stravimech
by CDM Stravitec

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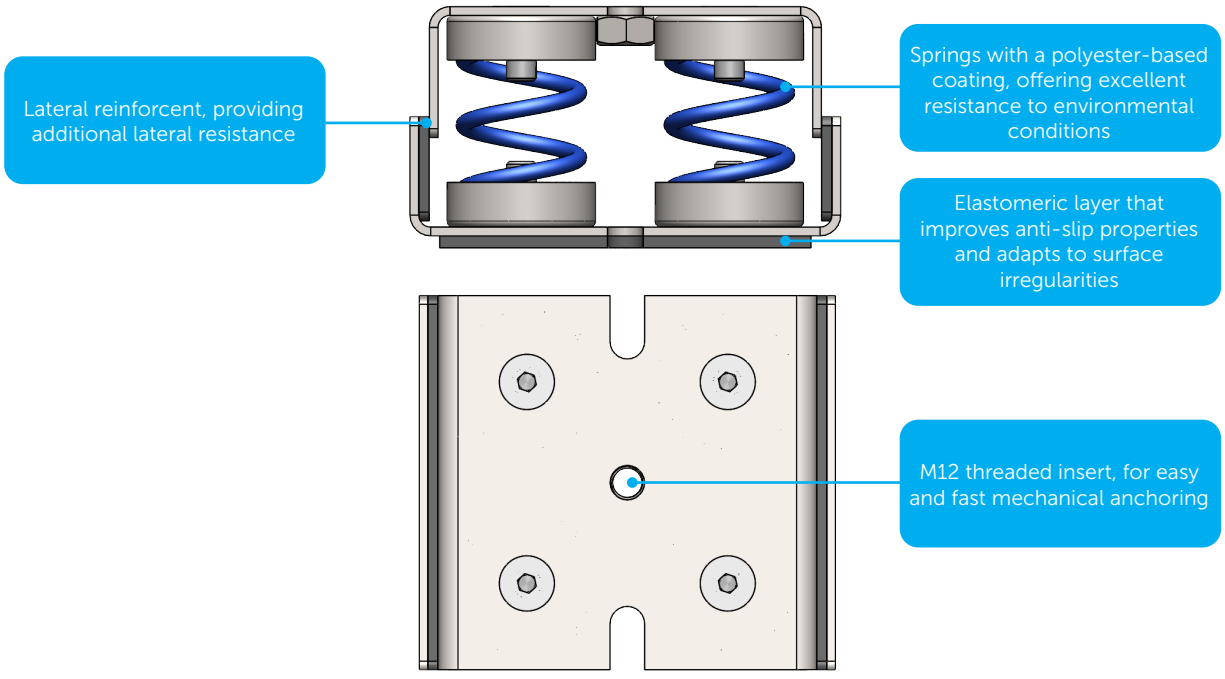
Stravimech Bearing-S4S

Datasheet

Stravimech Bearing-S4S is a high-performance spring mount featuring four metal springs working in parallel, offering enhanced load distribution and increased stability. Its standout feature is its integrated lateral reinforcement system, which provides superior resistance to lateral forces, ensuring robust performance under dynamic conditions. This solution includes top and bottom mounting plates for secure mechanical anchoring and can be paired with an optional levelling system. It is especially suited for low-speed machinery, delivering effective vibration and noise isolation across a wide range of equipment weights.

FEATURES

- Designed to support all types of machinery operating at low frequencies (below 1200 rpm), ensuring effective vibration control
- Offered with 12 spring variants to accommodate design loads up to 3100 N (total loads up to 5000 N), suitable for a wide range of machinery
- Equipped with lateral reinforcement, providing additional lateral resistance up to 2453 N
- Springs are colour-coded for quick and accurate identification on-site
- Can be equipped with a levelling mechanism for precise height adjustment and alignment
- Bottom plate features an elastomeric layer that improves anti-slip properties and adapts to surface irregularities
- Springs achieve natural frequencies of 4 Hz at design load, ensuring optimal vibration isolation
- Spring deflection goes up to 25 mm for consistent performance
- Springs are protected with a polyester-based coating, offering excellent resistance to environmental conditions
- Top and bottom cylindrical metal bushings include a visco-elastic putty layer that prevents metal-to-metal contact and promotes sound-stop



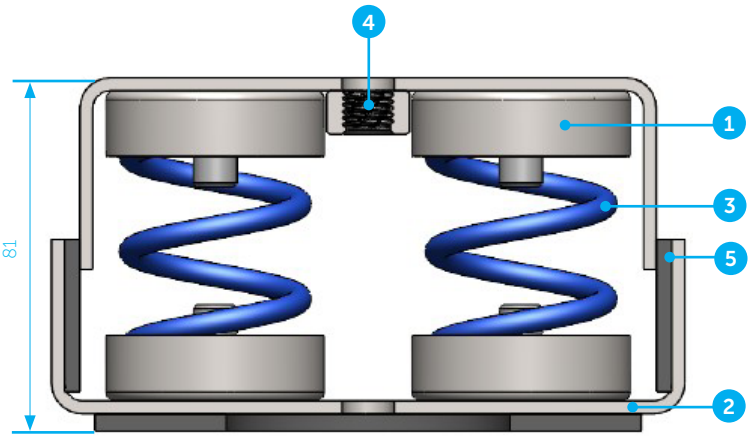
PACKAGING

Model	Reference	Quantity per Box	Weight per Box [kg]	Dimension of Box [mm]
Stravimech Bearing-S4S-125	002184	2	3.86	200 x 200 x 140
Stravimech Bearing-S4S-370	002185	2	4.10	200 x 200 x 140
Stravimech Bearing-S4S-495	002186	2	4.15	200 x 200 x 140
Stravimech Bearing-S4S-620	002187	2	4.21	200 x 200 x 140
Stravimech Bearing-S4S-930	002188	2	4.25	200 x 200 x 140
Stravimech Bearing-S4S-1240	002189	2	4.29	200 x 200 x 140
Stravimech Bearing-S4S-1550	002190	2	4.43	200 x 200 x 140
Stravimech Bearing-S4S-1860	002191	2	4.56	200 x 200 x 140
Stravimech Bearing-S4S-2170	002192	2	4.51	200 x 200 x 140
Stravimech Bearing-S4S-2480	002193	2	4.45	200 x 200 x 140
Stravimech Bearing-S4S-2790	002194	2	4.53	200 x 200 x 140
Stravimech Bearing-S4S-3100	002195	2	4.60	200 x 200 x 140

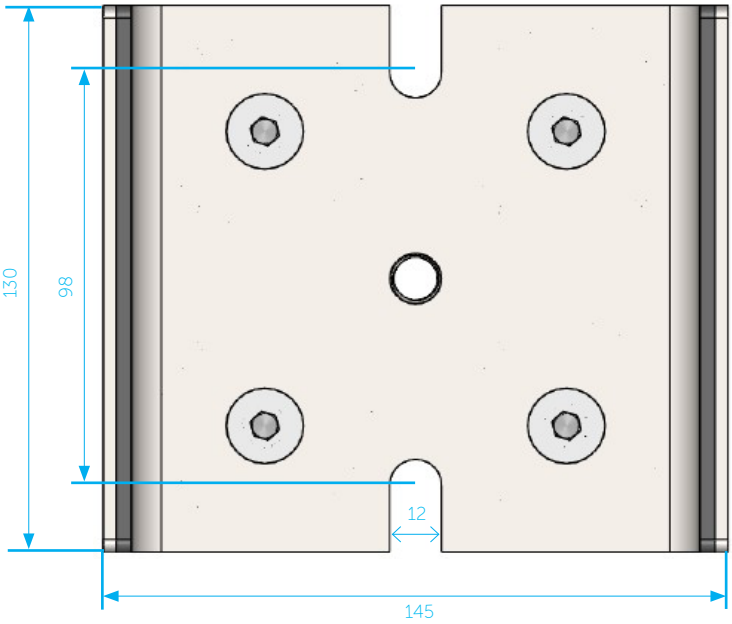
PHYSICAL & MECHANICAL PROPERTIES

Model	Height	Design Load	Natural Frequency at Design Load	Load Range	Resistance to Uplift	Lateral Stiffness	Maximum Allowed Lateral Load	Spring Colour
	mm	N	Hz	N	N	N/mm	N	
Stravimech Bearing-S4S-125	81	125	4	40-200	40	8	1769	
Stravimech Bearing-S4S-370		370		120-600	120	23	1819	
Stravimech Bearing-S4S-495		495		160-800	160	37	1870	
Stravimech Bearing-S4S-620		620		200-1000	200	51	1920	
Stravimech Bearing-S4S-930		930		300-1500	300	67	1976	
Stravimech Bearing-S4S-1240		1240		400-2000	400	84	2032	
Stravimech Bearing-S4S-1550		1550		500-2500	510	104	2103	
Stravimech Bearing-S4S-1860		1860		600-3000	620	124	2173	
Stravimech Bearing-S4S-2170		2170		700-3500	710	136	2216	
Stravimech Bearing-S4S-2480		2480		800-4000	800	148	2259	
Stravimech Bearing-S4S-2790		2790		900-4500	920	176	2356	
Stravimech Bearing-S4S-3100		3100		1000-5000	1040	204	2453	

Notes:
- The products are suited to a C3 (medium duration) environment (urban and industrial atmospheres, moderate sulphur dioxide pollution, coastal areas with low salt content).
- Resistance to uplift is tested at room temperature.
- Maximum allowed lateral load while under design load.
- Lateral stiffness is valid up to 3.5mm lateral displacement, after this the steel lateral restraint blocks any more displacement.



1. Steel bushings
2. Mounting plate
3. Polyester-based coated springs
4. M12 threaded insert
5. Lateral reinforcement



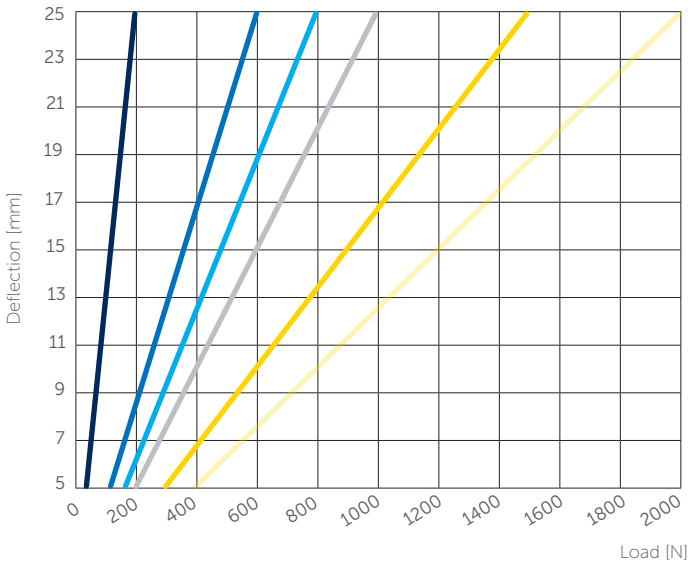
Note:
All dimensions in millimeters (mm).

To assess if the Stravimech system is appropriate CDM Stravitec's engineers will need the following information:

- Weight and load distribution of the machine to be supported on Stravimech Bearing supports
- Size and layout of support surfaces
- The dynamic loads generated by the machine
- Dimensional limits
- The required vibration isolation performance or natural frequency of the solution

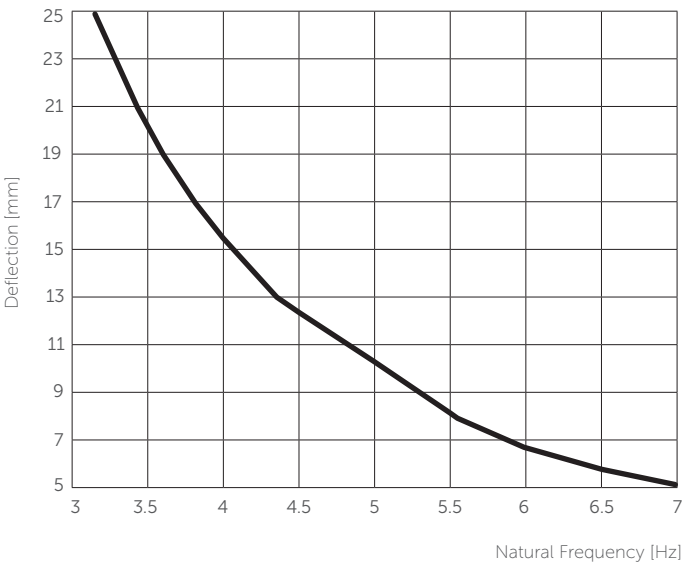
PERFORMANCE GRAPHS

Deflection vs Load

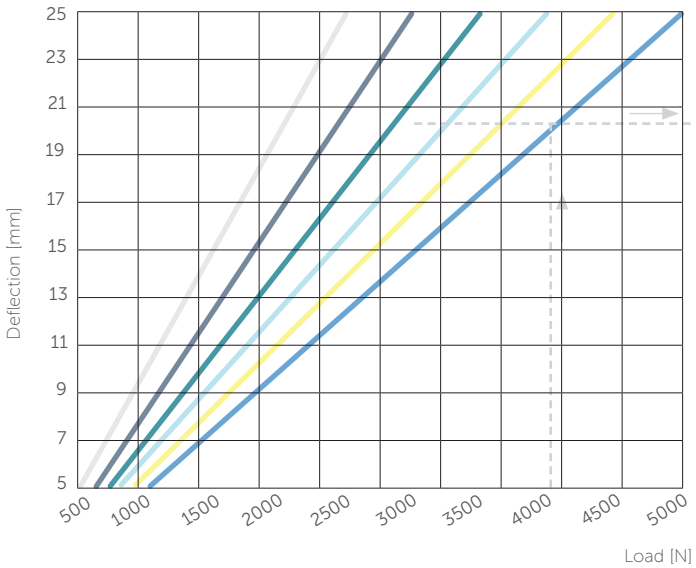


Stravimech Bearing-S4S-125
Stravimech Bearing-S4S-370
Stravimech Bearing-S4S-495
Stravimech Bearing-S4S-620
Stravimech Bearing-S4S-930
Stravimech Bearing-S4S-1240

Deflection vs Natural Frequency



Deflection vs Load



Stravimech Bearing-S4S-1550
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Stravimech Bearing-S4S-2170
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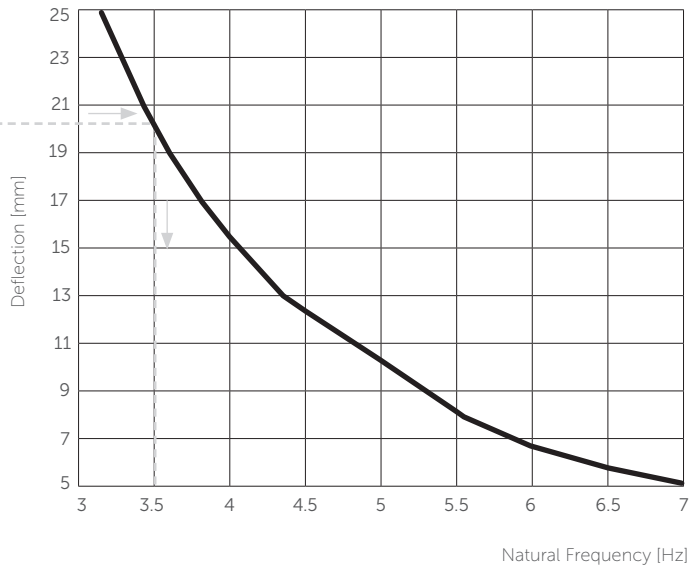
Stravimech Bearing-S4S-2790
Stravimech Bearing-S4S-3100

Deflection vs Natural Frequency



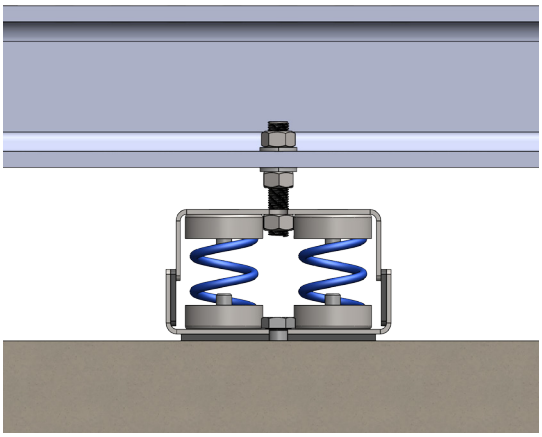
The natural frequency of a Stravimech isolator can be determined by its load. To start the calculation use the graph "deflection as function of load" this will provide the deflection at the specified load. Then moving horizontally to the right hand side plot "deflection as function of frequency" on which the corresponding natural frequency can be found. As an example, the natural frequency of a Stravimech Bearing-S4S-3100 loaded with 4000 N is determined. The corresponding deflection is 20.5 mm. The natural frequency of a spring at 20.5 mm deflection is 3.5 Hz.

ACCESSORIES

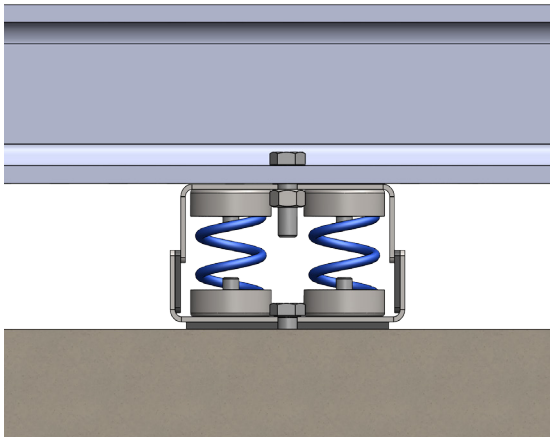
Level Set

Levelling kit consisting of a threaded rod with nuts and washers for height adjustment.
Available in M12.

TYPICAL ASSEMBLIES



Stravimech Bearing-S4S with levelling*



Stravimech Bearing-S4S directly assembled

*Levelling set available as accessory.

DISCLAIMER

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