



GRUPO
INTELLI



**GENERAL
PRODUCT
CATALOG**

GRUPO INTELLI



**COPPERSTEEL
BIMETÁLICOS**

Formed by the companies INTELLI and COPPERSTEEL BIMETÁLICOS, it operates in the sectors of energy, transmission and distribution, grounding systems and data transmission. It has achieved the important ISO 9.001:2015 quality certificate and ISO 14.001:2015, environmental management, granted by Vanzolini Foundation and endorsed by the International Certification Network - IQNET. Has also seals from UL - Underwriters Laboratories Inc. and Q-Cert (Q-Cert - Organismo de Certificación - Colombia). Has also the Certification from CSA (Canadian Standards Association).

National leader in the manufacture of ground rods, connectors and electrical terminals, in addition to being a world in bimetallic conductors.

Its portfolio also includes bare, insulated and multiplexed aluminum cables, metallic telephone wire and cables and optical cables.

CERTIFICATIONS



INTELLI Headquarters	INTELLI New Headquarters	INTELLI Foundry Unit	INTELLI Power Unit	COPPERSTEEL Headquarters	COPPERSTEEL Branch
Orlândia/SP Brazil	Orlândia/SP Brazil	Orlândia/SP Brazil	Orlândia/SP Brazil	Campinas/SP Brazil	Três Lagoas/MS Brazil
8.348m ² total area	200.045m ² total area	20.901m ² total area	26.964m ² total area	41.155m ² total area	45.690m ² total area

GRUPO INTELLI'S MILESTONES

1973 INTELLI foundation.	1985 Beginning of activities at Power Unity.	1986 Beginning of activities at the Foundry Unit.	1994 Acquisition of COPPERSTEEL and forming GRUPO INTELLI	1997 Obtaining ISO 9001 Quality Certificate.	2003 Beginning of bimetallic ALUMOSTEEL wires and cables.	2011 Beginning of bimetallic COPPERALUMINO wires and cables.	2014 Beginning of activities at a COPPERSTEEL Subsidiary in Três Lagoas/MS	2015 Beginning of activities at a INTELLI New Headquarters in Orlândia/SP
						2016 Beginning production of aluminum conductors line and properzi aluminum rebars.	2018 Beginning of covered aluminum conductors' manufacture.	2020 Obtaining ISO 14001 Environmental System Certificate.

1.	CONDUCTORS.....	07
1.1.	CS - COPPERSTEEL SOLID AND STRANDED CONDUCTORS.....	08
1.2.	COPPERSTEEL TRACER WIRE.....	12
1.3.	COPPERSTEEL COPPER COMPOSITE CONDUCTORS.....	13
1.4.	AS - ALUMOSTEEL SOLID AND STRANDED CONDUCTORS.....	14
1.5.	CAS - ALUMOSTEEL WIRE ROPES.....	18
1.6.	ALUMINUM CONDUCTORS (AAC).....	19
1.7.	ALUMINUM CONDUCTORS WITH ALUMOSTEEL CORE (ACSR/AW).....	20
1.8.	ALUMINUM 6201ALLOY CONDUCTORS.....	22
1.9.	ALUMINUM 1120 ALLOY CONDUCTORS.....	23
1.10.	MULTIPLEXALUMINUM CONDUCTORS.....	24
1.11.	INSULATED ALUMINUM CONDUCTOR.....	26
1.12.	INSULATED ALUMINUM CABLE WITH XLPE/PVC.....	27
1.13.	ICALC - MEDIUM VOLTAGE SPACER CABLES.....	28
2.	GROUND RODS AND ACCESSORIES.....	29
2.1.	COPPER-BONDED GROUND ROD.....	30
2.2.	GROUNDING CLAMPS.....	31
2.3.	GROUNDING CONNECTORS WITH SPRING SYSTEM.....	34
2.4.	GROUNDING COMPRESSION CONNECTORS.....	35
2.5.	ACCESSORIES FOR SECTIONAL GROUND RODS (IHP).....	36
3.	TERMINALS.....	37
3.1.	COMPRESSION TERMINALS.....	38
3.2.	BIMETALLIC TERMINALS.....	47
3.3.	MECHANICAL TERMINALS.....	49
3.4.	ADAPTER TERMINALS.....	52
4.	SPLICE SLEEVES.....	53
4.1.	COMPRESSION SPLICE SLEEVES.....	54
5.	PRE-INSULATED TERMINALS.....	56
5.1.	RING TYPE.....	57
5.2.	PIN TYPE.....	58
5.3.	PRE-INSULATED SPLICE SLEEVE.....	59
5.4.	FORK TYPE.....	59
5.5.	MALE / FEMALE QUICK DISCONNECT TYPE TERMINALS.....	60
5.6.	EYELET TYPE.....	61
6.	CONNECTORS.....	62
6.1.	COMPRESSION CONNECTORS.....	63
6.2.	WEDGE TYPE CONNECTORS.....	65
6.3.	CONNECTORS WITH STIRRUP.....	70
6.4.	STIRRUPS FOR CONNECTORS.....	73
6.5.	INSULATED PIERCING CONNECTORS.....	73
6.6.	SPLIT BOLT CONNECTORS.....	76
6.7.	SERVICE POST CONNECTORS.....	78
6.8.	ACCESSORIES FOR CONNECTORS.....	80
7.	CLAMPS.....	81
7.1.	HOTLINE CLAMPS.....	82
7.2.	PARALLEL GROOVE CLAMPS.....	82
7.3.	ANCHOR CLAMPS.....	83
8.	TOOLING.....	84
8.1.	PLIER HAND TOOLS.....	85
8.2.	RATCHET TOOLS.....	85
8.3.	HYDRAULIC PLIERS.....	85
8.4.	AUTOMATIC HYDRAULIC PLIERS.....	85
8.5.	CABLE CUTTERS.....	86
8.6.	INTERCHANGEABLE DIES.....	86
9.	ATTACHMENTS.....	87

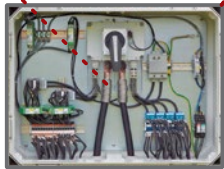
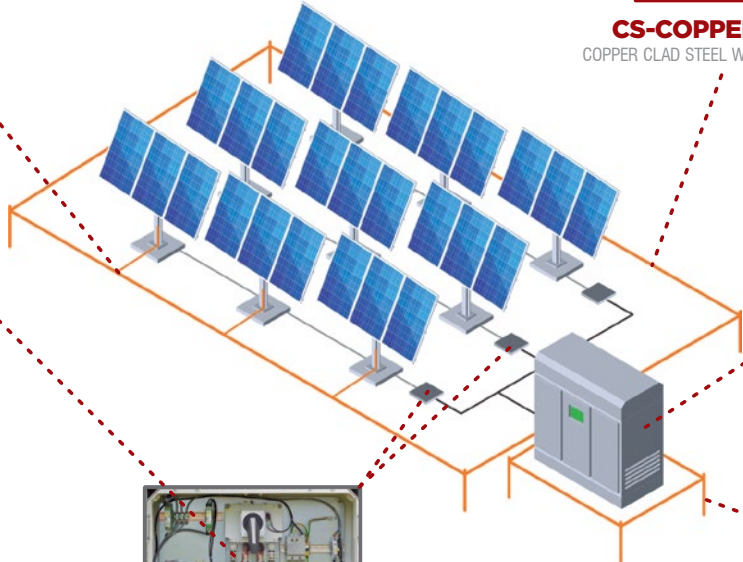
RENEWABLE / PV PLANTS



SACC/CCO
COMPRESSION
GROUNDING CONNECTOR



TBTA
BIMETALLIC COMPRESSION
TERMINAL



CS-COPPERSTEEL
COPPER CLAD STEEL WIRES AND CABLES



TBTA
BIMETALLIC COMPRESSION
TERMINAL

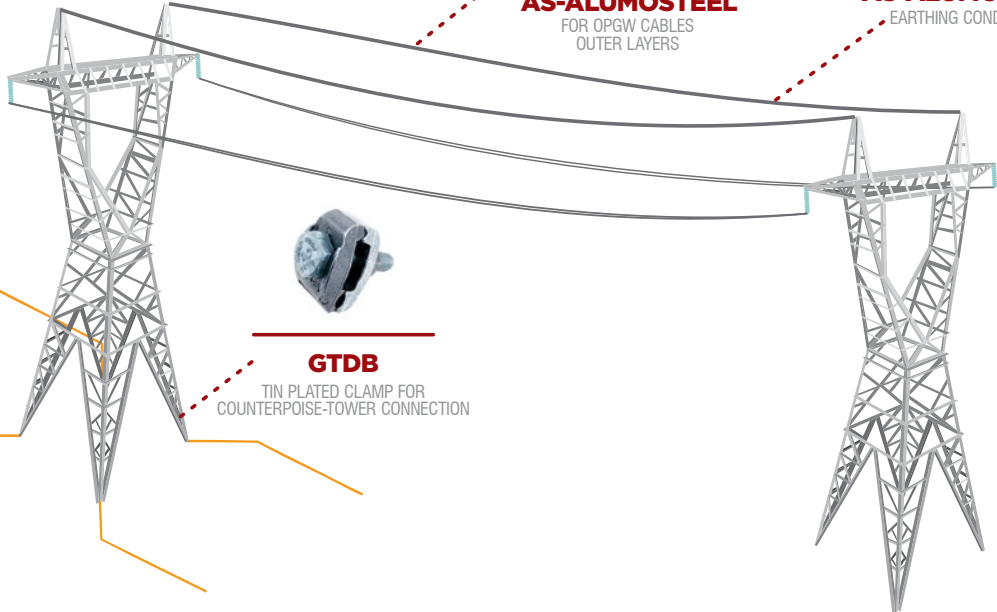


IH/IHP
COPPER-BONDED
GROUND RODS

POWER TRANSMISSION



CS - COPPERSTEEL
COPPER CLAD STEEL WIRE
FOR COUNTERPOISE



AS-ALUMOSTEEL
FOR OPGW CABLES
OUTER LAYERS

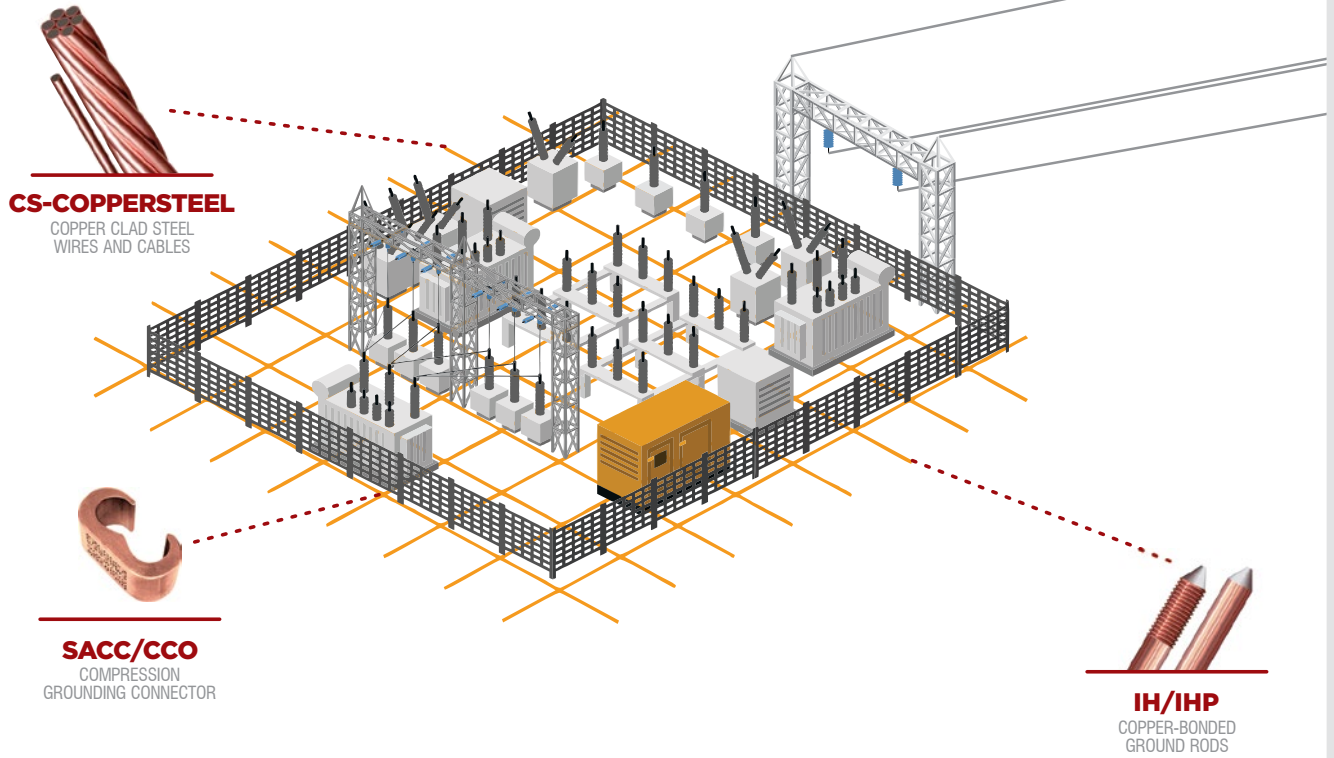


AS-ALUMOSTEEL
EARTHING CONDUCTOR

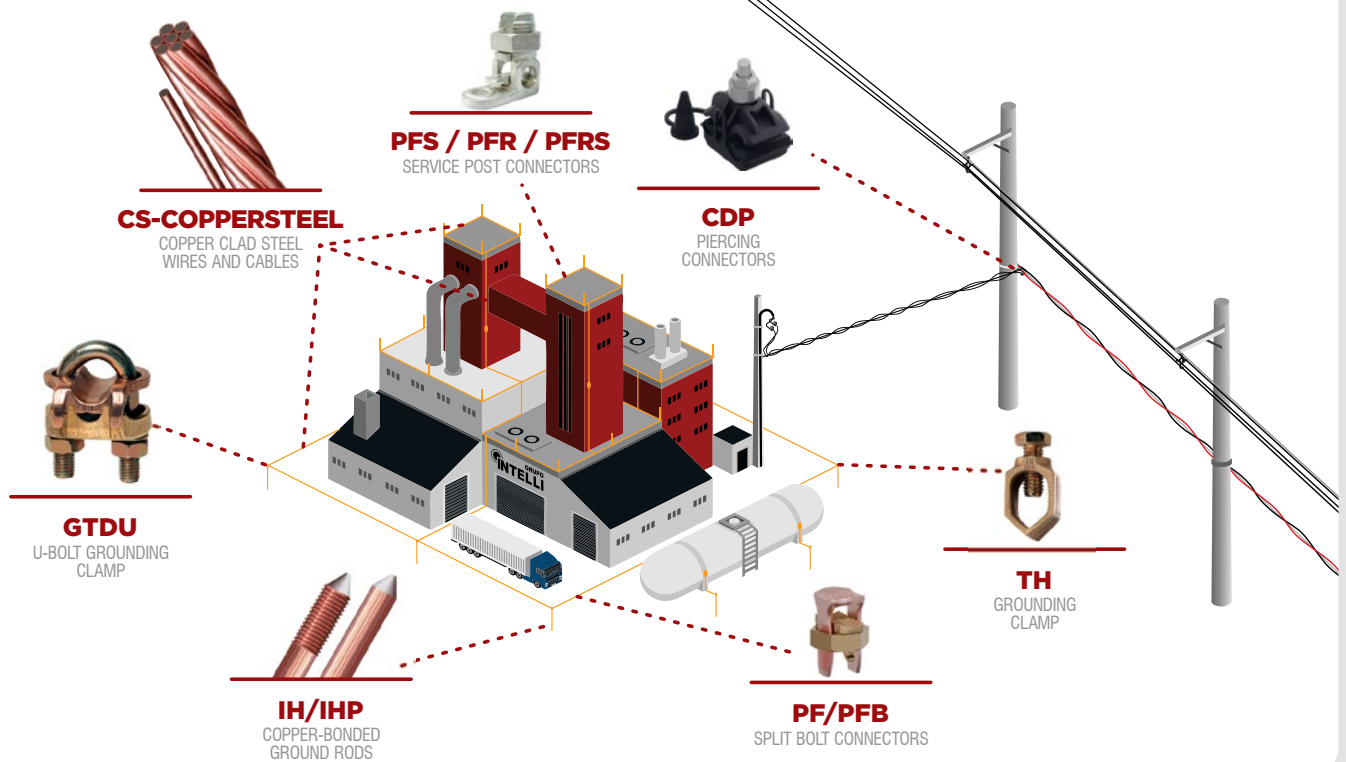


GTDB
TIN PLATED CLAMP FOR
COUNTERPOISE-TOWER CONNECTION

SUBSTATION



POWER DISTRIBUTION





1. CONDUCTORS

CONDUCTORS	7
1.1. CS - COPPERSTEEL SOLID AND STRANDED CONDUCTORS.....	8
1.2. COPPERSTEEL TRACER WIRE.....	12
1.3. COPPERSTEEL COPPER COMPOSITE CONDUCTORS.....	13
1.4. AS - ALUMOSTEEL SOLID AND STRANDED CONDUCTORS.....	14
1.5. CAS - ALUMOSTEEL WIRE ROPES.....	18
1.6. ALUMINUM CONDUCTORS (AAC).....	19
1.7. ALUMINUM CONDUCTORS WITH ALUMOSTEEL CORE (ACSR/AW).....	20
1.8. ALUMINUM 6201 ALLOY CONDUCTORS.....	22
1.9. ALUMINUM 1120 ALLOY CONDUCTORS.....	23
1.10. MULTIPLEX ALUMINUM CONDUCTORS.....	24
1.11. ICALS - INSULATED ALUMINUM CONDUCTOR.....	26
1.12. ICALI-XP - INSULATED ALUMINUM CABLE WITH XLPE/PVC.....	27
1.13. ICALC - MEDIUM VOLTAGE SPACER CABLES.....	28

1.1. CS - COPPERSTEEL SOLID AND STRANDED CONDUCTORS

COPPER CLAD STEEL

COPPERSTEEL is a bimetallic conductor that combines the mechanical properties of steel with the high conductivity and corrosion resistance of copper. Created from a continuous cladding process where the metals are joined together on an atomic scale to produce a bimetallic material with the best of both metals.

GROUNDING AND LIGHTNING PROTECTION SYSTEMS

The **COPPERSTEEL** conductors has equivalent performance to bare copper for grounding applications and much higher performance than zinc plated steel for lightning protection, thanks to its longer service life.



POWER GENERATION GROUNDING SYSTEMS (RENEWABLE)



SUBSTATION GROUNDING SYSTEMS



TRANSMISSION GROUNDING SYSTEMS (OVERHEAD, CONTERPOISE AND GROUNDING APPLICATIONS)



DISTRIBUTION GROUNDING SYSTEMS



PUBLIC LIGHTING AND SIGNALING

- THE MOST INTELLIGENT, EFFICIENT AND ECONOMIC SOLUTION;
- GREAT ELECTRIC PERFORMANCE;
- BETTER MECHANICAL PERFORMANCE;
- HIGH CORROSION RESISTANCE;
- EASY INSTALLATION AND HIGH FLEXIBILITY;
- TOTAL COMPATIBILITY WITH COPPER SYSTEMS, FITTINGS AND CONNECTIONS.



Watch **CS - COPPERSTEEL** movie

*Scan QR-Code with your smartphone cam. If it does not work, download and use a QR-Code App (available on phone's Applications store, App Store-iOS ou Google Play-Android).



Comparison of materials after 10 years stuck in the ground.

GREATER SERVICE LIFE - 6 TIMES MORE DURABILITY THAN HOT DIP GALVANIZED STEEL.

The **COPPERSTEEL** is the only material with resistance and long lifetime, due to copper skin electrochemistry properties. The **COPPERSTEEL** conductors last 40 to 50 years in any type of soil, while hot dip galvanized elements less than 10 years^{[1] [2]}.

^[1] Romanoff M., "Underground Corrosion", United States Department of Commerce, National Bureau of Standards, Circular 579 (April, 1957).

^[2] Loboda M., "Corrosion Tests of Steel Earthing Electrodes with Protective Coatings Made from Different Materials", International Conference on Grounding and Earthing, (November, 2006).

GROUND CONDUCTORS COMPARISON

	COPPER	GALVANIZED STEEL	COPPER CLAD STEEL
COMPATIBLE WITH COPPER SYSTEM FITTINGS AND CONNECTIONS	✓	✗	✓
40+ YEARS OF SERVICE LIFE	✓	✗	✓
HIGH MECHANICAL AND THERMAL RESISTANCE	✗	✓	✓
DISCOURAGES THEFT (INVENTORY, LOGISTICS AND INSTALLED)	✗	✓	✓
TECHNICAL AND ECONOMICAL FEASIBILITY	✗	✗	✓



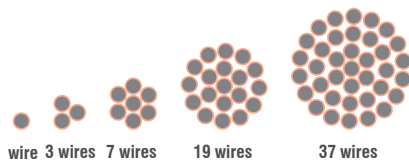
DISCOURAGES THEFT

Because of their high market value and because they are often installed in exposed or easily accessible locations, copper conductors become attractive and vulnerable to theft, being an easy and profitable target for resale in the underground market. The solution is **COPPERSTEEL** technology as its atomic scale welding process creates a copper-clad steel conductor with non-scrap value.

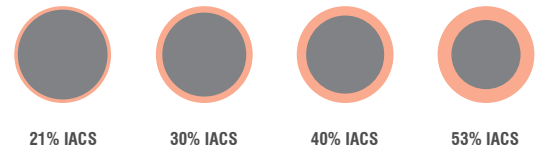
Construction:



Formations:



Conductivities:



STANDARDS: ASTM B-228, ASTM B-227



Technical Data:

IACS	21%	30%	40%	53%
COPPER AREA	14%	25%	35%	49%
STEEL AREA	86%	75%	65%	51%
DENSITY	7.96g/cm ³	8.08g/cm ³	8.20g/cm ³	8.35g/cm ³
ELASTICITY MODULE	190 GPa	183 GPa	176 GPa	166 GPa
COEFFICIENT OF LINEAR EXPANSION	1.77 E-05 1/°C	1.84 E-05 1/°C	1.90 E-05 1/°C	1.98 E-05 1/°C
COEFFICIENT OF VARIATION WITH RESISTANCE	0.00378 1/°C	0.00378 1/°C	0.00378 1/°C	0.00378 1/°C

COPPERSTEEL Cables*

No. of Wires / AWG	Nominal Cross Section		Effective Cross Section (mm ²)	Conductor Characteristics			● 21% IACS					● 30% IACS**				
							Mechanical Characteristics		Electrical Characteristics			Mechanical Characteristics				Electrical Characteristics
							Nominal Weight (kg/km)	Breaking Load (daN)	Maximum Resistance to 20°C in DC (Ω/km)	Nominal Weight (kg/km)	Breaking Load				Maximum Resistance to 20°C in DC (Ω/km)	
											LCA (daN)	LC (daN)	HS (daN)	EHS (daN)		
● 3N5	50	1/0	50.30	3	4.62	9.95	406	1553	1.633	408	1513	2793	4201	5062	1.143	
● 3N6	40	1	39.80	3	4.11	8.85	315	1197	2.082	320	1200	2400	3466	4201	1.457	
● 3N7	35	2	31.70	3	3.67	7.91	256	980	2.587	257	952	1932	2853	3468	1.811	
● 3N8	25	3	25.00	3	3.26	7.02	202	773	3.279	203	750	1627	2346	2850	2.295	
● 3N9	20	4	19.90	3	2.91	6.27	158	599	4.154	160	599	1320	1927	2314	2.908	
● 3N10	16	5	15.80	3	2.59	5.58	127	488	5.194	129	473	1097	1590	1890	3.636	
● 3N12	10	7	10.00	3	2.06	4.43	80	299	8.370	81	299	519	841	1137	5.861	
● 7N5	120	4/0	117.30	7	4.62	13.86	948	3433	0.700	957	3328	6174	9286	11189	0.490	
● 7N6	95	3/0	93.30	7	4.12	12.36	754	2730	0.880	761	2646	5305	7661	9286	0.616	
● 7N7	70	2/0	65.40	7	3.45	10.35	529	1915	1.255	534	1856	4271	6306	7667	0.878	
● 7N8	60	1/0	58.40	7	3.26	9.78	463	1663	1.417	482	1657	3597	5185	6300	0.992	
● 7N9	50	1	49.50	7	3.00	9.00	400	1448	1.659	404	1403	2917	4259	5116	1.162	
● 7N10	35	2	34.40	7	2.50	7.50	278	1000	2.389	280	974	2426	3515	4177	1.673	
● 7N12	25	4	23.30	7	2.06	6.18	189	683	3.519	190	662	1147	1859	2514	2.463	
● 7N13	16	6	15.90	7	1.70	5.10	128	465	5.167	130	451	989	1481	1997	3.617	
● 19N8	150	300	157.60	19	3.25	16.25	-	-	-	1291	4470	9764	14073	17100	0.365	
● 19N9	120	4/0	125.50	19	2.90	14.50	-	-	-	1028	3559	7917	11560	13885	0.458	
● 19N10	95	3/0	93.30	19	2.50	12.50	-	-	-	764	2645	6584	9542	11337	0.616	
● 19N12	70	2/0	67.10	19	2.12	10.60	-	-	-	549	1902	3112	5045	6823	0.857	
● 19N13	50	1	47.30	19	1.78	8.90	-	-	-	387	1341	2685	4019	5421	1.216	
● 37N9	240	500	244.40	37	2.90	20.30	-	-	-	2013	6930	15418	22511	27040	0.235	
● 37N10	185	350	181.60	37	2.50	17.50	-	-	-	1496	5150	12821	18581	22078	0.316	

● = ABNT-NBR 8121
● = ASTM B228

Note: Comparison of CS - COPPERSTEEL with bare copper wires available in page 88 (Anexes)

COPPERSTEEL Wires

Conductor Characteristics			● 21% IACS				● 30% IACS**				
			Mechanical Characteristics		Electrical Characteristics		Mechanical Characteristics				Electrical Characteristics
			Cross Section (AWG)	Wire Diameter (mm)	Effective Cross Section (mm ²)	Nominal Weight (kg/km)	Breaking Load (daN)	Maximum Resistance to 20°C in DC (Ω/km)	Nominal Weight (kg/km)	Breaking Load	
LCA (daN)	LC (daN)	HS (daN)								EHS (daN)	
1/0	8.25	53.46	425.0	1737.0	1.536	432.0	1689.0	2984.0	3534.0	4630.0	1.075
1	7.35	42.43	338.0	1379.0	1.935	343.0	1336.0	2381.0	3041.0	3671.0	1.354
2	6.54	33.59	267.0	1092.0	2.444	272.0	1058.0	1904.0	2577.0	2911.0	1.711
3	5.83	26.69	212.0	868.0	3.075	216.0	841.0	1525.0	2156.0	2502.0	2.153
4	5.19	21.16	168.0	688.0	3.881	171.0	666.0	1188.0	1784.0	2121.0	2.716
5	4.62	16.76	133.0	545.0	4.897	135.0	528.0	980.0	1474.0	1776.0	3.428
6	4.11	13.27	106.0	431.0	6.188	107.0	418.0	842.0	1216.0	1474.0	4.332
7	3.67	10.58	84.0	344.0	7.761	86.0	333.0	678.0	1001.0	1217.0	5.433
8	3.26	8.37	67.0	271.0	9.836	68.0	263.0	571.0	823.0	1000.0	6.885
9	2.91	6.65	53.0	216.0	12.344	54.0	209.0	463.0	676.0	812.0	8.641
10	2.59	5.27	42.0	171.0	15.583	43.0	166.0	385.0	558.0	663.0	10.908
11	2.31	4.19	33.0	136.0	19.590	34.0	132.0	305.0	442.0	503.0	13.713
12	2.05	3.30	26.0	107.0	24.874	27.0	104.0	182.0	295.0	399.0	17.412
13	1.83	2.63	21.0	85.0	31.214	21.0	83.0	157.0	235.0	317.0	21.850
14	1.63	2.09	17.0	68.0	39.344	17.0	66.0	136.0	186.0	250.0	27.541
15	1.45	1.65	13.0	54.0	49.718	13.0	52.0	106.0	147.0	198.0	34.803
16	1.29	1.31	10.0	42.0	62.816	11.0	41.0	89.0	117.0	157.0	43.972
17	1.15	1.04	8.3	34.0	79.042	8.4	33.0	67.0	93.0	125.0	55.329
18	1.02	0.82	6.5	27.0	100.474	6.6	26.0	55.0	74.0	98.0	70.332
19	0.91	0.65	5.2	21.0	126.232	5.3	20.5	46.0	58.0	78.0	88.363
20	0.81	0.52	4.1	17.0	159.325	4.2	16.2	36.0	46.0	62.0	111.527
21	0.72	0.41	3.2	13.0	201.645	3.3	12.8	28.0	37.0	49.0	141.752
22	0.64	0.32	2.6	10.5	255.207	2.6	10.1	23.0	29.0	39.0	178.645
23	0.57	0.26	2.0	8.3	321.739	2.1	8.0	18.0	23.0	31.0	225.217
24	0.51	0.20	1.6	6.6	401.895	1.7	6.4	15.0	18.0	25.0	281.327
25	0.45	0.16	1.3	5.2	516.212	1.3	5.0	12.0	15.0	19.0	361.348
26	0.40	0.13	1.0	4.1	653.331	1.0	4.0	9.2	11.0	15.0	457.332

No. of Wires / AWG	● ● 40% IACS**						● 53% IACS			
	Mechanical Characteristics				Electrical Characteristics		Mechanical Characteristics		Electrical Characteristics	
	Nominal Weight (kg/km)	Breaking Load			Maximum Resistance to 20°C in DC (Ω/km)	Current capacity at 75°C (A)	Nominal Weight (kg/km)	Breaking Load	Maximum Resistance to 20°C in DC (Ω/km)	Current capacity at 75°C (A)
		LCA (daN)	LC (daN)	HS (daN)				LCA (daN)		
3N5	415	1338	2591	3796	0.857	217	423	1243	0.647	250
3N6	328	1066	2132	3144	1.093	187	331	1043	0.825	215
3N7	262	844	1807	2599	1.358	162	267	784	1.025	188
3N8	206	666	1511	2143	1.721	140	211	619	1.299	162
3N9	163	533	1254	1767	2.181	121	166	519	1.646	139
3N10	130	421	1026	1459	2.727	105	133	391	2.058	121
3N12	82	260	870	990	4.395	79	84	259	3.317	90
7N5	969	2974	5727	8392	0.372	375	988	2747	0.277	426
7N6	767	2356	4712	6949	0.469	323	786	2184	0.349	366
7N7	612	1871	3994	5746	0.589	280	551	1532	0.497	318
7N8	482	1481	3339	4738	0.744	233	482	1449	0.562	267
7N9	385	1178	2772	3906	0.937	210	417	1158	0.657	237
7N10	305	932	2268	3226	1.182	181	289	804	0.947	205
7N12	191	586	1027	2029	1.888	136	197	546	1.394	154
7N14	131	466	869	-	2.368	107	134	372	2.047	121
19N8	1307	3973	9063	12859	0.274	435	1333	3689	0.206	503
19N9	1041	3163	7524	10602	0.343	377	1061	2937	0.259	436
19N10	774	2351	6156	8755	0.462	313	789	2183	0.349	362
19N12	556	1691	4942	6943	0.643	255	567	1570	0.485	294
19N13	392	1192	2360	3471	0.912	204	400	1107	0.688	236
37N9	2039	6160	14652	-	0.176	574	2079	5720	0.133	662
37N10	1515	4578	11988	-	0.237	476	1545	4251	0.179	550

*Other specifications available on demand.

**Also available on DSA (Dynamic Strain Aging) steel on request.

Wire Diameter (mm)	● ● 40% IACS**						● 53% IACS			
	Mechanical Characteristics				Electrical Characteristics		Mechanical Characteristics		Electrical Characteristics	
	Nominal Weight (kg/km)	Breaking Load			Maximum Resistance to 20°C in DC (Ω/km)	Current capacity at 75°C (A)	Nominal Weight (kg/km)	Breaking Load	Maximum Resistance to 20°C in DC (Ω/km)	Current capacity at 75°C (A)
		LCA (daN)	LC (daN)	HS (daN)				LCA (daN)		
8.25	438.0	1497.0	2463.0	3088.0	0.806	225.0	447.0	1390.0	0.608	259.0
7.35	348.0	1188.0	1966.0	2688.0	1.016	194.0	354.0	1103.0	0.767	224.0
6.54	275.0	940.0	1571.0	2293.0	1.283	168.0	281.0	873.0	0.968	193.0
5.83	219.0	747.0	1259.0	1931.0	1.615	145.0	223.0	694.0	1.219	167.0
5.19	173.0	592.0	1098.0	1606.0	2.037	125.0	177.0	550.0	1.538	144.0
4.62	137.0	469.0	909.0	1332.0	2.571	108.0	140.0	436.0	1.940	125.0
4.11	109.0	371.0	748.0	1103.0	3.249	93.0	111.0	345.0	2.452	108.0
3.67	87.0	296.0	634.0	912.0	4.075	81.0	88.0	275.0	3.075	93.0
3.26	69.0	234.0	530.0	752.0	5.164	70.0	70.0	217.0	3.897	80.0
2.91	55.0	186.0	440.0	620.0	6.481	60.0	56.0	173.0	4.891	69.0
2.59	43.0	147.0	360.0	512.0	8.181	52.0	44.0	137.0	6.174	60.0
2.31	34.0	117.0	289.0	406.0	10.285	45.0	35.0	109.0	7.762	52.0
2.05	27.0	92.0	163.0	322.0	13.059	39.0	28.0	86.0	9.856	45.0
1.83	22.0	74.0	138.0	203.0	16.387	34.0	22.0	68.0	12.368	39.0
1.63	17.0	58.0	118.0	161.0	20.656	29.0	17.0	54.0	15.589	34.0
1.45	14.0	46.0	99.0	128.0	26.102	25.0	14.0	43.0	19.670	29.0
1.29	11.0	37.0	83.0	101.0	32.979	22.0	11.0	34.0	24.890	25.0
1.15	8.5	29.0	63.0	80.0	41.497	19.0	8.7	27.0	31.318	22.0
1.02	6.7	23.0	52.0	64.0	52.749	16.0	6.8	21.0	39.810	19.0
0.91	5.3	18.0	42.0	50.0	66.272	14.0	5.4	16.9	50.017	16.0
0.81	4.2	14.4	33.0	40.0	83.645	12.0	4.3	13.4	63.129	14.0
0.72	3.3	11.4	26.0	32.0	105.864	11.0	3.4	10.6	79.897	12.0
0.64	2.6	9.0	20.0	25.0	133.984	9.2	2.7	8.4	101.120	11.0
0.57	2.1	7.1	16.0	20.0	168.913	7.9	2.1	6.6	127.481	9.1
0.51	1.7	5.7	13.0	16.0	210.995	6.9	1.7	5.3	159.241	8.0
0.45	1.3	4.5	10.0	13.0	271.011	5.9	1.3	4.1	204.537	6.8
0.40	1.0	3.5	8.0	10.0	343.000	5.1	1.1	3.3	258.867	5.9

1.2. COPPERSTEEL TRACER WIRE

COPPERSTEEL TRACER WIRE is a flexible, copper clad steel tracer wire, a low carbon steel core, metallurgically bonded with a copper cladding, that is uniform and continuous, creating a bimetallic conductor that acts as one, ensuring high corrosion resistance. Special annealing process is performed during the cladding process giving HF-CCS the flexibility and flexibility of copper, but 43% higher in strength which means less breaks than copper tracer wire.

It uses a 30 mil, high density, high molecular weight polyethylene (HDPE) insulation. HDPE provides an excellent balance of surface smoothness, processing easines, and electrical consistency, HDPE provides superior strength against underground elements that help prevent handling breaks caused by rocks in shifting soil conditions.

APPLICATION: COPPERSTEEL TRACER WIRE is designed to be buried directly into the ground as an identifier for utilities service lines such as gas, water, sewer, telecommunication and electricity.

Its copper coating allows the signal from the locating equipment be transmitted through the conductor as a solid copper conductor, due to the skin effect.



Cable marking available on customer demand.

INSULATION COLORS / APPLICATIONS

BLUE	Water
YELLOW	Gas
ORANGE	Communication
GREEN	Sewer
RED	Electric
PURPLE	Reclaimed Water
BLACK	Pet fence or High Flex
WHITE	Pipeline

TECHNICAL DATA

NOMINAL CROSS SECTION	8 AWG		10 AWG		12 AWG		14 AWG		18 AWG		20 AWG	
BREAKING LOAD	264 daN		166 daN		105 daN		66 daN		26 daN		16 daN	
RESISTENCIA NOMINAL	9,810 Ω/km		15,610 Ω/km		24,830 Ω/km		39,340 Ω/km		100,47 Ω/km		159,320 Ω/km	
NOMINAL DIAMETER (CONDUCTOR)	3,26 mm		2,59 mm		2,05 mm		1,63 mm		1,02 mm		0,81 mm	
HDPE INSULATION THICKNESS	30mils (0,76mm)	45mils (1,14mm)	30mils (0,76mm)	45mils (1,14mm)	30mils (0,76mm)	45mils (1,14mm)	30mils (0,76mm)	45mils (1,14mm)	30mils (0,76mm)	45mils (1,14mm)	30mils (0,76mm)	45mils (1,14mm)
NOMINAL WEIGHT (kg/km)	76,1	82	49,6	54,7	32,4	37,5	22,5	27	10,5	14,3	7,7	10,8
OUTSIDE DIAMETER (mm)	4,78	5,54	4,11	4,87	3,57	4,33	3,15	3,91	2,54	3,30	2,33	3,09
DENSITY	7.96 g/cm³											
STEEL TYPE	LC, LCA, HS, EHS e DSA											

Other specifications available on demand.

1.3. COPPERSTEEL COPPER COMPOSITE CONDUCTORS

COPPERSTEEL COPPER COMPOSITE CONDUCTORS are a conductors manufactured varying proportions of **COPPERSTEEL** 30% IACS and hard-drawn copper wire.

ADVANTAGES:

COPPERSTEEL COPPER COMPOSITE CONDUCTOR have **HIGHER AMPACITY** compared with the same cross section of **COPPERSTEEL**.

COPPERSTEEL COPPER COMPOSITE CONDUCTORS have **HIGHER BREAKING STRENGHT** compared with the same cross section of copper.

CORROSION RESISTANCE. Ideal for adverse climates and enviroments.

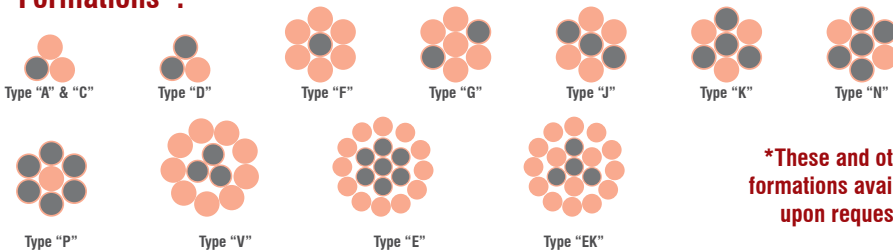


DISCORAGE THEFT. Welded on atomic scale, makes the separation between copper and steel difcult making a product without scrap-value for thefts.

APPLICATIONS:

- NEUTRAL MESSENGER FOR AERIAL CABLES;
- CATENARY MESSENGER;
- OVERHEAD GROUND CABLES FOR TRANSMISSION LINES;
- GROUNDING AND POWER CONDUCTORS FOR ELECTRIFIED RAILBOARDS;
- CONDUCTORS FOR UTILITY COMPANIES.

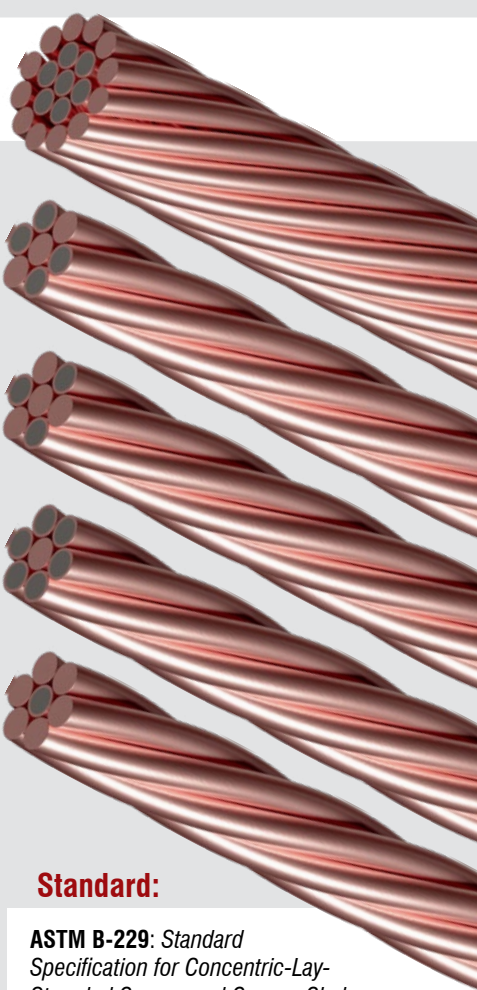
Formations*:



*These and other formations available upon request.

Standard:

ASTM B-229: Standard Specification for Concentric-Lay-Stranded Copper and Copper-Clad Steel Composite Conductors.



TYPE	No. Wires	Nominal Diameter (mm)	Nominal Cross Section		CS COPPERSTEEL (EHS - 30%)		Hard-Drawn Copper Wires		Breaking Load (daN)	DC Resistance (ohms/km) at 20°C
			AWG	mm²	No. Wires	Ømm	No. Wires	Ømm		
E	19	20.02	350	177.35	7	4.00	12	4.00	14,421	0.103
EK	19	18.67	350	177.35	4	3.73	15	3.73	10,609	0.103
V	12	19.15	350	177.35	3	4.45	9	4.81	10,444	0.103
E	19	18.52	300	152.01	7	3.71	12	3.71	12,353	0.120
EK	19	17.27	300	152.01	4	3.46	15	3.46	9,323	0.120
V	12	17.73	300	152.01	3	4.12	9	4.45	9,221	0.120
E	19	16.92	250	126.68	7	3.38	12	3.38	10,640	0.144
EK	19	15.77	250	126.68	4	3.15	15	3.15	7,936	0.144
V	12	16.18	250	126.68	3	3.76	9	4.06	7,749	0.144
E	19	15.57	4/0	107.22	7	3.11	12	3.11	9,221	0.171
G	7	14.81	4/0	107.22	2	4.94	5	4.94	6,957	0.171
EK	19	14.50	4/0	107.22	4	2.90	15	2.90	6,837	0.171
V	12	14.88	4/0	107.22	3	3.46	9	3.74	6,672	0.171
F	7	13.97	4/0	107.22	1	4.66	6	4.66	5,467	0.171
E	19	13.84	3/0	85.02	7	2.77	12	2.77	7,473	0.215
J	7	14.10	3/0	85.02	3	4.70	4	4.70	7,193	0.215
G	7	13.18	3/0	85.02	2	4.40	5	4.40	5,720	0.215
EK	19	12.93	3/0	85.02	4	2.59	15	2.59	5,502	0.215
V	12	13.26	3/0	85.02	3	3.08	9	3.33	5,427	0.215
F	7	12.45	3/0	85.02	1	4.15	6	4.15	4,439	0.215
K	7	13.56	2/0	67.44	4	4.52	3	4.52	7,829	0.271
J	7	12.55	2/0	67.44	3	4.19	4	4.19	5,974	0.271
G	7	11.76	2/0	67.44	2	3.92	5	3.92	4,675	0.271
V	12	11.81	2/0	67.44	3	2.74	9	2.96	4,380	0.271
F	7	11.07	2/0	67.44	1	3.69	6	3.69	3,600	0.271
K	7	12.07	1/0	53.51	4	4.03	3	4.03	6,445	0.342
J	7	11.18	1/0	53.51	3	3.73	4	3.73	4,880	0.342
G	7	10.46	1/0	53.51	2	3.49	5	3.49	3,809	0.342
F	7	9.86	1/0	53.51	1	3.29	6	3.29	2,907	0.342
N	7	11.79	1	42.41	5	3.93	2	3.93	6,855	0.431
K	7	10.74	1	42.41	4	3.59	3	3.59	5,293	0.431

TYPE	No. Wires	Nominal Diameter (mm)	Nominal Cross Section		CS COPPERSTEEL (EHS - 30%)		Hard-Drawn Copper Wires		Breaking Load (daN)	DC Resistance (ohms/km) at 20°C
			AWG	mm²	No. Wires	Ømm	No. Wires	Ømm		
J	7	9.96	1	42.41	3	3.32	4	3.32	4,003	0.431
G	7	9.32	1	42.41	2	3.10	5	3.10	3,094	0.431
F	7	8.79	1	42.41	1	2.93	6	2.93	2,342	0.431
P	7	11.73	2	33.62	6	3.91	1	3.91	7,504	0.544
N	7	10.49	2	33.62	5	3.50	2	3.50	5,640	0.544
K	7	9.58	2	33.62	4	3.19	3	3.19	4,328	0.544
J	7	8.86	2	33.62	3	2.96	4	2.96	3,257	0.544
A	3	9.30	2	33.62	1	4.32	2	4.32	2,614	0.544
G	7	8.31	2	33.62	2	2.77	5	2.77	2,503	0.544
F	7	7.82	2	33.62	1	2.61	6	2.61	1,883	0.544
P	7	10.44	3	26.66	6	3.48	1	3.48	6,187	0.686
N	7	9.35	3	26.66	5	3.11	2	3.11	4,622	0.686
K	7	8.53	3	26.66	4	2.84	3	2.84	3,519	0.686
J	7	7.90	3	26.66	3	2.63	4	2.63	2,649	0.686
A	3	8.28	3	26.66	1	3.84	2	3.84	2,140	0.686
P	7	9.30	4	21.15	6	3.10	1	3.10	5,080	0.865
N	7	8.33	4	21.15	5	2.77	2	2.77	3,763	0.865
D	3	8.84	4	21.15	2	4.10	1	4.10	3,265	0.865
A	3	7.87	4	21.15	1	3.42	2	3.42	1,752	0.865
P	7	8.28	5	16.77	6	2.76	1	2.76	4,142	1.080
D	3	7.87	5	16.77	2	3.65	1	3.65	2,685	1.080
A	3	6.55	5	16.77	1	3.05	2	3.05	1,420	1.080
D	3	7.01	6	13.30	2	3.25	1	3.25	2,198	1.362
A	3	5.84	6	13.30	1	2.71	2	2.71	1,150	1.362
C	3	5.72	6	13.30	1	2.66	2	2.66	953	1.362
D	3	6.25	7	10.55	2	2.90	1	2.90	1,789	1.717
A	3	5.66	7	10.55	1	3.22	2	2.27	1,225	1.717
D	3	5.56	8	8.37	2	2.58	1	2.58	1,448	2.165
A	3	5.05	8	8.37	1	28.64	2	2.02	993	2.165
C	3	4.55	8	8.37	1	2.05	2	2.12	489	2.165
D	3	4.42	9 1/2	5.95	2	2.05	1	2.05	592	3.009

1.4. AS - ALUMOSTEEL SOLID AND STRANDED CONDUCTORS

ALUMINUM CLAD STEEL

ALUMOSTEEL is a bimetallic conductor that combines the properties of steel and aluminum to form a material with the best of both metals.

Obtained from a continuous extrusion process, **ALUMOSTEEL** can be manufactured with different proportions between the two metals, according to the application and the demands of mechanical strength and electrical conductivity, it can vary between 13%, 20%, 27%, 30% and 40% IACS.

The 13% and 20% IACS versions, for example, are smartest choices to replace hot dip galvanized steel cables on applications such as support wire ropes, stays for towers or ACSR core (ACSR/AW). For other applications such as OPGW cables, lightning protection conductors or neutral distribution line conductors, 27%, 30% and 40% IACS **ALUMOSTEEL** are the most suitable design options.

In applications such as neutral or phase conductors on distribution lines, another advantage of **ALUMOSTEEL** is the non scrap value making it a definitive theft deterrent alternative solution for aluminum theft.



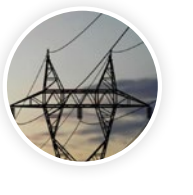
CONDUCTORS FOR PHASE AND NEUTRAL

ALUMOSTEEL conductors are an excellent alternative for power distribution, both in phase and in neutral, and it can be dimensioned according to the utility power distribution lines requirements with the advantage of operating in a higher thermal regime than other CAA cables.



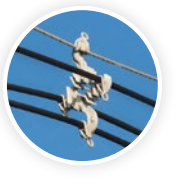
CAA CONDUCTORS CORE (ACSR/AW)

High mechanical strength, good electrical conductivity, excellent corrosion resistance and compatibility with solid aluminum wire, make the **ALUMOSTEEL** the most suitable material for core and reinforcement in CAA-RA conductors (ACSR/AW).



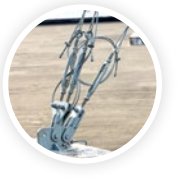
GROUNDING CONDUCTOR (EARTHING CONDUCTOR)

The high mechanical strength and the low weight of **ALUMOSTEEL** cables allows its traction with minimal sags. The aluminum coating offers an excellent protection against atmospheric corrosion, while providing excellent conductivity.



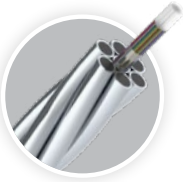
MESSENGER AND NEUTRAL CABLE OF PROTECTED POWER DISTRIBUTION LINES (STAY WIRE ROPE)

The high breaking load of **ALUMOSTEEL** provides the messenger cable with the strength necessary to support the weight of other conductors, while its aluminum cover ensures efficient performance as a neutral cable.



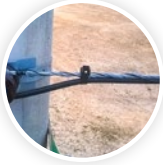
STAY ROPE FOR TOWERS AND POLES

ALUMOSTEEL wire ropes provide high mechanical strength for power transmission and power distribution lines. The high breaking strength and corrosion ensures a better performance and durability in relation to other conventional stay cables.



WIRES FOR OPGW CABLE

Used to support OPGW (Overhead Power Ground Wire) cables, the different aluminum thickness of **ALUMOSTEEL** versions provides a greater flexibility of electrical and mechanical design.



WIRE ROPES FOR TELEPHONE CABLES

Used to support telephone cables on overhead power distribution lines, **ALUMOSTEEL** cables for applications such as wire ropes ensure greater durability and corrosion resistance compared to hot dip galvanized steel.



WIRES FOR PREFORMED DEAD-END

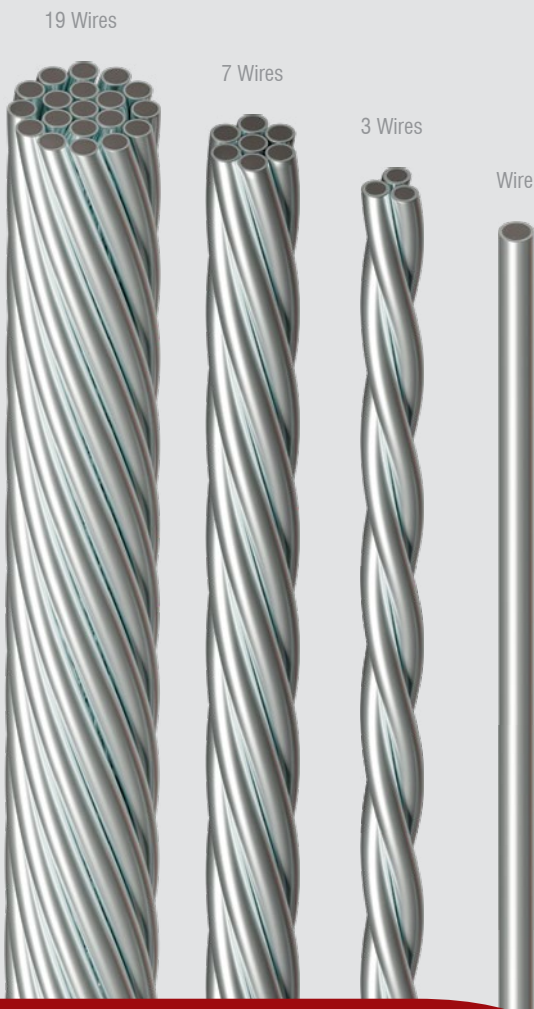
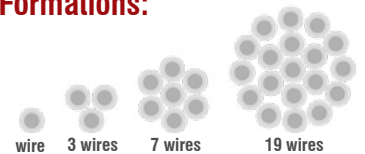
Suitable for anchoring aluminum cables in power transmission and distribution lines. Due to its aluminum outer layer in steel core **ALUMOSTEEL** cables prevent galvanic corrosion, ensuring greater durability.

STANDARDS: ASTM B-228, ASTM B-227

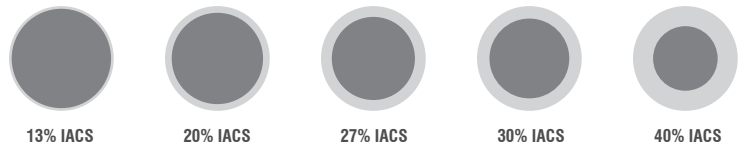
Construction



Formations:



Conductivities:



Technical Data:

IACS	13%	20%	27%	30%	40%
ALUMINUM AREA	10%	24%	37%	42%	62%
STEEL AREA	90%	76%	63%	58%	38%
DENSITY	7.27g/cm ³	6.56g/cm ³	5.91g/cm ³	5.65g/cm ³	4.63g/cm ³
ELASTICITY MODULE	187 GPa	169 GPa	152 GPa	145 GPa	119 GPa
LINEAR EXPANSION COEFFICIENT	1.22 E-5 1/°C	1.39 E-5 1/°C	1.55 E-5 1/°C	1.60 E-5 1/°C	1.84 E-5 1/°C
COEFFICIENT OF VARIATION WITH RESISTANCE	0.0034 1/°C	0.0036 1/°C	0.0037 1/°C	0.0038 1/°C	0.0040 1/°C

ALUMOSTEEL Cables*

	No. of Wires / AWG	Cross Section (AWG)	Conductor Characteristics				13% IACS					● ● 20,3% IACS			
							Mechanical Characteristics			Electrical Characteristics		Mechanical Characteristics		Electrical Characteristics	
			Qty. of wires	Wire Diameter (mm)	Cable Diameter (mm)	Cross Section (mm ²)	Nominal Weight (kg/km)	Breaking Load		Maximum Resistance to 20°C in DC (Ω/km)	Current Capacity at 75°C (A)	Nominal Weight (kg/km)	Breaking Load	Maximum Resistance to 20°C in DC (Ω/km)	Current Capacity at 75°C (A)
								HS (daN)	EHS (daN)						
●	3N4	2/0	3	5.19	11.18	63.97	468	6692	7481	1.950	150	422	6441	1.349	170
● ●	3N5	1/0	3	4.62	9.95	50.69	371	5304	6318	2.461	129	334	5439	1.702	147
● ●	3N6	1	3	4.11	8.85	40.12	294	4198	5318	3.110	112	264	4574	2.151	127
● ●	3N7	2	3	3.67	7.91	31.99	234	3406	4466	3.900	97	211	3835	2.698	110
● ●	3N8	3	3	3.26	7.02	25.24	185	2688	3397	4.943	83	166	3206	3.419	95
● ●	3N9	4	3	2.91	6.27	20.11	147	2143	2800	6.203	72	133	2542	4.291	82
● ●	3N10	5	3	2.59	5.58	15.93	117	1713	2286	8.142	62	105	2016	5.416	71
● ●	3N11	6	3	2.30	4.95	12.56	92	1362	1949	9.930	54	83	1599	6.868	61
● ●	3N12	7	3	2.05	4.42	9.98	73	1083	1625	12.380	47	66	1268	8.646	53
● ●	7N4	300	7	5.19	15.57	149.57	1095	14792	16538	0.831	250	986	14239	0.579	283
● ●	7N5	4/0	7	4.62	13.86	118.52	868	11724	13967	1.048	216	781	12022	0.731	244
● ●	7N6	3/0	7	4.11	12.33	93.80	687	9280	11756	1.325	187	618	10111	0.924	211
● ●	7N7	2/0	7	3.67	11.01	74.79	548	7529	9872	1.661	161	493	8477	1.158	183
● ●	7N8	1/0	7	3.26	9.78	59.01	432	5941	7510	2.106	139	389	7087	1.468	158
● ●	7N9	1	7	2.91	8.73	47.02	344	4738	6193	2.642	121	310	5619	1.843	137
● ●	7N10	2	7	2.59	7.77	37.25	273	3786	5053	3.336	104	245	4456	2.326	118
● ●	7N11	3	7	2.30	6.90	29.37	215	3011	4309	4.230	90	194	3534	2.949	102
● ●	7N12	4	7	2.05	6.15	23.34	171	2394	3591	5.237	78	154	2802	3.713	88

● = ABNT-NBR 10712
● = ASTM B416

ALUMOSTEEL Wires

Cross Section (AWG)	Conductor Characteristics		13% IACS					● ● 20% IACS			
			Mechanical Characteristics			Electrical Characteristics		Mechanical Characteristics		Electrical Characteristics	
	Wire Diameter (mm)	Cross Section (mm ²)	Nominal Weight (kg/km)	Carga de Ruptura		Maximum Resistance to 20°C in DC (Ω/km)	Current Capacity at 75°C (A)	Nominal Weight (kg/km)	Breaking Load	Maximum Resistance to 20°C in DC (Ω/km)	Current Capacity at 75°C (A)
				HS (daN)	EHS (daN)						
4	5.19	21.16	153	2348	2574	6.269	65	139	2260	4.015	81
5	4.62	16.76	121	1861	2173	7.911	63	110	1908	5.066	70
6	4.11	13.27	96	1473	1828	9.996	48	87	1605	6.402	61
7	3.67	10.58	77	1195	1533	12.537	42	70	1346	8.029	53
8	3.26	8.35	60	943	1282	15.889	36	55	1125	10.175	45
9	2.91	6.65	48	752	1016	19.941	31	44	892	12.770	39
10	2.59	5.27	38	601	805	25.173	27	35	707	16.120	34
11	2.30	4.15	30	478	638	31.921	23	27	561	20.442	29
12	2.05	3.30	24	380	507	40.181	20	22	445	25.732	25

No. of Wires / AWG	● ● 27% IACS				● ● 30% IACS				● ● 40% IACS			
	Mechanical Characteristics		Electrical Characteristics		Mechanical Characteristics		Electrical Characteristics		Mechanical Characteristics		Electrical Characteristics	
	Nominal Weight (kg/km)	Breaking Load	Maximum Resistance to 20°C in DC (Ω/km)	Current Capacity at 75°C (A)	Nominal Weight (kg/km)	Breaking Load	Maximum Resistance to 20°C in DC (Ω/km)	Current Capacity at 75°C (A)	Nominal Weight (kg/km)	Breaking Load	Maximum Resistance to 20°C in DC (Ω/km)	Current Capacity at 75°C (A)
		EHS (daN)				EHS (daN)						
3N4	378	5195	1.014	197	359	4239	0.913	208	297	3324	0.685	266
3N5	300	4383	1.280	170	284	3624	1.152	180	235	2899	0.864	230
3N6	237	3684	1.617	147	225	2979	1.455	155	186	2509	1.092	198
3N7	189	3110	2.028	127	179	2529	1.825	135	148	2031	1.369	172
3N8	149	2565	2.570	110	142	2104	2.313	116	117	1635	1.735	148
3N9	119	2033	3.226	95	113	1668	2.903	101	-	-	-	-
3N10	94	1633	4.072	82	-	-	-	-	-	-	-	-
3N11	-	-	-	-	-	-	-	-	-	-	-	-
3N12	-	-	-	-	-	-	-	-	-	-	-	-
7N4	884	11484	0.436	327	839	9371	0.392	345	694	7348	0.294	441
7N5	700	9688	0.550	283	665	8012	0.495	298	550	6409	0.371	381
7N6	554	8144	0.694	244	526	6586	0.625	258	435	5546	0.469	329
7N7	442	6874	0.871	212	420	5591	0.784	223	347	4489	0.588	286
7N8	349	5669	1.104	182	331	4652	0.993	193	274	3615	0.745	246
7N9	278	4495	1.385	158	264	3688	1.247	167	-	-	-	-
7N10	220	3565	1.749	137	-	-	-	-	-	-	-	-
7N11	-	-	-	-	-	-	-	-	-	-	-	-
7N12	-	-	-	-	-	-	-	-	-	-	-	-

*Other specifications available on demand.

Cross Section (AWG)	● ● 27% IACS				● ● 30% IACS				● ● 40% IACS			
	Mechanical Characteristics		Electrical Characteristics		Mechanical Characteristics		Electrical Characteristics		Mechanical Characteristics		Electrical Characteristics	
	Nominal Weight (kg/km)	Breaking Load	Maximum Resistance to 20°C in DC (Ω/km)	Current Capacity at 75°C (A)	Nominal Weight (kg/km)	Breaking Load	Maximum resistance to 20°C in DC (Ω/km)	Current Capacity at 75°C (A)	Nominal Weight (kg/km)	Breaking Load	Maximum Resistance to 20°C in DC (Ω/km)	Current Capacity at 75°C (A)
		EHS (daN)				EHS (daN)						
4	884	11484	0.436	327	839	9371	0.392	345	694	7348	0.294	441
5	700	9688	0.550	283	665	8012	0.495	298	550	6409	0.371	381
6	554	8144	0.694	244	526	6586	0.625	258	435	5546	0.469	329
7	442	6874	0.871	212	420	5591	0.784	223	347	4489	0.588	286
8	349	5669	1.104	182	331	4652	0.993	193	274	3615	0.745	246
9	278	4495	1.385	158	264	3688	1.247	167	-	-	-	-
10	220	3565	1.749	137	-	-	-	-	-	-	-	-
11	-	-	-	-	-	-	-	-	-	-	-	-
12	-	-	-	-	-	-	-	-	-	-	-	-

1.5. CAS - ALUMOSTEEL WIRE ROPES

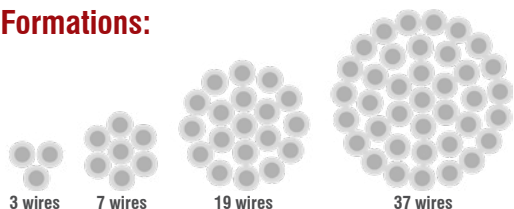
ALUMINUM CLAD STEEL

Made of aluminum-clad steel conductors, **ALUMOSTEEL** stranded conductor offers a technological solution for stay in power distribution and transmission lines, messenger and neutral for spacer power distribution lines (protected compact), messenger for telephony, rural electrification and lightning cable.

In relation to hot dip galvanized steel, **ALUMOSTEEL** stranded conductor has greater resistance to corrosion, protective aluminum layer in microns greater than a class 2 or B zinc plating, higher conductivity (13% IACS versus 8% IACS), less weight per kilometer (on average 8%), equivalent mechanical resistance, price per kilo equivalent and the same fittings.



Formations:



Diameter* (inch)	Wire Rope Characteristics			Mass (Kg/Km)	Minimum Aluminum Layer	Minimum Breaking Load		
	Nominal Diameter (mm)	Number of Wires	Diameter of Wires (mm)		μm	SM (daN)	HS (daN)	EHS (daN)
3/16"	4.76	3	2.21	84	53	950	1310	1830
1/4"	6.35	7	2.03	165	49	1580	2300	3030
5/16"	7.94	7	2.64	280	64	2700	3890	5100
3/8"	9.52	7	3.05	373	73	3500	5190	7020
1/2"	12.70	7	4.19	705	101	-	8550	12270
1/2"	12.70	19	2.54	706	61	-	8730	12300
5/8"	15.87	19	3.18	1107	77	-	12900	18340
3/4"	19.05	19	3.81	1590	92	-	18800	26600
1"	25.40	37	3.63	2815	87	-	32960	46860

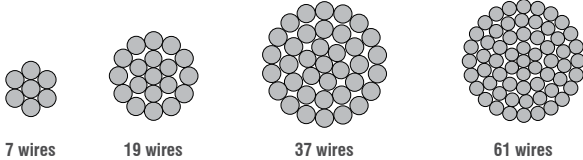
*Other specifications available on demand.

1.6. ALUMINUM CONDUCTORS (AAC)

ICAL-CA

Suitable for power transmission in urban and rural overhead lines, the bare aluminum cable (AAC) alloy 1350 (H19 temper) is a stranded conductor (class 2), concentric.

Formations:

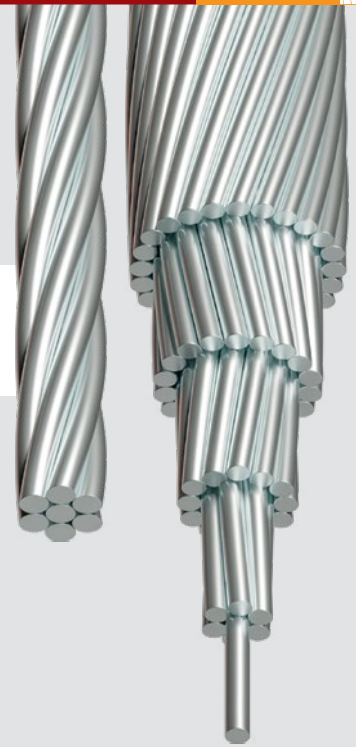


7 wires

19 wires

37 wires

61 wires

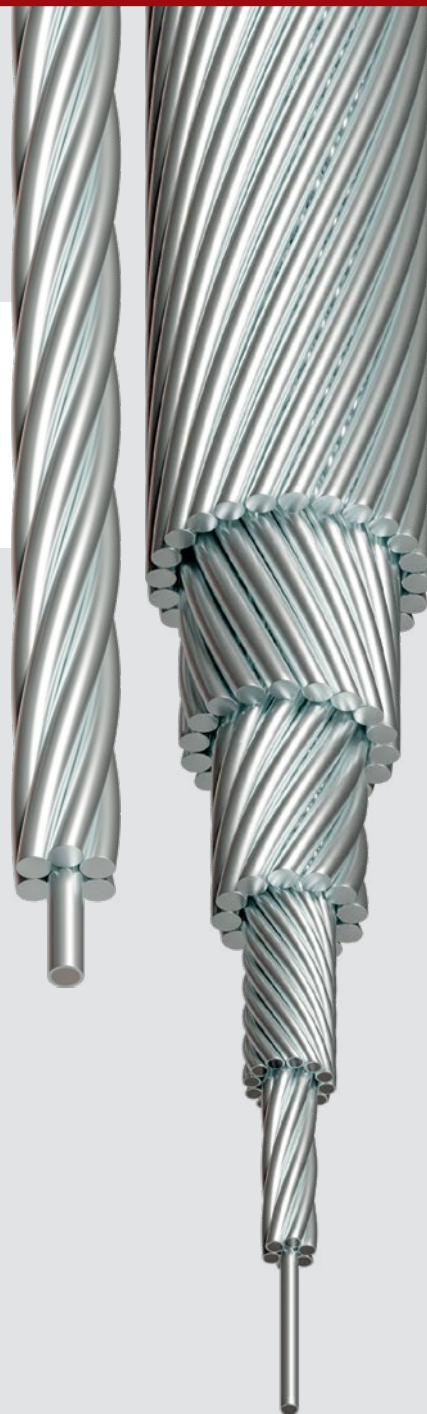
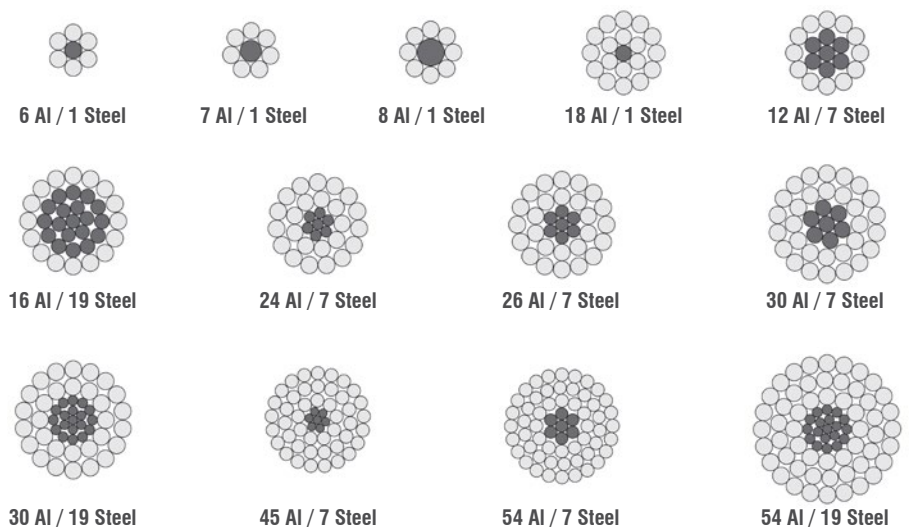


INTELLI Code / International Coding	Area		Formation		Conductor Nominal Diameter (mm)	Nominal Net Weight of Cable (kg/km)	RMC (kN)	DC Electrical Resistance at 20°C (Ω/km)
	AWG/MCM	mm ²	Wire No.	Ø wires (mm)				
ICAL-CA 4 AWG - Rose	4	21.120	7	1.96	5.88	58	3.91	1.3606
ICAL-CA 2 AWG - Iris	2	33.541	7	2.47	7.41	93	5.99	0.8567
ICAL-CA 1 AWG - Pansy	1	42.489	7	2.78	8.34	117	7.30	0.6763
ICAL-CA 1/0 AWG - Poppy	1/0	53.518	7	3.12	9.36	148	8.84	0.5369
ICAL-CA 2/0 AWG - Aster	2/0	67.348	7	3.50	10.50	186	11.12	0.4267
ICAL-CA 3/0 AWG - Phlox	3/0	84.913	7	3.93	11.79	234	13.45	0.3384
ICAL-CA 4/0 AWG - Oxlip	4/0	107.407	7	4.42	13.26	296	17.01	0.2675
ICAL-CA 266,8 MCM - Daisy	266.8	135.254	7	4.96	14.90	373	21.42	0.2125
ICAL-CA 300 MCM - Peony	300.0	151.854	19	3.19	15.95	419	24.29	0.1892
ICAL-CA 336,4 MCM - Tulip	336.4	170.481	19	3.38	16.90	470	27.27	0.1686
ICAL-CA 350 MCM - Daffodil	350.0	177.610	19	3.45	17.25	490	28.40	0.1620
ICAL-CA 397,5 MCM - Canna	397.5	202.080	19	3.68	18.40	557	31.76	0.1422
ICAL-CA 450 MCM - Goldentuft	450.0	228.130	19	3.68	19.55	629	34.98	0.1260
ICAL-CA 477 MCM - Cosmos	477.0	241.155	19	4.02	20.10	665	37.01	0.1192
ICAL-CA 500 MCM - Zinnia	500.0	253.302	19	4.12	20.60	698	38.87	0.1134
ICAL-CA 556,5 MCM - Dahlia	556.5	281.070	19	4.35	21.75	779	43.33	0.1020
ICAL-CA 636 MCM - Orchid	636.0	322.240	37	3.33	23.31	888	50.44	0.0892
ICAL-CA 715,5 MCM - Violet	715.5	362.110	37	3.53	24.71	998	56.68	0.0794
ICAL-CA 750 MCM - Petunia	750.0	380.810	37	3.62	25.34	1050	58.56	0.0755
ICAL-CA 795 MCM - Lilac	795.0	402.910	61	2.90	26.10	1109	65.08	0.0710
ICAL-CA 795 MCM - Arbutus	795.0	402.140	37	3.72	26.04	1109	61.85	0.0715
ICAL-CA 874,5 MCM - Anemone	874.5	444.268	37	3.91	27.37	1225	66.71	0.0650
ICAL-CA 954 MCM - Goldenrod	954.0	483.480	61	3.18	28.60	1336	75.00	0.0593
ICAL-CA 954 MCM - Magnolia	954.0	483.740	37	4.08	28.56	1334	72.63	0.0594
ICAL-CA 1000 MCM - Hawkweed	1,000.0	507.730	37	4.18	29.26	1400	76.23	0.0570
ICAL-CA 1033,5 MCM - Bluebell	1,033.0	522.424	37	4.24	29.68	1440	78.44	0.0550
ICAL-CA 1113 MCM - Marigold	1,113.0	563.648	61	3.43	30.90	1554	87.25	0.0510
ICAL-CA 1192,5 MCM - Hawthorn	1,192.0	603.777	61	3.55	31.95	1665	93.46	0.0476
ICAL-CA 1272 MCM - Narcissus	1,272.0	645.270	61	3.67	33.00	1779	98.15	0.0445
ICAL-CA 1351,5 MCM - Columbine	1,352.0	684.547	61	3.78	34.02	1887	104.10	0.0420
ICAL-CA 1431 MCM - Carnation	1,431.0	724.950	61	3.89	35.00	1999	107.69	0.0396
ICAL-CA 1590 MCM - Coreopsis	1,590.0	805.355	61	4.10	36.90	2220	119.60	0.0357
ICAL-CA 1750 MCM - Jassamine	1,750.0	885.820	61	4.30	38.70	2442	131.60	0.0320

1.7. ALUMINUM CONDUCTORS WITH ALUMOSTEEL CORE (ACSR/AW) **ICAL-CAA/RA**

ACSR/AW is suitable for energy transmission in urban and rural overhead lines. The **CAA/RA** aluminum cable is an aluminum conductor, alloy 1350 (H19 temper) stranded (class 2), concentric with an aluminum coated steel core **ALUMOSTEEL**, which ensures greater mechanical performance compared to bare aluminum cables and higher resistance to corrosion compared to cables with zinc plated steel core.

Formations:



EXTRA-STRONG LINE

INTELLI Code	AWG MCM	Area			Formation		Cable Nominal Diameter (mm)	Nominal Mass			RMC (kN)	DC Electrical Resistance at 20°C (Ω/km)
		Al (mm ²)	Steel (mm ²)	Total (mm ²)	Al (wires/Ømm)	Steel (wires/Ømm)		Al (kg/km)	Steel (kg/km)	Total (kg/km)		
ICAL-80,0-CAA/RA-Grouse	80	40.540	14.120	54.660	8 / 2.54	1 / 4.24	9.32	112	93	205	21.72	0.6358
ICAL-101,8-CAA/RA-Petrel	101.8	51.610	30.100	81.710	12 / 2.34	7 / 2.34	11.70	143	199	342	44.06	0.4684
ICAL-110,8-CAA/RA-Minorca	110.8	56.110	32.730	88.840	12 / 2.44	7 / 2.44	12.20	156	217	372	47.91	0.4308
ICAL-134,6-CAA/RA-Leghorn	134.6	68.200	39.780	107.980	12 / 2.69	7 / 2.69	13.45	189	263	452	57.78	0.3544
ICAL-159,0-CAA/RA-Guinea	159	80.360	46.880	127.240	12 / 2.92	7 / 2.92	14.60	223	310	533	67.85	0.3008
ICAL-176,9-CAA/RA-Dotterel	176.9	89.410	52.150	141.560	12 / 3.08	7 / 3.08	15.40	248	345	593	75.14	0.2704
ICAL-190,8-CAA/RA-Dorking	190.8	96.510	56.300	152.810	12 / 3.20	7 / 3.20	16.00	267	373	640	81.12	0.2505
ICAL-203,2-CAA/RA-Brahma	203.2	102.960	91.780	194.740	16 / 2.86	19 / 2.48	18.12	285	609	893	120.3	0.2163
ICAL-211,3-CAA/RA-Cochin	211.3	107.060	62.440	169.500	12 / 3.37	7 / 3.37	16.85	297	413	710	87.93	0.2258

GENERAL PRODUCT CATALOG

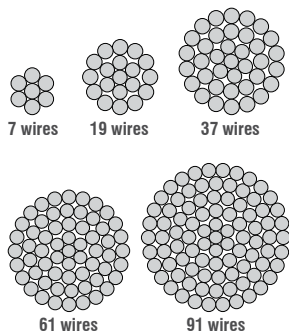
INTELLI Code	AWG MCM	Area			Formation		Cable Nominal Diameter (mm)	Nominal Mass			RMC (kN)	DC Electrical Resistance at 20°C (Ω/km)
		Al (mm ²)	Steel (mm ²)	Total (mm ²)	Al (wires/Ømm)	Steel (wires/Ømm)		Al (kg/km)	Steel (kg/km)	Total (kg/km)		
ICAL-4-CAA/RA-Swan	4	21,180	3,530	24,710	6 x 2,12	1 x 2,12	6,36	58	23	81	7,95	1,2822
ICAL-2-CAA/RA-Sparrow	2	33,590	5,600	39,190	6 x 2,67	1 x 2,67	8,01	92	37	129	12,26	0,8085
ICAL-1-CAA/RA-Robin	1	42,410	7,070	49,480	6 x 3,00	1 x 3,00	9,00	116	47	163	15,35	0,6403
ICAL-1/0-CAA/RA-Raven	1/0	53,520	8,920	62,440	6 x 3,37	1 x 3,37	10,11	147	59	206	18,87	0,5074
ICAL-2/0-CAA/RA-Quail	2/0	67,330	11,220	78,550	6 x 3,78	1 x 3,78	11,34	185	74	259	22,80	0,4033
ICAL-3/0-CAA/RA-Pigeon	3/0	85,120	14,190	99,310	6 x 4,25	1 x 4,25	12,75	234	94	327	28,03	0,3199
ICAL-4/0-CAA/RA-Penguin	4/0	107,220	17,870	125,090	6 x 4,77	1 x 4,77	14,31	294	118	412	34,14	0,2533
ICAL-266,8-CAA/RA-Waxwing	266,8	134,980	7,500	142,480	18 x 3,09	1 x 3,09	15,45	372	49	422	30,27	0,2096
ICAL-266,8-CAA/RA-Partridge	266,8	134,870	21,990	156,860	26 x 2,57	7 x 2,00	16,28	374	146	519	47,91	0,2035
ICAL-300,0-CAA/RA-Ostrich	300,0	152,190	24,710	176,900	26 x 2,73	7 x 2,12	17,28	422	164	585	53,94	0,1804
ICAL-336,4-CAA/RA-Merlin	336,4	170,220	9,460	179,680	18 x 3,47	1 x 3,47	17,35	469	62	532	37,87	0,1662
ICAL-336,4-CAA/RA-Linnet	336,4	170,550	27,830	198,380	26 x 2,89	7 x 2,25	18,31	473	184	666	60,14	0,1609
ICAL-336,4-CAA/RA-Oriole	336,4	170,500	39,780	210,280	30 x 2,69	7 x 2,69	18,83	474	263	737	74,44	0,1578
ICAL-397,5-CAA/RA-Chickadee	397,5	200,900	11,200	212,100	18 x 3,77	1 x 3,77	18,85	554	74	627	43,40	0,1408
ICAL-397,5-CAA/RA-Brant	397,5	201,600	26,100	227,700	24 x 3,27	7 x 2,18	19,61	558	173	731	62,49	0,1377
ICAL-397,5-CAA/RA-Ibis	397,5	201,340	32,730	234,070	26 x 3,14	7 x 2,44	19,88	558	217	774	70,10	0,1363
ICAL-397,5-CAA/RA-Lark	397,5	200,900	46,880	247,780	30 x 2,92	7 x 2,92	20,44	558	310	868	87,16	0,1339
ICAL-477,0-CAA/RA-Pelican	477	242,300	13,500	255,800	18 x 4,14	1 x 4,14	20,70	668	89	757	50,98	0,1168
ICAL-477,0-CAA/RA-Flicker	477	241,600	31,400	273,000	24 x 3,58	7 x 2,39	21,49	669	208	877	74,32	0,1148
ICAL-477,0-CAA/RA-Hawk	477	241,650	39,490	281,140	26 x 3,44	7 x 2,68	21,80	670	261	931	84,37	0,1136
ICAL-477,0-CAA/RA-Hen	477	241,270	56,300	297,570	30 x 3,20	7 x 3,20	22,40	670	373	1043	103,80	0,1115
ICAL-556,5-CAA/RA-Osprey	556,5	282,500	15,700	298,200	18 x 4,47	1 x 4,47	22,35	779	103	882	58,92	0,1002
ICAL-556,5-CAA/RA-Parakeet	556,5	282,300	36,600	318,900	24 x 3,87	7 x 2,58	23,22	782	242	1024	85,69	0,0983
ICAL-556,5-CAA/RA-Dove	556,5	282,590	45,920	328,510	26 x 3,72	7 x 2,89	23,55	783	304	1087	97,58	0,0971
ICAL-556,5-CAA/RA-Eagle	556,5	282,100	65,800	347,900	30 x 3,46	7 x 3,46	24,21	783	436	1219	119,20	0,0954
ICAL-605,0-CAA/RA-Peacock	605	306,100	39,800	345,900	24 x 4,03	7 x 2,69	24,21	848	263	1111	93,03	0,0906
ICAL-605,0-CAA/RA-Squab	605	305,800	49,800	355,600	26 x 3,87	7 x 3,01	24,54	847	330	1177	104,60	0,0898
ICAL-605,0-CAA/RA-Wood Duck	605	307,060	71,650	378,710	30 x 3,61	7 x 3,61	25,25	583	474	1057	126,50	0,0876
ICAL-605,0-CAA/RA-Teal	605	306,060	69,620	375,680	30 x 3,61	19 x 2,16	25,25	853	462	1314	126,40	0,0878
ICAL-636,0-CAA/RA-Kingbird	636	323,000	17,900	340,900	18 x 4,78	1 x 4,78	23,90	891	118	1009	66,80	0,0876
ICAL-636,0-CAA/RA-Rook	636	323,100	41,900	365,000	24 x 4,14	7 x 2,76	24,82	895	277	1172	98,06	0,0859
ICAL-636,0-CAA/RA-Grosbeak	636	321,840	52,490	374,330	26 x 3,97	7 x 3,09	25,15	892	347	1239	110,20	0,0853
ICAL-636,0-CAA/RA-Scoter	636	322,220	75,260	397,480	30 x 3,70	7 x 3,70	25,88	896	498	1394	130,40	0,0834
ICAL-636,0-CAA/RA-Egret	636	322,220	73,540	395,760	30 x 3,70	19 x 2,22	25,88	896	488	1383	133,20	0,0835
ICAL-666,6-CAA/RA-Flamingo	666,6	337,270	43,720	380,990	24 x 4,23	7 x 2,82	25,38	934	289	1224	102,40	0,0823
ICAL-666,6-CAA/RA-Gannet	666,6	338,260	54,900	393,160	26 x 4,07	7 x 3,16	25,76	937	363	1300	115,50	0,0812
ICAL-715,5-CAA/RA-Stilt	715,5	363,270	46,880	410,150	24 x 4,39	7 x 2,92	26,31	1007	310	1317	110,00	0,0764
ICAL-715,5-CAA/RA-Starling	715,5	361,930	59,150	421,080	26 x 4,21	7 x 3,28	26,68	1003	391	1394	122,10	0,0758
ICAL-715,5-CAA/RA-Redwing	715,5	362,060	82,410	444,470	30 x 3,92	19 x 2,35	27,43	1006	546	1551	148,00	0,0744
ICAL-795,0-CAA/RA-Tern	795	403,770	27,830	431,600	45 x 3,38	7 x 2,25	27,03	1119	184	1303	95,42	0,0701
ICAL-795,0-CAA/RA-Condor	795	402,330	52,150	454,480	54 x 3,08	7 x 3,08	27,74	1115	345	1460	123,40	0,0699
ICAL-795,0-CAA/RA-Cuckoo	795	402,300	52,200	454,500	24 x 4,62	7 x 3,08	27,74	1115	345	1460	122,10	0,0699
ICAL-795,0-CAA/RA-Drake	795	402,840	65,510	468,350	26 x 4,44	7 x 3,45	28,14	1115	433	1548	135,40	0,0662
ICAL-795,0-CAA/RA-Mallard	795	403,840	91,780	495,620	30 x 4,14	19 x 2,48	28,96	1122	609	1730	164,90	0,0667
ICAL-900,0-CAA/RA-Ruddy	900	455,500	31,670	487,170	45 x 3,59	7 x 2,40	28,74	1262	210	1472	106,70	0,0621
ICAL-900,0-CAA/RA-Canary	900	456,060	59,100	515,160	54 x 3,28	7 x 3,28	29,51	1264	391	1656	138,00	0,0608
ICAL-954,0-CAA/RA-Rail	954	483,840	33,540	517,380	45 x 3,70	7 x 2,47	29,61	1341	222	1563	113,20	0,0585
ICAL-954,0-CAA/RA-Cardinal	954	484,530	62,810	547,340	54 x 3,38	7 x 3,38	30,42	1342	416	1758	146,50	0,0573
ICAL-1033,5-CAA/RA-Ortolan	1033,5	523,900	36,310	560,210	45 x 3,85	7 x 2,57	30,78	1451	240	1692	120,70	0,0544
ICAL-1033,5-CAA/RA-Curlew	1033,5	522,510	67,730	590,240	54 x 3,51	7 x 3,51	31,59	1448	448	1896	155,70	0,0531
ICAL-1113,0-CAA/RA-Bluejay	1113	565,490	38,900	604,390	45 x 4,00	7 x 2,66	31,98	1567	257	1824	130,00	0,0501
ICAL-1113,0-CAA/RA-Finch	1113	565,030	71,570	636,600	54 x 3,65	19 x 2,19	32,84	1569	475	2044	167,20	0,0493
ICAL-1192,5-CAA/RA-Bunting	1192,5	605,760	41,880	647,640	45 x 4,14	7 x 2,76	33,07	1678	277	1955	139,40	0,0467
ICAL-1192,5-CAA/RA-Grackle	1192,5	602,790	76,890	679,680	54 x 3,77	19 x 2,27	33,99	1674	510	2184	178,90	0,0462
ICAL-1272,0-CAA/RA-Bittern	1272	644,400	44,660	689,060	45 x 4,27	7 x 2,85	34,17	1786	296	2081	148,50	0,0439
ICAL-1272,0-CAA/RA-Pheasant	1272	645,080	81,650	726,730	54 x 3,90	19 x 2,34	35,10	1792	542	2333	188,50	0,0432
ICAL-1351,5-CAA/RA-Dipper	1351,5	684,240	47,200	731,440	45 x 4,40	7 x 2,93	35,20	1896	312	2208	157,40	0,0414
ICAL-1351,5-CAA/RA-Martin	1351,5	685,390	86,670	772,060	54 x 4,02	19 x 2,41	36,17	1904	575	2478	200,10	0,0406
ICAL-1431,0-CAA/RA-Bobolink	1431	725,270	50,140	775,410	45 x 4,53	7 x 3,02	36,24	2010	332	2341	167,00	0,0399
ICAL-1431,0-CAA/RA-Plover	1431	726,920	91,780	818,700	54 x 4,14	19 x 2,48	37,21	2019	609	2627	212,10	0,0383
ICAL-1510,5-CAA/RA-Nuthatch	1510,5	764,200	52,900	817,100	45 x 4,65	7 x 3,10	37,24	2117	350	2467	175,90	0,0377
ICAL-1510,5-CAA/RA-Parrot	1510,5	766,060	97,030	863,090	54 x 4,25	19 x 2,55	38,23	2128	643	2771	223,90	0,0363
ICAL-1590,0-CAA/RA-Lapwing	1590	807,530	55,600	863,130	45 x 4,78	7 x 3,18	38,22	2238	368	2606	185,60	0,0351
ICAL-1590,0-CAA/RA-Falcon	1590	806,230	102,430	908,660	54 x 4,36	19 x 2,62	39,26	2229	679	2918	235,90	0,0345

1.8. ALUMINUM ALLOY CONDUCTORS

ICAL-6201

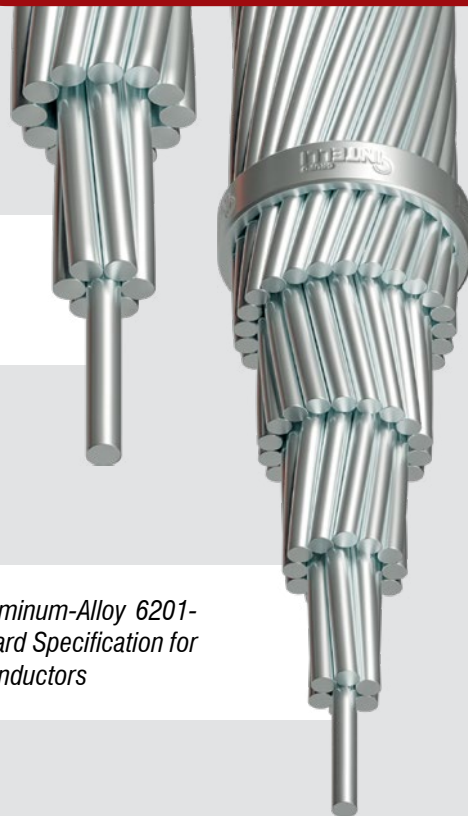
The aluminum alloy conductor is suitable for power distribution lines, where high mechanical resistance than aluminum cables ICAL-CA is required. They are concentric stranded (AAA Class) and have 52,5% IACS of conductivity.

Formations:



Standard:

ASTM B-398 e B-399: *Standard Specification for Aluminum-Alloy 6201-T81 and 6201-T83 Wire for Electrical Purposes / Standard Specification for Concentric-Lay-Stranded Aluminum-Alloy 6201-T81 Conductors*



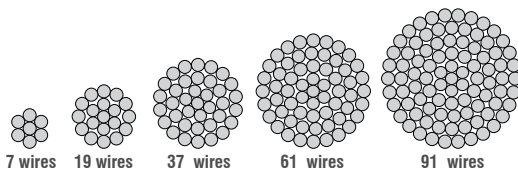
INTELLI Code	Area		Formation		Conductor Nominal Diameter (mm)	Nominal Net Weight of Cable (kg/km)	RMC (kN)	DC Electrical Resistance at 20°C (Ω/km)
	AWG/MCM	mm ²	Wire No.	Ø wires (mm)				
ICAL-6201-77,5MCM-Ames	77.5	39.19	7	2.67	8.01	108	1,270	0.8540
ICAL-6201-123,3MCM-Azusa	123.3	62.44	7	3.37	10.11	171	1,939	0.5360
ICAL-6201-155,4MCM-Anaheim	155.4	78.55	7	3.78	11.34	216	2,440	0.4260
ICAL-6201-195,7MCM-Amherst	195.7	99.30	7	4.25	12.75	273	3,084	0.3370
ICAL-6201-246,9MCM-Alliance	246.9	125.10	7	4.77	14.31	343	3,885	0.2670
ICAL-6201-312,8MCM-Butte	312.8	158.50	19	3.26	16.30	435	4,770	0.2110
ICAL-6201-394,5MCM-Canton	394.5	199.90	19	3.66	18.30	549	6,013	0.1670
ICAL-6201-465,4MCM-Cairo	465.4	235.80	19	3.98	19.88	646	7,098	0.1420
ICAL-6201-559,5MCM-Darien	559.5	283.67	19	4.36	21.80	776	8,534	0.1180
ICAL-6201-652,4MCM-Elgin	652.4	331.04	19	4.71	23.55	908	9,958	0.1010
ICAL-6201-740,8MCM-Flint	740.8	374.52	37	3.59	25.13	1,028	11,020	0.0892
ICAL-6201-927,2MCM-Greeley	927.2	469.62	37	4.02	28.14	1,289	13,827	0.0713
ICAL-6201-2AWG	2.0	33.54	7	2.47	7.41	92	1,088	0.9980
ICAL-6201-1/0AWG	1/0	53.52	7	3.12	9.36	147	1,736	0.6250
ICAL-6201-2/0AWG	2/0	67.35	7	3.50	10.50	185	2,092	0.4970
ICAL-6201-3/0AWG	3/0	84.91	7	3.93	11.79	233	2,637	0.3940
ICAL-6201-4/0AWG	4/0	107.41	7	4.42	13.26	295	3,336	0.3110
ICAL-6201-250MCM	250.0	126.37	19	2.91	14.55	347	3,969	0.2650
ICAL-6201-300MCM	300.0	151.85	19	3.19	15.95	417	4,770	0.2200
ICAL-6201-350MCM	350.0	177.62	19	3.45	17.25	487	5,343	0.1880
ICAL-6201-400MCM	400.0	203.19	19	3.69	18.45	558	6,112	0.1649
ICAL-6201-450MCM	450.0	228.14	19	3.91	19.55	626	6,863	0.1468
ICAL-6201-500MCM	500.0	253.30	19	4.12	20.60	695	7,620	0.1322
ICAL-6201-550MCM	550.0	279.26	37	3.10	21.70	766	8,584	1.1200
ICAL-6201-600MCM	600.0	303.18	37	3.23	22.61	832	9,318	0.1105
ICAL-6201-650MCM	650.0	330.03	37	3.37	23.59	906	9,714	0.1015
ICAL-6201-700MCM	700.0	353.95	37	3.49	24.43	971	10,418	0.0946
ICAL-6201-750MCM	750.0	380.81	37	3.62	25.34	1,045	11,214	0.0880
ICAL-6201-800MCM	800.0	404.31	37	3.73	26.11	1,109	11,898	0.0829
ICAL-6201-900MCM	900.0	455.70	37	3.96	27.72	1,250	13,418	0.0735
ICAL-6201-1000MCM	1000.0	507.74	37	4.18	29.26	1,393	14,949	0.0660
ICAL-6201-35mm ²	-	35.00	7	2.50	7.50	94	1,114	0.9748
ICAL-6201-50mm ²	-	50.00	7	3.00	9.00	136	1,603	0.6770
ICAL-6201-70mm ²	-	70.00	7	3.45	10.35	179	2,030	0.5119
ICAL-6201-95mm ²	-	95.00	7	4.12	12.36	256	2,896	0.3589
ICAL-6201-95mm ²	-	95.00	19	2.50	12.60	257	2,928	0.3591

1.9. ALUMINUM ALLOY CONDUCTORS

ICAL-1120

The aluminum alloy conductor is suitable for power distribution and transmission lines. They are concentric stranded and have 58,8% IACS of conductivity.

Formations:



Standard:

AS 1531 (Standards Australia): Conductors - Bare overhead - Aluminum and aluminum alloy

OBS: To calculate current capacity: environment temperature (25°C), conductor temperature (75°C), wind velocity (1m/s) and frequency (60Hz) with sun incidence.

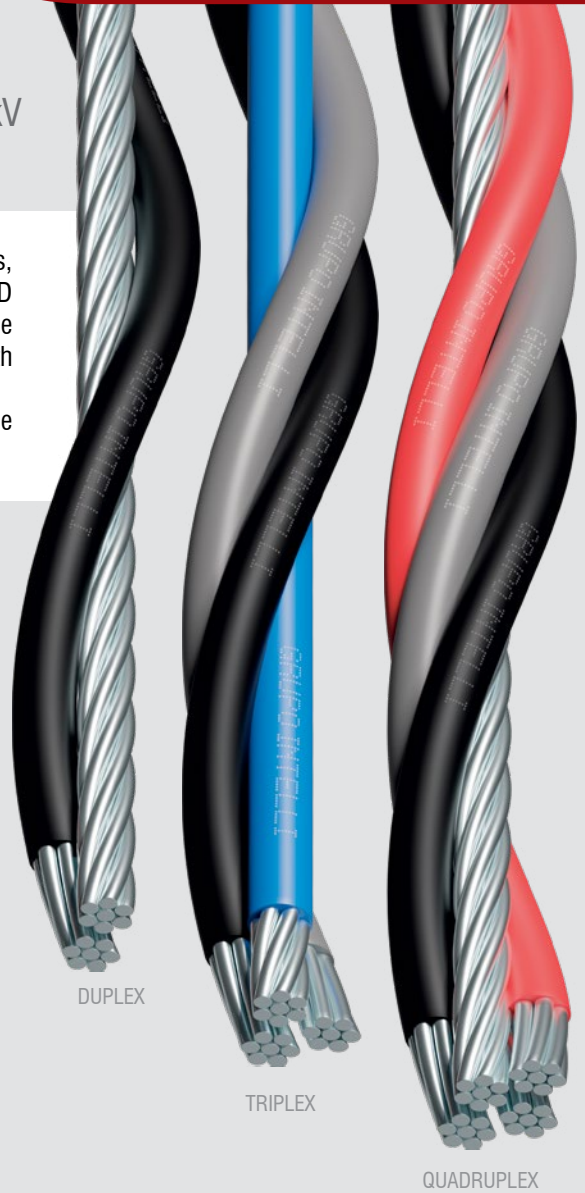
INTELLI Code	Area		Formation, Wire No. and Ø wires (mm)	Conductor Nominal Diameter (mm)	Nominal Net Weight of Cable (kg/km)	RMC (kN)	DC Electrical Resistance at 20°C (Ω/km)
	AWG/MCM	mm ²					
ICAL-1120-67,8MCM-Chlorine	67,80	34,36	7 x 2,50	7,50	94	8,18	0,8640
ICAL-1120-82,0MCM-Chromium	82,00	41,58	7 x 2,75	8,25	113	9,91	0,7130
ICAL-1120-97,70MCM-Fluorine	97,70	49,48	7 x 3,00	9,00	135	11,80	0,5590
ICAL-1120-152,6MCM-Helium	152,60	77,30	7 x 3,75	11,25	211	17,60	0,3830
ICAL-1120-219,7MCM-Hydrogen	219,70	111,30	7 x 4,50	13,50	304	24,30	0,2660
ICAL-1120-244,8MCM-Iodine	244,80	124,00	7 x 4,75	14,25	339	27,10	0,2390
ICAL-1120-311,1MCM-Krypton	311,10	157,60	19 x 3,25	16,25	433	37,40	0,1890
ICAL-1120-360,8MCM-Lutetium	360,80	182,80	19 x 3,50	17,50	502	41,70	0,1630
ICAL-1120-414,1MCM-Neon	414,10	209,80	19 x 3,75	18,80	577	47,80	0,1420
ICAL-1120-516,2MCM-Nitrogen	516,20	261,54	37 x 3,00	21,00	720	62,20	0,1140
ICAL-1120-605,8MCM-Nobelium	605,8	307,00	37 x 3,25	22,80	845	72,80	0,0973
ICAL-1120-664,5MCM-Oxygen	664,5	336,70	19 x 4,75	23,80	925	73,60	0,0884
ICAL-1120-806,5MCM-Phosphorus	806,5	408,65	37 x 3,75	26,30	1.125	93,10	0,0731
ICAL-1120-998,7MCM-Selenium	998,7	506,10	61 x 3,25	29,30	1.400	114,00	0,0592
ICAL-1120-1158,3MCM-Silicon	1158,3	856,90	61 x 3,50	31,50	1.620	127,00	0,0511
ICAL-1120-1329,6MCM-Sulfur	1329,6	673,72	61 x 3,75	33,80	1.860	145,50	0,0444
ICAL-1120-22,4mm ²	-	22,40	7 x 2,02	6,06	61	5,32	1,3230
ICAL-1120-35,5mm ²	-	35,50	7 x 2,54	7,62	97	8,42	0,8370
ICAL-1120-57,0mm ²	-	57,00	7 x 3,22	9,66	156	13,53	0,5210
ICAL-1120-71,3mm ²	-	71,30	7 x 3,60	10,80	195	16,24	0,4170
ICAL-1120-88,0mm ²	-	88,00	7 x 4,00	12,00	241	19,22	0,3370
ICAL-1120-112,8mm ²	-	112,80	7 x 4,53	13,59	309	24,65	0,2630
ICAL-1120-141,6mm ²	-	141,60	19 x 3,08	15,40	389	33,61	0,2110
ICAL-1120-177,6mm ²	-	177,60	19 x 3,45	17,25	488	40,50	0,1680
ICAL-1120-215,5mm ²	-	215,50	19 x 3,80	19,00	592	47,08	0,1380
ICAL-1120-253,3mm ²	-	253,30	19 x 4,12	20,60	696	55,34	0,1180
ICAL-1120-295,5mm ²	-	295,50	19 x 4,45	22,25	812	64,56	0,1010
ICAL-1120-335,9mm ²	-	335,90	37 x 3,40	23,80	925	76,58	0,0890
ICAL-1120-376,6mm ²	-	376,60	37 x 3,60	25,20	1.037	85,86	0,0794
ICAL-1120-419,6mm ²	-	419,60	37 x 3,80	26,60	1.156	91,68	0,0712
ICAL-1120-496,7mm ²	-	496,70	61 x 3,22	28,98	1.371	111,76	0,0603
ICAL-1120-553,8mm ²	-	553,80	61 x 3,40	30,60	1.528	119,63	0,0541
ICAL-1120-586,9mm ²	-	586,90	61 x 3,50	31,50	1.619	126,77	0,0510
ICAL-1120-678,1mm ²	-	678,10	91 x 3,08	33,88	1.886	152,55	0,0445
ICAL-1120-826,2mm ²	-	826,20	91 x 3,40	37,40	2.298	178,46	0,0365
ICAL-1120-1143,5mm ²	-	1.143,50	91 x 4,00	44,00	3.180	236,71	0,0264
ICAL-1120-1213,2mm ²	-	1.213,20	91 x 4,12	45,32	3.374	251,12	0,0249

1.10. MULTIPLEX ALUMINUM CONDUCTORS

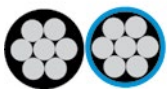
SERVICE DROP CABLES - VOLTAGE CLASS 0.6kV / 1kV

Suitable for overhead power distribution lines of low urban tension, connection extensions, secondary rural power distribution lines, among other applications. The MULTIPLEXED conductors have PHASE aluminum alloy conductor 1350 (CA) and NEUTRAL available in aluminum alloy 6201 (CAL), aluminum alloy 1350 (CA) or aluminum alloy 1350 with aluminum clad steel (CAA/RA).

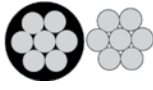
The insulation is composed of polyethylene (PE)70°C or cross-linked polyethylene (XLPE)90°C and can have its color and engraving customized on demand.



Phases Identification:



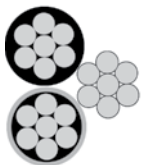
DUPLEX
Insulated Neutral
1 PHASE and
NEUTRAL



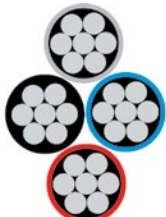
DUPLEX
Bare Neutral
1 PHASE and
NEUTRAL



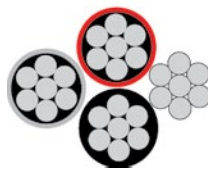
TRIPLEX
Insulated Neutral
2 PHASE and
NEUTRAL



TRIPLEX
Bare Neutral
2 PHASE and
NEUTRAL



QUADRUPLEX
Insulated Neutral
3 PHASE and
NEUTRAL



QUADRUPLEX
Bare Neutral
3 PHASE and
NEUTRAL

Conductor	Engraving	Color
PHASE 01	1	BLACK
PHASE 02	2	GRAY
PHASE 03	3	RED
NEUTRAL (when insulated)	NEUTRAL	BLUE

Note: For the black insulation option (phases and insulated neutrals), the marking will be according to the "ENGRAVING" column above.

Cross Section (mm ²)	Phase Conductor		Neutral Conductor				Outside Diameter (mm)	Current Capacity (A)	Total Weight (Kg/Km)	
	Conductor Phase Diameter (mm)	Insulation Thickness (mm)	Diameter (mm)	Type	RMC (daN)				Bare Neutral	Insulated Neutral
					CA	CAL				
DUPLEX										
1x1x10+10	4.08	1.20	4.08	CA	195	-	10.60	65	78	100
1x1x16+16	4.70	1.20	5.10	CA	300	-	12.40	86	110	137
1x1x25+25	6.10	1.40	6.33	CA	446	-	15.20	115	169	208
1x1x35+35	7.20	1.60	7.50	CA/CAL	614	1092	18.00	142	234	286
1x1x50+50	8.30	1.60	9.00	CA/CAL	836	1572	21.80	172	316	378

Cross Section (mm ²)	Phase Conductor		Neutral Conductor				Outside Diameter (mm)	Current Capacity (A)	Total Weight (Kg/Km)	
	Conductor Phase Diameter (mm)	Insulation Thickness (mm)	Diameter (mm)	Type	RMC (daN)				Bare Neutral	Insulated Neutral
					CA	CAL				
TRIPLEX										
2x1x10+10	4.08	1.20	4.08	CA	195	-	14.20	55	128	150
2x1x16+16	4.70	1.20	5.10	CA	300	-	15.50	73	176	203
2x1x25+25	6.10	1.40	6.33	CA	446	-	19.40	97	271	310
2x1x35+35	7.20	1.60	7.50	CA/CAL	614	1092	22.70	119	373	425
2x1x50+50	8.30	1.60	9.00	CA/CAL	836	1572	25.00	144	495	558
2x1x70+70	10.00	1.80	10.35	CA/CAL	1081	1991	29.10	183	669	745

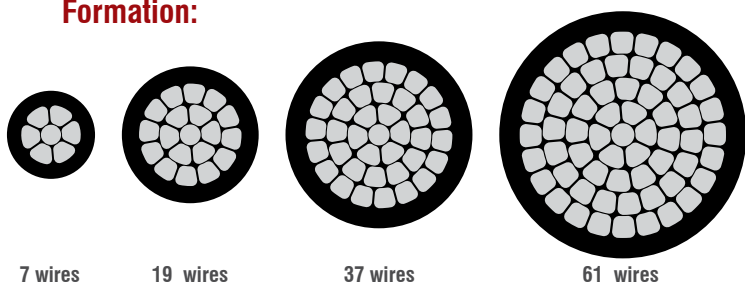
Cross Section (mm ²)	Phase Conductor		Neutral Conductor				Outside Diameter (mm)	Current Capacity (A)	Total Weight (Kg/Km)	
	Conductor Phase Diameter (mm)	Insulation Thickness (mm)	Diameter (mm)	Type	RMC (daN)				Bare Neutral	Insulated Neutral
					CA	CAL				
QUADRUPLEX										
3x1x10+10	4.08	1.20	4.08	CA	195	-	15.86	44	178	200
3x1x16+16	4.70	1.20	5.10	CA	300	-	17.35	59	243	270
3x1x25+25	6.10	1.40	6.33	CA	446	-	21.7	80	374	412
3x1x35+35	7.20	1.60	7.50	CA/CAL	614	1092	25.3	100	513	565
3x1x50+35	8.30	1.60	9.00	CA/CAL	614	1092	27.96	122	634	686
3x1x50+50	8.30	1.60	9.00	CA/CAL	836	1572	27.96	122	675	739
3x1x70+50	10.00	1.80	10.35	CA/CAL	836	1572	32.54	157	871	933
3x1x70+70	10.00	1.80	10.35	CA/CAL	1081	1991	32.54	157	915	988
3x1x95+70	11.60	1.80	10.35	CA/CAL	1081	1991	37.84	196	1184	1266
3x1x95+95	11.60	2.00	12.36	CA/CAL	1478	2840	37.84	196	1262	1370
3x1x120+70	13.00	2.00	10.35	CA/CAL	1081	1991	41.21	229	1431	1512
3x1x120+120	13.00	2.00	14.50	CA/CAL	2054	3863	41.21	229	1601	1716

1.11. INSULATED ALUMINUM CONDUCTOR ICALS

VOLTAGE CLASS 0,6kV / 1kV

Suitable for underground power supply distribution lines (buried directly or through ducts) or overhead on the consumer, aerial power supply systems, for power supply circuits, industrial power supply, commercial and residential power supply distribution. Consisting of a round compacted aluminum conductor, it has conductor class 2, available in 7, 19, 37 or 61 solid conductors, Its insulation is made of thermoset polyethylene type XLPE in black for 90°C, 130°C at overload and 250°C at short-circuit.

Formation:



INTELLI Code	Formation				Approx. Mass (kg/km)	Max. Electrical Resistance DC at 20°C (Ω/km)	Nominal Cut Length (m)
	Wires No.	Conductor Diameter (mm)	Insulation Thickness (mm)	Outside Diameter (mm)			
ICALS-10	7 RC	4.08	1.60	7.38	58	3.0800	2000
ICALS-16	7 RC	4.70	1.60	8.00	75	1.9100	2000
ICALS-25	7 RC	6.10	1.60	9.40	109	1.2000	1000
ICALS-35	7 RC	7.20	1.60	10.50	142	0.8680	1000
ICALS-50	7 RC	8.30	2.00	12.40	197	0.6410	1000
ICALS-70	19 RC	10.00	2.00	14.10	260	0.4430	1000
ICALS-95	19 RC	11.60	2.00	15.70	337	0.3200	1000
ICALS-120	19 RC	13.00	2.40	17.90	440	0.2530	1000
ICALS-150	19 RC	14.30	2.40	19.20	526	0.2060	1000
ICALS-185	37 RC	16.00	2.40	20.90	621	0.1640	1000
ICALS-240	37 RC	18.00	2.40	22.90	794	0.1250	500
ICALS-300	37 RC	20.50	2.80	26.20	988	0.1000	500
ICALS-400	61 RN	23.50	2.80	29.20	1263	0.0778	500
ICALS-500	61 RN	26.80	2.80	32.50	1562	0.0605	500

Note: RC = Round Compact and RN = Round Normal



1.12. INSULATED ALUMINUM CABLE WITH XLPE/PVC

VOLTAGE CLASS 0.6kV / 1kV CA and 1.8kV CC

ICALi-XP

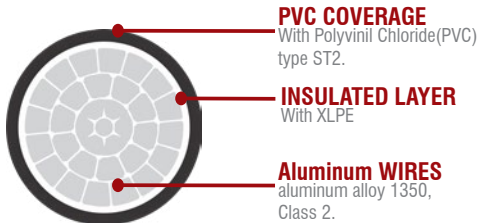
Suitable to transmitting energy with solar farms, the aluminum cable insulated with XLPE/PVC has many applications and can be used in aerial or underground systems.

Its external insulation has high mechanical resistance, allowing the conductor to be directly installed underground. It is also resistant to UV rays what results in longer lifespan when used in aerial installations.

The cable ICALi-XP is manufactured with aluminum alloy 1350, compacted, class 2. It has an insulation made with cross-linked polyethylene (XLPE) 90°C and covered by polyvinil chloride (PVC) 90°C with flame retardant properties.



Construction:



INTELLI Code	Conductor Characteristics						Mechanical Characteristics	Electrical Characteristics
	Nominal Cross Section (mm ²)	Qty. of Wires	Wire Diameter (mm)	Conductor Diameter (mm)	Diameter with Insulation (mm)	External Diameter (mm)	Nominal Weight (kg/km)	Maximum Resistance to 20°C in CC (Ω/km)
ICALi-XP-35	35	7	2.50	7.20	9.00	11.20	171	0.8680
ICALi-XP-50	50	7	3.00	8.30	10.30	12.70	225	0.6410
ICALi-XP-70	70	19	2.12	10.00	12.00	14.60	294	0.4430
ICALi-XP-95	95	19	2.53	11.60	13.80	16.40	384	0.3200
ICALi-XP-120	120	19	2.83	13.00	15.40	18.00	476	0.2530
ICALi-XP-150	150	19	3.20	14.30	17.10	19.90	586	0.2060
ICALi-XP-185	185	37	2.53	16.00	19.20	22.00	700	0.1640
ICALi-XP-240	240	37	2.85	18.00	21.40	24.40	898	0.1250
ICALi-XP-300	300	37	3.20	20.50	24.10	27.30	1,104	0.1000
ICALi-XP-400	400	61	2.89	23.50	27.50	30.90	1,413	0.0778
ICALi-XP-500	500	61	3.23	26.80	31.20	34.80	1,764	0.0605
ICALi-XP-630	630	61	3.63	29.80	34.60	38.60	2,241	0.0469

1.13. ICALC - MEDIUM VOLTAGE SPACER CABLES

15kV, 25kV AND 35kV INSULATED

Suitable for urban power distribution lines, **ALUMINUM INSULATED CONDUCTOR WITH XLPE** is the substitute for bare aluminum cable, when it needs to be used in regions with a chance of accidental contact, such as wood areas.

Consisting of a stranded conductor composed of aluminum solid conductors with or without lock. Both the 15kV and 25kV cables have a semiconductor layer (optional) and cross-linked polyethylene (XLPE) coverage, resistant to the action of the sun, abrasion and with high resistance to electrical tracking. The cover is 3mm thick for 15kV cables, 4mm for 25kV cables and 7,6mm for 35kV cables.

15KV CABLES*

INTELLI Code	Conductor Characteristics				Mechanical Characteristics		Electrical Characteristics	
	Qty. of wires	Conductor Diameter (mm)	Outside Diameter (mm)	Nominal Cross Section (mm ²)	Nominal Weight (kg/km)	Breaking Load (daN)	Maximum Resistance to 20°C in DC (Ω/km)	Current Capacity at AC 70°C (A)
ICALC-35-15	7	7.20	13.20	35	190	455	0.8680	231
ICALC-50-15	7	8.30	14.30	50	238	650	0.6410	275
ICALC-70-15	19	9.80	15.80	70	302	910	0.4430	342
ICALC-95-15	19	11.60	17.60	95	402	1,235	0.3200	416
ICALC-120-15	19	13.00	19.00	120	494	1,560	0.2530	480
ICALC-150-15	19	14.30	20.30	150	583	1,950	0.2060	544
ICALC-185-15	37	16.00	22.00	185	676	2,405	0.1640	625
ICALC-240-15	37	18.00	24.00	240	859	3,120	0.1250	738
ICALC-300-15	37	20.50	26.50	300	1,045	3,900	0.1000	848

*Thickness of the coverage: 3mm. Optional semiconductor layer available.

25KV CABLES**

INTELLI Code	Conductor Characteristics				Mechanical Characteristics		Electrical Characteristics	
	Qty. of wires	Conductor Diameter (mm)	Outside Diameter (mm)	Nominal Cross Section (mm ²)	Nominal Weight (kg/km)	Breaking Load (daN)	Maximum resistance to 20°C in DC (Ω/km)	Current capacity at AC 70°C (A)
ICALC-35-25	7	7.20	15.20	35	231	455	0.8680	241
ICALC-50-25	7	8.30	16.30	50	282	650	0.6410	287
ICALC-70-25	19	9.80	17.80	70	350	910	0.4430	356
ICALC-95-25	19	11.60	19.60	95	455	1,235	0.3200	431
ICALC-120-25	19	13.00	21.00	120	551	1,560	0.2530	496
ICALC-150-25	19	14.30	22.30	150	644	1,950	0.2060	561
ICALC-185-25	37	16.00	24.00	185	743	2,405	0.1640	643
ICALC-240-25	37	18.00	26.00	240	954	3,120	0.1250	758
ICALC-300-25	37	20.50	28.50	300	1,142	3,900	0.1000	869

**Thickness of the coverage: 4mm. Optional semiconductor layer available.

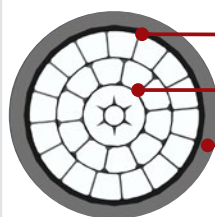
35KV CABLES***

INTELLI Code	Conductor Characteristics				Mechanical Characteristics		Electrical Characteristics	
	Qty. of wires	Conductor Diameter (mm)	Outside Diameter (mm)	Nominal Cross Section (mm ²)	Nominal Weight (kg/km)	Breaking Load (daN)	Maximum resistance to 20°C in DC (Ω/km)	Current capacity at AC 70°C (A)
ICALC-70-35	19	9.80	26.00	70	660	910	0.4430	401
ICALC-95-35	19	11.60	27.80	95	775	1,235	0.3200	481
ICALC-120-35	19	13.00	29.20	120	895	1,560	0.2530	551
ICALC-150-35	19	14.30	30.50	150	1,000	1,950	0.2060	620
ICALC-185-35	37	16.00	32.20	185	1,150	2,405	0.1640	706
ICALC-240-35	37	18.00	34.20	240	1,360	3,120	0.1250	827
ICALC-300-35	37	20.50	36.70	300	1,585	3,900	0.1000	943

***Thickness of the coverage: 7,6mm. Semiconductor layer obligatory.



Construction



SEMICONDUCTIVE LAYER
Optional

ALUMINUM WIRES
Compacted Alloy 1350

XLPE COVERAGE
Thermofixed XLPE layer (90°C) or two layers of polymeric material LDPE/HDPE or XLPE/ HDPE (70°C).

2. GROUND RODS AND ACCESSORIES

2. GROUND RODS AND ACCESSORIES.....	29
2.1. COPPER-BONDED GROUND ROD.....	30
2.2. GROUNDING CLAMPS.....	31
2.3. GROUNDING CONNECTORS WITH SPRING SYSTEM EFFECT.....	34
2.4. GROUNDING COMPRESSION CONNECTORS.....	35
2.5. ACCESSORIES FOR SECTIONAL GROUND RODS (IHP).....	36

2.1. COPPER-BONDED GROUND ROD



IH GROUND ROD



IHP SECTIONAL GROUND ROD



IHR* GROUNDING KIT



INTELLI Code	Dimensions									
	Nominal Diameter	Real Diameter	Length		Thread (IHP)	Length				
			Inches	mm			Feet	mm		
IH-312	1/2"	12,7	3	1.000,0	-	-				
IH-412			4	1.200,0						
IH-512			5	1.500,0						
IH-612			6	1.800,0						
IH-712			7	2.000,0						
IH-812 IHP-812			8	2.400,0						
IH-1012			10	3.000,0						
IH-258			5/8"	14,3			2	609,0	5/8"	35,0
IH-358 IHP-358							3	1.000,0		
IH-458 IHP-458							4	1.200,0		
IH-558 IHP-558	5	1.500,0								
IH-658 IHP-658	6	1.800,0								
IH-758 IHP-758	7	2.000,0								
IH-858 IHP-858	8	2.400,0								
IH-1058 IHP-1058	10	3.000,0								
IH-334 IHP-334	3/4"	17,3			3	1.000,0	3/4"			
IH-534 IHP-534					5	1.500,0				
IH-634 IHP-634			6	1.800,0						
IH-734 IHP-734			7	2.000,0						
IH-834 IHP-834			8	2.400,0						
IH-1034 IHP-1034			10	3.000,0						
IH-81 IHP-81			1"	23,2	8	2.400,0			1"	50,0
IH-101 IHP-101					10	3.000,0				

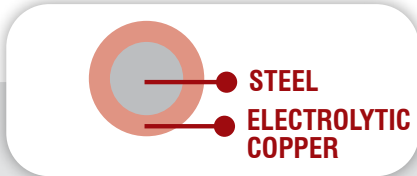
Characteristics: Straight, consisting of a solid carbon steel core, coated with a uniform layer of electrolytic copper (minimum 254 microns = 10 mils) through an electroplating process, which ensures the inseparable and homogeneous union of the metals.

Application: Grounding systems in general (power generation, transmission and distribution systems), grounding grids, residential, building and industrial grounding, substations grounding and telecommunication networks.

Material: Carbon steel core (SAE 1010/1020) with electrolytic copper coating of minimum purity of 99.9% without a trace of zinc.

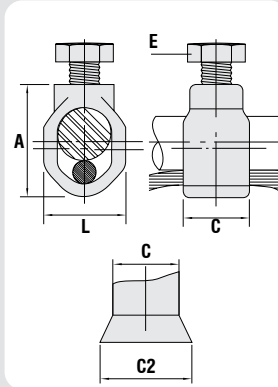
Sectional Ground Rod IHP 5/8" UNC, 3/4" UNC and 1" UNC threads.

***Grounding Kit (IHR)** - Supplied with connector and conductor applied. Manufactured according to the customer's need. Ready for installation.



2.2. GROUNDING CLAMPS

TH / TH-R GROUNDING CLAMPS



Purpose: Connection between ground rod and cable. Suitable for **COPPERSTEEL** or copper cables.

Characteristics: Tightening connection. High electrical conductivity and corrosion resistance.

Application: Grounding systems in general (power distribution systems, grounding grids, residential, building and industrial grounding, grounding in telecommunication networks).

Material: Bronze clamp, copper alloy (TH-R) or copper alloy clamp, electrolytic zinc plated steel fittings (TH).

Application Tool: Spanner set or open-ended wrench.

*Only TH-R

INTELLI Code	Ground Rod Nominal Diameter		Conductor		Dimensions (mm)				
	Inches		AWG	mm ²	L	A	C	C2	Screw E
TH-12-58	1/2" - 5/8"		10 - 1/0	6 - 50	25.0	35.0	12.5	-	5/16"
TH-12-58-R	1/2" - 5/8"		8 - 2/0	10 - 70	31.5	42.0	19.5	-	M10
TH-58	5/8"		8 - 1/0	10 - 50	22.0	36.0	17.0	21.0	3/8"
TH-58-R	5/8"		8 - 1/0	10 - 50	22.0	36.0	17.0	21.0	M10
TH-34	3/4"		8 - 1/0	10 - 50	26.0	41.5	17.0	21.0	3/8"
TH-34-R	3/4"		8 - 1/0	10 - 50	26.0	41.5	17.0	21.0	M10
TH-38	3/8"		12 - 8	4 - 16	19.0	27.5	12.8	21.3	5/16"
TH-1	1"		8 - 1/0	10 - 50	44.3	69.0	29.8	38.3	M10
TH-1-R	1"		8 - 1/0	10 - 50	44.3	69.0	29.8	38.3	M10

GTDB / GTDB2C BUSBAR DOUBLE GROUNDING CLAMPS



Purpose: Cable to busbar connections. Suitable for **COPPERSTEEL** or copper cables.

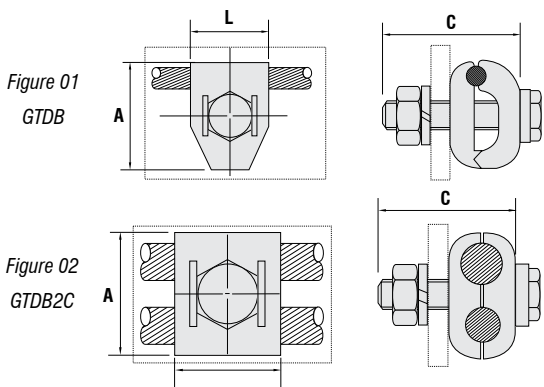
Characteristics: Tightening connection. High electrical conductivity and corrosion resistant. Two versions, GTDB model for one cable and GTDB2C for two cables. Enough screw length for plate/bar thickness up to 7mm.

Application: Grounding systems in general (power distribution systems, grounding grids, residential, building, industrial grounding, grounding in telecommunication networks).

Material: Bronze clamp, fittings in copper alloy or hot galvanized steel.

Application Tool: Spanner set or open-ended wrench.

*Also available tin plated.



INTELLI Code	Conductors		Dimensions (mm)				
	AWG	mm ²	L	A	C	Screw	Figure
GTDB-8-4	8 - 4	10 - 25	27.0	34.0	45.0	M10	1
GTDB-4-2/0	4 - 2/0	16 - 70	25.0	38.0	45.0	M10	
GTDB-2/0-250	2/0 - 250	70 - 120	38.0	53.0	50.0	M12	
GTDB-300-500	300 - 500	150 - 240	39.0	62.0	70.0	M12	

INTELLI Code	Conductors		Dimensions (mm)				
	AWG	mm ²	L	A	C	Screw	Figure
GTDB2C-8-4	8 - 4	10 - 25	33.0	35.0	45.0	M10	2
GTDB2C-4-2/0	4 - 2/0	16 - 70	35.0	40.0	45.0	M10	
GTDB2C-2/0-250	2/0 - 250	70 - 120	42.0	58.0	50.0	M12	
GTDB2C-300-500	300 - 500	150 - 240	49.0	65.0	50.0	M12	

GTSB / GTSB2C GROUNDING CLAMPS



Purpose: Cable to busbar connections. Suitable for copper or **COPPERSTEEL** cables.

Characteristics: Tightening connection. Electrical conductivity and corrosion resistant. Two Models, GTSB for one cable and GTSB2C for two cables. Screw length suitable for plate / bar thickness up to 7mm.

Application: Grounding systems in general (power distribution systems, grounding grids, residential, building, industrial grounding, grounding in telecommunications networks).

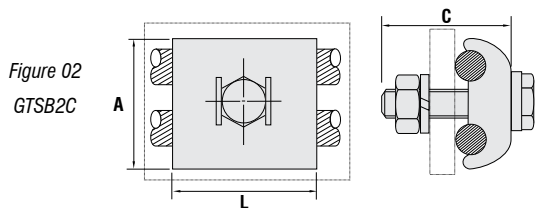
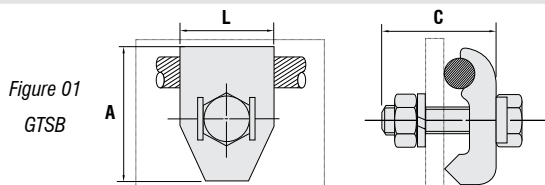
Material: Bronze clamp, fittings in copper alloy or hot galvanized steel.

Application Tool: Spanner set or open-ended wrench.

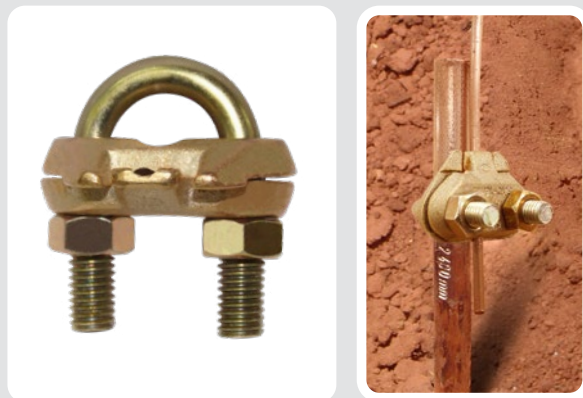
**Also available tin plated.*

INTELLI Code	Conductors		Dimensions (mm)				
	AWG	mm ²	L	A	C	Screw	Figure
GTSB-8-4	8 - 4	10 - 25	27.0	33.0	45.0	M10	1
GTSB-4-2/0	4 - 2/0	16 - 70	27.0	40.0	45.0	M10	
GTSB-2/0-250	2/0 - 250	70 - 120	37.0	52.0	50.0	M12	
GTSB-300-500	300 - 500	150 - 240	37.0	58.0	70.0	M12	

INTELLI Code	Conductors		Dimensions (mm)				
	AWG	mm ²	L	A	C	Screw	Figure
GTSB2C-8-4	8 - 4	10 - 25	35.0	33.0	45.0	M10	2
GTSB2C-4-2/0	4 - 2/0	16 - 70	35.0	40.0	45.0	M10	
GTSB2C-2/0-250	2/0 - 250	70 - 120	41.0	54.0	50.0	M12	



GA GROUNDING CLAMP



Purpose: Connection between ground rod and cable or rebar-cable. Suitable for **CS - COPPERSTEEL** or copper cables.

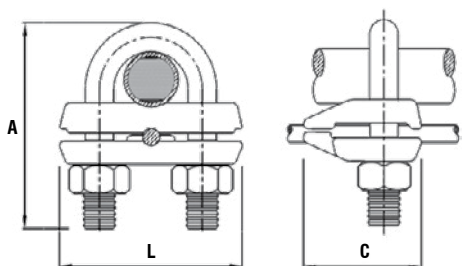
Characteristics: Tightening connection. High electrical conductivity and corrosion resistant. Allows connecting conductors in parallel.

Application: Grounding systems in general.

Material: Copper alloy body. Clamp: electrolytic zinc plated steel (GA-12) or copper alloy (GA-38).

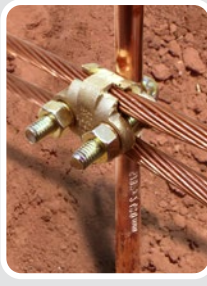
Finish: GA-38 tin plated

Application Tool: Spanner set or open-ended wrench.



INTELLI Code	'U' Clamp Material	Rod Nominal Diameter	Steel Rebar Diameter	Conductors		Dimensions (mm)		
		Inches	Inches	AWG	mm ²	L	A	C
GA-12	Electrolytic Zinc Plated Steel	1/2"	-	wire 8 - 6	wire 10 - 16	42.0	45.0	27.0
GA-38	Copper Alloy	3/8"	5/16" - 3/8"	8 - 1/0	10 - 50	33.0	51.0	26.0

GTDU / GTDU2C U-BOLT GROUNDING CLAMP



Purpose: Connection between ground rod to cable or IPS tube-cable. Suitable for **COPPERSTEEL** or copper cables.

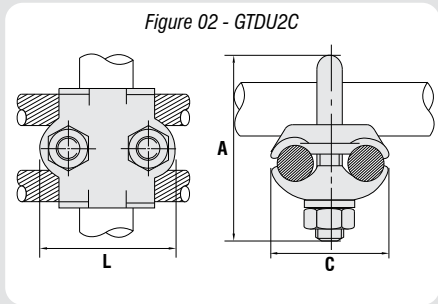
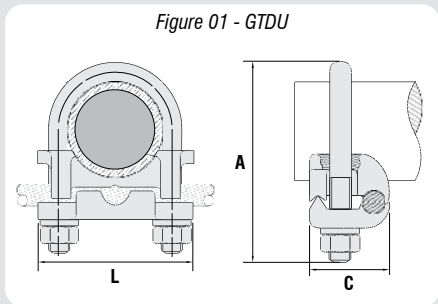
Characteristics: Tightening connection. High electrical conductivity and corrosion resistant. It allows you to connect a cable, at 90° in relation to the rod / IPS tube (GTDU) or two parallel cables (GTDU2C).

Application: Grounding systems in general (power distribution systems, grounding grids, residential, building and industrial grounding, grounding in telecommunication networks, grounding in substations).

Material: Copper alloy clamp, fittings in copper alloy or electrolytic zinc plated steel.

Application Tool: Spanner set or open-ended wrench.

*Also available tin plated.



INTELLI Code	Conductors		Rod Diameter (Inches)	IPS Tube	Dimensions				Fig.
	AWG	mm ²			L	A	C	Screw "U"	
GTDU 1/4" IPS 8-4	8 - 4	10 - 25	1/2"	1/4"	53.0	58.5	34.0	M10	1
GTDU 1/4" IPS 4-2/0	4 - 2/0	16 - 70	1/2"	1/4"	56.0	65.0	40.0	M10	
GTDU 3/8" IPS 8-4	8 - 4	10 - 25	5/8" - 3/4"	3/8"	50.0	65.0	34.0	M10	
GTDU 3/8" IPS 4-2/0	4 - 2/0	16 - 70	5/8" - 3/4"	3/8"	52.0	65.0	40.0	M10	
GTDU 3/8" IPS 2/0-250	2/0 - 250	70 - 120	5/8" - 3/4"	3/8"	54.0	65.0	48.0	M10	
GTDU 3/8" IPS 300-500	300 - 500	150 - 240	5/8" - 3/4"	3/8"	63.0	80.0	59.0	M10	
GTDU 1/2" - 3/4" IPS 8-4	8 - 4	10 - 25	7/8" - 1"	1/2" - 3/4"	59.0	66.0	41.0	M10	
GTDU 1/2" - 3/4" IPS 4-2/0	4 - 2/0	16 - 70	7/8" - 1"	1/2" - 3/4"	61.0	76.0	43.0	M10	
GTDU 1/2" - 3/4" IPS 2/0-250	2/0 - 250	70 - 120	7/8" - 1"	1/2" - 3/4"	62.0	91.0	47.0	M10	
GTDU 1/2" - 3/4" IPS 300-500	300 - 500	150 - 240	7/8" - 1"	1/2" - 3/4"	62.0	91.0	60.0	M10	
GTDU 1" IPS 8-4	8 - 4	10 - 25	-	1"	67.0	85.0	34.0	M10	
GTDU 1" IPS 4-2/0	4 - 2/0	16 - 70	-	1"	72.0	92.0	42.0	M10	
GTDU 1" IPS 2/0-250	2/0 - 250	70 - 120	-	1"	73.0	92.0	57.0	M10	
GTDU 1" IPS 300-500	300 - 500	150 - 240	-	1"	76.0	98.0	61.0	M12	
GTDU 1.1/4" IPS 2/0-250	2/0 - 250	70 - 120	-	1.1/4"	77.0	100.0	47.0	M10	
GTDU 1.1/2" IPS 8-4	8 - 4	10 - 25	-	1.1/2"	83.0	99.0	45.0	M10	
GTDU 1.1/2" IPS 4-2/0	4 - 2/0	16 - 70	-	1.1/2"	81.0	99.0	41.0	M10	
GTDU 1.1/2" IPS 2/0-250	2/0 - 250	70 - 120	-	1.1/2"	82.0	104.0	45.0	M10	
GTDU 2" IPS 8-4	8 - 4	10 - 25	-	2"	96.0	107.0	34.0	M10	
GTDU 2" IPS 4-2/0	4 - 2/0	16 - 70	-	2"	96.0	109.5	36.0	M10	
GTDU 2" IPS 2/0-250	2/0 - 250	70 - 120	-	2"	96.0	118.0	46.0	M10	
GTDU 2" IPS 300-500	300 - 500	150 - 240	-	2"	103.0	124.0	60.0	M12	
GTDU 2.1/2" IPS 8-4	8 - 4	10 - 25	-	2.1/2"	110.0	123.0	41.0	M10	
GTDU 2.1/2" IPS 4-2/0	4 - 2/0	16 - 70	-	2.1/2"	108.0	127.0	42.0	M10	
GTDU 2.1/2" IPS 2/0-250	2/0 - 250	70 - 120	-	2.1/2"	111.0	135.0	48.0	M10	
GTDU 2.1/2" IPS 300-500	300 - 500	150 - 240	-	2.1/2"	117.0	138.0	61.0	M12	
GTDU 3" IPS 8-4	8 - 4	10 - 25	-	3"	120.0	145.0	34.0	M10	
GTDU 3" IPS 4-2/0	4 - 2/0	16 - 70	-	3"	125.0	146.0	45.0	M10	
GTDU 3" IPS 2/0-250	2/0 - 250	70 - 120	-	3"	127.0	147.0	47.0	M10	
GTDU 3.1/2" IPS 4-2/0	4 - 2/0	16 - 70	-	3.1/2"	145.0	168.5	46.0	M10	
GTDU 4" IPS 8-4	8 - 4	10 - 25	-	4"	152.0	175.0	34.0	M10	
GTDU 4" IPS 4-2/0	4 - 2/0	16 - 70	-	4"	152.0	178.4	48.0	M10	
GTDU 4" IPS 2/0-250	2/0 - 250	70 - 120	-	4"	187.0	180.0	60.0	M12	

INTELLI Code	Conductors		Rod Diameter (Inches)	IPS Tube	Dimensions				Fig.
	AWG	mm ²			L	A	C	Screw "U"	
GTDU2C 1/4" IPS 4-2/0	4 - 2/0	16 - 70	1/2"	1/4"	55.0	68.0	35.0	M10	2
GTDU2C 3/8" IPS 8-4	8 - 4	10 - 25	5/8" - 3/4"	1/4"	53.0	68.0	34.0	M10	
GTDU2C 3/8" IPS 4-2/0	4 - 2/0	16 - 70	5/8" - 3/4"	3/8"	53.0	65.0	44.0	M10	
GTDU2C 3/8" IPS 2/0-250	2/0 - 250	70 - 120	5/8" - 3/4"	3/8"	54.0	65.0	48.0	M10	
GTDU2C 3/8" IPS 300-500	300 - 500	150 - 240	5/8" - 3/4"	3/8"	64.0	80.0	68.0	M10	
GTDU2C 1/2"-3/4" IPS 4-2/0	4 - 2/0	16 - 70	7/8" - 1"	1/2" - 3/4"	59.0	76.0	42.0	M10	
GTDU2C 1/2"-3/4" IPS 2/0-250	2/0 - 250	70 - 120	7/8" - 1"	1/2" - 3/4"	61.0	91.0	49.0	M10	
GTDU2C 1" IPS 4-2/0	4 - 2/0	16 - 70	-	1"	68.0	82.0	43.0	M10	
GTDU2C 1" IPS 2/0-250	2/0 - 250	70 - 120	-	1"	68.0	92.0	51.0	M10	
GTDU2C 1.1/2" IPS 4-2/0	4 - 2/0	16 - 70	-	1.1/2"	85.0	99.0	44.0	M10	
GTDU2C 2" IPS 4-2/0	4 - 2/0	16 - 70	-	2"	96.0	109.5	51.0	M10	
GTDU2C 2" IPS 2/0-250	2/0 - 250	70 - 120	-	2"	97.0	118.0	51.0	M10	
GTDU2C 2.1/2" IPS 2/0-250	2/0 - 250	70 - 120	-	2.1/2"	111.0	135.0	52.0	M10	
GTDU2C 3" IPS 8-4	8 - 4	10 - 25	-	3"	125.0	145.0	34.0	M10	
GTDU2C 3" IPS 2/0-250	2/0 - 250	70 - 120	-	3"	127.0	147.0	48.0	M10	
GTDU2C 4" IPS 8-4	8 - 4	10 - 25	-	4"	150.0	175.0	34.0	M10	

2.3. GROUNDING CONNECTORS WITH SPRING SYSTEM

CCA WEDGE TAP CONNECTOR FOR GROUNDING



Purpose: Connection between ground rod to cable. Suitable for **COPPERSTEEL** or copper cables.

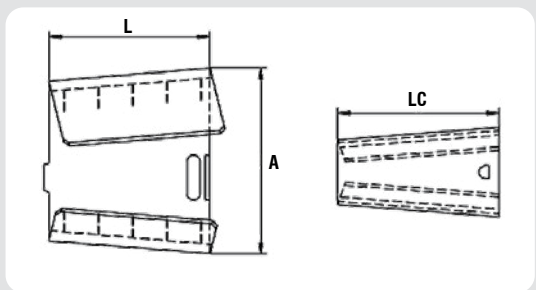
Characteristics: Spring system connection (permanent tightening). High resistance to corrosion. Easy application. Supplied with antioxide compound **INTELTRIX-Cu**.

Application: Grounding systems in general (power distribution systems, grounding grids, residential, building and industrial grounding), grounding in telecommunication networks).

Material: Copper Alloy.

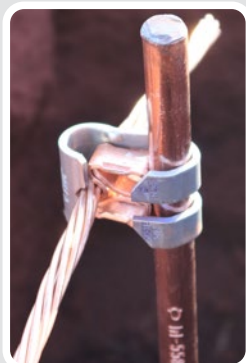
Finish: Tin plated

Application Tool: Water pump pliers.



INTELLI Code	Conductors		Ground Rod Diameter	Dimensions (mm)		
	AWG	mm ²		L	A	LC
CCA-12-25	8 - 4	10 - 25	1/2" (12.7mm)	31.7	37.9	31.7
CCA-12-35	4 - 2	25 - 35		31.7	40.5	31.7
CCA-58-25	10 - 4	6 - 25	5/8" (14.3mm)	31.7	39.5	31.7
CCA-58-35	8 - 2	10 - 35		31.7	42.0	31.7

CAT CONNECTOR FOR TRANSVERSAL GROUNDING



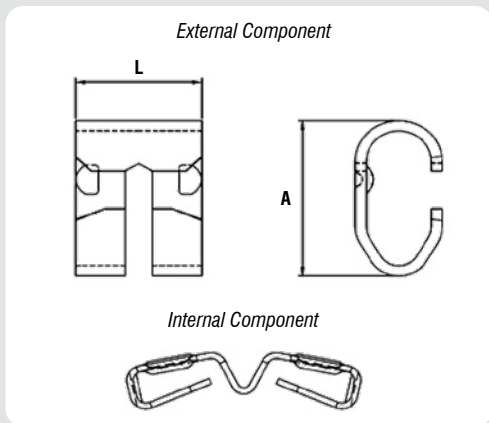
Purpose: Connection between ground rod to cable. Suitable for **COPPERSTEEL** or copper cables.

Characteristics: Spring system connection (permanent tightening). High resistance to corrosion. Easy application.

Application: Grounding systems in general (power distribution systems, grounding grids, residential, building and industrial grounding), grounding in telecommunication networks, grounding in substations).

Material: Copper for internal parts and stainless steel for external parts.

Application Tool: Water pump pliers.



INTELLI Code	Ground Rod Diameter	Conductors		Dimensions (mm)	
		AWG	mm ²	L	A
CAT-58-16 <i>(Available on demand)</i>	5/8" (14.3mm)	8 - 6	10 - 16	29.5	41.0
CAT-58-35		4 - 2	25 - 35	33.5	46.0
CAT-58-50		1/0	50	34.0	53.0

Note: Indicated for 10mil minimum copper coated ground rods, with 14,3mm (5/8" nominal) standard or threaded.

2.4. GROUNDING COMPRESSION CONNECTORS

SACC CABLE TO CABLE COMPRESSION GROUNDING SYSTEMS

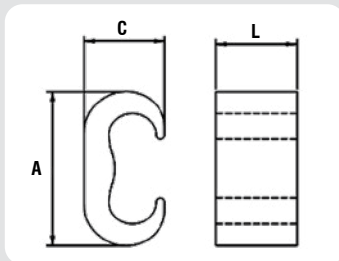


Purpose: Cable to cable splice or branch. Suitable for **COPPERSTEEL** and copper cables.

Characteristics: Compression connection. High resistance to corrosion. It can be buried directly into the ground or concrete.

Application: Grounding systems in general (power distribution systems, grounding grids, residential, building and industrial grounding), grounding in telecommunication networks, grounding in substations).

Material: Copper alloy, supplied with antioxidant compound **INTELTROX-Cu**.



INTELLI Code	Accommodations				Die Index	Application Tool	Compressions	Dimensions (mm)		
	Run		Tap					L	A	C
	AWG	mm ²	AWG	mm ²						
SACC-70-70	2 - 2/0	35 - 70	6 - 2/0	16 - 70	IU-0	AY-96 CY-96	1	19.0	39.0	19.0
SACC-120-120	3/0 - 250	95 - 120	3/0 - 250	95 - 120	IU-997	AHM-400		22.0	49.0	24.0
SACC-120-70	3/0 - 250	95 - 120	wire 6 - 2/0	10 - 70	IU-997	AHB-400				

CCO COMPRESSION GROUNDING CONNECTOR

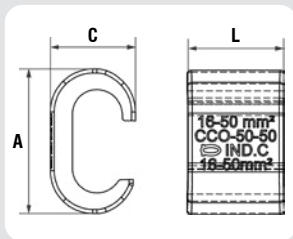


Purpose: Cable to cable splice or branch. Suitable for **COPPERSTEEL** and copper cables.

Characteristics: Compression connection. High resistance to corrosion. It can be buried directly into the ground or concrete.

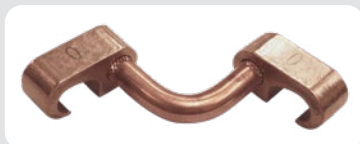
Application: Grounding systems in general (power distribution systems, grounding grids, residential, building and industrial grounding), grounding in telecommunication networks, grounding in substations).

Material: Copper alloy, supplied with antioxidant compound **INTELTROX-Cu**.



INTELLI Code	Accommodations				Application Tool				Compressions	Dimensions (mm)		
	Run		Tap		Mechanical		Hydraulic			L	A	C
	AWG	mm ²	AWG	mm ²	Pliers	Die	Pliers	Die				
CCO-25-25	8 - 4	10 - 25	8 - 4	10 - 25	AT-60	IW-BG	AY-96 CY-96	IU-BG	1	18.0	20.5	12.0
CCO-50-50	6 - 1/0	16 - 50	6 - 1/0	16 - 50	-	-	AHM-400 AHB-400	IU-C		18.5	28.0	17.0

SACGL COMPRESSION GROUNDING SYSTEMS "G" TYPE "L"



Purpose: Cable to cable or cable to rod splice or branch. Suitable for **COPPERSTEEL** and copper cables.

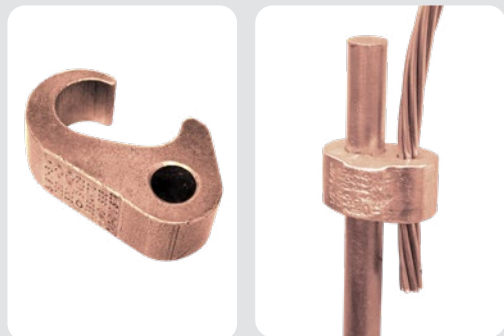
Characteristics: SACG connectors supplied with "L" copper rebar knurled on the edge.

Application: Residential, building, industrial, power distribution and transmission systems, substations and telecom grounding system.

Material: Copper alloy connector, supplied with antioxidant compound **INTELTROX-Cu** and copper rebar.

INTELLI Code	Accommodations		"L" Copper Rebar Diameter (mm)	Application Tool		
	Ground Rod (mm)	Conductor		Hydraulic (AY/CY/AHM/AHB)		
		AWG		mm ²	Die	Compressions
SACGL-1258-35-120	1/2" - 5/8" (Ø12.7 - Ø14.3)	2 - 250	35 - 120	12,4	IU-997 1 per Connector	

SACG CABLE TO GROUND ROD COMPRESSION GROUNDING SYSTEMS

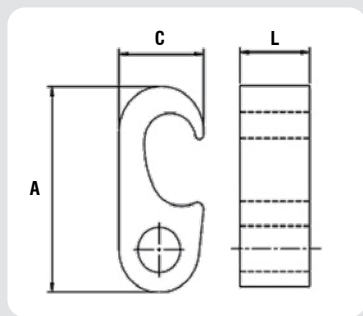


Purpose: Connection between ground rod to cable and cable to cable. Suitable for **COPPERSTEEL** and copper wires and cables.

Characteristics: Compression connection. High resistance to corrosion. It can be buried directly into the ground or concrete.

Application: Grounding systems in general (power distribution systems, grounding grids, residential, building and industrial grounding), grounding in telecommunication networks, grounding in substations).

Material: Copper alloy, supplied with antioxidant compound **INTELTROX-Cu**.



INTELLI Code	Accommodations				Die Index	Application Tool	Compressions	Dimensions (mm)		
	Run		Tap					L	A	C
	Ground Rod	Conductors	AWG	mm ²						
SACG-1258-35			4 - 2	16 - 35		AY-96				
SACG-1258-70	1/2" - 5/8"	1/0 STR - 250 MCM	1/0 - 2/0	50 - 70	IU-997	CY-96 AHM-400 AHB-400	1	19.0	52.0	23.0
SACG-1258-150			3/0 - 250	95 - 150						
SACG-5834-35			4 - 2	16 - 35		AY-96				
SACG-5834-70	5/8" - 3/4"	250 MCM - 500 MCM	1/0 - 2/0	50 - 70	IU-998	CY-96 AHM-400 AHB-400	1	19.0	58.5	32.5
SACG-5834-150			3/0 - 250	95 - 150						

2.5. ACCESSORIES FOR SECTIONAL GROUND RODS (IHP)

PH DRIVING STUD



Purpose: Used for driving sectional copperbonded ground rods (**IHP**).

Characteristics: High impact and shock resistance.

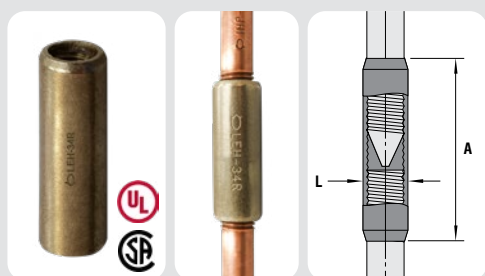
Application: Grounding of sectional copperbonded ground rod. The driving stud is attached to the coupling to prevent damage to the threads of the stud during ground rod driving.

Material: High mechanical resistance steel.

Finish: Black oxidation.

Available in Threaded Couplings **LEH-58-R (5/8") and **LEH-34-R (3/4")** compatible versions.*

LEH THREADED COUPLINGS FOR SECTIONAL GROUND RODS



Purpose: Connecting two ground rods (**IHP**) to extend total length.

Characteristics: High resistance to corrosion. Ensures a good connection between the sectional copperbonded ground rods.

Application: Grounding systems in general.

Material: Copper alloy.

INTELLI Code	Thread / Ground Rod (Inches)	Dimensions (mm)	
		L (Ø)	A
LEH-58-R	5/8"	22.0	70.0
LEH-34-R	3/4"	25.4	70.0
LEH-1-R	1"	32.0	100.0

3. TERMINALS

3. TERMINALS	37
3.1. COMPRESSION TERMINALS.....	38
3.2. BIMETALLIC TERMINALS.....	47
3.3. MECHANICAL TERMINALS.....	49
3.4. ADAPTER TERMINALS.....	52

3.1. COMPRESSION TERMINALS

TM COPPER COMPRESSION TERMINAL – one hole / short barrel



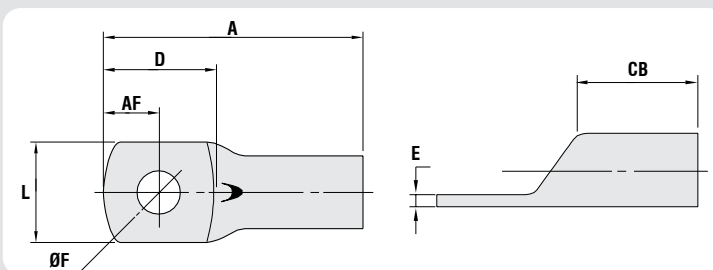
Purpose: Termination of copper conductors.

Characteristics: High electrical conductivity and corrosion resistance. Pad with several hole diameter options and optimum electrical contact.

Applications: Electrical panels, circuit breaker connections, motors, machines, busbars, electrical distribution boards, among others.

Material: Electrolytic copper.

Finish: Tin plated.



INTELLI code	Conductors Cross Section (mm ²)	Hole Diameter (ØF)	Screw*1		Alternative Drilling Available Ø (mm)	Dimensões (mm)						Current (A)	Application Tools			
			Inch	Metric		L	A	AF	CB	D	E		Mechanical Pliers		Hydraulic Pliers (AY / CY / AHM / AHB)	
													Model	Die (AT-60)	Circunf. Die	Hexagonal Die
TM-2,5	1 - 2.5	5.2	3/16	M5	6.5	8.0	19.0	4.8	5.5	10.0	1.0	41	AT-10	-	-	-
TM-6	4 - 6	5.2	3/16	M5	6.5	7.8	22.5	5.5	6.5	12.0	2.0	73	AT-10	-	-	-
TM-10	10	5.2	3/16	M5	6.5	8.5	23.0	5.0	8.0	11.0	1.5	101	AT-60/68	IW-8	IU-8	H-8
TM-10-8	10	8.5	5/16	M8	-	12.0	27.6	7.0	8.0	15.0	1.5	101	AT-60/68	IW-8	IU-8	H-8
TM-16	16	5.2	3/16	M5	6.5 / 8.5	11.3	28.0	6.0	10.0	13.5	2.0	137	AT-60/68	IW-8	IU-5	H-5
TM-25	25	6.5	1/4	M6	5.2 / 8.5	12.9	32.0	6.0	11.0	15.5	2.0	182	AT-60/68	IW-4	IU-4	H-4
TM-25-10	25	10.5	3/8	M10	-	15.5	34.0	8.0	11.0	18.0	2.0	182	AT-60/68	IW-4	IU-4	H-4
TM-35	35	8.5	5/16	M8	6.5 / 10.5	15.0	36.0	8.0	12.0	17.5	2.4	226	AT-60/68	IW-4	IU-2	H-2
TM-50	50	10.5	3/8	M10	6.5 / 8.5 / 13.8	18.0	42.5	9.0	16.0	19.5	2.7	275	AT-60/68	IW-1	IU-25 *2	H-25
TM-70	70	10.5	3/8	M10	8.5 / 13.8	20.3	46.0	10.0	16.5	22.0	3.0	353	AT-60/68	IW-26	IU-26	H-26
TM-95	95	10.5	3/8	M10	8.5 / 13.8	24.0	49.0	10.0	17.5	22.0	3.0	430	AT-60/68	IW-27	IU-27	H-27
TM-120	120	10.5	3/8	M10	13.8	27.0	65.0	13.3	25.5	29.5	3.3	500	AT-60/68	IW-29	IU-29	H-29
TM-150	150	13.8	1/2	M12	10.5 / 17.5	30.0	67.0	13.0	24.0	29.5	3.6	577	-	-	IU-30	H-30
TM-185	185	13.8	1/2	M12	10.5 / 17.5	32.4	68.5	13.5	26.0	29.5	3.8	661	-	-	IU-31	H-31
TM-240	240	13.8	1/2	M12	10.5 / 17.5	38.0	80.5	17.0	29.0	35.0	4.8	781	-	-	IU-34	H-34
TM-300	300	17.5	5/8	M16	13.8	41.5	91.5	19.0	33.0	40.0	5.0	902	-	-	IU-36	H-36
TM-400	400	17.5	5/8	M16	13.8	46.5	101.5	19.0	37.0	44.0	5.3	1085	-	-	IU-40	H-40
TM-500	500	17.5	5/8	M16	-	52.0	108.0	19.0	43.0	44.0	5.1	1253	-	-	IU-44	H-44
TM-630	630	17.5	5/8	M16	20.0	61.2	125.0	22.5	50.5	51.0	6.3	1454	-	-	*3	*3

*1 Commercial line screw - disregard for alternative hole diameter.

*2 For compact conductors use IU-2 index die.

*3 Application tools and die for TM-630 available on request (atendimento@grupointelli.com.br).

TM-L COPPER COMPRESSION TERMINAL – one hole / long barrel



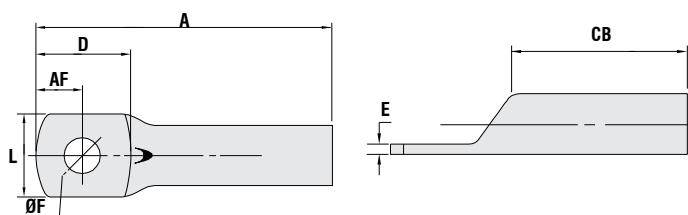
Purpose: Termination of copper conductors.

Characteristics: High electrical conductivity and corrosion resistance. Pad with several hole diameter options and optimum electrical contact.

Applications: Electrical panels, circuit breaker connections, motors, machines, busbars, electrical distribution boards, among others.

Material: Electrolytic copper.

Finish: Tin plated.



INTELLI code	Conductors Cross Section (mm ²)	Dimensions (mm)										Current (A)	Application Tools			
		Hole Diameter (ØF)	Screw*1		Alternative Drilling Available Ø (mm)	L	A	AF	CB	D	E		Mechanical Pliers		Hydraulic Pliers (AY / CY / AHM / AHB)	
			Inch	Metric									Model	Die (AT-60)	Circunf. Die	Hexagonal Die
TM-10-L	10	5.2	3/16	M5	6.5	8.6	31.0	5.0	16.0	11.0	1.5	101	AT-60/68	IW-8	IU-8	H-8
TM-16-L	16	6.5	1/4	M6	8.5	11.3	37.5	6.0	20.0	13.5	2.0	137	AT-60/68	IW-8	IU-5	H-5
TM-25-L	25	6.5	1/4	M6	-	12.9	42.5	6.0	22.0	15.5	2.0	182	AT-60/68	IW-4	IU-4	H-4
TM-25-L-10	25	10.5	3/8	M10	-	15.5	45.0	8.0	22.0	18.0	2.0	182	AT-60/68	IW-4	IU-4	H-4
TM-35-L	35	8.5	5/16	M8	10.5	15.0	47.0	8.0	23.0	17.5	2.4	226	AT-60/68	IW-4	IU-2	H-2
TM-50-L	50	8.5	5/16	M8	10.5 / 13.8	18.0	54.5	9.0	28.5	19.5	2.7	275	AT-60/68	IW-1	IU-25 *2	H-25
TM-70-L	70	13.8	1/2	M12	8.5 / 10.5	20.3	58.0	10.0	28.5	22.0	3.0	353	AT-60/68	IW-26	IU-26	H-26
TM-95-L	95	13.8	1/2	M12	10.5	24.0	60.0	10.0	28.5	22.0	3.0	430	AT-60/68	IW-27	IU-27	H-27
TM-120-L	120	13.8	1/2	M12	10.5	27.0	75.0	13.3	36.0	29.5	3.3	500	AT-60/68	IW-29	IU-29	H-29
TM-150-L	150	13.8	1/2	M12	17.5	30.0	79.5	13.0	38.0	29.5	3.6	577	-	-	IU-30	H-30
TM-185-L	185	13.8	1/2	M12	17.5	32.0	80.0	13.5	39.0	29.5	3.8	661	-	-	IU-31	H-31
TM-240-L	240	13.8	1/2	M12	17.5	38.0	93.5	17.0	43.0	35.0	4.8	781	-	-	IU-34	H-34
TM-300-L	300	13.8	1/2	M12	17.5	41.5	104.0	19.0	48.0	40.0	5.0	902	-	-	IU-36	H-36
TM-400-L	400	13.8	1/2	M12	17.5	46.5	125.0	19.0	62.0	44.0	5.3	1085	-	-	IU-40	H-40
TM-500-L	500	13.8	1/2	M12	17.5	51.8	131.0	19.0	67.0	44.0	5.1	1253	-	-	IU-44	H-44
TM-630-L	630	13.8	1/2	M12	20.0	61.2	144.5	22.0	70.0	51.0	6.3	1454	-	-	*3	*3

*1 Commercial line screw - disregard for alternative hole diameter.

*2 For compact conductors use IU-2 index die.

*3 Application tools and die for TM-630 available on request (atendimento@grupointelli.com.br).

TM-2 COPPER COMPRESSION TERMINAL – two holes / short barrel



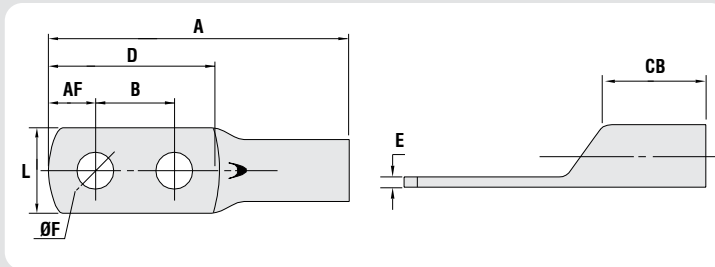
Purpose: Termination of copper conductors.

Characteristics: High electrical conductivity and corrosion resistance. Pad with several hole diameter options and optimum electrical contact.

Applications: Electrical panels, circuit breaker connections, motors, machines, busbars, electrical distribution boards, among others.

Material: Electrolytic copper.

Finish: Tin plated.



INTELLI code	Conductors Cross Section (mm ²)	Dimensions (mm)										Current (A)	Application Tools			
		Hole Diameter (ØF)	Screw*1		L	A	AF	B	CB	D	E		Mechanical Pliers		Hydraulic Pliers (AY / CY / AHM / AHB)	
			Inch	Metric									Model	Die (AT-60)	Circunf. Die	Hexagonal Die
TM-10-2	10	5.2	3/16	M5	8.6	37.0	5.0	14.0	8.0	25.0	1.5	101	AT-60/68	IW-8	IU-8	H-8
TM-16-2	16	6.5	1/4	M6	11.3	43.5	6.0	16.0	10.0	29.5	2.0	137	AT-60/68	IW-8	IU-5	H-5
TM-25-2	25	6.5	1/4	M6	13.0	47.5	6.0	16.0	11.0	31.5	2.2	182	AT-60/68	IW-4	IU-4	H-4
TM-35-2	35	8.5	5/16	M8	15.0	55.0	8.0	19.0	12.0	36.5	2.4	226	AT-60/68	IW-4	IU-2	H-2
TM-50-2	50	8.5	5/16	M8	18.0	64.5	9.0	22.2	16.0	42.0	2.7	275	AT-60/68	IW-1	IU-25 *2	H-25
TM-70-2	70	13.8	1/2	M12	20.3	91.0	10.0	44.4	16.5	66.4	3.0	353	AT-60/68	IW-26	IU-26	H-26
TM-95-2	95	13.8	1/2	M12	24.0	94.5	10.0	44.4	17.5	66.4	3.0	430	AT-60/68	IW-27	IU-27	H-27
TM-120-2	120	13.8	1/2	M12	27.0	110.0	13.0	44.4	26.0	73.6	3.3	500	AT-60/68	IW-29	IU-29	H-29
TM-150-2	150	13.8	1/2	M12	30.0	112.0	13.0	44.4	26.0	74.0	3.6	577	-	-	IU-30	H-30
TM-185-2	185	13.8	1/2	M12	32.4	114.5	13.5	44.4	26.0	73.9	3.8	661	-	-	IU-31	H-31
TM-240-2	240	13.8	1/2	M12	38.1	124.0	17.0	44.4	29.0	79.4	4.8	781	-	-	IU-34	H-34
TM-300-2	300	13.8	1/2	M12	41.5	136.0	19.0	44.4	33.0	84.4	5.0	902	-	-	IU-36	H-36
TM-400-2	400	13.8	1/2	M12	46.8	147.0	19.0	44.4	38.0	86.4	5.3	1085	-	-	IU-40	H-40
TM-500-2	500	13.8	1/2	M12	52.0	154.0	19.0	44.4	44.0	86.4	5.1	1253	-	-	IU-44	H-44
TM-630-2	630	13.8	1/2	M12	61.2	169.0	22.5	44.4	50.5	95.5	6.3	1454	-	-	*3	*3

*1 Commercial line screw - disregard for alternative hole diameter.

*2 For compact conductors use IU-2 index die.

*3 Application tools and die for TM-630 available on request (atendimento@grupointelli.com.br).

TM-2L COPPER COMPRESSION TERMINAL – two holes / long barrel



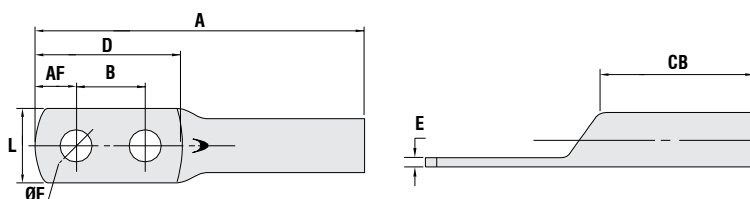
Purpose: Termination of copper conductors.

Characteristics: High electrical conductivity and corrosion resistance. Pad with several hole diameter options and optimum electrical contact.

Applications: Electrical panels, circuit breaker connections, motors, machines, busbars, electrical distribution boards, among others.

Material: Electrolytic copper.

Finish: Tin plated.



INTELLI code	Conductors Cross Section (mm ²)	Dimensions (mm)										Current (A)	Application Tools			
		Hole Diameter (ØF)	Screw*1		L	A	AF	B	CB	D	E		Mechanical Pliers		Hydraulic Pliers (AY / CY / AHM / AHB)	
			Inch	Metric									Model	Die (AT-60)	Circunf. Die	Hexagonal Die
TM-10-2L	10	5.2	3/16	M5	8.6	45.0	5.0	14.0	16.0	25.0	1.5	101	AT-60/68	IW-8	IU-8	H-8
TM-16-2L	16	6.5	1/4	M6	11.3	53.5	6.0	16.0	20.0	29.5	2.0	137	AT-60/68	IW-8	IU-5	H-5
TM-25-2L	25	6.5	1/4	M6	13.0	58.5	6.0	16.0	22.0	31.5	2.2	182	AT-60/68	IW-4	IU-4	H-4
TM-35-2L	35	8.5	5/16	M8	15.0	66.0	8.0	19.0	23.0	36.5	2.4	226	AT-60/68	IW-4	IU-2	H-2
TM-50-2L	50	8.5	5/16	M8	18.0	75.0	9.0	22.2	26.5	42.0	2.7	275	AT-60/68	IW-1	IU-25*2	H-25
TM-70-2L	70	13.8	1/2	M12	20.3	102.4	10.0	44.4	28.5	66.4	3.0	353	AT-60/68	IW-26	IU-26	H-26
TM-95-2L	95	13.8	1/2	M12	24.0	104.0	10.0	44.4	28.5	66.4	3.0	430	AT-60/68	IW-27	IU-27	H-27
TM-120-2L	120	13.8	1/2	M12	27.0	120.0	13.0	44.4	36.0	73.6	3.3	500	AT-60/68	IW-29	IU-29	H-29
TM-150-2L	150	13.8	1/2	M12	30.0	124.0	13.0	44.4	38.5	74.0	3.6	577	-	-	IU-30	H-30
TM-185-2L	185	13.8	1/2	M12	32.4	124.5	13.5	44.4	39.0	73.9	3.8	661	-	-	IU-31	H-31
TM-240-2L	240	13.8	1/2	M12	38.1	137.0	17.0	44.4	43.0	79.4	4.8	781	-	-	IU-34	H-34
TM-300-2L	300	13.8	1/2	M12	41.5	148.4	19.0	44.4	48.0	84.4	5.0	902	-	-	IU-36	H-36
TM-400-2L	400	13.8	1/2	M12	46.8	169.0	19.0	44.4	65.0	86.4	5.3	1085	-	-	IU-40	H-40
TM-500-2L	500	13.8	1/2	M12	51.9	173.0	19.0	44.4	67.0	86.4	5.1	1253	-	-	IU-44	H-44
TM-630-2L	630	13.8	1/2	M12	61.2	187.5	22.5	44.4	70.0	95.5	6.3	1454	-	-	*3	*3

*1 Commercial line screw - disregard for alternative hole diameter.

*2 For compact conductors use IU-2 index die.

*3 Application tools and die for TM-630 available on request (atendimento@grupointelli.com.br).

TF COPPER TERMINAL FOR FLEXIBLE CONDUCTORS – one hole / short barrel



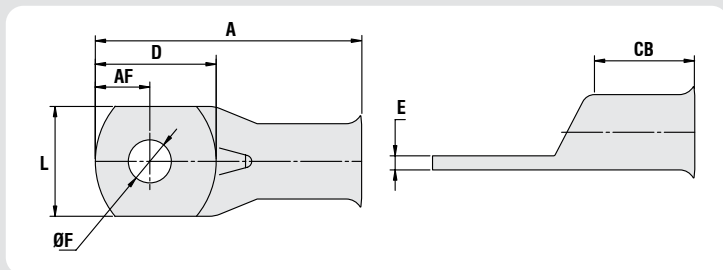
Purpose: Termination of copper conductors.

Characteristics: High electrical conductivity and corrosion resistance. Pad with several hole diameter options and optimum electrical contact. Expanded shape barrel for easy insertion of flexible conductors.

Applications: Electrical panels, circuit breaker connections, motors, machines, busbars, electrical distribution boards, among others.

Material: Electrolytic copper.

Finish: Tin Plated.



INTELLI code	Conductors Cross Section (mm ²)	Dimensions (mm)										Current (A)	Application Tools			
		Hole Diameter (ØF)	Screw*1		Alternative Drilling Available Ø (mm)	L	A	AF	CB	D	E		Mechanical Pliers		Hydraulic Pliers (AY / CY / AHM / AHB)	
			Inch	Metric									Model	Die (AT-60)	Circunf. Die	Hexagonal Die
TF-6	4 – 6	5.2	3/16	M5	6.5	7.8	22.5	5.5	6.0	12.0	2.0	73	AT-10	-	-	-
TF-10	10	5.2	3/16	M5	6.5	8.5	22.5	5.0	7.5	11.0	1.5	101	AT-60/68	IW-8	IU-8	H-8
TF-10-8	10	8.5	5/16	M8	-	12.0	27.6	7.0	8.0	15.0	1.5	101	AT-60/68	IW-8	IU-8	H-8
TF-16	16	5.2	3/16	M5	6.5 / 8.5	11.3	28.0	6.0	9.5	13.5	2.0	137	AT-60/68	IW-8	IU-5	H-5
TF-25	25	6.5	1/4	M6	5.2 / 8.5	12.9	31.5	6.0	10.5	15.5	2.2	182	AT-60/68	IW-4	IU-4	H-4
TF-25-10	25	10.5	3/8	M10	-	15.5	33.0	8.0	11.0	18.0	2.2	182	AT-60/68	IW-4	IU-4	H-4
TF-35	35	8.5	5/16	M8	6.5 / 10.5	15.0	36.0	8.0	11.5	17.5	2.4	226	AT-60/68	IW-4	IU-2	H-2
TF-50	50	10.5	3/8	M10	6.5 / 8.5 / 13.8	18.0	42.0	9.0	15.0	19.5	2.7	275	AT-60/68	IW-1	IU-25 *2	H-25
TF-70	70	10.5	3/8	M10	8.5 / 13.8	20.3	45.5	10.0	16.0	22.0	3.0	353	AT-60/68	IW-26	IU-26	H-26
TF-95	95	10.5	3/8	M10	8.5 / 13.8	24.0	49.0	10.0	17.5	22.0	3.0	430	AT-60/68	IW-27	IU-27	H-27
TF-120	120	10.5	3/8	M10	13.8	27.0	64.0	13.3	24.5	29.5	3.3	500	AT-60/68	IW-29	IU-29	H-29
TF-150	150	13.8	1/2	M12	10.5 / 17.5	30.0	66.0	13.0	24.0	29.5	3.6	577	-	-	IU-30	H-30
TF-185	185	13.8	1/2	M12	10.5 / 17.5	32.4	68.0	13.5	25.0	29.5	3.8	661	-	-	IU-31	H-31
TF-240	240	13.8	1/2	M12	10.5 / 17.5	38.0	79.0	17.0	28.0	35.0	4.8	781	-	-	IU-34	H-34
TF-300	300	17.5	5/8	M16	13.8	41.5	89.5	19.0	33.0	40.0	5.0	902	-	-	IU-36	H-36
TF-400	400	17.5	5/8	M16	13.8	46.8	101.0	19.0	37.0	42.0	5.3	1085	-	-	IU-40	H-40
TF-500	500	17.5	5/8	M16	-	52.0	108.0	19.0	42.0	45.0	5.1	1253	-	-	IU-44	H-44

*1 Commercial line screw - disregard for alternative hole diameter.
 *2 For compact conductors use IU-2 index die.

TF-L COPPER TERMINAL FOR FLEXIBLE CONDUCTORS – one hole / long barrel



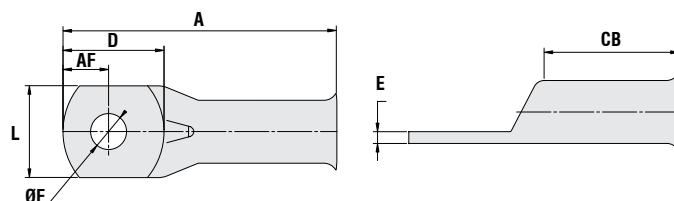
Purpose: Termination of copper conductors.

Characteristics: High electrical conductivity and corrosion resistance. Pad with several hole diameter options and optimum electrical contact. Expanded shape barrel for easy insertion of flexible conductors.

Applications: Electrical panels, circuit breaker connections, motors, machines, busbars, electrical distribution boards, among others.

Material: Electrolytic copper.

Finish: Tin Plated.



INTELLI code	Conductors Cross Section (mm ²)	Dimensions (mm)										Current (A)	Application Tools			
		Hole Diameter (ØF)	Screw*		Alternative Drilling Available Ø (mm)	L	A	AF	CB	D	E		Mechanical Pliers		Hydraulic Pliers (AY / CY / AHM / AHB)	
			Inch	Metric									Model	Die (AT-60)	Circunf. Die	Hexagonal Die
TF-10-L	10	5.2	3/16	M5	6.5	8.6	31.0	5.0	16.0	11.0	1.5	101	AT-60/68	IW-8	IU-8	H-8
TF-16-L	16	6.5	1/4	M6	8.5	11.3	37.5	6.0	19.5	13.5	2.0	137	AT-60/68	IW-8	IU-5	H-5
TF-25-L	25	6.5	1/4	M6	-	13.0	42.0	6.0	21.0	15.5	2.2	182	AT-60/68	IW-4	IU-4	H-4
TF-35-L	35	8.5	5/16	M8	10.5	15.0	46.5	8.0	22.0	17.5	2.4	226	AT-60/68	IW-4	IU-2	H-2
TF-50-L	50	8.5	5/16	M8	6.5 / 10.5 / 13.8	18.0	54.5	9.0	27.0	19.5	2.7	275	AT-60/68	IW-1	IU-25 *2	H-25
TF-70-L	70	13.8	1/2	M12	8.5 / 10.5	20.3	58.0	10.0	28.5	22.0	3.0	353	AT-60/68	IW-26	IU-26	H-26
TF-95-L	95	13.8	1/2	M12	10.5	24.0	60.0	10.0	28.5	22.0	3.0	430	AT-60/68	IW-27	IU-27	H-27
TF-120-L	120	13.8	1/2	M12	10.5	27.0	74.0	13.3	35.0	29.5	3.3	500	AT-60/68	IW-29	IU-29	H-29
TF-150-L	150	13.8	1/2	M12	17.5	30.0	79.5	13.0	38.0	29.5	3.6	577	-	-	IU-30	H-30
TF-185-L	185	13.8	1/2	M12	17.5	32.5	79.0	13.5	37.0	29.5	3.8	661	-	-	IU-31	H-31
TF-240-L	240	13.8	1/2	M12	17.5	38.0	92.5	17.0	43.0	35.0	4.8	781	-	-	IU-34	H-34
TF-300-L	300	13.8	1/2	M12	17.5	41.5	103.0	19.0	47.0	40.0	5.0	902	-	-	IU-36	H-36
TF-400-L	400	13.8	1/2	M12	17.5	46.8	124.0	19.0	62.0	42.0	5.3	1085	-	-	IU-40	H-40
TF-500-L	500	13.8	1/2	M12	17.5	60.0	129.0	19.0	66.0	42.0	5.1	1253	-	-	IU-44	H-44

*1 Commercial line screw - disregard for alternative hole diameter.

*2 For compact conductors use IU-2 index die.

TF-2 COPPER TERMINAL FOR FLEXIBLE CONDUCTORS – two holes / short barrel



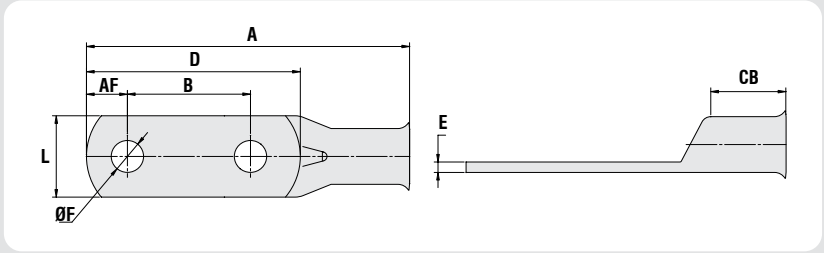
Purpose: Termination of copper conductors.

Characteristics: High electrical conductivity and corrosion resistance. Pad with several hole diameter options and optimum electrical contact. Expanded shape barrel for easy insertion of flexible conductors.

Applications: Electrical panels, circuit breaker connections, motors, machines, busbars, electrical distribution boards, among others.

Material: Electrolytic copper.

Finish: Tin Plated.



INTELLI code	Conductors Cross Section (mm ²)	Dimensions (mm)										Current (A)	Application Tools			
		Hole Diameter (ØF)	Screw*1		L	A	AF	B	CB	D	E		Mechanical Pliers		Hydraulic Pliers (AY / CY / AHM / AHB)	
			Inch	Metric									Model	Die (AT-60)	Circunf. Die	Hexagonal Die
TF-10-2	10	5.2	3/16	M5	8.6	36.5	5.0	14.0	6.5	25.0	1.5	101	AT-60/68	IW-8	IU-8	H-8
TF-16-2	16	6.5	1/4	M6	11.3	43.5	6.0	16.0	9.5	29.5	2.0	137	AT-60/68	IW-8	IU-5	H-5
TF-25-2	25	6.5	1/4	M6	13.0	47.0	6.0	16.0	10.5	31.5	2.2	182	AT-60/68	IW-4	IU-4	H-4
TF-35-2	35	8.5	5/16	M8	15.0	54.5	8.0	19.0	11.5	36.5	2.4	226	AT-60/68	IW-4	IU-2	H-2
TF-50-2	50	8.5	5/16	M8	18.0	63.5	9.0	22.2	15.0	42.0	2.7	275	AT-60/68	IW-1	IU-25 *2	H-25
TF-70-2	70	13.8	1/2	M12	20.3	90.0	10.0	44.4	15.5	66.4	3.0	353	AT-60/68	IW-26	IU-26	H-26
TF-95-2	95	13.8	1/2	M12	24.0	94.5	10.0	44.4	17.5	66.4	3.0	430	AT-60/68	IW-27	IU-27	H-27
TF-120-2	120	13.8	1/2	M12	27.0	108.4	13.0	44.4	24.5	73.6	3.3	500	AT-60/68	IW-29	IU-29	H-29
TF-150-2	150	13.8	1/2	M12	30.0	110.0	13.0	44.4	24.0	74.0	3.6	577	-	-	IU-30	H-30
TF-185-2	185	13.8	1/2	M12	32.4	114.5	13.5	44.4	25.0	73.9	3.8	661	-	-	IU-31	H-31
TF-240-2	240	13.8	1/2	M12	38.1	123.0	17.0	44.4	28.0	79.4	4.8	781	-	-	IU-34	H-34
TF-300-2	300	13.8	1/2	M12	41.5	135.4	19.0	44.4	31.5	84.4	5.0	902	-	-	IU-36	H-36
TF-400-2	400	13.8	1/2	M12	46.8	146.0	19.0	44.4	37.0	86.4	5.3	1085	-	-	IU-40	H-40
TF-500-2	500	13.8	1/2	M12	52.0	152.0	19.0	44.4	42.5	86.4	5.1	1253	-	-	IU-44	H-44

*1 Commercial line screw - disregard for alternative hole diameter.

*2 For compact conductors use IU-2 index die.

TF-2L COPPER TERMINAL FOR FLEXIBLE CONDUCTORS – two holes / long barrel



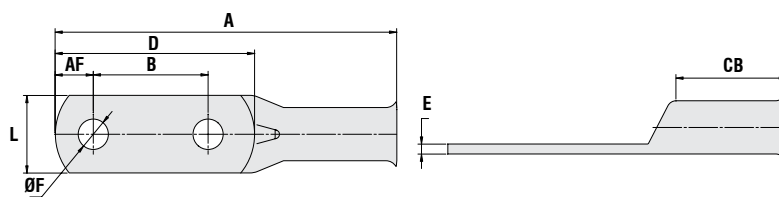
Purpose: Termination of copper conductors.

Characteristics: High electrical conductivity and corrosion resistance. Pad with several hole diameter options and optimum electrical contact. Expanded shape barrel for easy insertion of flexible conductors.

Applications: Electrical panels, circuit breaker connections, motors, machines, busbars, electrical distribution boards, among others.

Material: Electrolytic copper.

Finish: Tin Plated.

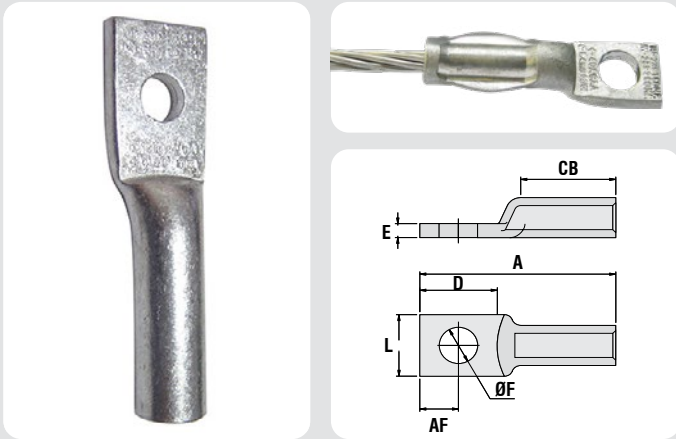


INTELLI code	Conductors Cross Section (mm ²)	Dimensões (mm)										Current (A)	Application Tools			
		Hole Diameter (ØF)	Screw*1		L	A	AF	B	CB	D	E		Mechanical Pliers		Hydraulic Pliers (AY / CY / AHM / AHB)	
			Inch	Metric									Model	Die (AT-60)	Circunf. Die	Hexagonal Die
TF-10-2L	10	5.2	3/16	M5	8.6	44.5	5.0	14.0	15.5	25.0	1.5	101	AT-60/68	IW-8	IU-8	H-8
TF-16-2L	16	6.5	1/4	M6	11.3	53.0	6.0	16.0	19.5	29.5	2.0	137	AT-60/68	IW-8	IU-5	H-5
TF-25-2L	25	6.5	1/4	M6	13.0	57.5	6.0	16.0	21.0	31.5	2.2	182	AT-60/68	IW-4	IU-4	H-4
TF-35-2L	35	8.5	5/16	M8	15.0	65.5	8.0	19.0	22.5	36.5	2.4	226	AT-60/68	IW-4	IU-2	H-2
TF-50-2L	50	8.5	5/16	M8	18.0	74.5	9.0	22.2	26.0	42.0	2.7	275	AT-60/68	IW-1	IU-25*2	H-25
TF-70-2L	70	13.8	1/2	M12	20.3	101.4	10.0	44.4	27.5	66.4	3.0	353	AT-60/68	IW-26	IU-26	H-26
TF-95-2L	95	13.8	1/2	M12	24.0	104.0	10.0	44.4	28.5	66.4	3.0	430	AT-60/68	IW-27	IU-27	H-27
TF-120-2L	120	13.8	1/2	M12	27.0	117.5	13.0	44.4	34.5	73.6	3.3	500	AT-60/68	IW-29	IU-29	H-29
TF-150-2L	150	13.8	1/2	M12	30.0	123.0	13.0	44.4	37.5	74.0	3.6	577	-	-	IU-30	H-30
TF-185-2L	185	13.8	1/2	M12	32.4	125.0	13.5	44.4	38.0	73.9	3.8	661	-	-	IU-31	H-31
TF-240-2L	240	13.8	1/2	M12	38.1	136.0	17.0	44.4	42.0	79.4	4.8	781	-	-	IU-34	H-34
TF-300-2L	300	13.8	1/2	M12	41.5	146.4	19.0	44.4	47.0	84.4	5.0	902	-	-	IU-36	H-36
TF-400-2L	400	13.8	1/2	M12	46.8	168.0	19.0	44.4	64.0	86.4	5.3	1085	-	-	IU-40	H-40
TF-500-2L	500	13.8	1/2	M12	52.0	172.0	19.0	44.4	66.0	86.4	5.1	1253	-	-	IU-44	H-44

*1 Commercial line screw - disregard for alternative hole diameter.

*2 For compact conductors use IU-2 index die.

TAL EXTRUDED ALUMINUM TERMINAL – one hole



Purpose: Cable to busbar termination for CA or CAA aluminum cables.

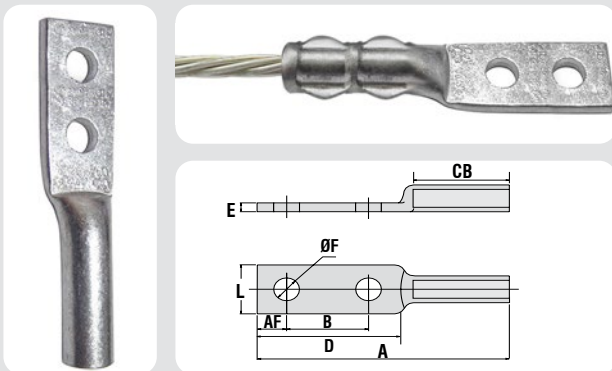
Characteristics: Compression connection. High electrical conductivity and resistance to corrosion.

Application: Power distribution lines.

Material: Extruded aluminum. Supplied with antioxidant compound INTELTROX.

INTELLI code	Conductors			Dimensions (mm)									Application Tools			
	Compact CA (mm ²)	AWG / MCM		Hole Diameter (ØF)	Screw		L	A	AF	CB	D	E	Mechanical Pliers (AT-60 - 4t)		Hydraulic Pliers (AY / CY / AHM / AHB)	
		CA	CAA		Inch	Metric							Die	Compressions No.	Die	Compressions No.
TAL-16	16	6	6	8.0	5/16	M8	18.0	66.0	13.0	32.0	26.0	4.0	IW-237	2	IU-237	1
TAL-32	25	4	4	13.0	1/2	M12	22.0	66.0	13.0	32.0	26.0	5.0	IW-239	2	IU-239	1
TAL-38	35	2	2	13.0	1/2	M12	22.0	66.0	13.0	32.0	26.0	5.0	IW-239	2	IU-239	1
TAL-44	50	1/0	1/0	14.0	1/2	M12	24.0	75.0	16.0	31.0	33.0	5.5	IW-243	2	IU-243	1
TAL-49	70	2/0	-	14.0	1/2	M12	24.0	75.0	16.0	31.0	33.0	5.5	IW-243	2	IU-243	1
TAL-58	95	3/0	-	14.0	1/2	M12	27.0	92.0	16.0	47.0	33.0	6.8	IW-247	4	IU-247	2
TAL-60	120	4/0	4/0	14.0	1/2	M12	32.0	92.0	16.0	41.0	33.0	8.2	IW-249	3	IU-249	1

TAL-2 EXTRUDED ALUMINUM TERMINAL – two holes



Purpose: Cable to busbar termination for CA or CAA aluminum cables.

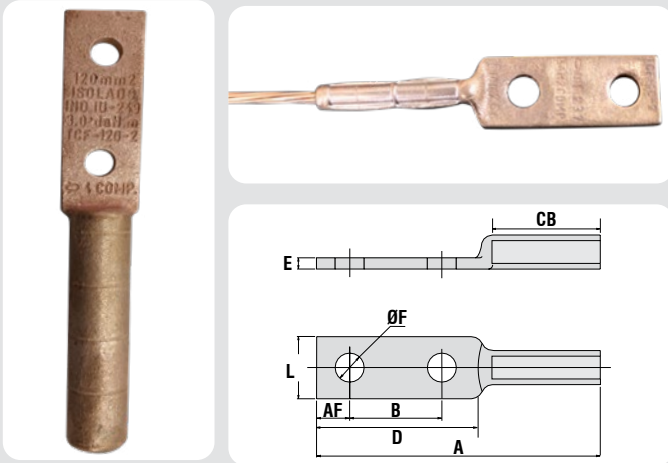
Characteristics: Compression connection. High electrical conductivity and corrosion resistance. Hole diameter per NEMA standard.

Application: Power distribution lines.

Material: Extruded aluminum. Supplied with antioxidant compound INTELTROX.

INTELLI code	Conductors			Dimensions (mm)									Application Tools				
	Compact CA (mm ²)	AWG / MCM		Hole Diameter (ØF)	Screw		L	A	AF	B	CB	D	E	Mechanical Pliers (AT-60 - 4t)		Hydraulic Pliers (AY / CY / AHM / AHB)	
		CA	CAA		Inch	Metric								Die	Compressions No.	Die	Compressions No.
TAL-32-2	25	4	4	14.0	1/2	M12	22.0	138.0	16.0	44.5	54.0	76.0	5.0	IW-239	4	IU-239	2
TAL-38-2	35	2	2	14.0	1/2	M12	22.0	138.0	16.0	44.5	54.0	76.0	5.0	IW-239	4	IU-239	2
TAL-44-2	50	1/0	1/0	14.0	1/2	M12	24.0	159.0	16.0	44.5	72.0	76.0	5.5	IW-243	4	IU-243	2
TAL-49-2	70	2/0	-	14.0	1/2	M12	24.0	155.0	16.0	44.5	66.0	76.0	6.0	IW-243	6	IU-243	3
TAL-58-2	95	3/0	-	14.0	1/2	M12	27.0	160.0	16.0	44.5	72.0	76.0	6.8	IW-247	6	IU-247	3
TAL-60-2	120	4/0	4/0	14.0	1/2	M12	32.0	173.0	16.0	44.5	81.0	78.0	8.2	IW-249	6	IU-249	3
TAL-150-2	150	250	-	14.0	1/2	M12	37.0	165.0	16.0	44.5	65.0	78.0	9.7	-	-	IU-251	3
TAL-72-2	185	336.4	-	14.0	1/2	M12	37.0	177.0	16.0	44.5	72.0	78.0	9.0	-	-	IU-321	4
TAL-80-2	240	397.5	336.4	14.0	1/2	M12	42.0	190.0	16.0	44.5	94.0	78.0	9.0	-	-	IU-316	4
TAL-92-2	300	556.5	-	14.0	1/2	M12	50.0	205.0	16.0	44.5	105.0	76.0	11.0	-	-	IU-261	5

TCF CAST COPPER TERMINAL



Purpose: Cable to busbar termination for copper cables.

Characteristics: Compression connection. High electrical conductivity and resistance to corrosion. Drilling per NEMA standard.

Application: Power distribution lines.

Material: Copper Alloy.

Finish: No Finishing. Supplied with antioxidant compound INTELTROX-Cu.

INTELLI code	Conductor (mm ²)	Dimensions (mm)										Application Tools			
		Hole Diameter (ØF)	Screw		L	A	B	AF	CB	D	E	Mechanical Pliers (AT-60 - 4t)		Hydraulic Pliers (AY / CY / AHM / AHB)	
			Inch	Metric								Die	Compressions No.	Die	Compressions No.
TCF-16-2	16	14.0	1/2	M12	30.0	137.0	44.5	16.0	52.0	78.0	5.5	IW-237	4	IU-237	2
TCF-25-2	25	14.0	1/2	M12	30.0	137.0	44.5	16.0	52.0	78.0	5.5	IW-237	4	IU-237	2
TCF-35-2	35	14.0	1/2	M12	30.0	137.0	44.5	16.0	52.0	78.0	5.5	IW-239	4	IU-239	2
TCF-50-2	50	14.0	1/2	M12	30.0	137.0	44.5	16.0	52.0	78.0	5.5	IW-239	4	IU-239	2
TCF-70-2	70	14.0	1/2	M12	30.0	137.0	44.5	16.0	52.0	78.0	6.0	IW-245	4	IU-245	2
TCF-95-2	95	14.0	1/2	M12	30.0	137.0	44.5	16.0	52.0	78.0	6.0	IW-245	4	IU-245	2

3.2. BIMETALLIC TERMINALS

TBB BIMETALLIC TERMINAL FOR TERMINAL BLOCK



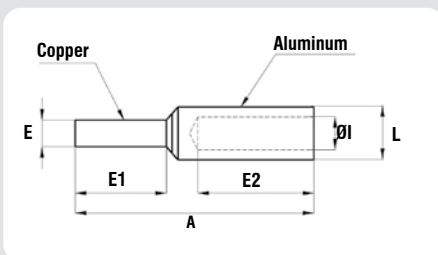
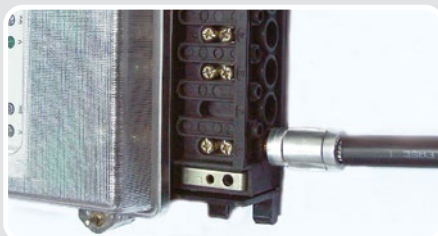
Purpose: Bimetallic termination cable-strip (aluminum cable to copper block). Connection on terminal block, transformer bushing, circuit breakers.

Characteristics: Compression connection. Its construction (copper pin and aluminum barrel) prevents galvanic corrosion.

Applications: Power distribution lines.

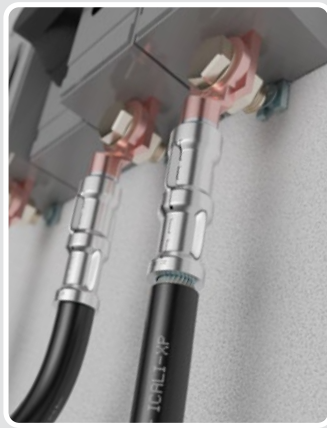
Material: Electrolytic copper pin and extruded aluminum barrel. Supplied with INTELTROX antioxidant compound.

Note: For installation in regions of aggressive climate, it is recommended to use thermoset insulation or self-fusing tape in the connection.



INTELLI code	CA Conductor		Dimensions (mm)							Application Tools		
	AWG	mm ²	L	A	E	E1	E2	ØI	Mechanical Pliers (AT-60 4t)		Hydraulic Pliers (AY / CY / AHM / AHB)	
									Die IW	Die IU	Die MH	
TBB-10-25	8	10	9.7	57.0	4.0	25.0	25.0	5.0	161	161	-	
TBB-16-25	6	16	9.7	57.0	4.0	25.0	25.0	5.8	161	161	-	
TBB-25-30	4	25	11.5	80.0	5.0	30.0	42.0	7.0	162	162	-	
TBB-35-30	2	35	13.0	80.0	6.0	30.0	42.0	8.5	163	163	163A	
TBB-50-45	1/0	50	16.0	94.0	7.0	45.0	42.0	10.0	243	243	243A	
TBB-70-45	2/0	70	17.0	94.0	8.0	45.0	42.0	11.0	245	245	245A	
TBB-95-45	3/0	95	19.5	94.0	9.0	45.0	42.0	12.7	247	247	247A	
TBB-120-55	4/0	120	23.0	112.0	10.0	55.0	50.0	15.0	249	249	249A	

TBTA BIMETALLIC COMPRESSION TERMINAL



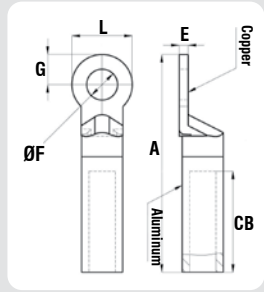
Purpose: Bimetallic cable to busbar termination (aluminum cable to copper busbar).

Characteristics: Compression connection. Its construction (copper pad and aluminum barrel) prevents the formation of galvanic corrosion. Pad with one hole.

Applications: For application of aluminum conductors to copper bus bar, inverters, photovoltaic panels and more.

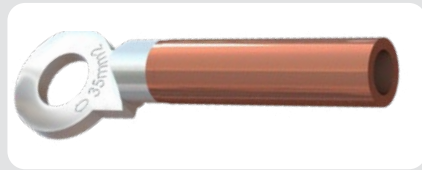
Material: Electrolytic copper pad (with 99,95% content e 99% IACS) and extruded aluminum barrel. Supplied with antioxidant compound **INTELTROX**.

Note: For installation in regions of aggressive environments, it is recommended to use thermoset insulation or self-fusing tape in the connection.



INTELLI code	CA Conductor		Dimensions (mm)							Application Tools					
			Hole Diameter (ØF)	L	A	CB	E	G	Mechanical Pliers (AT-60 4t)		Hydraulic Pliers (AY / CY / AHM / AHB)			Compressor (CY-630) 23t	
	Die (IW)	Compres. No.							Die (IU)	Die (MH)	Compres. No.	Die (H)	Compres. No.		
TBTA-16-10	6	16	10.5	20,0	66.4	32.0	3.0	10.0	161	2	161	-	1	-	-
TBTA-25-10	4	25	10.5	20.0	82.0	42.0	3.8	10.0	162	5	162	-	2	-	-
TBTA-35-13	2	35	13.0	25.0	89.0	42.0	3.8	12.5	163	5	163	163A	2	-	-
TBTA-50-13	1/0	50	13.0	25.0	89.0	42.0	3.8	12.5	243	4	243	243A	2	-	-
TBTA-70-10	2/0	70	10.5	25.0	91.0	42.0	3.8	12.5	245	4	245	245A	2	-	-
TBTA-70-13			13.0												
TBTA-95-13	3/0	95	13.0	25.0	91.0	42.0	3.8	12.5	247	4	247	247A	2	-	-
TBTA-120-10	4/0	120	10.5	30.0	106.0	50.0	4.0	15.0	249	4	249	249A	2	-	-
TBTA-120-13			13.0												
TBTA-150-10	266.8	150	10.5	30.0	111.0	55.0	5.5	15.0	-	-	251	-	3	-	-
TBTA-150-13			13.0												
TBTA-185-10	336.4	185	10.5	32.0	120.0	60.0	6.0	16.0	-	-	316	-	3	-	-
TBTA-185-16			16.5												
TBTA-240-10	397.5	240	10.5	35.0	124.0	60.0	6.0	17.5	-	-	316	-	3	-	-
TBTA-240-16			16.5												
TBTA-300-10	477	300	10.5	35.0	131.0	65.0	7.0	17.5	-	-	261	-	3	-	-
TBTA-300-16			16.5												
TBTA-400-10	636	400	10.5	36.0	143.0	70.0	7.5	18.0	-	-	-	-	-	G722H	2
TBTA-400-16			16.5												

TBTC* BIMETALLIC COMPRESSION TERMINAL



Bimetallic cable to busbar termination (copper or bimetallic COPPERSTEEL cable to aluminum busbar).

*Available on request.

3.3. MECHANICAL TERMINALS

TTAC ALUMINUM CABLE-BUSBAR TERMINAL – straight connection



Purpose: Cable to busbar termination for CA or CAA aluminum cables.

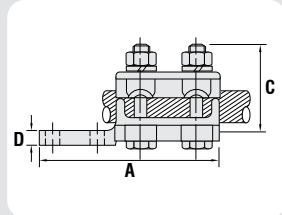
Characteristics: Mechanical connection. High electrical conductivity. Pad with two or four NEMA standard holes. There are lugs that lock the head of the screws.

Application: Power distribution lines and substations.

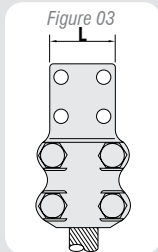
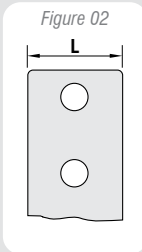
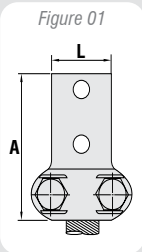
Material: Cast aluminum alloy and hot galvanized steel fittings.

Application Tool: Star or open-ended wrench.

Note: Using of the antioxidant compound **INTELTRIX** is recommended.



INTELLI code	Conductors (AWG/MCM)		Screw	Dimensions (mm)				Figure
	CA	CAA		L	A	C	D	
TTAC 4-1/0-2N	4 - 1/0	4 -1/0	M12	30.0	132.0	60.0	10.0	1
TTAC 1/0-250-2N	1/0 - 250	1/0 - 4/0	M12	42.0	155.0	60.0	10.0	2
TTAC 1/0-250-4N	1/0 - 250	1/0 - 4/0	M12	78.0	150.0	60.0	10.0	3
TTAC 250-400-2N	250 - 400	4/0 - 397.5	M12	42.0	162.0	60.0	10.0	2
TTAC 250-400-4N	250 - 400	4/0 - 397.5	M12	78.0	162.0	60.0	11.0	3
TTAC 350-600-2N	350 - 600	336.4 - 477	M12	42.0	170.0	70.0	11.0	2
TTAC 350-600-4N	350 - 600	336.4 - 477	M12	78.0	170.0	70.0	11.0	3
TTAC 600-900-2N	600 - 900	477 - 795	M12	52.0	174.0	70.0	12.0	2
TTAC 600-900-4N	600 - 900	477 - 795	M12	75.0	174.0	70.0	12.0	3



CTRA ALUMINUM CABLE-BUSBAR TERMINAL – straight or 90° connection



Purpose: Cable to busbar termination for CA or CAA aluminum cables.

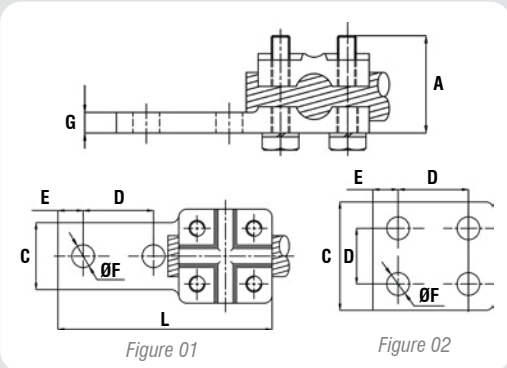
Characteristics: Mechanical connection. High electrical conductivity. Pad with two or four holes NEMA standard. With a single item meets a wide range of cables. Straight or 90° in relation to the bus.

Application: Power distribution lines and substation.

Material: Cast aluminum alloy and stainless steel fittings.

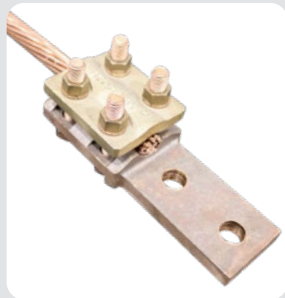
Application Tool: Star or open-ended wrench.

Note: The use of the antioxidant compound **INTELTRIX** is recommended.



INTELLI code	Conductors		Dimensions (mm)							Screw	Figure
	mm²	AWG/MCM	L	A	C	D	E	ØF	G		
CTRA-6-636-2N	16 - 300	6 - 636	137.0	45.0	42.0	44.5	16.0	14.0	11.0	M10	1
CTRA-6-636-4N			137.0	45.0	76.0	44.5	16.0	14.0	11.0	M10	2

TTBC COPPER CABLE-BUSBAR TERMINAL – straight connection



Purpose: Cable to busbar termination for copper cables.

Characteristics: Tightening connection. High electrical conductivity. Pad with two or four holes NEMA standard. There are lugs that lock the head of the screws.

Application: Power distribution lines and substations.

Material: Bronze terminal, fittings in copper alloy.

Application Tool: Star or open-ended wrench.

Note: The use of the antioxiide compound **INTELTRON-Cu** is recommended.

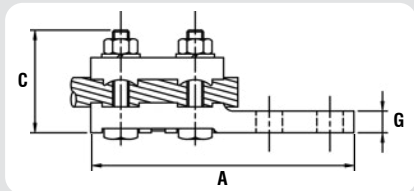


Figure 01

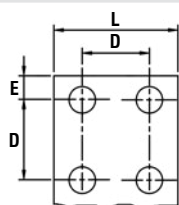
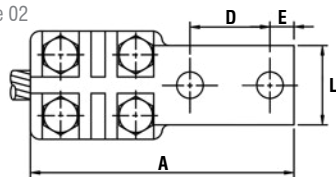
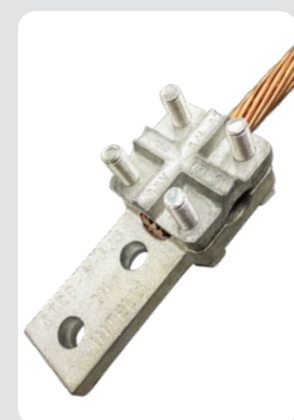


Figure 02



INTELLI code	Conductors				Screw	Dimensions (mm)						Figure
	Minimum		Maximum			L	A	C	D	E	G	
	mm ²	AWG/MCM	mm ²	AWG/MCM								
TTBC 4-1/0-2N	25	4	50	1/0	M10	32.0	140.0	45.0	44.5	16.0	10.0	2
TTBC 2/0-4/0-2N	70	2/0	120	4/0	M10	32.0	147.0	55.0	44.5	16.0	10.0	2
TTBC 250-500-2N	120	250	240	500	M10	43.0	150.0	55.0	44.5	16.0	10.0	2
TTBC 250-500-4N	120	250	240	500	M10	76.0	148.0	60.0	44.5	16.0	10.0	1
TTBC 500-800-2N	240	500	400	800	M10	44.0	157.0	60.0	44.5	16.0	12.0	2
TTBC 500-800-4N	240	500	400	800	M10	76.0	153.0	60.0	44.5	16.0	14.0	1

CTRB COPPER CABLE-BUSBAR TERMINAL – straight or 90° connection



Purpose: Cable to busbar termination for copper or CA or CAA aluminum cables.

Characteristics: Tightening connection. High electrical conductivity. Pad with two or four holes NEMA standard. Meets a wide range of cables. Straight or 90° in relation to the bus.

Application: Power distribution lines and substations.

Material: Bronze terminal, fittings in Copper alloy or hot-dip galvanization.

Application Tool: Star or open-ended wrench.

Finish: Tinned.

Note: For aluminum conductors, the use of the antioxiide compound **INTELTRON** is recommended.

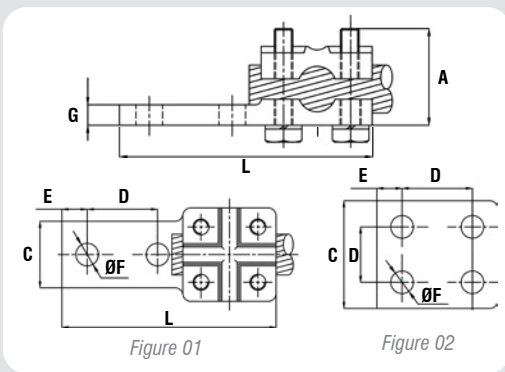


Figure 01

Figure 02

INTELLI code	Conductors		Dimensions (mm)							Screw	Figure
	mm ²	AWG/MCM	L	A	C	D	E	ØF	G		
CTRB-6-636-2N	16 - 300	6 - 636	137.0	45.0	42.0	44.5	16.0	14.0	11.0	M10	1
CTRB-6-636-4N			137.0	45.0	76.0	44.5	16.0	14.0	11.0	M10	2

TA TIGHTENING TERMINAL – symmetric series



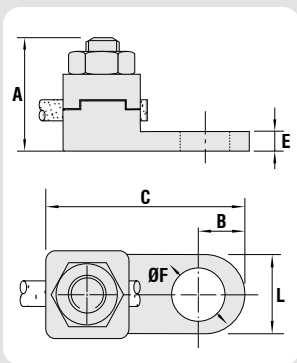
Purpose: Cable-busbar termination for copper cable (classes - 1/2/3). Connection to busbars, switchboards, electrical panels and others.

Characteristics: Mechanical pressure connection. Pad with one hole.

Application: Electrical installations in general (residential, building, industrial).

Material: Copper alloy terminal, electrolytic zinc plated steel nut.

Application Tool: Star or open-ended wrench.



INTELLI code	Conductor		Screw		Dimensions (mm)					
	mm ²	AWG/MCM	Inch	Metric	L	A	C	B	E	ØF
TA-6	6	10	3/16	M5	11.0	21.0	28.0	5.5	3.0	5.4
TA-10	10	8	3/16	M5	11.5	19.0	28.0	5.5	3.0	5.4
TA-16	16	6	1/4	M6	11.0	21.0	28.0	6.5	3.5	6.5
TA-25	25	4	1/4	M6	13.5	24.0	32.0	7.0	4.0	6.5
TA-35	35	2	1/4	M6	13.5	24.0	32.0	7.0	4.0	6.5
TA-50	50	1/0	5/16	M8	16.0	29.0	41.0	8.5	4.0	8.5
TA-70	70	2/0	5/16	M8	18.0	29.0	41.0	9.0	4.0	8.5
TA-95	95	3/0	3/8	M10	21.0	34.0	50.5	10.5	5.0	10.5
TA-120	120	4/0	1/2	M12	24.5	41.0	59.5	12.5	5.0	13.5
TA-150	150	250	1/2	M12	24.5	41.0	59.5	12.5	5.0	13.5
TA-185	185	300	1/2	M12	26.0	41.0	65.0	13.5	6.0	13.5
TA-240	240	500	9/16	M14	30.0	50.0	69.0	15.0	6.5	15.5
TA-300	300	600	9/16	M14	30.0	50.0	69.0	15.0	6.5	15.5
TA-400	400	800	5/8	M16	39.0	61.0	94.0	19.5	9.0	18.0
TA-500	500	1000	5/8	M16	39.0	61.0	94.0	19.5	9.0	18.0

TPAM PRESSURE TERMINAL WITH SPRING EFFECT



Purpose: Cable to busbar termination for aluminum AC or ACSR and copper cables. Knife switch termination and transformer bushing.

Characteristics: Spring system connection (permanent tightening). High electrical conductivity and corrosion resistance. Pad with two or four holes NEMA* standard. Reusable.

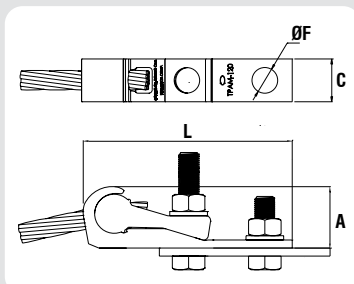
Application: Power distribution lines.

Material: Aluminum alloy with corrosion inhibiting surface treatment. Supplied with antioxidant compound INTELTRÖX.

Application Tool: Star or open-ended wrench.

Note: It may be supplied with or without fittings (stainless steel bolts, nuts and washers).

*Except TPAM-50 (one hole).

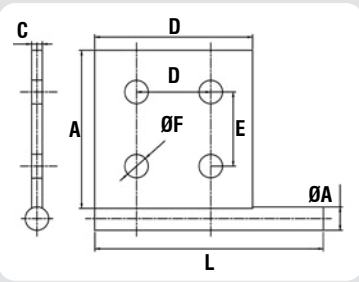


Comp. = Compact Cable.

INTELLI code	Diameter Range (mm)		Combinations (mm ² / AWG)		Dimensions (mm)				Thread / Length of Screw
	Smaller side (P)	Larger Side (G)	Smaller side (P)	Larger Side (G)	L	A	C	ØF	
TPAM-50	6.7 - 7.3	7.31 - 8.1	35 CA/Cu Comp.	2 CA/Cu/CAA 35 CA/Cu 50 CA/Cu Comp.	48.0	22.0	18.0	10.5	M8x45
TPAM-70	9 - 9.7	10 - 10.6	1/0 CA/Cu 50 CA/Cu/CAL 70 CA/Cu Comp.	2/0 CA/Cu 1/0 CAA 70 CA/Cu/CAL	106.0	28.0	22.0	15.0	M10x30 M10x60
TPAM-120	11.2 - 12.3	12.7 - 13.3	3/0 CA/Cu 2/0 CAA 95 CA/Cu 95 CA/Cu Comp.	4/0 CA/Cu 3/0 CAA 120 CA/Cu Comp.	123.0	36.0	25.0	15.0	M12x40 M12x75
TPAM-150	14.2 - 14.4	14.5 - 15.1	4/0 CAA 150 CA Comp.	266.8 CA/Cu 120 CA/Cu	123.0	36.0	30.0	15.0	M12x40 M12x75
TPAM-185	15.45 - 17	17.3 - 18.9	266.8 CAA 336.4 CA/Cu 150 CA/Cu 185 CA/Cu Comp.	397.5 CA/Cu 336.4 CAA 185 CA/Cu 240 CA/Cu Comp.	137.0	46.0	33.0	15.0	M12x40 M12x75
TPAM-300	20 - 20	21.7 - 22.5	477 CA/Cu 397.5 CAA 240 CA/Cu 300 CA/Cu Comp.	556.5 CA/Cu 477 CAA 300 CA/Cu 350 CA/Cu Comp.	147.0	54.0	38.0	15.0	M12x40 M12x75

3.4. ADAPTER TERMINALS

TAB BRONZE FLAG ADAPTER TERMINAL



Purpose: For transformer bushings, allowing the connection of conventional aluminum or copper terminals.

Characteristics: High electrical conductivity and corrosion resistance. Pad with four holes NEMA standard, 10mm, 14mm or 20mm diameter pin options.

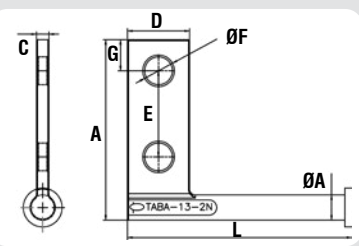
Application: Power distribution lines.

Material: Bronze.

Finish: Tin plated.

INTELLI code	Dimensions (mm)						
	L	A	ØA	C	D	E	ØF
TAB-10	137.0	94.5	10.0	6.4	94.5	44.5	14.0
TAB-14	137.0	94.5	14.0	6.4	94.5	44.5	14.0
TAB-20	137.0	94.5	20.5	6.4	94.5	44.5	14.0

TABA ALUMINUM FLAG ADAPTER TERMINAL



Purpose: Used for disconnecting switch terminals and fuse switches for temporary grounding.

Characteristics: High electrical conductivity and corrosion resistance. Pad with four holes NEMA standard.

Application: Power distribution lines.

Material: Cast aluminum alloy.

INTELLI code	Dimensions (mm)							
	L	ØA	A	C	D	E	ØF	G
TABA-13-2N	115.5	13.0	93.0	6.4	32.0	44.5	14.3	16.0

TAC ADAPTER TERMINALS FOR WEDGE CONNECTOR



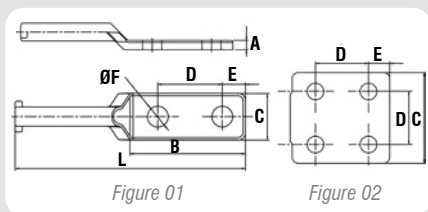
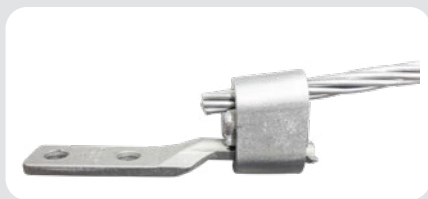
Purpose: Termination on sectioning switches and busbars in conjunction with aluminum wedge connectors.

Characteristics: High electrical conductivity and corrosion resistance. Pad with two or four holes NEMA standard.

Application: Power distribution lines.

Material: Cast aluminum alloy.

Application Tool: Impact tool for wedge connector.



INTELLI code	Terminal (Pin gauge)		Conductors (AWG/MCM)	Wedge type connectors**	Dimensions							
	AWG/MCM	Ø mm			Figure	L	A	C	B	D	E	ØF
TAC-4/0-2N	4/0	13.2	6	CADC-20B	1	177.0	7.0	32.0	78.0	44.5	16.0	14.3
			4	CADC-20B								
			2	CADC-208								
			1/0	CADC-208								
			2/0	CADC-208								
			3/0	CADC-211								
TAC-336,4-2N	336.4	16.9	4/0	CADC-211	1	200.0	8.2	32.0	78.0	44.5	16.0	14.3
			336.4	CADC-401*								
			397.5	CADC-503								
			477	CADC-503								
TAC-4/0-4N	4/0	13.2	6	CADC-20B	2	159.0	7.0	76.0	78.0	44.5	16.0	14.3
			4/0	CADC-20B								
			2/0	CADC-208								
			1/0	CADC-208								
			2/0	CADC-208								
			3/0	CADC-211								
TAC-336,4-4N	336.4	16.9	4/0	CADC-211	2	178.0	7.0	76.0	78.0	44.5	16.0	14.3
			336.4	CADC-401*								
			397.5	CADC-503								
			477	CADC-503								
			556.5	CADC-503								

*When using the 336,4 CA conductor (without steel core) use CADC-317

**TAC terminal and CADC wedge connector sold separately.

4. SPLICE SLEEVES

4. SPLICE SLEEVES	53
4.1. COMPRESSION SPLICE SLEEVES.....	54

4.1. COMPRESSION SPLICE SLEEVES

LF SPLICE SLEEVE FOR COPPER CABLES – low traction



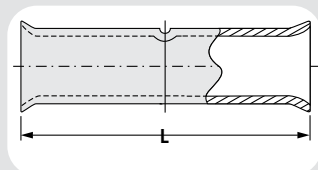
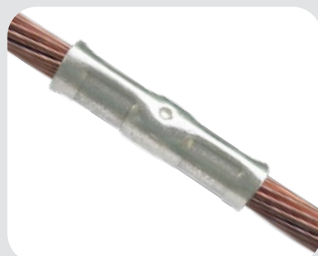
Purpose: Rigid or flexible copper cable splice (low traction).

Characteristics: Compression connection. High electrical conductivity and corrosion resistance. Expanded shape ends for easy insertion of flexible conductors. With center wire stop.

Application: Electrical installations in general (residential, building, industrial).

Material: Electrolytic copper.

Finish: Tin plated.

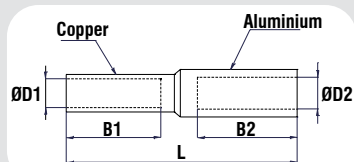


INTELLI code	Conductors (mm ²)	Current (A)	Dimension (mm) L	Application Tools			
				Mechanical Pliers		Hydraulic Pliers (AY-96 / CY-96)	
				Model	Die (AT-60)	Circunf. Die	Hexagonal Die
LF-10	10	101	22.5	AT-60/68	IW-8	IU-8	H-8
LF-16	16	137	34.0	AT-60/68	IW-8	IU-8	H-8
LF-25	25	182	39.0	AT-60/68	IW-4	IU-4	H-4
LF-35	35	226	42.0	AT-60/68	IW-4	IU-2	H-2
LF-50	50	275	47.0	AT-60/68	IW-1	IU-25*1	H-25
LF-70	70	353	51.5	AT-60/68	IW-26	IU-26	H-26
LF-95	95	430	52.0	AT-60/68	IW-27	IU-27	H-27
LF-120	120	500	55.0	AT-60/68	IW-29	IU-29	H-29
LF-150	150	577	57.0	-	-	IU-30	H-30
LF-185	185	661	58.5	-	-	IU-31	H-31
LF-240	240	781	71.0	-	-	IU-34	H-34
LF-300	300	902	76.0	-	-	IU-36	H-36
LF-400	400	1085	85.5	-	-	*2	*2
LF-500	500	1253	90.0	-	-	*2	*2

*1 For compact conductors use IU-2 index die.

*2 Die and application tools for **LF-400** and **LF-500** informations available on atendimento@grupointelli.com.br.

LB BIMETALLIC COMPRESSION SLEEVE



Purpose: Bimetallic splice, between aluminum-copper cable (reduced traction).

Characteristics: Compression connection. Its joint aluminum and copper construction prevents the formation of galvanic corrosion.

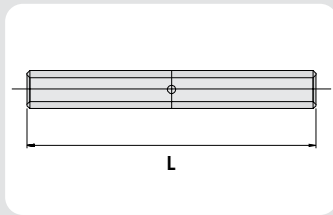
Application: Power distribution lines.

Material: Extruded aluminum and electrolytic copper. Supplied with antioxidant compound **INTELTRON** (aluminum side only).

INTELLI code	Aluminum Side						Copper Side						Dimension (mm) L
	CA Conductor (mm ²)	Dimensions (mm)		Application Tool			Conductor Cu (mm ²)	Dimensions (mm)		Application Tool			
		Ø D2	B2	AT-60	AY-96 / CY-96			Ø D1	B1	AT-60	AY-96 / CY-96		
LB-35-25	35	8.5	42.0	163	163	163A	25	7.0	30.0	4	4	4	85.0
LB-50-35	50	10.0	42.0	243	243	243A	35	8.2	30.0	2	2	2	85.0
LB-70-50	70	11.0	42.0	245	245	245A	50	9.7	38.0	1	25	25	95.0
LB-95-70	95	12.7	42.0	247	247	247A	70	11.3	38.0	26	26	26	95.0
LB-120-95	120	15.0	50.0	249	249	249A	95	13.5	38.0	28	27	27	100.0

Note: In adhesive environments it's recommended to use thermo-contractile insulation or self-fusing tape in the connection.

LAR SPLICE SLEEVE FOR ALUMINUM CABLE – full traction



Purpose: Aluminum cable splice (bare or insulated network), full traction.
Characteristics: Compression connection. High electrical conductivity and resistance to corrosion. Supplied with centering guide.
Application: Power distribution lines.
Material: Extruded aluminum. Supplied with antioxide compound INTELTROX.

INTELLI code	Conductors		Dimension (mm) L	Application Tools			
	CA (AWG/MCM)	Compact (mm ²)		Mechanical Pliers (AT-60)		Hydraulic Pliers (AY-96 / CY-96)	
				Die	Compressions No.	Die	Compressions No.
LAR-28	6	16	67.0	IW-161	8	IU-161	4
LAR-32	4	25	67.0	IW-162	8	IU-162	2
LAR-38	2	35	99.0	IW-163	12	IU-163	4
LAR-44	1/0	50 - 70	185.0	IW-243	12	IU-243	6
LAR-49	2/0	70	235.0	IW-245	16	IU-245	8
LAR-58	3/0	95	184.0	IW-247	16	IU-247	8
LAR-60	4/0	120	266.0	IW-249	24	IU-249	12
LAR-72	336.4	185	251.0	-	-	IU-321	16
LAR-80	397.5	240	310.0	-	-	IU-468	10
LAR-92	556.5	300	323.0	-	-	IU-261	18

5. PRE-INSULATED TERMINALS

5. PRE-INSULATED TERMINALS.....	56
5.1. RING TYPE.....	57
5.2. PIN TYPE.....	58
5.3. PRE-INSULATED SPLICE SLEEVE.....	59
5.4. FORK TYPE.....	59
5.5. MALE / FEMALE QUICK DISCONNECT TYPE TERMINALS.....	60
5.6. EYELET TYPE.....	61

5.1. RING TYPE

TP RING TYPE PRE-INSULATED TERMINALS



Purpose: Termination of rigid or flexible copper cables.

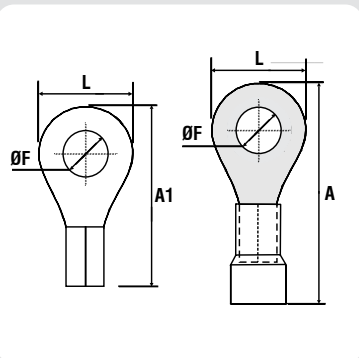
Characteristics: Compression connection. High electrical conductivity and corrosion resistance.

Application: Electrical installations in general (residential, building, industrial). Circuits up to 70°C and 750V.

Material: Electrolytic copper and insulation in rigid PVC.

Finish: Tin plated and insulated.

Application Tool: AT-10 or ATC-6.



* Also available in non-insulated version (add "1" at the end of the code).

INTELLI code*	Insulation per DIN Standard (Color)	Conductors		Dimensions (mm)				Maximum current (A)
		AWG	mm ²	L	A	A1	ØF	
TP-1,5-3	RED	22 - 16	0.5 - 1.5	7.8	21.0	15.0	3.3	19
TP-1,5-4	RED	22 - 16	0.5 - 1.5	7.8	21.0	15.0	4.3	19
TP-1,5-5	RED	22 - 16	0.5 - 1.5	7.8	21.0	15.0	5.2	19
TP-1,5-6	RED	22 - 16	0.5 - 1.5	12.0	27.0	21.5	6.7	19
TP-1,5-8	RED	22 - 16	0.5 - 1.5	12.0	27.0	21.5	8.3	19
TP-2,5-3	BLUE	16 - 14	1.5 - 2.5	8.0	21.0	15.8	3.3	27
TP-2,5-4	BLUE	16 - 14	1.5 - 2.5	8.0	21.0	15.8	4.3	27
TP-2,5-5	BLUE	16 - 14	1.5 - 2.5	8.0	21.0	15.8	5.2	27
TP-2,5-6	BLUE	16 - 14	1.5 - 2.5	12.0	27.0	21.5	6.7	27
TP-2,5-8	BLUE	16 - 14	1.5 - 2.5	12.0	27.0	21.5	8.3	27
TP-6-3	YELLOW	12 - 10	4 - 6	8.5	25.0	18.0	3.3	48
TP-6-4	YELLOW	12 - 10	4 - 6	8.5	25.0	18.0	4.3	48
TP-6-5	YELLOW	12 - 10	4 - 6	9.5	25.0	18.0	5.2	48
TP-6-6	YELLOW	12 - 10	4 - 6	13.4	31.0	24.5	6.7	48
TP-6-8	YELLOW	12 - 10	4 - 6	13.4	31.0	24.5	8.4	48
TP-6-10	YELLOW	12 - 10	4 - 6	13.4	31.0	24.5	10.2	48

TPT TUBULAR RING TYPE PRE-INSULATED TERMINALS



Purpose: Termination of rigid or flexible copper cables.

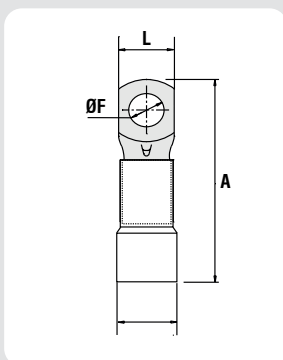
Characteristics: Compression connection. High electrical conductivity and corrosion resistance.

Application: Electrical installations in general (residential, building, industrial). Circuits up to 90°C and 750V.

Material: Electrolytic copper and polypropylene insulation.

Finish: Tin plated and insulated.

Application Tool: ATP-49.



INTELLI code	Insulation per DIN Standard (Color)	Conductors (mm ²)	Dimensions (mm)				Maximum current (A)
			L	A	C	ØF	
TPT-10-5	RED	10	8.6	32.0	6.0	5.2	101
TPT-10-6	RED	10	8.6	32.0	6.0	6.5	101
TPT-10-8	RED	10	13.0	36.0	6.0	8.5	101
TPT-16-5	BLUE	16	11.3	38.0	7.9	5.2	137
TPT-16-6	BLUE	16	11.3	38.0	7.9	6.5	137
TPT-16-8	BLUE	16	11.3	38.0	7.9	8.5	137
TPT-25-5	YELLOW	25	12.9	42.5	9.0	5.2	182
TPT-25-6	YELLOW	25	12.9	42.5	9.0	6.5	182
TPT-25-8	YELLOW	25	12.9	42.5	9.0	8.5	182
TPT-25-10	YELLOW	25	15.5	46.5	9.0	10.5	182
TPT-35-6	RED	35	14.9	49.0	10.3	6.5	226
TPT-35-8	RED	35	14.9	49.0	10.3	8.5	226
TPT-35-10	RED	35	14.9	49.0	10.3	10.5	226
TPT-50-6	BLUE	50	18.0	57.0	12.4	6.5	275
TPT-50-8	BLUE	50	18.0	57.0	12.4	8.5	275
TPT-50-10	BLUE	50	18.0	57.0	12.4	10.5	275
TPT-50-13	BLUE	50	18.0	57.0	12.4	13.0	275
TPT-70-8	YELLOW	70	20.3	65.0	14.0	8.5	353
TPT-70-10	YELLOW	70	20.3	65.0	14.0	10.5	353
TPT-70-13	YELLOW	70	20.3	65.0	14.0	13.0	353

5.2. PIN TYPE

TPP PIN TYPE PRE-INSULATED TERMINALS



Purpose: Termination of rigid or flexible copper cables.

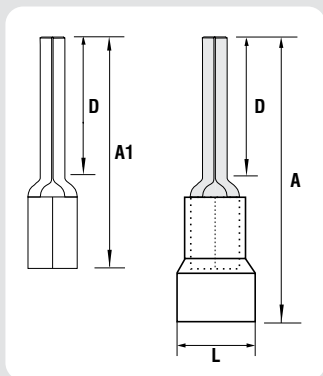
Characteristics: Compression connection. High electrical conductivity and corrosion resistance.

Application: Electrical installations in general (residential, building, industrial). Circuits up to 70°C and 750V.

Material: Electrolytic copper and insulation in rigid PVC.

Finish: Tin plated and insulated.

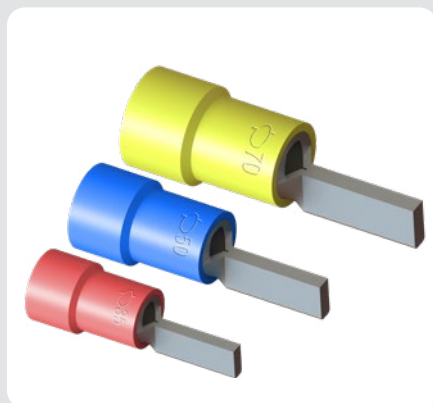
Application Tool: AT-10 or ATC-6.



INTELLI code*	Insulation per DIN Standard (Color)	Conductors		Dimensões (mm)				Maximum current (A)
		AWG	mm ²	L	A	A1	D	
TPP-1,5-8	RED	22 - 16	0.5 - 1.5	5.7	20.0	14.0	8.0	19
TPP-1,5-12	RED	22 - 16	0.5 - 1.5	5.7	24.0	18.0	12.0	19
TPP-2,5-8	BLUE	16 - 14	1.5 - 2.5	5.9	21.0	15.0	8.0	27
TPP-2,5-12	BLUE	16 - 14	1.5 - 2.5	5.9	24.0	18.0	12.0	27
TPP-6-12	YELLOW	12 - 10	4 - 6	7.5	27.0	20.5	12.0	48

* Also available in non-insulated version (add "1" at the end of the code).

TPP TUBULAR PIN TYPE PRE-INSULATED TERMINALS



Purpose: Termination of rigid or flexible copper cables.

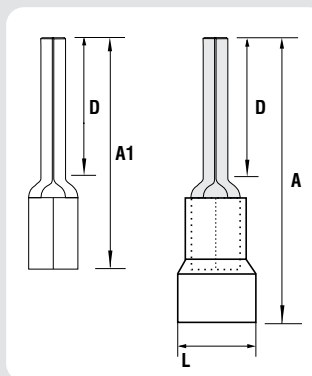
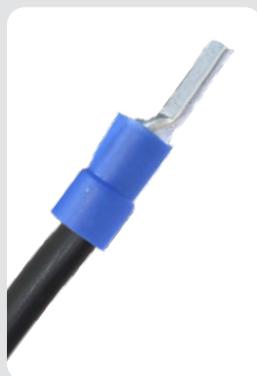
Characteristics: Compression connection. High electrical conductivity and corrosion resistance.

Application: Electrical installations in general (residential, building, industrial). Circuits up to 90°C and 750V.

Material: Electrolytic copper and polypropylene insulation.

Finish: Tin plated and insulated.

Application Tool: ATP-49.



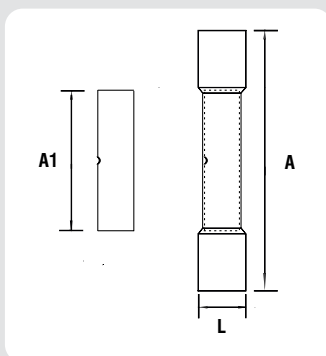
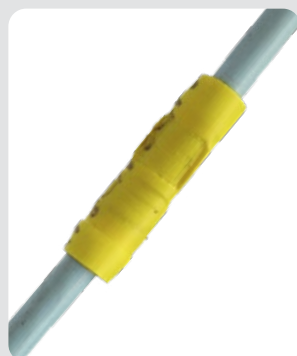
INTELLI code	Insulation per DIN Standard (Color)	Conductors (mm ²)	Dimensions (mm)				Maximum current (A)
			L	A	A1	D	
TPP-10-15	VERMELHO	10	10.2	35.0	27.0	15.0	101
TPP-16-16	AZUL	16	12.0	40.0	30.0	16.5	137
TPP-25-16	AMARELO	25	13.2	41.5	30.0	16.5	182
TPP-35-17	VERMELHO	35	15.0	46.0	32.0	17.0	226
TPP-50-24	AZUL	50	17.1	55.0	41.5	24.0	275
TPP-70-24	AMARELO	70	18.4	62.0	43.0	24.0	353

5.3. PRE-INSULATED SPLICE SLEEVE

LEP PRE-INSULATED SPLICE SLEEVE



Purpose: Splice (reduced traction) of rigid or flexible copper cable.
Characteristics: Compression connection. High electrical conductivity and corrosion resistance.
Application: Electrical installations in general (residential, building, industrial). Circuits up to 70°C and 750V.
Material: Electrolytic copper and insulation in rigid PVC.
Finish: Tin plated and insulated.
Application Tool: AT-10 or ATC-6.



INTELLI code*	Insulation per DIN Standard (Color)	Conductors		Dimensions (mm)			Maximum current (A)
		AWG	mm ²	L	A	A1	
LEP-1,5	RED	22 - 16	0.5 - 1.5	5.1	27.0	15.0	19
LEP-2,5	BLUE	16 - 14	1.5 - 2.5	5.5	27.0	15.0	27
LEP-6	YELLOW	12 - 10	4 - 6	7.2	27.0	15.0	48

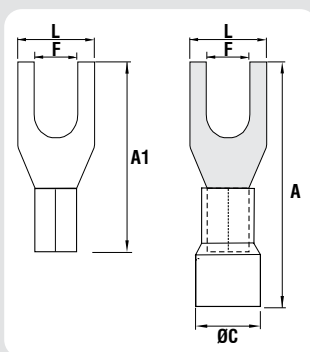
* Also available in non-insulated version (add "1" at the end of the code).

5.4. FORK TYPE

TPF FORK TYPE PRE-INSULATED TERMINALS



Purpose: Termination of rigid or flexible copper cables.
Characteristics: Compression connection. High electrical conductivity and corrosion resistance.
Application: Electrical installations in general (residential, building, industrial). Circuits up to 90°C and 750V.
Material: Electrolytic copper and polypropylene insulation.
Finish: Tin plated and insulated.
Application Tool: AT-10 or ATC-6.

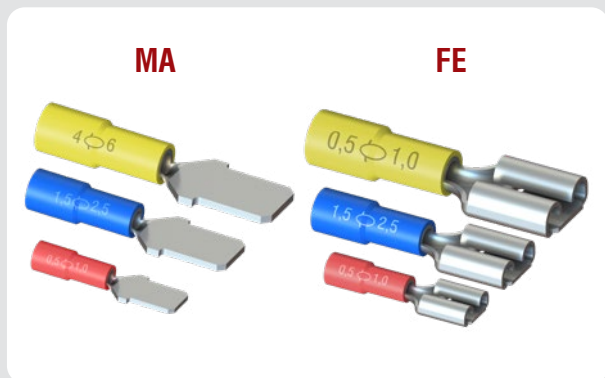


INTELLI code*	Insulation per DIN Standard (Color)	Conductors		Dimensions (mm)					Maximum current (A)
		AWG	mm ²	L	A	A1	ØC	F	
TPF-1,5-3	RED	22 - 16	0.5 - 1.5	6.5	20.0	14.5	5.7	3.3	19
TPF-1,5-4	RED	22 - 16	0.5 - 1.5	6.5	20.0	14.5	5.7	4.3	19
TPF-1,5-5	RED	22 - 16	0.5 - 1.5	8.0	20.0	14.5	5.7	5.2	19
TPF-2,5-3	BLUE	16 - 14	1.5 - 2.5	6.5	21.5	16.0	6.0	3.3	27
TPF-2,5-4	BLUE	16 - 14	1.5 - 2.5	6.5	21.5	16.0	6.0	4.3	27
TPF-2,5-5	BLUE	16 - 14	1.5 - 2.5	8.0	21.5	16.0	6.0	5.2	27
TPF-6-3	YELLOW	12 - 10	4 - 6	7.5	26.0	20.0	7.6	3.3	48
TPF-6-4	YELLOW	12 - 10	4 - 6	7.5	26.0	20.0	7.6	4.3	48
TPF-6-5	YELLOW	12 - 10	4 - 6	8.0	26.0	20.0	7.6	5.2	48

* Also available in non-insulated version (add "1" at the end of the code).

5.5. MALE / FEMALE QUICK DISCONNECT TYPE TERMINALS

MA/FE MALE/FEMALE QUICK DISCONNECT TYPE PRE-INSULATED TERMINALS



Purpose: Connection / disconnection of rigid or flexible copper cables.

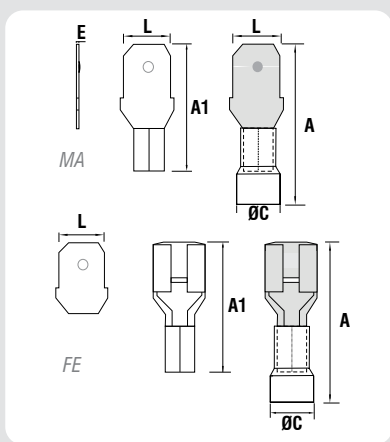
Characteristics: Compression connection. High electrical conductivity and corrosion resistance.

Application: Electrical installations in general (residential, building, industrial). Circuits up to 70°C and 750V.

Material: Electrolytic copper and polypropylene insulation.

Finish: Tin plated and insulated.

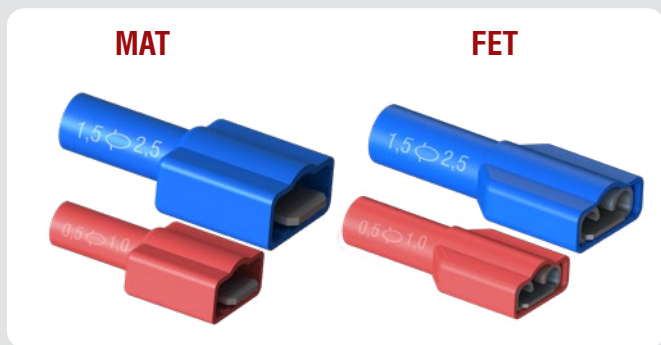
Application Tool: AT-10 or ATC-6.



INTELLI code*	Insulation per DIN Standard (Color)	Conductors		Dimensions (mm)					Maximum current (A)
		AWG	mm ²	L	A	A1	ØC	E	
MA-1,5-6	RED	22 - 18	0.5 - 1.0	6.4	25.0	19.0	5.7	0.8	10
MA-2,5-6	BLUE	16 - 14	1.5 - 2.5	6.4	25.0	19.0	6.1	0.8	15
MA-6-6	YELLOW	12 - 10	4.0 - 6.0	6.4	25.0	19.0	7.5	1.0	24
FE-1,5-6	RED	22 - 18	0.5 - 1.0	6.4	24.0	18.0	4.8	0.8	10
FE-2,5-6	BLUE	16 - 14	1.5 - 2.5	6.4	24.0	18.0	5.3	0.8	15
FE-6-6	YELLOW	12 - 10	4 - 6	6.4	24.0	18.0	6.3	1.0	24

* Also available in non-insulated version (add "1" at the end of the code).

MAT/FET MALE/FEMALE QUICK DISCONNECT TYPE TERMINALS WITH TOTAL INSULATION



Purpose: Connection / disconnection of rigid or flexible copper cables.

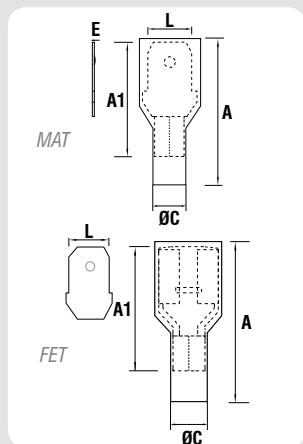
Characteristics: Compression connection. High electrical conductivity and corrosion resistance.

Application: Electrical installations in general (residential, building, industrial). Circuits up to 90°C and 750V.

Material: Electrolytic copper and polypropylene insulation.

Finish: Tin plated and insulated.

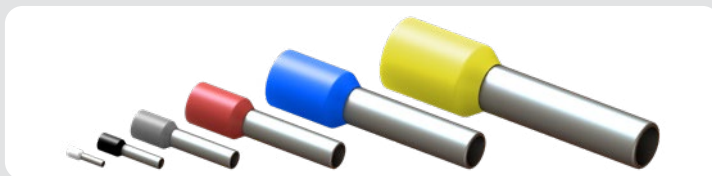
Application Tool: AT-10 or ATC-6.



INTELLI code	Insulation per DIN Standard (Color)	Conductors		Dimensions (mm)					Maximum current (A)
		AWG	mm ²	L	A	A1	ØC	E	
MAT-1,5-6	RED	22 - 18	0.5 - 1.0	6.4	25.0	19.0	5.5	0.8	10
MAT-2,5-6	BLUE	16 - 14	1.5 - 2.5	6.4	25.0	20.0	5.5	0.8	15
FET-1,5-6	RED	22 - 18	0.5 - 1.0	6.4	24.0	18.5	4.9	0.8	10
FET-2,5-6	BLUE	16 - 14	1.5 - 2.5	6.4	24.0	18.5	4.9	0.8	15

5.6. EYELET TYPE

TI EYELET TYPE PRE-INSULATED TERMINALS



Purpose: Termination of rigid or flexible copper cables for terminal blocks.

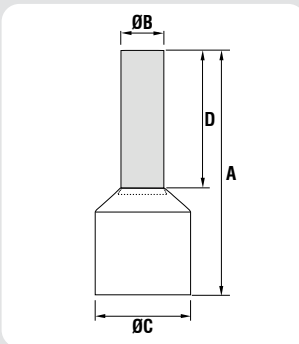
Characteristics: Compression connection. High electrical conductivity and corrosion resistance.

Application: Electrical installations in general (residential, building, industrial). Circuits up to 105°C and 750V.

Material: Electrolytic copper and nylon insulation.

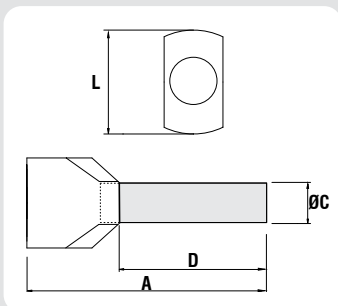
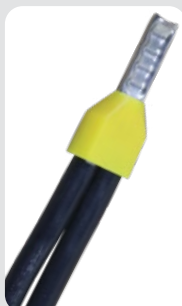
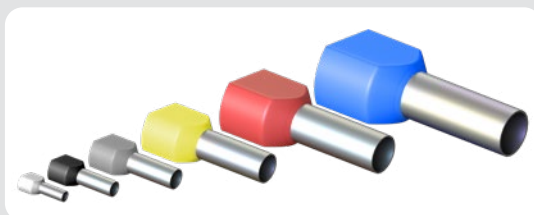
Finish: Tin plated and insulated.

Application Tool: ATI-25, ATIC-6 or ATIC-35.



INTELLI code	Insulation per DIN Standard (Color)	Conductors		Dimensions (mm)				Maximum current (A)
		AWG / MCM	mm ²	A	ØC	ØB	D	
TI-0,5-8	WHITE	22	0.50	14.0	3.4	1.3	8.0	9
TI-0,75-8	GREY	20	0.75	14.3	3.4	1.5	8.0	12
TI-1-8	RED	18	1.0	14.3	3.6	1.7	8.0	17
TI-1,5-8	BLACK	16	1.5	14.3	4.0	2.0	8.0	18
TI-2,5-8	BLUE	14	2.5	15.4	4.8	2.6	8.0	30
TI-2,5-10	BLUE	14	2.5	17.4	4.8	2.6	10.0	30
TI-4-12	GREY	12	4	19.4	5.5	3.2	12.0	35
TI-6-12	YELLOW	10	6	20.5	7.0	3.9	12.0	50
TI-6-22	YELLOW	10	6	30.0	7.0	3.9	22.0	50
TI-10-12	RED	8	10	20.8	8.5	4.9	12.0	70
TI-10-18	RED	8	10	26.8	8.5	4.9	18.0	70
TI-10-22	RED	8	10	31.0	8.5	4.9	22.0	70
TI-16-12	BLUE	6	16	22.0	9.8	6.2	12.0	95
TI-16-18	BLUE	6	16	28.0	9.8	6.2	18.0	95
TI-16-22	BLUE	6	16	31.7	9.8	6.2	22.0	95
TI-25-16	YELLOW	4	25	28.0	12.0	7.9	16.0	125
TI-25-22	YELLOW	4	25	34.0	12.0	7.9	22.0	125
TI-35-16	RED	2	35	30.0	13.5	8.7	16.0	170
TI-35-25	RED	2	35	39.0	13.5	8.7	25.0	170
TI-50-20	BLUE	1/0	50	36.0	16.0	10.9	20.0	230
TI-50-25	BLUE	1/0	50	41.0	16.0	10.9	25.0	230
TI-70-20	YELLOW	2/0	70	37.0	17.0	14.3	20.0	265
TI-70-25	YELLOW	2/0	70	42.0	17.0	14.3	25.0	265
TI-95-25	RED	3/0	95	44.0	19.5	15.3	25.0	310
TI-120-27	BLUE	4/0	120	47.6	22.0	17.5	27.0	360
TI-150-32	YELLOW	250 - 300	150	57.6	25.0	20.6	32.0	405

TID DOBLE EYELET TYPE PRE-INSULATED TERMINALS



Purpose: Termination of rigid or flexible copper cables for terminal blocks. Recommended for application of two conductors.

Characteristics: Compression connection. High electrical conductivity and corrosion resistance.

Application: Electrical installations in general (residential, building, industrial). Circuits up to 105°C and 750V.

Material: Electrolytic copper and nylon insulation.

Finish: Tin plated and insulated.

Application Tool: ATIC-6 (TID-0,5 to TID-4) or ATIC-35 (TID-6 to TID-16).

INTELLI code	Insulation per DIN Standard (Color)	Conductors		Dimensions (mm)				Maximum current (A)
		AWG	mm ²	L	A	ØC	D	
TID-0,5-8	WHITE	2x 22	2x 0.5	5.7	14.5	1.8	8.0	9
TID-0,75-8	GREY	2x 20	2x 0.75	6.4	14.7	2.1	8.0	12
TID-1-8	RED	2x 18	2x 1.0	6.5	15.1	2.3	8.0	17
TID-1,5-8	BLACK	2x 16	2x 1.5	7.2	15.5	2.6	8.0	18
TID-2,5-10	BLUE	2x 14	2x 2.5	9.0	18.5	3.3	10.0	30
TID-4-12	GREY	2x 12	2x 4	9.3	23.1	4.2	12.0	35
TID-6-14	YELLOW	2x 10	2x 6	11.0	26.1	5.3	14.0	50
TID-10-14	RED	2x 8	2x 10	13.8	26.6	6.9	14.0	70
TID-16-14	BLUE	2x 6	2x 16	19.5	31.3	8.7	14.0	95

6. CONNECTORS

6. CONNECTORS.....	62
6.1. COMPRESSION CONNECTORS.....	63
6.2. WEDGE TYPE CONNECTORS.....	65
6.3. CONNECTORS WITH STIRRUP.....	70
6.4. STIRRUPS FOR CONNECTORS.....	73
6.5. INSULATED PIERCING CONNECTORS.....	73
6.6. SPLIT BOLT CONNECTORS.....	76
6.7. SERVICE POST CONNECTORS.....	78
6.8. ACCESSORIES FOR CONNECTORS.....	80

6.1. COMPRESSION CONNECTORS

CAL ALUMINUM COMPRESSION C TYPE CONNECTOR

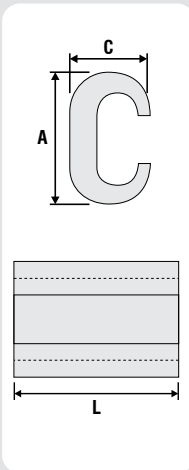


Purpose: Aluminum CA or CAA cable tap. Suitable for aluminum-aluminum connections.

Characteristics: Compression connection. High electrical conductivity and resistance to corrosion.

Application: Power distribution lines.

Material: Extruded aluminum, Supplied with antioxidant compound INTELTRON.



INTELLI code	Conductors						Dimensions (mm)			Application Tools			
	Run			Tap						AT-60		AY-96 / CY-96	
	CA (AWG)	CAA (AWG)	Diameter (mm)	CA (AWG)	CAA (AWG)	Diameter (mm)	L	A	C	Die	Comp. No.	Die	Comp. No.
CAL-32 A 32	4	6	5.1 - 5.9	8 - 4	6	3.7 - 5.9	32.0	19.0	13.4	IW-BG	2	IU-BG	2
CAL-38 A 38	2	4 - 2	6.3 - 8.0	6 - 2	6 - 2	4.6 - 8.0	38.0	24.8	16.0	IW-C	4	IU-C	2
CAL-44 A 38	1/0	1/0	9.3 - 10.1	6 - 2	6 - 2	4.6 - 8.0	57.0	29.0	15.6	IW-C	6	IU-C	3
CAL-44 A 44	1/0 - 2/0	1/0	9.3 - 10.5	1/0 - 2/0	1/0	9.3 - 10.5	45.0	34.0	20.0	IW-Q	6	IU-Q	2
CAL-60 A 44	3/0 - 4/0	3/0 - 4/0	11.8 - 14.3	1/0	1/0	9.3 - 10.1	70.0	42.0	25.2	-	-	IU-H	3
CAL-60 A 60	3/0 - 4/0	3/0	11.8 - 13.3	3/0 - 4/0	3/0	11.8 - 13.3	70.0	42.0	25.0	-	-	IU-H	3

CAC ALUMINUM COMPRESSION CONNECTOR

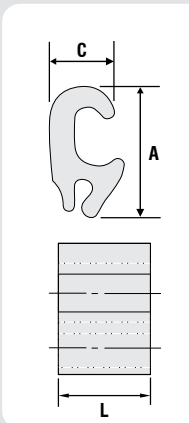


Purpose: To aluminum CA, CAA or copper cables tap connector. Suitable for aluminum-aluminum and aluminum-copper connections.

Characteristics: Compression connection. High electrical conductivity and corrosion resistance. Connection keeps the conductors separate to minimize the effects of galvanic corrosion, enabling a bimetallic connection.

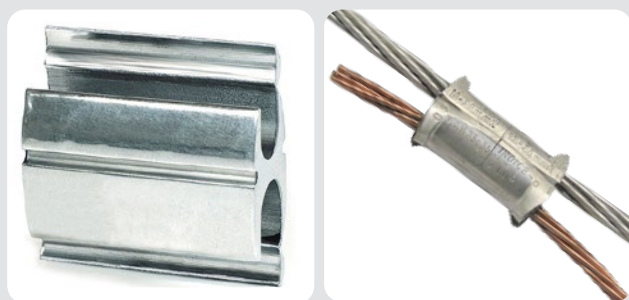
Application: Power distribution lines.

Material: Extruded aluminum, Supplied with antioxidant compound INTELTRON.



INTELLI code	Conductors						Dimensions (mm)			Application Tools			
	Run			Tap						AT-60		AY-96 / CY-96	
	CA/Cu (AWG)	CAA (AWG)	Diameter (mm)	CA/Cu (AWG)	CAA (AWG)	Diameter (mm)	L	A	C	Die	Comp. No.	Die	Comp. No.
CAC-38 A 24	6 - 2	6 - 4	4.6 - 7.4	Wire 14 - 8	-	1.6 - 3.7	18.0	25.0	13.0	IW-BG	2	IU-BG	1
CAC-40 A 40	4 - 1	6 - 2	5.1 - 8.1	Wire 6 - 1	6 - 2	4.1 - 8.3	48.0	44.0	19.6	-	-	IU-D3	2
CAC-49 A 24	Wire 1 - 2/0	2 - 2/0	7.3 - 11.3	Wire 14 - 8	-	1.6 - 3.7	19.0	33.0	18.0	IW-O	2	IU-O	1
CAC-60 A 38	1/0 - 4/0	1/0 - 4/0	9.3 - 14.3	Wire 6 - 1/0	6 - 2	4.1 - 9.3	54.0	52.4	24.4	-	-	IU-H	2
CAC-60 A 49	1/0 - 4/0	1/0 - 4/0	9.3 - 14.3	Wire 6 - 2/0	6 - 1/0	4.1 - 10.6	54.0	53.0	26.0	-	-	IU-H	2

CAH ALUMINUM COMPRESSION CONNECTOR - "H" TYPE

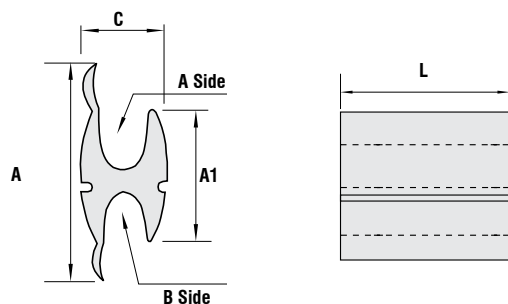


Purpose: Aluminum CA, CAA or copper cables tap connector. Suitable for aluminum-aluminum and aluminum-copper connections.

Characteristics: Compression connection. High electrical conductivity and corrosion resistance. Connection keeps the conductors separate to minimize the effects of galvanic corrosion, enabling a bimetallic connection.

Application: Power distribution lines.

Material: Extruded aluminum, Supplied with antioxiide compound INTELTROX.



INTELLI code	Conductors						Dimensions (mm)				Application Tools			
	Run			Tap							AT-60		AY-96 / CY-96	
	CA/Cu	CAA	Diameter (mm)	CA/Cu	CAA	Diameter (mm)	L	A	A1	C	Die	Nº Comp.	Die	Nº Comp.
CAH-16 A 16	Wire 10 - 6 AWG 6 - 16mm ²	6	2.6 - 5.1	Wire 10 - 6 AWG 6 - 16 mm ²	6	2.6 - 5.1	32.0	28.3	19.0	13.0	IW-BG	5	IU-BG	2
CAH-35 A 10	4 - 2 AWG 25 - 35mm ²	2	5.9 - 8.0	16 - 8 AWG 1.5 - 10 mm ²	8	1.46 - 4.08	20.0	40.0	28.0	17.0	IW-O	2	IU-O	1
CAH-35 A 25	Wire 6 - 1 AWG 10 - 35mm ²	6 - 2	4 - 8.3	Wire 6 - 4 AWG 10 - 35 mm ²	6 - 4	3.6 - 6.4	40.0	36.5	24.0	15.0	IW-C	7	IU-C	2
CAH-35 A 35	6 - 1 AWG 16 - 35mm ²	6 - 2	4.5 - 8.3	6 - 1 AWG 16 - 35 mm ²	6 - 2	4.5 - 8.3	38.0	44.1	28.0	18.0	IW-O	4	IU-O	2
CAH-58 A 35	1/0 - 3/0 AWG 50 - 70mm ²	1/0 - 2/0	8.9 - 11.8	6 - 1 AWG 16 - 35 mm ²	6 - 2	4.5 - 8.3	48.0	53.8	36.0	23.0	IW-D3	5	IU-D3	2
CAH-70 A 35	3 - 2/0 AWG 25 - 70mm ²	3 - 1/0	5.6 - 10.7	6 - 1 AWG 16 - 35 mm ²	6 - 2	4.5 - 8.3	44.0	47.1	29.0	18.0	IW-O	5	IU-O	2
CAH-95 A 95	1/0 - 3/0 AWG 50 - 95mm ²	1/0 - 2/0	9.4 - 11.8	1/0 - 3/0 AWG 50 - 95mm ²	1/0 - 2/0	9.4 - 11.8	48.0	55.2	36.0	24.0	IW-D3	5	IU-D3	2
CAH-120 A 10	2/0 - 4/0 AWG 70 - 120mm ²	2/0 - 4/0	10.6 - 14.5	16 - 8 AWG 1.5 - 10 mm ²	-	1.46 - 4.08	36.0	52.9	36.0	23.0	IW-D3	4	IU-D3	1
CAH-120 A 70	1/0 - 4/0 AWG 50 - 120mm ²	1/0 - 4/0	8.9 - 14.3	1/0 - 3/0 AWG 50 - 70 mm ²	1/0	8.9 - 11.8	63.0	57.6	36.0	22.0	IW-D3	7	IU-D3	2
CAH-120 A 120	1/0 - 4/0 AWG 50 - 120mm ²	1/0 - 4/0	8.9 - 14.3	1/0 - 4/0 50 - 120 mm ²	1/0 - 4/0	8.9 - 14.3	63.0	62.8	35.0	22.0	IW-D3	6	IU-D3	2
CAH-240 A 70	4/0 AWG - 500 MCM 120 - 240 mm ²	4/0 - 397.5	13.2 - 20.6	6 - 3/0 AWG 16 - 70 mm ²	6 - 2/0	4.5 - 11.8	50.0	72.4	49.6	31.9	-	-	IU-N	2
CAH-240 A 120	4/0 AWG - 500 MCM 120 - 240mm ²	4/0 - 397.5	13.2 - 20.6	1/0 - 4/0 AWG 50 - 120 mm ²	1/0 - 4/0	8.9 - 14.3	51.0	75.0	50.0	32.0	-	-	IU-N	2
CAH-240 A 240	4/0 AWG - 500 MCM 120 - 240mm ²	4/0 - 397.5	13.2 - 20.6	4/0 - 500 AWG 120 - 240mm ²	4/0 - 397.5	13.2 - 20.6	89.0	81.0	50.0	31.0	-	-	IU-N	3

CDC Asymmetric ASYMMETRIC WEDGE CONNECTOR



Purpose: Copper or aluminum CA and CAA cable tap. Suitable for copper-copper, copper-aluminum and aluminum-copper connections.

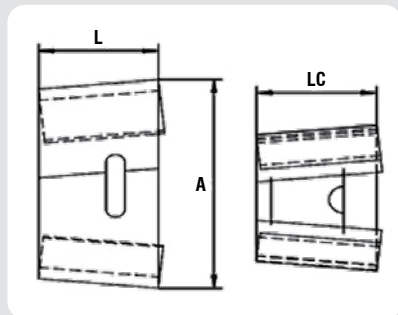
Characteristics: Spring system connection (permanent tightening). High electrical conductivity and corrosion resistance.

Application: Power distribution lines.

Material: Copper alloy. Supplied with antioxidant compound INTELTRÖX.

Finish: Tin plated.

Application Tool: 12" water pump plier.



INTELLI code	Type	Reference Color	Selection per diameter						Dimensions (mm)		
			Run (mm)		Tap (mm)		Sum of conductors (mm)		L	A	LC
			Min.	Max.	Min.	Max.	Min.	Max.			
CDC-A-Vi	A	PURPLE	5.60	9.36	1.74	5.10	9.10	10.95			40.7
CDC-B-La	B	ORANGE	6.20	9.36	1.74	5.10	10.95	13.11			42.6
CDC-C-Ma	C	BROWN	8.20	12.74	1.74	5.10	13.11	14.75			44.5
CDC-D-Br	D	WHITE	9.50	12.74	1.74	5.10	14.75	17.00			46.0
CDC-F-VdAz	F	GREEN / BLUE	5.60	8.33	1.74	5.10	7.20	9.10	19.0	39.0	19.0
CDC-G-ViAz	G	PURPLE / BLUE	5.60	8.33	1.36	1.73	7.20	9.10			39.0
CDC-H-LaAz	H	ORANGE / BLUE	5.60	9.36	1.36	1.73	9.10	10.95			39.2
CDC-J-MaAz	J	BROWN / BLUE	9.34	11.10	1.74	5.10	10.95	13.11			42.8
CDC-K-BrAz	K	WHITE / BLUE	9.34	11.10	1.36	1.73	10.95	13.11			42.8
CDC-L-CiAz	L	GREY / BLUE	12.50	14.60	2.25	5.10	16.43	19.45	31.7	38.6	31.7

GENERAL SELECTION TABLE

RUN \ TAP	TAP																						
	1.5mm² Sol Ø1.38	1.5mm² Cable Ø1.63 / 14AWG Sol	2.5mm² Sol Ø1.78	14AWG Cable Ø1.84	2.5mm² Cable Ø2.05 / 12AWG Sol	4mm² Sol Ø2.24	12AWG Cable Ø2.32	4mm² Cable Ø2.59 / 10AWG Sol	6mm² Sol Ø2.80	10AWG Cable Ø2.95	6mm² Cable Ø3.10	8AWG Sol Ø3.26	10mm² Sol Ø3.55	8AWG Cable Ø3.71	8AWG ACSR Ø3.99	10mm² Cable Ø4.08	6AWG Sol Ø4.11	16mm² Sol Ø4.50	6AWG Cable Ø4.65	6AWG ACSR Ø5.04	16mm² Cable Ø5.10		
25mm² Sol Ø5.60																							
4 AWG Cable Ø5.88																							
25mm² Cable Ø6.18																							
4 AWG ACSR Ø6.36																							
2 AWG Sol Ø6.54																							
35mm² Sol Ø6.70																							
2 AWG Cable Ø7.42																							
35mm² Cable Ø7.50																							
2 AWG ACSR Ø8.01 / 50mm² Sol																							
1/0 AWG Sol Ø8.25																							
50mm² Cable Ø9.00																							
2/0 AWG Sol Ø9.27																							
1/0 AWG Cable Ø9.36																							
70mm² Sol Ø9.50																							
1/0 AWG ACSR Ø10.11																							
3/0 AWG Sol Ø10.40																							
2/0 AWG Cable Ø10.60 / 70mm² Cable																							
95mm² Sol Ø11.00																							
2/0 AWG ACSR Ø11.35																							
4/0 AWG Sol Ø11.70																							
3/0 AWG Cable Ø11.80																							
95mm² Cable Ø12.50																							
3/0 AWG ACSR Ø12.74																							
4/0 AWG Cable Ø13.26																							
4/0 AWG ACSR Ø14.31																							
120mm² Cable Ø14.50																							

*Sol: Solid Wire *ACSR: Aluminum Conductors with Steel Core.

CADC ALUMINUM WEDGE TYPE CONNECTOR



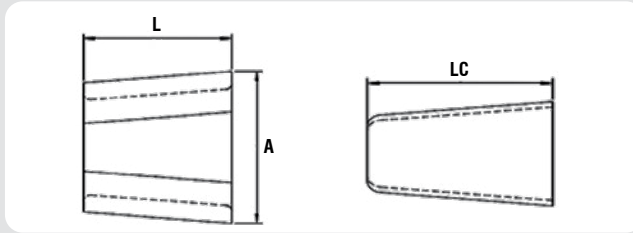
Purpose: CA or CAA aluminum and copper cables tap. Suitable for aluminum-aluminum and aluminum-copper connections.

Characteristics: Spring system connection (permanent tightening). High electrical conductivity and corrosion resistance.

Application: Power distribution lines.

Material: Aluminum alloy body and wedge. Supplied with antioxidant compound **INTELTRONX**.

Application Tool: Impact tool with cartridge for wedge connector.



INTELLI code	Application Cartridge Color	Conductors								Dimensions (mm)				
		Run				Tap				Sum of Conductors		L	A	LC
		Min. (mm)	Max. (mm)	AWG/MCM		Min. (mm)	Max. (mm)	AWG/MCM		Min. (mm)	Max. (mm)			
SERIE 100														
CADC-101	RED	6.53	10.11	1/0		6.53	10.11	2		14.81	18.39	31.7	39.5	38.0
CADC-102		6.53	10.11	2 1/0		4.11	6.55	4 6		11.79	15.29			
CADC-103		6.53	10.11	2 1/0		5.18	8.38	2 4		13.08	16.66			
CADC-104		4.11	6.55	6 4		4.11	5.84	6 6		8.41	11.81			
CADC-105		5.18	8.38	4 2		4.11	6.55	4 6		10.41	13.46			
SERIE 200														
CADC-20A	BLUE	8.23	14.53	2/0 3/0		4.11	7.60	6 6		13.36	17.18	41.5	64.5	51.0
CADC-20B		8.23	14.53	1/0 2/0 2/0 2/0 2/0 3/0 3/0 4/0 4/0	4.11	11.79	1/0 4 2 1/0 2/0 4 2 6 4	15.90	22.32					
CADC-208		9.25	14.53	2/0 3/0 3/0 3/0 4/0 4/0 4/0	6.55	14.53	2/0 1/0 2/0 3/0 2 1/0 2/0	20.67	25.66					
CADC-211		9.25	14.53	4/0 4/0		9.25	14.53	3/0 4/0		24.86	28.70			
SERIE 300														
CADC-30A	BLUE	15.24	17.37	266.8 266.8 336.4 336.4	4.11	12.70	6 4 6 4		18.75	22.76	50.0	65.5	54.0	
CADC-313		15.24	17.37	266.8 266.8 266.8 336.4 336.4	6.55	14.20	2 1/0 2/0 2 1/0		22.77	27.01				
CADC-316		15.24	17.37	266.8 266.8 266.8 336.4 336.4 336.4	8.23	15.24	3/0 4/0 266.8 2/0 3/0 4/0	27.02	31.22					
CADC-317		15.24	17.37	336.4 336.4		11.68	17.37	266.8 336.4		31.21				34.75
SERIE 350														
CADC-35B	BLUE	16.90	18.30	336.4* 336.4* 336.4*		7.42	11.35	2 1/0 2/0		25.71	29.64	50.0	70.2	54.0
CADC-351		16.90	18.30	336.4* 336.4*		11.80	14.31	3/0 4/0		30.10	32.60			
CADC-352		16.30	18.50	336.4* 336.4* 336.4*		15.00	18.50	266.8 336.4 336.4*		32.50	37.00			
SERIE 400														
CADC-401	YELLOW	13.31	19.05	336.4* 336.4*		13.31	19.05	266.8 336.4*		31.75	36.99	75.7	90.5	88.7
CADC-403		13.31	19.05	336.4* 336.4 336.4 336.4*		11.68	16.00	1/0 2/0 3/0 4/0		27.70	32.95			
CADC-407		13.31	19.05	336.4* 336.4*		6.53	9.02	4 2		21.84	27.08			
CADC-409		13.31	19.05	336.4*		4.11	5.18	6		19.43	24.67			
SERIE 500														
CADC-501	YELLOW	18.34	24.13	556.5* 556.5*		18.34	24.13	477 556.5		42.98	47.09	76.0	98.7	88.8
CADC-502		16.92	24.21	397.5* 477* 477* 556.5* 556.5*		16.92	23.88	397.5 397.5 477 336.4 397.5	38.56	45.00				
CADC-503		16.92	23.88	397.5* 477* 556.5*		14.55	19.05	397.5 477 266.8		34.70	40.31			
CADC-504		16.92	23.88	397.5* 477* 556.5*		10.51	19.05	266.8 266.8 4/0		31.98	38.03			
CADC-505		16.92	23.88	397.5* 397.5* 477* 477* 477* 556.5* 556.5* 556.5*		11.07	16.51	3/0 4/0 2/0 3/0 4/0 1/0 2/0 3/0	30.89	36.09				
CADC-508		16.92	23.88	397.5* 477* 556.5*		5.88	11.35	1/0 1/0 2		28.27	32.53			
CADC-510		16.92	23.88	397.5* 477*		6.53	8.28	2 2		25.27	30.10			

*Aluminum Conductors with steel core. (CAA/ACSR-AW).

SELECTION TABLE AWG / MCM

RUN / TAP		Cable Gauge (AWG/MCM) CA / CAL / Cu (AAC / AAAC / Cu)									
		336.4 CAA	336.4 CA	266.8	4/0	3/0	2/0	1/0	2	4	6
Cable Gauge (AWG/MCM) CA / CAL / Cu (AAC / AAAC / Cu)	6		CADC-30A	CADC-30A	CADC-20B	CADC-20A	CADC-20A	CADC-102	CADC-105	CADC-104	CADC-104
	4		CADC-30A	CADC-30A	CADC-20B	CADC-20B	CADC-20B	CADC-103	CADC-102	CADC-105	
	2	CADC-35B	CADC-313	CADC-313	CADC-208	CADC-20B	CADC-20B	CADC-101 *	CADC-103		
	1/0	CADC-35B	CADC-313	CADC-313	CADC-208	CADC-208	CADC-20B	CADC-20B			
	2/0	CADC-35B	CADC-316	CADC-313	CADC-208	CADC-208	CADC-208				
	3/0	CADC-351	CADC-316	CADC-316	CADC-211	CADC-208					
	4/0	CADC-351	CADC-316	CADC-316	CADC-211						
	266.8	CADC-352	CADC-317	CADC-316							
	336.4 CA	CADC-352	CADC-317								
	336.4 CAA	CADC-352									

*Alternative: CADC-20B.

SELECTION TABLE mm² (comp.) x mm² (comp.)

RUN / TAP		Cable Gauge (mm ²) CA (Insulated - Compact)									
		240	185	150	120	95	70	50	35	25	16
Cable Gauge (mm ²) CA (Insulated - Compact)	16	CADC-409	CADC-30A	CADC-20B	CADC-20B	CADC-20A	CADC-20A	CADC-105	CADC-105	CADC-104	CADC-104
	25	CADC-407	CADC-30A	CADC-20B	CADC-20B	CADC-20B	CADC-20A	CADC-102	CADC-102	CADC-105	
	35	CADC-407	CADC-313	CADC-20B	CADC-20B	CADC-20B	CADC-20A	CADC-103	CADC-103		
	50	CADC-407	CADC-313	CADC-208	CADC-20B	CADC-20B	CADC-20B	CADC-101			
	70	CADC-403	CADC-313	CADC-208	CADC-208	CADC-20B	CADC-20B				
	95	CADC-403	CADC-316	CADC-211	CADC-208	CADC-208					
	120	CADC-403	CADC-316	CADC-211	CADC-211						
	150	CADC-401	CADC-316	*CADC-211							
	185	CADC-401	CADC-317								
	240	CADC-401									

*Alternative: CADC-316

SELECTION TABLE AWG / MCM

RUN / TAP		Cable Gauge (AWG/MCM) CAA / ACSR				
		556.5	477	397.5	336.4	
Cable Gauge (AWG/MCM)	CA / CAA / Cu	6				CADC-409
		4				CADC-407
		2	CADC-508	CADC-510	CADC-510	CADC-407
		1/0	CADC-505	CADC-508	CADC-508	CADC-403
		2/0	CADC-505	CADC-505	CADC-505	CADC-403
		3/0	CADC-505	CADC-505	CADC-505	CADC-403
	CAA / ACSR	4/0	CADC-504	CADC-505	CADC-505	CADC-403
		266.8	CADC-503	CADC-504	CADC-504	CADC-401
		336.4	CADC-502	CADC-503	CADC-503	CADC-401
		397.5	CADC-502	CADC-502	CADC-502	
		477	CADC-501	CADC-502		
		556.5	CADC-501			

SELECTION TABLE AWG / MCM

RUN / TAP		Cable Gauge (AWG/MCM)									
		CA / CAL / Cu (AAC / AAAC / Cu)									
		336.4 CAA	336.4 CA	266.8	4/0	3/0	2/0	1/0	2	4	6
Cable Gauge (AWG/MCM) CA / CAL / Cu (AAC / AAAC / Cu)	6		CADC-30A	CADC-30A	CADC-20B	CADC-20A	CADC-20A	CADC-102	CADC-105	CADC-104	CADC-104
	4		CADC-30A	CADC-30A	CADC-20B	CADC-20B	CADC-20B	CADC-103	CADC-102	CADC-105	
	2	CADC-35B	CADC-313	CADC-313	CADC-208	CADC-20B	CADC-20B	CADC-101 *	CADC-103		
	1/0	CADC-35B	CADC-313	CADC-313	CADC-208	CADC-208	CADC-20B	CADC-20B			
	2/0	CADC-35B	CADC-316	CADC-313	CADC-208	CADC-208	CADC-208				
	3/0	CADC-351	CADC-316	CADC-316	CADC-211	CADC-208					
	4/0	CADC-351	CADC-316	CADC-316	CADC-211						
	266.8	CADC-352	CADC-317	CADC-316							
	336.4 CA	CADC-352	CADC-317								
	336.4 CAA	CADC-352									

*Alternative: CADC-20B.

SELECTION TABLE mm² (comp.) x mm² (comp.)

RUN / TAP		Cable Gauge (mm ²)									
		CA (Insulated - Compact)									
		240	185	150	120	95	70	50	35	25	16
Cable Gauge (mm ²) CA (Insulated - Compact)	16	CADC-409	CADC-30A	CADC-20B	CADC-20B	CADC-20A	CADC-20A	CADC-105	CADC-105	CADC-104	CADC-104
	25	CADC-407	CADC-30A	CADC-20B	CADC-20B	CADC-20B	CADC-20A	CADC-102	CADC-102	CADC-105	
	35	CADC-407	CADC-313	CADC-20B	CADC-20B	CADC-20B	CADC-20A	CADC-103	CADC-103		
	50	CADC-407	CADC-313	CADC-208	CADC-20B	CADC-20B	CADC-20B	CADC-101			
	70	CADC-403	CADC-313	CADC-208	CADC-208	CADC-20B	CADC-20B				
	95	CADC-403	CADC-316	CADC-211	CADC-208	CADC-208					
	120	CADC-403	CADC-316	CADC-211	CADC-211						
	150	CADC-401	CADC-316	*CADC-211							
	185	CADC-401	CADC-317								
	240	CADC-401									

*Alternative: CADC-316

SELECTION TABLE AWG / MCM

RUN / TAP		Cable Gauge (AWG/MCM)				
		CAA / ACSR				
		556.5	477	397.5	336.4	
Cable Gauge (AWG/MCM)	CA / CAA / Cu	6				CADC-409
		4				CADC-407
		2	CADC-508	CADC-510	CADC-510	CADC-407
		1/0	CADC-505	CADC-508	CADC-508	CADC-403
		2/0	CADC-505	CADC-505	CADC-505	CADC-403
		3/0	CADC-505	CADC-505	CADC-505	CADC-403
		4/0	CADC-504	CADC-505	CADC-505	CADC-403
		266.8	CADC-503	CADC-504	CADC-504	CADC-401
	CAA / ACSR	336.4	CADC-502	CADC-503	CADC-503	CADC-401
		397.5	CADC-502	CADC-502	CADC-502	
477		CADC-501	CADC-502			
	556.5	CADC-501				

6.3. CONNECTORS WITH STIRRUP

CDCEL WEDGE TYPE TAP CONNECTOR WITH STIRRUP – side model



Purpose: Connection with copper, CA or CAA aluminum cables. Allows ing of up to four wedge types or compression connectors.

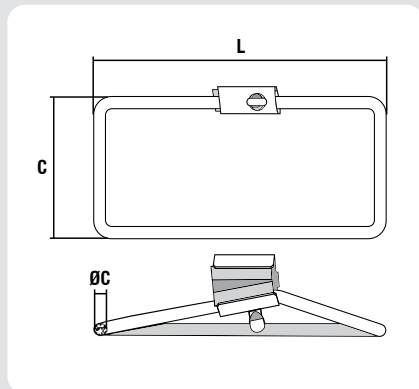
Characteristics: Spring system connection (permanent tightening). High electrical conductivity and resistance to corrosion.

Application: Power distribution lines.

Material: Copper alloy body and wedge and Electrolytic copper stirrup. Supplied with antioxide compound **INTELTROX**.

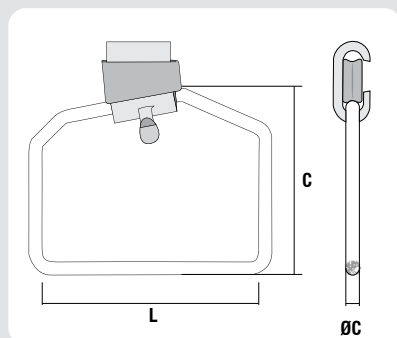
Finishing (Stirrup): Tin plated.

Application Tool: 12" water pump pliers.



INTELLI code	Conductors				Dimensions (mm)			
	Run		Stirrup	Sum of conductors (mm)		L	C	ØC
	AWG	mm ²	AWG	Min.	Max.			
CDCEL-I	6 - 2	16 - 35	2	10.65	14.01	156.0	76.0	6.5
CDCEL-VII	2 - 1/0	35 - 50	2	13.95	16.78			

CAEN ALUMIMUN WEDGE TYPE CONNECTOR WITH STIRRUP – standard model



Purpose: Connection with CA and CAA aluminum or copper cables. Enables ing of a hotline clamp, s of up to four wedge type or compression connector.

Characteristics: Spring system connection (permanent tightening). High electrical conductivity and corrosion resistance.

Application: Power distribution lines.

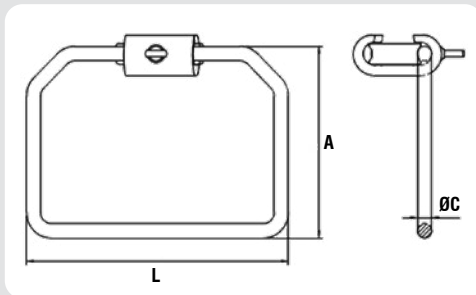
Material: Aluminum alloy body and wedge and stirrup in electrolytic copper. Supplied with antioxide compound **INTELTROX**.

Finishing (Stirrup): Tin plated.

INTELLI code	Application Cartridge Color	Conductors		Stirrup AWG	Dimensions (mm)		
		AWG/MCM	Type of Conductor		L	C	ØC
CAEN-105	RED	8 - 6	CA/CAA	2	121.0	92.0	6.5
CAEN-103	RED	4 - 2	CA/CAA	2	121.0	92.0	6.5
CAEN-20B	BLUE	1/0 - 4/0	CA/CAA	2	121.0	92.0	6.5
CAEN-312	BLUE	336.4	CA	2	121.0	92.0	6.5
CAEN-407	YELLOW	336.4 - 397.5*	CA/CAA	1/0	117.0	108.0	8.0

*Only 397.5 CA cable.

CAEL ALUMINUM WEDGE TYPE CONNECTOR WITH STIRRUP – side model



Purpose: Connection with copper, aluminum CA and CAA cables. Allows ing of up to four wedge types or compression connectors.

Characteristics: Spring system connection (permanent tightening). High electrical conductivity and corrosion resistance.

Application: Power distribution lines.

Material: Aluminum alloy body and wedge and stirrup in electrolytic copper. Supplied with antioxide compound **INTELTRIX**.

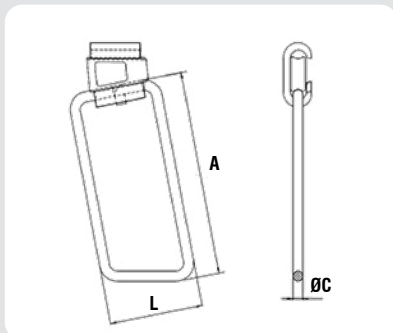
Finishing (Stirrup): Tin plated.

Application Tool: Impact tool with cartridge for wedge connector.

INTELLI code	Application Cartridge Color	Conductors		Stirrup AWG	Dimensions (mm)		
		AWG/MCM	Type of Conductor		L	A	ØC
CAEL-105	RED	8 - 6	CA/CAA	2	121.0	88.0	6.5
CAEL-103	RED	4 - 2	CA/CAA	2			
CAEL-20B	BLUE	1/0 - 4/0	CA/CAA	2			
CAEL-312	BLUE	336.4	CA	2			
CAEL-407	YELLOW	336.4 - 397.5*	CA/CAA	2			

*Only 397.5 CA Cable.

CAEP ALUMINUM WEDGE TYPE CONNECTOR WITH STIRRUP – protected line model



Purpose: Connection with copper, aluminum CA and CAA cables. Enables ing of a hotline clamp in 15kV protected networks.

Characteristics: Spring system connection (permanent tightening). High electrical conductivity and corrosion resistance.

Application: Power distribution lines.

Material: Aluminum alloy body and wedge and stirrup in electrolytic copper. Supplied with antioxide compound **INTELTRIX**.

Finishing (Stirrup): Tin plated.

Application Tool: Impact tool with cartridge for wedge connector.

INTELLI code	Application Cartridge Color	Conductors		Stirrup AWG	Dimensions (mm)		
		AWG/MCM	Type of Conductor		L	A	ØC
CAEP-105	RED	8 - 6	CA/CAA	2	60.0	140.0	6.5
CAEP-103	RED	4 - 2	CA/CAA	2			
CAEP-20B	BLUE	1/0 - 4/0	CA/CAA	2			
CAEP-312	BLUE	336.4	CA	2			
					78.0		

LEB ALUMINUM COMPRESSION CONNECTOR WITH STIRRUP



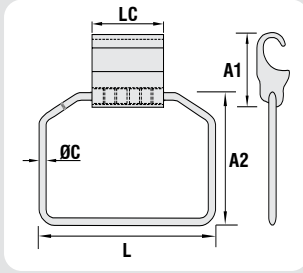
Purpose: Connection with CA or CAA aluminum cables. Enables ing of a hotline clamp, ing of up to four wedge type or compression connectors.

Characteristics: Compression connection. High electrical conductivity and corrosion resistance.

Application: Power distribution lines.

Material: Extruded aluminum body and stirrup in electrolytic copper. Supplied with antioxide compound INTELTRÖX.

Finishing (Stirrup): Tin plated.



INTELLI code	Conductors		Stirrup (AWG)	Dimensions (mm)					Application Tools (AY-96 / CY-96)	
	CA - Cu (AWG)	CAA (AWG)		L	LC	A1	A2	ØC	Die	Comp. No.
LEB-40	2 - 1	2	2	131.0	48.0	40.0	86.0	6.5	IU-D	2
LEB-60	1/0 - 4/0	1/0 - 4/0	2	131.0	54.0	48.0	86.0	6.5	IU-H	2

LCBF CAST ALUMINUM COMPRESSION CONNECTOR WITH STIRRUP



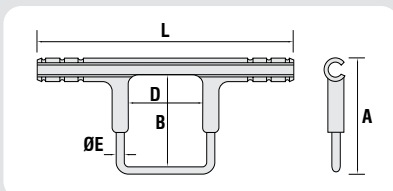
Purpose: Connection with CA, CAA aluminum cables. Enables ing of a hotline clamp or ing of up to four wedge type or compression connectors.

Characteristics: Compression connection. High electrical conductivity and corrosion resistance.

Application: Power distribution lines.

Material: Cast aluminum body and stirrup in electrolytic copper. Supplied with antioxide compound INTELTRÖX.

Finishing (Stirrup): Tin plated.



INTELLI code	Conductors CA/CAA (AWG)	Dimensions (mm)					Application Tools			
		L	A	B	D	ØE	AT-60		AY-96 / CY-96	
							Die	Comp. No.	Die	Comp. No.
LCBF-38	4 - 2	230.0	90.0	64.0	64.0	6.3	IW-BG	3	IU-BG	3
LCBF-44	1/0	248.0	113.0	89.0	64.0	6.3	IW-C	4	IU-C	2
LCBF-60	4/0	283.0	127.0	89.0	87.0	8.3	-	-	IU-L	2
LCBF-72	336.4	324.0	135.0	86.0	96.0	8.3	-	-	IU-M	3

AEB CAST ALUMINUM CONNECTOR WITH STIRRUP



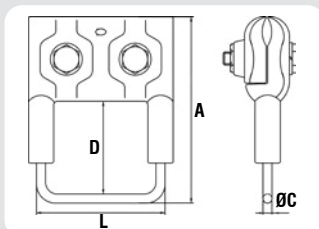
Purpose: Connection with CA, CAA aluminum cables. Enables ing of a hotline clamp.

Characteristics: Tightening connection. High electrical conductivity and corrosion resistance.

Application: Power distribution lines.

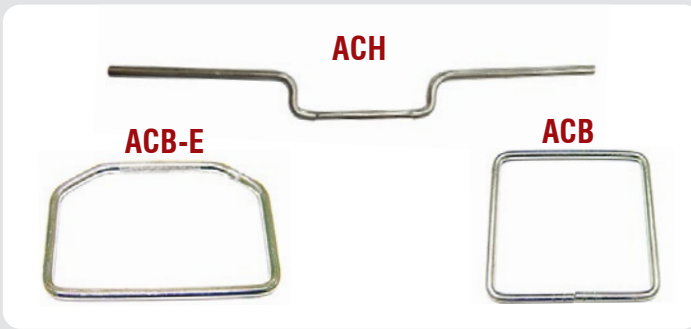
Material: Cast aluminum alloy body and stirrup in electrolytic copper.

Application Tool: Star or open ended wrench. **Finishing (Stirrup):** Tin plated.



INTELLI code	Conductors			Dimensions (mm)				Screw
	Run (AWG/MCM)	Conductor Type	Stirrup (AWG)	L	A	ØC	D	
AEB-38-1	10 - 2	CA	4	63.0	150.0	5.2	100.0	1x M10
AEB-44-2	4 - 1/0	CA / CAA	1/0	75.5	130.0	8.0	65.0	2x M10
AEB-88-2	2/0 - 477	CA / CAA	4/0	84.5	150.0	11.0	65.0	2x M10

6.4. STIRRUPS FOR CONNECTORS



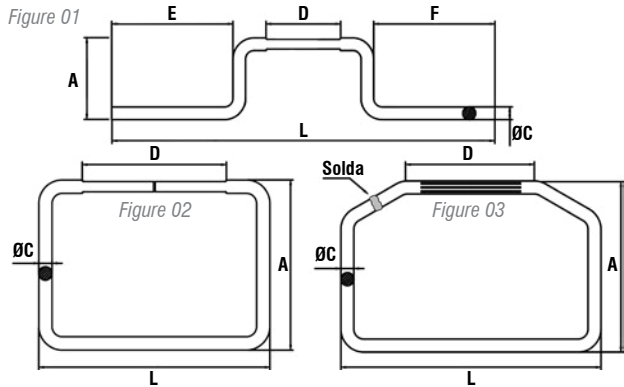
Purpose: Connection between CA, CAA aluminum or copper cables with wedge, compression and hotline clamp connector.

Characteristics: Connection can be by tightening, compression or spring system. High electrical conductivity and corrosion resistance. Stirrups designed for perfect adaptation with connectors / clamps such as CAH, CAC, CDC, CADC, GLV, among others.

Application: Power distribution lines.

Material: Electrolytic copper.

Finish: Tin plated



INTELLI code	Cross Section		Figure	Dimensions (mm)					
	AWG	mm ²		L	A	ØC	D	E	F
ACH-35	2	35	1	293.0	33.0	6.5	60.0	100.0	100.0
ACB-35	2	35	2	113.0	83.0	6.5	70.0	-	-
ACB-38-E	2	35	3	131.0	86.0	6.5	70.0	-	-
ACB-44	1/0	50	2	116.0	86.0	8.0	70.0	-	-
ACB-60	4/0	120	2	143.4	120.0	11.8	-	-	-

6.5. INSULATED PIERCING CONNECTORS

CDP PIERCING CONNECTOR



Purpose: Tap of Insulated Cables, suitable for combinations aluminum to aluminum, aluminum to copper and copper to copper in overhead power distribution lines (low voltage up to 1kV).

Characteristics: Insulation piercing connection (no stripping of cable insulation required). Used with 0.6/1kV XLPE/PE insulated aluminum cables or 450/750v PVC insulated cables (without cover). It has a fuse nut to ensure a perfect connection. It has elastomeric rubbers, making the connector watertight.

Application: Overhead insulated power distribution lines.

Material: Polymer connector resistant to weather and U.V. rays. Tin plated copper contacts.

Application Tool: Star or socket wrench.

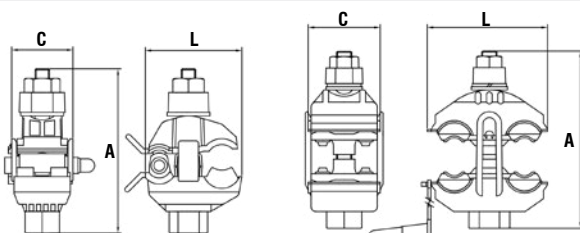
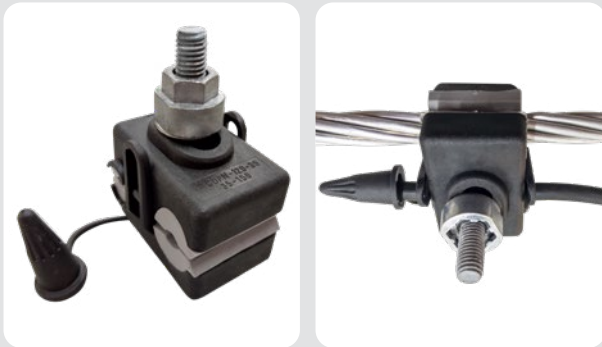


Figure 01

Figure 02

INTELLI code	Conductors				Figure	Dimensions (mm)		
	Run		Tap			L	A	C
	mm ²	AWG/MCM	mm ²	AWG/MCM				
CDP-6	10 - 120	8 - 4/0	1.5 - 6	16 - 10	1	40.0	65.0	23.0
CDP-70	10 - 95	8 - 3/0	1.5 - 10	16 - 8	1	40.0	65.0	23.0
CDP-150-10	10 - 185	8 - 336.4	1.5 - 10	16 - 8	1	40.0	65.0	23.0
CDP-16-120	16 - 120	6 - 4/0	16 - 120	6 - 4/0	2	55.0	84.8	27.0
CDP-120-35	16 - 150	6 - 300	4 - 35	12 - 2	2	47.0	72.0	31.0
CDP-150-35	10 - 150	8 - 300	4 - 35	12 - 2	2	40.0	72.0	47.0
CDP-120-120	25 - 150	4 - 300	25 - 150	4 - 300	2	60.0	87.0	33.0
CDP-240-240-S	50 - 240	1/0 - 477	50 - 240	1/0 - 477	2	60.0	93.0	35.5
CDP-240-240 (Dual)	70 - 240	2/0 - 477	70 - 240	2/0 - 477	-	60.0	93.0	82.0

CDPN PIERCING CONNECTOR FOR BARE NETWORK



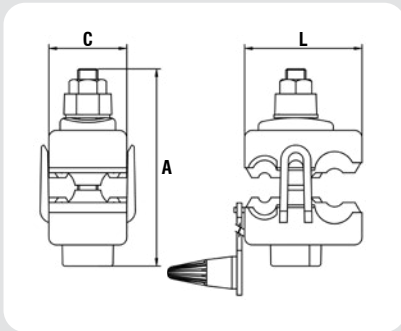
Purpose: Cables tapping. Suitable for connection to the main / trunk (bare line) and tap (insulated line). Suitable for aluminum to aluminum, aluminum to copper or copper to copper connections (low voltage up to 1kV).

Characteristics: Connection by piercing the insulation only on the tap side (there is no need to strip the cable insulation). It has a shear head nut to ensure a perfect application.

Application: OVERHEAD power distribution lines bare (run side) and insulated (tap side).

Material: Weatherproof polymer and U.V. connector, tin plated copper contacts.

Application Tool: Star or socket wrench.



INTELLI code	Conductors (CA/Cu)				Dimensions (mm)		
	Run (Bare Line)		Tap (Insulated Line)		L	A	C
	mm ²	AWG	mm ²	AWG			
CDPN-70	35 - 95	2 - 3/0	1.5 - 10	16 - 8	40.0	65.0	23.0
CDPN-120-35	25 - 120	4 - 4/0	4 - 35	12 - 2	47.0	72.0	31.0
CDPN-120-120	25 - 120	4 - 4/0	16 - 120	6 - 4/0	47.0	72.0	31.0

CDPF PIERCING CONNECTOR FOR FLEXIBLE CONDUCTORS



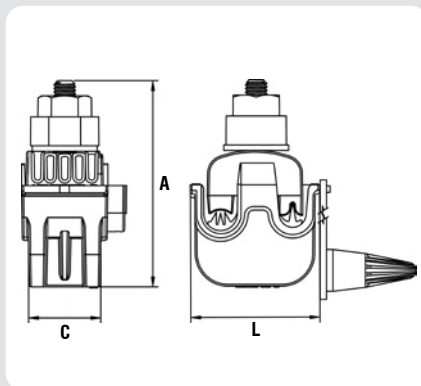
Purpose: Connection between the service entrance cable (flexible copper cable Class-4/5 - PVC insulation 450/750V - without covering) and the supply cable (multiplexed aluminum conductors - XLPE/PE 0.6/1kV - phase and neutral (insulated or bare)).

Characteristics: Connection by piercing (no need to strip the insulation from the cable). It has a shear head nut to ensure a perfect connection. It has compensation springs that ensure a constant pression in the connection.

Application: Overhead insulated electricity distribution networks.

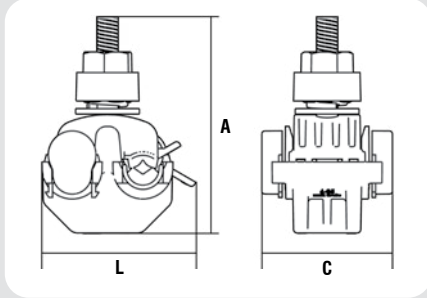
Material: Polymer connector resistant to weather and U.V rays. Tin plated copper contacts.

Application Tool: Star or socket wrench.



INTELLI code	Conductors		Dimensions (mm)		
	Run (CA/Cu) Class 2	Tap (Cu) Class 4/5	L	A	C
	mm ²	mm ²			
CDPF-16-16	10 - 16	6 - 16	35.0	63.0	19.5
CDPF-25-25	10 - 25	6 - 25	35.0	63.0	19.5
CDPF-35-35	10 - 35	25 - 35	36.0	65.0	19.0
CDPF-50-50	10 - 50	25 - 50	45.0	70.0	22.0
CDPF-70-70	25 - 70	50 - 70	58.5	95.0	26.0
CDPF-70-120	25 - 70	95 - 120	61.5	92.0	26.0
CDPF-120-150	50 - 120 95 - 120	120 - 150 95 - 120	80.0	125.0	66.0
CDPF-120-240	50 70 - 120	185 185 - 240	87.0	133.0	65.0

CDPU UNIVERSAL PIERCING CONNECTOR



Purpose: Connection at the consumer service entrance cable. Suitable for aluminum to aluminum, aluminum to copper and copper to copper connections in low voltage overhead networks (0.6/1kV).

Characteristics: Connection by piercing for wires, solid, flexible and extra-flexible (class 1, 2, 5 and 6), with or without insulation. It does not necessary chose the right side to cables install. Suitable for aluminum cables 0,6/1kV, XLPE/PE (class 2) or copper wires / cables (class 1, 2, 5 and 6) 450 / 750V PVC (without cover). It has a shear head nut to ensure a perfect application. It has elastomeric rubbers and two limiters that block conductors during installation, these can be easily removed and customized during its configuration and installation.

Application: Overhead insulated low voltage distribution networks.

Material: Polymer connector resistant to weather and U.V rays. Tin plated copper contacts.

Application Tool: Star or socket wrench.

INTELLI Code	Conductors				Dimensions (mm)		
	Run (Branch) "T"		Tap "D"		L	A	C
	mm ²	AWG/MCM	mm ²	AWG/MCM			
CDPU-35-35	6 - 35	10 - 2	1.5 - 35	16 - 2	45.0	65.0	40.0

CDPRP PIERCING TAP CONNECTOR FOR PROTECTED NETWORK - 15KV



Purpose: Covered cable tap (protected network)

Characteristics: Connection by piercing (does not need to strip or rebuild the insulation of the conductor). Suitable for covered aluminum cables. It has a shear head nut to guarantee a perfect application and elastomeric rubbers, making it watertight.

Application: Protected overhead electricity distribution networks (medium voltage)

Material: Polymer body resistant to weathering and UV rays. Main contact and tap in tinned copper.

Application tool: 17 mm socket wrench.

INTELLI Code	Conductors		Protection Coating Thickness (mm)
	Run	Tap	
	mm ²	mm ²	
CDPRP-185-185-15	50 - 185	50 - 185	3
CDPRP-70-70-15	35 - 70	35 - 70	3

CDPRPE PIERCING TAP CONNECTOR WITH STIRRUP FOR PROTECTED NETWORK - 15KV



Purpose: Tap of protected network (medium voltage) to shear head switch or transformer using a live line clamp on the stirrup.

Characteristics: Connection by piercing (does not need to strip or rebuild the insulation of the conductor). Suitable for covered aluminum cables. It has a shear head nut to guarantee a perfect application and elastomeric rubbers, making it watertight.

Application: Protected overhead electricity distribution networks (medium voltage)

Material: Polymer body resistant to weathering and UV rays. Stirrup, main contact and tap in tinned copper.

Application tool: 17 mm socket wrench.

INTELLI Code	Run (mm ²)	Protection Coating Thickness (mm)	Stirrup (AWG)
CDPRPE-70-2-15	35 - 70	3	2 (35)
CDPRPE-185-2-15	50 - 185	3	2 (35)
CDPRPE-185-1/0-15	50 - 185	3	1/0 (50)

CDP-4D PIERCING CONNECTOR FOR 4 TAPS



Purpose: It allows multiple cable connection (up to four) per connector. Suitable for aluminum to aluminum, aluminum to copper or copper to copper connections (low voltage 1kV).

Characteristics: Connection by piercing the insulation (simultaneous tightening), no stripping of the cable insulation (run side only) and independent taps by tightening. Used with 0.6 / 1kV XLPE / PE insulated aluminum cables or 450 / 750v PVC insulated copper cables (without cover). Allows connection for public lighting.

Application: Overhead insulated power distribution lines.

Material: Piercing connector cover in weatherproof and U.V. rays resistant polymer. Contact of run side in copper and tap side in aluminum alloy.

Application Tool: 5mm allen key for tap side and star or socket wrench for run side.



*It is recommended to adapt the combination of the tap gauges not to exceed the maximum cross section of 120mm².

INTELLI code	Conductors			
	Run		Tap	
	mm ²	AWG/MCM	mm ²	AWG
CDP-120-4D	25 - 150	4 - 300	1.5 - 35*	16 - 2*

6.6. SPLIT BOLT CONNECTORS

PF SPLIT BOLT CONNECTOR



Purpose: Tap or splice (low traction) for **COPPERSTEEL** or copper cables. Suitable for copper to copper connection.

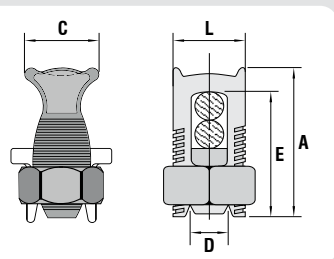
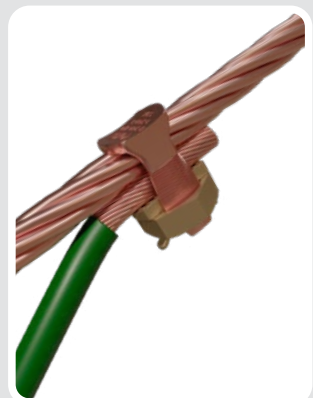
Characteristics: Tightening connection. High electrical conductivity and corrosion resistance.

Application: Power distribution network and grounding in general.

Material: Body in electrolytic copper. Nut and rider in copper alloy.

Application Tool: Box, open-ended or monkey wrenches.

* Tin plated also available.



Norma:

UL-486A-486B

INTELLI code	Conductors		Dimensions (mm)				
	Run (mm ²)	Tap (mm ²)	L	A	C	D	E
PF-10	10	1.5 - 10	10.5	19.5	12.0	4.1	18.0
PF-16	16	2.5 - 16	11.5	23.0	12.5	5.3	21.0
PF-25	25	2.5 - 25	14.7	26.5	17.0	6.8	24.0
PF-35	35	2.5 - 35	15.6	29.0	19.0	7.9	26.8
PF-50	50	2.5 - 50	18.0	34.0	20.0	9.5	32.0
PF-70	70	2.5 - 70	20.5	39.0	22.0	10.7	36.0
PF-95	95	2.5 - 95	24.8	45.0	28.0	13.5	42.0
PF-120	120	10 - 120	26.8	46.0	28.0	14.7	44.0
PF-150	150	10 - 150	26.0	50.5	28.0	16.2	47.5
PF-185	185	50 - 185	30.0	57.0	31.0	17.8	52.5
PF-240	240	95 - 240	34.0	64.0	34.0	20.7	59.0

PFB BIMETALLIC SPLIT BOLT CONNECTOR WITH SPACER



Purpose: Tap or splice (low traction) for **COPPERSTEEL**, copper or aluminum cables. Suitable for copper to copper, copper to aluminum and aluminum to copper connections.

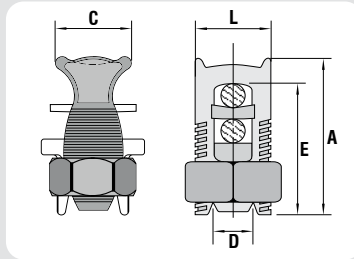
Characteristics: Tightening connection. High electrical conductivity and corrosion resistance. Allows bimetallic connection.

Application: Power distribution lines and grounding in general.

Material: Body in electrolytic copper, nut, rider and spacer in copper alloy.

Finish: Tin plated.

Application Tool: Box open-ended or monkey wrenches.



INTELLI code	Conductors		Dimensions (mm)				
	Run (mm ²)	Tap (mm ²)	L	A	C	D	E
PFB-10	10	2.5 - 10	10.5	20.0	12.0	4.1	18.5
PFB-16	16	2.5 - 16	11.5	24.5	12.5	5.3	22.5
PFB-25	25	4 - 25	14.7	27.0	17.0	6.8	25.0
PFB-35	35	4 - 35	15.6	31.0	19.0	7.9	28.4
PFB-50	50	4 - 50	18.0	35.5	20.0	9.5	33.0
PFB-70	70	10 - 70	20.5	41.5	22.0	10.7	39.0
PFB-95	95	10 - 95	24.8	48.5	28.0	13.5	45.5
PFB-120	120	10 - 120	26.8	51.0	28.0	14.7	48.0
PFB-150	150	16 - 150	26.0	55.0	28.0	16.2	52.0
PFB-185	185	25 - 185	30.0	62.0	31.0	17.8	57.0
PFB-240	240	95 - 240	34.0	69.0	34.0	20.7	64.0

PFT TRANSVERSAL SPLIT BOLT CONNECTOR



Purpose: Connection between **COPPERSTEEL** or copper cables to mini captors or steel rebar. Crossing connection for grounding grids.

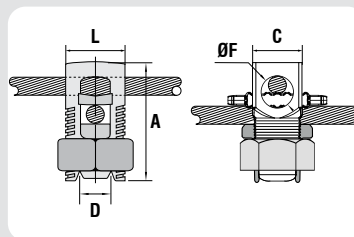
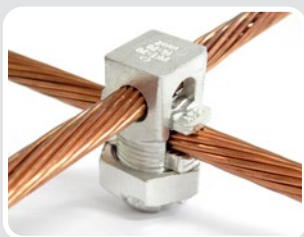
Characteristics: Tightening connection. High electrical conductivity and corrosion resistance. It allows bimetallic connection.

Application: Grounding systems in general and Lightning protection systems.

Material: Copper alloy.

Finish: Tin plated.

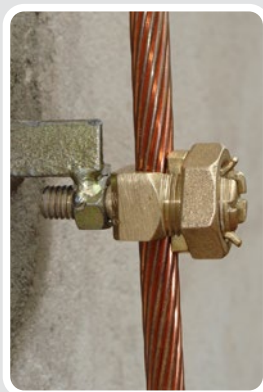
Application Tool: Box, open-ended or monkey wrenches.



INTELLI code	Conductors		Dimensions (mm)				
	Run (mm ²)	Steel Rebar (Inch)	L	A	C	D	ØF
PFT-70	16 - 70	5/16" - 3/8"	21.2	46.0	18.5	11.0	11.0

6.7. SERVICE POST CONNECTORS

PFR SERVICE POST CONNECTOR



Purpose: Connection with **COPPERSTEEL** or copper cables. Used to align one or two downconductors on metal structures, building facades or roofs. Ground one or two cables to steel structures, plates or busbars. Supplied with nut on pigtail.

Characteristics: Tightening connection. High electrical conductivity and corrosion resistance.

Application: Grounding systems in general and lightning protection systems.

Material: Copper alloy.

Application Tool: Box, open-ended or monkey wrenches.

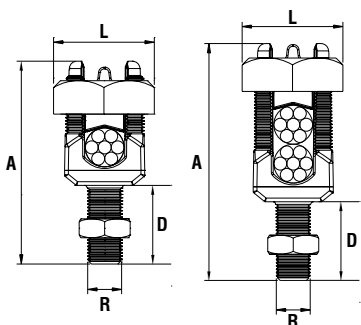


Figure 01

Figure 02

INTELLI code		No. of conductors	Conductors (mm ²)		Dimensions (mm)				
Regular Line	Reinforced Line*		Minimum	Maximum	Figure	L	A	D	Pigtail - R
PFR-16	PFR-16R	1	6	16	1	17.5	43.0	21.0	1/4" UNC
PFR-35	PFR-35R	1	6	35	1	20.6	48.0	21.0	3/8" UNC
PFR-35-2C	PFR-35R-2C	2	6 - 6	35 - 35	2	20.6	54.0	21.0	3/8" UNC
PFR-70	PFR-70R	1	10	70	1	27.0	54.5	21.0	3/8" UNC
PFR-70-2C	PFR-70R-2C	2	10 - 10	70 - 70	2	27.0	63.0	21.0	3/8" UNC

*(R) Bronze reinforced line.

PFRS SERVICE POST CONNECTOR WITH LAG SCREW



Purpose: Connection with **COPPERSTEEL** or copper cables. Used to align one or two downconductors on building facades (masonry or concrete). Use with nylon bushing S-10.

Characteristics: Tightening connection. High electrical conductivity and corrosion resistance.

Application: Grounding systems in general e lightning protection systems.

Material: Copper alloy.

Application Tool: Box open-ended or monkey wrenches.

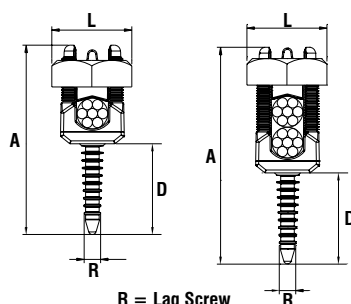


Figure 01

Figure 02

R = Lag Screw

INTELLI code		No. of conductors	Conductors (mm ²)		Dimensions (mm)				
Regular Line	Reinforced Line*		Min.	Max.	Figure	L	A	D	Thread - R
PFRS-35	PFRS-35R	1	6	35	1	20.6	57.5	30.5	1/4" LAG SCREW
PFRS-35-2C	PFRS-35R-2C	2	6 - 6	35 - 35	2	20.6	63.5	30.5	1/4" LAG SCREW
PFRS-70	PFRS-70R	1	10	70	1	27.0	64.0	30.5	1/4" LAG SCREW
PFRS-70-2C	PFRS-70R-2C	2	10 - 10	70 - 70	2	27.0	72.5	30.5	1/4" LAG SCREW

*(R) Bronze reinforced line.

PFS SPLIT BOLT CONNECTOR WITH PAD



Purpose: Connection with **COPPERSTEEL** or copper cables. Used to connect one or two cables to the capture mesh with the metallic tile. Ground one or two cables to steel structures, metal boxes, plates or busbars. Fixing lightning protection systems downconductors to masonry or concrete.

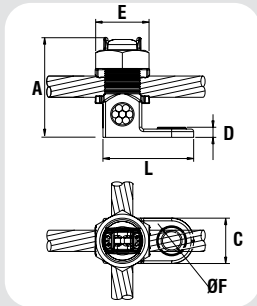
Characteristics: Tightening connection. High electrical conductivity and corrosion resistance.

Application: Grounding systems in general and Lightning protection systems.

Material: Copper alloy.

Finish: Tin plated.

Application Tool: Box, open-ended and monkey wrenches.



INTELLI code		Conductors				Rod / Rebar	Dimensions (mm)					
		1 Conductor (mm ²)		2 Conductors (mm ²)			L	A	C	D	E	ØF
Regular Line	Reinforced Line*	Minimum	Maximum	Min. Comb.	Max. Comb.							
PFS-35	PFS-35R	16	35	16 - 6	35 - 35	3/8"	35.0	36.0	17.0	4.0	20.6	6.5
PFS-70	PFS-70R	35	70	16 - 16	70 - 70	3/8" - 1/2"	42.0	46.0	21.0	5.0	27.0	6.5

*(R) Bronze reinforced line.

PFS-90 SPLIT BOLT CONNECTOR WITH 90° PAD



Purpose: Connection with **COPPERSTEEL** or copper cables. Used to connect one or two cables, ground one or two cables to steel structures, metal boxes, plates or busbars. Fixation of lightning protection systems downconductors to masonry or concrete.

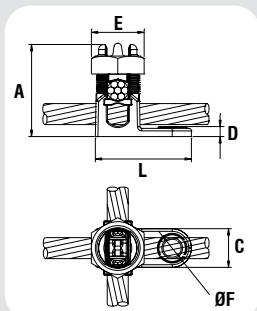
Characteristics: Tightening connection. High electrical conductivity and corrosion resistance.

Application: Grounding systems in general e Lightning protection systems.

Material: Copper alloy.

Finish: Tin plated.

Application Tool: Box, open-ended or monkey wrenches.

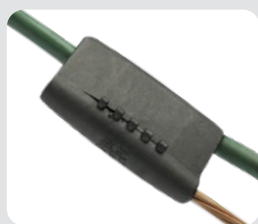


INTELLI code		Conductors				Rod / Rebar	Dimensions (mm)					
		1 Conductor (mm ²)		2 Conductors (mm ²)			L	A	C	D	E	ØF
Regular Line	Reinforced Line*	Min.	Max.	Min. Comb.	Max. Comb.							
PFS-35-90	PFS-35R-90	16	35	16 - 6	35 - 35	3/8"	37.5	36.0	15.0	4.0	20.6	6.5
PFS-70-90	PFS-70R-90	35	70	16 - 16	70 - 70	3/8" - 1/2"	45.5	46.0	18.7	5.0	27.0	6.5

*(R) Bronze reinforced line.

6.8. ACCESSORIES FOR CONNECTORS

INSULATING COVER FOR WEDGE CONNECTORS – up to 1kV

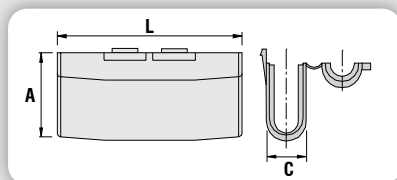


Purpose: Designed to protect wedge connectors.

Characteristics: Excellent protection for wedge connectors. Ensures protection from the elements.

Application: Power distribution lines (low voltage - up to 1kV).

Material: Polymer resistant to weathering and U.V. rays.



*Red Series

INTELLI code	Suitable for connectors	Dimensions (mm)		
		L	A	C
COVER TYPE-I-VII	CDCR-I-Ci / CDCR-VII-VmB	65.0	29.0	16.5
COVER TYPE-II	CDCR-II-Vd	53.0	26.0	16.0
COVER TYPE-III-IV-V	CDCR-III-Vm / CDCR-IV-Az / CDCR-V-Am	51.0	23.0	12.5
COVER TYPE-VI-VIII-L	CDCR-VI-AzB / CDCR-VIII-VdB / CDCR-L / CADC-100* / CODC-50*	111.0	42.0	24.0
COVER ASYMMETRIC-TYPE	CDC-A-Vi / CDC-B-La / CDC-C-Ma / CDC-D-Br / CDC-F-VdAz CDC-G-ViAz / CDC-H-LaAz / CDC-J-MaAz / CDC-K-BrAz	59.0	55.0	26.0
COVER CADC-TYPE Blue-Series	CADC Blue Series (200/300/350)	151.0	57.0	35.0

PROTECTIVE COVER FOR WEDGE CONNECTORS - 15kV



Purpose: Designed to protect aluminum wedge connectors CADC* and wedge connectors with protected stirrup CAEP*.

Characteristics: Excellent protection for wedge connectors against weather and U.V. rays. Supplied with caulk and water-repellent compound to ensure an excellent seal against dust and water. Ensures a more lasting connection.

Application: Power distribution lines (protected network) at medium voltage.

Material: Polymer resistant to weather and U.V. rays.

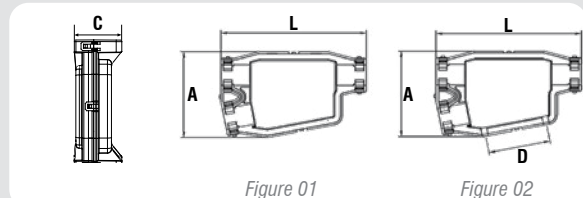
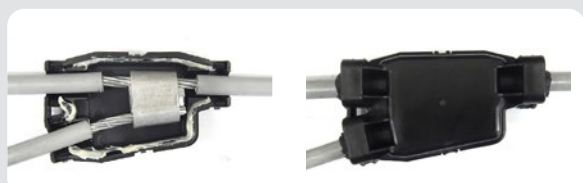


Figure 01

Figure 02



INTELLI code	Suitable for connectors	Dimensions (mm)				Figure
		L	A	C	D	
15kV - Small	CADC Red Series - 100	129.5	77.5	46.8	-	1
15kV - Big	CADC Blue Series - 200, 300 e 350	163.0	97.0	50.0	-	1
15kV - Stirrup-Small	CAEP Red Series - 100	129.5	77.5	46.8	53.5	2
15kV - Stirrup-Big	CAEP Blue Series - 200, 300	163.0	97.0	50.0	71.5	2

* Can be supplied with connectors upon request.

INTELTROX ANTIOXIDANT COMPOUND FOR AL-AL AND AL-Cu CONNECTIONS

For use in connections with insulated conductors up to 600V and bare conductors at any voltage (V).

Antioxidant compound with zinc suspended particles in a viscous vehicle. To ensure low resistance electrical connections. Applied around an electrical conductor, INTELTRON breaks the oxide film that forms shortly after brushing and gathers a large number of conductive points. INTELTRON due to its antioxidant action (amine-type) of its additives and the insolubility in water, gas or oil eliminates the entry of air and moisture in the connections, preventing corrosion and oxidation. The use of INTELTRON is indispensable in Al-Al and Al-Cu connections.

INTELTRON-Cu ANTIOXIDANT COMPOUND FOR Cu-Cu CONNECTIONS

For use in connections with insulated conductors up to 600V and bare conductors at any voltage (V).

Antioxidant compound with copper suspended particles in a viscous vehicle to ensure low resistance electrical connections. Applied around an electrical conductor, INTELTRON-Cu gathers a large number of conductive points. INTELTRON-Cu by the antioxidant action (amine-type) of its additives and by the insolubility in water, gas or oil eliminates the entry of air and moisture in the connections, preventing corrosion and oxidation. The use of INTELTRON-Cu is Suitable for Cu-Cu.



AVAILABLE IN
VERSIONS:
1kg, 400g and 250g

7. CLAMPS

7. CLAMPS	81
7.1. HOTLINE CLAMPS.....	82
7.2. PARALLEL GROOVE CLAMPS.....	82
7.3. ANCHORCLAMPS.....	83

7.1. HOTLINE CLAMPS

GLV HOTLINE CLAMPS



GLV-150AL



GLV-120



GLV-68R



GLV-150BZ

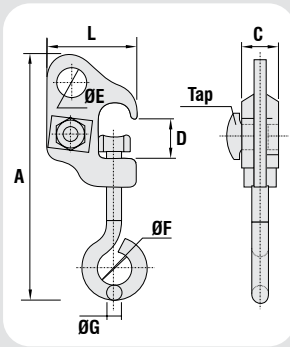
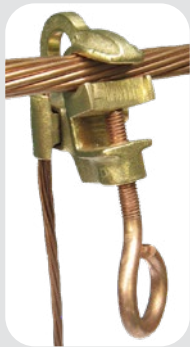
Purpose: For interconnecting medium voltage network in copper, aluminum AC or AAC cables (with or without stirrup) to the connection of a fuse, transformer or knife switch.

Characteristics: High electrical conductivity and tightening connection.

Application: Power distribution networks (low and medium voltage).

Material: Bronze, brass or aluminum alloy.

Application Tool: Hot stick.



INTELLI code	Conductors				Dimensions (mm)							Material
	Run		Tap		L	A	C	D	ØE	ØF	ØG	
	mm ²	AWG	mm ²	AWG								
GLV-68	16 - 120	6 - 250	wire10 - 70	wire8 - 2/0	59.0	138.0	23.0	25.0	18.0	18.0	7.0	BRASS
GLV-95	10 - 95	8 - 3/0	6 - 35	10 - 2	53.0	138.0	23.0	17.0	14.0	18.0	7.0	
GLV-68R	16 - 120	6 - 250	wire10 - 70	wire8 - 2/0	59.0	160.0	24.0	25.0	18.0	18.0	9.0	BRONZE
GLV-120*	wire16 - wire120	wire6 - wire4/0	wire10 - 70	wire8 - 2/0	50.0	160.0	33.0	15.0	-	22.0	-	
GLV-150-BZ* Cemig	wire120	wire4/0	50 - 150	1/0 - 300	-	164.0	47.0	-	-	20.0	8.0	
GLV-68A	16 - 120	6 - 250	wire10 - 70	wire8 - 2/0	59.0	160.0	24.0	25.0	18.0	18.0	9.0	ALUMINUM ALLOY
GLV-80A-60A	16 - 150	6 - 266.8	10 - 120	8 - 4/0	73.0	188.0	25.0	35.0	22.0	18.0	9.0	
GLV-150-AL	50	wire1/0	50 - 150	1/0 - 300	-	164.0	47.0	-	-	20.0	8.0	

*Hotline clamps with tin plated finish

7.2. PARALLEL GROOVE CLAMPS

GPB BRONZE PARALLEL GROOVE CLAMP



Purpose: Parallel connections cable to cable. Suitable for copper to copper and **COPPERSTEEL** connections.

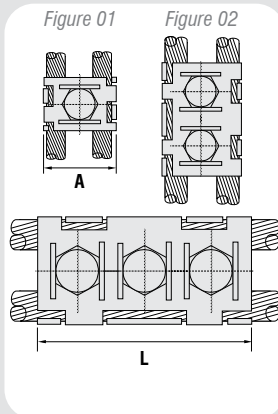
Characteristics: Tightening connection. High electrical conductivity and corrosion resistance.

Application: Power distribution networks and grounding system in general.

Material: Bronze clamp and copper alloy fittings or fire galvanized steel.

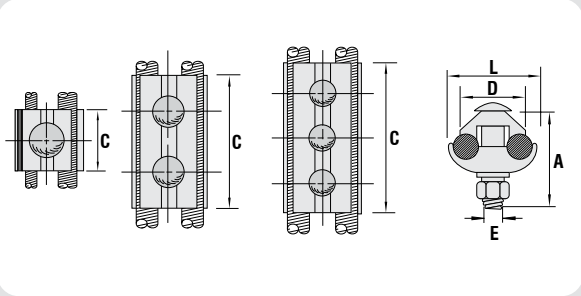
Application Tool: Box or open-ended wrench.

*Also available tin plated.



INTELLI code	Conductors		Dimensions (mm)			
	mm ²	AWG	L	A	Figure	Screws
GPB-44-1	wire 6 - 70	8 - 2/0	26.0	36.0	1	1x M10
GPB-49-1	6 - 70	10 - 2/0	42.0	37.0		1x M10
GPB-60-2	16 - 120	6 - 4/0	55.0	46.0	2	2x M10
GPB-69-2	35 - 150	2 - 300	61.0	50.0		2x M10
GPB-88-3	120 - 240	4/0 - 500	108.0	63.0	3	3x M12
GPB-104-3	150 - 400	300 - 800	109.0	77.0		3x M12

GPAL ALUMINUM PARALLEL GROOVE CLAMP



Purpose: Parallel connections cable to cable. Suitable for aluminum to aluminum and aluminum to copper connections.

Characteristics: Tightening connection. High electrical conductivity and corrosion resistance. Allows bimetallic connections. Available with one, two or three screws.

Application: Power distribution networks.

Material: Extruded aluminum alloy and fittings in fire galvanized steel.

Application Tool: Box or open-ended wrench.

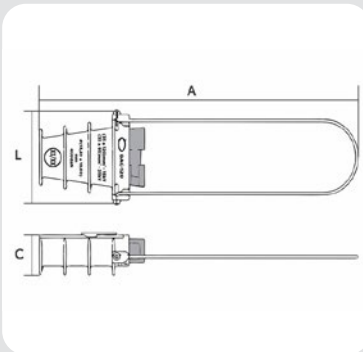


INTELLI code	Conductors										Dimensions (mm)				
	Run					Tap					L	A	C	D	Screws (E)
	Cu/Al		ACSR/AW		Diameter (mm)	Cu/Al		ACSR/AW		Diameter (mm)					
mm ²	AWG	mm ²	AWG	mm ²		AWG	mm ²	AWG	mm ²		AWG	mm	mm	mm	mm
GPAL-44-1*	10 - 70	wire 10 - 2/0	-	6 - 1/0	2.59 - 10.60	10 - 70	wire 10 - 2/0	-	6 - 1/0	2.59 - 10.60	38.0	38.0	31.5	29.0	1x 3/8"
GPAL-44-2*													63.0		2x 3/8"
GPAL-60-1	50 - 120	1/0 - 4/0	50 - 120	1/0 - 4/0	9.36 - 14.31	10 - 50	wire 8 - 1/0	16 - 50	6 - 1/0	3.26 - 10.11	48.0	50.0	37.0	38.0	1x 3/8"
GPAL-60-2													74.0		2x 3/8"
GPAL-80-1	50 - 185	1/0 - 397.5	50 - 185	1/0 - 336.4	9.36 - 18.30	wire 16 - 70	wire 6 - 2/0	-	6 - 1/0	4.11 - 10.60	57.0	60.0	37.0	42.5	1x 3/8"
GPAL-80-2													74.0		2x 3/8"
GPAL-80-P1													40.0		1x M12
GPAL-80-P2	50 - 240	1/0 - 397.5	50 - 240	1/0 - 397.5	9.36 - 20.44	50 - 240	1/0 - 397.5	50 - 240	1/0 - 397.5	9.36 - 20.44	65.0	60.0	80.0	50.0	2x M12
GPAL-80-P3													117.0		3x M12

* Models: GPAL-44-1 / GPAL-44-2 are available in the options GPAL-44-1B and GPAL-44-2B, with copper groove in the Tap.

7.3. ANCHOR CLAMPS

GAC DEAD END CLAMP FOR M.V. SPACER CABLES



Purpose: Anchoring medium voltage aluminum spacer cables (15kV, 25kV and 35kV).

Characteristics: The GAC can be applied directly to the insulation of spacer cables without specific tools. It also offers high UV and bad weather resistance.

Application: Medium voltage power distribution lines with aluminum spacer cables.

Material: Body: Aluminum alloy, Wedge: black polymer, Bail: Stainless Steel.



INTELLI Code	Tension (kV)	Cross Section (mm ²)	External Diameter (mm)		Breaking Load (daN)	Dimensions (mm)		
			min.	max.		L	A	C
GAC-120	15 / 25	35 - 120 (15kV) / 35 - 95 (25kV)	12,60	21,80	400	84.0	320.0	36.0
GAC-300	15 / 25 / 35	35 - 120 (15kV) / 35 - 95 (25kV) / 70 (35kV)	12,60	29,40	400	95.0	320.0	44.0

8. TOOLING

8. TOOLING.....	84
8.1. PLIER HAND TOOLS.....	85
8.2. RATCHET TOOLS.....	85
8.3. HYDRAULIC PLIERS.....	85
8.4. AUTOMATIC HYDRAULIC PLIERS.....	85
8.5. CABLE CUTTERS.....	86
8.6. INTERCHANGEABLE DIES.....	86

8.1. PLIER HAND TOOLS



INTELLI code	Applicable Conductors		Purpose (Crimp)	Suitable for:	Comp. Strength
	mm ²	AWG/MCM			
AT-10	0,5 - 6	22 - 10	Stripping and cutting wires/cables, crimping pre-insulated terminals of closed barrel (insulated and non-insulated)	Pre-insulated : TP, TPF, TPP, LEP, MA, MAT, FE, FET	-
ATI-25	0,75 - 25	22 - 4	Stripping and cutting wires/cables, crimping gommel type terminals (insulated or non-insulated)	TI, TID	-
ATP-49	10 - 70	8 - 2/0	Crimp pre-insulated terminals (tubular)	Pre-insulated (tubular): TPT, TPP	-
AT-60*	6 - 120	10 - 4/0	Crimp all types of copper or aluminum connectors, terminals and sleeves	CAH, CAC, CAL, CAS, TAL, LAR, LEB, LCBF, TM, TF, LF, TCF, TBTA, TBB, LB, CCO	4t
AT-68	10 - 120	8 - 250	Crimp copper terminals and splice sleeves	TM, TF, LF	-

* Can be used with interchangeable IW (circumferential) dies, which must be purchased separately.

8.2. RATCHET TOOLS



INTELLI code	Applicable Conductors		Purpose (Crimp)	Suitable for:	Comp. Strength
	mm ²	AWG/MCM			
ATC-6	0,5 - 6	22 - 10	Crimp closed barrel pre-insulated terminals (insulated and non-insulated)	Pre-insulated: TP, TPF, TPP, LEP	-
ATIC-6	0,5 - 6	22 - 10	Crimp eyelet terminals (insulated and non-insulated)	TI, TID	-
ATIC-35	10 - 35	8 - 2	Crimp eyelet terminals (insulated and non-insulated)	TI, TID	-

8.3. HYDRAULIC PLIERS



INTELLI code	Applicable Conductors		Purpose (Crimp)	Suitable for:	Comp. Strength
	mm ²	AWG/MCM			
AY-96	10 - 300	8 - 600			12t
CY-96*	10 - 300	8 - 600	Crimp copper or aluminum connectors, terminals and sleeves.	CAH, CAC, CAL, CAS, TAL, LAR, LEB, LCBF, TM, TF, LF, TCF, TBTA, TBB, LB, CCO, SACC, SACG	12t
CY-630	Up to 630	Up to 1.250			26t
AHM-400	16 - 400 (Cu) 16 - 300 (Al)	5 - 750 5 - 600			12t

* The hydraulic crimper CY-96 can be supplied with a hose of 3m or 12m, for applications in places of difficult access.

8.4. AUTOMATIC HYDRAULIC PLIERS



INTELLI code	Applicable Conductors		Purpose (Crimp)	Suitable for:	Comp. Strength
	mm ²	AWG/MCM			
AHB-400	10 - 400 (Cu) 10 - 300 (Al)	8 - 750 8 - 300	Crimp copper or aluminum connectors, terminals and sleeves.	CAH, CAC, CAL, CAS, TAL, LAR, LEB, LCBF, TM, TF, LF, TCF, TBTA, TBB, LB, CCO, SACC, SACG	12t

8.5. CABLE CUTTERS



INTELLI code	Applicable Conductors		Purpose	Suitable for:
	mm ²	AWG/MCM		
TCC-350	Up to 185	Up to 350	Cut Aluminum or copper wires and cables. Note: Not recommended for cables with steel core, CS or AS.	Aluminum wires / cables: ICAL-CA, ICALC, ICALS (multiplexed / covered) copper wires / cables: IFNI, IC

8.6. INTERCHANGEABLE DIES



IU/H
FOR HYDRAULIC PLIERS
AY-96 and CY-96



IW
FOR MANUAL PLIERS
AT-60

9. ATTACHMENTS

ATT. 1- COMPARISON CHART BETWEEN CS - COPPERSTEEL AND SOLID COPPER CABLE.....	88
ATT. 2- CONVERSION CHART FOR COMMON MEASURES.....	89

ATT. 1- COMPARISON CHART BETWEEN CS - COPPERSTEEL AND SOLID COPPER CABLE

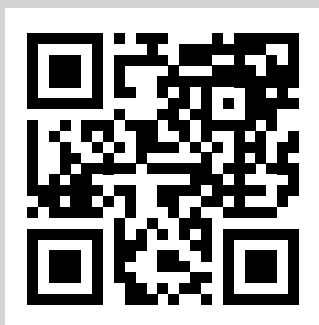
Nominal Cross Section (mm ²)	ADMISSIBLE SHORT CIRCUIT CURRENT (KAmp)**								
	At 50ms			At 100ms			At 500ms		
	Bare Copper* (wires / Ø)	CS 40% IACS	CS 53% IACS	Bare Copper* (wires / Ø)	CS 40% IACS	CS 53% IACS	Bare Copper* (wires / Ø)	CS 40% IACS	CS 53% IACS
16	-	11,45	12,93	-	8,09	9,15	-	3,62	4,09
25	-	18,13	20,50	-	12,82	14,50	-	5,73	6,48
35	-	22,98	25,97	-	16,25	18,36	-	7,27	8,21
50	-	36,42	41,16	-	25,75	29,10	-	11,52	13,01
16	13,13 (7 x 1,70)	11,54	13,04	9,28 (7 x 1,70)	8,16	9,22	4,15 (7 x 1,70)	3,65	4,00
25	19,27 (7 x 2,06)	16,94	19,14	13,63 (7 x 2,06)	11,98	13,54	6,1 (7 x 2,06)	5,36	6,05
35	28,39 (7 x 2,50)	26,77	30,26	20,07 (7 x 2,50)	18,93	21,4	8,98 (7 x 2,50)	8,46	9,57
50	40,87 (7 x 3,00)	33,80	38,20	28,90 (7 x 3,00)	23,90	27,01	12,93 (7 x 3,00)	10,69	12,08
70	54,06 (7 x 3,45)	53,76	60,75	38,22 (7 x 3,45)	38,01	42,96	17,09 (7 x 3,45)	17,00	19,21
95	77,09 (7 x 4,12)	67,42	76,19	54,51 (7 x 4,12)	47,67	53,88	24,38 (7 x 4,12)	21,32	24,09
120	-	85,19	96,27	-	60,24	68,08	-	26,94	30,44
50	-	36,32	41,04	-	25,68	29,02	-	11,48	12,98
70	-	50,13	56,65	-	35,45	40,06	-	15,85	17,91
95	-	72,75	82,21	-	51,44	58,13	-	23,00	25,00
120	103,78 (19 x 2,90)	91,84	103,78	73,39 (19 x 2,90)	64,94	73,39	32,82 (19 x 2,90)	29,04	32,82
150	130,34 (19 x 3,25)	115,26	130,25	92,17 (19 x 3,25)	81,50	92,10	41,22 (19 x 3,25)	36,45	41,19
185	-	133,30	150,65	-	94,10	106,34	-	42,08	47,56
240	-	179,47	202,82	-	126,90	143,41	-	56,75	64,14

* Formations of copper cable according to brazilian technical standards ABNT-NBR 6524 - "Wires and cables of hard and medium-hard-drawn copper wire with or without protective cover for overhead installations - Specification." **Copper Tmax, =250°C; Tmax, CS=550°C

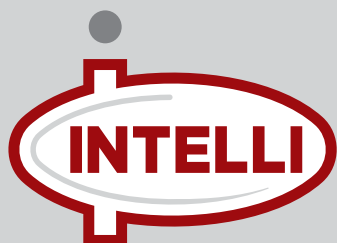
ATT. 2- CONVERSION CHART FOR COMMON MEASURES

TO \ FROM	mm	inches	Rated Strenght (kg)	Rated Strenght (lb)	Mass/Unit Lenght (Kg/Km)	Mass/Unit Lenght (lb/1000 ft)	Resistance (ohms/Km)	Resistance (ohms/1000ft)	mm ²	inches ²	cmils	mil	
in.	x 25.4	↑	↑	↑	↑	↑	↑	↑	↑	↑	↑	x 1,000	
mm	→	÷ 25.4	-----										÷ 0.02540
Rated Strenght (lb)	→		x 0.45359	↑									
Rated Strenght (Kg)	→			÷ 0.45359	↑								
Mass/Unit Lenght (lb/1000 ft)	→				x 1.48816	↑							
Mass/Unit Lenght (kg/km)	→					÷ 1.48816	↑						
Resistance (ohms/1000ft)	→						x 3.281	↑					
Resistance (ohms/Km)	→							÷ 3.281	↑				
inches ²	→								x 645.16	↑			
mm ²	→									÷ 645.16	÷ 0.0005067		
cmils	→										x 0.0005067		
mil	→	÷ 1,000											

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BIMETÁLICOS

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