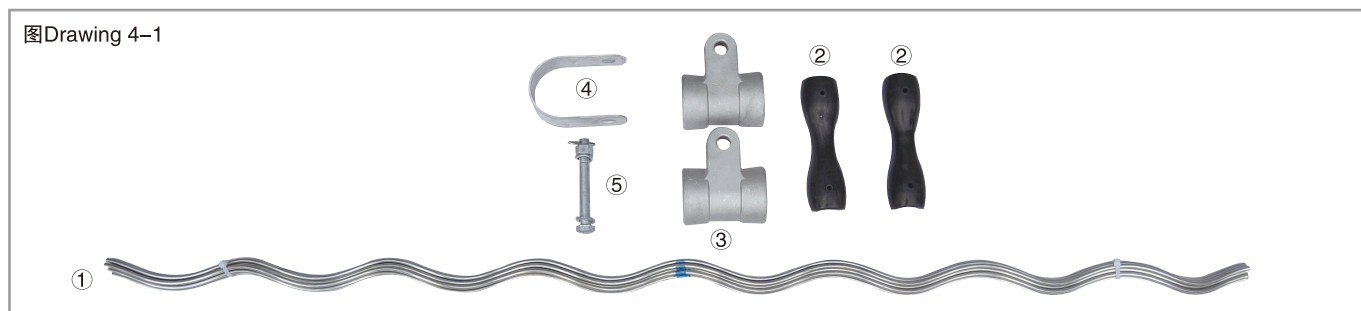


预绞式悬垂线夹 Preformed Suspension Set

1. 部件说明(图4-1) Component illustration (Drawing 4-1)

图Drawing 4-1



①预绞线：线径在7.72~12.23mm的钢芯铝绞线采用铝包钢线材
线径在6.91~12.70mm的铝包钢绞线采用铝包钢的线材

线径在12.24~56.72mm的钢芯铝绞线采用铝包金线材
线径在6.91~12.70mm的镀锌钢绞线采用镀锌钢丝

标准护线条预绞丝与预绞式悬垂线夹的预绞丝在尺寸上有区别，不能替换使用

预绞丝尾端处理：用于非超高压线路的预绞丝尾端为磨圆处理，用于超高压(345kV以上)线路的预绞丝尾端采用鹦鹉嘴(PARROT-BILL)处理

②橡胶衬垫：特殊配方的橡胶弹性体，可以抵御臭氧侵蚀，以及极端高温、低温和其它恶劣气候的影响，并可承受压力。在橡胶弹性体中有一块铝合金型板



③金属护套：导线线径在6.91~12.70mm范围时为镀锌钢冲压

导线线径在12.24~56.72mm范围时为高强度铝合金铸件

④固定夹片：导线线径在6.91~12.70mm范围时为镀锌钢

导线线径在12.24~56.72mm范围时为高强度铝合金

⑤螺栓/紧固垫圈/螺母：镀锌钢

① Aluminum clad steel for ACSR diameter 7.72~12.23mm.

Aluminum alloy for ACSR diameter 12.24~56.72mm

Aluminum clad steel for aluminoweld strand diameter 6.91~12.70mm.

Galvanized steel for galvanized steel strand, diameter 6.91~12.70mm

Standard armor rods have dimensions which are different from FHAGS rods and cannot be substituted.

Ball end rod: Rod has a Ball End for non-EHV application. PARROT-BILL ends are supplied for EHV application.

② Insert: An elastomer specially formulated for resistance to ozone attacks, weathering, extreme high and low temperature variations, and compression set. Aluminum alloy reinforcement is molded into the elastomer.

③ Housing: Galvanized steel stamping for cable dia. Range 6.9~12.7mm High-strength Aluminum alloy Casting for conductor dia. Range 12.24~56.72

④ Strap: Galvanized Steel for conductor dia. Range 6.91~12.70mm High-strength aluminum alloy for conductor dia. Range 12.24~56.72mm

⑤ Bolt/lock washer/ lock nut: galvanized steel

2. 用途 Application

1) 预绞式悬垂线夹的作用和普通悬垂线夹相似，用于杆塔上悬垂导线及地线。所不同的是预绞式悬垂线夹不仅可有效地保护导线，而且其平滑的外轮廓使电晕放大大减少，故尤其适用于超高压(220kV及以上)线路。双支点预绞式悬垂线夹还可以用于跨江河的长距离输电线及转角较大的杆塔(30°~60°)上；

2) 预绞式悬垂线夹用于铝基系列导线，铝包钢和镀锌钢绞线。它被设计用来减弱在支撑点上的静态和动态应力，以便能保护导线及绞线，抵御振动的影响，同时也能保护导线在支撑点上免受冲击和电弧影响；

3) 预绞式悬垂线夹作为一种优秀的护线-悬垂组合，可以保护导线不受弯曲应力、压应力的影响，同时也可使导线免遭磨损。

1) It is used for the suspension conductor and ground wire on poles. It could not only protect the conductor, but also reduce corona. So it is suitable for Super High Voltage Line. Double set could also be used for long distance line and big angle pole.

2) It is intended for use on aluminum based conductors, Aluminoweld and galvanized steel strands. It is designed to reduce the static and dynamic stresses at the support point, so that the conductor or strand is protected against the effects of oscillations. It also protects the conductor in the support against impulse and power flash-over.

3) It is recommended as being superior to armor-clamp combinations, for protecting conductors from bending stress, compression stress and abrasion.

3.特点(图4-2) Characteristic (Drawing 4-2)

- 1) 最佳应力分配: 预绞式悬垂线夹将导线所受应力分布在一个较大的区域, 使弯曲、剪切、拉伸等静态应力对导线的影响大大减少, 极大提高了导线承受应力的能力。而且在导线发生振动甚至舞动时, 不易在悬垂处造成损伤;
 - 2) 最低的磨损: 预绞式悬垂线夹的护线条在悬垂点两侧紧握导线可以承受较高的不平衡荷载, 从而避免了导线滑移, 因此把导线的磨损降至最低限度;
 - 3) 防老化及松动: 预绞式悬垂线夹的护线条由于导线材质相符的材料制成, 同时又具有极好的弹性和韧性, 与普通钢性较强的硬铝护线条相比, 极好的抗老化性能和防松动性, 因而可以长年安全使用;
 - 4) 极佳的电气性能: 预绞式悬垂线夹的独特设计, 可降低电磁损耗和消除电晕线条的球形端头或鹦鹉嘴端头, 保证不会发生尖端放电。
- 1) Best stress distribution: The stress of conductor are distributed at a large area, increasing the stress capability of the conductor;
 - 2) Lowest abrasion: It could avoid the shifting of conductor, so it reduce the abrasion;
 - 3) Anti-aging and anti-loosening: It is made of the same material as conductor, and it is also with a good elasticity and toughness. So it could be used safely for a long term.;
 - 4) Excellent electricity: No point discharge because of special design of parrot-bill ends.

图4-2 悬垂线夹的整体结构 Drawing 4-2 suspension clamp structure



4.特殊设计 Design modification

尾端鹦鹉嘴处理: 在大多数超高压线路使用中, 为避免电晕现象的发生以及满足无线电干扰电压的要求, 用尾端鹦鹉嘴处理代替标准的尾端磨圆处理。(图4-3)

PARROT-BILL Ends: To meet the corona on set and RIV requirements for most extrahigh voltage applications. PARROT-BILL ends are to be used instead of the standard ball-end rods. (drawing 4-3)

图4-3

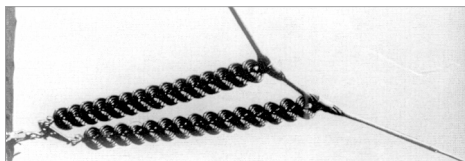


5.使用说明 Note

当导线夹角度在 30° ~ 60° 之间, 用双支点悬垂线夹直接与绝缘子串相连 (图4-4)。

When the line angle is between 30° ~ 60° , use double set to connect with insulator (drawing 4-5)。

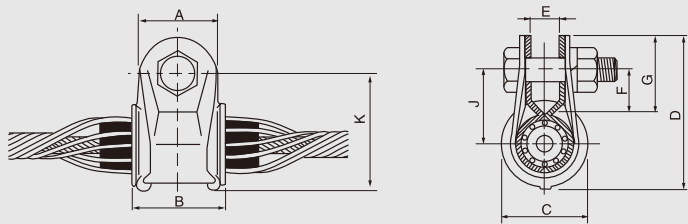
图4-4



6.部件尺寸 Component dimension

图4-5地线用预绞式悬垂线夹金属护套尺寸图(钢绞线/铝包钢绞线)

Drawing 4-5 Preformed suspension set metal jacket used on ground wire dimension drawing

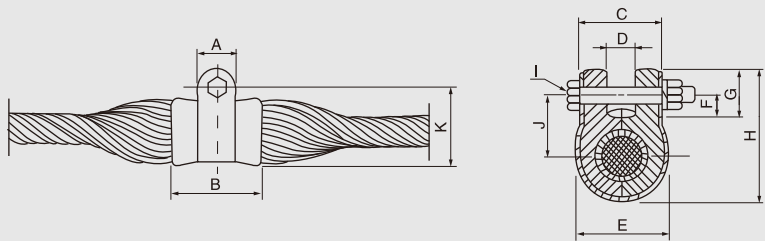


表Table 4-1

适用导线直径范围 Cable range(mm)		尺寸 Dimension (mm)										垂直破断强度(kN)
最小Min.	最大Max.	A	B	C	D	E	F	G	J	K	螺栓 Bolt	Vertical broken strength
6.90	9.88	45	57	52	104	17	29	52	52	82	15.9x63	68
9.89	12.7	45	64	57	104	17	28	50	53	82	15.9x63	68

图4-6导线用预绞式悬垂线夹金属护套尺寸图

Drawing 4-6 Preformed suspension set metal jacket used on conductor dimension drawing



表Table 4-2

适用导线直径范围 Cable range(mm)		尺寸 Dimension (mm)											垂直破断强度(kN)
最小Min.	最大Max.	A	B	C	D	E	F	G	H	I	J	K	Vertical broken strength
7.72	9.89	44.45	57.15	31.75	17.46	52.39	29.37	51.59	103.98	15.88	51.59	81.76	69
9.90	12.23	44.45	63.5	33.34	17.46	57.15	27.78	50.01	103.98	15.88	53.18	81.76	69
12.24	13.78	41.28	76.2	53.18	16.67	61.12	25.4	46.04	101.6	15.88	50.01	80.96	45
13.79	16.39	44.45	88.9	54.77	18.26	66.68	26.19	48.42	106.36	15.88	49.21	82.55	45
16.40	19.06	44.45	95.25	57.15	19.05	71.44	25.4	47.63	112.71	15.88	54.77	90.49	69
19.07	23.05	50.8	115.09	68.26	22.23	84.14	25.4	50.8	127	15.88	59.53	101.6	89
23.06	25.54	50.8	127	74.61	22.23	96.67	25.4	50.8	136.53	15.88	64.29	111.13	89
25.55	30.69	57.15	139.7	88.9	30.16	105.57	25.4	53.98	150.2	15.88	68.66	121.44	111
30.70	34.43	57.15	152.4	92.08	31.75	122.24	31.75	60.33	169.86	19.05	80.17	141.29	111
34.44	39.56	57.15	165.1	104.78	34.93	128.59	28.58	57.15	168.28	19.05	75.41	139.7	111
39.57	47.81	63.5	177.8	119.06	57.15	142.08	28.58	60.33	184.05	19.05	80.96	152.4	111
47.82	56.72	63.5	190.5	132.56	61.12	153.99	30.16	61.91	197.64	19.05	88.9	169.89	134

7.选型表 Model table

表4-3预绞式地线用悬垂线夹(钢绞线用)选型表 Table 4-3 Preformed suspension set used on ground wire (used on steel stranded wire) model table

DL-T763-2001 标准型号 Standard type	适用导线直径 范围(mm) Suitable dia.	GB 1200-75		参考线长度 Reference length (mm)	线夹重量 Weight (kg)	色标 Color code	垂直破断强度 (单/双) Vertical broken strength (single/double)	可选配套挂环 Optional fitting
		外径(mm) Outer dia.	绞线结构 Wire structure					
CL-1/G	6.90~7.20	7.0	19W	660	1.2	蓝 Blue	68kN/136kN	GHX-15-B
CL-1/GS				960	2.1			
CL-4/G	7.72~8.01	7.8(35)	7W	660	1.2	黑 Black		
CL-4/GS				960	2.1			
CL-6/G	8.32~8.69	8.4	7W	660	1.2	紫 Purple		
CL-6/GS				960	2.2			
CL-7/G	8.70~9.03	9.0(50)	7W/19W	660	1.2	棕 Brown		
CL-7/GS				960	2.2			
CL-9/G	9.53~9.89	9.6	7W	660	1.2	蓝 Blue		
CL-9/GS				960	2.2			
CL-10/G	9.90~10.27	10.0	19W	910	1.7	红 Red		
CL-10/GS				1220	2.8			
CL-11/G	10.28~10.62	10.5	7W	900	1.7	棕 Brown		
CL-11/GS				1220	2.9			
CL-12/G	10.63~11.03	11.0(70)	19W	900	1.7	黑 Black		
CL-12/GS				1220	2.9			
CL-13/G	11.04~11.43	11.4	7W	900	1.7	绿 Green		
CL-13/GS				1220	2.9			
CL-15/G	11.96~12.22	12.0	7W/19W	900	1.8	棕 Brown		
CL-15/GS				1220	3.0			
CL-16G	12.23~12.70	12.5(95)	19W	1140	1.9	蓝 Blue		
CL-16/GS				1440	3.0			

注:后缀G为单悬垂线夹, GS为双悬垂线夹。 Note: G means single suspension set, GS means double suspension set.

表4-4预绞式地线用悬垂线夹(铝包钢绞线和良导体钢芯铝绞线用)选型表 Table 4-4 Preformed suspension set used on ground wire (ACSR) model table

产品型号 单只点/双支点 Catalogue No. single / double	适用导线直径 Suitable dia. (mm)	适用良导体钢芯 铝绞线型号 Wire type	参考线夹长度 Reference length (mm)	线夹重量 Weight (kg)	色标 Color code	垂直破断强度(单/双) vertical broken strength (single / double)	可选配套挂环 Optional fitting
DX-2097/2797	6.90~7.20		660/960	1.1/2.0	蓝 Blue	68kN/136kN	GHX-15-B
DX-2098/2798	7.21~7.47		660/960	1.1/2.0	红 Red		
DX-2099/2799	7.48~7.70		660/960	1.1/2.0	黑 Black		
DX-2100/2800	7.71~8.01		660/960	1.1/2.0	棕 Brown		
DX-2101/2801	8.02~8.31		660/960	1.1/2.0	紫 Purple		
DX-2102/2802	8.32~8.69		660/960	1.1/2.1	绿 Green		
DX-2103/2803	8.70~9.03		660/960	1.1/2.1	黑 Black		
DX-2104/2804	9.04~9.50		660/960	1.1/2.1	棕 Brown		
DX-2105/2805	9.51~9.89		660/960	1.1/2.1	红 Red		
DX-2106/2806	9.90~10.27		914/1219	1.6/2.7	蓝 Blue		
DX-2107/2807	10.28~10.62		914/1219	1.6/2.7	橙 Orange		
DX-2108/2808	10.63~11.03		914/1219	1.6/2.7	棕 Brown		
DX-2109/2809	11.04~11.43		914/1219		紫 Purple		
DX-2110/2810	11.44~11.9	50/30	914/1219	1.7/2.8	绿 Green		
DX-2111/2811	11.96~12.22		914/1219		黑 Black		
DX-2102/2803	13.49~13.78	70/40	1041/1350		黄 Orange	66kN/136kN	
DX-2108/2809	15.75~16.39	95/55	1270/1680	1.5/2.3	红 Red	66kN/178kN	
DX-2111/2812	17.55~18.04	120/70	1372/1830		黄 Orange	66kN/132kN	

表4-5预绞式悬垂线夹(钢芯铝绞线用)选型表(345KV以下) Table 4-5 Preformed suspension set (ACSR) model table (below 345KV)

DL-T763-2001 标准型号 Standard type	适用导线类型 Suitable conductor type (GB1179-83)LGJ/LGJF	适用导线直径范围 Cable range (mm)		参考线夹长度 Reference length (mm)	线夹重量 Weight (kg)	色标 Color code	垂直破断强度 Vertical broken strength(kN)	可选配套挂环 Optional fitting
		最小 Min.	最大Max.					
CL-35/6	35/6	8.03	8.31	660	1.1	红 Red	66	GHX-15-B
CL-50/8	50/8	9.53	9.88	660	1.1	粉红 Pink		
CL-70/10	70/10	11.05	11.45	914	1.5	蓝 Blue		
CL-95/15	95/15	13.49	13.78	1041	1.2	黄 Yellow		
CL-95/20	95/20	13.79	14.10	1118	1.3	黑 Black		
CL-120/7	120/7	14.11	14.56	1118	1.4	白 White		
CL-120/20	120/20	14.57	15.10	1143	1.4	棕 Brown		
CL-120/25	120/25	15.42	15.74	1168	1.4	紫 Purple		
CL-150/8	150/8	15.75	16.39	1270	1.5	红 Red		
CL-150/20	150/20	16.40	17.10	1372	1.8	蓝 Blue		
CL-150/25	150/25							
CL-150/35	150/35	17.11	17.54	1372	1.8	绿 Green		
CL-185/10	185/10	17.55	18.04	1372	1.9	黄 Yellow		
CL-185/25	185/25	18.59	19.00	1422	2.0	白 White		
CL-180/30	185/30							
CL-210/10	210/10							
CL-180/45	185/45	19.52	20.10	1524	2.6	橙 Orange		
CL-210/25	210/25							
CL-210/35	210/35	20.11	20.94	1549	2.8	紫 Purple	89	GHX-20-B
CL-210/50	210/50							
CL-240/30	240/30	21.48	22.09	1626	2.9	蓝 Blue		
CL-240/40	240/40							
CL-240/55	240/55	22.10	22.69	1651	3.1	绿 Green		
CL-300-15	300/15	22.70	23.05	1651	3.1	绿 Green		
CL-300/20	300/20	23.39	23.79	1676	4.1	黑 Black	89	GHX-20-B
CL-300/25	300/25							
CL-300/40	300/40	23.80	24.45	1702		白 White		
CL-300/50	300/50							
CL-300/70	300/70	25.08	25.54	1753	4.4	橙 Orange		
CL-400/20	400/20	26.43	27.29	2083		蓝 Blue	111	GHX-25-B
CL-400/25	400/25							
CL-400/35	400/35							
CL-400/50	400/50	27.30	27.69	2083	5.9	绿 Green		
CL-400/65	400/65	27.70	28.40	2083		黄 Orange		
CL-400/95	400/95	28.88	29.26	2083	5.9	白 White		
CL-500/35	500/35	29.87	30.68	2083		橙 Orange		
CL-500/45	500/45							
CL-500/65	500/65	30.69	31.14	2235	8.3	紫 Purple		
CL-630/45	630/45	33.39	34.42	2235		黄 Yellow		
CL-630/55	630/55							
CL-630/80	630/80	34.43	35.41	2235	9.1	黑 Black		
CL-800/55	800/55	37.53	38.51	2235		紫 Purple		
CL-800/70	800/70	38.52	39.55	2235	9.7	红 Red		
CL-800/100	800/100							

注：型号中字母与数字意义：C-悬垂线夹；L-螺旋预绞式；数字-适用导线型号。本表只列出部分产品。

Note: Meaning of letters: N- tension set; L- bolt preformed; after “-” is conductor type. This Table is simply listed some products.

表4-6预绞式悬垂线夹(铝绞线用)选型表(345kV以下)

Table 4-6 Preformed suspension set (aluminum stranded conductor) model table (below 345kV)

DL-T763-2001 标准型号 Standard type	适用导线类型 Suitable conductor type (GB1179-83)LJ	适用导线直径范围 Cable range (mm)		参考线夹长度 Reference length (mm)	线夹重量 Weight (kg)	色标 Color code	垂直破断强度 Verticalbroken strength(kN)	可选配套挂环 Optional fitting
		最小Min.	最大Max.					
CL-95	95	12.24	12.69	1016	1.1	红 Red	45	GHX-15-B
CL-120	120	14.11	14.56	1118	1.4	白 White		
CL-150	150	15.75	16.39	1270	1.5	红 Red		
CL-185	185	17.11	17.54	1372	1.8	绿 Green	66	
CL-210	210	18.59	19.00	1422	2.0	白 White		
CL-240	240	19.52	20.10	1524	2.6	橙 Orange	89	GHX-20-B
CL-300	300	22.10	22.69	1651	3.1	绿 Green		
CL-400	400	25.55	25.97	2032	5.5	紫 Purple	111	GHX-25-B
CL-500	500	28.88	29.26	2083	5.9	白 White		
CL-630	630	32.00	32.67	2235	8.8	蓝 Blue		
CL-800	800	36.64	37.52	2235	8.7	橙 Orange		

注：型号中字母与数字意义：C-悬垂线夹；L-螺旋预绞式；数字-适用导线型号。本表只列出部分产品。
Note: Meaning of letters: N- tension set; L- bolt preformed; after “-” is conductor type. This table only list part of products.

表4-7预绞式悬垂线夹(钢芯铝绞线/铝绞线用)选型表(345kV及以上)

Table 4-7 Preformed suspension set (ACSR / aluminum stranded conductor) model table (higher than 345kV)

产品型号 Catalogue No.	适用导线直径范围 Cable range (mm)		适用导线类型Suitable conductor type (GB1179-83)		参考线夹长度 Reference length (mm)	线夹重量 Weight (kg)	色标 Color code	垂直破断强度 Verticalbroken strength(kN)	可选配套挂环 Optional fitting
	最小Min.	最大Max.	钢芯铝绞线LGJ/LGJF ACSR	铝绞线LJ Aluminum stranded conductor					
DX-6501	23.39	23.79	300/20, 300/25		1676	4.1	黑 Black	89	GHX-20-B
DX-6502	23.80	24.45	300/40, 300/50		1702	4.1	白 White		
DX-6504	25.08	25.54	300/70		1753	4.4	橙 Orange		
DX-6505	25.55	25.97		400	2032	5.5	紫 Purple	111	GHX-25-B
DX-6507	26.43	27.29	400/20, 400/25, 400/35		2083	5.7	蓝 Blue		
DX-6508	27.30	27.69	400/50		2083	5.9	绿 Green		
DX-6509	27.70	28.40	400/65		2083	5.9	黄 Yellow		
DX-6511	28.88	29.26	400/9	500	2083	5.9	白 White		
DX-6513	29.87	30.68	500/35, 500/45		2083	6.0	橙 Orange		
DX-6514	30.69	31.14	500/65		2235	8.3	紫 Purple		
DX-6516	32.00	32.66		630	2235	8.8	蓝 Blue		
DX-6518	33.39	34.42	630/45, 630/55		2235	8.8	黄 Yellow		
DX-6519	34.43	35.41	630/80		2235	9.1	黑 Black		
DX-6522	36.64	37.52		800	2235	9.4	橙 Orange		
DX-6523	37.53	38.51	800/55		2235	9.7	紫 Purple		
DX-6524	38.52	39.55	800/70, 800/100		2235	9.7	红 Red		

注：本表只列出部分产品。 This table only list part of products.

表4-8预绞式双悬垂线夹(钢芯铝绞线/铝绞线用)选型表(345kV及以下)
Table 4-8 Performed Helical Double Suspension Clamp (suitable for ACSR Conductor / AAAC Conductor) Selection Table (not higher than 345kV)

产品型号 Catalogue No.	适用导线直径范围 Cable range (mm)		适用导线类型Suitable conductor type (GB1179-83)		参考线夹长度	线夹重量	色标	垂直破断强度	可选配套挂环
	最小Min.	最大Max.	钢芯铝绞线LGJ/LGJF	铝绞线LJ	Reference length (mm)	Weight (kg)	Color code	Verticalbroken strength(kN)	Optional fitting
			ACSR	Aluminum stranded conductor					
CLS-35/6	8.03	8.31	35/6		970	1.8	红 Red	136	GHX-15-B (两个) (Two piece)
CLS-50/8	9.53	9.88	50/8		970	2.0	紫 Purple		
CLS-70/10	11.05	11.45	70/10		1220	2.6	蓝 Blue		
	12.24	12.69		95	1350	2.0	红 Red	178	
CLS-95/15	13.49	13.78	95/15		1350	2.0	黄 Yellow		
CLS-95/20	13.79	14.10	95/20		1470	2.2	黑 Black		
CLS-120/7	14.11	14.56	120/7	120	1470	2.3	白 White		
CLS-120/20	14.57	15.10	120/20		1470	2.3	橙 Orange		
CLS-120/25	15.75	16.39	120/25	150	1680	2.3	红 Red		
CLS-150/8			150/8						
CLS-150/20	16.40	17.10	150/20		1830	3.0	蓝 Blue	132	
CLS-150/25			150/25						
CLS-150/35	17.11	17.54	150/35	185	1830	3.0	绿 Green		
CLS-185/10	17.55	18.04	185/10		1830	3.2	黄 Yellow		
CLS-185/25	18.59	19.00	185/25	210	1830	3.2	白 White		
CLS-185/30			185/30						
CLS-210/10			210/10						
CLS-185/45	19.52	20.10	185/45	240	1980	4.2	橙 Orange	178	
CLS-210/25			210/25						
CLS-210/35	20.11	20.94	210/35		1980	4.3	紫 Purple		
CLS-210/50			210/50						
CLS-240/30	21.48	22.09	240/30		2080	4.5	蓝 Blue		
CLS-240/40			240/40						
CLS-240/55	22.10	22.69	240/55	300	2080	4.7	绿 Green		
CLS-300/15	22.70	23.05	300/15		2080	4.7	绿 Green		
CLS-300/20	23.39	23.79	300/20		2290	5.6	黑 Black		
CLS-300/25			300/25						
CLS-300/40	23.80	24.45	300/40		2290	5.6	白 White		
CLS-300/50			300/50						
CLS-300/70	25.08	25.54	300/70		2290	5.8	橙 Orange		

注：本表只列出部分产品(接下页)。This table only list part of products (follow newt page) .

产品型号 Catalogue No.	适用导线直径范围 Cable range (mm)		适用导线类型Suitable conductor type (GB1179-83)		参考线夹长度 Reference length (mm)	线夹重量 Weight (kg)	色标 Color code	垂直破断强度 Verticalbroken strength(kN)	可选配套挂环 Optional fitting
	最小Min.	最大Max.	钢芯铝绞线LGJ/LGJF ACSR	铝绞线LJ Aluminum stranded conductor					
CLS-400	25.55	25.97		400	2740	8.8	紫 Purple	222	GHX-25-B (两个) (Two piece)
CLS-400/20			400/20						
CLS-400/25	26.43	27.29	400/25		2740	8.8	蓝 Blue		
CLS-400/35			400/35						
CLS-400/50	27.30	27.69	400/50		2740	9.2	绿 Green		
CLS-400/65	27.70	28.40	400/65		2740	9.2	黄 Yellow		
CLS-400/95	28.88	29.26	400/95	500	2740	9.3	白 White		
CLS-500/35	29.87	30.68	500/35		2740	9.3	橙 Orange		
CLS-500/45			500/45						
CLS-500/65	30.69	31.14	500/65	2970	13.0		紫 Purple		
	32.00	32.66		630	2970	13.6	蓝 Blue		
CLS-630/45	33.39	34.42	630/45		2970	13.6	黄 Yellow		
CLS-630/55			630/55						
CLS-630/80	34.43	35.41	630/80		3050	15.2	黑 Black		
	36.64	37.52		800	3050	15.2	橙 Orange		
CLS-800/55	37.53	38.51	800/55		3050	15.2	紫 Purple		
CLS-800/70	38.52	39.55	800/70		3050	15.2	红 Red		
CLS-800/100			800/100						

注：本表只列出部分产品(接下页)。This table only list part of products (follow newt page) .

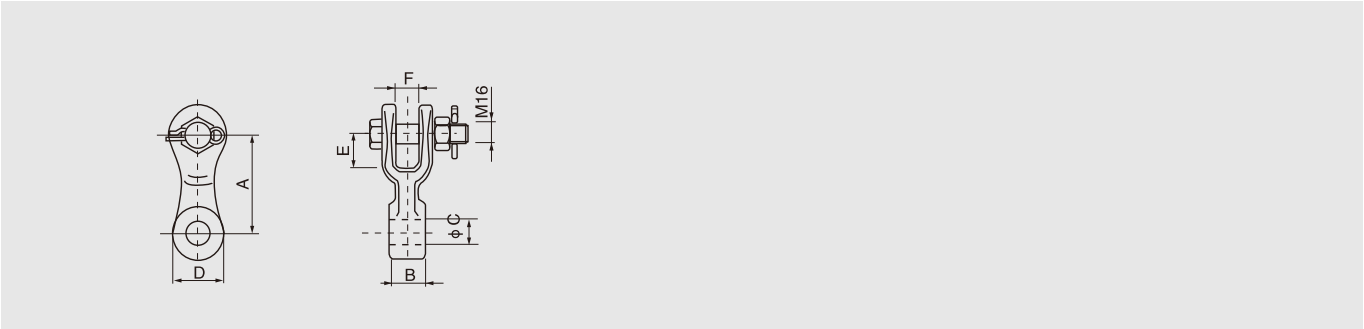
表4-9预绞式双悬垂线夹(钢芯铝绞线/铝绞线用)选型表(345kV及以上)
Table 4-9 Performed Helical Double Suspension Clamp (suitable for ACSR Conductor / AAAC Conductor) Selection Table (higher than 345kV)

产品型号 Catalogue No.	适用导线直径范围 Cable range (mm)		适用导线类型Suitable conductor type (GB1179-83)		参考线夹长度 Reference length (mm)	线夹重量 Weight (kg)	色标 Color code	垂直破断强度 Verticalbroken strength(kN)	可选配套挂环 Optional fitting
	最小Min.	最大Max.	钢芯铝绞线LGJ/LGJF ACSR	铝绞线LJ Aluminum stranded conductor					
DX-6856	23.39	23.79	300/20, 300/25		2286	5.6	黑 Black	178	CEB-20-B (两个) (Two piece)
DX-6857	23.80	24.45	300/40, 300/50		2286	5.6	白 White		
DX-6859	25.08	25.54	300/70		2286	5.8	橙 Orange		
DX-6860	25.55	25.97		400	2743	8.8	紫 Purple	222	GHX-25-B (两个) (Two piece)
DX-6862	26.43	27.29	400/20,400/25,400/35		2743	8.8	蓝 Blue		
DX-6863	27.30	27.69	400/50		2743	9.2	绿 Green		
DX-6864	27.70	28.40	400/65		2743	9.2	黄 Yellow		
DX-6866	28.88	29.26	400/95	500	2743	9.4	白 White		
DX-6868	29.87	30.68	500/35, 500/45		2743	9.4	橙 Orange		
DX-6869	30.69	31.14	500/65		2972	13.0	紫 Purple		
DX-6871	32.00	32.66		630	2972	13.6	蓝 Blue		
DX-6873	33.39	34.42	630/45, 600/55		2972	13.6	黄 Yellow		
DX-6874	34.43	35.41	630/80		3048	15.2	黑 Black		
DX-6877	36.64	37.52		800	3048	15.2	橙 Orange		
DX-6878	37.53	38.51	800/55		3048	15.2	紫 Purple		
DX-6879	38.52	39.55	800/70, 800/100		3048	15.2	红 Red		

注：本表只列出部分产品(接下页)。This table only list part of products (follow newt page) .

8.配套金具 Match Fitting

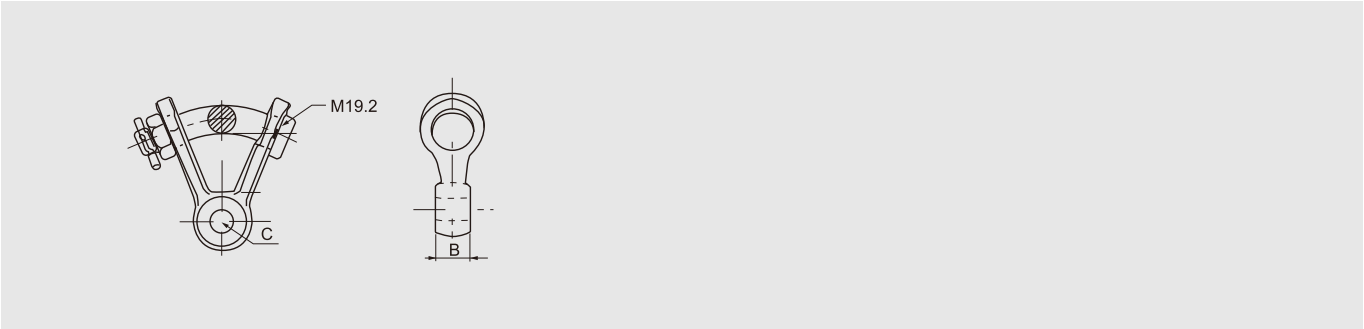
图4-7 挂环 Diagram 4-7 Shackles



表Table 4-10

产品型号 Catalogue No.	适用导线直径范围 Dia of Conductor (mm)		尺寸Size (mm)						重量 Weight (kg)	垂直破断强度 vertical breaking strength (kN)
	最小Min.	最大Max.	A	B	C	D	E	F		
GHX-15	6.90	19.06	79	13	17	38	38	21	0.5	67
GHX-20	19.06	25.53	79	19	17	38	38	21	0.5	89
GHX-25	25.54	39.55	79	27	21	38	38	21	0.8	111
GHX-25M	39.56	56.72	79	54	21	38	38	21	0.8	111

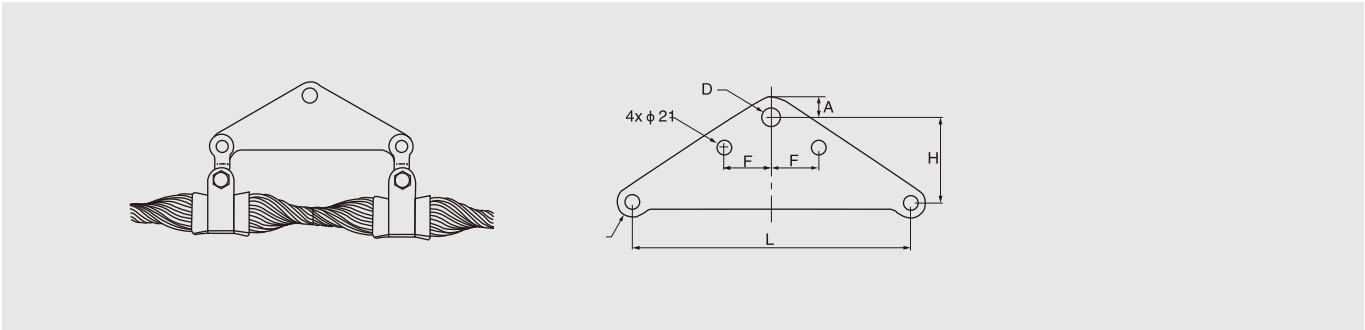
图4-8 Y型挂环 Diagram 4-8 Y Shackle



表Table 4-11

产品型号 Catalogue No.	适用导线直径范围 Dia of Conductor (mm)		尺寸Size (mm)		垂直破断强度 vertical breaking strength	
	最小Min.	最大Max.	B	C	(磅Pound)	(kN)
YC-5206	6.90	19.06	15.9	17.5	15, 000	67
YC-5207	19.06	25.53	19.1	17.5	20, 000	89
YC-5209	25.54	39.55	27	20.6	25, 000	111
YC-5211	39.56	56.72	54	20.6	25, 000	111

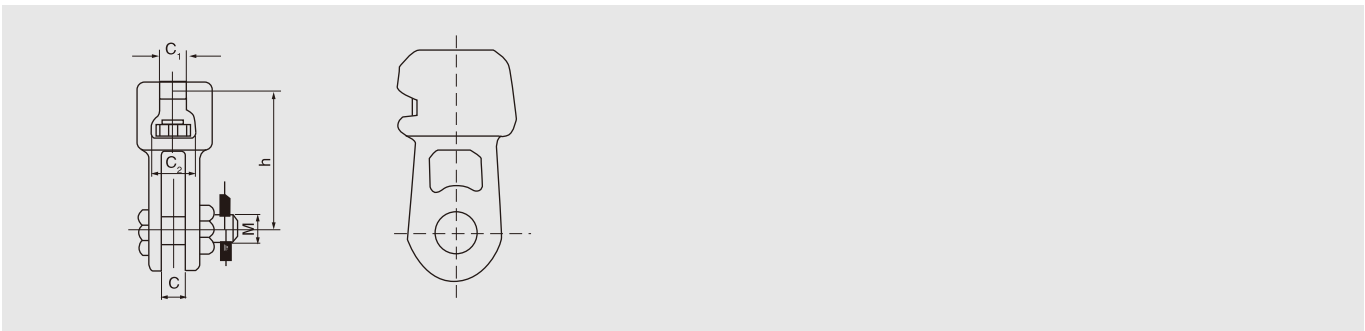
图4-9 三角挂环 Diagram 4-9 Tri-angle Yoke Plate



表Table 4-12

产品型号 Catalogue No.	尺寸Size (mm)						重量 Weight (kg)	三角挂板厚度 thickness of yoke plate (mm)
	L	H	D	R	半径 Dia.A	F		
YP-5907N	305	90	24	20	25		3	14
YP-5908N	450	100	26	24	32	100	5.2	16
YP-5909N	560	120	26	24	32	120	7.15	16
YP-5910N	660	150	28	30	33	120	11.55	18
YP-5911N	737	241	26	30	33	140	19	19

图4-10 碗头挂板 Diagram 4-10 Socket Clevises

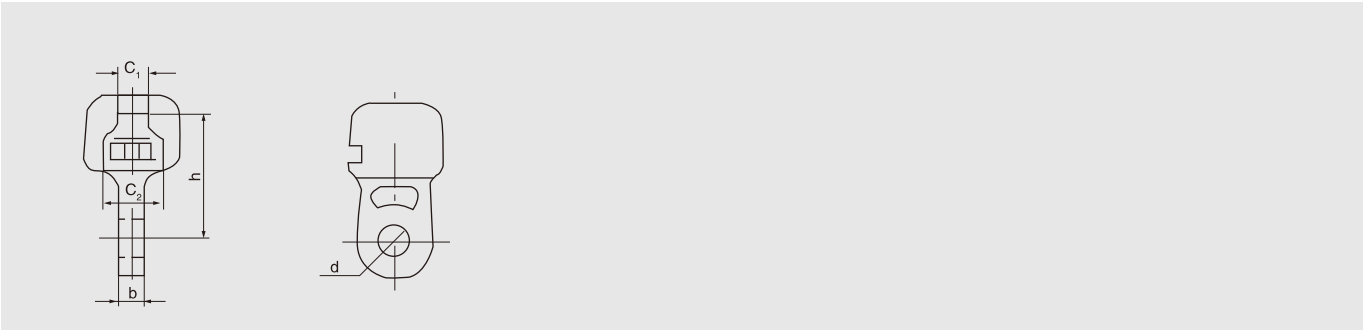


表Table 4-13

产品型号 Catalogue No.	适用绝缘子 Suitable Insulator	尺寸Size (mm)					重量 Weight (kg)	破坏荷重 Breaking loading (kN)
		C	C ₁	C ₂	M	h		
WS-7	XP-7、X-4,5	18	19.2	34.5	16	70	1.0	69
WS-10	XP10	20	19.2	34.5	18	85	1.2	98
WS-16	XP-16	26	23.0	42.5	24	95	2.6	157
WS-20	XP-16	30	27.5	51.0	27	100	4.3	196
WS-30	XP-30	36	27.5	51.0	36	110	5.7	294

注:碗头挂板WS-7和WS-10为可锻铸铁件, WS-16、WS-20和WS-30为铸钢件, 弹簧销和闭口销为不锈钢, 其余为钢制件。所有钢铁制件热镀锌。
Note: Socket Clevis WS-7 and WS-10 are forged, WS-16, WS-20 and WS-30 are casted, Spring pin and cotter pin are stainless steel, Other parts are steel. All steel parts are hot dip galvanizing

图4-11 碗头挂板(W型) Diagram 4-11 Socket Clevis (W type)

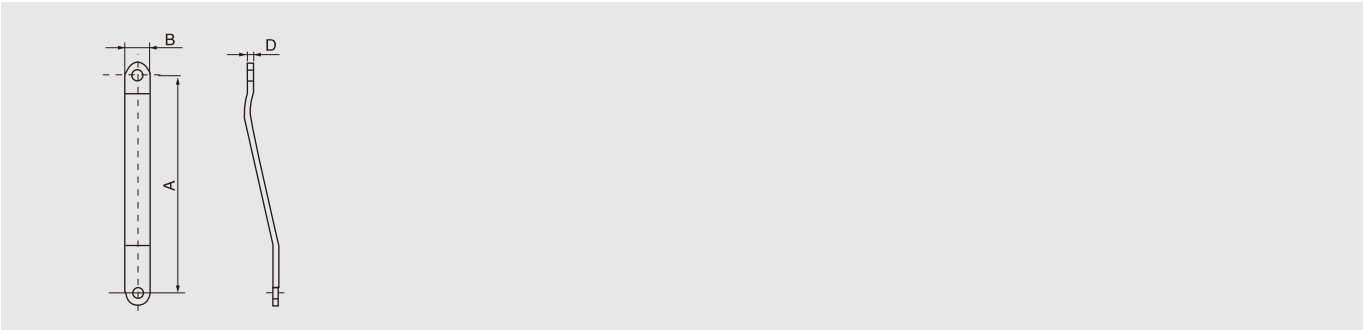


表Table 4-14

产品型号 Catalogue No.	适用绝缘子 Suitable Insulator	主要尺寸 Main Size(mm)					重量 Weight (kg)	破坏荷重 Breaking loading (kN)
		C ₁	C ₂	h	d	b		
W-7A	XP-7、X-4.5	19.2	34.5	70	20	16	0.8	69
W-7B	XP-7、X-4.5	19.2	34.5	115	20	16	0.9	69
W1-10	XP-10	20.0	34.5	85	20	18	0.9	98

注:碗头挂板为可锻铸铁件，热镀锌。弹簧销为不锈钢。 Note : Socket Clevis is forged, hot dip galvanizing. Spring pin is stainless steel.

图4-12 连板 Diagram 4-12 Joint Plant



表Table 4-15

产品型号 Catalogue No.	尺寸Size (mm)				垂直破断强度 Vertical breaking strength (kN)
	A	B	C	D	
LB-25	305	45	Φ 17.5	8	110(一对one couple)
LB-40	400	45	Φ 17.5	8	110(一对one couple)

注:热镀锌。 Note: hot dip galvanizing。