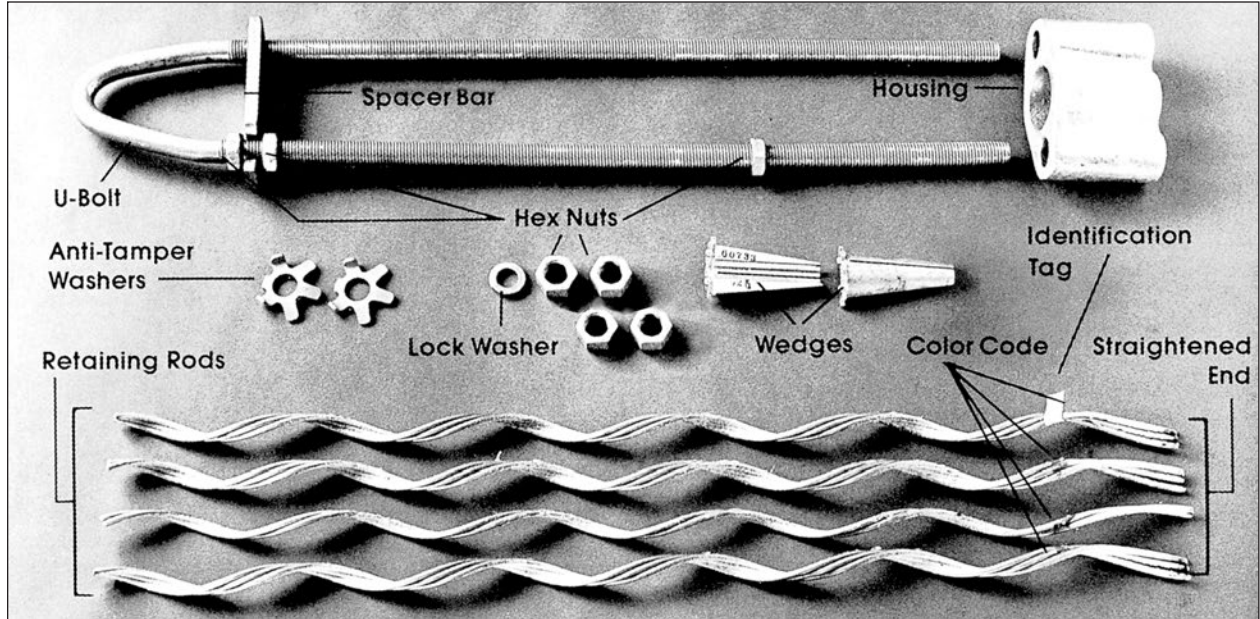




# VARI-GRIP™ Dead-end

## NOMENCLATURE



- U-Bolt:** Galvanized Steel
- Housing:** Galvanized Iron
- Wedges:** Aluminum
- Spacer Bar:** Galvanized Steel (supplied with adjustable models only, except conformal casting supplied with all models with 1½ & 1¾ U-Bolts in place of Spacer Bar)

- Nuts & Washers:** Galvanized Steel
- Retaining Rods:** Galvanized Steel for Galvanized Steel Strand, Aluminum-covered Steel for Aluminum-covered Steel Strand
- Color Code:** Identifies Strand Size

## GENERAL RECOMMENDATIONS

VARI-GRIP Dead-ends are designed for use on Transmission, Tower and Antenna, Communications and other types of guyed structures that require use of large guy strand. VARI-GRIP Dead-end components, such as the housing, U-Bolt, and hex nuts allow for adjustment in guy tensions.

Where guying requirements call for strands not shown on the catalog pages, consult PLP. VARI-GRIP Dead-ends are available in 0" and 18" (457 mm) take-up ranges.

**RATED HOLDING STRENGTH (RHS):** VARI-GRIP Dead-ends are designed to hold the maximum loads published on the catalog pages for only those specific strands listed.

**MATERIAL SELECTION:** VARI-GRIP Dead-end retaining rods are made from material compatible with the strand for which they are designed.



# VARI-GRIP™ Dead-end

## INSTALLATION GUIDELINES

**Strand Compatibility:** VARI-GRIP Dead-ends should be used only on the size and strand for which they are designed. The VARI-GRIP Dead-end Retaining Rods **MUST** have the same lay direction as the strand to which they are applied. **WHEN ORDERING VARI-GRIP DEAD-ENDS, SPECIFY THE STRAND AND THE STRAND LAY DIRECTION ON WHICH THEY ARE TO BE USED.**

When installing VARI-GRIP Dead-ends, care should be taken not to damage the protective coatings on the hardware, rods or fittings.

VARI-GRIP Dead-ends should not be used as tools, i.e., come-alongs, pulling-grips, etc.

Factory suggests guy tensions be maintained at a minimum of approximately 10% of the Strand's Rated Breaking Strength (RBS).

Guy tension may be roughly determined by measuring the torque on the hex nuts (during initial installation with threads well lubricated). If this method is to be used, an anti-seize compound applied liberally on the threads of the U-Bolt and anti-tamper washers will permit more accurate measurements.

The anti-seize compound will also make the nut tightening procedure easier.

Consult Factory for torque/tension information or for any unusual installations.

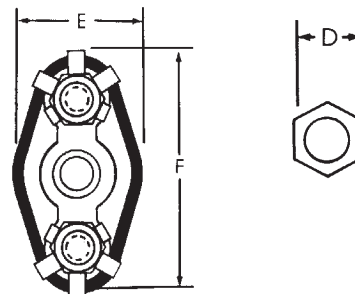
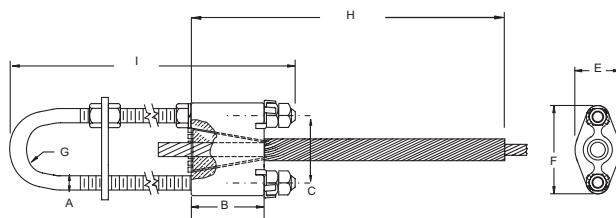
The spacer bar and hex nuts (supplied with the 18" take-up model) should be installed as close to the interior radius of the U-Bolt as possible.

**Attachment Fittings:** When installing VARI-GRIP Dead-ends to a pin or other linkage, refer to the table below for minimum and maximum diameters. The minimum dimension indicates the smallest fitting that will insure support of the U-Bolt, while the maximum dimension indicates the largest fitting that will fit through the U-Bolt.

### Acceptable Pin Diameters

Strand Range	U-Bolt Dia.	Minimum	Maximum
.438"-.500"	5/8"	5/8"	1-1/8"
.546"-.661"	3/4"	3/4"	1-1/8"
.744"-.914"	1"	1"	1-1/4"
.915"-1.034"	1-1/8"	1-1/8"	1-3/8"
1-1/8" EHS 1" BS 61#7 61#6	1-1/2"	4"	4"
61#5 91#6	1-3/4"	4"	4-1/2"

## DIMENSIONAL DATA



Strand Range	A	B	C	D	E	F	G	H	I (0")	I (18")
.438"-.500"	5/8"	3-1/4"	3-1/4"	1-1/16"	3-17/32"	4-3/4"	15/16"	See rod length in table on next page	N/A	29-9/16"
.546"-.661"	3/4"	3-1/2"	3-9/16"	1-1/8"	2-13/16"	5-3/16"	19/32"		11-11/16"	28-5/16"
.744"-.914"	1"	4-1/2"	4-3/4"	1-1/2"	3-5/16"	6-11/16"	5/8"		12-11/16"	33-3/16"
.915"-1.034"	1-1/8"	4-15/16"	5-3/8"	1-5/8"	3-5/8"	7-5/8"	3/4"		14"	33-1/2"
1.25"-1.460"	1-1/2"	7-1/4"	7-1/8"	2-5/16"	5-1/4"	10-1/8"	2-1/16"		20-3/4"	39-15/16"
1.5"-1.64"	1-3/4"	7-1/4"	8-3/16"	2-5/8"	5-9/16"	11-11/16"	2-1/2"		22-1/2"	42-3/4"
1.78"	1-3/4"	8-3/4"	8-3/16"	2-5/8"	6-5/8"	12-3/8"	2-1/2"		22-1/2"	42-3/4"



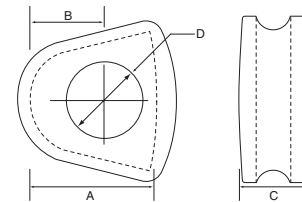
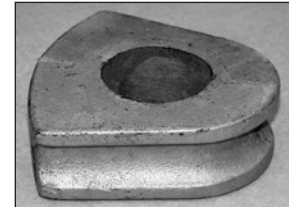
# VARI-GRIP™ Dead-end

## ACCESSORIES and strength of

### Conformal Casting

(Supplied with Dead-ends using 1-1/2" and 1-3/4" U-Bolts to assure proper support)

Strand Sizes	U-Bolt Dia.	A	B	C	D
1-1/8" EHS, 1-1/4" EHS, 37#6, 61#8, 37#5, 61#7, 1" BS, 1-1/16" BS, 1-1/8" BS, 1-3/16" BS	1-1/2"	5"	2.75"	2.875"	2.875"
61#6, 1-1/4" BS, 1-5/16 BS, 1-3/8" BS, 1-7/16" BS	1-1/2"	5"	3"	2.875"	3.125"
61#5, 1-1/2" BS	1-3/4"	5.844"	3.75"	3.375"	3.625"
91#6	1-3/4"	5.844"	4"	3.375"	3.875"



## ORDERING INFORMATION

Be sure that the VARI-GRIP Dead-end selected matches the material, lay direction and strength of the strand being used.

### Aluminum Clad Steel Strand (left-hand lay)

Catalog Number 0" Take-Up	Catalog Number 18" Take-Up	Nominal Strand Range		Nominal Strand Size	Construction	U-Bolt Diameter	Rods Per Set	Rod Length	Subset	Color Code	Rated Holding Strength
		Min.	Max.								
N/A	VG-18-3000	.546	.546	N/A	7#5	3/4"	12	26"	3-3-3-3	Yellow	27,030#
N/A	VG-18-3100	.572	.572	N/A	19#9	3/4"	11	28"	3-4-4	Orange	34,290#
VG-0-3101	VG-18-3101	0.636	0.661	N/A	19#8	3/4"	11	32"	3-4-4	Black	42,240#
VG-0-3102	VG-18-3102	0.713	0.741	N/A	19#7 37#10	1"	12	35"	3-3-3-3	Yellow	51,730# 52,950#
VG-0-3103	VG-18-3103	0.800	0.810	N/A	19#6 37#9	1"	12	46"	3-3-3-3	Green	61,700# 66,770#
VG-0-3104	VG-18-3104	0.893	0.903	N/A	37#8	1-1/8"	13	54"	3-3-3-4	Yellow	84,200#
VG-0-3105	VG-18-3105	0.904	0.914	N/A	19#5	1"	13	54"	3-3-3-4	Yellow	73,350#
VG-0-3106	VG-18-3106	0.911	0.921	N/A	61#10	1-1/8"	13	54"	3-3-3-4	Yellow	87,290#
VG-0-3107	VG-18-3107	1.000	1.010	N/A	37#7	1-1/8"	14	58"	3-3-4-4	Green	100,700#
VG-0-3108	VG-18-3108	1.024	1.034	N/A	61#9	1-1/8"	14	76"	3-3-4-4	Purple	110,100#
VG-0-3109	VG-18-3109	1.130	1.130	N/A	37#6	1-1/2"	14	86"	3-3-4-4	Yellow	120,200#
VG-0-3110	VG-18-3110	1.160	1.160	N/A	61#8	1-1/2"	14	98"	3-3-4-4	Orange	138,800#
VG-0-3111	VG-18-3111	1.270	1.270	N/A	37#5	1-1/2"	16	105"	4-4-4-4	Red	142,800#
VG-61#7-0	VG-61#7-18	1.300	1.300	N/A	61#7	1-1/2"	16	106"	4-4-4-4	Blue	166,100#
VG-61#6-0	VG-61#6-18	1.460	1.460	N/A	61#6	1-1/2"	18	116"	3-3-4-4-4	Green	198,100#
VG-61#5-0	VG-61#5-18	1.640	1.640	N/A	61#5	1-3/4"	20	129"	4-4-4-4-4	Orange	235,500#
VG-91#6-0	VG-91#6-18	1.780	1.780	N/A	91#6	1-3/4"	18	165"	3-3-4-4-4	Red	295,500#

# VARI-GRIP™ Dead-end

## ORDERING INFORMATION

### Galvanized Steel Extra High Strength Strand (left hand lay)

Catalog Number 0" Take-Up	Catalog Number 18" Take-Up	Nominal Strand Range		Nominal Strand Size	Construction	U-Bolt Diameter	Rods Per Set	Rod Length	Subset	Color Code	Rated Holding Strength
		Min.	Max.								
N/A	VG-18-2100	0.438	0.438	7/16"	7W	5/8"	11	27"	3-4-4	Red	20,800#
N/A	VG-18-2101	0.459	0.500	1/2"	7W or 19W	5/8"	12	30"	3-3-3-3	Blue	26,900#
VG-0-2108	VG-18-2108	0.559	0.563	9/16"	7w or 19w	3/4"	11	28"	3-4-4	Yellow	35,000#
VG-0-2102	VG-18-2102	0.621	0.625	5/8"	7W or 19W	3/4"	11	31"	3-4-4	Black	42,400#
VG-0-2103	VG-18-2103	0.744	0.754	3/4"	19W	1"	12	44"	3-3-3-3	Orange	58,300#
VG-0-2104	VG-18-2104	0.878	0.888	7/8"	19W	1"	13	58"	3-3-3-4	Green	79,700#
VG-0-2105	VG-18-2105	1.000	1.010	1"	19W or 37W	1-1/8"	14	66"	3-3-4-4	Blue	104,500#
VG-0-2106	VG-18-2106	1.125	1.125	1-1/8"	37W	1-1/2"	14	95"	3-3-4-4	Yellow	130,800#
VG-0-2107	VG-18-2107	1.250	1.250	1-1/4"	37w	1-1/2"	16	103"	4-4-4-4	Red	162,200#

### Galvanized Steel Bridge Strand (left hand lay)

Catalog Number 0" Take-Up	Catalog Number 18" Take-Up	Nominal Strand Range		Nominal Strand Size	Construction	U-Bolt Diameter	Rods Per Set	Rod Length	Subset	Color Code	Rated Holding Strength
		Min.	Max.								
VG-0-2103	VG-18-2103	0.750	0.750	3/4"	1 X 19	1"	12	44"	3-3-3-3	Orange	68,000#
VG-0-4104	VG-18-4104	0.813	0.813	13/16"	1 X 19	1"	12	54"	3-3-3-3	Red	80,000#
VG-0-4105	VG-18-4105	0.875	0.875	7/8"	1 X 19	1-1/8"	13	58"	3-3-3-4	Green	92,000#
VG-0-4106	VG-18-4106	0.938	0.938	15/16"	1 X 31 or 37W	1-1/8"	14	63"	3-3-4-4	Black	108,000#
VG-0-4107	VG-18-4107	1.000	1.000	1"	1 X 31	1-1/2"	14	66"	3-3-4-4	Blue	122,000#
VG-0-4108	VG-18-4108	1.063	1.063	1-1/16"	1 X 31	1-1/2"	14	91"	3-3-4-4	Green	138,000#
VG-0-2106	VG-18-2106	1.125	1.125	1-1/8"	1 X 37	1-1/2"	14	95"	3-3-4-4	Yellow	156,000#
VG-0-4109	VG-18-4109	1.187	1.187	1-3/16"	1 X 37	1-1/2"	15	99"	3-4-4-4	Orange	172,000#
VG-0-2107	VG-18-2107	1.250	1.250	1-1/4"	1 X 43	1-1/2"	16	103"	4-4-4-4	Red	192,000#
VG-0-4110	VG-18-4110	1.313	1.313	1-5/16"	1 X 43	1-1/2"	17	107"	3-3-3-3-3-2	Black	212,000#
VG-0-4111	VG-18-4111	1.375	1.375	1-3/8"	1 X 43	1-1/2"	17	110"	3-3-3-3-3-2	Orange	232,000#
VG-0-4112	VG-18-4112	1.438	1.438	1-7/16"	1 X 43	1-1/2"	18	114"	3-3-3-3-3-3	Green	252,000#
VG-0-4113	VG-18-4113	1.500	1.500	1-1/2"	1 X 43	1-3/4"	16	119"	3-3-3-3-2-2	Pink	276,000#

### Galvanized Steel Bridge Strand (right hand lay)

Catalog Number 0" Take-Up	Catalog Number 18" Take-Up	Nominal Strand Range		Nominal Strand Size	Construction	U-Bolt Diameter	Rods Per Set	Rod Length	Subset	Color Code	Rated Holding Strength
		Min.	Max.								
VG-0-5103	VG-18-5103	0.750	0.750	3/4"	1 X 19	1"	12	44"	3-3-3-3	Orange	68,000#
VG-0-5104	VG-18-5104	0.813	0.813	13/16"	1 X 19	1"	12	54"	3-3-3-3	Red	80,000#
VG-0-5105	VG-18-5105	0.875	0.875	7/8"	1 X 19	1-1/8"	13	58"	3-3-3-4	Green	92,000#
VG-0-5106	VG-18-5106	0.938	0.938	15/16"	1 X 31 or 37W	1-1/8"	14	63"	3-3-4-4	Black	108,000#
VG-0-5107	VG-18-5107	1.000	1.000	1"	1 X 31	1-1/2"	14	66"	3-3-4-4	Blue	122,000#
VG-0-5108	VG-18-5108	1.063	1.063	1-1/16"	1 X 31	1-1/2"	14	91"	3-3-4-4	Green	138,000#
VG-0-5109	VG-18-5109	1.125	1.125	1-1/8"	1 X 37	1-1/2"	14	95"	3-3-4-4	Yellow	156,000#
VG-0-5110	VG-18-5110	1.187	1.187	1-3/16"	1 X 37	1-1/2"	15	99"	3-4-4-4	Orange	172,000#
VG-0-5111	VG-18-5111	1.250	1.250	1-1/4"	1 X 43	1-1/2"	16	103"	4-4-4-4	Red	192,000#
VG-0-5112	VG-18-5112	1.313	1.313	1-5/16"	1 X 43	1-1/2"	17	107"	3-3-3-3-3-2	Black	212,000#
VG-0-5113	VG-18-5113	1.375	1.375	1-3/8"	1 X 43	1-1/2"	17	110"	3-3-3-3-3-2	Orange	232,000#
VG-0-5114	VG-18-5114	1.438	1.438	1-7/16"	1 X 43	1-1/2"	18	114"	3-3-3-3-3-3	Green	252,000#
VG-0-5115	VG-18-5115	1.500	1.500	1-1/2"	1 X 43	1-3/4"	16	119"	3-3-3-3-2-2	Pink	276,000#