

## BIG-GRIP DEAD-END

**Big-Grip Dead-Ends** are designed for use on Transmission, Tower and Antenna, Communications, and other types of guyed structures that require multiple guying points, guy lengths in excess of 90 feet, and/or the use of large guy strand. The unique, one-piece dead-end design is neat in appearance and free from bolts or holding devices that focus high-stress points on the strand. The Big-Grip Dead-End offers a cabled loop, a feature that provides more durability, easier tensioning and adaptability to multiple guying and minimizes the concentrated stresses at both the top of the structure and at the ground anchor.

### FEATURES AND BENEFITS

- For use on large guyed structures that require larger diameter guy strand
- Manufactured to match the material of the strand on which it is applied to inhibit corrosion and meet strength requirements
- Rated at 100% of the strand's published rated breaking strength unless otherwise specified
- Designed to be used with a variety of fittings
- Can be installed without the use of tools
- Can be reapplied twice within the first 90 days after the initial installation for retensioning
- Offset legs help identify the rods of each leg and make installation and removal of the dead-end easier
- Designed to permit strand tails to be buried within the dead-end or passed through the loop when a bond to ground is required

## DESIGN CONSIDERATIONS

Description	Details
Material Selection	Big-Grip Dead-Ends are made of the same basic material as the strand to which they are applied (galvanized steel and aluminum clad steel) <b>except where noted otherwise</b> . These materials can be selected from the catalog tables. The recommended types of strand are also indicated.
Application and Safety Considerations	<p>Big-Grip Dead-Ends are intended for use on large structures associated with transmission, tower and antenna, and communications construction. <b>Big-Grip Dead-Ends are NOT acceptable for use on wire rope applications</b>. When in doubt about installations, hardware, or applications, contact a PLP representative.</p> <p>Big-Grip Dead-Ends should be used only on the size and strand for which they are designed. They must have the same lay direction and be made from the same material as the strand to which they are applied. When using types of strand and/or sizes of strand not mentioned in these catalog pages, consult PLP for compatible Big-Grip Dead-End designs.</p> <p>During installation and at all times, care should be taken to avoid gouging or damaging the corrosion preventive material of either the Big-Grip Dead-end or the strand. Although Big-Grip Dead-Ends can be installed without the use of tools, a screwdriver can be used with caution to split the legs of the dead-end into subsets. When splitting the legs, do not make more than two subsets per leg.</p> <p>Within the first 90 days after initial application, Big-Grip Dead-Ends may be removed and reapplied two times for the purpose of retensioning the guy. After 90 days a new dead-end must be used any time removal is required.</p> <p><b>BIG-GRIP Dead-Ends should not be used as tools; that is, come-alongs, pulling-in grips, etc.</b> Refer to the Installation Tools section for the PLP Pulling Eye, designed to assist application at the anchor.</p>
Strand Tail	For appearance and safety, the strand tail should be cut as close as convenient to the crossover mark and buried inside the crossover mark if possible. If desired, the strand tail can, instead, extend through the loop for grounding purposes. Any tail that extends through the loop should be restrained and not permitted to rotate during loading of the guy. Grounding of the down guy should never be accomplished through any part of the Big-Grip Dead-End.
Mechanical Strength	Big-Grip Dead-Ends are rated at 100% of the strand's published rated breaking strength unless otherwise specified. PLP suggests guy tensions be maintained at approximately 10% of the strand's Rated Breaking Strength (RBS).
Hardware	<p>Big-Grip Dead-Ends should not be used on hardware that allows the strand to rotate or spin about its axis uncontrolled. Adjustable hardware, such as a turnbuckle, may be used as long as rotational movement of the strand is restricted. Consult PLP for additional information concerning adjustable hardware that can be used with Big-Grip Dead-Ends.</p> <p>Hardware used in conjunction with Big-Grip Dead-Ends should have smooth contours, ample groove clearances, acceptable seat diameters, and sufficient strength to minimize abrasion and fatigue of the loop area. Refer to the figures and table on the next page for acceptable hardware and dimensions to use with Big-Grip Dead-Ends.</p> <p>If PLP's Heavy-Duty Thimbles are not used, only heavy-duty type wire rope thimbles or solid Hawser type thimbles are recommended for use with Big-Grip Dead-Ends (Refer to Figures 4, 5, and 6 on the next page). Heavy-duty type wire rope thimbles can collapse when guy tensions are high. In order to support and protect the loop area of the Big-Grip Dead-End, special precautions are necessary. To prevent collapse of the thimble, either a Hawser type thimble (Figure 4), a large pin inside the thimble (Figure 5), or a smaller pin (such as a shackle pin) plus double extra strong weight pipe or equivalent (Figure 6) is necessary. Double extra strong weight pipe, which has increased wall thickness and strength over schedule 160 pipe, does not have a schedule number but information can be obtained from a pipe supplier. Thimble strengths and dimensions can be obtained from a thimble supplier.</p>

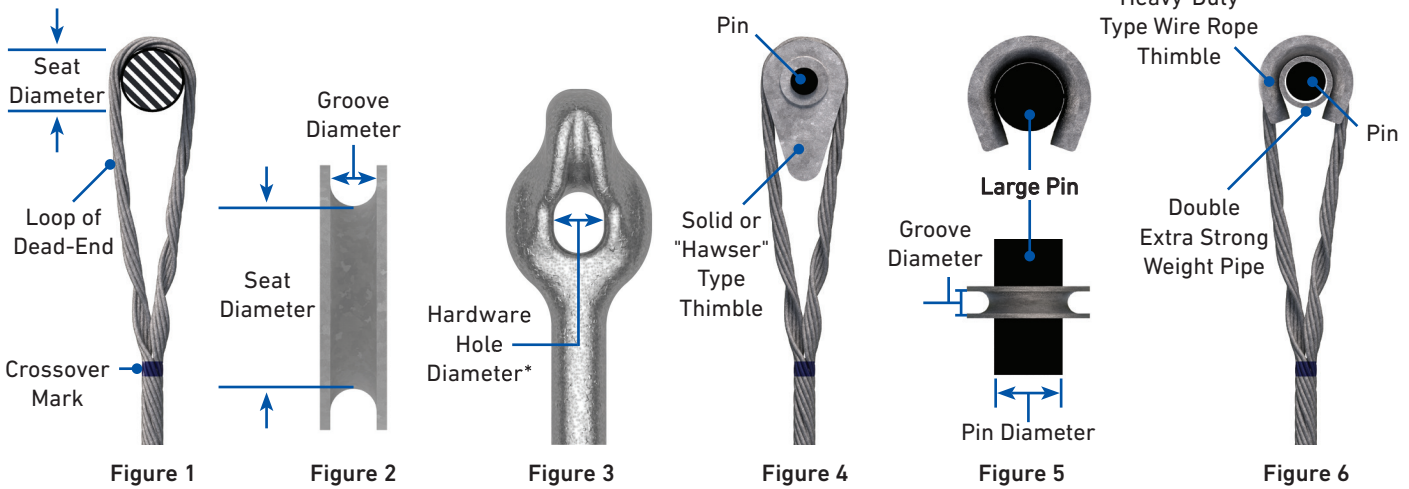
### Additional Resources

For additional information regarding the use and installation of Big-Grip Dead-Ends, use the QR codes listed below.



Big-Grip Dead-End  
Webpage

## ATTACHMENT HARDWARE

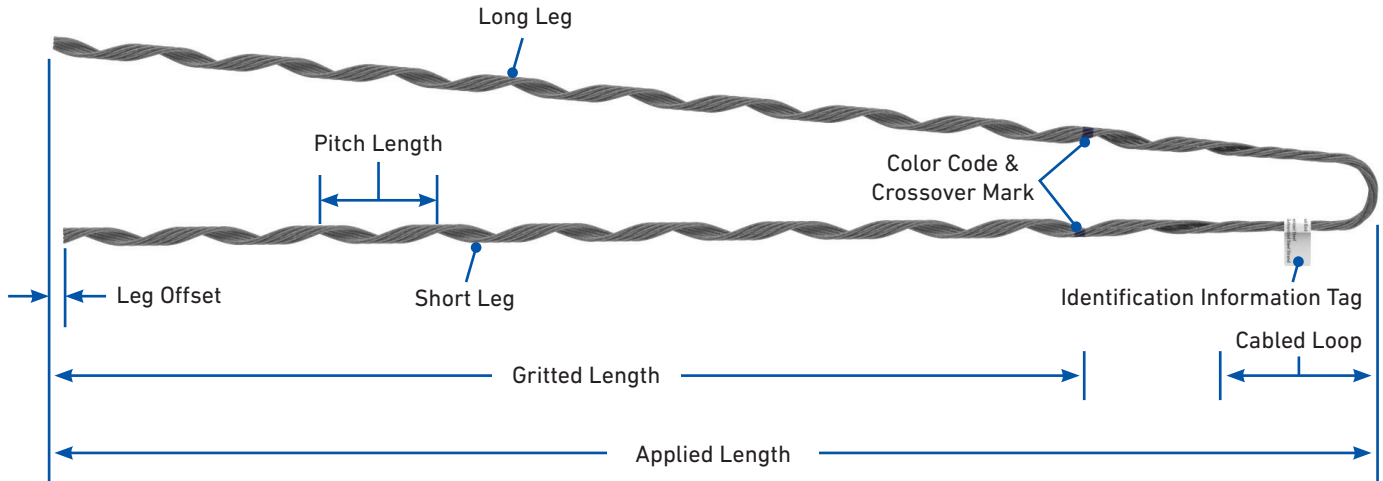


### Suggested Hardware Dimensions for Big-Grip Dead-Ends

Nominal Strand Size	Dead-End Diameter Range		Seat Dimensions (Figures 1 & 2)		Groove Diameter (Figure 2)	Hardware Hole Diameter* (Figure 3)	Heavy-Duty Thimble Size	Pin Diameter (Figures 4 & 5)		Double Extra Strong Weight Pipe (Figure 6)		
	in		in		in	in		in		in		
in	Minimum	Maximum	Minimum	Maximum	Minimum	Minimum	in	Minimum	Maximum	Nominal Size	OD	ID
3/16	0.174	0.203	1	(2-1/2) 1-3/4	1/4	3/8	7/16 - 3/8	5/8	1	3/4	1.05	0.61
7/32	0.204	0.230	1-1/8	(2-1/2) 1-3/4	5/16	3/8	7/16 - 3/8	5/8	1	3/4	1.05	0.61
1/4	0.231	0.259	1-1/8	(2-1/2) 1-3/4	5/16	7/16	1/2	1	1-3/8	1	1.32	0.82
9/32	0.260	0.291	1-1/8	(2-1/2) 1-3/4	3/8	1/2	1/2	1	1-3/8	1	1.32	0.82
5/16	0.292	0.336	1-1/4	(2-1/2) 1-3/4	3/8	9/16	1/2	1	1-3/8	1	1.32	0.82
3/8	0.337	0.394	1-3/8	(2-1/2) 1-3/4	7/16	5/8	1/2	1	1-3/8	1	1.32	0.82
7/16	0.395	0.474	1-3/8	2-3/8	1/2	11/16	1/2	1	1-3/8	1	1.32	0.82
1/2	0.475	0.515	1-3/8	2-3/8	9/16	3/4	5/8	1	1-5/8	1-1/4	1.66	0.90
9/16	0.516	0.570	1-1/2	2-5/8	5/8	15/16	5/8	1-1/8	1-5/8	1-1/4	1.66	0.90
5/8	0.571	0.635	2	2-5/8	3/4	1	3/4	1-1/2	1-7/8	1-1/4	1.66	0.90
3/4	0.636	0.772	2-1/2	3-1/8	7/8	1-3/16	7/8	1-7/8	2-1/8	1-1/2	1.90	1.10
-	0.773	0.868	2-1/2	3-5/8	1	1-3/8	1	2	2-3/8	2	2.38	1.50
7/8 or 1	0.869	1.024	3	4-1/8	1	1-3/8	1-1/8 - 1-1/4	2-3/8	2-3/4	2	2.38	1.50
-	1.025	1.27	3-1/2	5-1/8	1-3/8	1-3/4	1-1/4 - 1-3/8	2-3/4	3-1/4	2-1/2	2.88	1.77
-	1.30		4	5-1/8	1-3/8	1-15/16	1-3/8 - 1-1/2	2-7/8	3-3/8	2-1/2	2.88	1.77

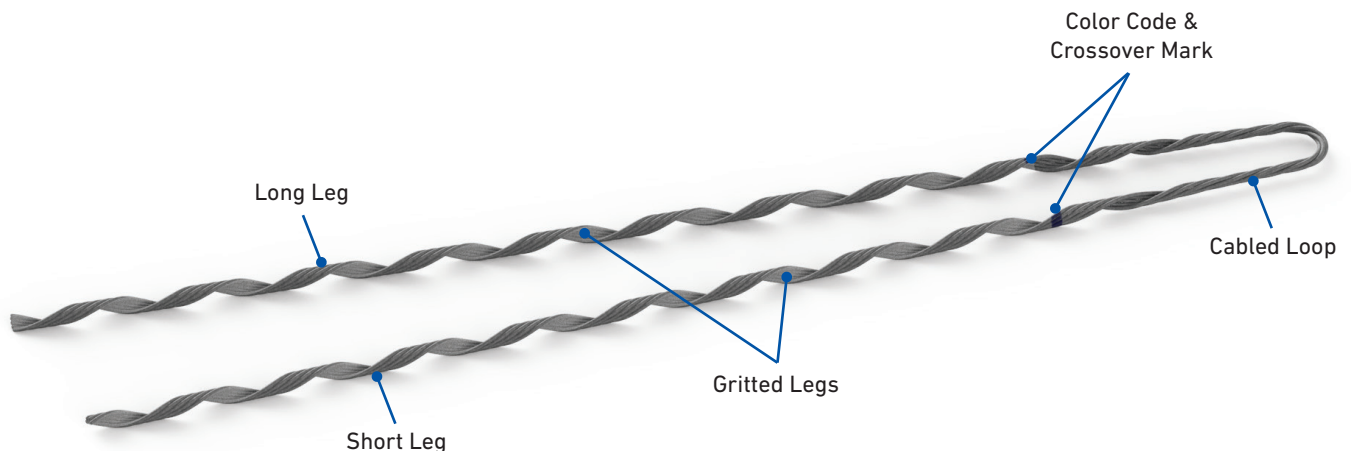
\* Depending on geometric shape of the hole, the legs of the Big-Grip Dead-End may be inserted into a hole diameter less than specified.

# SPECIFICATIONS



## Big-Grip Dead-End

Feature	Description
Identification Information Tag	Shows catalog number and pertinent dead-end information. Printed on a flag.
Color Code	Identifies strand size for colors corresponding to tabular information on catalog pages.
Crossover Mark	Indicates starting point for application.
Short Leg and Long Leg	Identifies rods belonging to each leg after application. During application, the short leg should be applied first.
Pitch Length	One complete wrap of a leg.
Gritted Length	Gritted helical legs retain the strand in place.
Cabled Loop	Furnished as standard for all sizes. Allows the dead-end to form properly around the seat of the hardware fitting.
Applied Length	Assists in identification of strand size corresponding to tabular information appearing on catalog pages.
Leg Offset	Ensures the wires of each leg are defined for future removal.



**Big-Grip Dead-End**



## ORDERING INFORMATION

### Galvanized Steel Strand

For use on Extra High-Strength, High-Strength, Siemens Martin, Utilities Grade

Catalog Number	Strand			Units per Carton	Weight per Carton	Applied Length	Rate Holding Strength	Percent of Strand's Rated Breaking Strength	Color Code
	Size	Construction	Actual Diameter						
	in		in						
BG-2140	1/8	7W	0.123	100	12	14	1,830	100%	Blue
BG-2142	3/16	7W	0.186	100	33	23	3,990	100%	Red
BG-2144	1/4	3W	0.259	50	25	27	6,650	100%	Yellow
		7W	0.240						
BG-2145	9/32	7W	0.279	50	27	30	8,950	100%	Blue
BG-2146	5/16	3W	0.312	50	41	33	11,200	100%	Black
		7W	0.312						
BG-2147	3/8	3W	0.356	25	33	37	15,400	100%	Orange
		7W	0.360						
BG-2148	7/16	7W	0.435	25	46	40	20,800	100%	Green
BG-2115	1/2	7W	0.495	20	40	49	26,900	100%	Blue
		19W	0.500						
BG-2116	9/16	7W	0.564	10	47	55	35,000	100%	Yellow
		19W	0.565						
BG-2111	5/8	7W	0.621	10	64	64	42,400	100%	Black
		19W	0.625				40,200		
BG-1112	3/4	19W	0.750	5	55	76	58,300	100%	Orange
BG-1113	7/8	19W	0.885	5	94	90	79,700	100%	Green
BG-1114	1	19W	1.000	3	92	125	104,500	100%	Blue
		37W	1.001				92,430	90%+	

Left-hand lay standard  
 + Down-rated for 37 stranding (1994)

**NOTES:**

- <sup>1</sup> For strand sizes equal to or smaller than 1/2" and guy lengths shorter than 90', refer to the GUY-GRIP® Dead-End as an alternate solution.
- <sup>2</sup> Reference the table under the Attachment Hardware section for acceptable fitting dimensions.
- <sup>3</sup> Cabled loop design is furnished as standard for all sizes.
- <sup>4</sup> Rated Holding Strengths (RHS) of the Big-Grip Dead-Ends are listed for each strand and are expressed as a percent of the strand's Rated Breaking Strength (RBS).
- <sup>5</sup> C-Coat galvanized steel is standard for all Big-Grip Dead-Ends unless otherwise stated.
- <sup>6</sup> B-Coat galvanized steel is used for the Big-Grip Dead-Ends on 3/4", 7/8", and 1" strand.
- <sup>7</sup> The Aluminum Clad Steel version of the 7/8" and 1" Big-Grip Dead-End are still available as **Catalog Number BGMS7023** (7/8") and **Catalog Number BGMS7047** (1").
- <sup>8</sup> Consult PLP for sizes and stranding not shown.

## ORDERING INFORMATION CONTINUED

### Aluminum Clad Steel Strand

For use on all grades of Aluminum Clad Steel Strand

Catalog Number	Strand			Units per Carton	Weight per Carton	Applied Length	Rate Holding Strength	Percent of Strand's Rated Breaking Strength	Color Code
	Nominal Strand Size	Diameter Range							
		in			lb	in	lb		
		Minimum	Maximum						
BG-4202	3, #12	0.174	0.181	100	21	19	2,850	100%	Orange
BG-4208	4M; 3, #10	0.219	0.230	50	20	22	4,532	100%	Green
BG-4210	7, #12; 6M	0.237	0.247	50	22	24	6,000	100%	Yellow
BG-4213	3, #8; 8M	0.270	0.280	50	24	27	8,000	100%	Blue
BG-4216	3, #7; 10M; 5/16; 7, #10	0.303	0.313	50	31	29	10,000	100%	Black
BG-4220	3, #12; 5M; 11/32; 7, #9	0.343	0.355	50	44	32	12,500	100%	Yellow
BG-4221	14M	0.350	0.364	50	59	35	14,000	100%	Blue
BG-4223	3, #5; 3/8; 7, #8; 16M	0.380	0.394	50	61	36	16,000	100%	Orange
BG-4225	18M	0.410	0.426	25	43	39	18,000	100%	Black
BG-4226	7/16; 7, #7	0.427	0.442	25	43	40	19,060	100%	Green
BG-4227	20M	0.443	0.459	25	56	41	20,000	100%	Yellow
BG-4168	7, #6	0.475	0.494	20	46	42	22,730	100%	Blue
BG-4169	19, #10	0.495	0.515	25	60	44	27,190	100%	Green
BG-4170	25M	0.516	0.536	20	65	47	25,000	100%	Red
BG-4171	7, #5	0.537	0.555	20	66	48	27,030	100%	Yellow
BG-4172	-	0.556	0.570	20	68	49	33,330	-	Blue
BG-4173	19, #9	0.571	0.591	20	70	50	34,290	100%	Orange
BG-4174	-	0.592	0.612	20	65	50	34,450	-	Green
BG-4175	-	0.613	0.635	10	48	54	45,000	-	Yellow
BG-4176	19, #8	0.636	0.661	10	49	56	43,240	100%	Black
BG-4177	19 x .1363"	0.662	0.686	10	65	59	47,400	100%	Blue
BG-4178	-	0.687	0.712	10	67	61	54,200	-	Red
BG-4179	19, #7	0.713	0.741	10	69	63	51,730	100%	Black
	37, #10						50,300	95%+	
BG-4180	19 x .1499"	0.742	0.772	5	40	71	54,300	100%	Yellow

Continue to Next Page For More Products

Left-hand lay standard

+ Down-rated for 37 stranding (1994)

#### NOTES:

<sup>1</sup> For strand sizes smaller than 7#6 and guy lengths shorter than 90', refer to the GUY-GRIP® Dead-End as an alternate solution.

<sup>2</sup> Nominal Strand Size indicates possible strand sizes that fit within the Strand Diameter Range.

<sup>3</sup> Reference the table under the Attachment Hardware section for acceptable fitting dimensions.

<sup>4</sup> Cabled loop design is furnished as standard for all sizes.

<sup>5</sup> Rated Holding Strengths (RHS) of the Big-Grip Dead-Ends are listed for each strand and are expressed as a percent of the strand's Rated Breaking Strength (RBS).

<sup>6</sup> Consult PLP for sizes and stranding not shown.



## ORDERING INFORMATION CONTINUED

### Aluminum Clad Steel Strand

For use on all grade of Aluminum Clad Steel Strand

The Following Products Are For The Specific Cables Listed								
Catalog Number	Strand		Units per Carton	Weight per Carton	Applied Length	Rate Holding Strength	Percent of Strand's Rated Breaking Strength	Color Code
	Nominal Strand Size	Actual Diameters						
		in		lb	in	lb		
BG-4181	19 x .1584"	0.792	5	49	80	59,000	-	Blue
BG-4183	37, #9	0.801, 0.810, 0.827	5	70	84	63,430	95%+	Green
	19, #6					61,700	100%	
	19 x .1660"					63,000	100%	
BG-4185	37 x .121"	0.849, 0.850, 0.866	5	72	87	71,250	95%+	Black
	19 x .170"					66,000	100%	
	19 x .173"					68,500	100%	
	37 x .123"					74,100	95%+	
BG-4186	37, #8	0.899	5	80	91	80,000	95%+	Yellow
BG-4187	19, #5	0.910, 0.934	5	77	93	73,350	100%	Blue
	19 x .1868"					75,000	100%	
BG-4188	37 x .1404"	0.981			95	90,250	95%+	Red
BG-4189	37, #7	1.01	4	86	108	90,600	90%+	Green
BG-4190	37 x .1571"	1.10	4	115	117	101,700	90%+	Black
BG-4191	37, #6	1.134	4	59	120	108,200	89%	Yellow
BG-4192	37, #5	1.27	2	86	151	127,000	89%+	Red

Left-hand lay standard  
 + Down-rated for 37 stranding (1994)

**NOTES:**

- <sup>1</sup> For strand sizes smaller than 7#6 and guy lengths shorter than 90', refer to the GUY-GRIP® Dead-End as an alternate solution.
- <sup>2</sup> Nominal Strand Size indicates possible strand sizes that fit within the Strand Diameter Range.
- <sup>3</sup> Reference the table under the Attachment Hardware section for acceptable fitting dimensions.
- <sup>4</sup> Cabled loop design is furnished as standard for all sizes.
- <sup>5</sup> Rated Holding Strengths (RHS) of the Big-Grip Dead-Ends are listed for each strand and are expressed as a percent of the strand's Rated Breaking Strength (RBS).
- <sup>6</sup> Consult PLP for sizes and stranding not shown.

## ORDERING INFORMATION CONTINUED

### Galvanized Steel Structural (Bridge) Strand - Left-Hand Lay

For use on Left-Hand Lay Galvanized Steel Structural (Bridge) Strand

Catalog Number	Dead-End Material	Strand		Units per Carton	Weight per Carton	Applied Length	Rods per Dead-End	Cables Published Rated Breaking Strength	Dead-End Rated Holding Strength	Color Code
		Nominal Size	Construction							
		in								
BGMS6599	C-Coat Galvanized Steel	1/2	19W	10	38	52	5	30,000	30,000	Orange
BGMS7648	C-Coat Galvanized Steel	9/16	19W	10	50	55	5	38,000	38,000	Yellow
BGMS6446	B-Coat Galvanized Steel	5/8	19W	10	75	67	4	48,000	48,000	Black
BGMS1035	C-Coat Galvanized Steel	11/16	19W	5	52	74	5	58,000	58,000	Blue
BGMS3690	Aluminum Clad Steel	3/4	19W	5	67	84	4	68,000	68,000	Orange
BGMS2759	Aluminum Clad Steel	13/16	19W	5	71	85	5	80,000	80,000	Red
BGMS7346	Aluminum Clad Steel	7/8	19W	3	56	94	5	92,000	92,000	Orange
BGMS7656	Aluminum Clad Steel	15/16	19W	3	72	121	5	108,000	101,300	Blue

### Galvanized Steel Structural (Bridge) Strand - Right-Hand Lay

For use on Right-Hand Lay Galvanized Steel Structural (Bridge) Strand

Catalog Number	Dead-End Material	Strand		Units per Carton	Weight per Carton	Applied Length	Rods per Dead-End	Cables Published Rated Breaking Strength	Dead-End Rated Holding Strength	Color Code
		Nominal Size	Construction							
		in								
BGMS0717	C-Coat Galvanized Steel	1/2	19W	10	38	52	5	30,000	30,000	Orange
BGMS6604	C-Coat Galvanized Steel	9/16	19W	10	48	55	5	38,000	38,000	Blue
BGMS2617	B-Coat Galvanized Steel	5/8	19W	10	75	67	4	48,000	48,000	Black
BGMS6654	C-Coat Galvanized Steel	11/16	19W	5	52	74	5	58,000	58,000	Green
BGMS0704	Aluminum Clad Steel	3/4	19W	5	67	84	4	68,000	68,000	Black
BGMS0721	Aluminum Clad Steel	13/16	19W	5	71	85	5	80,000	80,000	Red
BGMS5548	Aluminum Clad Steel	7/8	19W	3	56	94	5	92,000	92,000	Orange
BGMS7260	Aluminum Clad Steel	15/16	19W	3	72	121	5	108,000	101,300	Blue



# ACCESSORIES

## Heavy-Duty Thimble

**Big-Grip Dead-End Heavy-Duty Thimbles** are designed specifically to fit inside the loop of Big-Grip Dead-Ends. The heavy-duty thimbles have an enlarged opening to assist with installation over mounting hardware. All thimbles are hot-dip galvanized in accordance with ASTM-A153 to ensure a long life in the field.



### Heavy-Duty Thimbles

For use on Big-Grip Dead-Ends

Heavy-Duty Thimble		Big-Grip Dead-End		Size
Catalog Number	Carton Quantity	Catalog Number	Carton Quantity	in
HDT-9147	50	BG-2140	100	1/8
		BG-2142	100	3/16
		BG-2144	50	1/4
HDT-9148	25	BG-2145	50	9/32
		BG-2146	50	5/16
		BG-2147	25	3/8
HDT-9149	20	BG-2148	25	7/16
		BG-2115	20	1/2
HDT-9150	10	BG-2116	10	9/16
		BG-2111	10	5/8
HDT-9151	5	BG-1112	5	3/4
HDT-9152	3	BG-1113	5	7/8
		BG-1114	3	1



Catalog Number:  
HDT-9147



Catalog Number:  
HDT-9148



Catalog Number:  
HDT-9149



Catalog Number:  
HDT-9150



Catalog Number:  
HDT-9151



Catalog Number:  
HDT-9152

## ACCESSORIES CONTINUED

### End Sleeves

**End Sleeves** are designed to help ensure the proper application of Big-Grip Dead-Ends. They are made from galvanized steel and are compatible with Big-Grip Dead-Ends designed for EHS strand, bridge strand, and aluminum-clad steel cables.

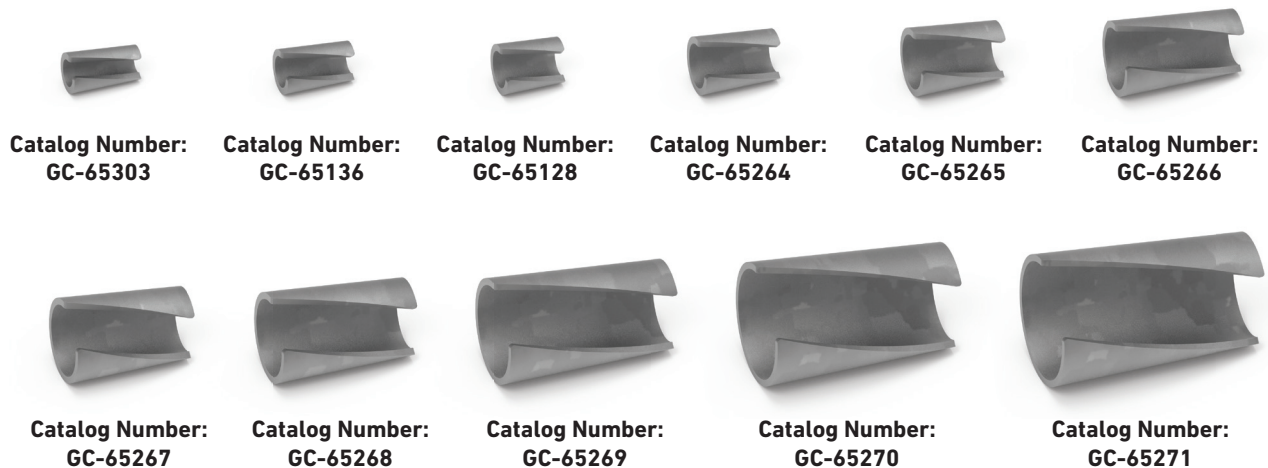


### End Sleeves

For use on C-Coat Galvanized Steel Big-Grip Dead-Ends

End Sleeve		C-Coat Galvanized Steel Big-Grip Dead-End		Size
Catalog Number	Carton Quantity	Catalog Number	Carton Quantity	in
GC-65303	100	BG-2142	100	3/16
GC-65136		BG-2144	50	1/4
GC-65128		BG-2146	50	5/16
GC-65264		BG-2147	25	3/8
GC-65265		BG-2148	25	7/16
GC-65266		BG-2115	25	1/2
GC-65267	50	BG-2116	10	9/16
GC-65268	50	BG-2111	10	5/8
GC-65269	50	BG-1112	10	11/16 or 3/4
		BG-2112	10	11/16 or 3/4
GC-65270	50	BG-1114	3	15/16 or 1
		*BGMS7023, and BG-1113	5	13/16 or 7/8
GC-65271	100	*BGMS7047	3	15/16 or 1

\*Manufactured from aluminum-clad steel strand





## ACCESSORIES CONTINUED

### End Sleeves

For use on Aluminum Clad Steel Strand Big-Grip Dead-Ends

End Sleeve		Aluminum Clad Steel Big-Grip Dead-End		Size
Catalog Number	Carton Quantity	Catalog Number	Carton Quantity	in
GC-65436	100	BG-4210	50	6M, 3 #9
GC-65128	100	BG-4216	50	10M, 7 #10
GC-65264	100	BG-4220	50	12.5, 7 #9
GC-65265	100	BG-4221	50	14M
		BG-4223	50	16M, 7 #8
		BG-4225	25	18M
		BG-4226	25	7 #7
GC-65266	100	BG-4227	25	20M
		BG-4168	20	7 #6
		BG-4169	25	9 #10
GC-65267	50	BG-4170	20	25M
		BG-4171	20	7 #5
		BG-4173	20	19 #9
GC-65272	100	BG-4176	10	19 #8
GC-65269	50	BG-4179	10	37 #10
				19 #7
GC-65298	100	BG-4181	5	19x, .1584
				37 #9
		BG-4183	5	19 #6
GC-65270	30	BG-4186	5	19x, .1660
				37 #8
				19 #5
GC-65271	100	BG-4187	5	19x, .1868
				BG-4188
		BG-4189	4	37 #7