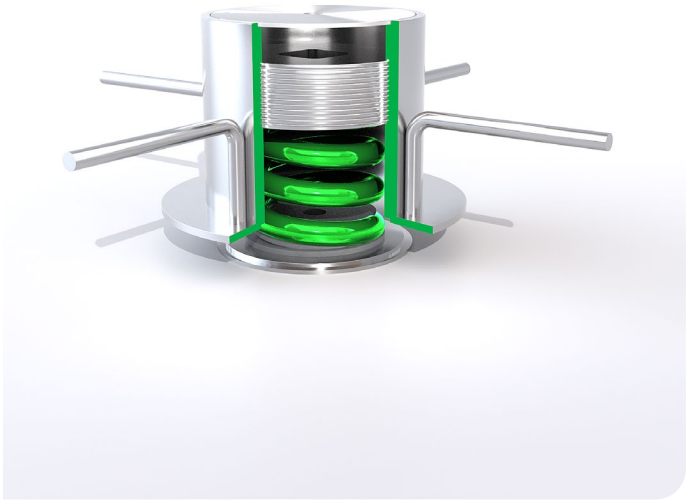
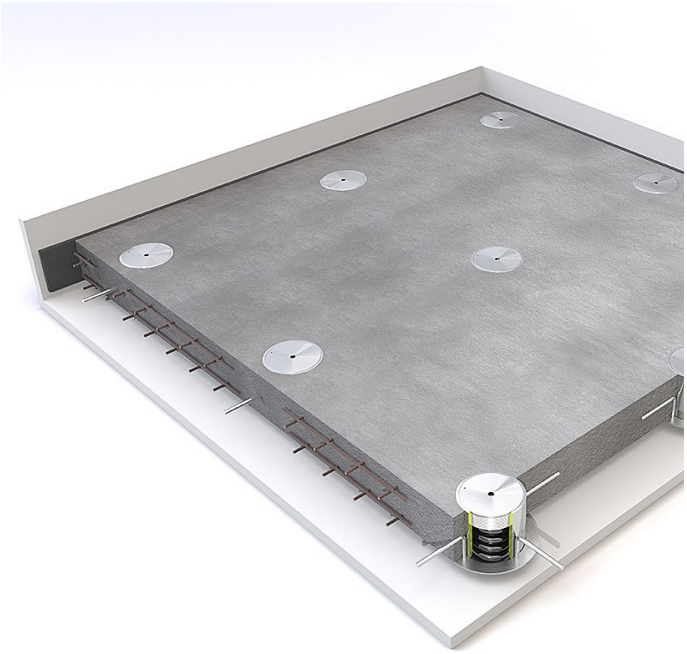
VIBRATEC

Floor System VT-JFS

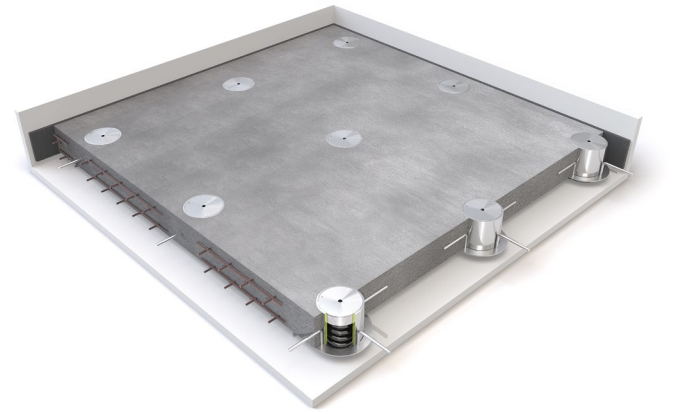
Jack-Up Floor system installation guide

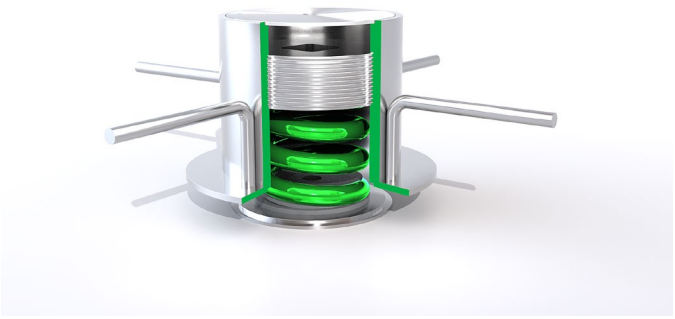




Quietly Improving Your Environment

Jack-up Floor System VT-JFS





Description

VT-JFS is an antivibration system for floating concrete floors and slabs.

VT-JFS jack-up floating floor system results in high performances on the isolation level of airborne and structure-borne sound transmission.

VT-JFS is ideal to use in areas subjected to vibrations such as gym floors, bowling halls, shopping malls, machine rooms etc.

It is also useful in cases where a limited height is available for the floating concrete floor, as the system allows for smaller air gap than with formwork panels.

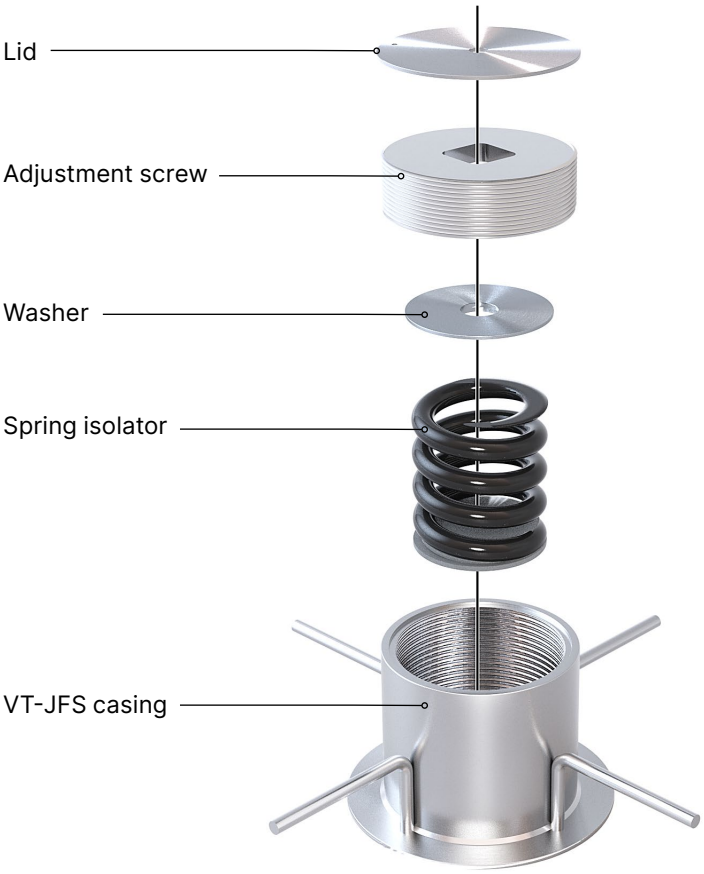
Characteristics

Static Load	From 300 daN to 2000 daN
Natural Frequency	3 - 6 Hz
Concrete thickness	From 80 mm to 300 mm

Advantages of the VT-JFS System are:

- Low natural frequency.
- High level of vibration attenuation.
- High stability of the suspension due to low C.O.G.
- Improved operational life for suspended machinery.
- Integrated system controlling the height of the floor.
- Springs are accessible if modifications are required.

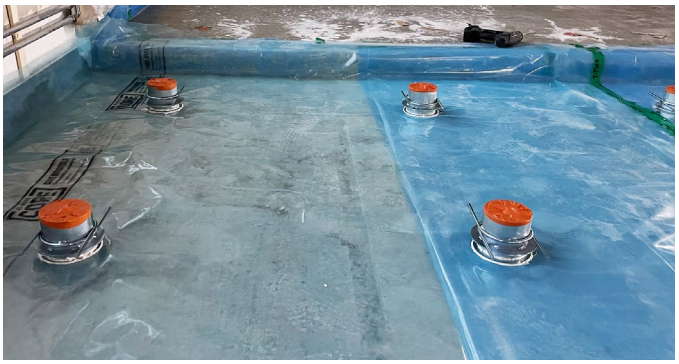
VT-JFS components

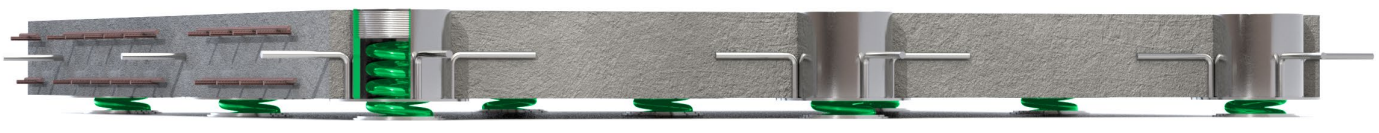


Installation Guide

Content

The aim of this document is to present the different phases for VT-JFS installation.



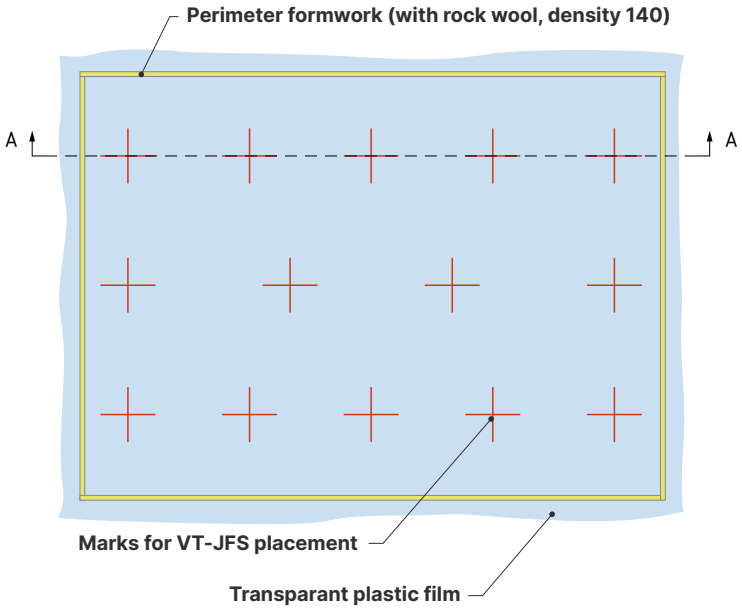


1. Preparations before installing VT-JFS

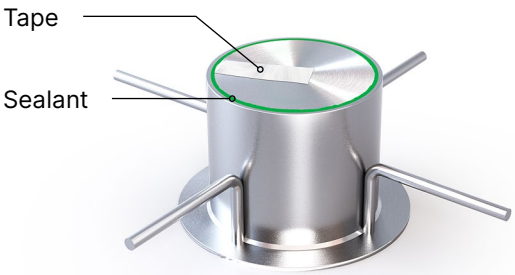
A. First the foundation needs to be level. This is to make sure all the VT-JFS-cases can be placed according to the drawing and level. If this is not posible then the VT-JFS-cases need to be shimed or adjusted to the correct height.

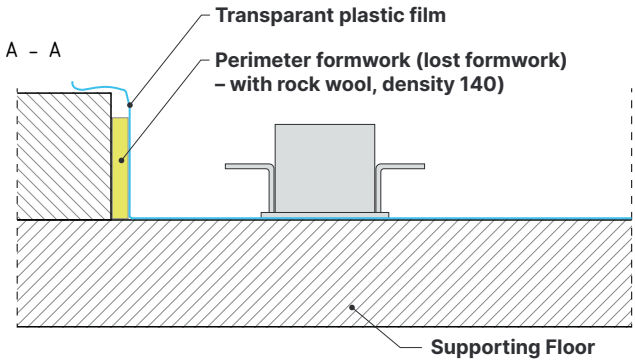
B. Prepare the formwork and the support area where the VT-JFS cases are going to be installed

C. Mark the foundation with cross marks where the VT-JFS cases are to be positioned. Place 1 to 2 layers of plastic film on top of the foundation and seal it with tape to prevent the concrete to stick to the foundation and the walls.



The VT-JFS is sealed with silicon (green highlight in image below) and the holes for fastening has been sealed with tape (grey marking on top of the JFS). The same is done on the bottom of the JFS. All this is to prevent any leakage during pouring of the concrete.





Since the VT-JFS cases are delivered separately from the spring isolators and the lifting tool, the VT-JFS is mounted in two phases.

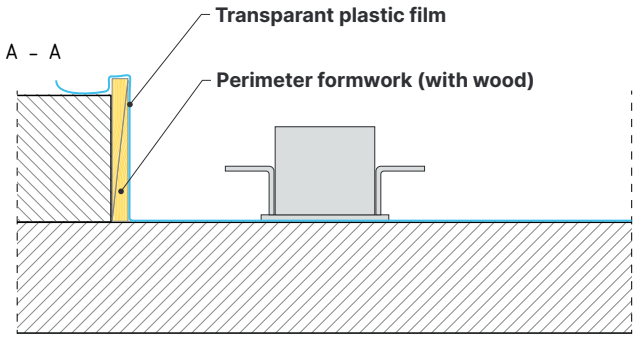
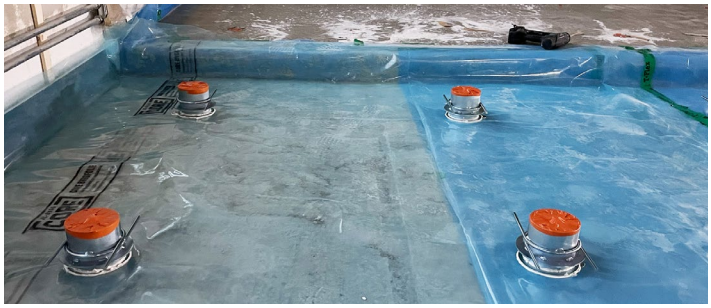


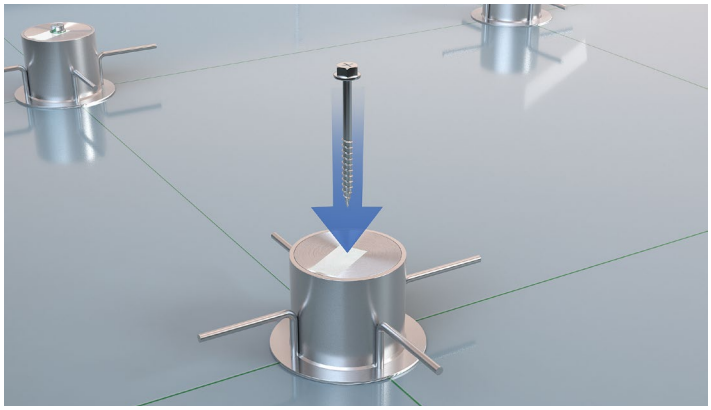
Fig 1: Parts on delivery: The spring isolator, the sealed VT-JFS case and the top washer for the spring.

2. Positioning of VT-JFS and Rebar



A. Once the foundationfloor is leveled, place all the sealed cases on top of the plastic film. Make sure to place all the VT-JFS cases in the correct places, according to drawing.

B. Check and make sure all the VT-JFS are all level and perpendicular to the floor. Dubble check that all VT-JFS cases are placed right-side-up, with the wider part closest to the floor.

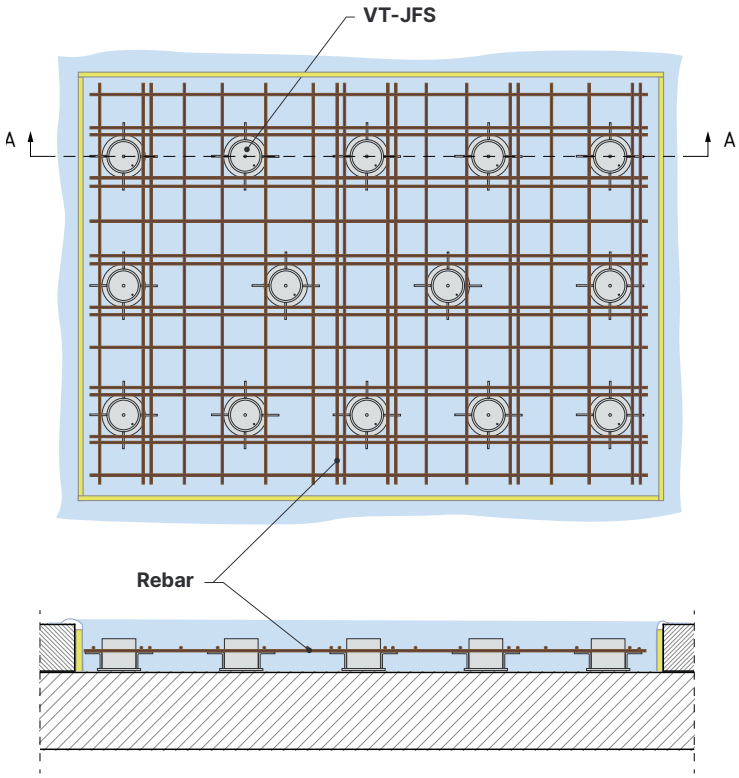


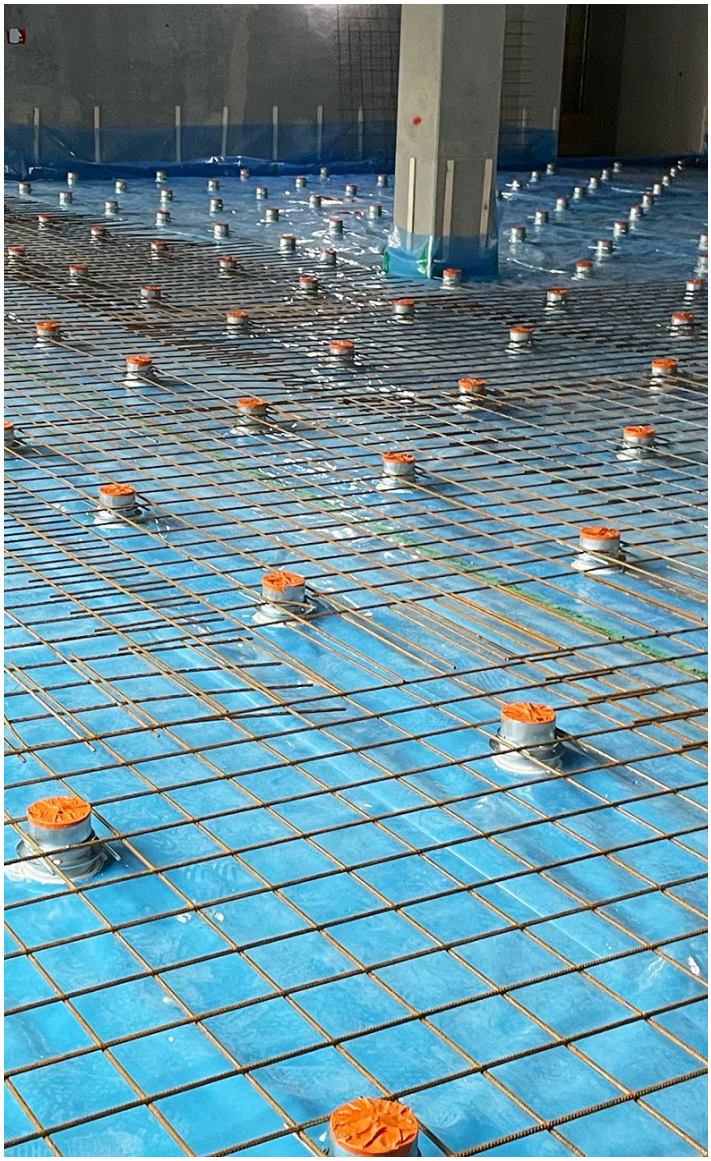
C. When the VT-JFS is sitting correctly, secure it to the foundation with a M8 concrete screw. The hole for the screw is 10 mm in diameter, other dimensions than M8 can be used. The height of the VT-JFS is usually between 80-120 mm (depending on your specification), so the screw should be at least 100 mm or longer.

D. Install the rebar. It can be singel or dubble depending on the height of the slab.

Notice: Walking on the rebar should be avoided!

Notice: A visual inspection should be done after this step and/or just before pooring the concrete.

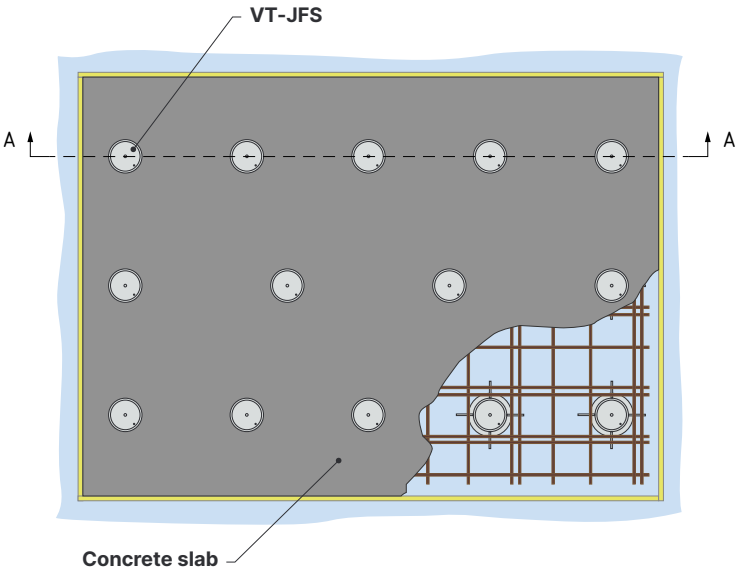


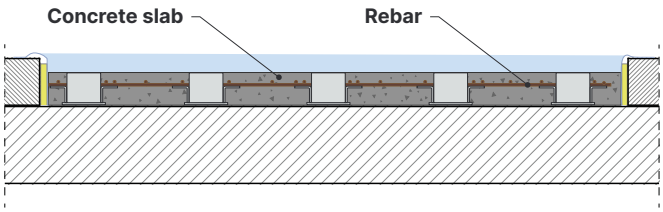


3. Concrete Slab Pouring

A. The next step is to pour the concrete slab. This process needs to be done carefully to avoid moving the VT-JFS-cases or the plastic film. When the concrete has been poured, all instructions should be given by the concrete company.

B. The important information is:
At least 75 % curing time of the slab. No lifting can bee done before this is reached.





4. Concrete Slab Lifting

A. The next steps must be done in a clean environment. Dust and anything that could end up inside the VT-JFS-cases must be removed.

B. Remove the screws we used to secure the cases before concrete pouring.

C. Install the springs. Open the upper lid of each VT-JFS-case and install the springs (see series of images below).

Unscrew the lifting washer

Unscrew the lifting washer

Place the spring with the scroll facing down

Spray lubricant on the top of the spring

Place the top washer on the spring

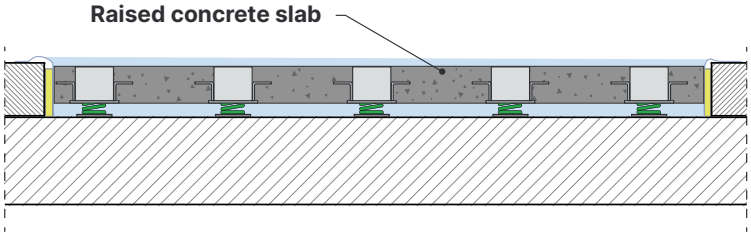
Spray lubricant on the top washer

Screw the lifting washer back in place

Place the top lid back untill time for slab lift

D. The final phase of this installation consist in separating the new concrete slab from the floor. In this first step it is really important to screw the leveling screws progressively (see image to the right).

Continue this process untill the concrete slab is completely separated and resting at its appropriate height.



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Engineering, Production and installation

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.

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