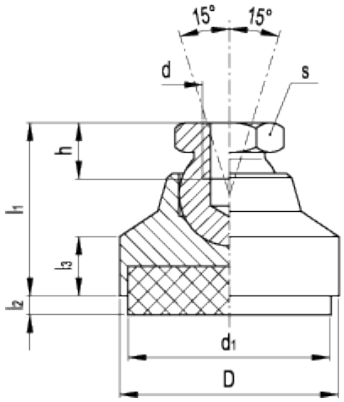
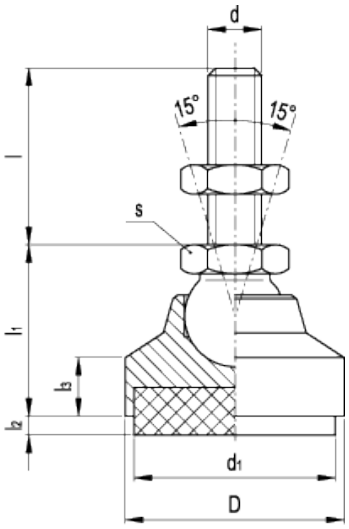
LM.SV

Levelling elements

METRIC





american unit
metric unit

Elesa Standards		Main dimensions				Threaded hole		Wrench	Compression [N/mm²]			Area damping insert [mm²]	Static load #	Weight
									0	0.4	0.6			
Code	Description	D	d_1	l_1	l_3	d	h	s	l_2	l_2	l_2		[lbf] [N]	lbs g
401331	LM.32-M10-SV	1.26 32	1.18 30	1.14 29	0.43 11	- M10	0.41 10.5	0.63 16	- 5.5	- 4.3	- 3.4	- 707	63 280	0.143 65
401341	LM.40-M12-SV	1.57 40	1.5 38	1.18 30	0.37 9.5	- M12	0.45 11.5	0.71 18	- 6	- 4.8	- 3.9	- 1134	101 450	0.22 100
401351	LM.50-M12-SV	1.97 50	1.89 48	1.2 30.5	0.35 9	- M12	0.45 11.5	0.71 18	- 6.5	- 5.3	- 4.4	- 1809	161 720	0.302 137
401361	LM.60-M16-SV	2.36 60	2.28 58	1.52 38.5	0.43 11	- M16	0.63 16	0.94 24	- 7	- 5.8	- 4.9	- 2641	235 1050	0.606 275

See techinical data.

american unit
metric unit

Elesa Standards		Main dimensions				Threaded stem		Wrench	Compression [N/mm²]			Area damping insert [mm²]	Static load #	Weight
									0	0.4	0.6			
Code	Description	D	d_1	l_1	l_3	d	l	s	l_2	l_2	l_2		[lbf] [N]	lbs g
401833	LM.32-M10x50-SV	1.26 32	1.18 30	1.14 29	0.43 11	- M10	1.97 50	0.63 16	- 5.5	- 4.3	- 3.4	- 707	63 280	0.236 107
401836	LM.32-M10x80-SV	1.26 32	1.18 30	1.14 29	0.43 11	- M10	3.15 80	0.63 16	- 5.5	- 4.3	- 3.4	- 707	63 280	0.269 122
401843	LM.40-M12x63-SV	1.57 40	1.5 38	1.18 30	0.37 9.5	- M12	2.48 63	0.71 18	- 6	- 4.8	- 3.9	- 1134	101 450	0.352 160
401846	LM.40-M12x100-SV	1.57 40	1.5 38	1.18 30	0.37 9.5	- M12	3.94 100	0.71 18	- 6	- 4.8	- 3.9	- 1134	101 450	0.416 189
401853	LM.50-M12x63-SV	1.97 50	1.89 48	1.2 30.5	0.35 9	- M12	2.48 63	0.71 18	- 6.5	- 5.3	- 4.4	- 1809	161 720	0.458 208
401856	LM.50-M12x100-SV	1.97 50	1.89 48	1.2 30.5	0.35 9	- M12	3.94 100	0.71 18	- 6.5	- 5.3	- 4.4	- 1809	161 720	0.551 250
401863	LM.60-M16x80-SV	2.36 60	2.28 58	1.52 38.5	0.43 11	- M16	3.15 80	0.94 24	- 7	- 5.8	- 4.9	- 2641	235 1050	0.881 400
401866	LM.60-M16x125-SV	2.36 60	2.28 58	1.52 38.5	0.43 11	- M16	4.92 125	0.94 24	- 7	- 5.8	- 4.9	- 2641	235 1050	1.09 495

See techinical data.

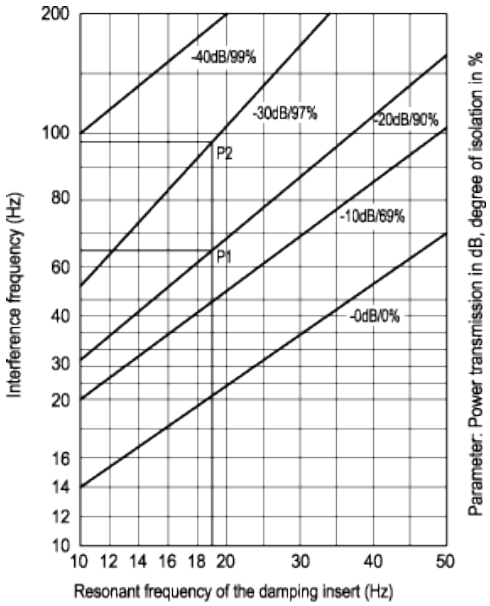
Base
Zinc-plated steel.

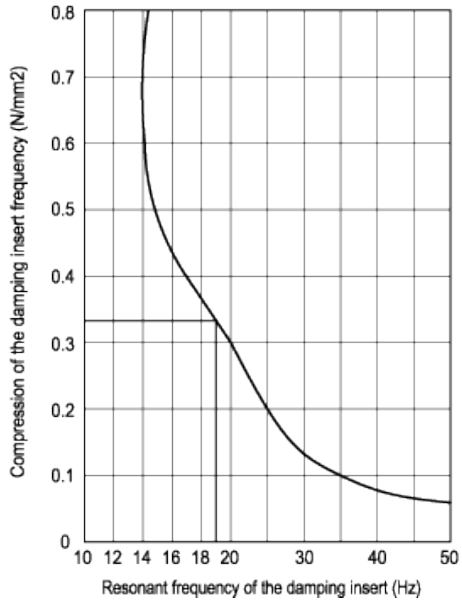
Damping element
PUR elastomer (Sylomer V12), glued into the base housing, grey colour, resistant to oils and to temperatures from -30°C to +70°C.

Ball joint with threaded hole or threaded stem
Zinc-plated steel, supplied assembled.

Nut
Zinc-plated steel, supplied assembled.

Technical data
The maximum static permanent load value reported in the table represents the limit that the damping element can withstand permanently. It equals a thrust on the area by 0.4 N/mm², at which the damping material reaches its optimum dynamic damping ability. The table shows also the values (l2) of elastic deformation with a load of max 0.6 N/mm² in case of a dynamic load.
When using LM.SV levelling elements properly, the following differentiation in vibration absorption must be considered:
- active vibrations: vibrations transmitted to surroundings or associated equipment (table, basement, ...) by working machinery.
- passive vibrations: vibrations transmitted to equipment or parts by vibrating surroundings or bases.
The efficiency of vibration absorption depends on 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 fold the resonant frequency of the damping element.
The greater difference (Δ) between the two, the better is the damping effect. The resonant frequency of the damping element depends on the type (composition) of the material, on its geometry and on the static load.
The graphs show all data of PUR elastomer (SV12) of the damping element. Damping materials with other absorption properties are available on request.





Example
Assume a load per levelling foot: 400 N.
Compression levelling foot D = 32
400 N
707 mm² = 0,57 N/mm²
Compression levelling foot D = 40
400 N
1134 mm² = 0,34 N/mm²
Therefore levelling feet with D=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: 19 Hz.
The lower graph shows:
Degree of isolation at 66 Hz interference frequency (P1): 90%
Degree of isolation at 98 Hz interference frequency (P2): 97%
At approximately 200 Hz interference frequency the degree of isolation is 100%.