

Air Spring Systems



Trelleborg IAVS has used its expertise in developing the range of Metalastik® Air Spring Solutions for its International Customer base for both New Build, Service and Overhaul requirements.



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Features and Application Benefits



- ▼ Bespoke solutions to individual customer specifications.
- ▼ Ideal for all types of bogie and vehicle designs.
- ▼ Satisfy stringent requirements for modern Rail technology and CEN standards
- ▼ The potential for progressive force/displacement characteristics enabling a stable vehicle performance to be achieved at all load conditions.
- ▼ The use of Metalastik® bearer springs provides optimum low ride frequency characteristics in both normal and air fail conditions.
- ▼ The ability to accommodate high horizontal, torsional and conical displacements make these Air Spring Systems ideal solutions on bolsterless bogie designs. (They can of course be adapted to suit bolster arrangements)
- ▼ Bearer springs may be integral to the system characteristics or only act as an emergency spring in air fail condition.
- ▼ A wide range of load capacities and shear displacements is available together with a variety of horizontal stiffness characteristics.
- ▼ Constant vehicle ride height for passenger access
- ▼ The option of an air reservoir can simplify the total system integration.

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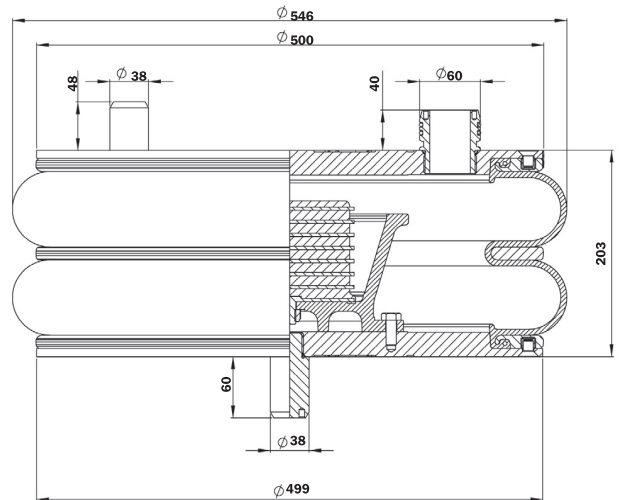
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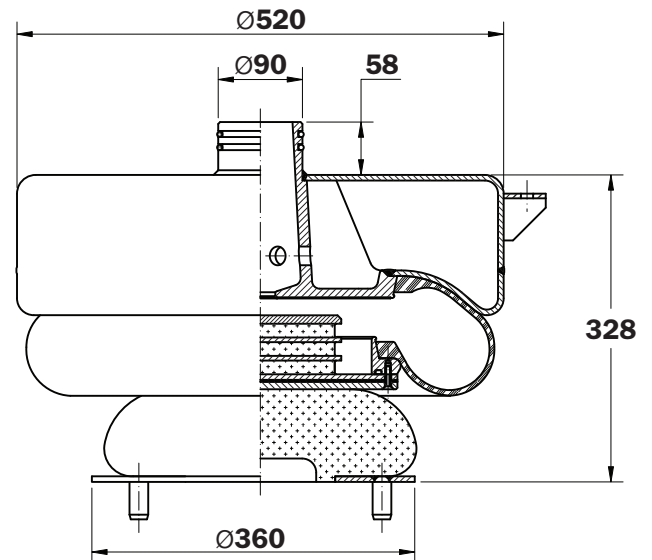
45/4018

	Vertical Load		
	59kN	103kN	115kN
Pressure, bar	3.4	5.9	6.5
Vertical stiffness N/mm <i>additional volume 0 litres amplitude ± 12.7mm</i>	677	1076	1197
Horizontal stiffness N/mm <i>amplitude ± 12.7mm</i>	206	240	273
maximum horizontal displacement	±38mm		



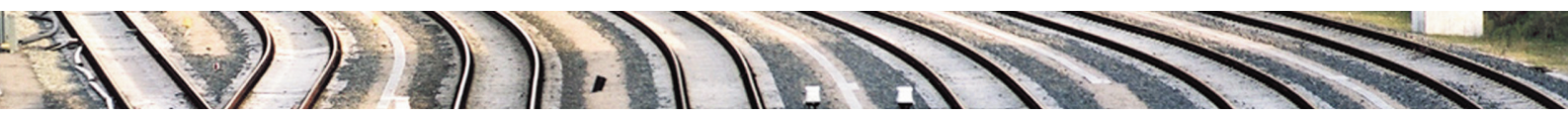
45/1010

	Vertical Load		
	34kN	58kN	83kN
Pressure, bar	2.8	4.7	6.6
Vertical stiffness N/mm <i>additional volume 0 litres amplitude ± 10mm</i>	265	425	605
Horizontal stiffness N/mm <i>amplitude ± 10mm</i>	140	180	185
maximum horizontal displacement	±105mm		



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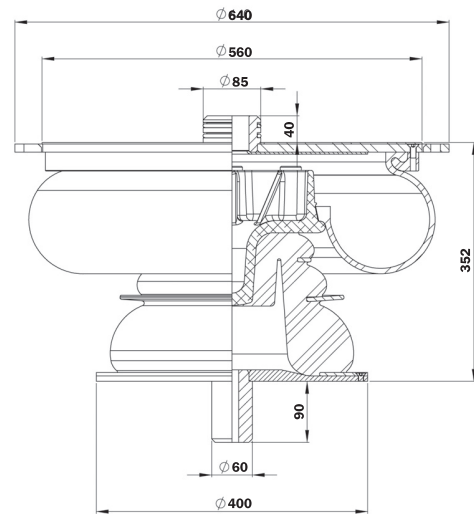
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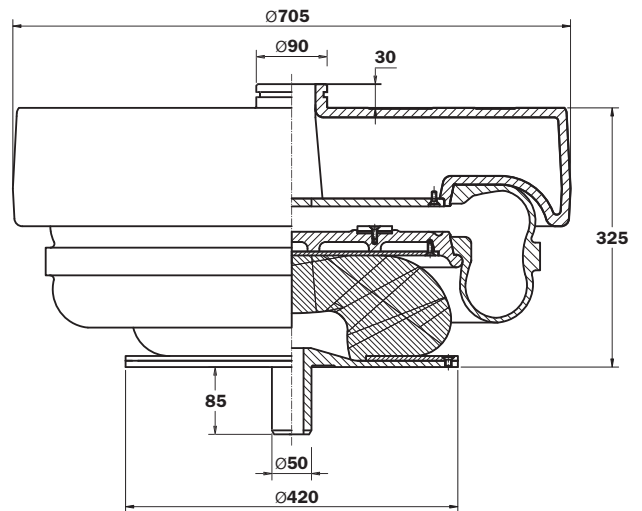
45/4003

	Vertical Load		
	38kN	64kN	90kN
Pressure, bar	2.5	5.4	6.2
Vertical stiffness N/mm <i>additional volume 0 litres amplitude ± 10mm</i>	356	515	710
Horizontal stiffness N/mm <i>amplitude ± 10mm</i>	71	105	138
maximum horizontal displacement	±110mm		



45/1001

	Vertical Load		
	54kN	82kN	110kN
Pressure, bar	2.6	3.7	5.0
Vertical stiffness N/mm <i>additional volume 70 litres amplitude ± 10mm</i>	270	333	430
Horizontal stiffness N/mm <i>amplitude ± 10mm</i>	81	98	115
maximum horizontal displacement	±110mm		



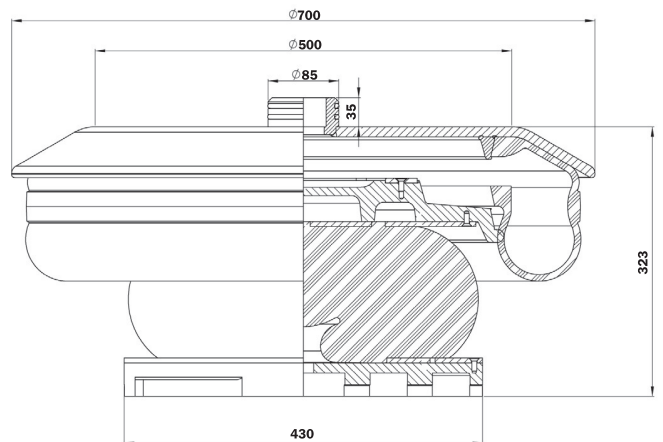
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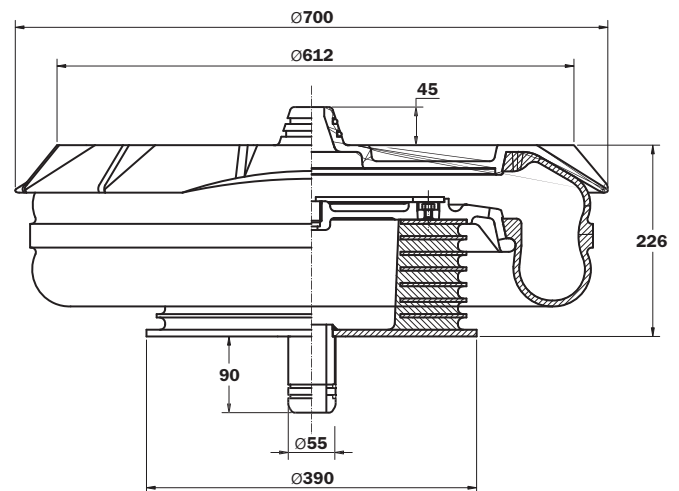
45/1054

	Vertical Load		
	60kN	90kN	120kN
Pressure, bar	2.4	3.7	4.8
Vertical stiffness N/mm <i>additional volume 60 litres amplitude ± 10mm</i>	421	539	663
Horizontal stiffness N/mm <i>amplitude ± 10mm</i>	173	177	200
maximum horizontal displacement	±110mm		



45/1003

	Vertical Load		
	66kN	157kN	127kN
Pressure, bar	2.4	3.6	4.9
Vertical stiffness N/mm <i>additional volume 30 litres amplitude ± 10mm</i>	330	410	485
Horizontal stiffness N/mm <i>amplitude ± 10mm</i>	160	157	144
maximum horizontal displacement	±105mm		



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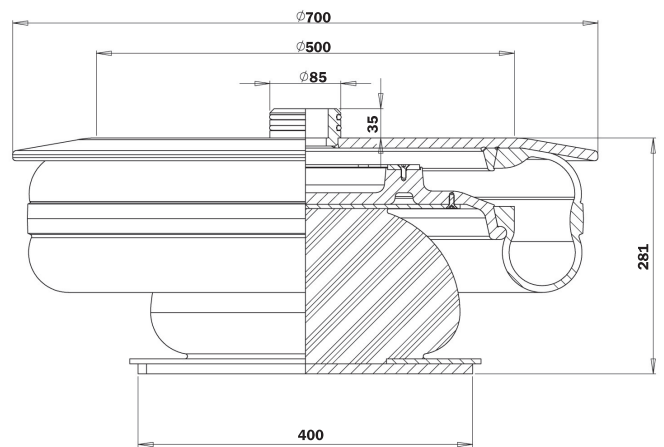
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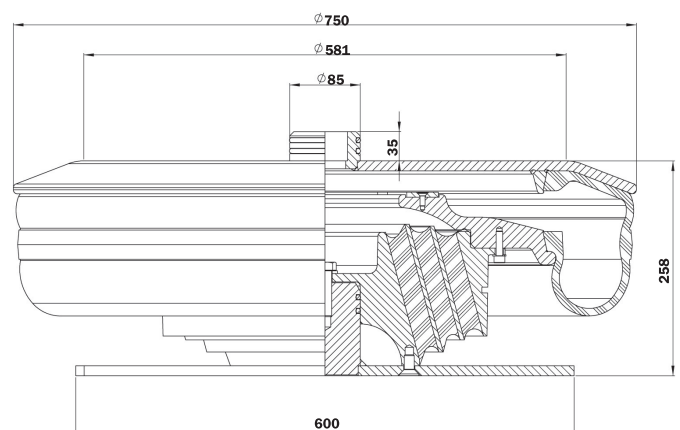
45/4017

	Vertical Load		
	50kN	115kN	140kN
Pressure, bar	2.1	4.6	5.5
Vertical stiffness N/mm <i>additional volume 40 litres amplitude ± 10mm</i>	474	811	935
Horizontal stiffness N/mm <i>amplitude ± 10mm</i>	178	243	262
maximum horizontal displacement	±120mm		



45/1052

	Vertical Load		
	50kN	165kN	180kN
Pressure, bar	1.6	4.8	6.0
Vertical stiffness N/mm <i>additional volume 40 litres amplitude ± 10mm</i>	563	1132	1224
Horizontal stiffness N/mm <i>amplitude ± 10mm</i>	330	565	566
maximum horizontal displacement	±60mm		



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