

INSTALLATION INSTRUCTIONS

for the correct installation of isoloc FEDAM Spring-Damper-Systems

General installation guidelines:

Before installing the machine or plant, the area around the bearing surface must be free from oil and grease as well as be cleaned in order to give optimum anti-slip protection. This can be achieved with the help of solvents as e. g. acetone. Rough concrete should be given a clean smooth coating. The admissible evenness and angle tolerances of the upper sides of the bearing surfaces and of the lower sides of the machine pedestals base on DIN 18202. Localized loads have to be avoided. It should additionally be ensured that the specified maximum load indexes (F_{max}) are not exceeded. If they are not known, please ask us. If the **centre of gravity of the machine is not central**, other, larger FEDAM-elements have to be used at the higher loaded mounting points, if necessary, or the positions of the elements have to be adjusted to the position of the centre of gravity. Only in this way, the machine can be prevented from tilting.

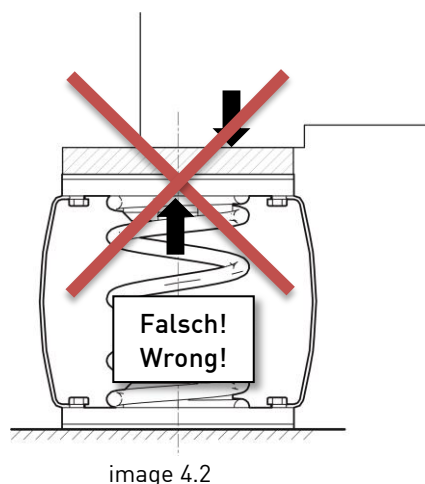
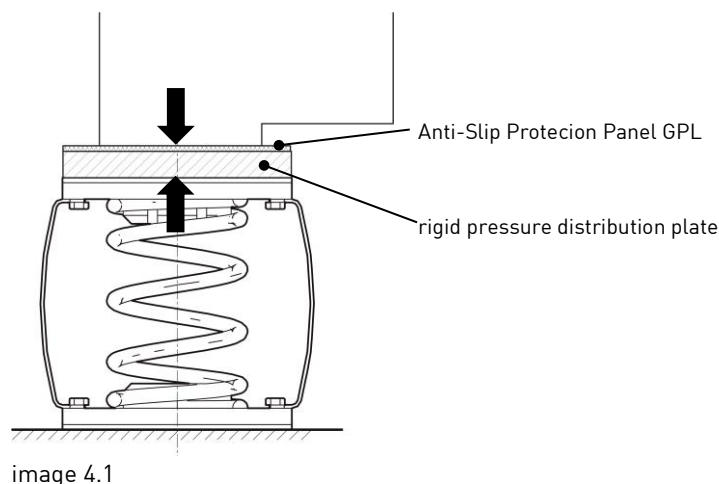
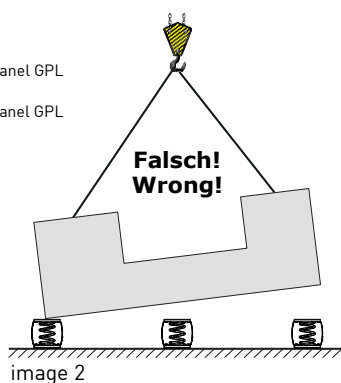
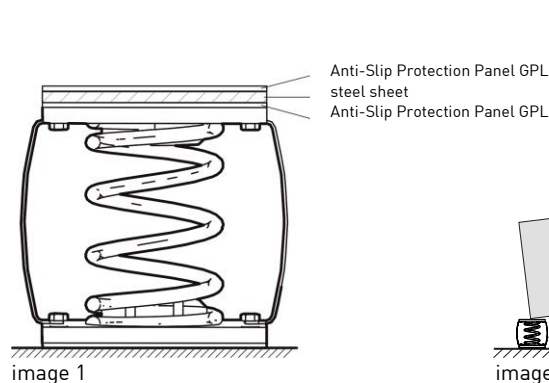
All mounting points have to be at the same level (check with a precision spirit level if necessary) and the machine has to be lowered **carefully** and slowly on to them. Larger height differences of the floor can be equalized with our Anti-Slip Protection Panels GPL3025 (h = 2.5 mm) or GPL3050 (h = 5 mm) in connection with steel sheets (s. a. image 1). Between the machine pedestal there has always to be an anti-slip protection panel in order to minimize slipping.

An oblique settling or tilting (image 2) of the machine has to be avoided as otherwise the FEDAM-elements can be damaged irreparably or the machine can overturn (**⚠ DANGER OF ACCIDENT ⚠**).

The springs used for FEDAM are designed for mounting coefficients $v \leq 1$ kink-resistant. For $v \geq 1$ the buckling safety has to be checked and the buckling length has to be observed.

The machine can no longer be shifted horizontally after it has been placed down, due to the very high static friction coefficients of the anti-slip protection panels! The machine has to be lifted once again for this purpose. If this is not respected, the FEDAM-elements are damaged or shifted horizontally with the danger of buckling.

The FEDAM-elements have to be loaded **on their full area and centrally** on their upper and lower side. This means that the support surface of the machine pedestals (machine support surface) has to be at least of the same size as the FEDAM-elements. If this is not the case, pressure distribution plates, e. g. steel sheets, have to be put onto the FEDAM-elements and be secured against slipping, e. g. by glueing or better by screwing together (image 4.1). Possibly existing levelling screws at the machine for levelling the machine have to be removed before lowering onto the FEDAM-elements. You can find the dimensions in our product catalogue No. 08.2014/US/3500 on page 34.



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If the load is one-sided or by point, the FEDAM-elements are damaged or the machine can overturn!

After placing the machine on a safe position, each FEDAM-element has to be controlled and inspected for its functional capability by a visual check **before commissioning**. Things as e. g. tools or other objects must not be located between or protrude into the spring coils and have to be removed immediately so that a repeated penetration is avoided (images 5 + 6). This prevents the FEDAM-elements from being damaged and the machine installed on them from an unequal vibration behaviour. This has to be examined time and again during the entire operating period of the FEDAM-elements. During operation of the machines installed on the FEDAM-elements do not grab with the hands between the upper and lower steel plate or between the spring coils, neither with objects, e. g. tools (image 6). There would be increased **danger of injury**.

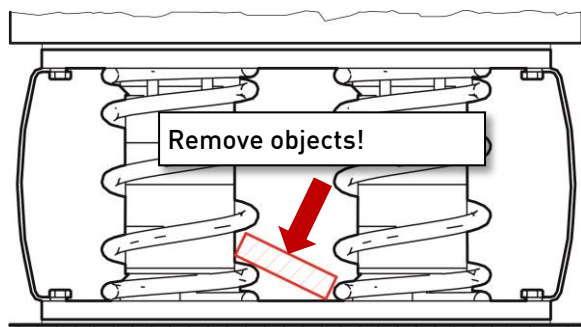


image 5

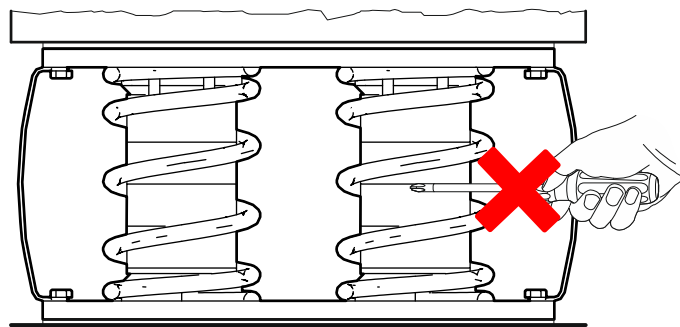


image 6

General notes:

Be careful pressing the springs together because a jerky slackening can lead to severe injuries. The towing ropes must not be removed.

Clean the springs from dust and dirt in order to ensure the operating life. Dirt and dust are collected especially in the lower spring mandrels. In connection with water, oils etc. an effective abrasive paste is formed that can damage the spring (protection) surface and the dampers. A rusty spring can break at every moment and has to be replaced at once. All coil springs used for isoloc FEDAM are covered with a Delta Tone priming coat that has excellent corrosion protection features.

All springs are subject to material fatigue [s. a. DIN EN 13906-1:2002 (D)].

The maximum admissible compressive stress can be reduced by shear loads and dynamic loads (forces) if these loads are not negligibly small in comparison to the static compressive load. Such loads, provided they are known, have to be considered for the dimensioning / choice of the elements. If you are not sure, please contact us!

Defect springs or dampers have to be replaced immediately!

In such a case, please contact us at once, thank you.

With FEDAM-elements, **especially without damper core**, the resonance point of the system, e. g. after starting a machine up to its operating speed (0....xxxxx rev./min.), has to be passed through as fast as possible. In resonance, the vibration amplitudes increase fast because steel has a very low damping (approx. $D \cong 0.001 \dots 0.01$, $Q = \frac{1}{2D}$).

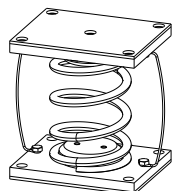


image 7: FEDAM 1

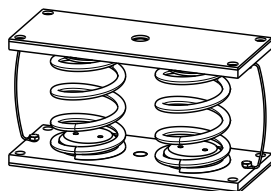


image 8: FEDAM 2

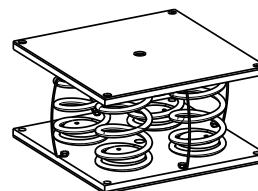


image 9: FEDAM 4

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