

# KINETICS™

## 1" and 2" Deflection Isolation Hangers Model SH

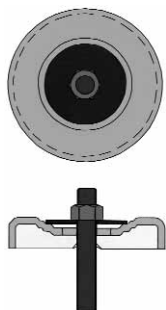
- Epoxy Powder-Coated Bracket and Spring Coil
- Patented, Self-Centering Cap

U.S. Patent number 5,653,426

### Description

Kinetics Model SH Vibration Isolation Hangers are designed to reduce the transmission of vibration and noise produced by suspended equipment and piping. SH Hangers incorporate a high deflection color-coded spring element, a "no short" spring cap, and noise isolation pad, assembled into a stamped or welded hanger bracket. To assure stability, the spring element has a minimum lateral spring stiffness of 1.0 times the rated vertical stiffness. SH Hangers will allow a support rod misalignment through a 30° arc without short circuiting. Isolation brackets will carry a 500% overload without failure. Hangers are available in deflections from 1" to 2" (25 to 51 mm) and in capacities from 35 to 3,500 lbs. (16 to 1588 kg) for 1" and 35 to 3250 lbs. (16 to 1475 kg) for 2" deflection hangers. SH Hangers are effective in isolating vibration produced by low rpm equipment. Kinetics Model SH Hangers are recommended for the isolation of vibration produced by suspended mechanical equipment, in-line and exhaust fans, ductwork, piping, etc.

### How the self-centering no-short cap works:



Indexed steps in spring cap correspond to standard washer diameters for the appropriate rod diameter. The washer and rod stay centered in the cap.



### Application

Kinetics Model SH Hangers are recommended for use in isolating suspending sources of inaudible frequency vibration, located near critical vibration-free areas.

Suspended mechanical equipment such as in-line fans, cabinet fans, and piping and ductwork in close proximity to mechanical equipment are typical uses of Model SH hangers.

Standard Model SH hangers are shipped fully assembled and ready for installation in threaded metal rod suspension systems.

Model SH hangers are available in a wide range of load and static deflection selections, and can be provided with labor-saving accessories for preloading ease in erecting piping at a fixed elevation.

Isolator Type	Spring Color	Rated Capacity Lbs (kg)	Rated Deflection In. (mm)	Spring O.D. In. (mm)	A In. (mm)	B In. (mm)	C In. (mm)	D In. (mm)
SH-1-35	Blue	35 (16)	1.52 (37)	1.75 (45)	3.69 (94)	5.25 (133)	2.25 (57)	.50 (13)
SH-1-70	Green	70 (32)	1.36 (35)	1.75 (45)	3.69 (94)	5.25 (133)	2.25 (57)	.50 (13)
SH-1-125	Gray	125 (57)	1.25 (32)	1.75 (45)	3.69 (94)	5.25 (133)	2.25 (57)	.50 (13)
SH-1-245	Brown	245 (111)	1.19 (30)	1.75 (45)	3.69 (94)	5.25 (133)	2.25 (57)	.50 (13)
SH-1-370	Orange	370 (168)	1.00 (25)	1.75 (45)	3.69 (94)	5.25 (133)	2.25 (57)	.50 (13)
SH-1-500	Beige	500 (227)	1.00 (25)	1.75 (45)	3.69 (94)	5.25 (133)	2.25 (57)	.63 (16)
SH-1-600	Chrome	600 (273)	1.00 (25)	1.75 (45)	3.69 (94)	5.25 (133)	2.25 (57)	.63 (16)
SH-1-700	Beige/Wh	700 (318)	1.00 (25)	1.75 (45)	3.69 (94)	5.25 (133)	2.25 (57)	.63 (16)
SH-1-805	Chr/Wh	805 (366)	1.00 (25)	1.75 (45)	3.69 (94)	5.25 (133)	2.25 (57)	.63 (16)
SH-1-250	Blue	250 (114)	1.79 (45)	3.00 (76)	5.58 (142)	8.59 (218)	3.63 (92)	1.00 (25)
SH-1-450	Green	450 (205)	1.54 (39)	3.00 (76)	5.58 (142)	8.59 (218)	3.63 (92)	1.00 (25)
SH-1-625	Black	625 (284)	1.44 (37)	3.00 (76)	5.58 (142)	8.59 (218)	3.63 (92)	1.00 (25)
SH-1-800	Gray	800 (364)	1.31 (33)	3.00 (76)	5.58 (142)	8.59 (218)	3.63 (92)	1.00 (25)
SH-1-1000	Red	1000 (455)	1.15 (29)	3.00 (76)	5.58 (142)	8.59 (218)	3.63 (92)	1.00 (25)
SH-1-1250	Brown	1250 (568)	1.09 (28)	3.00 (76)	5.58 (142)	8.59 (218)	3.63 (92)	1.00 (25)
SH-1-1700	Orange	1700 (773)	1.00 (25)	3.00 (76)	5.58 (142)	8.59 (218)	3.63 (92)	1.00 (25)
SH-1-2200	Org/Gray	2200 (998)	1.00 (25)	3.00 (76)	5.00 (127)	9.50 (241)	4.75 (121)	1.00 (25)
SH-1-2465	Blue	2465 (1118)	1.00 (25)	3.00 (76)	5.00 (127)	9.50 (241)	4.75 (121)	1.00 (25)
SH-1-2865	Blu/Gray	2865 (1300)	1.00 (25)	3.00 (76)	5.00 (127)	9.50 (241)	4.75 (121)	1.00 (25)
SH-1-3500	Blu/Brn	3500 (1588)	1.00 (25)	3.00 (76)	5.00 (127)	9.50 (241)	4.75 (121)	1.00 (25)
SH-2-35	Blue	35 (16)	2.00 (51)	1.75 (45)	3.69 (94)	7.38 (187)	2.25 (57)	.50 (13)
SH-2-70	Green	70 (32)	2.00 (51)	1.75 (45)	3.69 (94)	7.38 (187)	2.25 (57)	.50 (13)
SH-2-120	Gray	120 (55)	2.00 (51)	1.75 (45)	3.69 (94)	7.38 (187)	2.25 (57)	.50 (13)
SH-2-220	Brown	220 (100)	2.00 (51)	1.75 (45)	3.69 (94)	7.38 (187)	2.25 (57)	.50 (13)
SH-2-260	Blue	260 (118)	2.14 (54)	3.00 (76)	5.58 (142)	8.59 (218)	3.63 (92)	.88 (22)
SH-2-465	Green	465 (211)	2.00 (51)	3.00 (76)	5.58 (142)	8.59 (218)	3.63 (92)	.88 (22)
SH-2-720	Black	720 (328)	2.00 (51)	3.00 (76)	5.58 (142)	8.59 (218)	3.63 (92)	.88 (22)
SH-2-850	White	850 (386)	2.03 (52)	3.00 (76)	5.58 (142)	8.59 (218)	3.63 (92)	.88 (22)
SH-2-1025	Beige	1025 (466)	2.00 (51)	3.00 (76)	5.58 (142)	8.59 (218)	3.63 (92)	.88 (22)
SH-2-1200	Chrome	1200 (456)	2.03 (52)	3.00 (76)	5.58 (142)	8.59 (218)	3.63 (92)	.88 (22)
SH-2-2000	Orange	2000 (907)	2.00 (51)	3.00 (76)	6.00 (152)	12.00 (305)	6.00 (152)	1.00 (25)
SH-2-2500	Blue	2500 (1134)	2.00 (51)	3.00 (76)	6.00 (152)	12.00 (305)	6.00 (152)	1.00 (25)
SH-2-2750	Blu/Blu	2750 (1245)	2.00 (51)	5.00 (127)	6.00 (152)	12.00 (305)	6.00 (152)	1.00 (25)
SH-2-3025	Blu/Grn	3025 (1375)	2.00 (51)	5.00 (127)	6.00 (152)	12.00 (305)	6.00 (152)	1.00 (25)
SH-2-3250	Blu/Blk	3250 (1475)	2.00 (51)	5.00 (127)	6.00 (152)	12.00 (305)	6.00 (152)	1.00 (25)

## Specifications

Vibration isolators for suspended equipment, with minimum static deflection requirement exceeding 0.4" (10 mm), shall be hangers consisting of a free-standing, laterally stable steel spring and elastomeric washer in series, assembled in a stamped or welded steel bracket.

The bracket shall be finished with an epoxy-based powder coating. The manufacturer shall provide independent laboratory testing showing that the bracket with this finish has endured a minimum of 1,000 hours of exposure to salt spray fog testing per ASTM B117 without signs of corrosion.

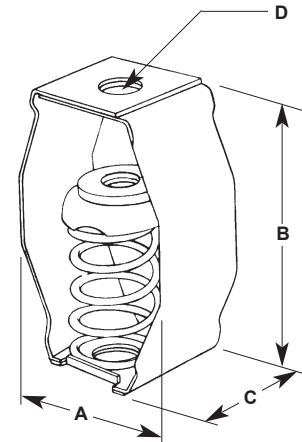
The hanger bracket shall be designed to carry a 500% overload without failure and to allow a support rod misalignment through a 30° arc without metal-to-metal contact or other short circuit.

The isolation hanger shall incorporate spring caps with indexed steps which correspond to the washer diameter of the appropriately sized hanger rod to keep the rod centered in the spring cap and reduce rod misalignment. The spring caps are protected under U.S. patent number 5,653,426.

Springs shall have a minimum lateral stiffness of 1.0 times the rated vertical stiffness.

Springs shall be selected to provide operating static deflections shown on the Vibration Isolation Schedule or as indicated on the project documents. Springs shall be color coded or otherwise identified to indicate load capacity.

Vibration isolation hangers shall be Model SH, as manufactured by Kinetics Noise Control, Inc.



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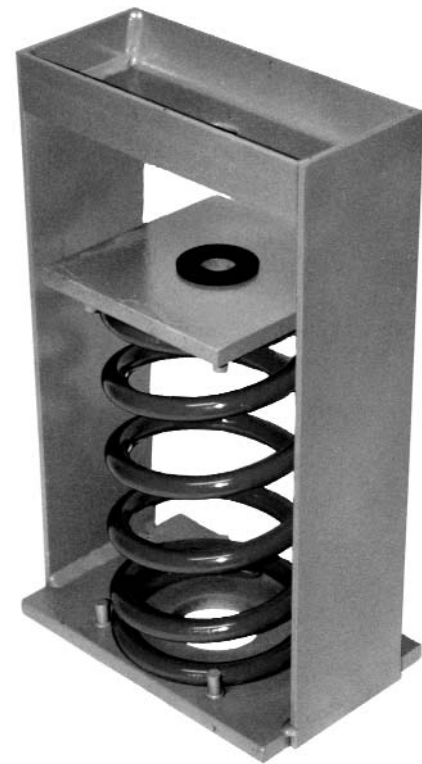
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Kinetics Noise Control, Inc. is continually upgrading the quality of our products. We reserve the right to make changes to this and all products without notice.

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# KINETICS™

## 4" Deflection Isolation Hangers Model SH



### Description

Kinetics Model SH Vibration Isolation Hangers are designed to reduce the transmission of vibration and noise produced by suspended equipment and piping. SH Hangers incorporate a high deflection color-coded spring element, load transfer plate, and noise isolation pad, assembled into a stamped or welded hanger bracket. To assure stability, the spring element has a minimum lateral spring stiffness of 1.0 times the rated vertical stiffness. Springs are epoxy powder coated, with a 1000-hour salt spray rating per ASTM B-117. SH Hangers will allow a support rod misalignment through a 30° arc without short circuiting. Isolation brackets will carry a 500% overload without failure. Hangers are available in deflections of 4.00" (102 mm) and in capacities from 100 to 3850 lbs. (46 to 1747 kg). SH Hangers are effective in isolating vibration produced by low rpm equipment. Kinetics Model SH Hangers are recommended for the isolation of vibration produced by suspended mechanical equipment, in-line and exhaust fans, ductwork, piping, etc.

### Application

Kinetics Model SH Hangers are recommended for use in isolating suspending sources of inaudible frequency vibration located near critical vibration-free areas.

Suspended mechanical equipment such as in-line fans, cabinet fans, and piping and ductwork in close proximity to mechanical equipment are typical uses of Model SH hangers.

Standard Model SH hangers are shipped fully assembled and ready for installation in threaded metal rod suspension systems.

Model SH hangers are available in a wide range of load and static deflection selections, and can be provided with labor saving accessories for preloading, or provided with positioning plates for ease in erecting piping at a fixed elevation.

Hanger Type	Spring Color	Rated Capacity		Rated Deflection		A		B		C		D		E		F	
		lb	kg	in	(mm)	in	(mm)	in	(mm)	in	(mm)	in	(mm)	in	(mm)	in	(mm)
SH-4-100	Gray	100	46	4.00	102	9.38	238	6.00	152	16.00	406	1.13	29	10.00	254	4.00	102
SH-4-250	Blue	250	114	4.00	102	9.38	238	6.00	152	16.00	406	1.13	29	10.00	254	4.00	102
SH-4-500	Green	500	227	4.00	102	9.38	238	6.00	152	16.00	406	1.13	29	10.00	254	4.00	102
SH-4-750	Black	750	341	4.00	102	9.38	238	6.00	152	16.00	406	1.13	29	10.00	254	4.00	102
SH-4-1000	Red	1000	455	4.00	102	9.38	238	6.00	152	16.00	406	1.13	29	10.00	254	4.00	102
SH-4-1250	Brown	1250	568	4.00	102	9.38	238	6.00	152	16.00	406	1.13	29	10.00	254	4.00	102
SH-4-1600	Orange	1600	727	4.00	102	9.38	238	6.00	152	16.00	406	1.13	29	10.00	254	4.00	102
SH-4-2250	Beige	2250	1023	4.00	102	13.50	343	8.00	203	18.50	470	1.25	32	11.50	292	6.00	152
SH-4-2500	Beige/Blu	2500	1136	4.00	102	13.50	343	8.00	203	18.50	470	1.25	32	11.50	292	6.00	152
SH-4-2750	Beige/Grn	2750	1250	4.00	102	13.50	343	8.00	203	18.50	470	1.25	32	11.50	292	6.00	152
SH-4-3000	Beige/Blk	3000	1364	4.00	102	13.50	343	8.00	203	18.50	470	1.25	32	11.50	292	6.00	152
SH-4-3250	Beige/Red	3250	1475	4.00	102	13.50	343	8.00	203	18.50	470	1.25	32	11.50	292	6.00	152
SH-4-3500	Beige/Brn	3500	1588	4.00	102	13.50	343	8.00	203	18.50	470	1.25	32	11.50	292	6.00	152
SH-4-3850	Beige/Org	3850	1747	4.00	102	13.50	343	8.00	203	18.50	470	1.25	32	11.50	292	6.00	152

## Specifications

Vibration isolators for suspended equipment, with minimum static deflection requirement exceeding 0.4" (10 mm) shall be hangers consisting of a free-standing, laterally stable steel spring and elastomeric washer in series, assembled in a stamped or welded steel bracket.

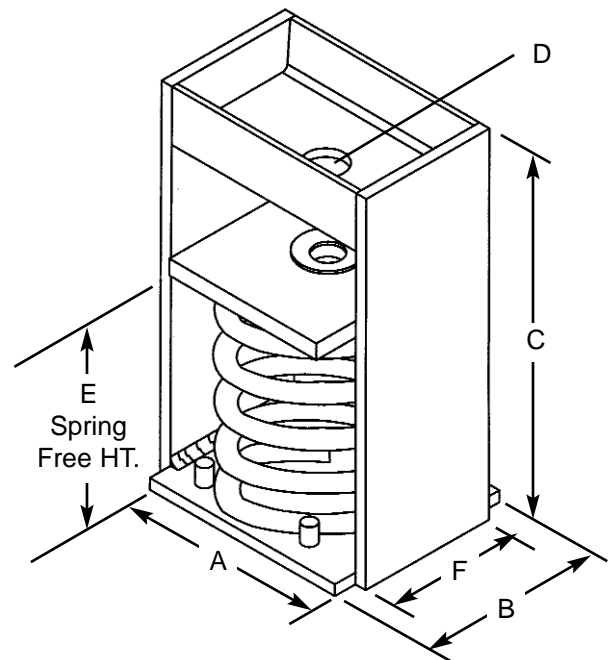
The bracket shall be finished with an epoxy-based powder coating. The manufacturer shall provide independent laboratory testing showing that the bracket with this finish has endured a minimum of 1,000 hours of exposure to salt spray fog testing per ASTM B117 without signs of corrosion.

The hanger bracket shall be designed to carry a 500% overload without failure and to allow a support rod misalignment through a 30° arc without metal-to-metal contact or other short circuit.

Springs shall have a minimum lateral stiffness of 1.0 times the rated vertical stiffness.

Springs shall be selected to provide operating static deflections shown on the Vibration Isolation Schedule or as indicated on the project documents. Springs shall be color coded or otherwise identified to indicate load capacity.

Vibration isolation hangers shall be Model SH, as manufactured by Kinetics Noise Control, Inc.



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