Summit Power

CONVENIENCE IS POWER

TRANSMISSION

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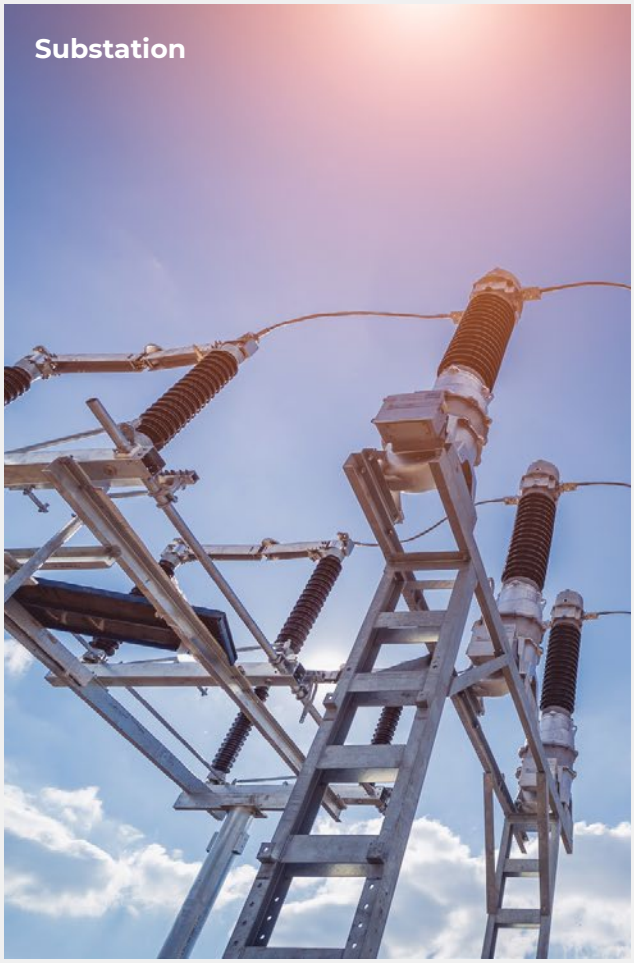
Transmission


Substation


Distribution


Markers

Why Choose Summit Power?

At Summit Power, our commitment to excellence has positioned us as a leading choice for all transmission needs. Our catalogue features a diverse range of specialised transmission components, thoughtfully curated to cater to various industries and applications.

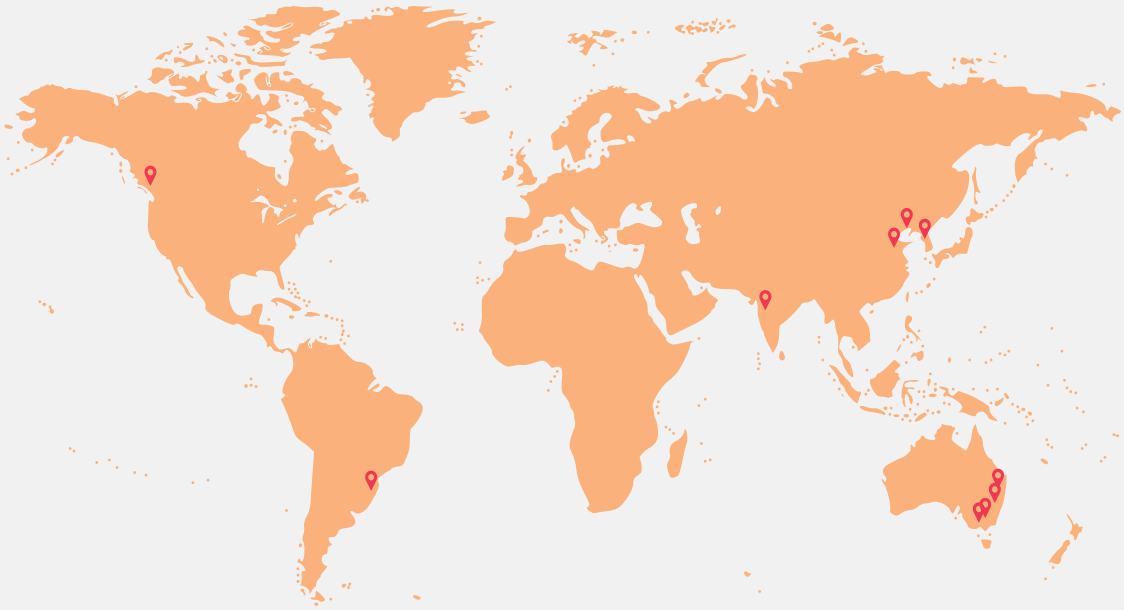
Explore our transmission catalogue to discover a wide array of products, including compression dead ends, insulators, conductors, vibration dampers and many more. Each product undergoes rigorous quality checks to ensure compliance with Australian standards and regulations, ensuring the safety, reliability, and efficiency of power transmission systems.

Summit Power's customer service is a cornerstone of our success. At Summit Power, we prioritise building enduring relationships with our customers. Our dedicated support team is readily available to assist you throughout the entire process, from product selection to post-purchase support. We actively listen to your unique project requirements and collaborate to find tailored solutions that empower your success.

Our mission is to facilitate progress and prosperity through robust electrical infrastructure. As a trusted partner, we take pride in providing not just products but a commitment to excellence. When you choose Summit Power, you opt for industry-leading solutions and a seamless experience.

This catalogue caters to a wide range of professionals, from seasoned experts to renewable energy enthusiasts and industry newcomers. Explore our transmission solutions and experience our customer focused approach, providing reliable support for your projects.

Summit Power is dedicated to powering a stronger, more connected world. With our transmission expertise, you can trust in the quality and service that defines our brand. Together, let us power the future with Summit Power.



Office, Warehouse & Manufacturing Facility
146 Fallon Street, Albury, NSW Australia

Sales Office
3A Williamson Road, Ingleburn, NSW Australia

Sales Office
460/492 Beaudesert Road, Salisbury, QLD Australia

Sales & Engineering Office
20 Industry Boulevard, Carrum Downs, VIC Australia

Sales & Engineering Office
73 Qiqi Street, Zhongshan District, Dalian City, China

Engineering Office
A-2, Madhura Society, 173 Navi Peth, Pune 411 030, India

Sales Office
117 Namdaemun-ro, Euljiro, Seoul, South Korea

Glass & Hardware Manufacturing Facility
Taian City, Shandong Province, China

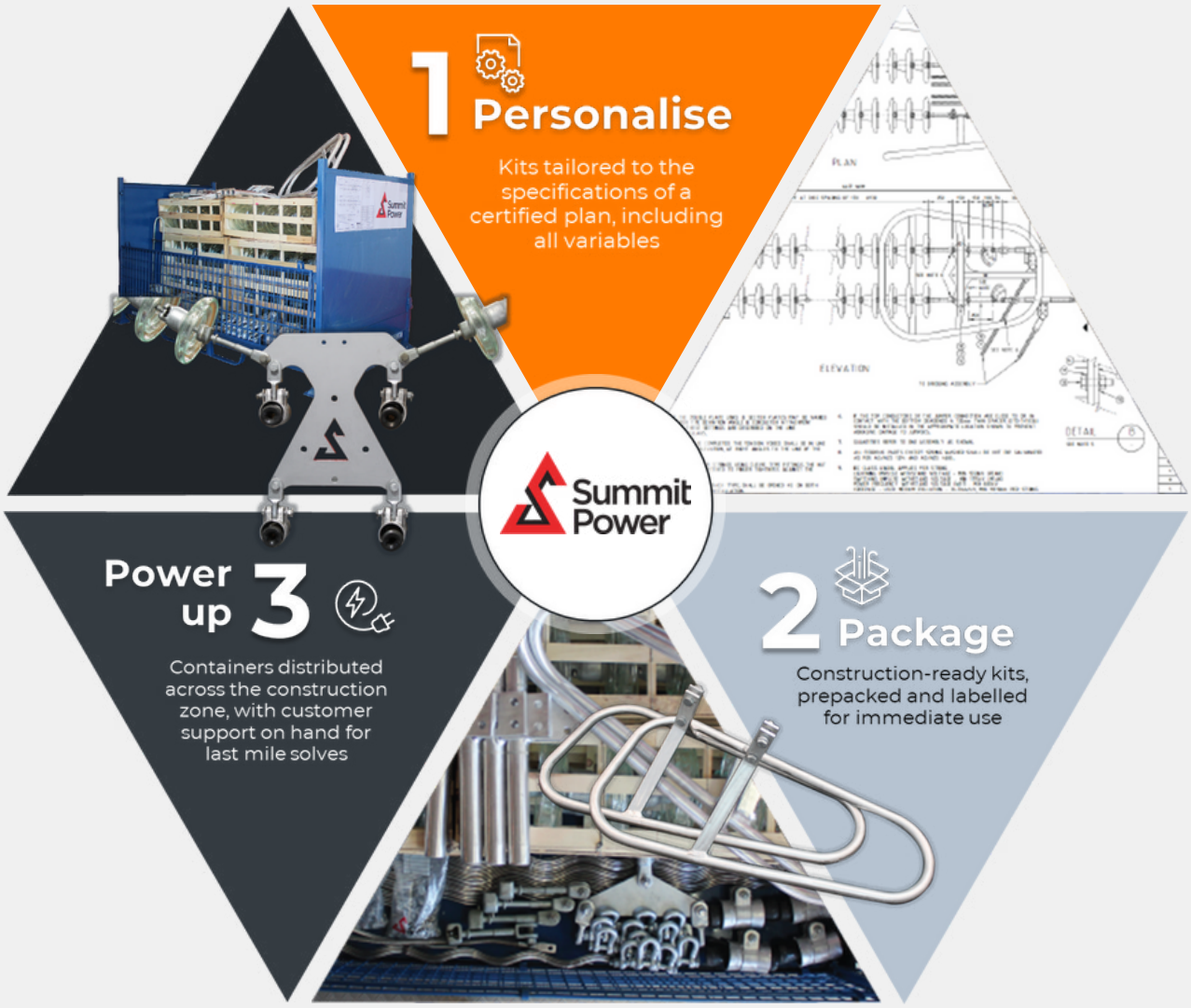
Engineering Office
1467 Marguerite St, Coquitlam, British Columbia, Canada

Sales & Engineering Office
159 Quintino Bocaiuva Street,Moinhos de Vento, Porto Alegre, Brazil

Convenience is ***power***...

We exist to remove the hassle of sourcing, sorting and storing your materials, so your crews can get powerlines in the air faster. We put the right parts into a kit, and into the hands of your crew - ready for immediate construction.

We reduce build time by removing complexity.



Local Manufacturing Capabilities

Local Manufacturing Capabilities

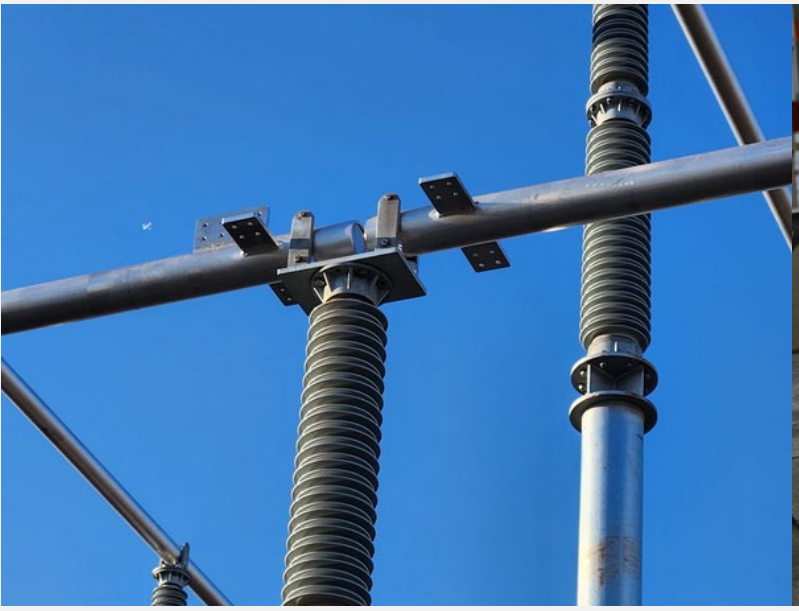
Did you know that Summit Power has the capability to manufacture items in our state-of-the-art manufacturing facility?

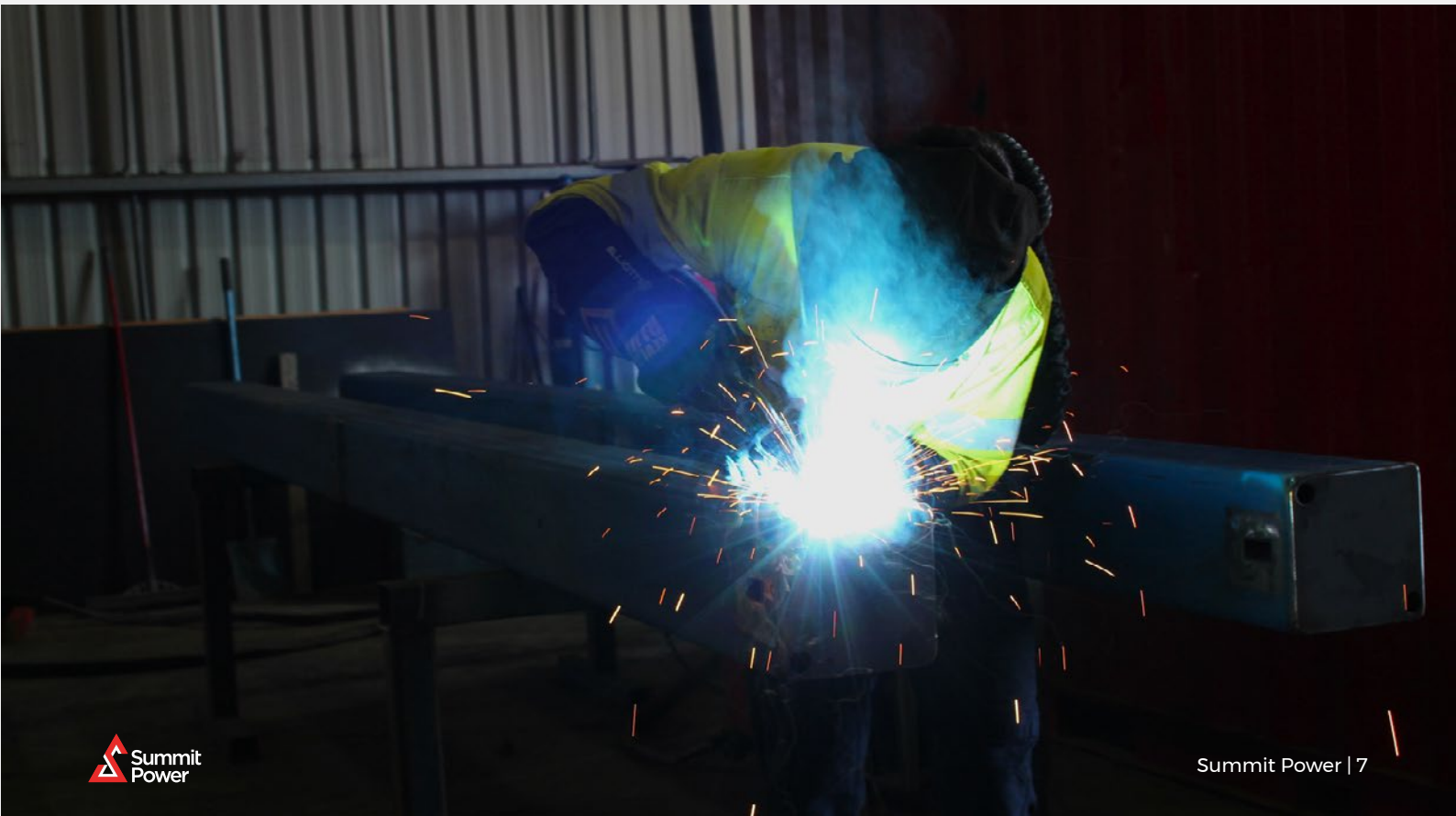
From aluminium Busbar & Fittings, Compression Fittings, Pole Brackets, Custom bracketry, we can do it all!

With our large stock of material and local galvanising facility we can sustain a short turnaround time - providing you with what you need, when you need it!

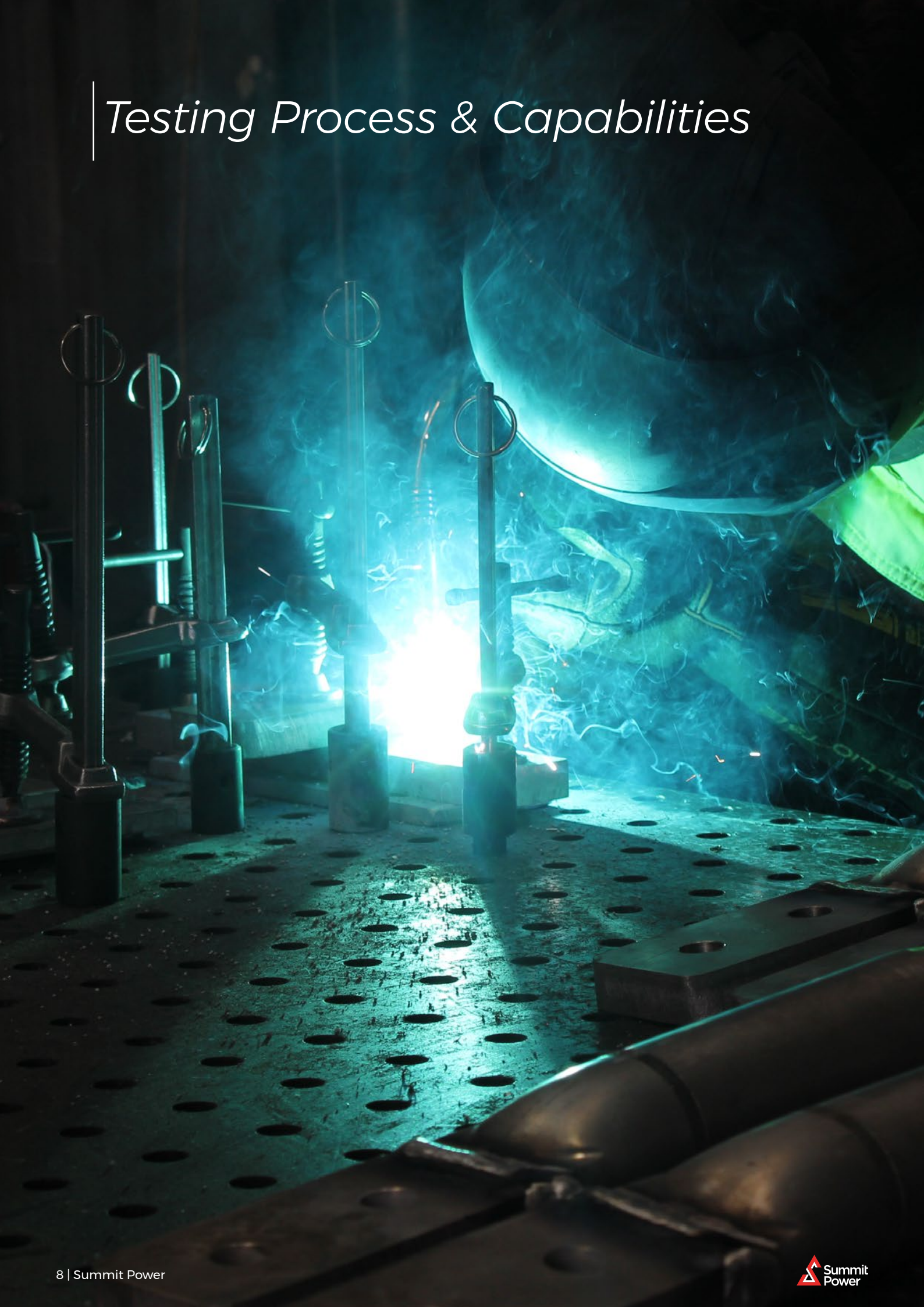
We utilise our own Transmission and Substation Engineers to ensure all project requirements are met.

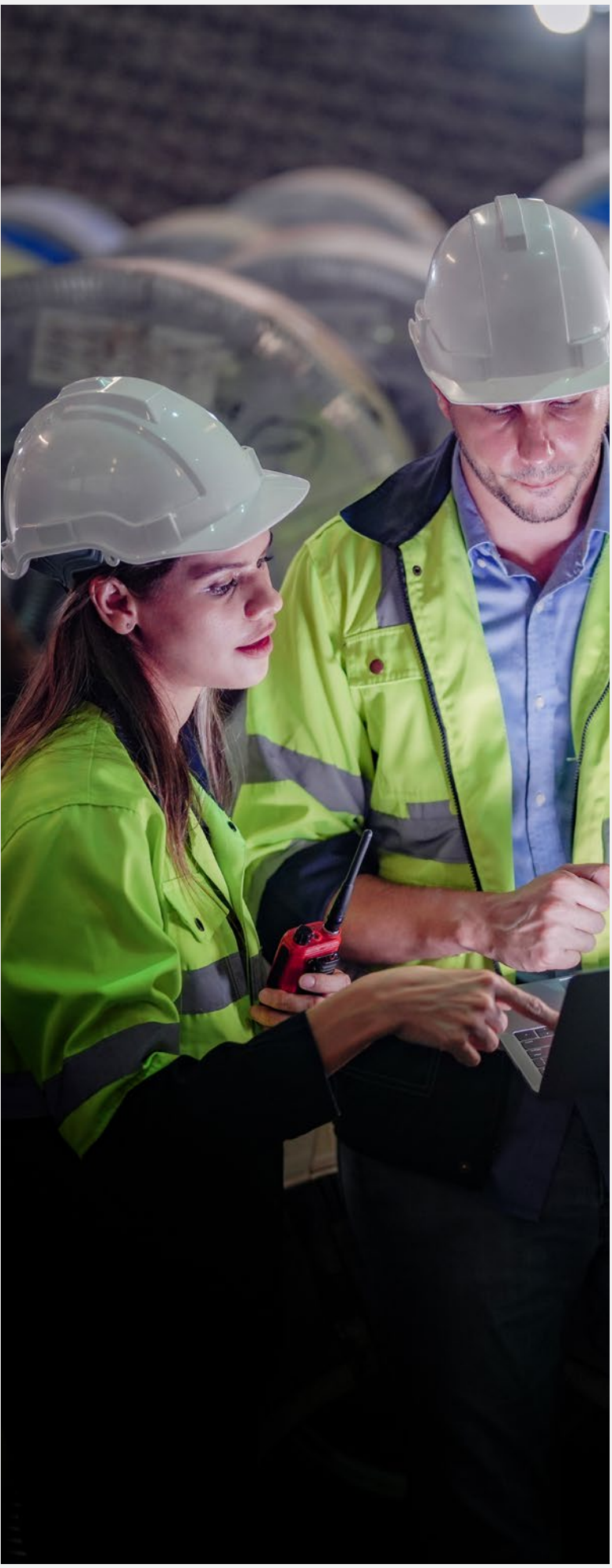
Your projects are in capable hands with Summit Power!





Testing Process & Capabilities





Testing Process & Capabilities

At Summit Power, we take immense pride in our unwavering commitment to delivering top-tier products and services to our valued clients. A cornerstone of our success lies in our exceptional process and testing capabilities, which enable us to consistently meet and exceed industry standards and client expectations.

Our dedication to process excellence is deeply ingrained in our organisational DNA. We understand that the foundation of any reliable and high-quality product or service rests upon robust, well-defined processes. This commitment to excellence extends across allfacets of our operations, from design and development to manufacturing and beyond.

In tandem with our meticulous processes, our third-party testing facilities serve as the ultimate assurance of quality and reliability. We employ cutting-edge testing methodologies and equipment to rigorously assess the performance, safety, and compliance of our offerings, ensuring they meet the most stringent industry requirements.

This introduction provides a glimpse into our comprehensive process and testing capabilities, which play a pivotal role in delivering products and services of the highest calibre. We invite you to explore further to discover how Summit Power can partner with you to achieve excellence in every Project.

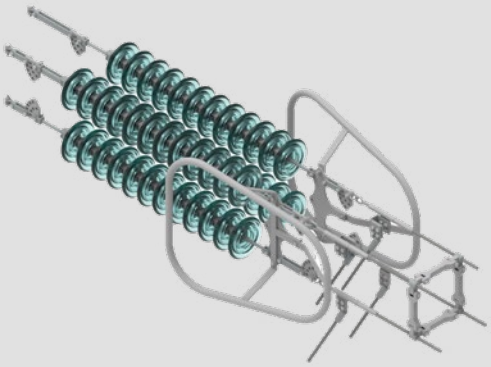
Type Testing to Australian Standards

Summit Power collaborates with National Measurement Institute (NMI) located in Sydney for conducting high-voltage (HV) electrical testing, capable of handling voltages up to 500kV.

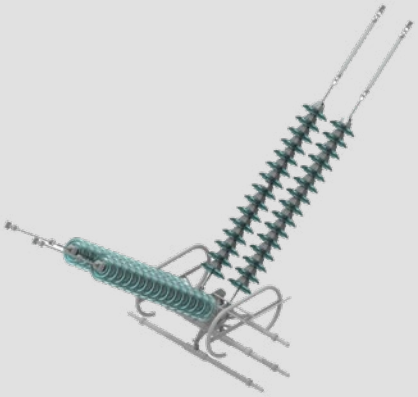
Our approach to testing aligns with best practices, involving the examination of complete stringing arrangements, assembled as an integrated system. This methodology ensures the compatibility of individual components with one another and facilitates comprehensive type testing for each component within a more realistic real-world context.

To enhance our communication with customers, we utilise 3D modelling to visually represent how these assemblies will be constructed and subjected to type testing. Please refer to the two 3D model samples provided below for a clearer understanding.

Sample Assembly



Model No. 1
500kV Tension Insulator Assembly



Model No. 2
500kV V String Suspension Assembly

Testing Standards

- IEC 60383-2 - Lightning Impulse Voltage Test
- IEC 60383-2 - Wet Power Frequency Voltage Test
- IEC 60383-2 - Wet Switching Impulse Voltage Test
- IEC 60437 - Radio Interference Test
- IEC 61284 - Corona Extinction Voltage (Section 14)
- IEC 60797 - Residual Strength Test
- IEC 61211 - Impulse Puncture Testing in Air - Steep Front Test
- ASTM C151 - Test Method for Autoclave Expansion of Portland Cement – where Portland cement is used
- ANSI C29.2 - Thermal Shock Test

Quality Standards & Compliance

All items will adhere to the regulations set by the Australian standards board. The supply of Transmission Line Hardware and Substation Busbar and Fittings is facilitated by well-established and reputable companies from around the globe with whom Summit Power has maintained a strong relationship for over 17 years. Summit Power always extends a warm invitation to its clients to visit the testing facilities and witness the type testing.

As part of Summit Power's QA procurement policy, Summits Senior Transmission Engineers visit our supplier factories at every critical stage to conduct comprehensive inspections, witness the manufacturing process, complete audits, and provide detailed reports, as outlined below:

- Inspect the quality of raw materials.
- Verify quantities and allocations of materials.
- Examine manufacturing procedures and workmanship.
- Inspect the final product to ensure compliance with drawings and specifications.
- Witness factory testing procedures.
- Inspect packaging for quality and adequacy.

Additionally, Summit Power conduct 3-monthly Supplier Assessment Reports covering the following aspects for each factory:

- Factory Profile
- Human Resources
- Product and Marketing Capacity
- Production Process
- Production Capability
- Quality Control Management System
- Product Research and Development
- Client's Special Requirements

These measures are taken to uphold the highest standards of quality and ensure the reliability of the supplied products. The auditing and inspections mentioned above are reported monthly, to our clients which significantly aid in adhering to the timelines set out by our clients.

QA Compliance

Glass Factory - QA Compliance

Mechanical Hardware Type Testing - NATA QA Compliant

Timeline and Milestones

Project timelines are clearly set out to our clients, encompassing essential milestones fortesting and hardware development, outlined as follows:

1. Item design and approval
2. Procure samples
3. Type Testing & Approve Samples
4. Ship samples
5. Receive, inspect, and assemble stringing arrangements
6. Type testing, report creation, copies issued to the client

Conclusion

Summit Power covers the cost of type testing general items, for project specific or specialist items please consult with Summit Power for a costing analysis.

In summary, Summit Power possesses the expertise to fully mitigate any technical risks associated with the supply of Transmission Line Hardware and Substation Busbar and Fittings. We are committed to going above and beyond to ensure a successful partnership by delivering high-quality products in a prompt and professional manner.

Engineering Capabilities

Engineering Capabilities

Introduction

The Engineering Team at Summit Power are all highly trained professionals with decades of experience in the Energy Sectors. We offer specialist skills in the fields of Substation, Busbar & Fittings, Transmission Line Hardware and Transmission Towers to ensure you get unrivalled engineering value, service and support. We meet the highest standards of safety and quality.

Engineering Capabilities

Specialising in four key areas

1. Third Party Auditing & Advisory Services

- Review transmission line design concepts
- Review transmission tower design concepts
- Audit final transmission line designs
- Audit final transmission tower deisgns
- Audit Supplier factories & testing facilities
- Audit testing policies & procedures
- Audit raw material
- Material take-off from certified plans

2. Substation Busbar & Fittings

- Busbar engineering
- Component engineering
- Item creation
- Busbar design
- Material take-off from certified plans

3. Transmission Line Hardware

- Transmission line hardware engineering
- Item creation
- Material take-off from certified plans

4. Transmission Towers

- Tower design & engineering
- Tower planning
- Tower supplier assesment reports
- Summit Power offer the following service: Physical presence at the supplier manufacturing facility throughout the process, from inspecting raw materials, ensuring strict policies and procedures are being adhered too, QA inspections throughout the process and overseeing the packaging and shipment of transmission towers.

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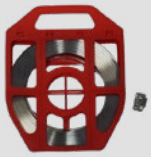

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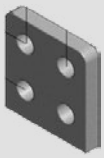
Section 4 Spacers

Section 5 Compression Sleeves

Section 6 Compression Lugs



Section 7 Compression Dead Ends

Section 8 Grading Rings

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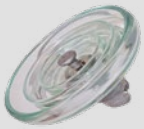

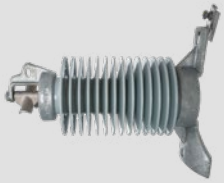

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Section 11 OPGW Fittings

Section 12 Conductors

Section 13 Markers

Did you know?

You can purchase these markers online!
visit: summitpower.com.au

Section 1
Suspension & Support Clamps

Suspension and support clamps are essential components in powerline transmission hardware. They are used to securely hold and support power lines, ensuring their stability and reliability. Here's an overview of their functions and types:

- Suspension Clamps: Suspension clamps are used to hang or suspend power lines from towers or poles. They provide vertical support and allow for controlled movement of the conductors due to factors like wind or thermal expansion. Suspension clamps typically consist of a metal or composite body that holds the conductor and attaches to the supporting structure using bolts or other fasteners.
- Support Clamps: Support clamps are designed to hold conductors on the top of an insulator as they pass around poles or towers. They provide lateral support to the conductor, preventing excessive movement and maintaining proper alignment. Support clamps come in various designs, including single-bolt or double-bolt configurations, and are made from materials that offer high strength and resistance to environmental factors.

When selecting suspension and support clamps for powerline applications, several factors must be considered, including the type of conductor, operating voltage, environmental conditions, and mechanical requirements. The choice of materials, such as steel, aluminum, or composite, is crucial to ensure the clamps' durability and resistance to corrosion.

Helical Suspension Clamps AAC, AAAC, ACSR

Summit Power Part Number	Conductor Stranding	OD (mm)	Conductor Name	Conductor Colour
1.2-0010	6/1/3.75	11.30	Banana	black
1.2-0020	7/4.50	13.50	Mercury/Hydrogen	Green
1.2-0030	7/4.75 6/4.75-7/1.60	14.30	Moon/Iodine Cherry	Red
1.2-0040	19/3.25	16.30	Neptune/Krypton	Orange
1.2-0050	19/3.50 30/7/2.50	17.50	Lutetium Grape	Blue
1.2-0060	19/3.75	18.80	Pluto/Neon	Black
1.2-0070	37/3.00 30/7/3.00	21.00	Saturn/Nitrogen Lemon	Red
1.2-0075	19/4.75	23.80	Taurus/Oxygen	Black
1.2-0080	30/7/3.50	24.50	Lime	Purple
1.2-0090	37/3.75	26.30	Triton/Phosphorus	Black
1.2-0100	54/7/3.00	27.00	Mango	Red
1.2-0110	61/3.25 54/7/3.25	29.30	Uranus/Selenium Orange	Brown
1.2-0120	61/3.50 54/7/3.50	31.50	Silicon Olive	Purple
1.2-0130	61/3.75 54/3.75-19/2.25	33.80	Venus/Sulphur Paw Paw	Black

Helical Support Clamps AAC, AAAC, ACSR

Summit Power Part Number	Conductor Stranding	OD (mm)	Conductor Name	Conductor Colour
1.2-1010	6/1/3.75	11.30	Banana	black
1.2-1020	7/4.50	13.50	Mercury/Hydrogen	Green
1.2-1030	7/4.75 6/4.75-7/1.60	14.30	Moon/Iodine Cherry	Red
1.2-1040	19/3.25	16.30	Neptune/Krypton	Orange
1.2-1050	19/3.50 30/7/2.50	17.50	Lutetium Grape	Blue
1.2-1060	19/3.75	18.80	Pluto/Neon	Black
1.2-1070	37/3.00 30/7/3.00	21.00	Saturn/Nitrogen Lemon	Red
1.2-1080	19/4.75	23.80	Taurus/Oxygen	Black
1.2-1090	30/7/3.50	24.50	Lime	Purple
1.2-1100	37/3.75	26.30	Triton/Phosphorus	Black
1.2-1110	54/7/3.00	27.00	Mango	Red
1.2-1120	61/3.25 54/7/3.25	29.30	Uranus/Selenium Orange	Brown
1.2-1130	61/3.50 54/7/3.50	31.50	Silicon Olive	Purple
1.2-1140	61/3.75 54/3.75-19/2.25	33.80	Venus/Sulphur Paw Paw	Black

Bridging Insulator Support Clamps

Summit Power Part Number	Conductor Range (mm)
1.2-9010	6.25 - 32.00
1.2-9020	12.00 - 28.00
1.2-9030	38.00 - 51.00

Section 2
General Hardware

Summit Power stocks a full range of Hardware and fittings. Finding the appropriate hardware and fittings is an essential aspect of successful and efficient project completion. Summit Power offers a diverse range of hardware and fittings tailored to suit the specific needs of our customers. Our comprehensive inventory includes everything from screws, nuts, and bolts. Our products are crafted using top-quality materials, ensuring they can withstand even the most challenging conditions. At Summit Power, we stock and supply a full range of sizes and qualities for your project requirements.

NOTE Hardware complies with AS1154 Standard

Bow Shackle Steel Bolt & Nut HDG / Split Pin S/S

Summit Power Part Number	Rating (kN)	Bolt Size (mm)
1.3-0010	70	M16
1.3-0020	120	M16
1.3-0030	160	M20
1.3-0040	210	M20
1.3-0050	320	M24

Note: Please contact Summit Power for sizes not listed above

D Shackle Steel Bolt & Nut HDG / Split Pin S/S

Summit Power Part Number	Rating (kN)	Bolt Size (mm)
1.3-0110	70	M16
1.3-0120	120	M16
1.3-0130	160	M20
1.3-0140	210	M20
1.3-0150	320	M24

Note: Please contact Summit Power for sizes not listed above

Clevis Thimble Aluminium Bolt & Nut HDG / Split Pin S/S

Summit Power Part Number	Rating (kN)	Bolt Size (mm)
1.3-0210	70	M16
1.3-0220	120	M16

Note: Please contact Summit Power for sizes not listed above

Clevis Thimble Steel Round Head Pin HDG / Split Pin S/S

Summit Power Part Number	Rating (kN)	Bolt Size (mm)
1.3-0310	70	M16

Note: Please contact Summit Power for sizes not listed above

Socket Clevis Steel Bolt & Nut HDG / Split Pin S/S / W Clip S/S

Summit Power Part Number	Rating (kN)	Socket Size (mm)	Bolt Size (mm)
1.3-0410	70	16	M16
1.3-0420	120	16	M16
1.3-0430	160	20	M20
1.3-0440	210	20	M20

Note: Please contact Summit Power for sizes not listed above

Socket Thimble Steel HDG / W Clip S/S

Summit Power Part Number	Rating (kN)	Socket Size (mm)
1.3-0510	70	16
1.3-0510	120	16
1.3-0510	160	20
1.3-0510	210	20

Note: Please contact Summit Power for sizes not listed above

Socket Tongue Steel HDG / W Clip S/S

Summit Power Part Number	Rating (kN)	Hole Size (mm)
1.3-0610	70	M16
1.3-0620	120	M16
1.3-0630	160	M20
1.3-0640	210	M20

Note: Please contact Summit Power for sizes not listed above

Ball Y Clevis Steel Bolt & Nut HDG /Split Pin S/S

Summit Power Part Number	Maximum Falling Load (kN)	Ball Size (mm)	Bolt Size (mm)
1.3-0710	70	16	M16
1.3-0720	120	16	M16
1.3-0730	160	20	M20
1.3-0740	210	20	M20

Note: Please contact Summit Power for sizes not listed above

Ball Clevis Steel Bolt & Nut HDG /Split Pin S/S

Summit Power Part Number	Rating (kN)	Ball Size (mm)	Bolt Size (mm)
1.3-0810	70	16	M16
1.3-0820	120	16	M16
1.3-0830	160	20	M20
1.3-0840	210	20	M20

Note: Please contact Summit Power for sizes not listed above

Ball Eye Steel HDG

Summit Power Part Number	Rating (kN)	Ball Size (mm)
1.3-0910	70	16
1.3-0920	120	16
1.3-0930	160	20
1.3-0940	210	20

Note: Please contact Summit Power for sizes not listed above

Extension Link Ball Clevis Steel Bolt & Nut HDG / Split Pin S/S

Summit Power Part Number	Rating (kN)	Ball Size (mm)
1.3-1010	70	16
1.3-1020	120	16
1.3-1030	160	20
1.3-1040	210	20

Note: Please contact Summit Power for sizes not listed above

Extension Link Ball Eye Steel HDG

Summit Power Part Number	Rating (kN) **	Length (mm)	Ball Size (mm)
1.3-1150	70, 120, 160, 210	150	16, 20
1.3-1200	70, 120, 160, 210	200	16, 20
1.3-1250	70, 120, 160, 210	250	16, 20
1.3-1300	70, 120, 160, 210	300	16, 20
1.3-1350	70, 120, 160, 210	350	16, 20
1.3-1400	70, 120, 160, 210	400	16, 20
1.3-1450	70, 120, 160, 210	450	16, 20
1.3-1500	70, 120, 160, 210	500	16, 20
1.3-1550	70, 120, 160, 210	550	16, 20
1.3-1600	70, 120, 160, 210	600	16, 20
1.3-1650	70, 120, 160, 210	650	16, 20
1.3-1700	70, 120, 160, 210	700	16, 20
1.3-1750	70, 120, 160, 210	750	16, 20
1.3-1800	70, 120, 160, 210	800	16, 20
1.3-1850	70, 120, 160, 210	850	16, 20
1.3-1900	70, 120, 160, 210	900	16, 20
1.3-1950	70, 120, 160, 210	950	16, 20
1.3-2000	70, 120, 160, 210	1000	16, 20

Note: Please nominate kN and Ball Size.

Tongue Clevis Steel Bolt & Nut HDG / Split Pin S/S

Summit Power Part Number	Rating (kN)	Hole Size (mm)	Bolt Size (mm)
1.3-2110	70	18	M16
1.3-2120	120	22	M16
1.3-2130	160	22	M20
1.3-2140	210	26	M20
1.3-2150	320	26	M24

Note: Please contact Summit Power for sizes not listed above

Y Clevis Tongue Steel Bolt & Nut HDG / Split Pin S/S

Summit Power Part Number	Rating (kN)	Hole Size (mm)	Bolt Size (mm)
1.3-2210	70	18	M16
1.3-2220	120	22	M20
1.3-2230	160	22	M20
1.3-2240	210	26	M24

Note: Please contact Summit Power for sizes not listed above

Eye Tongue Steel HDG

Summit Power Part Number	Rating (kN)	Hole Size (mm)	Bolt Size (mm)
1.3-2310	70	18	M16
1.3-2320	120	22	M20
1.3-2330	160	22	M20

Note: Please contact Summit Power for sizes not listed above

Eye Tongue Twisted Steel HDG

Summit Power Part Number	Rating (kN)	Hole Size (mm)	Bolt Size (mm)
1.3-2410	70	18	M16
1.3-2420	120	22	M20
1.3-2430	160	22	M20

Note: Please contact Summit Power for sizes not listed above

Link Eye Steel HDG

Summit Power Part Number	Thickness (mm)	Rating (kN)
1.3-2510	16	70
1.3-2520	16	120
1.3-2530	20	160
1.3-2540	20	210
1.3-2550	24	320
1.3-2560	36	500

Note: Please contact Summit Power for sizes not listed above

Summit Power takes pride in its extensive manufacturing capabilities, offering a diverse array of sizes and types of transmission line yoke plates. Our product range encompasses a variety of configurations, including rectangles, quad bundles, triangles, and many more. This diversity in our product offerings ensures that we can cater to a broad spectrum of project requirements, providing tailored solutions for different applications within the electrical power transmission industry. Our commitment to versatility and quality underscores our dedication to meeting the evolving needs of our customers and the ever-advancing demands of the energy sector.

Yoke Plate Steel HDG

Summit Power Part Number	Rating (kN) **	Hole Spacing (mm)
1.3-2610	70, 120, 160, 320	200
1.3-2620	70, 120, 160, 320	250
1.3-2630	70, 120, 160, 320	380
1.3-2640	70, 120, 160, 320	460

Note: Please nominate kN rating.

Quad Yoke Steel HDG

Summit Power Part Number	Rating (kN)	Hole Spacing (mm)
1.3-2710	160	460

Note: Please contact Summit Power for sizes not listed above

Rectangular Yoke Steel HDG

Summit Power Part Number	Rating (kN) **	Hole Spacing (mm)
1.3-2810	70, 120, 160, 320	200
1.3-2820	70, 120, 160, 320	250
1.3-2830	70, 120, 160, 320	380
1.3-2840	70, 120, 160, 320	460

Note: Please nominate kN rating.

Maintenance Tension Link Steel HDG

Summit Power Part Number	Rating (kN)	Hole Spacing (mm)
1.3-2910	70	60
1.3-2920	120	60
1.3-2930	160	60
1.3-2940	210	60

Note: Please contact Summit Power for sizes not listed above

Link Plate Single Steel HDG

Summit Power Part Number	Rating (kN) **	Hole Separation (mm)
1.3-3050	70, 120, 160, 210	100
1.3-3100	70, 120, 160, 210	150
1.3-3150	70, 120, 160, 210	200
1.3-3200	70, 120, 160, 210	250
1.3-3250	70, 120, 160, 210	300
1.3-3300	70, 120, 160, 210	350
1.3-3350	70, 120, 160, 210	400
1.3-3400	70, 120, 160, 210	450
1.3-3450	70, 120, 160, 210	500
1.3-3500	70, 120, 160, 210	550
1.3-3550	70, 120, 160, 210	600
1.3-3600	70, 120, 160, 210	650
1.3-3650	70, 120, 160, 210	700
1.3-3700	70, 120, 160, 210	750
1.3-3750	70, 120, 160, 210	800
1.3-3800	70, 120, 160, 210	850
1.3-3850	70, 120, 160, 210	900
1.3-3900	70, 120, 160, 210	950
1.3-3950	70, 120, 160, 210	1000

Note: Please nominate kN rating.

Link Plate Double Steel Bolt & Nut HDG / Split Pin S/S

Summit Power Part Number	Rating (kN) **	Hole Separation (mm)
1.3-4050	70, 120, 160, 210, 320	100
1.3-4100	70, 120, 160, 210, 320	150
1.3-4150	70, 120, 160, 210, 320	200
1.3-4200	70, 120, 160, 210, 320	250
1.3-4250	70, 120, 160, 210, 320	300
1.3-4300	70, 120, 160, 210, 320	350
1.3-4350	70, 120, 160, 210, 320	400
1.3-4400	70, 120, 160, 210, 320	450
1.3-4450	70, 120, 160, 210, 320	500
1.3-4500	70, 120, 160, 210, 320	550
1.3-4550	70, 120, 160, 210, 320	600
1.3-4600	70, 120, 160, 210, 320	650
1.3-4650	70, 120, 160, 210, 320	700
1.3-4700	70, 120, 160, 210, 320	750
1.3-4750	70, 120, 160, 210, 320	800
1.3-4800	70, 120, 160, 210, 320	850
1.3-4850	70, 120, 160, 210, 320	900
1.3-4900	70, 120, 160, 210, 320	950
1.3-4950	70, 120, 160, 210, 320	1000

Note: Please nominate kN rating.

Link Plate Adjustable Steel Bolt & Nut HDG / Split Pin S/S

Summit Power Part Number	Rating (kN) **	Range (mm)	
		Minimum	Maximum
1.3-5100	70, 120, 160, 210	300	500
1.3-5200	70, 120, 160, 210	500	750
1.3-5300	70, 120, 160, 210	500	850
1.3-5400	70, 120, 160, 210	500	950
1.3-5500	70, 120, 160, 210	500	1050
1.3-5600	70, 120, 160, 210	500	1150

Note: Please nominate kN rating.

Stay Rod Steel HDG

Supplied with Sheave Wheel or Clevis Thimble

Summit Power Part Number	Size
1.5-0010	M20 x 3000mm
1.5-0020	M24 x 2140mm
1.5-0030	M24 x 3000mm
1.5-0040	M36 x 4000mm
1.5-0050	M36 x 4500mm
1.5-0060	M36 x 5800mm

Note: Please contact Summit Power for sizes not listed above

Turnbuckles Steel HDG

Summit Power Part Number	Configuration	Rating (kN)	Bolt Size (mm)
1.5-0105	Eye / Eye	70	M20
1.5-0110	Eye / Eye	160	M24
1.5-0115	Eye / Eye	320	M36
1.5-0120	Eye / Clevis	70	M20
1.5-0125	Eye / Clevis	160	M24
1.5-0130	Eye / Clevis	320	M36
1.5-0135	Clevis / Clevis	70	M20
1.5-0140	Clevis / Clevis	160	M24
1.5-0145	Clevis / Clevis	320	M36
1.5-0150	Clevis / Tongue	70	M20
1.5-0155	Clevis / Tongue	160	M24
1.5-0160	Clevis / Tongue	320	M36

Note: Please contact Summit Power for sizes not listed above

Stay Wire SC/GZ

Summit Power Part Number	OD (mm)	Stranding (mm)
1.5-0210	11	19/2.00
1.5-0220	13	19/2.75
1.5-0230	16	19/3.25

Note: Summit Power custom-cut Stay Wire to your desired length if required.

Thimble Wheel Steel HDG

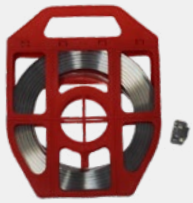
Summit Power Part Number	Hole Size (mm)	Sheave Diameter (mm)
1.5-0310	18	75
1.5-0320	22	75
1.5-0330	26	75
1.5-0340	26	150

Note: Please contact Summit Power for sizes not listed above

S/S Strapping

Summit Power Part Number	Size (mm)
1.3-3710	16
1.3-3720	19
1.3-3730	25
1.3-3711	16 - Clip
1.3-3721	19 - Clip
1.3-3731	25 - Clip

Note: Please contact Summit Power for sizes not listed above



Counterweight Assembly HDG

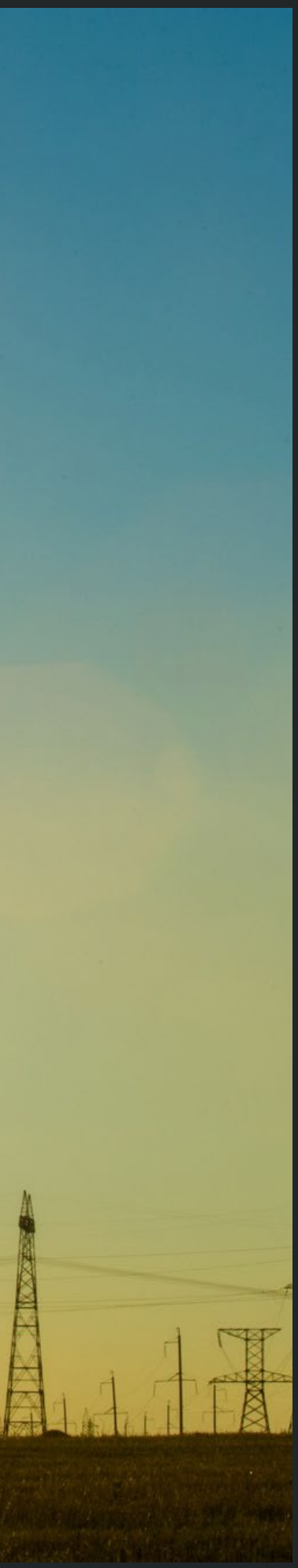
Summit Power Part Number
****

Note: Summit Power engineer Counterweight Assemblies to customer requirements.

Pole Steps Steel 8.8 HDG

Summit Power Part Number	Size	Length (mm)
1.3-4010	M16	180 - Concrete
1.3-4020	M16	250 - Timber

Note: Please contact Summit Power for sizes not listed above



Section 3
RIDGEBACK Fasteners

Summit's Range of Ridgeback Fasteners are fabricated and packaged under intense quality control processes in accordance with ISO 9001, using only the highest quality materials. To give you further peace of mind all Ridgeback Fasteners are NATA tested and approved. Ridgeback Fasteners are exceptionally tough and durable fasteners, designed for optimum performance in the harsh and rugged environments, that the Australian outback and coastlines present.

For this reason Ridgeback Fasteners are used on the most advanced energy networks in Australia and currently hold the supply contract of Fastening Hardware for Essential Energy

*RIDGE**BACK*** Fasteners

Ridgeback Hex King Bolt & Nut 4.6 Galv - Extended Thread

	Summit Power Part Number	Length (mm)	Threaded Length (mm)
M10	DB10025	25	150
M12	DB12025	25	150
	DB12030	30	150
	DB12035	35	150
	DB12040	40	150
	DB12045	45	150
	DB12050	50	150
	DB12055	55	150
	DB12060	60	150
	DB12065	65	150
	DB12070	70	150
	DB12075	75	150
	DB12080	80	150
	DB12085	85	150
	DB12090	90	150
	DB12100	100	150
	DB12130	130	150
	DB12140	140	150
	DB12150	150	150
	DB12180	180	150
	DB12200	200	150
	DB12220	220	150
	DB12240	240	150
	DB12260	260	150
	DB12300	300	150
	DB12325	325	150
	DB12350	350	150
	DB12400	400	150
	DB12450	450	150
M16	DB16040	40	150
	DB16045	45	150
	DB16050	50	150
	DB16055	55	150
	DB16060	60	150
	DB16065	65	150
	DB16070	70	150
	DB16075	75	150
	DB16080	80	150
	DB16085	85	150
	DB16090	90	150
	DB16100	100	150
	DB16110	110	150
	DB16120	120	150

Continued next page...

Complies to Australian Standards:

- AS 1111.1
- AS 1112.1
- AS 1214

*RIDGE**BACK*** Fasteners

Ridgeback Hex King Bolt & Nut 4.6 Galv - Extended Thread

Summit Power Part Number	Length (mm)	Threaded Length (mm)
DB16130	130	150
DB16140	140	150
DB16150	150	150
DB16160	160	150
DB16180	180	150
DB16200	200	150
DB16220	220	150
DB16240	240	150
DB16260	260	150
DB16280	280	150
DB16300	300	150
DB16325	325	150
DB16350	350	150
DB16375	375	150
DB16400	400	150
DB16425	425	150
DB16450	450	150
DB16475	475	150
DB16500	500	150
M20		
DB20050	50	150
DB20060	60	150
DB20065	65	150
DB20130	130	150
DB20150	150	150
DB20160	160	150
DB20180	180	150
DB20200	200	150
DB20220	220	150
DB20260	260	150
DB20280	280	150
DB20300	300	150
DB20325	325	150
DB20350	350	150
DB20375	375	150
DB20400	400	150
DB20425	425	150
DB20450	450	150
DB20475	475	150
DB20500	500	150
DB20525	525	150
DB20550	550	150
DB20575	575	150

Continued next page...

Complies to Australian Standards:

- AS 1111.1
- AS 1112.1
- AS 1214

RIDGEBACK Fasteners

*RIDGE**BACK*** Fasteners

Ridgeback Hex King Bolt & Nut 4.6 Galv - Extended Thread

Summit Power Part Number	Length (mm)	Threaded Length (mm)
DB20600	600	150
DB20625	625	150
DB20650	650	150
DB20675	675	150
DB20700	700	150
DB20725	725	150
DB20750	750	150
DB20775	775	150
DB20800	800	150
DB20825	825	150

Complies to Australian Standards:
- AS 1111.1
- AS 1112.1
- AS 1214

Ridgeback Hex King Bolt & Nut 8.8 High Tensile Galv

	Summit Power Part Number	Length (mm)	Threaded Length (mm)
M12	6HCUGA12030	30	150
	6HCUGA12035	35	150
	6HCUGA12040	40	150
	6HCUGA12045	45	150
	6HCUGA12050	50	150
	6HCUGA12055	55	150
	6HCUGA12060	60	150
	6HCUGA12065	65	150
	6HCUGA12070	70	150
	6HCUGA12075	75	150
	6HCUGA12080	80	150
	6HCUGA12085	85	150
	6HCUGA12090	90	150
	6HCUGA12100	100	150
	6HCUGA12130	130	150
	6HCUGA12140	140	150
	6HCUGA12150	150	150
	6HCUGA12180	180	150
	6HCUGA12200	200	150
M16	6HCUGA16040	40	150
	6HCUGA16045	45	150
	6HCUGA16050	50	150
	6HCUGA16055	55	150
	6HCUGA16060	60	150
	6HCUGA16065	65	150
	6HCUGA16070	70	150
	6HCUGA16075	75	150
	6HCUGA16080	80	150
	6HCUGA16085	85	150

Complies to Australian Standards:
- AS 1252

Continued next page...

*RIDGE**BACK*** Fasteners

Ridgeback Hex King Bolt & Nut 8.8 High Tensile Galv

Complies to Australian Standards:
- AS 1252

	Summit Power Part Number	Length (mm)	Threaded Length (mm)
	6HCUGA16090	90	150
	6HCUGA16100	100	150
	6HCUGA16110	110	150
	6HCUGA16120	120	150
	6HCUGA16130	130	150
	6HCUGA16140	140	150
	6HCUGA16150	150	150
	6HCUGA16160	160	150
	6HCUGA16180	180	150
	6HCUGA16200	200	150
	6HCUGA16220	220	150
	6HCUGA16240	240	150
	6HCUGA16260	260	150
	6HCUGA16280	280	150
	6HCUGA16300	300	150
	6HCUGA16325	325	150
	6HCUGA16350	350	150
	6HCUGA16375	375	150
	6HCUGA16400	400	150
	6HCUGA16425	425	150
	6HCUGA16450	450	150
	6HCUGA16475	475	150
	6HCUGA16500	500	150
M20	6HCUGA20050	50	150
	6HCUGA2060	60	150
	6HCUGA2065	65	150
	6HCUGA20130	130	150
	6HCUGA20150	150	150
	6HCUGA20160	160	150
	6HCUGA20180	180	150
	6HCUGA20200	200	150
	6HCUGA20220	220	150
	6HCUGA20260	260	150
	6HCUGA20280	280	150
	6HCUGA20300	300	150
	6HCUGA20325	325	150
	6HCUGA20350	350	150
	6HCUGA20375	375	150
	6HCUGA20400	400	150
	6HCUGA20425	425	150
	6HCUGA20450	450	150
	6HCUGA20475	475	150

Continued next page...

*RIDGE**BACK*** Fasteners

Ridgeback Hex King Bolt & Nut 8.8 High Tensile Galv

Summit Power Part Number	Length (mm)	Threaded Length (mm)
6HCUGA20500	500	150
6HCUGA20525	525	150
6HCUGA20550	550	150
6HCUGA20575	575	150
6HCUGA20600	600	150
6HCUGA20625	625	150
6HCUGA20650	650	150
6HCUGA20675	675	150
6HCUGA20700	700	150
6HCUGA20725	725	150
6HCUGA20750	750	150
6HCUGA20775	775	150
6HCUGA20800	800	150
6HCUGA20825	825	150
6HCUGA20850	850	150
6HCUGA20875	875	150
6HCUGA20900	900	150
6HCUGA24130	130	150
6HCUGA24150	150	150
6HCUGA24160	160	150
6HCUGA24180	180	150
6HCUGA24200	200	150
6HCUGA24220	220	150
6HCUGA24260	260	150
6HCUGA24280	280	150
6HCUGA24300	300	150
6HCUGA24325	325	150
6HCUGA24350	350	150
6HCUGA24375	375	150
6HCUGA24400	400	150
6HCUGA24425	425	150
6HCUGA24450	450	150
6HCUGA24475	475	150
6HCUGA24500	500	150
6HCUGA24525	525	150
6HCUGA24550	550	150
6HCUGA24575	575	150
6HCUGA24600	600	150
6HCUGA24625	625	150
6HCUGA24650	650	150
6HCUGA24675	675	150
6HCUGA24700	700	150

M24

Continued next page...

Complies to Australian Standards:

- AS 1252

*RIDGE**BACK*** Fasteners

Ridgeback Hex King Bolt & Nut 8.8 High Tensile Galv

Summit Power Part Number	Length (mm)	Threaded Length (mm)
6HCUGA24725	725	150
6HCUGA24750	750	150
6HCUGA24775	775	150
6HCUGA24800	800	150
6HCUGA24825	825	150
6HCUGA24850	850	150
6HCUGA24875	875	150
6HCUGA24900	900	150

Complies to Australian Standards:
- AS 1252

Ridgeback Bolt & Nut, Hex Head Metric Coarse 304 S/S

M12

Summit Power Part Number	Length (mm)	Threaded Length (mm)
6HCS212025-N	25	
6HCS212030-N	30	
6HCS212035-N	35	
6HCS212040-N	40	
6HCS212045-N	45	
6HCS212050-N	50	
6HCS212055-N	55	
6HCS212060-N	60	
6HCS212065-N	65	
6HCS212070-N	70	
6HCS212075-N	75	
6HCS212080-N	80	
6HCS212085-N	85	
6HCS212090-N	90	
6HCS212100-N	100	
6HCS212110-N	110	
6HCS212120-N	120	
6HCS212130-N	130	
6HCS212140-N	140	
6HCS212150-N	150	
6HCS212180-N	180	
6HCS212200-N	200	
6HCS212220-N	220	
6HCS212240-N	240	
6HCS212260-N	260	
6HCS212300-N	300	
6HCS212325-N	325	
6HCS212350-N	350	
6HCS212400-N	400	
6HCS212450-N	450	

Continued next page...

Complies to the following standard:
- DIN 931

*RIDGE**BACK*** Fasteners

Ridgeback Bolt & Nut, Hex Head Metric Coarse 304 S/S

	Summit Power Part Number	Length (mm)	Threaded Length (mm)
M16	6HCS216040-N	40	
	6HCS216045-N	45	
	6HCS216050-N	50	
	6HCS216055-N	55	
	6HCS216060-N	60	
	6HCS216065-N	65	
	6HCS216070-N	70	
	6HCS216075-N	75	
	6HCS216080-N	80	
	6HCS216085-N	85	
	6HCS216090-N	90	
	6HCS216100-N	100	
	6HCS216110-N	110	
	6HCS216120-N	120	
	6HCS216130-N	130	
	6HCS216140-N	140	
	6HCS216150-N	150	
	6HCS216160-N	160	
	6HCS216180-N	180	
	6HCS216200-N	200	
	6HCS216220-N	220	
	6HCS216240-N	240	
	6HCS216260-N	260	
	6HCS216280-N	280	
	6HCS216300-N	300	
	6HCS216325-N	325	
	6HCS216350-N	350	
	6HCS216375-N	375	
	6HCS216400-N	400	
	6HCS216425-N	425	
	6HCS216450-N	450	
	6HCS216475-N	475	
	6HCS216500-N	500	
M20	6HCS220050-N	50	
	6HCS220060-N	60	
	6HCS220065-N	65	
	6HCS220130-N	130	
	6HCS220150-N	150	
	6HCS220160-N	160	
	6HCS220180-N	180	
	6HCS220200-N	200	
	6HCS220220-N	220	

Continued next page...

Complies to the following standard:

- DIN 931

*RIDGE**BACK*** Fasteners

Ridgeback Bolt & Nut, Hex Head Metric Coarse 304 S/S

Summit Power Part Number	Length (mm)	Threaded Length (mm)
6HCS220260-N	260	
6HCS220280-N	280	
6HCS220300-N	300	
6HCS220325-N	325	
6HCS220350-N	350	
6HCS220375-N	375	
6HCS220400-N	400	
6HCS220425-N	425	
6HCS220450-N	450	
6HCS220475-N	475	
6HCS220500-N	500	
6HCS220525-N	525	
6HCS220550-N	550	
6HCS220575-N	575	
6HCS220600-N	600	
6HCS220625-N	625	
6HCS220650-N	650	
6HCS220675-N	675	
6HCS220700-N	700	
6HCS220725-N	725	
6HCS220750-N	750	
6HCS220775-N	775	
6HCS220800-N	800	
6HCS220825-N	825	

Complies to the following standard:
- DIN 931

Ridgeback Double Arming Bolt 4.6 Galv - Threaded Rod

M20

Summit Power Part Number	Length (mm)	Threaded Length (mm)
30.1-101954	550	
30.1-101955	625	
30.1-101958	650	
30.1-101959	675	
30.1-101960	700	
30.1-101961	725	
30.1-101962	750	
30.1-101963	775	
30.1-101964	800	
30.1-101965	825	
30.1-101966	850	
30.1-101967	875	
30.1-101968	900	
30.1-101969	925	
30.1-101970	975	
30.1-101971	1000	
30.1-101972	1025	
30.1-101973	1050	

Complies to the following standard:
- DIN 975
- AS 1214

*RIDGE**BACK*** **Fasteners**

Ridgeback Set Screw & Nut Hex Head Metric Coarse 304 S/S - Full Thread

	Summit Power Part Number	Length (mm)	Threaded Length (mm)
M10	6SCS2110016	16	16
	6SCS2110020	20	20
	6SCS2110025	25	25
	6SCS2110030	30	30
	6SCS2110035	35	35
	6SCS2110040	40	40
	6SCS2110045	45	45
	6SCS2110050	50	50
	6SCS2110055	55	55
	6SCS2110060	60	60
	6SCS2110065	65	65
	6SCS2110070	70	70
	6SCS2110075	75	75
M12	6SCS2112020	20	20
	6SCS2112025	25	25
	6SCS2112030	30	30
	6SCS2112035	35	35
	6SCS2112040	40	40
	6SCS2112045	45	45
	6SCS2112050	50	50
	6SCS2112055	55	55
	6SCS2112060	60	60
	6SCS2112065	65	65
	6SCS2112070	70	70
	6SCS2112075	75	75
M16	6SCS2116020	20	20
	6SCS2116025	25	25
	6SCS2116035	35	35
	6SCS2116040	40	40
	6SCS2116045	45	45
	6SCS2116050	50	50
	6SCS2116055	55	55
	6SCS2116060	60	60
	6SCS2116065	65	65
	6SCS2116070	70	70
	6SCS2116075	75	75

Complies to the following standard:

- DIN 933

*RIDGE**BACK*** Fasteners

Ridgeback Eye Bolt & Nut 4.6 Galv

	Summit Power Part Number	Length (mm)	Threaded Length (mm)
M20	GEBR20200	200	100
	GEBR20250	250	150
	GEBR20300	300	150
	GEBR20350	350	150
	GEBR20375	375	150
	GEBR20400	400	150
	GEBR20425	425	150
	GEBR20450	450	150
	GEBR20475	475	150
	GEBR20500	500	150
	GEBR20525	525	150
	GEBR20550	550	150
	GEBR20575	575	150
	GEBR20600	600	150
	GEBR20625	625	150
	GEBR20650	650	150
	GEBR20675	675	150
	GEBR20700	700	150
	GEBR20725	725	150
	GEBR20750	750	150
	GEBR20775	775	150
	GEBR20800	800	150
	GEBR20825	825	150
M24	GEBR24175	175	100
	GEBR24200	200	100
	GEBR24250	250	150
	GEBR24300	300	150
	GEBR24350	350	150
	GEBR24375	375	150
	GEBR24400	400	150
	GEBR24425	425	150
	GEBR24450	450	150
	GEBR24475	475	150
	GEBR24500	500	150
	GEBR24525	525	150
	GEBR24550	550	150
	GEBR24575	575	150
	GEBR24600	600	150
	GEBR24625	625	150
	GEBR24650	650	150
	GEBR24675	675	150
	GEBR24700	700	150

Continued next page...

150mm of thread
Complies to Australian Standard:
- AS 1111.1

RIDGEBACK Fasteners

*RIDGE**BACK*** Fasteners

Ridgeback Eye Bolt & Nut 4.6 Galv

Summit Power Part Number	Length (mm)	Threaded Length (mm)
GEBR24725	725	150
GEBR24750	750	150
GEBR24775	775	150
GEBR24800	800	150
GEBR24825	825	150

150mm of thread
Complies to Australian Standard:
- AS 1111.1

Ridgeback Eye Bolt & Nut High Tensile 8.8 Galv

	Summit Power Part Number	Length (mm)	Threaded Length (mm)
M16	GEBH16200	200	100
	GEBH16250	250	150
	GEBH16300	300	150
	GEBH16350	350	150
	GEBH16400	400	150
	GEBH16450	450	150
	GEBH16500	500	150
	GEBH16550	550	150
	GEBH16600	600	150
	GEBH16650	650	150
	GEBH16700	700	150
	GEBH16750	750	150
	GEBH16800	800	150
M20	GEBH20200	200	150
	GEBH20250	250	150
	GEBH20300	300	150
	GEBH20350	350	150
	GEBH20375	375	150
	GEBH20400	400	150
	GEBH20425	425	150
	GEBH20450	450	150
	GEBH20475	475	150
	GEBH20500	500	150
	GEBH20525	525	150
	GEBH20550	550	150
	GEBH20575	575	150
	GEBH20600	600	150
	GEBH20625	625	150
	GEBH20650	650	150
	GEBH20675	675	150
	GEBH20700	700	150
	GEBH20725	725	150
	GEBH20750	750	150

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High Tensile
150mm of thread
Complies to Australian Standards:
- AS 1110
- AS 1112

*RIDGE**BACK*** Fasteners

Ridgeback Eye Bolt & Nut High Tensile 8.8 Galv

	Summit Power Part Number	Length (mm)	Threaded Length (mm)
	GEBH20775	775	150
	GEBH20800	800	150
	GEBH20825	825	150
M24	GEBH24175	175	150
	GEBH24200	200	150
	GEBH24250	250	150
	GEBH24300	300	150
	GEBH24350	350	150
	GEBH24375	375	150
	GEBH24400	400	150
	GEBH24425	425	150
	GEBH24450	450	150
	GEBH24475	475	150
	GEBH24500	500	150
	GEBH24525	525	150
	GEBH24550	550	150
	GEBH24575	575	150
	GEBH24600	600	150
	GEBH24625	625	150
	GEBH24650	650	150
	GEBH24675	675	150
	GEBH24700	700	150
	GEBH24725	725	150
	GEBH24750	750	150
	GEBH24775	775	150
	GEBH24800	800	150
	GEBH24825	825	150

High Tensile
150mm of thread
Complies to Australian Standards:
- AS 1110
- AS 1112

Ridgeback Coach Screw Hex Head 4.6 Galv

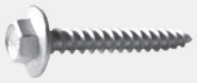
	Summit Power Part Number	Length (mm)
M10	3VHUG10050	50
	3VHUG10075	75
	3VHUG10090	90
	3VHUG10100	100
M12	3VHUG12050	50
	3VHUG12075	75
	3VHUG12090	90
	3VHUG12100	100
	3VHUG12120	120
M16	3VHUG16075	75
	3VHUG16100	100
	3VHUG16130	130
M20	3VHUG20130	130

Complies to Australian Standard:
- AS 1393

*RIDGE**BACK*** Fasteners

Ridgeback Type 17 Screw Hex Head CL4 - Full Thread

Summit Power Part Number	Size (mm)	Threaded Length (mm)
3THU9C410025	10-11 x 25	
3THU9C412025	12-11 x 25	
3THU9C412040	12-11 x 40	
3THU9C412050	12-11 x 50	



Complies to Australian Standards:
- AS 3566

Ridgeback Square Flat Washer Galv

Summit Power Part Number	Size (mm)	Network
6WQMCG120403	M12 x 40 x 40 x 3	Private Network
6WQMCG120503	M12 x 50 x 50 x 3	Private Network
6WQMCG160506	M16 x 50 x 50 x 6	Private Network
6WQMCG160656	M16 x 65 x 65 x 6	Private Network
6WQMCG200656	M20 x 65 x 65 x 6	Essential Energy
6WQMCG200756	M20 x 75 x 75 x 6	Essential Energy
6WQMCG240756	M24 x 75 x 75 x 6	Essential Energy
6WQMCG361006	M36 x 100 x 100 x 6	Essential Energy

Complies to Australian Standard:
- AS 1237

Ridgeback Round Flat Washer Galv

Summit Power Part Number	Size (mm)	Network
6WRMCG10021	M10 x 22 x 2	Private Network
6WRMCG12024	M12 x 24 x 2.5	Private Network
6WRMCG12037	M12 x 37 x 3	Essential Energy
6WRMCG12044	M12 x 44 x 6	Transgrid
6WRMCG16034	M16 x 34 x 3	Private Network
6WRMCG16050	M16 x 50 x 4	Essential Energy
6WRMCG16055	M16 x 55 x 6	Transgrid
6WRMCG20039	M20 x 39 x 3	Private Network
6WRMCG20060	M20 x 60 x 4	Essential Energy
6WRMCG2010475	M20 x 104 x 75	Private Network
6WRMCG24050	M24 x 50 x 4	Private Network

Complies to Australian Standards:
- BS 3410
- AS 1237

Ridgeback Spring Washer Galv

Summit Power Part Number	Size (mm)	Network
6WSMCG124025	M12 x 4 x 2.5	Private Network
6WSMCG124226	M12 x 4.2 x 2.65	Transgrid
6WSMCG165035	M16 x 5 x 3.5	Private Network
6WSMCG165237	M16 x 5.2 x 3.7	Transgrid
6WSMCG206040	M20 x 6 x 4	Private Network
6WSMCG206242	M20 x 6.2 x 4.2	Transgrid
6WSMCG247150	M24 x 7.1 x 5	Private Network
6WSMCG247252	M24 x 7.2 x 5.2	Transgrid

Complies to Australian Standards:
- DIN 127B

Ridgeback Volute Taper Conical Washer Galv

Summit Power Part Number	Size (mm)	Network
30.1-116870	M12	Private Network
30.1-116900	M16	Private Network
30.1-116930	M20	Private Network
30.1-116960	M24	Private Network

Complies to Australian Standards:
- AS 1472

*RIDGE**BACK*** Fasteners

Ridgeback Round Flat Washer 304 S/S

Summit Power Part Number	Size (mm)	Network
6WRMS204008	M4 x 9 x 0.8	Private Network
6WRMS206012	M6 x 12.5 x 1.2	Private Network
6WRMS208017	M8 x 17 x 1.2	Private Network
6WRMS210021	M10 x 21 x 1.2	Essential Energy
6WRMS212024	M12 x 24 x 1.5	Essential Energy
6WRMS216030	M16 x 30 x 1.5	Private Network
6WRMS220037	M20 x 37 x 2	Private Network
6WRMS224044	M24 x 44 x 3	Private Network

Complies to Australian Standards:
- DIN 125A

Ridgeback Belleville Washer 304 S/S

Summit Power Part Number	Size (mm)	Network
6WBMS210	M10 x 20 x 1.1	Essential Energy
6WBMS212	M12 x 25 x 1.5	Essential Energy

Complies to Australian Standards:
- AS 1237

Ridgeback Spring Washer 304 S/S

Summit Power Part Number	Size (mm)	Network
6WSMS2041509	M4 x 1.5 x 0.9	Private Network
6WSMS2062516	M6 x 2.5 x 1.6	Private Network
6WSMS2083020	M8 x 3 x 2	Private Network
6WSMS2103522	M10 x 3.5 x 2.2	Essential Energy
6WSMS2124025	M12 x 4 x 2.5	Essential Energy
6WSMS2165035	M16 x 5 x 3.5	Essential Energy
6WSMS2206040	M20 x 6 x 4	Private Network
6WSMS2247050	M24 x 7 x 5	Private Network

Complies to Australian Standards:
- DIN 127B

Ridgeback Volute Taper Conical Washer 304 S/S

Summit Power Part Number	Size (mm)	Network
30.1-110465	M12-M16	Essential Energy
30.1-110468	M16-M20	Essential Energy
30.1-110470	M20-M24	Essential Energy

Complies to Australian Standards:
- AS 1472

Ridgeback Nut Hex Metric Coarse Steel Class 8 Galv

Summit Power Part Number	Size (mm)
6NHCCG006	M6
6NHCCG008	M8
6NHCCG010	M10
6NHCCG012	M12
6NHCCG016	M16
6NHCCG020	M20
6NHCCG024	M24
6NHCCG027	M27
6NHCCG030	M30
6NHCCG036	M36
6NHCCG042	M42

Complies to Australian Standards:
- AS 1112.1

*RIDGE**BACK*** Fasteners

Ridgeback Nut Hex Metric Coarse 316 S/S

Summit Power Part Number	Size (mm)
6NHCS4010	M10
6NHCS4012	M12
6NHCS4014	M14
6NHCS4016	M16
6NHCS4018	M18
6NHCS4020	M20
6NHCS4022	M22
6NHCS4024	M24
6NHCS4027	M27
6NHCS4030	M30
6NHCS4033	M33
6NHCS4036	M36
6NHCS4039	M39
6NHCS4042	M42

Complies to Australian Standards:
- DIN 934

Ridgeback Nylon Insert Lock Nut Hex Metric Coarse 316 S/S

Summit Power Part Number	Size (mm)
6NNCS4003	M3
6NNCS4004	M4
6NNCS4005	M5
6NNCS4006	M6
6NNCS4008	M8
6NNCS4010	M10
6NNCS4012	M12
6NNCS4014	M14
6NNCS4016	M16
6NNCS4018	M18
6NNCS4020	M20
6NNCS4024	M24
6NNCS4027	M27
6NNCS4030	M30
6NNCS4036	M36

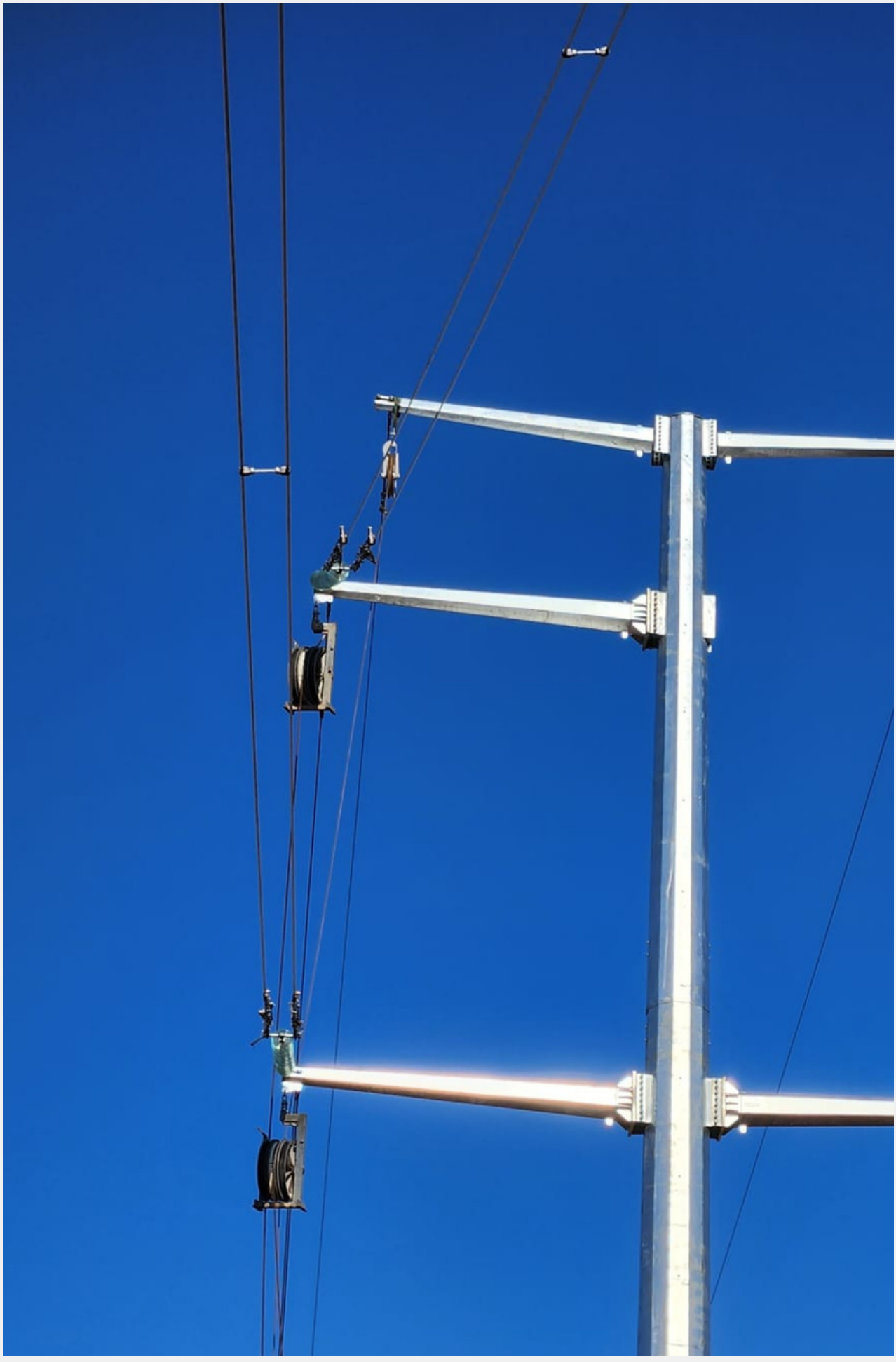
Complies to Australian Standards:
- DIN 985

RIDGEBACK Fasteners

Section 4
Spacers

Conductor spacers, such as Twin and Quad spacers, are indispensable components in powerline construction, vital to the efficient and secure transmission of electricity. Twin spacers meticulously maintain consistent spacing between conductors, preventing electrical arcing that can lead to power outages and equipment damage. Quad spacers, an advanced iteration, accommodate four conductors, making them ideal for multicircuit systems and high-capacity transmission lines.

By ensuring precise alignment and separation, both spacers enhance the reliability and longevity of powerline infrastructure, reducing the risk of electrical faults. These spacers exemplify the commitment to safety and performance in power distribution, benefiting communities and industries by bolstering the resilience and efficiency of electrical grids.



*Twin Spacer** Can be supplied with damping if required*

Summit Power Part Number	Conductor Range (mm)	Conductor Center Spacing (mm)
1.10-0010	Customer to specify	380
1.10-0020	Customer to specify	460
1.10-0040	Customer to specify	520

Note: Please contact Summit Power for sizes not listed above

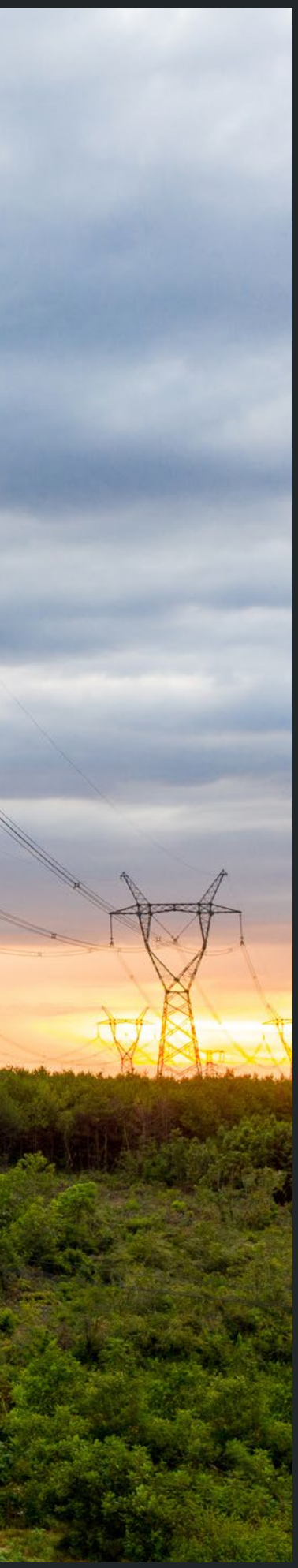
Twin spacers, also known as dual spacers or twin bundle spacers, are components used in overhead powerline installations to maintain proper spacing and separation between multiple sets of conductors that are arranged in a side-by-side configuration. They ensure that the conductors remain properly aligned and prevent unwanted contact or interference between them.

Quad Damper Spacer

Summit Power Part Number	Conductor Range (mm)	Conductor Center Spacing (mm)
1.10-0110	Customer to specify	380
1.10-0120	Customer to specify	460
1.10-0130	Customer to specify	520

Note: Please contact Summit Power for sizes not listed above

Quad Spacers are a specific type of spacer damper used in overhead powerline installations to control aeolian vibrations and provide additional mechanical support to the conductors. It is designed to dampen the oscillations caused by wind-induced vibrations and prevent fatigue failure in the powerline.
The Quad Spacer features a unique design that combines both vibration-damping and clamping functions. It consists of a clamping mechanism and an elastomeric cushioning material, typically made of a high-quality silicone compound or rubber, housed within a durable metal enclosure.
The clamping mechanism of the Quad Spacer securely holds the powerline conductors in place, ensuring proper alignment and separation.



Section 5
Compression Sleeves

A compression sleeve is a specialised connector used to create a secure and reliable electrical connection between two powerline conductors. It is designed to ensure efficient power transfer and maintain the integrity of the electrical system.

Features:

- Secure Connection
- Efficient Power Transfer
- High Conductivity
- Mechanical Strength
- Corrosion Resistance
- Easy Installation

OH&S Considerations:

- Electrical Safety: Powerlines carry high voltages, posing a significant electrical hazard. Prior to commencing any compression splice repair work, workers must follow proper lockout/tagout procedures, deenergize the powerline, and ensure it is properly grounded. Insulated tools and equipment should be used, and workers should receive training on safe electrical work practices.
- Equipment Safety: Inspecting and maintaining equipment used for compression splice repairs is crucial to ensure worker safety. Tools and equipment should be regularly checked for damage, wear, or malfunctioning parts. Faulty equipment should be repaired or replaced promptly to mitigate potential hazards.

Compression Sleeve - Full Tension - AAC

Summit Power Part Number	Conductor Stranding	Conductor Name
1.8-0010	7/4.50	Mercury
1.8-0020	7/4.75	Moon
1.8-0030	19/3.25	Neptune
1.8-0040	19/3.75	Pluto
1.8-0050	37/3.00	Saturn
1.8-0060	19/4.75	Taurus
1.8-0070	37/3.75	Triton
1.8-0080	61/3.25	Uranus
1.8-0090	61/3.75	Venus

Note: Please contact Summit Power for sizes not listed above

Compression Sleeve - Full Tension - AAAC

Summit Power Part Number	Conductor Stranding	Conductor Name
1.8-0110	7/4.50	Hydrogen
1.8-0120	7/4.75	Iodine
1.8-0130	19/3.25	Krypton
1.8-0140	19/3.50	Lutetium
1.8-0150	19/3.75	Neon
1.8-0160	30/7/3.00	Nitrogen
1.8-0170	19/4.75	Oxygen
1.8-0180	37/3.75	Phosphorus
1.8-0190	61/3.25	Selenium
1.8-0200	61/3.50	Silicon
1.8-0210	61/3.75	Sulphur

Note: Please contact Summit Power for sizes not listed above

Compression Sleeve - Full Tension - ACSR - Steel

Summit Power Part Number	Conductor Stranding	Conductor Name	Compression Die A/F Size
1.8-0220	6/4.75+7/1.60	Cherry	9.5 (Steel) 22.0 (Alum)
1.8-0230	30/7/2.50	Grape	16.0 (Steel) 28.5 (Alum)
1.8-0240	30/7/3.00	Lemon	17.0 (Steel) 34.5 (Alum)
1.8-0250	30/7/3.50	Lime	17.0(Steel) 40.0(Alum)
1.8-0260	54/7/3.00	Mango	17.0 (Steel) 44.5 (Alum)
1.8-0270	54/7/3.25	Orange	19.0 (Steel) 44.5 (Alum)
1.8-0280	54/7/3.50	Olive	19.0 (Steel) 47.5 (Alum)

Note: Please contact Summit Power for sizes not listed above

Compression Sleeve - Full Tension - SC/GZ

Summit Power Part Number	Conductor (mm)	Conductor Stranding
1.8-0310	8.25	7/2.75
1.8-0320	9.00	7/3.00
1.8-0330	9.75	7/3.25
1.8-0340	11.30	7/3.75
1.8-0350	12.80	7/4.25

Note: Please contact Summit Power for sizes not listed above

Compression Sleeve - Non Tension - AAC

Summit Power Part Number	Conductor Stranding	Conductor Name
1.8-0410	7/4.50	Mercury
1.8-0420	7/4.75	Moon
1.8-0430	19/3.25	Neptune
1.8-0440	19/3.75	Pluto
1.8-0450	37/3.00	Saturn
1.8-0460	19/4.75	Taurus
1.8-0470	37/3.75	Triton
1.8-0480	61/3.25	Uranus
1.8-0490	61/3.75	Venus

Note: Please contact Summit Power for sizes not listed above

Compression Sleeve - Non Tension - AAAC

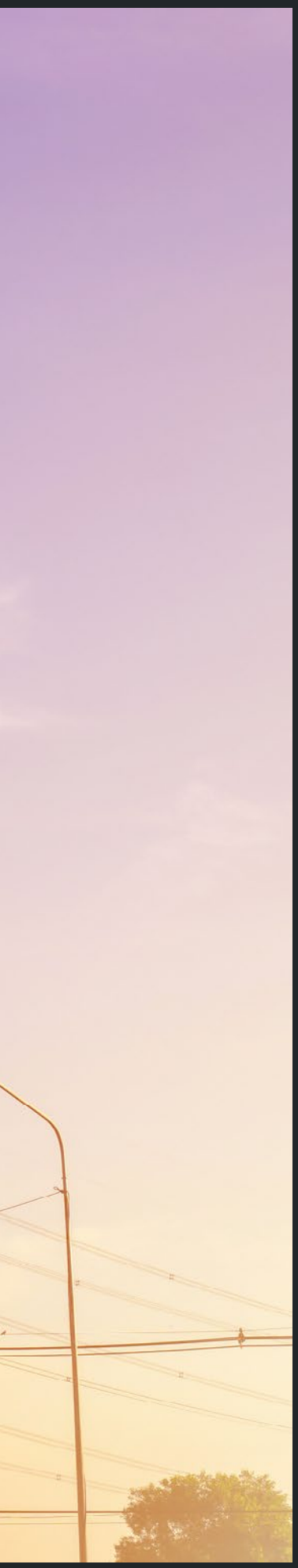
Summit Power Part Number	Conductor Stranding	Conductor Name
1.8-0510	7/4.50	Hydrogen
1.8-0520	7/4.75	Iodine
1.8-0530	19/3.25	Krypton
1.8-0540	19/3.50	Lutetium
1.8-0550	19/3.75	Neon
1.8-0560	30/7/3.00	Nitrogen
1.8-0570	19/4.75	Oxygen
1.8-0580	37/3.75	Phosphorus
1.8-0590	61/3.25	Selenium
1.8-0600	61/3.50	Silicon
1.8-0610	61/3.75	Sulphur

Note: Please contact Summit Power for sizes not listed above

Compression Sleeve - Non Tension - ACSR

Summit Power Part Number	Conductor Stranding	Conductor Name
1.8-0620	6/1/3.75	Banana
1.8-0630	7/4.75	Cherry
1.8-0640	30/7/2.50	Grape
1.8-0650	30/7/3.00	Lemon
1.8-0660	24.50	Lime
1.8-0670	54/7/3.00	Mango
1.8-0680	54/7/3.25	Orange
1.8-0690	54/7/3.50	Olive
1.8-0700	61/3.75	Paw Paw

Note: Please contact Summit Power for sizes not listed above



Section 6
Compression Lugs

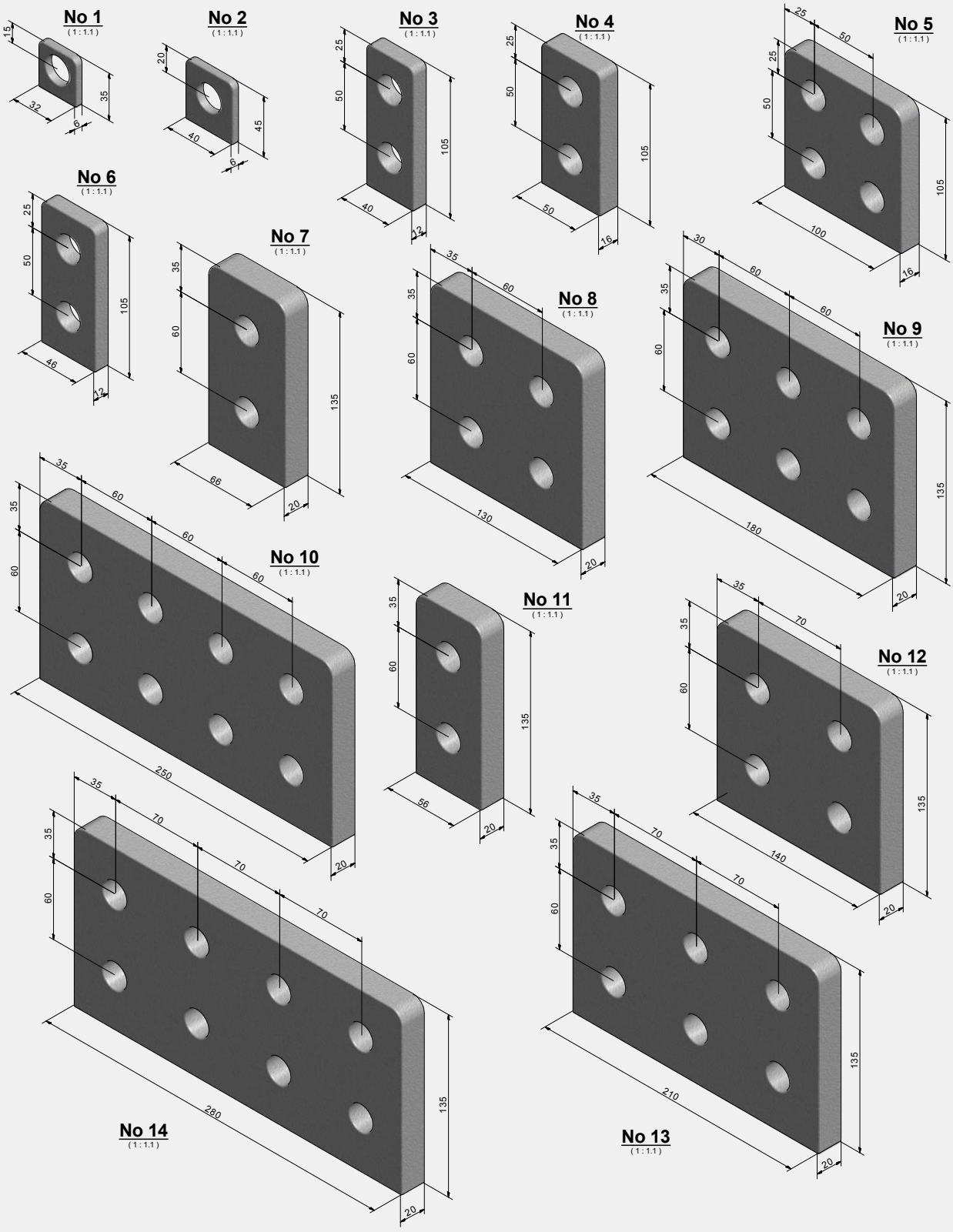
Compression lugs, essential in transmission lines, serve as reliable connectors for efficient electrical transmission. Summit Power's customized compression lugs include features like adaptable size, palm angle, the option to choose between standard or offset configurations and compression tube angle, ensuring precise fittings. Summit Power's customization capabilities guarantee tailored solutions, aligning with specific project requirements. This not only ensures optimal performance but also underscores Summit Power's commitment to providing versatile and high-quality components for the seamless and efficient operation of transmission systems.

- Adaptable size options
- Varied palm angle configurations
- Diverse compression tube angle choices
- Options for standard or offset configurations
- Reliable and secure electrical connections
- Precision fittings for enhanced performance
- Customizable to meet specific project requirements
- Essential in ensuring optimal functionality in transmission lines

Custom Compression Lugs

(Diagrams according to Australian Standard AS 62271.301 (High Voltage Switchgear and Controlgear)

Summit Power provides tailored Compression Lugs, offering customization in palm angle, compression tube angle, and the choice between standard or offset options. This flexibility ensures precise fittings to meet diverse specifications and enhance the efficiency of electrical connections.



Compression Lugs

Compression Jumper Terminal - 30° Angled Palm AAC

Summit Power Part Number	Conductor Stranding	OD (mm)	Conductor Name	Conductor Colour
1.7-0010	7/4.50	13.50	Mercury	Green
1.7-0020	7/4.75	14.30	Moon	Red
1.7-0030	19/3.25	16.30	Neptune	Orange
1.7-0040	19/3.75	18.80	Pluto	Black
1.7-0050	37/3.00	21.00	Saturn	Red
1.7-0060	19/4.75	23.80	Taurus	Black
1.7-0070	37/3.75	26.30	Triton	Black
1.7-0080	61/3.25	29.30	Uranus	Brown
1.7-0090	61/3.75	33.80	Venus	Black

Compression Jumper Terminal - 30 deg Angled Palm AAAC

Summit Power Part Number	Conductor Stranding	OD (mm)	Conductor Name	Conductor Colour
1.7-0100	7/4.50	13.50	Hydrogen	Green
1.7-0110	7/4.75	14.30	Iodine	Red
1.7-0120	19/3.25	16.30	Krypton	Orange
1.7-0130	19/3.50	17.50	Lutetium	Blue
1.7-0140	19/3.75	18.80	Neon	Black
1.7-0150	37/3.00	21.00	Nitrogen	Red
1.7-0160	19/4.75	23.80	Oxygen	Black
1.7-0170	37/3.75	26.30	Phosphorus	Black
1.7-0180	61/3.25	29.30	Selenium	Brown
1.7-0190	61/3.50	31.50	Silicon	Purple
1.7-0200	61/3.75	33.80	Sulphur	Black

Compression Jumper Terminal - 30 deg Angled Palm ACSR

Summit Power Part Number	Conductor Stranding	OD (mm)	Conductor Name	Conductor Colour
1.7-0210	6/1/3.75	11.30	Banana	black
1.7-0220	6/4.75-7/1.60	14.30	Cherry	Red
1.7-0230	30/7/2.50	17.50	Grape	Blue
1.7-0240	30/7/3.00	21.00	Lemon	Red
1.7-0250	30/7/3.50	24.50	Lime	Purple
1.7-0260	54/7/3.00	27.00	Mango	Red
1.7-0270	54/7/3.25	29.30	Orange	Brown
1.7-0280	54/7/3.50	31.50	Olive	Purple
1.7-0290	54/3.75-19/2.25	33.80	Paw Paw	Black

Compression Jumper Terminal - Straight Palm AAC

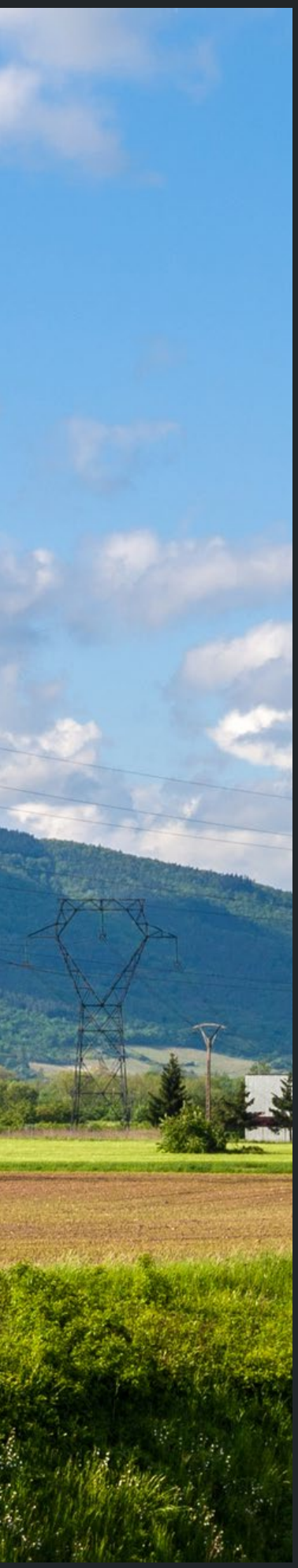
Summit Power Part Number	Conductor Stranding	OD (mm)	Conductor Name	Conductor Colour
1.7-0300	7/4.50	13.50	Mercury	Green
1.7-0310	7/4.75	14.30	Moon	Red
1.7-0320	19/3.25	16.30	Neptune	Orange
1.7-0330	19/3.75	18.80	Pluto	Black
1.7-0340	37/3.00	21.00	Saturn	Red
1.7-0350	19/4.75	23.80	Taurus	Black
1.7-0360	37/3.75	26.30	Triton	Black
1.7-0370	61/3.25	29.30	Uranus	Brown
1.7-0380	61/3.75	33.80	Venus	Black

Compression Jumper Terminal - Straight Palm AAAC

Summit Power Part Number	Conductor Stranding	OD (mm)	Conductor Name	Conductor Colour
1.7-0390	7/4.50	13.50	Hydrogen	Green
1.7-0400	7/4.75	14.30	Iodine	Red
1.7-0410	19/3.25	16.30	Krypton	Orange
1.7-0420	19/3.50	17.50	Lutetium	Blue
1.7-0430	19/3.75	18.80	Neon	Black
1.7-0440	37/3.00	21.00	Nitrogen	Red
1.7-0450	19/4.75	23.80	Oxygen	Black
1.7-0460	37/3.75	26.30	Phosphorus	Black
1.7-0470	61/3.25	29.30	Selenium	Brown
1.7-0480	61/3.50	31.50	Silicon	Purple
1.7-0490	61/3.75	33.80	Sulphur	Black

Compression Jumper Terminal - Straight Palm ACSR

Summit Power Part Number	Conductor Stranding	OD (mm)	Conductor Name	Conductor Colour
1.7-0500	6/1/3.75	11.30	Banana	black
1.7-0510	6/4.75-7/1.60	14.30	Cherry	Red
1.7-0520	30/7/2.50	17.50	Grape	Blue
1.7-0530	30/7/3.00	21.00	Lemon	Red
1.7-0540	30/7/3.50	24.50	Lime	Purple
1.7-0550	54/7/3.00	27.00	Mango	Red
1.7-0560	54/7/3.25	29.30	Orange	Brown
1.7-0570	54/7/3.50	31.50	Olive	Purple
1.7-0580	54/3.75-19/2.25	33.80	Paw Paw	Black



Section 7
Compression Dead Ends

Compression deadends are designed to securely anchor and support powerlines, preventing them from sagging or coming loose under various environmental conditions, such as strong winds, ice, or heavy loads. They are typically installed at the endpoints of powerline spans or where changes in direction occur.

Features:

- Securely anchors and supports powerlines
- Minimizes sagging and prevents line loosening
- Distributes tension evenly along the powerline
- Withstands high mechanical loads and reduces stress concentrations

OH&S Considerations:

- Electrical Safety: Powerlines carry high voltages, making electrical safety a critical concern. Workers must follow proper lockout/tagout procedures, de-energize the powerline before working on the deadend, and use insulated tools and equipment to minimize the risk of electric shock.
- Fall Protection: When working at heights during the installation or maintenance of compression deadends, workers should utilize fall protection measures such as harnesses, lanyards, and anchor points to prevent falls.

Compression Dead End - Side Mounted Palm - AAC

Summit Power Part Number	Conductor Stranding	Conductor Name
1.6-0010	7/4.50	Mercury
1.6-0020	7/4.75	Moon
1.6-0030	19/3.25	Neptune
1.6-0040	19/3.75	Pluto
1.6-0050	37/3.00	Saturn
1.6-0060	19/4.75	Taurus
1.6-0070	37/3.75	Triton
1.6-0080	61/3.25	Uranus
1.6-0090	61/3.75	Venus

Note: Please contact Summit Power for sizes not listed above

Compression Dead End - Side Mounted Palm - AAAC

Summit Power Part Number	Conductor Stranding	Conductor Name
1.6-0110	7/4.50	Hydrogen
1.6-0120	7/4.75	Iodine
1.6-0130	19/3.25	Krypton
1.6-0140	19/3.50	Lutetium
1.6-0150	19/3.75	Neon
1.6-0160	30/7/3.00	Nitrogen
1.6-0170	19/4.75	Oxygen
1.6-0180	37/3.75	Phosphorus
1.6-0190	61/3.25	Selenium
1.6-0200	61/3.50	Silicon
1.6-0210	61/3.75	Sulphur

Note: Please contact Summit Power for sizes not listed above

Compression Dead End - Side Mounted Palm - ACSR

Summit Power Part Number	Conductor Stranding	Conductor Name
1.6-0230	6/1/3.75	Banana
1.6-0240	7/4.75	Cherry
1.6-0250	30/7/2.50	Grape
1.6-0260	30/7/3.00	Lemon
1.6-0270	30/7/3.50	Lime
1.6-0280	54/7/3.00	Mango
1.6-0290	54/7/3.25	Orange
1.6-0300	54/7/3.50	Olive
1.6-0310	54/3.75-19/2.25	Paw Paw

Note: Please contact Summit Power for sizes not listed above

Compression Dead End - End Mounted Palm - AAC

Summit Power Part Number	Conductor Stranding	Conductor Name
1.6-0330	7/4.50	Mercury
1.6-0340	7/4.75	Moon
1.6-0350	19/3.25	Neptune
1.6-0360	19/3.75	Pluto
1.6-0370	37/3.00	Saturn
1.6-0380	19/4.75	Taurus
1.6-0390	37/3.75	Triton
1.6-0400	61/3.25	Uranus
1.6-0410	61/3.75	Venus

Note: Please contact Summit Power for sizes not listed above

Compression Dead End - End Mounted Palm - AAAC

Summit Power Part Number	Conductor Stranding	Conductor Name
1.6-0430	7/4.50	Hydrogen
1.6-0440	7/4.75	Iodine
1.6-0450	19/3.25	Krypton
1.6-0460	19/3.50	Lutetium
1.6-0470	19/3.75	Neon
1.6-0480	30/7/3.00	Nitrogen
1.6-0490	19/4.75	Oxygen
1.6-0500	37/3.75	Phosphorus
1.6-0510	61/3.25	Selenium
1.6-0520	61/3.50	Silicon
1.6-0530	61/3.75	Sulphur

Note: Please contact Summit Power for sizes not listed above

Compression Dead End - End Mounted Palm - ACSR

Summit Power Part Number	Conductor Stranding	Conductor Name
1.6-0550	6/1/3.75	Banana
1.6-0560	7/4.75	Cherry
1.6-0570	30/7/2.50	Grape
1.6-0580	30/7/3.00	Lemon
1.6-0590	30/7/3.50	Lime
1.6-0600	54/7/3.00	Mango
1.6-0610	54/7/3.25	Orange
1.6-0620	54/7/3.50	Olive
1.6-0630	61/3.75	Paw Paw

Note: Please contact Summit Power for sizes not listed above

Earthing Compression Dead End with Earth Tab SC/GZ

Summit Power Part Number	Conductor Stranding	Conductor (mm)
1.6-0650	7/2.75	8.25
1.6-0660	7/3.25	9.75
1.6-0670	7/3.75	11.30

Note: Please contact Summit Power for sizes not listed above

Earthing Compression Dead End with Earth Tab SC/AC

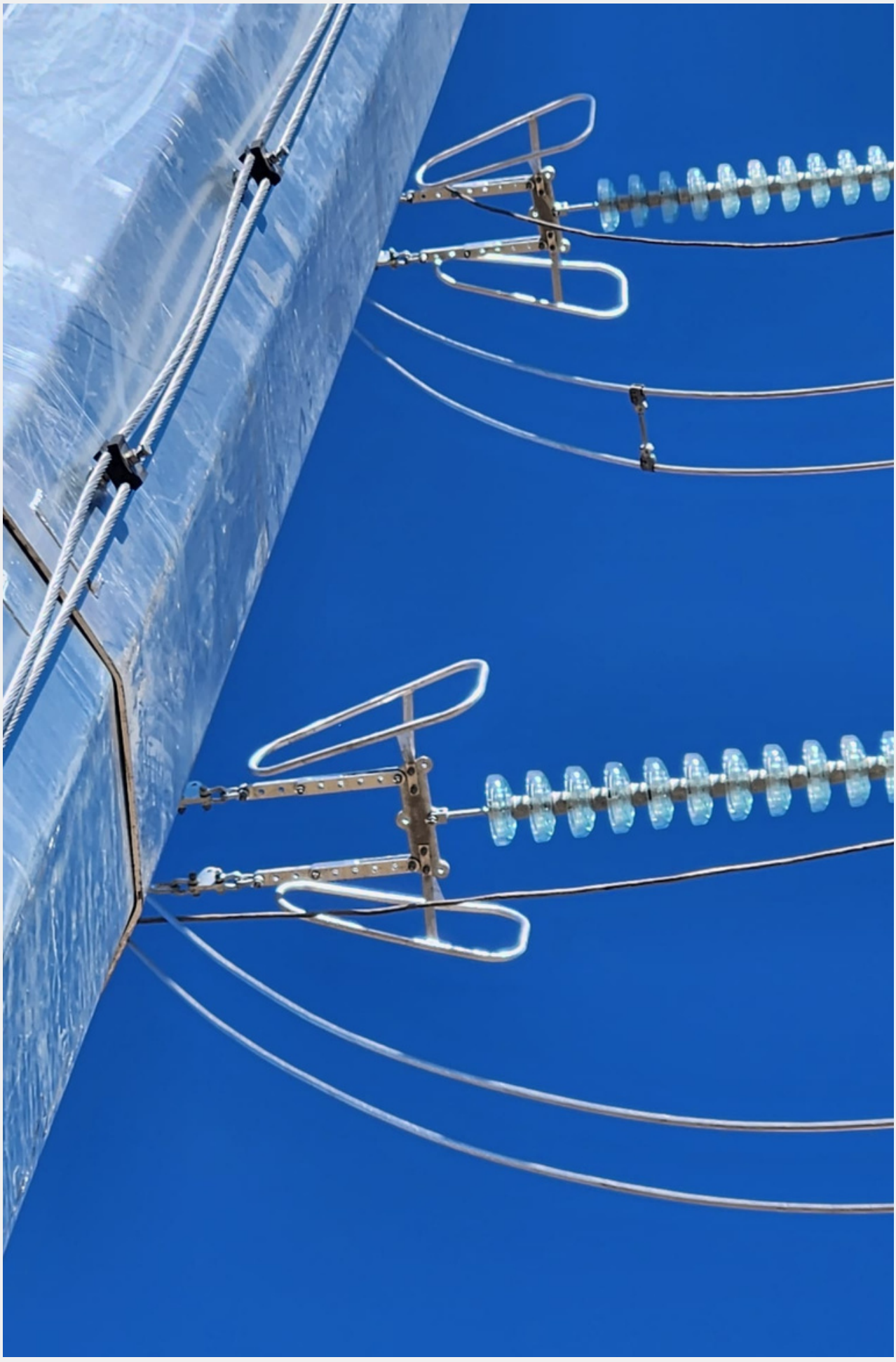
Summit Power Part Number	Conductor Stranding	Conductor (mm)
1.6-0680	7/2.75	8.25
1.6-0690	7/3.00	9.00
1.6-0700	7/3.25	9.75
1.6-0710	7/3.75	11.30
1.6-0720	7/4.25	12.80

Note: Please contact Summit Power for sizes not listed above

Compression Dead Ends

Section 8
Grading Rings

Grading rings are essential components in high-voltage electrical systems, optimizing the electric field distribution around insulators. Typically made of insulating materials, they are strategically placed to enhance the performance and reliability of insulator assemblies, reducing the risk of electrical breakdown and improving the overall efficiency of power transmission systems.



Grading Ring - Tension

Summit Power Part Number	Size (kV)
1.9-0010	330
1.9-0010	500

Note: Please contact Summit Power for sizes not listed above

Grading Ring - Suspension

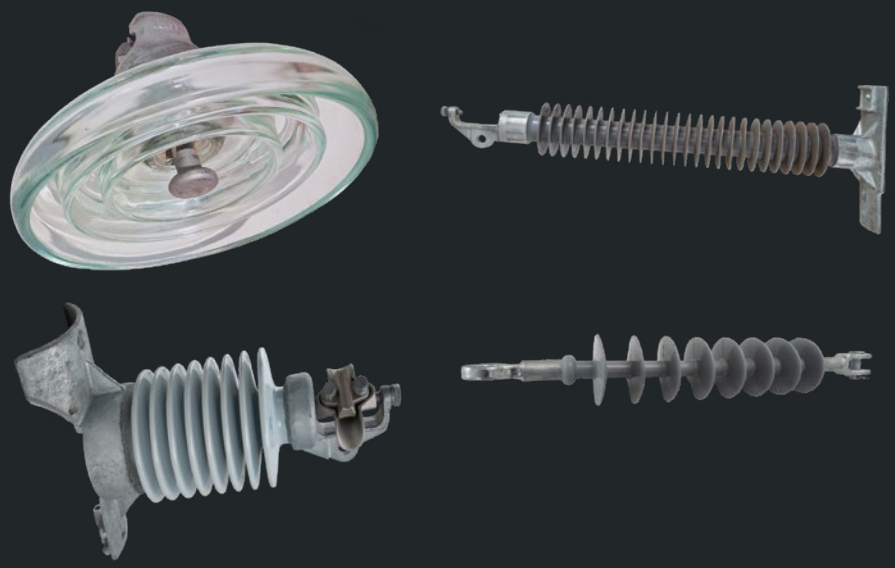
Summit Power Part Number	Size (kV)
1.9-0110	330
1.9-0120	500

Note: Please contact Summit Power for sizes not listed above

Section 9
DCI by Summit Power - Insulators

Insulators are essential components used in electrical power systems to support and isolate live conductors from the supporting structure or ground. They play a critical role in ensuring the safe and reliable transmission and distribution of electrical energy. Insulators are primarily used in overhead powerline installations, substations, and various electrical equipment.

The main purpose of insulators is to prevent current leakage and maintain electrical insulation between the conductors and the supporting structures. They are typically made of non-conductive materials such as porcelain, glass, or polymer composites. The choice of material depends on factors such as voltage level, environmental conditions, and mechanical strength requirements.



DCI by Summit Power - *Glass Disc Insulators*

Summit Power Part Number	IEC Type	Drawing Number	Diameter D (mm)	Spacing H (mm)	Creepage Distance L (mm)	Size of Coupling (mm)	Mechanical Falling Load (kN)	Mechanical Routine Test (kN)	Power Frequency Withstand Voltage (DRY) (kV)	Power Frequency Withstand Voltage (WET) (kV)	Lightning Impulse Withstand Voltage (kV)	Impulse Withstand Voltage (p.u.)	Min Power Frequency Puncture Voltage (kV)	Radio Interference Voltage (10kV, 1MHz)	Corona Test (pin&cap) (kV)	Power Frequency Electric Arc Test	Net Weight Per Unit (kg)
1.1-1010-1-70	U70BU146	1	255	146	320	16	70	35	70	40	100	2.8	130	<50	18/22	0.12s/20kA	3.6
1.1-1010-2-70	U70BS/127	1	255	127	320	16	70	35	70	40	100	2.8	130	<50	18/22	0.12s/20kA	3.5
1.1-1010-100	U100BU146	1	255	146	320	16	100	50	70	40	100	2.8	130	<50	18/22	0.12s/20kA	4.0
1.1-1010-2-100	U100BS/127	1	255	127	320	16	100	50	70	40	100	2.8	130	<50	18/22	0.12s/20kA	4.0
1.1-1010-120	U120B/146	1	255	146	320	16	120	60	70	40	100	2.8	130	<50	18/22	0.12s/20kA	4.2
1.1-1010-2-120	U120B/127	1	255	127	320	16	120	60	70	40	100	2.8	130	<50	18/22	0.12s/20kA	4.0
1.1-1010-160	U160BU170	1	280	170	400	20	160	80	75	45	110	2.8	130	<50	18/22	0.12s/20kA	6.5
1.1-1010-1-160	U160B/155	1	280	155	450	20	160	80	75	45	110	2.8	130	<50	18/22	0.12s/20kA	6.3
1.1-1010-3-160	U160B/155	1	280	155	400	20	160	80	75	45	110	2.8	130	<50	18/22	0.12s/20kA	6.3
1.1-1010-4-160	U160BS/146	1	280	146	400	20	160	80	75	45	110	2.8	130	<50	18/22	0.12s/20kA	6.3
1.1-1010-2-210	U210B/170	1	280	170	460	20	210	105	85	45	125	2.8	130	<50	18/22	0.12s/20kA	6.9
1.1-1010-3-210	U210B/170	1	280	170	400	20	210	105	75	45	110	2.8	130	<50	18/22	0.12s/20kA	6.9
1.1-1010-240	U240B/170	1	280	170	400	24	240	120	75	45	110	2.8	130	<50	18/22	0.12s/20kA	6.9
1.1-1010-2-240	U240B/170	1	280	170	460	24	240	120	85	50	110	2.8	130	<50	18/22	0.12s/20kA	6.9
1.1-1010-300	U300B/195	1	320	195	485	24	300	150	85	50	130	2.8	130	<50	18/22	0.12s/20kA	10.6
1.1-1010-420	U420/205	1	360	205	550	28	420	210	90	55	140	2.8	130	<50	18/22	0.12s/20kA	16.0
1.1-1010-550	U550B/240	1	380	240	620	32	550	275	95	55	145	2.8	130	<50	18/22	0.12s/20kA	21.5

Note: Please contact Summit Power for sizes not listed above.
Note: Summit Power manufacture to customer requirements.

Glass insulators, using annealed tough glass for insulation, offer advantages over porcelain insulators, including exceptional dielectric strength, high electrical resistivity, and low thermal expansion. They also have superior tensile strength, do not heat up in sunlight, and their transparency aids in quality control. Glass insulators provide a cost-effective solution and a prolonged service life, making them valuable assets in modern electrical systems.

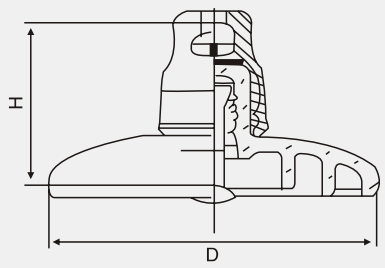


Fig. 1

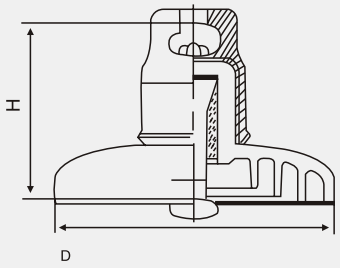


Fig. 2

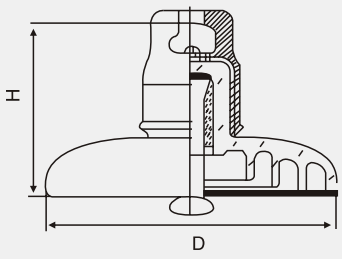


Fig. 3

DCI by Summit Power - *Stain-resistant Glass Disc Insulators*

Summit Power Part Number	IEC Type	Drawing Number	Diameter D (mm)	Spacing H (mm)	Creepage Distance L (mm)	Size of Coupling (mm)	Mechanical Falling Load (kN)	Mechanical Routine Test (kN)	Power Frequency Withstand Voltage (DRY) (kV)	Power Frequency Withstand Voltage (WET) (kV)	Lightning Impulse Withstand Voltage (kV)	Impulse Withstand Voltage (p.u.)	Min Power Frequency Puncture Voltage (kV)	Radio Interference Voltage (10kV, 1MHz)	Corona Test (pin&cap) (kV)	Power Frequency Electric Arc Test	Net Weight Per Unit (kg)
1.1-1020-4-70	U70BP/146	4	260	146	400	16	70	35	80	45	110	2.8	130	<50	18/22	0.12s/20kA	5.0
1.1-1020-5-70	U70BLP/146	4	280	146	450	16	70	35	85	50	125	2.8	130	<50	18/22	0.12s/20kA	5.5
1.1-1020-6-70	U70BP/146	4	320	146	550	16	70	35	90	55	140	2.8	130	<50	18/22	0.12s/20kA	7.5
1.1-1020-3-100	U100BLP/146	4	260	146	400	16	100	50	80	45	110	2.8	130	<50	18/22	0.12s/20kA	5.0
1.1-1020-4-100	U100BLP/146	4	280	146	450	16	100	50	85	50	125	2.8	130	<50	18/22	0.12s/20kA	5.5
1.1-1020-6-100	U100BP/146	4	320	146	550	16	100	50	90	55	140	2.8	130	<50	18/22	0.12s/20kA	7.5
1.1-1020-3-120	U120BLP/146	4	260	146	400	16	120	60	80	45	110	2.8	130	<50	18/22	0.12s/20kA	5.0
1.1-1020-4-120	U120BLP/146	4	280	146	450	16	120	60	85	50	125	2.8	130	<50	18/22	0.12s/20kA	5.5
1.1-1020-6-120	U120BP/146	4	320	146	550	16	120	60	90	55	140	2.8	130	<50	18/22	0.12s/20kA	7.5
1.1-1020-3-160	U160BSP/155	4	280	155	450	20	160	80	85	50	125	2.8	130	<50	18/22	0.12s/20kA	7.0
1.1-1020-4-160	U160BP/170	4	280	170	450	20	160	80	85	50	125	2.8	130	<50	18/22	0.12s/20kA	7.2
1.1-1020-5-160	U160BLP/170	4	320	170	550	20	160	80	90	55	140	2.8	130	<50	18/22	0.12s/20kA	9.2
1.1-1020-6-160	U160BP/155	4	320	155	550	20	160	80	90	55	140	2.8	130	<50	18/22	0.12s/20kA	9.0
1.1-1020-7-160	U160BSP/146	4	320	146	550	20	160	80	90	55	140	2.8	130	<50	18/22	0.12s/20kA	8.8
1.1-1020-3-210	U210BP/170	4	320	170	550	20	210	105	90	55	140	2.8	130	<50	18/22	0.12s/20kA	10.0
1.1-1020-3-240	U240BP/170	5	320	170	550	24	240	120	90	55	140	2.8	130	<50	18/22	0.12s/20kA	10.5
1.1-1020-4-240	U240BP/170	5	320	170	550	20	240	120	90	55	140	2.8	130	<50	18/22	0.12s/20kA	10.5
1.1-1020-300	U300BP/195	6	390	195	710	24	300	150	95	60	150	2.8	130	<50	18/22	0.12s/20kA	14.0
1.1-1020-3-300	U300BP/195	6	380	195	635	24	300	150	95	60	150	2.8	130	<50	18/22	0.12s/20kA	14.0
1.1-1020-420	U420BP/205	6	380	205	620	28	420	210	90	55	140	2.8	130	<50	18/22	0.12s/20kA	16.5
1.1-1020-550	U550BP/240	6	380	240	650	32	550	275	95	55	145	2.8	130	<50	18/22	0.12s/20kA	20.5
1.1-1020-1-550	U550BP/240	6	380	240	710	32	550	275	95	60	145	2.8	130	<50	18/22	0.12s/20kA	20.5
1.1-1020-760	U760BP/280	6	420	280	700	36	760	380	90	55	140	2.8	130	<50	18/22	0.12s/20kA	22.0
1.1-1020-840	U840BP/300	6	420	300	710	40	840	420	95	60	145	2.8	130	<50	18/22	0.12s/20kA	24.5

Note: Please contact Summit Power for sizes not listed above.
Note: Summit Power manufacture to customer requirements.

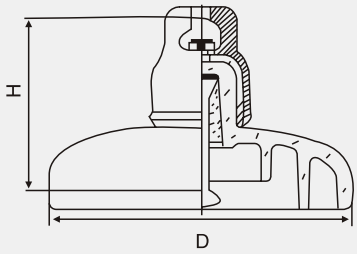


Fig. 4

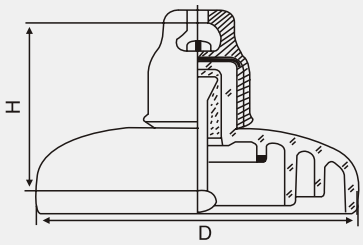


Fig. 5

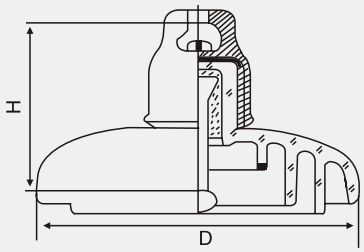


Fig. 6

DCI by Summit Power - *DC Glass Disc Insulators*

Summit Power Part Number	IEC Type	Drawing Number	Diameter D (mm)	Spacing H (mm)	Creepage Distance L (mm)	Size of Coupling (mm)	Mechanical Falling Load (kN)	Mechanical Routine Test (kN)	Power Frequency Withstand Voltage (DRY) (kV)	Power Frequency Withstand Voltage (WET) (kV)	Lightning Impulse Withstand Voltage (kV)	Impulse Withstand Voltage (p.u.)	SF6 Puncture Withstand Voltage (kV)	Min Power Frequency Puncture Voltage (kV)	DC Corona Test (pin&cap) (kV)	Net Weight Per Unit (kg)
1.1-1030-160	U160BP/170H I	7	320	170	550	20	160	80	150	65	140	2.8	225	<50	>50	9.7
1.1-1030-210	U21OBP/170H	7	320	170	550	20	210	105	150	65	140	2.8	225	<50	>50	10.2
1.1-1030-240	U240BP/170H	7	320	170	550	24	240	120	150	65	140	2.8	225	<50	>50	10.5
1.1-1030-300	U300BP1/195H	7	390	195	710	24	300	150	150	65	140	2.8	225	<50	>50	15.4
1.1-1030-1-300	U300BP/195H	7	380	195	635	24	300	150	170	75	155	2.8	255	<50	>50	16.0
1.1-1030-420	U420BP/205H	8	360	205	550	28	420	210	150	65	140	2.8	225	<50	>50	14.6
1.1-1030-1-420	U420BP1/205HI	8	380	205	620	28	420	210	160	70	150	2.8	240	<50	>50	18.9
1.1-1030-550	U550BP/240H	8	380	240	650	32	550	275	160	70	150	2.8	240	<50	>50	19.1
1.1-1030-1-550	U550BP1/240H	8	380	240	710	32	550	275	160	70	150	2.8	240	<50	>50	22.0
1.1-1030-1-840	U840BP/300	8	420	300	710	40	840	420	170	75	155	2.8	240	<50	>50	24.5

Note: Please contact Summit Power for sizes not listed above.
Note: Summit Power manufacture to customer requirements.

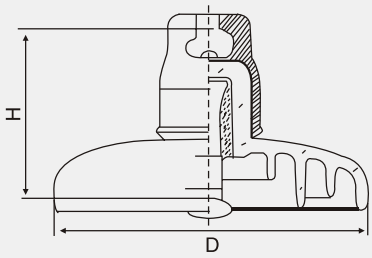


Fig. 7

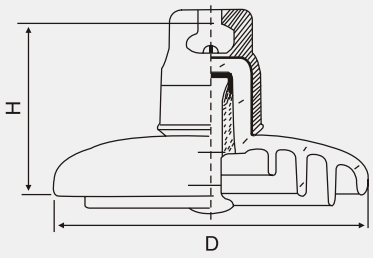


Fig. 8

DCI by Summit Power - *Polymer Strain Insulators*

Polymer Strain Insulators, also referred to as polymer long rod insulators, emerged as an alternative to porcelain insulators in the 1920s, primarily for challenging environments like high-pollution areas. Their construction includes a fiber-reinforced core, metal fittings, and a silicone housing. Notably, these insulators benefit from the manufacturing advantages of FRP (fiber-reinforced plastic) rods, which can be produced in exceptionally long lengths, up to 20 meters. They find utility in various network systems, with lengths ranging from 10 centimeters to over 10 meters, making them versatile for different electrical infrastructure needs.

10KV Composite Insulator

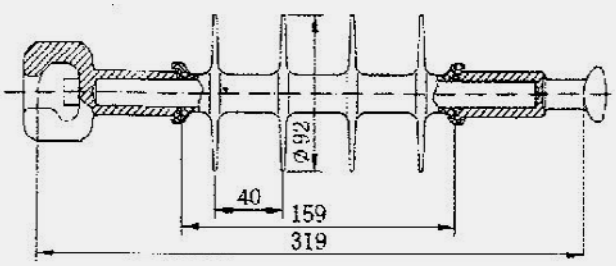


Fig.1 10KV composite insulator (W,T coupling)

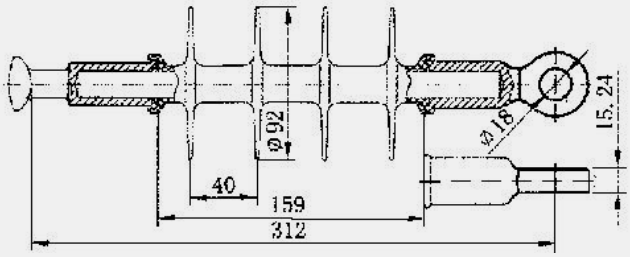


Fig.2 10KV composite insulator (D,T coupling)

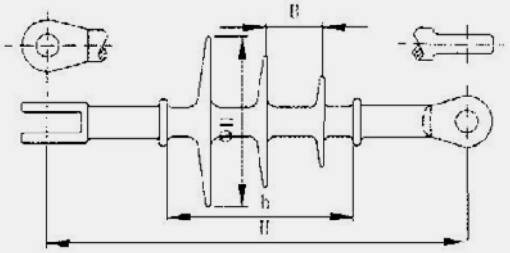


Fig.3 10KV composite insulator (U,D coupling)

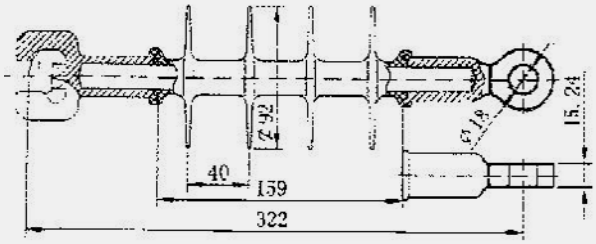


Fig.4 10KV composite insulator(W,D coupling)

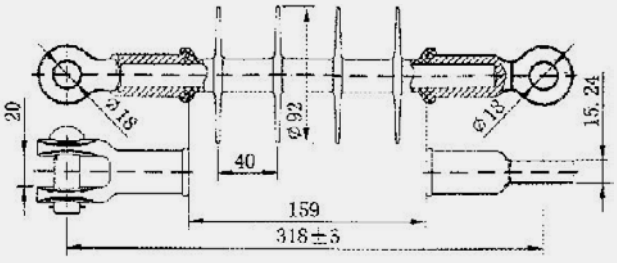


Fig.5 10KV composite insulator (U,D coupling)

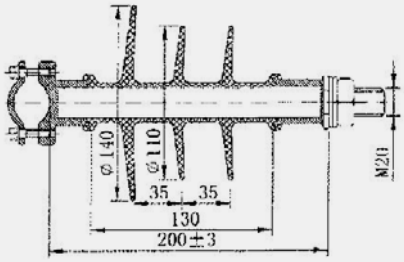
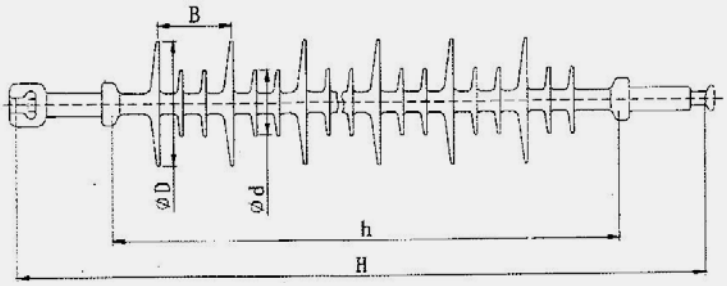


Fig.6 10KV pin composite insulator

Summit Power Part Number	Fig.	Rated Voltage (kV)	Specified Mechanical Load (kN)	Socket & Ball Size	Section Height H (mm)	Minimum Arcing Distance H (mm)	Shed Diameter D (mm)	Min Nominal Creepage Distance L (mm)	Lighting Impulse Withstand Voltage	Wet Power Frequency Voltage	Weight (kg)
1.1-1000-10/70-WT	1	10	70	16	319±5	159	92	415	95	60	1.6
1.1-1000-10/70-DT	2	10	70	16	312±5	159	92	415	95	60	1.1
1.1-1000-10/70-UD-1	3	10	70	/	342±5	155	150	400	95	60	1.6
1.1-1000-10/70-WD	4	10	70	16	322±5	159	92	415	95	60	1.6
1.1-1000-10/70-UD-2	5	10	70	/	318±5	159	92	415	95	60	1.5
1.1-1000-10/3	6	10	3 (Curve)	/	200±5	130	140	380	95	40	1.6

Note: Please contact Summit Power for sizes not listed above.
Note: Summit Power manufacture to customer requirements.

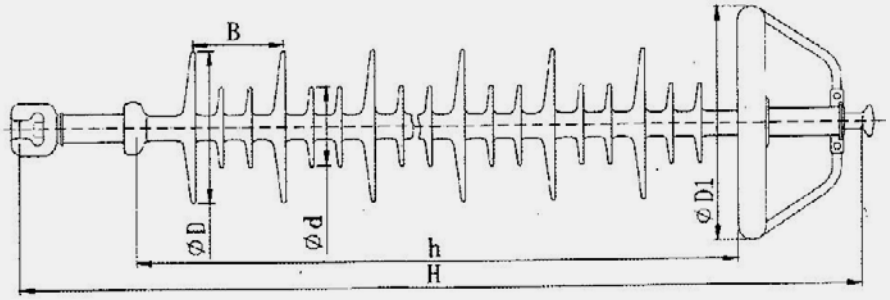
35KV-330KV AC Composite Insulator



General dimension and characteristics of 35KV~66KV AC composite insulator

Summit Power Part Number	Rated Voltage (kV)	Specified Mechanical Load (kN)	Socket & Ball Size	Section Height H (mm)	Minimum Arcing Distance H (mm)	Shed Diameter D (mm)	Min Nominal Creepage Distance L (mm)	Lighting Impulse Withstand Voltage	Wet Power Frequency Voltage	Weight (kg)
1.1-1000-10/70-WT	35	70	16	610±15	430	95	45	1050	95	2.2
1.1-1000-10/70-DT	35	70	16	650±15	450	95	45	1050	95	2.3
1.1-1000-10/70-UD-1	66	70	16	870±15	700	98	117	1050	185	3.5
1.1-1000-10/70-WD	66	70	16	940±15	760	98	117	1050	185	3.8

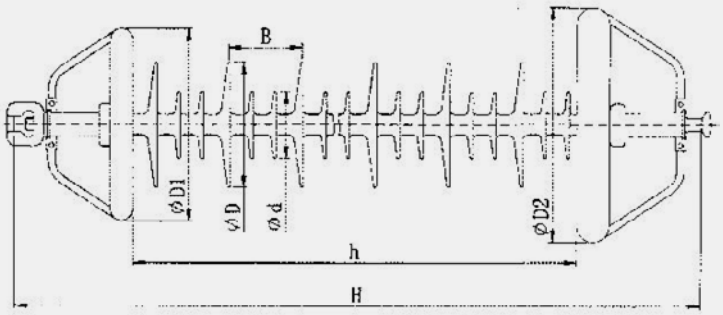
Note: Please contact Summit Power for sizes not listed above.
Note: Summit Power manufacture to customer requirements.



General dimension and characteristics of 110KV AC composite Insulator

Summit Power Part Number	Rated Voltage (kV)	Specified Mechanical Load (kN)	Socket & Ball Size	Section Height H (mm)	Minimum Arcing Distance H (mm)	Large/Small Shed Diameter D/d (mm)	Shed Spacing B (mm)	Diameter of Corona Ring D1 (mm)	Min Nominal Creepage Distance L (mm)	Lighting Impulse Withstand Voltage	Wet Power Frequency Voltage	Weight (kg)
1.1-1000-3-110/70	110	70	16	1180±15	1000	162/86	95	250	3150	550	230	5.0
1.1-1000-4-110/70	110	70	16	1240±15	1000	162/86	95	250	3150	550	230	5.0
1.1-1000-3-110/100	110	100	16	1180±15	1000	162/86	95	250	3150	550	230	5.0
1.1-1000-4-110/100	110	100	16	1240±15	1000	162/86	95	250	3150	550	230	5.0

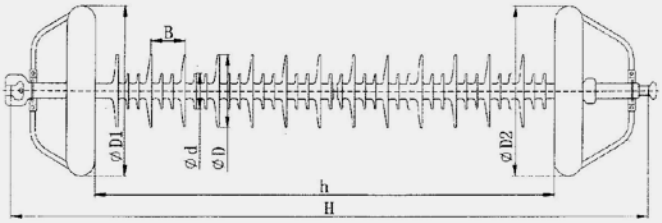
Note: Please contact Summit Power for sizes not listed above.
Note: Summit Power manufacture to customer requirements.



General dimension and characteristics of 220KV AC composite Insulator

Summit Power Part Number	Rated Voltage (kV)	Specified Mechanical Load (kN)	Socket & Ball Size	Section Height H (mm)	Minimum Arcing Distance H (mm)	Large/Small Shed Diameter D/d (mm)	Shed Spacing B (mm)	Diameter of Corona Ring D1/D2 (mm)	Min Nominal Creepage Distance L (mm)	Lighting Impulse Withstand Voltage	Wet Power Frequency Voltage	Weight (kg)
1.1-1000-3-220/100	220	100	16	2150±30	1900	162/86	95	250/305	6300	1000	395	9.5
1.1-1000-4-220/100	220	100	16	2240±30	1900	162/86	95	250/305	6300	1000	395	9.5
1.1-1000-3-220/160	220	160	20	2150±30	1900	171/85	79	250/305	6300	1000	395	13
1.1-1000-4-220/160	220	160	20	2240±30	1900	171/85	79	250/305	6300	1000	395	13

Note: Please contact Summit Power for sizes not listed above.
Note: Summit Power manufacture to customer requirements.

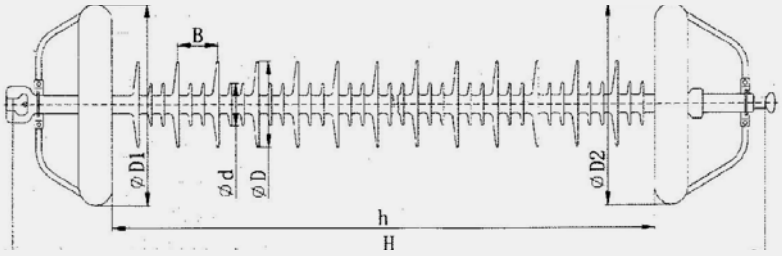


General dimension and characteristics of 330KV AC composite insulator

Summit Power Part Number	Rated Voltage (kV)	Specified Mechanical Load (kN)	Socket & Ball Size	Section Height H (mm)	Minimum Arcing Distance H (mm)	Large/Small Shed Diameter D/d (mm)	Shed Diameter D (mm)	Diameter of Corona Ring D1, D2 (mm)	Min Nominal Creepage Distance L (mm)	Lighting Impulse Withstand Voltage	Wet Switch Impulse Withstand Voltage	Wet Power Frequency Voltage	Weight (kg)
1.1-1000-3-330/100	330	100	16	2930±40	2600	171/85	79	400	9075	1425	950	570	15
1.1-1000-4-330/100	330	100	16	2990±40	2600	171/85	79	400	9075	1425	950	570	15
1.1-1000-3-330/160	330	160	20	2930±40	2600	171/85	79	400	9075	1425	950	570	18
1.1-1000-4-330/160	330	160	20	2990±40	2600	171/85	79	400	9075	1425	950	570	18
1.1-1000-3-330/210	330	210	20	2930±40	2600	171/85	79	400	9075	1425	950	570	18
1.1-1000-4-330/210	330	210	20	2990±40	2600	171/85	79	400	9075	1425	950	570	18

Note: Please contact Summit Power for sizes not listed above.
Note: Summit Power manufacture to customer requirements.

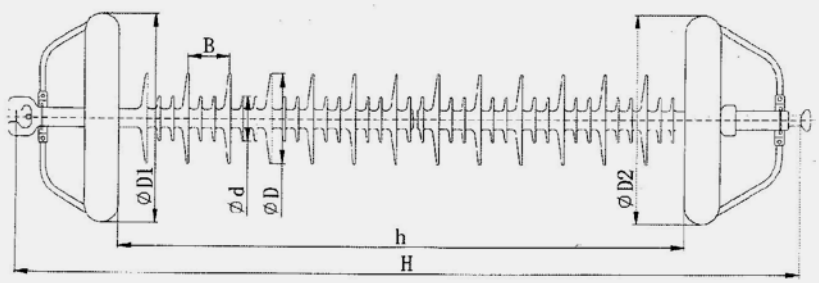
500KV ~ 750KV AC Composite Insulator



Summit Power Part Number	Rated Voltage (kV)	Specified Mechanical Load (kN)	Socket & Ball Size	Section Height H (mm)	Minimum Arcing Distance H (mm)	Large/Small Shed Diameter D/d (mm)	Shed Diameter D (mm)	Diameter of Corona Ring D1, D2 (mm)	Min Nominal Creepage Distance L (mm)	Lighting Impulse Withstand Voltage	Wet Switch Impulse Withstand Voltage	Wet Power Frequency Voltage	Weight (kg)
1.1-1000-1-500/100	500	100	16	4030±50	3600	171/85	79	400	11000	2050	1240	740	22
1.1-1000-4-500/100	500	100	16	4450±50	4000	171/85	79	400	13750	2250	1240	740	26
1.1-1000-1-500/160	500	160	20	4030±50	3600	171/85	79	400	11000	2050	1240	740	23
1.1-1000-4-500/160	500	160	20	4450±50	4000	171/85	79	400	13750	2250	1240	740	26
1.1-1000-1-500/180	500	180	20	4030±50	3600	171/85	79	400	11000	2050	1240	740	23
1.1-1000-4-500/180	500	180	20	4450±50	4000	171/85	79	400	13750	2250	1240	740	26
1.1-1000-1-500/210	500	210	20	4030±50	3600	171/85	79	400	11000	2050	1240	740	23
1.1-1000-4-500/210	500	210	20	4450±50	4000	171/85	79	400	13750	2250	1240	740	26
1.1-1000-1-500/240	500	240	20	4030±50	3600	171/85	79	400	11000	2050	1240	740	23
1.1-1000-4-500/240	500	240	24	4450±50	4000	171/85	79	400	13750	2250	1240	740	26
1.1-1000-1-500/300	500	300	24	4030±50	3600	171/85	79	400	11000	2050	1240	740	25
1.1-1000-4-500/300	500	300	24	4450±50	4000	171/85	79	400	13750	2250	1240	740	29
1.1-1000-1-500/400	500	400	28	4030±50	3600	171/85	79	400	11000	2050	1240	740	30
1.1-1000-4-500/400	500	400	28	4450±50	4000	171/85	79	400	13750	2250	1240	740	35
1.1-1000-750/100	750	100	20	6550±50	6000	171/85	79	400	22000	2700	1800	1125	32
1.1-1000-750/120	750	120	20	6550±50	6000	171/85	79	400	22000	2700	1800	1125	32
1.1-1000-750/160	750	160	20	6550±50	6000	171/85	79	400	22000	2700	1800	1125	34
1.1-1000-750/180	750	180	20	6550±50	6000	171/85	79	400	22000	2700	1800	1125	34
1.1-1000-750/210	750	210	20	6550±50	6000	174/88	79	400	22000	2700	1800	1125	34
1.1-1000-750/240	750	240	24	6550±50	6000	174/88	79	400	22000	2700	1800	1125	36
1.1-1000-750/300	750	300	24	6550±50	6000	190/110	89	400	22000	2700	1800	1125	50
1.1-1000-750/400	750	400	28	6550±50	4000	190/110	89	400	22000	2700	1800	1125	52

Note: Please contact Summit Power for sizes not listed above.
Note: Summit Power manufacture to customer requirements.

+/-500KV DC Composite Insulator



General dimension and characteristics of ±500KV DC composite insulator

Summit Power Part Number	Rated Voltage (kV)	Specified Mechanical Load (kN)	Socket & Ball Size	Section Height H (mm)	Minimum Arcing Distance H (mm)	Large/Small Shed Diameter D/d (mm)	Shed Diameter D (mm)	Diameter of Corona Ring D1, D2 (mm)	Min Nominal Creepage Distance L (mm)	Lighting Impulse Withstand Voltage	Wet Switch Impulse Withstand Voltage	Wet Power Frequency Voltage	Weight (kg)
1.1-1000-500/160-1	500	160	20	5440±50	5000	174/88	79	400	18025	+2550	+1550	+600	33
1.1-1000-500/160-2	500	160	20	6290±50	5600	174/88	79	400	21000	+2750	+1650	+650	38
1.1-1000-500/160-3	500	160	20	6800±50	6200	174/88	79	400	23000	+2950	+1750	+700	45
1.1-1000-500/180-1	500	180	20	5440±50	5000	174/88	79	400	18025	+2550	+1550	+600	33
1.1-1000-500/180-2	500	180	20	6290±50	5600	174/88	79	400	21000	+2750	+1650	+650	38
1.1-1000-500/180-3	500	180	20	6800±50	6200	174/88	79	400	23000	+2950	+1750	+700	45
1.1-1000-500/210-1	500	210	20	5440±50	5000	174/88	79	400	18025	+2550	+1550	+600	33
1.1-1000-500/210-2	500	210	20	6290±50	5600	174/88	79	400	21000	+2750	+1650	+650	38
1.1-1000-500/210-3	500	210	20	6800±50	6200	174/88	79	400	23000	+2950	+1750	+700	45
1.1-1000-500/240-1	500	240	20	5440±50	5000	174/88	79	400	18025	+2550	+1550	+600	33
1.1-1000-500/240-2	500	240	20	6290±50	5600	174/88	79	400	21000	+2750	+1650	+650	38
1.1-1000-500/240-3	500	240	20	6800±50	6200	174/88	79	400	23000	+2950	+1750	+700	45
1.1-1000-500/300-1	500	300	24	5440±50	5000	190/110	89	400	18025	+2550	+1550	+600	34
1.1-1000-500/300-2	500	300	24	6290±50	5600	190/110	89	400	21000	+2750	+1650	+650	40
1.1-1000-500/300-3	750	300	24	6800±50	6200	190/110	89	400	23000	+2950	+1750	+700	47
1.1-1000-500/400-1	750	400	28	5440±50	5000	190/110	89	400	18025	+2550	+1550	+600	35
1.1-1000-500/400-2	750	400	28	6290±50	5600	190/110	89	400	21000	+2750	+1650	+650	41
1.1-1000-500/400-3	750	400	28	6800±50	6200	190/110	89	400	23000	+2950	+1750	+700	47

Note: Please contact Summit Power for sizes not listed above.
Note: Summit Power manufacture to customer requirements.

DCI by Summit Power -
Porcelain Horizontal Line Post insulators

Summit Power Part Number	Rated Voltage (kV)	Cantilever Strength (kN)	Creepage (mm)	Arcing Distance (mm)	Length (mm)
1.1-2010	33	12.5	737	265	432
1.1-2020	66	12.5	1346	489	635
1.1-2030	132	12.5	3625	1305	1405

Note: Please contact Summit Power for sizes not listed above.
Note: Summit Power manufacture to customer requirements.

DCI by Summit Power -
Polymer Horizontal Line Post insulators

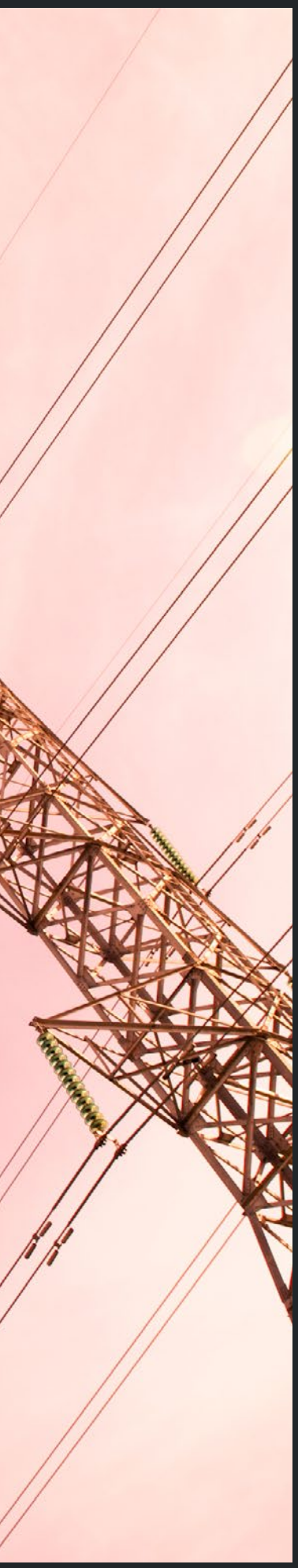
Summit Power Part Number	Rated Voltage (kV)	Cantilever Strength (kN)	Creepage (mm)	Arcing Distance (mm)	Length (mm)
1.1-3010	33	12.5	1116	390	552
1.1-3020	66	12.5	2139	690	874
1.1-3030	132	12.5	2309	850	1040
1.3-3040	220	12.5	6300	2100	2300
1.3-3050	330	12.5	6300	2100	2300

Note: Please contact Summit Power for sizes not listed above

In high-voltage transmission and distribution lines, post insulators are crucial for both insulation and conductor support. They come in various types, including line post porcelain insulators, cross-arm porcelain insulators, and long-rod suspension insulators. These insulators are known for their puncture resistance, high mechanical strength, excellent insulation properties, and resistance to pollution. They offer safety and reliability in operation, ease of maintenance, long operational life, and cost-effectiveness.

Polymer Horizontal Line Post Insulators are designed for outdoor use, particularly in transformer substations and switchgear equipment. They are constructed from specialized cycloaliphatic epoxy compounds known for their robust mechanical and electrical properties. These insulators use non-tracking materials to bolster their reliability. They come with standard steel zinc-plated inserts and offer customization options with copper or brass inserts to meet specific project needs.

Complies to the following standards:
- ANSI C29.8
- ANSI C29.9

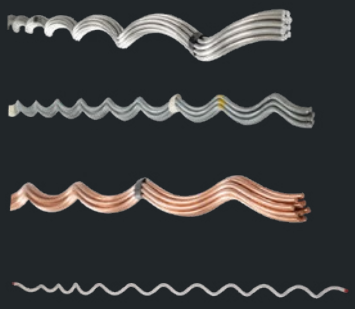


Section 10
Armour Rods & Dampers

Preformed armor rods are specialized components used in overhead powerline installations to provide mechanical protection and enhance the durability of the conductor. These rods are typically made of high-strength materials, such as aluminum alloy or galvanized steel, and are designed to be preformed into a specific shape.

Features:

- High-Strength Material
- Corrosion Resistance
- Preformed Shape
- Even Stress Distribution
- Abrasion Protection
- Vibration Damping



Armour Rods - Aluminium - AAC

Summit Power Part Number	Conductor Stranding	Conductor Name
1.6-0010	7/4.50	Mercury
1.6-0020	7/4.75	Moon
1.6-0030	19/3.25	Neptune
1.6-0040	19/3.75	Pluto
1.6-0050	37/3.00	Saturn
1.6-0060	19/4.75	Taurus
1.6-0070	37/3.75	Triton
1.6-0080	61/3.25	Uranus
1.6-0090	61/3.75	Venus

Note: Please contact Summit Power for sizes not listed above

Armour Rods - Aluminium - AAAC

Summit Power Part Number	Conductor Stranding	Conductor Name
1.6-0110	7/4.50	Hydrogen
1.6-0120	7/4.75	Iodine
1.6-0130	19/3.25	Krypton
1.6-0140	19/3.50	Lutetium
1.6-0150	19/3.75	Neon
1.6-0160	30/7/3.00	Nitrogen
1.6-0170	19/4.75	Oxygen
1.6-0180	37/3.75	Phosphorus
1.6-0190	61/3.25	Selenium
1.6-0200	61/3.50	Silicon
1.6-0210	61/3.75	Sulphur

Note: Please contact Summit Power for sizes not listed above

Armour Rods - Aluminium - ACSR

Summit Power Part Number	Conductor Stranding	Conductor Name
1.6-0230	6/1/3.75	Banana
1.6-0240	7/4.75	Cherry
1.6-0250	30/7/2.50	Grape
1.6-0260	30/7/3.00	Lemon
1.6-0270	24.50	Lime
1.6-0280	54/7/3.00	Mango
1.6-0290	54/7/3.25	Orange
1.6-0300	54/7/3.50	Olive
1.6-0310	61/3.75	Paw Paw

Note: Please contact Summit Power for sizes not listed above

Armour Rods - Steel

Summit Power Part Number	Conductor Stranding (metric)	Conductor Stranding (imperial)	OD (mm)
1.6-0410	3/2.00	3/0.080	4.31
1.6-0420	3/2.75	3/0.104	5.93
1.6-0430	7/2.00	7/0.080	6.00
1.6-0440	7/2.75	7/0.104	8.25
1.6-0450	7/3.25	7/0.128	9.75
1.6-0460	7/3.75	7/0.144	11.30
1.6-0470	19/2.00	19/0.080	10.00
1.6-0480	7/4.25	-	12.80
1.6-0490	19/2.75	19/0.104	13.80
1.6-0500	19/3.25	19/0.128	16.30

Note: Please contact Summit Power for sizes not listed above

Armour Rods - Copper

Summit Power Part Number	Conductor Stranding (metric)	Conductor Stranding (imperial)	OD (mm)
1.6-0510	7/1.00	7/036	3.00
1.6-0520	7/1.25	7/048	3.75
1.6-0530	7/1.75	7/064	5.25
1.6-0540	7/2.00	7/080	6.00
1.6-0550	7/2.75	19/064	8.25
1.6-0560	19/1.75	7/118	8.75
1.6-0570	19/2.00	7/136	10.00
1.6-0580	7/3.50	19/083	10.50
1.6-0590	37/1.75	37/072	12.30
1.6-0600	19/3.00	19/116	15.00
1.6-0610	37/2.50	37/093	17.50
1.6-0620	37/2.75	37/103	19.30
1.6-0630	37/3.00	37/118	21.00
1.6-0640	61/2.75	91/093	24.80

Note: Please contact Summit Power for sizes not listed above

Spiral Vibration Dampers

Summit Power Part Number	Conductor Range (mm)	Colour
2.4-4010	4.42-6.34	Red
2.4-4020	6.35-8.29	Blue
2.4-4030	8.30-11.74	Black
2.4-4040	11.75-14.30	Yellow
2.4-4050	14.30-19.30	Green

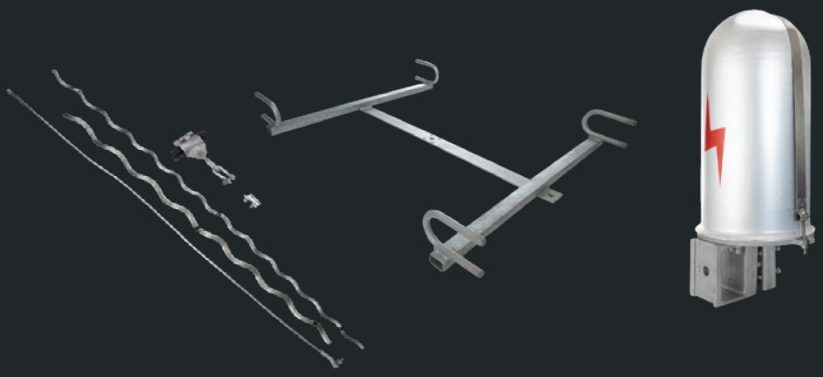
Stockbridge Vibration Dampers

Summit Power Part Number	Conductor Range (mm)
2.4-5010	9.00-13.00
2.4-5020	13.00-16.00
2.4-5030	16.00-20.00
2.4-5040	20.00-26.00
2.4-5050	26.00-34.00

Section 11
OPGW & ADSS Fittings

OPGW (Optical Ground Wire) systems are a critical component in modern power transmission and telecommunication infrastructure. Combining the functions of both a ground wire for electrical transmission systems and optical fibers for data transmission, OPGW plays a dual role. Its primary function is to provide a safe path for lightning strikes, protecting power lines from damage.

Simultaneously, the embedded optical fibers enable high-speed data transmission for monitoring and control purposes. OPGW conductors enhance the reliability and efficiency of electrical grids, allowing real-time data collection and remote diagnostics. Their integration has become integral to modernizing power grids and ensuring uninterrupted energy supply while facilitating telecommunications connectivity.



OPGW Dead End Set

Summit Power Part Number	Conductor Range (mm)
1.11-1010*L*R	10.0-11.0
1.11-1020*L*R	11.0-12.0
1.11-1030*L*R	12.0-13.0
1.11-1040*L*R	13.0-14.0
1.11-1050*L*R	14.0-15.0
1.11-1060*L*R	15.0-16.0
1.11-1070*L*R	16.0-17.0
1.11-1080*L*R	17.0-18.0
1.11-1090*L*R	18.0-19.0
1.11-1100*L*R	19.0-20.0

Note: L or R Denotes Right or Left hand lay

OPGW Dead End Set is a specific type of dead-end hardware used in overhead powerline installations to provide secure termination and mechanical support to the conductor at the end of a span. It is designed to withstand the mechanical forces and stresses experienced by the powerline and ensure reliable performance. It consists of several key components, including a preformed rod, armor rods, a housing or clamp, and associated hardware.

OPGW Suspension Set

Summit Power Part Number	Conductor Range (mm)
1.11-2010*L*R	10.0-11.0
1.11-2020*L*R	11.0-12.0
1.11-2030*L*R	12.0-13.0
1.11-2040*L*R	13.0-14.0
1.11-2050*L*R	14.0-15.0
1.11-2060*L*R	15.0-16.0
1.11-2070*L*R	16.0-17.0
1.11-2080*L*R	17.0-18.0
1.11-2090*L*R	18.0-19.0
1.11-2100*L*R	19.0-20.0

Note: L or R Denotes Right or Left hand lay

OPGW Suspension Set is a type of suspension hardware used in overhead powerline installations to provide reliable support and tensioning for the conductors. It is designed to withstand the mechanical stresses and environmental conditions encountered in transmission and distribution systems.
The OPGW Suspension Set hardware consists of several key components, including a suspension insulator, a preformed rod, armor rods, a housing or clamp, and associated hardware.

ADSS Dead End Set

Summit Power Part Number	Conductor Range (mm)
1.11-3010	10.0-11.0
1.11-3020	11.0-12.0
1.11-3030	12.0-13.0
1.11-3040	13.0-14.0
1.11-3050	14.0-15.0
1.11-3060	15.0-16.0
1.11-3070	16.0-17.0
1.11-3080	17.0-18.0
1.11-3090	18.0-19.0
1.11-3100	19.0-20.0

Note: L or R Denotes Right or Left hand lay

ADSS Dead End Set is a specific type of dead-end hardware used in overhead powerline installations to provide secure termination and mechanical support to the conductor at the end of a span. It is designed to withstand the mechanical forces and stresses experienced by the powerline and ensure reliable performance. It consists of several key components, including a preformed rod, armor rods, a housing or clamp, and associated hardware.

ADSS Suspension Set

Summit Power Part Number	Conductor Range (mm)
1.11-4010	10.0-11.0
1.11-4020	11.0-12.0
1.11-4030	12.0-13.0
1.11-4040	13.0-14.0
1.11-4050	14.0-15.0
1.11-4060	15.0-16.0
1.11-4070	16.0-17.0
1.11-4080	17.0-18.0
1.11-4090	18.0-19.0
1.11-4100	19.0-20.0

Note: L or R Denotes Right or Left hand lay

ADSS Suspension Set is a type of suspension hardware used in overhead powerline installations to provide reliable support and tensioning for the conductors. It is designed to withstand the mechanical stresses and environmental conditions encountered in transmission and distribution systems.
The OPGW Suspension Set hardware consists of several key components, including a suspension insulator, a preformed rod, armor rods, a housing or clamp, and associated hardware.

OPGW Splicing Box

The OPGW Splicing Box is a versatile and reliable enclosure used in telecommunications and fiber optic networks for housing and protecting spliced fiber optic cables. It is designed to provide a secure and weather-resistant environment for the splicing and management of fiber optic connections. The OPGW Splicing Box features a rugged construction and incorporates various components to facilitate cable management and ensure the integrity of the fiber optic splices.

Features:

- Enclosure: The splicing box consists of a sturdy enclosure made of high-quality materials, such as ruggedized plastic or metal. The box provides protection against environmental elements, such as moisture, dust, and UV radiation.
- Splice Trays: Inside the box, there are splice trays or modules that hold and organize the fiber optic splices. These trays typically have designated slots or holders to securely hold fusion or mechanical splices, protecting them from damage or movement.
- Cable Entry and Sealing: The splicing box is designed with multiple cable entry points, typically through rubber grommets or glands, to allow fiber optic cables to enter the enclosure. These entry points are sealed to maintain the environmental integrity of the enclosure and prevent moisture or dust ingress.
- Cable Management: The splicing box includes features for managing and organizing fiber optic cables within the enclosure. These may include cable routing guides, tie-downs, or clamps to ensure proper cable management and strain relief.

OPGW Splicing Box

Summit Power Part Number	OPGW Conductor Style (cores)
1.11-0010	24
1.11-0020	48
1.11-0030	72
1.11-0040	96
1.11-0050	144

Downlead Cushions

Summit Power Part Number	Size (mm)	Pole Material
1.11-0110	10.0-18.0	Concrete/Steel
1.11-0120	10.0-18.0	Timber

Note: Please contact Summit Power for sizes not listed above

Coil Bracket

Summit Power Part Number	OPGW Conductor Style (cores)
1.11-0210	24C-144C

Note: Please contact Summit Power for sizes not listed above

Earth Wire 37/2.00

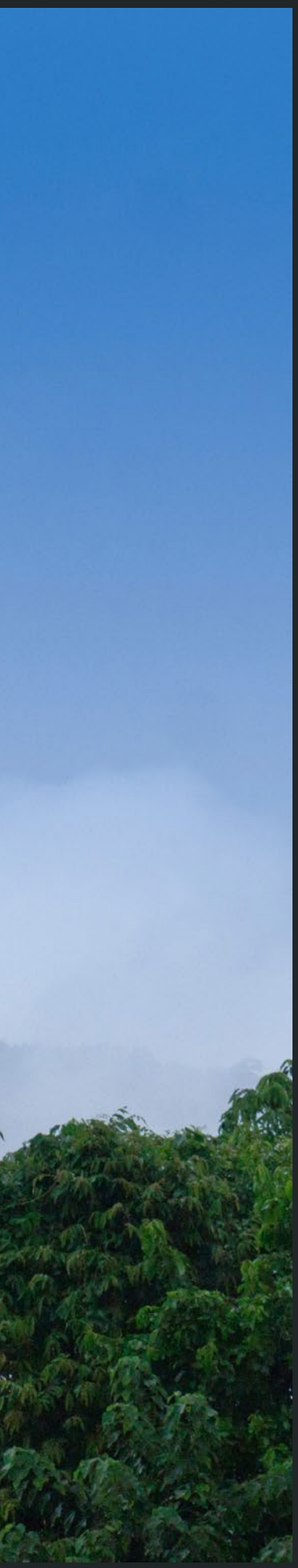
Summit Power Part Number	Conductor Range (mm)
5.3-0310	37/2.00 - 14mm

Note: Please contact Summit Power for sizes not listed above

Earth Wire Lug

Summit Power Part Number	Conductor Range (mm)
1.7-0410	37/2.00 - 14mm

Note: Please contact Summit Power for sizes not listed above



Section 12
Conductors

OPGW Conductor

OPGW (Optical Ground Wire) conductor is a crucial component in modern power transmission systems, serving a dual purpose of electrical grounding and high-speed data transmission. Comprising optical fibers within its structure, OPGW facilitates real-time monitoring and control of power lines. Its advantages include high tensile strength, low thermal expansion, and resistance to environmental factors. The transparency of OPGW allows for easy detection of impurities. OPGW conductors enhance the reliability and efficiency of electrical grids, making them integral to the modernization of power systems. Their integration exemplifies a sophisticated approach to combining power transmission and communication technologies for optimal performance.

Summit Power Part Number	Conductor Style (cores & lay)	Standard OD (mm)
5.1-5010	24C LHL	10.0
5.1-5020	24C RHL	10.0
5.1-5030	48C LHL	13.9
5.1-5040	48C RHL	13.9
5.1-5050	72C LHL	15.4
5.1-5060	72C RHL	15.4
5.1-5070	96C LHL	16.0
5.1-5080	96C RHL	16.0
5.1-5090	144C LHL	18.5
5.1-5100	144C RHL	18.5

Note: Please contact Summit Power for sizes not listed above

ACSR/GZ - Aluminium Conductor/Steel Reinforced (Galvanised)

Australian Standard - AS1220

Conductor Code Name	Stranding (mm)	OD (mm)	Eq. AL (mm^2)	Area (mm^2)	NBL (kN)	Mass (kg/km)
Quince	3/4/1.75	5.25	8.77	16.85	12.70	95.90
Almond	6/1/2.50	7.50	29.00	34.36	10.50	119.00
Raisin	3/4/2.50	7.50	17.90	34.36	24.40	193.00
Apple	6/1/3.00	9.00	41.80	49.48	14.90	171.00
Sultana	4/3/3.00	9.00	31.60	49.48	28.30	242.00
Banana	6/1/3.75	11.30	65.20	77.31	22.80	268.00
Walnut	4/3/3.75	11.30	49.40	77.31	43.90	379.00
Cherry	6/4.75-7/1.60	14.30	105.00	120.40	33.00	404.00
Grape	30/7/2.50	17.50	144.00	181.60	63.70	675.00
Lemon	30/7/3.00	21.00	207.00	261.50	90.10	973.00
Lime	30/7/3.50	24.50	282.00	365.00	121.00	1320.00
Mango	54/7/3.00	27.00	373.00	431.20	118.00	1440.00
Orange	54/7/3.25	29.30	483.00	506.00	137.00	1690.00
Olive	54/7/3.50	31.50	508.00	386.90	159.00	1960.00
Paw-Paw	54/3.75-19/2.25	33.80	583.00	671.70	179.00	2250.00
Peach	54/4.75-19-2.85	42.80	936.00	1085.00	292.00	3660.00

ACSR/GZ - Aluminium Conductor/Steel Reinforced (Aluminised)

Australian Standard - AS3607

Conductor Code Name	Stranding (mm)	OD (mm)	NBL (kN)	Mass (kg/km)
Barley	6/1/2.50	7.50	10.20	118.00
Bean	6/1/3.00	9.00	14.50	170.00
Cabbage	6/1/3.75	11.25	22.40	265.00
Carrot	6/4.75-7/1.60	14.30	32.00	399.00
Corn	30/7/2.50	17.50	62.60	675.00
Garlic	30/7/3.00	21.00	87.20	973.00
Millet	30/7/3.50	24.50	116.00	1320.00
Oats	54/7/3.00	27.00	115.00	1440.00
Onion	54/7/3.25	29.25	132.00	1690.00
Parsnip	54/7/3.50	32.50	153.00	1960.00
Potato	54/3.75-19/2.25	33.75	177.00	2250.00
Rice	54/4.75-19-2.85	42.80	277.00	3600.00

ACSR/AC - Aluminium Conductor/Steel Reinforced (Aluminium Clad)

Australian Standard - AS1220

Conductor Code Name	Stranding (mm)	OD (mm)	Eq. AL (mm^2)	Area (mm^2)	NBL (kN)	MASS (kg/km)
Skating	3/4/1.75	5.25	10.40	16.85	12.30	83.50
Angling	6/1/2.50	7.50	30.70	34.36	10.70	113.00
Soccer	3/4/2.50	7.50	21.20	34.36	24.90	170.00
Archery	6/1/3.00	9.00	44.10	49.48	15.00	163.00
Swimming	4/3/3.00	9.00	35.20	49.48	28.80	217.00
Baseball	6/1/3.75	11.30	68.90	77.31	22.40	255.00
Tennis	4/3/3.75	11.30	54.90	77.31	42.80	339.00
Bowls	6/4.75-7/1.60	14.30	109.00	120.40	32.60	385.00
Cricket	30/7/2.50	17.50	155.00	181.60	64.60	635.00
Darts	30/7/3.00	21.00	244.00	261.50	91.30	913.00
Diving	30/7/3.50	24.50	305.00	365.00	121.00	1240.00
Golf	54/7/3.00	27.00	390.00	431.20	119.00	1380.00
Gymnastics	54/7/3.25	29.30	475.00	506.00	138.00	1620.00
Hurdles	54/7/3.50	31.50	530.00	386.90	159.00	1880.00
Lacrosse	54/3.75-19/2.25	33.80	608.00	671.70	181.00	2150.00
Rugby	54/4.75-19-2.85	42.80	978.00	1085.00	295.00	3500.00

AAC - All Aluminium Conductor

Australian Standard - AS1531

Conductor Code Name	Stranding (mm)	OD (mm)	Eq. AL (mm^2)	Area (mm^2)	NBL (kN)	Mass (kg/km)
Gemini	7/1.75	5.25	16.60	16.84	3.01	46.10
Jupiter	7/2.75	6.75	27.50	27.83	4.76	75.90
Leo	7/2.50	7.50	33.90	34.36	5.75	94.30
Libra	7/3.00	9.00	48.80	49.48	7.91	135.00
Mars	7/3.75	11.30	76.30	77.31	11.90	212.00
Mercury	7/4.50	13.50	110.00	111.30	16.80	305.00
Moon	7/4.75	14.30	122.00	124.00	18.80	340.00
Neptune	19/3.25	16.30	155.00	157.00	24.70	433.00
Pluto	19/3.75	18.80	206.00	209.80	32.30	578.00
Saturn	37/3.00	21.00	256.00	261.50	41.80	721.00
Taurus	19/4.75	23.80	331.00	336.70	50.90	926.00
Triton	37/3.75	26.30	400.00	408.70	62.90	1130.00
Uranus	61/3.25	29.30	493.00	506.00	75.20	1400.00
Venus	61/3.75	33.80	659.00	673.70	98.30	1860.00
Virgo	91/4.50	49.50	1410.00	1447.00	207.00	1410.00

AAAC - Aluminium Alloy Conductor

Australian Standard - AS1531

Conductor Code Name	Stranding (mm)	OD (mm)	Eq. AL (mm^2)	Area (mm^2)	NBL (kN)	Mass (kg/km)
Agate	7/1.75	5.25	14.30	16.84	4.71	46.10
Amethyst	7/2.25	6.75	23.70	27.83	7.78	75.90
Diamond	7/2.50	7.50	29.30	34.36	9.64	94.30
Dolomite	7/2.75	8.25	35.30	41.60	11.60	113.00
Emerald	7/3.00	9.00	42.10	49.48	13.90	135.00
Garnet	7/3.75	11.30	65.80	77.31	21.70	211.00
Jade	7/4.50	13.50	94.80	111.30	31.20	304.00
Jasper	7/4.75	14.30	106.00	124.00	34.80	339.00
Opal	19/3.25	16.30	134.00	157.60	44.20	433.00
Patronite	19/3.50	17.50	155.30	183.00	51.30	503.00
Pearl	19/3.75	18.80	178.00	209.80	58.80	576.00
Ruby	37/3.00	21.00	221.00	261.50	73.50	721.00
Ruthenium	37/3.25	22.75	260.60	307.00	86.10	845.00
Rutile	19/4.75	23.80	285.00	336.70	94.40	924.00
Sapphire	37/3.75	26.30	345.00	408.70	115.00	1120.00
Spinel	61/3.25	29.30	426.00	506.00	135.00	1400.00
Tatalum	61/3.50	31.50	498.30	587.00	156.00	1620.00
Topaz	61/3.75	33.80	568.00	673.70	179.00	1860.00
Zircon	91/4.50	49.50	1220.00	1447.00	384.00	4000.00

AAAC - All Aluminium Alloy Conductor

Australian Standard - 1120 Alloy

Conductor Code Name	Stranding (mm)	OD (mm)	Eq. AL (mm^2)	Area (mm^2)	NBL (kN)	Mass (kg/km)
Argon	7/1.75	5.25	16.10	16.84	4.00	46.10
Boron	7/2.25	6.75	26.50	27.83	6.61	75.90
Chlorine	7/2.50	7.50	32.80	34.36	8.18	94.30
Chromium	7/2.75	8.25	35.30	41.60	9.90	113.00
Fluorine	7/3.00	9.00	47.20	49.48	11.80	135.00
Helium	7/3.75	11.30	73.70	77.31	17.60	211.00
Hydrogen	7/4.50	13.50	106.00	111.30	24.30	304.00
Iodine	7/4.75	14.30	118.00	124.00	27.10	339.00
Krypton	19/3.25	16.30	150.00	157.60	37.40	433.00
Lutetium	19/3.50	17.50	155.30	183.00	41.70	503.00
Neon	19/3.75	18.80	199.00	209.80	47.80	576.00
Nitrogen	37/3.00	21.00	248.00	261.50	62.20	721.00
Nobelium	37/3.25	22.75	260.60	307.00	72.80	845.00
Oxygen	19/4.75	23.80	320.00	336.70	73.60	924.00
Phosphorous	37/3.75	26.30	387.00	408.70	93.10	1120.00
Selenium	61/3.25	29.30	478.00	506.00	114.00	1400.00
Silicon	61/3.50	31.50	198.30	587.00	127.00	1620.00
Sulphur	61/3.75	33.80	637.00	673.70	145.00	1860.00
Xenon	91/4.50	49.50	1360.00	1447.00	300.00	4000.00

SC/GZ - Steel Conductor/Galvanised

Australian Standard - AS1222

Stranding (mm)	OD (mm)	Eq. AL (mm^2)	Area (mm^2)	NBL (kN)	Mass (kg/km)
3/2.00	4.31	1.56	9.43	11.70	75.50
3/2.75	5.93	2.95	17.82	22.20	139.00
7/2.00	6.00	3.62	21.99	27.40	177.00
7/2.75	8.25	6.85	41.58	51.80	326.00
7/3.25	9.75	9.56	58.07	72.30	460.00
7/3.75	11.30	12.70	77.31	96.20	609.00
19/2.00	10.00	9.79	56.96	74.40	483.00
19/2.75	13.80	18.50	112.90	141.00	888.00
19/3.25	16.30	25.80	156.60	196.00	1250.00

SC/AC - Steel Conductors/Aluminium Clad

Australian Standard - AS1222

Stranding (mm)	OD (mm)	Eq. AL (mm^2)	Area (mm^2)	NBL (kN)	Mass (kg/km)
3/2.75	5.93	5.91	17.82	22.70	118.00
3/3.00	6.47	7.03	21.21	27.00	141.00
3/3.25	7.02	8.26	24.89	31.60	165.00
3/3.75	8.08	11.00	33.13	40.00	220.00
7/2.75	8.25	13.70	41.58	50.10	277.00
7/3.00	9.00	16.30	49.48	59.70	330.00
7/3.25	9.75	19.20	58.07	69.80	387.00
7/3.75	11.30	25.50	77.31	88.30	515.00
7/4.25	12.80	32.80	99.30	106.00	662.00
19/2.75	13.80	37.10	112.90	136.00	755.00
19/3.00	15.00	44.10	134.40	162.00	899.00
19/3.25	16.30	51.80	157.60	189.00	1060.00
19/3.75	18.80	68.90	209.80	240.00	1410.00
19/4.25	21.30	88.60	269.50	289.00	1800.00

Hard Drawn Bare Copper Conductor

Australian Standard - AS1746

Stranding (mm)	OD (mm)	Eq. AL (mm^2)	Area (mm^2)	NBL (kN)	Mass (kg/km)
7/1.00	3.00	8.68	5.49	2.31	49.30
7/1.25	3.75	13.60	8.59	3.61	76.90
7/1.75	5.25	26.60	16.84	6.89	151.00
7/2.00	6.00	34.70	21.99	9.02	197.00
7/2.75	8.25	65.30	41.58	16.70	375.00
7/3.50	10.50	106.00	67.35	26.60	607.00
19/1.75	8.75	71.70	45.70	18.30	413.00
19/2.00	10.00	93.70	59.69	23.90	538.00
19/2.75	13.80	177.00	112.90	44.50	1020.00
19/3.00	15.00	211.00	134.30	52.80	1210.00
37/1.75	12.30	139.00	89.00	35.60	806.00
37/2.50	17.50	284.00	181.60	72.90	1640.00
37/2.75	19.30	344.00	219.80	86.60	1990.00
37/3.00	21.00	409.00	261.50	103.00	2370.00
61/2.75	24.80	566.00	362.30	143.00	3280.00

British Standard Conductor

All Aluminium Conductor ASC to BS 125

Conductor Code Name	Stranding (mm)	OD (mm)	NBL (kN)	Mass (kg/km)
Midge	7/2.06	6.18	3.90	64.00
Gnat	7/2.21	6.63	4.80	73.00
Aphis	3/3.35	7.20	4.30	73.00
Mosquito	7/2.59	7.77	6.30	101.00
Weevil	3/3.66	7.90	5.10	86.00
Ladybird	7/2.79	8.38	7.20	117.00
Ant	7/3.10	9.30	8.20	145.00
Fly	7/3.40	10.21	9.90	174.00
Bluebottle	7/3.66	10.98	11.70	202.00
Earwig	7/3.78	11.35	12.50	215.00
Grasshopper	7/3.91	11.73	13.30	230.00
Clegg	7/4.17	12.51	14.90	262.00
Wasp	7/4.39	13.18	16.30	290.00
Beetle	19/2.67	13.35	17.70	293.00
Bee	7/4.90	14.70	20.20	361.00
Cricket	7/5.36	16.08	24.00	432.00
Hornet	19/3.25	16.26	25.20	434.00
Caterpillar	19/3.53	17.65	29.30	512.00
Chafer	19/3.78	18.92	62.40	587.00
Spider	19/3.99	19.95	36.60	652.00
Cockroach	19/4.22	21.08	40.40	731.00
Butterfly	19/4.65	23.25	48.70	868.00
Moth	19/5.00	25.00	55.90	1027.00
Drone	37/3.58	25.06	56.20	1029.00
Centipede	37/3.78	26.46	62.05	1145.00
Locust	19/5.36	26.80	63.90	1179.00
Maybug	37/4.09	28.63	71.50	1342.00
Scorpion	37/4.27	29.87	77.20	1460.00
Cicada	37/4.65	32.55	90.40	1733.00
Tarantula	37/5.23	36.61	122.00	2191.00

British Standard Conductor

Aluminium Conductor (Galvanised) Steel Reinforced ASCR to BS 125

Conductor Code Name	Stranding (mm)	OD (mm)	NBL (kN)	Mass (kg/km)
Mole	6/1/1.50	4.50	4.20	43.00
Squirrel	6/1/2.11	6.33	7.50	85.00
Gopher	6/1/2.36	7.08	9.60	106.00
Weasel	6/1/2.59	7.77	11.40	128.00
Fox	6/1/2.79	8.37	13.10	148.00
Ferret	6/1/3.00	9.00	15.20	172.00
Rabbit	6/1/3.35	10.05	18.30	214.00
Mink	6/1/3.66	10.98	21.80	255.00
Beaver	6/1/3.99	11.97	25.70	303.00
Racoon	6/1/4.09	12.27	27.00	319.00
Otter	6/1/4.22	12.66	28.80	339.00
Skunk	12/7/2.59	12.95	52.90	464.00
Cat	6/1/4.50	13.50	32.60	386.00
Horse	12/7/2.79	13.95	25.70	538.00
Hare	6/1/4.72	14.16	35.90	425.00
Dog	6/4.72+7/1.57	14.17	32.70	394.00
Hyena	7/4.39+7/1.93	14.57	41.70	451.00
Cougar	18/1/3.05	15.25	30.40	419.00
Leopard	6/5.28+7/1.75	15.81	40.70	492.00
Coyote	26/2.54+7/1.91	15.88	46.30	521.00
Tiger	30/7/2.36	16.52	58.00	602.00
Dingo	18/1/3.35	16.75	25.70	506.00
Caracal	18/1/3.61	18.05	41.80	587.00
Wolf	30/7/2.59	18.13	69.20	726.00
Jaguar	18/1/3.86	19.30	46.50	671.00
Lynx	30/7/2.79	19.56	79.80	842.00
Panther	30/7/3.00	21.00	92.20	974.00
Lion	30/7/3.18	22.26	100.00	1094.00
Bear	30/7/3.35	23.45	111.00	1214.00
Batang	18/4.78+7/1.68	24.16	69.60	1015.00
Goat	30/7/0.146	25.96	135.00	1489.00
Antelope	54/7/2.97	26.73	118.00	1415.00
Bison	54/7/3.00	27.00	120.00	1443.00
Sheep	30/7/3.99	27.93	156.00	1722.00
Zebra	54/7/3.18	28.62	131.00	1621.00
Deer	30/7/4.27	29.89	178.00	1973.00
Camel	54/7/3.35	30.15	145.00	1799.00
Elk	30/7/4.50	31.50	198.00	2190.00
Moose	54/7/3.53	31.77	161.00	1998.00
Moa	76/3.72+7/2.89	38.40	180.00	2641.00

New Zealand Conductor

All Aluminium Conductor AAC

Conductor Code Name	Stranding (mm)	OD (mm)	NBL (kN)	Mass (kg/km)
Namu	7/2.11	6.33	4.10	70.00
Gant	7/2.21	6.63	4.80	73.00
Poko	7/2.36	7.08	5.10	80.00
Ladybird	7/2.80	8.40	6.90	117.00
Kutu	7/3.00	9.00	7.90	140.00
Fly	7/3.40	10.20	9.90	147.00
Rango	7/3.66	10.98	11.70	200.00
Grasshopper	7/3.91	11.73	13.30	230.00
Moka	7/4.09	12.27	-	-
Wasp	7/4.40	13.20	16.00	290.00
Beetle	19/2.66	13.30	17.80	293.00
Weke	7/4.72	14.16	18.50	340.00
Bee	7/4.90	14.70	20.20	361.00
Cricket	7/5.30	15.90	24.10	432.00
Hornet	19/3.25	16.25	25.00	434.00
Weta	19/3.35	16.75	26.20	460.00
Huhu	37/2.52	17.64	30.10	-
Caterpiller	19/3.50	17.50	29.30	512.00
Chafer	19/3.78	18.90	32.40	587.00
Mata	19/3.86	19.30	33.80	610.00
Spider	19/3.40	19.95	36.60	652.00
Cockroach	19/4.21	21.05	40.40	731.00
Butterfly	19/4.64	23.20	48.80	868.00
Centipede	37/3.78	26.46	62.10	1145.00
Cicada	37/4.65	32.55	90.50	1733.00

Section 13
Markers

Summit Power supplies a range of power line warning markers for the utilities, construction, mining, rail and agriculture industries.

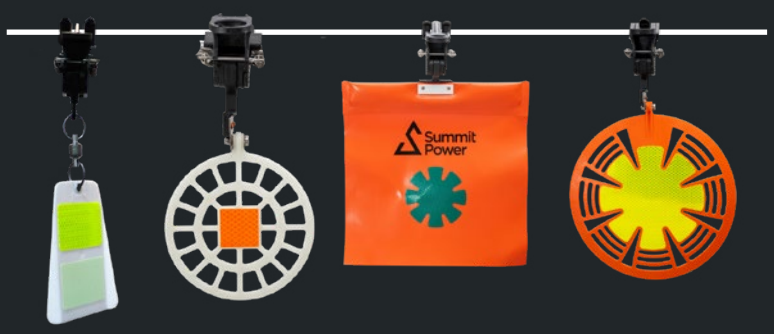
Trusted by Australia's biggest electricity networks, our safety markers and bird diverters help to create a zone of protection around overhead cables and lines, ensuring uninterrupted power supply and reducing the potential for harm to people, equipment and wildlife.

Collisions and entanglement in plant and equipment such as excavators, concrete pumping booms or EWPs can have dire consequences for workers on site, including electrocution and other severe injuries.

Even experienced workers who are familiar with the risks can become complacent and accidentally make contact with overhead lines, causing the surrounding area to become dangerously energised.

Bright visual markers such as the Quickmark discs or reflective warning flags offer a cost-effective solution for construction, mining, rail and agribusiness applications, giving plant operators a constant warning when working near overhead lines.

Our range of flags and markers provide a strong visual reminder to stay safe around energised assets, and our aerial warning spheres also provide increased power line visibility for light aircraft.



Firefly

The Firefly utilises the reflectance of sunlight during the daylight hours & luminescent light emissions during dusk and night-time hours.

This sparkling and refraction of light allows birds to change their flight pattern to divert around the marked wires and avoid collisions. The rotational speed of the Firefly also acts as a diverter and scares off the birds. The Snap-Fast clamp holds securely on conductors from 6-70mm OD and can be easily attached from the ground using a **installation tool or drone**.

Birds are most vulnerable to collisions with wires during sunset and sunrise hours, especially during bad weather. That is why Summit Power's Firefly is so important due to their glow which can be seen in both static and active wind conditions.

Firefly - Reflective Bird Diverter

- Utilises light and motion visual focus for birds
- Firefly starts to rotate at approx. 5 kmh
- Two clamp sizes available

Summit Power Part Number	Clamp Size	Swivel / Fixed
PE1008	4-16mm	Swivel
PE1010	10-70mm	Swivel
PE1012	4-16mm	Fixed
PE1014	10-70mm	Fixed

Note: Online purchase of these items available!
Visit: summitpower.com.au

Bird Mark Afterglow

The Birdmark Afterglow is a perforated disc containing reflective and luminescent properties. This permanent powerline marker emits UV rays to divert birdlife traffic away from lines.

Summit Power's Birdmark Afterglow's consist of a disc that absorbs sunlight during the day, then emits purple ultraviolet light during the night hours visible to birds as violet but appearing as white plastic to humans. You will see the product glow for 10-12 hours after sunset.

These bird markers can be easily attached from the ground using a **installation tool or drone**.

Birdmark Afterglow 135mm

- Recommended distance between each birdmark is 3-5m
- Two clamp sizes available

Summit Power Part Number	Clamp Size
PE1105	4-16mm
PE1100	10-70mm

Note: Online purchase of these items available!
Visit: summitpower.com.au

Warning Flags

Summit Power's Warning Flags are a superior safety solution for visually hazard-marking powerlines.

Low hanging lines over roads or work areas, & bare lines close to buildings present an extremely hazardous risk for any person, either operating machinery or working in proximity to powerlines. Insulated & bare lines need to be adequately marked to reduce risk of machinery collision or contact by workers. Summit Power's Warning Flags are made with high quality materials, & are designed to be a temporary solution for up to 2 years, depending on the severity of the elements in which they are installed.

With Summit Power's specialist **installation tool or drone**, Warning Flags can be attached live to powerlines from the ground or a bucket truck.

Warning Flag 300mm

- Approved to AS/NZ 3891 Part 2
- Two clamp sizes available

Summit Power Part Number	Clamp Size	Colour
PE1055-S	4-16mm	Orange with White Patch
PE1055-L	10-70mm	Orange with White Patch
PE1056-S	4-16mm	White with Green Patch
PE1056-L	10-70mm	White with Green Patch
PE1057-S	4-16mm	Orange with Green Patch
PE1057-L	10-70mm	Orange with Green Patch

Note: Online purchase of these items available!
Visit: summitpower.com.au

Quick Marks

The Quickmark is a permanent powerline warning marker preventing costly line damage & outages caused by collisions with high vehicles or loads.

Light weight 260mm diameter bright orange plastic disc with prismatic yellow centre reflector identifies powerlines and applies no windage to the conductor as the disc swings out in a controlled and even manner and does not flap in the wind. Summit Power's Permanent Quickmark will not degrade under prolonged exposure and severe weather conditions. Patented SnapFast Clamp allows fast & simple installation by **installation tool or drone** to any size conductor, from 6-70mm OD.

Quickmark 260mm

- Moves with air currents to enhance visibility
- Two clamp sizes available

Summit Power Part Number	Clamp Size
PE1096	10-70mm
PE1097	4-16mm

Note: Online purchase of these items available!
Visit: summitpower.com.au

Aerial Warning Spheres

Summit Power's Aerial Marker Ball range is manufactured using the highest quality materials.

Summit Power's Aerial Marker Balls are highly durable, permanent aerial warning markers suitable for powerlines and guy wires. The design uses neoprene strapping that packs out the diameter of the wire to suit the cable-groove in the sphere halves.

Aerial Marker Balls are available in four colours to enable colour selection that best contrasts the surrounding environment & compliance with relevant aviation warning standards.

Aerial Marker Balls are available in both 300mm and 600mm sizes

Powerline Marker Ball 2-PC

- Easy to install from helicopters and bucket trucks

Summit Power Part Number	Size	Colour
PE3005	300mm	Orange
PE3007	300mm	Red
PE3008	300mm	Yellow
PE3006	300mm	White
PE3100	600mm	Orange
PE3107	600mm	Red
PE3108	600mm	Yellow
PE3106	600mm	White

Note: Online purchase of these items available!
Visit: summitpower.com.au

Installation Tool - Snap Fast Clamps

- Fast and effective removal / application
- Suits Universal Hotstick

Summit Power Part Number	Size	Colour
PE1025	4-70mm	Orange

Note: Online purchase of these items available!
Visit: summitpower.com.au

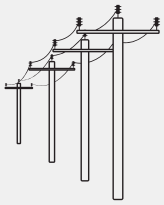
Drone Installation

Introducing Summit Power's new Drone technology, it is now capable of installing bird markers on conductors under high voltage. With a combination of a drone platform and a mechatronic system we have created a solution that is resistant to high voltage.

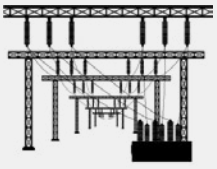
Utilising our experience in both hardware and software R&D we were able to create a drone that is stable and safe to interact with the electromagnetic field close to high voltage conductors.

- Summit Power offer Drone Installation Service - Please phone for pricing
- Exceptional option for installation across water bodies, mountainous terrain, or areas where there is limited access.
- Fast and effective installation
- Suits all Warning Flags & Markers

TRANSMISSION



DISTRIBUTION



SUBSTATION

SAFETY MARKERS

Summit Power

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