



Wire Rope Technology

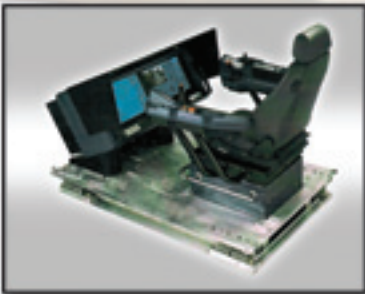
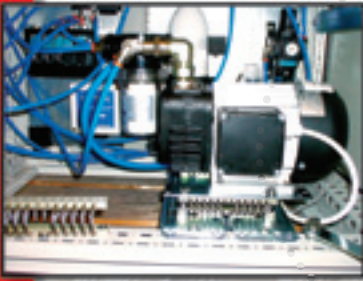


Energy Absorption • Vibration Isolation • Noise Attenuation

Wire Rope Isolator Series
Compact Rope Isolator Series
HERM (High Energy Rope Mounts)
Custom Engineered Products

ENIDINE

An **IMC** Company



WR and HERM Applications:

- Carts, Transporters & Gurneys
- Chemical Processing Equipment
- Chimneys, Scrubbers & Vessels
- Electronic Cabinets
- Navigation Equipment
- Over-the-road Transport
- Power Plant Piping Suspension
- Pump, Generator & Compressor Isolation
- Seismic Isolation
- Shipping Cases, Skids & Containers
- Transportable Shelters

CR Applications:

- Audio/Visual Equipment
- Catering Carts
- Communications Packages
- Medical Devices
- Sensitive Electronic Equipment
- Security Cameras
- Hard Drives / CD-ROM Drives
- Electronics Production

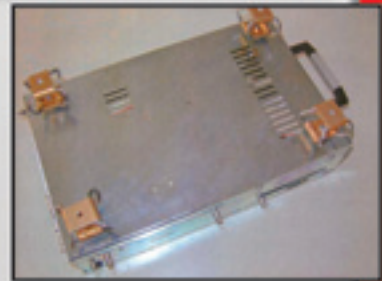


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Enidine, a preferred source for energy absorption and vibration isolation solutions, offers a full range of Wire Rope, Compact Wire Rope Isolator and HERM (High Energy Rope Mount) products, each designed to reduce the harmful effects of shock and vibration.



U.S. Patents 5,549,285
6,290,217
6,244,579

Need Assistance? Enidine is ready to answer your questions, feel free to contact us at:

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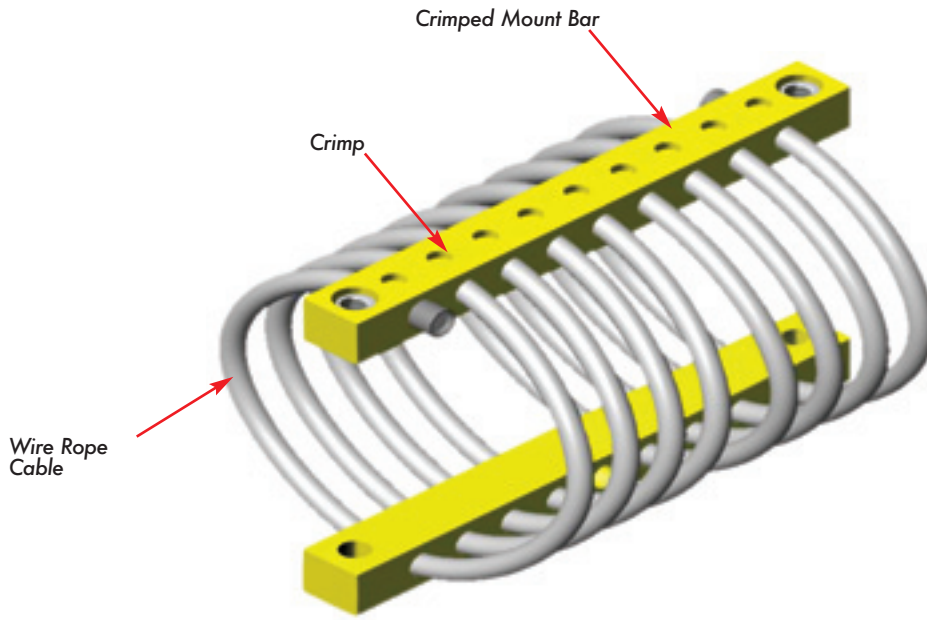


U.S. Patents 5,549,285

Wire Rope Isolators

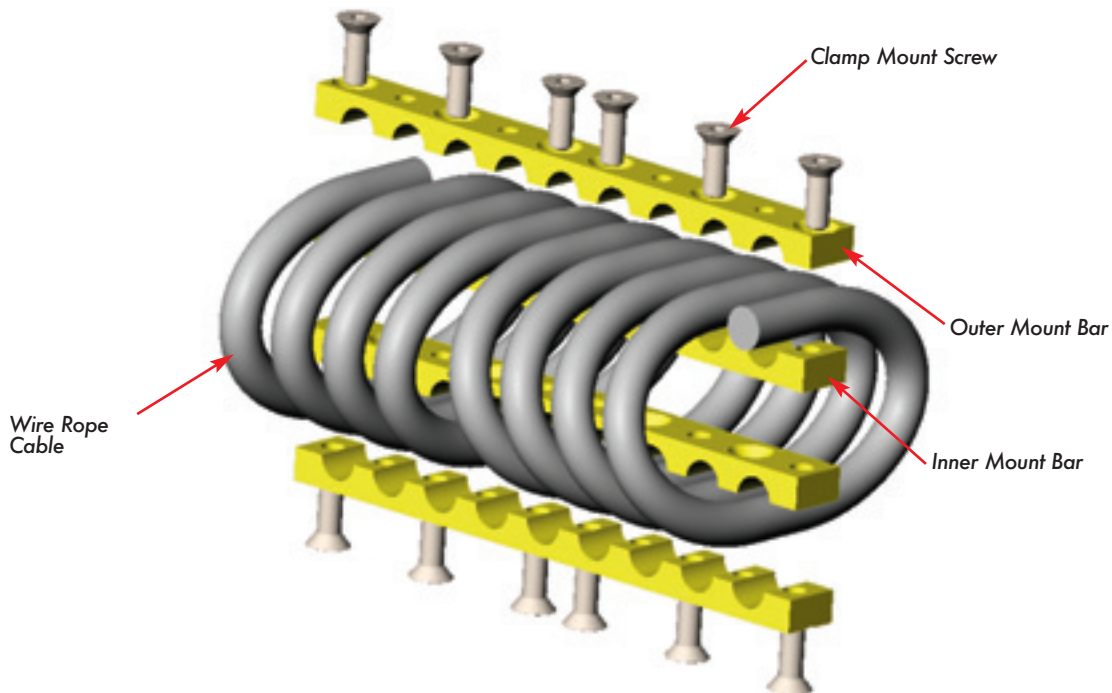
Standard Wire Rope Isolators are comprised of stainless steel stranded cable threaded through aluminum alloy retaining bars that are mounted for effective shock and vibration isolation. With their corrosion resistant, all-metal construction, Enidine Wire Rope Isolators are environmentally stable, high-performance shock and vibration isolators that are unaffected by temperature extremes, chemicals, oils, ozone and abrasives.

Featuring a patented crimping pattern, versatile mounting options and a variety of sizes, these helical isolator products can help ensure that your systems can effectively meet performance requirements in Commercial, Industrial, and Defense industries, including MIL-STD-810, MIL-STD-167, MIL-S-901D, MIL-E-5400, STANAG-042, BV43-44 and DEF-STND 0755. For more information, please refer to our "Wire Rope Isolator Sizing Information" on pages 5-6 to assist you in selecting a model for your application.



Crimp Models (WR2 – WR8):

Enidine's patented crimp design lowers cost by using fewer mount bars when compared to the clamp design, no assembly hardware, and reduced assembly time.



Clamp Models (WR12 – WR40):

Enidine's clamp bar models are constructed by clamping the wire rope between two fastened mount bars.

Materials and Finishes:

Standard: Wire Rope: 302/304 Stainless Steel
 Mount Bars: 6061-T6 Aluminum, Chemical Conversion Coated per MIL-C-5541, Class 1A
 Hardware: Alloy Steel per ASTM F835, Zinc Plated (WR12–WR40 Series)
 Thread: Stainless Self Clinching Insert (WR2–WR8 Series), Threaded Bar (WR12–WR40 Series)

Optional: Wire Rope: Galvanized or Nylon Coated Stainless
 Mount Bars: 6061-T6 Aluminum, Anodized per MIL-A-8625, Type II, Class 1
 302/304 Stainless Steel per ASTM A276, Passivated
 Hardware: 302/304 Stainless Steel (when stainless steel bars are specified) (WR12 – WR40)
 Threads: Stainless Steel Helical Inserts, Free Running or Self Locking (WR3 – WR40)
 Threaded Aluminum (WR2 – WR8)

Special: Consult Enidine

Isolator Options:

Mounting: Enidine offers a full range of mounting combinations of thru-hole, countersunk, and threaded bars. All configurations are available in either Imperial or Metric styles. Add an "M" after the mounting option for Metric. Some models have reduced mounting options available due to limited fastener installation space. Consult Enidine if a preferred mounting configuration is not listed.

Loops: Enidine's wire rope isolators can be purchased with the full number of loops, or as few as 2-Loops. The number of loops is indicated in the isolator part number. Performance is provided for full loop isolators. Performance for reduced loop isolators can be obtained by a simple ratio.

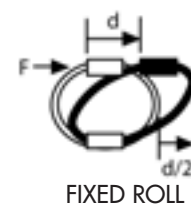
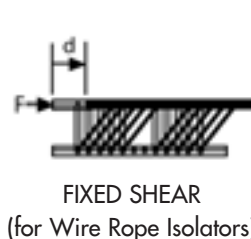
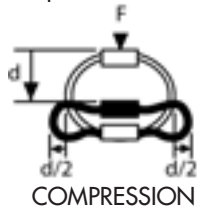
Bellmouth: Enidine's wire rope isolators are available with a "bellmouth" option. The bellmouth feature includes mount bars with radii manufactured into the wire rope hole edges. This option is recommended for high fatigue applications. Add an "R" to the end of the part number.

Performance:**Stiffness (Kv or Ks):**

Wire rope isolators exhibit non-linear stiffness behavior. Small deflections, usually associated with vibration isolation, will have a different spring rate than larger shock deflections. Enidine publishes typical vibration stiffness values (Kv), and average shock stiffness values (Ks) within the catalog. These values can be used with the provided equations listed on Page 6 to predict system performance. The stiffness values listed in the catalog are for full-loop versions. For reduced loop versions, ratio the stiffness by dividing the number of desired loops by the number of full loops.

Isolator Axes:

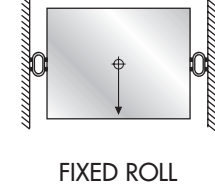
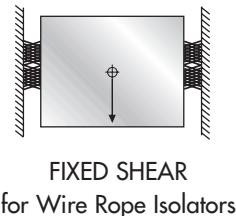
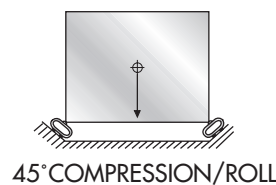
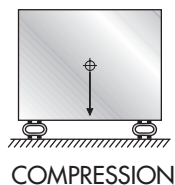
Wire rope isolators are multi-axis isolators. The diagram below includes load axis definitions and deflection considerations.



Damping: Typically 5-15%, depending on size and input level. For specific damping considerations, please consult Enidine.

Mounting Orientation:

The diagrams below illustrate typical mounting orientations.

**Stabilizers:**

Stabilizers are used to control deflections of tall supported masses. Stabilizers are typically recommended when the height equals 2-times the width or depth dimension. In most applications, the quantity of stabilizers required are half as many as the base isolators, and selected one size softer than the base isolators.

APPLICATION WORKSHEET - INPUTS IMPERIAL/METRIC
PART I: SYSTEM DATA:

- Total Supported Load (W_T):
 $W_T = \text{_____ lbs.}$
 $W_T = \text{_____ Kg} \times 9.81 = \text{_____ N}$
- Number of Isolators (n):
 $n = \text{_____}$
- Static Load per Isolator (W):
 $W = \frac{W_T}{n}$
* Assumes a central CG
- Load Axis: Compression
 Shear or Roll
 45° Compression/Roll

IMPERIAL
METRIC

W = _____ lbs.*

W = _____ N*

Load Axis

Load Axis

PART II: VIBRATION SIZING:

- Input Excitation Frequency
 $(f_i) = \text{_____ Hz} \left(= \frac{\text{rpm}}{60} \right)$
- System Response Natural Frequency for 80% isolation:
 $f_n = \frac{f_i}{3.0} = \text{_____ Hz}$
- Maximum Isolator Vibration Stiffness: (K_v)
 $K_v = \frac{W (2\pi f_n)^2}{g}$
 $g = 386 \text{ in./sec}^2 \text{ or } 9.81 \text{ m/sec}^2$
- Select an isolator by comparing calculated values with technical data for the desired load axis provided in tables for each isolator.
 a.) Calculated "W" must be less than the isolator's max static load
 and
 b.) Isolator's vibration stiffness must be less than the calculated maximum K_v

 K_v = _____ lbs./in.

 K_v = _____ N/m

PART III: SHOCK SIZING:

- Maximum Allowable Transmitted Acceleration:
 $A_T = \text{_____ G's}$
- Shock Input Velocity:
 $V = \text{_____ in./sec.}$
 $V = \text{_____ m/sec.}$
 Free Fall Impact:
 $V = \sqrt{2gh}$
 $g = 386 \text{ in./sec.}^2 \text{ or } 9.81 \text{ m/sec.}^2$
 $h = \text{Drop Height (in. or m)}$

- Min. Isolator Response Deflection:
 $D_{\min} = \frac{V^2}{g(A_T)}$

 D_{min} = _____ in.

 D_{min} = _____ m

- Maximum Isolator Shock Stiffness:
 $K_s = \frac{W(V/D_{\min})^2}{g}$

 K_s = _____ lbs./in.

 K_s = _____ N/m

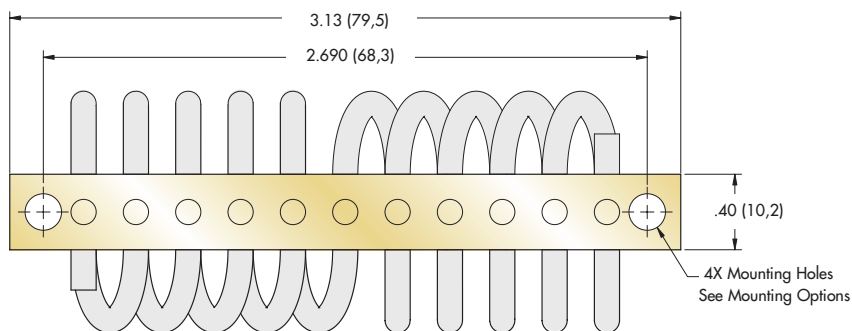
- Select an isolator by comparing calculated values with technical data for the desired load axis provided in tables for each isolator.
 a.) Calculated "W" must be less than the isolator's max static load
 and
 b.) Calculated D_{min} must be less than the isolator's max deflection
 Note: Metric deflections are calculated in meters (m) and technical data is in millimeters (mm).
 and
 c.) Isolator's shock stiffness must be less than calculated maximum "K_s"

- Check actual deflection using "K_s" from technical data to ensure that the isolator's max deflection is not exceeded.
 $D_{\text{actual}} = \sqrt{\frac{V}{K_s(\text{Isolator})g}}$

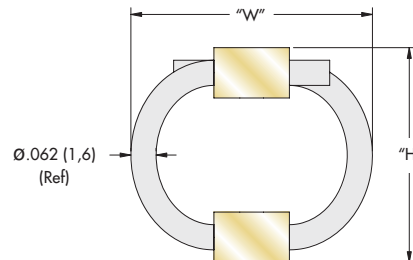
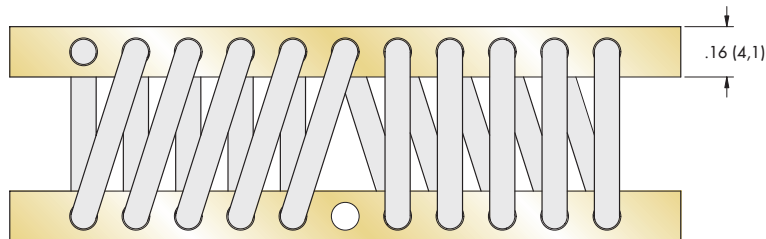
 D_{actual} = _____ in.

 D_{actual} = _____ m

- If isolator's max deflection is exceeded, select another isolator and repeat steps 5 and 6.

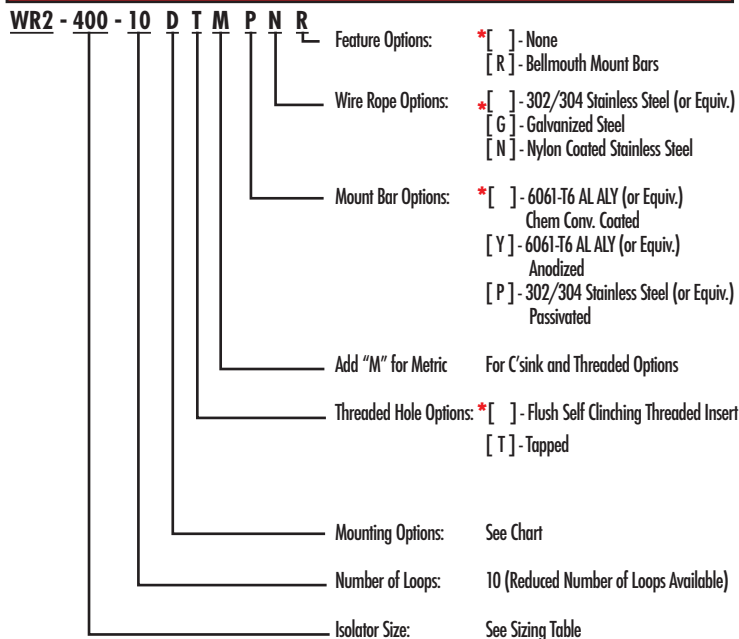


Note: Dimensions are in inches (mm)
Tolerances are ± .010 (± .25mm)

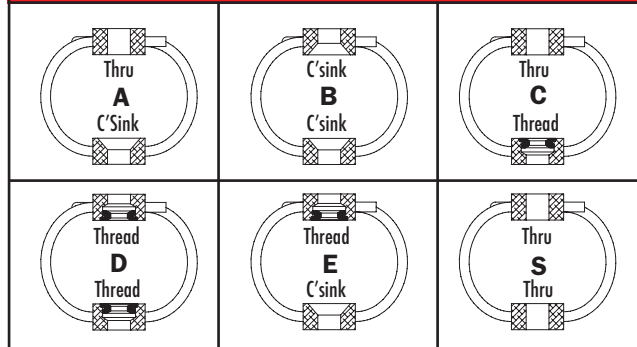


Size	Height "H" in. (mm)	Width (Ref) "W" in. (mm)	Unit Weight Lbs. (Kg)	Mounting Options	Thru Hole in. (mm)	Thread in. (mm)	C'sink Imperial (Metric)
WR2-100	0.70 (18)	1.00 (25)	0.05 (0,02)	B, D, E	Ø.185 ± .005 (Ø4,7 ± 0,13)	#8-32 UNC (M4 X 0,7)	82° (90°)
WR2-200	0.80 (20)	1.10 (28)	0.05 (0,02)	A, B, C, D, E, S			
WR2-400	1.00 (25)	1.20 (30)	0.07 (0,03)				
WR2-600	1.10 (28)	1.30 (33)	0.07 (0,03)				
WR2-700	1.20 (30)	1.40 (36)	0.07 (0,03)				
WR2-800	1.30 (33)	1.50 (38)	0.07 (0,03)				

Model Number Ordering Code



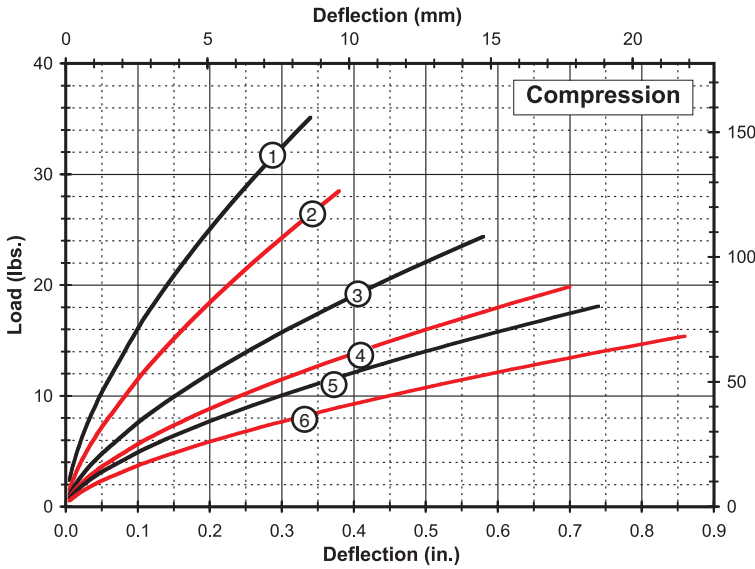
Mounting Options



- Maximum recommended torque for standard threaded insert is 6 in.-lbs. (0,7 Nm)
- Operating Temperature Range: -150°F to 500°F (-100°C to 260°C)
- U.S. Patent 5,549,285

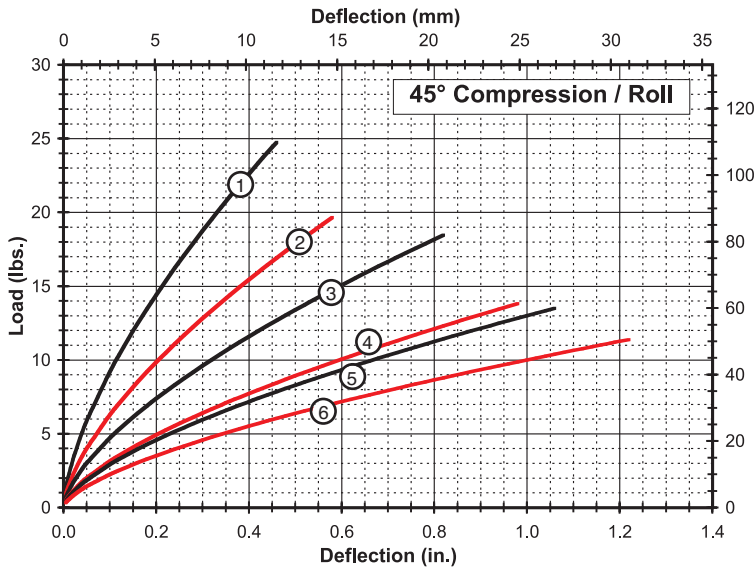
* Standard features. Any non-standard items may require longer lead times. Call for quotation.

Static Load vs. Deflection



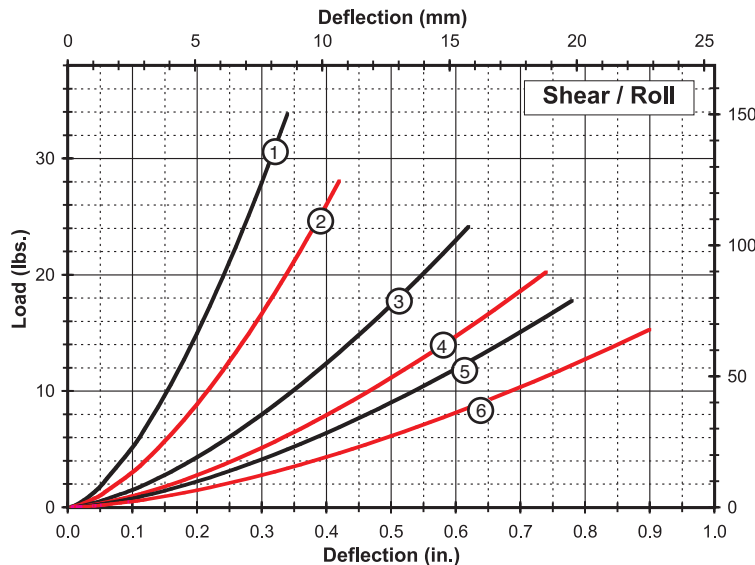
Compression

Curve	Model	Max Static Load Lbs. (N)	Max Deflection in. (mm)	Kv (vibration) Lbs./in. (kN/m)	Ks (shock) Lbs./in. (kN/m)
1	WR2-100-10	10.5 (47)	0.34 (8,6)	205 (36)	125 (22)
2	WR2-200-10	8.0 (36)	0.38 (9,7)	145 (25)	90 (16)
3	WR2-400-10	7.0 (31)	0.58 (14,7)	95 (17)	50 (8,8)
4	WR2-600-10	6.0 (27)	0.70 (17,8)	70 (12)	35 (6,1)
5	WR2-700-10	5.0 (22)	0.74 (18,8)	60 (11)	30 (5,3)
6	WR2-800-10	4.5 (20)	0.86 (21,8)	45 (7,9)	22 (3,9)



45° Compression/Roll

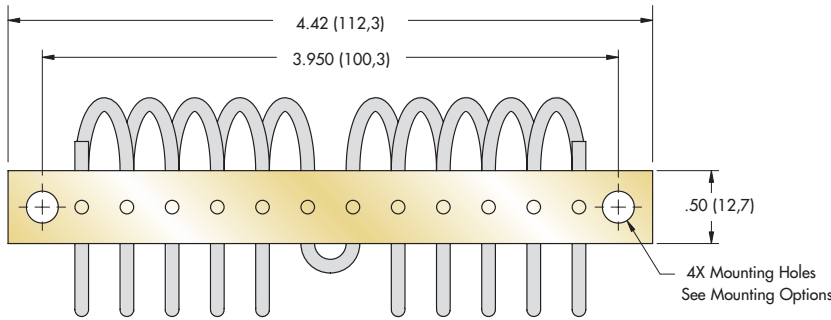
Curve	Model	Max Static Load Lbs. (N)	Max Deflection in. (mm)	Kv (vibration) Lbs./in. (kN/m)	Ks (shock) Lbs./in. (kN/m)
1	WR2-100-10	7.5 (33)	0.46 (11,7)	115 (20)	65 (11,4)
2	WR2-200-10	5.5 (24)	0.58 (14,7)	80 (14)	40 (7,0)
3	WR2-400-10	5.5 (24)	0.82 (20,8)	60 (11)	27 (4,7)
4	WR2-600-10	4.0 (18)	0.98 (24,9)	40 (7,0)	17 (3,0)
5	WR2-700-10	4.0 (18)	1.06 (26,9)	35 (6,1)	15 (2,6)
6	WR2-800-10	3.5 (16)	1.22 (31,0)	30 (5,3)	11 (1,9)



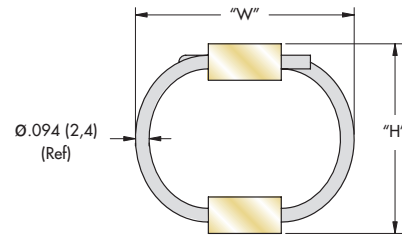
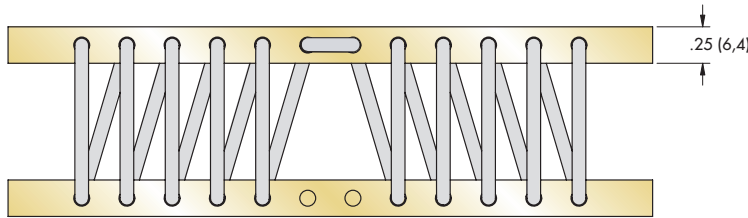
Shear/Roll

Curve	Model	Max Static Load Lbs. (N)	Max Deflection in. (mm)	Kv (vibration) Lbs./in. (kN/m)	Ks (shock) Lbs./in. (kN/m)
1	WR2-100-10	5.0 (22)	0.34 (8,6)	80 (14)	80 (14)
2	WR2-200-10	4.0 (18)	0.42 (10,7)	50 (8,8)	50 (8,8)
3	WR2-400-10	3.5 (16)	0.62 (15,7)	30 (5,3)	30 (5,3)
4	WR2-600-10	3.0 (13)	0.74 (18,8)	22 (3,9)	22 (3,9)
5	WR2-700-10	3.0 (13)	0.78 (19,8)	18 (3,2)	18 (3,2)
6	WR2-800-10	2.5 (11)	0.90 (22,9)	13 (2,3)	13 (2,3)

Note: Performance provided for full loop models with standard (302/304) stainless steel cable. Consult ENIDINE for other options. Do not extrapolate curves.

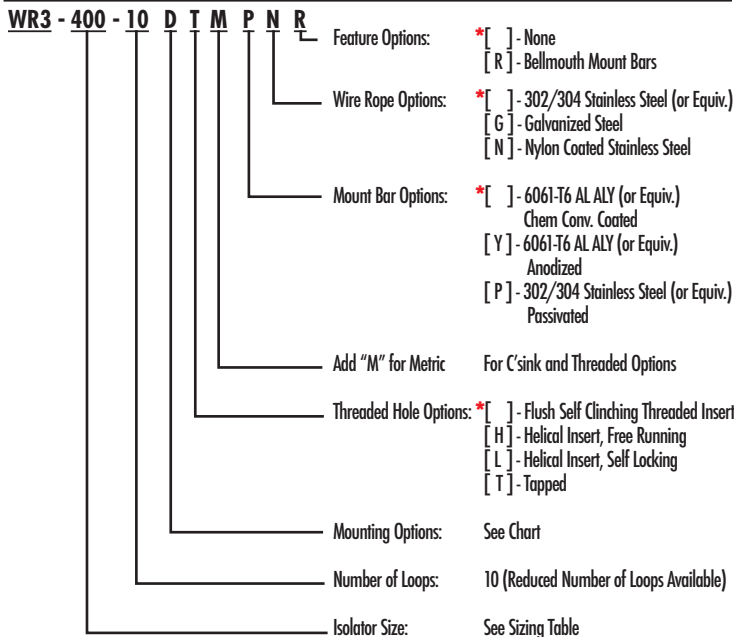


Note: Dimensions are in inches (mm)
Tolerances are ± .010 (± .25mm)

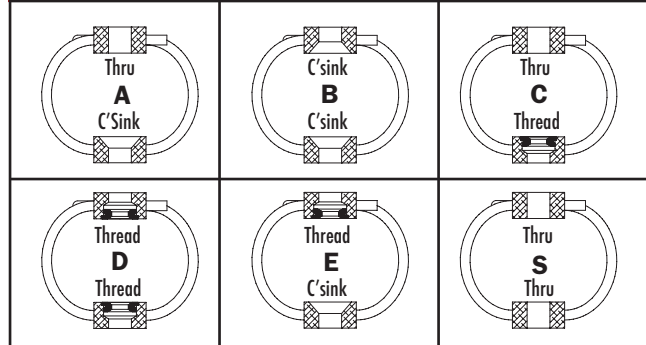


Size	Height "H" in. (mm)	Width (Ref) "W" in. (mm)	Unit Weight Lbs. (Kg)	Mounting Options	Thru Hole in. (mm)	Thread in. (mm)	C'sink Imperial (Metric)
WR3-100	0.90 (23)	1.10 (28)	0.14 (0,06)	B, D, E	Ø.210 ± .005 (Ø5,3 ± 0,13)	#10-32 UNF (M5 X 0,8)	82° (90°)
WR3-200	1.00 (25)	1.20 (30)	0.15 (0,07)	A, B, C, D, E, S			
WR3-400	1.10 (28)	1.30 (33)	0.15 (0,07)				
WR3-600	1.30 (33)	1.50 (38)	0.15 (0,07)				
WR3-700	1.40 (36)	1.60 (41)	0.16 (0,07)				
WR3-800	1.50 (38)	1.70 (43)	0.18 (0,08)				

Model Number Ordering Code



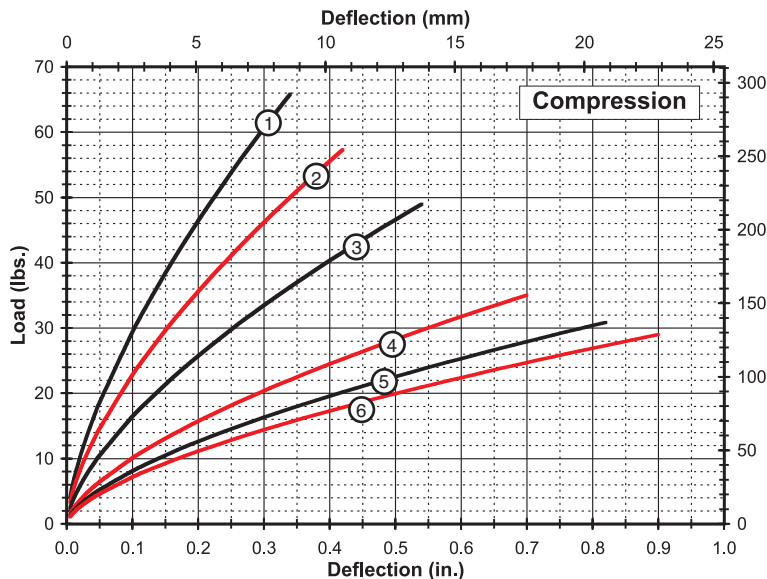
Mounting Options



- Maximum recommended torque for standard threaded insert is 8 in.-lbs. (0,9 Nm)
- Operating Temperature Range: -150°F to 500°F (-100°C to 260°C)
- U.S. Patent 5,549,285

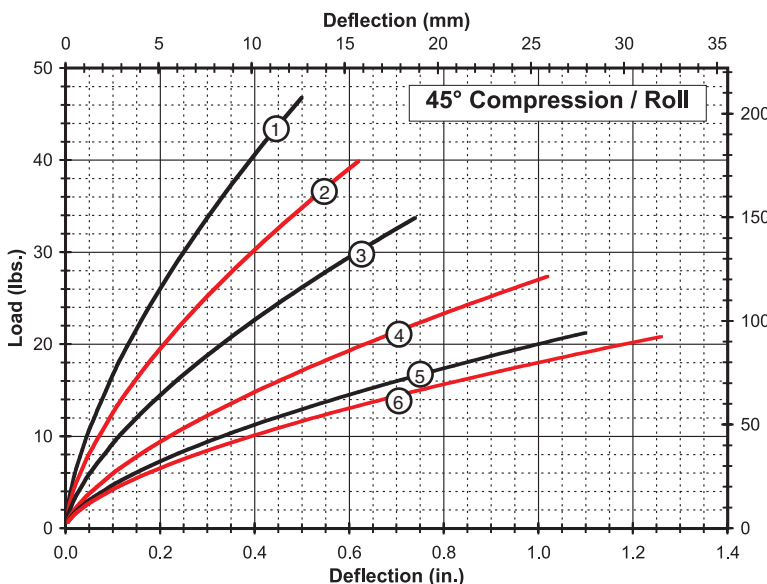
* Standard features. Any non-standard items may require longer lead times. Call for quotation.

Static Load vs. Deflection



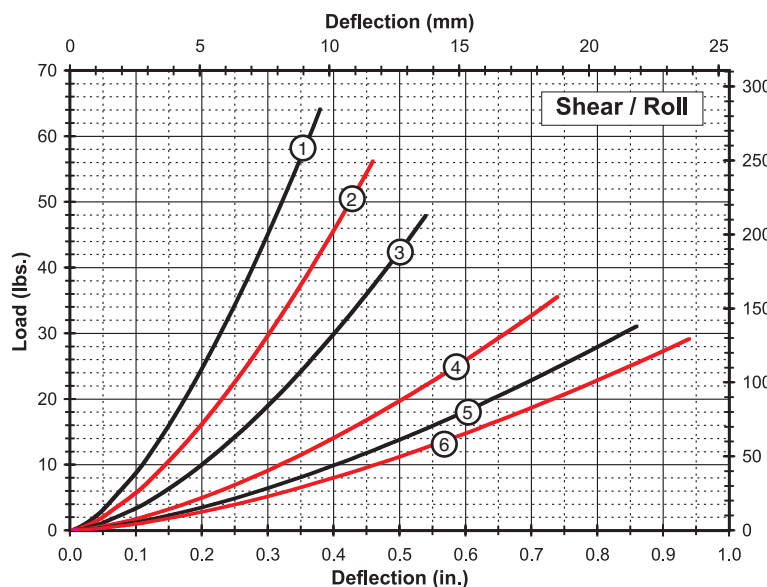
Compression

Curve	Model	Max Static Load lbs. (N)	Max Deflection in. (mm)	Kv (vibration) lbs./in. (kN/m)	Ks (shock) lbs./in. (kN/m)
1	WR3-100-10	19 (85)	0.34 (8,6)	370 (65)	230 (40)
2	WR3-200-10	17 (76)	0.42 (10,7)	290 (51)	170 (30)
3	WR3-400-10	14 (62)	0.54 (13,7)	210 (37)	110 (19)
4	WR3-600-10	10 (44)	0.70 (17,8)	130 (23)	60 (11)
5	WR3-700-10	9 (40)	0.82 (20,8)	105 (18)	45 (7,9)
6	WR3-800-10	9 (40)	0.90 (22,9)	90 (16)	40 (7,0)



45° Compression/Roll

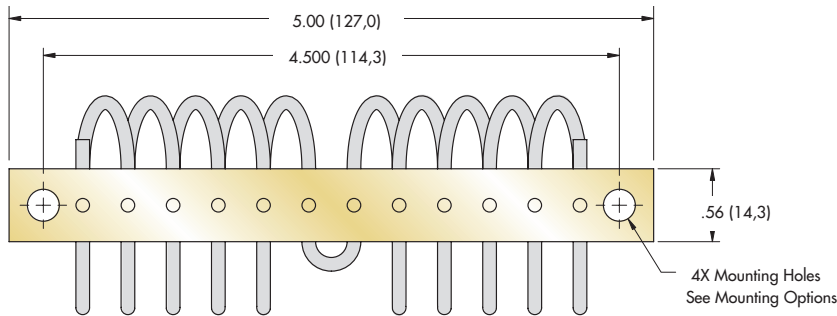
Curve	Model	Max Static Load lbs. (N)	Max Deflection in. (mm)	Kv (vibration) lbs./in. (kN/m)	Ks (shock) lbs./in. (kN/m)
1	WR3-100-10	14 (62)	0.50 (12,7)	215 (38)	115 (20)
2	WR3-200-10	12 (53)	0.62 (15,7)	160 (28)	80 (14)
3	WR3-400-10	10 (44)	0.74 (18,8)	120 (21)	55 (9,6)
4	WR3-600-10	8 (36)	1.02 (25,9)	75 (13)	32 (5,6)
5	WR3-700-10	7 (31)	1.10 (27,9)	60 (11)	25 (4,4)
6	WR3-800-10	6 (27)	1.26 (32,0)	55 (9,6)	20 (3,5)



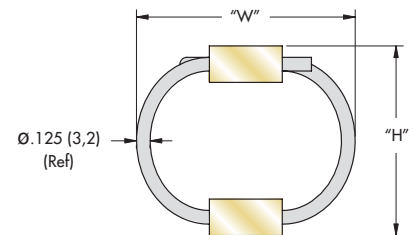
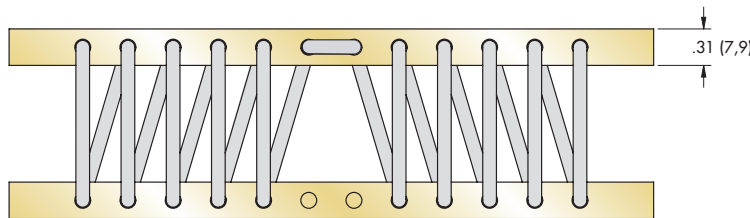
Shear/Roll

Curve	Model	Max Static Load lbs. (N)	Max Deflection in. (mm)	Kv (vibration) lbs./in. (kN/m)	Ks (shock) lbs./in. (kN/m)
1	WR3-100-10	10 (44)	0.38 (9,7)	135 (24)	135 (24)
2	WR3-200-10	9 (40)	0.46 (11,7)	100 (18)	100 (18)
3	WR3-400-10	7 (31)	0.54 (13,7)	70 (12)	70 (12)
4	WR3-600-10	6 (27)	0.74 (18,8)	40 (7,0)	40 (7,0)
5	WR3-700-10	5 (22)	0.86 (21,8)	30 (5,3)	30 (5,3)
6	WR3-800-10	4 (18)	0.94 (23,9)	25 (4,4)	25 (4,4)

Note: Performance provided for full loop models with standard (302/304) stainless steel cable. Consult ENIDINE for other options. Do not extrapolate curves.

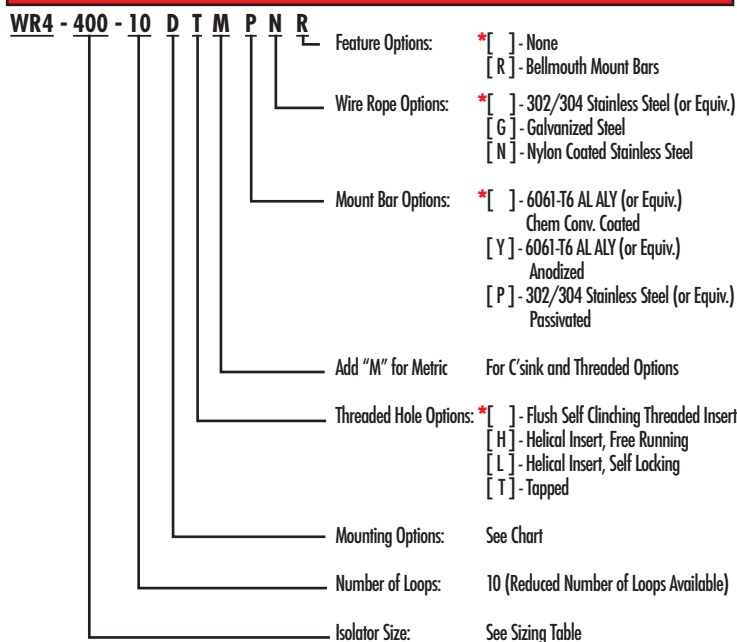


Note: Dimensions are in inches (mm)
Tolerances are ± .010 (± .25mm)

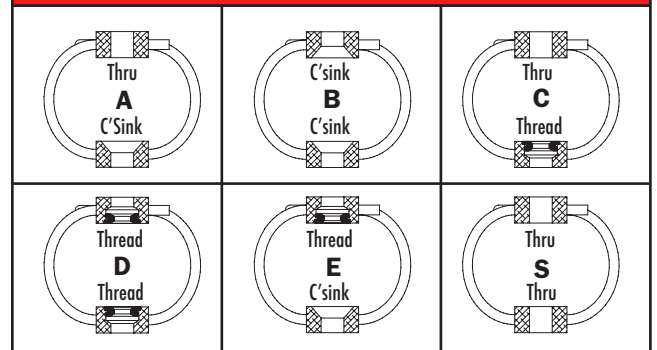


Size	Height "H" in. (mm)	Width (Ref) "W" in. (mm)	Unit Weight Lbs. (Kg)	Mounting Options	Thru Hole in. (mm)	Thread in. (mm)	C'sink Imperial (Metric)
WR4-100	1.10 (28)	1.40 (36)	0.26 (0,12)	B, D, E	Ø.272 ± .005 (Ø6,9 ± 0,13)	1/4-20 UNC (M6 X 1,0)	82° (90°)
WR4-200	1.20 (30)	1.50 (38)	0.26 (0,12)				
WR4-400	1.30 (33)	1.60 (41)	0.29 (0,13)				
WR4-500	1.40 (36)	1.70 (43)	0.29 (0,13)				
WR4-600	1.50 (38)	1.80 (46)	0.29 (0,13)				
WR4-700	1.60 (41)	1.90 (48)	0.30 (0,14)				
WR4-800	1.70 (43)	2.00 (51)	0.30 (0,14)				

Model Number Ordering Code



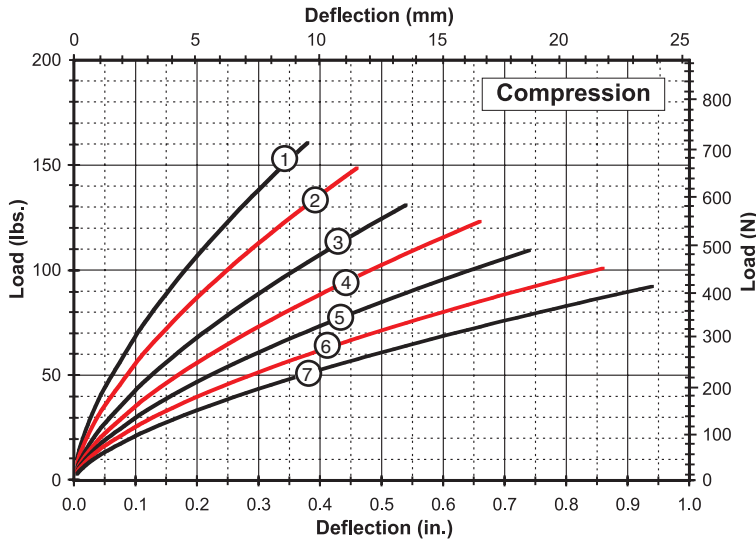
Mounting Options



- Maximum recommended torque for standard threaded insert is 36 in.-lbs. (3,7 Nm)
- Operating Temperature Range: -150°F to 500°F (-100°C to 260°C)
- U.S. Patent 5,549,285

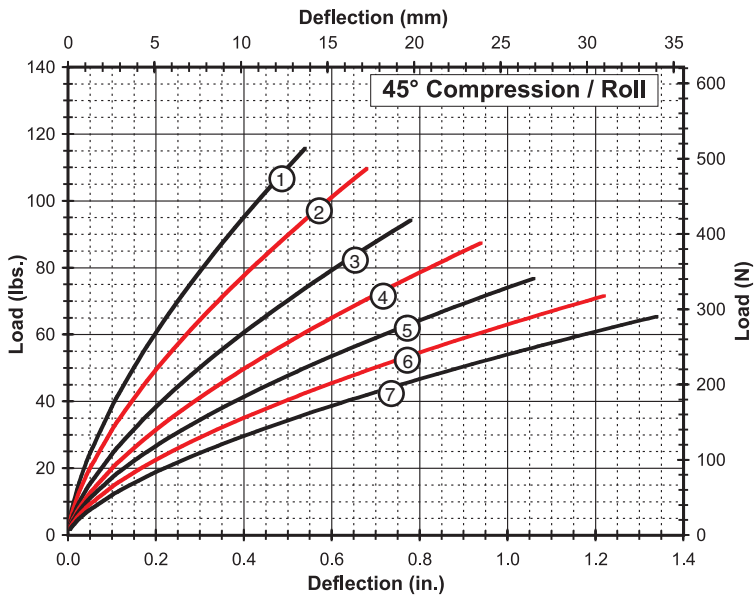
* Standard features. Any non-standard items may require longer lead times. Call for quotation.

Static Load vs. Deflection



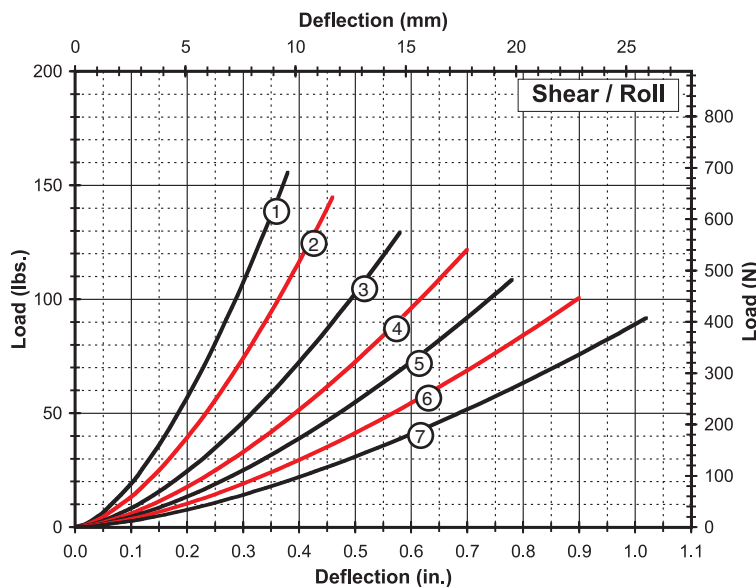
Compression

Curve	Model	Max Static Load Lbs. (N)	Max Deflection in. (mm)	Kv (vibration) Lbs./in. (kN/m)	Ks (shock) Lbs./in. (kN/m)
1	WR4-100-10	48 (213)	0.38 (9,7)	880 (154)	520 (91)
2	WR4-200-10	44 (194)	0.46 (11,7)	710 (124)	390 (68)
3	WR4-400-10	37 (166)	0.54 (13,7)	540 (95)	290 (51)
4	WR4-500-10	35 (156)	0.66 (16,8)	445 (78)	220 (39)
5	WR4-600-10	32 (142)	0.74 (18,8)	380 (67)	180 (32)
6	WR4-700-10	30 (133)	0.86 (21,8)	325 (57)	140 (25)
7	WR4-800-10	26 (117)	0.94 (23,9)	265 (46)	120 (21)



45° Compression/Roll

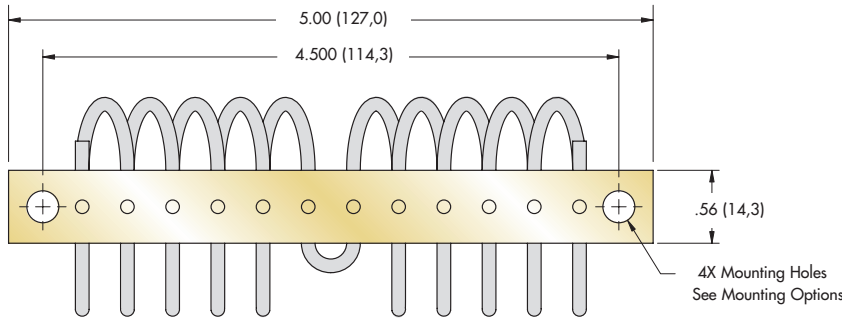
Curve	Model	Max Static Load Lbs. (N)	Max Deflection in. (mm)	Kv (vibration) Lbs./in. (kN/m)	Ks (shock) Lbs./in. (kN/m)
1	WR4-100-10	33 (149)	0.54 (13,7)	490 (86)	260 (46)
2	WR4-200-10	31 (138)	0.68 (17,3)	400 (70)	200 (35)
3	WR4-400-10	27 (118)	0.78 (19,8)	305 (53)	145 (25)
4	WR4-500-10	25 (111)	0.94 (23,9)	250 (44)	115 (20)
5	WR4-600-10	23 (102)	1.06 (26,9)	220 (39)	90 (16)
6	WR4-700-10	21 (94)	1.22 (31,0)	185 (32)	70 (12)
7	WR4-800-10	19 (84)	1.34 (34,0)	150 (26)	60 (11)



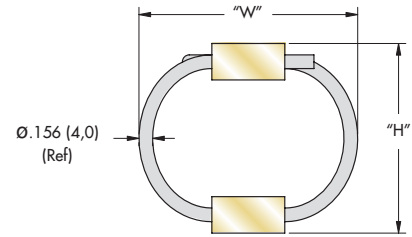
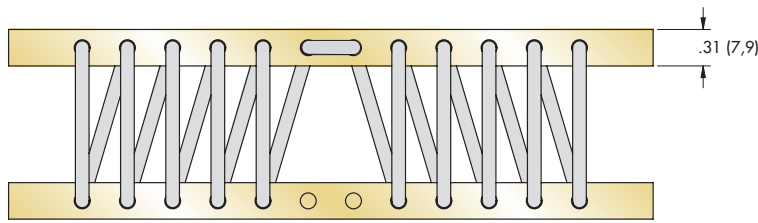
Shear/Roll

Curve	Model	Max Static Load Lbs. (N)	Max Deflection in. (mm)	Kv (vibration) Lbs./in. (kN/m)	Ks (shock) Lbs./in. (kN/m)
1	WR4-100-10	25 (111)	0.38 (9,7)	320 (56)	320 (56)
2	WR4-200-10	22 (98)	0.46 (11,7)	245 (43)	245 (43)
3	WR4-400-10	21 (93)	0.58 (14,7)	175 (31)	175 (31)
4	WR4-500-10	19 (85)	0.70 (17,8)	140 (25)	140 (25)
5	WR4-600-10	18 (80)	0.78 (19,8)	110 (19)	110 (19)
6	WR4-700-10	16 (71)	0.90 (22,9)	90 (16)	90 (16)
7	WR4-800-10	14 (62)	1.02 (25,9)	70 (12)	70 (12)

Note: Performance provided for full loop models with standard (302/304) stainless steel cable. Consult ENIDINE for other options. Do not extrapolate curves.

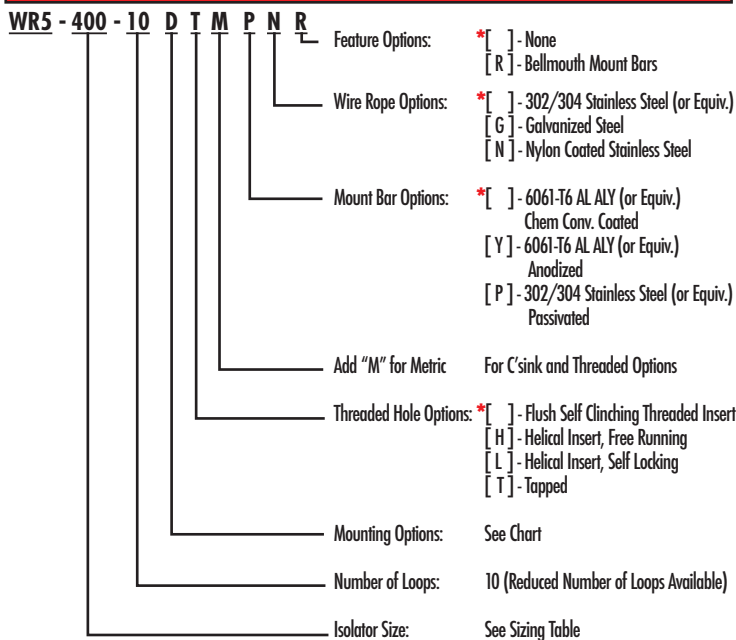


Note: Dimensions are in inches (mm)
Tolerances are ± .010 (± .25mm)

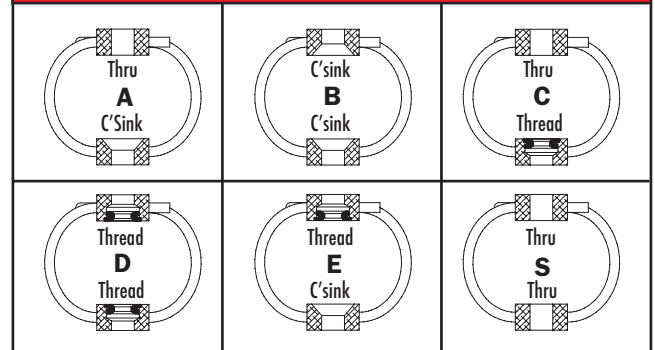


Size	Height "H" in. (mm)	Width (Ref) "W" in. (mm)	Unit Weight Lbs. (Kg)	Mounting Options	Thru Hole in. (mm)	Thread in. (mm)	C'sink Imperial (Metric)
WR5-200	1.20 (30)	1.60 (41)	0.33 (0,15)	B, D, E	Ø.272 ± .005 (Ø6,9 ± 0,13)	1/4-20 UNC (M6 X 1,0)	82° (90°)
WR5-400	1.30 (33)	1.70 (43)	0.33 (0,15)	A, B, C, D, E, S			
WR5-600	1.50 (38)	1.90 (48)	0.35 (0,16)				
WR5-800	1.80 (46)	2.10 (53)	0.38 (0,17)				
WR5-900	2.10 (53)	2.50 (64)	0.39 (0,18)				

Model Number Ordering Code



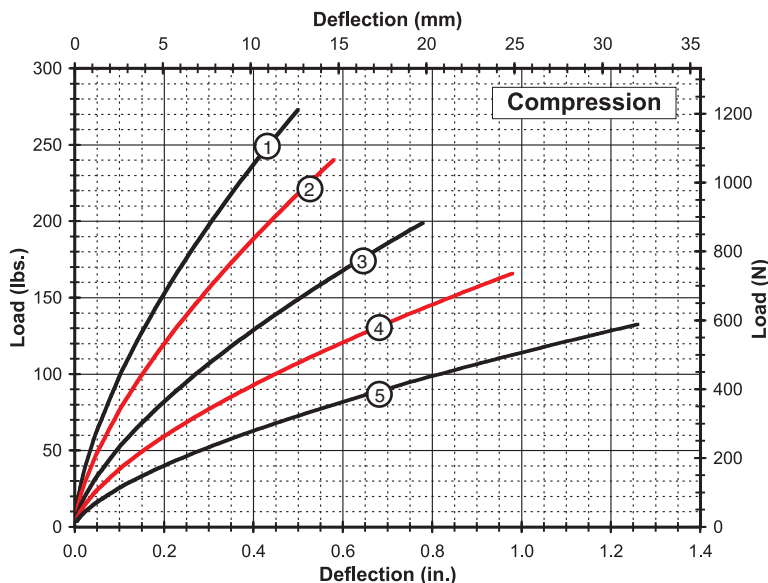
Mounting Options



- Maximum recommended torque for standard threaded insert is 38 in.-lbs. (4,3 Nm)
- Operating Temperature Range: -150°F to 500°F (-100°C to 260°C)
- U.S. Patent 5,549,285

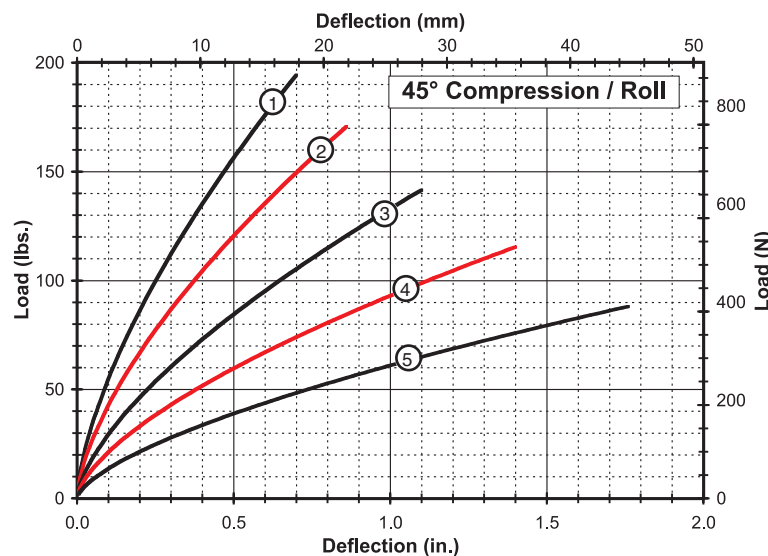
* Standard features. Any non-standard items may require longer lead times. Call for quotation.

Static Load vs. Deflection



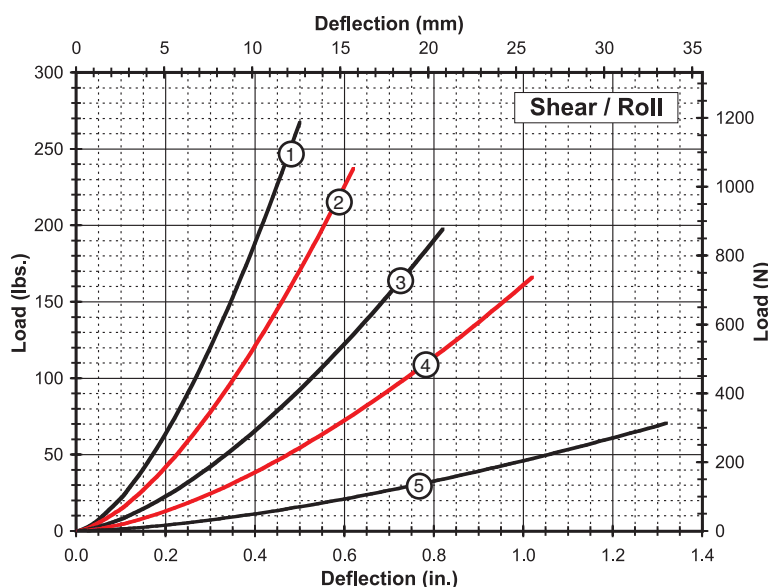
Compression

Curve	Model	Max Static Load Lbs. (N)	Max Deflection in. (mm)	Kv (vibration) Lbs./in. (kN/m)	Ks (shock) Lbs./in. (kN/m)
1	WR5-200-10	82 (364)	0.50 (12,7)	1,270 (222)	670 (117)
2	WR5-400-10	69 (309)	0.58 (14,7)	970 (170)	500 (88)
3	WR5-600-10	58 (257)	0.78 (19,8)	660 (116)	310 (54)
4	WR5-800-10	48 (216)	0.98 (24,9)	480 (84)	210 (37)
5	WR5-900-10	39 (172)	1.26 (32,0)	330 (58)	130 (23)



45° Compression/Roll

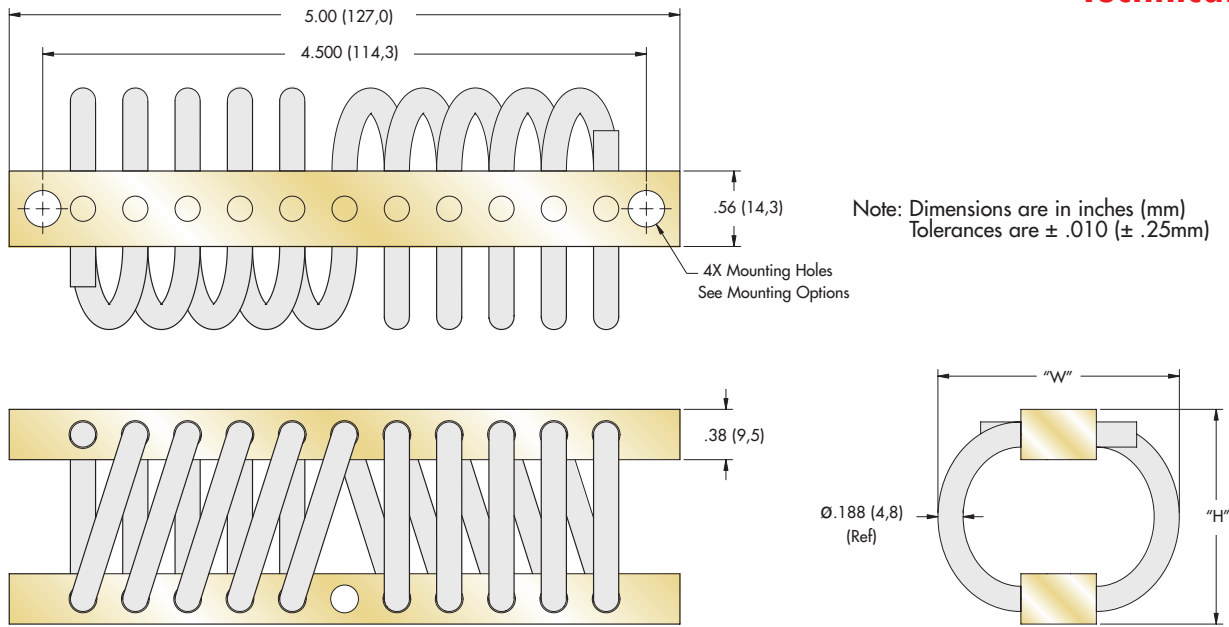
Curve	Model	Max Static Load Lbs. (N)	Max Deflection in. (mm)	Kv (vibration) Lbs./in. (kN/m)	Ks (shock) Lbs./in. (kN/m)
1	WR5-200-10	57 (254)	0.70 (17,8)	700 (123)	340 (60)
2	WR5-400-10	49 (218)	0.86 (21,8)	550 (96)	240 (42)
3	WR5-600-10	41 (182)	1.10 (27,9)	375 (66)	160 (28)
4	WR5-800-10	34 (151)	1.40 (35,6)	275 (48)	100 (18)
5	WR5-900-10	26 (115)	1.76 (44,7)	175 (31)	60 (11)



Shear/Roll

Curve	Model	Max Static Load Lbs. (N)	Max Deflection in. (mm)	Kv (vibration) Lbs./in. (kN/m)	Ks (shock) Lbs./in. (kN/m)
1	WR5-200-10	40 (178)	0.50 (12,7)	415 (73)	415 (73)
2	WR5-400-10	35 (156)	0.62 (15,7)	300 (53)	300 (53)
3	WR5-600-10	30 (133)	0.82 (20,8)	190 (33)	190 (33)
4	WR5-700-10	25 (111)	1.02 (25,9)	130 (23)	130 (23)
5	WR5-900-10	9 (40)	1.32 (33,5)	45 (7,9)	45 (7,9)

Note: Performance provided for full loop models with standard (302/304) stainless steel cable. Consult ENIDINE for other options. Do not extrapolate curves.



Note: Dimensions are in inches (mm)
Tolerances are ± .010 (± .25mm)

Size	Height "H" in. (mm)	Width (Ref) "W" in. (mm)	Unit Weight Lbs. (Kg)	Mounting Options	Thru Hole in. (mm)	Thread in. (mm)	C'sink Imperial (Metric)
WR6-200	1.20 (30)	1.40 (36)	0.42 (0,19)	D	Ø.272 ± .005 (Ø6,9 ± 0,13)	1/4-20 UNC (M6 X 1,0)	82° (90°)
WR6-300	1.30 (33)	1.50 (38)	0.43 (0,20)	B, D, E			
WR6-400	1.40 (36)	1.60 (41)	0.46 (0,21)				
WR6-500	1.50 (38)	1.70 (43)	0.47 (0,21)	A, B, C, D, E, S			
WR6-600	1.60 (41)	1.80 (46)	0.49 (0,22)				
WR6-700	1.70 (43)	1.90 (48)	0.54 (0,25)				
WR6-800	2.00 (51)	2.30 (58)	0.57 (0,26)				
WR6-850	2.13 (54)	2.94 (75)	0.59 (0,27)				
WR6-900	2.45 (62)	3.45 (88)	0.61 (0,28)				
WR6-950	3.20 (81)	4.20 (107)	0.63 (0,29)				

Model Number Ordering Code

WR6 - 400 - 10 D T M P N R

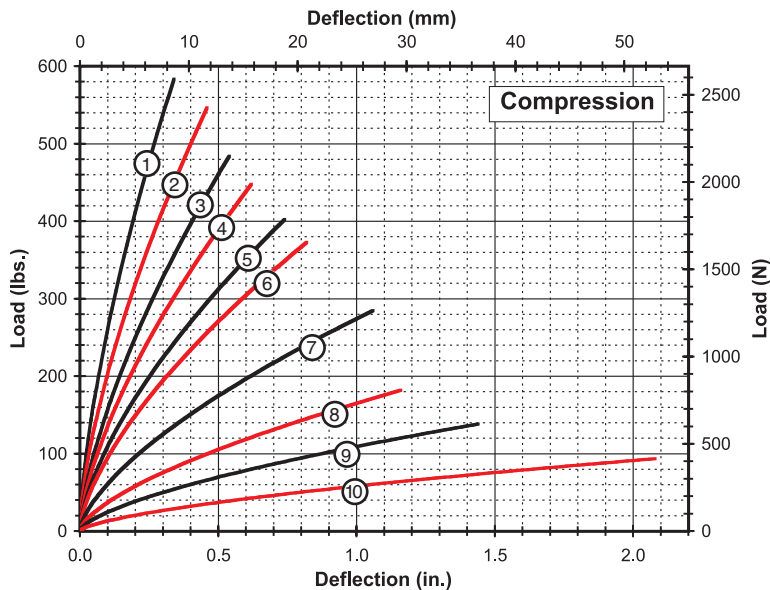
- Feature Options:
 - * [] - None
 - [R] - Bellmouth Mount Bars
- Wire Rope Options:
 - * [] - 302/304 Stainless Steel (or Equiv.)
 - [G] - Galvanized Steel
 - [N] - Nylon Coated Stainless Steel
- Mount Bar Options:
 - * [] - 6061-T6 AL ALY (or Equiv.) Chem Conv. Coated
 - [Y] - 6061-T6 AL ALY (or Equiv.) Anodized
 - [P] - 302/304 Stainless Steel (or Equiv.) Passivated
- Add "M" for Metric For C'sink and Threaded Options
- Threaded Hole Options:
 - * [] - Flush Self Clinching Threaded Insert
 - [H] - Helical Insert, Free Running
 - [L] - Helical Insert, Self Locking
 - [T] - Tapped
- Mounting Options: See Chart
- Number of Loops: 10 (Reduced Number of Loops Available)
- Isolator Size: See Sizing Table

Mounting Options

- Maximum recommended torque for standard threaded insert is 38 in.-lbs. (4,3 Nm)
- Operating Temperature Range: -150°F to 500°F (-100°C to 260°C)
- U.S. Patent 5,549,285

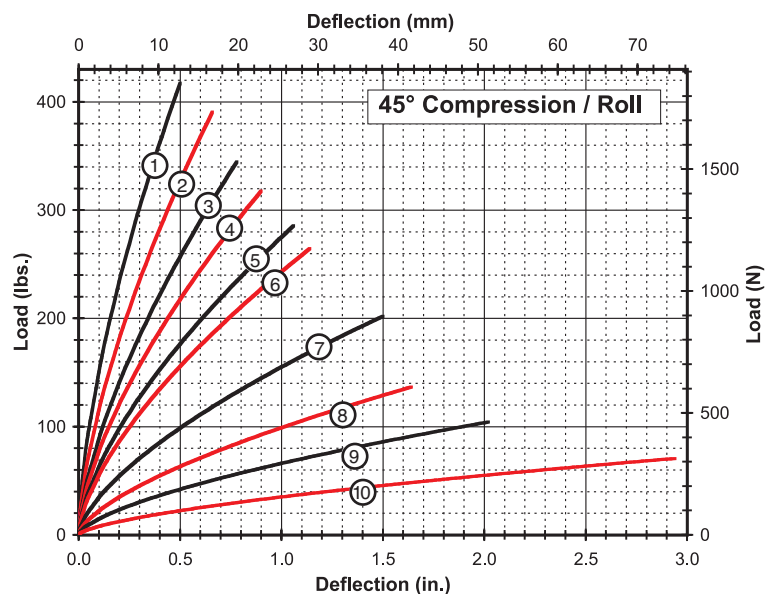
* Standard features. Any non-standard items may require longer lead times. Call for quotation.

Static Load vs. Deflection



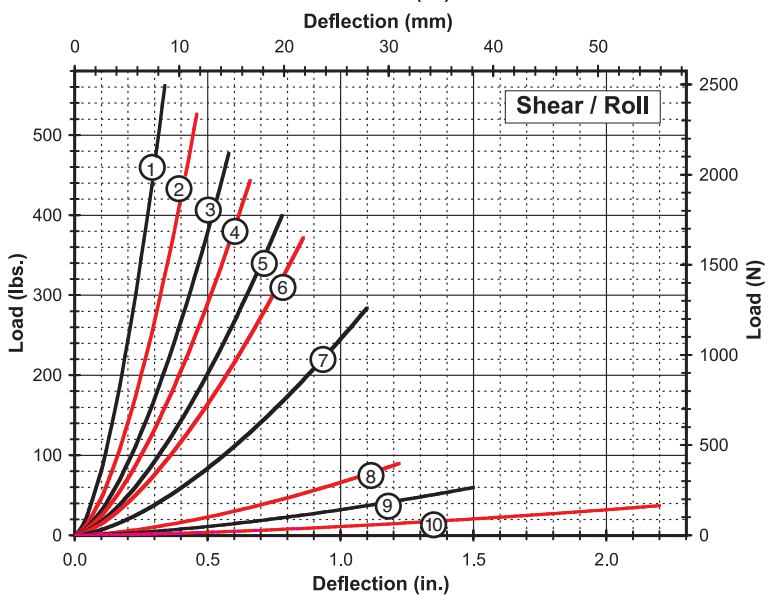
Compression

Curve	Model	Max Static Load Lbs. (N)	Max Deflection in. (mm)	Kv (vibration) Lbs./in. (kN/m)	Ks (shock) Lbs./in. (kN/m)
1	WR6-200-10	165 (734)	0.34 (8,6)	3,300 (578)	2,070 (363)
2	WR6-300-10	160 (712)	0.46 (11,7)	2,600 (455)	1,440 (252)
3	WR6-400-10	135 (601)	0.54 (13,7)	1,980 (347)	1,080 (189)
4	WR6-500-10	130 (578)	0.62 (15,7)	1,720 (301)	870 (152)
5	WR6-600-10	115 (512)	0.74 (18,8)	1,395 (244)	670 (117)
6	WR6-700-10	110 (489)	0.82 (20,8)	1,210 (212)	550 (96)
7	WR6-800-10	82 (365)	1.06 (26,9)	775 (136)	330 (58)
8	WR6-850-10	53 (236)	1.16 (29,5)	470 (82)	190 (33)
9	WR6-900-10	40 (178)	1.44 (36,6)	310 (54)	120 (21)
10	WR6-950-10	27 (120)	2.08 (52,8)	165 (29)	55 (10)



45° Compression/Roll

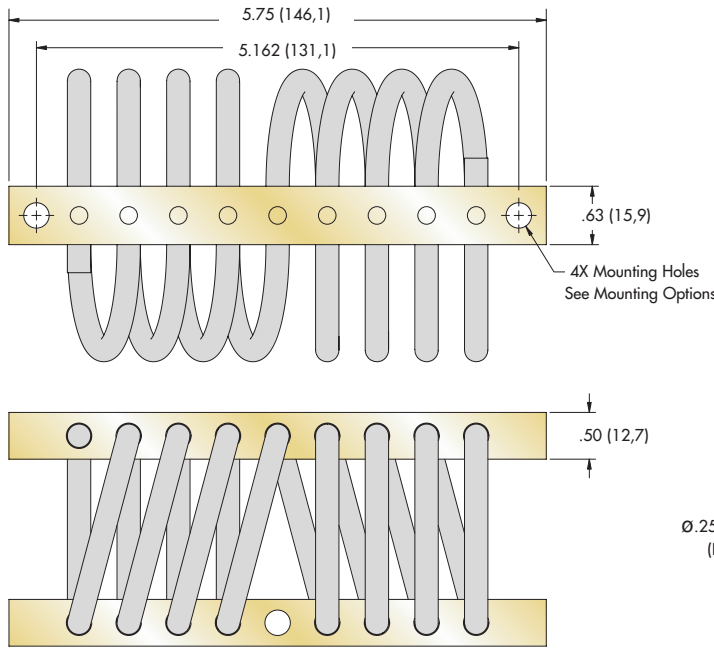
Curve	Model	Max Static Load Lbs. (N)	Max Deflection in. (mm)	Kv (vibration) Lbs./in. (kN/m)	Ks (shock) Lbs./in. (kN/m)
1	WR6-200-10	120 (534)	0.50 (12,7)	1,945 (341)	1,020 (179)
2	WR6-300-10	115 (512)	0.66 (16,8)	1,475 (258)	720 (126)
3	WR6-400-10	97 (432)	0.78 (19,8)	1,125 (197)	530 (93)
4	WR6-500-10	92 (409)	0.90 (22,9)	985 (172)	430 (75)
5	WR6-600-10	84 (373)	1.06 (26,9)	805 (141)	330 (58)
6	WR6-700-10	79 (350)	1.14 (29,0)	705 (123)	280 (49)
7	WR6-800-10	58 (260)	1.50 (38,1)	440 (77)	160 (28)
8	WR6-850-10	40 (177)	1.64 (41,7)	280 (49)	100 (18)
9	WR6-900-10	31 (136)	2.02 (51,3)	190 (33)	65 (11)
10	WR6-950-10	21 (91)	2.94 (74,7)	100 (18)	30 (5,3)



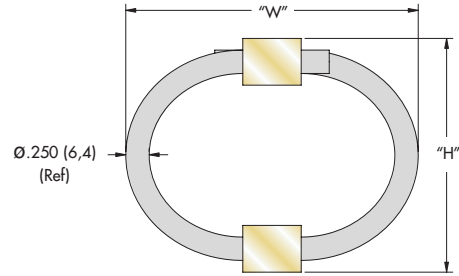
Shear/Roll

Curve	Model	Max Static Load Lbs. (N)	Max Deflection in. (mm)	Kv (vibration) Lbs./in. (kN/m)	Ks (shock) Lbs./in. (kN/m)
1	WR6-200-10	80 (356)	0.34 (8,6)	1,280 (224)	1,280 (224)
2	WR6-300-10	80 (356)	0.46 (11,7)	890 (156)	890 (156)
3	WR6-400-10	75 (334)	0.58 (14,7)	640 (112)	640 (112)
4	WR6-500-10	70 (311)	0.66 (16,8)	530 (93)	530 (93)
5	WR6-600-10	65 (289)	0.78 (19,8)	400 (70)	400 (70)
6	WR6-700-10	60 (267)	0.86 (21,8)	340 (60)	340 (60)
7	WR6-800-10	45 (200)	1.10 (27,9)	200 (35)	200 (35)
8	WR6-850-10	13 (58)	1.22 (31,0)	60 (11)	60 (11)
9	WR6-900-10	9 (40)	1.50 (38,1)	30 (5,3)	30 (5,3)
10	WR6-950-10	5 (22)	2.20 (55,9)	13 (2,3)	13 (2,3)

Note: Performance provided for full loop models with standard (302/304) stainless steel cable. Consult ENIDINE for other options. Do not extrapolate curves.



Note: Dimensions are in inches (mm)
Tolerances are ± .010 (± .25mm)



Size	Height "H" in. (mm)	Width (Ref) "W" in. (mm)	Unit Weight Lbs. (Kg)	Mounting Options	Thru Hole in. (mm)	Thread in. (mm)	C'sink Imperial (Metric)
WR8-200	1.90 (48)	2.20 (56)	0.84 (0,38)	A, B, C, D, E, S	Ø.272 ± .005 (Ø6,9 ± 0,13)	1/4-28 UNF (M6 X 1,0)	82° (90°)
WR8-400	2.13 (54)	2.50 (64)	0.90 (0,41)				
WR8-500	2.31 (59)	2.80 (71)	0.94 (0,43)				
WR8-600	2.50 (64)	3.13 (80)	1.04 (0,47)				
WR8-700	2.50 (64)	3.50 (89)	1.14 (0,52)				
WR8-800	2.63 (67)	3.75 (95)	1.20 (0,54)				
WR8-850	2.63 (67)	3.95 (100)	1.25 (0,57)				
WR8-900	3.25 (83)	4.25 (108)	1.30 (0,59)				

Model Number Ordering Code

WR8 - 400 - 8 D T M P N R

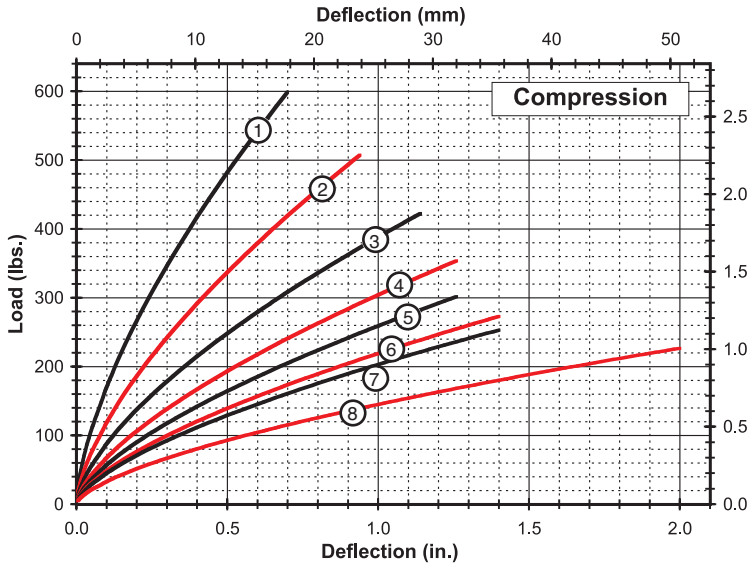
- WR8** - Isolator Size: See Sizing Table
- 400** - Number of Loops: 08 (Reduced Number of Loops Available)
- 8** - Mounting Options: See Chart
- D** - Threaded Hole Options:
 - * [] - Flush Self Clinching Threaded Insert
 - [H] - Helical Insert, Free Running
 - [L] - Helical Insert, Self Locking
 - [T] - Tapped
- T** - Mount Bar Options:
 - * [] - 6061-T6 AL ALY (or Equiv.) Chem Conv. Coated
 - [Y] - 6061-T6 AL ALY (or Equiv.) Anodized
 - [P] - 302/304 Stainless Steel (or Equiv.) Passivated
- M** - Add "M" for Metric For C'sink and Threaded Options
- P** - Wire Rope Options:
 - * [] - 302/304 Stainless Steel (or Equiv.)
 - [G] - Galvanized Steel
 - [N] - Nylon Coated Stainless Steel
- N** - Feature Options:
 - * [] - None
 - [R] - Bellmouth Mount Bars
- R** - Feature Options: (None listed)

Mounting Options

- Maximum recommended torque for standard threaded insert is 38 in.-lbs. (4,3 Nm)
- Operating Temperature Range: -150°F to 500°F (-100°C to 260°C)
- U.S. Patent 5,549,285

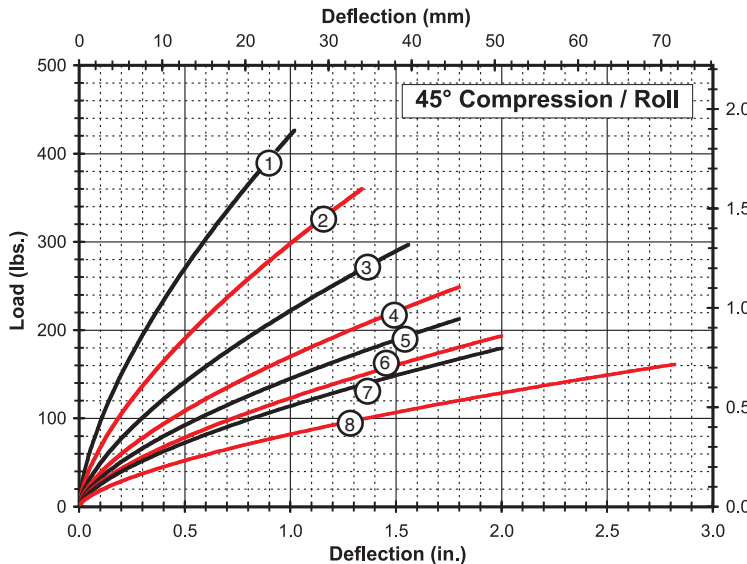
* Standard features. Any non-standard items may require longer lead times. Call for quotation.

Static Load vs. Deflection



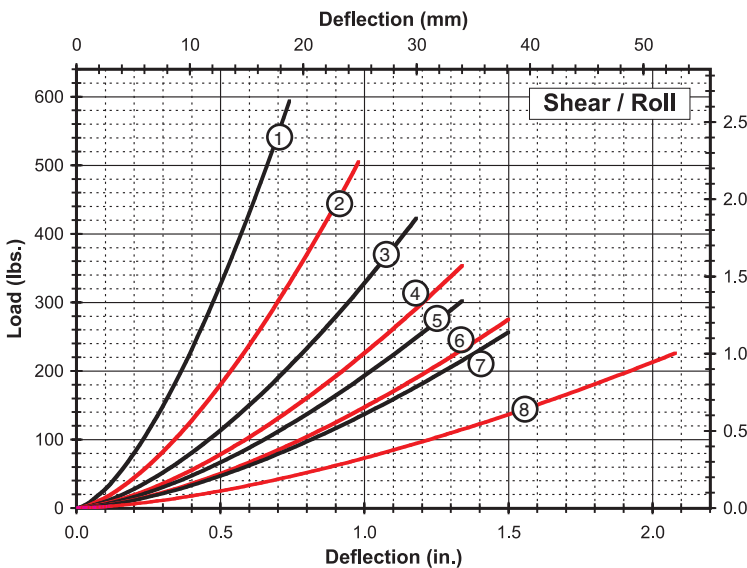
Compression

Curve	Model	Max Static Load Lbs. (N)	Max Deflection in. (mm)	Kv (vibration) Lbs./in. (kN/m)	Ks (shock) Lbs./in. (kN/m)
1	WR8-200-08	175 (778)	0.70 (17,8)	2,180 (382)	1,040 (182)
2	WR8-400-08	150 (667)	0.94 (23,9)	1,520 (266)	660 (116)
3	WR8-500-08	125 (556)	1.14 (29,0)	1,120 (196)	450 (79)
4	WR8-600-08	100 (445)	1.26 (32,0)	860 (151)	340 (60)
5	WR8-700-08	87 (386)	1.26 (32,0)	725 (127)	290 (51)
6	WR8-800-08	79 (351)	1.40 (35,6)	620 (109)	240 (42)
7	WR8-850-08	73 (325)	1.40 (35,6)	570 (100)	220 (39)
8	WR8-900-08	67 (297)	2.00 (50,8)	420 (74)	140 (25)



45° Compression/Roll

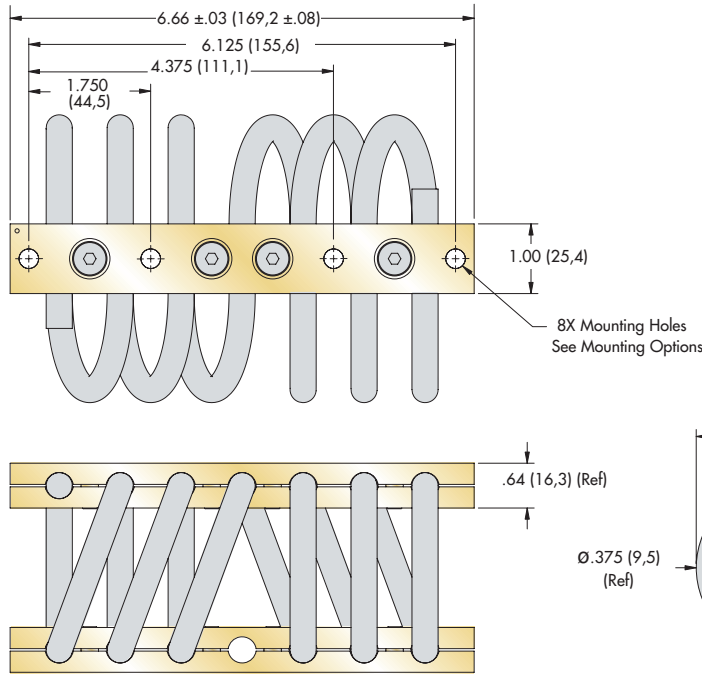
Curve	Model	Max Static Load Lbs. (N)	Max Deflection in. (mm)	Kv (vibration) Lbs./in. (kN/m)	Ks (shock) Lbs./in. (kN/m)
1	WR8-200-08	125 (556)	1.02 (25,9)	1,230 (215)	510 (89)
2	WR8-400-08	105 (467)	1.34 (34,0)	860 (151)	330 (58)
3	WR8-500-08	88 (390)	1.56 (39,6)	625 (109)	230 (40)
4	WR8-600-08	72 (321)	1.80 (45,7)	490 (86)	170 (30)
5	WR8-700-08	61 (273)	1.80 (45,7)	410 (72)	140 (25)
6	WR8-800-08	56 (248)	2.00 (50,8)	350 (61)	120 (21)
7	WR8-850-08	51 (229)	2.00 (50,8)	320 (56)	110 (19)
8	WR8-900-08	47 (209)	2.82 (71,6)	235 (41)	70 (12)



Shear/Roll

Curve	Model	Max Static Load Lbs. (N)	Max Deflection in. (mm)	Kv (vibration) Lbs./in. (kN/m)	Ks (shock) Lbs./in. (kN/m)
1	WR8-200-08	95 (423)	0.74 (18,8)	630 (110)	630 (110)
2	WR8-400-08	80 (356)	0.98 (24,9)	410 (72)	410 (72)
3	WR8-500-08	70 (311)	1.18 (30,0)	280 (49)	280 (49)
4	WR8-600-08	55 (245)	1.34 (34,0)	210 (37)	210 (37)
5	WR8-700-08	50 (222)	1.34 (34,0)	180 (32)	180 (32)
6	WR8-800-08	45 (200)	1.50 (38,1)	140 (25)	140 (25)
7	WR8-850-08	40 (178)	1.50 (38,1)	130 (23)	130 (23)
8	WR8-900-08	35 (156)	2.08 (52,8)	90 (16)	90 (16)

Note: Performance provided for full loop models with standard (302/304) stainless steel cable. Consult ENIDINE for other options. Do not extrapolate curves.



Note: Dimensions are in inches (mm)
Tolerances are ± .010 (± .25mm)

Size	Height "H" in. (mm)	Width (Ref) "W" in. (mm)	Unit Weight Lbs. (Kg)	Mounting Options	Thru Hole in. (mm)	Thread in. (mm)	C'sink Imperial (Metric)
WR12-206	2.80 (71)	3.31 (84)	1.82 (0,83)	A, B, C, D, E, S	Ø.281 ^{+.005} - .015 (Ø7,4 ^{+0,13} - 0,38)	1/4-28 UNF (M6 X 1,0)	82° (90°)
WR12-306	2.90 (74)	3.50 (89)	1.88 (0,85)				
WR12-406	3.00 (76)	4.13 (105)	1.99 (0,90)				
WR12-506	3.25 (83)	4.25 (108)	2.09 (0,95)				
WR12-606	3.50 (89)	4.25 (108)	2.15 (0,98)				
WR12-706	4.13 (105)	4.75 (121)	2.36 (1,07)				
WR12-806	4.25 (108)	5.50 (140)	2.48 (1,12)				

Model Number Ordering Code

WR12 - 406 - 6 D H M P N R

Feature Options: * [] - None
[R] - Bellmouth Mount Bars

Wire Rope Options: * [] - 302/304 Stainless Steel (or Equiv.)
[G] - Galvanized Steel
[N] - Nylon Coated Stainless Steel

Mount Bar Options: * [] - 6061-T6 AL ALY (or Equiv.)
Chem Conv. Coated
[Y] - 6061-T6 AL ALY (or Equiv.)
Anodized
[P] - 302/304 Stainless Steel (or Equiv.)
Passivated

Add "M" for Metric For C'sink and Threaded Options

Threaded Hole Options: * [] - Tapped
[H] - Helical Insert, Free Running
[L] - Helical Insert, Self Locking

Mounting Options: See Chart

Number of Loops: 06 (Reduced Number of Loops Available)

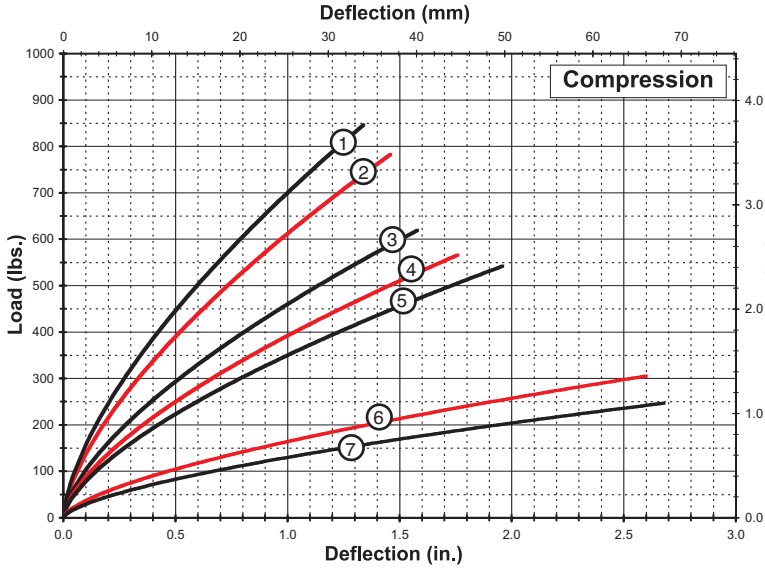
Isolator Size: See Sizing Table

Mounting Options

- Maximum recommended torque for threaded bar 100 in.-lbs. (10 Nm)
- Operating Temperature Range: -150°F to 500°F (-100°C to 260°C)

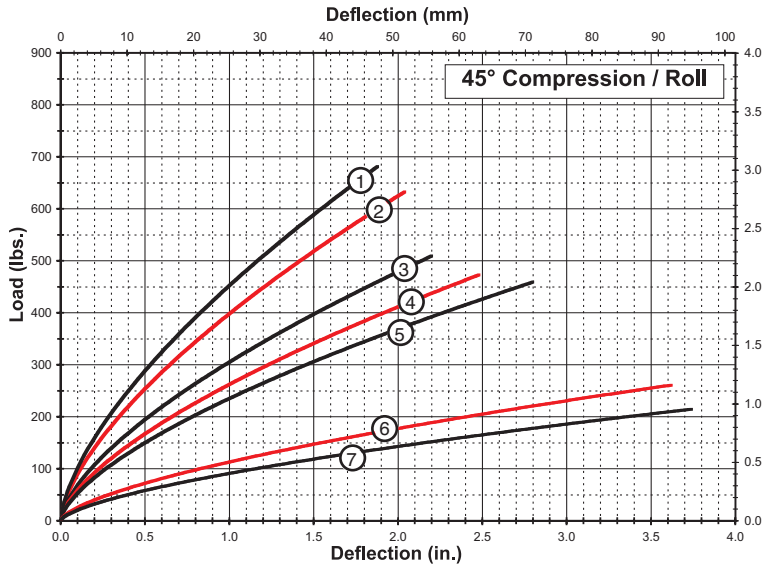
* Standard features. Any non-standard items may require longer lead times. Call for quotation.

Static Load vs. Deflection



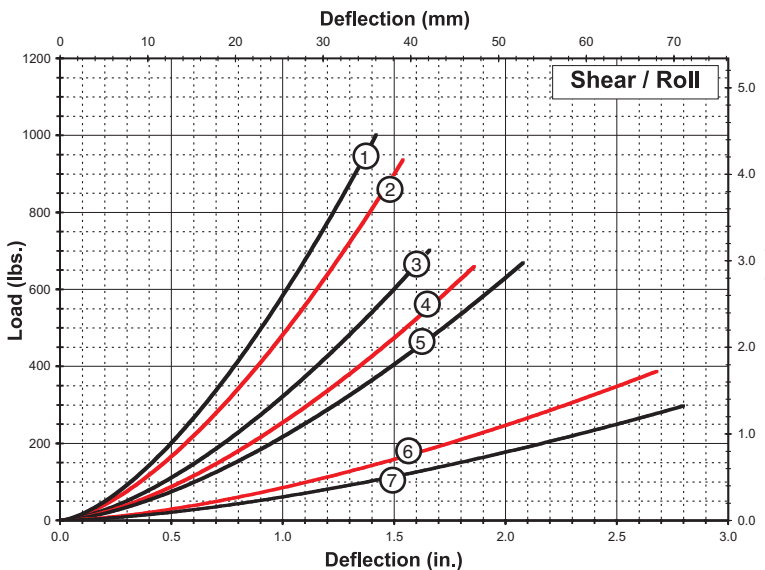
Compression

Curve	Model	Max Static Load Lbs. (N)	Max Deflection in. (mm)	Kv (vibration) Lbs./in. (kN/m)	Ks (shock) Lbs./in. (kN/m)
1	WR12-206-06	245 (1 090)	1.34 (34,0)	1,570 (275)	770 (135)
2	WR12-306-06	230 (1 023)	1.46 (37,1)	1,370 (240)	650 (114)
3	WR12-406-06	180 (801)	1.58 (40,1)	1,030 (180)	480 (84)
4	WR12-506-06	165 (734)	1.76 (44,7)	880 (154)	390 (68)
5	WR12-606-06	160 (712)	1.96 (49,8)	785 (137)	340 (60)
6	WR12-706-06	89 (396)	2.60 (66,0)	370 (65)	140 (25)
7	WR12-806-06	72 (320)	2.68 (68,1)	290 (51)	110 (19)



45° Compression/Roll

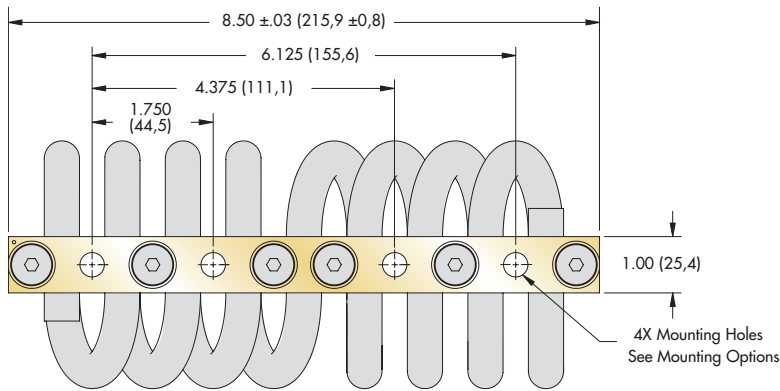
Curve	Model	Max Static Load Lbs. (N)	Max Deflection in. (mm)	Kv (vibration) Lbs./in. (kN/m)	Ks (shock) Lbs./in. (kN/m)
1	WR12-206-06	200 (890)	1.88 (47,8)	1,010 (177)	440 (77)
2	WR12-306-06	185 (823)	2.04 (51,8)	890 (156)	380 (67)
3	WR12-406-06	150 (667)	2.20 (55,9)	685 (120)	280 (49)
4	WR12-506-06	140 (623)	2.48 (63,0)	590 (103)	230 (40)
5	WR12-606-06	135 (601)	2.80 (71,1)	525 (92)	200 (35)
6	WR12-706-06	77 (341)	3.62 (91,9)	250 (44)	90 (16)
7	WR12-806-06	63 (280)	3.74 (95,0)	205 (36)	70 (12)



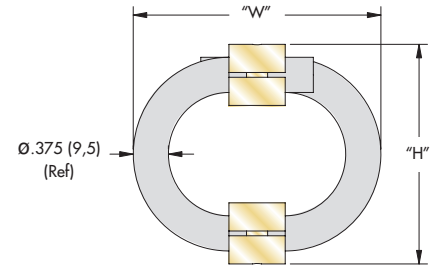
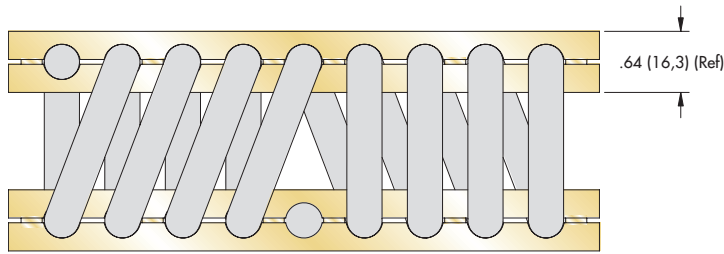
Shear/Roll

Curve	Model	Max Static Load Lbs. (N)	Max Deflection in. (mm)	Kv (vibration) Lbs./in. (kN/m)	Ks (shock) Lbs./in. (kN/m)
1	WR12-206-06	155 (689)	1.42 (36,1)	560 (98)	560 (98)
2	WR12-306-06	145 (645)	1.54 (39,1)	480 (84)	480 (84)
3	WR12-406-06	110 (489)	1.66 (42,2)	330 (58)	330 (58)
4	WR12-506-06	105 (467)	1.86 (47,2)	280 (49)	280 (49)
5	WR12-606-06	100 (445)	2.08 (52,8)	250 (44)	250 (44)
6	WR12-706-06	45 (200)	2.68 (68,1)	115 (20)	115 (20)
7	WR12-806-06	35 (156)	2.80 (71,1)	85 (15)	85 (15)

Note: Performance provided for full loop models with standard (302/304) stainless steel cable. Consult ENIDINE for other options. Do not extrapolate curves.



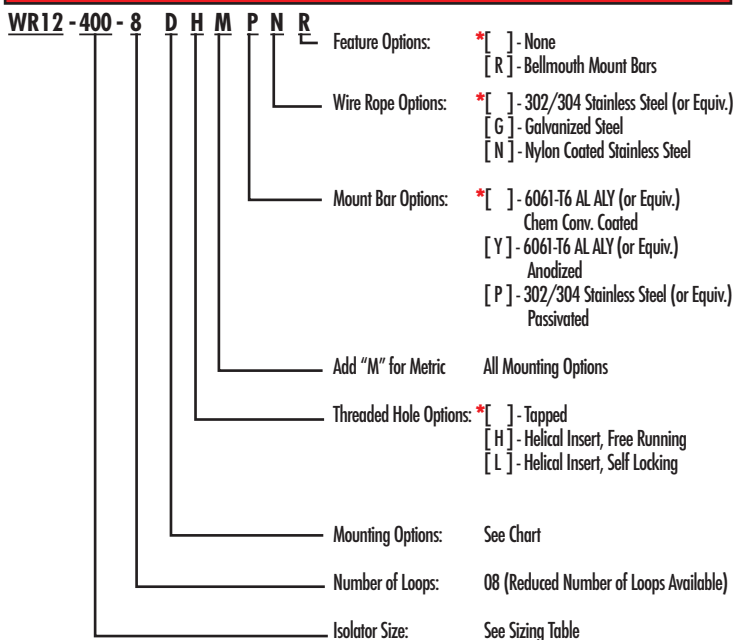
Note: Dimensions are in inches (mm)
Tolerances are ± .010 (± .25mm)



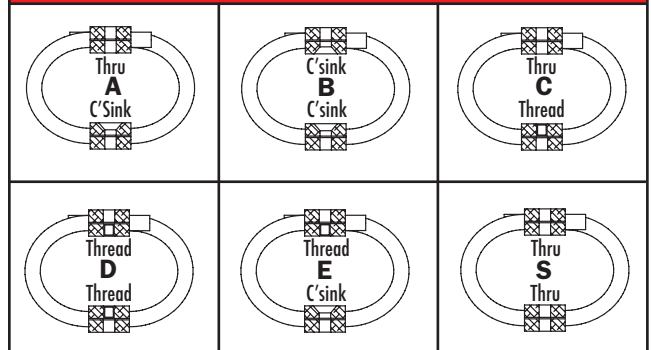
Size	Height "H" in. (mm)	Width (Ref) "W" in. (mm)	Unit Weight Lbs. (Kg)	Mounting Options	Thru Hole in. (mm)	Thread in. (mm)	C'sink Imperial (Metric)
WR12-200	2.80 (71)	3.31 (84)	2.43 (1,10)	A, B, C, D, E, S	Ø.281 + .005 - .015 (Ø9,0 + 0,13 - 0,38)	1/4-28 UNF *(M8 X 1,25)	82° (90°)
WR12-300	2.90 (74)	3.50 (89)	2.50 (1,13)				
WR12-400	3.00 (76)	4.13 (105)	2.65 (1,20)				
WR12-500	3.25 (83)	4.25 (108)	2.78 (1,26)				
WR12-600	3.50 (89)	4.25 (108)	2.87 (1,30)				
WR12-700	4.13 (105)	4.75 (121)	3.15 (1,43)				
WR12-800	4.25 (108)	5.50 (140)	3.31 (1,50)				

* Tapped M8 x 1.25, Inserts M6 x 1.0

Model Number Ordering Code



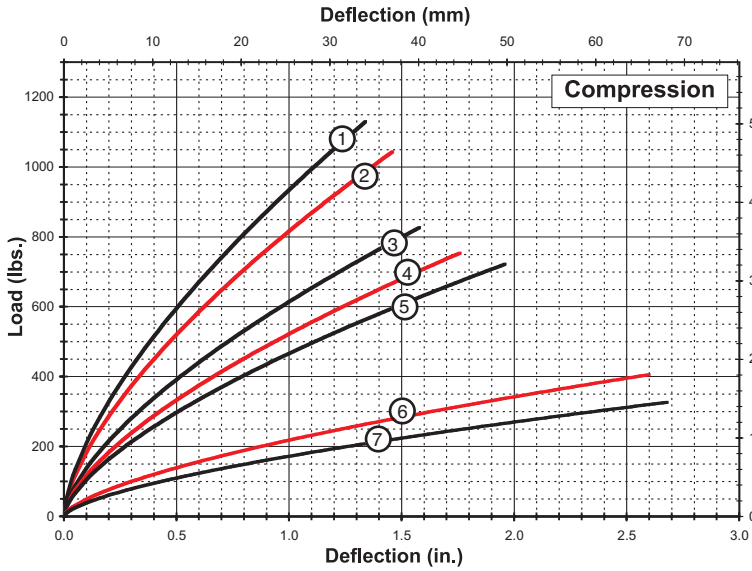
Mounting Options



- Maximum recommended torque for threaded bar is 100 in.-lbs. (20 Nm)
- Operating Temperature Range: -150°F to 500°F (-100°C to 260°C)

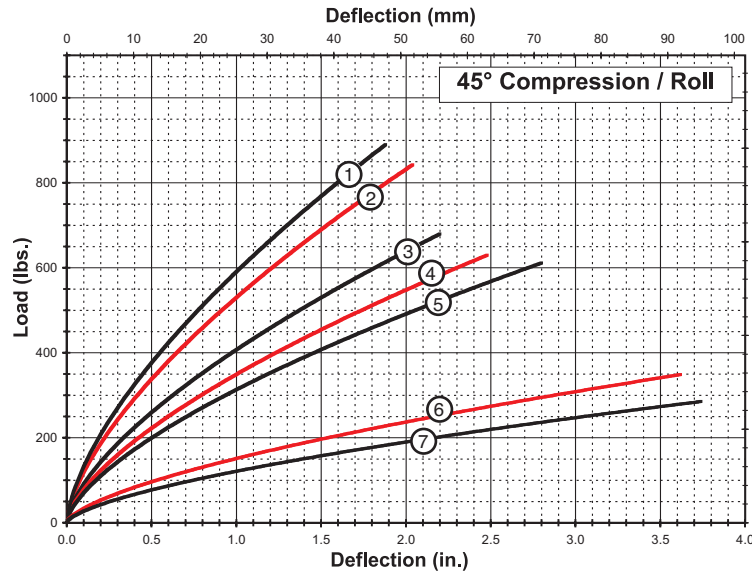
* Standard features. Any non-standard items may require longer lead times. Call for quotation.

Static Load vs. Deflection



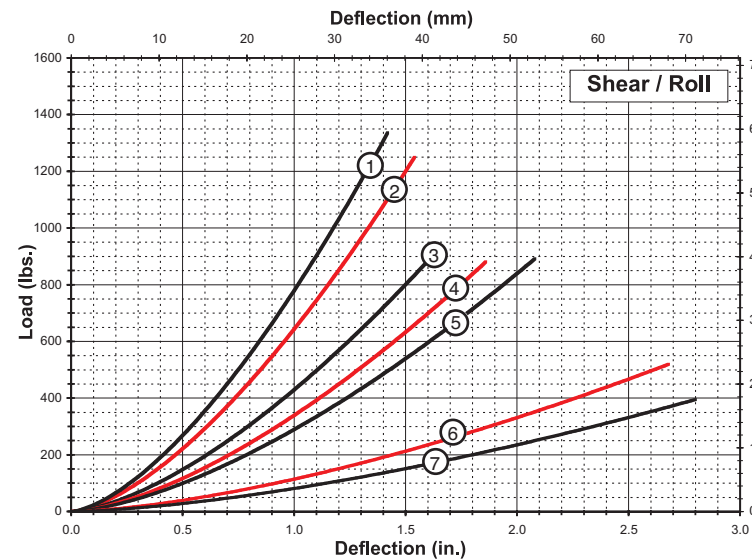
Compression

Curve	Model	Max Static Load Lbs. (N)	Max Deflection in. (mm)	Kv (vibration) Lbs./in. (kN/m)	Ks (shock) Lbs./in. (kN/m)
1	WR12-200-08	330 (1 468)	1.34 (34,0)	2,090 (366)	1,020 (179)
2	WR12-300-08	305 (1 357)	1.46 (37,1)	1,830 (320)	870 (152)
3	WR12-400-08	240 (1 068)	1.58 (40,1)	1,380 (242)	630 (110)
4	WR12-500-08	220 (979)	1.76 (44,7)	1,170 (205)	520 (91)
5	WR12-600-08	210 (934)	1.96 (49,8)	1,040 (182)	450 (79)
6	WR12-700-08	120 (534)	2.60 (66,0)	490 (86)	190 (33)
7	WR12-800-08	95 (423)	2.68 (68,1)	385 (67)	150 (26)



45° Compression/Roll

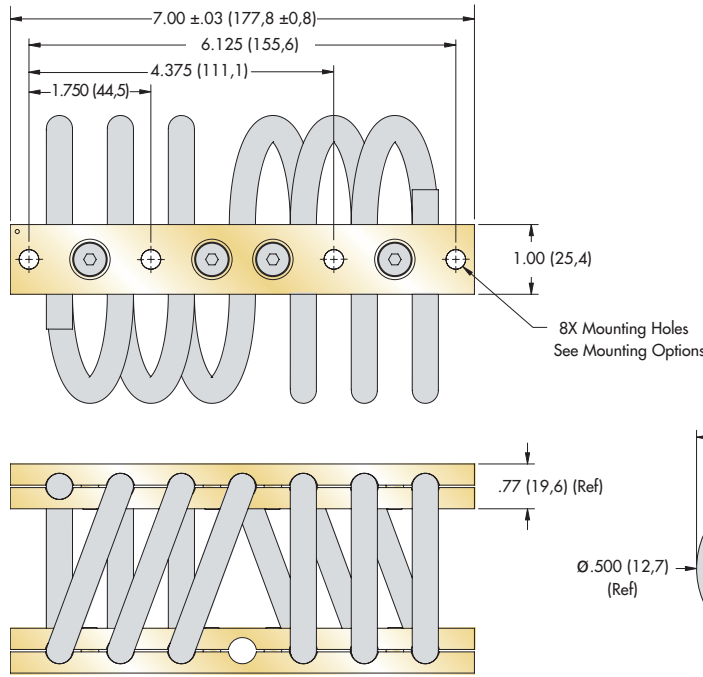
Curve	Model	Max Static Load Lbs. (N)	Max Deflection in. (mm)	Kv (vibration) Lbs./in. (kN/m)	Ks (shock) Lbs./in. (kN/m)
1	WR12-200-08	265 (1 179)	1.88 (47,8)	1,350 (236)	590 (103)
2	WR12-300-08	245 (1 090)	2.04 (51,8)	1,190 (208)	500 (88)
3	WR12-400-08	200 (890)	2.20 (55,9)	910 (159)	370 (65)
4	WR12-500-08	185 (823)	2.48 (63,0)	780 (137)	310 (54)
5	WR12-600-08	175 (778)	2.80 (71,1)	700 (123)	270 (47)
6	WR12-700-08	105 (467)	3.62 (91,9)	340 (60)	120 (21)
7	WR12-800-08	84 (373)	3.74 (95,0)	270 (47)	90 (16)



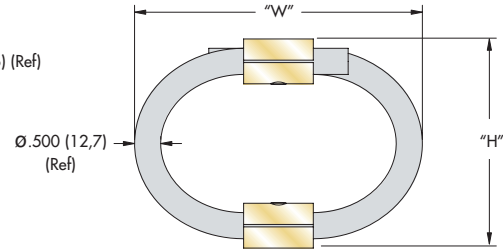
Shear/Roll

Curve	Model	Max Static Load Lbs. (N)	Max Deflection in. (mm)	Kv (vibration) Lbs./in. (kN/m)	Ks (shock) Lbs./in. (kN/m)
1	WR12-200-08	205 (912)	1.42 (36,1)	740 (130)	740 (130)
2	WR12-300-08	195 (867)	1.54 (39,1)	640 (112)	640 (112)
3	WR12-400-08	150 (667)	1.66 (42,2)	440 (77)	440 (77)
4	WR12-500-08	140 (623)	1.86 (47,2)	370 (65)	370 (65)
5	WR12-600-08	135 (601)	2.08 (52,8)	340 (60)	340 (60)
6	WR12-700-08	60 (267)	2.68 (68,1)	155 (27)	155 (27)
7	WR12-800-08	45 (200)	2.80 (71,1)	110 (19)	110 (19)

Note: Performance provided for full loop models with standard (302/304) stainless steel cable. Consult ENIDINE for other options. Do not extrapolate curves.



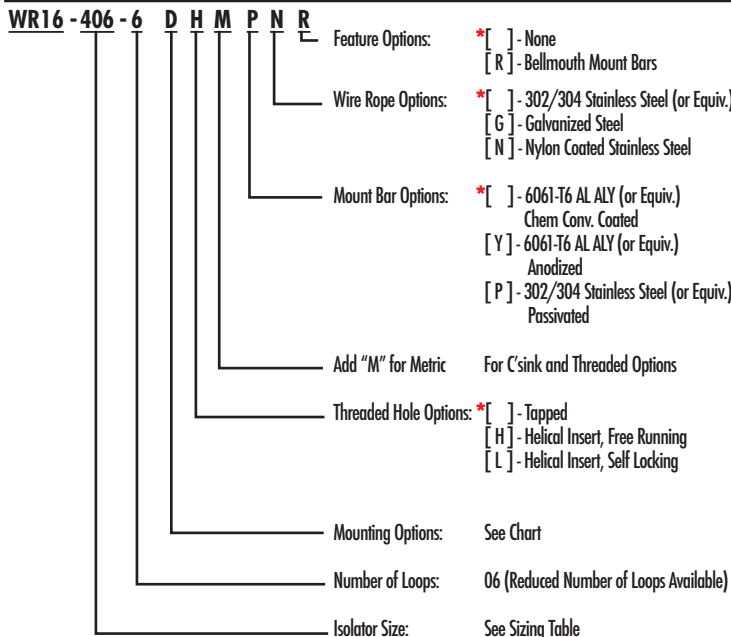
Note: Dimensions are in inches (mm)
Tolerances are ± .010 (± .25mm)



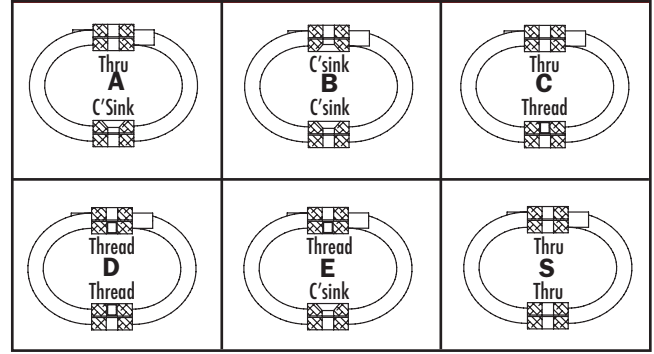
Size	Height "H" in. (mm)	Width (Ref) "W" in. (mm)	Unit Weight Lbs. (Kg)	Mounting Options	Thru Hole in. (mm)	Thread in. (mm)	C'sink Imperial (Metric)
WR16-206	3.00 (76)	3.63 (92)	3.00 (1,36)	A, B, C, D, E, S	0.354 ^{+0.005} _{-.015} (09,0 ^{+0.13} _{-0,38})	1/4-28 UNF *(M8 X 1,25)	82° (90°)
WR16-306	3.25 (83)	4.00 (102)	3.15 (1,43)				
WR16-406	3.50 (89)	4.13 (105)	3.30 (1,50)				
WR16-606	3.75 (95)	4.75 (121)	3.68 (1,67)				
WR16-706	4.25 (108)	5.25 (133)	3.98 (1,81)				
WR16-806	4.90 (124)	5.65 (144)	4.46 (2,02)				
WR16-856	5.40 (137)	6.13 (156)	4.80 (2,18)				
WR16-906	6.10 (155)	7.10 (180)	5.10 (2,31)				

* Tapped M8 x 1.25, Inserts M7 x 1.0

Model Number Ordering Code



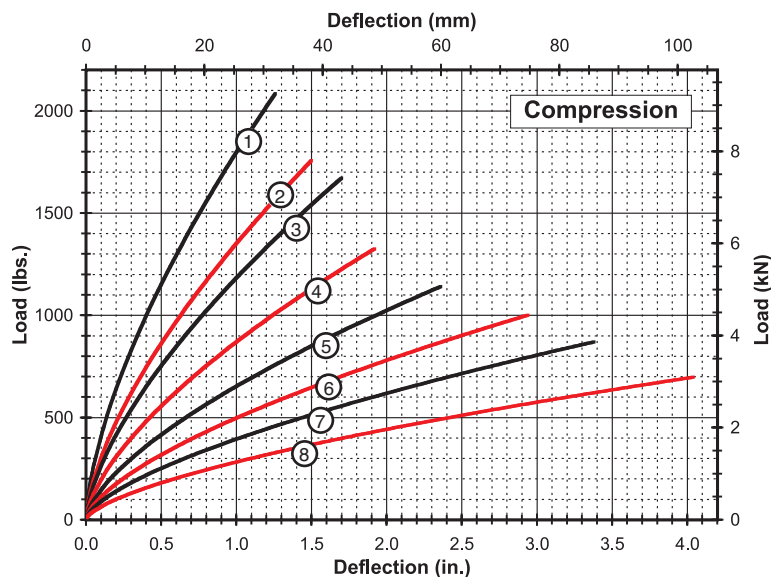
Mounting Options



- Maximum recommended torque for threaded bar is 115 in.-lbs. (20 Nm)
- Operating Temperature Range: -150°F to 500°F (-100°C to 260°C)

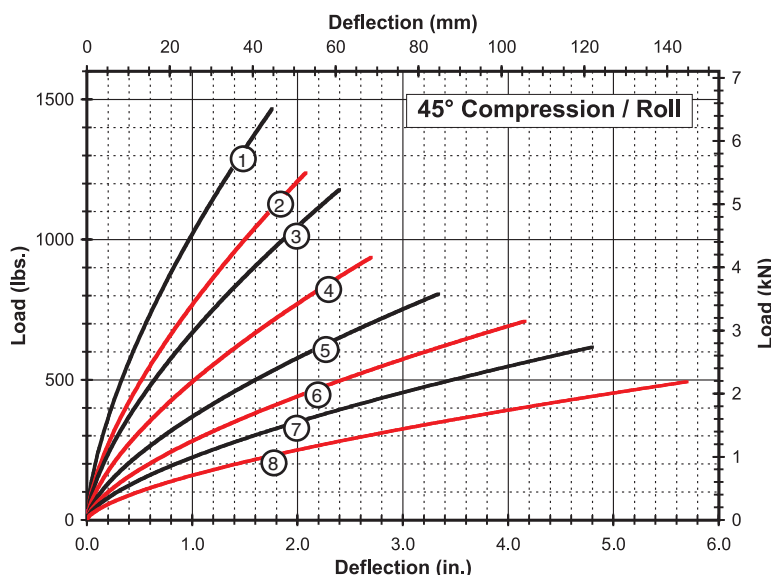
* Standard features. Any non-standard items may require longer lead times. Call for quotation.

Static Load vs. Deflection



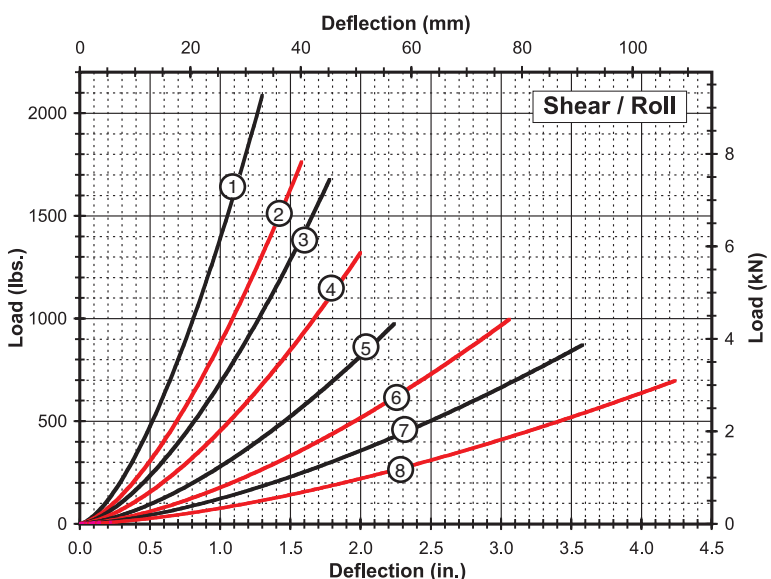
Compression

Curve	Model	Max Static Load Lbs. (N)	Max Deflection in. (mm)	Kv (vibration) Lbs./in. (kN/m)	Ks (shock) Lbs./in. (kN/m)
1	WR16-206-06	615 (2 736)	1.26 (32,0)	4,090 (716)	2,010 (352)
2	WR16-306-06	515 (2 291)	1.50 (38,1)	3,030 (531)	1,420 (249)
3	WR16-406-06	485 (2 157)	1.70 (43,2)	2,630 (461)	1,190 (208)
4	WR16-606-06	390 (1 735)	1.92 (48,8)	1,960 (343)	840 (147)
5	WR16-706-06	330 (1 468)	2.36 (59,9)	1,460 (256)	590 (103)
6	WR16-806-06	290 (1 290)	2.94 (74,7)	1,120 (196)	410 (72)
7	WR16-856-06	255 (1 134)	3.38 (85,9)	880 (154)	310 (54)
8	WR16-906-06	205 (912)	4.04 (102,6)	635 (111)	210 (37)



45° Compression/Roll

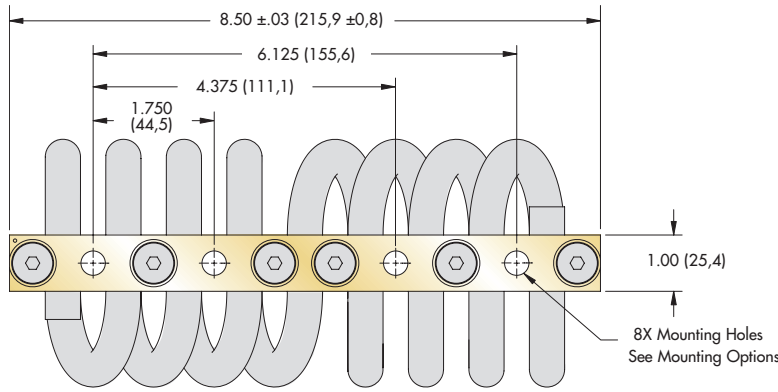
Curve	Model	Max Static Load Lbs. (N)	Max Deflection in. (mm)	Kv (vibration) Lbs./in. (kN/m)	Ks (shock) Lbs./in. (kN/m)
1	WR16-206-06	435 (1 935)	1.76 (44,7)	2,310 (405)	1,010 (177)
2	WR16-306-06	365 (1 624)	2.08 (52,8)	1,700 (298)	720 (126)
3	WR16-406-06	345 (1 535)	2.40 (61,0)	1,500 (263)	600 (105)
4	WR16-606-06	275 (1 223)	2.70 (68,6)	1,110 (194)	420 (74)
5	WR16-706-06	235 (1 045)	3.34 (84,8)	825 (144)	290 (51)
6	WR16-806-06	205 (912)	4.16 (105,7)	630 (110)	210 (37)
7	WR16-856-06	180 (801)	4.80 (121,9)	500 (88)	160 (28)
8	WR16-906-06	140 (623)	5.70 (144,8)	355 (62)	110 (19)



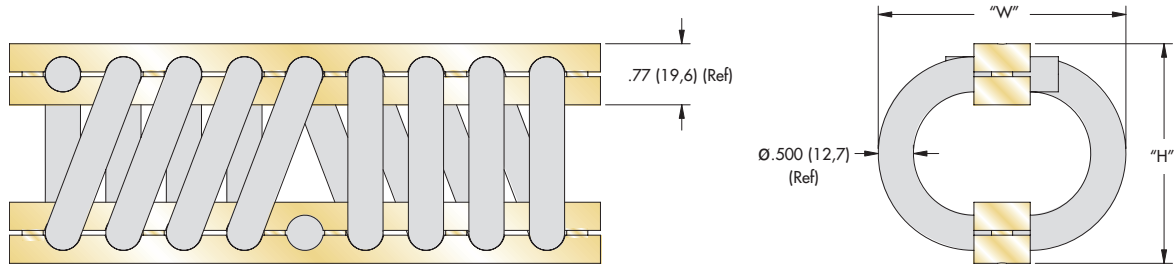
Shear/Roll

Curve	Model	Max Static Load Lbs. (N)	Max Deflection in. (mm)	Kv (vibration) Lbs./in. (kN/m)	Ks (shock) Lbs./in. (kN/m)
1	WR16-206-06	335 (1 490)	1.30 (33,0)	1,260 (221)	1,260 (221)
2	WR16-306-06	275 (1 223)	1.58 (40,1)	890 (156)	890 (156)
3	WR16-406-06	255 (1 134)	1.78 (45,2)	740 (130)	740 (130)
4	WR16-606-06	205 (912)	2.00 (50,8)	520 (91)	520 (91)
5	WR16-706-06	135 (601)	2.24 (56,9)	340 (60)	340 (60)
6	WR16-806-06	100 (445)	3.06 (77,7)	260 (46)	260 (46)
7	WR16-856-06	75 (334)	3.58 (90,9)	190 (33)	190 (33)
8	WR16-906-06	50 (222)	4.24 (107,7)	130 (23)	130 (23)

Note: Performance provided for full loop models with standard (302/304) stainless steel cable. Consult ENIDINE for other options. Do not extrapolate curves.



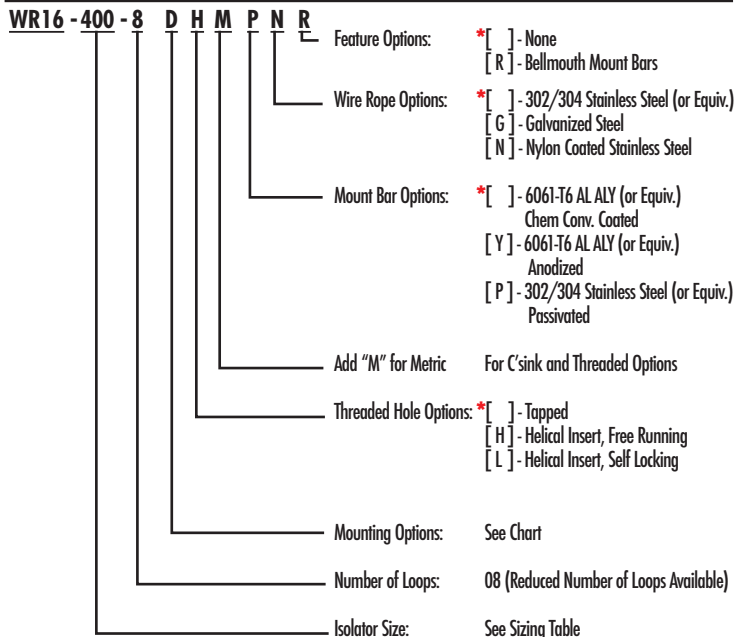
Note: Dimensions are in inches (mm)
Tolerances are ± .010 (± .25mm)



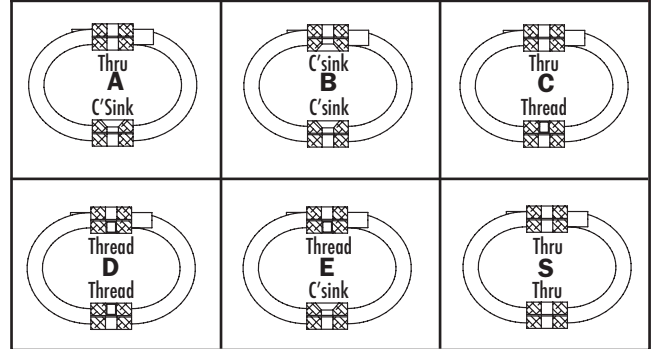
Size	Height "H" in. (mm)	Width (Ref) "W" in. (mm)	Unit Weight Lbs. (Kg)	Mounting Options	Thru Hole in. (mm)	Thread in. (mm)	C'sink Imperial (Metric)
WR16-200	3.00 (76)	3.63 (92)	4.00 (1,81)	A, B, C, D, E, S	Ø.354 ^{+.005} _{-.015} (Ø9.0 ^{+0.13} _{-0.38})	1/4-28 UNF *(M8 X 1,25)	82° (90°)
WR16-300	3.25 (83)	4.00 (102)	4.20 (1,91)				
WR16-400	3.50 (89)	4.13 (105)	4.40 (2,00)				
WR16-600	3.75 (95)	4.75 (121)	4.90 (2,22)				
WR16-700	4.25 (108)	5.25 (133)	5.30 (2,40)				
WR16-800	4.90 (124)	5.65 (144)	5.95 (2,70)				
WR16-850	5.40 (137)	6.13 (156)	6.40 (2,90)				
WR16-900	6.10 (155)	7.10 (180)	6.80 (3,09)				

* Tapped M8 x 1.25, Inserts M7 x 1.0

Model Number Ordering Code



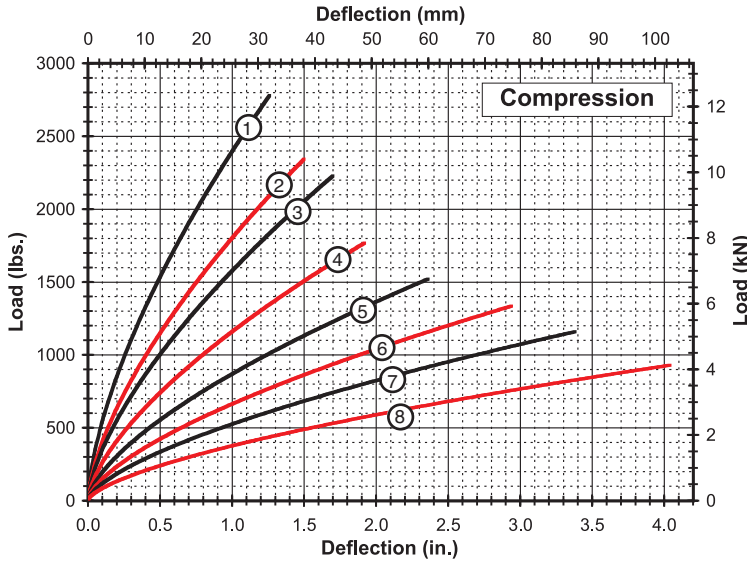
Mounting Options



- Maximum recommended torque for threaded bar is 115 in.-lbs. (20 Nm)
- Operating Temperature Range: -150°F to 500°F (-100°C to 260°C)

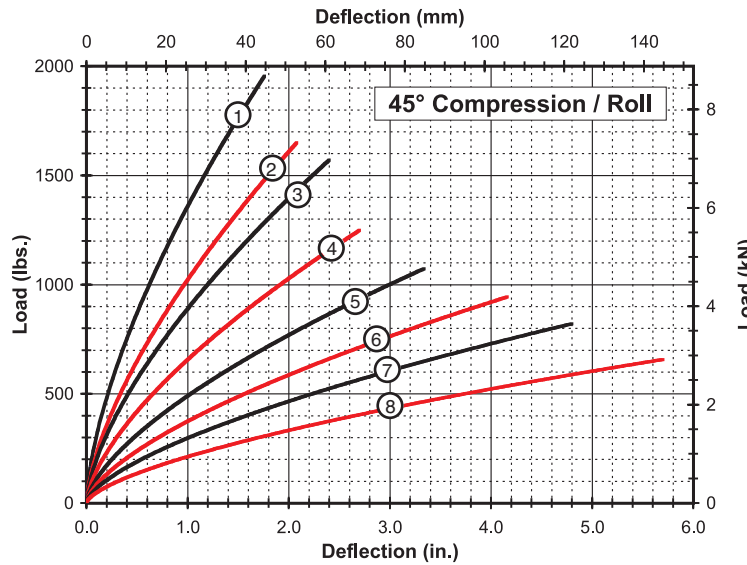
* Standard features. Any non-standard items may require longer lead times. Call for quotation.

Static Load vs. Deflection



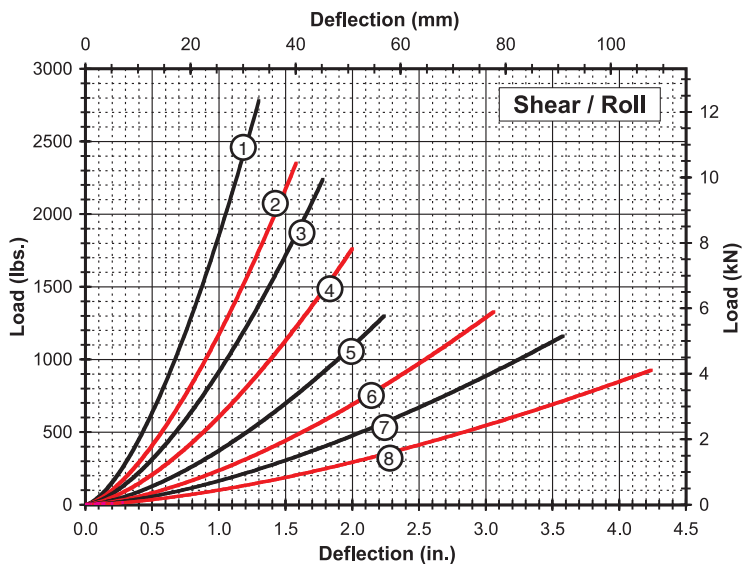
Compression

Curve	Model	Max Static Load Lbs. (N)	Max Deflection in. (mm)	Kv (vibration) Lbs./in. (kN/m)	Ks (shock) Lbs./in. (kN/m)
1	WR16-200-08	820 (3 648)	1.26 (32,0)	5,450 (954)	2,690 (471)
2	WR16-300-08	685 (3 047)	1.50 (38,1)	4,040 (708)	1,900 (333)
3	WR16-400-08	645 (2 869)	1.70 (43,2)	3,500 (613)	1,590 (278)
4	WR16-600-08	520 (2 313)	1.92 (48,8)	2,610 (457)	1,120 (196)
5	WR16-700-08	440 (1 957)	2.36 (59,9)	1,940 (340)	780 (137)
6	WR16-800-08	390 (1 735)	2.94 (74,7)	1,490 (261)	550 (96)
7	WR16-850-08	340 (1 512)	3.38 (85,9)	1,180 (207)	420 (74)
8	WR16-900-08	270 (1 201)	4.04 (102,6)	845 (148)	280 (49)



45° Compression/Roll

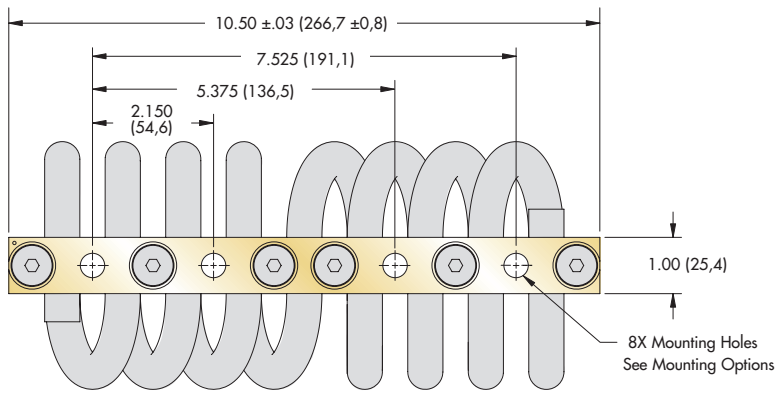
Curve	Model	Max Static Load Lbs. (N)	Max Deflection in. (mm)	Kv (vibration) Lbs./in. (kN/m)	Ks (shock) Lbs./in. (kN/m)
1	WR16-200-08	580 (2 580)	1.76 (44,7)	3,080 (539)	1,350 (236)
2	WR16-300-08	485 (2 157)	2.08 (52,8)	2,270 (398)	960 (168)
3	WR16-400-08	460 (2 046)	2.40 (61,0)	1,990 (349)	790 (138)
4	WR16-600-08	365 (1 624)	2.70 (68,6)	1,480 (259)	560 (98)
5	WR16-700-08	315 (1 401)	3.34 (84,8)	1,100 (193)	390 (68)
6	WR16-800-08	275 (1 223)	4.16 (105,7)	840 (147)	280 (49)
7	WR16-850-08	240 (1 068)	4.80 (121,9)	670 (117)	210 (37)
8	WR16-900-08	185 (823)	5.70 (144,8)	475 (83)	140 (25)



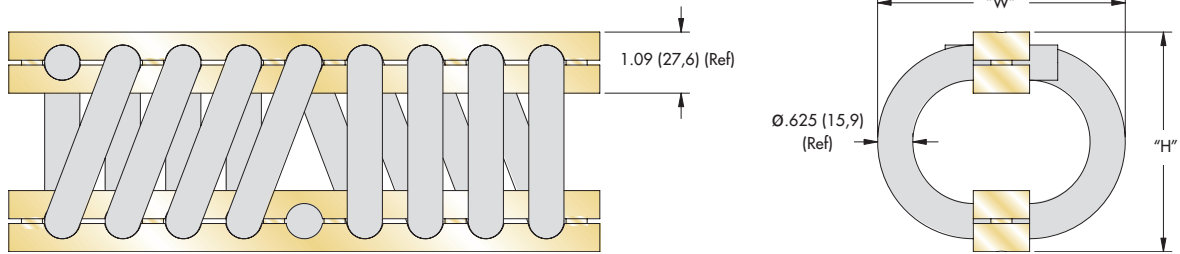
Shear/Roll

Curve	Model	Max Static Load Lbs. (N)	Max Deflection in. (mm)	Kv (vibration) Lbs./in. (kN/m)	Ks (shock) Lbs./in. (kN/m)
1	WR16-200-08	660 (2 936)	1.30 (33,0)	1,680 (294)	1,680 (294)
2	WR16-300-08	385 (1 713)	1.58 (40,1)	1,180 (207)	1,180 (207)
3	WR16-400-08	350 (1 557)	1.78 (45,2)	990 (173)	990 (173)
4	WR16-600-08	270 (1 201)	2.00 (50,8)	690 (121)	690 (121)
5	WR16-700-08	180 (801)	2.24 (56,9)	460 (81)	460 (81)
6	WR16-800-08	135 (601)	3.06 (77,7)	340 (60)	340 (60)
7	WR16-850-08	100 (445)	3.58 (90,9)	260 (46)	260 (46)
8	WR16-900-08	65 (289)	4.24 (107,7)	170 (30)	170 (30)

Note: Performance provided for full loop models with standard (302/304) stainless steel cable. Consult ENIDINE for other options. Do not extrapolate curves.



Note: Dimensions are in inches (mm)
Tolerances are ± .010 (± .25mm)



Size	Height "H" in. (mm)	Width (Ref) "W" in. (mm)	Unit Weight Lbs. (Kg)	Mounting Options	Thru Hole in. (mm)	Thread in. (mm)	C'sink Imperial (Metric)
WR20-200	3.50 (89)	4.00 (102)	6.62 (3,00)	C, D	0.433 ± .005 - .015 (Ø11,0 + 0,13 - 0,38)	3/8-24 UNF (M10 X 1,5)	82° (90°)
WR20-300	3.90 (99)	4.40 (112)	7.06 (3,20)	A, B, C, D, E, S			
WR20-400	4.00 (102)	4.75 (121)	7.50 (3,40)				
WR20-600	4.30 (109)	5.31 (135)	8.16 (3,70)				
WR20-700	4.70 (119)	6.00 (152)	8.83 (4,00)				
WR20-800	5.00 (127)	6.50 (165)	9.50 (4,31)				
WR20-900	5.30 (135)	7.00 (178)	10.20 (4,63)				

Model Number Ordering Code

WR20 - 400 - 8 D H M P N R

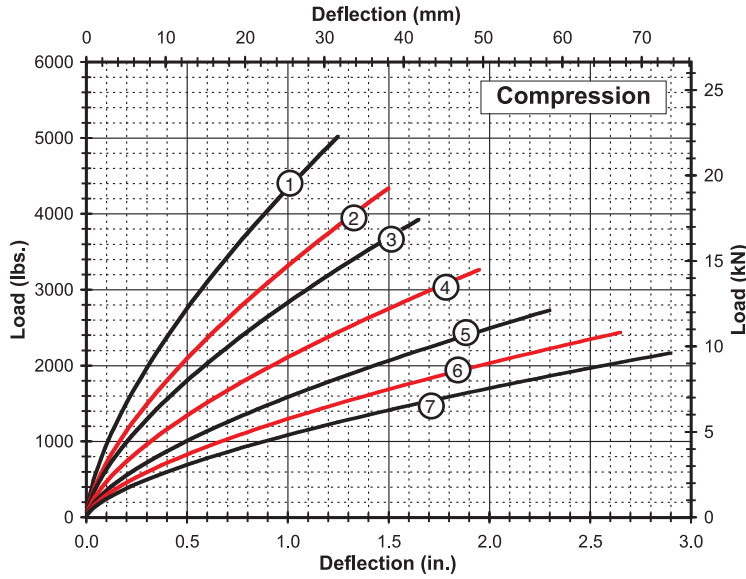
- Feature Options:
 - * [] - None
 - [R] - Bellmouth Mount Bars
- Wire Rope Options:
 - * [] - 302/304 Stainless Steel (or Equiv.)
 - [G] - Galvanized Steel
 - [N] - Nylon Coated Stainless Steel
- Mount Bar Options:
 - * [] - 6061-T6 AL ALY (or Equiv.) Chem Conv. Coated
 - [Y] - 6061-T6 AL ALY (or Equiv.) Anodized
 - [P] - 302/304 Stainless Steel (or Equiv.) Passivated
- Add "M" for Metric For C'sink and Threaded Options
- Threaded Hole Options:
 - * [] - Tapped
 - [H] - Helical Insert, Free Running
 - [L] - Helical Insert, Self Locking
- Mounting Options: See Chart
- Number of Loops: 08 (Reduced Number of Loops Available)
- Isolator Size: See Sizing Table

Mounting Options

- Maximum recommended torque for threaded bar is 415 in.-lbs. (50 Nm)
- Operating Temperature Range: -150°F to 500°F (-100°C to 260°C)

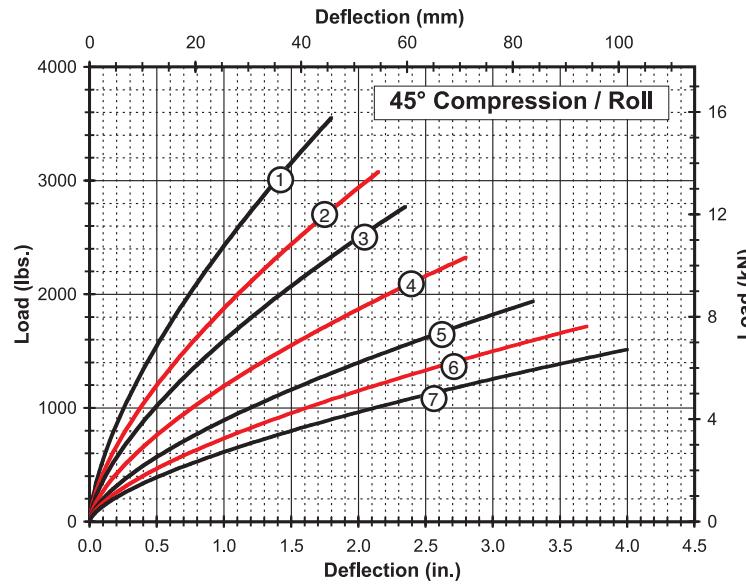
* Standard features. Any non-standard items may require longer lead times. Call for quotation.

Static Load vs. Deflection



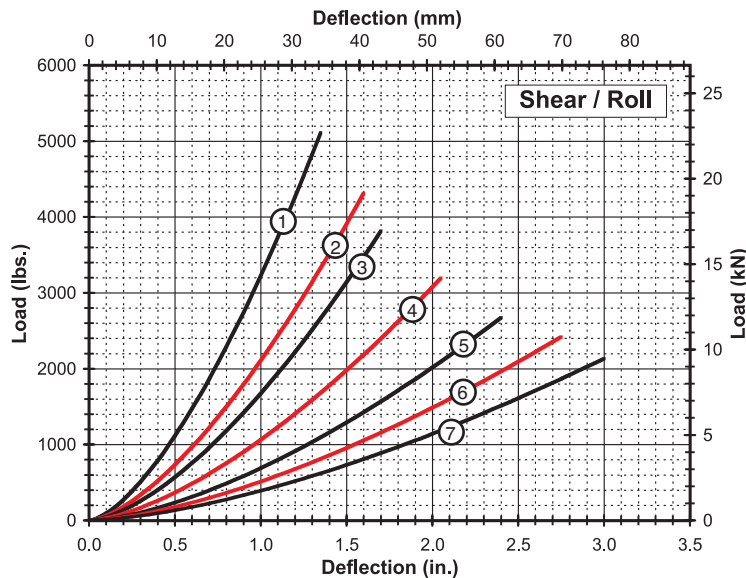
Compression

Curve	Model	Max Static Load Lbs. (N)	Max Deflection in. (mm)	Kv (vibration) Lbs./in. (kN/m)	Ks (shock) Lbs./in. (kN/m)
1	WR20-200-08	1,450 (6 450)	1.25 (31,8)	9,570 (1 676)	4,850 (849)
2	WR20-300-08	1,230 (5 471)	1.50 (38,1)	7,190 (1 259)	3,480 (609)
3	WR20-400-08	1,140 (5 071)	1.65 (41,9)	6,310 (1 105)	2,880 (504)
4	WR20-600-08	945 (4 204)	1.95 (49,5)	4,690 (821)	2,030 (356)
5	WR20-700-08	790 (3 514)	2.30 (58,4)	3,520 (616)	1,440 (252)
6	WR20-800-08	715 (3 180)	2.65 (67,3)	2,920 (511)	1,120 (196)
7	WR20-900-08	630 (2 802)	2.90 (73,7)	2,440 (427)	910 (159)



45° Compression/Roll

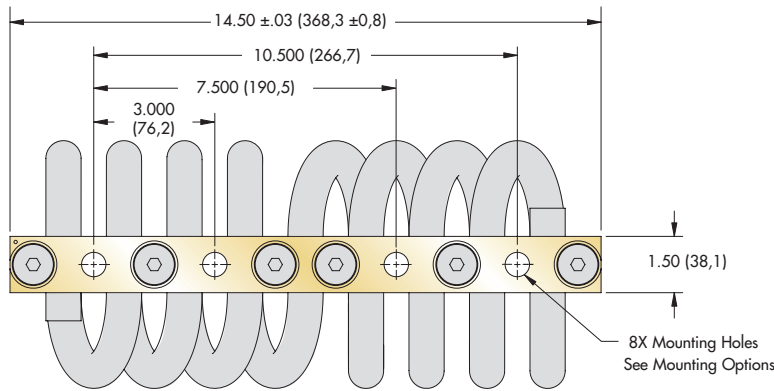
Curve	Model	Max Static Load Lbs. (N)	Max Deflection in. (mm)	Kv (vibration) Lbs./in. (kN/m)	Ks (shock) Lbs./in. (kN/m)
1	WR20-200-08	1,020 (4 537)	1.80 (45,7)	5,430 (951)	2,390 (419)
2	WR20-300-08	895 (3 981)	2.15 (54,6)	4,230 (741)	1,740 (305)
3	WR20-400-08	805 (3 581)	2.35 (59,7)	3,580 (627)	1,430 (250)
4	WR20-600-08	670 (2 980)	2.80 (71,1)	2,670 (468)	1,010 (177)
5	WR20-700-08	560 (2 491)	3.30 (83,8)	2,000 (350)	710 (124)
6	WR20-800-08	505 (2 246)	3.70 (94,0)	1,630 (285)	560 (98)
7	WR20-900-08	445 (1 979)	4.00 (101,6)	1,360 (238)	460 (81)



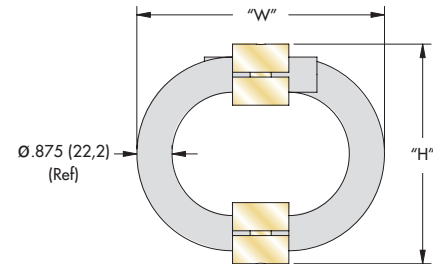
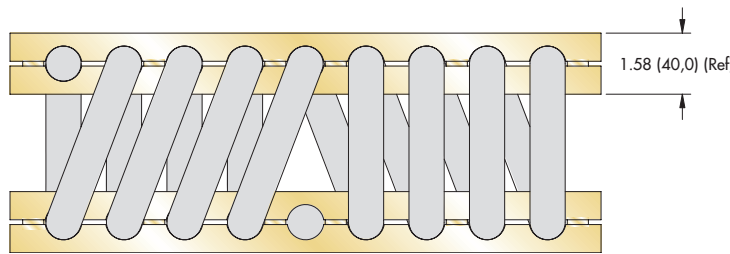
Shear/Roll

Curve	Model	Max Static Load Lbs. (N)	Max Deflection in. (mm)	Kv (vibration) Lbs./in. (kN/m)	Ks (shock) Lbs./in. (kN/m)
1	WR20-200-08	790 (3 514)	1.35 (34,3)	2,990 (524)	2,990 (524)
2	WR20-300-08	680 (3 025)	1.60 (40,6)	2,140 (375)	2,140 (375)
3	WR20-400-08	590 (2 624)	1.70 (43,2)	1,760 (308)	1,760 (308)
4	WR20-600-08	480 (2 135)	2.05 (52,1)	1,230 (215)	1,230 (215)
5	WR20-700-08	340 (1 512)	2.40 (61,0)	870 (152)	870 (152)
6	WR20-800-08	275 (1 223)	2.75 (69,9)	700 (123)	700 (123)
7	WR20-900-08	220 (979)	3.00 (76,2)	560 (98)	560 (98)

Note: Performance provided for full loop models with standard (302/304) stainless steel cable. Consult ENIDINE for other options. Do not extrapolate curves.

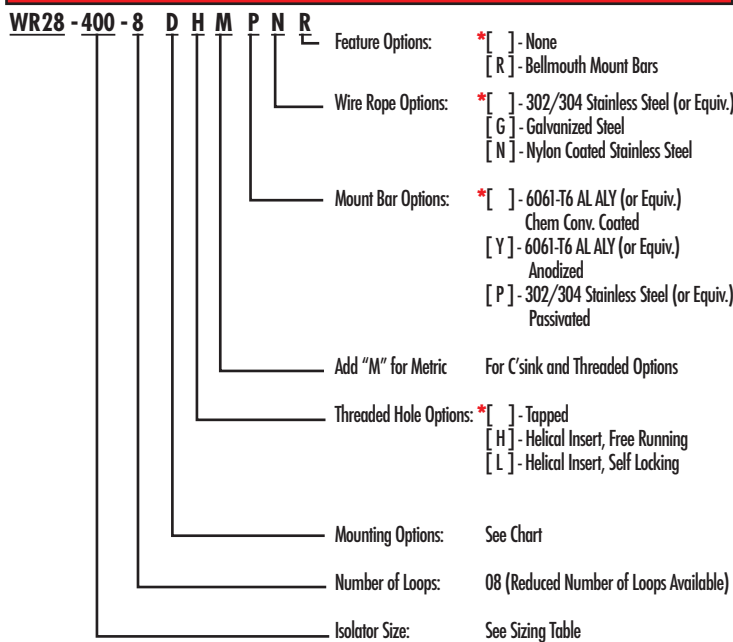


Note: Dimensions are in inches (mm)
Tolerances are ± .010 (± .25mm)

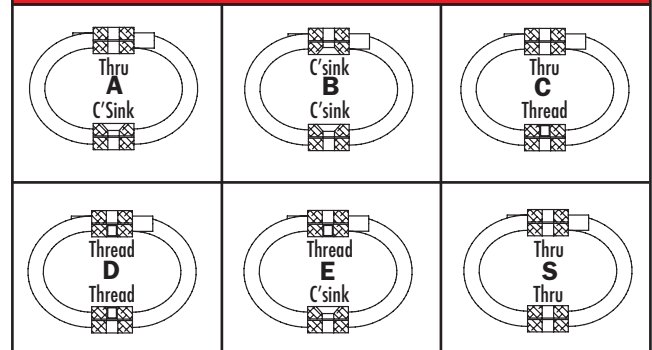


Size	Height "H" in. (mm)	Width (Ref) "W" in. (mm)	Unit Weight Lbs. (Kg)	Mounting Options	Thru Hole in. (mm)	Thread in. (mm)	C'sink Imperial (Metric)
WR28-200	5.25 (133)	5.50 (140)	18.5 (8,40)	C, D	0.531 +.005 -.015 (Ø13,5 +0,13 -0,38)	1/2-13 UNC (M12 X 1,75)	82° (90°)
WR28-400	6.00 (152)	6.50 (165)	21.0 (9,53)	A, B, C, D, E, S			
WR28-600	6.25 (159)	7.00 (178)	21.8 (9,90)				
WR28-800	7.50 (191)	8.25 (210)	25.3 (11,50)				
WR28-900	8.50 (216)	9.25 (235)	28.0 (12,70)				
WR28-950	8.50 (216)	11.25 (286)	30.6 (13,90)				

Model Number Ordering Code



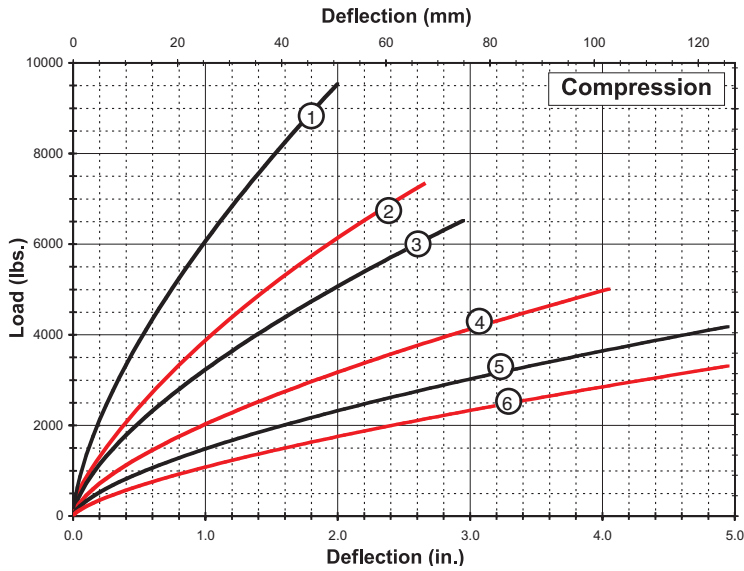
Mounting Options



- Maximum recommended torque for threaded bar 95 ft.-lbs. (100 Nm)
- Operating Temperature Range: -150°F to 500°F (-100°C to 260°C)

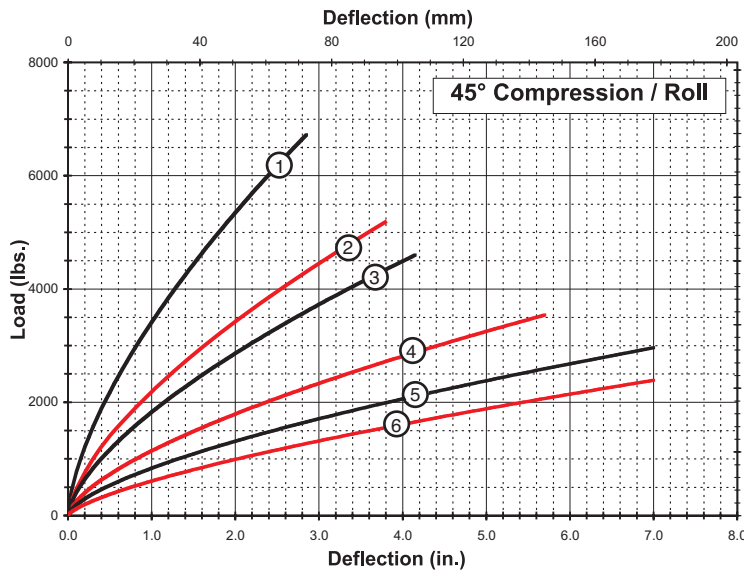
* Standard features. Any non-standard items may require longer lead times. Call for quotation.

Static Load vs. Deflection



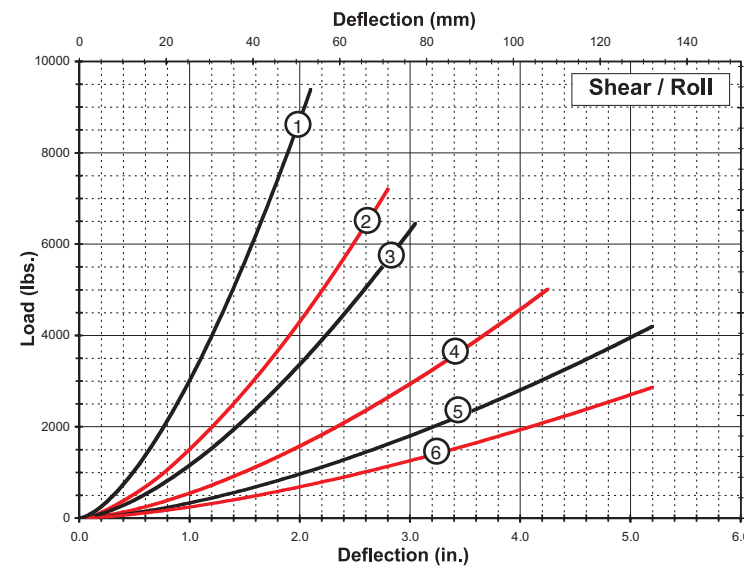
Compression

Curve	Model	Max Static Load Lbs. (kN)	Max Deflection in. (mm)	Kv (vibration) Lbs./in. (kN/m)	Ks (shock) Lbs./in. (kN/m)
1	WR28-200-08	2,760 (12,28)	2.00 (50,8)	13,490 (2 362)	5,770 (1 010)
2	WR28-400-08	2,120 (9,43)	2.65 (67,3)	8,640 (1 513)	3,340 (585)
3	WR28-600-08	1,900 (8,45)	2.95 (74,9)	7,250 (1 270)	2,680 (469)
4	WR28-800-08	1,470 (6,54)	4.05 (102,9)	4,570 (800)	1,500 (263)
5	WR28-900-08	1,220 (5,43)	4.95 (125,7)	3,340 (585)	1,030 (180)
6	WR28-950-08	840 (3,74)	4.95 (125,7)	2,150 (377)	790 (138)



45° Compression/Roll

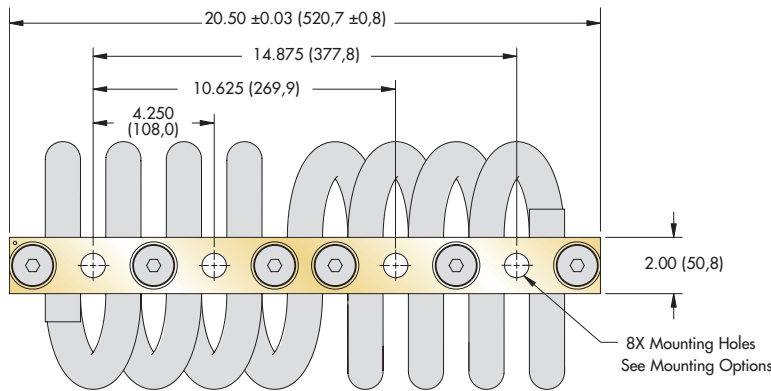
Curve	Model	Max Static Load Lbs. (kN)	Max Deflection in. (mm)	Kv (vibration) Lbs./in. (kN/m)	Ks (shock) Lbs./in. (kN/m)
1	WR28-200-08	1,960 (8,72)	2.85 (72,4)	7,700 (1 348)	2,870 (503)
2	WR28-400-08	1,500 (6,67)	3.80 (96,5)	4,910 (860)	1,650 (289)
3	WR28-600-08	1,350 (6,01)	4.15 (105,4)	4,100 (718)	1,340 (235)
4	WR28-800-08	1,000 (4,45)	5.70 (144,8)	2,560 (448)	750 (131)
5	WR28-900-08	730 (3,25)	7.00 (177,8)	1,870 (327)	510 (89)
6	WR28-950-08	475 (2,11)	7.00 (177,8)	1,210 (212)	400 (70)



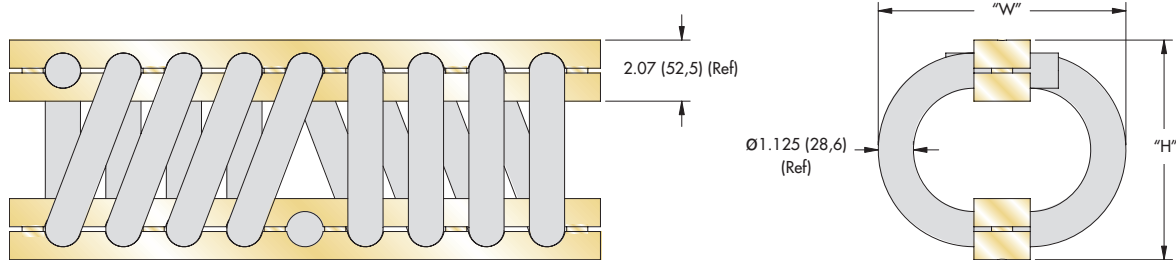
Shear/Roll

Curve	Model	Max Static Load Lbs. (kN)	Max Deflection in. (mm)	Kv (vibration) Lbs./in. (kN/m)	Ks (shock) Lbs./in. (kN/m)
1	WR28-200-08	1,380 (6,14)	2.10 (53,3)	3,530 (618)	3,530 (618)
2	WR28-400-08	795 (3,54)	2.80 (71,1)	2,030 (356)	2,030 (356)
3	WR28-600-08	650 (2,89)	3.05 (77,5)	1,660 (291)	1,660 (291)
4	WR28-800-08	365 (1,62)	4.25 (108,0)	930 (163)	930 (163)
5	WR28-900-08	250 (1,11)	5.20 (132,1)	640 (112)	640 (112)
6	WR28-950-08	170 (0,76)	5.20 (132,1)	440 (77)	440 (77)

Note: Performance provided for full loop models with standard (302/304) stainless steel cable. Consult ENIDINE for other options. Do not extrapolate curves.

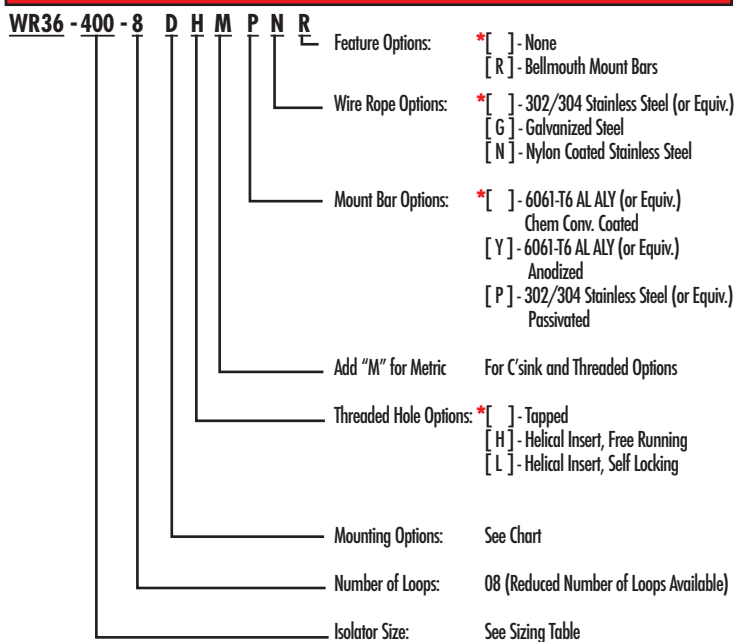


Note: Dimensions are in inches (mm)
Tolerances are ± .010 (± .25mm)

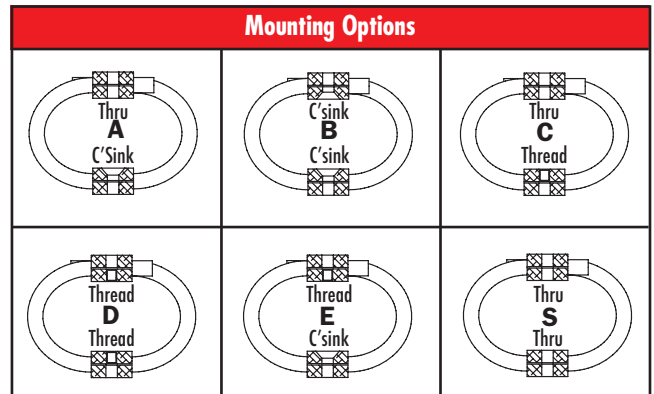


Size	Height "H" in. (mm)	Width (Ref) "W" in. (mm)	Unit Weight Lbs. (Kg)	Mounting Options	Thru Hole in. (mm)	Thread in. (mm)	C'sink Imperial (Metric)
WR36-200	7.00 (178)	8.50 (216)	46 (20,9)	A, B, C, D, E, S	0.781 + .005 - .015 (Ø19.8 + 0.13 - 0.38)	3/4-10 UNC (M18 X 2,5)	82° (90°)
WR36-400	8.50 (216)	9.50 (241)	53 (24,0)				
WR36-600	9.25 (235)	10.25 (260)	55 (25,0)				

Model Number Ordering Code



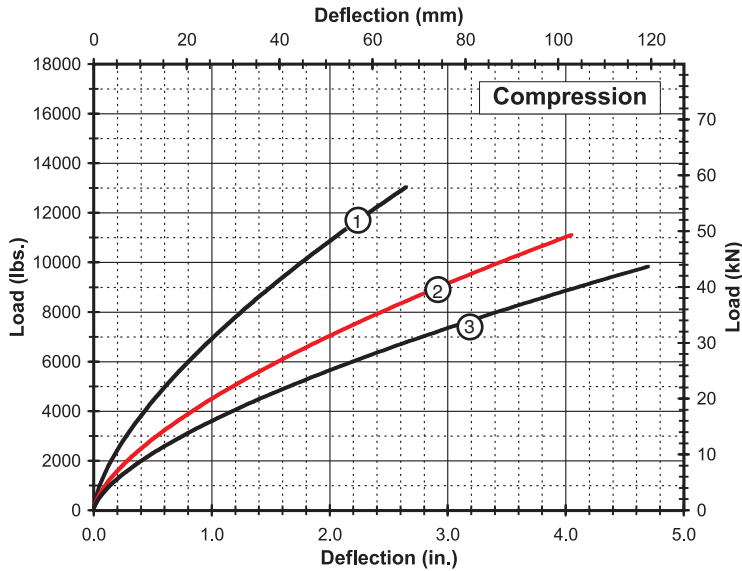
Mounting Options



- Maximum recommended torque for threaded bar is 300 ft.-lbs. (300 Nm)
- Operating Temperature Range: -150°F to 500°F (-100°C to 260°C)

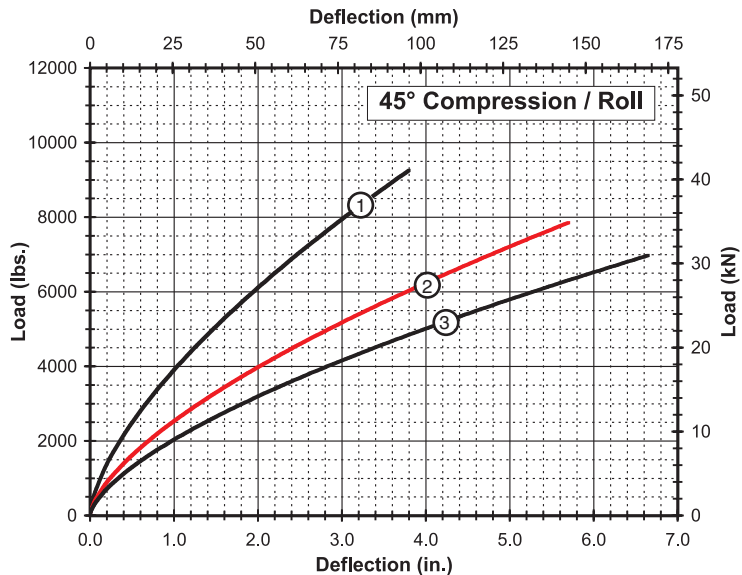
* Standard features. Any non-standard items may require longer lead times. Call for quotation.

Static Load vs. Deflection



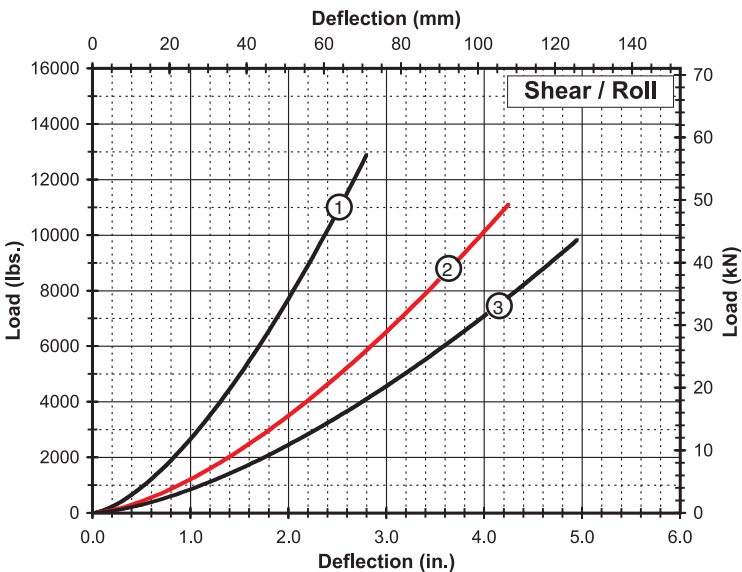
Compression

Curve	Model	Max Static Load Lbs. (kN)	Max Deflection in. (mm)	Kv (vibration) Lbs./in. (kN/m)	Ks (shock) Lbs./in. (kN/m)
1	WR36-200-08	3,790 (16,86)	2.65 (67,3)	15,450 (2 706)	5,960 (1 044)
2	WR36-400-08	3,260 (14,50)	4.05 (102,9)	10,130 (1 774)	3,330 (583)
3	WR36-600-08	2,870 (12,77)	4.70 (119,4)	8,080 (1 415)	2,540 (445)



45° Compression/Roll

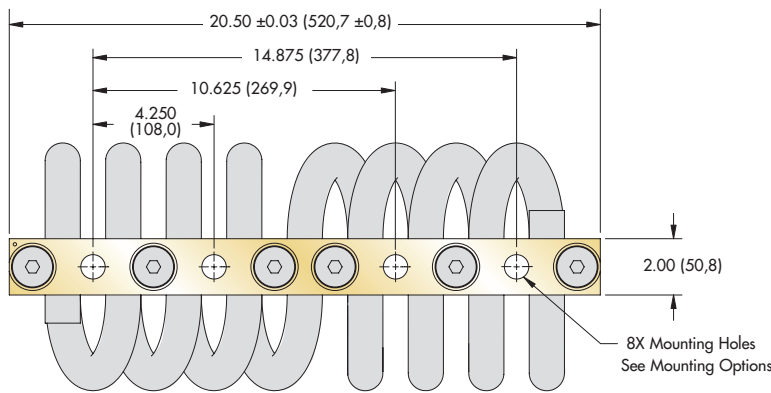
Curve	Model	Max Static Load Lbs. (kN)	Max Deflection in. (mm)	Kv (vibration) Lbs./in. (kN/m)	Ks (shock) Lbs./in. (kN/m)
1	WR36-200-08	2,690 (11,97)	3.80 (96,5)	8,800 (1 541)	2,960 (518)
2	WR36-400-08	2,220 (9,88)	5.70 (144,8)	5,670 (993)	1,670 (292)
3	WR36-600-08	1,790 (7,96)	6.65 (168,9)	4,560 (799)	1,270 (222)



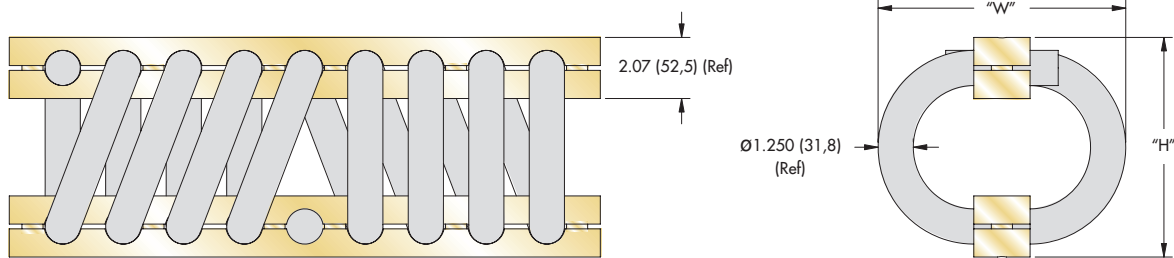
Shear/Roll

Curve	Model	Max Static Load Lbs. (kN)	Max Deflection in. (mm)	Kv (vibration) Lbs./in. (kN/m)	Ks (shock) Lbs./in. (kN/m)
1	WR36-200-08	1,420 (6,32)	2.80 (71,1)	3,630 (636)	3,630 (636)
2	WR36-400-08	810 (3,60)	4.25 (108,0)	2,060 (361)	2,060 (361)
3	WR36-600-08	615 (2,74)	4.95 (125,7)	1,570 (275)	1,570 (275)

Note: Performance provided for full loop models with standard (302/304) stainless steel cable.
Consult ENIDINE for other options. Do not extrapolate curves.



Note: Dimensions are in inches (mm)
Tolerances are ± .010 (± .25mm)



Size	Height "H" in. (mm)	Width (Ref) "W" in. (mm)	Unit Weight Lbs. (Kg)	Mounting Options	Thru Hole in. (mm)	Thread in. (mm)	C'sink Imperial (Metric)
WR40-200	7.00 (178)	8.25 (210)	53 (24,0)	A, B, C, D, E, S	Ø.781 ^{+0,05} _{-.015} (Ø19.8 ^{+0,13} _{-0,38})	3/4-10 UNC (M18 X 2,5)	82°
WR40-400	8.50 (216)		60 (27,2)				90°

Model Number Ordering Code

WR40 - 400 - 8 D H M P N R

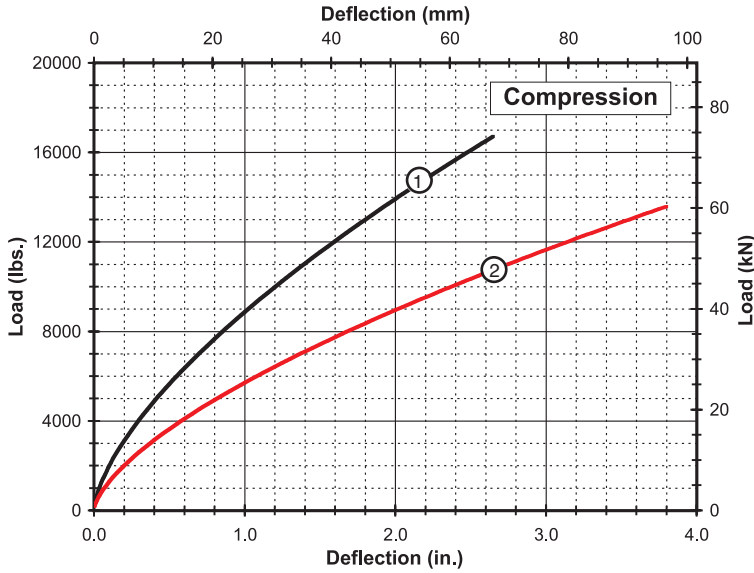
- Feature Options:**
 - * [] - None
 - [R] - Bellmouth Mount Bars
- Wire Rope Options:**
 - * [] - 302/304 Stainless Steel (or Equiv.)
 - [G] - Galvanized Steel
 - [N] - Nylon Coated Stainless Steel
- Mount Bar Options:**
 - * [] - 6061-T6 AL ALY (or Equiv.) Chem Conv. Coated
 - [Y] - 6061-T6 AL ALY (or Equiv.) Anodized
 - [P] - 302/304 Stainless Steel (or Equiv.) Passivated
- Add "M" for Metric For C'sink and Threaded Options
- Threaded Hole Options:**
 - * [] - Tapped
 - [H] - Helical Insert, Free Running
 - [L] - Helical Insert, Self Locking
- Mounting Options:** See Chart
- Number of Loops:** 08 (Reduced Number of Loops Available)
- Isolator Size:** See Sizing Table

Mounting Options

- Maximum recommended torque for threaded bar is 300 ft.-lbs. (300 Nm)
- Operating Temperature Range: -150°F to 500°F (-100°C to 260°C)

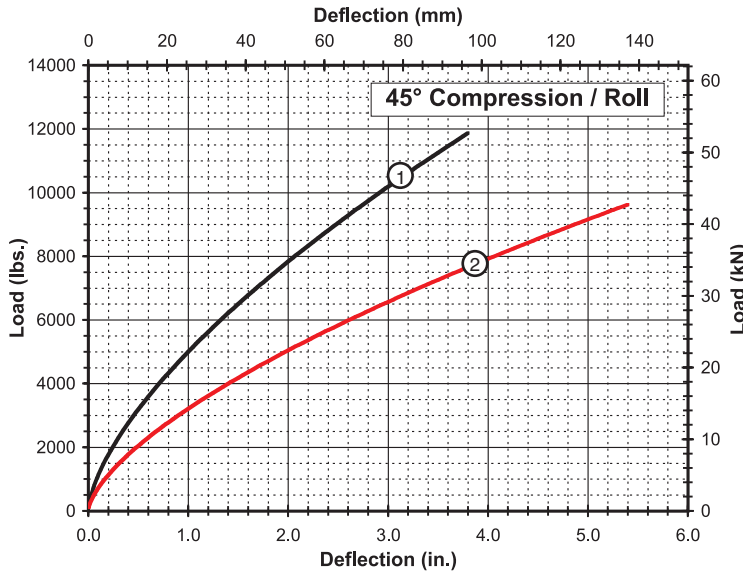
* Standard features. Any non-standard items may require longer lead times. Call for quotation.

Static Load vs. Deflection



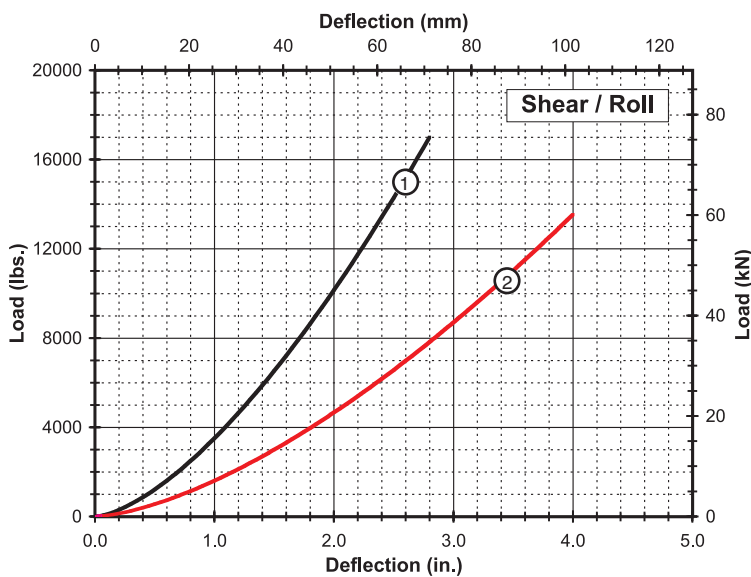
Compression

Curve	Model	Max Static Load Lbs. (kN)	Max Deflection in. (mm)	Kv (vibration) Lbs./in. (kN/m)	Ks (shock) Lbs./in. (kN/m)
1	WR40-200-08	4,860 (21,62)	2.65 (67,3)	19,800 (3 468)	7,640 (1 338)
2	WR40-400-08	3,960 (17,61)	3.80 (96,5)	12,770 (2 236)	4,330 (758)



45° Compression/Roll

Curve	Model	Max Static Load Lbs. (kN)	Max Deflection in. (mm)	Kv (vibration) Lbs./in. (kN/m)	Ks (shock) Lbs./in. (kN/m)
1	WR40-200-08	3,440 (15,30)	3.80 (96,5)	11,240 (1 968)	3,790 (664)
2	WR40-400-08	2,790 (12,41)	5.40 (137,2)	7,170 (1 256)	2,160 (378)



Shear/Roll

Curve	Model	Max Static Load Lbs. (kN)	Max Deflection in. (mm)	Kv (vibration) Lbs./in. (kN/m)	Ks (shock) Lbs./in. (kN/m)
1	WR40-200-08	1,870 (8,32)	2.80 (71,1)	4,790 (839)	4,790 (839)
2	WR40-400-08	1,044 (4,64)	4.00 (101,6)	2,670 (468)	2,670 (468)

Note: Performance provided for full loop models with standard (302/304) stainless steel cable. Consult ENIDINE for other options. Do not extrapolate curves.