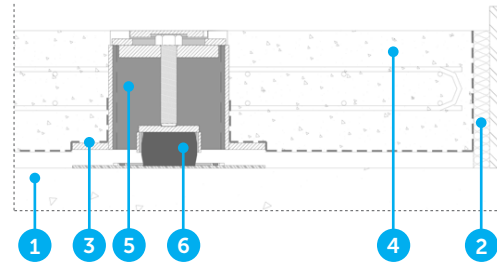


Stravifloor Jackup-R with springs



1. Reinforced concrete slab
2. Perimeter isolation
3. Protection foil (PE layer)
4. Reinforced concrete floating floor
5. Reinforced steel box
6. CDM Stravitec springs

Stravifloor Jackup-R with elastomeric pads



1. Reinforced concrete slab
2. Perimeter isolation
3. Protection foil (PE layer)
4. Reinforced concrete floating floor
5. Reinforced steel box
6. CDM Stravitec elastomeric pad

Note: an installation manual is available upon request.



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



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