

Stravibase Spring^{*} Datasheet



Stravibase Spring bearings are [structural springs](#) used for building base isolation, where an acoustic performance with a resonance frequency lower than 6 Hz is required.

Stravibase Spring bearings have a static deflection ranging from 10 mm (0.4") to 30 mm (1-3/16"). Therefore, these bearings are only recommended for structures that are capable of dealing with such progressive deflection during the construction process. If pre-compressed spring bearings are required, [Stravibase Springbox](#) is recommended.

Each Stravibase Spring consists of a single or double-nested springs with a top and bottom cover plate, including an elastomeric friction layer.



SYSTEM FEATURES

- 2.5 Hz to 5 Hz natural frequency
- Cost-effective high-performance solution
- Quick and easy installation
- Long-lasting and maintenance free
- High lateral stiffness
- Easily adapted to meet different load and performance requirements



DESIGN REQUIREMENTS

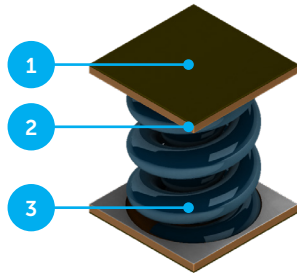
- Natural frequency requirement
- Design dead and live loads on each load bearing point (vertical and horizontal)
- Available load bearing footprint and dimensions as well as locations of any uplift restraints
- Fire protection requirements
- Maximum dynamic forces / dynamic displacement

*Previously known as CDM-CHR



SYSTEM COMPONENTS

Each Stravibase Spring consists of one spring with a high pressure laminate (HPL) plate at the top and bottom of the spring, covered by an elastomeric friction layer.



1. Elastomeric friction layer
2. HPL plate
3. Spring



PHYSICAL & MECHANICAL PROPERTIES

The following table shows the characteristics of different families of structural springs which can be used in Stravibase Spring solutions.

The springs are designed so that no permanent setting occurs before they reach the solid height. Springs are made of a chromium steel alloy type 51CrV4 according to EN 10089.

Characteristics Structural Springs

Spring type	Nominal Performance ⁽¹⁾ (Hz)	Load Range ⁽²⁾ [kN(lbf)]	Outside Diameter [mm (inches)]	Free Length [mm (inches)]
Spring 2.5Hz-18500N ⁽¹⁾ (4160lbf)	2.5	18-25 (4160-5620lbf)	74 (3)	325 (12-51/64)
Spring 2.5Hz-73600N ⁽¹⁾ (16545lbf)	2.5	73-100 (16545-22480lbf)	150 (6)	325 (12-51/64)
Spring 3.0Hz-20000N ⁽¹⁾ (4500lbf)	3.0	20-26 (4500-5845lbf)	84 (3-5/16)	118 (4-41/64)
Spring 3.5Hz-18500N ⁽¹⁾ (4160lbf)	3.5	18-25 (4160-5620lbf)	74 (3)	185 (7-9/32)
Spring 3.5Hz-73600N ⁽¹⁾ (16545lbf)	3.5	73-100 (16545-22480lbf)	150 (6)	185 (7-9/32)
Spring 4.5Hz-1350N ⁽¹⁾ (304lbf)	4.5	1.4-1.7 (304-382lbf)	40 (1-37/64)	50 (2)
Spring 4.5Hz-4000N ⁽¹⁾ (900lbf)	4.5	4-5 (900-1124 lbf)	62 (2-7/16)	50 (2)

⁽¹⁾ As an advantage in 2.5Hz , 3.5Hz and 4.5Hz spring families, the smaller spring can be fitted inside the bigger one as a nested spring to increase the load capacity in a limited support space.

⁽²⁾ The nominal resonance frequency is given at the lower limit of the design load range.
A fine tuning on the resonance frequency can be done if required.

⁽³⁾ The upper limit of the load range refers to the serviceability limit state with max 1% relaxation limit according to IST standard.

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.