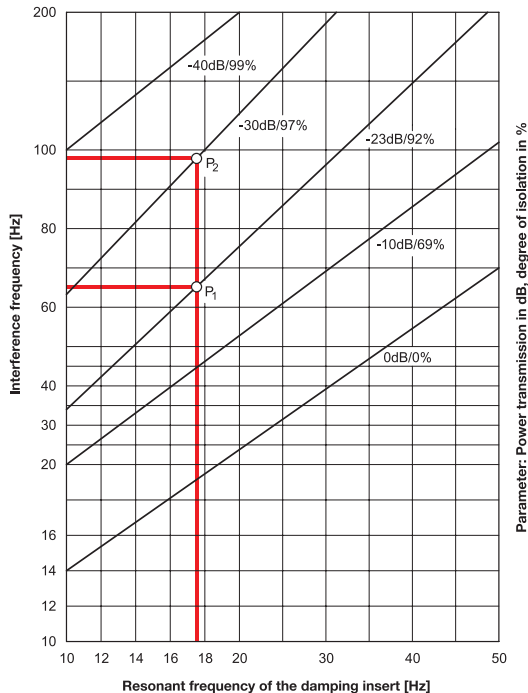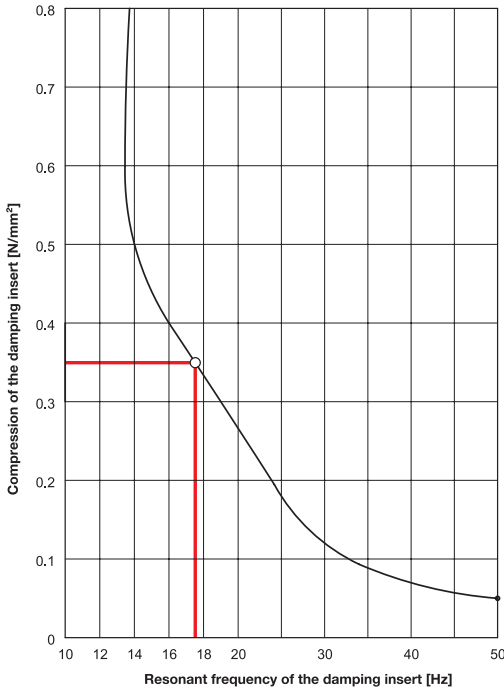## Vibration absorption - Performance graph

When using leveling feet GN 342.1 / GN 342.2 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 $\sqrt{2}$-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 dependent 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. Dampening elements with other absorption properties are available on request.

Example

Assume a load per leveling foot: 400 N

Compression leveling foot d1 = 32

$\frac{400 \text{ N}}{707 \text{ mm}^2}$ = 0,57 N/mm²

Compression leveling foot d1 = 40

$\frac{400 \text{ N}}{1134 \text{ mm}^2}$ = 0,34 N/mm²

Therefore leveling feet with d1=40, that exert a pressure of 0,4 N/mm² should be preferred.

The above graph shows:
Resonant frequency with compression 0,34 N/mm²:17,5 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%.