

Stravibase SEB

Datasheet



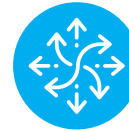
Easy
Installation



Durability &
Performance



Replaceable
& Inspectable



Compatible with steel,
wood & concrete
constructions

Stravibase SEB stands for **Structural Elastomeric Bearing**. It consists of a series of elastomeric bearings (natural or recycled rubber and polyurethane) designed to meet natural frequencies above 6 Hz. Stravibase SEB can be manufactured in a variety of dimensions to accommodate acoustic design loads up to 10 MPa (1,450 psi). The solution is suitable for all types of applications (columns, supporting walls, beams, etc.). Depending on the application, it can be combined with a formwork on one or both sides.



DESIGN REQUIREMENTS

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

- The isolation bearing natural frequency requirements;
- Vertical and lateral load combinations (including permanent loads - dead and superimposed loads - and variable loads such as service live loads, wind loads, etc.);
- Occasional loads for stability checks;
- Surface areas at each bearing location;
- Structural and architectural drawings with sections from substructure and superstructure (plan views, sections, etc.).



EXTRA FEATURES

Depending on the client's need 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 to the Stravibase SEB solutions (failsafes, shear keys, etc.); with the objective of maintaining the integrity and durability without compromising the acoustic performance of the bearings.



PHYSICAL & MECHANICAL PROPERTIES

Material: Natural Rubber	841	857	871	885
Color	Black with Blue Marking	Black with Yellow Marking	Black with Green Marking	Black with White Marking
Thickness [mm (inches)] ⁽¹⁾	20-90 (13/16" - 3-9/16")	20-90 (13/16" - 3-9/16")	20-90 (13/16" - 3-9/16")	20-90 (13/16" - 3-9/16")
Resonance Frequency [Hz]	6-25	6-25	6-25	8-25
Max. Service Load [MPa (psi)]	0.80 (116)	1.5 (218)	3.2 (464)	10 (1,450)
Occasional load [MPa (psi)]	6 (870)	12 (1,741)	20 (2,901)	25 (3,626)
Static Modulus [MPa (psi)] @ 70% of max. Service load	2.8 (406)	5.7 (827)	10.8 (1,566)	25.1 (3,640)
Dynamic Modulus [MPa (psi)] @ 70% of max. Service load	4.6 (667)	9.6 (1,392)	26.2 (3,800)	118.8 (17,230)
Creep Rate [as % of Initial Thickness per decade]	<=2%			
Temperature Range ⁽²⁾	-30/70°C (-22/158°F)			

Material: Polyurethane	101	102	103	104	105	106	107
Color	Yellow	Green	Blue	Red	Orange	Dark Blue	Dark Grey
Thickness [mm (inches)] ⁽³⁾	12.5-75 (1/2"-3")	12.5-75 (1/2"-3")	12.5-75 (1/2"-3")	12.5-75 (1/2"-3")	12.5-75 (1/2"-3")	12.5-75 (1/2"-3")	12.5-75 (1/2"-3")
Resonance Frequency [Hz]	6-25	6-25	6-25	6-25	6-25	6-25	8-25
Max. Service Load [MPa (psi)]	0.12 (17.4)	0.25 (36.3)	0.5 (72.5)	1.2 (174)	2 (290)	4.5 (653)	9 (1,305)
Occasional load [MPa (psi)]	2 (290)	3 (435)	4 (580)	6 (870)	8 (1,160)	10.5 (1,523)	18 (2,611)
Static Modulus [MPa (psi)] @ 70% of max. Service load	0.7 (108)	1.5 (212)	2.9 (424)	4.9 (708)	7 (1,018)	15.9 (2,303)	27.5 (3,985)
Dynamic Modulus [MPa (psi)] @ 70% of max. Service load	0.9 (124)	1.8 (255)	3.2 (467)	7.9 (1,145)	13.5 (1,959)	33.9 (4,911)	103 (14,933)
Creep Rate [as % of Initial Thickness per decade]	<=2%						
Temperature Range ⁽²⁾	-30/70°C (-22/158°F)						

⁽¹⁾A 50 mm bearing of Stravibase SEB-841 for example, will be referred to as Stravibase SEB-841050.

⁽²⁾The temperature range indicates where the bearing maintains both structural and acoustic performance. However, the acoustic performance will be affected as the temperature lowers.

⁽³⁾A 25 mm bearing of Stravibase SEB-101 for example, will be referred to as Stravibase SEB-101025.

Material: Recycled Rubber	45	46
Color	Black (red inserts)	Black
Thickness [mm (inches)] ⁽¹⁾	20-60 (13/16"-2-3/8")	20-60 (13/16"-2-3/8")
Resonance Frequency [Hz]	10-25	10-25
Max. Service Load [MPa (psi)]	1 (145)	1.6 (232)
Occasional load [MPa (psi)]	8 (1,160)	10 (1,450)
Static Modulus [MPa (psi)] @ 70% of max. Service load	3.5 (508)	9.9 (1,436)
Dynamic Modulus [MPa (psi)] @ 70% of max. Service load	18.4 (2,669)	60.5 (8,775)
Creep Rate [as % of Initial Thickness per decade]	<=2%	
Temperature Range ⁽²⁾	-30/70°C (-22/158°F)	

⁽¹⁾A 40 mm bearing of Stravibase SEB-45 for example, will be referred to as Stravibase SEB-45040.

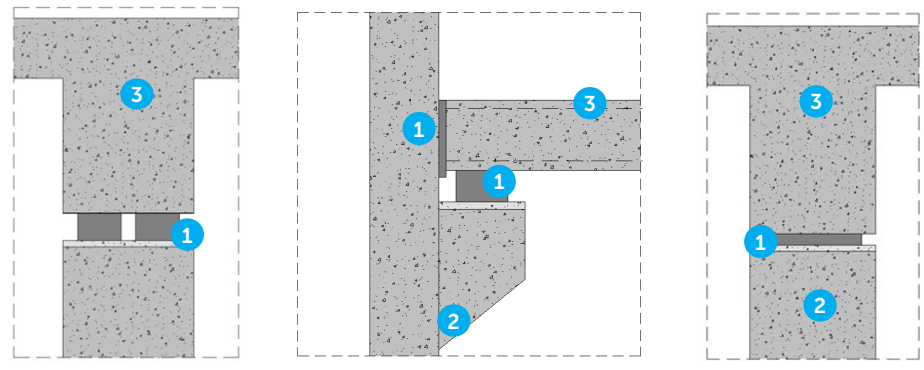
⁽²⁾The temperature range indicates where the bearing maintains both structural and acoustic performance. However, the acoustic performance will be affected as the temperature lowers.

Notes:

All CDM Stravitec elastomeric bearings are designed based on the EN1337-3.
 EN1337-3 - Structural bearings – Part 3: elastomeric bearings It is important to note that the scope of application of the EN1337-3 covers a broad range of applications. CDM Stravitec bearings are only applicable to the building application.
 Structural stability of Stravibase bearings are checked at different load combinations according to the building codes, e.g. Eurocode in Europe and United Kingdom, IBC in United States and Canada.

All CDM Stravitec bearings go through a rigorous testing programme. Materials datasheets are available on demand.

TYPICAL ASSEMBLIES



- 1. Stravibase SEB
- 2. Substructure
- 3. Superstructure

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. The renders and details present on this document are intended solely for illustration purposes only. The actual components of the final solution may undergo variations, intricately adjusted to the unique details of each project.

