GN 342.1
Levelling feet
with vibration damping / female thread

Specification

Type
- Type **SV**: with damping element

Steel

- Tensile strength class 5.8
- zinc plated, blue passivated

Damping element
Elastomer (PUR)

- Sylomer SR 450-12
- anti-slip, glued
- grey
- oil resistant
- Operating range form -30 °C up to 70 °C

Hexagon nut ISO 4032
Steel zinc plated, blue passivated

Information

The specified load in the table of the levelling feet GN 342.1 is a recommendation up to which the damping element can be **permanently** subjected.

This static load equals a thrust on the area of 0.4 N/mm^2 at which the damping material reaches its optimum dynamic damping ability. This also takes into account an additional load up to 0.6 N/mm^2 in the event of a dynamic load.

Levelling feet GN 342.1 cannot be disassembled.

Technical information

- Elastomer characteristics
- Strength values

Vibration absorption - Performance graph
When using levelling feet GN 342.1 the following differentiation in vibration absorption is made:

Active vibrations:
Vibrations transmitted to surroundings or associated equipment from working machinery for example.

Passive vibrations:
Vibrations transmitted to equipment or parts from vibrating surroundings or bases.

The efficiency of vibration absorption is dependent upon the interference frequency of the vibration to be absorbed as well as on the resonant frequency of the damping element itself.

A vibration absorbing effect is only achieved when the interference frequency is greater than √2-times the resonant frequency of the damping element. The greater the difference [Δ] between the two, the better the damping effect.

The resonant frequency of the damping pad is dependant upon type (composition) of the material cross section and the static load.

The graphs on the left show all the required data of the standard material (SR 450-12) of the damping element. Damping elements with other absorption properties are available on request.
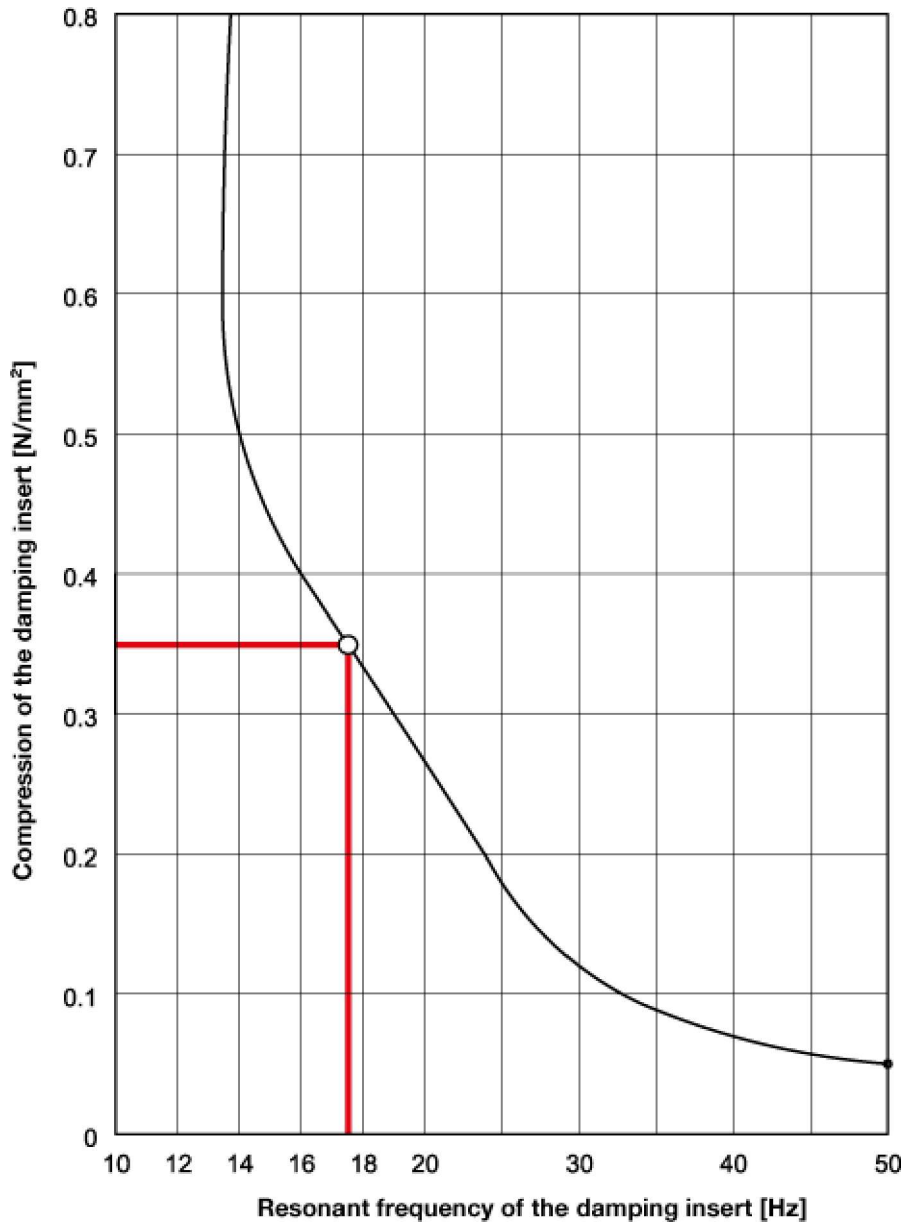
Example

Assume a load per levelling foot: 400 N

Compression levelling foot $d_1 = 32$

400 N / 707 mm^2 = 0.57 N/mm^2

Compression levelling foot $d_1 = 40$

400 N / 11340 mm^2 = 0.34 N/mm^2

Therefore levelling feet with $d_1 = 40$, that exert a pressure of 0.4 N/mm^2 should be preferred.
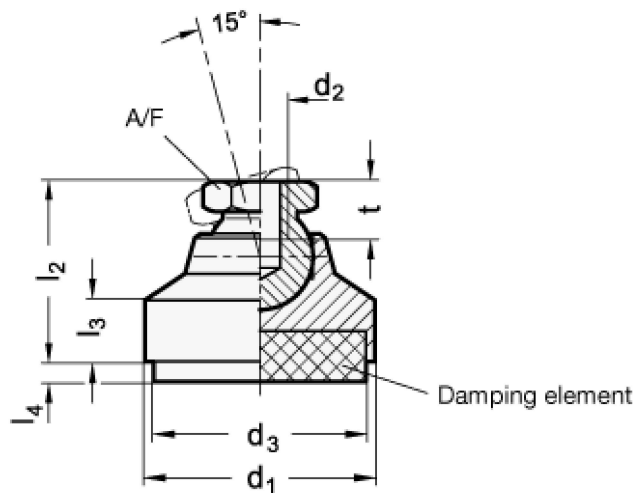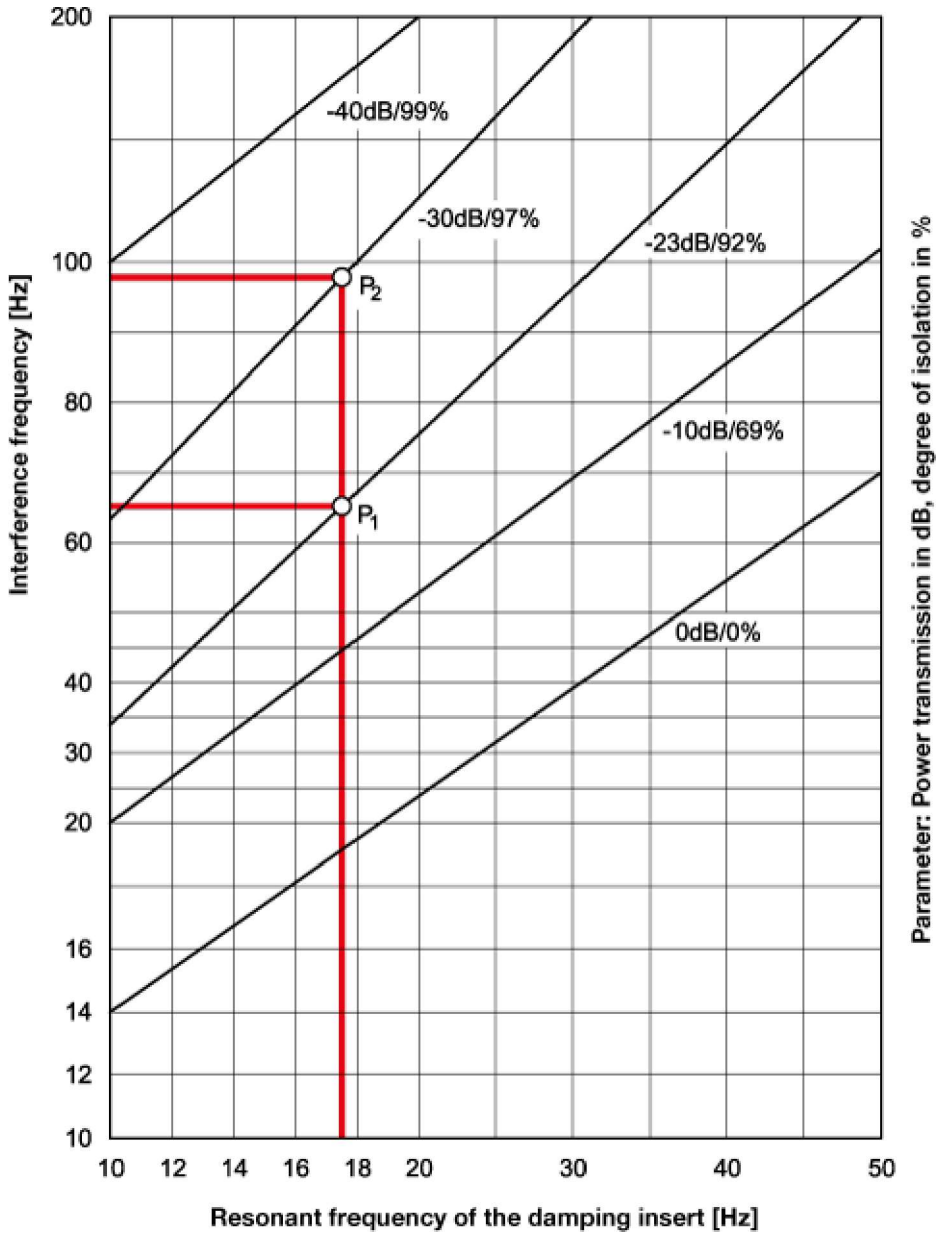
The above graph shows:

Resonant frequency with compression 0.34 N/mm^2: 17.5 Hz

The lower graph shows:

Degree of isolation at 66 Hz interference frequency (P1): 92 %

Degree of isolation at 98 Hz interference frequency (P2): 97 %

At approximately 200 Hz interference frequency the degree of isolation is 100 %.

Resonant frequency of the damping insert [Hz]

Description	d_1	d_2	d_3	l_2	l_3	l_4 Compression in N/mm^2 0	l_4 Compression in N/mm^2 0.4	l_4 Compression in N/mm^2 0.6	A/F	t	Area damping element in mm^2	Load in N by compression 0.4 N/mm^2	Weight
GN 342.1-32-M10-SV	32	M 10	30	29	11	5.5	3.8	2.7	15	10.5	707	280	65
GN 342.1-40-M12-SV	40	M 12	38	30	9.5	6	4.3	3.3	17	11.5	1134	450	92
GN 342.1-50-M12-SV	50	M 12	48	30.5	9	6.5	4.9	3.9	17	11.5	1809	720	137
GN 342.1-60-M16-SV	60	M 16	58	37.5	10	7	5.5	4.4	24	16	2641	1050	275