

KINETICS™

1" and 2" Deflection Isolation Hangers Model SH

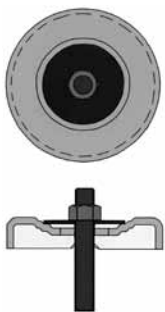
- Polyester Powder Coated Bracket and Spring Coil
- Self-Centering Cap Patent No. 5,653,426

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 featuring the patented *No-Short self-centering cap*.

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.



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.



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.

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 polyester powder coating. The manufacturer shall provide (upon request) 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.

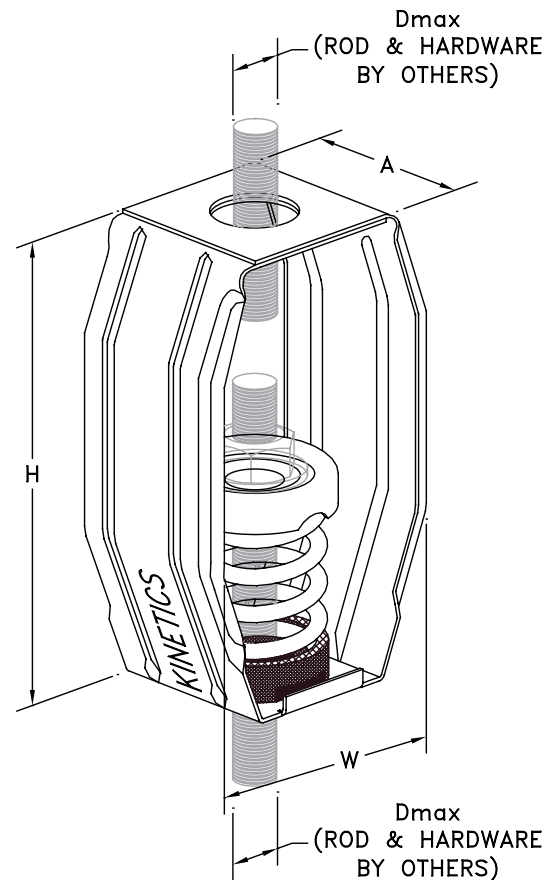
The hanger bracket shall be designed to carry a 500% overload without failure and to allow a support rod misalignment through a 30° arc without metal-to-metal contact or other short circuit.

The isolation hanger shall incorporate spring caps with indexed steps which correspond to the washer diameter of the appropriately sized hanger rod which serve 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.



| Hanger Type | Spring Color | Spring O.D. | | Load | | Deflection | | Free HT | | H | | W | | A | | Dmax | |
|-------------|--------------|-------------|-----|------|------|------------|----|---------|-----|-------|-----|------|-----|------|-----|------|----|
| | | in | mm | lbs | kg | in | mm | in | mm | in | mm | in | mm | in | mm | in | mm |
| SH-1-35 | Blue | 1.75 | 44 | 35 | 16 | 1.52 | 39 | 3.19 | 81 | 5.25 | 133 | 3.69 | 94 | 2.25 | 57 | 0.63 | 16 |
| SH-1-70 | Green | 1.75 | 44 | 70 | 32 | 1.36 | 35 | 3.19 | 81 | 5.25 | 133 | 3.69 | 94 | 2.25 | 57 | 0.63 | 16 |
| SH-1-125 | Gray | 1.75 | 44 | 125 | 57 | 1.23 | 31 | 3.19 | 81 | 5.25 | 133 | 3.69 | 94 | 2.25 | 57 | 0.63 | 16 |
| SH-1-245 | Brown | 1.75 | 44 | 245 | 111 | 1.19 | 30 | 3.19 | 81 | 5.25 | 133 | 3.69 | 94 | 2.25 | 57 | 0.63 | 16 |
| SH-1-370 | Orange | 1.75 | 44 | 370 | 168 | 0.96 | 24 | 3.19 | 81 | 5.25 | 133 | 3.69 | 94 | 2.25 | 57 | 0.63 | 16 |
| SH-1-500 | Beige | 1.75 | 44 | 500 | 227 | 1.00 | 25 | 3.19 | 81 | 5.25 | 133 | 3.69 | 94 | 2.25 | 57 | 0.63 | 16 |
| SH-1-600 | Chrome | 1.75 | 44 | 600 | 272 | 1.00 | 25 | 3.19 | 81 | 5.25 | 133 | 3.69 | 94 | 2.25 | 57 | 0.63 | 16 |
| SH-1-700 | Beige/Wht | 1.75 | 44 | 700 | 318 | 1.00 | 25 | 3.19 | 81 | 5.25 | 133 | 3.69 | 94 | 2.25 | 57 | 0.63 | 16 |
| SH-1-805 | Chrm/Wht | 1.75 | 44 | 805 | 365 | 1.01 | 26 | 3.19 | 81 | 5.25 | 133 | 3.69 | 94 | 2.25 | 57 | 0.63 | 16 |
| SH-1-50 | Beige | 3.00 | 76 | 50 | 23 | 1.00 | 25 | 4.20 | 107 | 8.59 | 218 | 5.58 | 142 | 3.63 | 92 | 1.00 | 25 |
| SH-1-100 | Chrome | 3.00 | 76 | 100 | 45 | 1.00 | 25 | 4.20 | 107 | 8.59 | 218 | 5.58 | 142 | 3.63 | 92 | 1.00 | 25 |
| SH-1-250 | Blue | 3.00 | 76 | 250 | 113 | 1.79 | 45 | 4.20 | 107 | 8.59 | 218 | 5.58 | 142 | 3.63 | 92 | 1.00 | 25 |
| SH-1-450 | Green | 3.00 | 76 | 450 | 204 | 1.54 | 39 | 4.20 | 107 | 8.59 | 218 | 5.58 | 142 | 3.63 | 92 | 1.00 | 25 |
| SH-1-625 | Black | 3.00 | 76 | 625 | 283 | 1.44 | 37 | 4.20 | 107 | 8.59 | 218 | 5.58 | 142 | 3.63 | 92 | 1.00 | 25 |
| SH-1-800 | Gray | 3.00 | 76 | 800 | 363 | 1.31 | 33 | 4.20 | 107 | 8.59 | 218 | 5.58 | 142 | 3.63 | 92 | 1.00 | 25 |
| SH-1-1000 | Red | 3.00 | 76 | 1000 | 454 | 1.15 | 29 | 4.20 | 107 | 8.59 | 218 | 5.58 | 142 | 3.63 | 92 | 1.00 | 25 |
| SH-1-1250 | Brown | 3.00 | 76 | 1250 | 567 | 1.09 | 28 | 4.20 | 107 | 8.59 | 218 | 5.58 | 142 | 3.63 | 92 | 1.00 | 25 |
| SH-1-1700 | Orange | 3.00 | 76 | 1700 | 771 | 0.95 | 24 | 4.20 | 107 | 8.59 | 218 | 5.58 | 142 | 3.63 | 92 | 1.00 | 25 |
| SH-1-2200 | Org/Gray | 3.00 | 76 | 2200 | 998 | 1.00 | 26 | 4.20 | 107 | 9.50 | 241 | 5.00 | 127 | 4.75 | 121 | 1.00 | 25 |
| SH-1-2465 | Blue | 3.00 | 76 | 2465 | 1118 | 1.00 | 25 | 4.20 | 107 | 9.50 | 241 | 5.00 | 127 | 4.75 | 121 | 1.00 | 25 |
| SH-1-2865 | Blue/Gry | 3.00 | 76 | 2865 | 1300 | 1.00 | 25 | 4.20 | 107 | 9.50 | 241 | 5.00 | 127 | 4.75 | 121 | 1.00 | 25 |
| SH-1-3500 | Blue/Brn | 3.00 | 76 | 3500 | 1588 | 1.00 | 25 | 4.20 | 107 | 9.50 | 241 | 5.00 | 127 | 4.75 | 121 | 1.00 | 25 |
| SH-2-35 | Blue | 1.75 | 44 | 35 | 16 | 2.00 | 51 | 4.13 | 105 | 7.38 | 187 | 3.69 | 94 | 2.25 | 57 | 0.50 | 13 |
| SH-2-70 | Green | 1.75 | 44 | 70 | 32 | 2.00 | 51 | 4.13 | 105 | 7.38 | 187 | 3.69 | 94 | 2.25 | 57 | 0.50 | 13 |
| SH-2-120 | Gray | 1.75 | 44 | 120 | 54 | 2.00 | 51 | 4.13 | 105 | 7.38 | 187 | 3.69 | 94 | 2.25 | 57 | 0.50 | 13 |
| SH-2-220 | Brown | 1.75 | 44 | 220 | 100 | 2.00 | 51 | 4.13 | 105 | 7.38 | 187 | 3.69 | 94 | 2.25 | 57 | 0.50 | 13 |
| SH-2-260 | Blue | 3.00 | 76 | 260 | 118 | 2.21 | 56 | 4.20 | 107 | 8.59 | 218 | 5.58 | 142 | 3.63 | 92 | 0.88 | 22 |
| SH-2-465 | Green | 3.00 | 76 | 465 | 211 | 2.01 | 51 | 4.20 | 107 | 8.59 | 218 | 5.58 | 142 | 3.63 | 92 | 0.88 | 22 |
| SH-2-720 | Black | 3.00 | 76 | 720 | 327 | 2.07 | 53 | 4.20 | 107 | 8.59 | 218 | 5.58 | 142 | 3.63 | 92 | 0.88 | 22 |
| SH-2-850 | White | 3.00 | 76 | 850 | 386 | 1.97 | 50 | 4.25 | 108 | 8.59 | 218 | 5.58 | 142 | 3.63 | 92 | 0.88 | 22 |
| SH-2-1025 | Beige | 3.00 | 76 | 1025 | 465 | 1.99 | 51 | 4.25 | 108 | 8.59 | 218 | 5.58 | 142 | 3.63 | 92 | 0.88 | 22 |
| SH-2-1200 | Chrome | 3.00 | 76 | 1200 | 544 | 2.00 | 51 | 4.50 | 114 | 8.59 | 218 | 5.58 | 142 | 3.63 | 92 | 0.88 | 22 |
| SH-2-2000 | Orange | 5.00 | 127 | 2000 | 909 | 2.00 | 51 | 7.00 | 178 | 12.00 | 305 | 6.00 | 152 | 6.00 | 152 | 1.00 | 25 |
| SH-2-2500 | Blue | 5.00 | 127 | 2500 | 1136 | 2.00 | 51 | 7.00 | 178 | 12.00 | 305 | 6.00 | 152 | 6.00 | 152 | 1.00 | 25 |
| SH-2-2750 | Blu/Blu | 5.00 | 127 | 2750 | 1250 | 2.00 | 51 | 7.00 | 178 | 12.00 | 305 | 6.00 | 152 | 6.00 | 152 | 1.00 | 25 |
| SH-2-3025 | Blu/Grn | 5.00 | 127 | 3025 | 1375 | 2.02 | 51 | 7.00 | 178 | 12.00 | 305 | 6.00 | 152 | 6.00 | 152 | 1.00 | 25 |
| SH-2-3250 | Blu/Blk | 5.00 | 127 | 3250 | 1477 | 2.00 | 51 | 7.00 | 178 | 12.00 | 305 | 6.00 | 152 | 6.00 | 152 | 1.00 | 25 |



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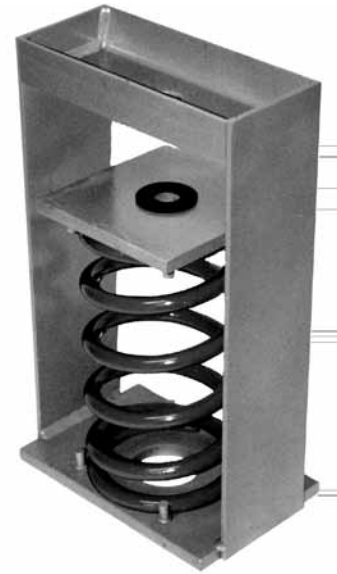
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KINETICS™

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 polyester 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 Load | | Deflection | | Free HT | | Spring O.D. | | H | | W | | A | | Dmax | |
|-------------|--------------|------------|------|------------|-----|---------|-----|-------------|-----|-------|-----|-------|-----|------|-----|------|----|
| | | lbs | kg | in | mm | in | mm | in | mm | in | mm | in | mm | in | mm | in | mm |
| SH-4-100 | Gray | 100 | 45 | 4.00 | 102 | 10.00 | 254 | 5.63 | 143 | 16.00 | 406 | 9.38 | 238 | 6.00 | 152 | 0.88 | 22 |
| SH-4-250 | Blue | 250 | 114 | 4.00 | 102 | 10.00 | 254 | 5.63 | 143 | 16.00 | 406 | 9.38 | 238 | 6.00 | 152 | 0.88 | 22 |
| SH-4-500 | Green | 500 | 227 | 4.00 | 102 | 10.00 | 254 | 5.63 | 143 | 16.00 | 406 | 9.38 | 238 | 6.00 | 152 | 0.88 | 22 |
| SH-4-750 | Black | 750 | 341 | 4.00 | 102 | 10.00 | 254 | 5.63 | 143 | 16.00 | 406 | 9.38 | 238 | 6.00 | 152 | 0.88 | 22 |
| SH-4-1000 | Red | 1000 | 454 | 4.00 | 102 | 10.00 | 254 | 5.63 | 143 | 16.00 | 406 | 9.38 | 238 | 6.00 | 152 | 0.88 | 22 |
| SH-4-1250 | Brown | 1250 | 568 | 4.00 | 102 | 10.00 | 254 | 5.63 | 143 | 16.00 | 406 | 9.38 | 238 | 6.00 | 152 | 0.88 | 22 |
| SH-4-1600 | Orange | 1600 | 726 | 4.00 | 102 | 10.00 | 254 | 5.63 | 143 | 16.00 | 406 | 9.38 | 238 | 6.00 | 152 | 0.88 | 22 |
| SH-4-2250 | Beige | 2250 | 1023 | 4.00 | 102 | 11.50 | 292 | 8.00 | 203 | 18.50 | 470 | 13.50 | 343 | 8.00 | 203 | 1.00 | 25 |
| SH-4-2500 | Bge/Blu | 2500 | 1135 | 4.00 | 102 | 11.50 | 292 | 8.00 | 203 | 18.50 | 470 | 13.50 | 343 | 8.00 | 203 | 1.00 | 25 |
| SH-4-2750 | Bge/Grn | 2750 | 1249 | 4.00 | 102 | 11.50 | 292 | 8.00 | 203 | 18.50 | 470 | 13.50 | 343 | 8.00 | 203 | 1.00 | 25 |
| SH-4-3000 | Bge/Blk | 3000 | 1362 | 4.00 | 102 | 11.50 | 292 | 8.00 | 203 | 18.50 | 470 | 13.50 | 343 | 8.00 | 203 | 1.00 | 25 |
| SH-4-3250 | Bge/Red | 3250 | 1476 | 4.00 | 102 | 11.50 | 292 | 8.00 | 203 | 18.50 | 470 | 13.50 | 343 | 8.00 | 203 | 1.00 | 25 |
| SH-4-3500 | Bge/Brn | 3500 | 1589 | 4.00 | 102 | 11.50 | 292 | 8.00 | 203 | 18.50 | 470 | 13.50 | 343 | 8.00 | 203 | 1.00 | 25 |
| SH-4-3850 | Bge/org | 3850 | 1748 | 4.00 | 102 | 11.50 | 292 | 8.00 | 203 | 18.50 | 470 | 13.50 | 343 | 8.00 | 203 | 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.

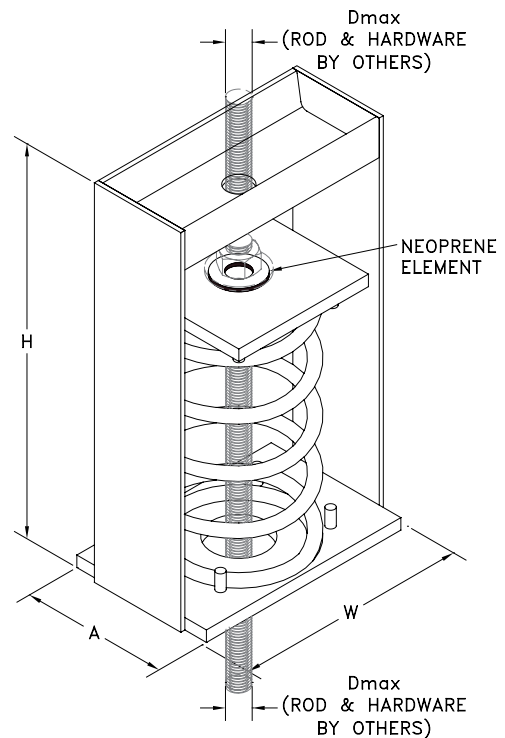
The bracket shall be finished with an polyester powder coating. The manufacturer shall provide independent laboratory testing showing that the bracket with this finish has endured a minimum of 1,000 hours of exposure to salt spray fog testing per ASTM B117 without signs of corrosion.

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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