

# Stravibase Spring Datasheet



Maintenance  
Free



Easy  
Installation



Durability &  
Performance



Cost-effective

Stravibase Spring bearing consists of an arranged serie of single or nested structural springs covered by High Pressure Laminated (HPL) plates at both ends of the springs.

Stravibase Spring is designed and configured to meet natural frequencies below 5Hz. Different sizes are available depending on the loads and performance requirements.



## DESIGN REQUIREMENTS

For each project, the CDM Stravitec engineering service will help you find the optimum Stravibase Spring solution to achieve the acoustic performance required and the load bearing resistance needed to withstand the static and dynamic forces in your structure. For this reason, our team will require:

- Natural frequency requirements;
- The vertical and lateral load combinations (including dead loads and variable loads such as service live loads, wind loads, etc.);
- Occasional loads for stability checks;
- Contact surface areas of each contact point;
- Substructure and superstructure drawings (sections, plan views, etc.).

**Note:**

Stravibase Spring bearings have a static deflection varying from 10 to 30 mm. These bearings are recommended for structures capable of dealing with such variable deflections during the construction process. Alternatively, we invite you to check our Stravibase SpringBox bearing.



## EXTRA FEATURES

Depending on the clients' needs and the intended use of the building, additional architectural and structural design considerations may be required by the project design team.

CDM Stravitec will support the design team with integrating all possible additional features; with the objective of maintaining the integrity and durability of the solutions without compromising the acoustic performance of the bearings.



## PHYSICAL & MECHANICAL PROPERTIES

The product portfolio of CDM Stravitec covers structural springs designed according to the EN13906-1:2013<sup>1</sup> and made of chrome alloy material (Type 51CrV4).

Commercial Name	Spring 16600/2.5	Spring 20800/2.5	Spring 4500/3.0	Spring 16600/3.5	Spring 20800/3.5	Spring 900/4.5	Spring 1200/4.5
Frequencies [Hz]	2.5		3	3.5		4.5	
Load Range <sup>2</sup> [kip]	16.6-22.5	20.8-28.1	4.5-5.9	16.6-22.5	20.8-28.1	0.9-1.1	1.2-1.5
Free Length <sup>3</sup> [inch]	13.50"	13.50"	5.35"	7.99"	7.99"	2.36"	2.36"
Cover Plate Size [inch]	6.50" x 6.50"	6.50" x 6.50"	3.94" x 3.94"	6.50" x 6.50"	6.50" x 6.50"	2.95" x 2.95"	2.95" x 2.95"
Vertical Spring Rate [lb/in]	10496	13139	4389	20991	26199	1965	2594
Horizontal Spring Rate [lb/in]	3102	3102	3504	18753	19787	3321	3995

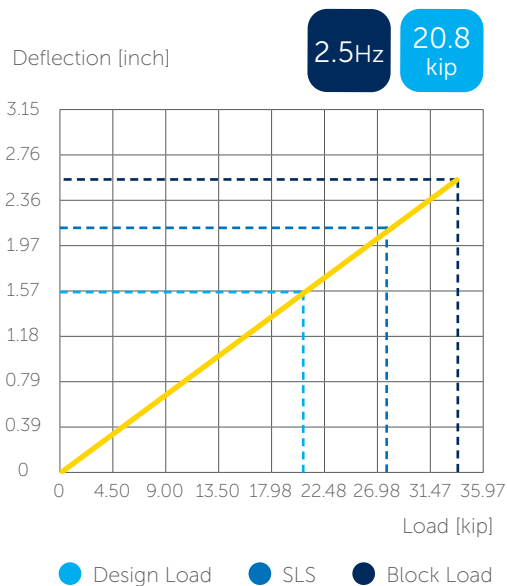
<sup>1</sup>EN 13906-1:2013: cylindrical helical springs made from round wire and bar – calculation and design part 1: compression springs.

<sup>2</sup>The lower limit of the load range refers to the design load while the upper limit of the load range refers to the serviceability limit state with max 1% relaxation limit according to the IST Standard.

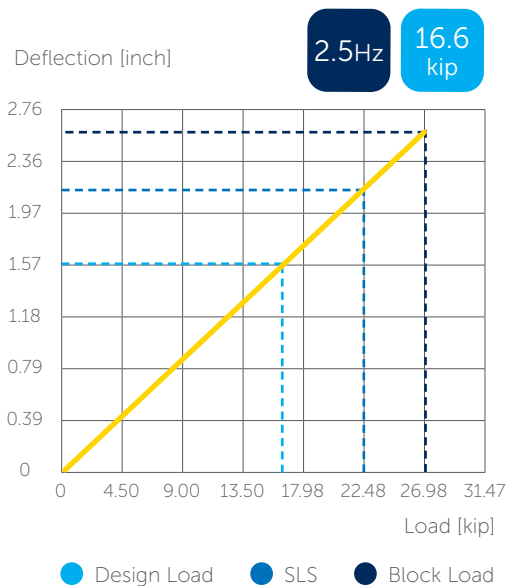
<sup>3</sup>The free length considers the length of the full solution : the spring, the top and the bottom plates.



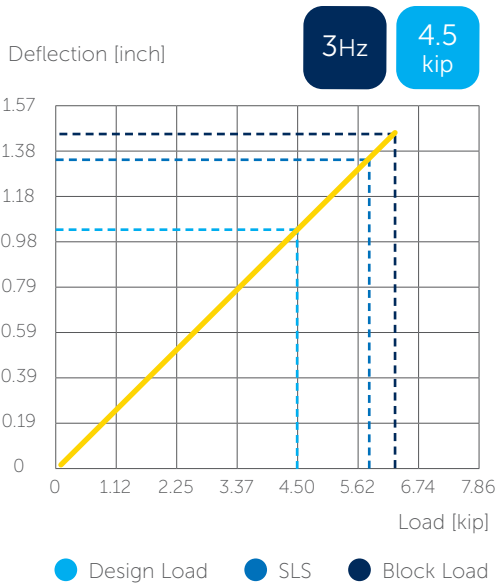
## ACOUSTICAL RESULTS



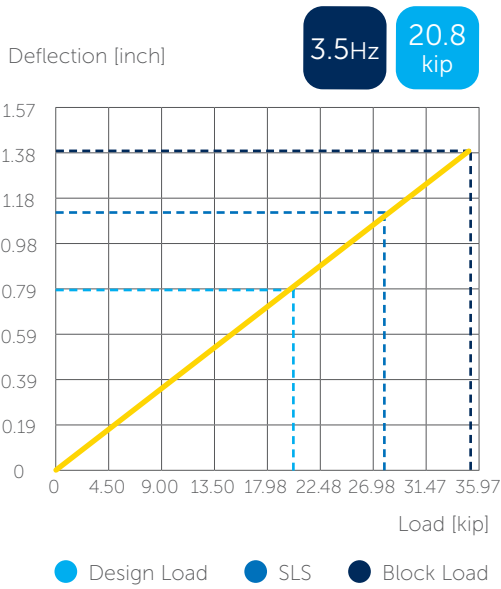
Stravibase Spring 20800/2.5



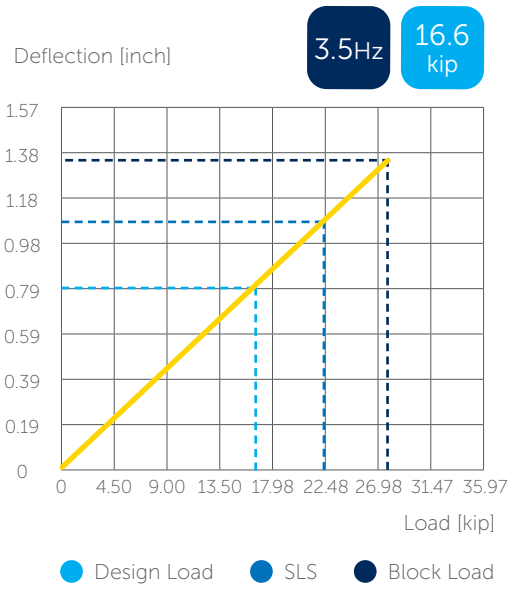
Stravibase Spring 16600/2.5



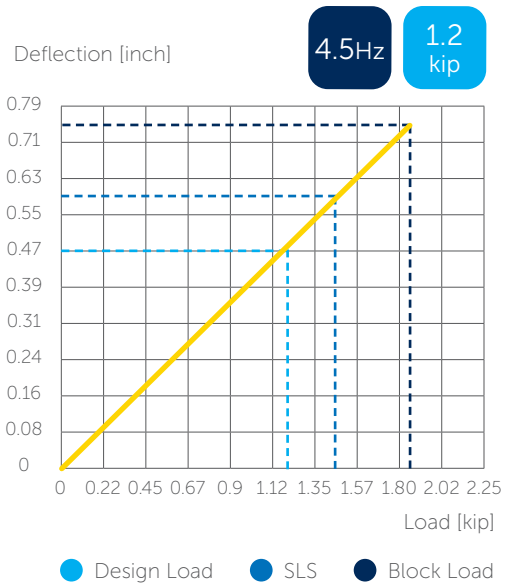
Stravibase Spring 4500/3.0



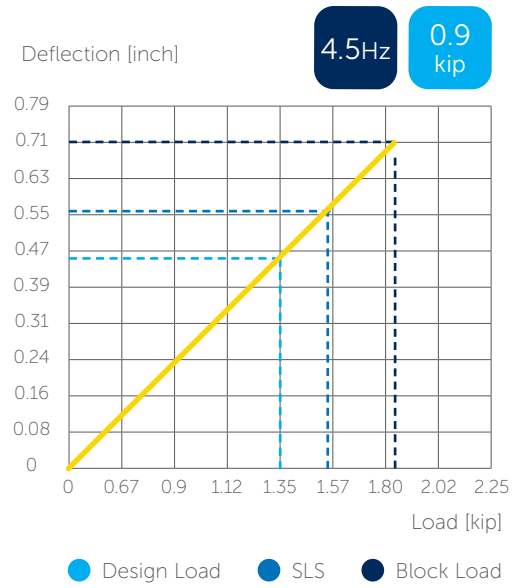
Stravibase Spring 20800/3.5



Stravibase Spring 16600/3.5



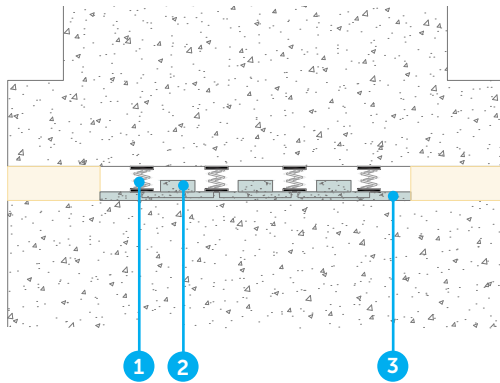
Stravibase Spring 1200/4.5



Stravibase Spring 900/4.5

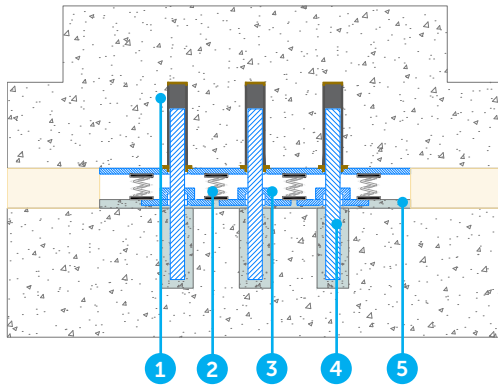


## TYPICAL ASSEMBLIES



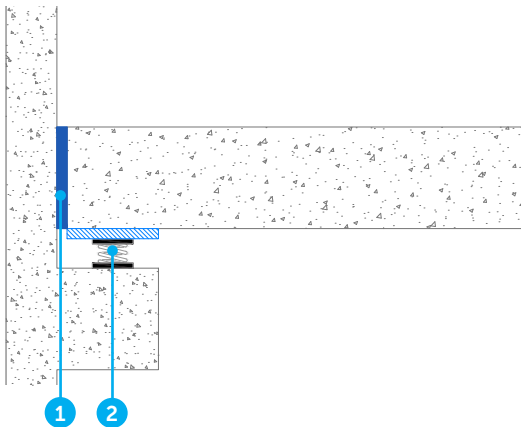
Stravibase Spring with failsafe

1. Stravibase Spring
2. Failsafe
3. Grout



Stravibase Spring with integrated shear dowels

1. Sleeve
2. Stravibase Spring
3. Failsafe
4. Shear dowel
5. Grouting for surface leveling



Stravibase Spring used for slab decoupling

1. Stravibase Mat
2. Stravibase Spring

## DISCLAIMER

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