

Stravibase Spring^{*} Datasheet

SYSTEM FEATURES

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

Stravibase Spring bearings may 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 to deal with such a deflection variation during the construction process.

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

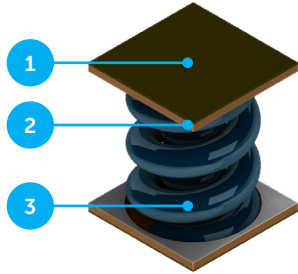
- 2.5Hz to 5Hz natural frequency
- Cost effective high-performance solution
- Quick and easy installation
- Long-lasting and maintenance free
- High lateral stiffness
- Easily adapted to meet different loads and performance requirements
- Natural frequency requirement
- Design dead and live loads on each load bearing point (vertical and horizontal)
- Available load bearing footprint and dimensions as well as locations of any fixing down bolts
- Fire protection requirements
- Maximum dynamic forces / dynamic displacement

*Previously known as CDM-CHR



SYSTEM COMPONENTS

Each Stravibase Spring consists of one spring with an HPL plate at either end of the spring, covered by an elastomeric antislip layer.



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



PHYSICAL & MECHANICAL PROPERTIES

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

The springs are designed in such a way that no permanent setting occurs before it reaches to the solid height. Springs are made of a chrome alloy material type 51CrV4 according to EN 10089.

Characteristics structural springs

Spring type	Nominal Performance ⁽¹⁾ (Hz)	Load range ⁽²⁾ (kN)	Outside diameter (mm)	Free lenght (mm)
Spring 2.5Hz-18500N ⁽¹⁾	2.5	18-25	74	325
Spring 2.5Hz-73600N ⁽¹⁾	2.5	73-100	150	325
Spring 3.0Hz-20000N ⁽¹⁾	3.0	20-26	84	118
Spring 3.5Hz-18500N ⁽¹⁾	3.5	18-25	74	185
Spring 3.5Hz-73600N ⁽¹⁾	3.5	73-100	150	185
Spring 4.5Hz-1350N ⁽¹⁾	4.5	1.4-1.7	40	50
Spring 4.5Hz-4000N ⁽¹⁾	4.5	4-5	62	50

⁽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 rage refers to the serviceability limit state with max 1% relaxation limit according to IST standard.



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