

WRAPLOCK® TIE



The Neoprene pad which is a slit tube is applied around the bare conductor to provide a cushion between the conductor and the insulator groove surface. The Neoprene cover centre section with the pad surrounds the conductor in a neoprene protective layer.

General Recommendations

WRAPLOCK® Ties, manufactured of aluminium alloy wire, secure conductor in the top groove of interchangeable head-style insulators.

WRAPLOCK® Ties provide an improved method of securing conductor compared to clamp-top insulator or hand ties over Armour Rods.

Wraplock® Pad: WRAPLOCK® Ties provide superior abrasion protection for the conductor under all types of motion, including low frequency sway oscillation and high frequency aeolian vibration, and galloping. The pad component provides the bare conductor with resilient cushion where it would otherwise come into contact with the insulator. With the pad, WRAPLOCK® Ties not only replace original armoring product, but provide superior protection by eliminating abrasion rather than sacrificing outside surfaces to abrasion.

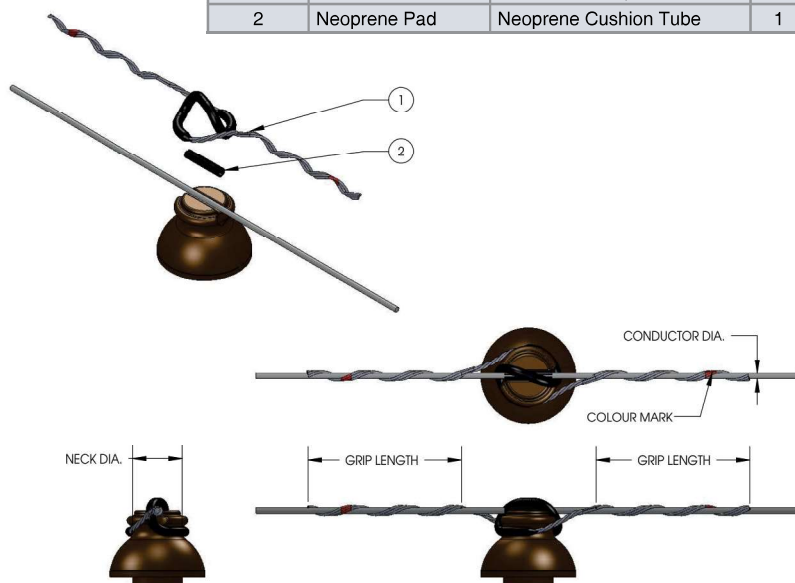
Vibration Dampers: By using WRAPLOCK® Ties, the vibration fatigue life is maximized to the extent that the original endurance limit of the conductor is not reduced by abrasion on its outside surface. However, on selected lines where experience indicates that prolonged periods of vibration might approach the fatigue life of the conductor, or cause inner wire fretting it will be necessary to supplement with dampers.

The following are guideline definitions for vibration activity. They should be applied to a Utility's own experience on lines in a given area.

“Excessive” Vibration: Areas where abrasion damage has been known to occur require replacement of both hand tie wire and protective rods, or where fatigue has been found under clamps. Protective rods should be replaced when visual inspection shows approximately ¼ of the rod diameter has been worn away.

“Severe” Vibration: Areas where abrasion has required replacement of hand-tie wire, but less than ½ of the protective rod's diameter has been worn away.

ITEM NO.	DESCRIPTION	MATERIAL	QTY.
1	AWT XXX/XXX-73F	Aluminium Wrap-Lock Tie	1
2	Neoprene Pad	Neoprene Cushion Tube	1



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“Moderate” Vibration: Areas where replacement of hand-tie wire has not been required, and damage is minor. WRAPLOCK® Ties provide protection in areas of “severe” or “moderate” vibration. For areas experiencing “excessive” vibration supplemental use of damper is recommended. Spiral Vibration Damper’s single purpose is to prevent the unlimited accumulation of aeolian vibration.

Insulators: WRAPLOCK® Ties are suitable for use on only those insulators which correspond to C-neck, F-neck, H-neck, and J-neck designs. Details of these designs appear in the I.E.C. 720 publication. When an insulator is not suited to the WRAPLOCK® Tie, then the PREFORMED™ TWIN-TIES can be used. Consult the factory for engineering recommendation when in doubt.

Conductor Size: Conductor sizes up to 31.50 mm O.D. can be accommodated depending on the insulator’s top groove radius. In cases of doubt consult PLP for recommendations.

Mechanical Strength: Maximum holding strength is usually sufficient to contain the broken conductor to a single span, however, the WRAPLOCK® Tie is designed to relieve the load before severe damage is done to the pole’s structural components. The WRAPLOCK® Tie is designed to permit controlled movement of unbroken conductor, reducing cantilever loading at the base of the insulator or bracket, then restore itself. We refer to this unique feature as “resilience.”

Radio Interference: The RIV characteristics of the WRAPLOCK® Tie are equivalent to those of a well-made hand tie when originally installed. During service life the precontoured Tie assures continued fit which would have better RIV than a loosened tie wire.

Tapping: Compared to the use of protective rods, placing hot-line clamps directly over the applied leg of the WRAPLOCK® Ties cannot be recommended. Tapping over protective rods will remain permissible; however, there are stirrups available now that provide a superior method of making hot-line taps.

Line Angles: On vertically-mounted insulators, WRAPLOCK® Ties are recommended for running line angles up to 10 degrees. Larger angles can be turned when the WRAPLOCK® Tie is combined with insulator or brackets having various degrees of cant. A technical report is available which describes turning angles as a function of the insulator cant.

Double Support: At double cross-arms PREFORMED™ Double-Support Ties can be used to cross major highways and railroads, or turn angles where it is practical to hold the conductor in the top groove during installation.

When Ordering: TO ENSURE PROPER FIT AND SERVICE LIFE, THE INSULATOR TYPE AND NECK DIAMETER MUST BE QUOTED (IN ADDITION TO CONDUCTOR DETAILS)

Catalogue No.: AWT (Aluminium); CWT (Copper)



Aluminium Alloy WRAPLOCK® TIES

RIGHT HAND LAY STANDARD. ALWAYS QUOTE INSULATOR TYPE AND NECK DIAMETER.

CATALOGUE NO. AWT	CONDUCTOR DIAMETER (mm)	COLOUR CODE	SETS PER PACK	APPROX PACK MASS (kg)
192 – 201	4.88 – 5.10	BLUE	15	1.5
202 – 212	5.11 – 5.38	GREEN	15	1.5
213 – 223	5.39 – 5.66	WHITE	15	1.5
224 – 235	5.67 – 5.97	GREY	15	1.5
236 – 247	5.98 – 6.27	RED	15	1.5
248 – 259	6.28 – 6.57	ORANGE	15	1.5
260 – 269	6.58 – 6.83	GREEN	15	1.5
270 – 280	6.84 – 7.11	YELLOW	15	1.5
281 – 291	7.12 – 7.39	BLUE	15	1.5
292 – 303	7.40 – 7.70	RED	15	1.5
304 – 314	7.71 – 7.97	BROWN	15	1.5
315 – 327	7.98 – 8.30	GREY	15	1.5
328 – 340	8.31 – 8.63	BLUE	15	1.5
341 – 353	8.64 – 8.97	ORANGE	15	1.5
354 – 367	8.98 – 9.32	GREEN	15	1.5
368 – 381	9.33 – 9.67	BROWN	15	1.5
382 – 394	9.68 – 10.00	GREY	15	2.0
395 – 411	10.01 – 10.44	YELLOW	10	2.0
412 – 437	10.45 – 11.10	RED	10	2.0
438 – 463	11.11 – 11.76	BLUE	10	2.0
464 – 492	11.77 – 12.50	GREEN	10	2.0
493 – 522	12.51 – 13.27	BLACK	10	2.0
523 – 554	13.28 – 14.07	GREY	10	2.0
555 – 594	14.08 – 15.09	BROWN	10	2.0
595 – 630	15.10 – 16.00	ORANGE	10	2.0
631 – 664	16.01 – 16.86	BROWN	10	2.0
665 – 705	16.87 – 17.91	GREEN	10	2.0
706 – 747	17.92 – 18.97	WHITE	5	1.5
748 – 795	18.98 – 20.19	BLACK	5	1.5
796 – 846	20.20 – 21.49	BROWN	5	1.5
847 – 900	21.50 – 22.86	RED	5	1.5
901 – 958	22.87 – 24.33	ORANGE	5	1.5
959 – 1018	24.34 – 25.86	WHITE	5	1.5
1019 – 1083	25.87 – 27.50	BLACK	5	1.5
1084 – 1151	27.51 – 29.23	YELLOW	5	1.5
1152 – 1223	29.24 – 31.06	BROWN	5	1.5
1224 – 1240	31.07 – 31.50	RED	5	1.5



Copper Alloy WRAPLOCK® TIES

RIGHT HAND LAY STANDARD. ALWAYS QUOTE INSULATOR TYPE AND NECK DIAMETER.

CATALOGUE NO. CWT	CONDUCTOR DIAMETER (MM)	COLOUR CODE	SETS PER PACK	APPROX PACK MASS(KG)
192 – 201	4.88 – 5.10	RED	15	5.0
202 – 212	5.11 – 5.38	YELLOW	15	5.0
213 – 223	5.39 – 5.66	GREEN	15	5.0
224 – 235	5.67 – 5.97	BLUE	15	5.0
236 – 247	5.98 – 6.27	WHITE	15	5.0
248 – 259	6.28 – 6.57	BROWN	15	5.0
260 – 269	6.58 – 6.83	RED	15	5.0
270 – 280	6.84 – 7.11	GREEN	15	5.0
281 – 291	7.12 – 7.39	ORANGE	15	5.0
292 – 303	7.40 – 7.70	YELLOW	15	5.0
304 – 314	7.71 – 7.97	BLUE	15	5.0
315 – 327	7.98 – 8.30	BLACK	15	5.0
328 – 340	8.31 – 8.63	RED	15	5.0
341 – 353	8.64 – 8.97	WHITE	15	5.0
354 – 367	8.98 – 9.32	BROWN	15	5.0
368 – 381	9.33 – 9.67	BLACK	15	5.0
382 – 394	9.68 – 10.00	RED	15	5.0
395 – 411	10.01 – 10.44	ORANGE	10	6.5
412 – 437	10.45 – 11.10	GREEN	10	6.5
438 – 463	11.11 – 11.76	BLUE	10	6.5
464 – 492	11.77 – 12.50	WHITE	10	6.5
493 – 522	12.51 – 13.27	BROWN	10	6.5
523 – 554	13.28 – 14.07	RED	10	6.5
555 – 594	14.08 – 15.09	BLACK	10	6.5
595 – 630	15.10 – 16.00	ORANGE	10	6.5
631 – 664	16.01 – 16.86	GREEN	10	6.5
665 – 705	16.87 – 17.91	YELLOW	10	6.5
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