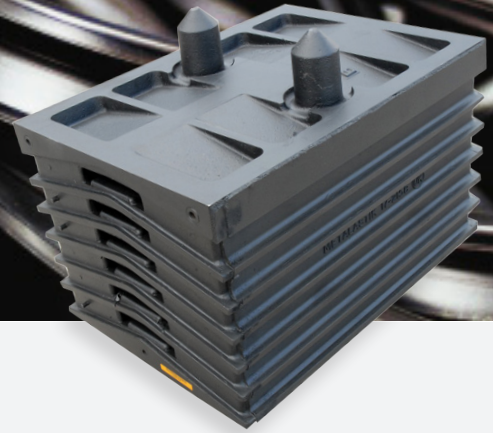# Bearer Spring

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 optimised performance within limited space envelopes, particularly where large horizontal displacements require to be accommodated.
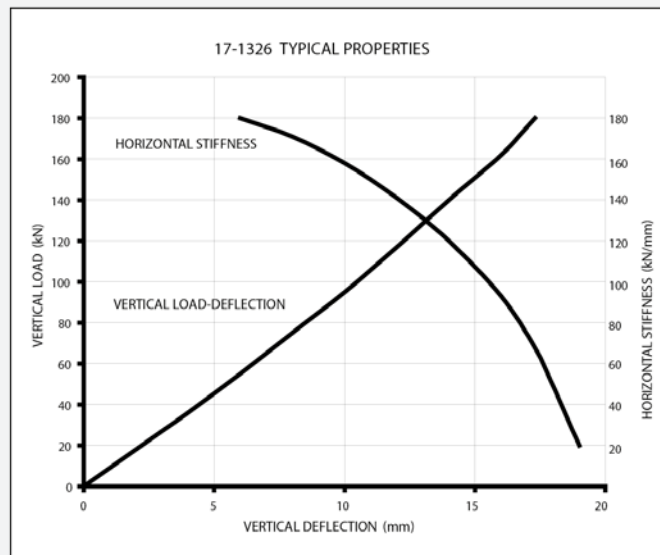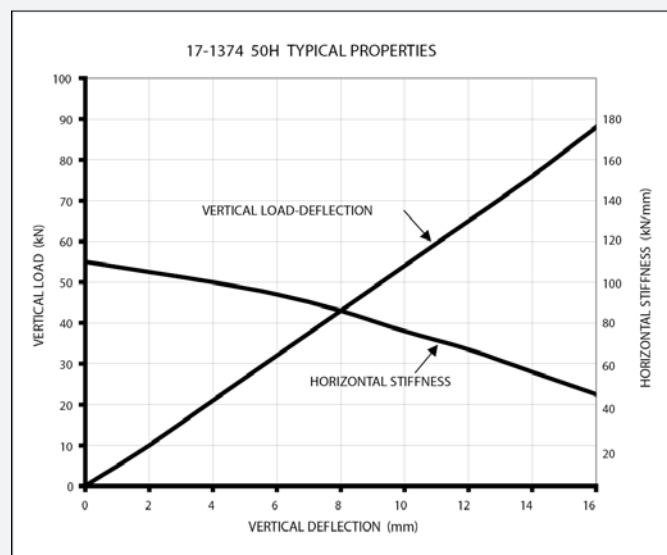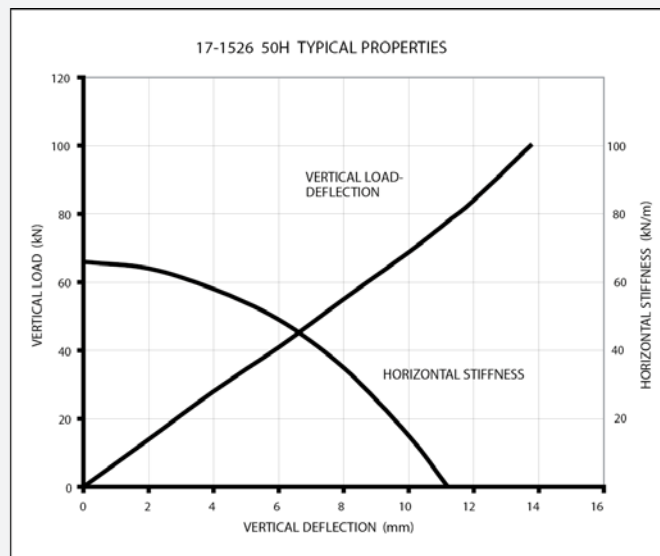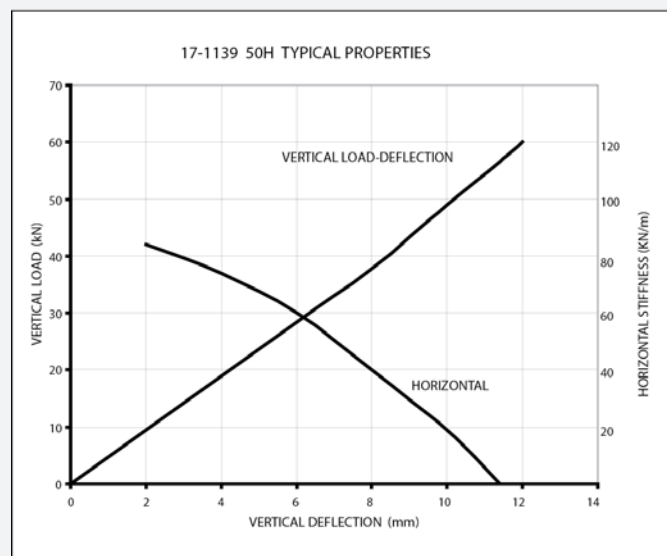
About Trelleborg Industrial AVS

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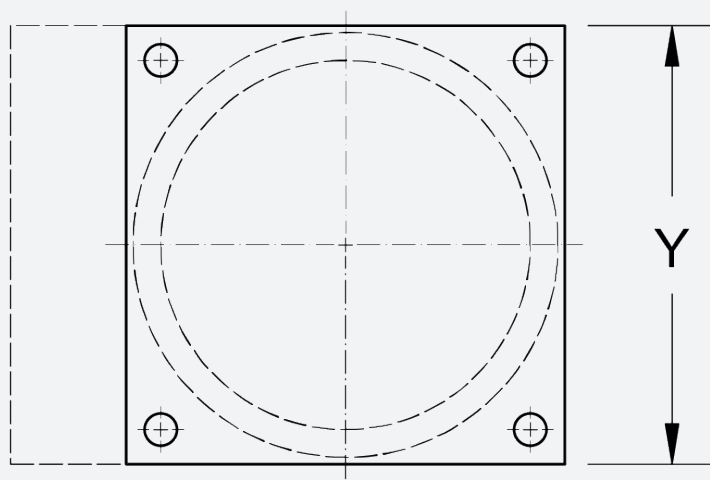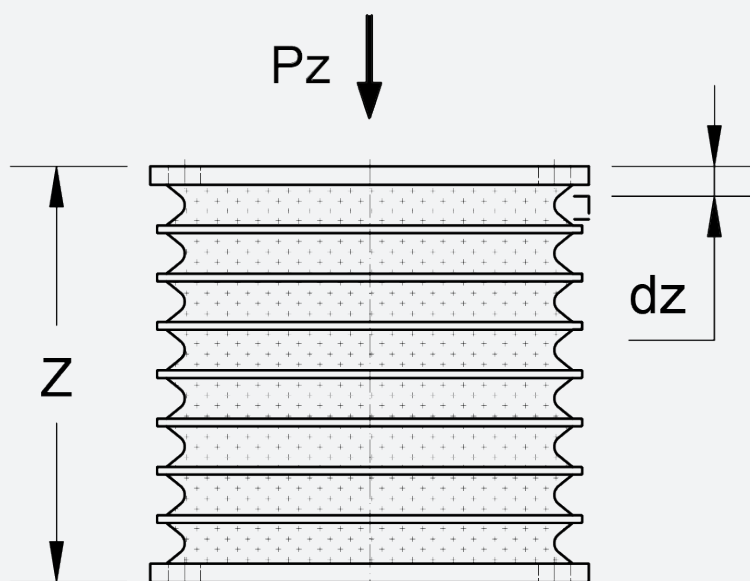
Trelleborg IAVS is part of Trelleborg Group, which employs 15,000 people in over 40 countries. Whatever your challenge, whatever your role and wherever you are, we are nearby to offer expert knowledge and quality solutions.

Bearer Spring

17-1139 50H TYPICAL PROPERTIES

17-1526 50H TYPICAL PROPERTIES

17-1374 50H TYPICAL PROPERTIES

17-1326 TYPICAL PROPERTIES

Bearer Spring Circular
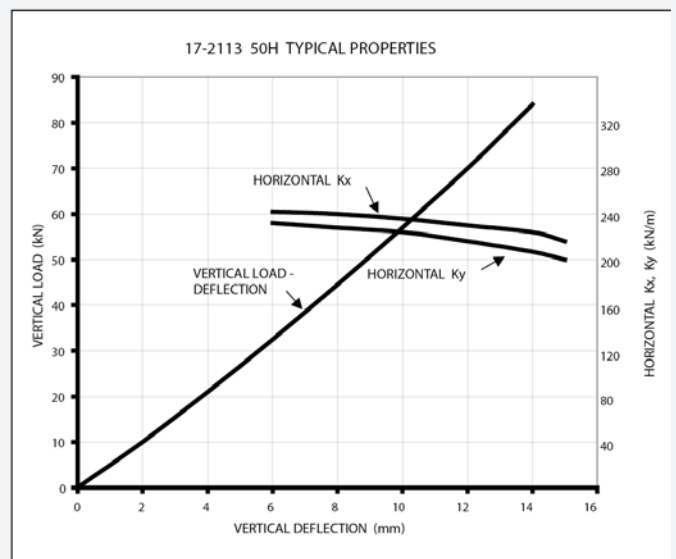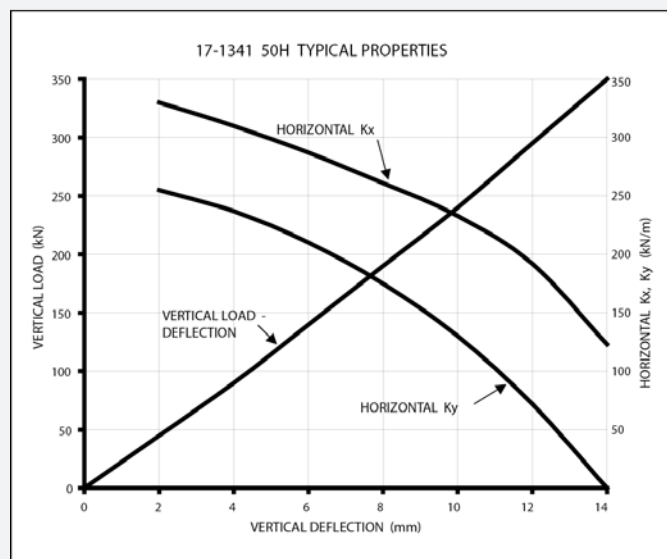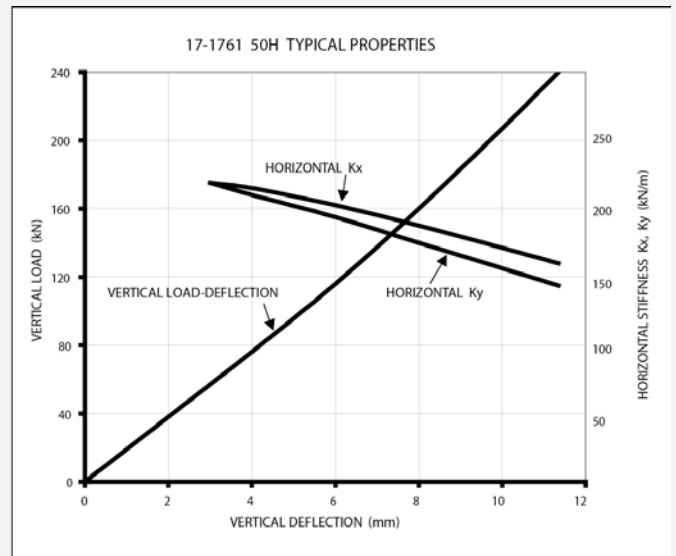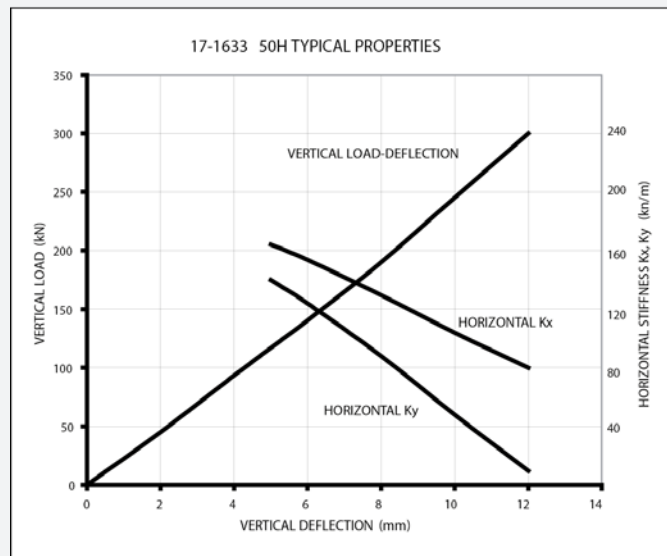
55 - 85 mm Horizontal Deflection

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.

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)
	X	Y	Z						
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 Spring

17-1633 50H TYPICAL PROPERTIES

17-1761 50H TYPICAL PROPERTIES

17-1341 50H TYPICAL PROPERTIES

17-2113 50H TYPICAL PROPERTIES

17-1853 50H TYPICAL PROPERTIES
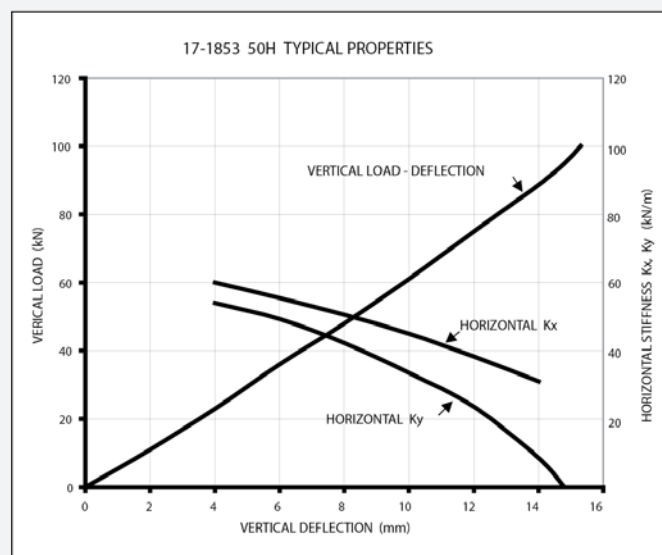
Bearer Spring Rectangular

70 - 108 mm Shear Deflection
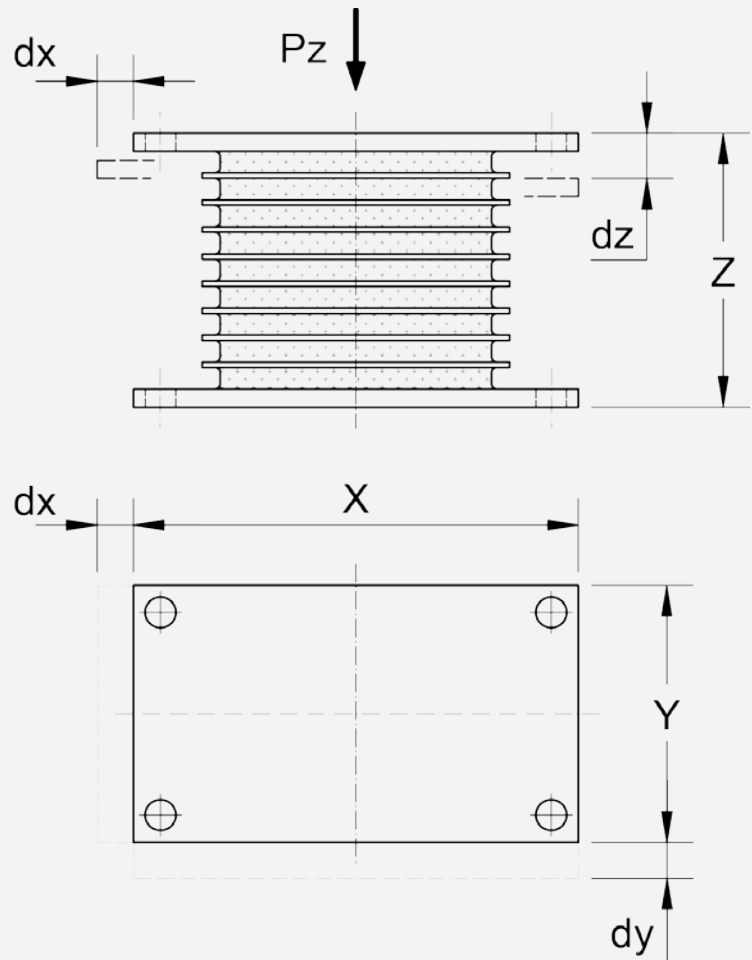
Bearer Springs should not be used at both maximum vertical load capacity and maximum shear deflection. Hence, multiples of Pz (vertical load) x d_x, P_z x d_y and P_z (d_x +d_y) should be less then the value quoted in the table.
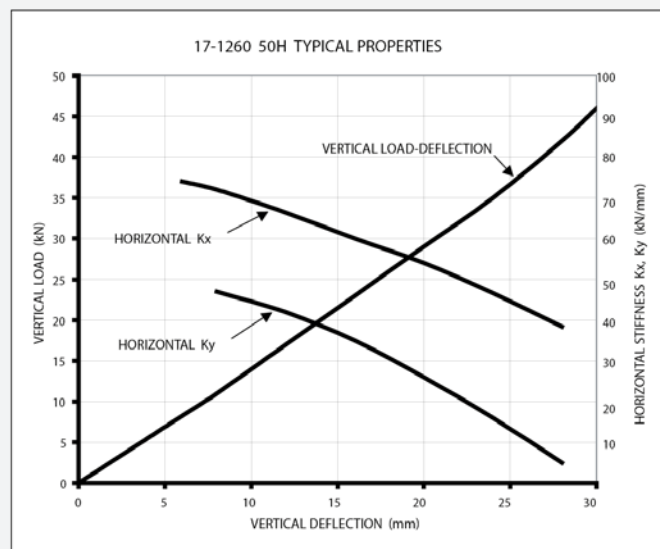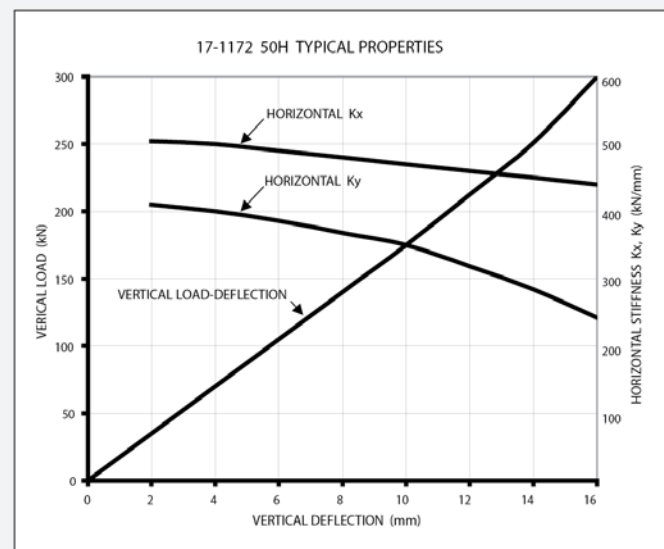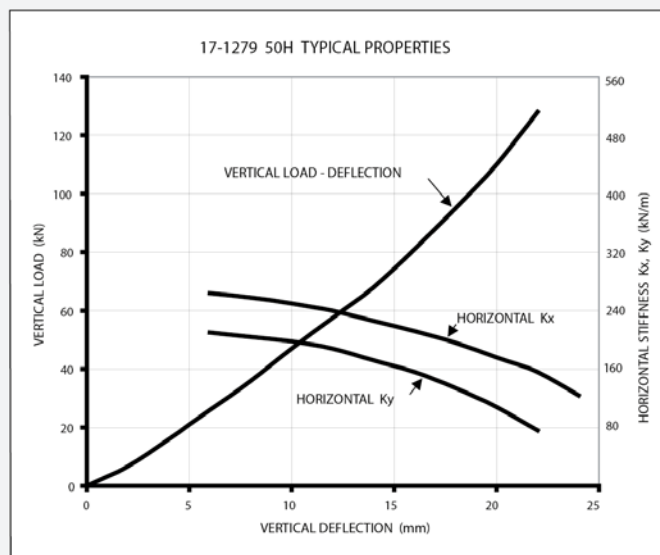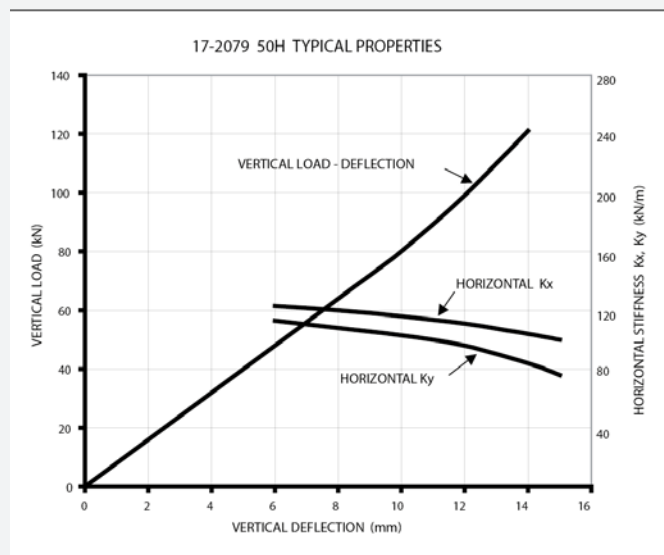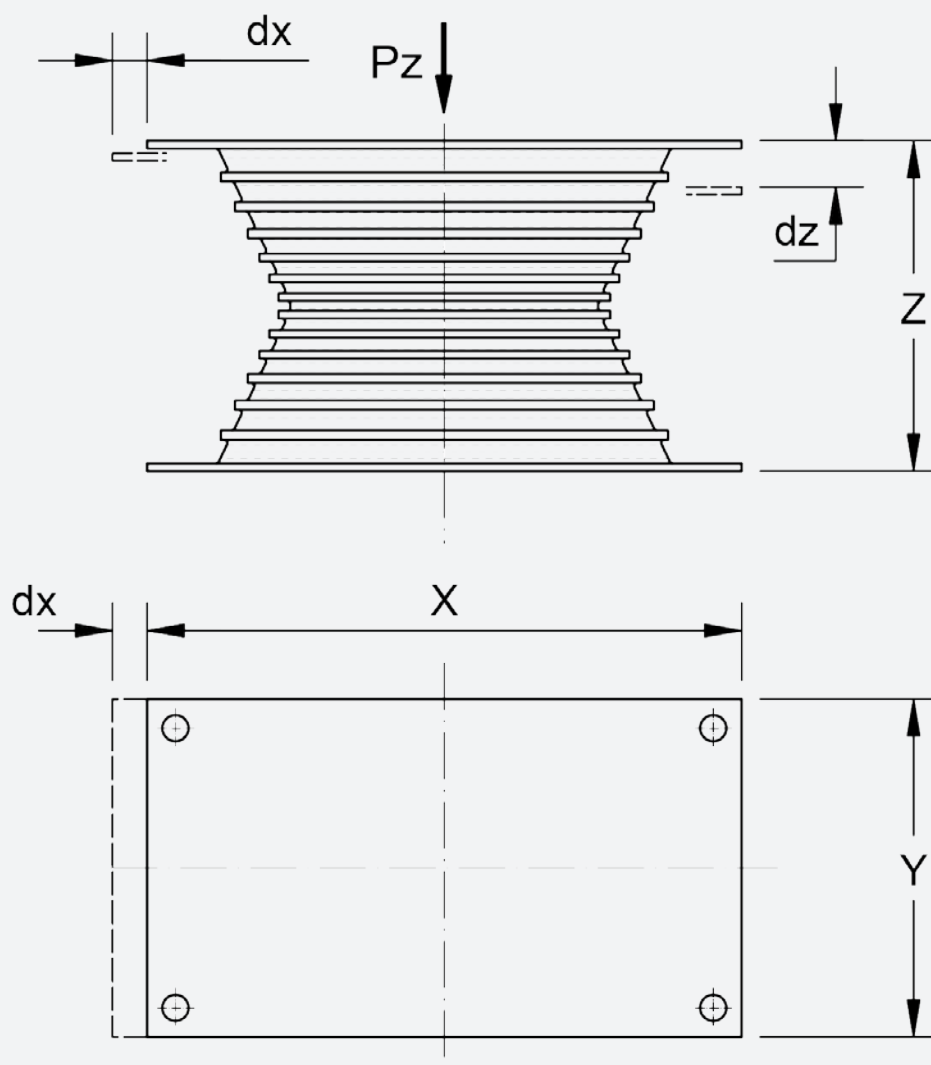
Product Data

DRAWING No.	DIMENSIONS (mm)			MAX LOAD Pz (kN)	VERTICAL STIFFNESS (kN/mm)	VERTICAL DEFLECTION dz (mm)	LONGITUDINAL DEFLECTION dx (mm)	LATERAL DEFLECTION dx (mm)	Pz · dx	Pz · dy	Pz · (dx+dy)	WEIGHT (kg)
	X	Y	Z									
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 Spring

17-2079 50H TYPICAL PROPERTIES

17-1279 50H TYPICAL PROPERTIES

17-1172 50H TYPICAL PROPERTIES

17-1260 50H TYPICAL PROPERTIES

Bearer Spring Waisted

<140 mm Shear Deflection

Product Data

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

TRELLEBORG