

ALUMINIUM STRUCTURES





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ALUMINIUM STRUCTURES

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ALUMINIUM STRUCTURES

The top welding experts at your disposal.

Tesmec aluminium structures are a product of excellence: completely hand welded by certified workers using only top quality anticorrosional

aluminium of 6000 class certified exclusively in Europe.



ALUMINIUM STRUCTURES: OUR VALUE PROPOSITION



HAND-MADE FOR THE TOP SAFETY LEVEL

The Working Platform PLL is an equipment used to allow the access to the insulator area and the conductor's dead end joints on anchoring towers.

It is attached to the tower by a handle in the middle of the platform. It is retained in horizontal working position by proper guy wires firmly anchored to the ground or to the tower.

The capacity of the PLL is 3 kN for each of the two ends.

Thanks to the single side anti-fall barrier, provided with all the platforms, Tesmec guarantees the highest safety on jobsite.



HIGH VOLTAGE TUBULAR TOWER'S EQUIPMENT

Tesmec has developed a new range of equipment for high voltage new generation tubular towers.

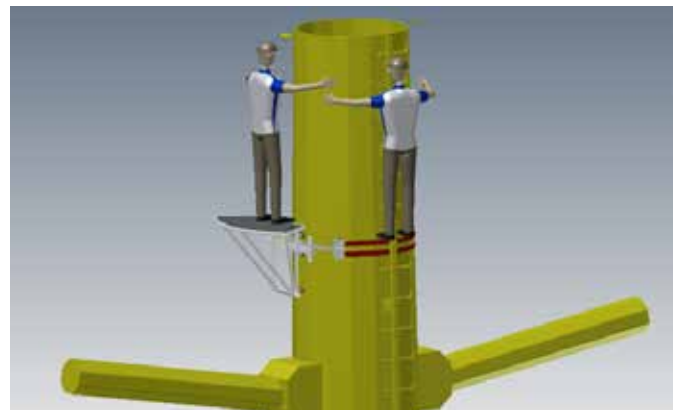
This type of structures require less space and reduce environmental impact however, in comparison with a traditional tower, the linemen here have no anchoring points or standing area.



LIGHT ALUMINIUM ALLOY LADDERS (PPE)

Ladder and anti-fall device are a complex of individual protective devices, certified by a third party organization. The ladders, designed in accordance with the Italian TSO Terna, are tested and used in all conditions since 60 years on job sites around the world.

Operator safety is always a priority. From 2013 not only the anti-fall devices SDA021 / SDA022 but the ladder itself is certified in compliance with the PPE Directive.



Tesmec R&D department has developed a complete set of equipment easy to transport and to install, ensuring operations with the traditional safety level. This is the best solution to reach any area for proper maintenance of such new compact towers.

PIL

SUPPORT STRUCTURES

LIGHT ALUMINIUM ALLOY SUPPORTING STRUCTURE FOR ERECTION OF PROTECTIONS FOR ROADS, RAILWAYS, CHANNELS AND LINE CROSSINGS.

MODULAR
LIGHT & STRONG



PIL

PXT004

PXT002

PXB006

CHARACTERISTICS

MODEL	LENGTH mm	SECTION	CAPACITY kN	MASS Kg
PIL100	2000	Triangular	10	7.5
PIL101	4000	Triangular	10	14
PIL500	2000	Square	10	9.5
PIL501	4000	Square	10	18.5

OPTION

DESCRIPTION	FOR SQUARE SECTION	FOR TRIANGULAR SECTION
Swivel light aluminium alloy head with pulley diameter 650 mm	PXT001	PXT002
Steel head designed to carry wooden beams suitable for crossing operations	PXT003	PXT004
Steel base	PXB005	PXB006

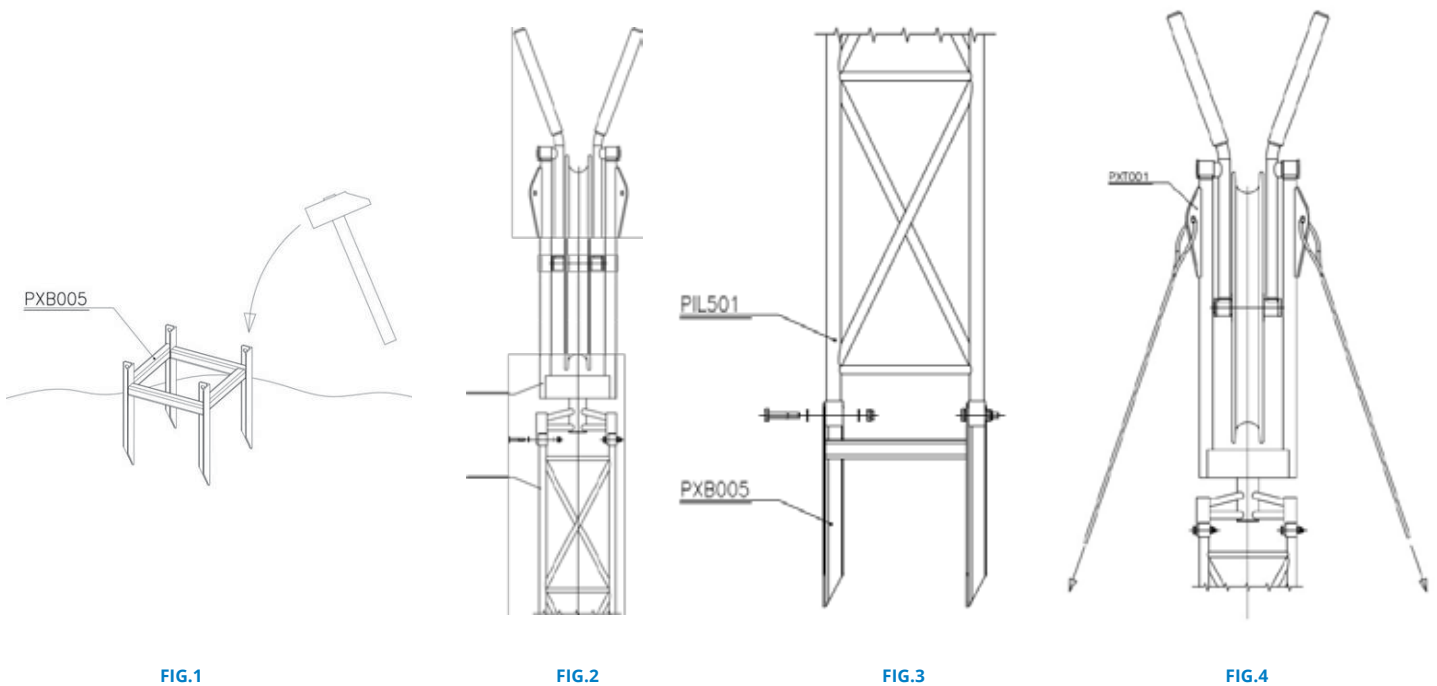


FIG.1

FIG.2

FIG.3

FIG.4

ASSEMBLY OPERATIONS FOR PIL005, PXT001, PXB005

First operation: stake out the base chip PXB005 on the ground by hammer. **FIG.1**

Second operation: join PIL501 part with PXT001 part by bolts and nuts. Make these operations with components laid on the floor. **FIG.2**

Third operation: lift components and join PXB005+PXT001 parts with PIL501 part by bolts and nuts. **FIG.3**

Fourth operation: fix the steel wire guys from the PXT001 holes to supports on the floor. **FIG.4**

PLL WORKING PLATFORMS

DETACHABLE WIDE RANGE
SEVERAL OPTIONS AVAILABLE FRAME



CHARACTERISTICS

MODEL	TOTAL LENGTH	LATERAL SECTION LENGTH	CENTRAL SECTION LENGTH	INTERMEDIATE SECTION LENGTH	WORKING LOAD AT THE TWO ENDS	MASS
	m	m	m	m	kg	kg
PLL004	7	3,5+3,5	-	-	300	65
PLL302	8	4+4	-	-	300	75
PLL308	9	4,5+ 4,5	-	-	300	85
PLL306	10	5+5	-	-	300	95
PLL303	11	5,5 +5,5	-	-	300	105
PLL311	12	6+6	-	-	300	107
PLL300	12	3,5+3,5	5	-	300	110
PLL600	16	3,5+3,5	5	2+2	300	150
PLL901	18	4,5+4,5	4,5+4,5	-	300	180
PLL909	20	5+5	5+5	-	300	190
PLL900	22	5,5+5,5	5,5+5,5	-	300	200
PLL905	24	6+6	6+6	-	300	228
PLL907	26	5+5+5+5	6	-	300	240

AVAILABLE DEVICES

- PYB001** Special track for hydraulic press trolley
- PYC002** Hydraulic press trolley
- PYDxxx** Double side anti-fall barrier



PYB001 + PYC002 + PRT060

CONFIGURATION

The working platforms have trapezoidal section and they are made of light aluminium alloy. For modular use of the platforms extra sling and anti-fall barrier kit are required for each specific length. All the platforms are provided with single side anti-fall barrier.

Special working platforms are available upon request.

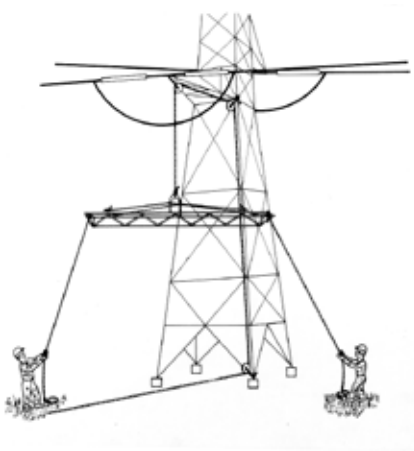


FIG.1

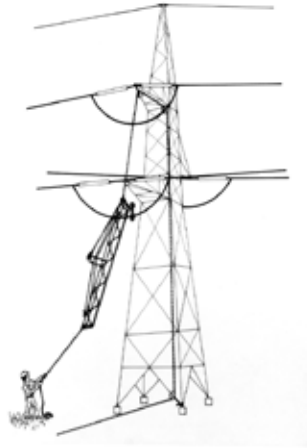


FIG.2



FIG.3

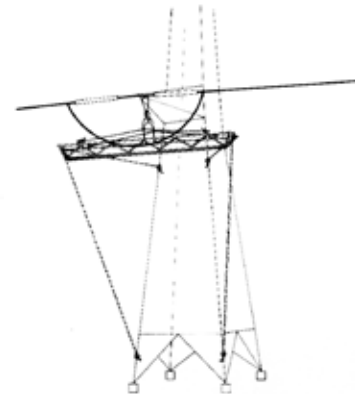


FIG.4

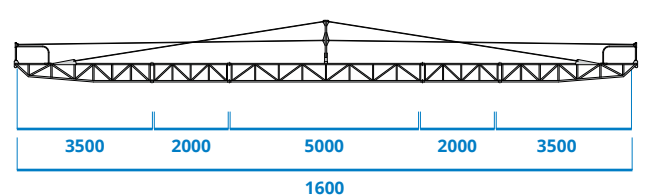
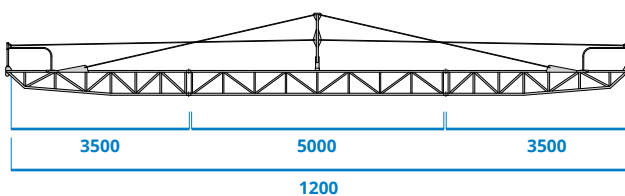
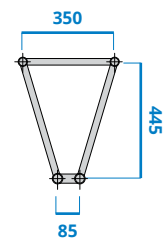
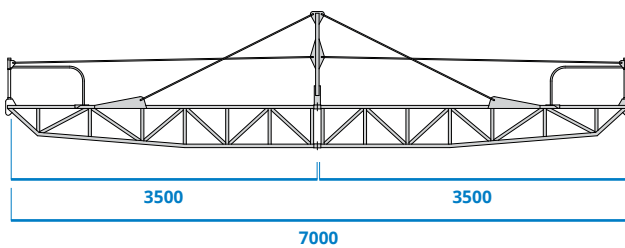
USE INSTRUCTIONS FOR WORKING PLATFORM PLL

Installation on bottom cross arm, for standard or delta towers. **FIG.1**

Installation on top cross arm: lifting operation. **FIG.2**

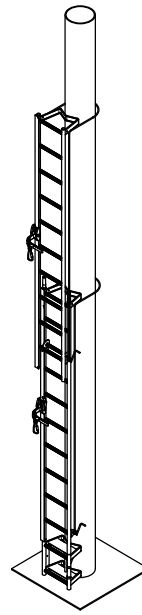
Installation on top cross arm: twist to final position. **FIG.3**

Stability: example of anchoring. **FIG.4**



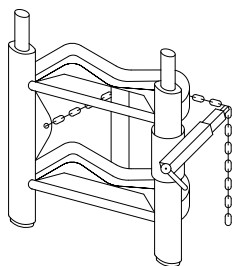
SCP MONOPOLE LADDERS

PERFECT FIT
SLIDING SYSTEM

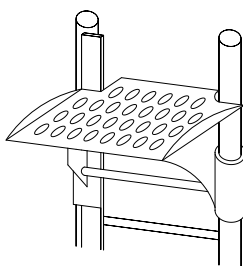


CHARACTERISTICS

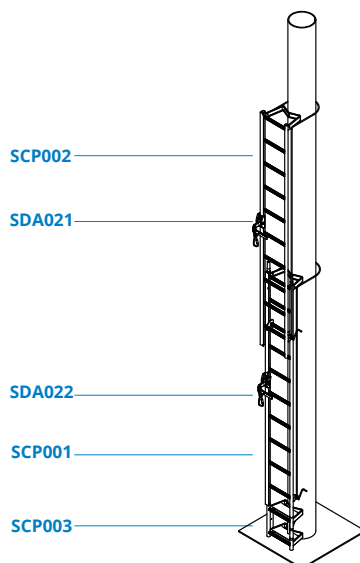
MODEL	DESCRIPTION	SECTION LENGTH m	WORKING LOAD kg	MASS kg	ANTI-FALL DEVICE model
SCP001	Standard section	2.5	100	6.6	SDA022 (not included)
SCP002	Terminal section	2.5	100	7	SDA021 (included)
SCP003 OR SCP004	Self-supporting base	-	100	5	-
	Self-supporting base section	2.5	100	7	Use the one of the standard section
SCP005	Working platform	-	100	1.2	-



SCP003



SCP005



SCP

CONFIGURATION

Specifically designed for climbing poles of circular or polygonal section. Standard lengths can be assembled to create the total length required. The ladder is made of light aluminium alloy, provided with anti-slippery rungs and with special tracks for the anti-fall device.

The ladder can be composed by using the following elements:

A. Several standard sections: quantity according to the total required height (**SCP001**)

B1. One self-supporting base for fixing the ladder to the pole without additional ground support (**SCP003**)

or

B2. One self-supporting base section for fixing the ladder to the pole without additional ground support (**SCP004**)

C. One terminal section, complete with anti-fall device, to be connected to any of the rungs of the last standard section, in order to adjust the final ladder length (**SCP002**)

As an option available the working platform applicable to the ladder at the required height (**SCP005**)

SCA

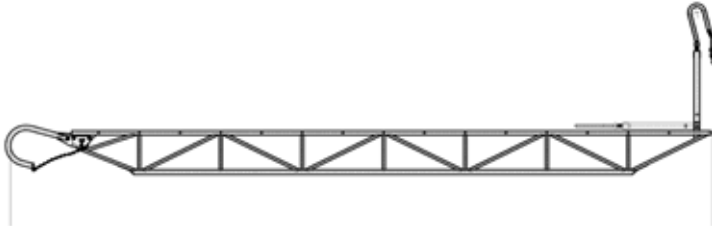
ANCHORING LADDERS

LIGHT WEIGHT PLATFORM
EASY TO HANDLE

CONFIGURATION

Specifically designed for anchoring works. The ladders are made of light aluminium alloy, with anti-slippery rungs and with galvanized steel suspension hooks.

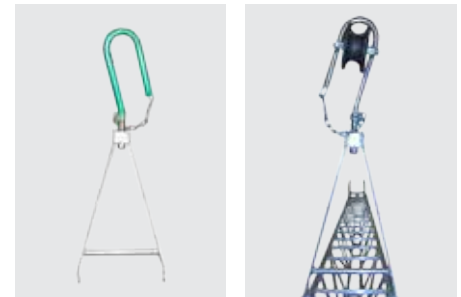
The ladders are supplied with a supplementary swivel hook to be located on the conductor, which allows the ladder to be used in horizontal position. The ladders are available with triangular or trapezoidal section.



CHARACTERISTICS

MODEL	LENGTH m	SECTION LENGTH m	WORKING LOAD kg	LINEAR MASS kg/m	SECTION
SCA700	4	4	150	4	Triangular
SCA800	6	6	150	4	Triangular
SCA801	6	4+2	150	4	Triangular
SCA900	8	4+4	150	4	Triangular
SCA400	3.5	3.5	300	4.7	Trapezoidal
SCA401	4.5	4.5	300	4.7	Trapezoidal
SCA500	6.5	4.5+2	300	4.7	Trapezoidal
SCA600	8	4+4	300	4.7	Trapezoidal

SPECIAL MODELS WITH DIFFERENT LENGTHS ARE AVAILABLE UPON REQUEST.



SDG010

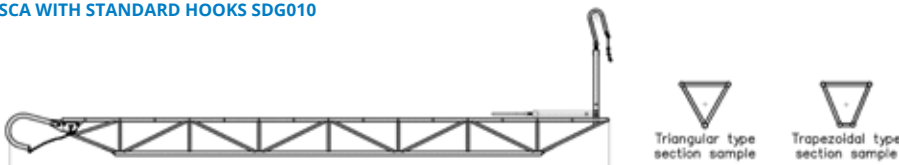
SDG009



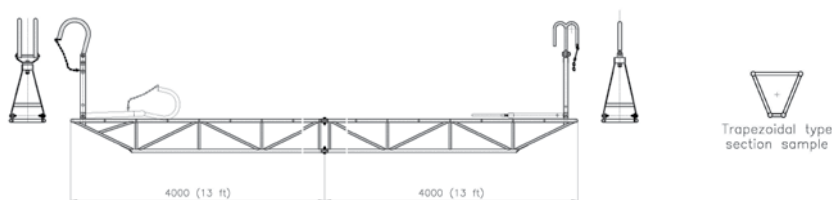
SDG018

SDG025

SCA WITH STANDARD HOOKS SDG010



SCA WITH SPECIAL DOUBLE SWIVEL SUSPENSION HOOKS SDG018 SDG019



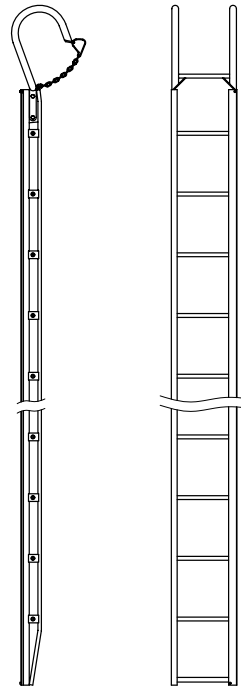
SDG019

SCS-SDA

SUSPENSION LADDERS

PPE SYSTEM

MODULAR AND LIGHT WEIGHT



SUSPENSION LADDERS - SCS

Specifically designed for suspension works. The ladder is made of light aluminium alloy, fitted with anti-slippery rungs, with a special track for the anti-fall device and with a galvanized steel supporting hook.

MODEL	LENGTH m	SECTION LENGTH m	WORKING LOAD kg	LINEAR MASS kg/m	ANTI-FALL DEVICE model not included
SCS100	3.5	3.5	300	3.8	SDA021
SCS200	4.5	4.5	300	3.8	SDA021
SCS306	5	5	300	3.8	SDA021
SCS300	6	6	300	3.8	SDA021
SCS301	6	4+2	300	3.8	SDA021
SCS302	8	4+4	300	3.8	SDA021

AVAILABLE DEVICES

SDG015 Double swivel hook

Special models with different lengths are available upon request.



SDG015

ANTI-FALL DEVICES - SDA

They are individual protective devices to prevent the operator from falling down; they are self-guided and self-locking devices running on a special rigid track and made of light aluminium alloy. They are provided with a polyamide mini energy-absorber and safety spring catch to connect it to the safety harness; the use of the safety harness is compulsory. They allow the proper movement of the operator along the ladder and, at the same time, they protect him from falling down. End stroke devices are provided in order to avoid that the anti-fall device run away from the anchoring track. These devices comply with the 89/686/CEE European Standard related to the individual protective devices.

MODEL	WORKING LOAD kg	NYLON ROPE LENGTH mm	MASS kg
SDA021	100	300	1
SDA022	100	300	1



Pictures & drawings can be different according to technical specifications - updating programme variations without notice are possible.

Certified Quality System
ISO 9001:2015

Certified Environmental System
ISO 14001:2015

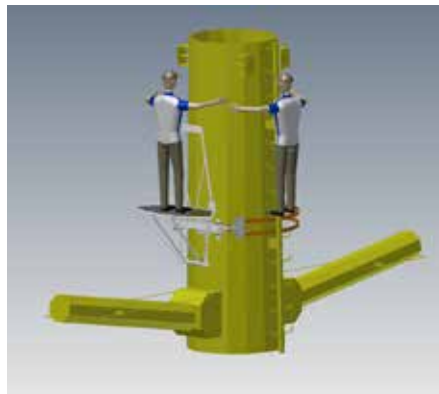
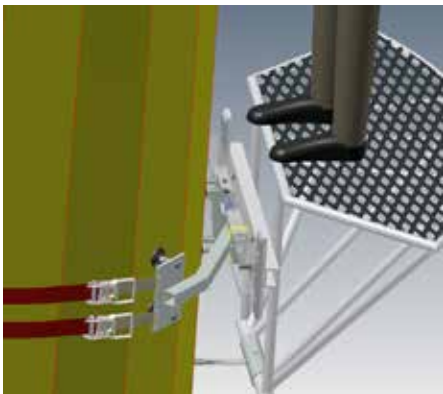
Certified Health & Safety System
ISO 45001:2018



TUBULAR TOWER'S EQUIPMENT

COMPLETE RANGE FOR MAINTENANCE OF HV TUBULAR TOWER

DESIGNED AND TESTED FOR ITALIAN 380 KV
NEW TOWERS



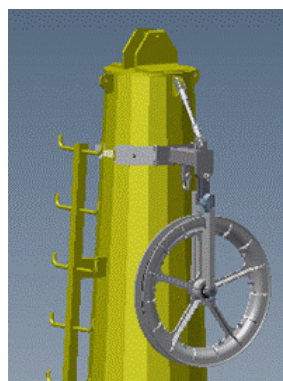
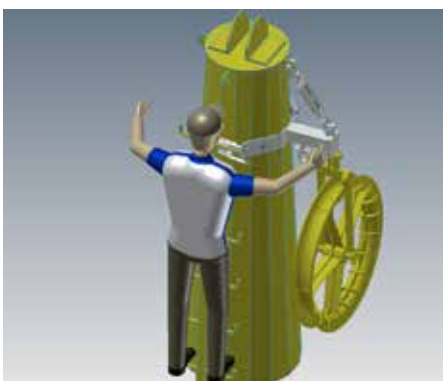
PLS952

SUPPORT PLATFORM

This equipment allows a lineman to move away from tower's ladder, giving him a comfortable area to perform different operations. It can be positioned on each part of the tower thanks to its self-adapting locking system. This equipment does not require anchoring devices on tower. The platform is made of light aluminum alloy for an easy handling and it is provided with anti-slipper floor and a positioning connection for the operator. All steel parts are fully protected by corrosion.

CHARACTERISTICS

Working load	120 kg
Tower Diameter range	560÷1700 mm



ABS060

GUARD ROPE PULLEY SUPPORT

This an equipment provides a support to a pulley on the top of the tower for guard rope or OPGW stringing. It is provided with a self-adjusting support designed to self adapt to the different tower diameters. The arm is provided with an anchoring point for service blocks.

CHARACTERISTICS

Working load	14 kN
Tower Diameter range	400÷700 mm

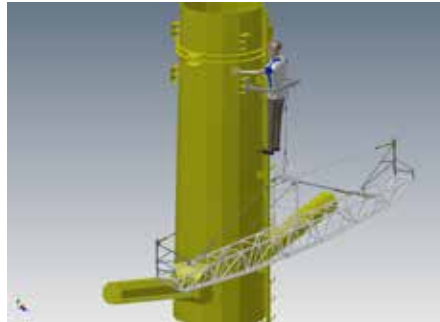
ABS061

SUPPORT FOR WORKING PLATFORM

This equipment which is a support structure to connect a working platform onto the tower. It is provided with a self-support base and doesn't require anchoring devices on tower. It can be placed in every position on the tower. The device is designed to self adapt to the tower shape. It can support the weight of three operators.

CHARACTERISTICS

Working load	500 kg
Tower Diameter range	450÷1700 mm



SCA407

HORIZONTAL LADDER

It's a device used to offer an easy passage from tower to the end of the tower's arms. It is provided with universal hook and a stabilizing system. The ladder is made of light aluminum alloy and can be detached in two section 3 + 1.5 m

CHARACTERISTICS

Working load	400 kg
Length	4.5 m (3+1.5)



AVZ

HYDRAULIC JACK FOR INSULATOR MAINTENANCE

This device is composed by two hydraulic jacks and byconnection devices. It is designed to unload horizontal insulator without detaching the conductors from their connection points. Power is provided by an external power unit. Horizontal arms are made of light aluminum alloy to save weight. This device is suitable also for cornering tower. Hydraulic jacks are double effect and can push or pull conductors with the same force.



CHARACTERISTICS

Working load	35 kN
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