

Bearer Spring

Metalastik® Bearer Springs provide a bearing medium between rail vehicle bodies and bogies and are operating worldwide in various suspension applications including locomotives, passenger and freight vehicles

Conventional circular and rectangular bearer springs are designed to support the vehicle body in their compression mode whilst allowing horizontal, lateral and rotational bogie movements by virtue of the more flexible shear mode.

Waisted Type Bearer Springs offer optimized performance within limited space envelopes, particularly where large horizontal displacements require to be accommodated.

About Trelleborg Industrial AVS

Over 100 years of experience as Metalastik and Novibra, today Trelleborg Industrial AVS make improvements people can physically feel. From smoother travel to quieter, more efficient machines, we make life feel better. With quality, testing and compliance built in, we're in it for the long haul, ensuring your solution still works, over an extended and often arduous life-cycle.

With three state-of-the-art manufacturing plants across the globe, our experience in rubber to metal bonding enhances several industries, including off-highway vehicles, rail and mass transit, marine and energy and general industry.

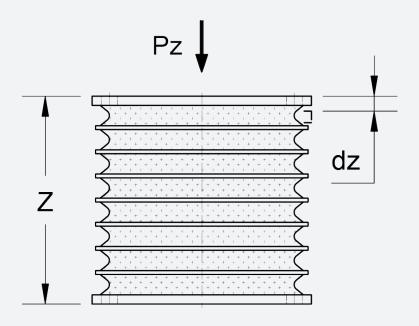
We offer an end-to-end service, to take you from concept through design, manufacturing and testing to delivery. This reduces the complexity of supply, helping you cut costs, mitigate risk and receive on time, on budget delivery.

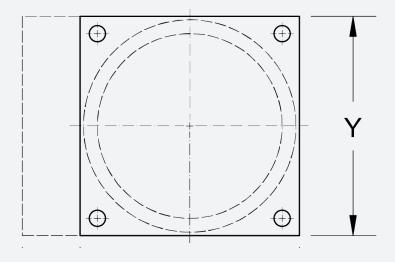
Trelleborg IAVS is part of Trelleborg Group, which employs 15,000 people in over 40 countries. Whatever your challenge, whatever your role and wherever you are, we are nearby to offer expert knowledge and quality solutions.



Bearer Spring Circular

55 - 85 mm Horizontal Deflection





Product Data

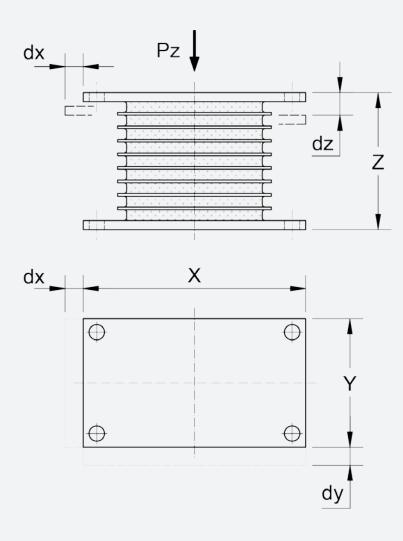
| DRAWING No | DIMENSIONS (mm) | | MAX LOAD Pz* (kN) | VERTICAL STIFFNESS (kN/mm) | VERTICAL DEFLECTION dz (mm) | HORIZONTAL DEFLECTION dx (mm) | Pz∙dx | WEIGHT (kg) | |
|------------|-----------------|-----|----------------------|----------------------------------|-----------------------------------|-------------------------------------|-------|-------------|------|
| 17-1139 | 170 | 170 | 150 | 54 | 4.7 | 11 | 56 | 1350 | 9 |
| 17-1526 | 190 | 190 | 180 | 100 | 6.3 | 14 | 71 | 2700 | 13.5 |
| 17-1374 | 280 | 195 | 220 | 100 | 6.1 | 15 | 76 | 2700 | 28 |
| 17-1326 | 292 | 292 | 213 | 180 | 9.5 | 17 | 85 | 7600 | 33 |

^{*} Bearer Springs should not be used at both maximum vertical load capacity and maximum shear deflection. Hence, for any round or square Bearer Spring the multiple of P_z (vertical load) and d_x (shear deflection) should be less then the value quoted in the table.



Bearer Spring Rectangular

70 - 108 mm Shear Deflection



Product Data

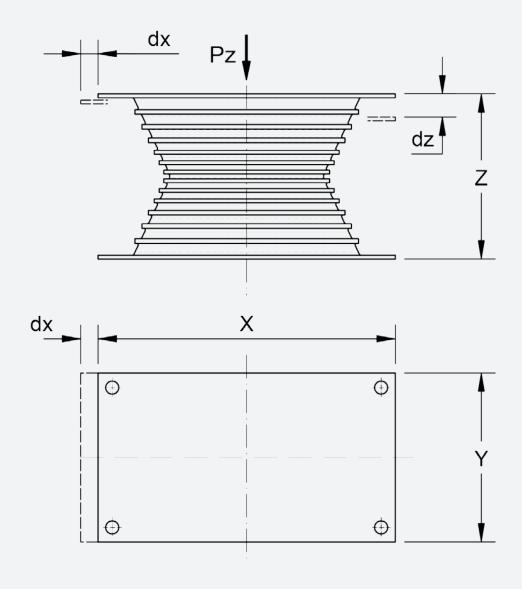
| DRAWING | | | MAX LOAD | VERTICAL STIFFNESS | VERTICAL DEFLECTION | LONGITUDINAL DEFLECTION | LATERAL DEFLECTION | Pz · dx | Pz · dv | Pz· | WEIGHT | |
|---------|-----|-----|----------|-----------------------|------------------------|----------------------------|-----------------------|---------|---------|------|---------|------|
| No. | Х | Υ | Z | Pz (kN) | (kN/mm) | dz (mm) | dx (mm) | dx (mm) | | | (dx+dy) | (kg) |
| 17-1633 | 246 | 216 | 162 | 275 | 25 | 11 | 54 | 42 | 7340 | 4810 | 6360 | 23.2 |
| 17-1761 | 306 | 211 | 188 | 240 | 20 | 12 | 61 | 50 | 7320 | 6000 | 6930 | 31.8 |
| 17-1341 | 349 | 210 | 178 | 350 | 25 | 14 | 65 | 46 | 11400 | 7000 | 9560 | 31.1 |
| 17-2113 | 351 | 217 | 164 | 73 | 6 | 13 | 66 | 48 | 2400 | 1600 | 2040 | 26 |
| 17-2079 | 360 | 220 | 182 | 126 | 8 | 14 | 70 | 45 | 7670 | 4900 | 6670 | 23 |
| 17-1279 | 432 | 241 | 218 | 95 | 5 | 17 | 83 | 52 | 3940 | 2440 | 3940 | 42 |
| 17-1172 | 432 | 241 | 216 | 300 | 17 | 16 | 83 | 50 | 12400 | 7900 | 11800 | 49 |
| 17-1260 | 330 | 191 | 299 | 41 | 1.4 | 27 | 108 | 81 | 2160 | 1600 | 2160 | 35 |
| 17-1853 | 230 | 192 | 180 | 90 | 6 | 14 | 69 | 56 | 3100 | 2700 | 3020 | 21 |

^{*} Bearer Springs should not be used at both maximum vertical load capacity and maximum shear deflection. Hence, for any round or square Bearer Spring the multiple of P₇ (vertical load) and d_x (shear deflection) should be less then the value quoted in the table.



Bearer Spring Waisted

<140 mm Shear Deflection



Product Data

| DRAWING No. | D | IMENSIONS (I | mm) | MAX LOAD Pz* | VERTICAL DEFLECTION dz | LONGITUDINAL DEFLECTION dx | WEIGHT (kg) | |
|-------------|-----|--------------|-----|--------------|---------------------------|-------------------------------|-------------|--|
| | X | Y | Z | (kN) | (mm) | (mm) | | |
| 17-1665 | 387 | 220 | 215 | 120 | 4 | 110 | 37.3 | |
| 17-1762 | 395 | 368 | 268 | 160 | 12.5 | 140 | 49 | |



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For further information visit our website or e-mail industrial avs@trelleborg.com

The content in this datasheet was correct at the time of printing, but is subject to change without notice.