AFL

FORMED WIRE

Armor Rods | Line Guards | Dead Ends | Wire Ties

Founded in 1984, AFL is a global leader providing fiber optic products, equipment, and engineering services to the telecommunications, electric utility, wireless, energy, private network and OEM markets. AFL also serves a diverse mix of industry segments that include service providers, military and defense, mining, oil and gas, and biomedical.

AFL brings years of experience in developing solutions for customers, fostering a creative culture to drive and deploy innovative technologies that will improve communications for years to come. Our product line consists of fiber optic cable, optical connectivity, fusion splicers and test equipment as well as fiber management systems, closures and accessories.

AFL is dedicated to bringing our customers a quality product as well as delivering superior value.

AFL

COMPANY WITH QUALITY SYSTEM CERTIFIED BY DNV GL = ISO 9001 =

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Installation Instructions

Armor Rods

Armor rods are designed to protect the conductor by reducing bending, compression, and abrasion at the support point. Protection against flashover damage is also provided. Armor rods are recommended as protection for spans greater than 300 ft. (91 m). Manufactured from either aluminum alloy, Alumoweld®, or galvanized steel, they are designed for use with ACSR, AAC, AAAC, ACSS, SSAC, TW Types and ACAR conductors as well as Alumoweld® and steel ground wire. All rod sets are manufactured with right-hand lay as standard for aluminum-based material and left hand lay for Alumoweld and steel ground wire.

Features

Color Coded and Center Marked

For ease of identification to conductor size, the armor rods are color coded in the center of the rod. This feature also assists in alignment of the rods during installation.

Repair Damage

When no more than 50% of the outside strands on an ACSR or aluminum conductor have been damaged outside the support point, armor rods may be used to restore 100% of the rated conductance and strength of the line.

Vibration Protection

Installing armor rods improves the conductor's ability to withstand the fatigue forces associated with aeolian type vibration. They do not function as vibration control devices. For assistance in determining the proper vibration protection, contact the AFL Technical Support Team or visit our website at www.Vibrec.com.

Tap Over

Armor rods may be tapped over on ACSR and aluminum conductor, but not on Alumoweld, or steel ground wire. Where tapping is used, it is strongly recommended that the conductor is thoroughly wire brushed and an oxide inhibitor be applied.

Extra High Voltage Applications

For 345 kV and above, the armor rod ends are modified to eliminate Corona effects and include a suffix of 'EHV' at the end of the AFL part number.

Customized Armor Rods

For armor rods with special requirements, such as longer lengths or non-standard lay direction contact the AFL Technical Support Team at 1-800-866-7385.

Ordering Information

Configuration		Material		Basic Unit		Numeric Range		Voltage Range
@	—	@@	—	AR	—	###	—	@@@
Blank - Single Support D - Double Support		A - Aluminum AW - Alumoweld S - Galvanized Steel		Series Designation		Numeric Range Code (from catalog)		Blank - < 345 kV EHV - ≥ 345 kV

Example: For single 795 26/7, Aluminum conductor diameter of 1.099 to 1.139 inches and Extra High Voltage, the complete catalog number is: AAR279EHV

continued

Ordering Information - Armor Rods

AFL NO.	CONDUCTOR DIAMETER RANGE MIN. (INCHES)	CONDUCTOR DIAMETER RANGE MAX. (INCHES)	NOMINAL CABLE SIZE	ROD DIA. (INCHES)	QUANTITY IN SET	COLOR CODE	ROD LENGTH (INCHES)	PACKAGING PER BOX UNITS	PACKAGING PER BOX WEIGHT (LBS)
ALUMINUM (RIGHT HAND LAY)									
AAR062	0.244	0.259	#4, 6/1, 7/1	0.146	7	Orange	40 (S) 52 (D)	50	25 (S) 32 (D)
AAR066	0.260	0.273	#3, 7W All Aluminum	0.146	7	Green	42 (S) 54 (D)	50	26 (S) 34 (D)
AAR069	0.274	0.289	#3, 7W Aluminum Alloy	0.146	8	Yellow	42 (S) 54 (D)	50	30 (S) 38 (D)
AAR073	0.290	0.308	#2, 7W All Aluminum	0.146	8	Purple	42 (S) 54 (D)	50	30 (S) 38 (D)
AAR078	0.309	0.326	#2, 6/1, 7/1	0.136	9	Red	44 (S) 56 (D)	50	32 (S) 40 (D)
AAR083	0.327	0.346	#1, 7W All Aluminum	0.146	9	Blue	46 (S) 58 (D)	50	38 (S) 46 (D)
AAR088	0.347	0.366	#1, 6/1	0.146	9	Green	48 (S) 60 (D)	50	40 (S) 49 (D)
AAR093	0.367	0.389	1/0, 7W All Aluminum	0.146	10	Black	50 (S) 62 (D)	50	45 (S) 55 (D)
AAR099	0.390	0.413	1/0, 6/1	0.167	9	Yellow	52 (S) 64 (D)	50	55 (S) 67 (D)
AAR105	0.414	0.436	3/0, 7W Comp.	0.146	10	Brown	52 (S) 64 (D)	50	48 (S) 58 (D)
AAR111	0.437	0.463	2/0, 6/1	0.167	10	Blue	54 (S) 66 (D)	50	64 (S) 76 (D)
AAR118	0.464	0.490	3/0, 7W-19W All Aluminum	0.167	10	Green	54 (S) 66 (D)	50	64 (S) 76 (D)
AAR124	0.491	0.521	3/0, 6/1	0.167	11	Orange	56 (S) 68 (D)	25	37 (S) 46 (D)
AAR132	0.522	0.551	4/0, 7W-19W All Aluminum	0.167	11	Black	58 (S) 70 (D)	25	38 (S) 46 (D)
AAR140	0.552	0.585	4/0, 6/1	0.182	11	Red	60 (S) 72 (D)	25	46 (S) 55 (D)
AAR149	0.586	0.606	266.8, 19W	0.182	12	Black	62 (S) 74 (D)	25	52 (S) 61 (D)
AAR154	0.607	0.630	266.8, 18/1	0.182	12	Purple	64 (S) 76 (D)	25	54 (S) 63 (D)
AAR160	0.631	0.655	266.8, 26/7	0.182	12	Yellow	64 (S) 76 (D)	25	54 (S) 63 (D)
AAR166	0.656	0.679	336.4, 19W	0.182	13	Brown	66 (S) 78 (D)	18	43 (S) 51 (D)
AAR172	0.680	0.703	300, 26/7	0.204	12	Blue	68 (S) 80 (D)	18	52 (S) 60 (D)
AAR179	0.704	0.740	336.4, 26/7	0.204	12	Green	72 (S) 84 (D)	18	54 (S) 64 (D)
AAR188	0.741	0.782	397.5 18/1	0.204	13	Orange	72	18	50
AAR199	0.783	0.814	397.5 26/7	0.250	11	Purple	76	15	66
AAR207	0.815	0.845	636 19W	0.250	11	Red	76	15	66
AAR215	0.846	0.907	477 26/7	0.250	12	Blue	78	15	74
AAR230	0.908	0.929	636 37W	0.250	13	Green	80	12	55
AAR236	0.930	0.976	605 26/7	0.250	13	White	88	12	60
AAR248	0.977	1.016	636 26/7	0.310	11	Yellow	92	6	55
AAR258	1.017	1.035	795 37W-61W	0.310	12	Brown	94	6	45
AAR263	1.036	1.064	715.5 26/7	0.310	12	Blue	96	6	46
AAR270	1.065	1.098	795 24/7	0.310	12	Green	96	6	46
AAR279	1.099	1.139	795 26/7	0.310	12	Orange	100	6	51
AAR289	1.140	1.161	954 36/1	0.310	13	Purple	100	6	52
AAR295	1.162	1.208	1003.5 37W-61W	0.310	13	Red	100	6	57
AAR307	1.209	1.269	1113 45/7	0.365	12	Black	100	6	67

continued →

Ordering Information - Armor Rods (cont.)

AFL NO.	CONDUCTOR DIAMETER RANGE MIN. (INCHES)	CONDUCTOR DIAMETER RANGE MAX. (INCHES)	NOMINAL CABLE SIZE	ROD DIA. (INCHES)	QUANTITY IN SET	COLOR CODE	ROD LENGTH (INCHES)	PACKAGING PER BOX UNITS	PACKAGING PER BOX WEIGHT (LBS)
ALUMINUM (CONT.) (RIGHT HAND LAY)									
AAR322	1.270	1.327	1192.5 45/7	0.365	12	White	100	6	67
AAR337	1.328	1.390	1272 45/7	0.365	13	Yellow	100	3	45
AAR353	1.391	1.440	1431 45/7	0.436	11	Brown	100	3	54
AAR366	1.441	1.508	1590 45/7	0.436	12	Blue	100	3	58
AAR383	1.509	1.578	1590 54/19	0.436	12	Green	100	3	58
AAR401	1.579	1.651	1780 84/19	0.436	13	Orange	100	3	60
AAR419	1.652	1.728	—	0.436	13	Purple	100	3	60
AAR439	1.729	1.809	2156 84/19	0.436	14	Red	100	3	64
AAR459	1.810	1.898	2500 91W	0.436	14	Black	100	3	64
AAR482	1.899	1.991	—	0.436	15	White	100	3	74
AAR506	1.992	2.090	—	0.436	15	Yellow	100	3	74
AAR531	2.091	2.193	—	0.436	15	Brown	100	3	82
GALVANIZED STEEL (LEFT HAND LAY)									
SAR058	0.229	0.243	1/4, 7 WIRE	0.086	10	Black	40	50	38
SAR062	0.244	0.259	1/4, 3 WIRE	0.086	10	Yellow	40	50	38
SAR078	0.309	0.326	5/16, 3 OR 7 WIRE	0.100	11	Black	44	50	60
SAR088	0.347	0.373	3/8, 3 OR 7 WIRE	0.100	12	Orange	48	50	70
SAR105	0.414	0.436	7/16, 3 OR 7 WIRE	0.119	12	Green	52	20	54
SAR124	0.491	0.521	1/2, 7 OR 19 WIRE	0.138	12	Blue	56	20	64
ALUMOWELD® (LEFT HAND LAY)									
AWAR043	0.169	0.178	3 #12 AW	0.102	7	Orange	40 (S) 52 (D)	50	31 (S) 40 (D)
AWAR050	0.196	0.207	3 # 11 AW	0.102	7	Black	40 (S) 52 (D)	50	31 (S) 40 (D)
AWAR055	0.218	0.225	3 # 10 AW, 4M AW	0.102	8	Green	40 (S) 52 (D)	50	35 (S) 46 (D)
AWAR060	0.237	0.249	7 # 12 AW, 1/4", 6M AW, 3 # 9 AW	0.102	9	Yellow	40 (S) 52 (D)	50	39 (S) 51 (D)
AWAR067	0.264	0.277	7 # 11 AW, 9/32", 8M AW, 3 # 8 AW	0.114	9	Blue	42 (S) 54 (D)	25	27 (S) 35 (D)
AWAR075	0.296	0.314	7 # 10 AW, 5/16", 10M AW, 3 # 7 AW	0.114	9	Black	46 (S) 58 (D)	25	29 (S) 37 (D)
AWAR085	0.334	0.352	7 # 9 AW, 11/31", 12.5M AW, 3 # 6 AW	0.114	10	Yellow	50 (S) 62 (D	25	33 (S) 44 (D)
AWAR095	0.373	0.392	7 # 8 AW, 3/8", 3 # 5 AW	0.128	10	Orange	50 (S) 62 (D	25	44 (S) 54 (D)
AWAR104	0.409	0.425	18M AW	0.128	11	Black	54 (S) 66 (D)	25	52 (S) 62 (D)
AWAR108	0.426	0.450	7 # 7 AW, 7/16", 20M AW	0.128	12	Green	56 (S) 68 (D)	25	59 (S) 70 (D)
AWAR121	0.477	0.504	7 # 6 AW, 1/2"	0.144	11	Blue	56 (S) 68 (D)	20	52 (S) 65 (D)
AWAR136	0.535	0.565	7 # 5 AW, 9/16"	0.162	12	Yellow	60 (S) 72 (D)	10	39 (S) 48 (D)
AWAR150	0.593	0.625	7 # 4 AW, 5/8"	0.183	11	Black	60 (S) 72 (D)	10	59 (S) 56 (D)

End Finish of Rods:

1. Chamfered ends - standard on diameters up to 0.250"
2. Ball ends - standard on diameters greater than 0.250"
3. Tapered ends for EHV - designated by suffix 'EHV'
4. For double armor rods, contact the AFL Technical Support Team

continued

Armor Rods Cross Reference

SINGLE		
ALUMINUM		
AFL NO.	DULMISON®	PLP®*
AAR062	AAR 0620	AR-0110
AAR066	AAR 0660	AR-0111
AAR069	AAR 0695	AR-0112
AAR073	AAR 0735	AR-0113
AAR078	AAR 0785	AR-0114
AAR083	AAR 0830	AR-0115
AAR088	AAR 0880	AR-0116
AAR093	AAR 0930	AR-0117
AAR099	AAR 0990	AR-0118
AAR105	AAR 1050	AR-0119
AAR111	AAR 1110	AR-0120
AAR118	AAR 1180	AR-0121
AAR124	AAR 1245	AR-0122
AAR132	AAR 1325	AR-0123
AAR140	AAR 1400	AR-0124
AAR149	AAR 1490	AR-0125
AAR154	AAR 1540	AR-0126
AAR160	AAR 1605	AR-0127
AAR166	AAR 1665	AR-0128
AAR172	AAR 1725	AR-0129
AAR179	AAR 1790	AR-0130
AAR188	AAR 1880	AR-0131
AAR199	AAR 1990	AR-0132
AAR207	AAR 2070	AR-0133
AAR215	AAR 2150	AR-0134
AAR230	AAR 2305	AR-0135
AAR236	AAR 2360	AR-0136
AAR248	AAR 2480	AR-0137
AAR258	AAR 2585	AR-0138
AAR263	AAR 2630	AR-0139
AAR270	AAR 2705	AR-0140
AAR279	AAR 2790	AR-0141
AAR289	AAR 2895	AR-0142
AAR295	AAR 2950	AR-0143
AAR307	AAR 3070	AR-0144
AAR322	AAR 3225	AR-0145
AAR337	AAR 3375	AR-0146
AAR353	AAR 3535	AR-0147
AAR366	AAR 3660	AR-0163
AAR383	AAR 3835	AR-0164
AAR401	AAR 4010	AR-0165
AAR419	AAR 4195	AR-0166
AAR439	AAR 4390	AR-0167
AAR459	AAR 4595	AR-0168
AAR482	AAR 4825	AR-0169
AAR506	AAR 5060	AR-0170
AAR531	AAR 5310	AR-0171

SINGLE		
ALUMINUM (CONT.)		
AFL NO.	DULMISON®	PLP®*
AAR248EHV	—	AR-0500
AAR258EHV	—	AR-0501
AAR263EHV	—	AR-0502
AAR270EHV	—	AR-0503
AAR279EHV	—	AR-0504
AAR289EHV	—	AR-0505
AAR295EHV	—	AR-0506
AAR307EHV	—	AR-0507
AAR322EHV	—	AR-0508
AAR337EHV	—	AR-0509
AAR353EHV	—	AR-0510
AAR366EHV	—	AR-0511
AAR383EHV	—	AR-0512
AAR401EHV	—	AR-0513
AAR419EHV	—	AR-0514
AAR439EHV	—	AR-0516
AAR459EHV	—	AR-0517
AAR482EHV	—	AR-0518
AAR506EHV	—	AR-0519
AAR531EHV	—	AR-0520
GALVANIZED STEEL		
SAR058	SAR 0580	AR-1123
SAR062	SAR 0620	AR-1124
SAR078	SAR 0785	AR-1128
SAR088	SAR 0880	AR-1130
SAR105	SAR 1050	AR-1133
SAR124	SAR 1245	AR-1136
ALUMOWELD®		
AWAR043	AWAR 0430	AR-2113
AWAR050	AWAR 0500	AR-2116
AWAR055	AWAR 0555	AR-2118
AWAR060	AWAR 0600	AR-2120
AWAR067	AWAR 0670	AR-2122
AWAR075	AWAR 0750	AR-2124
AWAR085	AWAR 0850	AR-2126
AWAR095	AWAR 0950	AR-2128
AWAR104	AWAR 1040	AR-2130
AWAR108	AWAR 1080	AR-2131
AWAR121	AWAR 1210	AR-2133
AWAR136	AWAR 1360	AR-2135
AWAR150	AWAR 1505	AR-2137

DOUBLE		
ALUMINUM		
AFL NO.	DULMISON®	PLP®*
DAAR062	DAAR 0620	AR-0310
DAAR066	DAAR 0660	AR-0311
DAAR069	DAAR 0695	AR-0312
DAAR073	DAAR 0735	AR-0313
DAAR078	DAAR 0785	AR-0314
DAAR083	DAAR 0830	AR-0315
DAAR088	DAAR 0880	AR-0316
DAAR093	DAAR 0930	AR-0317
DAAR099	DAAR 0990	AR-0318
DAAR105	DAAR 1050	AR-0319
DAAR111	DAAR 1110	AR-0320
DAAR118	DAAR 1180	AR-0321
DAAR124	DAAR 1245	AR-0322
DAAR132	DAAR 1325	AR-0323
DAAR140	DAAR 1400	AR-0324
DAAR149	DAAR 1490	AR-0325
DAAR154	DAAR 1540	AR-0326
DAAR160	DAAR 1605	AR-0327
DAAR166	DAAR 1665	AR-0328
DAAR172	DAAR 1725	AR-0329
DAAR179	DAAR 1790	AR-0342
ALUMOWELD®		
DAWAR043D	DAWAR 0430	AR-2313
DAWAR050D	DAWAR 0500	AR-2316
DAWAR055D	DAWAR 0555	AR-2318
DAWAR060D	DAWAR 0600	AR-2320
DAWAR067D	DAWAR 0670	AR-2322
DAWAR075D	DAWAR 0750	AR-2324
DAWAR085D	DAWAR 0850	AR-2326
DAWAR095D	DAWAR 0950	AR-2328
DAWAR104D	DAWAR 1040	AR-2330
DAWAR108D	DAWAR 1080	AR-2331
DAWAR121D	DAWAR 1210	AR-2333
DAWAR136D	DAWAR 1360	AR-2335
DAWAR150D	DAWAR 1505	AR-2337

*PLP is a trademark of Preformed Line Products.

Line Guards

Line guards are designed to protect the conductor by reducing bending, compression, and abrasion at the support point, particularly where hand-ties are used. Line guards are recommended as protection for spans of less than 300 ft. (91 m). Manufactured from aluminum alloy, they are designed for use with ACSR, AAC, AAAC, ACSS, SSAC, TW Types and ACAR conductors. All guard sets are manufactured with right-hand lay as standard.

Features

Color Coded and Center Marked

For ease of identification to conductor size, the line guards are color coded in the center of the rod. This feature also assists in alignment of the rods during installation.

Repair Damage

When no more than 25% of the outside strands on an ACSR or aluminum conductor have been damaged outside the support area, line guards may be used to restore 100% of the rated conductance and strength of the line. Do not use line guards for repair at the support point.

Tap Over

Line guards may be tapped over on ACSR and aluminum conductor. Where tapping is used, it is strongly recommended that the conductor be thoroughly wire brushed and an oxide inhibitor be applied.

Extra High Voltage Applications

For 345 kV and above, the line guards ends are modified to eliminate Corona effects and include a suffix of 'EHV' at the end of the product number.

Customized Line Guards

For line guards with special requirements, such as longer lengths or non-standard lay direction contact the AFL Technical Support Team at 1.800.866.7385.

Ordering Information

Configuration		Material		Basic Unit		Numeric Range		Voltage Range
@	—	@	—	LG	—	###	—	@@@
Blank - Single Support D - Double Support		A - Aluminum		Series Designation		Numeric Range Code (from catalog)		Blank - < 345 kV EHV - ≥ 345 kV

Example: For single 795 26/7, Aluminum conductor diameter of 1.099 to 1.139 inches and Extra High Voltage, the complete catalog number is: **ALG279EHV**

continued

Ordering Information—Line Guards

AFL NO.	CONDUCTOR DIAMETER RANGE		NOMINAL CABLE SIZE	ROD DIAMETER (INCHES)	QTY OF SET	COLOR CODE	ROD LENGTH (INCHES)	PACKAGING PER BOX	
	MIN. (INCHES)	MAX. (INCHES)						UNITS	WEIGHT (LBS)
ALG046	0.182	0.193	#6, 7W All Aluminum	0.102	7	Purple	17 (S) 29 (D)	100	12 (S) 19 (D)
ALG049	0.194	0.207	#6, 7W Aluminum Alloy	0.102	7	Blue	17 (S) 29 (D)	100	12 (S) 19 (D)
ALG056	0.220	0.228	#5, 6/1	0.121	7	White	17 (S) 29 (D)	100	16 (S) 26 (D)
ALG058	0.229	0.243	#4, 7W All Aluminum	0.121	8	Brown	19 (S) 31 (D)	100	20 (S) 32 (D)
ALG062	0.244	0.259	#4, 6/1, 7/1	0.121	8	Orange	19 (S) 31 (D)	100	20 (S) 32 (D)
ALG066	0.260	0.273	#3, 7W All Aluminum	0.121	8	Green	19 (S) 31 (D)	100	20 (S) 32 (D)
ALG069	0.274	0.289	#3, 7W Aluminum Alloy	0.121	9	Yellow	21 (S) 33 (D)	100	25 (S) 38 (D)
ALG073	0.290	0.308	#2, 7W All Aluminum	0.121	9	Purple	21 (S) 33 (D)	100	25 (S) 38 (D)
ALG078	0.309	0.326	#2, 6/1, 7/1	0.121	9	Red	21 (S) 33 (D)	100	25 (S) 38 (D)
ALG083	0.327	0.346	#1, 7W All Aluminum	0.121	10	Blue	21 (S) 33 (D)	100	28 (S) 42 (D)
ALG088	0.347	0.366	#1, 6/1	0.121	10	Green	23 (S) 35 (D)	100	30 (S) 44 (D)
ALG093	0.367	0.389	1/0, 7W All Aluminum	0.121	11	Black	23 (S) 35 (D)	100	32 (S) 46 (D)
ALG099	0.390	0.413	1/0, 6/1	0.121	11	Yellow	25 (S) 37 (D)	100	35 (S) 50 (D)
ALG105	0.414	0.436	3/0, 7W-19W Comp.	0.121	12	Brown	25 (S) 37 (D)	50	20 (S) 29 (D)
ALG111	0.437	0.463	2/0, 6/1, 7/1	0.121	13	Blue	27 (S) 39 (D)	50	23 (S) 32 (D)
ALG118	0.464	0.490	3/0, 7W-19W	0.121	13	Green	27 (S) 39 (D)	50	24 (S) 32 (D)
ALG124	0.491	0.521	3/0, 6/1	0.121	14	Orange	29 (S) 41 (D)	50	26 (S) 36 (D)
ALG132	0.522	0.551	4/0, 7W-19W	0.121	14	Black	29 (S) 41 (D)	50	26 (S) 36 (D)
ALG140	0.552	0.585	4/0 6/1	0.121	15	Red	31 (S) 43 (D)	50	30 (S) 40 (D)
ALG149	0.586	0.606	266.8 19W	0.146	14	Black	31 (S) 43 (D)	50	40 (S) 54 (D)
ALG154	0.607	0.630	266.8 18/1	0.146	14	White	33 (S) 45 (D)	50	42 (S) 57 (D)
ALG160	0.631	0.655	266.8 26/7	0.146	14	Yellow	33 (S) 45 (D)	50	42 (S) 57 (D)

continued

Ordering Information—Line Guards (cont.)

AFL NO.	CONDUCTOR DIAMETER RANGE		NOMINAL CABLE SIZE	ROD DIAMETER (INCHES)	QTY OF SET	COLOR CODE	ROD LENGTH (INCHES)	PACKAGING PER BOX	
	MIN. (INCHES)	MAX. (INCHES)						UNITS	WEIGHT (LBS)
ALG166	0.656	0.679	336.4 19W	0.146	15	Brown	35 (S) 47 (D)	50	48 (S) 62 (D)
ALG172	0.680	0.703	303.714	0.146	15	Blue	35 (S) 47 (D)	50	48 (S) 62 (D)
ALG179	0.704	0.740	336.4 26/7	0.146	16	Green	37 (S) 49 (D)	25	54 (S) 70 (D)
ALG188	0.741	0.792	397.5 18/1, 26/7, 24/7	0.146	17	Orange	39 (S) 51 (D)	25	60 (S) 77 (D)
ALG201	0.793	0.840	477 18/1, 19W, 37W	0.146	18	Purple	39 (S) 51 (D)	25	64 (S) 82 (D)
ALG213	0.841	0.898	477 24/7, 26/7, 30/7	0.146	19	Blue	41 (S) 53 (D)	25	36 (S) 45 (D)
ALG228	0.899	0.954	556.5 24/7, 26/7, 30/7, 19W, 37W	0.167	18	Green	43 (S) 55 (D)	25	46 (S) 58 (D)
ALG242	0.955	0.986	605 26/7, 636	0.182	17	White	45 (S) 57 (D)	25	54 (S) 68 (D)
ALG250	0.987	1.016	636 26/7, 666.6 24/7	0.182	18	Yellow	45 (S) 57 (D)	25	58 (S) 72 (D)
ALG258	1.017	1.064	715.5 26/7, 24/7, 795 37W, 61W	0.182	18	Brown	47 (S) 59 (D)	25	60 (S) 74 (D)
ALG270	1.065	1.098	874.5 37W, 61W	0.204	17	Green	49 (S) 61 (D)	15	44 (S) 25 (D)
ALG279	1.099	1.153	795 26/7, 30/19	0.250	15	Orange	49 (S) 61 (D)	15	58 (S) 72 (D)
ALG293	1.154	1.208	954 45/7, 54/7	0.250	15	Purple	51 (S) 63 (D)	15	62 (S) 75 (D)
ALG307	1.209	1.268	1192.5 61W	0.250	16	Black	53 (S) 65 (D)	15	68 (S) 82 (D)
ALG322	1.269	1.327	1192.5 45/7	0.250	17	White	53 (S) 65 (D)	10	48 (S) 58 (D)
ALG337	1.328	1.390	1351.5 61W, 1272 45/7, 54/19	0.250	17	Yellow	55 (S) 67 (D)	10	50 (S) 60 (D)
ALG353	1.391	1.440	1431 45/7	0.310	15	Brown	57 (S) 69 (D)	5	36 (S) 44 (D)
ALG366	1.441	1.508	1431 54/19	0.310	16	Blue	59 (S) 71 (D)	5	40 (S) 48 (D)
ALG383	1.509	1.578	1590 54/19, 1750 61W	0.310	16	Green	61 (S) 73 (D)	5	42 (S) 49 (D)
ALG401	1.579	1.651	1780 84/19	0.310	17	Orange	63 (S) 75 (D)	5	43 (S) 53 (D)
ALG419	1.652	1.728	2034 72/7	0.365	15	Purple	65 (S) 77 (D)	5	54 (S) 66 (D)
ALG439	1.729	1.890	2156 84/19	0.365	16	Red	67 (S) 79 (D)	5 (S) 3 (D)	55 (S) 45 (D)

End Finish of Rods:

1. Chamfered ends - standard on diameters up to 0.250". **2.** Ball ends - standard on diameters greater than 0.250". **3.** Tapered ends for EHV - designated by suffix 'EHV'.

continued

Line Guards Cross Reference

SINGLE ALUMINUM		
AFL NO.	DULMISON®	PLP®*
ALG046	ALG0460	MG-0122
ALG049	ALG0490	MG-0123
ALG056	ALG0560	MG-0125
ALG058	ALG0580	MG-00126
ALG062	ALG0620	MG-0127
ALG066	ALG0660	MG-0128
ALG069	ALG0690	MG-0129
ALG073	ALG0730	MG-0130
ALG078	ALG0780	MG-0131
ALG083	ALG0830	MG-0132
ALG088	ALG0880	MG-0133
ALG093	ALG0930	MG-0134
ALG099	ALG0990	MG-0135
ALG105	ALG1050	MG-0136
ALG111	ALG1110	MG-0137
ALG118	ALG1180	MG-0138
ALG124	ALG1240	MG-0139
ALG132	ALG1320	MG-0143
ALG140	ALG 1400	MG-0141
ALG149	ALG 1490	MG-0142
ALG154	ALG 1540	MG-0143
ALG160	ALG 1605	MG-0144
ALG166	ALG 1665	MG-0145
ALG172	ALG 1725	MG-0146
ALG179	ALG 1790	MG-0147
ALG188	ALG 1880	MG-0148
ALG201	ALG 2015	MG-0149
ALG213	ALG 2135	MG-0150
ALG228	ALG 2285	MG-0151
ALG242	ALG 2425	MG-0152
ALG250	ALG 2505	MG-0153
ALG258	ALG 2585	MG-0154
ALG270	ALG 2705	MG-0155
ALG279	ALG 2790	MG-0156
ALG293	ALG 2930	MG-0157

SINGLE ALUMINUM		
AFL NO.	DULMISON®	PLP®*
ALG307	ALG 3070	MG-0158
ALG322	ALG 3225	MG-0159
ALG337	ALG 3375	MG-0160
ALG353	ALG 3535	MG-0161
ALG366	ALG 3660	MG-0162
ALG383	ALG 3835	—
ALG401	ALG 4010	—
ALG419	ALG4195	—
ALG439	ALG 4390	—

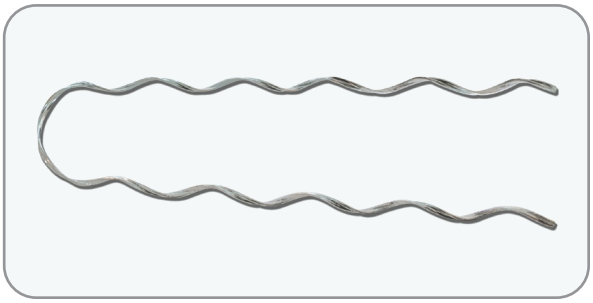
DOUBLE ALUMINUM		
AFL NO.	DULMISON®	PLP®*
DALG046	DALG0460	MG-0305
DALG049	DALG0490	MG-0306
DALG056	DALG0560	MG-0308
DALG058	DALG0580	MG-0309
DALG062	DALG0620	MG-0310
DALG066	DALG0660	MG-0311
DALG069	DALG0690	MG-0312
DALG073	DALG0730	MG-0313
DALG078	DALG0780	MG-0314
DALG083	DALG0830	MG-0315
DALG088	DALG0880	MG-0316
DALG093	DALG0930	MG-0317
DALG099	DALG0990	MG-0318
DALG105	DALG1050	MG-0319
DALG111	DALG1110	MG-0320
DALG118	DALG1180	MG-0321
DALG124	DALG1240	MG-0322
DALG132	DALG1320	MG-0324
DALG140	DALG 1400	MG-0324
DALG149	DALG 1490	MG-0325
DALG154	DALG1540	MG-0326
DALG160	DALG 1605	MG-0327
DALG166	DALG 1665	MG-0328
DALG172	DALG 1725	MG-0329

DOUBLE ALUMINUM		
AFL NO.	DULMISON®	PLP®*
DALG179	DALG 1790	MG-0330
DALG188	DALG 1880	MG-0331
DALG201	DALG 2015	MG-0332
DALG213	DALG 2135	MG-0333
DALG228	DALG 2285	MG-0334
DALG242	DALG 2425	MG-0335
DALG250	DALG 2505	MG-0336
DALG258	DALG 2585	MG-0337
DALG270	DALG 2705	MG-0338
DALG279	DALG 2790	MG-0339
DALG293	DALG 2930	MG-0340
DALG307	DALG 3070	MG-0341
DALG322	DALG 3225	MG-0342
DALG337	DALG 3375	MG-0343
DALG353	DALG 3535	MG-0344
DALG366	DALG 3660	MG-0345
DALG383	DALG 3835	—
DALG401	DALG 4010	—
DALG419	DALG4195	—
DALG439	DALG 4390	—

*PLP is a trademark of Preformed Line Products.

Distribution Dead End

Aluminum Covered Steel Materials



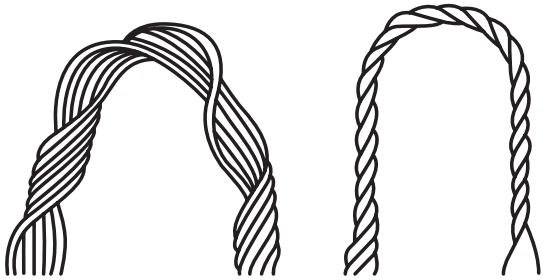
MATERIALS

Dead End - Aluminum covered steel and galvanized steel.

Color code and crossover marks - Identifies proper conductor size and indicates application starting point.

Identification tag - Shows catalog number, conductor diameter range (when applicable) and nominal conductor size.

Loop type - Open helix for smaller sizes and cabled for larger sizes.



Open Helix Loop

Cabled Loop

General Recommendations

Distribution Grip Dead Ends are recommended as a replacement for Bare Looped Dead Ends because of their stronger loops and higher holding strengths on ACSR cable. Aluminum covered steel Grips are used on bare aluminum based conductors and galvanized steel Grips are used for plastic jacketed conductors. Coated Dead Ends are also recommended for jacketed conductors. Distribution Grip Dead Ends are specifically designed for single pole distribution construction.

Rated Holding Strength

The mechanical strengths of Distribution Grip Dead Ends meet the requirements of primaries, secondaries, and substation feeders.

Tapping

Tapping onto the applied legs of the Distribution Grip Dead Ends is not recommended. Taps should be located either six inches from the gritted legs on the conductor or on the other end of the conductor passing through the Dead End.

continued

Distribution Dead End

Aluminum Covered Steel Materials
ACSR, All-Aluminum, Aluminum Alloy, AWAC, Compacted ACSR

Open Helix Loop Standard/Right Hand Lay Standard Ordering Information

AFL NO.	ACSR	ALL ALUMINUM	ALUMINUM ALLOY	COMPACTED ACSR	AWAC 6/1	UNITS PER CARTON	WT. PER CARTON POUNDS	LENGTH INCHES	COLOR CODE
AWDG 050	#6, 6/1	#6, 7W	#6, 7W	#6, 6/1		100	14	16	Blue
AWDG 063	#4, 6/1 #4, 7/1	#4, 7W	#4, 7W	#4, 6/1	#4	100	20	17	Orange
AWDG 080	#2, 6/1 #2, 7/1	#2, 7W	#2, 7W	#2, 6/1	#2	100	33	24	Red
AWDG 090	#1,6/1	#1, 7W	#1, 7W	#1, 6/1	#1	100	44	26	Green
AWDG 099	1/0, 6/1	1/0, 7W	1/0, 7W	1/0, 6/1	1/0	50	31	26	Yellow
AWDG 113	2/0, 6/1	2/0, 7W	2/0, 7W	2/0, 6/1	2/0	50	31	28	Blue
AWDG 127	3/0, 6/1	3/0, 7W	3/0, 7W	3/0, 6/1	3/0	50	43	32	Orange
AWDG 143	4/0, 6/1	4/0, 7W	4/0, 7W	4/0, 6/1	4/0	25	30	34	Red

Note: The following Dead Ends are designed only for the specific conductors listed.

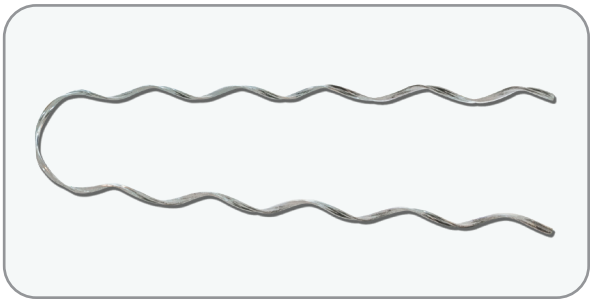
Cabled Loop Standard/Right Hand Lay Standard Ordering Information

AFL NO.	ACSR	ALL ALUMINUM	ALUMINUM ALLOY	COMPACTED ACSR	UNITS PER CARTON	WT. PER CARTON POUNDS	LENGTH INCHES	COLOR CODE
AWDG 147	266.8, 18/1	266.8, 19W	266.8, 19W	336.4, 18/1	25	3935		Black
AWDG 166	336.4, 18/1	336.4, 19W	336.4, 19W	397.5, 18/1	25	5339		Green
AWDG 188	397.5, 18/1 477, 36/1 477, 18/1	450, 19W 477, 19W 500, 37W	397.5, 19W	477, 18/1 556, 19W	10	35	50	Orange
AWDG 213	556.5,36/1 605, 36/1 636, 18/1	556.5, 7W 636, 37W 650, 61W	477, 19W 556.5, 19W	636, 18/1 795, 19W	10	45	55	Blue
AWDG 241	666.6, 36/1 715.5, 36/1 795, 36/1	715.5, 37W 750, 61W 795, 61W	636, 37W	874.5, 37W 954, 37W	5	64	62	Brown
AWDG 273	874.5, 36/1 954, 36/1 1033.5, 36/1	874.5, 61W 954, 61W 1033.5, 61W	795, 37W		5	46	70	Orange

Notes: 1. The rated holding strengths of the above Distribution End Grip Dead Ends are between 60% and 100% of the conductors RBS depending on the conductor used.

2. Consult AFL for sizes and stranding or holding strengths not listed.

Service Dead End



MATERIALS

Dead End - Manufactured of aluminum covered steel.

Color code and crossover marks - Identifies conductor size and indicates application starting point.

Identification tag - Shows catalog number, conductor diameter range, and nominal conductor size

General Recommendations

Service Dead Ends are used to make service drops on bare neutral messengers of self supporting cable. They are designed for minimum length, maximum economy and neatness of appearance. Service Dead Ends should not be reused after original installation. They are designed to be applied to spool insulators or wire holders having a smooth contour with diameters no less than 1 inch and no greater than 3 inches.

Rated Holding Strength

The mechanical strength of Service Dead Ends meets or exceeds NESC Grade "N", rule 263-E, Supply Services, for spans not exceeding 150 feet. For service drops exceeding 150 feet. Distribution Dead Ends are recommended. For direct application onto plastic jacketed conductors Coated Dead Ends are recommended.

The published Rated Holding Strengths listed on page 5 are actual test results on unweathered conductor and are conservative when compared to typical values.

Tapping

Tapping over the applied legs of the Service Dead End is not recommended. Taps should be located either six inches from the gritted legs or on the neutral tail continued past the crossover point.

Vibration

When vibration is suspected or encountered, Distribution Dead Ends should be used since the design of Service Dead Ends are not intended for use under vibration conditions.

continued

Service Dead End
Aluminized Steel

Selection Information

AFL NO.	DIA. RANGE INCHES	NOMINAL CONDUCTOR SIZE	UNITS PER CARTON	WT. PER CARTON POUNDS	APPLIED LENGTH INCHES	COLOR CODE
SG 043	.169 -.198	#6, 6/1 #6, 7W All Aluminum #6, 7W Aluminum Alloy	300	24	11	Blue
SG 050	.199-.224	#5, 6/1 #4, Solid #5, 7W Aluminum Alloy	300	27	12	White
SG 057	.225 -.257	#4, 6/1, 7/1 #4, 7W All Aluminum #4, 7W Aluminum Alloy	300	29	13	Orange
SG 065	.258-.289	#3, 6/1 #3, 7W All Aluminum #2, Solid #3, 7W Aluminum Alloy	200	27	14	Black
SG 073	.290-.325	#2, 6/1, 7/1 #2, 7W All Aluminum #2, 7W Aluminum Alloy	200	28	15	Red
SG 083	.326-.360	#1, 6/1 #1.7W All Aluminum #1.7W Aluminum Alloy	200	31	17	Green
SG 091	.361 - .400	1/0,6/1 1/0, 7W All Aluminum 1/0, 7W Aluminum Alloy	100	28	19	Yellow
SG 102	.401 - .450	2/0,6/1 2/0, 7W All Aluminum 2/0, 7W Aluminum Alloy	100	31	21	Blue
SG 114	.451 -.510	3/0,6/1 3/0, 7W All Aluminum 3/0, 7W Aluminum Alloy	100	33	23	Orange
SG 130	.511-.580	4/0,6/1,18/1 4/0, 7W All Aluminum 4/0, 7W Aluminum Alloy	100	37	26	Red

Right-Hand Lay Standard

continued

Service Dead End
Aluminized Steel

Rated Holding Strength for Aluminum Based Conductor

AFL NO.	ACSR	ALL ALUMINUM	ALUMINUM ALLOY
SG 043	#6,6/1 585 lbs. (50%)	#6, 7W 488 lbs. (88%) #5, Solid 549 lbs. (88%)	#6, 7W 840 lbs. (80%)
SG 050	#5,6/1 730 lbs. (50%)	#4, Solid 772 lbs. (88%)	#5, 7W 1,080 lbs. (50%)
SG 057	#4,6/1 915 lbs. (50%) #4, 7/1 1,144 lbs. (50%)	# 4, 7W 770 lbs. (88%) #3 Solid 854 lbs. (88%)	#4, 7W 1,336 lbs. (80%)
SG 065	#3, 6/1 1,125 lbs. (50%)	#3, 7W 900 lbs. (88%) #2 Solid 1,078 lbs. (88%)	#3, 7W 1,720 lbs. (80%)
SG 073	#2, 6/1 1,395 lbs. (50%)	#2, 7W 1,175 lbs. (88%)	#2. 7W 2,124 lbs. (80%)
SG 083	#1,6/1 1,740 lbs. (50%)	#1, 6/1 1,430 lbs. (88%)	#1, 7W 2,736 lbs. (80%)
SG 091	1/0, 6/1 2,140 lbs. (50%) 1/0, 5/1 1.698 lbs. (50%)	1/0, 7 W 1,734 lbs. (88%)	1/0, 7W 3,384 lbs. (80%)
SG 102	2/0, 6/1 2,673 lbs. (50%)	2/0, 7W 2,182 lbs. (88%)	2/0, 7W 4,044 lbs. (80%)
SG 114	3/0, 6/1 3,338 lbs. (50%)	3/0, 7W 2,644 lbs. (88%)	3/0, 7W 5,092 lbs. (80%)
SG 130	4/0, 6/1 4,210 lbs. (50%) 4/0, 18/1 2,523 lbs. (50%)	4/0, 7W 3,335 lbs. (88%)	4/0, 7W 6,420 lbs. (80%)

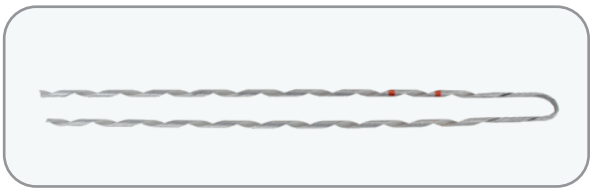
Guy Dead End

MATERIALS

Dead End - Manufactured of aluminum covered steel.

Color code and crossover marks - Identifies conductor size and indicates application starting point.

Identification tag - Shows catalog number, conductor diameter range, and nominal conductor size



General Recommendations

Guy Dead Ends are designed for guying of poles in the construction of power and communication lines. Guy dead ends are designed for use with standard guy strands of 1" diameter or less. Manufactured from similar wire, the dead ends can be applied to galvanized steel or Alumoweld® guy wire. Unless otherwise specified, all dead ends and guy strand are left hand lay. Once in place, under normal conditions, guy dead ends hold their grip regardless of the condition of the conductor to which they are attached, relaxed or in tension.

Offset Tips

To simplify installation, AFL Conductor Accessories' guy dead ends are designed with offset ends. This feature is important in that toward the end of the installation of the dead end, the tips are easier to handle and wrap around the cable. No additional modification is required.

Reusable after Initial Installation

Guy dead ends may be removed and reapplied twice after initial installation to retension guy strands. Should it become necessary to remove a guy dead end after it has been installed for a period of three months, it should be replaced with a new dead end.

Color Coded

For ease of identification to guy strand size, the dead ends are color coded on both legs of the product.

Cabled Loop

Guy dead ends are manufactured with a cabled loop for all strand sizes.

Customized Guy Dead Ends

For guy dead ends with special requirements, such as longer lengths or non-standard lay direction contact AFL at (800) 866-7385.

Selection Information

GYDE XX XXX

Series Designation

AW - Alumoweld
GB - Galvanized B Coat
GC - Galvanized C Coat

Numeric Range Code

continued

Guy Dead Ends

AFL NO.	DIA. RANGE INCHES	NOMINAL GUY SIZE	UNITS/CARTON	WT./CARTON POUNDS	APPLIED LENGTH (INCHES)	COLOR CODE
Alumoweld®						
GYDEAW044	.174-.181	3/16 , 3#12	100	21	18	Orange
GYDEAW055	.219-.230	4M, 3#10	50	20	21	Green
GYDEAW060	.237-.247	1/4, 6M, 3#9	50	20	24	Yellow
GYDEAW068	.270-.280	8M,3#8	50	22	24	Blue
GYDEAW077	.303-.313	5/16, 10M, 3#7, 3#9	50	29	26	Black
GYDEAW082	.325-.336	11.5M	50	30	26	Green
GYDEAW087	.343-.355	12.5M, 3#6, 7#9	50	41	29	Yellow
GYDEAW090	.356-.364	14M	50	53	31	Blue
GYDEAW096	.380-.394	3/8, 16M, 3#5, 7#8	50	55	32	Orange
GYDEAW104	.410-.426	18M	25	37	34	Black
GYDEAW108	.427-.442	7/16, 7#7	25	50	36	Green
GYDEAW112	.443-.459	20M	25	55	37	Yellow
GYDEAW120	.475-.494	1/2, 7#6	25	60	42	Blue
GYDEAW125	.495-.515	19#10	25	62	44	Green
GYDEAW131	.516-.536	25M	20	66	47	Red
GYDEAW136	.537-.555	7#5	20	67	48	Yellow
GYDEAW141	.556-.570	9/16	15	68	49	Blue
GYDEAW145	.571-.591	19#9	20	68	50	Orange
GYDEAW150	.592-.612	–	15	50	50	Green
GYDEAW155	.613-.635	5/8	10	49	54	Yellow
GYDEAW161	.636-.661	19#8	10	50	56	Black
GYDEAW168	.662-.686	19 X .1363	10	66	59	Blue
GYDEAW174	.687-.712	–	10	68	61	Red
GYDEAW181	.713-.741	19#7, 37#10	10	70	63	Black
GYDEAW188	.742-.772	3/4, 19 X .1499	5	41	71	Yellow
GYDEAW201	.773-.800	–	5	50	80	Blue
GYDEAW203	.801-.827	37#9, 19#6,19 X .1660	5	69	84	Green
GYDEAW215	.849-.866	19 X .1730, 37 X .121	5	70	87	Black
GYDEAW228	.880-.898	7/8, 37#8	5	76	91	Yellow
GYDEAW231	.910-.934	19#5, 19 X .1868	5	78	93	Blue
GYDEAW249	.970-.990	37 X .1401	4	52	95	Red
GYDEAW256	.991-1.010	1, 37#7	4	85	108	Green
GYDEAW279	1.050-1.120	37 X .1571	3	83	117	Black
GYDEAW288	1.130-1.170	37#6	3	86	120	Yellow
Galvanized 'B' Coat						
GYDEGB047	–	3/16"	100	20	20	Red
GYDEGB055	–	7/32"	100	25	22	Green
GYDEGB061	–	1/4"	50	17	25	Yellow
GYDEGB071	–	9/32"	50	27	28	Blue
GYDEGB079	–	5/16"	50	35	30	Black
GYDEGB091	–	3/8"	50	52	35	Orange
GYDEGB110	–	7/16"	50	40	38	Green
Galvanized 'C' Coat						
GYDEGC047	–	3/16"	100	20	20	Red
GYDEGC055	–	7/32"	100	25	22	Green
GYDEGC061	–	1/4"	50	17	25	Yellow
GYDEGC071	–	9/32"	50	27	28	Blue
GYDEGC079	–	5/16"	50	35	30	Black
GYDEGC091	–	3/8"	50	52	35	Orange
GYDEGC110	–	7/16"	50	40	38	Green

RUS Approved

Longspan Tie

MATERIALS

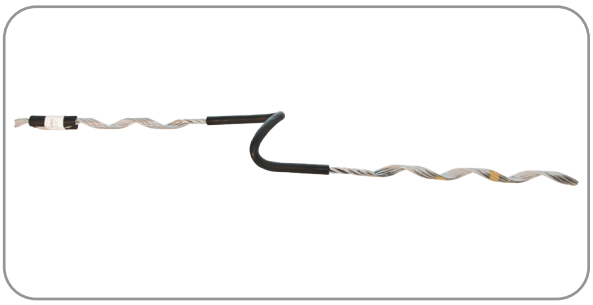
Tie - Aluminum alloy for aluminum based conductor.

Center section - Specially formulated elastomer.

Identification tag - Identifies catalog number, neck size, nominal conductor size and conductor range.

Color code - Identifies proper conductor range.

Insulator identification mark (identifies insulator head size)
Black -C Neck
Yellow -F Neck
Green -J Neck



General Recommendations

To insure proper fit and service life, it is recommended that only insulators corresponding to C Neck, F Neck, or J Neck be used as specified by ANSI C29.5 The top groove radius, neck size, and groove height relationship corresponding to each neck size are shown at the beginning of each listing.

Longspan Ties are recommended as an improvement over Armor Rods secured with hand tie wire. For areas subject to both wind sway and vibration, Longspan Ties provide superior abrasion protection and are superior to a well made hand tie - Armor Rod combination in regard to conductor fatigue.

Longspan Tie Pad

The pad component is recommended for bare conductor because it prevents contact with the insulator and compensates for insulator misalignment. With the pad, Longspan Ties not only replace armoring products, but provide superior protection by eliminating abrasion rather than sacrificing outside surfaces to abrasion.

Maximum Size

Longspan Ties are available for conductors up to 1. 240" O. D. depending on the insulators top groove radius.

Line Angle

On vertically mounted insulators, Longspan Ties are recommended for running line angles of up to 10 degrees. Larger angles can be turned when Longspan Ties are used with Side Ties or with pins and brackets having various degrees of cant.

Unbalanced Loading

Under unbalanced load conditions, the Longspan Tie has the resiliency to permit some longitudinal displacement of the conductor over the insulator without loosening the tie or damaging the conductor.

Radio Interference

The RIV characteristics of Longspan Ties are superior to those of well made hand ties when originally installed. During service-life, the pre-contoured helix assures consistent fit which has better RIV characteristics than loosened tie-wire.

Tapping

Tapping over applied legs of the Longspan Tie is not recommended. Taps should be located at least 6 inches from the end of the legs.

Double Supports

At double crossarms, 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.

continued →

RUS Approved

Longspan Tie

C Neck

ACSR, All-Aluminum, Aluminum Alloy, AWAC, Compacted All-Aluminum, Compacted ACSR

Selection Information

LT X XXX

Longspan Tie
Insulator "C" Neck Size
Numeric Range Code

2-1/4" Neck Diameter ANSI Class 55-2 and 55-3 / Groove Height Relationship 9/16" Min. 7/8" Max.
Insulator Identification Mark: Black

AFL NO.	DIA. RANGE INCHES	NOMINAL CONDUCTOR SIZE	UNITS PER CARTON	WT. PER CARTON POUNDS	APPLIED LENGTH INCHES	COLOR CODE
LTC 063	.248-.259	#4, 6/1-7/1 #4, 7W, Aluminum Alloy	100	21	19	Orange
LTC 066	.260-.269	#4, AWAC, 5/2 #3, 7W, All- Aluminum #2, 7W Compacted	100	21	19	Green
LTC 068	.270-.280	#3, 7W, Aluminum Alloy #3, AWAC, 6/1	100	21	19	Yellow
LTC 071	.281-.291	#4, AWAC, 4/3 #3, 6/1 #2, 6/1, Compacted	100	24	20.5	White
LTC 074	.292-.303	#3, AWAC, 5/2 #2, 7W, All Aluminum #2, 7/1 Compacted	100	24	20.5	Purple
LTC 077	.304-.314	#4, AWAC. 3/4 #2, AWAC, 6/1	100	24	21.5	Brown
LTC 080	.315-.327	#2, 6/1-7/1 #2, 7W, Aluminum Alloy	100	24	21.5	Red
LTC 083	.328-.340	#2, AWAC, 5/2 #1, 7W, All Aluminum 1/0, 7W COMP	100	25	22.5	Blue
LTC 086	.341-.353	#3, AWAC, 3/4 #1, 7W, Aluminum Alloy	100	25	22.5	Orange
LTC 090	.354-.367	#2, AWAC, 4/3 #1,6/1 1/0, 6/1, COMP,	100	26	23.5	Green
LTC 093	.368-.381	1/0, 7W, All Aluminum 2/0, 7W, Compacted	100	26	20	Black
LTC 097	.382-.394	#2, AWAC, 3/4 1/0, AWAC, 6/1	100	27	21	White
LTC 100	.395 -.411	1/0, 6/1 1/0, 7W, Aluminum Alloy	100	27	21	Yellow
LTC 104	.412-.437	2/0, 7W-19W, All Aluminum 3/0, 7W-19W, COMP	100	27	22	Brown
LTC 111	.438-.463	2/0, 6/1-7/1 2/0, 7W, Aluminum Alloy	100	28	23	Blue
LTC 118	.464-.492	3/0, 7W-19W, All Aluminum 4/0, 7W-19W, COMP	50	18	24.5	Green

continued

RUS Approved

Longspan Tie

C Neck

ACSR, All-Aluminum, Aluminum Alloy, AWAC, Compacted All-Aluminum, Compacted ACSR

Selection Information

AFL NO.	DIA. RANGE INCHES	NOMINAL CONDUCTOR SIZE	UNITS PER CARTON	WT. PER CARTON POUNDS	APPLIED LENGTH INCHES	COLOR CODE
LTC 125	.493-.522	3/0, 6/1 3/0, 7W, Aluminum Alloy 4/0, 7W, All Aluminum	50	18	24.5	Orange
LTC 133	.523-.554	3/0, AWAC. 5/2 4/0, 19W, All Aluminum 266.8, 7W-19W, COMP	50	18	26.5	Black
LTC 141	.555-.594	4/0, 6/1 4/0, 7W, Aluminum Alloy 266.8, 7W- 19W, All Alum	50	19	27.5	Red
LTC 151	.595-.630	266.8,18/1 300, 19W-37W, All Aluminum	50	21	28.5	Purple
LTC 160	.631-.664	266.8, 26/7 266.8, 19W, Aluminum Alloy	50	21	28.5	Yellow
LTC 169	.665-.705	336.4,18/1-36/1 336.4, 19W, All Aluminum 350, 19W-37W, All Aluminum	50	21	29.5	Brown
LTC 179	.706-.747	336.4, 26/7-30/7 397.5, 19W, All Aluminum	50	22	30.5	Green
LTC 190	.748-.795	397.5, 24/7-26/7 397.5, 19W, Aluminum Alloy 477, 19W-37W, All Aluminum	50	18	33	Orange
LTC 202	.796-.846	477, 18/1, 36/1 500, 19W, All Aluminum	50	20	37	Purple
LTC 215	.847-.900	556.5, 18/1, 36/1 556.5, 19W, 37W, All Aluminum	50	21	39	Blue
LTC 229	.901-.958	636, 18/1,36/1 636, 37W, All Aluminum 556.5M, 19W, Aluminum Alloy	50	21	41	Green
LTC 243	.959-1.018	666.6, 24/7, 54/7 750, 37W, All Aluminum 636, 37W, Aluminum Alloy	50	22	43	White
LTC 259	1.019-1.083	795, 36/1, 45/7 795, 37W, All Aluminum	50	23	45	Brown
LTC 275	1.084-1.151	954,36/1 954, 37W, All Aluminum 795, 37W, Aluminum Alloy	50	24	47	Orange
LTC 292	1.152-1.223	954, 45/7, 54/7 1033.5, 37W, All Aluminum 954, 37W, Aluminum Alloy	50	25	49	Purple
LTC 311	1.224- 1.240		50	27	59	Black

Right-Hand Lay Standard

continued

RUS Approved

Longspan Tie

F Neck

ACSR, All-Aluminum, Aluminum Alloy, AWAC, Compacted All-Aluminum, Compacted ACSR

Selection Information

LT X XXX

Longspan Tie

Insulator "F" Neck Size

Numeric Range Code

2-7/8" Neck Diameter ANSI Class 55-4 and 55-5 Pin Type/57-1. 57-2 and 57-3 Post Type Groove Height Relationship 9/16" Min. 7/8" Max.

Insulator Identification Mark: Yellow

AFL NO.	DIA. RANGE INCHES	NOMINAL CONDUCTOR SIZE	UNITS PER CARTON	WT. PER CARTON POUNDS	APPLIED LENGTH INCHES	COLOR CODE
LTF 063	.248-.259	#4,6/1-7/1 #4, 7W Aluminum Alloy	100	24	20.75	Orange
LTF 066	.260-.269	#4, AWAC, 5/2 #3, 7W, All- Aluminum #2, 7W Compacted	100	24	20.75	Green
LTF 068	.270-.280	#3, 7W, Aluminum Alloy #3, AWAC, 6/1	100	24	20.75	Yellow
LTF 071	.281-.291	#4, AWAC, 4/3 #3, 6/1 #2, 6/1, Compacted	100	26	21.75	White
LTF 074	.292-.303	#3, AWAC, 5/2 #3, 7W, All Aluminum #2, 7/1 Compacted	100	26	21.75	Purple
LTF 077	.304-.314	#4, AWAC. 3/4 #2, AWAC, 6/1	100	27	22.75	Brown
LTF 080	.315-.327	#2, 6/1-7/1 #2, 7W, Aluminum Alloy	100	27	22.75	Red
LTF 083	.328-.340	#2, AWAC, 5/2 #1, 7W, All Aluminum 1/0, 7W COMP	100	27	23.75	Blue
LTF 086	.341-.353	#3, AWAC, 3/4 #1, 7W, Aluminum Alloy	100	27	23.75	Orange
LTF 090	.354-.367	#2, AWAC, 4/3 #1,6/1 1/0, 6/1, COMP,	100	28	24.75	Green
LTF 093	.368-.381	1/0, 7W, All Aluminum 2/0, 7W, Compacted	100	29	21.5	Black
LTF 097	.382-.394	#2, AWAC, 3/4 1/0, AWAC, 6/1	100	29	22.5	White
LTF 100	.395 -.411	1/0, 6/1 1/0, 7W, Aluminum Alloy	100	29	22.5	Yellow
LTF 104	.412-.437	2/0, 7W-19W, All Aluminum 3/0, 7W-19W, COMP	100	30	23.5	Brown
LTF 111	.438-.463	2/0, 6/1-7/1 2/0, 7W, Aluminum Alloy	100	31	24.5	Blue
LTF 118	.464-.492	3/0, 7W-19W, All Aluminum 4/0, 7W-19W, COMP	50	20	25.5	Green

continued

Longspan Tie

F Neck

ACSR, All-Aluminum, Aluminum Alloy, AWAC, Compacted All-Aluminum, Compacted ACSR

Selection Information

AFL NO.	DIA. RANGE INCHES	NOMINAL CONDUCTOR SIZE	UNITS PER CARTON	WT. PER CARTON POUNDS	APPLIED LENGTH INCHES	COLOR CODE
LTF 125	.493-.522	3/0, 6/1 3/0, 7W, Aluminum Alloy 4/0, 7W, All Aluminum	50	20	25.5	Orange
LTF 133	.523-.554	3/0, AWAC. 5/2 4/0, 19W, All Aluminum 4/0, 18/1 266.8, 7W-19W, COMP	50	20	25.5	Black
LTF 141	.555-.594	4/0, 6/1 4/0, 7W, Aluminum Alloy 266.8, 7W- 19W, All Alum	50	20	26.5	Red
LTF 151	.595-.630	266.8,18/1 300, 19W-37W, All Aluminum	50	22	28	Purple
LTF 160	.631-.664	266.8, 26/7 266.8, 19W, Aluminum Alloy	50	22	29	Yellow
LTF 169	.665-.705	336.4,18/1-36/1 336.4, 19W, All Aluminum 350, 19W-37W, All Aluminum	50	22	29	Brown
LTF 179	.706-.747	336.4, 26/7-30/7 397.5, 19W, All Aluminum	50	23	30	Green
LTF 190	.748-.795	397.5, 24/7-26/7 397.5, 19W, Aluminum Alloy 477, 19W-37W, All Aluminum	50	24	32.5	Orange
LTF 202	.796-.846	477, 18/1, 36/1 500, 19W, All Aluminum	50	20	37	Purple
LTF 215	.847-.900	556.5, 18/1, 36/1 556.5, 19W, 37W, All Aluminum	50	21	39	Blue
LTF 229	.901 -.958	636, 18/1,36/1 636, 37W, All Aluminum 556.5M, 19W, Aluminum Alloy	50	22	41	Green
LTF 243	.959-1.018	666.6, 24/7, 54/7 750, 37W, All Aluminum 636, 37W, Aluminum Alloy	50	22	43	White
LTF 259	1.019-1.083	795, 36/1.45/7 795, 37W, All Aluminum	50	23	45	Brown
LTF 275	1.084-1.151	954,36/1 954, 37W, All Aluminum 795, 37W, Aluminum Alloy	50	24	47	Orange
LTF 292	1.152-1.223	954, 45/7, 54/7 1033.5, 37W, All Aluminum 954, 37W, Aluminum Alloy	50	25	49	Purple
LTF 311	1.224- 1.240		50	29	59	Black

Right-Hand Lay Standard

continued

RUS Approved

Longspan Tie

J Neck

ACSR, All-Aluminum, Aluminum Alloy, AWAC, Compacted All-Aluminum, Compacted ACSR

Selection Information

LT X XXX

Longspan Tie

Insulator "J" Neck Size

Numeric Range Code

3-1/2" Neck Diameter ANSI Class 55-6 and 65-7 Single Skirt Pin / 56-1 Double Skirt Pin Type Groove Height Relationship 1/4" Min. 5/8" Max.

Insulator Identification Mark: Green

AFL NO.	DIA. RANGE INCHES	NOMINAL CONDUCTOR SIZE	UNITS PER CARTON	WT. PER CARTON POUNDS	APPLIED LENGTH INCHES	COLOR CODE
LTJ 063	.248-.259	#4,6/1-7/1 #4, 7W Aluminum Alloy	100	29	21	Orange
LTJ 066	.260-.269	#4, AWAC, 5/2 #3, 7W, All- Aluminum #2, 7W Compacted	100	29	21	Green
LTJ 068	.270-.280	#3, 7W, Aluminum Alloy #3, AWAC, 6/1	100	29	21	Yellow
LTJ 071	.281-.291	#4, AWAC, 4/3 #3, 6/1 #2, 6/1, Compacted	100	32	21	White
LTJ 074	.292-.303	#3, AWAC, 5/2 #2, 7W, All Aluminum #2, 7/1 Compacted	100	32	22	Purple
LTJ 077	.304-.314	#4, AWAC. 3/4 #2, AWAC, 6/1	100	33	22	Brown
LTJ 080	.315-.327	#2, 6/1-7/1 #2, 7W, Aluminum Alloy	100	33	23	Red
LTJ 083	.328-.340	#2, AWAC, 5/2 #1, 7W, All Aluminum 1/0, 7W COMP	100	33	23	Blue
LTJ 086	.341-.353	#3, AWAC, 3/4 #1, 7W, Aluminum Alloy	100	33	24	Orange
LTJ 090	.354-.367	#2, AWAC, 4/3 #1,6/1 1/0, 6/1, COMP,	100	33	24	Green
LTJ 093	.368-.381	1/0, 7W, All Aluminum 2/0, 7W, Compacted	100	33	25	Black
LTJ 097	.382-.394	#2, AWAC, 3/4 1/0, AWAC, 6/1	100	34	23	White
LTJ 100	.395-.411	1/0, 6/1 1/0, 7W, Aluminum Alloy	100	34	24	Yellow
LTJ 104	.412-.437	2/0, 7W-19W, All Aluminum 3/0, 7W-19W, COMP	100	35	25	Brown
LTJ 111	.438-.463	2/0, 6/1-7/1 2/0, 7W, Aluminum Alloy	100	35	26	Blue
LTJ 118	.464-.492	3/0, 7W-19W, All Aluminum 4/0, 7W-19W, COMP	50	21	28	Green

continued

Longspan Tie

J Neck

ACSR, All-Aluminum, Aluminum Alloy, AWAC, Compacted All-Aluminum, Compacted ACSR

Selection Information

AFL NO.	DIA. RANGE INCHES	NOMINAL CONDUCTOR SIZE	UNITS PER CARTON	WT. PER CARTON POUNDS	APPLIED LENGTH INCHES	COLOR CODE
LTJ 125	.493-.522	3/0, 6/1 3/0, 7W, Aluminum Alloy 4/0, 7W, All Aluminum	50	21	28	Orange
LTJ 133	.523-.554	3/0, AWAC. 5/2 4/0, 19W, All Aluminum 4/0, 18/1 266.8, 7W-19W, COMP	50	21	28	Black
LTJ 141	.555-.594	4/0, 6/1 4/0, 7W, Aluminum Alloy 266.8, 7W- 19W, All Alum	50	22	29	Red
LTJ 151	.595-.630	266.8,18/1 300, 19W-37W, All Aluminum	50	24	30	Purple
LTJ 160	.631-.664	266.8, 26/7 266.8, 19W, Aluminum Alloy	50	24	31	Yellow
LTJ 169	.665-.705	336.4,18/1-36/1 336.4, 19W, All Aluminum 350, 19W-37W, All Aluminum	50	24	31	Brown
LTJ 179	.706-.747	336.4, 26/7-30/7 397.5, 19W, All Aluminum	50	25	32	Green
LTJ 190	.748-.795	397.5, 24/7-26/7 397.5, 19W, Aluminum Alloy 477, 19W-37W, All Aluminum	50	26	34	Orange
LTJ 202	.796-.846	477, 18/1, 36/1 500, 19W, All Aluminum	50	21	39.5	Purple
LTJ 215	.847-.900	556.5, 18/1, 36/1 556.5, 19W, 37W, All Aluminum	50	22	41	Blue
LTJ 229	.901-.958	636, 18/1,36/1 636, 37W, All Aluminum 556.5M, 19W, Aluminum Alloy	50	23	43	Green
LTJ 243	.959-1.018	666.6, 24/7, 54/7 750, 37W, All Aluminum 636, 37W, Aluminum Alloy	50	24	45	White
LTJ 259	1.019-1.083	795, 36/1.45/7 795, 37W, All Aluminum	50	24	47	Brown
LTJ 275	1.084-1.151	954,36/1 954, 37W, All Aluminum 795, 37W, Aluminum Alloy	50	25	49	Orange
LTJ 292	1.152-1.223	954, 45/7, 54/7 1033.5, 37W, All Aluminum 954, 37W, Aluminum Alloy	50	26	51	Purple
LTJ 311	1.224-1.240		50	30	59.5	Black

Right-Hand Lay Standard

RUS Approved

Distribution Tie

MATERIALS

Tie - Aluminum covered steel.

Pad - An elastomer tube is supplied with each Distribution Tie used on bare conductor, and they are identified by catalog number suffix P.

Distribution Ties are supplied without pads for plastic jacketed conductor identified by catalog number suffix T.

Identification tag - Identifies catalog number, neck size, nominal conductor range, and conductor diameter range.

Color code - There are two color codes on Distribution Ties. The inside color code identifies the proper conductor size and the outside color code identifies the insulator neck size as shown below:

Insulator identification mark (identifies insulator head size)
Black - C Neck
Yellow - F Neck
Green - J Neck

General Recommendations

To insure proper fit and service life, it is recommended that only insulators corresponding to C Neck, F Neck, or J Neck be used. The neck diameters and groove height dimensions appear in ANSI Standard for low and medium voltage pin type insulators and also at the beginning of each listing.

Distribution Ties are recommended as an improvement over Armor Rods secured with hand tie wire and clamp top insulators. When installed with a pad on bare conductor, they provide superior protection against abrasion and all types of conductor motion. The pad is a resilient cushion at the point of contact between conductor and insulator.

Distribution Ties without pads are intended for plastic jacketed conductor but may be used to replace hand tie wire in areas where abrasion damage has not been experienced.

Maximum Size

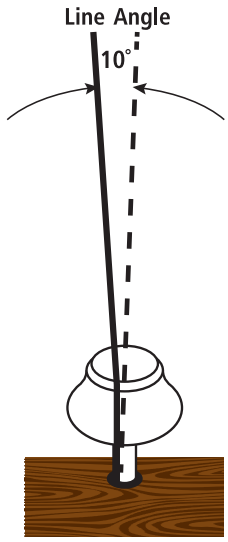
Conductor sizes up to 1.240" O.D. can be accommodated depending on the insulator top groove radius.

Line Angle

On vertically mounted insulators, Distribution Ties are recommended for running line angles of up to 10 degrees. Larger angles can be turned when Distribution Ties are used with Side Ties or with pins and brackets having various degrees of cant.

Unbalanced Loading

Under unbalanced load conditions, the Distribution Tie has the resiliency to permit some longitudinal displacement of the conductor over the insulator without loosening the tie or damaging the conductor.



Radio Interference

The RIV characteristics of Distribution Ties are superior to those of well made hand ties when originally installed. During service life, the pre-contoured helix assures consistent fit which has better RIV characteristics than loosened tie wire.

Tapping

Tapping over applied legs of the Distribution Tie is not recommended. Taps should be located at least 6 inches from the end of the legs.

continued

Distribution Tie

C Neck with Pad

ACSR, All-Aluminum, Aluminum Alloy, AWAC, Compacted All-Aluminum, Compacted ACSR

Selection Information

DT X XXX X

Longspan Tie
Insulator "F" or "J" Neck Size
Numeric Range Code
Pad *(P=With T=Without)*

2-1/4" Neck Diameter ANSI Class 55-2 and 55-3 / Groove Height Relationship 9/16" Min. 7/8" Max.

AFL NO.	DIA. RANGE INCHES	NOMINAL CONDUCTOR SIZE	UNITS PER CARTON	WT. PER CARTON POUNDS	APPLIED LENGTH INCHES	COLOR CODE
DTC 048P	.190-.215	#6, 6/1 #4, 7W, Compacted	100	17	24	Blue
DTC 055P	.216-.244	#4, 7W, All Aluminum #4, 6/1, 7/1 Compacted	100	18	25	Brown
DTC 062P	.245-.277	#4, 6/1, 7/1 #4, 7W, Aluminum Alloy	100	18	26	Orange
DTC 070P	.278-.315	#3, 7W, Aluminum Alloy #2, 7W, All Aluminum	100	18	26	Purple
DTC 080P	.316-.357	#2, 6/1, 7/1 #2, 7W, Aluminum Alloy #1, 6/1	100	19	28	Red
DTC 091P	.358-.405	1/0, 7W, All Aluminum 1/0, 6/1 1/0, 7W, Aluminum Alloy	100	20	30	Yellow
DTC 103P	.406-.459	2/0, 7W, All Aluminum 2/0, 6/1 2/0, 7W, Aluminum Alloy	50	17	25	Blue
DTC 117P	.460-.520	3/0, 7W, All Aluminum 3/0, 6/1 3/0, 7W, Aluminum Alloy	50	17	25	Orange
DTC 132P	.521-.588	4/0, 7W, All Aluminum 4/0, 6/1 4/0, 7W. Aluminum Alloy	50	18	28	Red
DTC 149P	.589 -.665	266.8, 37W, All Aluminum 266.8, 18/1	50	18	30	Purple
DTC 169P	.666-.755	336.4, 19W, All Aluminum 336.4, 18/1 397.5, 19W, All Aluminum 400, 19W, 37W, All Aluminum	50	19	31	Brown
DTC 192P	.756-.855	477, 19W, 37W, All Aluminum 477, 18/1, 24/7	50	19	32	Red
DTC 217P	.856-.968	556.5, 24/7 636, 18/1 700, 37W, 61W, All Aluminum	50	20	34	Blue
DTC 246P	.969-1.096	795, 37W, All Aluminum 795, 61W, All Aluminum 715.5, 24/7 795, 54/7	50	21	37	Green
DTC 278P	1.097-1.240	954, 36/1, 54/7 1033.5, 37W 61W, All Aluminum	50	22	40	Yellow

Right-Hand Lay Standard

Note: For further information on how to order, see the Selection Information above.

continued →

RUS Approved

Distribution Tie

F Neck with Pad

ACSR, All-Aluminum, Aluminum Alloy, AWAC, Compacted All-Aluminum, Compacted ACSR

2-7/8" Neck Diameter ANSI Class 55-4 and 55-5 Pin Type/57-1, 57-2 and 57-3 Post Type Groove Height Relationship 9/16" Min. 7/8" Max.

Insulator Identification Mark: Yellow

AFL NO.	DIA. RANGE INCHES	NOMINAL CONDUCTOR SIZE	UNITS PER CARTON	WT. PER CARTON POUNDS	APPLIED LENGTH INCHES	COLOR CODE
DTF 048P	.190-.215	#6, 6/1 #4, 7W, Compacted	100	18	25	Blue
DTF 055P	.216-.244	#4, 7W, All Aluminum #4, 6/1, 7/1 Compacted	100	19	26	Brown
DTF 062P	.245-.277	#4, 6/1, 7/1 #4, 7W, Aluminum Alloy	100	19	27	Orange
DTF 070 P	.278-.315	#3, 7W, Aluminum Alloy #2, 7W, All Aluminum	100	20	29	Purple
DTF 080P	.316-.357	#2, 6/1, 7/1 #2, 7W, Aluminum Alloy #1, 6/1	100	20	31	Red
DTF 091P	.358-.405	1/0, 7W, All Aluminum 1/0, 6/1 1/0, 7W, Aluminum Alloy	100	21	32	Yellow
DTF 103P	.406-.459	2/0, 7W, All Aluminum 2/0, 6/1 2/0, 7W, Aluminum Alloy	50	18	26	Blue
DTF 117P	.460-.520	3/0, 7W, All Aluminum 3/0, 6/1 3/0, 7W, Aluminum Alloy	50	18	27	Orange
DTF 132P	.521-.588	4/0, 7W, All Aluminum 4/0, 6/1 4/0, 7W. Aluminum Alloy	50	19	29	Red
DTF 149P	.589-.665	266.8, 37W, All Aluminum 266.8, 18/1	50	19	32	Purple
DTF 169P	.666-.755	336.4, 19W, All Aluminum 336.4, 18/1 397.5, 19W, All Aluminum 400, 19W, 37W, All Aluminum	50	20	32	Brown
DTF 192P	.756-.955	477, 19W, 37W, All Aluminum 477, 18/1, 24/7	50	20	33	Red
DTF 217P	.856-.968	556.5, 24/7 636, 18/1 700, 37W, 61W, All Aluminum	50	21	35	Blue
DTF 246P	.969-1.096	795, 37W, All Aluminum 795, 61W, All Aluminum 715.5, 24/7 795, 54/7	50	22	38	Green
DTF 278P	1.097-1.240	954, 36/1, 54/7 1033.5, 37W 61W, All Aluminum	50	23	41	Yellow

Right-Hand Lay Standard

Note: For further information on how to order, see the Selection Information on page 15.

continued

RUS Approved

Distribution Tie

J Neck with Pad

ACSR, All-Aluminum, Aluminum Alloy, AWAC, Compacted All-Aluminum, Compacted ACSR

3-1/2" Diameter ANSI Class 55-6 and 55-7 Single Skirt Pin Type/56-1 Double Skirt Pin Type
Groove Height Relationship 9/16" Min. 7/8" Max.

Insulator Identification Mark: Green

AFL NO.	DIA. RANGE INCHES	NOMINAL CONDUCTOR SIZE	UNITS PER CARTON	WT. PER CARTON POUNDS	APPLIED LENGTH INCHES	COLOR CODE
DTJ 048P	.190-.215	#6, 6/1 #4, 7W, Compacted	100	19	26	Blue
DTJ 055P	.216-.244	#4, 7W, All Aluminum #4, 6/1, 7/1 Compacted	100	20	27	Brown
DTJ 062P	.245-.277	#4, 6/1, 7/1 #4, 7W, Aluminum Alloy	100	20	28	Orange
DTJ 070P	.278-.315	#3, 7W, Aluminum Alloy #2, 7W, All Aluminum	100	21	30	Purple
DTJ 080P	.316-.357	#2, 6/1, 7/1 #2, 7W, Aluminum Alloy #1, 6/1	100	21	32	Red
DTJ 091P	.358-.405	1/0, 7W, All Aluminum 1/0, 6/1 1/0, 7W, Aluminum Alloy	100	22	33	Yellow
DTJ 103P	.406-.459	2/0, 7W, All Aluminum 2/0, 6/1 2/0, 7W, Aluminum Alloy	50	19	27	Blue
DTJ 117P	.460-.520	3/0, 7W, All Aluminum 3/0, 6/1 3/0, 7W, Aluminum Alloy	50	19	28	Orange
DTJ 132P	.521-.588	4/0, 7W, All Aluminum 4/0, 6/1 4/0, 7W. Aluminum Alloy	50	20	30	Red
DTJ 149P	.589-.665	266.8, 37W, All Aluminum 266.8, 18/1	50	20	33	Purple
DTJ 169P	.666-.755	336.4, 19W, All Aluminum 336.4, 18/1 397.5, 19W, All Aluminum 400, 19W, 37W, All Aluminum	50	21	33	Brown
DTJ 192P	.756-.855	477, 19W, 37W, All Aluminum 477, 18/1, 24/7	50	21	34	Red
DTJ 217P	.856-.968	556.5, 24/7 636, 18/1 700, 37W, 61W, All Aluminum	50	22	36	Blue
DTJ 246P	.969-1.096	795, 37W, All Aluminum 795, 61W, All Aluminum 715.5, 24/7 795, 54/7	50	23	39	Green
DTJ 278P	1.097 -1.240	954, 36/1, 54/7 1033.5, 37W 61W, All Aluminum	50	24	42	Yellow

Right-Hand Lay Standard

Note: For further information on how to order, see the Selection Information on page 15.

RUS Approved

Double Support Tie

MATERIALS

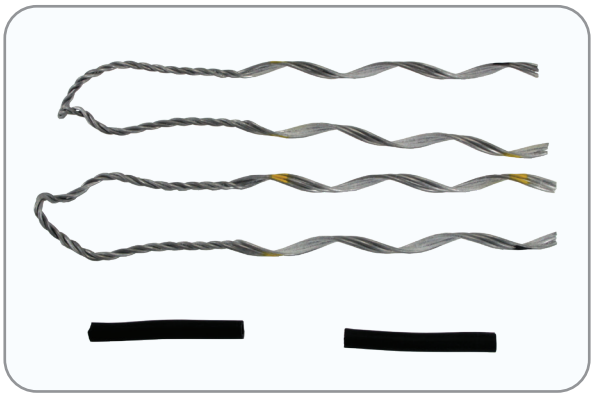
Ties - (2 each) Aluminum alloy.

Pads - (2 each) Specially formulated elastomer

Identification tags - (2 each) Identifies catalog number, neck size, nominal conductor size and conductor diameter range.

Color code - Each Double Support Tie has two color codes. The inside code identifies the proper conductor size and the leg color code identifies the insulator neck size:

Insulator identification mark (identifies insulator head size)
Black - C Neck
Yellow - F Neck
Green - J Neck



General Recommendations

To insure proper fit and service life, it is recommended that only insulators corresponding to C Neck, F Neck, or J Neck be used. These neck diameter and groove height dimensions appear in ANSI Standard for low and medium voltage pin type insulators.

Double Support Ties are recommended as an improvement over Armor Rods secured with hand tie wire. For areas subject to both wind sway and vibration. Double Support Ties provide superior abrasion protection, to a well made hand tie - Armor Rod combination in regard to conductor fatigue.

Pad

The pad component is provided for bare conductor because it prevents contact with the insulator and compensates for insulator misalignment. With the pad. Double Support Ties not only replace armoring products but provide superior protection by eliminating rather than sacrificing outside surfaces to abrasion.

Maximum Size

Double Support Ties are available for conductors up to 1.240" O.D. depending on the insulators top groove radius.

Line Angle

On vertically mounted insulators. Double Support Ties are recommended for running line angles of up to 10 degrees.

Unbalanced Loading

Under unbalanced load conditions, the Double Support Tie has the resiliency to permit some longitudinal displacement of the conductor over the insulator without loosening the tie or damaging the conductor.

Radio Interference

The RIV characteristics of Double Support Ties are superior to those of well made hand ties when originally installed. During service-life, the pre-contoured helix assures consistent fit which has better RIV characteristics than loosened tie wire.

Tapping

Tapping over applied legs of the Double Support Tie is not recommended. Taps should be located at least 6 inches from the end of the legs.

continued →

RUS Approved

Double Support Tie

C Neck and F Neck

ACSR, All-Aluminum, Aluminum Alloy, AWAC, Compacted All-Aluminum and Compacted ACSR

Selection Information

DST XX XXX

Double Support Tie
Insulator "C" and "F" Neck Size
Numeric Range Code

C Neck 2-1/4" Neck Diameter ANSI Class 55-2 and 55-3 / F Neck 2-7/8" Neck Diameter ANSI Class 55-4 and 55-5 Pin Type 57-1. 57-2 and 57-3 Post Type

Insulator Identification Mark: Black/Yellow

AFL NO.	DIA. RANGE INCHES	NOMINAL CONDUCTOR SIZE	UNITS PER CARTON	WT. PER CARTON POUNDS	APPLIED LENGTH INCHES	COLOR CODE
DSTCF 062	.245-.277	#4, 6/1-7/1 #4, 7W, Aluminum Alloy	50	11	13	Orange
DSTCF 070	.278-.315	#3, 7W, Aluminum Alloy #2, 7W, All Aluminum	50	11	13	Purple
DSTCF 080	.316-.357	#2, 6/1, 7/1 #2, 7W, Aluminum Alloy #1, 6/1	50	15	14	Red
DSTCF 091	.358-.405	1/0, 7W, All Aluminum 1/0, 6/1 1/0, 7W, Aluminum Alloy	50	16	14	Yellow
DSTCF 103	.406-.459	2/0, 7W, All Aluminum 2/0, 6/1 2/0, 7W, Aluminum Alloy	50	16	15	Blue
DSTCF 117	.460-.520	2/0, 7W, All Aluminum 2/0, 6/1 2/0, 7W, Aluminum Alloy	50	23	16	Orange
DSTCF 132	.521-.588	4/0, 7W, All Aluminum 4/0, 6/1 4/0, 7W, Aluminum Alloy	50	23	17	Red
DSTCF 149	.589-.665	266.8, 37W, All Aluminum 266.8,18/1	50	26	17	Purple
DSTCF 169	.666-.755	336.4, 19W, All Aluminum 336.4, 18/1 336.4, 37W, All Aluminum 397.5, 19W, All Aluminum 400, 19W, 37W, All Aluminum	50	28	18	Brown
DSTCF 192	.756-.855	477, 19W, 37W, All Aluminum 477, 18/1, 24/7	50	30	20	Red
DSTCF 217	.856-.968	556.5, 19W, All Aluminum 636,18/1 700, 37W, 61W, All Aluminum	50	30	21	Blue
DSTCF 246	.969-1.096	795, 37W, 6 1 W, All Aluminum 715.5, 24/7 795, 54/7	50	30	22	Green
DSTCF 278	1.097-1.240	954, 36/1, 54/7 1033.5, 37W, 61W, All Aluminum	50	30	23	Yellow

continued

RUS Approved

Double Support Tie

J Neck

ACSR, All-Aluminum, Aluminum Alloy, AWAC, Compacted All-Aluminum and Compacted ACSR

Selection Information

DST X XXX

Double Support Tie
Insulator "J"
Numeric Range Code

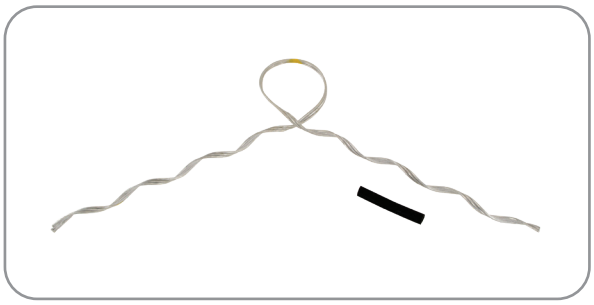
3-1/2" Diameter ANSI Class 55-6 and 55-7 Single Skirt Pin Type /56-1 Double Skirt Pin Type Groove Height Relationship 1/4" Mill. 5/8" Max.

Insulator Identification Mark: Green

AFL NO.	DIA. RANGE INCHES	NOMINAL CONDUCTOR SIZE	UNITS PER CARTON	WT. PER CARTON POUNDS	APPLIED LENGTH INCHES	COLOR CODE
DSTJ 0620	.245-.277	#4, 6/1-7/1 #4, 7W, Aluminum Alloy	50	12	14	Orange
DSTJ 0705	.278-.315	#3, 7W, Aluminum Alloy #2, 7W, All Aluminum	50	12	14	Purple
DSTJ 0800	.316-.357	#2, 6/1, 7/1 #2, 7W, Aluminum Alloy #1, 6/1	50	16	15	Red
DSTJ 0910	.358-.405	1/0, 7W, All Aluminum 1/0, 6/1 1/0, 7W, Aluminum Alloy	50	17	15	Yellow
DSTJ 1030	.406-.459	2/0, 7W, All Aluminum 2/0, 6/1 2/0, 7W, Aluminum Alloy	50	17	16	Blue
DSTJ 1170	.460-.520	2/0, 7W, All Aluminum 2/0, 6/1 2/0, 7W, Aluminum Alloy	50	25	16	Orange
DSTJ 1325	.521-.598	4/0, 7W, All Aluminum 4/0, 6/1 4/0, 7W, Aluminum Alloy	50	25	18	Red
DSTJ 1495	.589-.665	266.8, 37W, All Aluminum 266.8,18/1	50	30	18	Purple
DSTJ 1695	.666-.755	336.4, 19W, All Aluminum 336.4, 18/1 336.4, 37W, All Aluminum 397.5, 19W, All Aluminum 400, 19W, 37W, All Aluminum	50	30	19	Brown
DSTJ 1920	.756-.855	477, 19W, 37W, All Aluminum 477, 18/1, 24/7	50	33	21	Red
DSTJ 2175	.856-.968	556.5, 19W, All Aluminum 636,18/1 700, 37W, 61W, All Aluminum	50	34	22	Blue
DSTJ 2460	.969-1.096	795, 37W, 6 1 W, All Aluminum 715.5, 24/7 795, 54/7	50	37	23	Green
DSTJ 2785	1.097-1.240	954, 36/1, 54/7 1033.5, 37W, 61W, All Aluminum	50	40	24	Yellow

Side Tie

MATERIALS



Tie - Manufactured from aluminized steel for use on aluminum based conductors.

Pad - An elastomer tube is supplied with each Side Tie used on bare conductor. They are identified by catalog number suffix P. Side Ties without pads are used for plastic jacketed conductors. They are identified by catalog number suffix T.

Identification tag - Identifies catalog number, neck size, nominal conductor size, and conductor diameter range.

Color code - Each Side Tie has two color codes; the center code identifies the proper conductor size and the leg color code identifies the insulator neck sizes:

Insulator identification mark (identifies insulator head size)
Black - C Neck
Yellow - F Neck
Green - J Neck

General Recommendations

To insure proper fit and service life, it is recommended that only insulators corresponding to C Neck, F Neck, or J Neck he used. The neck diameters and groove height dimensions appear in ANSI Standard for low and medium voltage pin type insulators and also at the beginning of each listing.

Side Ties are recommended as an improvement over Armor Rods secured with hand tie wire, and clamp top insulators. When installed with a pad on bare conductor, they provide superior protection against abrasion and all types of conductor motion. The pad is a resilient cushion at the point of contact between conductor and insulator.

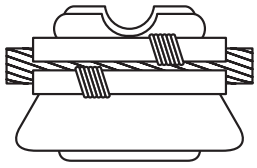


Figure 1

Side Ties without pads are intended for plastic jacketed conductor but may be used to replace hand tie wire in areas where abrasion damage has not been experienced.

In the case of the smaller sizes, the completed installation should show the applied leg tucked under the corner of the Tie Pad as shown (figure 1).

On the larger size conductor, it is optional whether the legs go under or over the corner of the Tie Pad (figure 2).

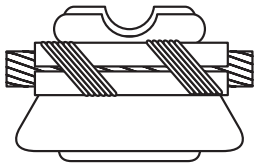


Figure 2

Side Ties exactly match the conductor ranges of the Distribution Ties which means identical color codes.

Maximum Size

Conductor sizes up to 1.240" O.D. can be accommodated depending on the insulator side groove radius.

Line Angle

On horizontally mounted insulators. Side Ties are recommended for running line angles of up to 10 degrees. Larger angles can be turned when Distribution Ties are used with side ties or with pins and brackets having various degrees of cant.

Unbalanced Loading

Under unbalanced load conditions, the Side Tie has the resiliency to permit some longitudinal displacement of the conductor over the insulator without loosening the tie or damaging the conductor.

Radio Interference

The RIV characteristics of Side Ties are superior to those of a well made hand tie when originally installed. During service-life, the pre-contoured helix assures consistent fit which has better RIV characteristics than loosened tie wire.

Tapping

Tapping over applied legs of the Side Tie is not recommended. Taps should be located at least 6 inches from the end of the legs.

continued →

RUS Approved

Side Tie

C Neck with Pad

ACSR, All-Aluminum, Aluminum Alloy, AWAC, Compacted All-Aluminum and Compacted ACSR

Selection Information

ST X XXX X

- Side Tie
- Insulator Neck Sizes (C)
- Numeric Range Code
- Pad *(P=With T=Without)*

2-7/4" Neck Diameter ANSI Class 55-2 and 55-3 / Groove Height Relationship 9/16" Min. 7/8" Max.

Insulator Identification Mark: Black

AFL NO.	DIA. RANGE INCHES	NOMINAL CONDUCTOR SIZE	UNITS PER CARTON	WT. PER CARTON POUNDS	APPLIED LENGTH INCHES	COLOR CODE
STC 048P	.190-.215	#6, 6/1 #4, 7W, Compacted	75	10	16	Blue
STC 055P	.216-.244	#4, 7W, All Aluminum #4, 6/1, 7/1 Compacted	75	10	17	Brown
STC 062P	.245-.277	#4, 6/1, 7/1 #4, 7W, Aluminum Alloy	75	13	19	Orange
STC 070P	.278-.315	#3, 7W, Aluminum Alloy #2, 7W, All Aluminum	75	13	21	Purple
STC 080P	.316-.357	#2,6/1, 7/1 #2, 7W, Aluminum Alloy #1, 6/1	75	18	24	Red
STC 091P	.358-.405	1/0, 7W, All Aluminum 1/0, 6/1 1/0, 7W, Aluminum Alloy	75	18	26	Yellow
STC 103P	.406-.459	2/0, 7W, All Aluminum 2/0, 6/1 2/0, 7W, Aluminum Alloy	75	24	28	Blue
STC 117P	.460-.520	3/0, 7W, All Aluminum 3/0, 6/1 3/0, 7W, Aluminum Alloy	75	23	31	Orange
STC 132P	.521-.588	4/0, 7W, All Aluminum 4/0, 6/1 4/0, 7W, Aluminum Alloy	35	13	32	Red
STC 149P	.589-.665	266.8, 37W, All Aluminum 266.8,18/1	35	13	23	Purple
STC 169P	.666-.755	336.4, 18/1 336.4, 37W, All Aluminum 397.5, 19W, All Aluminum 336.4, 19W, All Aluminum	35	14	25	Brown
STC 192P	.756-.855	477, 19W, 37W, All Aluminum 477,18/1,24/7	35	15	26	Red
STC 217P	.856-.968	556.5, 19W, All Aluminum 636, 18/1 700, 37W, 61W, All Aluminum	35	14	28	Blue
STC 246P	.969-1.096	795, 37W, 61W, All Aluminum 715.5, 24/7 795, 54/7			29	Green
STC 278P	1.097-1.240	954, 36/1, 54/7 1033.5, 37W, 61W, All Aluminum			33	Yellow

Right-Hand Lay Standard

continued

RUS Approved

Side Tie

F Neck with Pad

ACSR, All-Aluminum, Aluminum Alloy, AWAC, Compacted All-Aluminum and Compacted ACSR

Selection Information

ST X XXX X

- Side Tie
- Insulator Neck Sizes (F)
- Numeric Range Code
- Pad *(P=With T=Without)*

2-7/8" Neck Diameter ANSI Class 55-4 and 55-5 Pin Type/57-1, 57-2 and 57-3 Post Type Groove Height Relationship 9/16" Min. 7/8" Max.

Insulator Identification Mark: Yellow

AFL NO.	DIA. RANGE INCHES	NOMINAL CONDUCTOR SIZE	UNITS PER CARTON	WT. PER CARTON POUNDS	APPLIED LENGTH INCHES	COLOR CODE
STF 048P	.190-.215	#6, 6/1 #4, 7W, Compacted	75	11	16	Blue
STF 055P	.216-.244	#4, 7W, All Aluminum #4, 6/1, 7/1 Compacted	75	12	17	Brown
STF 062P	.245-.277	#4, 6/1, 7/1 #4, 7W, Aluminum Alloy	75	14	19	Orange
STF 070P	.278-.315	#3, 7W, Aluminum Alloy #2, 7W, All Aluminum	75	14	21	Purple
STF 080P	.316-.357	#2,6/1, 7/1 #2, 7W, Aluminum Alloy #1, 6/1	75	18	24	Red
STF 091P	.358-.405	1/0, 7W, All Aluminum 1/0, 6/1 1/0, 7W, Aluminum Alloy	75	18	26	Yellow
STF 103P	.406-.459	2/0, 7W, All Aluminum 2/0, 6/1 2/0, 7W, Aluminum Alloy	75	26	28	Blue
STF 117P	.460-.520	3/0, 7W, All Aluminum 3/0, 6/1 3/0, 7W, Aluminum Alloy	75	26	30	Orange
STF 132P	.521-.588	4/0, 7W, All Aluminum 4/0, 6/1 4/0, 7W, Aluminum Alloy	35	13	32	Red
STF 149P	.589-.665	266.8, 37W, All Aluminum 266.8,18/1	35	15	23	Purple
STF 169P	.666-.755	336.4, 18/1 336.4, 37W, All Aluminum 397.5, 19W, All Aluminum 336.4, 19W, All Aluminum	35	16	25	Brown
STF 192P	.756-.855	477, 19W, 37W, All Aluminum 477,18/1,24/7	35	17	26	Red
STF 217P	.856-.968	556.5, 19W, All Aluminum 636, 18/1 700, 37W, 61W, All Aluminum	35	19	28	Blue
STF 246P	.969-1.096	795, 37W, 61W, All Aluminum 715.5, 24/7 795, 54/7			29	Green
STF 278P	1.097-1.240	954, 6/1, 54/7 1033.5, 37W, 61W, All Aluminum			33	Yellow

Right-Hand Lay Standard

continued

RUS Approved

Side Tie

J Neck with Pad

ACSR, All-Aluminum, Aluminum Alloy, AWAC, Compacted All-Aluminum and Compacted ACSR

Selection Information

ST X XXX X

- Side Tie
- Insulator Neck Sizes (J)
- Numeric Range Code
- Pad *(P=With T=Without)*

3-1/2" Neck Diameter ANSI Class 55-6 and 55- 7 Single Skirt Pin Type / 56-1 Double Skirt Pint Type Groove Height Relationship 1/4" Min. 5/8" Max.

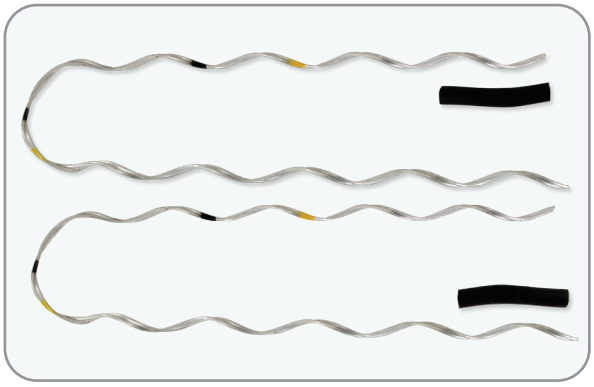
Insulator Identification Mark: Green

AFL NO.	DIA. RANGE INCHES	NOMINAL CONDUCTOR SIZE	UNITS PER CARTON	WT. PER CARTON POUNDS	APPLIED LENGTH INCHES	COLOR CODE
STJ 048P	.190-. 215	#6, 6/1 #4, 7W, Compacted	75	11	16	Blue
STJ 055P	.216-.244	#4, 7W, All Aluminum #4, 6/1, 7/1 Compacted	75	11	17	Brown
STJ 062P	.245-.277	#4, 6/1, 7/1 #4, 7W, Aluminum Alloy	75	14	19	Orange
STJ 070P	.278-.315	#3, 7W, Aluminum Alloy #2, 7W, All Aluminum	75	15	21	Purple
STJ 080P	.316-.357	#2,6/1, 7/1 #2, 7W, Aluminum Alloy #1, 6/1	75	19	24	Red
STJ 091P	.358-.405	1/0, 7W-19W, All Aluminum 1/0, 6/1 1/0, 7W, Aluminum Alloy	75	20	26	Yellow
STJ 103P	.406-.459	2/0, 7W, All Aluminum 2/0, 6/1 2/0, 7W, Aluminum Alloy	75	29	31	Blue
STJ 117P	.460-.520	3/0, 7W, All Aluminum 3/0, 6/1 3/0, 7W, Aluminum Alloy	75	29	32	Orange
STJ 132P	.521-.588	4/0, 7W, All Aluminum 4/0, 6/1 4/0, 7W, Aluminum Alloy	35	16	34	Red
STJ 149P	.589-.665	266.8, 37W, All Aluminum 266.8,18/1, 26/7	35	11	23	Purple
STJ 169P	.666-.755	336.4, 18/1 336.4, 37W, All Aluminum 397.5, 19W, All Aluminum 336.4, 19W, All Aluminum	35	15	25	Brown
STJ 192P	.756.855	477, 19W, 37W, All Aluminum 477,18/1,24/7	35	15	26	Red
STJ 217P	.856-.968	556.5, 19W, All Aluminum 636, 18/1 700, 37W, 61W, All Aluminum	35	16	28	Blue
STJ 246P	.969-1.096	795, 37W, 61W, All Aluminum 715.5, 24/7 795, 54/7			29	Green
STJ 278P	1.097-1.240	954, 36/1, 54/7 1033.5, 37W, 61W, All Aluminum			33	Yellow

Right-Hand Lay Standard

RUS Approved

Double Side Tie



MATERIALS

Ties - (2 each) Aluminum covered steel.

Identification tag - Identifies catalog number, neck size, nominal conductor size, and conductor diameter range.

Color code - Indicates the proper conductor diameter range. The C Neck and F Neck Double Side Ties have two color codes. The inner color code indicates the crossover mark for C Neck insulators and the outer color code indicates the F Neck crossover mark. J Neck Double Side Ties have only one color code.

Pads - (2 each) Specially formulated elastomer.

General Recommendations

To insure proper fit and service life, it is recommended that only insulators corresponding to C Neck, F Neck, or J Neck be used. The neck diameters and groove height dimensions appear in ANSI Standard for low and medium voltage pin type insulators.

Non-Standard Insulators

Double Side Ties are recommended as an improvement over Armor Rods secured with hand tie wire and clamp top insulators. When installed with a pad on bare conductor, they provide superior protection against abrasion and all types of conductor motion. The pad is a resilient cushion at the point of contact between conductor and insulator.

Double Side Ties are designed for double cross arm conductor support.

Maximum Size

Conductor sizes up to 1.20" O.D. can be accommodated depending on the insulator side groove radius.

Line Angle

At double cross arms, Double Side Ties are recommended for running line angles of up to 30 degrees with no more than 15 degrees at each insulator.

Unbalanced Loading

Under unbalanced load conditions, the Double Side Tie has the resiliency to permit some longitudinal displacement of the conductor over the insulator without loosening the tie or damaging the conductor.

Radio Interference

The RIV characteristics of Double Side Ties are superior to those of a well made hand tie when originally installed. During service-life, the pre-contoured helix assures consistent fit which has better RIV characteristics than loosened tie wire.

Tapping

Tapping over applied legs of the Double Side Tie is not recommended. Taps should be located at least 6 inches from the end of the legs.

continued

RUS Approved

Double Side Tie

C Neck and F Neck

ACSR, All-Aluminum, Aluminum Alloy, AWAC, Compacted All-Aluminum and Compacted ACSR

C Neck 2-1/4" Neck Diameter ANSI Class 55-2 and 55-3
F Neck 2-7/8" Neck Diameter ANSI Class 55-4 and 55-5 Pin Type
57-1, 57-2 and 57-3 Post Type

Insulator Identification Mark: Black and Yellow

AFL NO.	DIA. RANGE INCHES	NOMINAL CONDUCTOR SIZE	UNITS PER CARTON	WT. PER CARTON POUNDS	APPLIED LENGTH INCHES	COLOR CODE
DBST 062	.245-.277	#4, 6/1, 7/1 #4, 7W, Aluminum Alloy	50	21	16	Orange
DBST 070	.278-.315	#3, 7W, Aluminum Alloy #2, 7W, All Aluminum	50	21	16	Purple
DBST 080	.316-.357	#2, 6/1, 7/1 #2, 7W, Aluminum Alloy #11, 6/1	50	21	17	Red
DBST 091	.358-.405	1/0, 7W, All Aluminum 1/0, 6/1 1/0, 7W, Aluminum Alloy	50	21	16	Yellow
DBST 103	.406-.459	2/0, 7W, All Aluminum 2/0, 6/1 2/0, 7W, Aluminum Alloy	50	21	18	Blue
DBST 117	.460-.520	3/0, 7W, All Aluminum 3/0, 6/1 3/0, 7W, Aluminum Alloy	50	36	19	Orange
DBST 132	.521-.588	4/0, 7W, All Aluminum 4/0, 6/1 4/0, 7W, Aluminum Alloy	50	36	19	Red
DBST 149	.589-.665	266.8, 37W, All Aluminum 266.8,18/1	50	38	20	Purple
DBST 169	.666-.755	336.4, 19W, All Aluminum 336.4, 18/1 397.6, 19W, All Aluminum 400, 19W, 37W, All Aluminum	50	39	20	Brown
DBST 192	.756-.855	477, 19W, 37W, All Aluminum 477, 18/1, 24/7	50	39	20	Red
DBST 217	.856-.968	556.5, 19W, All Aluminum 636, 18/1 700, 37W, 61W, All Aluminum	50	42	22	Blue
DBST 246	.969-1.096	795, 37W, All Aluminum 795, 61W, All Aluminum 715.5, 24/7 795, 54/7	50	44	24	Green
DBST 278	1.097-1.240	954, 36/1, 54/7 1033.5, 37W, 61W, All Aluminum	50	44	24	Yellow

Right-Hand Lay Standard

continued

RUS Approved

Double Side Tie

J Neck

ACSR, All-Aluminum, Aluminum Alloy, AWAC, Compacted All-Aluminum and Compacted ACSR

3-1/2" Neck Diameter ANSI Class 55-6 and 55-7 Single Skirt Pin Type
56-1 Double Skirt Pin Type

Insulator Identification Mark: Green

AFL NO.	DIA. RANGE INCHES	NOMINAL CONDUCTOR SIZE	UNITS PER CARTON	WT. PER CARTON POUNDS	APPLIED LENGTH INCHES	COLOR CODE
DBSTJ 062	.245-.277	#4, 6/1, 7/1 #4, 7W, Aluminum Alloy	50	24	19	Orange
DBSTJ 070	.278-.315	#3, 7W, Aluminum Alloy #2, 7W, All Aluminum	50	21	17	Purple
DBSTJ 080	.316-.357	#2, 6/1, 7/1 #2, 7W, Aluminum Alloy #1, 6/1	50	27	22	Red
DBSTJ 091	.358-.405	1/0, 7W-19W, All Aluminum 1/0, 6/1 1/0, 7W, Aluminum Alloy	50	26	21	Yellow
DBSTJ 103	.406-.459	2/0, 7W-19W, All Aluminum 2/0, 6/1 2/0, 7W, Aluminum Alloy	50	36	19	Blue
DBSTJ 117	.460-.520	3/0, 7W, All Aluminum 3/0, 6/1 3/0, 7W, Aluminum Alloy	50	37	20	Orange
DBSTJ 132	.521-.588	4/0, 7W, All Aluminum 4/0, 6/1 4/0, 7W, Aluminum Alloy	50	39	21	Red
DBSTJ 149	.589-.665	266.8, 37W, All Aluminum 266.8,18/1	50	45	24	Purple
DBSTJ 169	.666-.755	336.4, 19W, All Aluminum 336.4, 18/1 397.6, 19W, All Aluminum 4W, 19W, 37W, All Aluminum	50	46	25	Brown
DBSTJ 192	.756-.855	477, 19W, 37W, All Aluminum 477, 18/1, 24/7	50	44	24	Red
DBSTJ 217	.856-.968	556.5, 24/7 636, 18/1 700, 37W, 61W, All Aluminum	50	43	23	Blue
DBSTJ 246	.969-1.096	795, 37W, All Aluminum 795, 61W, All Aluminum 715.5, 34/7 795, 54/7	50	43	23	Green
DBSTJ 278	1.097-1.240	954, 36/1, 54/7 1033.5, 37W, 61W, All Aluminum	50	48	25	Yellow

Right-Hand Lay Standard

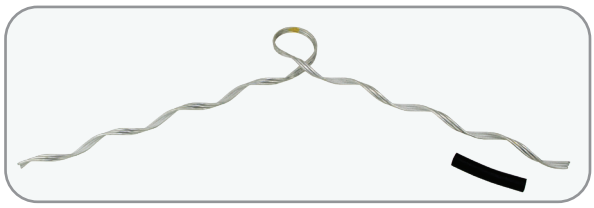
Spool Tie

MATERIALS

Ties - Manufactured of aluminum covered steel.

Pads - A specially formulated elastomer pad is supplied with each Spool Tie used for bare conductor, identified by catalog number suffix P. To specify the Spool Tie without the pad use the suffix T (for use on jacketed conductor).

Identification tag - Identifies catalog number, neck size, nominal conductor size, and conductor size.



General Recommendations

To ensure proper fit and service life, it is recommended that only spool insulators of 1-3/4" neck diameter be used of ANSI class 53-1, 53-2 and 53-3.

Spool Ties not only replace hand ties over armor rods, but Spool Ties with pads provide superior protection against abrasion and all types of conductor motion from high frequency aeolian vibration to low frequency galloping.

The pad, which surrounds the conductor is a resilient cushion where the conductor is in contact with the insulator.

Spool Ties without pads are used for jacketed conductor.

Maximum Size

Spool Ties are available for conductor sizes up to 0.968".

Line Angle

The following are the maximum permissible angles:

	HORIZONTALLY MOUNTED SPOOL	VERTICALLY MOUNTED SPOOL
LINE ANGLE	20°	15°
SAG ANGLE	15°	20°

Unbalanced Loading

Under unbalanced load conditions, the Spool Tie has the resiliency to permit some longitudinal displacement of the conductor over the insulator without loosening the tie or damaging the conductor.

Radio Interference

The RIV characteristics of Spool Ties are superior to those of a well made hand tie when originally installed. During service-life, the pre-contoured helix assures consistent fit which has better RIV characteristics than loosened tie-wire.

Tapping

Tapping over applied legs of the Spool Tie is not recommended. Taps should be located at least 6 inches from the end of the legs.

continued

Spool Tie

1-3/4 Neck With Pad

ACSR, All-Aluminum, Aluminum Alloy, AWAC, Compacted All-Aluminum and Compacted ACSR

Selection Information

SPL XXX X

Spool Tie

Numeric Range Code

Pad *(P=With T=Without)*

ANSI Class 53-1, 53-2, and 53-3 1 3/4"Neck Diameter

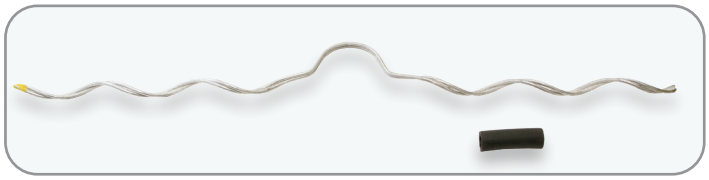
AFL NO.	DIA. RANGE INCHES	NOMINAL CONDUCTOR SIZE	UNITS PER CARTON	WT. PER CARTON POUNDS	APPLIED LENGTH INCHES	COLOR CODE
SPL 048P	.190-.215	#6, 6/1 #4, 7W, Compacted	100	12	16	Blue
SPL 055P	.216-.244	#4, 7W, All Aluminum #4, 6/1, 7/1 Compacted	100	13	17	Brown
SPL 062P	.245-.277	#4, 6/1, 7/1 #4, 7W, Aluminum Alloy	100	16	19	Orange
SPL 070IP	.278-.315	#3, 7W, Aluminum Alloy #2, 7W, All Aluminum	100	17	21	Purple
SPL 080P	.316-.357	#2,6/1, 7/1 #2, 7W, Aluminum Alloy #1, 6/1	100	23	24	Red
SPL 091P	.358-.405	1/0, 7W, All Aluminum 1/0, 6/1 1/0, 7W, Aluminum Alloy	100	24	26	Yellow
SPL 103P	.406-.459	2/0, 7W, All Aluminum 2/0, 6/1 2/0, 7W, Aluminum Alloy	100	28	28	Blue
SPL 117P	.460-.520	3/0, 7W, All Aluminum 3/0, 6/1 3/0, 7W, Aluminum Alloy	100	32	31	Orange
SPL 132P	.521-.588	4/0, 7W, All Aluminum 4/0, 6/1 4/0, 7W, Aluminum Alloy	50	18	32	Red
SPL 149P	.589-.665	266.8, 37W, All Aluminum 266.8,18/1	50	19	23	Purple
SPL 169P	.666-.755	336.4, 19W, All Aluminum 336.4, 18/1 336.4, 37W, All Aluminum 397.5, 19W, All Aluminum 400, 19W, 37W, All Aluminum	50	24	25	Brown
SPL 192P	.756-.855	477, 19W, 37W, All Aluminum 477,18/1,24/7	50	25	26	Red
SPL 217P	.856-.968	556.5, 19W, All Aluminum 636, 18/1 700, 37W, 61W, All Aluminum	50	26	28	Blue

Quick Spool Tie

MATERIALS

Ties - Manufactured of aluminum covered steel.

Pads - A specially formulated elastomer pad is supplied with each Quick Spool Tie used for bare conductor, identified by catalog number suffix P. To specify the Quick Spool Tie without the pad use the suffix T (for use on jacketed conductor).



Identification tag - Identifies catalog number, neck size, nominal conductor size, and conductor size.

General Recommendations

To insure proper fit and service life, it is recommended that only spool insulators of 1-3/4" neck diameter be used of ANSI class 53-1, 53-2 and 53-3.

Spool Ties not only replace hand ties over armor rods, but Spool Ties with pads provide superior protection against abrasion and all types of conductor motion from high frequency aeolian vibration to low frequency galloping.

The pad, which surrounds the conductor is a resilient cushion where the conductor is in contact with the insulator.

Maximum Size

Spool Ties are available for conductor sizes up to 0.968".

Line Angle

The following are the maximum permissible angles:

	HORIZONTALLY MOUNTED SPOOL	VERTICALLY MOUNTED SPOOL
LINE ANGLE	40°	10°

Unbalanced Loading

Under unbalanced load conditions, the Spool Tie has the resiliency to permit some longitudinal displacement of the conductor over the insulator without loosening the tie or damaging the conductor.

Radio Interference

The RIV characteristics of Spool Ties are superior to those of a well made hand tie when originally installed. During service-life, the pre-contoured helix assures consistent fit which has better RIV characteristics than loosened tie-wire.

Tapping

Tapping over applied legs of the Spool Tie is not recommended. Taps should be located at least 6 inches from the end of the legs.

continued

Quick Spool Tie

1-3/4 Neck With Pad

ACSR, All-Aluminum, Aluminum Alloy, AWAC, Compacted All-Aluminum and Compacted ACSR

Selection Information

SPL XXX X

Quick Spool Tie
Numeric Range Code
Pad *(P=With T=Without)*

Spool Insulators ANSI Class 53-1, 53-2, and 53-3 1 3/4"Neck Diameter

AFL NO.	DIA. RANGE INCHES	NOMINAL CONDUCTOR SIZE	UNITS PER CARTON	WT. PER CARTON POUNDS	APPLIED LENGTH INCHES	COLOR CODE
QSPL 062 P	.245 - .277	#4, 6/1, 7/1 #4, 7W, Alum. Alloy	100	16	15	Orange
QSPL 070 P						
QSPL 080 P	.316 - .357	#2, 6/1, 7/1 #2, 7W, Alum. Alloy #1, 6/1	100	23	18	Red
QSPL 091 P	.358 - .405	1/0, 7W, All Alum. 1/0, 6/1 1/0, 7W, Alum Alloy	100	24	20	Yellow
QSPL 103 P	.406 - .459	2/0, 7W, All Alum. 2/0, 6/1 2/0, 7W, Alum. Alloy	100	28	22	Blue
QSPL 117 P	.460 - .520	3/0, 7W, All Alum. 3/0, 6/1 3/0, 7W, Alum. Alloy	100	32	24	Orange
QSPL 132 P	.521 - .588	4/0, 7W, All Alum. 4/0,6/1 4/0, 7W, Alum. Alloy	50	18	25	Red
QSPL 149 P	.589 - .665	266.8, 37W, All Alum. 266.8, 18/1	50	19	28	Purple
QSPL 169 P	.666 - .755	336.4, 19W, All Alum. 336.4, 18/1 336.4, 37W, All Alum. 397.5, 19W, All Alum. 400, 19W, 37W, All Alum.	50	24	31	Brown
QSPL 192 P	.756 - .855	477, 19W, 37W, All Alum. 477,18/1, 24/7	50	25	32	Red
QSPL 217 P	.856 - .968	556.5, 19W, All Alum. 636, 18/1 700, 37W, All Alum.	50	26	33	Blue

Comparative Catalog Number Cross Reference

These comparative catalog number cross-reference lists are intended only as a guide. AFL does not assume responsibility for errors, omissions or subsequent changes.

Guy Dead Ends—Galvanized Coating

AFL NO.	HELICAL	PLP
GYDEGB 047	HG 205 3/16	GDE-1102
GYDEGB 055	HG 206 7/32	GDE-1103
GYDEGB 061	HG 207 1/4	GDE-1104
GYDEGB 071	HG 208 9/32	GDE-1105
GYDEGB 079	HG 209 5/16	GDE-1106
GYDEGB 091	HG 210 3/8	GDE-1107
GYDEGB 110	HG 211 7/16	GDE-1108

Guy Dead Ends—Alumoweld

AFL NO.	HELICAL	PLP
GYDE AW 044	HG 5103 #12	AWDE-4102
GYDE AW 055	HG 515 4M	AWDE-4108
GYDE AW 060	HG 517 6M	AWDE-4110
GYDE AW 068	HG 519 8M	AWDE-4113
GYDE AW 077	HG 521 10M	AWDE-4116
GYDE AW 082		AWDE-4118
GYDE AW 087	HG 523 12.5M	AWDE-4119
GYDE AW 090	HG 524 14M	AWDE-4120
GYDE AW 096	HG 525 16M	AWDE-4122
GYDE AW 104	HG 526 18M	AWDE-4124
GYDE AW 108	HG 528 20M	AWDE-4125
GYDE AW 112	HG 528 20M	AWDE-4126
GYDE AW 120	HG 530 7 #6	AWDE-4128
GYDE AW 131	HG 531 25M	AWDE-4130
GYDE AW 136	HG 532 7#5	AWDE-4131
GYDE AW 120		BG-4168
GYDE AW 125		BG-4169
GYDE AW 131		BG-4170
GYDE AW 136		BG-4171
GYDE AW 141		BG-4172
GYDE AW 145		BG-4173
GYDE AW 150		BG-4174
GYDE AW 155		BG-4175
GYDE AW 161		BG-4176
GYDE AW 168		BG-4177
GYDE AW 174		BG-4178
GYDE AW 181		BG-4179
GYDE AW 188		BG-4180
GYDE AW 201		BG-4181
GYDE AW 203		BG-4183
GYDE AW 215		BG-4185
GYDE AW 228		BG-4187
GYDE AW 249		BG-4188
GYDE AW 256		BG-4189
GYDE AW 279		BG-4190
GYDE AW 288		BG-4191
GYDE AW 322		BG-4192

continued

Comparative Catalog Number Cross Reference

Distribution Dead End—Aluminized

AFL NO.	HELICAL	PLP
AWDG 050	HD 510	DG-4554
AWDG 063	HD 514	DG-4541
AWDG 080	HD 518	DG-4542
AWDG 090	HD 520	DG-4543
AWDG 099	HD 522	DG-4544
AWDG 113	HD 524	DG 4545
AWDG 127	HD 626	DG-4546
AWDG 143	HD 528	DG-4547
AWDG 147	HD 530	DG-4548
AWDG 166	HD 533	DG 4549
AWDG 188		DG-4550
AWDG 213		DG-4551
AWDG 241		DG-4552
AWDG 273		DG 4553
AWDG 066	HD 560	DG 4560
AWDG 074	HD 561	DG-4561
AWDG 084	HD 562	DG-4562
AWDG 094	HD 563	DG-4563
AWDG 101	HD 564	DG 4564
AWDG 109	HD 566	DG 4565
AWDG 118	HD 566	DG-4566
AWOG 128	HO 667	DG-4567
AWDG 137	HD 568	DG-4568
AWDG 146		DG-4100

Service Dead End

AFL NO.	HELICAL	PLP
SG 043	HSG 510	SG-4500
SG 050	HSG 512	SG-4501
SG 057	HSG 514	SG-4502
SG 065	HSG 516	SG-4503
SG 073	HSG 518	SG-4504
SG 083	HSG 520	SG-4505
SG 091	HSG 522	SG-4506
SG 102	HSG 524	SG-4507
SG 114	HSG 526	SG-4508
SG 130	HSG 528	SG-4509

continued

Comparative Catalog Number Cross Reference

Longspan Tie

C NECK		F NECK		J NECK	
AFL NO.	**PLP**	**AFL NO.**	**PLP**	**AFL NO.**	**PLP**
LTC 063	WTC-0100	LTF 063	WTF-0200	LTJ 063	WTJ-0400
LTC 066	WTC-0101	LTF 066	WTF-0201	LTJ 066	WTJ-0401
LTC 068	WTC-0102	LTF 068	WTF-0202	LTJ 068	WTJ-0402
LTC 071	WTC-0103	LTF 071	WTF-0203	LTJ 071	WTJ-0403
LTC 074	WTC-0104	LTF 074	WTF-0204	LTJ 074	WTJ-0404
LTC 077	WTC-0105	LTF 077	WTF-0205	LTJ 077	WTJ-0405
LTC 080	WTC-0106	LTF 080	WTF-0206	LTJ 080	WTJ-0406
LTC 083	WTC-0107	LTF 083	WTF-0207	LTJ 083	WTJ-0407
LTC 086	WTC-0108	LTF 086	WTF-0208	LTJ 086	WTJ-0408
LTC 090	WTC-0109	LTF 090	WTF-0209	LTJ 090	WTJ-0409
LTC 093	WTC-0110	LTF 093	WTF-0210	LTJ 093	WTJ-0410
LTC 097	WTC-0111	LTF 097	WTF-0211	LTJ 097	WTJ-0411
LTC 100	WTC-0112	LTF 100	WTF-0212	LTJ 100	WTJ-0412
LTC 104	WTC-0113	LTF 104	WTF-0213	LTJ 104	WTJ-0413
LTC 111	WTC-0114	LTF 111	WTF-0214	LTJ 111	WTJ-0414
LTC 118	WTC-0115	LTF 118	WTF-0215	LTJ 118	WTJ-0415
LTC 125	WTC-0116	LTF 125	WTF-0216	LTJ 125	WTJ-0416
LTC 133	WTC-0117	LTF 133	WTF-0217	LTJ 133	WTJ-0417
LTC 141	WTC-0118	LTF 141	WTF-0218	LTJ 141	WTJ-0418
LTC 151	WTC-0119	LTF 151	WTF-0219	LTJ 151	WTJ-0419
LTC 160	WTC-0120	LTF 160	WTF-0220	LTJ 160	WTJ-0420
LTC 169	WTC-0121	LTF 169	WTF-0221	LTJ 169	WTJ-0421
LTC 179	WTC-0122	LTF 179	WTF-0222	LTJ 179	WTJ-0422
LTC 190	WTC-0123	LTF 190	WTF-0223	LTJ 190	WTJ-0423
LTC 202	WTC-0124	LTF 202	WTF-0224	LTJ 202	WTJ-0424
LTC 215	WTC-0125	LTF 215	WTF-0225	LTJ 215	WTJ-0425
LTC 229	WTC-0126	LTF 229	WTF-0226	LTJ 229	WTJ-0426
LTC 243	WTC-0127	LTF 243	WTF-0227	LTJ 243	WTJ-0427
LTC 259	WTC-0128	LTF 259	WTF-0228	LTJ 259	WTJ-0428
LTC 275	WTC-0129	LTF 275	WTF-0229	LTJ 275	WTJ-0429
LTC 292	WTC-0130	LTF 292	WTF-0230	LTJ 292	WTJ-0430
LTC 311	WTC-0131	LTF 311	WTF-0231	LTJ 311	WTJ-0431

Side Tie With Pad

C NECK		F NECK		J NECK	
AFL NO.	**PLP**	**AFL NO.**	**PLP**	**AFL NO.**	**PLP**
STC 048P	STC-1250P	STF 048P	STF-1150P	STJ 048P	STJ-1500P
STC 055P	STC-1251P	STF 055P	STF-1151P	STJ 055P	STJ-1501P
STC 062P	STC-1252P	STF 062P	STF-1152P	STJ 062P	STJ-1502P
STC 070P	STC-1253P	STF 070P	STF-1153P	STJ 070P	STJ-1503P
STC 080P	STC-1254P	STF 080P	STF-1154P	STJ 080P	STJ-1 504P
STC 091P	STC-1255P	STF 091P	STF-1155P	STJ 091P	STJ-1505P
STC 103P	STC-1256P	STF 103P	STF-1156P	STJ 103P	STJ-1506P
STC 117P	STC-1257P	STF 117P	STF-1157P	STJ 117P	STJ-1507P
STC 132P	STC-1258P	STF 132P	STF-1158P	STJ 132P	STJ-1508P
STC 149P	STC-1259P	STF 149P	STF-1159P	STJ 149P	STJ-1509P
STC 169P	STC-1260P	STF 169P	STF-1160P	STJ 169P	STJ-1510P
STC 192P	STC-1261P	STF 192P	STF-1161P	STJ 192P	STJ-1511P
STC 217P	STC-1262P	STF 217P	STF-1162P	STJ 217P	STJ-1512P
STC 246P	STC-1 263P	STF 246P	STF-1163P	STJ 246P	STJ-1513P
STC 278P	STC-1264P	STF 278P	STF-1164P	STJ 278P	STJ-1514P

continued

Comparative Catalog Number Cross Reference

Double Support Tie

C & F NECK		J NECK	
AFL NO.	PLP	AFL NO.	PLP
DSTCF 062	DST-0150	DSTJ 0620	DST-0350
DSTCF 070	DST-0151	DSTJ 0705	DST-0351
DSTCF 080	DST-0152	DSTJ 0800	DST-0352
DSTCF 091	DST-0153	DSTJ 0910	DST-0353
DSTCF 103	DST-0154	DSTJ 1030	DST-0354
DSTCF 117	DST-0155	DSTJ 1170	DST-0355
DSTCF 132	DST-0156	DSTJ 1325	DST-0356
DSTCF 149	DST-0157	DSTJ 1495	DST-0357
DSTCF 169	DST-0158	DSTJ 1695	DST-0358
DSTCF 192	DST-0159	DSTJ 1920	DST-0359
DSTCF 217	DST-0160	DSTJ 2175	DST-0360
DSTCF 246	DST-0161	DSTJ 2460	DST-0361
DSTCF 278	DST-0162	DSTJ 2785	DST-0362

Double Side Tie

C & F NECK		J NECK	
AFL NO.	PLP	AFL NO.	PLP
DBST 062	DBST-1100	DBSTJ 062	DBST-1300
DBST 062	DBST-1100	DBSTJ 062	DBST-1300
DBST 070	DBST-1101	DBSTJ 070	DBST-1301
DBST 080	DBST-1102	DBSTJ 080	DBST-1302
DBST 091	DBST-1103	DBSTJ 091	DBST-1303
DBST 103	DBST-1104	DBSTJ 103	DBST-1304
DBST 117	DBST-1105	DBSTJ 117	DBST-1305
DBST 132	DBST-1106	DBSTJ 132	DBST-1306
DBST 149	DBST-1107	DBSTJ 149	DBST-1307
DBST 169	DBST-1108	DBSTJ 169	DBST-1308
DBST 192	DBST-1109	DBSTJ 192	DBST-1309
DBST 217	DBST-1110	DBSTJ 217	DBST-1310
DBST 246	DBST-1111	DBSTJ 246	DBST-1111
DBST 278	DBST-1112	DBSTJ 278	DBST-1312

Spool Tie

AFL NO.	PLP
SPL048P	SPL1350-P
SPL055P	SPL1351-P
SPL062P	SPL1352-P
SPL070P	SPL1353-P
SPL080P	SPL1354-P
SPL091P	SPL1355-P
SPL103P	SPL1356-P
SPL117P	SPL135 7-P
SPL132P	SPL1358-P
SPL149P	SPL1359-P
SPL169P	SPL1360-P
SPL192P	SPL1361-P
SPL217P	SPL1362-P

Quick Spool Tie

QSPL 062P	EZSP-4372
QSPL 070P	EZSP-4373
QSPL 080P	EZSP-4374
QSPL 091P	EZSP-4375
QSPL 103P	EZSP-4376
QSPL 117P	EZSP-4377
QSPL 132P	EZSP-4378
QSPL 149P	EZSP-4379
QSPL 169P	EZSP-4380
QSPL 192P	EZSP-4381
QSPL 217P	EZSP-4382

continued

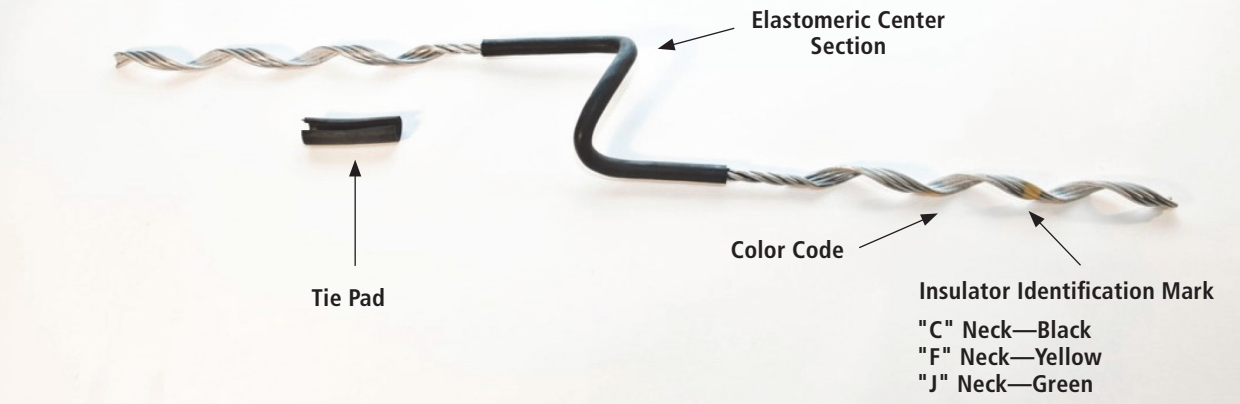
Comparative Catalog Number Cross Reference

Distribution Tie With Pad

C NECK		F NECK		J NECK	
AFL NO.	**PLP**	**AFL NO.**	**PLP**	**AFL NO.**	**PLP**
DTC 048P	UTC-1100	DTF 048P	UTF-1200	DTJ 048P	UTJ-1300
DTC 055P	UTC-1101	DTF 055P	UTF-1201	DTJ 055P	UTJ-1301
DTC 062P	UTC-1102	DTF 062P	UTF-1202	DTJ 062P	UTJ-1302
DTC 070P	UTC-1103	DTF 070P	UTF-1203	DTJ 070P	UTJ-1303
DTC 080P	UTC-1104	DTF 080P	UTF-1204	DTJ 080P	UTJ-1304
DTC 091P	UTC-1105	DTF 091P	UTF-1205	DTJ 091P	UTJ-1305
DTC 103P	UTC-1106	DTF 103P	UTF-1206	DTJ 103P	UTJ-1306
DTC 117P	UTC-1107	DTF 117P	UTF-1207	DTJ 117P	UTJ-1307
DTC 132P	UTC-1108	DTF 132P	UTF-1208	DTJ 132P	UTJ 1308
DTC 149P	UTC-1109	DTF 149P	UTF-1209	DTJ 149P	UTJ-1309
DTC 169P	UTC-1110	DTF 169P	UTF-1210	DTJ 169P	UTJ-1310
DTC 192P	UTC-1111	DTF 192P	UTF-1211	DTJ 192P	UTJ-1311
DTC 217P	UTC-1112	DTF 217P	UTF-1212	DTJ 217P	UTJ-1312
DTC 246P	UTC-1113	DTF 246P	UTF-1213	DTJ 246P	UTJ-1313
DTC 278P	UTC-1114	DTF 278P	UTF-1214	DTJ 278P	UTJ-1314

Longspan Tie with Pad

NOTE: READ AND UNDERSTAND INSTALLATION INSTRUCTIONS BEFORE INSTALL. ENSURE YOU HAVE THE CORRECT PREFORMED PRODUCT BEFORE INSTALL IS STARTED

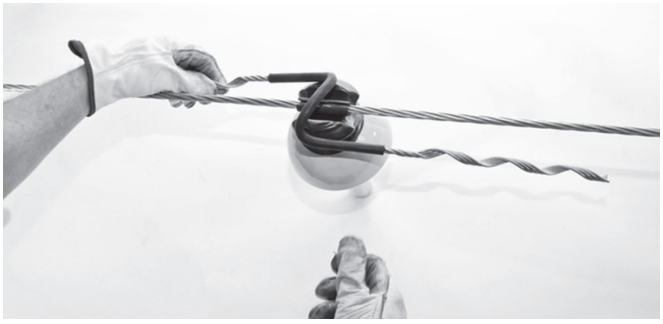


Cold Application

1. Apply the Tie Pad to the conductor so the conductor does not come into direct contact with the insulators. Keep the Tie Pad slit facing upward.

2. Bend the Longspan Tie open a little more to make it easier to fall into place and set itself.

3. Install the Longspan Tie over the center of the insulator so that both legs are parallel to the conductor.



4. Rotate the Longspan Tie counter-clock-wise. Ensure both legs go under the conductor. Rotate the Longspan Tie until the legs seat themselves.

continued

Longspan Tie with Pad

5. Bend one leg of the Longspan Tie around the neck of the insulator. Ensure the Tie is firmly seated under the insulator ear.

6. Continue wrapping the Longspan Tie legs until it is completely wrapped.

7. Snap the end of each leg into place. Ensure the Longspan Tie end fully snaps into place. This may require more pressure than the pressure to wrap.

Safety

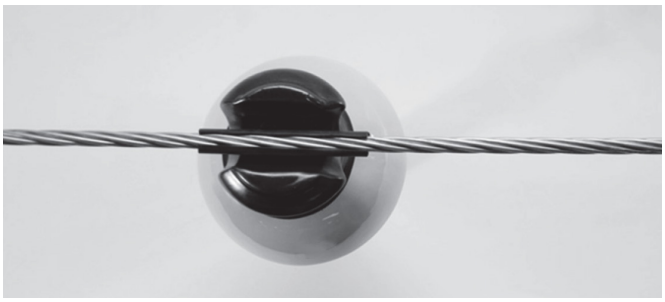
1. Longspan Ties are precision devices. They should be stored in covered cartons and handled carefully.
2. This application procedure is NOT intended to supersede any company construction or safety standards. This procedure is offered only to illustrate safe application for the individual. Failure to follow these procedures and restrictions may result in personal injury.
3. For proper performance and personal safety ensure the proper size Longspan Tie has been selected before installation.

Distribution Tie with Pad

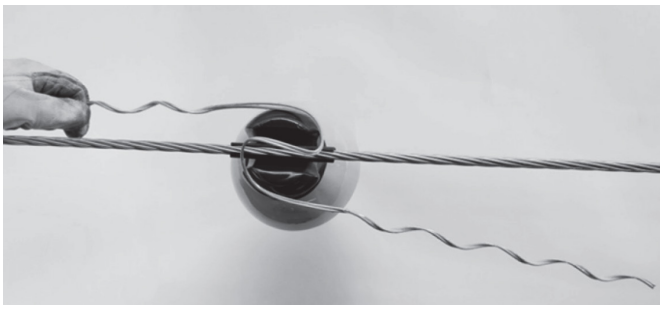
NOTE: READ AND UNDERSTAND INSTALLATION INSTRUCTIONS BEFORE INSTALL. ENSURE YOU HAVE THE CORRECT PREFORMED PRODUCT BEFORE INSTALL IS STARTED.

Cold Application

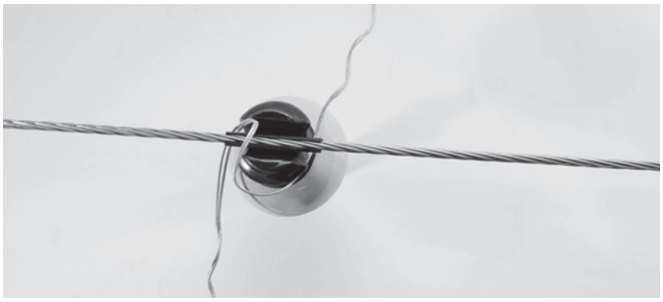
1. Apply the Tie Pad to conductor so the conductor does not come into direct contact with the insulator.



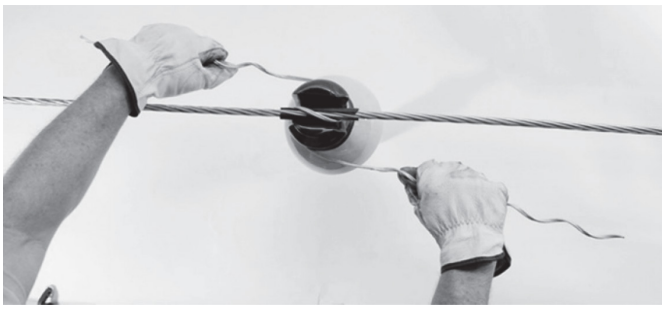
2. Install Distribution Tie onto insulator so both legs are parallel to the conductor.



3. Rotate the Distribution Tie counter clockwise ensuring both legs cross under the conductor.



4. Continue rotating the legs until the distribution tie fully seats itself.



continued

Distribution Tie with Pad

5. Wrap one leg of the Distribution Tie. Ensure the Distribution Tie end fully snaps into place. This may require more pressure than the previous wrap.

6. Repeat step 5 for the other Distribution Tie leg.

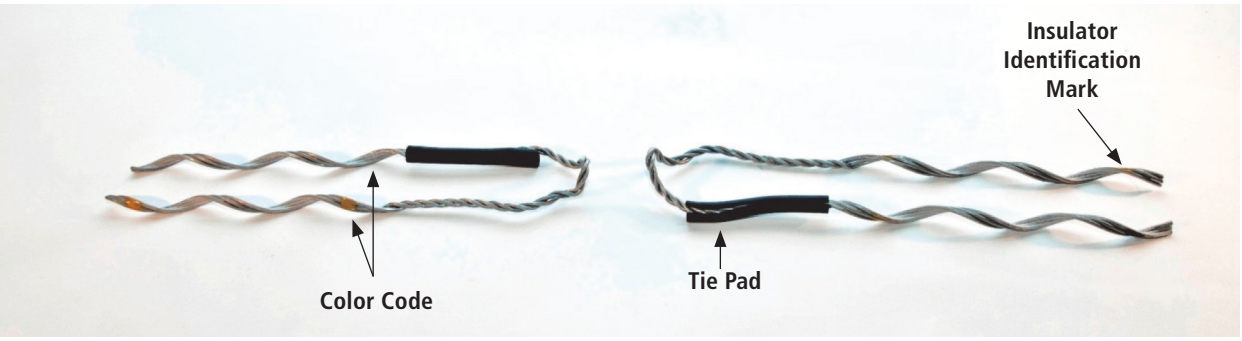
7. Completed installation should appear like below.

Safety

1. Distribution Ties are precision devices. They should be stored in covered cartons and handled carefully.
2. This application procedure is NOT intended to supersede any company construction or safety standards. This procedure is offered only to illustrate safe application for the individual. Failure to follow these procedures and restrictions may result in personal injury.
3. For proper performance and personal safety ensure the proper size Distribution Tie has been selected before installation.

Double-Support Tie with Pad

NOTE: READ AND UNDERSTAND INSTALLATION INSTRUCTIONS BEFORE INSTALL. ENSURE YOU HAVE THE CORRECT PREFORMED PRODUCT BEFORE INSTALL IS STARTED.



Cold Application

1. Apply the tie pads to the conductor so the conductor does not come into direct contact with the insulators.

2. Install the Double-Support Tie over the pad so the Tie ends extend away from the insulator. Ensure the conductor and insulator neck are between the Tie legs and both Tie legs properly seat in the groove of the insulator neck.

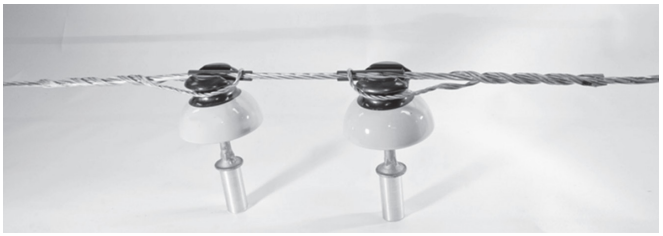
3. Lift one Tie leg up and over the conductor and let it naturally start to wrap the conductor wire followed by the other Tie leg. Both Tie legs should cross and meet at the crossover mark which is marked.

continued

Double-Support Tie with Pad

4. After Matching crossover marks, continue wrapping both legs until they are completely wrapped. Snap the end of each leg into place. Ensure the Support Tie end fully snaps into place. This may require more pressure than the pressure to wrap.

5. One side is now complete. Repeat the above steps to the other side with the second tie.

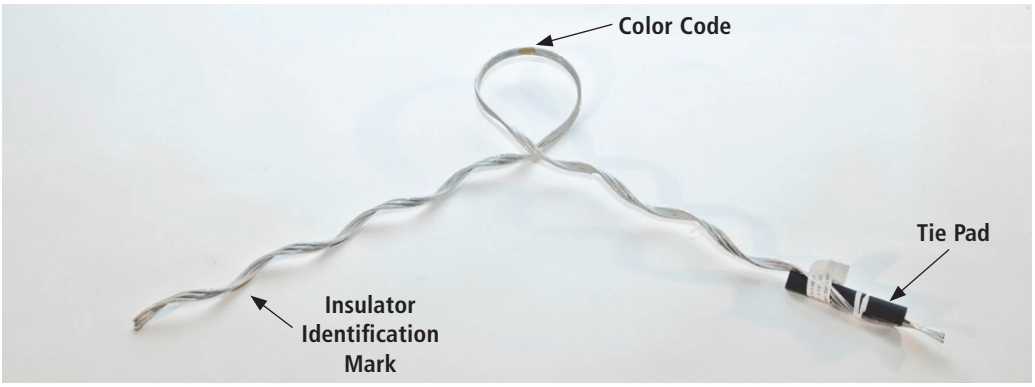


Safety

1. Double-Support Ties are precision devices. They should be stored in covered cartons and handled carefully.
2. This application procedure is NOT intended to supersede any company construction or safety standards. This procedure is offered only to illustrate safe application for the individual. Failure to follow these procedures and restrictions may result in personal injury.
3. For proper performance and personal safety ensure the proper size Double-Support Tie has been selected before installation.

Side Tie with Pad

NOTE: READ AND UNDERSTAND INSTALLATION INSTRUCTIONS BEFORE INSTALL. ENSURE YOU HAVE THE CORRECT PREFORMED PRODUCT BEFORE INSTALL IS STARTED.

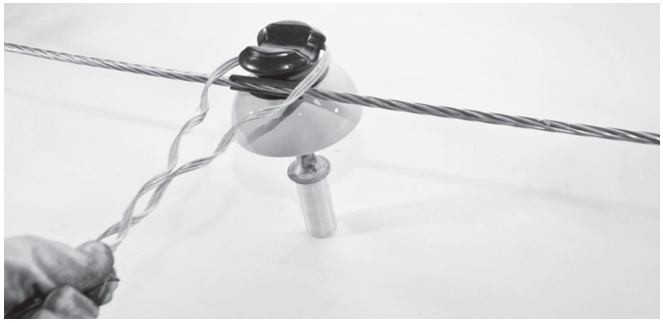


Cold Application

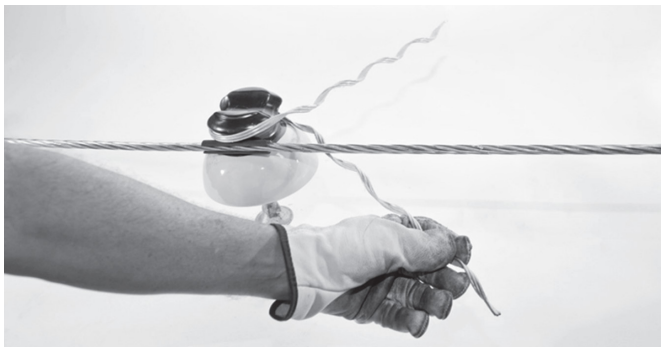
1. Apply the Tie Pads to the conductor so the conductor does not come into direct contact with the insulators. Keep the tie pad slit facing upward.

2. Ensure the Tie Pad is protecting the conductor from coming in direct contact with the insulator.

3. Install the Side Tie over the pad by squeezing the two Tie legs. The loop will enlarge enabling enough space to slide over the head of the insulator.



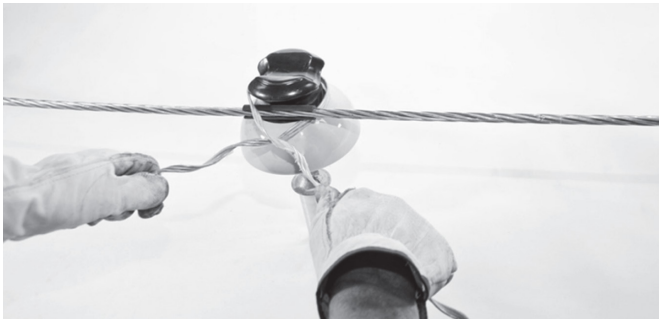
4. Position the Side Tie around the neck of the insulator. Be sure the conductor is between the two legs of the Side Tie.



continued

Side Tie with Pad

5. Pull the two legs opposite ways ensuring a tight connection around the insulator and start to wrap the Tie onto the conductor. (Note: On smaller size conductors, the leg of the Side Tie must be tucked under the corner of the Tie Pad. On larger size conductors, it is optional whether the Tie wraps under or over the Tie Pad.)



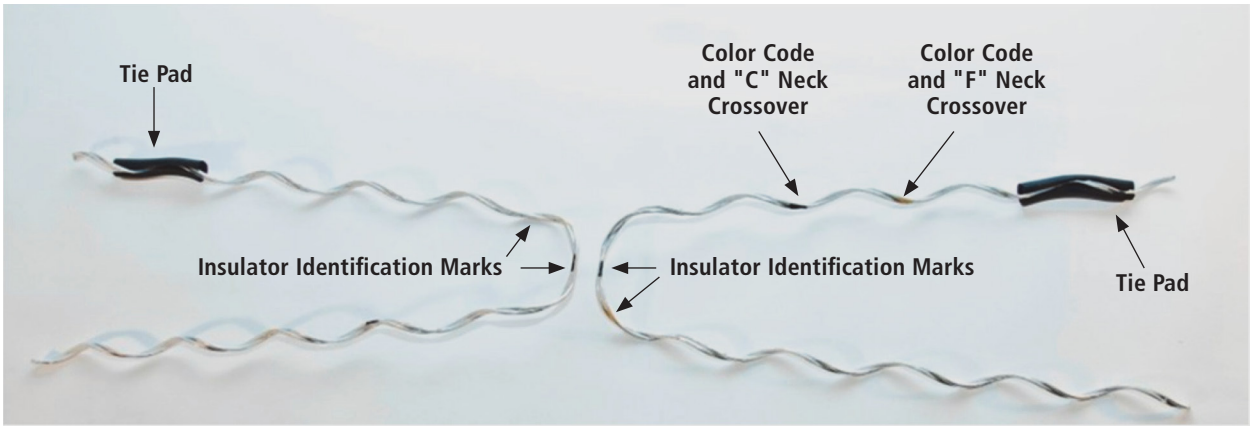
6. Finish fully wrapping both legs around the conductor. Ensure the Side Tie end fully snaps into place. This may require more pressure than the pressure to wrap.

Safety

1. Side Ties are precision devices. They should be stored in covered cartons and handled carefully.
2. This application procedure is NOT intended to supersede any company construction or safety standards. This procedure is offered only to illustrate safe application for the individual. Failure to follow these procedures and restrictions may result in personal injury.
3. For proper performance and personal safety ensure the proper size Side Tie has been selected before installation.

Double Side Tie with Pad

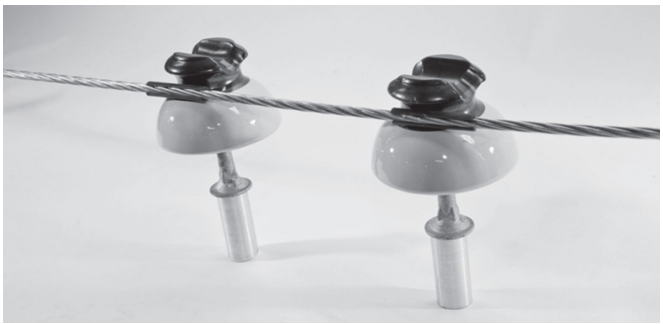
NOTE: READ AND UNDERSTAND INSTALLATION INSTRUCTIONS BEFORE INSTALL. ENSURE YOU HAVE THE CORRECT PREFORMED PRODUCT BEFORE INSTALL IS STARTED.



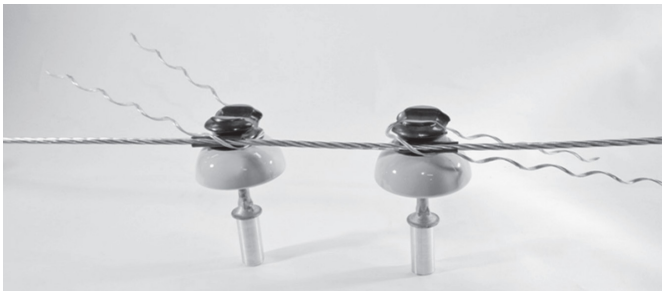
Cold Application

1. Apply the Tie Pads to the conductor so the conductor does not come into direct contact with the insulators.

2. Position the midpoint of each pad slightly beyond center of the insulator groove making the span between each Tie Pad larger.



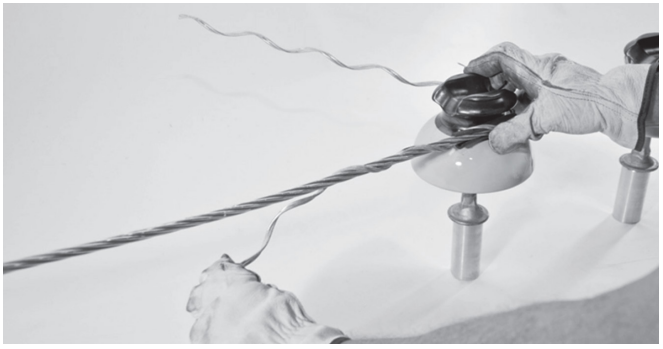
3. Install the Double Side Tie around the neck of the insulator. Ensure the leg of the tie with the crossover marking is on the same side as the conductor. Pull the tie snug against the insulator neck so that it will be properly seated.



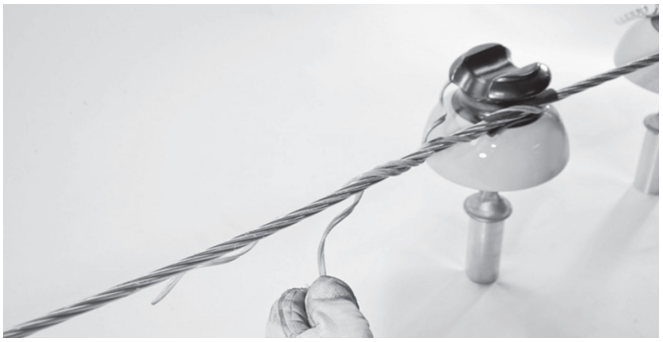
continued

Double Side Tie with Pad

4. Wrap the leg marked cross over around the Tie Pad. (Note: some ties have two crossover marks. The first is for C-Neck insulators and the second is for F-Neck insulators.) Continue wrapping the tie around the conductor. Ensure the Side Tie end fully snaps into place. This may require more pressure than the pressure to wrap.



5. Wrap the second leg around the insulator passing the first leg, so it crosses at one of the marks.



6. Lift up the leg and wrap it around the conductor. Ensure the Distribution Tie end fully snaps into place. This may require more pressure than the pressure to wrap.

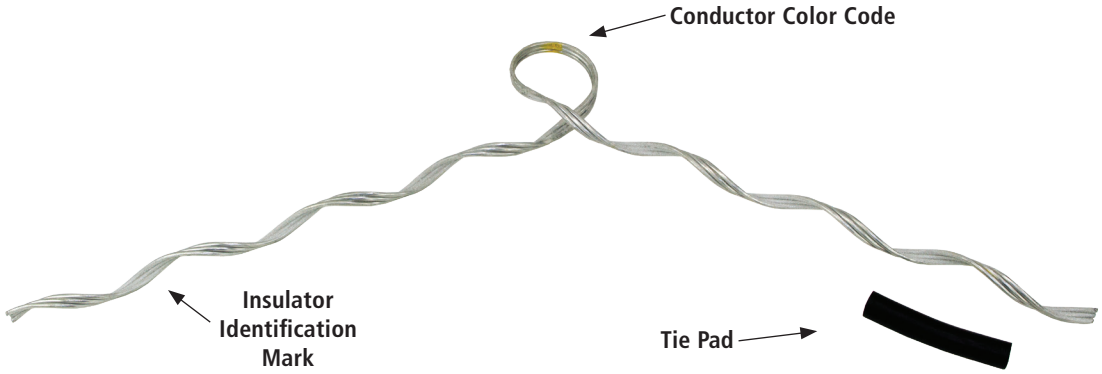
7. One side is now complete. Repeat steps 3-6 to the other side with the second tie. (Note: Wrap the tie over the pad in this installation.)

Safety

1. Double Side Ties are precision devices. They should be stored in covered cartons and handled carefully.
2. This application procedure is NOT intended to supersede any company construction or safety standards. This procedure is offered only to illustrate safe application for the individual. Failure to follow these procedures and restrictions may result in personal injury.
3. For proper performance and personal safety ensure the proper size Double Side Tie has been selected before installation.

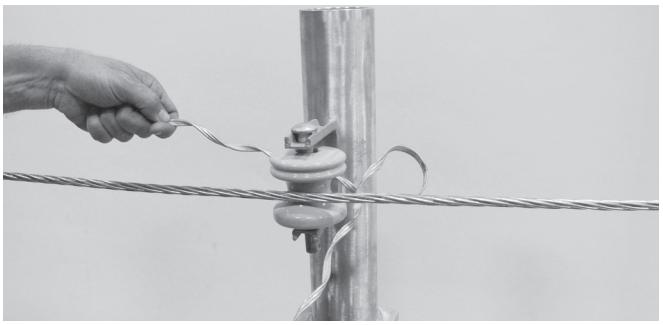
Spool Tie with Pad

NOTE: READ AND UNDERSTAND INSTALLATION INSTRUCTIONS BEFORE INSTALL. ENSURE YOU HAVE THE CORRECT HELIFORMED PRODUCT BEFORE INSTALL IS STARTED.

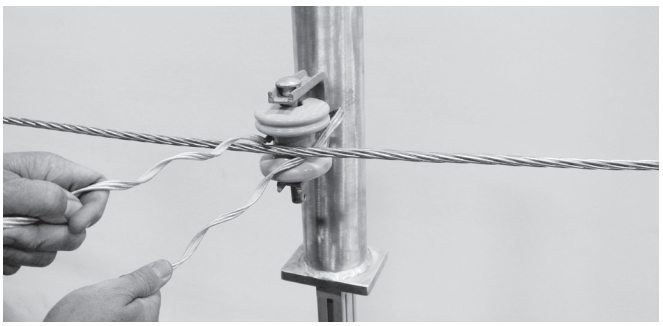


Cold Application

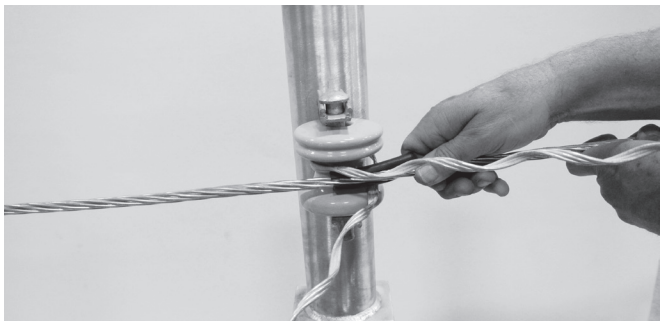
1. Install the Spool Tie by feeding one tie leg behind the spool. Then pull the tie leg over the conductor while keeping the right tie leg under the conductor.



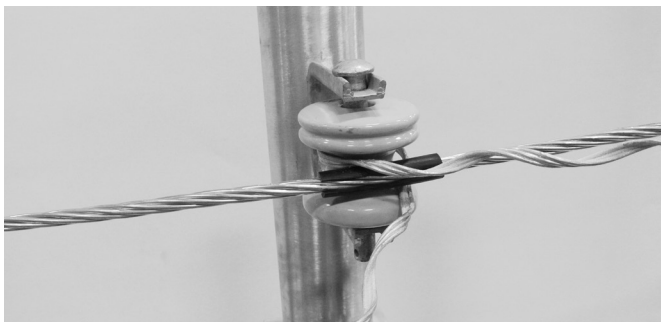
2. Position the Spool Tie around the neck of the insulator. Be sure the conductor is between the two legs of the Spool Tie. (left tie leg above, right tie leg below conductor)



3. Apply the Tie Pads to the conductor so the conductor does not come into direct contact with the insulator. Keep the tie pad slit facing outward.



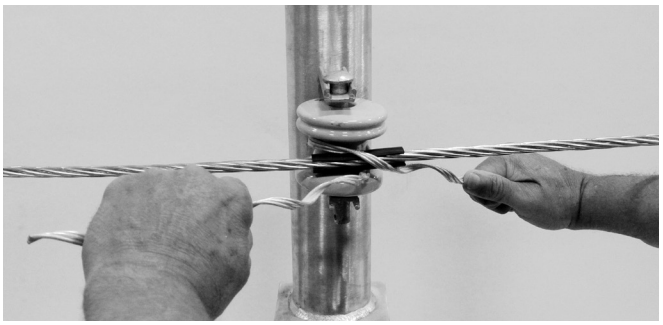
4. Ensure the Tie Pad is protecting the conductor from coming in direct contact with the insulator.



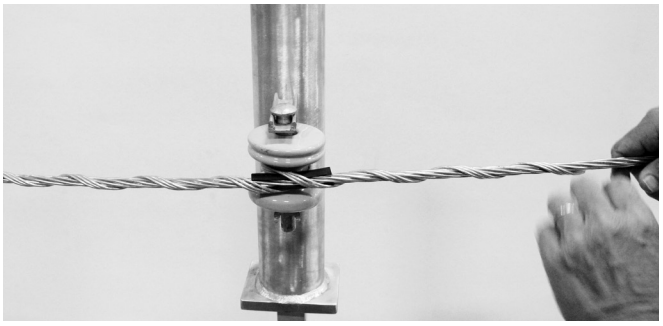
continued

Spool Tie with Pad

5. Pull the two legs opposite ways ensuring a tight connection around the insulator and start to wrap the Tie onto the conductor.



6. Finish fully wrapping both legs around the conductor. Ensure the Spool Tie end fully snaps into place. This may require more pressure than the pressure to wrap.



Safety

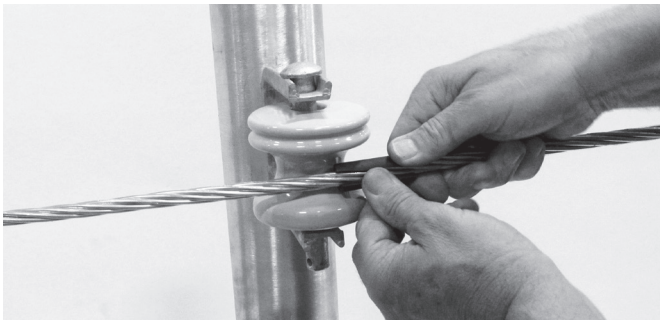
1. Spool Ties are precision devices. They should be stored in covered cartons and handled carefully.
2. This application procedure is NOT intended to supersede any company construction or safety standards. This procedure is offered only to illustrate safe application for the individual. Failure to follow these procedures and restrictions may result in personal injury.
3. For proper performance and personal safety ensure the proper size Spool Tie has been selected before installation.

Quick Spool Tie with Pad

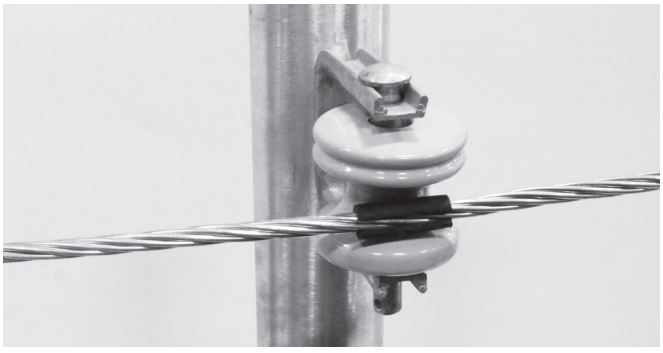
NOTE: READ AND UNDERSTAND INSTALLATION INSTRUCTIONS BEFORE INSTALL. ENSURE YOU HAVE THE CORRECT HELIFORMED PRODUCT BEFORE INSTALL IS STARTED.

Cold Application

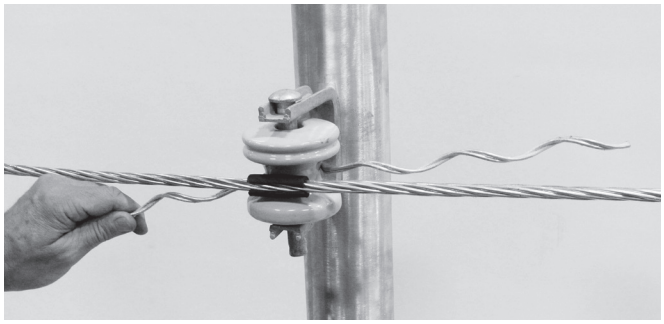
1. Apply the Tie Pads to the conductor so the conductor does not come into direct contact with the insulator. Keep the tie pad slit facing outward.



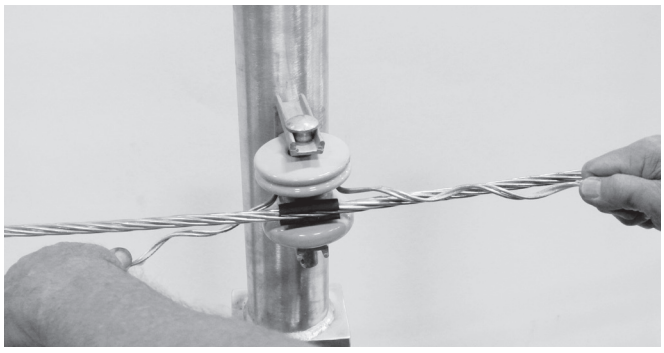
2. Ensure the Tie Pad is protecting the conductor from coming in direct contact with the insulator.



3. Install the Easy Tie by feeding one tie leg behind the spool. Then pull the tie leg under the conductor while keeping the right tie leg over the conductor.



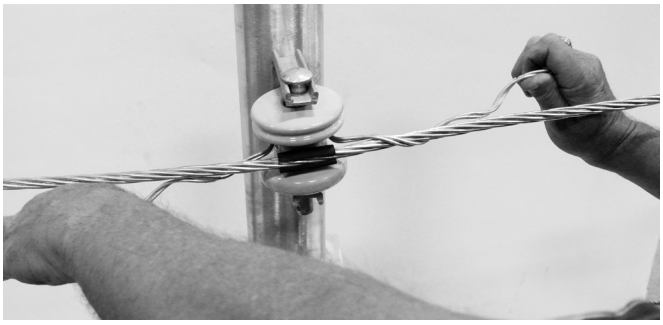
4. Position the Quick Spool Tie around the neck of the insulator. Be sure the conductor is between the two legs of the Easy Tie. (left tie leg below, right tie leg above conductor)



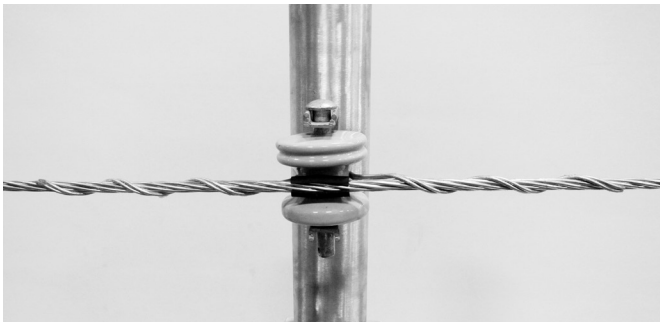
continued

Quick Spool Tie with Pad

5. Wrap the two legs opposite ways ensuring a tight connection around the insulator and wrap the Tie onto the conductor.



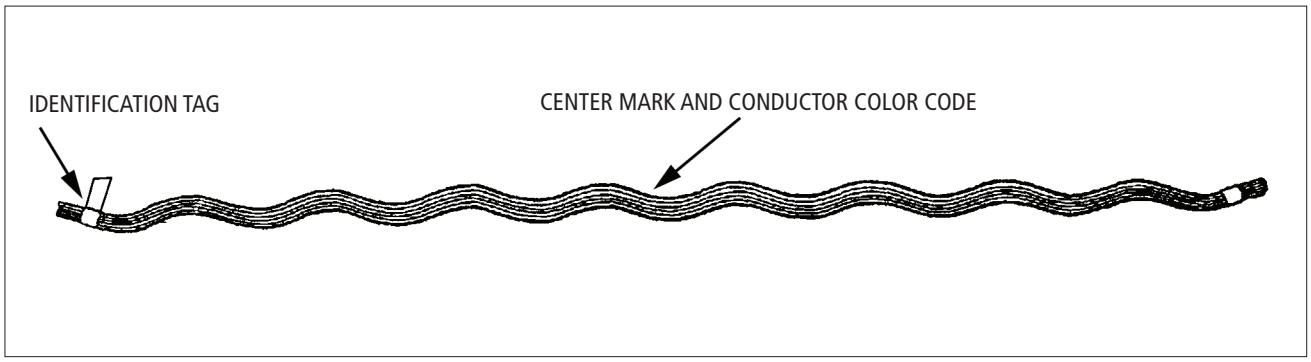
6. Finish by fully wrapping both legs around the conductor. Ensure the Quick Spool Tie end fully snaps into place. This may require more pressure than the pressure to wrap.



Safety

1. Quick Spool Ties are precision devices. They should be stored in covered cartons and handled carefully.
2. This application procedure is NOT intended to supersede any company construction or safety standards. This procedure is offered only to illustrate safe application for the individual. Failure to follow these procedures and restrictions may result in personal injury.
3. For proper performance and personal safety ensure the proper size Spool Tie has been selected before installation.

Installation Instructions for Armor Rods



DE-ENERGIZED APPLICATION

1. For conductor sizes 4/0 and above, a maximum of 4 rods may be subsetted together. To subset, hold the rods flat making sure none of the rods are crossed, then twist the rods with the lay direction until they subset together. For sizes less than 4/0 see General Notes on back.

2. Continue twisting the rods until they are completely subsetted end to end. Repeat the procedure until all the rods are in subsets.

3. Place the center of the first subset onto the conductor and begin wrapping.

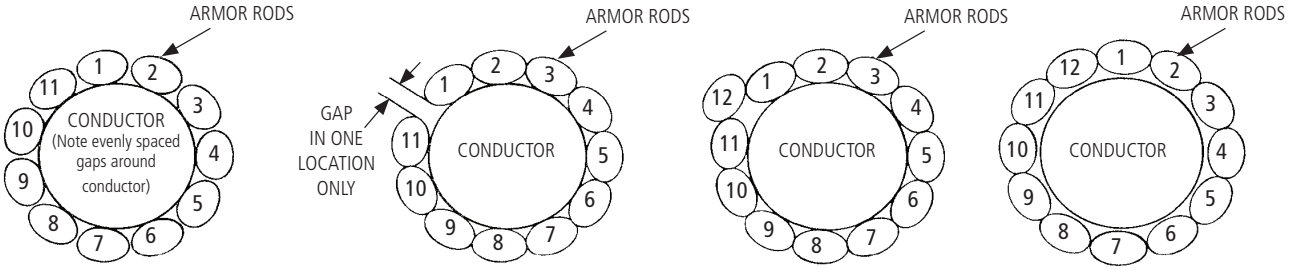
4. Wrap the subset to completion.

continued

Armor Rods and Line Guards (cont.)

5. Repeat the procedure for the remaining subsets.

6. When complete, make sure the ends have been snapped into place.



A. Correct Application

B. Also correct, but may appear that one rod is missing.

C. INCORRECT: Extra rod produces a bridging effect.

D. INCORRECT: Extra rod produces expanded tube effect.

GENERAL NOTES

1. For conductors smaller than 4/0, do not attempt to apply more than one half the number of rods per set at one time. For smaller conductors, the armor rods may be subsetted prior to installation or the rods may be subsetted while simultaneously wrapping them onto the conductor.

2. Since armor rods are considered precision devices, great care should be taken to ensure that the units are not distorted during installation. Distortion may cause the units to fit loosely on the conductor which could cause abrasion problems.

3. End Alignment

230 kV and Below: The alignment of the rod ends should be within 2 inches.

345 kV and Above: The alignment of the rod ends should be within 1 1/2 inches.

WARRANTY

The enclosed hardware will be free from defects in material and manufacturing workmanship. This warranty does not apply to normal wear of hardware, damage resulting from mishandling, misuse, neglect, improper storage, accidents, repair or alteration.

SAFETY

CONSULT YOUR SAFETY TRAINING DEPARTMENT TO ENSURE THAT THE INSTALLATION PROCEDURE ADOPTED IS IN COMPLIANCE WITH YOUR COMPANY'S STANDARD PROCEDURE.

Armor Rods and Line Guards Strength Restoration

ACSR, All Aluminum and Aluminum Alloy Conductors

Material	ACSR											AAC				AAAC	
Configuration	5/1	6/1	7/1	8/1	18/1	12/7	24/7	26/7	30/7	45/7	54/7	7W	19W	37W	61W	7W	19W
Maximum number of broken strands allowed																	
Armor Rods*	2	3	3	4	6	6	7	8	9	10	12	2	6	9	12	3	6
Line Guards*	1	1	1	2	3	3	3	4	5	5	6	1	3	4	6	1	3

**Not applicable if steel core is damaged*

Conductor Splices and Full Tension Splices Strength Restoration

ACSR, All Aluminum and Aluminum Alloy Conductors

Material	ACSR											AAC				AAAC	
Configuration	5/1	6/1	7/1	8/1	18/1	12/7	24/7	26/7	30/7	45/7	54/7	7W	19W	37W	61W	7W	19W
Maximum number of broken strands allowed																	
Conductor Splice*	5	6	7	8	18	12	24	26	30	45	54	7	19	37	61	7	19
ACSR Full Tension Splice	6	7	8	9	19	19	31	33	37	52	61	n/a	n/a	n/a	n/a	n/a	n/a

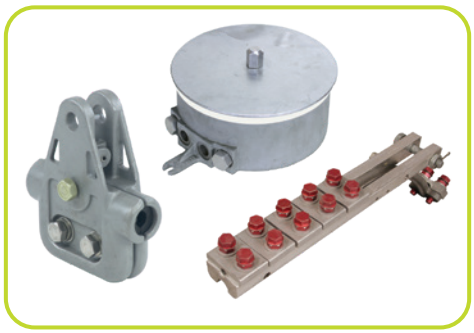
**Not applicable if steel core is damaged*

Steel Core
Aluminum Material

Please contact your AFL Sales Representative for information about our other products or services.

FIBER OPTIC CABLE (OPGW, ADSS, Loose Tube)

FIBER OPTIC CABLE ACCESSORIES



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