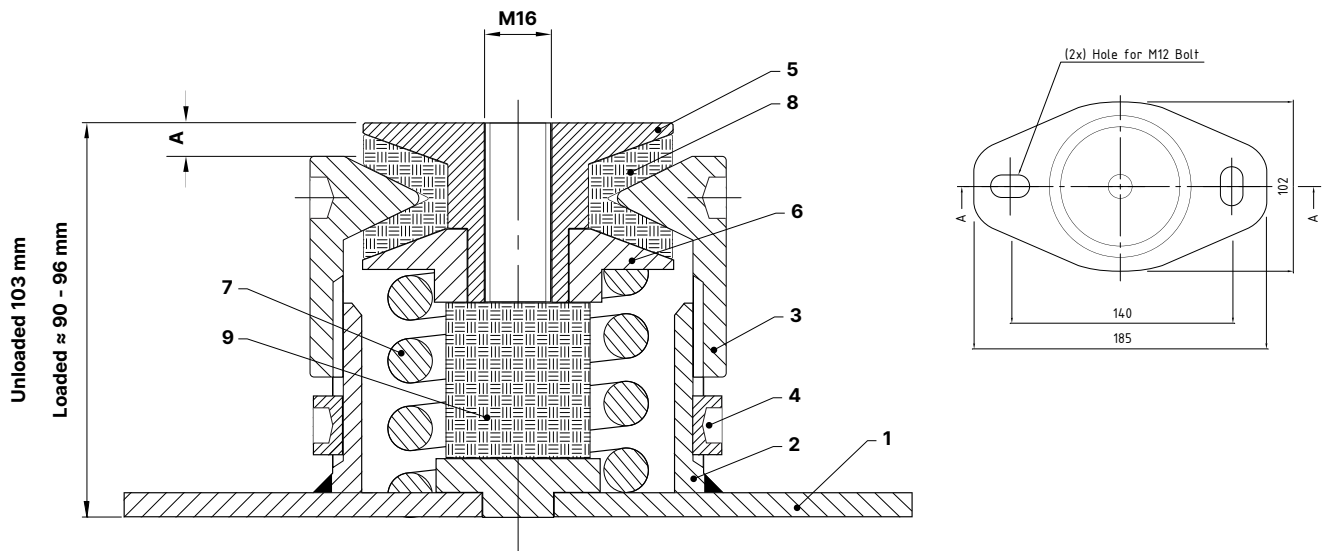


VT42XX – installation manual

The VT42XX spring isolator is specially designed for the installation of propulsion engines but also other mobile equipment such as fans, compressors, deckhousings, etc.

VT42XX is a very soft spring isolator with integrated adjustable movement limitation to limit movements from external forces during operation. In order to achieve optimal vibration isolation, the integrated movement limitation must therefore be adjusted during assembly. When the isolator is properly adjusted, only the spring will be the load carrier and the motion limiter will be free, this is important as the only task of the motion limiter is to limit the movements from external forces during operation.



- | | |
|--------------------------|--|
| 1. Bottom plate | 6. Axle nut |
| 2. Housing - bottom part | 7. Spring (load bearing) |
| 3. Housing - top part | 8. Elastic element (movement limitation) |
| 4. Locking ring | 9. Elastic elements for damping |
| 5. Axle | |

Installation of isolator and adjustment of its integrated movement limitation

Firstly, we would like to emphasise that the adjustable movement limitation is **NOT to be used to compensate for any unevenness in the motor bed or when aligning the installation.**

1. Compensation of unevenness in the engine bed

Problems with uneven surfaces shall be solved with shims under the isolator and the surface shall not differ more than a maximum of ± 2 mm along the entire engine bed.

2. Installation of engine and isolators

The installation shall be such that the isolators are horizontal (no lateral forces under normal static conditions) and the isolators shall be centred with respect to the engine mounting holes (no lateral displacement of the isolator shaft)..

3. Adjustment of the integrated movement limitation

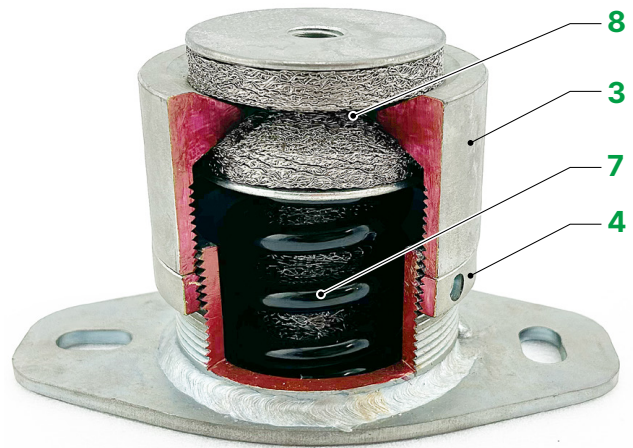
The adjustment shall be carried out when the engine is in its 'operating condition', i.e. when the oil and water are topped up and all accessories are fitted. The adjustment is made by hand or with the help of a spanner by turning the upper part of the housing, installed height (loaded height) is between 90-96 mm depending on the load.

The isolator is correctly adjusted when only the spring (7) is carrying the load. See figures 3.1 och 3.2

Since there is a gap in the movement limitation of about 2 mm (8) correct adjustment has been reached when it suddenly becomes very easy to turn the housing (3), which it is for about 1 turn See figure 3.2

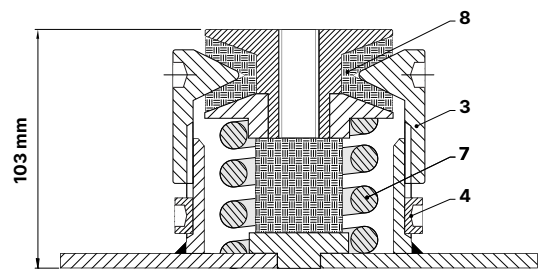
Then you turn the house so that you are standing in the centre of the gap and then lock the house with the locking ring (4). See figure 3.3

When the isolators are used to set up e.g. propulsion engines or similar applications, which produce an output torque, the isolators may need to be readjusted to get the best possible vibration isolation, this readjustment is done during operation with nominal torque applied, but then Vibrattec should be contacted first as this also increases the set-up frequency at idle.

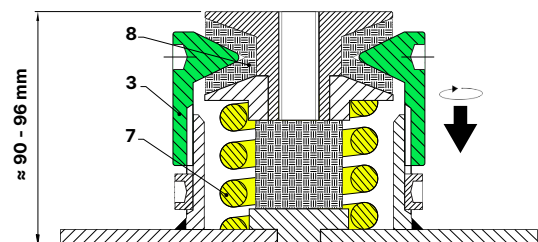


Installation sequence

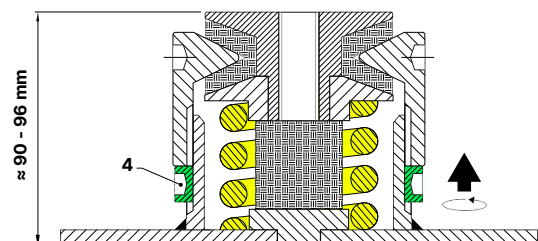
3.1 - Unloaded spring



3.2 - Loaded spring



3.3 - Loaded spring, locked in the right position



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The adjustment is made using the same method as described above. The direction in which the isolators should be adjusted depends on the direction in which the torque acts and is thus dependent on the direction of rotation of the output shaft.

If readjustment is necessary, we are happy to help calculate how much the isolators should be readjusted if we get the necessary input data.

Only when the adjustment of the isolator movement limitation is complete can the engine installation be aligned using the appropriate method.

4. Alignment of installation

Alignment of the installation should be done above the isolator, but after the isolator movement limit has been adjusted. For alignment, washers should preferably be used, but in the worst case, some form of set screw can be used, but this increases the risk of possible moments down the isolator.

Note, however, that you 'should NOT build towers' above the isolator; if the alignment requires the engine foot above the isolator be raised a considerable distance, this should instead be solved with shims below the isolator.

If you have any questions, please contact us.



See an example of a marine engine setup with four of our VT41XX isolators (big brother to VT42XX). Here shims are used under the isolators to raise the engine position.



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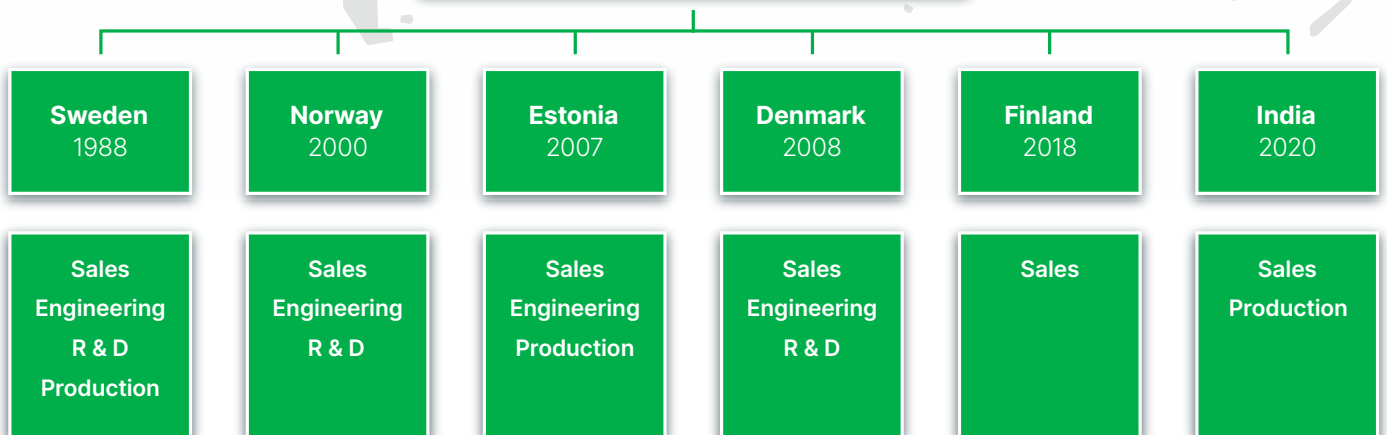
Vibratec has extensive experience, combined with the use of modern tools, when we design and manufacture tailor made solutions in all areas of vibration and noise reduction. Vibratec performs test to evaluate mechanical, physical and long term behaviour on materials as well as complete solutions.

Construction, Defence, Industrial, Marine, Offshore and Railway

Vibratec Akustikprodukter is one of Scandinavia's leading suppliers of noise and vibration solutions. Vibratec's ambition is to become the preferred choice for customers who need solutions to noise, vibration and shock problems. Vibratec produce and store many products for damping and isolation of vibration, shock and noise over a wide range of applications.



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