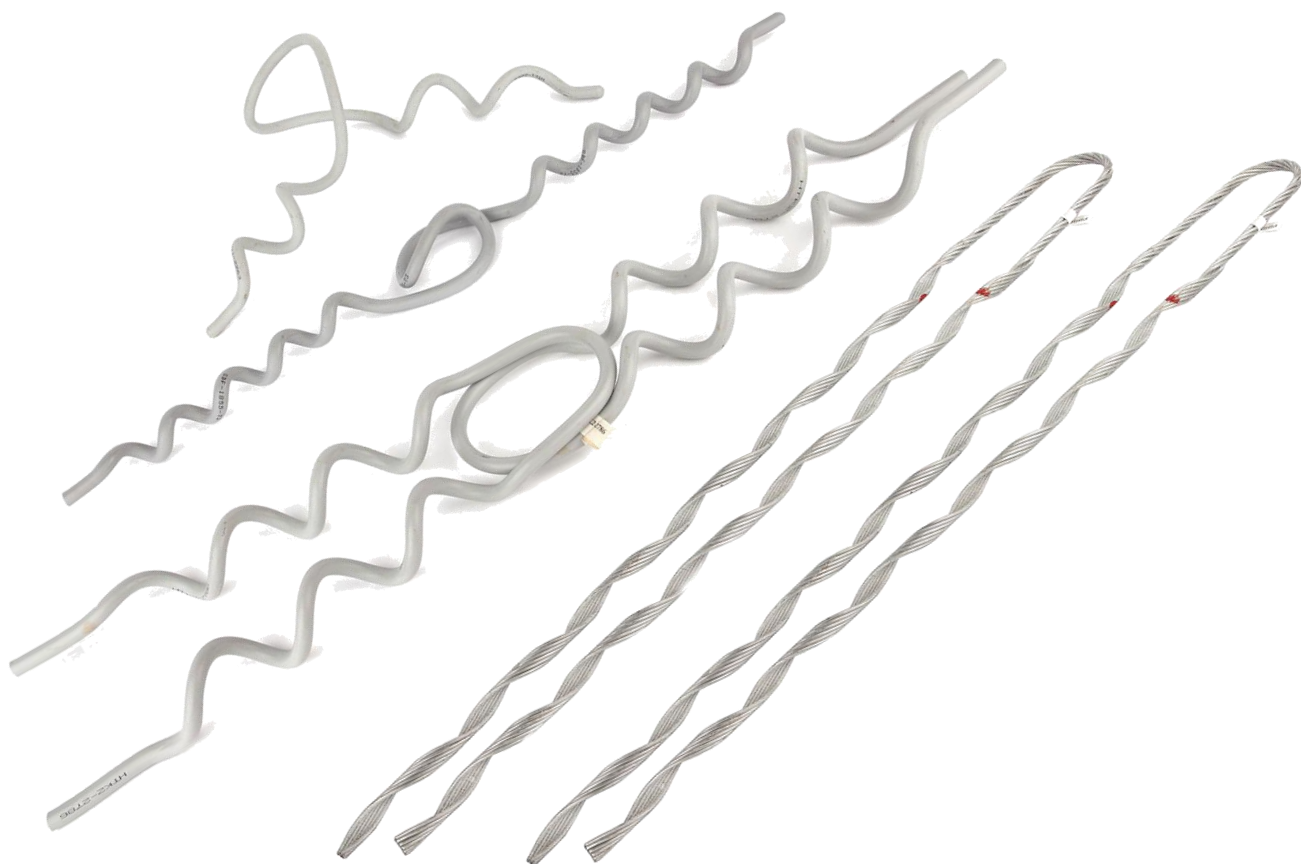




# PROFORMED LINE PRODUCT ELECTRIC POWER LINE TRANSMISSION & DISTRIBUTION



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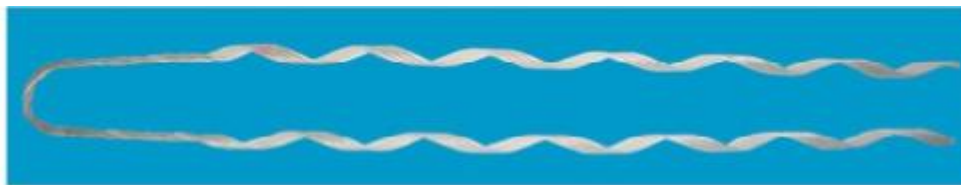
Whatsapp: +86 13868329796

Wechat: 13868329796

[www.cropgroupcn.com](http://www.cropgroupcn.com)

[admin@cropgroupcn.com](mailto:admin@cropgroupcn.com)

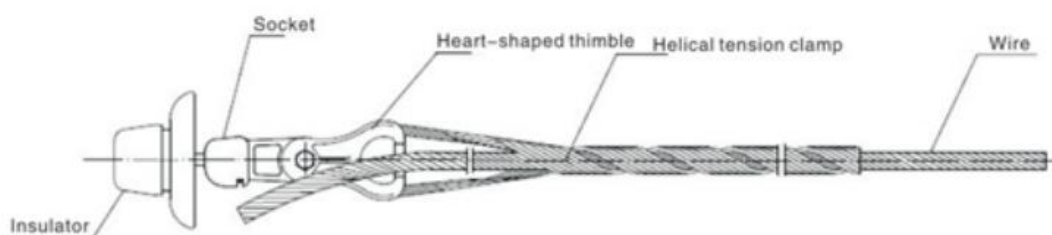
## Helical Tension Clamp (NL)



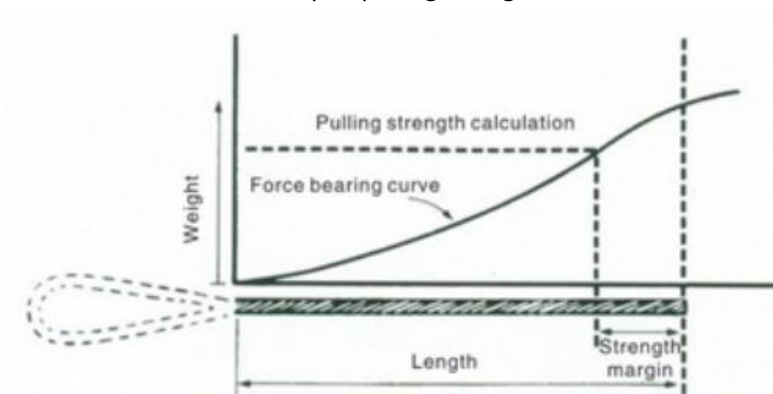
There are varieties of helical tension clamps , such as helical conductor tension clamp, helical earth wire tension clamp and helical stay wire tension clamp etc.

Helical tension clamp can be have follow 4 group:

1. Helical conductor tension clamp
2. Helical earth wire tension clamp
3. Helical stay wire tension clamp
4. Pole Top Make off



The sketch map of pulling strength calculation



### 1 Helical Conductor Tension Clamp

#### Material

Clamp is made of galvanized steel wire, aluminum-clad steel wire, aluminum wire, copper clad steel wire and other materials.

#### Prompt

The rotation direction of NL ground(conductor) tension clamp should be consistent. The rotation direction of standard NL is right-handed lay, if you need left-hand lay , please notify us in advance.

## 1.1 Helical Conductor Tension Clamp for ACSR

Table A01-1 Type selection table

Product model of the Company	Standard model of the industry	Applicable type of guide wire (GB1179-83)		Reference length of wire clamp ( mm )	Wire clamp weight ( Kg )	Color code	Optional matching fittings
		Applicable diameter of guide wire (mm)	ACSR ( LGJ/LGJF )				
NL-16/3	NL-16/3	5.55	16/3	444	0.1	Brown	TC-05-B
NL-25/4	NL-25/4	6.96	25/4	546	0.15	Yellow	
NL-35/6	NL-35/6	8.16	35/6	622	0.2	Red	
NL-50/8	NL-50/8	9.60	50/8	685	0.3	Yellow	
NL-70/10	NL-70/10	11.40	70/10	736	0.4	Blue	
NL-95/15	NL-95/15	13.61	95/15	876	0.6	Red	TC-07-B
NL-70/40	NL-70/40	13.60	70/40				
NL-95/20	NL-95/20	13.87	95/20				
NL-120/7	NL-120/7	14.50	120/7				
NL-120/20	NL-120/20	15.07	120/20	889	0.8	Black	TC-10-B
NL-120/25	NL-120/25	15.74	120/25				
NL-150/8	NL-150/8	16.00	150/8				
NL-150/20	NL-150/20	16.67	150/20	1016	1.1	Green	
NL-150/25	NL-150/25	17.10	150/25				
NL-150/35	NL-150/35	17.50	150/35				
NL-185/10	NL-185/10	18.00	185/10				
NL-185/25	NL-185/25	18.90	185/25	1155	1.8	Orange	
NL-185/30	NL-185/30	18.88	185/30				
NL-210/10	NL-210/10	19.00	210/10				
NL-185/45	NL-185/45	19.96	185/45				
NL-210/25	NL-210/25	19.98	210/25				
NL-210/35	NL-210/35	20.68	210/35	1270	2.3	Blue	
NL-240/30	NL-240/30	21.60	240/30				
NL-240/40	NL-240/40	21.66	240/40				
NL-240/55	NL-240/55	22.40	240/55	1700	3.2	Purple	TC-12-B
NL-300/15	NL-300/15	23.01	300/15	1442	2.6	Blue	TC-10-B
NL-300/20	NL-300/20	23.43	300/20				
NL-300/25	NL-300/25	23.76	300/25	1620	2.95	Brown	TC-10-B
NL-300/40	NL-300/40	23.94	300/40				
NL-300/50	NL-300/50*	24.26	300/50	1770	3.3	Brown	TC-12-B
NL-400/20	NL-400/20*	26.91	400/20	1860	4.9	Red	TC-12-B
NL-400/25	NL-400/25*	26.64	400/25				
NL-400/35	NL-400/35*	26.82	400/35				

Note:

1. Meaning of letters and number in models:  
N- tension clamp; L- helical type; "-" is followed by the applicable model of wire; LGJ- ACSR.
2. The raw material of helical tension clamp for ACSR is galvanized steel wire.
3. Before suing model marked with"" , please consult us.

## 1.2 Helical Conductor Tension Clamp for AAAC

Table A01-2 Type selection table

Product model of the Company	Standard model of the industry	Applicable diameter of guide wire (mm)		Applicable type of guide wire (GB1179-83) AAAC (LJ)	Reference length of wire clamp (mm)	Wire clamp weight (Kg)	Color code	Optional matching fittings
		Min.	Max.					
NL-16/LJ	NL-16/LJ	4.62	5.16	16	406	0.10	Blue	TC-07-B
NL-25/LJ	NL-25/LJ	5.80	6.53	25	444	0.10	Orange	
NL-35/LJ	NL-35/LJ	7.35	8.26	35	622	0.20	Red	
NL-50/LJ	NL-50/LJ	8.27	9.25	50	685	0.25	Green	
NL-70/LJ	NL-70/LJ	10.40	11.68	70	736	0.40	Blue	
NL-95/LJ	NL-95/LJ	11.69	13.11	95	800	0.40	Orange	
NL-120/LJ	NL-120/LJ	13.12	14.66	120	876	0.60	Red	
NL-150/LJ	NL-150/LJ	14.67	16.59	150	889	0.80	Black	
NL-185/LJ	NL-185/LJ	16.60	18.77	185	1016	1.10	Green	
NL-210/LJ	NL-210/LJ	16.60	18.77	210	1016	1.10	Green	
NL-240/LJ	NL-240/LJ	18.78	21.26	240	1155	1.70	Orange	
NL-300/LJ	NL-300/LJ	21.27	24.05	300	1270	2.30	Blue	
NL-400/LJ	NL-400/LJ	24.06	27.20	400	1422	3.10	Brown	TC-10-B
NL-500/LJ	NL-500/LJ	27.21	30.78	500	1651	4.30	Orange	

Note:

1. Meaning of letters and number in models:  
N- tension clamp; L- helical type; "-" is followed by the applicable model of wire; LJ- AAAC.
2. This table lists only some of the products, for other specifications, please contact us.
3. Before suing model marked with"" , please consult us.

## 1.3 Helical Conductor Tension Clamp for 1KV Insulated

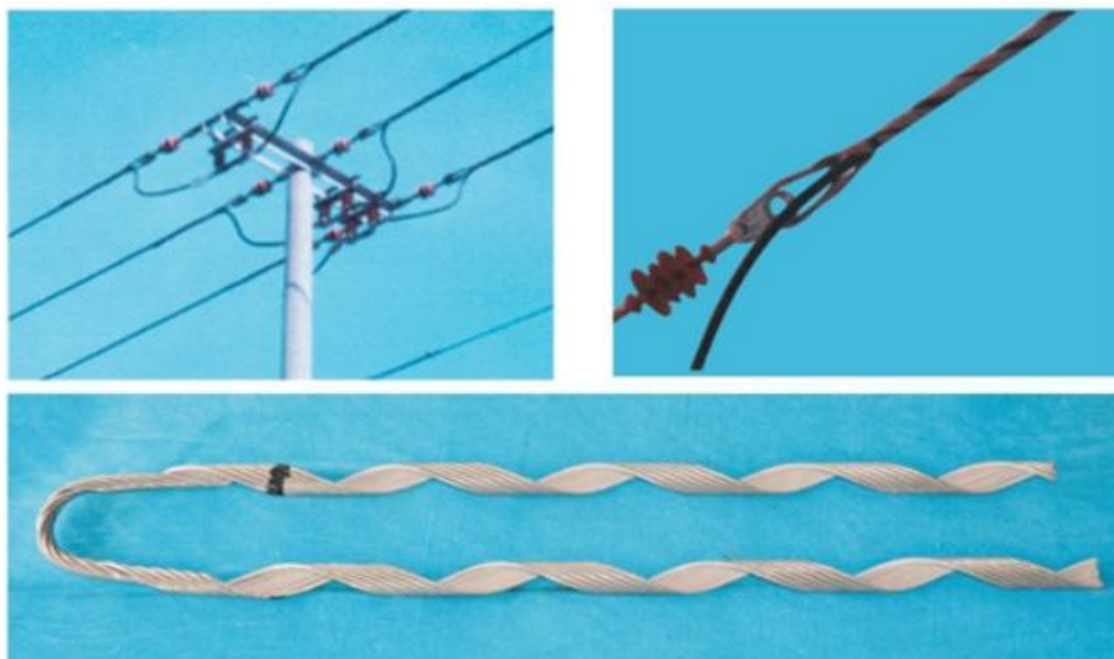


Fig. Insulated Helical Conductor Tension Clamp



Table A01-3 Type selection table

Product model of the Company	Standard model of the industry	Applicable diameter of guide wire (mm)		Applicable wire model below 1KV GB12527-90	10KV Applicable wire model GB14049-93 thinner insulation	Reference length (mm)	Color code	Optional matching fittings
		Min.	Max.					
NL-10/JY-1KV	-	5.82	6.53	10		460	Orange	TC-05-B
NL-16/JY-1KV	-	6.55	7.34	16		530	Yellow	
NL-25/JY-1KV	-	8.28	9.25	25		690	Green	
NL-35/JY-1KV	-	9.26	10.39	35		690	Yellow	
NL-50/JY-1KV	-	10.40	11.68	50		740	Blue	
NL-70/JY-1KV	-	11.60	13.11	70	25 35	790	Orange	
NL-95/JY-1KV	-	13.12	14.66		50	860	Purple	
NL-120/JY-1KV	-	14.67	16.59	95 120	70	889	Blue	TC-07-B
NL-150/JY-1KV	-	16.60	18.77	150	95	980	Red	
NL-185/JY-1KV	-	18.78	21.26	185	120 150	1016	Brown	TC-10-B
NL-240/JY-1KV	-	21.27	24.05	240	185	1016	Green	
NL-300JYQ-10KV	-	24.06	27.20		240 300	1016	Black	

## 1.4 Helical Conductor Tension Clamp for 10KV Insulated

Table A01-4 Type selection table

Product model of the Company	Standard model of the industry	Applicable diameter of guide wire (mm)		Reference length (mm)	10KV Applicable wire model GB14049-93 ordinary insulation	Color code	Optional matching fittings
		Min.	Max.				
NL-10/JY-10KV		10.40	11.68	740	10	Blue	TC-05-B
NL-16/JY-10KV		11.69	13.11	790	16	Orange	
NL-25/JY-10KV		13.12	14.66	860	25	Purple	
NL-35/JY-10KV NL-50/JY-10KV	NL-35/JY NL-50/JY	14.67	16.59	889	35 50	Blue	TC-07-B
NL-70/JY-10KV	NL-70/JY	16.60	18.77	980	70	Red	
NL-95/JY-10KV NL-120/JY-10KV	NL-95/JY NL-120/JY	18.78	21.26	1016	95 120	Brown	
NL-150/JY-10KV	NL-150/JY	21.27	24.05	1016	150	Green	
NL-185/JY-10KV NL-240/JY-10KV	NL-185/JY NL-240/JY	24.06	27.20	1016	185 240	Black	TCB-10-B
NL-300/JY-10KV	NL-300/JY	27.21	30.78	1016	300	Purple	

Note:

- Meaning of letters and number in models:  
N- tension clamp; L- helical type; "-" is followed by the applicable model of wire;  
JY- insulated wire, for circuit of 1KV-1KV and below, and circuit of 10KV-10KV.
- The type selection of tension clamp should be subject to the actual wire diameter.

## 2 Helical Earth Wire Tension Clamp

Clamp is for fixing terminals of the ground wire of overhead line.



### Material

Ground wire for steel conductor (G.I); wire clamp is used for galvanized steel.

Aluminum-clad steel, good conductor ACSR, wire clamp is used for aluminum-clad steel wire.

### 2.1 Helical Earth Wire Tension Clamp for Steel Conductor

Table A01-5 Type selection table

Product model of the Company	Standard model of the industry	Applicable diameter of guide wire ( mm )	Applicable type of guide wire YB/T 5004-1993(mm <sup>2</sup> )	Reference length of wire clamp( mm )	Wire clamp weight (Kg)	Color code
NL-25/G	NL-25/G	6.60	25	635	0.22	Yellow
NL-30/G	-	6.90	30	680	0.23	Purple
NL-35/G	NL-35/G	7.8	35	711	0.30	Black
NL-45/G	-	8.7	45	760	0.40	Blue
NL-50/G	NL-50/G	9.0	50	901	0.53	Orange
NL-55/G	-	9.60	55	920	0.55	Red
NL-60/G	-	10.0	60	950	0.65	Purple
NL-65/G	-	10.5	65	980	0.67	Blue
NL-70/G	NL-70/G	11.0	70	1016	0.82	Green
NL-80/G	-	11.40	80	1170	0.96	Black
NL-90/G	-	12.0	90	1180	1.30	Red
NL-95/G	NL-95/G	12.50	95	1333	1.50	Orange
NL-100/G	NL-100/G	13.0	100	1333	1.50	Yellow
NL-120/G	NL-120/G	14.0	120	1460	2.22	Yellow

Note:

1. N -tension clamp; L- helical type; “-” is followed by the applicable model of wire;

## 2.2 Helical Earth Wire Tension Clamp for Aluminum-Clad

Table A01-5 Type selection table

Product model of the Company	Standard model of the industry	Applicable range of wire diameter ( mm )		Model of good conductor ACSR	Length ( mm )	Color
		Min. outer diameter	Max. outer diameter			
NL-0460LB	-	4.42	4.60	-	420	Orange
NL-0585LB	-	5.56	5.85	-	500	Green
NL-0600LB	-	5.86	6.00	-	500	Orange
NL-0628LB	-	6.01	6.28	-	520	Yellow
NL-0656LB	-	6.29	6.56	-	520	Black
NL-0684LB	-	6.57	6.84	-	540	Red
NL-0712LB	-	6.85	7.12	-	570	Blue
NL-0740LB	-	7.13	7.40	-	570	Green
NL-0767LB	-	7.41	7.67	-	580	Yellow
NL-0795LB	-	7.68	7.95	-	650	Black
NL-0823LB	-	7.96	8.23	-	650	Red
NL-0854LB	-	8.24	8.54	-	650	Green
NL-0869LB	-	8.55	8.69	-	720	Orange
NL-0902LB	-	8.70	9.02	-	725	Yellow
NL-0925LB	-	9.03	9.25	-	775	Blue
NL-0963LB	-	9.26	9.63	-	770	Red
NL-1001LB	-	9.64	10.01	-	800	Orange
NL-1039LB	-	10.02	10.39	-	840	Yellow
NL-1082LB	-	10.40	10.82	-	850	Black
NL-1123LB	-	10.83	11.23	-	900	Green
NL-1166LB	-	11.24	11.66	50/30	940	Yellow
NL-1204LB	-	11.67	12.04	-	950	Red
NL-1255LB	-	12.05	12.55	-	980	Blue
NL-1308LB	-	12.56	13.08	-	1080	Green
NL-1361LB	-	13.09	13.61	70/40	1190	Red
NL-1410LB	-	13.62	14.10	-	1220	Yellow
NL-1448LB	-	14.11	14.48	-	1250	Blue
NL-1501LB	-	14.49	15.01	-	1270	Orange
NL-1554LB	-	15.02	15.54	-	1270	Green
NL-1613LB	-	15.55	16.13	95/55	1370	Yellow
NL-1679LB	-	16.14	16.79	-	1420	Black
NL-1742LB	-	16.80	17.42	-	1500	Blue
NL-1808LB	-	17.43	18.08	120/7	1530	Red
NL-1882LB	-	18.09	18.82	-	1570	Black
NL-1961LB	-	18.83	19.61	-	1780	Yellow

Note: 1. N- Tension wire clamp, L-helical type, LB-aluminum-clad

## 3 Helical Stay Wire Tension Clamp

Helical stay wire tension clamp is used for fixing drawing wires on all kinds of towers.

The structure of wire drawing clamp is very simple, with both ends of helical armor rod being twisted to form blank pipe and the rear forms helical twisted ring. During wire drawing, the blank pipe formed by both ends of helical armor rod will generate strong gripping force and the twisted rings is used for fixing to the ground anchors or the towers.

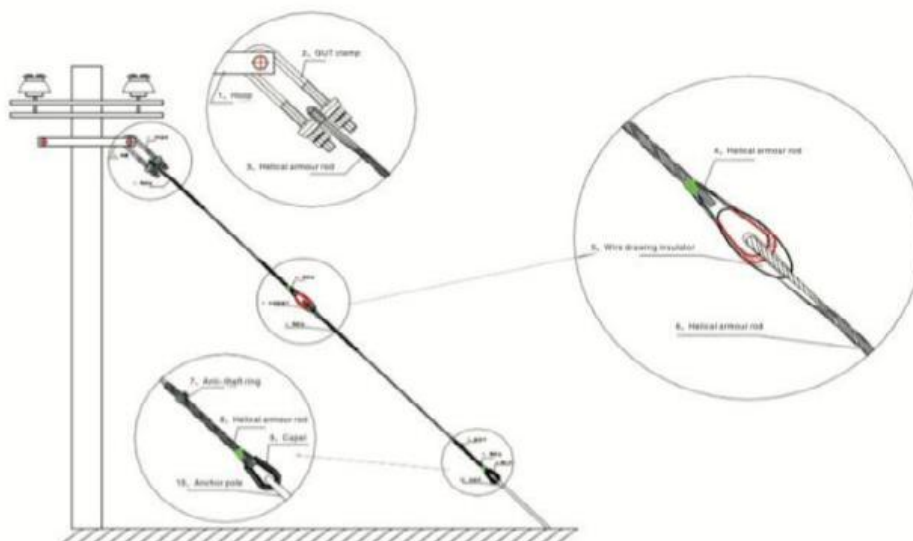


Table A01-6 Type selection table

Product model of the Company	Standard model of the industry	Applicable diameter of guide wire (mm)	Applicable type of guide wire YB/T 5004-1993(mm <sup>2</sup> )	Reference length of wire clamp (mm)	Wire clamp weight (Kg)	Color code	Matching fittings
NL-25/G	NL-25/G	6.60	25	635	0.22	Yellow	Capel, adjustable wire, anti-theft ring clamp
NL-35/G	NL-35/G	7.8	35	711	0.30	Black	
NL-50/G	NL-50/G	9.0	50	901	0.53	Orange	
NL-70/G	NL-70/G	11.0	70	1016	0.82	Green	
NL-95/G	NL-95/G	12.50	95	1333	1.50	Orange	
NL-100/G	NL-100/G	13.0	100	1333	1.50	Yellow	
NL-120/G	NL-120/G	14.0	120	1460	2.22	Yellow	

Notes:

1. N-tension wire clamp, L-helical type, “-” is followed by the model of applicable steel stranded wire

Prompt

The rotation direction of NL wire drawing tension clamp should be consistent. The rotation direction of standard NL is right-hand lay, if you need left-hand lay, please notify us in advance.



## 4 Pole Top Make Off

### Usage:

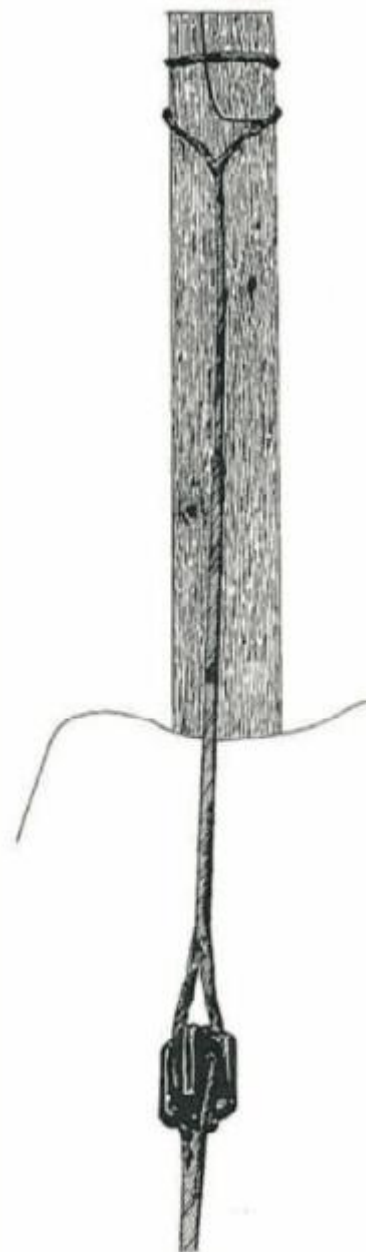
For fixing poles in the distribution lines.

### Features:

1. Simple structure: easy installation and fast installation without the need of special tools, hand installation is enough.
2. High strength: The products are made of high-strength steel wire and products different specifications may meet work environment with requirements of various strength.
3. Strong corrosion resistance: After galvanization treatment, the thickness of galvanized zinc layer meets IEC standards.

Table A01-7 Type selection table:

No.	Product standard	Product mix	Product length (mm)	Color code
1	DL-7/2.4	7/2.403	2290	Black
2	DL-7/2.65	7/2.65	2290	Brown
3	DL-7/2.92	7/2.92	2290	Red
4	DL-7/3.25	7/3.25	2290	Black
5	DL-7/3.27	7/3.267	2290	Black
6	DL-7/3.35	7/3.35	2290	Blue
7	DL-7/3.36	7/3.66	2290	Brown
8	DL-7/4.0	7/4.0	2290	Green
9	DL-19/2.65	19/2.65	2290	Orange
10	DL-19/3.25	19/3.25	2290	Brown



## Splices

There are 2 group on Splices: 1. Repair Rod(BL, YJB) 2. Splice(JL)

### Repair Rod (BL)



When the lost area of wire or ground wire is less than 7%, repair rod maybe used to restore 100% of the mechanical and electrical properties.

#### 1.1 Repair Rod for ACSR

Table B01-1 Selection table

Product model of the Company	Standard model of the industry	Applicable type of guide wire ( GB 1179-83 ) Steel core aluminum stranded wire LGJ/LGJ F		Reference length of wire clamp ( mm )	Monofil diameter ( mm )	Wire clamp weight ( Kg )	Color code
		Model of wire	Outer diameter				
BL-70/10	BL-70/10	70/10	11.40	420	3.6	0.14	Red
BL-95/15	BL-95/15	95/15	13.61			0.18	Yellow
BL-95/20	BL-95/20	95/20	13.87			0.18	Black
BL-95/55	BL-95/55	95/55	16.00			0.20	Red
BL-120/7	BL-120/7	120/7	14.50	450	3.6	0.20	white
BL-120/20	BL-120/20	120/20	15.07			0.20	Brown
BL-120/25	BL-120/25	120/25	15.74			0.22	Yellow
BL-120/70	BL-120/70	120/70	18.00			0.36	Blue
BL-150/8	BL-150/8	150/8	16.00	480	3.6	0.22	Red
BL-150/20	BL-150/20	150/20	16.67			0.24	Blue
BL-150/25	BL-150/25	150/25	17.10			0.24	Blue
BL-150/35	BL-150/35	150/35	17.50			0.24	Green
BL-185/10	BL-185/10	185/10	18.00	560	4.6	0.40	Yellow
BL-185/25	BL-185/25	185/25	18.90			0.40	white
BL-185/30	BL-185/30	185/30	18.88			0.41	Orange
BL-185/45	BL-185/45	185/45	19.60			0.42	white
BL-210/10	BL-210/10	210/10	19.00	600	4.6	0.42	Orange
BL-210/25	BL-210/25	210/25	19.98			0.42	Purple
BL-210/35	BL-210/35	210/35	20.38			0.45	
BL-210/50	BL-210/50	210/50	20.86				
BL-240/30	BL-240/30	240/30	21.60	650	4.6	0.53	Blue
BL-240/40	BL-240/40	240/40	21.66				Green
BL-240/55	BL-240/55	240/55	22.40				
BL-300/15	BL-300/15	300/15	23.01	1000	6.3	1.22	Black
BL-300/20	BL-300/20	300/20	23.43			1.22	white
BL-300/25	BL-300/25	300/25	23.76			1.23	
BL-300/40	BL-300/40	300/40	23.94			1.30	Orange
BL-300/50	BL-300/50	300/50	24.26	1000	6.3		
BL-300/70	BL-300/70	300/70	25.20				
BL-400/20	BL-400/20	400/20	26.91			1.32	Blue
BL-400/25	BL-400/25	400/25	26.64				
BL-400/35	BL-400/35	400/35	26.68	1100	6.3	1.45	Blue
BL-400/50	BL-400/50	400/50	27.63			1.46	Green
BL-400/65	BL-400/65	400/65	28.00			1.46	Yellow
BL-400/95	BL-400/95	400/95	29.14			1.50	white
BL-500/35	BL-500/35	500/35	30.00	1300	7.8	1.66	Orange
BL-500/45	BL-500/45	500/45	30.00				Purple
BL-500/65	BL-500/65	500/65	30.96				
BL-630/45	BL-630/45	630/45	33.60			2.62	Yellow

## 1.2 Repair Rod for Aluminum-Clad (YJB)

Table B01-2 Selection table

Product model of the Company	Standard model of the industry	Applicable type of guide wire Steel core aluminum stranded wire ( BG/1179-74 )		Reference length of wire clamp ( mm )	Monofil diameter ( mm )	Wire clamp weight ( Kg )	Color code
		Model of wire	Outer diameter				
YJB-35	YJB-35	LGJ-35	8.4	270	3.6	0.1	Purple
YJB-50	YJB-50	LGJ-50	9.6	300	3.6	0.1	Red
YJB-70	YJB-70	LGJ-70	11.4	340	3.6	0.13	Brown
YJB-95	YJB-95	LGJ-95	13.7	420	4.6	0.24	Blue
YJB-120	YJB-120	LGJ-120	15.16	450	4.6	0.28	Black
YJB-150	YJB-150	LGJ-150	16.96	480	4.6	0.32	white
YJB-185	YJB-185	LGJ-185	18.98	580	4.6	0.4	Green
YJB-240	YJB-240	LGJ-240	21.56	640	6.3	0.68	Orange
YJB-300	YJB-300	LGJ-300	24.20	700	6.3	0.85	Purple
YJB-400	YJB-400	LGJ-400	27.96	820	6.3	1.07	Red
YJB-300Q	YJB-300Q	LGJ-300Q	23.55	700	6.3	0.82	Brown
YJB-400Q	YJB-400Q	LGJ-400Q	27.24	820	6.3	1.07	Blue
YJB-400Q	YJB-500Q	LGJ-500Q	30.22	870	7.8	1.74	Black

### Splice (JL)

#### Type

Splices includes conductor splice (JL), splice for jumping wire (JLT), T-Splice(TJX), full tension splice(JLQ) for ACSR, splice for earth wire or stay wire (JLLX/JLDX) and strngthen splice(JLGB) etc. In addition to all-tension connecting bar for steel core aluminum stranded wire which had inner layer steel core connecting bar, filler rod and outer layer connecting bar three connecting layers, all other connecting bars are single layer helical armor rods.

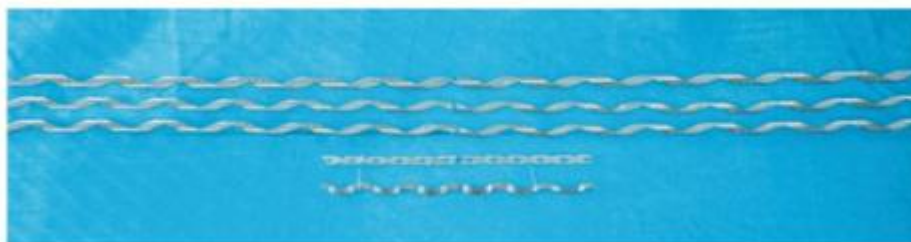
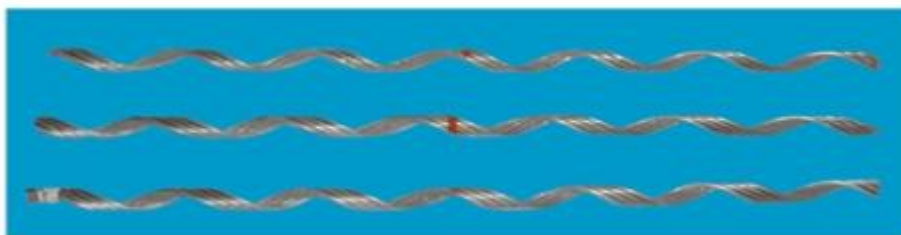


Fig. Full tension splice for ACSR (JLQ)

## Conductor Splice (JLD)



### Component information

1. Grouping bar: it generally consists of two, three or four groups of helical armor rods, the inner surface is sandblasted
2. Fitting mark: different color are used to distinguish the product models and marked on the center area of the product as a fitting mark for ease of installation.
3. Tags: Marked with product model and applicable wire size.
4. Length: see selection table

Conductor splices are designed only as separate add-in components for high voltage lines.

### Selection table

#### Conductor splice for AAAC

Table B01-3 Selection table

Product model of the Company	Standard model of the industry	Applicable diameter of guide wire (mm)		Applicable type of guide wire (GB 1179-83) AAAC (LJ)	Reference length of wire clamp (mm)	Wire clamp weight (Kg)	Color code
		Min.	Max.				
JLD-16/L		4.91	5.13	16	558	0.08	Blue
JLD-25/L		6.26	6.53	25	660	0.1	Orange
JLD-35/L		7.35	7.57	35	710	0.12	Purple
JLD-50/L		8.94	9.32	50	860	0.19	Green
JLD-70/L		10.52	10.80	70	1020	0.32	Brown
JLD-95/L	JL-95/L	12.24	12.78	95	1168	0.44	Orange
JLD-120/L	JL-120/L	13.83	14.40	120	1321	0.60	Red
JLD-150/L	JL-150/L	15.72	16.36	150	1702	1.05	Yellow
JLD-185/L	JL-185/L	17.05	17.78	185	1778	1.26	Orange
JLD-210/L	JL-210/L	18.53	19.30	210	2007	1.90	Black
JLD-240/L	JL-240/L	19.31	20.12	240	2108	2.18	Purple
JLD-300/L	JL-300/L	21.62	22.50	300	2515	2.84	Orange
JLD-400/L	JL-400/L	25.61	26.67	400	3073	4.86	Green
JLD-500/L	JL-500/L	27.72	30.05	500	3581	6.5	Red

Note: meaning of letters and number in models: J-connecting bar, L-helical type, D-wire, number-product specification No; LJ-AAAC.



## Insulator Ties

### Insulator Distribution Tie(DB)

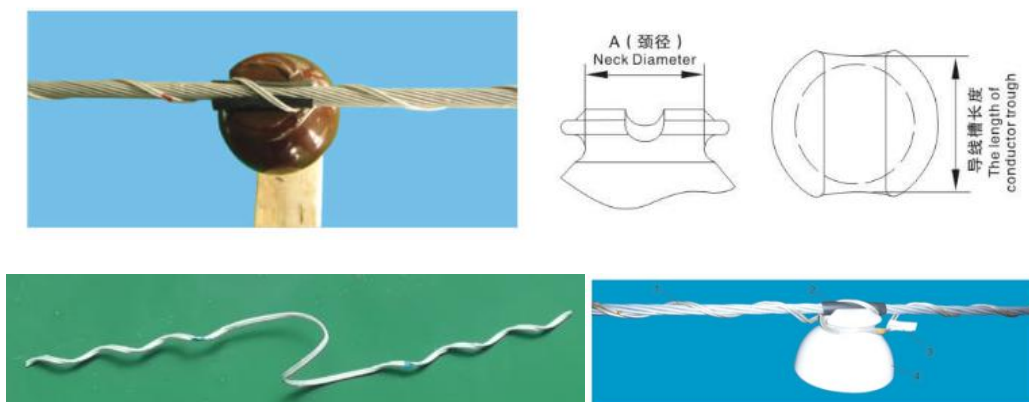


Fig Insulator Distribution Tie

1. Helical armor rod: Fixing wire , ground wire.
2. Sleeve: protective conductor and ground wire, cover the sleeve on the wire at first during installation
3. Identification tape: marked with product number,nominal size.
4. Color code: for distinguishing the range of applicable wire diameter.

#### Selection table

1. Helical insulator distribution tie, suitable for bare conductor and insulated wire used cooperatively with P-6 pin insulators(neck diameter 66mm)

Table C01-1selection table

Product model of the Company	Applicable diameter of guide wire (mm)		Product parameters		Applicable international wire		
			Color code	Number in each group	IJ	Ordinary insulation 10KV	Thinner insulation 10KV
DB-0600	4.83	5.46	Blue	2	16		10
DB-0601	5.47	6.20	Brown	2			16
DB-0602	6.21	7.04	Orange	2	25		
DB-0603	7.05	8.00	Purple	2	35		
DB-0604	8.01	9.07	Red	2	50		
DB-0605	9.08	10.29	Yellow	2			
DB-0606	10.3	11.66	Blue	2	70		
DB-0607	11.67	13.21	Orange	2	95	10, 16	
DB-0608	13.22	14.94	Red	2	120		25
DB-0609	14.95	16.89	Purple	2	150	25, 35	35, 50
DB-0610	16.9	19.18	Brown	2	185, 210	50	70
DB-0611	19.2	21.79	Red	2	240	70, 95	95, 120
DB-0612	21.82	24.59	Blue	2	300	120, 150	150, 185
DB-0613	24.61	27.84	Green	2	400	185	240
DB-0614	27.85	31.50	Yellow	2			

Note: For right-hand lay bare wires and insulated wires

## 2. Helical insulator distribution tie, suitable for bare conductor and insulated wire used cooperatively with P-10 pin insulators(neck diameter 74mm)

Table C01-2 selection table

Product model of the Company	Applicable diameter of guide wire (mm)		Product parameters		Applicable international wire		
			Color code	Number in each group	LJ	Ordinary insulation 10KV	Thinner insulation 10KV
DB-1000	4.83	5.46	Blue	2	16		10
DB-1001	5.47	6.20	Brown	2			16
DB-1002	6.21	7.04	Orange	2	25		
DB-1003	7.05	8.00	Purple	2	35		
DB-1004	8.01	9.07	Red	2	50		
DB-1005	9.08	10.29	Yellow	2			
DB-1006	10.3	11.66	Blue	2	70		
DB-1007	11.67	13.21	Orange	2	95	10, 16	
DB-1008	13.22	14.94	Red	2	120		25
DB-1009	14.95	16.89	Purple	2	150	25, 35	35, 50
DB-1010	16.9	19.18	Brown	2	185, 210	50	70
DB-1011	19.2	21.79	Red	2	240	70, 95	95, 120
DB-1012	21.82	24.59	Blue	2	300	120, 150	150, 185
DB-1013	24.61	27.84	Green	2	400	185	240
DB-1014	27.85	31.50	Yellow	2			

Note: For right-hand lay bare wires and insulated wires

## 3. Helical insulator distribution tie, suitable for bare conductor and insulated wire used cooperatively with P-15 pin insulators(neck diameter 80mm)

Table C01-3 selection table

Product model of the Company	Applicable diameter of guide wire (mm)		Product parameters		Applicable international wire		
			Color code	Number in each group	LJ	Ordinary insulation 10KV	Thinner insulation 10KV
DB-1500	4.83	5.46	Blue	2	16		10
DB-1501	5.47	6.20	Brown	2			16
DB-1502	6.21	7.04	Orange	2	25		
DB-1503	7.05	8.00	Purple	2	35		
DB-1504	8.01	9.07	Red	2	50		
DB-1505	9.08	10.29	Yellow	2			
DB-1506	10.3	11.66	Blue	2	70		
DB-1507	11.67	13.21	Orange	2	95	10, 16	
DB-1508	13.22	14.94	Red	2	120		25
DB-1509	14.95	16.89	Purple	2	150	25, 35	35, 50
DB-1510	16.9	19.18	Brown	2	185, 210	50	70
DB-1511	19.2	21.79	Red	2	240	70, 95	95, 120
DB-1512	21.82	24.59	Blue	2	300	120, 150	150, 185
DB-1513	24.61	27.84	Green	2	400	185	240
DB-1514	27.85	31.50	Yellow	2			

Note: For right-hand lay bare wires and insulated wires

## Helical Insulator Side Ties (CB)

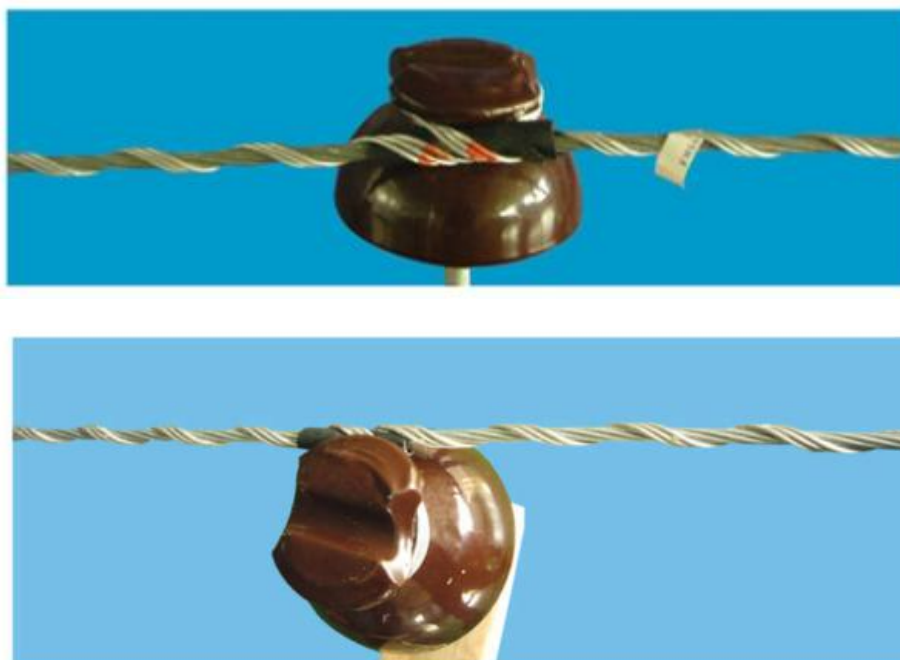


Fig Insulator side tie

### Selection Table

1. Helical insulator side tie, suitable for bare conductor and insulated wire used cooperatively with P-6 pin insulators(neck diameter 66mm)

Table C01-4 selection table

Product model of the Company	Applicable diameter of guide wire (mm)		Product parameters		Applicable international wire		
			Color code	Number in each group	LJ	Ordinary insulation 10KV	Thinner insulation 10KV
CB-0600	4.83	5.46	Blue	3	16		10
CB-0601	5.47	6.20	Brown	3			16
CB-0602	6.21	7.04	Orange	3	25		
CB-0603	7.05	8.00	Purple	3	35		
CB-0604	8.01	9.07	Red	3	50		
CB-0605	9.08	10.29	Yellow	3			
CB-0606	10.3	11.66	Blue	3	70		
CB-0607	11.67	13.21	Orange	3	95	10, 16	
CB-0608	13.22	14.94	Red	3	120		25
CB-0609	14.95	16.89	Purple	3	150	25, 35	35, 50
CB-0610	16.9	19.18	Brown	3	185, 210	50	70
CB-0611	19.2	21.79	Red	3	240	70, 95	95, 120
CB-0612	21.82	24.59	Blue	4	300	120, 150	150, 185
CB-0613	24.61	27.84	Green	4	400	185	240
CB-0614	27.85	31.50	Yellow	4			

Note: For right-hand lay bare wires and insulated wires

## 2. Helical insulator side tie, suitable for bare conductor and insulated wire used cooperatively with P-10 pin insulators(neck diameter 74mm)

Table C01-5 selection table

Product model of the Company	Applicable diameter of guide wire (mm)		Product parameters		Applicable international wire		
			Color code	Number in each group	LJ	Ordinary insulation 10KV	Thinner insulation 10KV
CB-1000	4.83	5.46	Blue	3	16		10
CB-1001	5.47	6.20	Brown	3			16
CB-1002	6.21	7.04	Orange	3	25		
CB-1003	7.05	8.00	Purple	3	35		
CB-1004	8.01	9.07	Red	3	50		
CB-1005	9.08	10.29	Yellow	3			
CB-1006	10.3	11.66	Blue	3	70		
CB-1007	11.67	13.21	Orange	3	95	10, 16	
CB-1008	13.22	14.94	Red	3	120		25
CB-1009	14.95	16.89	Purple	3	150	25, 35	35, 50
CB-1010	16.9	19.18	Brown	3	185, 210	50	70
CB-1011	19.2	21.79	Red	3	240	70, 95	95, 120
CB-1012	21.82	24.59	Blue	4	300	120, 150	150, 185
CB-1013	24.61	27.84	Green	4	400	185	240
CB-1014	27.85	31.50	Yellow	4			

Note: For right-hand lay bare wires and insulated wires

## 3. Helical insulator side tie, suitable for bare conductor and insulated wire used cooperatively with P-15 pin insulators(neck diameter 80mm)

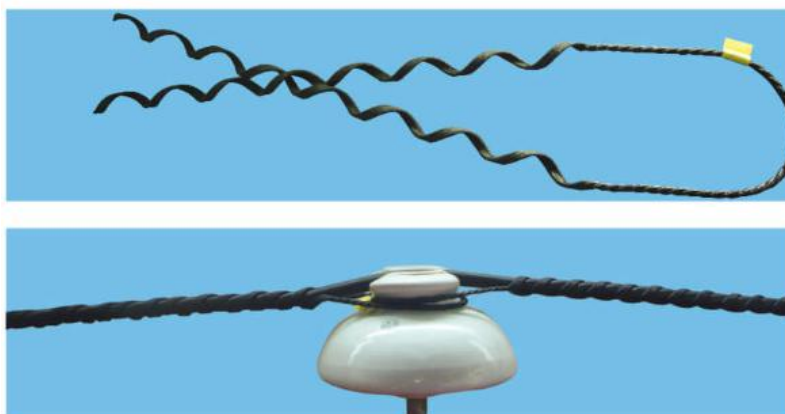
Table C01-6 selection table

Product model of the Company	Applicable diameter of guide wire (mm)		Product parameters		Applicable international wire		
			Color code	Number in each group	LJ	Ordinary insulation 10KV	Thinner insulation 10KV
CB-1500	4.83	5.46	Blue	3	16		10
CB-1501	5.47	6.20	Brown	3			16
CB-1502	6.21	7.04	Orange	3	25		
CB-1503	7.05	8.00	Purple	3	35		
CB-1504	8.01	9.07	Red	3	50		
CB-1505	9.08	10.29	Yellow	3			
CB-1506	10.3	11.66	Blue	3	70		
CB-1507	11.67	13.21	Orange	3	95	10, 16	
CB-1508	13.22	14.94	Red	3	120		25
CB-1509	14.95	16.89	Purple	3	150	25, 35	35, 50
CB-1510	16.9	19.18	Brown	3	185, 210	50	70
CB-1511	19.2	21.79	Red	3	240	70, 95	95, 120
CB-1512	21.82	24.59	Blue	4	300	120, 150	150, 185
CB-1513	24.61	27.84	Green	4	400	185	240
CB-1514	27.85	31.50	Yellow	4			

Note: For right-hand lay bare wires and insulated wires



**Double Tie**



**PVC insulated Plastic Tie**

**Single top insulator tie**



**Double top insulator tie**



**Single side insulator tie**



For detail specification of PVC Tie and Plastic Tie, please see catalogue Plastic Tie of CROP.

## PVC INSULATOR TOP TIE

### Description

PVC plastic line ties / insulator top ties are suitable used for fixing insulated conductors and vertically-mounted tie top insulators on crossarms or pole-top-mounted in the distribution line. Line angles of up to 15° can be accommodated. There are mainly two types:

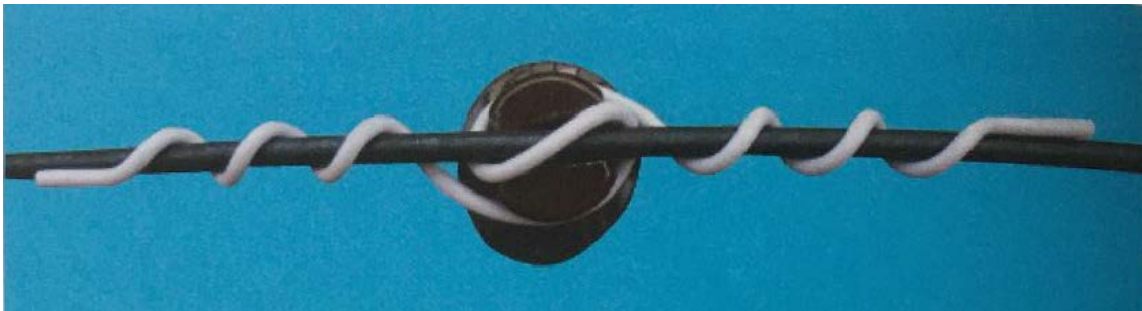
1. Top ties: fix the insulated conductor on the top groove of the insulator.
2. Side ties: fix the insulated conductor on the side groove of the insulator.

**Material:** High elasticity PVC, it can effectively prevent the insulated conductors from slipping out of the insulators during operation.

**Normal colour:** Grey or black (other colour can be customized)

**Working temperature:** -15℃-50℃

### Single top insulator tie



### Fixed insulator line post neck Ø 57mm

No.	Type	Suitable conductor diameter(mm)		Length(mm)
		Min.	Max.	
1	STIT-1017-57	7.51	10.17	660±25
2	STIT-1373-57	10.18	13.73	660±25
3	STIT-1855-57	13.74	18.55	711±25
4	STIT-2338-57	18.56	23.38	787±25
5	STIT-2795-57	23.39	27.95	860±25
6	STIT-3300-57	27.96	33.00	965±25

### Fixed insulator line post neck Ø 73mm

No.	Type	Suitable conductor diameter(mm)		Length(mm)
		Min.	Max.	
1	STIT-1017-73	7.51	10.17	660±30
2	STIT-1373-73	10.18	13.73	711±30
3	STIT-1855-73	13.74	18.55	762±30
4	STIT-2338-73	18.56	23.38	812±30
5	STIT-2795-73	23.39	27.95	889±30
6	STIT-3300-73	27.96	33.00	965±30

## Double top insulator tie



## Fixed insulator line post neck Ø 57mm

No.	Type	Suitable conductor diameter(mm)		Length(mm)
		Min.	Max.	
1	DTIT-1017-57	7.51	10.17	380±25
2	DTIT-1373-57	10.18	13.73	410±25
3	DTIT-1855-57	13.74	18.55	430±25
4	DTIT-2338-57	18.56	23.38	430±25
5	DTIT-2795-57	23.39	27.95	450±25
6	DTIT-3300-57	27.96	33.00	480±25

## Fixed insulator line post neck Ø 73mm

No.	Type	Suitable conductor diameter(mm)		Length(mm)
		Min.	Max.	
1	DTIT-1017-73	7.51	10.17	380±30
2	DTIT-1373-73	10.18	13.73	410±30
3	DTIT-1855-73	13.74	18.55	430±30
4	DTIT-2338-73	18.56	23.38	430±30
5	DTIT-2795-73	23.39	27.95	450±30
6	DTIT-3300-73	27.96	33.00	480±30

## Single side insulator tie



## Fixed insulator line post neck Ø 57mm

No.	Type	Suitable conductor diameter(mm)		Length(mm)
		Min.	Max.	
1	SIT-1017-57	7.51	10.17	533±25
2	SIT-1373-57	10.18	13.73	533±25
3	SIT-1855-57	13.74	18.55	559±25
4	SIT-2338-57	18.56	23.38	610±25
5	SIT-2795-57	23.39	27.95	686±25
6	SIT-3300-57	27.96	33.00	762±25

## Fixed insulator line post neck Ø 73mm

No.	Type	Suitable conductor diameter(mm)		Length(mm)
		Min.	Max.	
1	SIT-1017-73	7.51	10.17	559±30
2	SIT-1373-73	10.18	13.73	559±30
3	SIT-1855-73	13.74	18.55	584±30
4	SIT-2338-73	18.56	23.38	635±30
5	SIT-2795-73	23.39	27.95	686±30
6	SIT-3300-73	27.96	33.00	762±30