PREFORMED LINE PRODUCTS
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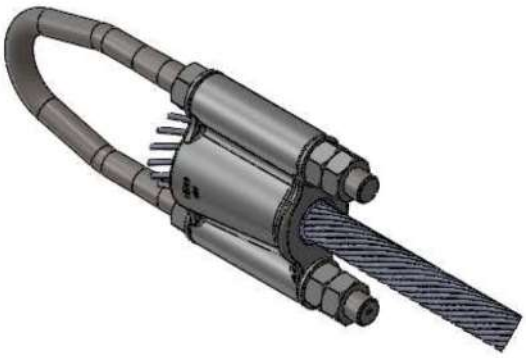
VARI-GRIP™ Dead-End



General Information:

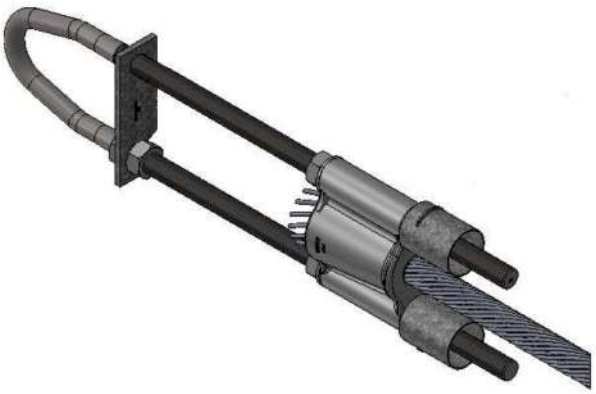
1. Vari-Grip™ dead-ends are designed for use on Transmission, Antenna, Communications and other types of guyed structures that require use of large guy strand. Vari-Grip™ components such as the housing, U-Bolt and hex nuts allow for adjustment in guy tensions.

2. Where guy requirements on strand 16 mm and larger call for the Big-Grip dead-end refer to Section "BIG-GRIP". Big-Grip dead-ends may be used in conjunction with Vari-Grip™ dead-ends on the same guy.

3. Rated Holding Strenght (RHS): Vari-Grip™ dead-ends are designed to develop the maximum loads published on the catalogue pages of only those specific strands listed.

4. Material Selection: Vari-Grip™ dead-end retaining rods are made from material which is compatible with the strand they are designed to be used with.

5. Features anti-tamper tubes, an improvement on standard opposing cup design as it allows a longer tube to be applied keeping the nuts out of reach of vandals.



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VARI-GRIP™ Dead-End

INSTALLATION GUIDELINES:

1. Strand Compatibility: Vari-Grip™ dead ends should be used only on the size and strand for which they are designed and must have the same lay as the strand for which they are applied. When ordering Vari-Grip™ dead-ends specify the strand on which it is to be used and the strand lay.

   When using types of strand and/or sizes of strand not mentioned in these catalogue pages consult Preformed for compatible Vari-Grip™ designs.

2. When installing Vari-Grip™ dead-ends care should be taken not to damage the protective coatings on the hardware, rods, or fittings.

3. Vari-Grip™ dead-ends should not be used as tools, i.e. come-alongs, pulling-in grips, etc.

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

5. 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-sieze compound applied liberally on the threads of the U-Bolt and anti-tamper cups will permit more accurate measurements.

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

   Consult PREFORMED™ for torque/tension information or for any unusual installations.

6. The Vari-Grip™ dead-end housing, U-Bolt, spacer bar (where applicable), hex nuts, lock washer (where applicable) and wedges may be removed and reapplied as necessary provided there have been no damages sustained.

   b. The anti-tamper washers (where applicable) may be reused until the lips show signs of fatigue breaks; new anti-tamper washers should then be used.

   c. The Vari-Grip™ dead-end retaining rods may be removed and reapplied only twice within 90 days after initial installation. If after 90 days, from the initial installation, a reapplication or removal of the retaining rods is required; use new retaining rods.

7. When installing a Vari-Grip™ to a structure plate, special considerations must be made regarding the plate dimensions and the plate hole design. The use of a chamfer on the hole is beneficial because it improves the cyclic loading performance of the U-Bolt.

8. It is recommended that an approved lubricant is used to protect the galvanising and provide optimum performance when tensioning in accordance with international standards.

9. The U-Bolt must be tensioned evenly to prevent uneven stresses damaging the U-Bolt.

SAFETY CONSIDERATIONS:

1. This catalogue section is not intended to supersede any utility construction, safety, or design standards. Preformed's recommendations are offered only to illustrate safe use of Vari-Grip™ dead-ends. Failure to follow these guidelines and restrictions may result in personal injury.

2. When installing Vari-Grip™ dead-ends in the proximity of energized lines, extra care should be taken to prevent accidental contact.

3. For proper performance and personal safety be sure to select the proper size Vari-Grip™ before installation.

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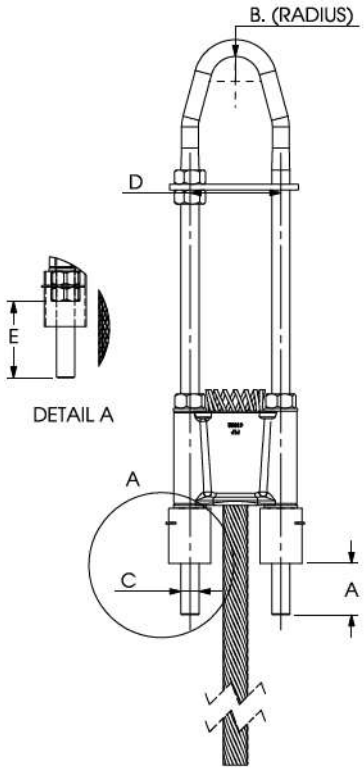
Adjustable VARI-GRIP™ Guy Strand Grip Assembly for Ground Level



ITEM NO.	DESCRIPTION	QTY.
1	VARI-GRIP HOUSING	1
2	ANTI-TAMPER TUBE AND WASHER	2
3	VG WEDGE	2
4	NUT	8
5	FLAT WASHER	4
6	RODS	1 SET
7	ADJUSTABLE U-BOLT	1
8	VARI-GRIP SPACER BAR	1

NOTES:

1. The specified UTS is for 1400MPa staywire. The vari-grip assembly may have a higher UTS. Contact PLP for info.
2. Anti-tamper cups supplied as standard. Other anti-tamper solutions available on request.
3. Please contact PLP to confirm compatability of dimension B with attachment hardware. Other dimensions on request.
4. PLP-SA in house U-bolts batch stamped on leg ends A1:A-raw material batch ref 1 – last digit of year of manufacture

PART NO.	GUY DIAM. (mm)	A	B (SEE NOTE 3)	C	D	E (MINIMUM) (mm)	NUTS (kN) (SEE NOTE 1)	ROD DIAM (mm)	RODS PER SET
VG 13 AC	13	0 – 457	16	M16	80	>13	(E) 150	3.25	12
VG 16 AC	16	0 – 457	16	M20	90.50	>16	189	4.47	12
VG 19 AC	19	0 – 457	16	M24	120	>19	300	4.47	12
VG 22 AC	22	0 – 457	16	M24	120	>19	355	5.2	12
VG 24 AC	24	0 – 457	18	M27	136	>22	427	5.2	14
VG 26 AC	26	0 – 457	18	M27	136	>22	484	5.2	14
VG 28 AC	28	0 – 457	45	M33	165	>26	596	6.4	14
VG 32 AC	32	0 – 457	45	M33	165	>26	775	6.4	16

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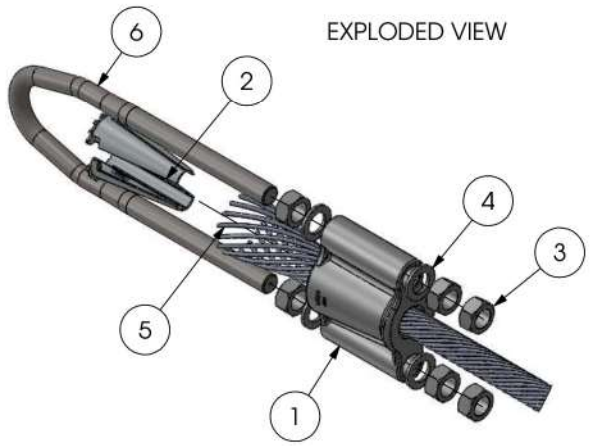
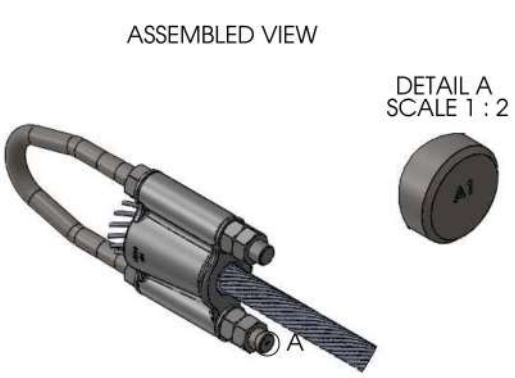
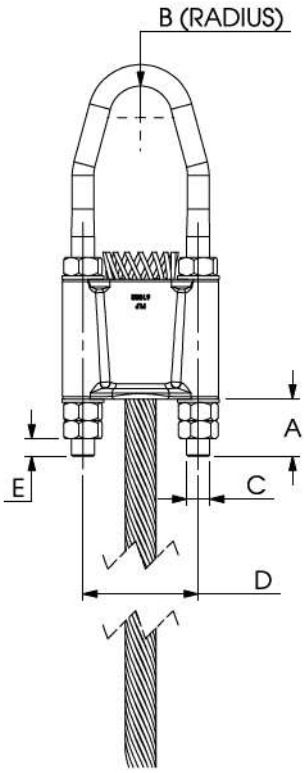
Non-Adjustable VARI-GRIP™ Guy Strand Grip Assembly for Tower Level





ITEM NO.	DESCRIPTION	QTY.
1	VARI-GRIP HOUSING	1
2	VARI-GRIP WEDGE	2
3	NUT	6
4	FLAT WASHER	4
5	RODS	1 Set
6	NON-ADJUSTABLE U-BOLT	1



NOTES:

1. The specified UTS is for 1400MPA staywire. The vari-grip assembly may have a higher UTS. Contact PLP for info.
2. Anti-tamper cups supplied as standard. Other anti-tamper solutions available on request.
3. Please contact PLP to confirm compatibility of dimension B with attachment hardware. Other dimensions on request.
4. PLP-SA in house U-bolts batch stamped on leg ends A1:A-Raw material batch Ref. 1-Last digit of year of manufacture.

PART NO.	GUY DIAM. (MM)	A	B (SEE NOTE 3)	C	D	E (MINIMUM) (mm)	UTS (kN) (SEE NOTE 1)	ROD DIAM. (mm)	RODS PER SET
VG 13 N	13	NON-ADJUSTABLE	(E)16	M16	80	>13	150	3.25	12
VG 16 N	16		16	M20	90.50	>16	189	4.47	12
VG 19 N	19		16	M24	120	>19	300	4.47	12
VG 22 N	22		16	M24	120	>19	355	5.2	12
VG 24 N	24		18	M27	136	>22	427	5.2	14
VG 26 N	26		18	M27	136	>22	484	5.2	14
VG 28 N	28		45	M33	165	>26	596	6.4	14
VG 32 N	32		45	M33	165	>26	775	6.4	16

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