

# Walraven VibraTek® HS-1X Spring Hanger

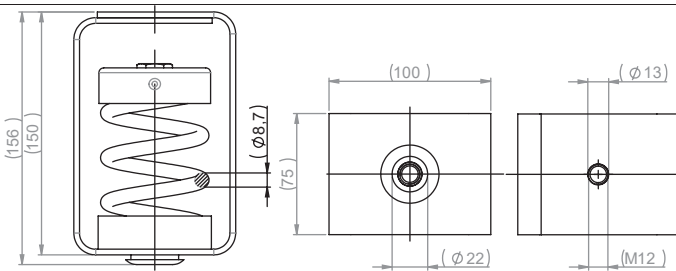
High performance spring isolator for medium to heavy suspended loads



## Features and Benefits

- Simple to install and does not need to be fixed to the base material
- Recommended for machinery with low working speeds above 700 rpm
- Rubber spring base cup prevents contact between housing and the spring
- Epoxy powder-coated housing, cap and spring provide increased resistance to corrosion
- Working temperature range -90 °C till 150 °C

## Technical Drawing



## Applications

- Pipelines, ducts, compressors, electrical panels, in-line fans and other HVAC equipment

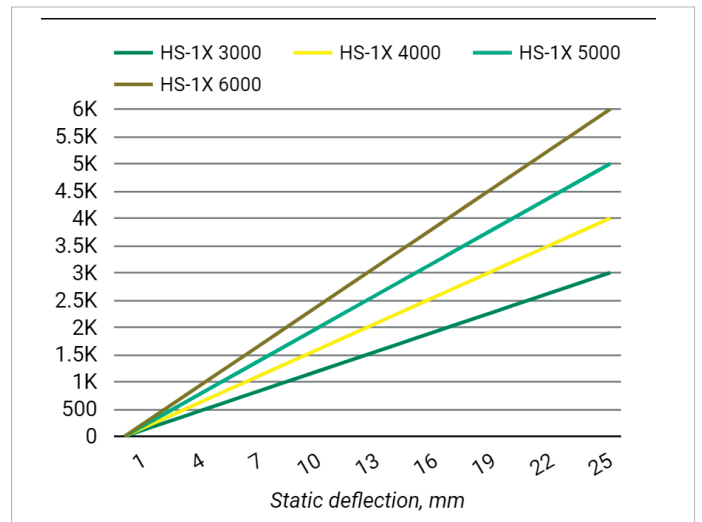
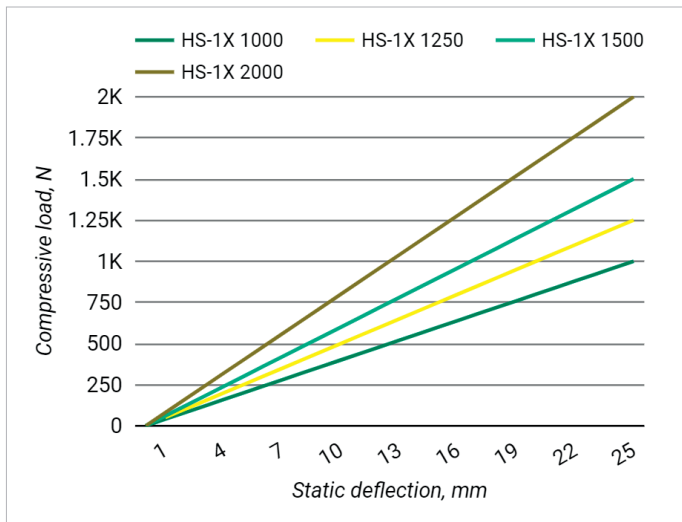
## 1. Product and packaging details

Part No.	Description	Dimension	Piece		Pack 1	
			(pcs)	EAN13	(pcs)	EAN13
2800701000	HS-1X Spring Hanger	1000/M12	1	8719942046091	10	8719942046107
2800701250	HS-1X Spring Hanger	1250/M12	1	8719942046121	10	8719942046138
2800701500	HS-1X Spring Hanger	1500/M12	1	8719942046152	10	8719942046169
2800702000	HS-1X Spring Hanger	2000/M12	1	8719942046183	10	8719942046190
2800703000	HS-1X Spring Hanger	3000/M12	1	8719942046213	10	8719942046220
2800704000	HS-1X Spring Hanger	4000/M12	1	8719942046244	10	8719942046251
2800705000	HS-1X Spring Hanger	5000/M12	1	8719942046275	10	8719942046282
2800706000	HS-1X Spring Hanger	6000/M12	1	8719942046305	10	8719942046312

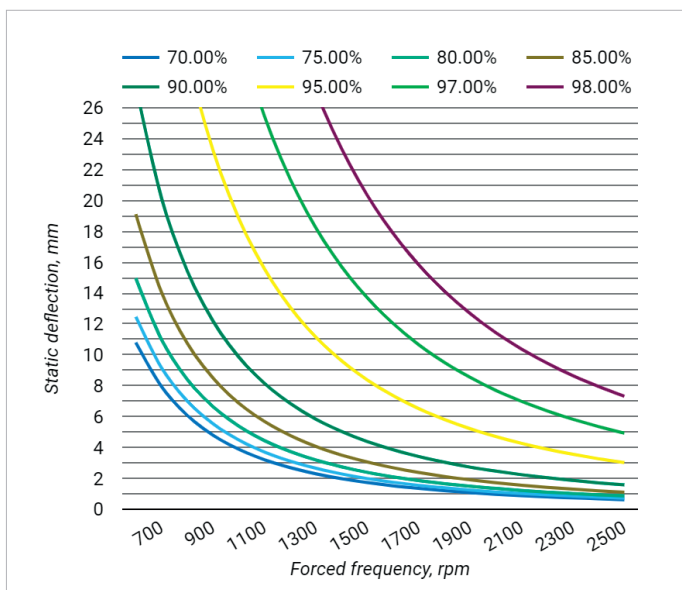
## 2. Performance data

Part No.	Description	Dimension	Max. deflection (mm)	Min. load (N)	Max. load (N)	Min. optimal load (N)	Max. optimal load (N)
2800701000	HS-1X Spring Hanger	1000/M12	25	100	1000	200	900
2800701250	HS-1X Spring Hanger	1250/M12	25	130	1250	250	1150
2800701500	HS-1X Spring Hanger	1500/M12	25	150	1500	300	1380
2800702000	HS-1X Spring Hanger	2000/M12	25	200	2000	400	1840
2800703000	HS-1X Spring Hanger	3000/M12	25	300	3000	600	2760
2800704000	HS-1X Spring Hanger	4000/M12	25	400	4000	800	3680
2800705000	HS-1X Spring Hanger	5000/M12	25	500	5000	1000	4600
2800706000	HS-1X Spring Hanger	6000/M12	25	600	6000	1200	5400

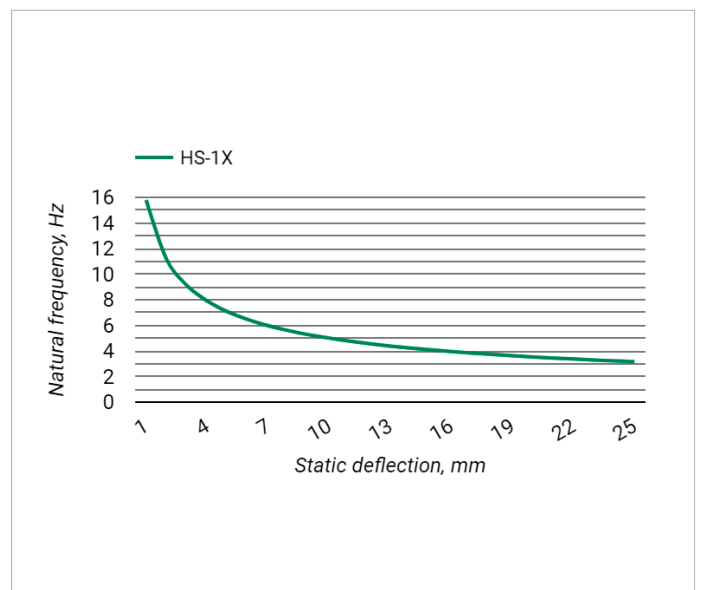
### 2.1 Static deflection



### 2.2 Isolation efficiency



### 2.3 Natural frequency



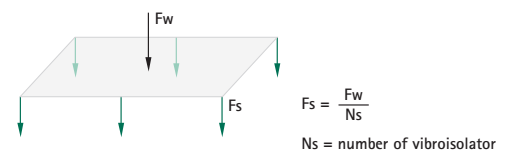
3. Dynamic properties

Description	Value
Damping factor	0.005
Average ratio $K_x / K_z = K_y / K_z$	1
Maximum transient overload % on maximum load	50 %
Working temperature range	-90 °C till 150 °C

4. Estimation of performance

Part No.	Applied load		Deflection (mm)	rpm	Damping efficiency upon disturbing vibration (%)						
	(N)	(~kg)			500	800	1000	1200	1500	2000	2500
	Hz	8.3			13.3	16.7	20.0	25.0	33.3	41.7	
2800701000	800	82	18.4		75.8	91.7	94.9	96.5	97.8	98.8	99.2
	1000	102	23.0		81.5	93.5	95.9	97.2	98.2	99.0	99.4
2800701250	1100	112	20.2		78.4	92.6	95.4	96.8	98.0	98.9	99.3
	1250	127	23.0		81.5	93.5	95.9	97.2	98.2	99.0	99.4
2800701500	1400	143	21.5		79.9	93.0	95.6	97.0	98.1	98.9	99.3
	1500	153	23.0		81.5	93.5	95.9	97.2	98.2	99.0	99.4
2800702000	1750	178	18.3		75.6	91.7	94.8	96.5	97.8	98.8	99.2
	2000	204	20.9		79.3	92.8	95.5	96.9	98.1	98.9	99.3
	2200	224	23.0		81.5	93.5	95.9	97.2	98.2	99.0	99.4
2800703000	2600	265	19.9		78.0	92.4	95.3	96.8	98.0	98.9	99.3
	3000	306	23.0		81.5	93.5	95.9	97.2	98.2	99.0	99.4
2800704000	3250	331	18.7		76.2	91.9	95.0	96.5	97.8	98.8	99.2
	3750	382	21.6		80.0	93.0	95.7	97.0	98.1	98.9	99.3
	4000	408	23.0		81.5	93.5	95.9	97.2	98.2	99.0	99.4
2800705000	5250	535	24.2		82.5	93.8	96.1	97.4	98.3	99.1	99.4
	5750	586	26.5		84.3	94.4	96.5	97.6	98.5	99.1	99.5
	5000	510	23.0		81.5	93.5	95.9	97.2	98.2	99.0	99.4
2800706000	5250	535	20.1		78.3	92.5	95.3	96.8	98.0	98.9	99.3
	5750	586	22.0		80.5	93.2	95.8	97.1	98.2	99.0	99.3
	6000	612	23.0		81.5	93.5	95.9	97.2	98.2	99.0	99.4

- Select vibroisolator load capacity in the table - greater or equal to  $F_s$
- Horizontally to the left you can see the product number of Walraven VibraTek®
- Horizontally to the right, you can read the deflection
- Locate the column with a frequency lower than 2300 rpm
- Read the damping performance at: cross deflection and frequency



V (%)	Description of damping efficiency
99	Excellent
93	Perfect
88	Very good
81	Good
67	Sufficient
20	Medium
0	No change
Resonance	Better without insulation

Hospitals, hotels, facilities cultural (theaters, centers congress, auditorium)	Residential and office buildings, adjoining rooms to living spaces	Normal requirements: cellars, facilities industrial, shopping centers
Low attenuation or negative impact - contact with the Technical Sales Support Department, to get an alternative solution		

## Find out how we can support you

Would you like to find out more about any of the solutions described in this Technical Data Sheet?  
Or would you like to discuss how we could help you find the best possible solution for your project?  
Get in touch today!

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Technical Data Sheet Walraven VibraTek® HS-1X Spring Hanger (INT) – 03/2024 – PDF – Full content subject to modifications  
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