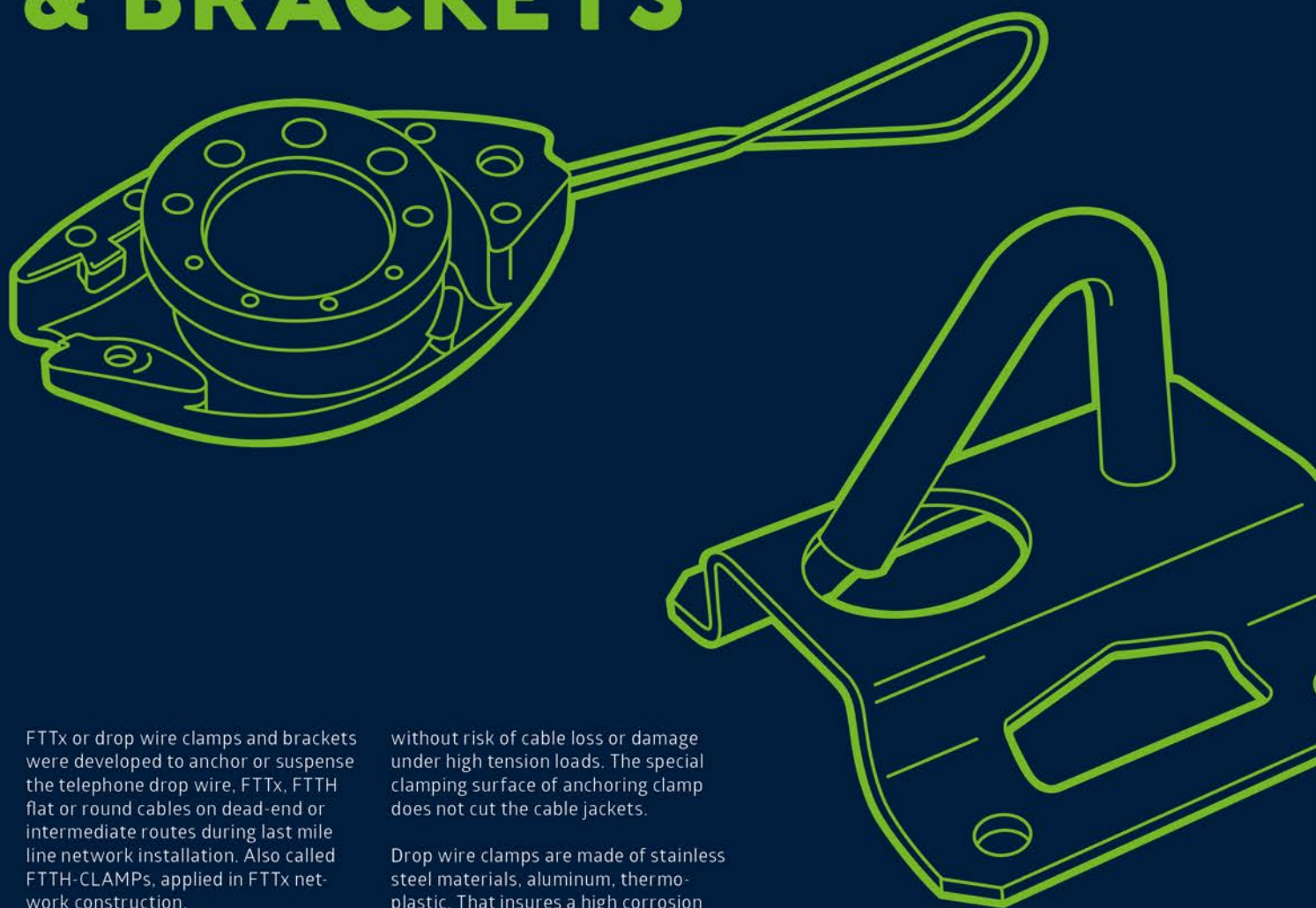


FTTX (DROP) CLAMPS & BRACKETS



FTTx or drop wire clamps and brackets were developed to anchor or suspend the telephone drop wire, FTTx, FTTH flat or round cables on dead-end or intermediate routes during last mile line network installation. Also called FTTH-CLAMPs, applied in FTTx network construction.

Aerial drop wire clamps attached to the building, strand or poles by special anchoring bracket, drive hooks, pole brackets, SS hooks and various drops attachments and different angles.

Special drop wire clamp's design allows to implement the securely "dead end"

without risk of cable loss or damage under high tension loads. The special clamping surface of anchoring clamp does not cut the cable jackets.

Drop wire clamps are made of stainless steel materials, aluminum, thermo-plastic. That insures a high corrosion resistance and guarantee the long period of usage.





All the cable assemblies passed the tensile tests, operation experience with temperatures ranging test, temperature cycling test, aging test, corrosion resistance test etc.

FTTX CLAMPS FOR FLAT, FIGURE-8 TYPE CABLES WITH STEEL OR FRP MESSENGERS

Product information:

FTTx cable clamps applied on flat type cables of different sizes. Tension strength achieved by excentral layout of cable in the clamp. Open or closed wire bails provide an easier installation.

Technical specification:

Product code		Wire, mm	MBL, kN	Materials
S-TYPE		Ø 0.4 – 1.5	1	UV resistant plastic, stainless steel
SO-TYPE		Ø 0.4 – 1.5	0.5	UV resistant plastic, stainless steel
SS-TYPE		Ø 0.4 – 1.5	2	UV resistant plastic, stainless steel
DH-01		Ø 2 – 5	1	Galvanized steel, aluminium







BRACKETS FOR FTTX CABLE CLAMPS

Product information:

Aerial drop wire clamps attached to the building, strand or poles by special anchoring bracket, drive hooks, pole brackets, SS hooks and various drops attachments.

Brackets can be easily attached to the building, strand or poles with special screws, bolts or stainless steel band with the buckles. Materials, as well as coating can be adjusted according to your needs.

Technical specification:















Product code		MBL, kN	Materials
YK		1.5	Galvanized steel
YK-02		1	Galvanized steel
YK-03		1	Galvanized steel
YK-04		1.5	Galvanized steel
AH		2	Galvanized steel
DWR-01		–	Galvanized steel

FTTX CLAMPS FOR FLAT-TYPE CABLES

Product information:

FTTx cable clamps applied on flat cables of different sizes. Tension strength achieved by wedges and conical body of clamp. Open or closed wire bails provide an easier installation.

Technical specification:




















Product code		Max cable size (h × w), mm	MBL, kN	Materials
ODWAC-HY		 <4 × <8	1	Stainless steel, UV resistant plastic
ODWAC-15		 <5 × <12	0.7	Stainless steel
ODWAC-22		 <6 × <13	1.2	Stainless steel
ODWAC-22P		 <6 × <13	1	Stainless steel, UV resistant plastic
ODWAC-22S		 <6 × <13	0.5	Stainless steel
ODWAC-26		 <6 × <16	2	Stainless steel
PA-08-F		 2-6 × <10	3	Aluminium, stainless steel, UV resistant plastic

FTTX CLAMPS FOR ROUND & FLAT-TYPE CABLES

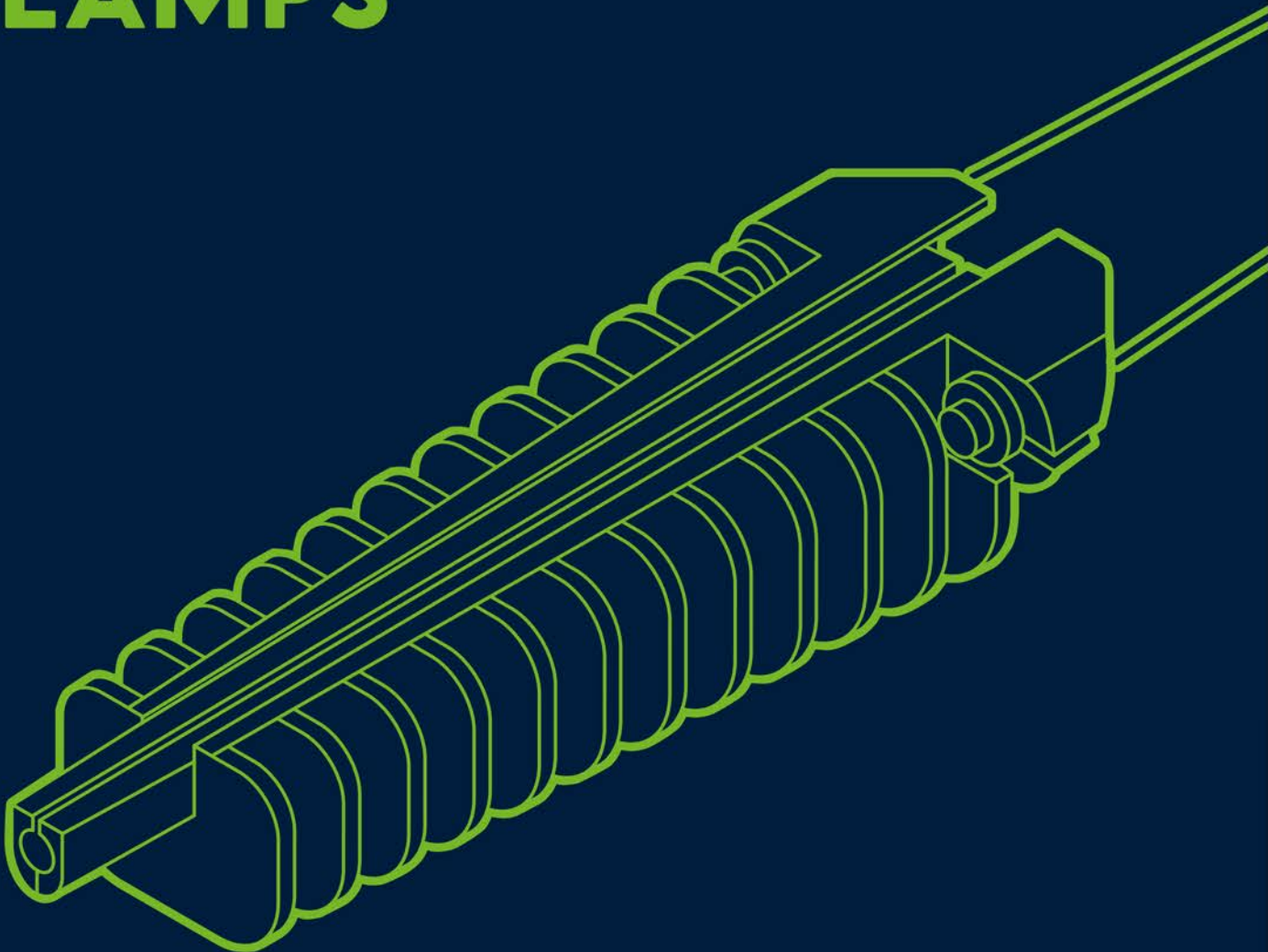
Product information:

FTTx cable clamps applied on round and flat type cables of different sizes. Tension strength achieved by excentral layout of cable in the clamp or wedges. Radius of excentrals is enough for the optical signal to work properly, without losses. Open or closed wire bails provide an easier installation.

Technical specification:

Product code		Cable size, mm	MBL, kN	Materials
FISH-1		 Ø 2 – 3,  2 × 3	0.5	UV resistant plastic, stainless steel
FISH-2		 Ø 2 – 5,  2 × 3	1	UV resistant plastic
ACC		 Ø 2 – 6	1	UV resistant plastic
H15		 Ø 2 – 4,  2 × (5 – 8)	0.5	UV resistant plastic, galvanized steel
D2		 Ø 2 – 5,  2 × (3 – 5)	0.5	UV resistant plastic, galvanized steel
D6		 Ø 4 – 8	0.5	UV resistant plastic
DC-35		 Ø 2 – 5,  2 × (3 – 5)	0.1	UV resistant plastic

ADSS CABLE CLAMPS



Anchor and suspension sets for all dielectric self-supporting cables (ADSS) were developed to tension and suspend an aerial round fiber optic cable of different diameters. Clamps applied at central loop routes up to 100 meters and last mile installation routes in FTTx, GPON network construction.

Design allows to implement the security of cable without risk of cable loss or damage of insulation under sufficient mechanical loads.

Anchor and suspension clamps for ADSS cables are made of aluminium, stainless steel, high strength plastic materials. That insures a high corrosion resistance and guarantee the long period of usage.

All the assemblies passed the tensile tests, operation experience with temperatures test, temperature cycling test, aging test, corrosion resistance test etc.

ANCHOR CLAMPS FOR ADSS CABLES

Product information:

ADSS anchor clamps are enough to keep the aerial bundled cables in tight strength position, and appropriate mechanical resistance archived by conical body and wedges, which does not allow the cable to slip from the ADSS cable accessory. The ADSS cable route may be dead-end, double dead-ending or double anchoring.

Technical specification:

Product code		Cable size, mm	MBL, kN	Materials
PA-500		Ø 4 – 8	3	UV resistant plastic, stainless steel, aluminium
PA-3000		Ø 8 – 12	5	
PA-3001		Ø 12 – 16	5	
PA-3002		Ø 16 – 20	5	




SUSPENSION CLAMPS FOR ADSS CABLES

Product information:

Suspension or support clamps for all dielectric self-supporting cable (ADSS) used for aerial round optical fiber cable. These optical fiber cable accessories can be installed on short spans at intermediate poles. ADSS suspension clamp are very easy in installation of optical fiber line and appropriate mechanical resistance.

Can be archived by tightening nut until needed strength will be reach. Or self-adjusting under cable weight. Neoprene insert or strap does not allow the optical cable to slip from the suspension fitting. The ADSS cable may be different sizes, but fiber optical cable route should be straight with angles up to 25.

Technical specification:

Product code		Cable size, mm	MBL, kN	Materials
D8		Ø 8 – 12	1.5	Galvanized steel, UV resistant plastic
D12		Ø 13 – 16	1.5	
HC5-8		Ø 5 – 8	4	
HC8-12		Ø 8 – 12	4	
HC10-15		Ø 10 – 15	4	
HC15-20		Ø 15 – 20	4	
PS-619		Ø 6 – 19	3	

BRACKETS & HOOKS



The suspension and tension brackets were designed to anchor or suspense the ADSS, OFNR, figure-8, cable dead-end tension or suspension clamps. In addition, used for fiber optical closures (FOSC) as storage for cable slacks, which appear during the construction of telecommunication network in overhead lines with ADSS, FTTH, drop wire cables. We provide our customers by anchor and suspension assemblies, which have been tested with dead-ending of flat and round cables applied on dead-end, double dead-ending routes and different angles.

Brackets can be easily attached to the building, strand or poles with special screws, bolts or stainless steel band with the buckles. Brackets and hooks are made of steel materials, aluminum, stainless steel materials, what guarantee high corrosion resistance and long period of usage.

Technical specification:










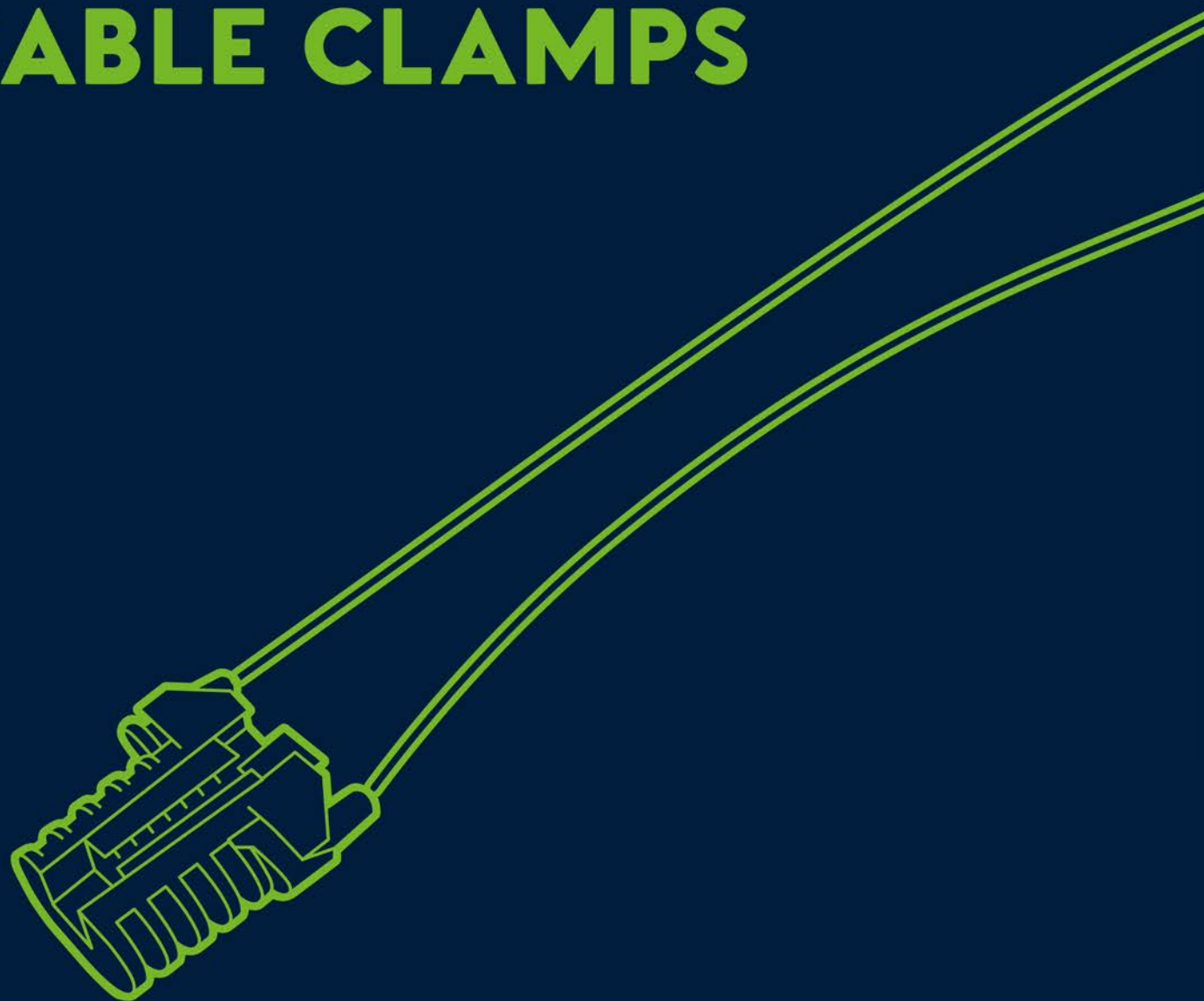
Product code		MBL, kN	Materials
UPB		F1 – 5, F2 – 3,5, F3 – 9, F4 – 2, F5 – 5	Aluminium
PS-1500		12	Aluminium
Console 32		15	Hot dip galvanized steel
YPMK		—	Galvanized steel
PS-7		1	Galvanized steel
YKP-01		4	Galvanized steel
YKP-02		4	Galvanized steel
YKN		15	Galvanized steel
KR-16		18	Hot dip galvanized steel

FIGURE-8 TYPE CABLE CLAMPS



Anchor and suspension sets for all figure-8 type cables were developed to tension and suspend an aerial round fiber optic cable of different diameters. The central messenger of cable can be made of steel or FRP materials. Clamps applied at central loop routes up to 100 meters and last mile installation routes in FTTx, GPON network construction.

Design allows to implement the security of cable without risk of cable loss or damage of insulation under sufficient mechanical loads.

Anchor and suspension clamps are made of aluminium, stainless steel, high strength plastic materials. That insures a high corrosion resistance and guarantee the long period of usage.

All the assemblies passed the tensile tests, operation experience with temperatures test, temperature cycling test, aging test, corrosion resistance test etc.

SUSPENSION CLAMPS FOR FIGURE-8 TYPE CABLES

Product information:

Suspension clamps designed to suspend figure-8 fiber optic cable of different diameters, and messenger's types, on the short spans. Clamps are universal to be applied on steel, FRP, kevlar, AAC messenger. Fiber optic cable route can be straight or turning, with angles up to 25. Our clamps does not cut the cable jackets and guarantee the long period of usage.

Following optical fiber suspension accessories are made of UV resistant plastic, galvanized steel plates and hardware. This allows very easy in installation of optical fiber cable and attached to pole (concrete, wooden, metal) with suspension hook or stainless steel strap.




ANCHOR CLAMPS FOR FIGURE-8 TYPE CABLES

Product information:






Anchor clamps designed to anchor figure-8 fiber optic cable of different diameters and messenger's types. All the clamps are self-adjusting. Needed mechanical strength and clamp of cable achieved by wedges and conical body of clamp. Usually for FRP, kevlar messenger it is used plastic wedges and body of clamp, whereas for metal messenger we use zink teeth and aluminum body material.

Generally, optical cable with steel messenger require higher mechanical load, and this completely assured by high strength aluminum materials that applied in anchor clamps. Our wedge anchor clamps does not cut the cable jackets and guarantee the long period of usage.

Technical specification:

Product code		Diameter of wire over the insulation	MBL, kN	Materials
SSA-1		Ø 4 - 5 / 5 - 9	8	Galvanized steel, UV resistant plastic
CS		Ø 4 - 5 / 5 - 9	8	Galvanized steel, UV resistant plastic
ZP 8-2		Ø 4 - 8	2	Galvanized steel, aluminium

Technical specification:

Product code		Messenger's material	Diameter of wire over the insulation	MBL, kN	Materials
PA-37		FRP	Ø 3 - 7	2.5	Stainless steel, UV resistant plastic, aluminium
PA-69			Ø 6 - 9		
PA-610			Ø 6 - 10		
PA-05		Steel	Ø 3-5	2	Stainless steel, UV resistant plastic, aluminium, zink
PA-06		Steel	Ø 3 - 6	3	Stainless steel, UV resistant plastic, aluminium, zink
PA-07			Ø 3 - 7	5	
PA-08		Steel	Ø 3 - 7	2.5	Stainless steel, UV resistant plastic, aluminium, zink
PA-07-535		Steel	Ø 3 - 5	5.5	Stainless steel, UV resistant plastic, aluminium, zink
PA-07-568			Ø 6 - 8		

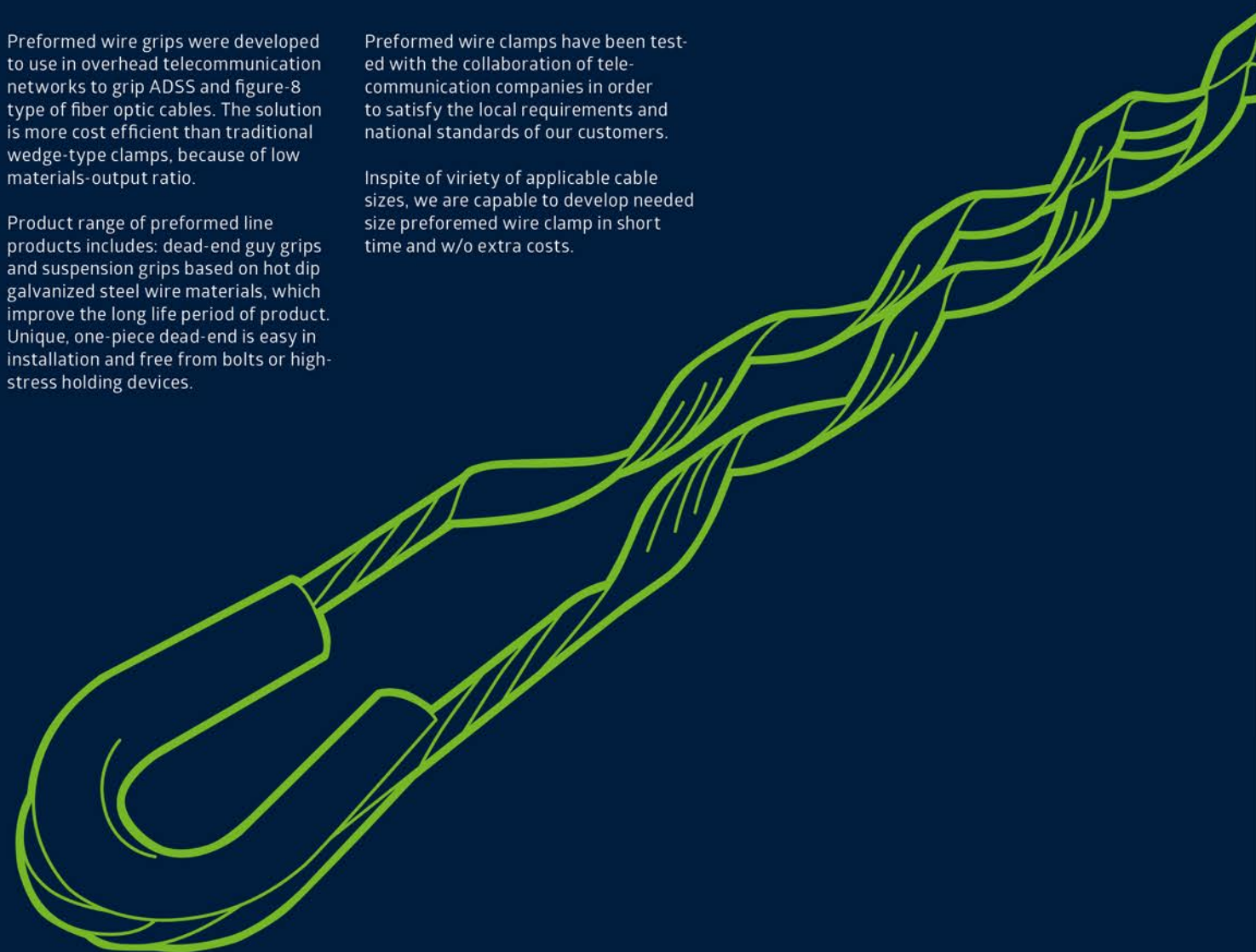
PREFORMED WIRE GRIPS FOR ADSS & FIGURE-8 CABLES

Preformed wire grips were developed to use in overhead telecommunication networks to grip ADSS and figure-8 type of fiber optic cables. The solution is more cost efficient than traditional wedge-type clamps, because of low materials-output ratio.

Product range of preformed line products includes: dead-end guy grips and suspension grips based on hot dip galvanized steel wire materials, which improve the long life period of product. Unique, one-piece dead-end is easy in installation and free from bolts or high-stress holding devices.

Preformed wire clamps have been tested with the collaboration of telecommunication companies in order to satisfy the local requirements and national standards of our customers.

In spite of variety of applicable cable sizes, we are capable to develop needed size preformed wire clamp in short time and w/o extra costs.



DEAD END GUY GRIPS, JS

Product information:

Performed wire dead-end guy grip, JS were developed to grip the ADSS fiber optical cable while construction of internet network lines on wood poles or concrete towers, as analog of classical wedge tension clamps.

ADSS performed wire guy grip, JS were made of hot dip galvanized steel, ASTM A475 standard of wire rod.

ADSS distribution dead-ends guy grip do not require any tool for installation and can be mounted on fiber optic cable, directly. Overhead ADSS dead-end JS type do not require and protective rods or side splices, it can be installed straight on the fiber cable jacket. However, when the tension strength is high,

it should be applied helical ADSS grip with splice protector in order to protect fiber core from damaging during tensioning. Opposite to it, it can be applied ADSS preformed wire grip without protector, when the tension is under 9 KN, with thimble or without it.

The configuration of ADSS performed clamp is calculated in order to minimize the insertion losses of light signal. In addition, our company has researched plenty of varieties of helical tension grips and we are able to match our wire formed dead-ends to your ADSS cable size, according to its working load and outer diameter.



SUSPENSION GRIPS, JS-X

Product information:

Preformed wire suspension grips JS-X were developed to secure cable intermediate pole on the central loop routes fiber optical cable line.

Wire formed grips are made of galvanized steel materials. Additionally equipped with round-type thimble, that provide superior holding without destruction of wire after years of usage.

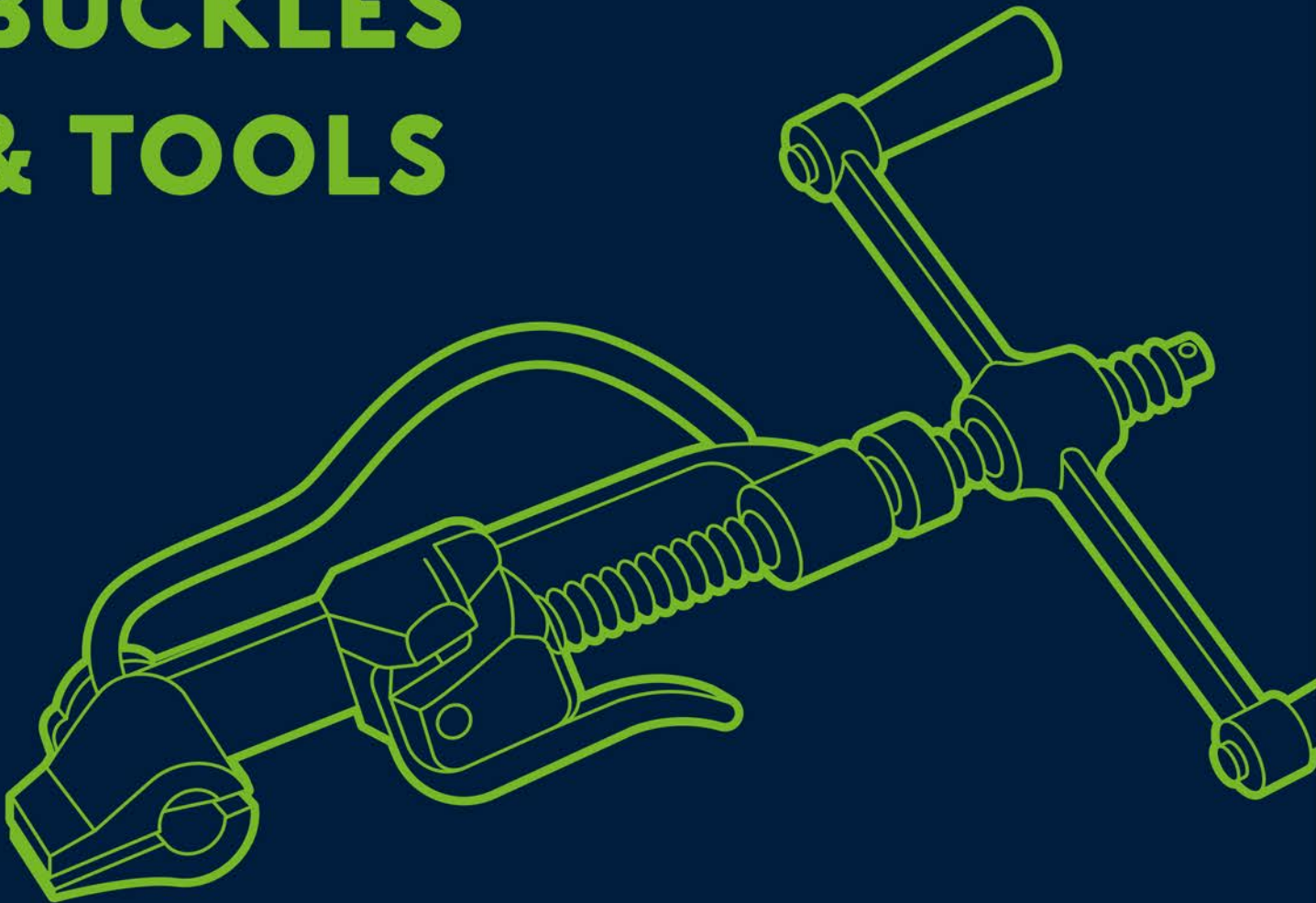
and protective rods or side splices, it can be installed straight on the fiber cable jacket. However, when the tension strength is high, it should be applied helical ADSS grip with splice protector in order to protect fiber core from damaging during tensioning. Opposite to it, it can be applied ADSS performed wire grip without protector, when the tension is under 9 KN, with thimble or without it.

Installation of grip do not require any tool and can be mounted on fiber optic cable, directly. Overhead ADSS grips do not require

Technical specification:

Product code	Thimble, may be applied on tension load	Working load of cable (breaking load), kN	ADSS cable size, mm	Color code	Wire configuration	Length, mm	Weight, kg
JS	Without	1 (2)	5.0/5.6	— red	Specified in accordance to cable working load		
	US – 1 (1 – 7 kN)		5.7/6.5	— yellow			
	UT – 05 (1 – 7 kN)	2 (3.5)	6.6/7.4	— black			
	UT – 1 (5 – 10 kN)	3 (5)	7.5/8.4	— orange			
	UT – 3 (12 – 15 kN)	4 (7)	8.5/9.4	— brown			
		5 (9)	9.5/10.5	— white			
			10.6/11.6	— blue			
			11.7/12.8	— green			
			12.9/14.1	— red			
			14.2/15.6	— yellow			
JS-X	Without	6 (10)	15.7/17.3	— black			
	UR – 1 (1 – 7 kN)	7 (12)	17.4/19.1	— orange			
	UR – 2 (5 – 10 kN)	8 (14)	19.2/20.9	— brown			
	UR – 3 (12 – 15 kN)	9 (15)	21/22.8	— white			

BANDS,
BUCKLES
& TOOLS



Stainless steel banding or strapping products and accessories were developed to bundle items together, to attach industrial fittings to the poles. Banding system is a set of fastening materials and special fixing devices made of stainless steel or steel, covered with special materials, gas, oil and mining industries, fixing signs to power line.

Basic package of banding accessories to fixate cable accessories to pole includes:

- stainless steel band;
- stainless steel buckles;
- tools for tightening band.

Stainless steel band accessories meet the criteria of key regional standards such as CENELEC, EN-50483-4, NF C 33-020, ROSSETI (CIS market).

Due to advantages as extended service life; extremely easy and convenient in use, securely and tightly attaching, strapping accessories can be applied very widely: in fastening solutions, in construction of overhead distribution lines; overhead transmission lines, telecommunication lines, construction of outdoor passive optic networks, street or traffic signs and video cameras, tubes and other pole hardware, marine and railway transportation.

STAINLESS STEEL BANDS



Product information:

Stainless steel band applied with suspension clamps, anchor clamps, and hooks, on dead end and intermediate routes, of main or end use electrical connections.

Stainless steel bands are made of stainless steel of different grades: 201, 202, 304, 316, 409. Jera's band have superior elongation value, compared to other manufacturers. For easy identification of steel grade, we produce the plastic boxes from different colors.

Steel strapping is the strongest way of securing with heavy loads, when fixing items withstand the high tensile strength.

Jera's banding products are available in different sizes to assist your strapping needs. Stainless steel bands can guarantee extended service life and attaching under significant mechanical loads.

Installation process:

1. Cut the stainless steel strap with needed length by strap banding tool.
2. Put on it the stainless steel buckle.
3. Fix the strap by moving the strap banding tool wheel (or ratchet), then cut the band.

Technical specification:

Material grade, SUS	201	202	304	316	409
Width	1/4" – 6.4 mm	3/8" – 9.5 mm	1/2" – 12.7 mm	5/8" – 16.0 mm	3/4" – 19.0 mm
Thickness	0.015" – 0.40 mm	0.020" – 0.50 mm	0.025" – 0.64 mm	0.028" – 0.70 mm	0.030" – 0.75 mm
Length for roll, m	30 or 50	30 or 50	30 or 50	30 or 50	30 or 50
Colour of dispenser	Red	Green	Blue	Purple	Yellow

STAINLESS STEEL BUCKLES, T-TYPE



Product information:

Stainless steel buckles, other called stainless steel clips, used to attach pole fittings, anchor clamps, suspension fittings and other fittings or accessories together with stainless steel band, on dead-end and intermediate routes, of main or end use electrical connections.

Stainless steel buckles t-type are made of stainless steel of different grades: 201, 202, 304, 316.

Stainless steel buckles t-type are reinforced, this can guarantee extended service life and

attaching under significant mechanical loads because teeth strictly clamped the band inside.

Stainless steel buckles t-type are made of different sizes depend on band strapping size to assist your strapping needs of securing with heavy loads. Stainless steel buckles has max size for band – 20 mm and appropriate for insertion of three coils of band strapping.

The design of buckles exclude purchase bolts, nuts and washers, hex keys of different sizes.

Technical specification:

Product code	HC-10-T	HC-13-T	HC-16-T	HC-20-T
Max band width	3/8" – 10 mm	1/2" – 12.7 mm	5/8" – 16.0 mm	3/4" – 20.0 mm
Grades	201, 202, 304, 316	201, 202, 304, 316	201, 202, 304, 316	201, 202, 304, 316



STAINLESS STEEL BUCKLES, L-TYPE

Product information:

Stainless steel buckles, other called stainless steel clips, used to attach pole fittings, anchor clamps, suspension fittings and other fittings or accessories together with stainless steel band on dead-end and intermediate routes, of main or end use electrical connections.

Stainless steel buckles I-type are made of stainless steel of different grades: 201, 202, 304, 316.

Stainless steel buckles I-type are made of different sizes depend on band strapping size to assist your strapping needs of securing with heavy loads. Stainless steel buckles have max size for band — 20 mm and appropriate for insertion of three coils of band strapping.

The design of buckles exclude purchase bolts, nuts and washers, hex keys of different sizes.

Technical specification:

Product code	HC-10-L	HC-13-L	HC-16-L	HC-20-L
Max band width	3/8" – 10 mm	1/2" – 12.7 mm	5/8" – 16.0 mm	3/4" – 20.0 mm
Grades	201, 202, 304, 316	201, 202, 304, 316	201, 202, 304, 316	201, 202, 304, 316



STAINLESS STEEL BUCKLES, LX AND LC

Product information:

Stainless steel buckles, other called stainless steel clips, used to attach pole fittings, anchor clamps, suspension fittings and other fittings or accessories together with stainless steel band, on dead-end and intermediate routes, of main or end use electrical connections.

Stainless steel buckles LC and LX are made of stainless steel of different grades: 201, 202, 304, 316.

Stainless steel buckles LC and LX are made as analog to reinforced buckles, to withhold sufficien mechanical loads, compared to simple I-type. Stainless steel buckles have max size for band — 20 mm and appropriate for insertion of three coils of band strapping.

The design of buckles exclude purchase bolts, nuts and washers, hex keys of different sizes.

Technical specification:

Product code	HC-20-LC	HC-20-LX
Max band width	3/4" – 20.0 mm	3/4" – 20.0 mm
Grades	201, 202, 304, 316	201, 202, 304, 316



RATCHET TOOL MBT-004

Product information:

Ratchet type tool MBT-004 is developed for tensioning the stainless steel band and mounting the fittings on wooden, concrete or metal poles. The tool is equipped with special blade for easily cutting the stainless steel band.

Ratchet tool MBT-004 heavy duty forged steel banding tool. Maximum thickness of mounted steel band is 1.5 mm and 25 mm of width.

Ratchet tool MBT-004 is an easy way of binding stainless steel banding around different rack / pole elements. It keeps the tension tight on the strapping bands as they fasten the components together. The operations of cutting, tension, banding can be done with spin tension handle, spring-loaded gripper and cutter. To complete the installation there is only one tool needed.

Ratchet tool MBT-004 is made of galvanized steel, which is resistant to impacts and wear. Has long durability and extended service life.

Technical specification:

Product code	MBT-004
Max band width	< 25
Grades	< 1.5



WHEEL TOOL MBT-003

Product information:

Wheel type tool MBT-003 is developed for tensioning the stainless steel band and mounting the fittings on wooden, concrete or metal poles. The tool is equipped with special blade for easily cutting the stainless steel band.

Wheel type tool MBT-003 is heavy duty forged steel banding tool. Maximum thickness of mounted steel band is 1.2 mm and 20 mm of width.

Wheel type tool MBT-003 is made of galvanized steel, which is resistant to impacts and wear. Have long durability and extended service life.

The strapping tool MBT-003 has superior rust corrosion resistance and trouble proofed design, which strictly clamped the band and buckles. The cut knife withholds plenty of cutting cycles and guarantee long service period of tool. To complete the installation there is only one tool needed.

Technical specification:

Product code	MBT-003
Max band width	< 20
Grades	< 1.2

PULLING TOOLS FOR CABLE LINE



Stringing overhead pulling tools were developed to be used with fiber optic cable in line construction. Such equipment have the access to pull conductors by manual or machine force. Pulling force converts to clamping force and easily allows pulling fiber optical cables.

Common installation set includes: FRP duct rodder, overhead stringing block (pulley), come-along, stringing lever hoist, overhead pulling cable grip, swivel shackle, separating wedges.

Simple desing and durability allows with stand sufficient loads without cable slip or its damage.

FIBER GLASS DUCT RODDER, WHEEL TYPE



Product information:

Fiberglass duct rodders also called fiber-glass snake rodders were developed for rod-ding operations and underground jobs such as pulling cables through duct and pipes.

Glassfiber reinforced composite core, covered by plastic jacket ensures long life period. Suitable for applying with pulling mechanical or electrical winch, which is easy because of metal frame body on wheels. Wheels allow to carry on distances during the construction works.

High-tensile strength and water resistant provide this solution widely applied in the telecommunication operations. Reliable performance to help increase the efficiency of construction works.

Technical specification:

Product code	DR-6/50	DR-6/100	DR-8/100	DR-8/150	DR-10/150
FRP, mm	Ø 6	Ø 6	Ø 8	Ø 8	Ø 10
FRP length, M	50	100	100	150	150

STRINGING BLOCKS (PULLEY)



Product information:

Overhead stringing block (pulley) is used for pulling of the insulated areal conductor or ropes.

Block made of galvanized steel metal part and plastic coated groove. Also pulley can be made of aluminum alloy with synthetic material groove.

Stringing block can be equipped with locking rope, fitted with a hand swiveling hook.

Technical specification:

Product code	MT 26-50-30	MT 56-120-30
MBL, kN	20	21
Material	Nylon	Al
Weight, kg	1.5	2.5



COME-ALONGS

Product information:

Stringing overhead come-along, is used for pulling conductors by manual or machine force.

Pulling force converts to clamping force and easily allows pulling cables.

Technical specification:

Product code	MC-29/41
MBL, kN	20
Cable size, mm	Ø 4 – 22



LEVER HOISTS

Product information:

Stringing lever hoist is used for pulling conductors of a low voltage power to lifting loads by manual force, reverse can be use.

It is made of galvanized steel. This LV ABC mechanical winch can be used for all types of cable adjustments.

Technical specification:

Product code		LH-15	LH-20
Pulling force, ton	Without block	0.75	1.5
	With block	1.5	3
Cable length, m	Without block	3	3.0
	With block	1.6	1.6



PULLING SOCKS

Product information:

Overhead pulling cable grip is used for pulling of the insulated conductor, for ropes and cable with neutral messenger.

Overhead pulling cable grip are made of stainless steel or galvanized steel wires.

Technical specification:

Product code	S10	S12	S15
MBL, kN	10	12	15
Cable size, mm	Ø 5 – 10	Ø 10 – 14	Ø 14 - 24
Length, mm	300	600	600



SWIVEL

Product information:

Swivel shackle is used with pulling socks to eliminate any twisting of conductor. Also it can be used to replace the old cable between winches.

This overhead swivel is used between two overhead pulling grips to replace an old conductor by a new one or between a pulling grip and the wire rope on the winch.

It prevents any twisting of the conductor.

Technical specification:

Product code	MBL, kN	Cable size, mm	Dimensions, mm					
			A	B	C	D	E	F
SW-15	15	Ø 12	12	87	33	29	12	113