PREFORMED LINE PRODUCTS
The connection you can count on.

Helical Wire Spacer

General Recommendations

Intended Use: The HELICAL ROD Spacer is recommended for use on horizontal, twin conductor bundles. For tri-bundle, quad-bundle and certain twin-bundle applications, ARMOR-GRIP® Spacers are recommended.

The functions of the HELICAL ROD Spacer are: to provide uniform spacing of the subconductors to ensure consistent electrical characteristics; to minimize wind induced motions such as subconductor oscillation and aeolian vibration so that no conductor damage results; to keep the subconductors from entangling due to galloping, ice unloading and faulty currents.

Materials: The standard HELICAL ROD Spacer for aluminium based conductors is constructed entirely of high strength aluminium alloy wire formed into helical rods. There are no loose parts or troublesome articulated joints to create radio noise through looseness. To avoid galvanic corrosion spacer rod material is always designed to be compatible with the conductor. Materials other than aluminium are available for special application to copper based conductor and galvanized steel wire.

Riv-Corona: Helical Spacers are designed to be corona-free at voltages 10-20% above operating up to 500 kV AC and 750 kV DC.

Installation and Inspection: The spacer is applied easily and uniformly without tools and can be installed with hot line tools. It is a simple matter to inspect for proper application from the ground since there are no bolts that need special torquing during installation.

Fault Currents: The HELICAL ROD Spacer is designed to meet fault current requirements developed in most EHV line design. For special situations the fault current capacity of the standard 4-rod helical spacer can be increased by adding additional rods and/or increasing rod diameter. Complete fault current testing and analysis has been completed for the HELICAL ROD Spacer and is published in AIEE paper DP 58-508, and IEEE paper 63-88.

Catalogue No.: AWS

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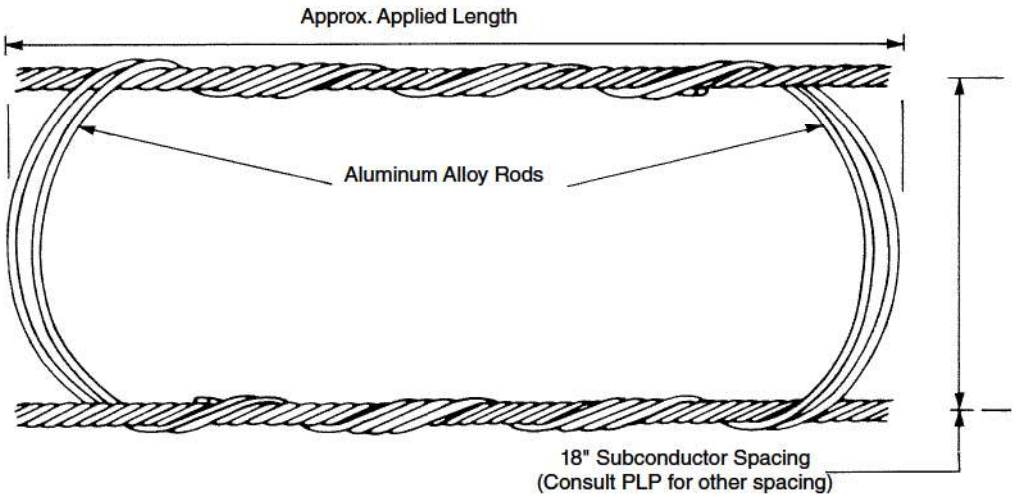
Spacer Placement: As a result of experimental work done on some of the early EHV lines the normal distance between HELICAL ROD Spacers should not exceed 75 metre. However, in some geographical areas exposed to constant high winds and heavy ice accumulation, experience suggests that the spacing should be shortened in order to stabilize the conductor bundle. Results of laboratory and field experiments indicate that one of the most effective methods to reduce subconductor oscillation and increase bundle stability is by reducing subspan lengths and placing spacers in a non-symmetrical pattern. Asymmetric spacing detunes the entire spacer-conductor system and thereby reduces the incidence of sympathetic vibration between subspans.

Specific recommendations for spacer design and spacer placement should be predicated on an evaluation of the electrical characteristics, the line design parameters, and the environmental conditions. We will be pleased to help determine the most suitable spacer design and placement pattern for your line conditions.

380 MM STANDARD SPACING FOR TWIN CONDUCTOR BUNDLES
RIGHT HAND LAY STANDARD

CATALOGUE NO. CODE AWS	CONDUCTOR DIAM. (mm)	COLOUR CODE	APPROX. LENGTH OF SET	SETS PER CRATE	RODS PER SET
549	14.0	BROWN	450	200	4 or 6
558	14.2	BROWN	450	200	4 or 6
685	17.4	YELLOW	450	100	6
714	18.1	WHITE	500	100	6
741	18.8	GREEN	500	100	6
770	19.5	GREEN	550	100	6
826	21.0	BROWN	550	60	6
889	22.6	RED	650	60	6
924	23.5	ORANGE	650	60	6
1 022	26.0	BLACK	750	50	6
1 125	28.6	YELLOW	750	50	6
1 400	35.6	RED	750	45	6

Other sizes available on request • Other spacing available on request



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Location for Preformed Spacers Reproduced in tabular form from spacer interval chart

SPAN LENGTH	SPACING – METRES FROM 1ST TOWER	NO. SPACERS
122	23M, 71M, 120M	3
200	23M, 76M, 130M, 184M	4
275	23M, 73M, 123M, 173M, 223M	5
300	23M, 85M, 148M, 210M, 273M, 335M	6
430	23M, 87M, 150M, 214M, 277M, 341M, 404M	7
500	23M, 89M, 156M, 222M, 289M, 355M, 421 M, 448M	8
580	23M, 91 M, 158M, 226M, 294M, 361 M, 428M, 496M, 564M	9
650	23M, 92M, 160M, 229M, 297M, 366M, 434M, 503M, 571 M, 640M	10
730	23M, 93M, 162M, 232M, 301M, 371M, 440M, 510M, 579M, 648M, 718M	11
800	23M, 93M, 163M, 233M, 303M, 373M, 444M, 514M, 584M, 654M, 724M, 794M	12

NOTE: FOR ADVERSE TERRAIN AND CONSTANT HIGH OR TURBULENT WIND CONDITIONS, THE NUMBER OF SPACERS SHOULD BE INCREASED.

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