# Isotop<sub>®</sub> MSN/Z, MSN/Z-LC and SD/Z

Steel spring vibration isolators, tension elements



#### Design

Isotop® tension elements consist of a spring element, connection nuts for threaded rods and either a rectangular tube housing or open steel sheet housing (LC-model). All Isotop® MSN/Z + MSN/Z-LC have connection thread M8 and Isotop® SD/Z has connection thread M10. As an option, all tension elements are also available with a damping core inside. On request, we also can deliver these elements with a pre-stressed spring.

#### Field of application

Isotop® tension elements have a natural frequency, depending on the load, down to approx. 3.2 Hz and are used for:

- Suspension elements from ceilings and steel constructions.
- Source isolation of ceiling-hung ventilators, fans, extractors, air conditioners, pipe lines etc.
- Receiver isolation of sensitive electronic measuring equipment in refrigeration, air conditioning and ventilation as well as in pipe line and ceiling construction.
- Percussion isolation of all sorts of machines



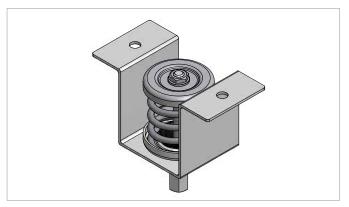
- Total weight to be absorbed
- Number and location of points of support
- Centre of gravity
- Structural shape of the device (dimensions)
- Direction of load
- Lowest disturbing frequency (rotational speed or number of strokes)

#### **Advantages**

- Element dimensions and connecting threads of the elements within the type series MSN/Z and MSN/Z-LC or SD/Z are uniform, which guarantees exchangeability.
- As a result of the open construction of the spring elements, the source is connected to the suspension point only via the spring. The spring element can oscillate in the horizontal plane without restriction.
- The spring is clearly visible, which allows checking of its condition without dismantling. The distance between spring coils is visible under load.



Isotop® MSN/Z, powder-coated, black



Isotop® MSN/Z-LC, galvanised



 $Isotop_{\circledast}\,SD/Z,\,powdercoated,\,black$ 

#### Our service

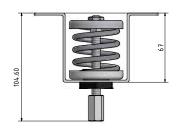
Make use of our know-how on questions about vibration technology. We will gladly consult you and will calculate tailor-made solutions for vibration isolation.

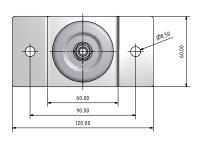


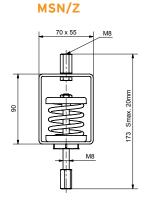
Selection table				
DESCRIPTION	REF. NO.	NOMINAL RANGE	SPRING RATE	
Isotop® MSN/Z 1 / Isotop® Z-1-LC	45000271 / 45000511	18 N - 45 N	1.78 N/mm	
Isotop® MSN/Z 2 / Isotop® Z-2-LC	45000272 / 45000512	27 N - 70 N	2.73 N/mm	
Isotop⊚ MSN/Z 3 / Isotop⊛ Z-3-LC	45000273 / 45000513	45 N - 115 N	4.52 N/mm	
Isotop⊚ MSN/Z 4 / Isotop⊛ Z-4-LC	45000274 / 45000514	70 N - 175 N	7.02 N/mm	
Isotop⊚ MSN/Z 5 / Isotop⊛ Z-5-LC	45000275 / 45000515	115 N - 285 N	11.44 N/mm	
Isotop® MSN/Z 6 / Isotop® Z-6-LC	45000276 / 45000516	175 N - 435 N	17.30 N/mm	
Isotop⊚ MSN/Z 7 / Isotop⊛ Z-7-LC	45000277 / 45000517	285 N - 650 N	26.02 N/mm	
Isotop® MSN/Z 8 / Isotop® Z-8-LC	45000278 / 45000518	440 N - 880 N	43.85 N/mm	

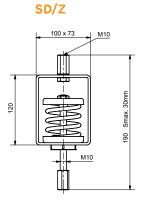
Selection table				
DESCRIPTION	REF. NO.	NOMINAL RANGE	SPRING RATE	
Isotop⊚ SD/Z 1	45000211	120 N - 265 N	7.93 N/mm	
Isotop⊚ SD/Z 2	45000212	195 N - 380 N	12.90 N/mm	
Isotop⊚ SD/Z 3	45000213	300 N - 670 N	20.16 N/mm	
Isotop⊚ SD/Z 4	45000214	475 N - 1,200 N	31.64 N/mm	
Isotop⊚ SD/Z 5	45000215	720 N - 1,700 N	48.07 N/mm	
Isotop⊚ SD/Z 6	45000216	1,130 N - 2,700 N	75.65 N/mm	
Isotop® SD/Z 7	45000217	1,815 N - 3,800 N	121.03 N/mm	

## MSN/Z-LC









All data indicated are based upon our current knowledge. They may be used as calculation and standard values and are subject to the usual machining tolerances. Subject to change and correction.

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