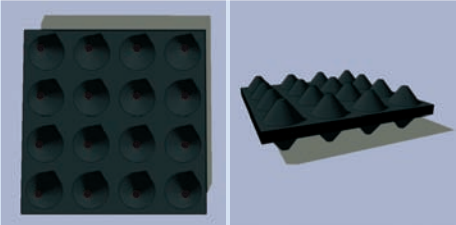
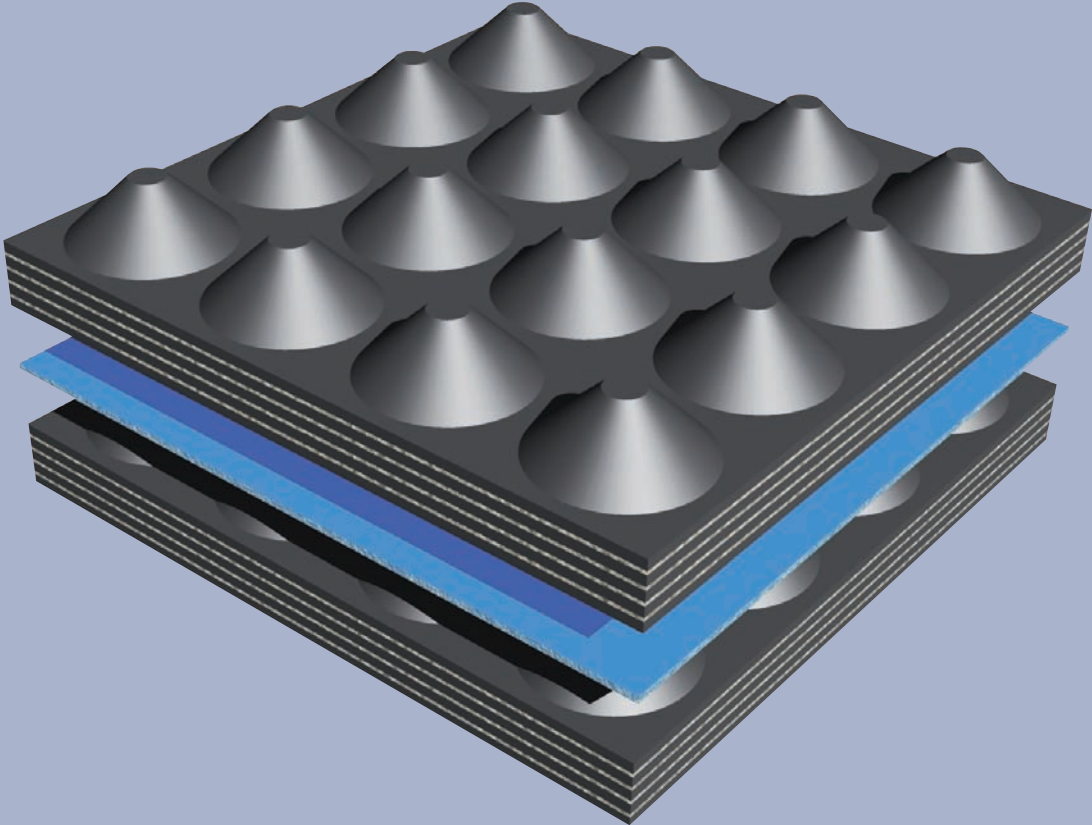


Cires®



*Effective Vibration Insulation
for all Kinds of Machines*

Cires® Versions

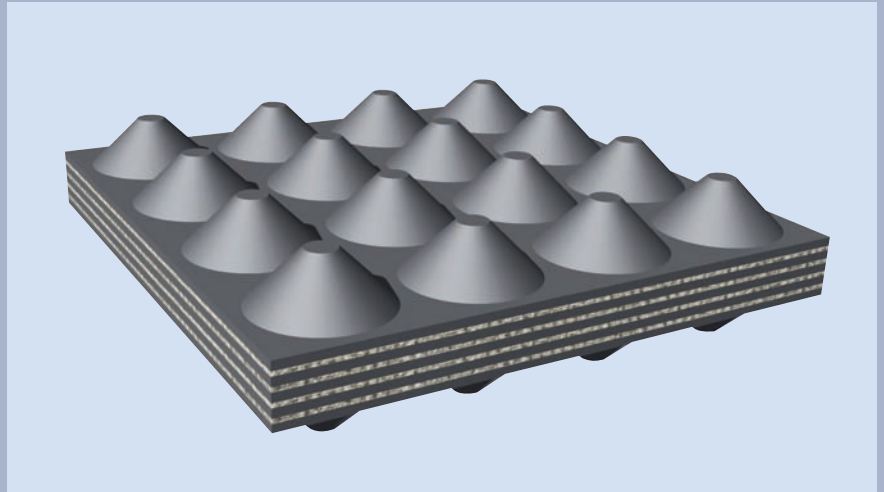
General

When using resilient standard elements with approximate constant spring rate – e.g. steel springs, PU foams, cylindrical rubber buffers – the problem is that the tuning frequency of a machine's resilient support depends on the load applied.

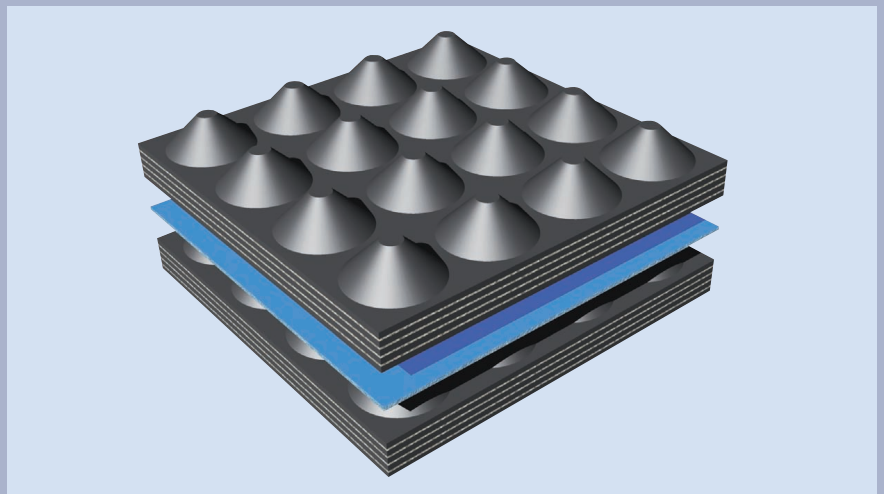
In order to achieve a certain tuning frequency the loads of all components must be known. To avoid overloading of individual spring elements a resilient support using such elements must be designed by an expert. The position of the bearings has to be determined fairly exactly.

This requires a relative high effort concerning the support of e. g. an air conditioning system.

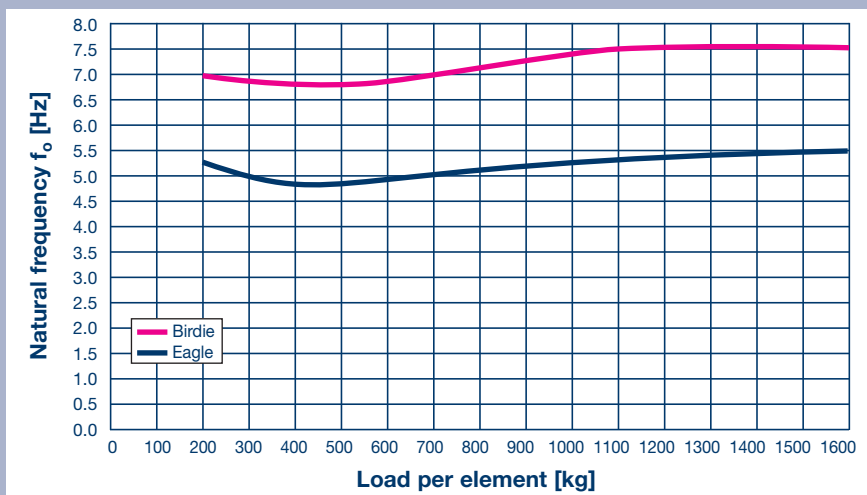
CIRES® elements show a property which especially favours them for this kind of structural task. With CIRES® a constant tuning frequency can be achieved within an extensive load range.



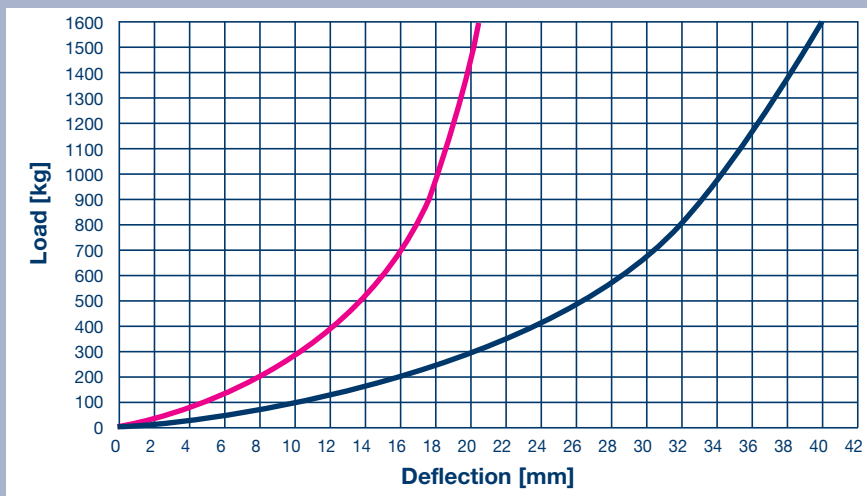
Picture 1: CIRES®, Type Birdie



Picture 2: CIRES®, Type Eagle



Picture 3: Cires®, Natural Frequencies



Picture 4: Cires®, Deflections referred to the Load per Element

Positioning and mounting of the elements is rather simple. It is sufficient to know the total weight of the machinery and of the foundation, if existing.

The position of the individual parts of the machinery to be resiliently supported as well as the one of the foundation is almost meaningless due to the high flexibility of the Cires® elements.

The number of elements required are determined by means of picture 5 and the approximate total weight of the mass to be insulated (machinery plus foundation slab if existing). The Cires® elements easily level uneven floors.

Due to the special Cires® properties it is not necessary to pay too much attention to their exact positioning.

In case the load of the machinery is unevenly distributed over the foundation slab, the Cires® elements simply are moved towards the heavier loads. Then the machinery is put in place.

Note: Horizontal forces must not be absorbed by Cires® elements but by additional structural measures.

Cires® Mounting

Cires® Insulating Effect

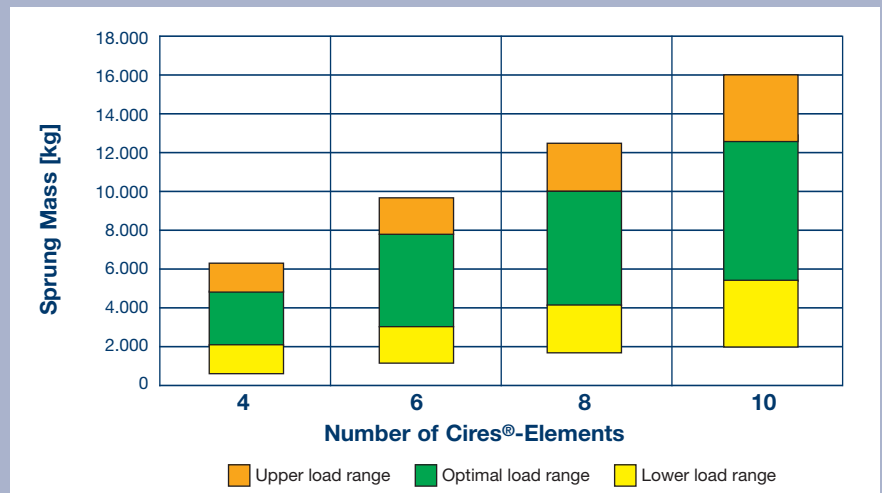
Technical Data		
Type	Eagle	Birdie
Length	250 mm	250 mm
Width	250 mm	250 mm
Thickness	125 mm	60 mm
Natural Frequency	5 Hz	7 Hz
Load/Element	200-1600 kg	200-1600 kg

For the type Birdie the effect of protection against vibration begins with a frequency of 10 Hz. For frequencies of 20 Hz and higher an optimal protection against vibration with an effect of at least 15 dB is achieved. For the type Eagle the corresponding frequencies are 7 Hz and 15 Hz respectively. As regular rpm of e. g. an air conditioning are at 25 Hz, for this a support with type Birdie is entirely sufficient. Due to the low natural frequencies of 7 Hz and 5 Hz respectively, the elements are also suitable for machines running relatively slowly.

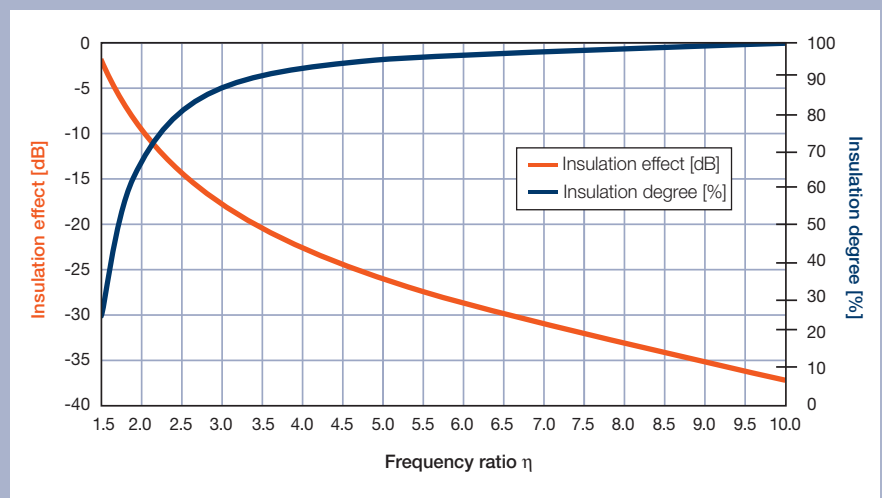
Text for Tender

Calenberg Cires® Elements with profiling on both sides, supply and install according to the manufacturer's instructions.

	Type Birdie	Type Eagle
Thickness [mm]:	60	125
Quantity [pcs]:		
Length [mm]:	250	250
Width [mm]:	250	250



Picture 5: CIREs®, Determination of the required number depending on the load



Picture 6: Insulation effect and -degree depending on the frequency ratio

The contents of the publication in the result of many years of research an experience gained in application technology. All information is given in good faith; it does not represent a guarantee with respect to characteristics an does not exempt the user from testing the suitability of products and from ascertaining that the industrial property rights of third parties are not violated. No liability whatsoever will be accepted for damage – regardless of its nature and its legal basis – arising from advice given in this publication. This does not apply in the event that we or our legal representatives or our management are found guilty of having acted with intent or gross negligence. The exclusion of liability applies also to the personal liability of or legal representatives and employed in performing our obligations.

Calenberg Ingenieure GmbH

Am Knübel 2-4
D-31020 Salzhemmendorf
Phone +49 (0) 51 53/94 00-0
Fax +49 (0) 51 53/94 00-49
info@calenberg-ingenieure.de
http://www.calenberg-ingenieure.de