

Technical note on screw-on aluminium machine feet with vibration damping

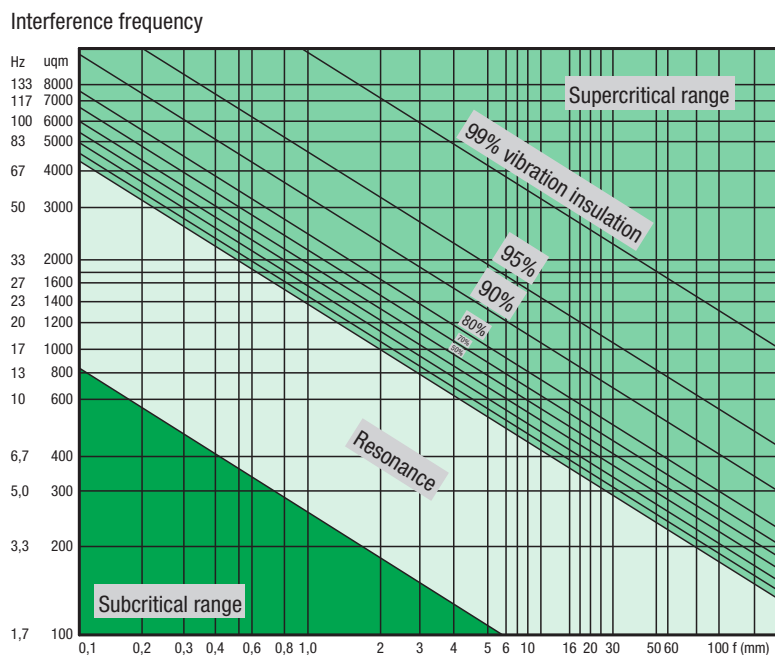
Vibration dampers are used to absorb inadmissible vibrations and knocks in machines. A permanently elastic spring system can reduce vibrations and knocks and provide very effective isolation.

Features:

- Aluminium body with vulcanised insulation.
- Oil-resistant rubber in four Shore hardnesses.
- Vulcanised slip protection.
- Can be screwed into the floor.

Technical data:

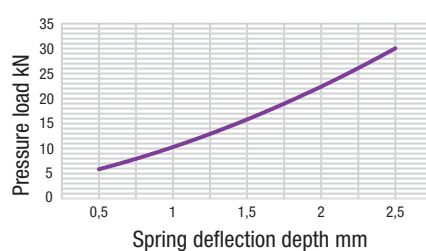
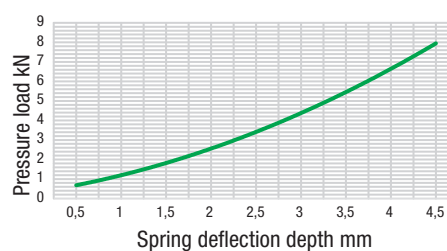
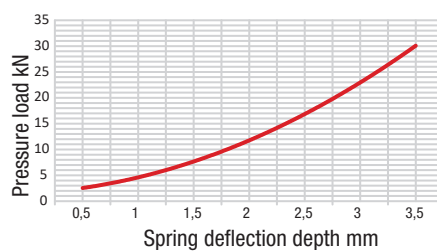
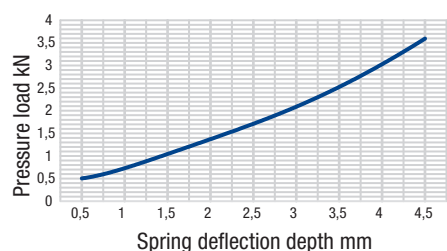
The following diagram can be used to determine the spring deflection depth required to obtain the desired level of isolation.



Example:

If a disturbance frequency of 1600 rpm has to be reduced by 80%, corresponding to the number of strokes in a punching machine for example, this diagram can be used to determine the spring deflection depth. At the intersection between the disturbance frequency and the diagonal transmission line of 80%, follow the vertical line down to find the required spring deflection of 2mm.

Natural frequency in Hz	Static or dynamic force in N			
	Shore hardness 30	Shore hardness 50	Shore hardness 70	Shore hardness 90
22	460	650	3250	6500
16	800	1300	5350	11000
13	1200	1900	6800	16300
11	1570	2800	12500	21000
10	1700	3500	16500	-
9	2000	4000	22000	-
8	2800	5600	-	-



Shore hardness 30 ■ Shore hardness 70 ■
Shore hardness 50 ■ Shore hardness 90 ■

Example:

If a static or dynamic force of 460 N is acting on a vibration damper with Shore hardness 30, a natural frequency of about 22 Hz is to be expected. If only the natural frequency is known, this principle can be applied in reverse. If the disturbance frequency is 22 Hz, a vibration damper with Shore hardness 30 can be loaded with a maximum force of 460 N.