



Vibration-damping elements



Vibration-damping elements - guidelines for the choice

Basic data required

- disturbing frequency: the frequency of the disturbing vibration produced by a on-duty machine. In general, it is obtained by the number of rotations of the engine [$\text{Hz} = \text{r.p.m.}/60$];
- the load applied to every single vibration-damping element [N];
- the isolation degree required [%];
- the deflection value of the vibration-damping element under a given load [mm];
- the rigidity [N/mm], that is to say the load that applied to the vibration-damping element produces a deflection of 1.0 mm.

For DVA.6 and DVA.7 the non-linear progress of the rigidity as reported in the graphs.

How to choose the vibration-damping element

- with reference to the diagram for checking the isolation degree, intersect the disturbing frequency value with the isolation degree required (each isolation degree corresponds to a line in the diagram) and define the deflection [in mm];
- divide the load applied onto the vibration-damping element by the deflection value to obtain the required rigidity of the vibration-damping element;
- compare the rigidity obtained with the rigidity shown in the table and choose the vibration-damping element which presents the nearest value (lower) to the calculated one.

Check

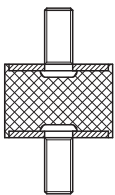
- the deflection of the vibration-damping element chosen can be obtained in the graphs (DVA.6-DVA.7) on the basis of the load;
- intersect the disturbing frequency value with the vibration-damping element deflection value in the diagram to obtain the isolation degree offered by the vibration-damping element chosen;
- compare the obtained value with the isolation degree required.

Example

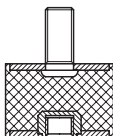
Conditions of use:

- disturbing frequency= 50 Hz (3,000 r.p.m.);
- load applied on each vibration-damping element 120 N;
- 90% isolation required;
- diagram shows that with a 50 Hz disturbing frequency and an isolation degree of 90%, the deflection obtained is 1.0 mm;
- divide the load applied by the deflection obtained to define the rigidity required, which is $120/1.0 = 120 \text{ N/mm}$;
- compare the rigidity value obtained (120 N/mm) with the values reported in the table;
- the values reported in table, for type DVA.1, show that the vibration-damping element which should be used is DVA.1-25-20-M6-18-55.

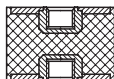
DVA.1



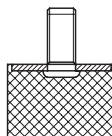
DVA.2



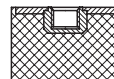
DVA.3



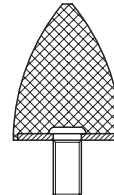
DVA.4



DVA.5



DVA.6



DVA.7

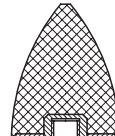
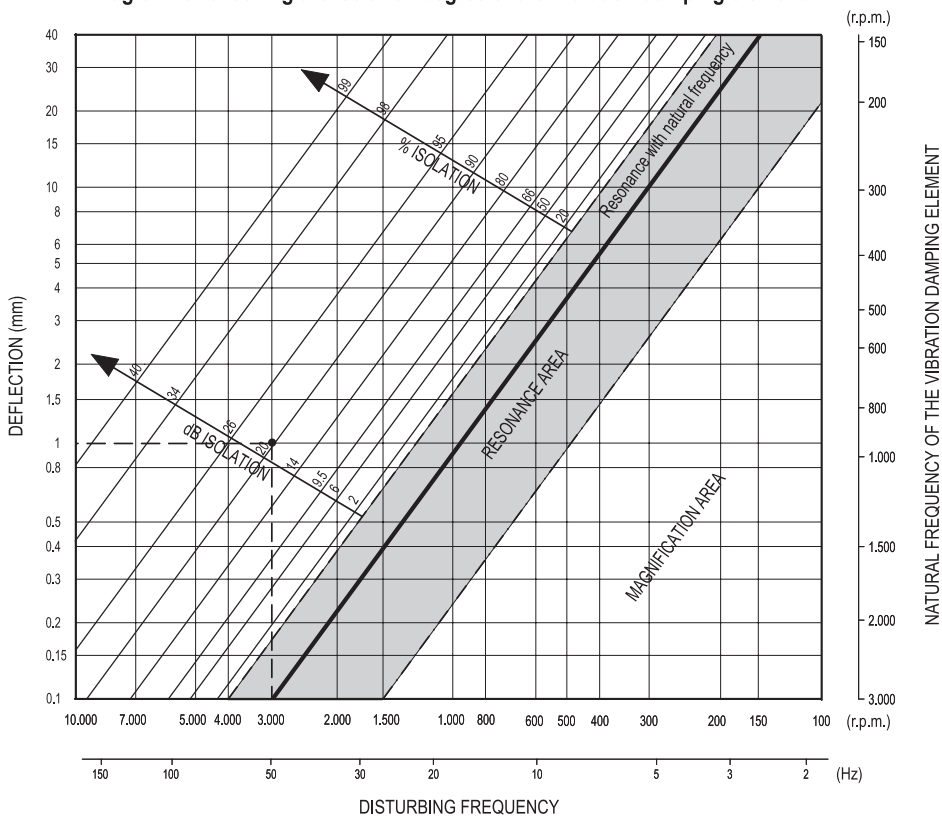
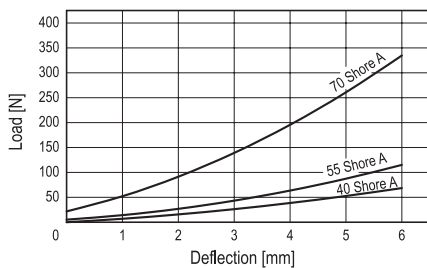


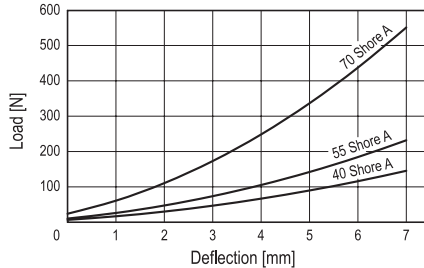
Diagram for checking the isolation degree of the vibration-damping element



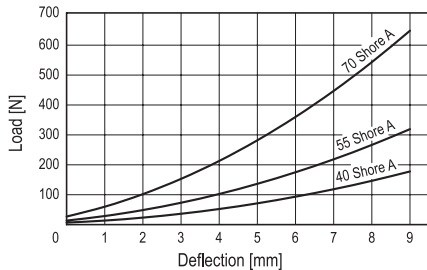
DVA.6-20-24
DVA.7-20-24



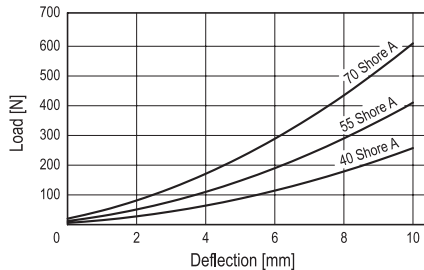
DVA.6-30-30
DVA.7-30-30



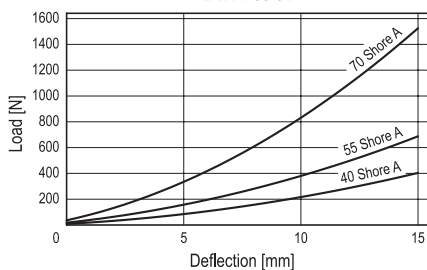
DVA.6-30-36
DVA.7-30-36



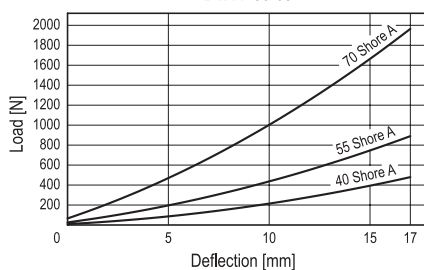
DVA.6-35-40
DVA.7-35-40



DVA.6-50-61
DVA.7-50-61



DVA.6-50-68
DVA.7-50-68



DVA.1 - DVA.2 - DVA.3

INOX
Stainless Steel

Vibration-damping elements



• Base

- **DVA**: glossy zinc-plated steel.
- **DVA-SST**: AISI 304 stainless steel.

• Vibration-damping body

Natural rubber NR, hardness 40, 55, 70 tolerance ± 5 Shore A, black colour.

• Standard executions

- **DVA.1**: zinc-plated steel threaded studs.
- **DVA.1-SST**: AISI 304 stainless steel threaded studs.
- **DVA.2**: threaded stud and boss in glossy zinc-plated steel, threaded blind hole.
- **DVA.2-SST**: threaded stud and boss in AISI 304 stainless steel, threaded blind hole.
- **DVA.3**: zinc-plated steel bosses, threaded blind holes.
- **DVA.3-SST**: AISI 304 stainless steel bosses, threaded blind holes.

Special executions on request

Natural rubber NR, hardness 40, 70 tolerance ± 5 Shore A for executions with AISI 304 stainless steel base.

Features and applications

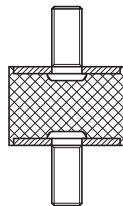
ELESA vibration-damping elements have been designed to damp vibrations, shocks and noises produced by moving bodies or nonbalanced vibrating masses of equipment and machines which can cause:

- malfunctioning and reduction of the machine lifespan and/or of the adjacent ones;
- damage to health;
- noise.

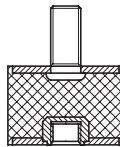
Technical data and guidelines for the choice (see page 2).



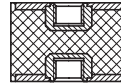
DVA.1



DVA.2

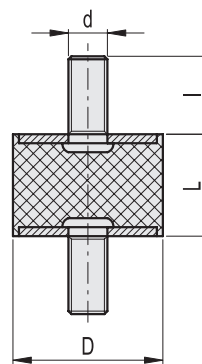


DVA.3



DVA.1

DVA.1



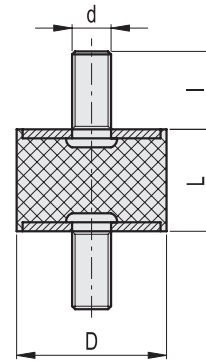
* Complete the description with the desired hardness:
40, 55 or 70 tolerance ± 5 Shore A.

DVA.1 - 8 - 8 - M3 - 6 - 55



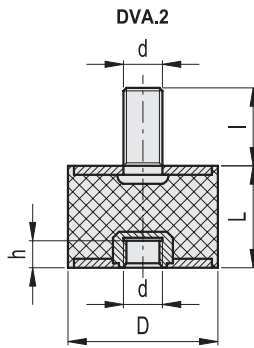
| Standard Elements | Dimensions | | | | | Hardness 40 Shore A | | | | Hardness 55 Shore A | | | | Hardness 70 Shore A | | | |
|-----------------------|-------------|----|-----|----|------|---------------------|-------|--------------|---------------------|---------------------|-------|--------------|---------------------|---------------------|-------|--------------|---------------------|
| | Description | D | L | d | l | g | Code | Max load [N] | Max deflection [mm] | Stiffness [N/mm] | Code | Max load [N] | Max deflection [mm] | Stiffness [N/mm] | Code | Max load [N] | Max deflection [mm] |
| DVA.1-8-8-M3-6-* | 8 | 8 | M3 | 6 | 4 | 413801 | 50 | 2 | 25 | 411101 | 85 | 2 | 43 | 416501 | 150 | 2 | 75 |
| DVA.1-10-10-M4-10-* | 10 | 10 | M4 | 10 | 5 | 413811 | 75 | 2.5 | 30 | 411121 | 100 | 2.5 | 40 | 416511 | 200 | 2.5 | 80 |
| DVA.1-10-15-M4-10-* | 10 | 15 | M4 | 10 | 6 | 413821 | 65 | 3.75 | 17 | 411131 | 65 | 3.75 | 26 | 416521 | 150 | 3.75 | 40 |
| DVA.1-15-8-M4-10-* | 15 | 8 | M4 | 10 | 7 | 413831 | 437 | 2 | 219 | 411141 | 537 | 2 | 269 | 416531 | 1325 | 2 | 663 |
| DVA.1-15-10-M4-10-* | 15 | 10 | M4 | 10 | 8 | 413841 | 210 | 2.5 | 84 | 411151 | 324 | 2.5 | 130 | 416541 | 717 | 2.5 | 287 |
| DVA.1-15-15-M4-10-* | 15 | 15 | M4 | 10 | 10 | 413851 | 155 | 3.75 | 41 | 411161 | 150 | 3.75 | 75 | 416551 | 513 | 3.75 | 137 |
| DVA.1-15-20-M4-10-* | 15 | 20 | M4 | 10 | 12 | 413861 | 151 | 5 | 30 | 411171 | 234 | 5 | 47 | 416561 | 468 | 5 | 94 |
| DVA.1-20-15-M6-18-* | 20 | 15 | M6 | 18 | 18 | 413871 | 322 | 3.75 | 86 | 411181 | 479 | 3.75 | 128 | 416571 | 1044 | 3.75 | 278 |
| DVA.1-20-20-M6-18-* | 20 | 20 | M6 | 18 | 25 | 413881 | 220 | 5 | 44 | 411201 | 430 | 5 | 86 | 416581 | 995 | 5 | 199 |
| DVA.1-20-25-M6-18-* | 20 | 25 | M6 | 18 | 20 | 413891 | 264 | 6.25 | 42 | 411211 | 433 | 6.25 | 69 | 416591 | 1010 | 6.25 | 162 |
| DVA.1-25-15-M6-18-* | 25 | 15 | M6 | 18 | 28 | 413901 | 860 | 3.75 | 229 | 411221 | 1068 | 3.75 | 285 | 416601 | 2690 | 3.75 | 717 |
| DVA.1-25-20-M6-18-* | 25 | 20 | M6 | 18 | 31 | 413911 | 391 | 5 | 78 | 411241 | 620 | 5 | 124 | 416611 | 1533 | 5 | 307 |
| DVA.1-25-25-M6-18-* | 25 | 25 | M6 | 18 | 35 | 413921 | 441 | 6.25 | 71 | 411261 | 529 | 6.25 | 85 | 416621 | 1374 | 6.25 | 220 |
| DVA.1-25-30-M6-18-* | 25 | 30 | M6 | 18 | 38 | 413931 | 432 | 7.5 | 58 | 411271 | 524 | 7.5 | 70 | 416631 | 1208 | 7.5 | 161 |
| DVA.1-30-15-M8-20-* | 30 | 15 | M8 | 20 | 45 | 413941 | 986 | 3.75 | 263 | 411281 | 2080 | 3.75 | 555 | 416641 | 3300 | 3.75 | 880 |
| DVA.1-30-20-M8-20-* | 30 | 20 | M8 | 20 | 50 | 413951 | 770 | 5 | 154 | 411301 | 1067 | 5 | 213 | 416651 | 2260 | 5 | 452 |
| DVA.1-30-30-M8-20-* | 30 | 30 | M8 | 20 | 57 | 413961 | 500 | 7.5 | 67 | 411321 | 1053 | 7.5 | 141 | 416661 | 1960 | 7.5 | 261 |
| DVA.1-40-20-M8-23-* | 40 | 20 | M8 | 23 | 80 | 413971 | 1800 | 5 | 360 | 411331 | 2430 | 5 | 486 | 416671 | 4450 | 5 | 890 |
| DVA.1-40-30-M8-23-* | 40 | 30 | M8 | 23 | 95 | 413981 | 1137 | 7.5 | 152 | 411341 | 1574 | 7.5 | 210 | 416681 | 3420 | 7.5 | 456 |
| DVA.1-40-40-M8-23-* | 40 | 40 | M8 | 23 | 100 | 413991 | 1056 | 10 | 106 | 411361 | 1397 | 10 | 140 | 416691 | 3190 | 10 | 319 |
| DVA.1-50-20-M10-28-* | 50 | 20 | M10 | 28 | 130 | 414001 | 3030 | 5 | 606 | 411381 | 4100 | 5 | 820 | 416701 | 9240 | 5 | 1848 |
| DVA.1-50-30-M10-28-* | 50 | 30 | M10 | 28 | 184 | 414011 | 2010 | 7.5 | 268 | 411401 | 3300 | 7.5 | 440 | 416711 | 5450 | 7.5 | 727 |
| DVA.1-50-40-M10-28-* | 50 | 40 | M10 | 28 | 170 | 414021 | 1477 | 10 | 148 | 411421 | 2130 | 10 | 213 | 416721 | 4940 | 10 | 494 |
| DVA.1-50-45-M10-28-* | 50 | 45 | M10 | 28 | 180 | 414031 | 1368 | 11.25 | 122 | 411441 | 2046 | 11.25 | 182 | 416731 | 2580 | 11.25 | 229 |
| DVA.1-50-50-M10-28-* | 50 | 50 | M10 | 28 | 195 | 414041 | 1500 | 12.5 | 120 | 411446 | 2188 | 12.5 | 175 | 416741 | 4750 | 12.5 | 380 |
| DVA.1-60-30-M10-28-* | 60 | 30 | M10 | 28 | 211 | 414051 | 3020 | 7.5 | 403 | 411451 | 4170 | 7.5 | 556 | 416751 | 9130 | 7.5 | 1217 |
| DVA.1-60-40-M10-28-* | 60 | 40 | M10 | 28 | 236 | 414061 | 2520 | 10 | 252 | 411456 | 3610 | 10 | 361 | 416761 | 6950 | 10 | 695 |
| DVA.1-70-45-M10-28-* | 70 | 45 | M10 | 28 | 380 | 414071 | 3810 | 11.25 | 339 | 411461 | 7130 | 11.25 | 634 | 416771 | 13210 | 11.25 | 1174 |
| DVA.1-75-25-M12-37-* | 75 | 25 | M12 | 37 | 345 | 414081 | 11000 | 6.25 | 1760 | 411471 | 12970 | 6.25 | 2075 | 416781 | 25000 | 6.25 | 4000 |
| DVA.1-75-40-M12-37-* | 75 | 40 | M12 | 37 | 410 | 414091 | 4910 | 10 | 491 | 411481 | 6970 | 10 | 697 | 416791 | 15380 | 10 | 1538 |
| DVA.1-75-55-M12-37-* | 75 | 55 | M12 | 37 | 515 | 414101 | 3470 | 13.75 | 252 | 411501 | 7510 | 13.75 | 546 | 416801 | 11240 | 13.75 | 817 |
| DVA.1-100-40-M16-41-* | 100 | 40 | M16 | 41 | 765 | 414111 | 13990 | 10 | 1399 | 411521 | 14660 | 10 | 2000 | 416811 | 29000 | 10 | 2900 |
| DVA.1-100-55-M16-41-* | 100 | 55 | M16 | 41 | 905 | 414121 | 7320 | 13.75 | 532 | 411541 | 13080 | 13.75 | 951 | 416821 | 24260 | 13.75 | 1764 |
| DVA.1-100-60-M16-41-* | 100 | 60 | M16 | 41 | 950 | 414131 | 7000 | 15 | 467 | 411561 | 11290 | 15 | 753 | 416831 | 28500 | 15 | 1900 |
| DVA.1-100-75-M16-41-* | 100 | 75 | M16 | 41 | 1090 | 414141 | 7790 | 18.75 | 415 | 411581 | 7790 | 18.75 | 514 | 416841 | 22350 | 18.75 | 1192 |

DVA.1-SST



DVA.1 - 8 - 8 - SST - M3 - 6 - 55
 D L Stainless steel d l Shore A

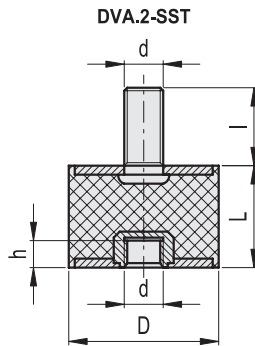
| Standard Elements | | Dimensions | | Δz | Hardness 40 Shore A | | | Hardness 55 Shore A | | | Hardness 70 Shore A | | | | | | |
|----------------------------|-----|------------|-----|------------|---------------------|------------|--------------|---------------------|------------------|--------|---------------------|---------------------|------------------|------------|--------------|---------------------|------------------|
| Description | D | L | d | l | g | Code | Max load [N] | Max deflection [mm] | Stiffness [N/mm] | Code | Max load [N] | Max deflection [mm] | Stiffness [N/mm] | Code | Max load [N] | Max deflection [mm] | Stiffness [N/mm] |
| DVA.1-8-8-SST-M3-6-55 | 8 | 8 | M3 | 6 | 4 | ON REQUEST | 50 | 2 | 25 | 410001 | 85 | 2 | 43 | ON REQUEST | 150 | 2 | 75 |
| DVA.1-10-10-SST-M4-10-55 | 10 | 10 | M4 | 10 | 5 | | 75 | 2.5 | 30 | 410005 | 100 | 2.5 | 40 | | 200 | 2.5 | 80 |
| DVA.1-10-15-SST-M4-10-55 | 10 | 15 | M4 | 10 | 6 | | 65 | 3.75 | 17 | 410007 | 65 | 3.75 | 17 | | 150 | 3.75 | 40 |
| DVA.1-15-8-SST-M4-10-55 | 15 | 8 | M4 | 10 | 7 | | 437 | 2 | 219 | 410011 | 537 | 2 | 269 | | 1325 | 2 | 663 |
| DVA.1-15-10-SST-M4-10-55 | 15 | 10 | M4 | 10 | 8 | | 210 | 2.5 | 84 | 410013 | 324 | 2.5 | 130 | | 717 | 2.5 | 287 |
| DVA.1-15-15-SST-M4-10-55 | 15 | 15 | M4 | 10 | 10 | | 155 | 3.75 | 41 | 410015 | 150 | 3.75 | 40 | | 513 | 3.75 | 137 |
| DVA.1-15-20-SST-M4-10-55 | 15 | 20 | M4 | 10 | 12 | | 151 | 5 | 30 | 410017 | 234 | 5 | 47 | | 468 | 5 | 94 |
| DVA.1-20-15-SST-M6-18-55 | 20 | 15 | M6 | 18 | 18 | | 322 | 3.75 | 86 | 410021 | 479 | 3.75 | 128 | | 1044 | 3.75 | 278 |
| DVA.1-20-20-SST-M6-18-55 | 20 | 20 | M6 | 18 | 25 | | 220 | 5 | 44 | 410023 | 430 | 5 | 86 | | 995 | 5 | 199 |
| DVA.1-20-25-SST-M6-18-55 | 20 | 25 | M6 | 18 | 20 | | 264 | 6.25 | 42 | 410025 | 433 | 6.25 | 69 | | 1010 | 6.25 | 162 |
| DVA.1-25-15-SST-M6-18-55 | 25 | 15 | M6 | 18 | 28 | | 860 | 3.75 | 229 | 410031 | 1068 | 3.75 | 285 | | 2690 | 3.75 | 717 |
| DVA.1-25-20-SST-M6-18-55 | 25 | 20 | M6 | 18 | 31 | | 391 | 5 | 78 | 410033 | 620 | 5 | 124 | | 1533 | 5 | 307 |
| DVA.1-25-25-SST-M6-18-55 | 25 | 25 | M6 | 18 | 35 | | 441 | 6.25 | 71 | 410035 | 529 | 6.25 | 85 | | 1374 | 6.25 | 220 |
| DVA.1-25-30-SST-M6-18-55 | 25 | 30 | M6 | 18 | 38 | | 432 | 7.5 | 58 | 410037 | 524 | 7.5 | 70 | | 1208 | 7.5 | 161 |
| DVA.1-30-15-SST-M8-20-55 | 30 | 15 | M8 | 20 | 45 | | 986 | 3.75 | 263 | 410041 | 2080 | 3.75 | 555 | | 3300 | 3.75 | 880 |
| DVA.1-30-20-SST-M8-20-55 | 30 | 20 | M8 | 20 | 50 | | 770 | 5 | 154 | 410043 | 1067 | 5 | 213 | | 2260 | 5 | 452 |
| DVA.1-30-30-SST-M8-20-55 | 30 | 30 | M8 | 20 | 57 | | 500 | 7.5 | 67 | 410045 | 1053 | 7.5 | 140 | | 1960 | 7.5 | 261 |
| DVA.1-40-20-SST-M8-23-55 | 40 | 20 | M8 | 23 | 80 | | 1800 | 5 | 360 | 410051 | 2430 | 5 | 486 | | 4450 | 5 | 890 |
| DVA.1-40-30-SST-M8-23-55 | 40 | 30 | M8 | 23 | 95 | | 1137 | 7.5 | 152 | 410053 | 1574 | 7.5 | 210 | | 3420 | 7.5 | 456 |
| DVA.1-40-40-SST-M8-23-55 | 40 | 40 | M8 | 23 | 100 | | 1056 | 10 | 106 | 410055 | 1397 | 10 | 140 | | 3190 | 10 | 319 |
| DVA.1-50-20-SST-M10-28-55 | 50 | 20 | M10 | 28 | 130 | | 3030 | 5 | 606 | 410061 | 4100 | 5 | 820 | | 9240 | 5 | 1848 |
| DVA.1-50-30-SST-M10-28-55 | 50 | 30 | M10 | 28 | 184 | | 2010 | 7.5 | 268 | 410063 | 3300 | 7.5 | 440 | | 5450 | 7.5 | 727 |
| DVA.1-50-40-SST-M10-28-55 | 50 | 40 | M10 | 28 | 170 | | 1477 | 10 | 148 | 410065 | 2130 | 10 | 213 | | 4940 | 10 | 494 |
| DVA.1-50-45-SST-M10-28-55 | 50 | 45 | M10 | 28 | 180 | | 1368 | 11.25 | 122 | 410067 | 2046 | 11.25 | 182 | | 2580 | 11.25 | 229 |
| DVA.1-50-50-SST-M10-28-55 | 50 | 50 | M10 | 28 | 195 | | 1500 | 12.5 | 120 | 410069 | 2188 | 12.5 | 175 | | 4750 | 12.5 | 380 |
| DVA.1-60-30-SST-M10-28-55 | 60 | 30 | M10 | 28 | 211 | | 3020 | 7.5 | 403 | 410071 | 4170 | 7.5 | 556 | | 9130 | 7.5 | 1217 |
| DVA.1-60-40-SST-M10-28-55 | 60 | 40 | M10 | 28 | 236 | | 2520 | 10 | 252 | 410073 | 3610 | 10 | 361 | | 6950 | 10 | 695 |
| DVA.1-70-45-SST-M10-28-55 | 70 | 45 | M10 | 28 | 380 | | 3810 | 11.25 | 339 | 410077 | 7130 | 11.25 | 634 | | 13210 | 11.25 | 1174 |
| DVA.1-75-25-SST-M12-37-55 | 75 | 25 | M12 | 37 | 345 | | 11000 | 6.25 | 1760 | 410081 | 12970 | 5 | 2594 | | 25000 | 6.25 | 4000 |
| DVA.1-75-40-SST-M12-37-55 | 75 | 40 | M12 | 37 | 410 | | 4910 | 10 | 491 | 410083 | 6970 | 10 | 697 | | 15380 | 10 | 1538 |
| DVA.1-75-55-SST-M12-37-55 | 75 | 55 | M12 | 37 | 515 | | 3470 | 13.75 | 252 | 410085 | 7510 | 13.75 | 546 | | 11240 | 13.75 | 817 |
| DVA.1-100-40-SST-M16-41-55 | 100 | 40 | M16 | 41 | 765 | | 13990 | 10 | 1399 | 410091 | 14660 | 10 | 1466 | | 29000 | 10 | 2900 |
| DVA.1-100-55-SST-M16-41-55 | 100 | 55 | M16 | 41 | 905 | | 7320 | 13.75 | 532 | 410093 | 13080 | 13.75 | 951 | | 24260 | 13.75 | 1764 |
| DVA.1-100-60-SST-M16-41-55 | 100 | 60 | M16 | 41 | 950 | | 7000 | 15 | 467 | 410095 | 11290 | 15 | 753 | | 28500 | 15 | 1900 |
| DVA.1-100-75-SST-M16-41-55 | 100 | 75 | M16 | 41 | 1090 | | 7790 | 18.75 | 415 | 410097 | 7790 | 18.75 | 415 | | 22350 | 18.75 | 1192 |



* Complete the description with the desired hardness:
40, 55 or 70 tolerance ± 5 Shore A.

DVA.2 - 8 - 8 - M3 - 6 - 55
D L d l Shore A

| Standard Elements | Dimensions | | | | | Δz | Hardness 40 Shore A | | | Hardness 55 Shore A | | | Hardness 70 Shore A | | | | | |
|-----------------------|-------------|----|-----|----|----|------------|---------------------|-------|-------|---------------------|---------------------|------------------|---------------------|--------------|---------------------|------------------|-------|--------------|
| | Description | D | L | d | l | | h | g | Code | Max load [N] | Max deflection [mm] | Stiffness [N/mm] | Code | Max load [N] | Max deflection [mm] | Stiffness [N/mm] | Code | Max load [N] |
| DVA.2-8-8-M3-6-* | 8 | 8 | M3 | 6 | 3 | 3 | 414301 | 50 | 2 | 25 | 411701 | 85 | 2 | 43 | 417001 | 150 | 2 | 75 |
| DVA.2-10-10-M4-10-* | 10 | 10 | M4 | 10 | 4 | 4 | 414311 | 75 | 2.5 | 30 | 411721 | 100 | 2.5 | 40 | 417011 | 200 | 2.5 | 80 |
| DVA.2-10-15-M4-10-* | 10 | 15 | M4 | 10 | 4 | 5 | 414321 | 65 | 3.75 | 17 | 411731 | 100 | 3.75 | 27 | 417021 | 150 | 3.75 | 40 |
| DVA.2-15-10-M4-10-* | 15 | 10 | M4 | 10 | 4 | 6 | 414331 | 210 | 2 | 105 | 411741 | 325 | 2 | 163 | 417031 | 717 | 2 | 359 |
| DVA.2-15-15-M4-10-* | 15 | 15 | M4 | 10 | 4 | 7 | 414341 | 155 | 3.75 | 41 | 411761 | 280 | 3.75 | 75 | 417041 | 513 | 3.75 | 137 |
| DVA.2-15-20-M4-10-* | 15 | 20 | M4 | 10 | 4 | 8 | 414351 | 151 | 5 | 30 | 411771 | 234 | 5 | 47 | 417051 | 468 | 5 | 94 |
| DVA.2-20-15-M6-18-* | 20 | 15 | M6 | 18 | 6 | 15 | 414361 | 322 | 3.75 | 86 | 411781 | 479 | 3.75 | 128 | 417061 | 1044 | 3.75 | 278 |
| DVA.2-20-20-M6-18-* | 20 | 20 | M6 | 18 | 6 | 17 | 414371 | 220 | 5 | 44 | 411801 | 430 | 5 | 86 | 417071 | 995 | 5 | 199 |
| DVA.2-20-25-M6-18-* | 20 | 25 | M6 | 18 | 6 | 18 | 414381 | 264 | 6.25 | 42 | 411811 | 433 | 6.25 | 69 | 417081 | 1010 | 6.25 | 162 |
| DVA.2-25-15-M6-18-* | 25 | 15 | M6 | 18 | 6 | 26 | 414391 | 860 | 3.75 | 229 | 411821 | 1068 | 3.75 | 285 | 417091 | 2690 | 3.75 | 717 |
| DVA.2-25-20-M6-18-* | 25 | 20 | M6 | 18 | 6 | 28 | 414401 | 391 | 5 | 78 | 411841 | 620 | 5 | 124 | 417101 | 1533 | 5 | 307 |
| DVA.2-25-30-M6-18-* | 25 | 30 | M6 | 18 | 6 | 36 | 414411 | 432 | 7.5 | 58 | 411851 | 524 | 7.5 | 70 | 417111 | 1208 | 7.5 | 161 |
| DVA.2-30-15-M8-20-* | 30 | 15 | M8 | 20 | 8 | 41 | 414421 | 986 | 3.75 | 263 | 411861 | 2080 | 3.75 | 555 | 417121 | 3300 | 3.75 | 880 |
| DVA.2-30-20-M8-20-* | 30 | 20 | M8 | 20 | 8 | 43 | 414431 | 1300 | 5 | 260 | 411881 | 3070 | 5 | 614 | 417131 | 7540 | 5 | 1508 |
| DVA.2-30-30-M8-20-* | 30 | 30 | M8 | 20 | 8 | 50 | 414441 | 500 | 7.5 | 67 | 411901 | 1055 | 7.5 | 141 | 417141 | 1960 | 7.5 | 261 |
| DVA.2-40-20-M8-23-* | 40 | 20 | M8 | 23 | 8 | 73 | 414451 | 3490 | 5 | 698 | 411911 | 8420 | 5 | 1684 | 417151 | 10160 | 5 | 2032 |
| DVA.2-40-30-M8-23-* | 40 | 30 | M8 | 23 | 8 | 85 | 414461 | 1137 | 7.5 | 152 | 411921 | 1574 | 7.5 | 210 | 417161 | 3420 | 7.5 | 456 |
| DVA.2-40-40-M8-23-* | 40 | 40 | M8 | 23 | 8 | 98 | 414471 | 1056 | 10 | 106 | 411941 | 1397 | 10 | 140 | 417171 | 3190 | 10 | 319 |
| DVA.2-50-20-M10-28-* | 50 | 20 | M10 | 28 | 10 | 115 | 414481 | 11610 | 5 | 2322 | 411961 | 14030 | 5 | 2806 | 417181 | 22540 | 5 | 4508 |
| DVA.2-50-30-M10-28-* | 50 | 30 | M10 | 28 | 10 | 135 | 414491 | 2010 | 7.5 | 268 | 411981 | 3300 | 7.5 | 440 | 417191 | 5450 | 7.5 | 727 |
| DVA.2-50-40-M10-28-* | 50 | 40 | M10 | 28 | 10 | 160 | 414501 | 1477 | 10 | 148 | 412001 | 2130 | 10 | 213 | 417201 | 4940 | 10 | 494 |
| DVA.2-50-45-M10-28-* | 50 | 45 | M10 | 28 | 10 | 170 | 414511 | 1368 | 11.25 | 122 | 412021 | 2046 | 11.25 | 182 | 417211 | 2580 | 11.25 | 229 |
| DVA.2-50-50-M10-28-* | 50 | 50 | M10 | 28 | 10 | 185 | 414521 | 1500 | 12.5 | 120 | 412026 | 2188 | 12.5 | 175 | 417221 | 4750 | 12.5 | 380 |
| DVA.2-60-30-M10-28-* | 60 | 30 | M10 | 28 | 10 | 199 | 414531 | 3020 | 7.5 | 403 | 412031 | 4170 | 7.5 | 556 | 417231 | 9130 | 7.5 | 1217 |
| DVA.2-60-40-M10-28-* | 60 | 40 | M10 | 28 | 10 | 220 | 414541 | 2520 | 10 | 252 | 412036 | 3610 | 10 | 361 | 417241 | 6950 | 10 | 695 |
| DVA.2-70-45-M10-28-* | 70 | 45 | M10 | 28 | 10 | 372 | 414551 | 3810 | 11.25 | 339 | 412041 | 7130 | 11.25 | 634 | 417251 | 13210 | 11.25 | 1174 |
| DVA.2-75-25-M12-37-* | 75 | 25 | M12 | 37 | 12 | 321 | 414561 | 4600 | 3 | 1533 | 412051 | 10000 | 3 | 3333 | 417261 | 15900 | 3 | 5300 |
| DVA.2-75-40-M12-37-* | 75 | 40 | M12 | 37 | 12 | 385 | 414571 | 4910 | 10 | 491 | 412061 | 6970 | 10 | 697 | 417271 | 15380 | 10 | 1538 |
| DVA.2-75-55-M12-37-* | 75 | 55 | M12 | 37 | 12 | 450 | 414581 | 3470 | 13.75 | 252 | 412081 | 7510 | 13.75 | 546 | 417281 | 11240 | 13.75 | 817 |
| DVA.2-100-40-M16-41-* | 100 | 40 | M16 | 41 | 16 | 740 | 414591 | 13990 | 10 | 1399 | 412101 | 20000 | 10 | 2000 | 417291 | 29000 | 10 | 2900 |
| DVA.2-100-55-M16-41-* | 100 | 55 | M16 | 41 | 16 | 850 | 414601 | 7320 | 13.75 | 532 | 412121 | 13080 | 13.75 | 951 | 417301 | 24260 | 13.75 | 1764 |
| DVA.2-100-60-M16-41-* | 100 | 60 | M16 | 41 | 16 | 865 | 414611 | 7000 | 15 | 467 | 412141 | 11290 | 15 | 753 | 417311 | 28500 | 15 | 1900 |
| DVA.2-100-75-M16-41-* | 100 | 75 | M16 | 41 | 16 | 980 | 414621 | 7790 | 18.75 | 415 | 412161 | 9640 | 18.75 | 514 | 417321 | 22350 | 18.75 | 1192 |

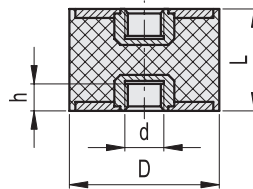


DVA.2 - 8 - 8 - SST - M3 - 6 - 55
 D L Stainless steel d l Shore A

| Standard Elements | Dimensions | | | | | $\Delta\Delta$ | Hardness 40 Shore A | | | Hardness 55 Shore A | | | Hardness 70 Shore A | | | | | |
|----------------------------|-------------|----|-----|----|----|----------------|---------------------|-------|--------------|---------------------|------------------|-------|---------------------|---------------------|------------------|-------|--------------|---------------------|
| | Description | D | L | d | l | | g | Code | Max load [N] | Max deflection [mm] | Stiffness [N/mm] | Code | Max load [N] | Max deflection [mm] | Stiffness [N/mm] | Code | Max load [N] | Max deflection [mm] |
| DVA.2-8-8-SST-M3-6-55 | 8 | 8 | M3 | 6 | 3 | 3 | ON REQUEST | 50 | 2 | 25 | 410101 | 85 | 2 | 43 | ON REQUEST | 150 | 2 | 75 |
| DVA.2-10-10-SST-M4-10-55 | 10 | 10 | M4 | 10 | 4 | 4 | | 75 | 2.5 | 30 | 410105 | 100 | 2.5 | 40 | | 200 | 2.5 | 80 |
| DVA.2-10-15-SST-M4-10-55 | 10 | 15 | M4 | 10 | 4 | 5 | | 65 | 3.75 | 17 | 410107 | 65 | 3.75 | 17 | | 150 | 3.75 | 40 |
| DVA.2-15-10-SST-M4-10-55 | 15 | 10 | M4 | 10 | 4 | 6 | | 210 | 2 | 105 | 410113 | 324 | 2 | 162 | | 717 | 2 | 359 |
| DVA.2-15-15-SST-M4-10-55 | 15 | 15 | M4 | 10 | 4 | 7 | | 155 | 3.75 | 41 | 410115 | 150 | 3.75 | 40 | | 513 | 3.75 | 137 |
| DVA.2-15-20-SST-M4-10-55 | 15 | 20 | M4 | 10 | 4 | 8 | | 151 | 5 | 30 | 410117 | 234 | 5 | 47 | | 468 | 5 | 94 |
| DVA.2-20-15-SST-M6-18-55 | 20 | 15 | M6 | 18 | 6 | 15 | | 322 | 3.75 | 86 | 410121 | 479 | 3.75 | 128 | | 1044 | 3.75 | 278 |
| DVA.2-20-20-SST-M6-18-55 | 20 | 20 | M6 | 18 | 6 | 17 | | 220 | 5 | 44 | 410123 | 430 | 5 | 86 | | 995 | 5 | 199 |
| DVA.2-20-25-SST-M6-18-55 | 20 | 25 | M6 | 18 | 6 | 18 | | 264 | 6.25 | 42 | 410125 | 433 | 6.25 | 69 | | 1010 | 6.25 | 162 |
| DVA.2-25-15-SST-M6-18-55 | 25 | 15 | M6 | 18 | 6 | 26 | | 860 | 3.75 | 229 | 410131 | 1068 | 3.75 | 285 | | 2690 | 3.75 | 717 |
| DVA.2-25-20-SST-M6-18-55 | 25 | 20 | M6 | 18 | 6 | 28 | | 391 | 5 | 78 | 410133 | 620 | 5 | 124 | | 1533 | 5 | 307 |
| DVA.2-25-30-SST-M6-18-55 | 25 | 30 | M6 | 18 | 6 | 36 | | 432 | 7.5 | 58 | 410137 | 524 | 7.5 | 70 | | 1208 | 7.5 | 161 |
| DVA.2-30-15-SST-M8-20-55 | 30 | 15 | M8 | 20 | 8 | 41 | | 986 | 3.75 | 263 | 410141 | 2080 | 3.75 | 555 | | 3300 | 3.75 | 880 |
| DVA.2-30-20-SST-M8-20-55 | 30 | 20 | M8 | 20 | 8 | 43 | | 1300 | 5 | 260 | 410143 | 1067 | 5 | 213 | | 7540 | 5 | 1508 |
| DVA.2-30-30-SST-M8-20-55 | 30 | 30 | M8 | 20 | 8 | 50 | | 500 | 7.5 | 67 | 410145 | 1053 | 7.5 | 140 | | 1960 | 7.5 | 261 |
| DVA.2-40-20-SST-M8-23-55 | 40 | 20 | M8 | 23 | 8 | 73 | | 3490 | 5 | 698 | 410151 | 2430 | 5 | 486 | | 10160 | 5 | 2032 |
| DVA.2-40-30-SST-M8-23-55 | 40 | 30 | M8 | 23 | 8 | 85 | | 1137 | 7.5 | 152 | 410153 | 1574 | 7.5 | 210 | | 3420 | 7.5 | 456 |
| DVA.2-40-40-SST-M8-23-55 | 40 | 40 | M8 | 23 | 8 | 98 | | 1056 | 10 | 106 | 410155 | 1397 | 10 | 140 | | 3190 | 10 | 319 |
| DVA.2-50-20-SST-M10-28-55 | 50 | 20 | M10 | 28 | 10 | 115 | | 11610 | 5 | 2322 | 410161 | 4100 | 5 | 820 | | 22540 | 5 | 4508 |
| DVA.2-50-30-SST-M10-28-55 | 50 | 30 | M10 | 28 | 10 | 135 | | 2010 | 7.5 | 268 | 410163 | 3300 | 7.5 | 440 | | 5450 | 7.5 | 727 |
| DVA.2-50-40-SST-M10-28-55 | 50 | 40 | M10 | 28 | 10 | 160 | | 1477 | 10 | 148 | 410165 | 2130 | 10 | 213 | | 4940 | 10 | 494 |
| DVA.2-50-45-SST-M10-28-55 | 50 | 45 | M10 | 28 | 10 | 170 | | 1368 | 11.25 | 122 | 410167 | 2046 | 11.25 | 182 | | 2580 | 11.25 | 229 |
| DVA.2-50-50-SST-M10-28-55 | 50 | 50 | M10 | 28 | 10 | 185 | | 1500 | 12.5 | 120 | 410169 | 2188 | 12.5 | 175 | | 4750 | 12.5 | 380 |
| DVA.2-60-30-SST-M10-28-55 | 60 | 30 | M10 | 28 | 10 | 199 | | 3020 | 7.5 | 403 | 410171 | 4170 | 7.5 | 556 | | 9130 | 7.5 | 1217 |
| DVA.2-60-40-SST-M10-28-55 | 60 | 40 | M10 | 28 | 10 | 220 | | 2520 | 10 | 252 | 410173 | 3610 | 10 | 361 | | 6950 | 10 | 695 |
| DVA.2-70-45-SST-M10-28-55 | 70 | 45 | M10 | 28 | 10 | 372 | | 3810 | 11.25 | 339 | 410177 | 7130 | 11.25 | 634 | | 13210 | 11.25 | 1174 |
| DVA.2-75-25-SST-M12-37-55 | 75 | 25 | M12 | 37 | 12 | 321 | | 4600 | 3 | 1533 | 410181 | 10000 | 3 | 3333 | | 15900 | 3 | 5300 |
| DVA.2-75-40-SST-M12-37-55 | 75 | 40 | M12 | 37 | 12 | 385 | | 4910 | 10 | 491 | 410183 | 6970 | 10 | 697 | | 15380 | 10 | 1538 |
| DVA.2-75-55-SST-M12-37-55 | 75 | 55 | M12 | 37 | 12 | 450 | | 3470 | 13.75 | 252 | 410185 | 7510 | 13.75 | 546 | | 11240 | 13.75 | 817 |
| DVA.2-100-40-SST-M16-41-55 | 100 | 40 | M16 | 41 | 16 | 740 | | 13990 | 10 | 1399 | 410191 | 14660 | 10 | 1466 | | 29000 | 10 | 2900 |
| DVA.2-100-55-SST-M16-41-55 | 100 | 55 | M16 | 41 | 16 | 850 | 7320 | 13.75 | 532 | 410193 | 13080 | 13.75 | 951 | 24260 | 13.75 | 1764 | | |
| DVA.2-100-60-SST-M16-41-55 | 100 | 60 | M16 | 41 | 16 | 865 | 7000 | 15 | 467 | 410195 | 11290 | 15 | 753 | 28500 | 15 | 1900 | | |
| DVA.2-100-75-SST-M16-41-55 | 100 | 75 | M16 | 41 | 16 | 980 | 7790 | 18.75 | 415 | 410197 | 7790 | 18.75 | 415 | 22350 | 18.75 | 1192 | | |

DVA.3

DVA.3



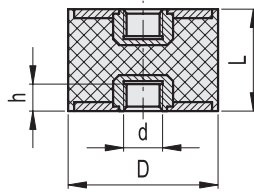
* Complete the description with the desired hardness:
40, 55 or 70 Shore A.

DVA.3 - 8 - 8 - M3 - 55



| Standard Elements | Dimensions | | | | | Hardness 40 Shore A | | | | Hardness 55 Shore A | | | | Hardness 70 Shore A | | | |
|--------------------|-------------|----|-----|----|-----|---------------------|-------|--------------|---------------------|---------------------|-------|--------------|---------------------|---------------------|-------|--------------|---------------------|
| | Description | D | L | d | h | g | Code | Max load [N] | Max deflection [mm] | Stiffness [N/mm] | Code | Max load [N] | Max deflection [mm] | Stiffness [N/mm] | Code | Max load [N] | Max deflection [mm] |
| DVA.3-8-8-M3-* | 8 | 8 | M3 | 3 | 2 | 414801 | 50 | 2 | 25 | 412301 | 85 | 2 | 43 | 417501 | 150 | 2 | 75 |
| DVA.3-10-10-M4-* | 10 | 10 | M4 | 4 | 3 | 414811 | 75 | 2.5 | 30 | 412321 | 100 | 2.5 | 40 | 417511 | 200 | 2.5 | 80 |
| DVA.3-10-15-M4-* | 10 | 15 | M4 | 4 | 4 | 414821 | 65 | 3.75 | 17 | 412326 | 100 | 3.75 | 27 | 417521 | 150 | 3.75 | 40 |
| DVA.3-15-10-M4-* | 15 | 10 | M4 | 4 | 5 | 414831 | 210 | 2 | 105 | 412331 | 325 | 2 | 163 | 417531 | 717 | 2 | 359 |
| DVA.3-15-15-M4-* | 15 | 15 | M4 | 4 | 6 | 414841 | 155 | 3.75 | 41 | 412341 | 280 | 3.75 | 75 | 417541 | 513 | 3.75 | 137 |
| DVA.3-15-20-M4-* | 15 | 20 | M4 | 4 | 8 | 414851 | 151 | 5 | 30 | 412346 | 234 | 5 | 47 | 417551 | 468 | 5 | 94 |
| DVA.3-20-15-M6-* | 20 | 15 | M6 | 6 | 13 | 414861 | 175 | 1.5 | 117 | 412351 | 227 | 1.5 | 151 | 417561 | 550 | 1.5 | 367 |
| DVA.3-20-20-M6-* | 20 | 20 | M6 | 6 | 16 | 414871 | 220 | 5 | 44 | 412361 | 430 | 5 | 86 | 417571 | 995 | 5 | 199 |
| DVA.3-20-25-M6-* | 20 | 25 | M6 | 6 | 19 | 414881 | 264 | 6.25 | 42 | 412371 | 433 | 6.25 | 69 | 417581 | 1010 | 6.25 | 162 |
| DVA.3-25-20-M6-* | 25 | 20 | M6 | 6 | 26 | 414891 | 391 | 5 | 78 | 412381 | 620 | 5 | 124 | 417591 | 1533 | 5 | 307 |
| DVA.3-25-25-M6-* | 25 | 25 | M6 | 6 | 29 | 414901 | 441 | 6.25 | 71 | 412386 | 529 | 6.25 | 85 | 417601 | 1374 | 6.25 | 220 |
| DVA.3-25-30-M6-* | 25 | 30 | M6 | 6 | 25 | 414911 | 432 | 7.5 | 58 | 412391 | 524 | 7.5 | 70 | 417611 | 1208 | 7.5 | 161 |
| DVA.3-30-20-M8-* | 30 | 20 | M8 | 8 | 39 | 414921 | 770 | 0.7 | 1100 | 412401 | 1067 | 0.7 | 1524 | 417621 | 2260 | 0.7 | 3229 |
| DVA.3-30-30-M8-* | 30 | 30 | M8 | 8 | 45 | 414931 | 500 | 7.5 | 67 | 412421 | 1055 | 7.5 | 141 | 417631 | 1960 | 7.5 | 261 |
| DVA.3-30-40-M8-* | 30 | 40 | M8 | 8 | 53 | 414941 | 700 | 10 | 70 | 412431 | 2100 | 10 | 210 | 417641 | 2400 | 10 | 240 |
| DVA.3-40-30-M8-* | 40 | 30 | M8 | 8 | 80 | 414951 | 1137 | 7.5 | 152 | 412441 | 1574 | 7.5 | 210 | 417651 | 3420 | 7.5 | 456 |
| DVA.3-40-40-M8-* | 40 | 40 | M8 | 8 | 98 | 414961 | 1056 | 10 | 106 | 412461 | 1397 | 10 | 140 | 417661 | 3190 | 10 | 319 |
| DVA.3-50-30-M10-* | 50 | 30 | M10 | 10 | 125 | 414971 | 2010 | 7.5 | 268 | 412463 | 3300 | 7.5 | 440 | 417671 | 5450 | 7.5 | 727 |
| DVA.3-50-40-M10-* | 50 | 40 | M10 | 10 | 150 | 414981 | 1477 | 10 | 148 | 412466 | 2130 | 10 | 213 | 417681 | 4940 | 10 | 494 |
| DVA.3-50-50-M10-* | 50 | 50 | M10 | 10 | 125 | 414991 | 1500 | 11.25 | 133 | 412469 | 2188 | 11.25 | 194 | 417691 | 4750 | 11.25 | 422 |
| DVA.3-60-30-M10-* | 60 | 30 | M10 | 10 | 189 | 415001 | 3020 | 7.5 | 403 | 412471 | 4170 | 7.5 | 556 | 417701 | 9130 | 7.5 | 1217 |
| DVA.3-60-40-M10-* | 60 | 40 | M10 | 10 | 220 | 415011 | 2520 | 10 | 252 | 412476 | 3610 | 10 | 361 | 417711 | 6950 | 10 | 695 |
| DVA.3-70-45-M10-* | 70 | 45 | M10 | 10 | 335 | 415021 | 3810 | 11.25 | 339 | 412481 | 7130 | 11.25 | 624 | 417721 | 13210 | 11.25 | 1174 |
| DVA.3-75-40-M12-* | 75 | 40 | M12 | 12 | 360 | 415031 | 4910 | 10 | 491 | 412501 | 6970 | 10 | 697 | 417731 | 15380 | 10 | 1538 |
| DVA.3-75-55-M12-* | 75 | 55 | M12 | 12 | 445 | 415041 | 3470 | 13.75 | 252 | 412521 | 7510 | 13.75 | 546 | 417741 | 11240 | 13.75 | 817 |
| DVA.3-100-40-M16-* | 100 | 40 | M16 | 16 | 690 | 415051 | 13990 | 10 | 1399 | 412541 | 20000 | 10 | 2000 | 417751 | 29000 | 10 | 2900 |
| DVA.3-100-55-M16-* | 100 | 55 | M16 | 16 | 765 | 415061 | 7320 | 13.75 | 532 | 412551 | 13080 | 13.75 | 951 | 417761 | 24260 | 13.75 | 1764 |
| DVA.3-100-60-M16-* | 100 | 60 | M16 | 16 | 885 | 415071 | 7000 | 15 | 467 | 412561 | 11290 | 15 | 753 | 417771 | 28500 | 15 | 1900 |
| DVA.3-100-75-M16-* | 100 | 75 | M16 | 16 | 965 | 415081 | 7790 | 18.75 | 415 | 412581 | 9640 | 18.75 | 514 | 417781 | 22350 | 18.75 | 1192 |

DVA.3-SST



DVA.3 - 8 - 8 - SST - M3 - 55

D L d Shore A
Stainless steel

| Standard Elements | | Dimensions | | Δ | Hardness 40 Shore A | | | Hardness 55 Shore A | | | Hardness 70 Shore A | | | | | | | |
|-------------------------|-----|------------|-----|----------|---------------------|------------|-------|---------------------|---------------------|------------------|---------------------|--------------|---------------------|------------------|-------|--------------|---------------------|------------------|
| Description | D | L | d | | h | g | Code | Max load [N] | Max deflection [mm] | Stiffness [N/mm] | Code | Max load [N] | Max deflection [mm] | Stiffness [N/mm] | Code | Max load [N] | Max deflection [mm] | Stiffness [N/mm] |
| DVA.3-8-8-SST-M3-55 | 8 | 8 | M3 | 3 | 2 | ON REQUEST | 50 | 2 | 25 | 410201 | 85 | 2 | 43 | ON REQUEST | | 150 | 2 | 75 |
| DVA.3-10-10-SST-M4-55 | 10 | 10 | M4 | 4 | 3 | | 75 | 2.5 | 30 | 410205 | 100 | 2.5 | 40 | | 200 | 2.5 | 80 | |
| DVA.3-10-15-SST-M4-55 | 10 | 15 | M4 | 4 | 4 | | 65 | 3.75 | 17 | 410207 | 65 | 3.75 | 17 | | 150 | 3.75 | 40 | |
| DVA.3-15-10-SST-M4-55 | 15 | 10 | M4 | 4 | 5 | | 210 | 2 | 105 | 410213 | 324 | 2 | 162 | | 717 | 2 | 359 | |
| DVA.3-15-15-SST-M4-55 | 15 | 15 | M4 | 4 | 6 | | 155 | 3.75 | 41 | 410215 | 150 | 3.75 | 40 | | 513 | 3.75 | 137 | |
| DVA.3-15-20-SST-M4-55 | 15 | 20 | M4 | 4 | 8 | | 151 | 5 | 30 | 410217 | 234 | 5 | 47 | | 468 | 5 | 94 | |
| DVA.3-20-15-SST-M6-55 | 20 | 15 | M6 | 6 | 13 | | 175 | 1.5 | 117 | 410221 | 479 | 3.75 | 128 | | 550 | 1.5 | 367 | |
| DVA.3-20-20-SST-M6-55 | 20 | 20 | M6 | 6 | 16 | | 220 | 5 | 44 | 410223 | 430 | 5 | 86 | | 995 | 5 | 199 | |
| DVA.3-20-25-SST-M6-55 | 20 | 25 | M6 | 6 | 19 | | 264 | 6.25 | 42 | 410225 | 433 | 6.25 | 69 | | 1010 | 6.25 | 162 | |
| DVA.3-25-20-SST-M6-55 | 25 | 20 | M6 | 6 | 26 | | 391 | 5 | 78 | 410231 | 620 | 3.75 | 165 | | 1533 | 5 | 307 | |
| DVA.3-25-25-SST-M6-55 | 25 | 25 | M6 | 6 | 29 | | 441 | 6.25 | 71 | 410233 | 529 | 6.25 | 85 | | 1374 | 6.25 | 220 | |
| DVA.3-25-30-SST-M6-55 | 25 | 30 | M6 | 6 | 25 | | 432 | 7.5 | 58 | 410237 | 524 | 7.5 | 70 | | 1208 | 7.5 | 161 | |
| DVA.3-30-20-SST-M8-55 | 30 | 20 | M8 | 8 | 39 | | 770 | 0.7 | 1100 | 410241 | 1067 | 5 | 213 | | 2260 | 0.7 | 3229 | |
| DVA.3-30-30-SST-M8-55 | 30 | 30 | M8 | 8 | 45 | | 500 | 7.5 | 67 | 410243 | 1053 | 7.5 | 140 | | 1960 | 7.5 | 261 | |
| DVA.3-30-40-SST-M8-55 | 30 | 40 | M8 | 8 | 53 | | 700 | 10 | 70 | 410245 | 2100 | 10 | 210 | | 2400 | 10 | 240 | |
| DVA.3-40-30-SST-M8-55 | 40 | 30 | M8 | 8 | 80 | | 1137 | 7.5 | 152 | 410253 | 1574 | 7.5 | 210 | | 3420 | 7.5 | 456 | |
| DVA.3-40-40-SST-M8-55 | 40 | 40 | M8 | 8 | 98 | | 1056 | 10 | 106 | 410255 | 1397 | 10 | 140 | | 3190 | 10 | 319 | |
| DVA.3-50-30-SST-M10-55 | 50 | 30 | M10 | 10 | 125 | | 2010 | 7.5 | 268 | 410263 | 3300 | 7.5 | 440 | | 5450 | 7.5 | 727 | |
| DVA.3-50-40-SST-M10-55 | 50 | 40 | M10 | 10 | 150 | | 1477 | 10 | 148 | 410265 | 2130 | 10 | 213 | | 4940 | 10 | 494 | |
| DVA.3-50-50-SST-M10-55 | 50 | 50 | M10 | 10 | 125 | | 1500 | 11.25 | 133 | 410269 | 2188 | 12.5 | 175 | | 4750 | 11.25 | 422 | |
| DVA.3-60-30-SST-M10-55 | 60 | 30 | M10 | 10 | 189 | | 3020 | 7.5 | 403 | 410271 | 4170 | 7.5 | 556 | | 9130 | 7.5 | 1217 | |
| DVA.3-60-40-SST-M10-55 | 60 | 40 | M10 | 10 | 220 | | 2520 | 10 | 252 | 410273 | 3610 | 10 | 361 | | 6950 | 10 | 695 | |
| DVA.3-70-45-SST-M10-55 | 70 | 45 | M10 | 10 | 335 | | 3810 | 11.25 | 339 | 410277 | 7130 | 11.25 | 634 | | 13210 | 11.25 | 1174 | |
| DVA.3-75-40-SST-M12-55 | 75 | 40 | M12 | 12 | 360 | | 4910 | 10 | 491 | 410283 | 6970 | 10 | 697 | | 15380 | 10 | 1538 | |
| DVA.3-75-55-SST-M12-55 | 75 | 55 | M12 | 12 | 445 | | 3470 | 13.75 | 252 | 410285 | 7510 | 13.75 | 546 | | 11240 | 13.75 | 817 | |
| DVA.3-100-40-SST-M16-55 | 100 | 40 | M16 | 16 | 690 | | 13990 | 10 | 1399 | 410291 | 14660 | 10 | 1466 | | 29000 | 10 | 2900 | |
| DVA.3-100-55-SST-M16-55 | 100 | 55 | M16 | 16 | 765 | | 7320 | 13.75 | 532 | 410293 | 13080 | 13.75 | 951 | | 24260 | 13.75 | 1764 | |
| DVA.3-100-60-SST-M16-55 | 100 | 60 | M16 | 16 | 885 | | 7000 | 15 | 467 | 410295 | 11290 | 15 | 753 | | 28500 | 15 | 1900 | |
| DVA.3-100-75-SST-M16-55 | 100 | 75 | M16 | 16 | 965 | | 7790 | 18.75 | 415 | 410297 | 9640 | 18.75 | 514 | | 22350 | 18.75 | 1192 | |

DVA.4 - DVA.5

INOX
Stainless Steel

Vibration-damping elements



• Base

- **DVA**: glossy zinc-plated steel.
- **DVA-SST**: AISI 304 stainless steel.

• Vibration-damping body

Natural rubber NR, hardness 40, 55, 70 tolerance ± 5 Shore A, black colour.

• Standard executions

- **DVA.4**: zinc-plated steel threaded stud.
- **DVA.4-SST**: AISI 304 stainless steel threaded stud.
- **DVA.5**: zinc-plated steel boss, threaded blind hole.
- **DVA.5-SST**: AISI 304 stainless steel boss, threaded blind hole.

Special executions on request

Natural rubber NR, hardness 40, 70 tolerance ± 5 Shore A for executions with AISI 304 stainless steel base.

Features and applications

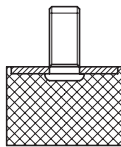
ELESA vibration-damping elements have been designed to damp vibrations, shocks and noises produced by moving bodies or nonbalanced vibrating masses of equipment and machines which can cause:

- malfunctioning and reduction of the machine lifespan and/or of the adjacent ones;
- damage to health;
- noise.

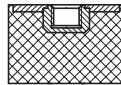
Technical data and guidelines for the choice (see page 2).



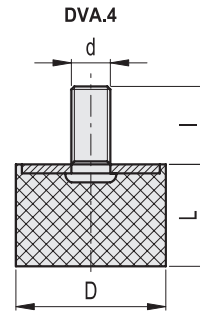
DVA.4



DVA.5



DVA.4

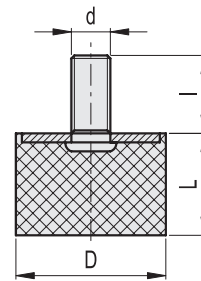


* Complete the description with the desired hardness:
40, 55 or 70 Shore A.

DVA.4 - 8 - 8 - M3 - 6 - 55
 D L d l Shore A

| Standard Elements | Dimensions | | | | | Hardness 40 Shore A | | | Hardness 55 Shore A | | | Hardness 70 Shore A | | | | | |
|-----------------------|-------------|----|-----|----|-----|---------------------|------|--------------|---------------------|------------------|-------|---------------------|---------------------|------------------|-------|--------------|---------------------|
| | Description | D | L | d | l | g | Code | Max load [N] | Max deflection [mm] | Stiffness [N/mm] | Code | Max load [N] | Max deflection [mm] | Stiffness [N/mm] | Code | Max load [N] | Max deflection [mm] |
| DVA.4-8-8-M3-6-* | 8 | 8 | M3 | 6 | 3 | 415201 | 33.5 | 2 | 17 | 412700 | 55 | 2 | 28 | 417901 | 141 | 2 | 71 |
| DVA.4-10-10-M4-10-* | 10 | 10 | M4 | 10 | 2 | 415211 | 53.5 | 2.5 | 21 | 412701 | 88 | 2.5 | 35 | 417911 | 217 | 2.5 | 87 |
| DVA.4-10-15-M4-10-* | 10 | 15 | M4 | 10 | 3 | 415221 | 69 | 3.75 | 18 | 412703 | 92 | 3.75 | 25 | 417921 | 175 | 3.75 | 47 |
| DVA.4-15-10-M4-10-* | 15 | 10 | M4 | 10 | 4 | 415231 | 110 | 2 | 55 | 412706 | 168 | 2 | 84 | 417931 | 410 | 2 | 205 |
| DVA.4-15-15-M4-10-* | 15 | 15 | M4 | 10 | 5 | 415241 | 141 | 3.75 | 38 | 412709 | 259 | 3.75 | 69 | 417941 | 384 | 3.75 | 102 |
| DVA.4-15-20-M4-10-* | 15 | 20 | M4 | 10 | 7 | 415251 | 134 | 5 | 27 | 412711 | 223 | 5 | 45 | 417951 | 590 | 5 | 118 |
| DVA.4-15-30-M4-10-* | 15 | 30 | M4 | 10 | 9 | 415261 | 125 | 7.5 | 17 | 412716 | 258 | 7.5 | 34 | 417961 | 392 | 7.5 | 52 |
| DVA.4-20-10-M6-18-* | 20 | 10 | M6 | 18 | 15 | 415271 | 390 | 2.5 | 156 | 412721 | 645 | 2.5 | 258 | 417971 | 940 | 2.5 | 376 |
| DVA.4-20-15-M6-18-* | 20 | 15 | M6 | 18 | 10 | 415281 | 289 | 3.75 | 77 | 412741 | 468 | 3.75 | 125 | 417981 | 704 | 3.75 | 188 |
| DVA.4-20-20-M6-18-* | 20 | 20 | M6 | 18 | 13 | 415291 | 258 | 5 | 52 | 412746 | 367 | 5 | 73 | 417991 | 809 | 5 | 162 |
| DVA.4-20-30-M6-18-* | 20 | 30 | M6 | 18 | 23 | 415301 | 237 | 7.5 | 32 | 412751 | 420 | 7.5 | 56 | 418001 | 848 | 7.5 | 113 |
| DVA.4-25-15-M6-18-* | 25 | 15 | M6 | 18 | 18 | 415311 | 485 | 3.75 | 129 | 412756 | 797 | 3.75 | 213 | 418011 | 1627 | 3.75 | 434 |
| DVA.4-25-17-M6-18-* | 25 | 17 | M6 | 18 | 20 | 415321 | 422 | 4.25 | 99 | 412761 | 833 | 4.25 | 196 | 418021 | 1726 | 4.25 | 406 |
| DVA.4-25-20-M6-18-* | 25 | 20 | M6 | 18 | 20 | 415331 | 416 | 5 | 83 | 412766 | 581 | 5 | 116 | 418031 | 1382 | 5 | 276 |
| DVA.4-25-30-M6-18-* | 25 | 30 | M6 | 18 | 25 | 415341 | 290 | 7.5 | 39 | 412771 | 591 | 7.5 | 79 | 418041 | 1186 | 7.5 | 158 |
| DVA.4-30-15-M8-20-* | 30 | 15 | M8 | 20 | 30 | 415351 | 746 | 3.75 | 199 | 412776 | 1023 | 3.75 | 273 | 418051 | 2610 | 3.75 | 696 |
| DVA.4-30-17-M8-20-* | 30 | 17 | M8 | 20 | 31 | 415361 | 772 | 4.25 | 182 | 412781 | 1275 | 4.25 | 300 | 418061 | 2447 | 4.25 | 576 |
| DVA.4-30-20-M8-20-* | 30 | 20 | M8 | 20 | 35 | 415371 | 567 | 5 | 113 | 412801 | 1014 | 5 | 203 | 418071 | 1878 | 5 | 376 |
| DVA.4-30-25-M8-20-* | 30 | 25 | M8 | 20 | 38 | 415381 | 576 | 6.25 | 92 | 412811 | 1026 | 6.25 | 164 | 418081 | 1591 | 6.25 | 255 |
| DVA.4-30-30-M8-20-* | 30 | 30 | M8 | 20 | 43 | 415391 | 601 | 7.5 | 80 | 412821 | 776 | 7.5 | 103 | 418091 | 1616 | 7.5 | 215 |
| DVA.4-40-20-M8-23-* | 40 | 20 | M8 | 23 | 55 | 415401 | 1200 | 5 | 240 | 412831 | 2500 | 5 | 500 | 418101 | 4750 | 5 | 950 |
| DVA.4-40-25-M8-23-* | 40 | 25 | M8 | 23 | 60 | 415411 | 1170 | 6.25 | 187 | 412836 | 1660 | 6.25 | 266 | 418111 | 4130 | 6.25 | 661 |
| DVA.4-40-30-M8-23-* | 40 | 30 | M8 | 23 | 73 | 415421 | 1140 | 7.5 | 152 | 412841 | 1480 | 7.5 | 197 | 418121 | 2830 | 7.5 | 377 |
| DVA.4-40-40-M8-23-* | 40 | 40 | M8 | 23 | 83 | 415431 | 995 | 10 | 100 | 412861 | 1403 | 10 | 140 | 418131 | 3150 | 10 | 315 |
| DVA.4-50-20-M10-28-* | 50 | 20 | M10 | 28 | 90 | 415441 | 2680 | 5 | 536 | 412881 | 3460 | 5 | 692 | 418141 | 7450 | 5 | 1490 |
| DVA.4-50-30-M10-28-* | 50 | 30 | M10 | 28 | 118 | 415451 | 1820 | 7.5 | 243 | 412901 | 2520 | 7.5 | 366 | 418151 | 5420 | 7.5 | 723 |
| DVA.4-50-40-M10-28-* | 50 | 40 | M10 | 28 | 140 | 415461 | 1430 | 10 | 143 | 412921 | 2760 | 10 | 276 | 418161 | 4950 | 10 | 495 |
| DVA.4-60-20-M10-28-* | 60 | 20 | M10 | 28 | 219 | 415471 | 1885 | 5 | 377 | 412931 | 3850 | 5 | 770 | 418171 | 11990 | 5 | 2398 |
| DVA.4-60-40-M10-28-* | 60 | 40 | M10 | 28 | 195 | 415481 | 2600 | 10 | 260 | 412936 | 3540 | 10 | 354 | 418181 | 4640 | 10 | 464 |
| DVA.4-70-40-M10-28-* | 70 | 40 | M10 | 28 | 265 | 415491 | 3850 | 10 | 385 | 412941 | 6280 | 10 | 628 | 418191 | 15280 | 10 | 1528 |
| DVA.4-70-55-M10-28-* | 70 | 55 | M10 | 28 | 357 | 415501 | 3320 | 13.75 | 241 | 412951 | 5770 | 13.75 | 420 | 418201 | 9510 | 13.75 | 692 |
| DVA.4-75-25-M12-37-* | 75 | 25 | M12 | 37 | 223 | 415511 | 6560 | 6.25 | 1050 | 412961 | 9660 | 6.25 | 1546 | 418211 | 20780 | 6.25 | 3325 |
| DVA.4-75-40-M12-37-* | 75 | 40 | M12 | 37 | 310 | 415521 | 5010 | 10 | 501 | 412971 | 6680 | 10 | 668 | 418221 | 9170 | 10 | 917 |
| DVA.4-75-50-M12-37-* | 75 | 50 | M12 | 37 | 340 | 415531 | 3970 | 12.5 | 318 | 412981 | 5570 | 12.5 | 446 | 418231 | 13550 | 12.5 | 1084 |
| DVA.4-100-40-M16-41-* | 100 | 40 | M16 | 41 | 570 | 415541 | 9430 | 10 | 943 | 413001 | 12110 | 10 | 1211 | 418241 | 24190 | 10 | 2419 |
| DVA.4-100-50-M16-41-* | 100 | 50 | M16 | 41 | 655 | 415551 | 8320 | 12.5 | 666 | 413011 | 14040 | 12.5 | 1123 | 418251 | 22900 | 12.5 | 1832 |
| DVA.4-100-60-M16-41-* | 100 | 60 | M16 | 41 | 830 | 415561 | 7440 | 15 | 496 | 413021 | 12950 | 15 | 863 | 418261 | 21450 | 15 | 1430 |

DVA.4-SST

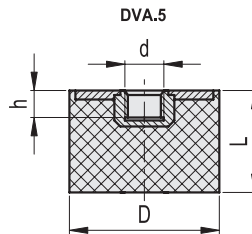


DVA.4 - 8 - 8 - SST - M3 - 6 - 55
 D L Stainless steel d l Shore A

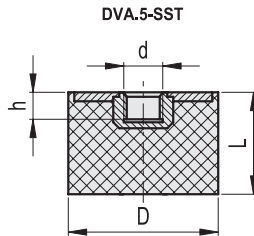
| Standard Elements | Dimensions | | | | | Hardness 40 Shore A | | | Hardness 55 Shore A | | | Hardness 70 Shore A | | | | | |
|----------------------------|-------------|----|-----|----|-----|---------------------|------|--------------|---------------------|------------------|-------|---------------------|---------------------|------------------|-------|--------------|---------------------|
| | Description | D | L | d | l | g | Code | Max load [N] | Max deflection [mm] | Stiffness [N/mm] | Code | Max load [N] | Max deflection [mm] | Stiffness [N/mm] | Code | Max load [N] | Max deflection [mm] |
| DVA.4-8-8-SST-M3-6-55 | 8 | 8 | M3 | 6 | 3 | ON REQUEST | 33.5 | 2 | 17 | 410301 | 55 | 2 | 28 | ON REQUEST | 141 | 2 | 71 |
| DVA.4-10-10-SST-M4-10-55 | 10 | 10 | M4 | 10 | 2 | | 53.5 | 2.5 | 21 | 410305 | 88 | 2.5 | 35 | | 217 | 2.5 | 87 |
| DVA.4-10-15-SST-M4-10-55 | 10 | 15 | M4 | 10 | 3 | | 69 | 3.75 | 18 | 410307 | 92 | 3.75 | 25 | | 175 | 3.75 | 47 |
| DVA.4-15-10-SST-M4-10-55 | 15 | 10 | M4 | 10 | 4 | | 110 | 2 | 55 | 410311 | 168 | 2 | 84 | | 410 | 2 | 205 |
| DVA.4-15-15-SST-M4-10-55 | 15 | 15 | M4 | 10 | 5 | | 141 | 3.75 | 38 | 410313 | 259 | 3.75 | 69 | | 384 | 3.75 | 102 |
| DVA.4-15-20-SST-M4-10-55 | 15 | 20 | M4 | 10 | 7 | | 134 | 5 | 27 | 410315 | 223 | 5 | 45 | | 590 | 5 | 118 |
| DVA.4-15-30-SST-M4-10-55 | 15 | 30 | M4 | 10 | 9 | | 125 | 7.5 | 17 | 410317 | 258 | 7.5 | 34 | | 392 | 7.5 | 52 |
| DVA.4-20-10-SST-M6-18-55 | 20 | 10 | M6 | 18 | 15 | | 390 | 2.5 | 156 | 410321 | 645 | 2.5 | 258 | | 940 | 2.5 | 376 |
| DVA.4-20-15-SST-M6-18-55 | 20 | 15 | M6 | 18 | 10 | | 289 | 3.75 | 77 | 410323 | 468 | 3.75 | 125 | | 704 | 3.75 | 188 |
| DVA.4-20-20-SST-M6-18-55 | 20 | 20 | M6 | 18 | 13 | | 258 | 5 | 52 | 410325 | 367 | 5 | 73 | | 809 | 5 | 162 |
| DVA.4-20-30-SST-M6-18-55 | 20 | 30 | M6 | 18 | 23 | | 237 | 7.5 | 32 | 410327 | 420 | 7.5 | 56 | | 848 | 7.5 | 113 |
| DVA.4-25-15-SST-M6-18-55 | 25 | 15 | M6 | 18 | 18 | | 485 | 3.75 | 129 | 410331 | 797 | 3.75 | 213 | | 1627 | 3.75 | 434 |
| DVA.4-25-17-SST-M6-18-55 | 25 | 17 | M6 | 18 | 20 | | 422 | 4.25 | 99 | 410333 | 883 | 4.25 | 208 | | 1726 | 4.25 | 406 |
| DVA.4-25-20-SST-M6-18-55 | 25 | 20 | M6 | 18 | 20 | | 416 | 5 | 83 | 410335 | 581 | 5 | 116 | | 1382 | 5 | 276 |
| DVA.4-25-30-SST-M6-18-55 | 25 | 30 | M6 | 18 | 25 | | 290 | 7.5 | 39 | 410337 | 591 | 7.5 | 79 | | 1186 | 7.5 | 158 |
| DVA.4-30-15-SST-M8-20-55 | 30 | 15 | M8 | 20 | 30 | | 746 | 3.75 | 199 | 410341 | 1023 | 3.75 | 273 | | 2610 | 3.75 | 696 |
| DVA.4-30-17-SST-M8-20-55 | 30 | 17 | M8 | 20 | 31 | | 772 | 4.25 | 182 | 410343 | 1275 | 4.25 | 300 | | 2447 | 4.25 | 576 |
| DVA.4-30-20-SST-M8-20-55 | 30 | 20 | M8 | 20 | 35 | | 567 | 5 | 113 | 410345 | 1014 | 5 | 203 | | 1878 | 5 | 376 |
| DVA.4-30-25-SST-M8-20-55 | 30 | 25 | M8 | 20 | 38 | | 576 | 6.25 | 92 | 410347 | 1026 | 6.25 | 164 | | 1591 | 6.25 | 255 |
| DVA.4-30-30-SST-M8-20-55 | 30 | 30 | M8 | 20 | 43 | | 601 | 7.5 | 80 | 410349 | 776 | 7.5 | 103 | | 1616 | 7.5 | 215 |
| DVA.4-40-20-SST-M8-23-55 | 40 | 20 | M8 | 23 | 55 | | 1200 | 5 | 240 | 410351 | 2500 | 5 | 500 | | 4750 | 5 | 950 |
| DVA.4-40-25-SST-M8-23-55 | 40 | 25 | M8 | 23 | 60 | | 1170 | 6.25 | 187 | 410353 | 1160 | 6.25 | 186 | | 4130 | 6.25 | 661 |
| DVA.4-40-30-SST-M8-23-55 | 40 | 30 | M8 | 23 | 73 | | 1140 | 7.5 | 152 | 410355 | 1480 | 7.5 | 197 | | 2830 | 7.5 | 377 |
| DVA.4-40-40-SST-M8-23-55 | 40 | 40 | M8 | 23 | 83 | | 995 | 10 | 100 | 410357 | 1400 | 10 | 140 | | 3150 | 10 | 315 |
| DVA.4-50-20-SST-M10-28-55 | 50 | 20 | M10 | 28 | 90 | | 2680 | 5 | 536 | 410361 | 3460 | 5 | 692 | | 7450 | 5 | 1490 |
| DVA.4-50-30-SST-M10-28-55 | 50 | 30 | M10 | 28 | 118 | | 1820 | 7.5 | 243 | 410363 | 2520 | 7.5 | 336 | | 5420 | 7.5 | 723 |
| DVA.4-50-40-SST-M10-28-55 | 50 | 40 | M10 | 28 | 140 | | 1430 | 10 | 143 | 410365 | 2760 | 10 | 276 | | 4950 | 10 | 495 |
| DVA.4-60-20-SST-M10-28-55 | 60 | 20 | M10 | 28 | 219 | | 1885 | 5 | 377 | 410371 | 3850 | 5 | 770 | | 11990 | 5 | 2398 |
| DVA.4-60-40-SST-M10-28-55 | 60 | 40 | M10 | 28 | 195 | | 2600 | 10 | 260 | 410373 | 3540 | 10 | 354 | | 4640 | 10 | 464 |
| DVA.4-70-40-SST-M10-28-55 | 70 | 40 | M10 | 28 | 265 | | 3850 | 10 | 385 | 410377 | 6280 | 10 | 628 | | 15280 | 10 | 1528 |
| DVA.4-70-55-SST-M10-28-55 | 70 | 55 | M10 | 28 | 357 | | 3320 | 13.75 | 241 | 410379 | 5770 | 13.75 | 420 | | 9510 | 13.75 | 692 |
| DVA.4-75-25-SST-M12-37-55 | 75 | 25 | M12 | 37 | 223 | | 6560 | 6.25 | 1050 | 410381 | 9660 | 6.25 | 1546 | | 20780 | 6.25 | 3325 |
| DVA.4-75-40-SST-M12-37-55 | 75 | 40 | M12 | 37 | 310 | | 5010 | 10 | 501 | 410383 | 6680 | 10 | 669 | | 9170 | 10 | 917 |
| DVA.4-75-50-SST-M12-37-55 | 75 | 50 | M12 | 37 | 340 | | 3970 | 12.5 | 318 | 410385 | 5570 | 12.5 | 446 | | 13550 | 12.5 | 1084 |
| DVA.4-100-40-SST-M16-41-55 | 100 | 40 | M16 | 41 | 570 | | 9430 | 10 | 943 | 410391 | 12110 | 10 | 1211 | | 24190 | 10 | 2419 |
| DVA.4-100-50-SST-M16-41-55 | 100 | 50 | M16 | 41 | 655 | | 8320 | 12.5 | 666 | 410393 | 14040 | 12.5 | 1123 | | 22900 | 12.5 | 1832 |
| DVA.4-100-60-SST-M16-41-55 | 100 | 60 | M16 | 41 | 830 | | 7440 | 15 | 496 | 410395 | 12950 | 15 | 863 | | 21450 | 15 | 1430 |

* Complete the description with the desired hardness: 40, 55 or 70 tolerance ± 5 Shore A.

DVA.5 - 10 - 10 - M4 - 55
 D L d Shore A



| Standard Elements | Dimensions | | | | | △ | Hardness 40 Shore A | | | Hardness 55 Shore A | | | Hardness 70 Shore A | | | | |
|-------------------|-------------|----|-----|----|-----|--------|---------------------|-------|--------------|---------------------|------------------|-------|---------------------|---------------------|------------------|-------|--------------|
| | Description | D | L | d | h | | g | Code | Max load [N] | Max deflection [mm] | Stiffness [N/mm] | Code | Max load [N] | Max deflection [mm] | Stiffness [N/mm] | Code | Max load [N] |
| DVA.5-10-10-M4* | 10 | 10 | M4 | 4 | 2 | 415701 | 53.5 | 2.5 | 21 | 413031 | 88 | 2.5 | 35 | 418401 | 217 | 2.5 | 87 |
| DVA.5-15-15-M4* | 15 | 15 | M4 | 4 | 5 | 415711 | 141 | 3.75 | 38 | 413041 | 259 | 3.75 | 69 | 418411 | 384 | 3.75 | 102 |
| DVA.5-15-20-M4* | 15 | 20 | M4 | 4 | 6 | 415721 | 134 | 5 | 27 | 413051 | 223 | 5 | 45 | 418421 | 590 | 5 | 118 |
| DVA.5-20-15-M6* | 20 | 15 | M6 | 6 | 10 | 415731 | 289 | 3.75 | 77 | 413061 | 468 | 3.75 | 125 | 418431 | 704 | 3.75 | 188 |
| DVA.5-20-20-M6* | 20 | 20 | M6 | 6 | 11 | 415741 | 258 | 5 | 52 | 413071 | 367 | 5 | 73 | 418441 | 809 | 5 | 162 |
| DVA.5-20-25-M6* | 20 | 25 | M6 | 6 | 13 | 415751 | 250 | 6.25 | 40 | 413081 | 437 | 6.25 | 70 | 418451 | 750 | 6.25 | 120 |
| DVA.5-25-15-M6* | 25 | 15 | M6 | 6 | 16 | 415761 | 485 | 3.75 | 129 | 413091 | 797 | 3.75 | 213 | 418461 | 1627 | 3.75 | 434 |
| DVA.5-25-20-M6* | 25 | 20 | M6 | 6 | 20 | 415771 | 416 | 5 | 83 | 413101 | 581 | 5 | 116 | 418471 | 1382 | 5 | 276 |
| DVA.5-25-30-M6* | 25 | 30 | M6 | 6 | 21 | 415781 | 290 | 7.5 | 39 | 413106 | 591 | 7.5 | 79 | 418481 | 1186 | 7.5 | 158 |
| DVA.5-30-15-M8* | 30 | 15 | M8 | 8 | 23 | 415791 | 746 | 3 | 249 | 413111 | 1023 | 3 | 341 | 418491 | 2610 | 3 | 870 |
| DVA.5-30-17-M8* | 30 | 17 | M8 | 8 | 25 | 415801 | 772 | 3 | 257 | 413121 | 1275 | 3 | 425 | 418501 | 2447 | 3 | 816 |
| DVA.5-30-20-M8* | 30 | 20 | M8 | 8 | 27 | 415811 | 567 | 5 | 113 | 413141 | 1014 | 5 | 203 | 418511 | 1878 | 5 | 376 |
| DVA.5-30-30-M8* | 30 | 30 | M8 | 8 | 34 | 415821 | 601 | 7.5 | 80 | 413146 | 776 | 7.5 | 103 | 418521 | 1616 | 7.5 | 215 |
| DVA.5-40-20-M8* | 40 | 20 | M8 | 8 | 45 | 415831 | 1200 | 5 | 240 | 413151 | 2500 | 5 | 500 | 418531 | 4750 | 5 | 950 |
| DVA.5-40-30-M8* | 40 | 30 | M8 | 8 | 65 | 415841 | 1140 | 7.5 | 152 | 413161 | 1480 | 7.5 | 197 | 418541 | 2830 | 7.5 | 377 |
| DVA.5-40-40-M8* | 40 | 40 | M8 | 8 | 75 | 415851 | 995 | 10 | 100 | 413171 | 1403 | 10 | 140 | 418551 | 3150 | 10 | 315 |
| DVA.5-50-20-M10* | 50 | 20 | M10 | 10 | 77 | 415861 | 2680 | 5 | 536 | 413181 | 3460 | 5 | 692 | 418561 | 7450 | 5 | 1490 |
| DVA.5-50-30-M10* | 50 | 30 | M10 | 10 | 100 | 415871 | 1820 | 7.5 | 243 | 413183 | 2520 | 7.5 | 336 | 418571 | 5420 | 7.5 | 723 |
| DVA.5-50-40-M10* | 50 | 40 | M10 | 10 | 115 | 415881 | 1430 | 10 | 143 | 413186 | 2760 | 10 | 276 | 418581 | 4950 | 10 | 495 |
| DVA.5-60-30-M10* | 60 | 30 | M10 | 10 | 141 | 415891 | 2800 | 7.5 | 373 | 413191 | 4350 | 7.5 | 580 | 418591 | 7500 | 7.5 | 1000 |
| DVA.5-60-50-M10* | 60 | 50 | M10 | 10 | 205 | 415901 | 2900 | 12.5 | 232 | 413193 | 4370 | 12.5 | 350 | 418601 | 9500 | 12.5 | 760 |
| DVA.5-70-40-M10* | 70 | 40 | M10 | 10 | 255 | 415911 | 3850 | 10 | 385 | 413196 | 6280 | 10 | 628 | 418611 | 15280 | 10 | 1528 |
| DVA.5-70-45-M10* | 70 | 45 | M10 | 10 | 275 | 415921 | 3700 | 11.25 | 329 | 413201 | 6750 | 11.25 | 600 | 418621 | 8800 | 11.25 | 782 |
| DVA.5-70-55-M10* | 70 | 55 | M10 | 10 | 341 | 415931 | 3320 | 13.75 | 241 | 413211 | 5770 | 13.75 | 420 | 418631 | 9510 | 13.75 | 692 |
| DVA.5-75-25-M12* | 75 | 25 | M12 | 12 | 205 | 415941 | 6560 | 5 | 1312 | 413221 | 9660 | 5 | 1932 | 418641 | 20780 | 5 | 4156 |
| DVA.5-75-30-M12* | 75 | 30 | M12 | 12 | 210 | 415951 | 5400 | 7.5 | 720 | 413226 | 8700 | 7.5 | 1160 | 418651 | 15400 | 7.5 | 2053 |
| DVA.5-75-40-M12* | 75 | 40 | M12 | 12 | 290 | 415961 | 5010 | 10 | 501 | 413231 | 6680 | 10 | 668 | 418661 | 9170 | 10 | 917 |
| DVA.5-75-50-M12* | 75 | 50 | M12 | 12 | 345 | 415971 | 3970 | 12.5 | 318 | 413241 | 5570 | 12.5 | 446 | 418671 | 13550 | 12.5 | 1084 |
| DVA.5-100-40-M16* | 100 | 40 | M16 | 16 | 485 | 415981 | 9430 | 10 | 943 | 413261 | 12110 | 10 | 1211 | 418681 | 24190 | 10 | 2419 |
| DVA.5-100-50-M16* | 100 | 50 | M16 | 16 | 580 | 415991 | 8320 | 12.5 | 666 | 413281 | 14040 | 12.5 | 1123 | 418691 | 22900 | 12.5 | 1832 |
| DVA.5-100-60-M16* | 100 | 60 | M16 | 16 | 720 | 416001 | 7440 | 15 | 496 | 413291 | 12950 | 15 | 863 | 418701 | 21450 | 15 | 1430 |



DVA.5 - 10 - 10 - SST - M4 - 55
 D L Stainless steel d Shore A

| Standard Elements | Dimensions | | | | | Hardness 40 Shore A | | | Hardness 55 Shore A | | | Hardness 70 Shore A | | | | | |
|-------------------------|-------------|----|-----|----|-----|---------------------|------|--------------|---------------------|------------------|-------|---------------------|---------------------|------------------|-------|--------------|---------------------|
| | Description | D | L | d | h | g | Code | Max load [N] | Max deflection [mm] | Stiffness [N/mm] | Code | Max load [N] | Max deflection [mm] | Stiffness [N/mm] | Code | Max load [N] | Max deflection [mm] |
| DVA.5-10-10-SST-M4-55 | 10 | 10 | M4 | 4 | 2 | ON REQUEST | 53.5 | 2.5 | 21 | 410401 | 88 | 2.5 | 35 | ON REQUEST | 217 | 2.5 | 87 |
| DVA.5-15-15-SST-M4-55 | 15 | 15 | M4 | 4 | 5 | | 141 | 3.75 | 38 | 410405 | 259 | 3.75 | 69 | | 384 | 3.75 | 102 |
| DVA.5-15-20-SST-M4-55 | 15 | 20 | M4 | 4 | 6 | | 134 | 5 | 27 | 410407 | 223 | 5 | 45 | | 590 | 5 | 118 |
| DVA.5-20-15-SST-M6-55 | 20 | 15 | M6 | 6 | 10 | | 289 | 3.75 | 77 | 410413 | 468 | 3.75 | 125 | | 704 | 3.75 | 188 |
| DVA.5-20-20-SST-M6-55 | 20 | 20 | M6 | 6 | 11 | | 258 | 5 | 52 | 410415 | 367 | 5 | 73 | | 809 | 5 | 162 |
| DVA.5-20-25-SST-M6-55 | 20 | 25 | M6 | 6 | 13 | | 250 | 6.25 | 40 | 410417 | 437 | 6.25 | 70 | | 750 | 6.25 | 120 |
| DVA.5-25-15-SST-M6-55 | 25 | 15 | M6 | 6 | 16 | | 485 | 3.75 | 129 | 410421 | 797 | 3.75 | 213 | | 1627 | 3.75 | 434 |
| DVA.5-25-20-SST-M6-55 | 25 | 20 | M6 | 6 | 20 | | 416 | 5 | 83 | 410425 | 581 | 5 | 116 | | 1382 | 5 | 276 |
| DVA.5-25-30-SST-M6-55 | 25 | 30 | M6 | 6 | 21 | | 290 | 7.5 | 39 | 410427 | 591 | 7.5 | 79 | | 1186 | 7.5 | 158 |
| DVA.5-30-15-SST-M8-55 | 30 | 15 | M8 | 8 | 23 | | 746 | 3 | 249 | 410431 | 1023 | 3.75 | 273 | | 2610 | 3 | 870 |
| DVA.5-30-17-SST-M8-55 | 30 | 17 | M8 | 8 | 25 | | 772 | 3 | 257 | 410433 | 1275 | 4.25 | 300 | | 2447 | 3 | 816 |
| DVA.5-30-20-SST-M8-55 | 30 | 20 | M8 | 8 | 27 | | 567 | 5 | 113 | 410435 | 1014 | 5 | 203 | | 1878 | 5 | 376 |
| DVA.5-30-30-SST-M8-55 | 30 | 30 | M8 | 8 | 34 | | 601 | 7.5 | 80 | 410437 | 776 | 7.5 | 103 | | 1616 | 7.5 | 215 |
| DVA.5-40-20-SST-M8-55 | 40 | 20 | M8 | 8 | 45 | | 1200 | 5 | 240 | 410441 | 2500 | 5 | 500 | | 4750 | 5 | 950 |
| DVA.5-40-30-SST-M8-55 | 40 | 30 | M8 | 8 | 65 | | 1140 | 7.5 | 152 | 410443 | 1480 | 7.5 | 197 | | 2830 | 7.5 | 377 |
| DVA.5-40-40-SST-M8-55 | 40 | 40 | M8 | 8 | 75 | | 995 | 10 | 100 | 410445 | 1400 | 10 | 140 | | 3150 | 10 | 315 |
| DVA.5-50-20-SST-M10-55 | 50 | 20 | M10 | 10 | 77 | | 2680 | 5 | 536 | 410451 | 3460 | 5 | 692 | | 7450 | 5 | 1490 |
| DVA.5-50-30-SST-M10-55 | 50 | 30 | M10 | 10 | 100 | | 1820 | 7.5 | 243 | 410453 | 2520 | 7.5 | 336 | | 5420 | 7.5 | 723 |
| DVA.5-50-40-SST-M10-55 | 50 | 40 | M10 | 10 | 115 | | 1430 | 10 | 143 | 410455 | 2760 | 10 | 276 | | 4950 | 10 | 495 |
| DVA.5-60-30-SST-M10-55 | 60 | 30 | M10 | 10 | 141 | | 2800 | 7.5 | 373 | 410461 | 4350 | 7.5 | 580 | | 7500 | 7.5 | 1000 |
| DVA.5-60-50-SST-M10-55 | 60 | 50 | M10 | 10 | 205 | | 2900 | 12.5 | 232 | 410463 | 4370 | 12.5 | 350 | | 9500 | 12.5 | 760 |
| DVA.5-70-40-SST-M10-55 | 70 | 40 | M10 | 10 | 255 | | 3850 | 10 | 385 | 410471 | 7000 | 10 | 700 | | 15280 | 10 | 1528 |
| DVA.5-70-45-SST-M10-55 | 70 | 45 | M10 | 10 | 275 | | 3700 | 11.25 | 329 | 410473 | 6750 | 11.25 | 600 | | 8800 | 11.25 | 782 |
| DVA.5-70-55-SST-M10-55 | 70 | 55 | M10 | 10 | 341 | | 3320 | 13.75 | 241 | 410475 | 5770 | 13.75 | 420 | | 9510 | 13.75 | 692 |
| DVA.5-75-25-SST-M12-55 | 75 | 25 | M12 | 12 | 205 | | 6560 | 5 | 1312 | 410481 | 10000 | 5 | 2000 | | 20780 | 5 | 4156 |
| DVA.5-75-30-SST-M12-55 | 75 | 30 | M12 | 12 | 210 | | 5400 | 7.5 | 720 | 410483 | 8700 | 7.5 | 1160 | | 15400 | 7.5 | 2053 |
| DVA.5-75-40-SST-M12-55 | 75 | 40 | M12 | 12 | 290 | | 5010 | 10 | 501 | 410485 | 6680 | 10 | 668 | | 9170 | 10 | 917 |
| DVA.5-75-50-SST-M12-55 | 75 | 50 | M12 | 12 | 345 | | 3970 | 12.5 | 318 | 410487 | 5570 | 12.5 | 446 | | 13550 | 12.5 | 1084 |
| DVA.5-100-40-SST-M16-55 | 100 | 40 | M16 | 16 | 485 | | 9430 | 10 | 943 | 410491 | 12110 | 10 | 1211 | | 24190 | 10 | 2419 |
| DVA.5-100-50-SST-M16-55 | 100 | 50 | M16 | 16 | 580 | | 8320 | 12.5 | 666 | 410493 | 14040 | 12.5 | 1123 | | 22900 | 12.5 | 1832 |
| DVA.5-100-60-SST-M16-55 | 100 | 60 | M16 | 16 | 720 | | 7440 | 15 | 496 | 410495 | 7440 | 15 | 496 | | 21450 | 15 | 1430 |

Vibration-damping elements



• Base

- **DVA**: glossy zinc-plated steel.
- **DVA-SST**: AISI 304 stainless steel.

• Vibration-damping body

Natural rubber NR, hardness 40, 55, 70 tolerance ± 5 Shore A, black colour.

• Standard executions

- **DVA.6**: zinc-plated steel threaded stud.
- **DVA.6-SST**: AISI 304 stainless steel threaded stud.
- **DVA.7**: zinc-plated steel boss, threaded blind hole.
- **DVA.7-SST**: AISI 304 stainless steel boss, threaded blind hole.

Special executions on request

Natural rubber NR, hardness 40, 70 tolerance ± 5 Shore A for executions with AISI 304 stainless steel base.

Features and applications

ELESA vibration-damping elements have been designed to damp vibrations, shocks and noises produced by moving bodies or nonbalanced vibrating masses of equipment and machines which can cause:

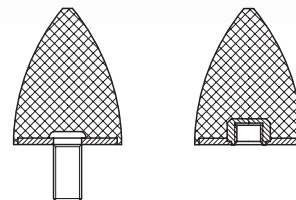
- malfunctioning and reduction of the machine lifespan and/or of the adjacent ones;
- damage to health;
- noise.

Technical data and guidelines for the choice (see page 2).

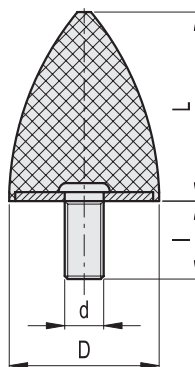


DVA.6

DVA.7



DVA.6
DVA.6-SST



* Complete the description with the desired hardness: 40, 55 or 70 tolerance ± 5 Shore A.

DVA.6 - 20 - 24 - M6 - 18 - 55

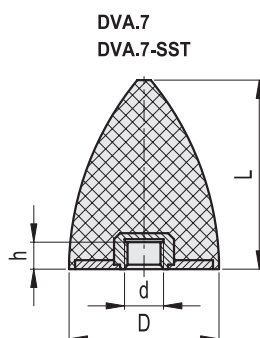
D L d I Shore A

| Standard Elements | Dimensions | | | | | Δ | Hardness 40 Shore A | | | Hardness 55 Shore A | | | Hardness 70 Shore A | | |
|---------------------|------------|----|-----|----|-----|----------|---------------------|--------------|---------------------|---------------------|--------------|---------------------|---------------------|--------------|---------------------|
| | D | L | d | I | g | | Code | Max load [N] | Max deflection [mm] | Code | Max load [N] | Max deflection [mm] | Code | Max load [N] | Max deflection [mm] |
| DVA.6-20-24-M6-18* | 20 | 24 | M6 | 18 | 10 | 416101 | 82 | 6 | 413401 | 130 | 6 | 418801 | 330 | 6 | |
| DVA.6-30-30-M8-18* | 30 | 30 | M8 | 18 | 24 | 416111 | 190 | 7.5 | 413411 | 260 | 7.5 | 418811 | 630 | 7.5 | |
| DVA.6-30-36-M8-20* | 30 | 36 | M8 | 20 | 39 | 416121 | 180 | 9 | 413421 | 320 | 9 | 418821 | 650 | 9 | |
| DVA.6-35-40-M8-23* | 35 | 40 | M8 | 23 | 45 | 416131 | 260 | 10 | 413431 | 300 | 10 | 418831 | 630 | 10 | |
| DVA.6-50-61-M8-28* | 50 | 61 | M8 | 28 | 114 | 416141 | 490 | 15.25 | 413441 | 600 | 15.25 | 418841 | 1520 | 15.25 | |
| DVA.6-50-68-M10-28* | 50 | 68 | M10 | 28 | 131 | 416151 | 490 | 17 | 413451 | 890 | 17 | 418851 | 1950 | 17 | |

DVA.6 - 20 - 24 - SST - M6 - 18 - 55

D L Stainless steel d I Shore A

| Standard Elements | Dimensions | | | | | Δ | Hardness 40 Shore A | | | Hardness 55 Shore A | | | Hardness 70 Shore A | | |
|---------------------------|------------|----|-----|----|-----|------------|---------------------|--------------|---------------------|---------------------|--------------|---------------------|---------------------|--------------|---------------------|
| | D | L | d | I | g | | Code | Max load [N] | Max deflection [mm] | Code | Max load [N] | Max deflection [mm] | Code | Max load [N] | Max deflection [mm] |
| DVA.6-20-24-SST-M6-18-55 | 20 | 24 | M6 | 18 | 10 | ON REQUEST | 82 | 6 | 410501 | 130 | 6 | ON REQUEST | 330 | 6 | |
| DVA.6-30-30-SST-M8-18-55 | 30 | 30 | M8 | 18 | 24 | | 190 | 7.5 | 410505 | 260 | 7.5 | | 630 | 7.5 | |
| DVA.6-30-36-SST-M8-20-55 | 30 | 36 | M8 | 20 | 39 | | 180 | 9 | 410507 | 320 | 9 | | 650 | 9 | |
| DVA.6-35-40-SST-M8-23-55 | 35 | 40 | M8 | 23 | 45 | | 260 | 10 | 410511 | 300 | 10 | | 630 | 10 | |
| DVA.6-50-61-SST-M8-28-55 | 50 | 61 | M8 | 28 | 114 | | 490 | 15.25 | 410521 | 600 | 15.25 | | 1520 | 15.25 | |
| DVA.6-50-68-SST-M10-28-55 | 50 | 68 | M10 | 28 | 131 | | 490 | 17 | 410523 | 890 | 17 | | 1950 | 17 | |



* Complete the description with the desired hardness:
40, 55 or 70 tolerance ± 5 Shore A.

DVA.7 - 20 - 24 - M6 - 55

D L d Shore A

| Standard Elements | Dimensions | | | | | Hardness 40 Shore A | | | Hardness 55 Shore A | | | Hardness 70 Shore A | | |
|-------------------|------------|----|-----|----|-----|---------------------|--------------|---------------------|---------------------|--------------|---------------------|---------------------|--------------|---------------------|
| Description | D | L | d | h | g | Code | Max load [N] | Max deflection [mm] | Code | Max load [N] | Deflection max [mm] | Code | Max load [N] | Max deflection [mm] |
| DVA.7-20-24-M6* | 20 | 24 | M6 | 6 | 8 | 416301 | 82 | 6 | 413601 | 130 | 6 | 419001 | 330 | 6 |
| DVA.7-30-30-M8* | 30 | 30 | M8 | 8 | 28 | 416311 | 190 | 7.5 | 413611 | 260 | 7.5 | 419011 | 630 | 7.5 |
| DVA.7-30-36-M8* | 30 | 36 | M8 | 8 | 30 | 416321 | 180 | 9 | 413621 | 320 | 9 | 419021 | 650 | 9 |
| DVA.7-35-40-M8* | 35 | 40 | M8 | 8 | 43 | 416331 | 260 | 10 | 413631 | 300 | 10 | 419031 | 630 | 10 |
| DVA.7-50-61-M8* | 50 | 61 | M8 | 8 | 114 | 416341 | 490 | 15.25 | 413641 | 600 | 15.25 | 419041 | 1520 | 15.25 |
| DVA.7-50-68-M10* | 50 | 68 | M10 | 10 | 120 | 416351 | 490 | 17 | 413651 | 890 | 17 | 419051 | 1950 | 17 |

DVA.7 - 20 - 24 - SST - M6 - 55

D L Stainless steel d Shore A

| Standard Elements | Dimensions | | | | | Hardness 40 Shore A | | | Hardness 55 Shore A | | | Hardness 70 Shore A | | |
|------------------------|------------|----|-----|----|-----|---------------------|--------------|---------------------|---------------------|--------------|---------------------|---------------------|--------------|---------------------|
| Description | D | L | d | h | g | Code | Max load [N] | Max deflection [mm] | Code | Max load [N] | Max deflection [mm] | Code | Max load [N] | Max deflection [mm] |
| DVA.7-20-24-SST-M6-55 | 20 | 24 | M6 | 6 | 8 | ON REQUEST | 82 | 6 | 410601 | 130 | 6 | ON REQUEST | 330 | 6 |
| DVA.7-30-30-SST-M8-55 | 30 | 30 | M8 | 8 | 28 | | 190 | 7.5 | 410611 | 260 | 7.5 | | 630 | 7.5 |
| DVA.7-30-36-SST-M8-55 | 30 | 36 | M8 | 8 | 30 | | 180 | 9 | 410613 | 320 | 9 | | 650 | 9 |
| DVA.7-35-40-SST-M8-55 | 35 | 40 | M8 | 8 | 43 | | 260 | 10 | 410621 | 300 | 10 | | 630 | 10 |
| DVA.7-50-61-SST-M8-55 | 50 | 61 | M8 | 8 | 114 | | 490 | 15.25 | 410631 | 600 | 15.25 | | 1520 | 15.25 |
| DVA.7-50-68-SST-M10-55 | 50 | 68 | M10 | 10 | 120 | | 490 | 17 | 410633 | 890 | 17 | | 1950 | 17 |

Vibration-damping levelling elements



- **Base**
Zinc-plated steel.
- **Vibration-damping disk**
Natural rubber NR, hardness 80 Shore A, black colour, matte finish.
- **Levelling plate**
Zinc-plated steel.
- **Packing ring**
OR in NBR synthetic rubber.
- **Threaded stem**
Zinc-plated steel, supplied not assembled.
- **Nut and washer**
Zinc-plated steel.

Assembly instructions

- Put the base of the vibration-damping element under the machine and insert the stem through the hole (not tapped) in the frame of the machine (fig. 1)
- Turn the square end of the stem to take the levelling plate in contact with the machine thus obtaining the levelling required. Then lock with nut and washer (fig. 2)

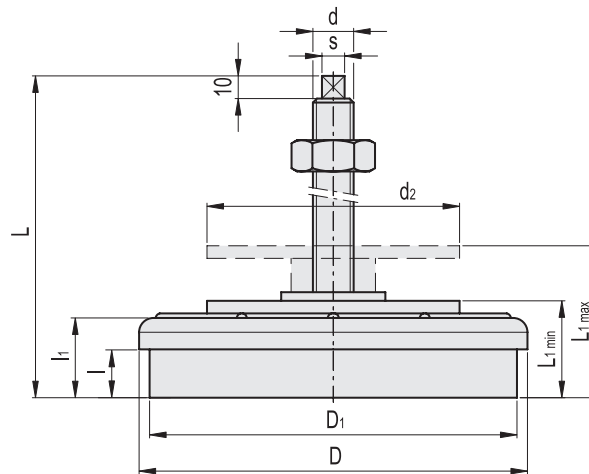
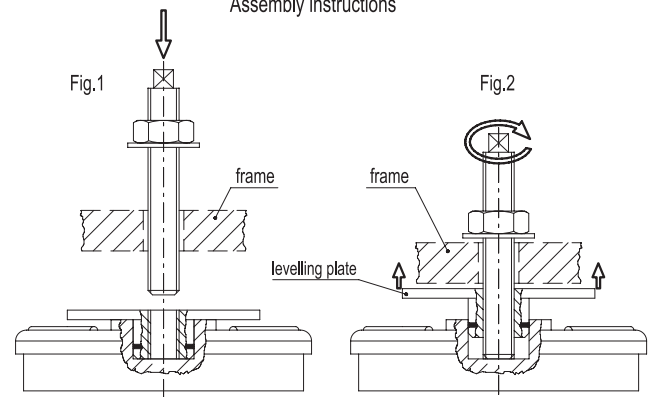
Features and applications

ELESA vibration-damping levelling elements have been designed to damp vibrations, shocks and noises produced by moving bodies or non-balanced vibrating masses of equipment and machines which can cause:

- malfunctioning and reduction of the machine lifespan and/or of the adjacent ones
- damage at men's health
- noise.



Assembly instructions



| Standard Elements | | Main dimensions | | | | | Threaded stem | | Max load | Max deflection | Stiffness | Δz | | | |
|-------------------|---------------------|-----------------|-----|-----|--------|--------|---------------|----|----------|----------------|-----------|------------|------|--------|------|
| Code | Description | D | D1 | L | L1 min | L1 max | l | l1 | d2 | d | s | [N] | [mm] | [N/mm] | g |
| 415111 | LWA-80-M12x1.25x120 | 80 | 72 | 134 | 38 | 50 | 18.5 | 33 | 60 | M12x1.25 | 7x7 | 5000 | 2 | 2500 | 530 |
| 415121 | LWA-120-M16x1.5x130 | 120 | 109 | 150 | 45 | 58 | 23 | 39 | 80 | M16x1.5 | 9x9 | 10000 | 2.5 | 4000 | 1200 |
| 415131 | LWA-160-M20x1.5x170 | 160 | 150 | 192 | 55 | 70 | 29 | 47 | 130 | M20x1.5 | 12x12 | 20000 | 2.2 | 9000 | 2650 |
| 415141 | LWA-200-M20x1.5x170 | 200 | 186 | 206 | 65 | 80 | 36 | 58 | 130 | M20x1.5 | 12x12 | 40000 | 2.7 | 15000 | 4500 |

Technical data and guidelines for the choice

1) Basic data required:

- disturbing frequency: the frequency of the disturbing vibration produced by a on-duty machine. In general, it coincides with the number of rotations of the engine [rpm]
- the static load applied to every single vibration-damping element [N]
- the isolation degree required [%]
- damping disk deflection value [mm] under a given load
- the stiffness, that is to say the load that applied to the vibration-damping element, produces a deflection of 1 mm [N/mm].

2) How to choose the vibration-damping element:

- with reference to the nomograph (Diagram), intersect the disturbing frequency value with the isolation degree required (each isolation degree corresponds to a line on the nomograph) and define the deflection (static deflection mm)
- divide the load applied onto the vibration-damping element by the deflection value to obtain the required rigidity of the vibration-damping element
- compare the rigidity obtained with the rigidity shown in the table and choose the vibration-damping element which presents the nearest value (lower) to the calculated one.

3) Check the values obtained:

- the deflection of the vibration-damping element chosen can be obtained in graphic 2 on the basis of the static load.
- intersect the disturbing frequency value with the vibration-damping element deflection value in the nomograph (Diagram) to obtain the isolation degree offered by the vibration-damping element chosen.
- compare the obtained value with the isolation degree required.

4) Example:

A 80% isolation degree is required.

Conditions of use:

- disturbing frequency = 3,000 rpm;
- load applied to every levelling element = 4,000 N.
- Diagram shows that with a 3,000 rpm disturbing frequency and an isolation degree of 80%, the deflection obtained is 0.6 mm.
- Divide the load applied by the deflection obtained to define the rigidity required, which is $4,000/0.6 = 6,666 \text{ N/mm}$.
- Compare the rigidity value obtained (6,666 N/mm) with the values reported in the table. This value is within the rigidity value reported in the table for LW.A-120 (4,000 N/mm) and LW.A-160 (9,000 N/mm). Choose the vibration-damping element with the lower value that is LW.A-120.

For a further check:

- graphic 2 shows that LW.A-120 (4,000 N/mm) deflection is 1mm.
 - by intersecting the deflection value with the disturbing frequency of 3,000 rpm in the nomograph, the isolation degree obtained is 90%.
- This value is even greater than the required one; your choice has proved correct.

Graphic 2

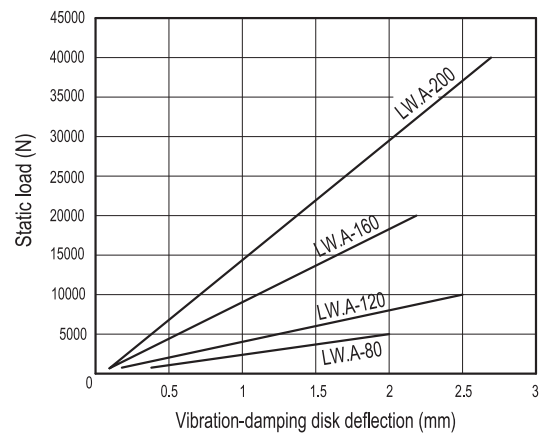
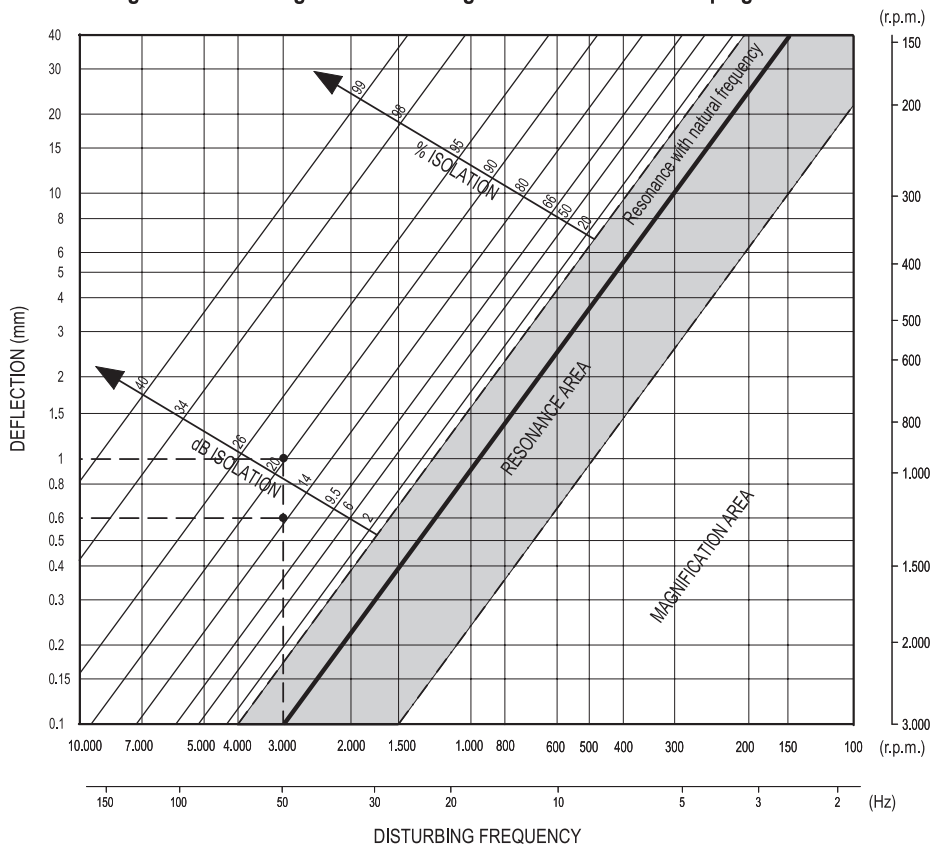


Diagram for checking the isolation degree of the vibration-damping element



GN 148

Levelling elements

- **Vibration-damping element (medium)**
Natural rubber NR, hardness 57 ± 5 Shore A, black colour.
- **Sheet metal**
Zinc plated steel, blue passivated.
- **Threaded insert**
Zinc plated steel, blue passivated.
- **Standard executions available**
 - Type **A**: with two hole flange ($d_1 = 60 / 90 / 113$).
 - Type **B**: with four-hole flange ($d_1 = 113 / 126$).
- **Version**
 - Identification no. **1**: without tear-off lock.
 - Identification no. **2**: with tear-off lock.

Accessories

Rubber pads GN 148.2.

Special executions on request

- Natural rubber NR, hardness 43 ± 5 Shore A.
- Natural rubber NR, hardness 68 ± 5 Shore A.

Features and applications

Levelling elements GN 148 are designed for setting up heavy machinery and units with insulation against vibrations.

This has a positive impact on the lifetime of machines and additionally reduces the noise pollution.

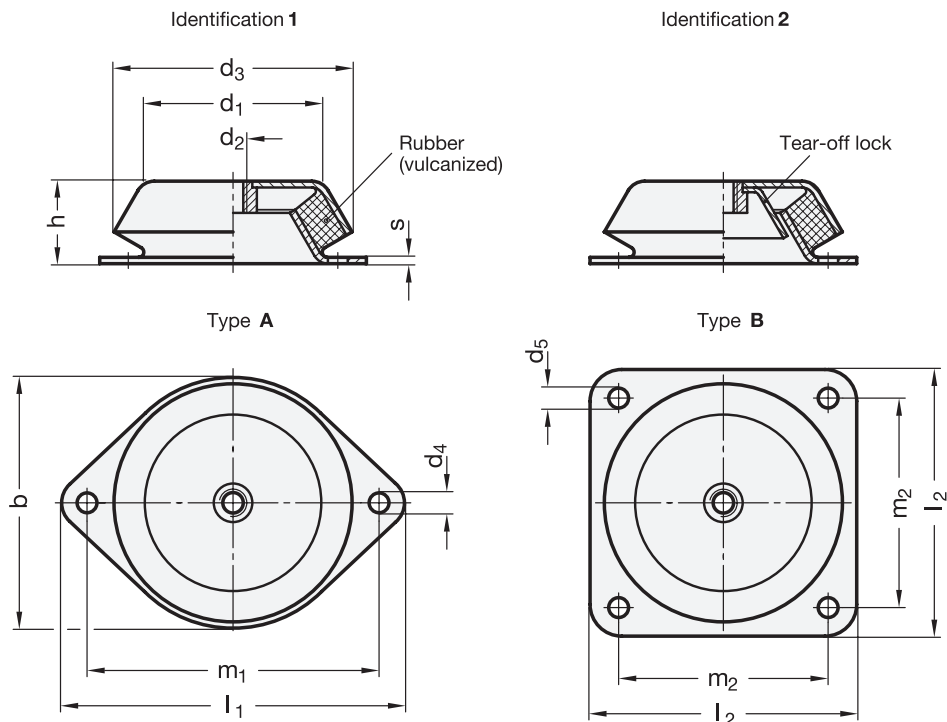
The structure is such that horizontal forces are also absorbed.

The design with tear-off lock (Type 2) protects the levelling feet from destruction caused by tear-off under excessive tension loads.

The details relating to the load bearing capacity are non-binding recommended values and rule out any liability. They constitute no general warranty of quality and condition. The user must determine from case to case whether a product is suitable for the intended use.



| Standard Elements | Main dimensions | | | | | | | | | | | | △△ |
|-----------------------|-----------------|-----|-----|------|------|----|---|-----|-----|-----|-----|-----|------|
| | Description | d1 | d2 | d3 | d4 | d5 | h | s | b | l1 | l2 | m1 | |
| GN 148-60-M10-A-1-57 | 60 | M10 | 78 | 9 | - | 30 | 2 | 78 | 128 | - | 110 | - | 299 |
| GN 148-60-M10-A-2-57 | 60 | M10 | 78 | 9 | - | 30 | 2 | 78 | 128 | - | 110 | - | 280 |
| GN 148-90-M12-A-1-57 | 90 | M12 | 106 | 13 | - | 39 | 3 | 110 | 170 | - | 140 | - | 725 |
| GN 148-90-M12-A-2-57 | 90 | M12 | 106 | 13 | - | 39 | 3 | 110 | 170 | - | 140 | - | 800 |
| GN 148-113-M16-A-1-57 | 113 | M16 | 150 | 12.5 | - | 52 | 4 | 150 | 216 | - | 184 | - | 1880 |
| GN 148-113-M16-A-2-57 | 113 | M16 | 150 | 12.5 | - | 52 | 4 | 150 | 216 | - | 184 | - | 1890 |
| GN 148-113-M16-B-1-57 | 113 | M16 | 150 | - | 12.5 | 52 | 4 | - | - | 168 | - | 132 | 1830 |
| GN 148-113-M16-B-2-57 | 113 | M16 | 150 | - | 12.5 | 52 | 4 | - | - | 168 | - | 132 | 2020 |
| GN 148-126-M20-B-1-57 | 126 | M20 | 177 | - | 13 | 63 | 4 | - | - | 184 | - | 150 | 2600 |
| GN 148-126-M20-B-2-57 | 126 | M20 | 177 | - | 13 | 63 | 4 | - | - | 184 | - | 150 | 2900 |

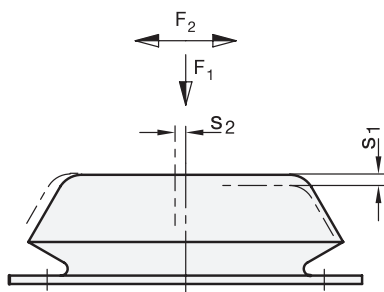


Technical data

- F_1 = static load in vertical direction (pressure)
 F_2 = static load in horizontal direction (lateral thrust)
 s_1 = Compression in vertical direction (spring excursion under load through F_1)
 s_2 = Compression in vertical direction (spring excursion) under load through F_2

Stiffness R:
is the load which causes the damping elements to be compressed by 1 mm (spring rate)

$$\text{Equation for calculating the stiffness: } R = \frac{F}{s}$$



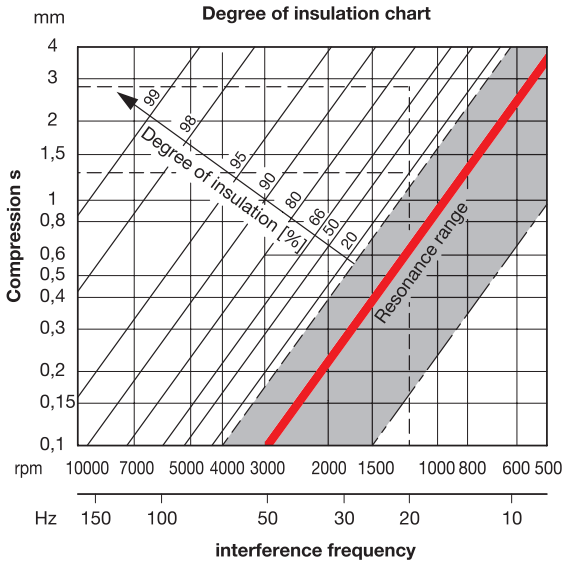
The table below gives details on the maximum static load F , the maximum rated compression and the resulting stiffness R .

The method shown on page 22 and the values given below allow the maximum degree of insulation of the vibration to be determined as factor of the interference frequency.

| d_1 | Hardness in Shore | max. static load F_1 in N | Stiffness R_1 in N/mm | max. compression s_1 in mm | max. static load F_2 in N | Stiffness R_2 in N/mm | max. compression s_2 in mm |
|-------|-------------------|-----------------------------|-------------------------|------------------------------|-----------------------------|-------------------------|------------------------------|
| 60 | 43* | 1100 | 340 | 3.2 | 2300 | 770 | 3 |
| 60 | 57 | 1750 | 550 | 3.2 | 3400 | 1130 | 3 |
| 60 | 68* | 2800 | 930 | 3 | 4000 | 1330 | 3 |
| 90 | 43* | 1500 | 430 | 3.5 | 3000 | 750 | 4 |
| 90 | 57 | 2800 | 800 | 3.5 | 5000 | 1330 | 3.75 |
| 90 | 68* | 4500 | 1290 | 3.5 | 7000 | 1870 | 3.75 |
| 113 | 43* | 3500 | 1000 | 3.5 | 4500 | 1290 | 3.5 |
| 113 | 57 | 6500 | 1860 | 3.5 | 7500 | 2140 | 3.5 |
| 113 | 68* | 10000 | 2860 | 3.5 | 11000 | 3140 | 3.5 |
| 126 | 43* | 7500 | 2140 | 3.5 | 9000 | 2570 | 3.5 |
| 126 | 57 | 12500 | 3570 | 3.5 | 1500 | 4290 | 3.5 |
| 126 | 68* | 19000 | 5340 | 3.5 | 22500 | 6430 | 3.5 |

* not available from stock, requires a minimum order quantity

Determining the suitable levelling element and the maximum degree of insulation



Technical data

Interference frequency [Hz]:
is the frequency emanating from a machine, e.g. the machine main shaft speed [rpm].

Static load F [N]:
is the load acting on each vibration-damping element (levelling element).

Degree of insulation [%]:
is the measure for absorbing the interference frequency (damping).

Compression s [mm]:
is the change in height of the damping element (spring excursion).

Stiffness R [N/mm]:
is the load which causes a damping element to be compressed by 1 mm (spring rate).

First, the static load F for each levelling element must be determined. For well arranged levelling elements and the resulting even distribution of the load F , the static load is calculated using the following equation:

$$\frac{\text{Weight force of the machine [N]}}{\text{number of levelling elements}} = \text{static load } F \text{ [N]} / \text{per levelling element}$$

Once the static load F has been calculated, select a levelling element from the table. Please note that the static load F should be as close as possible to the static load capacity, but without exceeding it. The associated stiffness R of the selected leg is also shown in the table.

The actual compression is then calculated using the equation below.

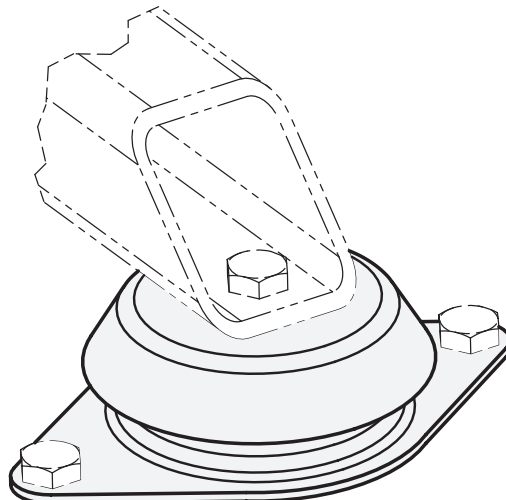
$$\frac{\text{Static load } F \text{ [N]} / \text{per levelling elements}}{\text{stiffness } R \text{ [N/mm]}} = \text{actual compression } s \text{ [mm]}$$

Starting from the actual compression s calculated, the maximum degree of insulation as factor of the interference frequency can now be read in the above chart.

To optimise the maximum degree of insulation, change the number of feet such that the static load F of each levelling element is as close as possible below a static load capacity value given in the table. This will increase the compression s which, in turn, improves the degree of insulation.

In general, medium and high frequencies can be very well insulated with an adequate compression.

Application example



GN 148.2

Rubber pads

- **Pad**

NBR Rubber, hardness 68 Shore, black colour, oil resistant.

- **Standard versions available**

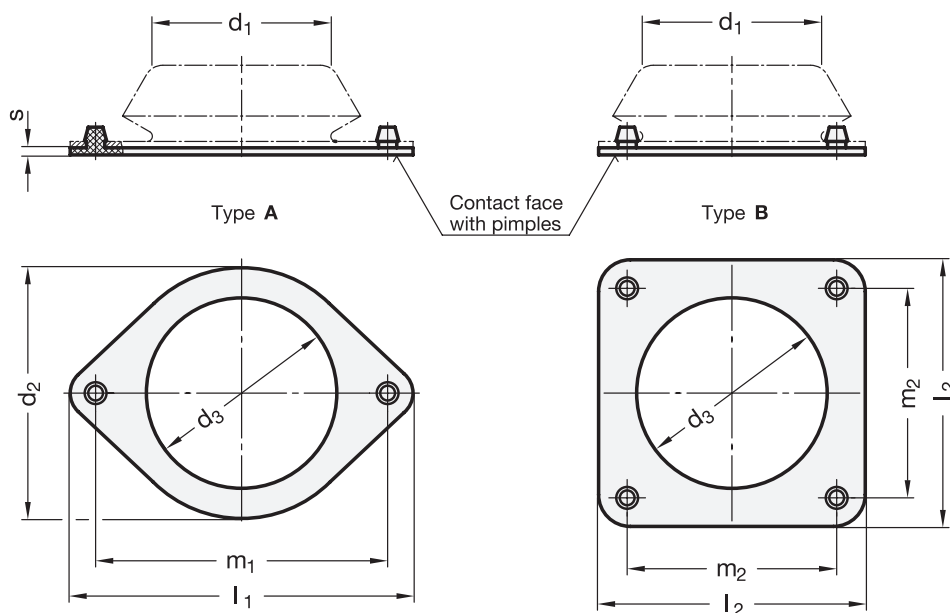
- Type **A**: for levelling elements with two hole flange (d1 = 60 / 90 / 113).

- Type **B**: for levelling elements with four hole flange (d1 = 113 / 126).

Features and applications

Rubber pads GN 148.2 in connection with GN 148 levelling element are used for setting up machines and units if no firm bolt connection to the ground is required.

To be fixed to the levelling foot, they are snapped into the attachment bore holes of the flanges. Small pimples at the bottom face of the rubber pads enhance the stability.



| Standard Elements | Main dimensions | | | | | | | | △ |
|-------------------|-----------------|-----|-----|-----|-----|-----|-----|---|----|
| | l1 | l2 | d1* | d2 | d3 | m1 | m2 | s | |
| GN 148.2-128-A | 128 | - | 60 | 78 | 65 | 110 | - | 3 | 13 |
| GN 148.2-170-A | 170 | - | 90 | 110 | 90 | 140 | - | 3 | 29 |
| GN 148.2-216-A | 216 | - | 113 | 150 | 12 | 184 | - | 4 | 55 |
| GN 148.2-168-B | - | 168 | 113 | - | 120 | - | 132 | 4 | 88 |
| GN 148.2-184-B | - | 184 | 126 | - | 150 | - | 150 | 4 | 88 |

* Diameter of the levelling elements GN 148



ELESA S.p.A.
Via Pompei 29
20900 Monza (MB) ITALY
Phone: +39 039 28 11.1
Fax: +39 039 83 63 51
www.elesa.com
info@elesa.com

OTTO GANTER GmbH & Co.KG
Triberger Straße 3
78120 Furtwangen GERMANY
Phone: +49 7723 65 07 130
Fax: +49 7723 65 07 165
www.ganter-griff.com
info@ganter-griff.de

www.elesa-ganter.com