

ENGINEERING AND MANUFACTURING OF EQUIPMENT FOR OVERHEAD  
TRANSMISSION LINES, UNDERGROUND LAYING AND TELECOMMUNICATION LINES

# GENERAL CATALOGUE





TE.M.A. S.p.A., stringing division of TE.M.A. Group, has been active since 1985 in the field of design, construction and sale of machinery and equipment products for stringing and laying high-medium-low voltage power lines.

TE.M.A. S.p.A. operates with an innovative approach to provide modern technologies and integrated solutions in the design, construction and maintenance phases of equipment and machinery for the stringing and cable laying sector.

TE.M.A. S.p.A. provides solutions and products able to satisfy customer's needs.



[www.temaitaly.it](http://www.temaitaly.it)

- PULLERS, TENSIONERS AND EQUIPMENT FOR CABLE STRINGING;
- ALUMINUM EQUIPMENT;
- PULLERS AND EQUIPMENT FOR CABLE LAYING.



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**CERTIFICATO - CERTIFICATION**



Si certifica che il Sistema di Gestione per la Qualità di:  
This is to certify that the Quality Management System of:

**TE.M.A. S.P.A.**

Sede legale / Registered Office: VIA PIATTO-FIATE 40 - 20040 CASAZZA (MI)  
Sede operativa / Operational Headquarters: VIA PIATTO-FIATE 40 - 20040 CASAZZA (MI)

è conforme ai requisiti della normativa - is compliant against the requirements of the standard:

**UNI EN ISO 9001:2015**

per il seguente settore di intervento - for the following scope of operations:

Progettazione, produzione ed assistenza di organi idraulici per sollevamenti e tensioni, scale di sospensione, attrezzature per stendimento cavi aerei ed isolatori, braccature di sicurezza, carrelli e biciclette aeree, strutture reticolari in lega leggera per sollevamento, porta anaboma e ricostituenti. Consegna per messa su strada di organi.

Design, production and service of hydraulic hoists for lifting and tension, suspension ladders, equipment for laying overhead and underground cables, safety harnesses, trolleys and aerial bicycles, lightweight alloy reticular structures for lifting, anaboma and trusscoilers. Manufacturing of splices for road use.

Settore DNV IMP Sector: 18

Questo certificato è valido e valido solo per il sistema di gestione per la qualità descritto nel campo di applicazione. È valida l'intera attività produttiva, commerciale e di servizi del sistema di gestione per la qualità descritto nel campo di applicazione. Non vengono considerati gli impianti e le attrezzature che non sono stati sottoposti a certificazione. Il presente certificato non è valido per scopi diversi da quelli per i quali è stato emesso. Per informazioni rivolgersi al personale di servizio clienti. Questo certificato è valido fino al 31/12/2020.

N° Q1/641/20

Primo Firmatario First Signatory	Secondo Firmatario Second Signatory	Autore della Certificazione Certification Authority	Scadenza della Certificazione Certificate Expiry Date
20/04/2020	20/04/2020	MI 30 30/04/2020	31/12/2020

**ACCREDITAZIONE**

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Stefano Fossati  
CEO - Chief Operating Officer  
AID INSPECTION





The company is committed to provide the market with the maximum responsiveness and dynamism, through the use of processes in compliance with ISO 9001: 2015 and the most recent regulations, all controlled and managed by qualified personnel, aiming for continuous and constant improvement.

The Quality Manager works side by side with the management verifying, promoting and sharing the results of the improvement activities through an objective and procedural analysis.

The company's mission is to represent a global leader for the stringing market, through the active involvement of all company levels.

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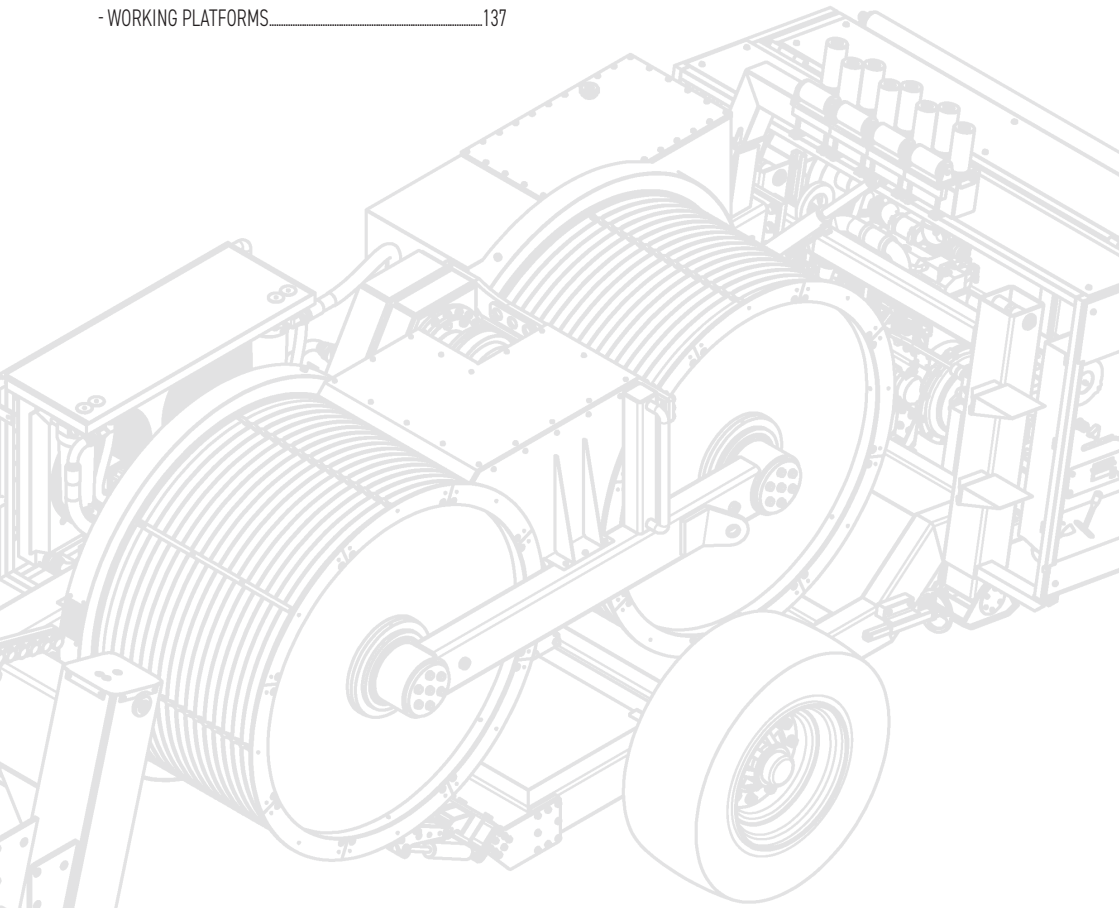
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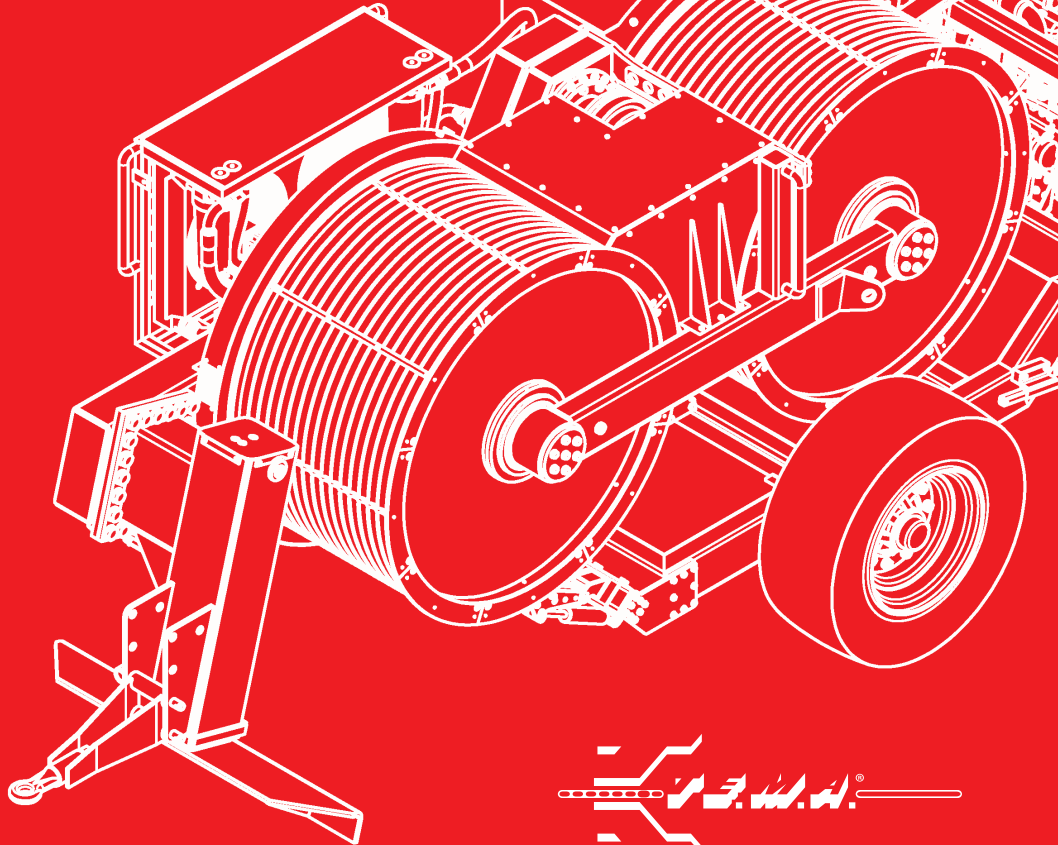


- Tower erection winches and complete stringing systems, including pullers and puller-tensioners, are T.E.M.A.'s core business.
- The entire range is designed, produced and tested within our factories and is equipped with the most modern control systems and engines in accordance with the latest emissions standards.
- For some time now, the following features have been added to the traditional product line:
  - Digital control panels with touch-screen technology and integrated PLC;
  - Multifunction radio controls;
  - Interconnection systems between machines;
  - Remote control via GPS and dedicated software.

## SECTION 1







## 101A1

Hydraulic axial drum winch 10 kN capacity for stringing LV and MV overhead lines, hoisting and tower erection as well as underground cabling and sagging.



### Performance

Max pull	10 kN
Max speed	35 m/min
Speed at max pull	13 m/min

### Characteristics

Drum dimensions	ø 160/331 x 440 mm
Drum capacity	250 m rope ø 10 mm
Weight without rope	190 kg

### Engine

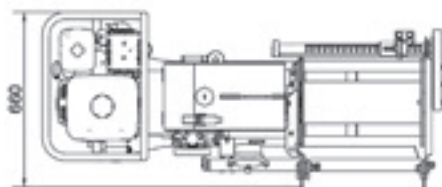
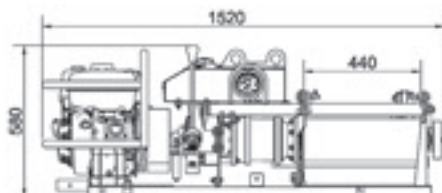
Petrol	(8,5 hp) 6,3 kW
Cooling	Air
Starter	Pull start

### Standard features

- 1 hydraulic circuit with negative brake system
- 1 dynamometer for direct reading of pulling value with load-limiter device
- Trailer kit with rigid axle for manual towing
- Balanced top lifting point and anchoring attachments

### Optional equipment

- 14-PW Large groove capstan with rope holder clamp
- 17-PW Special drum with automatic spooler device
  - A - ø 160/331 x 250 mm (150 m rope ø 10 mm)
  - B - ø 160/331 x 560 mm (350 m rope ø 10 mm)





## 101C1

Front drum hydraulic winch 10 kN capacity for stringing LV and MV overhead lines, hoisting and tower erection as well as underground cabling and sagging.



### Performance

Max pull	10 kN
Max speed	35 m/min
Speed at max pull	13 m/min

### Characteristics

Drum dimensions	ø 270/480 x 520 mm
Drum capacity	580 m rope ø 10 mm
Capstan bottom groove	ø 230 mm
Weight without rope	350 kg

### Engine

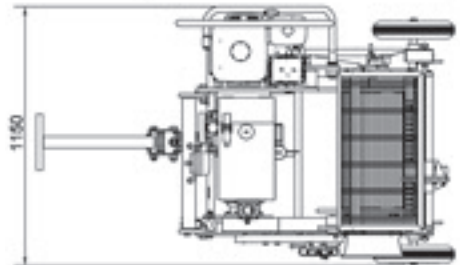
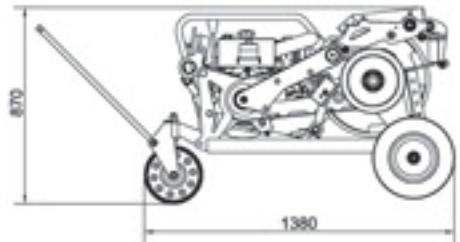
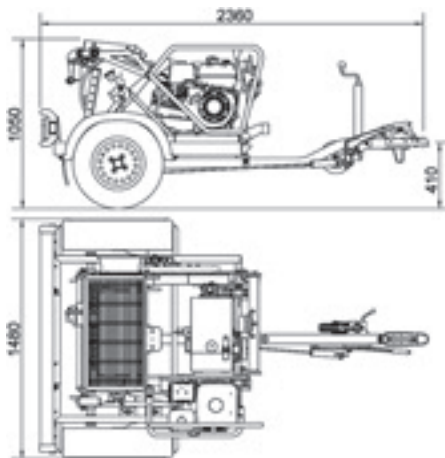
Petrol	(8,5 hp) 6,3 kW
Cooling	Air
Starter	Pull start

### Standard features

- 1 hydraulic circuit with negative brake system
- 1 dynamometer for direct reading of pulling value with load-limiter device
- Rope holder clamp for large-groove capstan
- Trailer kit with rigid axle for manual towing
- Balanced top lifting point and anchoring attachments

### Optional equipment

- 11-PW Road trailer kit
- 17-PW Conical drum



## 101S1

Hydraulic winch 15 kN capacity with two large-groove side capstans for stringing LV and MV overhead lines, hoisting and tower erection as well as underground cabling and sagging.



### Performance

Max pull	15 kN
Max speed	35 m/min
Speed at max pull	13 m/min

### Characteristics

Capstan bottom groove (panel side)	ø 200 mm
Capstan bottom groove (opposite)	ø 250 mm
Weight	320 kg

### Engine

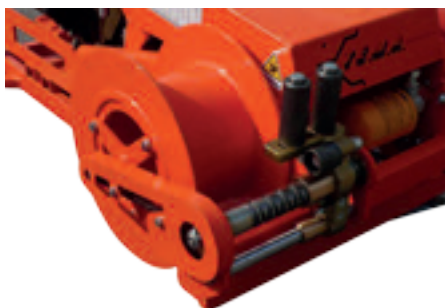
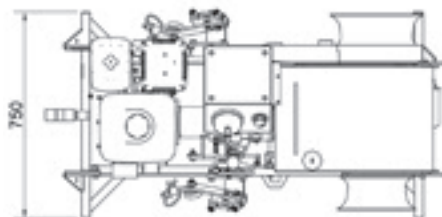
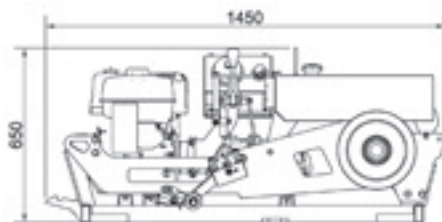
Petrol	(11,5 hp) 8,5 kW
Cooling	Air
Starter	Electrical

### Standard features

- 1 hydraulic circuit with negative brake system
- 1 dynamometer for direct reading of pulling value with load-limiter device
- Rope holder clamps for large-groove capstans
- Balanced top lifting point and anchoring attachments

### Optional equipment

- 02-PW Trailer kit with rigid axle for manual towing
- 17-PW Special drum with automatic spooler device (rope capacity 200 m ø 8 mm)







## 109T1.5

Front drum hydraulic winch 15 kN capacity for stringing LV and MV overhead lines, hoisting and tower erection as well as underground cabling and sagging.



### Performance

Max pull	15 kN
Max speed	70 m/min
Speed at max pull	25 m/min

### Characteristics

Drum dimensions	ø 350 x 620 mm
Drum capacity	400 m rope ø 12 mm
Weight without rope	1260 kg

### Engine

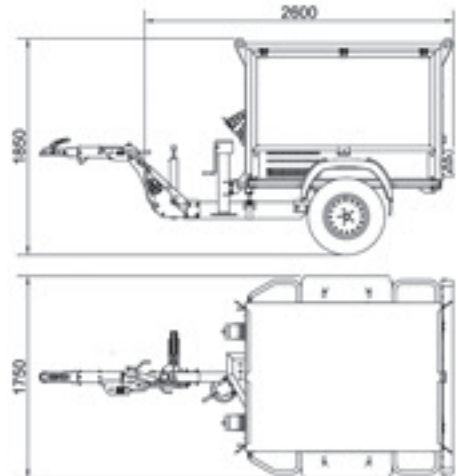
Diesel	(25 hp) 19 kW
Cooling	Liquid
Emission standard - [UE]2016/1628	Stage V

### Standard features

- 1 hydraulic circuit with negative brake system
- 1 dynamometer for direct reading of pulling value with load-limiter device
- 300 m rope HMPE Ø 12 mm
- Remote control unit c/w console 5 m cable
- Front stabilizer jack
- Back support by adjustable mechanical sprag
- Metallic cover can be opened on three sides
- On board toolbox
- Road trailer kit 1350 kg capacity with height adjustable drawbars and jockey wheel
- Upper lifting attachment point balanced type and anchoring attachments

### Optional equipment

- 04-PW Radio control unit
- 13-PW Pre-heater (up to -30°C)
- 30-PW Spare wheel
- 34-PW Pressure roller on the drum



## 109T2

Hydraulic front drum winch 30 kN capacity, suitable for transport by helicopter, for stringing LV and MV overhead lines, hoisting and tower erection as well as underground cabling and sagging.



### Performance

Max pull	30 kN
Max speed	65 m/min
Speed at max pull	18 m/min

### Characteristics

Drum dimensions	ø 350/510 x 620 mm
Drum capacity	350 m rope ø 13 mm
Weight without rope	840 kg

### Engine

Diesel	[25 hp] 19 kW
Cooling	Liquid
Emission standard - (UE)2016/1628	Stage V

### Standard features

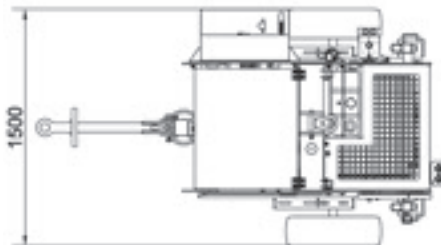
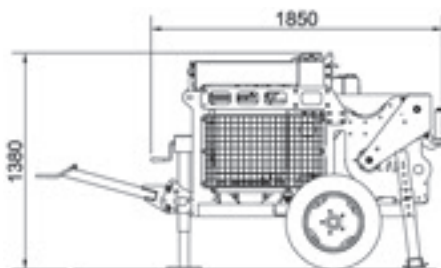
- 1 hydraulic circuit with negative brake system
- 1 dynamometer for direct reading of pulling value with load-limiter device
- Independent mechanical stabilizers (30 kg)
- Rigid axle with tyres for towing up to 30 km/h (76 kg)
- Balanced top lifting point and anchoring attachments

### Optional equipment

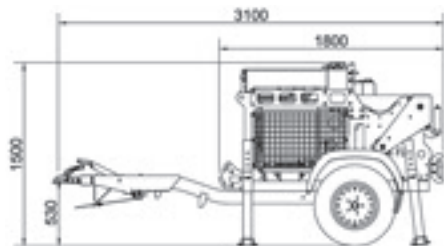
- 11-PW Road trailer kit (66 kg)
- 14-PW Large groove capstan 10 kN Capacity with rope-holder clamp (41 kg)

### Special features upon request

- 03-PW Remote control unit c/w console 5 m cable (22 kg)
- 04-PW Radio control unit (10 kg)
- 13-PW Pre-heater (up to -30°C) (45 kg)



11-PW





## 109T5

Hydraulic front drum winch 55 kN capacity, suitable for transport by helicopter, for stringing LV and MV overhead lines, hoisting and tower erection as well as underground cabling and sagging.



### Performance

Max pull	55 kN
Max speed	85 m/min
Speed at max pull	15 m/min

### Characteristics

Drum dimensions	ø 450/660 x 700 mm
Drum capacity	350 m rope 18 mm
Weight without rope	1100 kg

### Engine

Diesel	(36,5 hp) 27 kW
Cooling	liquid
Emission standard - (UE)2016/1628	Stage V

### Standard features

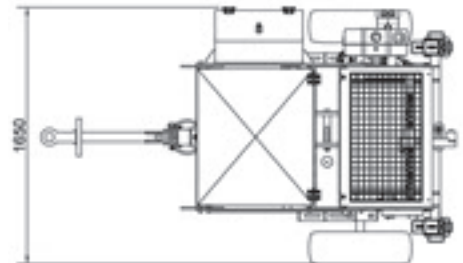
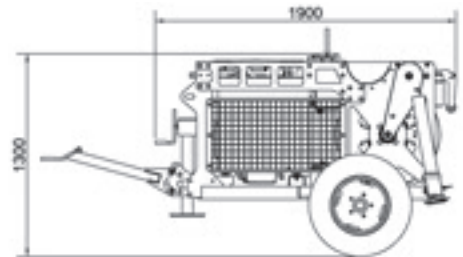
- 1 hydraulic circuit with negative brake system
- 1 dynamometer for direct reading of pulling value with load-limiter device
- Independent mechanical stabilizers (30 kg)
- Rigid axle with tyres for towing up to 30 km/h (76 kg)
- Balanced top lifting point and anchoring attachments

### Optional equipment

- 11-PW Road trailer kit
- 14-PW Large groove capstan with rope-holder clamp
  - A - 10 kN Capacity
  - B - 30 kN Capacity

### Special features upon request

- 03-PW Remote control unit c/w console 5 m cable (22 kg)
- 04-PW Radio control unit (10 kg)
- 36-PW Engine emission standard Stage IIIA - (36,5 hp) 27 kW



# PULLER

## 107R1

Hydraulic puller 15 kN capacity for single rope pulling on overhead stringing operations as well as underground cabling.

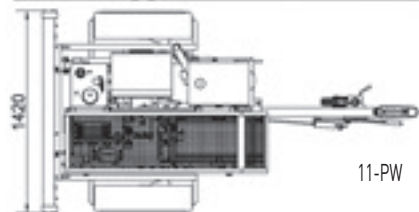
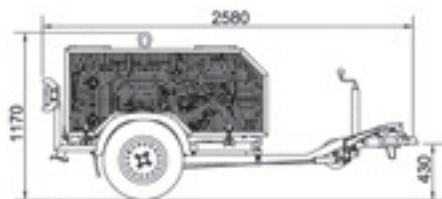


### Standard features

- 1 hydraulic circuit with negative brake system
- 1 dynamometer for direct reading of pulling value with load-limiter device
- Thermally treated steel bull-wheels
- Automatic reel-winder with rope spooler device
- Manually detachable steel reel
- Front pulley roller guided device for underground cabling
- Rigid axle with tyres for towing up to 30 km/h
- Balanced top lifting point and anchoring attachments

### Optional equipment

- 01-PW Preset for digital data recorder, counter-meter and speedometer
- 11-PW Road trailer kit
- 18-PW Digital counter-meter device



### Performance

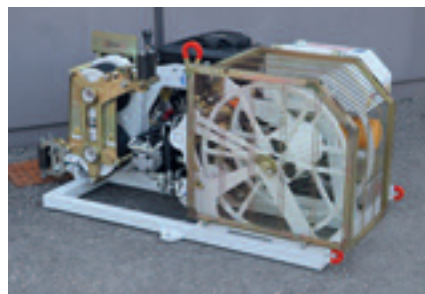
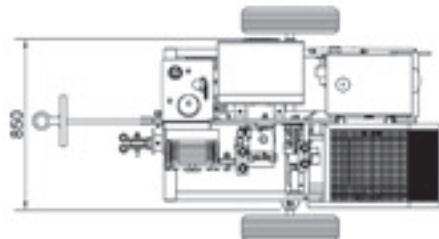
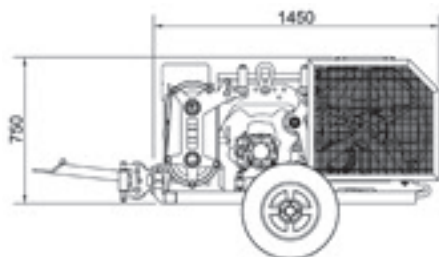
Max pull	15 kN
Max speed	4,5 km/h
Speed at max pull	1 km/h

### Characteristics

Bull-wheels diameter	200 mm
Max rope diameter	10 mm
Steel reel dimension	ø 200 x 220 mm
Steel reel capacity	500 m rope ø 9 mm
Weight without rope	440 kg

### Engine

Petrol	(18 hp) 13 kW
Cooling	Air
Starter	Electrical







## 107R2

Hydraulic puller 25 kN capacity for single rope pulling on overhead stringing operations as well as underground cabling.



### Performance

Max pull	25 kN
Max speed	5 km/h
Speed at max pull	1 km/h

### Characteristics

Bull-wheels diameter	250 mm
Max rope diameter	10 mm
Weight	950 kg

### Engine

Diesel	(25 hp) 18,6 kW
Cooling	Liquid
Emission standard - [UE]2016/1628	Stage V

### Standard features

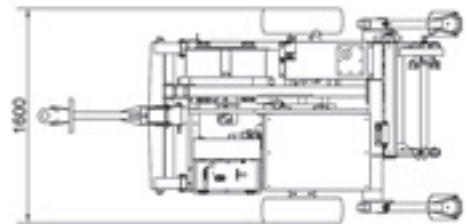
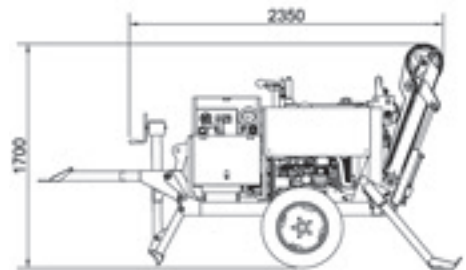
- 1 hydraulic circuit with negative brake system
- 1 dynamometer for direct reading of pulling value with load-limiter device
- Thermally treated steel bull-wheels
- Automatic reel-winder suitable for steel reel 1100-1400 mm
- Rigid axle with tyres for towing up to 30 km/h
- Balanced top lifting point and anchoring attachments

### Optional equipment

- 01-PW Preset for digital data recorder, counter-meter and speedometer
- 06-PW Front pulley roller guided device for underground cabling (Telescopic rod cod. AT1.30 on request)
- 07-PW Hydraulic power take-off for remote reel-winder

### Special features upon request

- 03-PW Remote control unit c/w console 5 m cable
- 04-PW Radio control unit
- 05-PW Rope holder clamp (hydraulic)
- 13-PW Pre-heater (up to -30°C)
- 18-PW Counter-meter device
- 20-PW Dynamic speed pulling force control



# PULLER

## 107R5

Hydraulic puller 50 kN capacity for single rope pulling on overhead stringing operations as well as underground cabling.



### Performance

Max pull	50 kN
Max speed	5 km/h
Speed at max pull	2,1 km/h

### Characteristics

Bull-wheels diameter	400 mm
Max rope diameter	16 mm
Weight	2300 kg

### Engine

Diesel	(73 hp) 54 kW
Cooling	Liquid
Emission standard - (UE)2016/1628	Stage V

### Standard features

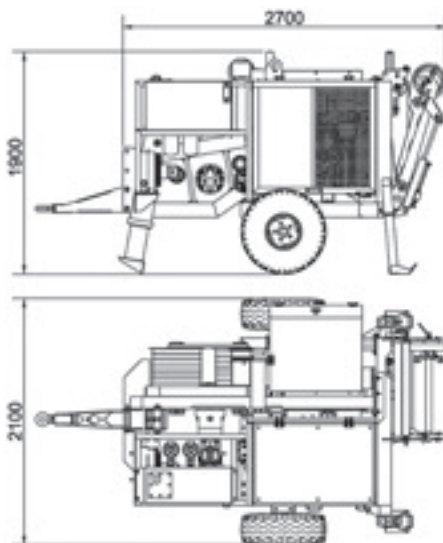
- 1 hydraulic circuit with negative brake system
- 1 dynamometer for direct reading of pulling value with load-limiter device
- Thermally treated steel bull-wheels
- Automatic reel-winder suitable for steel reel 1100-1400 mm
- Remote control unit c/w console 5 m cable
- Rigid axle with tyres for towing up to 30 km/h
- Balanced top lifting point and anchoring attachments

### Optional equipment

- 01-PW Preset for digital data recorder, counter-meter and speedometer
- 05-PW Rope holder clamp (hydraulic)
- 06-PW Roller guiding device for underground laying
- 07-PW Hydraulic power take-off for remote reel-winder

### Special features upon request

- 04-PW Radio control unit
- 13-PW Pre-heater (up to -30°C)
- 18-PW Counter-meter device
- 20-PW Dynamic speed pulling force control
- 36-PW Engine emission standard Stage IIIA - (85 hp) 63 kW





## 107R8

Hydraulic puller 90 kN capacity for single rope pulling on overhead stringing operations as well as underground cabling.



### Performance

Max pull	90 kN
Max speed	5 km/h
Speed at max pull	2 km/h

### Characteristics

Bull-wheels diameter	600 mm
Max rope diameter	24 mm
Weight	3400 kg

### Engine

Diesel	(125 hp) 93 kW
Cooling	Liquid
Emission standard - (UE)2016/1628	Stage IIIA

### Standard features

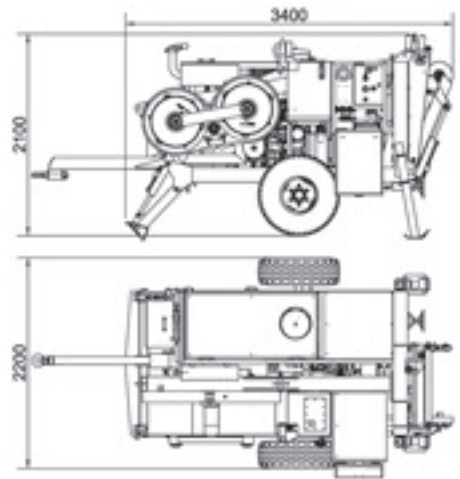
- 1 hydraulic circuit with negative brake system
- 1 dynamometer for direct reading of pulling value with load-limiter device
- Thermally treated steel bull-wheels
- Automatic reel-winder suitable for steel reel 1100-1400 mm
- Remote control unit c/w console 5 m cable
- Rigid axle with tyres for towing up to 30 km/h
- Balanced top lifting point and anchoring attachments

### Optional equipment

- 01-PW Preset for digital data recorder, counter-meter and speedometer
- 04-PW Radio control unit
- 05-PW Rope holder clamp (hydraulic)
- 06-PW Roller guiding device for underground laying
- 07-PW Hydraulic power take-off for remote reel-winder

### Special features upon request

- 13-PW Pre-heater (up to -30°C)
- 18-PW Counter-meter device
- 20-PW Dynamic speed pulling force control



# PULLER

## 107R10

Hydraulic puller 100 kN capacity for single rope pulling on overhead stringing operations.



### Performance

Max pull	100 kN
Max speed	5 km/h
Speed at max pull	2,1 km/h

### Characteristics

Bull-wheels diameter	550 mm
Max rope diameter	22 mm
Weight	4250 kg

### Engine

Diesel	(143 hp) 105 kW
Cooling	Liquid
Emission standard - (UE)2016/1628	Stage V

### Standard features

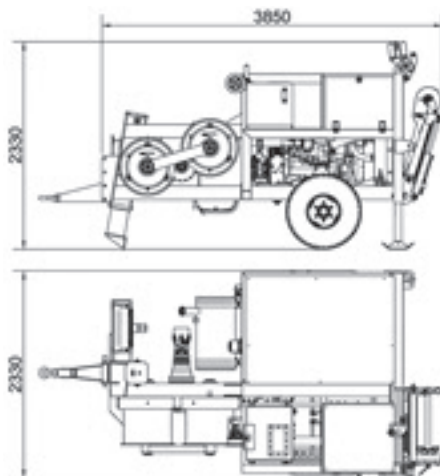
- 1 hydraulic circuit with negative brake system
- 1 dynamometer for direct reading of pulling value with load-limiter device
- Thermally treated steel bull-wheels
- Automatic reel-winder suitable for steel reel 1100-1400 mm
- Remote control unit c/w console 5 m cable
- Rigid axle with tyres for towing up to 30 km/h
- Balanced top lifting point and anchoring attachments

### Optional equipment

- 01-PW Preset for digital data recorder, counter-meter and speedometer
- 04-PW Remote control unit
- 05-PW Rope holder clamp (hydraulic)
- 07-PW Hydraulic power take-off for remote reel-winder

### Special features upon request

- 13-PW Pre-heater (up to -30°C)
- 18-PW Counter-meter device
- 20-PW Dynamic speed pulling force control







## 107R5.2

Hydraulic puller 100 kN capacity for one or two ropes for overhead stringing operations, designed to be used as a twin independent capstans puller (50+50 kN) as well as in coupled mode (100 kN).



### Performance

Max pull	2x50 or 1x100 kN
Max speed	5 km/h
Speed at max pull	2 km/h

### Characteristics

Bull-wheels diameter	550 mm
Max rope diameter	22 mm
Weight	5400 kg

### Engine

Diesel	(143 hp) 105 kW
Cooling	Liquid
Emission standard (UE)2016/1628	Stage V

### Standard features

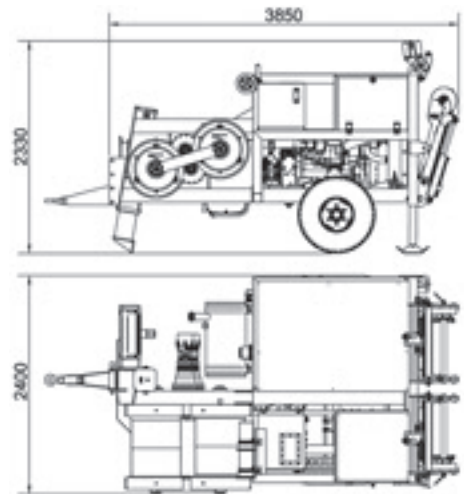
- 2 hydraulic circuits with negative brake system
- 2 dynamometers for direct reading of pulling value with load-limiter devices
- Thermally treated steel bull-wheels
- 2 automatic independent reel-winders for steel reel 1100-1400 mm
- Remote control unit c/w console 5 m cable
- Rigid axle with tyres for towing up to 30 km/h
- Balanced top lifting point and anchoring attachments

### Optional equipment

- 01-PW Preset for digital data recorder, counter-meter and speedometer
- 04-PW Radio control unit
- 05-PW Rope holder clamp (hydraulic)
- 07-PW Hydraulic power take-off for remote reel-winder

### Special features upon request

- 13-PW Pre-heater (up to -30°C)
- 18-PW Counter-meter device
- 20-PW Dynamic speed pulling force control
- 36-PW Engine emission standard Stage IIIA - (125 hp) 93 kW



# PULLER

## 107R14

Hydraulic puller 140 kN capacity for single rope pulling on overhead stringing operations.



### Performance

Max pull	140 kN
Max speed	5 km/h
Speed at max pull	2,2 km/h

### Characteristics

Bull-wheels diameter	600 mm
Max rope diameter	24 mm
Weight	4500 kg

### Engine

Diesel	(218 hp) 160 kW
Cooling	Liquid
Emission standard - (UE)2016/1628	Stage V

### Standard features

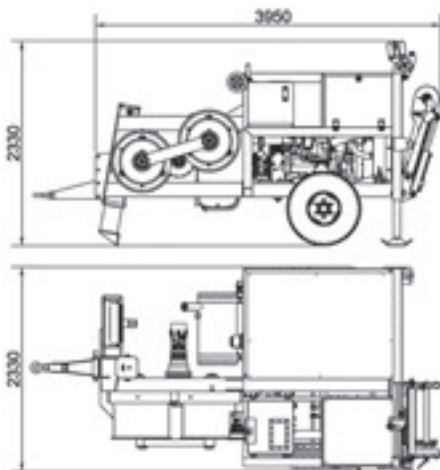
- 1 hydraulic circuit with negative brake system
- 1 dynamometer for direct reading of pulling value with load-limiter device
- Thermally treated steel bull-wheels
- Automatic reel-winder suitable for steel reel 1100-1400 mm
- Remote control unit c/w console 5 m cable
- Rigid axle with tyres for towing up to 30 km/h
- Balanced top lifting point and anchoring attachments

### Optional equipment

- 01-PW Preset for digital data recorder, counter-meter and speedometer
- 04-PW Radio control unit
- 05-PW Rope holder clamp (hydraulic)
- 07-PW Hydraulic power take-off for remote reel-winder

### Special features upon request

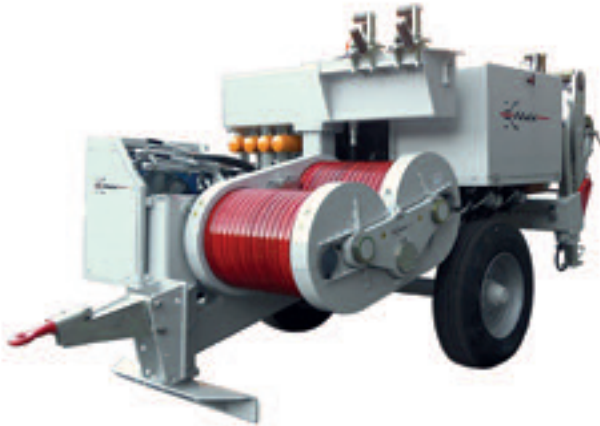
- 13-PW Pre-heater (up to -30°C)
- 18-PW Counter-meter device
- 20-PW Dynamic speed pulling force control
- 36-PW Engine emission standard Stage IIIA - (175 hp) 129 kW





## 107R7.2

Hydraulic puller 150 kN capacity for one or two ropes on overhead stringing operations, designed to be used as a twin independent capstans puller (75+75 kN) as well as in coupled mode (150 kN).



### Performance

Max pull	2x75 or 1x150 kN
Max speed	5 km/h
Speed at max pull	2,1 km/h

### Characteristics

Bull-wheels diameter	600 mm
Max rope diameter	24 mm
Weight	6800 kg

### Engine

Diesel	(218 hp) 160 kW
Cooling	Liquid
Emission standard - (UE)2016/1628	Stage V

### Standard features

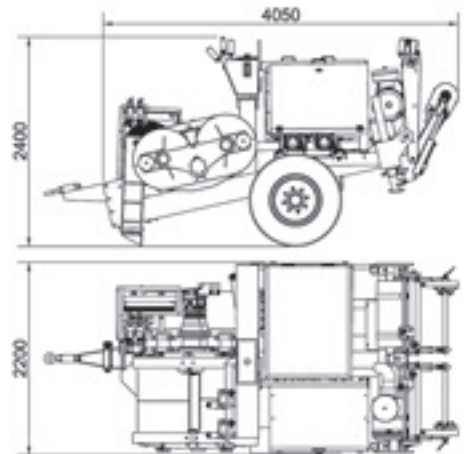
- 2 hydraulic circuits with negative brake system
- 2 dynamometers for direct reading of pulling value with load-limiter devices
- Thermally treated steel bull-wheels
- 2 automatic independent reel-winders for steel reel 1100-1400 mm
- Remote control unit c/w console 5 m cable
- Rigid axle with tyres for towing up to 30 km/h
- Balanced top lifting point and anchoring attachments

### Optional equipment

- 01-PW Preset for digital data recorder, counter-meter and speedometer
- 04-PW Radio control unit
- 05-PW Rope holder clamp (hydraulic)
- 07-PW Hydraulic power take-off for remote reel-winder

### Special features upon request

- 13-PW Pre-heater (up to -30°C)
- 18-PW Counter-meter device
- 20-PW Dynamic speed pulling force control
- 36-PW Engine emission standard Stage IIIA - (175 hp) 129 kW



# PULLER

## 107R18

Hydraulic puller 190 kN capacity for single rope pulling on overhead stringing operations.



### Performance

Max pull	190 kN
Max speed	5 km/h
Speed at max pull	2,2 km/h

### Characteristics

Bull-wheels diameter	700 mm
Max rope diameter	28 mm
Weight	7250 kg

### Engine

Diesel	[286 hp] 210 kW
Cooling	Liquid
Emission standard - (UE)2016/1628	Stage V

### Standard features

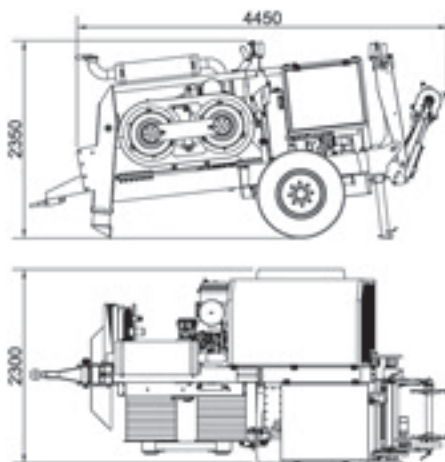
- 1 hydraulic circuit with negative brake system
- 1 dynamometer for direct reading of pulling value with load-limiter device
- Thermally treated steel bull-wheels
- Automatic reel-winder suitable for steel reel 1100-1400 mm
- Remote control unit c/w console 5 m cable
- Rigid axle with tyres for towing up to 30 km/h
- Balanced top lifting point and anchoring attachments

### Optional equipment

- 01-PW Preset for digital data recorder, counter-meter and speedometer
- 04-PW Radio control unit
- 05-PW Rope holder clamp (hydraulic)
- 07-PW Hydraulic power take-off for remote reel-winder

### Special features upon request

- 13-PW Pre-heater (up to -30°C)
- 18-PW Counter-meter device
- 19-PW Built-in reel winder suitable for reels up to Ø 1900 mm
- 20-PW Dynamic speed pulling force control
- 36-PW Engine emission standard Stage IIIA - (300 hp) 224 kW





## 107R24

Hydraulic puller 240 kN capacity for single rope pulling on overhead stringing operations.



### Performance

Max pull	240 kN
Max speed	4,5 km/h
Speed at max pull	2,2 km/h

### Characteristics

Bull-wheels diameter	800 mm
Max rope diameter	32 mm
Weight	9300 kg

### Engine

Diesel	[365 hp] 272 kW
Cooling	Liquid
Emission standard - (UE)2016/1628	Stage IIIA

### Standard features

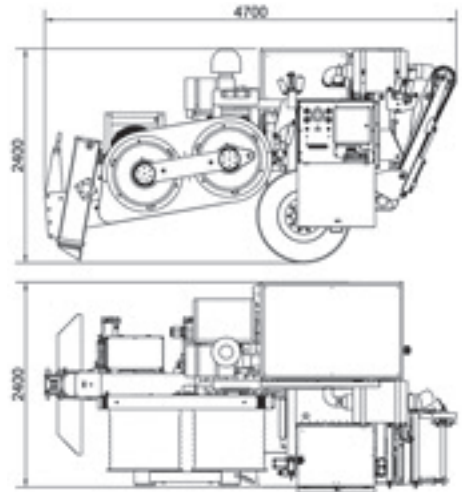
- 1 hydraulic circuit with negative brake system
- 1 dynamometer for direct reading of pulling value with load-limiter device
- Dynamic speed pulling force control
- Thermally treated steel bull-wheels
- Automatic reel-winder suitable for steel reel 1100÷1400 mm
- Remote control unit c/w console 5 m cable
- Front hydraulic stabilizer
- 2 back hydraulic stabilizers
- Rigid axle with tyres for towing up to 30 km/h
- Balanced top lifting point and anchoring attachments

### Optional equipment

- 01-PW Preset for digital data recorder, counter-meter and speedometer
- 04-PW Radio control unit
- 05-PW Rope holder clamp (hydraulic)
- 07-PW Hydraulic power take-off for remote reel-winder

### Special features upon request

- 13-PW Pre-heater (up to -30°C)
- 18-PW Counter-meter device
- 35-PW Engine emission standard Stage V - (272 hp) 210 kW





# TENSIONER

## P062.11

Inactive hydraulic tensioner 25 kN capacity for single conductor stringing operations.



### Performance

Max tension	25 kN
Max speed	5 km/h

### Characteristics

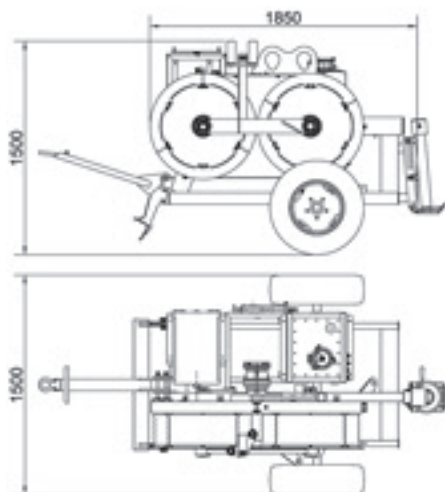
Adherence-wheels diameter	660 mm
Max conductor diameter	23 mm
Weight	785 kg
Weight without transport kit	700 kg

### Standard features

- 1 hydraulic circuit with negative brake system
- 1 dynamometer for direct reading of tensioning force
- 1 counter-meter device
- Adherence wheels with interchangeable adiprene liners
- Independent mechanical stabilizers
- Rigid axle with tyres for towing up to 30 km/h
- Balanced top lifting point and anchoring attachments

### Optional equipment

- 14-PT Thermally treated steel adherence wheels





## P152.11

Inactive hydraulic tensioner 25 kN capacity for single conductor and OPGW cable stringing operations.



### Performance

Max tension	25 kN
Max speed	5 km/h

### Characteristics

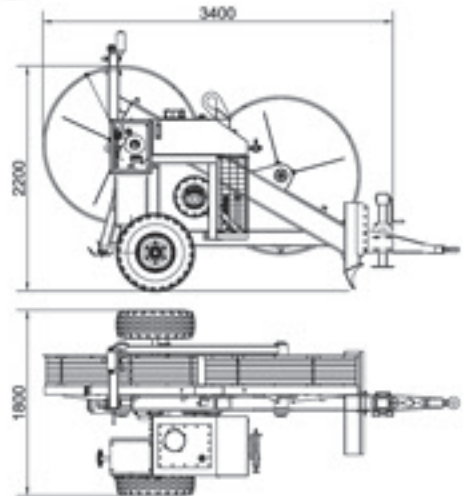
Adherence-wheels diameter	1500 mm
Max conductor diameter	40 mm
Weight	2450 kg

### Standard features

- 1 hydraulic circuit with negative brake system
- 1 dynamometer for direct reading of tensioning force
- 1 counter-meter device
- Adherence wheels with interchangeable nylon liners
- Independent mechanical stabilizers
- Rigid axle with tyres for towing up to 30 km/h
- Balanced top lifting point and anchoring attachments

### Optional equipment

14-PT Thermally treated steel adherence wheels



# TENSIONER

## P155.11

Inactive hydraulic tensioner 50 kN capacity for single conductor and OPGW cable stringing operations.



### Performance

Max tension	50 kN
Max speed	5 km/h

### Characteristics

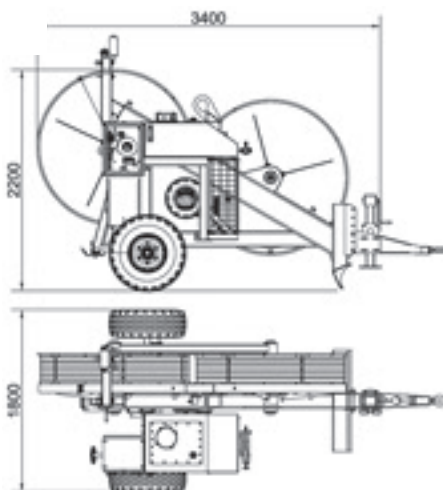
Adherence-wheels diameter	1500 mm
Also available with diameter	1200 mm
Max conductor diameter	40 mm
Weight	2950 kg

### Standard features

- 1 hydraulic circuit with negative brake system
- 1 dynamometer for direct reading of tensioning
- 1 counter-meter device
- Adherence wheels with interchangeable nylon liners
- Gear box (2 speed)
- Independent mechanical stabilizers
- Rigid axle with tyres for towing up to 30 km/h
- Balanced top lifting point and anchoring attachments

### Optional equipment

- 14-PT Thermally treated steel adherence wheels





## P1510.12

Inactive hydraulic tensioner 100 kN capacity for single/double conductors and OPGW cable stringing operations.



### Performance

Max tension	100 kN
Max speed	5 km/h

### Characteristics

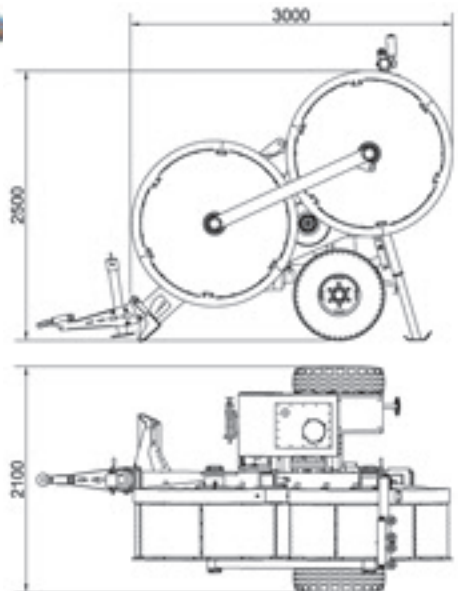
Adherence-wheels diameter	1500 mm
Also available with diameter	1200 mm
Max conductor diameter	40 mm
Weight	3500 kg

### Standard features

- 1 hydraulic circuit with negative brake system
- 1 dynamometer for direct reading of tensioning force
- 1 counter-meter device
- Adherence wheels with interchangeable nylon liners
- Gear box (2 speed)
- Independent mechanical stabilizers
- Rigid axle with tyres for towing up to 30 km/h
- Balanced top lifting point and anchoring attachments

### Optional equipment

- 14-PT Thermally treated steel adherence wheels



# TENSIONER - PULLER

## FA155.11

Hydraulic tensioner-puller 50 kN capacity for single conductor and OPGW cable stringing operations.



### Tensioner performance

Max tension	50 kN
Max speed	5 km/h

### Pull-back performance

Max pull	50 kN
Max speed	1 km/h

### Characteristics

Adherence-wheels diameter	1500 mm
Also available with diameter	1200 or 1800 mm
Max conductor diameter	40 mm
Weight	3500 kg

### Engine

Diesel	(36,5 hp) 27 kW
Cooling	Liquid
Emission standard - (UE)2016/1628	Stage V

### Standard features

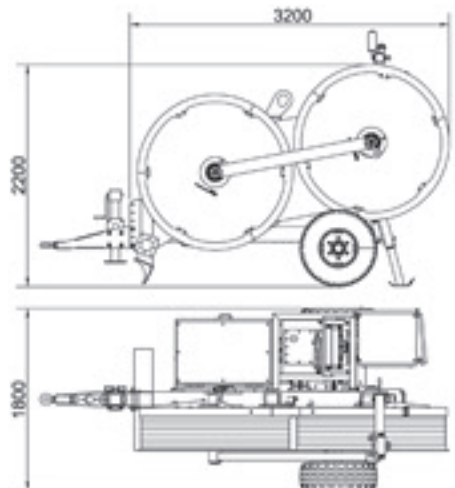
- 1 hydraulic circuit with negative brake system
- 1 dynamometer for direct reading of pulling value with load-limiter device (puller - mode)
- 1 counter-meter device
- 1 set of quick-release hydraulic connectors to drive up to 1 hydraulic driven reel-stands or 1 reel-winder unit
- Adherence wheels with interchangeable nylon liners
- Gear box (2 speed)
- Independent mechanical stabilizers
- Rigid axle with tyres for towing up to 30 km/h
- Balanced top lifting point and anchoring attachments

### Optional equipment

- 01-PT Preset for digital data recorder, counter-meter and speedometer
- 07-PT Hydraulic power take-off for press
- 08-PT Conductor/rope holder clamp (hydraulic)
- 14-PT Thermally treated steel adherence wheels
- 18-PT Multiple connection preset

### Special features upon request

- 20-PT Pre-heater (up to -30°C)
- 40-PT Kit for 2 bundle conductors max Ø 29 mm
- 42-PT Engine emission standard Stage IIIA - (36,5 hp) 27 kW







## FA1510.12

Hydraulic tensioner-puller 100 kN capacity for single/double conductors and OPGW cable stringing operations.



### Tensioner performance

Max tension	100 kN
Max speed	5 km/h

### Pull-back performance

Max pull	100 kN
Max speed	0,6 km/h

### Characteristics

Adherence-wheels diameter	1500 mm
Also available with diameter	1200 or 1800 mm
Max conductor diameter	40 mm
Weight	4100 kg

### Engine

Diesel	(36,5 hp) 27 kW
Cooling	Liquid
Emission standard - [UE]2016/1628	Stage V

### Standard features

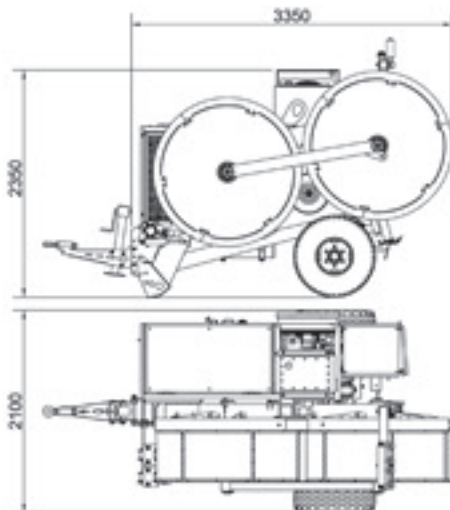
- 1 hydraulic circuit with negative brake system
- 1 dynamometer for direct reading of pulling value with load-limiter device (puller - mode)
- 1 counter-meter device
- 2 sets of quick-release hydraulic connectors to drive up to 2 hydraulic driven reel-stands or 1 reel-winder unit
- Adherence wheels with interchangeable nylon liners
- Gear box (2 speed)
- Independent mechanical stabilizers
- Rigid axle with tyres for towing up to 30 km/h
- Balanced top lifting point and anchoring attachments

### Optional equipment

- 01-PT Preset for digital data recorder, counter-meter and speedometer
- 07-PT Hydraulic power take-off for press
- 08-PT Conductor/rope holder clamp (hydraulic)
- 14-PT Thermally treated steel adherence wheels
- 18-PT Multiple connection preset

### Special features upon request

- 20-PT Pre-heater (up to -30°C)
- 42-PT Engine emission standard Stage IIIA - (36,5 hp) 27 kW



# TENSIONER - PULLER

## FA155.22

Hydraulic tensioner-puller with two independent hydraulic circuits, 2x50 kN or 1x100 kN capacity for stringing of up to 2 bundled conductors as well as OPGW cable.



### Tensioner performance

Max tension	2x50 or 1x100 kN
Max speed	5 km/h

### Pull-back performance

Max pull	2x50 or 1x100 kN
Max speed	1 km/h

### Characteristics

Adherence-wheels diameter	1500 mm
Also available with diameter	1800 mm
Max conductor diameter	40 mm
Weight	7700 kg

### Engine

Diesel	(73 hp) 54 kW
Cooling	Liquid
Emission standard (UE)2016/1628	Stage V

### Standard features

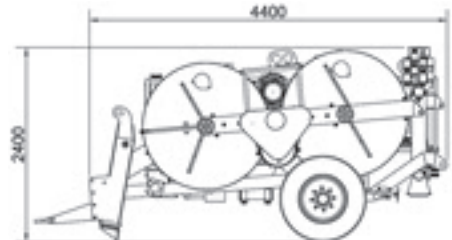
- 2 hydraulic circuits with negative brake system
- Mechanical capstans coupling
- 2 dynamometers for direct reading of pulling value with load-limiter device (puller-mode)
- 2 counter-meter devices
- 2 sets of quick-release hydraulic connectors to drive up to 2 hydraulic driven reel-stands or 1 reel-winder unit
- Adherence wheels with interchangeable nylon liners
- Gear box (2 speed) for 1 circuit
- Hydraulic stabilizers
- Rigid axle with tyres for towing up to 30 km/h
- Balanced top lifting point and anchoring attachments

### Optional equipment

- 01-PT Preset for digital data recorder, counter-meter and speedometer
- 07-PT Hydraulic power take-off for press
- 08-PT Conductor/rope holder clamp (hydraulic)
- 14-PT Thermally treated steel adherence wheels
- 18-PT Multiple connection preset

### Special features upon request

- 05-PT Additional hydraulic power take-off on reel-winder circuit
- 16-PT Mechanical Adherence-wheels coupling system by clutch
- 20-PT Pre-heater (up to -30°C)
- 21-PT Additional gear box (2 speed)
- 42-PT Engine emission standard Stage IIIA - (85 hp) 63 kW





## FA1514.14

Hydraulic tensioner-puller 140 kN capacity for stringing of up to 4 bundled conductors.



### Tensioner performance

Max tension	140 kN
Max speed	5 km/h

### Pull-back performance

Max pull	140 kN
Max speed	0,7 km/h

### Characteristics

Adherence-wheels diameter	1500 mm
Also available with diameter	1800 mm
Max conductor diameter	40 mm
Weight	8800 kg

### Engine

Diesel	(73 Hp) 54 kW
Cooling	Liquid
Emission standard (UE)2016/1628	Stage V

### Standard features

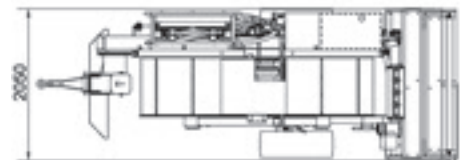
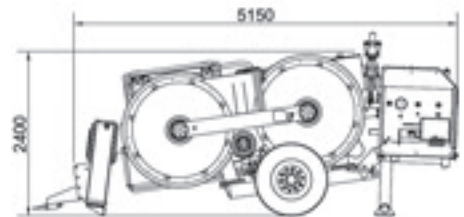
- 1 hydraulic circuit with negative brake system
- 1 dynamometer for direct reading of pulling value with load-limiter device (puller - mode)
- 1 counter-meter device
- 4 set of quick-release hydraulic connectors to drive up to 4 hydraulic driven reel-stands or 1 reel-winder unit
- Adherence wheels with interchangeable nylon liners
- Rear independent hydraulic stabilizers
- Rigid axle with tyres for towing up to 30 km/h
- Balanced top lifting point and anchoring attachments

### Optional equipment

- 01-PT Preset for digital data recorder, counter-meter and speedometer
- 07-PT Hydraulic power take-off for press
- 08-PT Conductor/rope holder clamp (hydraulic)
- 14-PT Thermally treated steel adherence wheels
- 18-PT Multiple connection preset

### Special features upon request

- 20-PT Pre-heater (up to -30°C)
- 42-PT Engine emission standard Stage IIIA - (85 hp) 63 kW



# TENSIONER - PULLER

## FA1518.14

Hydraulic tensioner-puller 180 kN capacity for stringing of up to 4 bundled conductors.



### Tensioner performance

Max tension	180 kN
Max speed	5 km/h

### Pull-back performance

Max pull	150 kN
Max speed	0,6 km/h

### Characteristics

Adherence-wheels diameter	1500 mm
Also available with diameter	1800 mm
Max conductor diameter	42 mm
Weight	11000 kg

### Engine

Diesel	(73 hp) 54 kW
Cooling	Liquid
Emission standard (UE)2016/1628	Stage V

### Standard features

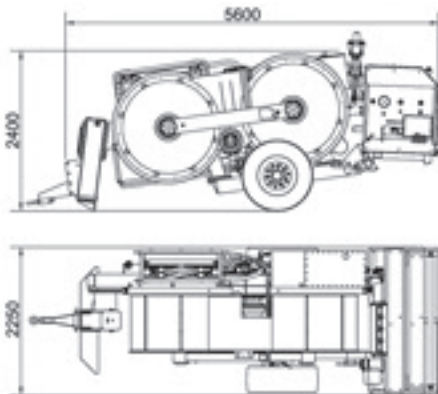
- 1 hydraulic circuit with negative brake system
- 1 dynamometer for direct reading of pulling value with load-limiter device (puller-mode)
- 1 counter-meter device
- 4 sets of quick-release hydraulic connectors to drive up to 4 hydraulic driven reel-stands or 1 reel-winder unit
- Adherence wheels with interchangeable nylon liners
- Rear independent hydraulic stabilizers
- Rigid axle with tyres for towing up to 30 km/h
- Balanced top lifting point and anchoring attachments

### Optional equipment

- 01-PT Preset for digital data recorder, counter-meter and speedometer
- 07-PT Hydraulic power take-off for press
- 08-PT Conductor/rope holder clamp (hydraulic)
- 14-PT Thermally treated steel adherence wheels
- 18-PT Multiple connection preset

### Special features upon request

- 05-PT Additional set of hydraulic power take-off for reel-winder unit
- 20-PT Pre-heater (up to -30°C)
- 40-PT Kit 24 grooves for Hexa bundle conductors max Ø 29 mm
- 42-PT Engine emission standard Stage IIIA - (85 hp) 63 kW





## FA159.24

Hydraulic tensioner-puller with two independent hydraulic circuits, 2x90kN capacity for single or simultaneous stringing of up to 4 bundled conductors.



### Tensioner performance

Max tension	2x90 kN
Max speed	5 km/h

### Pull-back performance

Max pull	2x90 kN
Max speed	0,6 km/h

### Characteristics

Adherence-wheels diameter	1500 mm
Also available with diameter	1800 mm
Max conductor diameter	40 mm
Weight	11900 kg

### Engine

Diesel	(73 hp) 54 kW
Cooling	Liquid
Emission standard (UE)2016/1628	Stage V

### Standard features

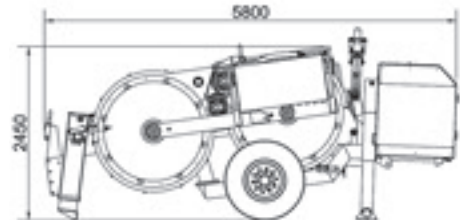
- 2 hydraulic circuits with negative brake system
- 2 dynamometers for direct reading of pulling value with load-limiter device (puller-mode)
- 2 counter-meter devices
- 4 sets of quick-release hydraulic connectors to drive up to 4 hydraulic driven reel-stands or 1 reel-winder unit
- Adherence wheels with interchangeable nylon liners
- Rear independent hydraulic stabilizers
- Rigid axle with tyres for towing up to 30 km/h
- Balanced top lifting point and anchoring attachments

### Optional equipment

- 01-PT Preset for digital data recorder, counter-meter and speedometer
- 07-PT Hydraulic power take-off for press
- 08-PT Conductor/rope holder clamp (hydraulic)
- 14-PT Thermally treated steel adherence wheels
- 18-PT Multiple connection preset

### Special features upon request

- 16-PT Mechanical adherence-wheels coupling system by clutch
- 20-PT Pre-heater (up to -30°C)
- 40-PT Kit 12+12 grooves for Hexa bundle conductors max Ø 29 mm
- 42-PT Engine emission standard Stage IIIA - (85 hp) 63 kW





# TENSIONER - PULLER

## FA154.44

Hydraulic tensioner-puller with 4 independent hydraulic circuits, 4x45kN or 2x90kN capacity for single or simultaneous stringing operation of up to 4 bundled conductors.



### Standard features

- 4 hydraulic circuits with negative brake system
- Mechanical capstans coupling
- 4 dynamometers for direct reading of pulling value with load-limiter device (puller-mode)
- 4 counter-meter devices
- 4 sets of quick-release hydraulic connectors to drive up to 4 hydraulic driven reel-stands or 1 reel-winder unit
- Adherence wheels with interchangeable nylon liners
- Rear independent hydraulic stabilizers
- Rigid axle with tyres for towing up to 30 km/h
- Balanced top lifting point and anchoring attachments

### Optional equipment

- 01-PT Preset for digital data recorder, counter-meter and speedometer
- 07-PT Hydraulic power take-off for press
- 08-PT Conductor/rope holder clamp (hydraulic)
- 14-PT Thermally treated steel adherence wheels

### Special features upon request

- 16-PT Mechanical Adherence-wheels coupling system by clutch
- 20-PT Pre-heater (up to -30°C)
- 42-PT Engine emission standard Stage IIIA - (85 hp) 63 kW

### Tensioner performance

Max tension	4x45 or 2x90 kN
Max speed	5 km/h

### Pull-back performance

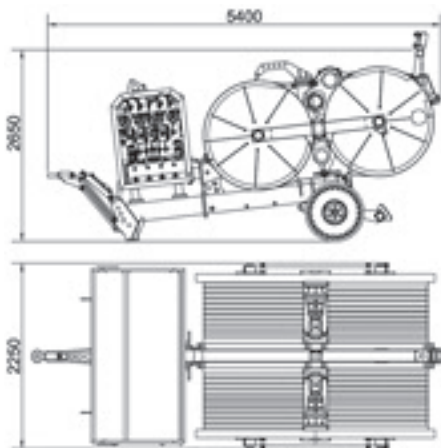
Max pull	4x45 or 2x90 kN
Max speed	0,5 km/h

### Characteristics

Adherence-wheels diameter	1500 mm
Max conductor diameter	40 mm
Weight	11500 kg

### Engine

Diesel	(73 hp) 54 kW
Cooling	Liquid
Emission standard (UE)2016/1628	Stage V





## AF062.11

Hydraulic puller-tensioner 25 kN capacity for single conductor stringing operations.



### Standard features

- 1 hydraulic circuit with negative brake system
- 1 dynamometer for direct reading of pulling value with load-limiter device (puller-mode)
- 1 counter-meter device
- 1 sets of quick-release hydraulic connectors to drive up to 1 hydraulic driven reel-stands or 1 reel-winder unit
- Dismountable in 2 heli-portable parts < 1100 kg each
- Reel-winder suitable for steel reel 1100-1400 mm (240 kg)
- Thermally treated steel adherence wheels
- Rear independent mechanical stabilizers
- Rigid axle with tyres for towing up to 30 km/h (70 kg)
- Balanced top lifting point and anchoring attachments

### Optional equipment

- 01-PT Preset for digital data recorder, counter-meter and speedometer
- 03-PT Remote control unit c/w console 5 m cable
- 04-PT Radio control unit
- 08-PT Conductor/rope holder clamp (hydraulic)
- 34-PT Adherence wheels with interchangeable adiprene liners

### Special features upon request

- 02-PT Dynamic speed pulling force control
- 13-PT Road trailer kit
- 20-PT Pre-heater (up to -30°C)
- 26-PT Puller version

### Puller performance

Max pull	25 kN
Max speed	3,2 km/h
Speed at max pull	1,2 km/h

### Tensioner performance

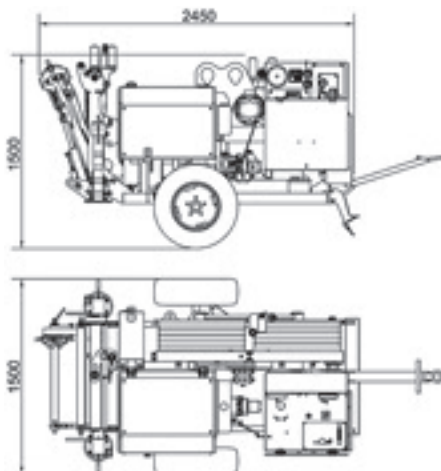
Max tension	25 kN
Max speed	5 km/h

### Characteristics

Adherence-wheels diameter	660 mm
Max conductor diameter	23 mm
Max rope diameter	18 mm
Weight	1400 kg

### Engine

Diesel	(25 hp) 19 kW
Cooling	Liquid
Emission standard (UE)2016/1628	Stage V



# PULLER - TENSIONER

## AF152.11

Hydraulic puller-tensioner 25 kN capacity for single conductor and OPGW cable stringing operations.



### Puller performance

Max pull	25 kN
Max speed	5 km/h
Speed at max pull	2 km/h

### Tensioner performance

Max tension	25 kN
Max speed	5 km/h

### Characteristics

Adherence-wheels diameter	1500 mm
Max conductor diameter	40 mm
Max rope diameter	18 mm
Weight	2850 kg

### Engine

Diesel	(36,5 hp) 27 kW
Cooling	Liquid
Emission standard - (UE)2016/1628	Stage V

### Standard features

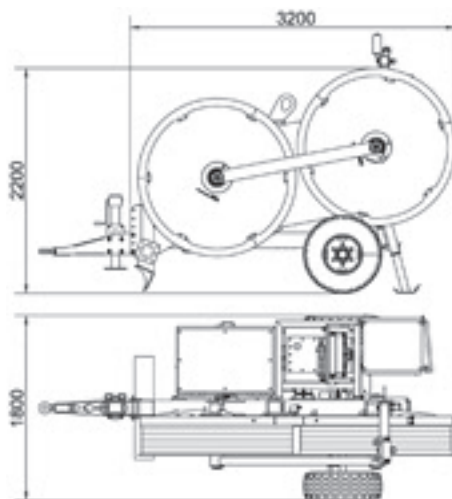
- 1 hydraulic circuit with negative brake system
- 1 dynamometer for direct reading of pulling value with load-limiter device (puller-mode)
- 1 counter-meter device
- 1 sets of quick-release hydraulic connectors to drive up to 1 hydraulic driven reel-stand or 1 reel-winder unit
- Thermally treated steel adherence wheels
- Mechanical stabilizers
- Rigid axle with tyres for towing up to 30 km/h
- Balanced top lifting point and anchoring attachments

### Optional equipment

- 01-PT Preset for digital data recorder, counter-meter and speedometer
- 03-PT Remote control unit c/w console 5 m cable
- 04-PT Radio control unit
- 07-PT Hydraulic power take-off for press
- 08-PT Conductor/rope holder clamp (hydraulic)
- 15-PT Adherence wheels with interchangeable nylon liners
- 18-PT Multiple connection preset

### Special features upon request

- 02-PT Dynamic speed pulling force control
- 20-PT Pre-heater (up to -30°C)
- 29-PT Front hydraulic stabilizer
- 42-PT Engine emission standard Stage IIIA - (36,5 hp) 27 kW





## AF155.11

Hydraulic puller-tensioner 50 kN capacity for single conductor and OPGW cable stringing operations.



### Puller performance

Max pull	50 kN
Max speed	5 km/h
Speed at max pull	2,1 km/h

### Tensioner performance

Max tension	50 kN
Max speed	5 km/h

### Characteristics

Adherence-wheels diameter	1500 mm
Also available with diameter	1200 or 1800 mm
Max conductor diameter	40 mm
Max rope diameter	18 mm
Weight	3650 kg

### Engine

Diesel	(73 hp) 54 kW
Cooling	Liquid
Emission standard - (UE)2016/1628	Stage V

### Standard features

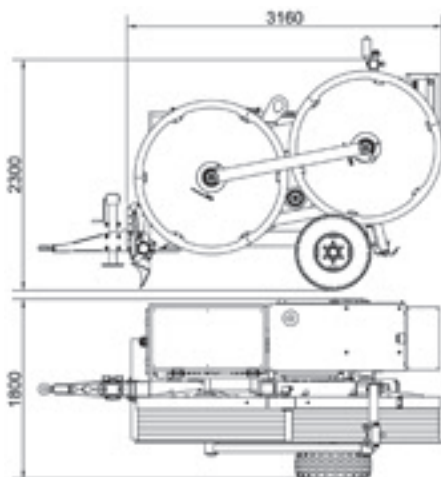
- 1 hydraulic circuit with negative brake system
- 1 dynamometer for direct reading of pulling value with load-limiter device (puller-mode)
- 1 counter-meter device
- 1 set of quick-release hydraulic connectors to drive up to 1 hydraulic driven reel-stand or 1 reel-winder unit
- Thermally treated steel adherence wheels
- Gear box (2 speed)
- Remote control unit c/w console 5 m cable
- Mechanical stabilizers
- Rigid axle with tyres for towing up to 30 km/h
- Balanced top lifting point and anchoring attachments

### Optional equipment

- 01-PT Preset for digital data recorder, counter-meter and speedometer
- 04-PT Radio control unit
- 07-PT Hydraulic power take-off for press
- 08-PT Conductor/rope holder clamp (hydraulic)
- 15-PT Adherence wheels with interchangeable nylon liners
- 18-PT Multiple connection preset

### Special features upon request

- 02-PT Dynamic speed pulling force control
- 05-PT Additional hydraulic power take-off for reel-winder unit
- 17-PT Built-in reel winder suitable for reels 1100-1400 mm
- 20-PT Pre-heater (up to -30°C)
- 40-PT Kit 8 grooves for 2 bundle conductors max  $\varnothing$  29 mm
- 42-PT Engine emission standard Stage IIIA - (85 hp) 63 kW



# PULLER - TENSIONER

## AF158.12

Hydraulic puller-tensioner 90 kN capacity for single/double conductors and OPGW cable stringing operations.



### Puller performance

Max pull	90 kN
Max Speed	5 km/h
Speed at max pull	2,2 km/h

### Tensioner performance

Max tension	90 kN
Max speed	5 km/h

### Characteristics

Adherence-wheels diameter	1500 mm
Also available with diameter	1200 mm
Max conductor diameter	40 mm
Max rope diameter	24 mm
Weight	5000 kg

### Engine

Diesel	(125 hp) 93 kW
Cooling	Liquid
Emission standard - (UE)2016/1628	Stage IIIA

### Standard features

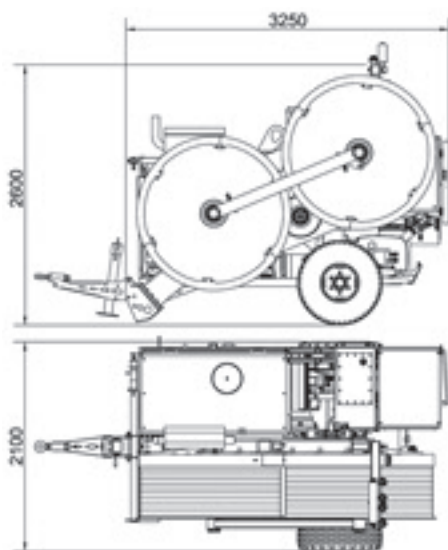
- 1 hydraulic circuit with negative brake system
- 1 dynamometer for direct reading of pulling value with load-limiter device (puller-mode)
- 1 counter-meter device
- 2 sets of quick-release hydraulic connectors to drive up to 2 hydraulic driven reel-stands or 1 reel-winder unit
- Thermally treated steel adherence wheels
- Gear box (2 speed)
- Remote control unit c/w console 5 m cable
- Hydraulic stabilizers
- Rigid axle with tyres for towing up to 30 km/h
- Balanced top lifting point and anchoring attachments

### Optional equipment

- 01-PT Preset for digital data recorder, counter-meter and speedometer
- 04-PT Radio control unit
- 07-PT Hydraulic power take-off for press
- 08-PT Conductor/rope holder clamp (hydraulic)
- 15-PT Adherence wheels with interchangeable nylon liners
- 18-PT Multiple connection preset

### Special features upon request

- 02-PT Dynamic speed pulling force control
- 05-PT Additional hydraulic power take-off for reel-winder unit
- 20-PT Pre-heater (up to -30°C)







## AF1510.12

Hydraulic puller-tensioner 100 kN capacity for single/double conductors and OPGW cable stringing operations.



### Puller performance

Max pull	100 kN
Max Speed	5 km/h
Speed at max pull	2,4 km/h

### Tensioner performance

Max tension	100 kN
Max speed	5 km/h

### Characteristics

Adherence-wheels diameter	1500 mm
Also available with diameter	1800 mm
Max conductor diameter	40 mm
Max rope diameter	24 mm
Weight	5100 kg

### Engine

Diesel	(143 hp) 105 kW
Cooling	Liquid
Emission standard - (UE)2016/1628	Stage V

### Standard features

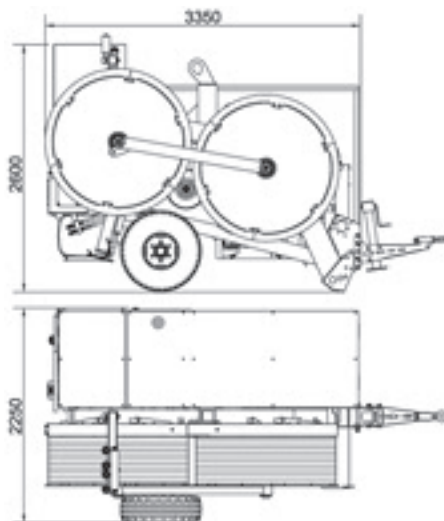
- 1 hydraulic circuit with negative brake system
- 1 dynamometer for direct reading of pulling value with load-limiter device (puller-mode)
- 1 counter-meter device
- 2 sets of quick-release hydraulic connectors to drive up to 2 hydraulic driven reel-stands or 1 reel-winder unit
- Thermally treated steel adherence wheels
- Gear box (2 speed)
- Remote control unit c/w console 5 m cable
- Hydraulic stabilizers
- Rigid axle with tyres for towing up to 30 km/h
- Balanced top lifting point and anchoring attachments

### Optional equipment

- 01-PT Preset for digital data recorder, counter-meter and speedometer
- 04-PT Radio control unit
- 07-PT Hydraulic power take-off for press
- 08-PT Conductor/rope holder clamp (hydraulic)
- 15-PT Adherence wheels with interchangeable nylon liners
- 18-PT Multiple connection preset

### Special features upon request

- 02-PT Dynamic speed pulling force control
- 05-PT Additional hydraulic power take-off for reel-winder unit
- 20-PT Pre-heater (up to -30°C)



# PULLER - TENSIONER

## AF155.22

Hydraulic puller-tensioner with two independent hydraulic circuits, 2x50 kN or 1x100 kN capacity for stringing of up to 2 bundled conductors as well as OPGW cable.



### Standard features

- 2 hydraulic circuits with negative brake system
- Mechanical capstans coupling
- 2 dynamometers for direct reading of pulling value with load-limiter devices (puller-mode)
- 2 counter-meter devices
- 2 sets of quick-release hydraulic connectors to drive up to 2 hydraulic driven reel-stands or 1 reel-winder unit
- Thermally treated steel adherence wheels
- Gear box (2 speed) for 1 circuit
- Remote control unit c/w console 5 m cable
- Hydraulic stabilizers
- Rigid axle with tyres for towing up to 30 km/h
- Balanced top lifting point and anchoring attachments

### Optional equipment

- 01-PT Preset for digital data recorder, counter-meter and speedometer
- 04-PT Radio control unit
- 07-PT Hydraulic power take-off for press
- 08-PT Conductor/rope holder clamp (hydraulic)
- 15-PT Adherence wheels with interchangeable nylon liners
- 16-PT Mechanical adherence-wheels coupling system by clutch
- 18-PT Multiple connection preset

### Special features upon request

- 02-PT Dynamic speed pulling force control
- 05-PT Additional hydraulic power take-off on reel-winder circuit
- 20-PT Pre-heater (up to -30°C)
- 21-PT Additional gear box (2 speed)
- 42-PT Engine emission standard Stage IIIA - (125 hp) 93 kW

### Puller performance

Max pull	2x50 or 1x100 kN
Max speed	5 km/h
Speed at max pull	2 km/h

### Tensioner performance

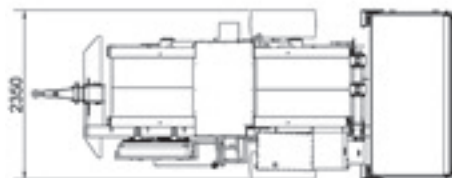
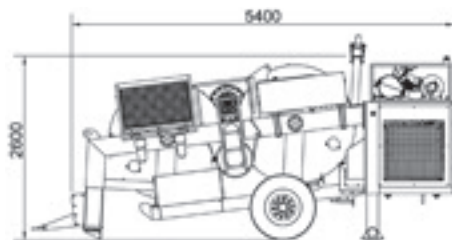
Max tension	2x50 or 1x100 kN
Max speed	5 km/h

### Characteristics

Adherence-wheels diameter	1500 mm
Also available with diameter	1800 mm
Max conductor diameter	40 mm
Max rope diameter	24 mm
Weight	7100 kg

### Engine

Diesel	(143 hp) 105 kW
Cooling	Liquid
Emission standard - (UE)2016/1628	Stage V



# PULLER - TENSIONER



## AF1514.14

Hydraulic puller-tensioner 140 kN capacity for stringing of up to 4 bundled conductors.



### Standard features

- 1 hydraulic circuit with negative brake system
- 1 dynamometer for direct reading of pulling value with load-limiter device (puller-mode)
- 1 counter-meter device
- 4 sets of quick release hydraulic connectors to feed up to 4 remote reel-stands or 1 reel-winder unit
- Thermally treated steel adherence wheels
- Remote control unit c/w console 5 m cable
- Rear independent hydraulic stabilizers
- Rigid axle with tyres for towing up to 30 km/h
- Balanced top lifting point and anchoring attachments

### Optional equipment

- 01-PT Preset for digital data recorder, counter-meter and speedometer
- 04-PT Radio control unit
- 07-PT Hydraulic power take-off for press
- 08-PT Conductor/rope holder clamp (hydraulic)
- 15-PT Adherence wheels with interchangeable nylon liners
- 18-PT Multiple connection preset

### Special features upon request

- 02-PT Dynamic speed pulling force control
- 05-PT Additional hydraulic power take-off for reel-winder unit
- 20-PT Pre-heater (up to -30°C)
- 42-PT Engine emission standard Stage IIIA - (175 hp) 129 kW

### Puller performance

Max pull	140 kN
Max speed	5 km/h
Speed at max pull	2,2 km/h

### Tensioner performance

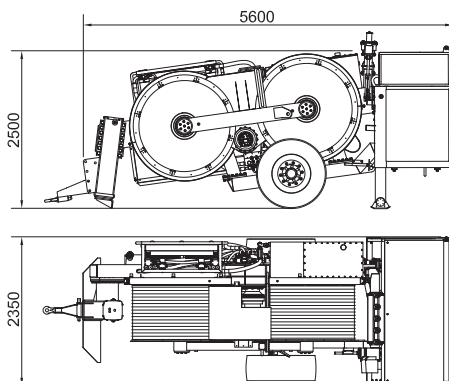
Max tension	140 kN
Max speed	5 km/h

### Characteristics

Adherence-wheels diameter	1500 mm
Also available with diameter	1800 mm
Max conductor diameter	40 mm
Max rope diameter	24 mm
Weight	9200 kg

### Engine

Diesel	(218 hp) 160 kW
Cooling	Liquid
Emission standard - (UE)2016/1628	Stage V



# PULLER - TENSIONER

## AF157.24

Hydraulic puller-tensioner with two independent hydraulic circuits, 2x75 kN or 1x150 kN capacity for stringing of up to 4 bundled conductors as well as OPGW cable.



### Standard features

- 2 hydraulic circuit with negative brake system
- Mechanical capstans coupling
- 2 dynamometers for direct reading of pulling value with load-limiter devices (puller-mode)
- 2 counter-meter device
- 4 sets of quick release hydraulic connectors to feed up to 4 remote reel-stands or 1 reel-winder units
- Thermally treated steel adherence wheels
- Gear box (2 speed) for 1 circuit
- Remote control unit c/w console 5 m cable
- Hydraulic stabilizers
- Rigid axle with tyres for towing up to 30 km/h
- Balanced top lifting point and anchoring attachments

### Optional equipment

- 01-PT Preset for digital data recorder, counter-meter and speedometer
- 04-PT Radio control unit
- 07-PT Hydraulic power take-off for press
- 08-PT Conductor/rope holder clamp (hydraulic)
- 15-PT Adherence wheels with interchangeable nylon liners
- 16-PT Mechanical adherence-wheels coupling system by clutch

### Special features upon request

- 02-PT Dynamic speed pulling force control
- 05-PT Additional hydraulic power take-off for reel-winder unit
- 20-PT Pre-heater (up to -30°C)
- 21-PT Additional gear box (2 speed)
- 42-PT Engine emission standard Stage IIIA - (175 hp) 129 kW

### Puller performance

Max pull	2x75 or 1x150 kN
Max speed	5 km/h
Speed at max pull	2 km/h

### Tensioner performance

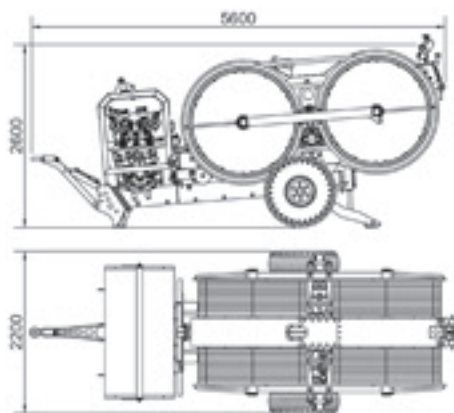
Max tension	2x75 or 1x150 kN
Max speed	5 km/h

### Characteristics

Adherence-wheels diameter	1500 mm
Also available with diameter	1800 mm
Max conductor diameter	40 mm
Max rope diameter	28 mm
Weight	8800 kg

### Engine

Diesel	(218 hp) 160 kW
Cooling	Liquid
Emission standard - (UE)2016/1628	Stage V





## AF1518.14

Hydraulic puller-tensioner 180 kN capacity stringing of up to 4 bundled conductors.



### Standard features

- 1 hydraulic circuit with negative brake system
- 1 dynamometer for direct reading of pulling value with load-limiter device (puller-mode)
- 1 counter-meter device
- 4 sets of quick release hydraulic connectors to feed up to 4 remote reel-stands or 1 reel-winder unit
- Thermally treated steel adherence wheels
- Remote control unit c/w console 5 m cable
- Rear independent hydraulic stabilizers
- Rigid axle with tyres for towing up to 30 km/h
- Balanced top lifting point and anchoring attachments

### Optional equipment

- 01-PT Preset for digital data recorder, counter-meter and speedometer
- 04-PT Radio control unit
- 07-PT Hydraulic power take-off for press
- 08-PT Conductor/rope holder clamp (hydraulic)
- 15-PT Adherence wheels with interchangeable nylon liners
- 18-PT Multiple connection preset

### Special features upon request

- 02-PT Dynamic speed pulling force control
- 05-PT Additional hydraulic power take-off for reel-winder unit
- 20-PT Pre-heater (up to -30°C)
- 42-PT Engine emission standard Stage IIIA - (300 hp) 224 kW

### Puller performance

Max pull	180 kN
Max speed	5 km/h
Speed at max pull	2,1 km/h

### Tensioner performance

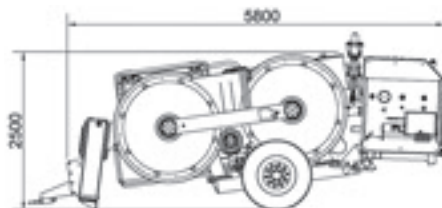
Max tension	180 kN
Max speed	5 km/h

### Characteristics

Adherence-wheels diameter	1500 mm
Also available with diameter	1800 mm
Max conductor diameter	42 mm
Max rope diameter	28 mm
Weight	12000 kg

### Engine

Diesel	(286 hp) 210 kW
Cooling	Liquid
Emission standard - (UE)2016/1628	Stage V



# PULLER - TENSIONER

## AF154.44

Hydraulic puller-tensioner with four independent hydraulic circuits, 4x45 kN or 2x90 kN capacity for single or simultaneous stringing of up to 4 bundled conductors as well as OPGW cable.



### Puller performance

Max pull	4x45 or 2x90 kN
Max speed	5 km/h
Speed at max pull	2,2 km/h

### Tensioner performance

Max tension	4x45 or 2x90 kN
Max speed	5 km/h

### Characteristics

Adherence-wheels diameter	1500 mm
Max conductor diameter	40 mm
Max rope diameter	28 mm
Weight	16500 kg

### Engine

Diesel	(286 hp) 210 kW
Cooling	Liquid
Emission standard - (UE)2016/1628	Stage V

### Standard features

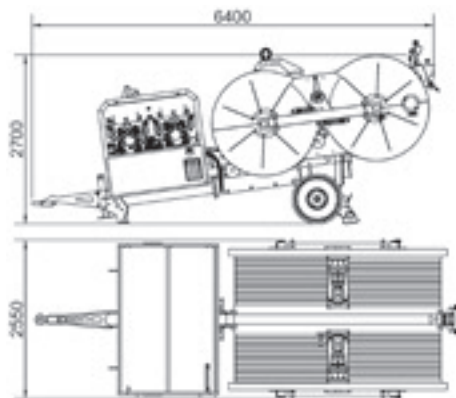
- 4 hydraulic circuits with negative brake system
- Mechanical capstans coupling
- 4 dynamometers for direct reading of pulling value with load-limiter devices (puller-mode)
- 4 counter-meter devices
- 4 sets of quick-release hydraulic connectors to drive up to 4 hydraulic driven reel-stands or 1 reel-winder unit
- Thermally treated steel adherence wheels
- Gear box (2 speed) for 1 circuit
- Remote control unit c/w console 5 m cable
- Hydraulic stabilizers
- Rigid axle with tyres for towing up to 30 km/h
- Balanced top lifting point and anchoring attachments

### Optional equipment

- 01-PT Preset for digital data recorder, counter-meter and speedometer
- 04-PT Radio control unit
- 07-PT Hydraulic power take-off for press
- 08-PT Conductor/rope holder clamp (hydraulic)
- 15-PT Adherence wheels with interchangeable nylon liners
- 16-PT Mechanical adherence-wheels coupling system by clutch

### Special features upon request

- 02-PT Dynamic speed pulling force control
- 20-PT Pre-heater (up to -30°C)
- 42-PT Engine emission standard Stage IIIA - (300 hp) 224 kW







## D107R2

Digital hydraulic puller 25 kN capacity for single rope pulling on overhead stringing operations as well as underground cabling.



### Performance

Max pull	25 kN
Max speed	5 km/h
Speed at max pull	1 km/h

### Characteristics

Bull-wheels diameter	250 mm
Max rope diameter	10 mm
Weight	1050 kg

### Engine

Diesel	[25 hp] 18,6 kW
Cooling	Liquid
Emission standard - (UE)2016/1628	Stage V

### Standard features

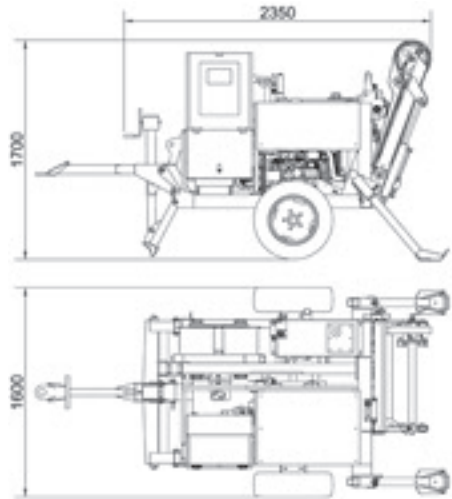
- 1 hydraulic circuit with negative brake system
- Control panel equipped with LCD touch screen 7" display which includes: preset for the maximum pulling force and instant indication, counter-meter, speed indicator and worked hours.
- USB output for pulling data recording
- Radio control unit
- Thermally treated steel bull-wheels
- Automatic reel-winder suitable for steel reel 1100-1400 mm
- Rigid axle with tyres for towing up to 30 km/h
- Balanced top lifting point and anchoring attachments

### Optional equipment

- 04-PW Radio control unit with display
- 06-PW Front pulley roller guided device for underground cabling [Telescopic rod cod. AT1.30 on request]
- 07-PW Hydraulic power take-off for remote reel-winder
- 28-PW T4L remote monitoring system with GPS geolocation

### Special features upon request

- 05-PW Rope holder clamp (hydraulic)
- 13-PW Pre-heater (up to -30°C)
- 20-PW Dynamic speed pulling force control



# DIGITAL PULLER

## D107R5

Digital hydraulic puller 50 kN capacity for single rope pulling on overhead stringing operations as well as underground cabling.



### Performance

Max pull	50 kN
Max speed	5 km/h
Speed at max pull	2,1 km/h

### Characteristics

Bull-wheels diameter	400 mm
Max rope diameter	16 mm
Weight	2300 kg

### Engine

Diesel	(73 hp) 54 kW
Cooling	Liquid
Emission standard - (UE)2016/1628	Stage V

### Standard features

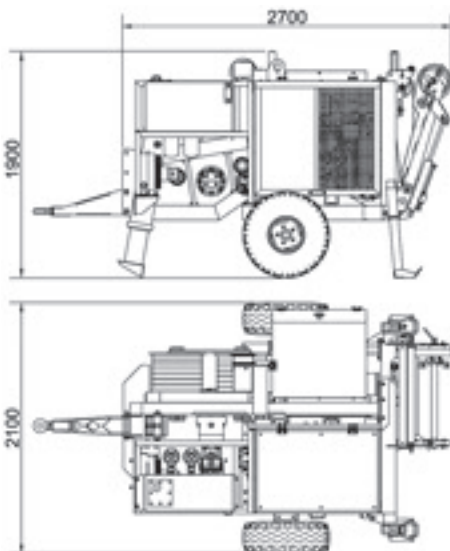
- 1 hydraulic circuit with negative brake system
- Control panel equipped with LCD touch screen 7" display which includes: preset for the maximum pulling force and instant indication, counter-meter, speed indicator and worked hours.
- USB output for pulling data recording
- Radio control unit
- Thermally treated steel bull-wheels
- Automatic reel-winder suitable for steel reel 1100÷1400 mm
- Rigid axle with tyres for towing up to 30 km/h
- Balanced top lifting point and anchoring attachments

### Optional equipment

- 04-PW Radio control unit with display
- 06-PW Front pulley roller guided device for Underground cabling
- 07-PW Hydraulic power take-off for remote reel-winder
- 28-PW T4L remote monitoring system with GPS geolocation

### Special features upon request

- 05-PW Rope holder clamp (hydraulic)
- 13-PW Pre-heater (up to -30°C)
- 20-PW Dynamic speed pulling force control
- 36-PW Engine emission standard Stage IIIA - (85 hp) 63,5 kW





## D107R10

Digital hydraulic puller 100 kN capacity for single rope pulling on overhead stringing operations as well as underground cabling.

### Performance

Max pull	100 kN
Max Speed	5 km/h
Speed at max pull	2,1 km/h

### Characteristics

Bull-wheels diameter	550 mm
Max rope diameter	22 mm
Weight	4250 kg

### Engine

Diesel	(143 hp) 105 kW
Cooling	Liquid
Emission standard - (UE)2016/1628	Stage V



### Standard features

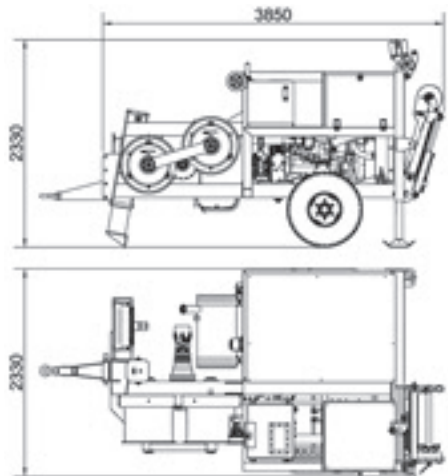
- 1 hydraulic circuit with negative brake system
- Control panel equipped with LCD touch screen 7" display which includes: preset for the maximum pulling force and instant indication, counter-meter, speed indicator and worked hours.
- USB output for pulling data recording
- Radio control unit
- Thermally treated steel bull-wheels
- Automatic reel-winder suitable for steel reel 1100-1400 mm
- Rigid axle with tyres for towing up to 30 km/h
- Balanced top lifting point and anchoring attachments

### Optional equipment

- 04-PW Radio control unit with display
- 06-PW Front pulley roller guided device for Underground cabling
- 07-PW Hydraulic power take-off for remote reel-winder
- 28-PW T4L remote monitoring system with GPS geolocation

### Special features upon request

- 05-PW Rope holder clamp (hydraulic)
- 13-PW Pre-heater (up to -30°C)
- 20-PW Dynamic speed pulling force control
- 36-PW Engine emission standard Stage IIIA - (125 hp) 92 kW



# DIGITAL PULLER

## D107R14

Digital hydraulic puller 140 kN capacity for single rope pulling on overhead stringing operations as well as underground cabling.



### Performance

Max pull	140 kN
Max speed	5 km/h
Speed at max pull	2,2 km/h

### Characteristics

Bull-wheels diameter	600 mm
Max rope diameter	24 mm
Weight	4500 kg

### Engine

Diesel	[218 hp] 160 kW
Cooling	Liquid
Emission standard - (UE)2016/1628	Stage V

### Standard features

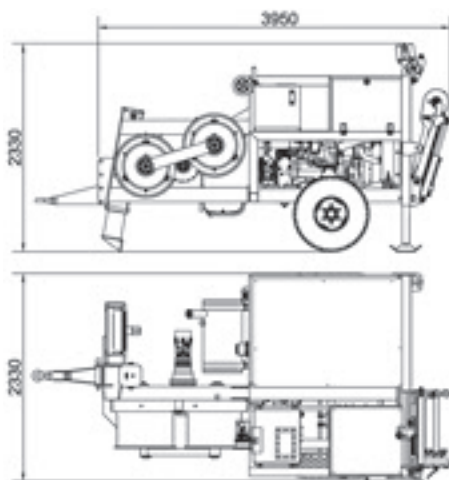
- 1 hydraulic circuit with negative brake system
- Control panel equipped with LCD touch screen 7" display which includes: preset for the maximum pulling force and instant indication, counter-meter, speed indicator and worked hours.
- USB output for pulling data recording
- Radio control unit
- Thermally treated steel bull-wheels
- Automatic reel-winder suitable for steel reel 1100÷1400 mm
- Rigid axle with tyres for towing up to 30 km/h
- Balanced top lifting point and anchoring attachments

### Optional equipment

- 04-PW Radio control unit with display
- 06-PW Front pulley roller guided device for Underground cabling
- 07-PW Hydraulic power take-off for remote reel-winder
- 28-PW T4L remote monitoring system with GPS geolocation

### Special features upon request

- 05-PW Rope holder clamp (hydraulic)
- 13-PW Pre-heater (up to -30°C)
- 20-PW Dynamic speed pulling force control
- 36-PW Engine emission standard Stage IIIA - (175 hp) 129 kW





## D107RS3

Self propelled hydraulic puller 35 kN capacity for single rope pulling on overhead stringing operations as well as underground cabling.



### Performance

Max pull	35 kN
Max speed	5,1 km/h
Speed at max pull	1,5 km/h

### Characteristics

Bull-wheels diameter	300 mm
Max rope diameter	13 mm
Weight	1750 kg

### Engine

Diesel	(36,5 hp) 27 kW
Cooling	Liquid
Emission standard - (UE)2016/1628	Stage V

### Standard features

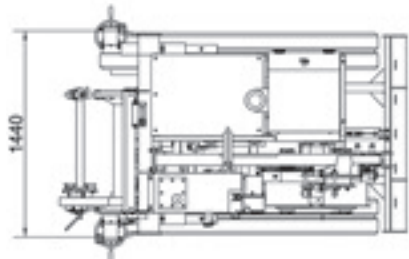
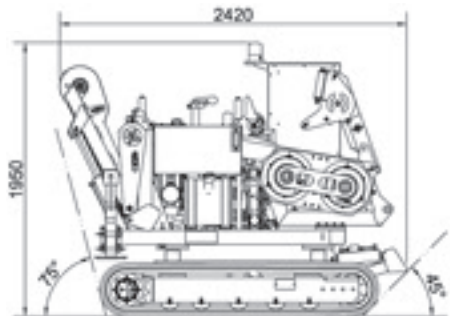
- 1 hydraulic circuit with negative brake system
- Control panel equipped with LCD touch screen 7" display which includes: preset for the maximum pulling force and instant indication, counter-meter, speed indicator and worked hours.
- USB output for pulling data recording
- Radio control unit
- Thermally treated steel bull-wheels
- Automatic reel-winder suitable for steel reel 1100-1400 mm
- Mechanical back stabilizers and front plough
- Tracked undercarriages
- Balanced top lifting point and anchoring attachments

### Optional equipment

- 06-PW Front pulley roller guided device for underground cabling
- 07-PW Hydraulic power take-off for remote reel-winder
- 28-PW T4L remote monitoring system with GPS geolocation

### Special features upon request

- 05-PW Rope holder clamp (hydraulic)
- 13-PW Pre-heater (up to -30°C)
- 14-PW Large groove capstan with rope holder clamp
- 20-PW Dynamic speed pulling force control
- 36-PW Engine emission standard Stage IIIA - (36,5 hp) 27 kW





# DIGITAL PULLER

## D107RS6

Digital self-propelled hydraulic puller 70kN capacity for single rope pulling on overhead stringing operations as well as underground cabling.



### Performance

Max pull	70 kN
Max speed	5 km/h
Speed at max pull	1 km/h
Speed at 50 kN	2 km/h

### Characteristics

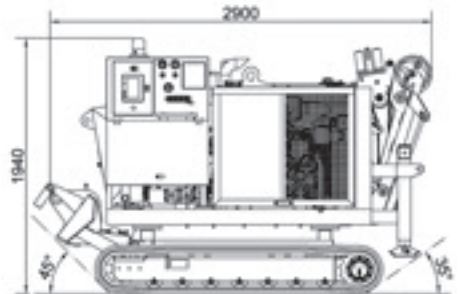
Bull-wheels diameter	400 mm
Max rope diameter	16 mm
Weight	3250 kg

### Engine

Diesel	(73 Hp) 54 kW
Cooling	Liquid
Emission standard (UE)2016/1628	Stage V

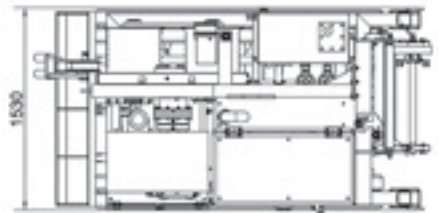
### Standard features

- 1 hydraulic circuit with negative brake system
- Control panel equipped with LCD touch screen 7" display which includes: preset for the maximum pulling force and instant indication, counter-meter, speed indicator and worked hours.
- USB output for pulling data recording
- Radio control unit
- Thermally treated steel bull-wheels
- Automatic reel-winder suitable for steel reel 1100÷1400 mm
- Tracked undercarriage
- Balanced top lifting point and anchoring attachments



### Optional equipment

- 06-PW Front pulley roller guided device for underground cabling
- 07-PW Hydraulic power take-off for remote reel-winder
- 28-PW T4L remote monitoring system with GPS geolocation



### Special features upon request

- 05-PW Rope holder clamp (hydraulic)
- 13-PW Pre-heater (up to -30°C)
- 20-PW Dynamic speed pulling force control
- 36-PW Engine emission standard Stage IIIA - (85 hp) 63,5 kW







## FAD155.11

Digital hydraulic tensioner-puller 50 kN capacity for single conductor and OPGW cable stringing operations.



### Tensioner performance

Max tension	50 kN
Max speed	5 km/h

### Pull-back performance

Max pull	50 kN
Max speed	1 km/h

### Characteristics

Adherence-wheels diameter	1500 mm
Also available with diameter	1800 mm
Max conductor diameter	40 mm
Weight	3200 kg

### Engine

Diesel	(36,5 hp) 27 kW
Cooling	Liquid
Emission standard - (UE)2016/1628	Stage V

### Standard features

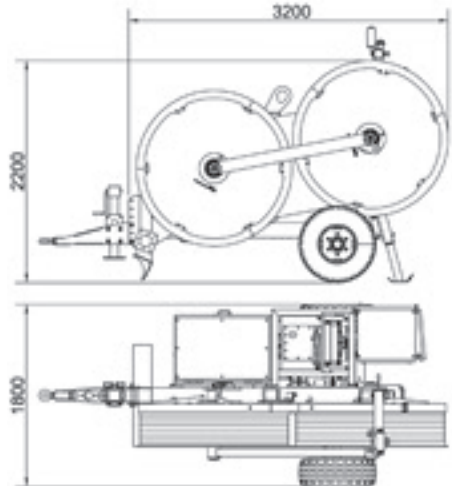
- 1 hydraulic circuit with negative brake system
- Control panel equipped with LCD touch screen 7" display which includes: preset for the maximum pulling force and instant indication, counter-meter, speed indicator and worked hours.
- USB output for pulling data recording
- Radio control unit
- 1 sets of quick-release hydraulic connectors to drive up to 1 hydraulic driven reel-stand or 1 reel-winder unit
- Adherence wheels with interchangeable nylon liners
- Gear box (2 speed)
- Rear independent hydraulic stabilizers
- Rigid axle with tires for towing up to 30 km/h
- Balanced top lifting point and anchoring attachments

### Optional equipment

- 04-PT Radio control unit with display
- 07-PT Hydraulic power take-off for press
- 08-PT Conductor/rope holder clamp (hydraulic)
- 18-PT Multiple connection preset
- 37-PT T4L remote monitoring system with GPS geolocation

### Special features upon request

- 05-PT Additional hydraulic power take-off on reel-winder circuit
- 20-PT Pre-heater (up to -30°C)
- 42-PT Engine emission standard Stage IIIA - (36,5 hp) 27 kW



# DIGITAL TENSIONER - PULLER

## FAD1510.12

Digital hydraulic tensioner-puller 100 kN capacity for single/double conductors and OPGW cable stringing operations.



### Tensioner performance

Max tension	100 kN
Max speed	5 km/h

### Pull-back performance

Max pull	100 kN
Speed at max pull	0,6 km/h

### Characteristics

Adherence-wheels diameter	1500 mm
Also available with diameter	1800 mm
Max conductor diameter	40 mm
Weight	4100 kg

### Engine

Diesel	(36,5 hp) 27 kW
Cooling	Liquid
Emission standard - (UE)2016/1628	Stage V

### Standard features

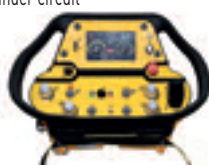
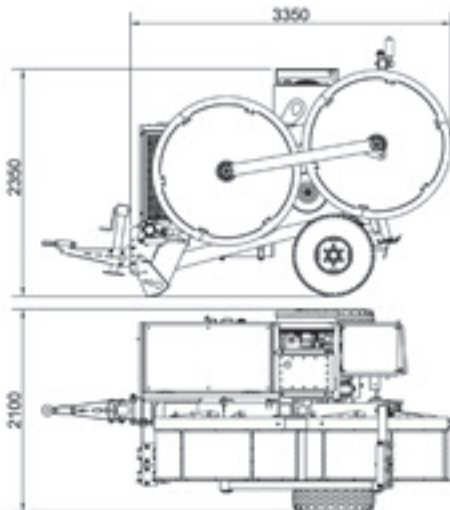
- 1 hydraulic circuit with negative brake system
- Control panel equipped with LCD touch screen 7" display which includes: preset for the maximum pulling force and instant indication, counter-meter, speed indicator and worked hours.
- USB output for pulling data recording
- Radio control unit
- 2 sets of quick-release hydraulic connectors to drive up to 2 hydraulic driven reel-stands or 1 reel-winder unit
- Adherence wheels with interchangeable nylon liners
- Gear box (2 speed)
- Mechanical stabilizers
- Rigid axle with tyres for towing up to 30 km/h
- Balanced top lifting point and anchoring attachments

### Optional equipment

- 04-PT Radio control unit with display
- 07-PT Hydraulic power take-off for press
- 08-PT Conductor/rope holder clamp (hydraulic)
- 14-PT Thermally treated steel adherence wheels
- 37-PT T4L remote monitoring system with GPS geolocation

### Special features upon request

- 05-PT Additional hydraulic power take-off on reel-winder circuit
- 18-PT Multiple connection preset
- 20-PT Pre-heater (up to -30°C)
- 42-PT Engine emission standard Stage IIIA - (36,5 hp) 27 kW





## FAD1514.14

Digital hydraulic tensioner-puller 140 kN capacity for stringing of up to 4 bundled conductors.



### Tensioner performance

Max tension	140 kN
Max speed	5 km/h

### Pull-back performance

Max pull	140 kN
Speed at max pull	0,7 km/h

### Characteristics

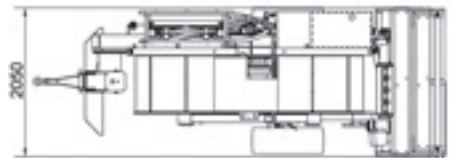
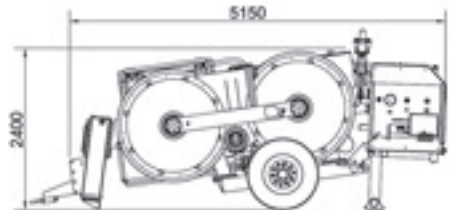
Adherence-wheels diameter	1500 mm
Also available with diameter	1800 mm
Max conductor diameter	40 mm
Weight	9000 kg

### Engine

Diesel	(73 hp) 54 kW
Cooling	Liquid
Emission standard - (UE)2016/1628	Stage V

### Standard features

- 1 hydraulic circuit with negative brake system
- Control panel equipped with LCD touch screen 7" display which includes: preset for the maximum pulling force and instant indication, counter-meter, speed indicator and worked hours.
- USB output for pulling data recording
- Radio control unit
- 4 sets of quick-release hydraulic connectors to drive up to 4 hydraulic driven reel-stands or 1 reel-winder unit
- Adherence wheels with interchangeable nylon liners
- Rear independent hydraulic stabilizers
- Rigid axle with tyres for towing up to 30 km/h
- Balanced top lifting point and anchoring attachments



### Optional equipment

- 04-PT Radio control unit with display
- 07-PT Hydraulic power take-off for press
- 08-PT Conductor/rope holder clamp (hydraulic)
- 14-PT Thermally treated steel adherence wheels
- 37-PT T4L remote monitoring system with GPS geolocation

### Special features upon request

- 05-PT Additional hydraulic power take-off on reel-winder circuit
- 18-PT Multiple connection preset
- 20-PT Pre-heater (up to -30°C)
- 42-PT Engine emission standard Stage IIIA - (85 hp) 63 kW



# DIGITAL PULLER - TENSIONER

**AFD086.12**

Self-propelled hydraulic puller-tensioner 70 kN capacity for single/double conductors stringing operations.



## Standard features

- 1 hydraulic circuit with negative brake system
- Control panel equipped with LCD touch screen 7" display which includes: preset for the maximum pulling force and instant indication, counter-meter, speed indicator and worked hours.
- USB output for pulling data recording
- Radio control unit
- Dynamic speed pulling force control
- 2 sets of quick-release hydraulic connectors to drive up to 2 hydraulic driven reel-stands or 1 reel-winder unit
- Thermally treated steel adherence wheels
- Hydraulic back stabilizers and front plough
- Tracked undercarriages
- Balanced top lifting point and anchoring attachments

## Optional equipment

- 04-PT Radio control unit with display HMI 4"
- 07-PT Hydraulic power take-off for press
- 08-PT Conductor/rope holder clamp (hydraulic)
- 37-PT T4L remote monitoring system with GPS geolocation

## Special features upon request

- 20-PT Pre-heater (up to -30°C)
- 42-PT Engine emission standard IIIA - (85 hp) 63 kW



### Puller performance

Max pull	70 kN
Max speed	5 km/h
Speed at max pull	1 km/h
Speed at 50 kN	2 km/h

### Tensioner performance

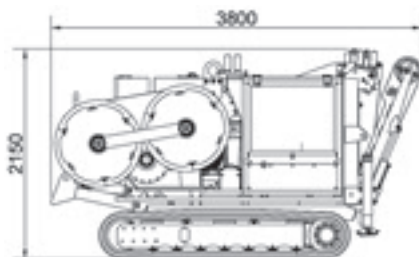
Max tension	70 kN
Max speed	5 km/h

### Characteristics

Adherence-wheels diameter	800 mm
Max conductor diameter	40 mm
Max rope diameter	18 mm
Weight	5000 kg

### Engine

Diesel	(73 hp) 54 kW
Cooling	Liquid
Emission standard - (UE)2016/1628	Stage V





## AFD155.11

Digital hydraulic puller-tensioner 50 kN capacity for single conductors as well as OPGW stringing operations.



### Puller performance

Max pull	50 kN
Max speed	5 km/h
Speed at max pull	2,1 km/h

### Tensioner performance

Max tension	50 kN
Max speed	5 km/h

### Characteristics

Adherence-wheels diameter	1500 mm
Also available with diameter	1200 or 1800 mm
Max conductor diameter	40 mm
Max rope diameter	18 mm
Weight	3500 kg

### Engine

Diesel	(73 hp) 54 kW
Cooling	Liquid
Emission standard - (UE)2016/1628	Stage V

### Standard features

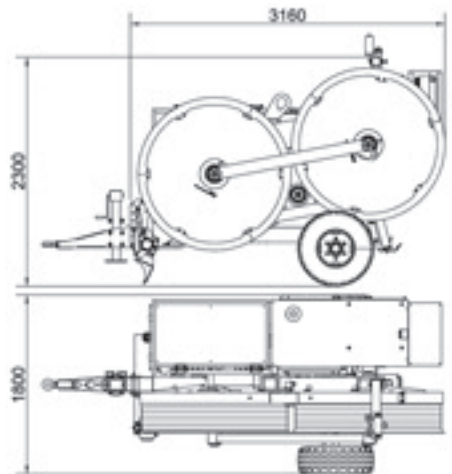
- 1 hydraulic circuit with negative brake system
- Control panel equipped with LCD touch screen 7" display which includes: preset for the maximum pulling force and instant indication, counter-meter, speed indicator and worked hours.
- USB output for pulling data recording
- Radio control unit
- Dynamic speed pulling force control
- 1 sets of quick-release hydraulic connectors to drive up to 1 hydraulic driven reel-stands or 1 reel-winder unit
- Thermally treated steel adherence wheels
- Gear box (2 speed)
- Mechanical stabilizers
- Rigid axle with tyres for towing up to 30 km/h
- Balanced top lifting point and anchoring attachments

### Optional equipment

- 04-PT Radio control unit with display HMI 4"
- 07-PT Hydraulic power take-off for press
- 08-PT Conductor/rope holder clamp (hydraulic)
- 15-PT Adherence wheels with interchangeable nylon liners
- 18-PT Multiple connection preset
- 37-PT T4L remote monitoring system with GPS geolocation

### Special features upon request

- 17-PT Built-in reel winder suitable for reels 1100-1400 mm
- 20-PT Pre-heater (up to -30°C)
- 40-PT Kit for 2 bundle conductors max  $\varnothing$  29 mm
- 42-PT Engine emission standard Stage IIIA - (85 hp) 63,5 kW





# DIGITAL PULLER - TENSIONER

## AFD1510.12

Digital hydraulic puller-tensioner 100 kN capacity for single/double conductors as well as OPGW stringing operations.



### Standard features

- 1 hydraulic circuit with negative brake system
- Control panel equipped with LCD touch screen 7" display which includes: preset for the maximum pulling force and instant indication, counter-meter, speed indicator and worked hours.
- USB output for pulling data recording
- Radio control unit
- Dynamic speed pulling force control
- 2 sets of quick-release hydraulic connectors to drive up to 2 hydraulic driven reel-stands or 1 reel-winder unit
- Thermally treated steel adherence wheels
- Gear box (2 speed)
- Rear hydraulic stabilizers
- Rigid axle with tyres for towing up to 30 km/h
- Balanced top lifting point and anchoring attachments

### Optional equipment

- 04-PT Radio control unit with display HMI 4"
- 07-PT Hydraulic power take-off for press
- 08-PT Conductor/rope holder clamp (hydraulic)
- 15-PT Adherence wheels with interchangeable Nylon liners
- 18-PT Multiple connection preset
- 37-PT T4L remote monitoring system with GPS geolocation

### Special features upon request

- 20-PT Pre-heater (up to -30°C)
- 42-PT Engine emission standard Stage IIIA - (125 hp) 93 kW



### Puller performance

Max pull	100 kN
Max speed	5 km/h
Speed at max pull	2,2 km/h

### Tensioner performance

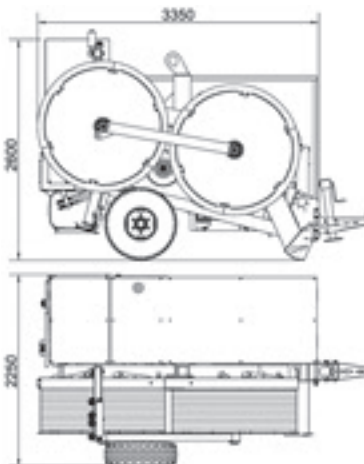
Max tension	100 kN
Max speed	5 km/h

### Characteristics

Adherence-wheels diameter	1500 mm
Also available with diameter	1800 mm
Max conductor diameter	40 mm
Max rope diameter	24 mm
Weight	5100 kg

### Engine

Diesel	(143 hp) 105 kW
Cooling	Liquid
Emission standard - [UE]2016/1628	Stage V







## AFD1514.14

Digital hydraulic puller-tensioner 140 kN capacity for stringing of up to 4 bundled conductors.



### Standard features

- 1 hydraulic circuit with negative brake system
- Control panel equipped with LCD touch screen 7" display which includes: preset for the maximum pulling force and instant indication, counter-meter, speed indicator and worked hours
- USB output for pulling data recording
- Radio control unit
- Dynamic speed pulling force control
- 4 sets of quick-release hydraulic connectors to drive up to 4 hydraulic driven reel-stands or 1 reel-winder unit
- Thermally treated steel adherence wheels
- Rear independent hydraulic stabilizers
- Rigid axle with tyres for towing up to 30 km/h
- Balanced top lifting point and anchoring attachments

### Optional equipment

- 04-PT Radio control unit with display HMI 4"
- 07-PT Hydraulic power take-off for press
- 08-PT Conductor/rope holder clamp (hydraulic)
- 15-PT Adherence wheels with interchangeable nylon liners
- 18-PT Multiple connection preset
- 37-PT T4L remote monitoring system with GPS geolocation

### Special features upon request

- 20-PT Pre-heater (up to -30°C)
- 42-PT Engine emission standard Stage IIIA - (175 hp) 129 kW



### Puller performance

Max pull	140 kN
Max speed	5 km/h
Speed at max pull	2,2 km/h

### Tensioner performance

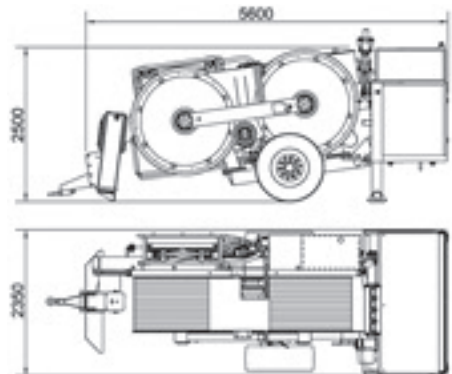
Max tension	140 kN
Max speed	5 km/h

### Characteristics

Adherence-wheels diameter	1500 mm
Also available with diameter	1800 mm
Max conductor diameter	40 mm
Max rope diameter	24 mm
Weight	9200 kg

### Engine

Diesel	[218 hp] 160 kW
Cooling	Liquid
Emission standard - (UE)2016/1628	Stage V



# TRACTION UNIT

## 101RBT

Remote controlled unit for reconductoring, ground wire/OPGW replacement and for conductor's protection system installation. Suitable also for LIVE LINE activities.



### Performance

Traction capacity	1,5 kN
Speed	20 m/min
Weight	53 kg

### With 24 V cc motors (Optional)

Traction capacity	1,2 kN
Speed	25 m/min
Weight	55 kg

### Wheels

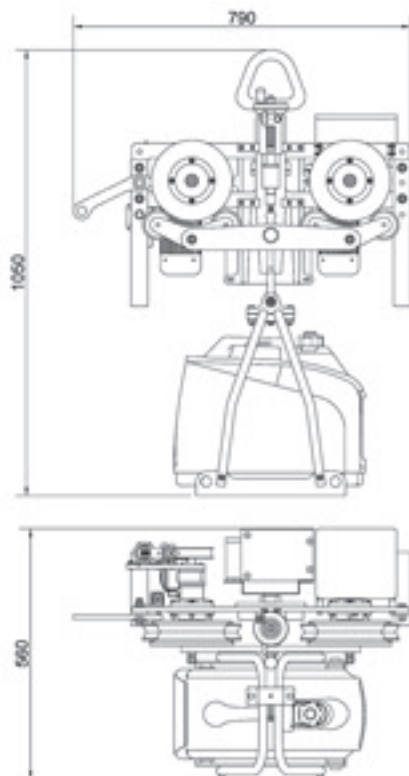
Transtation wheels	Ø 150 x 38 mm
Contrast wheels	Ø 52,5 x 38 mm

### Gasoline generator configuration

- Translation by means of rubber coated wheels for conductor diameter from 12 to 36 mm, able to pass-over on the middle span joint up to 44 mm (hexagonal)
- Adjustable contrast aluminium wheels
- Stationary mechanical brake system
- 2 on board electrical motors 230 V AC powered from a gasoline electric generator
- Remote wireless control IP67
- Towing and balanced lifting points

### Gasoline generator configuration

AT101RBT-001 2 electrical motors 24 V CC powered from rechargeable batteries (charger included)





The traditional production is completed by special products made according to specific customer needs.

It includes self-propelled winches, dismantlable winches and winches powered by electric engines.

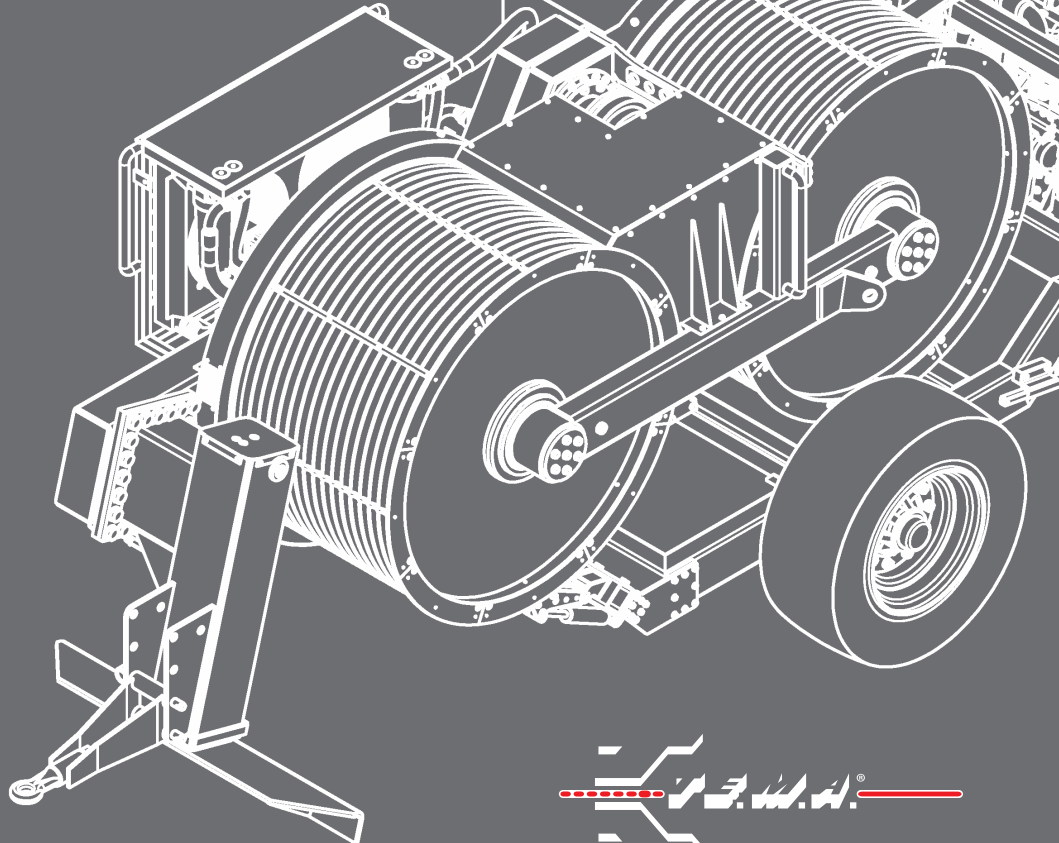
## SPECIAL MACHINES



Self-propelled puller 35 kN



Dismountable puller 70 kN



Self-propelled puller-tensioner 70 kN



Dismountable puller-tensioner 70 kN

# EQUIPMENT AND ACCESSORIES

## SECTION 2





TE.M.A. OFFERS A COMPLETE RANGE  
OF EQUIPMENT FOR OVERHEAD  
CONDUCTORS STRINGING,  
COMMUNICATION LINES  
AND FOR TOWERS ERECTION.



# EQUIPMENT FOR OVERHEAD CONDUCTORS STRINGING

**5011**

## WEDGE CLAMP FOR "ELICORD" CABLE CONNECTION

Wire rope diameter: 9 mm  
Weight: 3Kg  
(Ref. Enel: EA0256)



**5005**

## SERVICE BRACKET

Galvanized steel frame.  
Working load: 1000 daN  
Weight: 7 kg  
(Ref. Enel: EA0240)



**5008/1**

## PULLING DEVICE SET FOR M.V. PREFORMED CABLE

Set composed of:  
- 1 swivelling joint;  
- 1 stocking pulling grip for wire rope;  
- 1 stocking pulling grip for cable bundle.  
Weight: 3 kg  
(Ref. Enel: EA0248)



**5010**

## STEEL WIRE ROPE EXTRACTION SET FOR M.V. PREFORMED CABLE

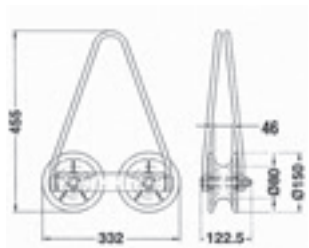
Set composed of:  
- 2 nylon wedges;  
- 2 extractors.  
Weight: 2 kg



**026/A**

## TWIN SHEAVES CABLE PULLEY-BLOCK

High tenacity nylon sheaves, mounted on ball-bearings, galvanized steel frame.  
Working load: 1000 daN  
Breaking load: 5000 daN  
Weight: 6 kg





**651**

**MANUAL PULLER FOR L.V. CABLE**

With self-locking rubber-lined clamps, with nylon strap.  
 Conductor diameter: 12-39 mm  
 - Maximum capacity: 400 daN;  
 - Pulling speed: 3 to 4 m/min;  
 - Dimensions: 780x650x75 mm;  
 Weight: 6 kg



**652/...**

**MANUAL PULLER FOR STEEL WIRE ROPE.**

MODEL	For cable	Capacity	Weight
	mm	kg	kg
652/1	2 ÷ 8	400	3.60
652/2	7 ÷ 14	600	4.80
652/3	15 ÷ 19	800	5.70



**5003**

**LIFTING BRACKET DEVICE WITH NYLON ROLLER**

Suitable for suspension poles.  
 Nylon sheave on ball-bearings.  
 Galvanized steel frame.  
 Working load: 100 daN  
 Weight: 5 kg  
**(Ref. Enel Code: EA0230)**  
 Suitable for items 5000 and 5007



**5004**

**LIFTING BRACKET DEVICE WITH NYLON ROLLER**

For angle/dead-end poles.  
 Nylon sheave on ball-bearings.  
 Galvanized steel frame.  
 Working load A: 100 daN  
 Working load B: 1000 daN  
 Weight: 7 kg  
**(Rif. Enel: EA0236)**  
 Suitable for item 5001



**5006**

**SUPPORT BRACKET**

Galvanized steel frame.  
 With chain and turnbuckle.  
 Working load: 200 daN  
 Weight: 3 kg  
 Suitable for item 029

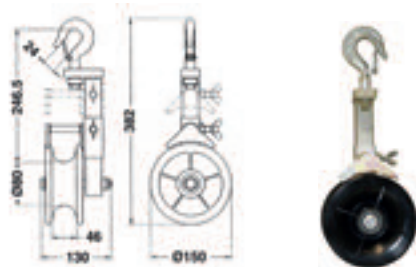


# EQUIPMENT FOR OVERHEAD CONDUCTORS STRINGING

**026/1**

## BARE CONDUCTOR AND L.V. PERFORMED CABLE STRINGING PULLEY-BLOCK

High tenacity nylon sheaves, mounted on ball-bearings.  
Galvanized steel frame.  
Swivel hook and adjustable rope-holding bracket.  
Working load 200 daN  
Breaking load 1000 daN  
Weight: 2,5 kg



**026/2**

## L.V. PREFORMED CABLE STRINGING PULLEY-BLOCK

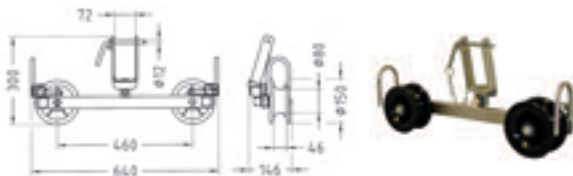
Nylon sheave mounted on ball-bearings.  
Galvanized steel frame swivel hook and adjustable rope-holding bracket.  
Working load: 500 daN  
Breaking load: 2500 daN  
Weight: 4 kg



**029**

## L.V. PREFORMED CABLE STRINGING PULLEY-BLOCK

High tenacity nylon sheaves.  
Rope/Conductor-holding brackets on both sheaves.  
Overall sheave diameter: 150 mm.  
Working load: 200 daN  
Breaking load: 1000 daN  
Weight: 6 kg  
(Ref. Enel: EA0432)



**026/5**

## CABLE PULLEY-BLOCK (STRAIGHT)

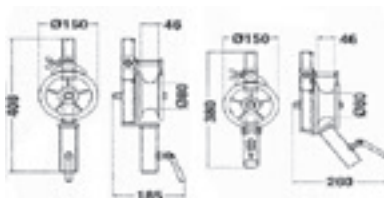
Suitable to be mounted on upright insulator bracket.  
High tenacity nylon sheave, mounted on ball-bearings.  
Galvanized steel frame.  
Adjustable rope-holding bracket device.  
Overall sheave diameter: 150 mm.



**026/6**

## CABLE PULLEY-BLOCK (ANGLED)

Suitable to be mounted on angled insulator bracket.  
For both models:  
Working load: 200 daN  
Breaking load: 600 daN  
Weight 2,5 kg

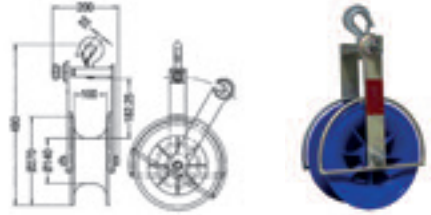




**5007**

**M.V. PREFORMED CABLE STRINGING PULLEY-BLOCK**

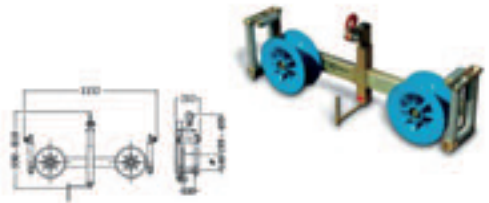
Nylon sheave mounted on ball-bearings.  
Galvanized steel frame with swivel hook.  
Working load: 1000 daN  
Breaking load: 5000 daN  
Weight 8 kg



**5000**

**M.V. PREFORMED CABLE STRINGING PULLEY-BLOCK**

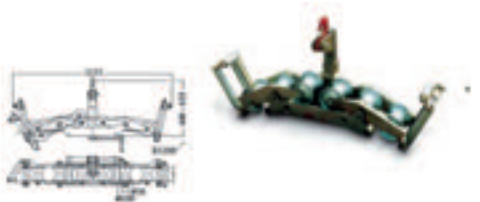
Nylon sheaves mounted on ball-bearings.  
Galvanized steel frame with height-adjustable attachment point.  
Cable-guide rollers.  
Working load: 1000 daN  
Weight: 25 kg  
(Ref. Enel: EA0232)



**5001**

**RULLIERA MULTIPLA  
MULTIPLE ROLLERS PULLEY-BLOCK**

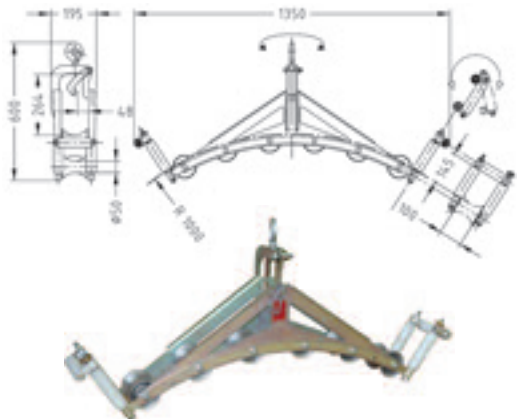
Suitable for angle/dead-end poles.  
N° 6 aluminum rollers on ball-bearings (1100mm bending radius).  
Galvanized steel frame with height-adjustable attachment point.  
Cable-guide rollers.  
Working load: 2000 daN  
Weight: 47 kg  
(Ref. Enel: EA0234)



**5001/FO**

**MULTIPLE ROLLERS PULLEY-BLOCK FOR OPGW CABLES**

N° 6 aluminum rollers on ball-bearings (1000mm bending radius).  
Opening rope-holding bracket device.  
Cable-guide nylon rollers.  
Galvanized steel frame with swivelling hook attachment.  
Working load: 1000 daN  
Breaking load: 3000 daN  
Weight: 28 kg



# EQUIPMENT FOR OVERHEAD CONDUCTORS STRINGING

## 026RBTV6

### STRINGING ROLLER

Suitable to be used with remote controlled pull/drag unit model 101RBT to replace existing earth wire (or conductor).

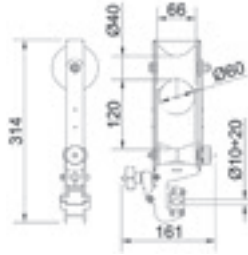
Pulling rope diameter from 10 to 20 mm.

Nylon sheaves on ball-bearings, steel frame with side protections.

Working load: 200 daN

Breaking load: 1000 daN

Weight: 1,4 kg



## 026RBT2

### STRINGING ROLLER

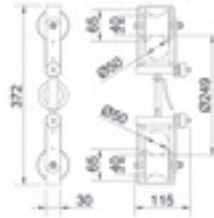
Suitable to be used with remote controlled pull/drag unit model 101RBT to replace existing earth wire (or conductor).

Nylon sheaves on ball-bearings, galvanized steel frame with nylon protection plates.

Working load: 200 daN

Breaking load: 1000 daN

Weight: 1,8 kg



## 026RBTV2

### STRINGING ROLLER

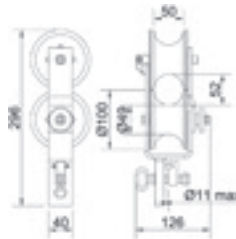
Suitable to be used with remote controlled pull/drag unit model 101RBT to replace existing earth wire (or conductor).

Self-lubricating nylon sheaves and aluminum alloy frame.

Working load: 100 daN

Breaking load: 500 daN

Weight: 0,95 kg



## 026RBTV8

### STRINGING ROLLER

Suitable to be used with remote controlled pull/drag unit model 101RBT to replace existing earth wire (or conductor).

Pulling rope diameter from 8 to 24 mm.

Self-lubricating nylon sheaves and aluminum alloy frame.

Working load: 200 daN

Breaking load: 1000 daN

Weight: 2,3 kg





## FR-RBT

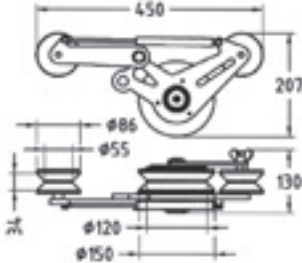
### BREAKING DEVICE

This device is positioned behind the supporting-rollers to keep the desired clearance between the rollers.

Aluminum alloy frame, rubber-lined aluminum sheaves and nylon sheaves on ball-bearings.

Working load: 150 daN

Weight: 4 kg



## 101/REC

### RECOVERING DEVICE

Designed to recover the remote-controlled pull/drag unit when operating in steep incline span conditions.

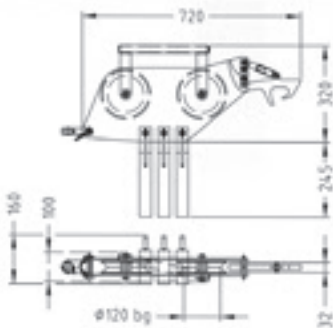
Towing system by rope, with removable counterweights.

Aluminum alloy frame, aluminum sheaves on ball bearings.

Supplied with 3 galvanized steel counterweights (8,8 kg each).

Working load: 150 daN

Weight: 8,3 kg (counterweights excluded)



# EQUIPMENT FOR OVERHEAD CONDUCTORS STRINGING

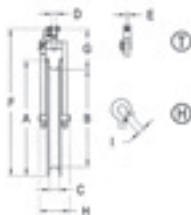
025/...

## SINGLE PULLEY-BLOCK

Aluminum alloy sheave on ball-bearings, easily interchangeable nylon lining sectors (or aluminum, on request) for conductor protection.

Galvanized steel frame with swivel clevis attachment.

- Swivel clevis attachment **Mod. 025/.../T** (standard version);
- Swivel hook **Mod. 025/.../H** (on request on model 025/1 and 025/2).



MODEL	Dimensions (mm)									Working load kN	Weight kg
	A	B	C	D	E	F	G	H	I		
025/1/...	300	230	38	21	12	420	155	140	25	20	4
025/2/...	440	350	48	21	12	559	164	176	25	20	9
025/5/...	620	500	68	30	16	834	274	200	/	33	21,5
025/3/...	755	650	68	30	16	969	274	200	/	40	26
025/3L/...	775	650	95	41	18	1005	300	231	/	40	33
025/4/...	890	800	68	30	16	1104	274	198	/	40	33
025/4L/...	910	800	95	41	18	1173	333	228	/	40	42,5
025/6L/...	1110	1000	95	41	20	1400	356	250	/	60	50
025/7L/...	1350	1200	130	36	24	1639	379	288	/	100	112

### Available on request:

- Sheave's grounding device (**Mod. 025/.../... MT**) with 50mm<sup>2</sup> insulated copper cable L=6m (other lengths on request) with grounding clamp;
- Rotating rope-holding bracket (anti-fleeting device) with 180° bow frame;
- Interchangeable nylon lining sectors kit (**Mod. NYR/...**);
- Interchangeable aluminum lining sectors kit (**Mod. ALR/...**).

## GROUNDING DEVICES





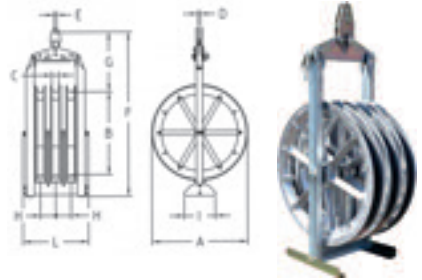
## 025/...

### BUNDLED CONDUCTOR STRINGING BLOCK FIX FRAME VERSION

For twin and triple bundled conductors stringing operations.  
Molded aluminum alloy sheaves on ball-bearings, interchangeable nylon (or aluminum) lining sectors for conductor protection.  
Galvanized steel frame with 90° orientable clevis attachment.

#### Available on request:

- Sheave's grounding device (**Mod. 025/.../... MT**) with 50mm<sup>2</sup> insulated copper cable L=6m (other lengths on request) with grounding clamp;
- Interchangeable nylon lining sectors kit (**Mod. NYR/...**);
- Interchangeable aluminum lining sectors kit (**Mod. ALR/...**);
- Different spacing between sheave centres.



MODEL	Dimensions (mm)										Working load		Weight
	A	B	C	D	E	F	G	H	I	L	kN	kg	
025/5/5	620	500	68	26	25	1277	583	145	300	521	40	90	
025/3/1	755	650	68	26	25	1412	583	145	300	521	60	105	
025/3/1/L	775	650	95	26	25	1487	627	175	300	611	60	130	
025/4/3	890	800	68	26	25	1597	630	145	500	525	60	138	
025/4/3L	910	800	95	26	25	1653	658	175	500	615	60	163	
025/6/3L	1110	1000	95	26	25	1893	668	175	500	627	66	187	
025/7/3L	1350	1200	130	26	25	2133	671	222	500	761	100	365	

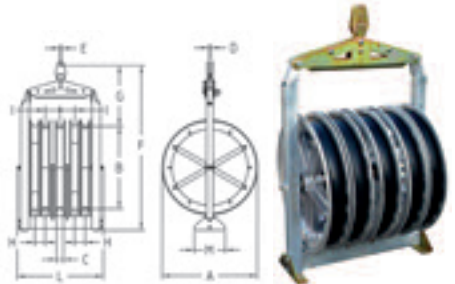
## 025/...

### BUNDLED CONDUCTOR STRINGING BLOCK FIX FRAME VERSION

For quad bundled conductors stringing operations.  
Molded aluminum alloy sheaves on ball-bearings, interchangeable nylon (or aluminum) lining sectors for conductor protection.  
Galvanized steel frame with 90° orientable clevis attachment.

#### Available on request:

- Sheave's grounding device (**Mod. 025/.../... MT**) with 50mm<sup>2</sup> insulated copper cable L=6m (other lengths on request) with grounding clamp;
- Interchangeable nylon lining sectors kit (**Mod. NYR/...**);
- Interchangeable aluminum lining sectors kit (**Mod. ALR/...**);
- Different spacing between sheave centres.



MODEL	Dimensions (mm)											Working load		Weight
	A	B	C	D	E	F	G	H	I	L	M	kN	kg	
025/5/6	620	500	68	26	25	1378	632	100	145	721	300	40	140	
025/3/2	755	650	68	26	25	1513	632	100	145	721	300	60	160	
025/3/2L	775	650	95	26	25	1553	673	145	175	901	300	60	190	
025/4/4	890	800	68	26	25	1648	633	100	145	725	500	60	175	
025/4/4L	910	800	95	26	25	1688	673	145	175	905	500	60	247	
025/6/4L	1110	1000	95	26	25	1893	668	145	175	917	500	66	280	
025/7/4L	1350	1200	130	26	25	2133	671	185	222	1131	500	100	545	

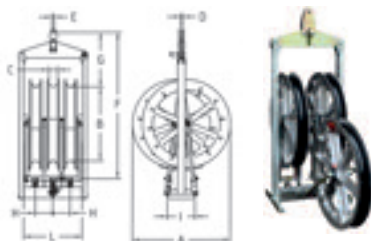
# EQUIPMENT FOR OVERHEAD CONDUCTORS STRINGING

## 025/...SC

### BUNDLED CONDUCTOR STRINGING BLOCKS DETACHABLE FRAME VERSION

For twin and triple bundled conductors stringing operations.  
Molded aluminum alloy sheaves on ball-bearings, interchangeable nylon (or aluminum) lining sectors for conductor protection.

Galvanized steel frame with 90° orientable clevis attachment suspension point, designed to accommodate complete single sheave rollers **Mod. 025/...**



#### Available on request:

- Sheave's grounding device (**Mod. 025/.../... MT**) with 50mm<sup>2</sup> insulated copper cable L=6m (other lengths on request) with grounding clamp;
- Interchangeable nylon lining sectors kit (**Mod. NYR/...**);
- Interchangeable aluminum lining sectors kit (**Mod. ALR/...**);
- Different spacing between sheave centres.

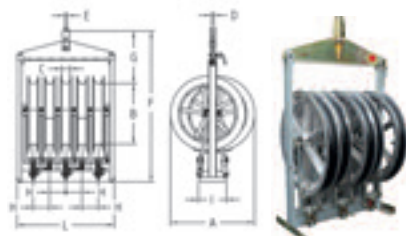
MODEL	Dimensions (mm)										Working load kN	Weight kg
	A	B	C	D	E	F	G	H	I	L		
025/5/5 SC	730	500	68	26	25	1522	671	145	300	626	40	120
025/3/1 SC	867	650	68	26	25	1657	671	145	300	626	60	143
025/3/1L SC	885	650	95	26	25	1657	645	175	300	716	60	160
025/4/3 SC	1000	800	68	26	25	1764	643	145	500	636	60	150
025/4/3L SC	1020	800	95	26	25	1822	643	175	500	720	60	202
025/6/3L SC	1219	1000	95	26	25	2022	640	175	500	720	66	227

## 025/...SC

### BUNDLED CONDUCTOR STRINGING BLOCKS DETACHABLE FRAME VERSION

For quad bundled conductors stringing operations.  
Molded aluminum alloy sheaves on ball-bearings, interchangeable nylon (or aluminum) lining sectors for conductor protection.

Galvanized steel frame with 90° orientable clevis attachment suspension point, designed to accommodate complete single sheave rollers **Mod. 025/...**



#### Available on request:

- Sheave's grounding device (**Mod. 025/.../... MT**) with 50mm<sup>2</sup> insulated copper cable L=6m (other lengths on request) with grounding clamp;
- Interchangeable nylon lining sectors kit (**Mod. NYR/...**);
- Interchangeable aluminum lining sectors kit (**Mod. ALR/...**);
- Different spacing between sheave centres.

MODEL	Dimensions (mm)										Working load kN	Weight kg
	A	B	C	D	E	F	G	H	I	L		
025/5/6 SC	715	500	68	26	25	1527	676	145	300	933	40	175
025/3/2 SC	867	650	68	26	25	1657	671	145	300	916	60	200
025/3/2L SC	886	650	95	26	25	1657	645	175	300	1066	60	235
025/4/4 SC	1000	800	68	26	25	1764	643	145	500	926	60	220
025/4/4L SC	1020	800	95	26	25	1887	708	175	500	1070	60	300
025/6/4L SC	1219	1000	95	26	25	2087	707	175	500	1070	66	325

025/...

### "TANDEM" CONFIGURATION FOR SINGLE OR MULTIPLE PULLEY BLOCKS

"Tandem" configuration is obtained by connecting two standard pulleys (single or multiple, standard or for helicopter use) with a dedicated galvanized steel frame kit.

Also available on request "tandem" pulley with integrated frame (fixed frame).

#### SINGLE VERSION



#### MULTIPLE VERSION

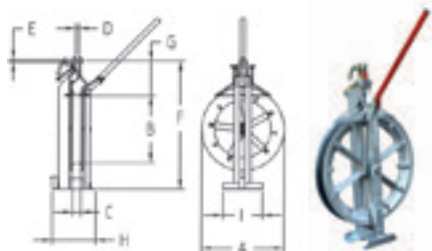


# EQUIPMENT FOR OVERHEAD CONDUCTORS STRINGING

## 025/... E

### HELICOPTER STRINGING BLOCK FOR SINGLE CONDUCTOR

Designed for helicopter pilot wire laying operations.  
Molded aluminum alloy sheaves on ball-bearings, interchangeable nylon lining sectors for conductor protection, galvanized steel frame with swivel clevis attachment.  
Complete with pilot wire holding bracket and detachable wire-guide rod



#### Available on request:

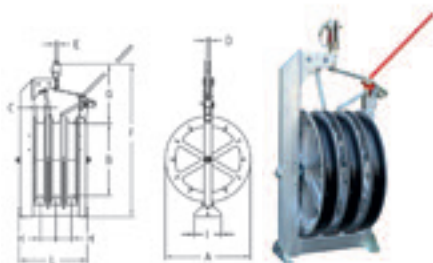
- Sheave's grounding device (**Mod. 025/.../... MT**) with 50mm<sup>2</sup> insulated copper cable L=6m [other lengths on request] with grounding clamp;
- Interchangeable nylon lining sectors kit (**Mod. NYR/.../...**);
- Interchangeable aluminum lining sectors kit (**Mod. ALR/.../...**);

MODEL	Dimensions (mm)										Working load		Weight
	A	B	C	D	E	F	G	H	I	kN	kg		
025/1 E	300	230	41	20	16	560	215	200	200	26	12		
025/2 E	440	350	48	20	16	700	235	245	300	26	20		
025/5 E	620	500	68	25	20	1130	404	325	300	33	45		
025/3 E	755	650	68	25	20	1265	404	277	300	40	50		
025/3L E	775	650	95	25	20	1278	418	306	300	40	60		
025/4 E	890	800	68	25	20	1401	406	277	300	40	57		
025/4L E	910	800	95	25	20	1414	419	310	300	40	65		
025/6L E	1110	1000	95	25	20	1614	416	330	500	60	99		

## 025/... E

### HELICOPTER STRINGING BLOCK FOR TWIN AND TRIPLE BUNDLED CONDUCTORS

Designed for helicopter pilot wire laying operations, for 2 or 3 bundled conductors stringing operations.  
Molded aluminum alloy sheaves on ball-bearings, interchangeable nylon lining sectors for conductor protection, galvanized steel frame with clevis attachment.  
Complete with pilot wire holding bracket and detachable wire-guide rod.



#### Available on request:

- Sheave's grounding device (**Mod. 025/.../... MT**) with 50mm<sup>2</sup> insulated copper cable L=6m [other lengths on request] with grounding clamp;
- Interchangeable nylon lining sectors kit (**Mod. NYR/.../...**);
- Interchangeable aluminum lining sectors kit (**Mod. ALR/.../...**);
- Different spacing between sheave centres.

MODEL	Dimensions (mm)											Working load		Weight
	A	B	C	D	E	F	G	H	I	L	kN	kg		
025/5/5 E	620	500	68	25	26	1400	674	145	300	654	40	115		
025/3/1 E	755	650	68	25	26	1533	674	145	300	654	60	154		
025/3/1L E	775	650	95	25	26	1570	704	175	300	744	60	175		
025/4/3 E	890	800	68	25	26	1678	674	145	300	654	60	177		
025/4/3L E	910	800	95	25	26	1708	704	175	300	744	60	205		
025/6/3L E	1110	1000	95	25	26	1908	704	175	500	744	66	248		





## 026/...E

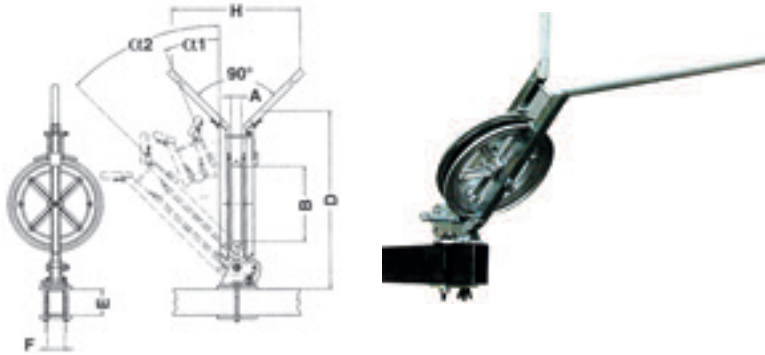
### HELICOPTER BLOCK – SINGLE CONDUCTOR (ADJUSTABLE ANGLE)

Designed for HELICOPTER pilot wire laying operations, complete with adjustable angle support for cross-arm.

Molded aluminum alloy sheaves on ball-bearings, interchangeable nylon lining sectors for conductor protection, galvanized steel frame with clevis attachment.

Complete with pilot wire holding bracket and detachable wire-guide rod.

Breaking load: 6000 daN



MODEL	Dimensions (mm)										Weight
	A	B	C	D	E	F	G	H	$\alpha 1$	$\alpha 2$	kg
026/11 E	48	350	440	870	*	*	800	1250	22.5°	45°	14

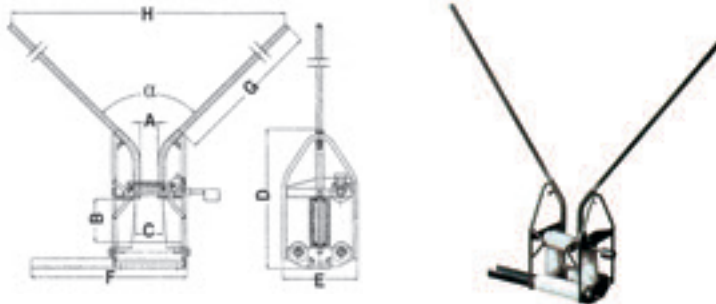
\*on request based on cross arm measurement

## 026/...

### TOWER-TOP RUNNING OUT ROLLERS FOR HELICOPTER PILOT WIRE DEPLOYMENT

Suitable for HELICOPTER pilot wire laying operations.

Nylon rollers on ball-bearings, galvanized steel frame complete with "V" shape detachable rope-guide and tower-top mounting brackets.



MODEL	Dimensions (mm)										Weight
	A	B	C	D	E	F	G	H	$\alpha^\circ$	kg	
026/10	55	130	85	415	255	445	1620	2324	22.5°	12	

# EQUIPMENT FOR OVERHEAD CONDUCTORS STRINGING

## 025/1 FG...

### GROUND WIRE PULLEY-BLOCK

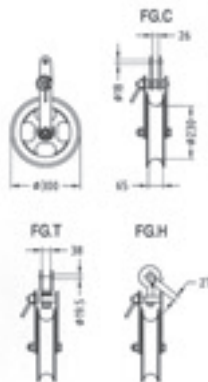
Suitable for galvanized steel ground wire.  
Galvanized steel frame and sheave on ball-bearings.

Working load: 23 kN

Weight: 14 kg

Types of attachment available:

- Fix clevis **Mod. 025/1 FG.C (standard type)**
- Swivel clevis **Mod. 025/1 FG.T**
- Swivel hook **Mod. 025/1 FG.H**



## 0251AS/...

### PULL-DOWN PULLEY-BLOCK

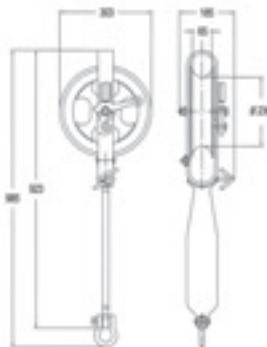
Designed to keep the pilot rope as well as conductor in the proper position while stringing between towers having a substantial height difference.

Automatic quick-release device.

Galvanized steel frame and wheel on ball-bearings.

Working load: 26 kN

Weight: 20 kg



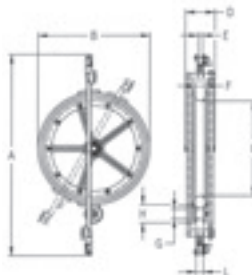
## 025...AS

### HOLD-DOWN PULLEY-BLOCK

Suitable for conductor stringing operations at the tower top position when operating on towers with significant height difference.

Molded aluminum alloy sheave on ball-bearings, interchangeable nylon lining sectors for conductor protection.

Opening galvanized steel frame with top and bottom swivelling clevis attachment.



MODEL	Dimensions (mm)									Breaking load kN	Breaking load (small sheave) kN	Weight kg
	A	B	C	D	E	F	G	H	L			
0255AS	1188	620	500	203	30	68	70	124	30	100	25	31
0253AS	1341	755	650	200	30	68	70	124	30	100	25	38
0253LAS	1378	775	650	229	41	95	83	133	41	120	25	45
0254LAS	1513	910	800	229	41	95	83	133	41	120	25	54



## 21.12...

### GALVANIZED STEEL "ANTITWISTING" WIRE ROPE 12 STRANDS BRAIDED TYPE

Standard supplied with spliced eyes and totally wound on steel reel.



MODEL	Diameter	Strands number	Weight	Breaking load	Working load	Standard length
	mm	N°	kg/m	kN	kN	m
21.12.8	8	12	0,22	39,2	13,1	1000
21.12.9	9	12	0,25	49,0	16,3	500 - 1000
21.12.10	10	12	0,35	72,0	24,0	1000
21.12.11	11	12	0,42	84,0	28,0	1000
21.12.12	12	12	0,49	96,0	32,0	1000
21.12.13	13	12	0,54	105,0	35,0	800 - 1600
21.12.14	14	12	0,65	120,0	40,0	1000
21.12.16	16	12	0,84	160,0	53,3	1000
21.12.18	18	12	1,07	212,0	70,6	1000
21.12.20	20	12	1,24	265,0	88,3	1000
21.12.22	22	12	1,56	320,0	106,6	900
21.12.24	24	12	1,76	375,0	125,0	800
21.12.26	26	12	2,18	409,0	136,3	600
21.12.28	28	12	2,72	479,0	159,6	600

\*Different diameters and length available on request

**Available on request:** internal tape showing order n°, model, Ø, length, breaking load, meters indication.

## 22. ...

### NYLON PILOT ROPE FOR CONDUCTOR AND CABLE STRINGING

Antitwisting braided type polyester pulling rope with high tenacity nylon core.

Standard delivered with stitched eyes.



MODEL	Diameter	Weight	Elongation at 35% of breaking load	Breaking load	Standard length
	mm	kg/m	%	kN	m
22.8	8	0,046	5	12	500 - 1000 - 2000
22.10	10	0,075	5	20	1000 - 1600 - 2000
22.12	12	0,120	5	35	1000 - 1600 - 2000
22.14	14	0,160	5	43	1000 - 1600 - 2000
22.16	16	0,200	5	50	1000
22.18	18	0,230	5	58	1000
22.20	20	0,280	5	65	1000

\*Different diameters and length available on request

# EQUIPMENT FOR OVERHEAD CONDUCTORS STRINGING

## 22.TR ...

### MODIFIED POLYPROPYLENE PILOT ROPE

Antitwisting polypropylene pulling rope for conductor stringing operations.  
 Braided type structure to assure high stability.  
 Easy-splicing method that guarantees 100% of rated breaking load on eyes.  
 High level of abrasion resistivity.  
 Resistant to acid and alkaline solutions.  
 High UVA stability.  
 Water repellent and floating in water.  
 Color: green.



MODEL	Diameter	Weight	Elongation at 35% of breaking load	Breaking load	Standard length on Ø 1400mm reel
	mm	kg/m	%	kN	m
22.TR.10	10	0,04	10	14	2400
22.TR.12	12	0,06	10	23	2000
22.TR.14	14	0,075	10	26,5	1500
22.TR.16	16	0,092	10	32	1000
22.TR.18	18	0,110	10	40,5	800-1000
22.TR.20	20	0,140	10	51,5	750
22.TR.22	22	0,165	10	62	500

## 23...

### DIELECTRIC POLYPROPYLENE PILOT ROPE

12 strands rope made of high tenacity polypropylene.  
 This is the ideal rope whereas great insulation along with anti-twist characteristics are required.  
 During the manufacturing process, several additives are added to confer excellent dielectric properties.  
 It is produced with diameter from 10 to 28 mm.



**Application:** Overhead electrical lines, underground laying, OPGW stringing. On request it can be supplied with thimbles or spliced eyes.

**Main features:** Waterproof, floatable, good flexibility, good UV resistance, resistant to slight abrasions, spliceable, antigratory.

**Color:** Yellow or red.

**Certifications:** Manufactured according to IEC62192.

Approved by EDF (France) ref. ST-HTB-71B-2

#### CAUTION:

It is recommended to keep the rope clean and dry to assure the highest dielectric properties.  
 If the material is not used in good conditions, the manufacturer does not assure the highest dielectric protection.

MODEL	Diameter	Weight	Breaking load
	mm	kg/m	kN
23.10	10	0,05	14
23.12	12	0,07	21
23.14	14	0,09	28
23.16	16	0,12	37
23.18	18	0,15	47
23.20	20	0,18	59
23.22	22	0,22	71
23.24	24	0,26	85
23.26	26	0,30	100
23.28	28	0,35	116



## 062/ ...

### STEEL REEL FOR PILOT ROPES

Suitable to be used with puller's reel winder device.  
 Made of painted steel pipes.  
 (Supplied complete with side cross-plates  
**(Mod. 062/CP)**).



MODEL	Dimensions (mm)				Weight
	A	B	C	D	kg
062/1	420	524	273	630	43
062/2	420	560	580	1100	59
062/3	420	560	580	1400	81
062/4	420	560	570	1900	101



Side cross-plates kit  
**Mod. 062/CP**  
 Suitable for steel reel  
 dragging

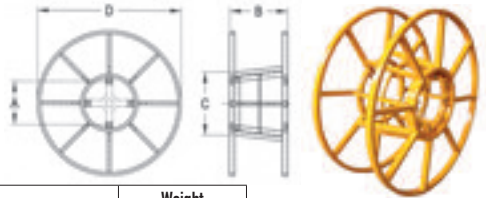


Side square cross-plates kit  
**Mod. 062/CPA**  
 Suitable for steel reel dragging  
 on reel stand  
**Mod. 040** with hydraulic driven head

## 063/ ...

### STEEL REEL FOR PILOT ROPES (OPENABLE SIDE)

Suitable to be used with puller's reel winder device.  
 Made of painted steel pipes.  
 (Supplied complete with side cross-plates **(Mod. 062/CP)**).



MODEL	Dimensions (mm)				Weight
	A	B	C	D	kg
063/1	420	524	209	630	35
063/2	420	560	610	1100	79
063/3	420	560	610	1400	91
063/4	420	560	610	1900	119

### STEEL REEL CAPACITY IN METERS

MODEL	Rope diameter (mm)														
	6	7	8	9-10	11-12	13	14	16	18	20	22	24	26	28	30
062/1 063/1	1800	1500	1100	800	600	500	400								
062/2 063/2	7200	5600	3200	2400	1600	1600	1100	900	750	600	500	400	350	350	
062/3 063/3	14400	12000	6400	3600	2100	2400	2200	1800	1200	1000	900	800	700	550	
062/4 063/4	21600	18000	9600	7200	7200	4800	4400	3600	2400	2000	1800	1600	1400	1200	1060

## R4

### HYDRAULIC DRIVEN REEL-WINDER WITH FOLDABLE STABILIZERS FOR EASE OF TRANSPORT AND STORAGE

Automatic reel-winder with foldable stabilizers and spooler rope-guiding unit.

Suitable for steel rope ranging from 8 to 24mm diameter and steel reels with 1100mm and 1400mm diameter.

#### Main features:

- Hydraulically controlled lifting-arm and stabilizers;
- Safety automatic negative-brake;
- Hydraulic motor;
- Idle position for reel rotation and manual adjustment of spooler rope-guiding unit;
- Standard connecting hoses set, 10 m length with quick release connections (other lengths upon request);
- Folding arm, wheels with extractable axle and towing bar for ease of transport;
- Balanced lifting point and anchoring attachments;
- Weight: 300 kg;
- Max torque: 100 daN m;
- Operative pressure: 150 bar;
- Max lifting capacity: 2000 kg.

Suitable to be connected to every model of TE.M.A. tensioner/puller or puller/tensioners

#### Available on request:

- Distributor group;
- Transmission/lifting arm with control pressure valve and manometer.







040/...

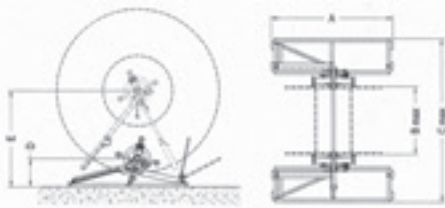
### HYDRAULIC REEL STAND

Capacity from 4 to 10 t.  
 Complete with mechanical braking system.  
 Suitable for conductor wooden drums or steel reels for aerial stringing operations and underground cabling.  
 Made in steel with foldable structure for ease of transport.  
 Drum lifting system by hydraulic jacks.  
 N° 2 mechanical disc brakes to control and adjust the torque force and counter-pull, with replaceable brake pads.  
 Steel shaft on ball-bearings with adjustment wedges.



**Available on request:**

- Hydraulic braking system;
- Mechanical locking system.



MODEL	Lifting capacity	Suitable for reels	Dimensions (mm)					Weight
	kg	Ø mm	A	B	C	D	E	kg
040/4	4000	800 ÷ 2800	1800	1400	2700	580	1400	230
040/7	7000	1000 ÷ 2800	2000	1500	2800	550	1600	280
040/10	10000	1500 ÷ 3200	2200	1500	3400	650	1800	500

040/...

### HYDRAULIC REEL STAND

Capacity from 12 to 18 t.  
 Complete with hydraulic braking system and safety latches.  
 Suitable for conductor wooden drums or steel reels for aerial stringing operations and underground cabling.  
 Made in steel with foldable structure for ease of transport.  
 Drum lifting system by hydraulic jacks.  
 N°2 hydraulically operated disc brakes to control and adjust the torque force counter-pull, with replaceable brake pads.  
 Steel shaft on ball-bearings with adjustment wedges.



MODEL	Lifting capacity	Suitable for reels	Dimensions (mm)					Weight	Braking torque
	kg	Ø mm	A	B	C	D	E	Kg	kNm
040/12	12000	1900 ÷ 3800	2900	1900	3900	900	2000	1100	400
040/15	15000	1900 ÷ 3800	2900	1900	3900	900	2000	1200	400
040/18	18000	1900 ÷ 3800	2900	1900	3900	900	2000	1400	400

# EQUIPMENT FOR OVERHEAD CONDUCTORS STRINGING

## 040/T/...

### HYDRAULIC REEL STAND

Capacity from 4 to 10 t.

Complete with mechanical braking system and prearranged for the installation of hydraulic driven head.

Suitable for conductor wooden drums or steel reels for aerial stringing operations and underground cabling

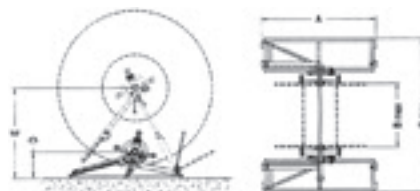
Made in steel with foldable structure for ease of transport.

Drum lifting system by hydraulic jacks.

N° 2 mechanical disc brakes to control and adjust the torque force and counter-pull, with replaceable brake pads.

Steel shaft on ball-bearings with adjustment wedges.

Prearranged for the installation of hydraulic driven head **Mod. 040/TI/...**



#### Available on request:

- Hydraulic braking system;
- Mechanical locking system.

MODEL	Lifting capacity	Suitable for reels	Dimensions (mm)					Ø Min. hole	Weight
	kg	Ø mm	A	B	C	D	E	mm	kg
040/4	4000	800 ÷ 2800	1800	1400	2700	580	1400	60	230
040/7	7000	1000 ÷ 2800	2000	1500	2800	550	1600	90	280
040/10	10000	1500 ÷ 3200	2200	1500	3400	650	1800	90	500

## 040/T/...

### HYDRAULIC REEL STAND

Capacity from 12 to 18 t.

Complete with hydraulic braking system, safety latches and prearranged for the installation of hydraulic driven head.

Suitable for conductor wooden drums or steel reels for aerial stringing operations and underground cabling

Made in steel with foldable structure for ease of transport.

Drum lifting system by hydraulic jacks.

N°2 hydraulically operated disc brakes to control and adjust the torque force counter-pull, with replaceable brake pads.

Steel shaft on ball-bearings with adjustment wedges.

Prearranged for the installation of hydraulic driven head **Mod. 040/TI/...**

MODEL	Lifting capacity	Suitable for reels	Dimensions (mm)					Weight	Ø Min. hole	Braking torque
	kg	Ø mm	A	B	C	D	E	kg	mm	kNm
040/12	12000	1900 ÷ 3800	2900	1900	3900	900	2000	1100	120	400
040/15	15000	1900 ÷ 3800	2900	1900	3900	900	2000	1200	120	400
040/18	18000	1900 ÷ 3800	2900	1900	3900	900	2000	1400	120	400



## 040/TI/...

### HYDRAULIC DRIVEN HEAD

Powered either by tensioner/puller machines or remote hydraulic-power unit.

The hydraulic driven head guarantees a synchronized rotation in both directions, from the machine's control panel.

Capacity from 7 to 12 t (other capacities available upon request).

Maximum torque: 300 daNm

Feed pressure: 150 bar

Maximum speed: 32 r.p.m.

Suitable to be installed on pre-arranged reel stands.

Weight: 80 kg



## 040/TU/...

### SET OF HYDRAULIC HOSES

For the connection from the hydraulic driven head to pullers, tensioners or hydraulic power units.

Standard length 10m (other length upon request).



## 062/CPA

### ADAPTATION CROSS-PLATES

Pair of square cross-plates that allows the installation of steel reels

Mod. 062/... and 063/... on reel stands with hydraulic driven head.



## 041...041/T

### REEL STANDS AND RECOVERY UNITS

Capacity and features configurable according to customer requirement.

Rotation controlled by hydraulic head available upon request (model 041,

Suitable to accommodate side-opening conical reels.

**NOTE:** Upon order, please provide reel's specifications.



# EQUIPMENT FOR OVERHEAD CONDUCTORS STRINGING

## 041/FR

### REEL STAND SUITABLE FOR HELICOPTER STRINGING

Designed for helicopter stringing.  
Galvanized steel frame with mechanical braking system and anchoring pickets.

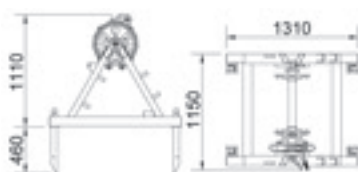
Designed for standard reels **Mod. 062/...** and **063/...**

Maximum reel diameter: 1400 mm

Maximum lifting capacity: 2000 kg

Weight: 190 kg

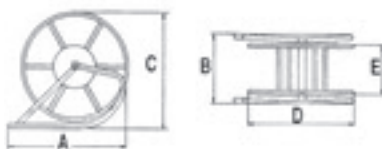
**Available on request:** hydraulic braking system



## 060/...

### CRADLE REEL STAND FOR WIRES

Made of painted steel pipes.

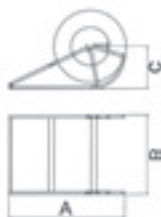


MODEL	Dimensions (mm)					Rope capacity Ø 8mm	Rope capacity Ø 12mm	Weight kg
	A	B	C	D	E	m	m	
060/1	765	500	530	450	420	700		20
060/2	1064	505	775	700	404	1200	560	27
060/3	1381	535	985	920	430	2500	1100	50

## 061/...

### CRADLE REEL STAND

Galvanized steel frame, modular, suitable for standard reels as per the following table:



MODEL	Dimensions (mm)				Capacity	Weight kg
	A	B	C	D max	kN	
061/1	2320	1000	830	1400	20	61
061/4	3120	960	1150	1900	26	144

## 061/...FR

### CRADLE REEL STAND WITH BRAKING SYSTEM

Galvanized steel frame, modular, suitable for standard reels with braking system.

**Mod. 061/1... FR** Weight: 103 kg

**Mod. 061/4... FR** Weight: 183 kg



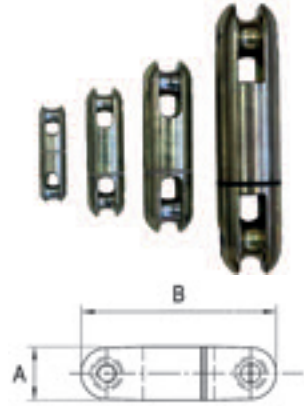


## 250...R

### SWIVEL JOINT

Made of high tenacity galvanized steel, it is used as a junction element.

MODEL	A	B	Rope Ø	Capacity	Breaking load	Weight
	mm	mm	mm	kN	kN	kg
250 AR	32	120	15	26.7	80	0,50
250 BCR	45	170	19	60	180	1,20
250 DR	60	212	24	120	360	3,00
250 ER	77	320	28	250	750	8,20

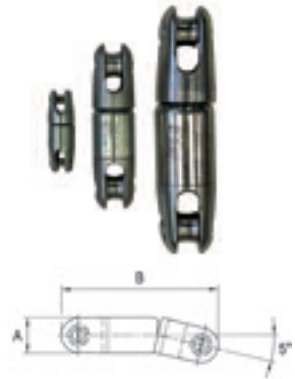


## 250...

### SWIVEL ARTICULATED JOINT

Made of high tenacity galvanized steel, it is used as a junction element.

MODEL	A	B	Rope Ø	Capacity	Breaking load	Weight
	mm	mm	mm	kN	kN	kg
250	20	62	6	8,3	25	0,10
250 A	32	125	10	20	60	0,50
250 B	45	188	15	40	120	1,50



## GF...

### "U" TYPE FIX JOINT

Made of high tenacity galvanized steel, it is used as junction element.

This joint is designed to be used on bull-wheels.

MODEL	Dimensions (mm)						Capacity	Breaking load	Weight
	A	B	C	D	E	R	kN	kN	kg
GF 10	59	28,5	15,5	10	22,5	12	20	60	0,15
GF 13	72	41	19,5	13	26	16	33	100	0,35
GF 16	90,5	48,5	20	16	41	19	53	160	0,6
GF 18	100,5	56	22	18	47,5	21,5	70	210	0,75
GF 24	121	61	28	24	60	22	120	360	1,1
GF 28	175	76	42	28	65	32,5	250	750	3,1
GF 30	183	81	44	32	70	34,5	250	750	3,4



# EQUIPMENT FOR OVERHEAD CONDUCTORS STRINGING

CT...

CABLE PULLING SOCK "HEAD" TYPE



MODEL	Conductor Ø	Dimensions (mm)		Working load	Weight
	mm	A	B	kN	kg
CT 0	7-11	900	1500	7	0,45
CT 1	11-14	1000	1600	8	0,6
CT 2	14-17	1050	1700	10	0,6
CT 3	17-23	1150	1800	17	0,8
CT 4	23-29	1300	2200	27	1,7
CT 5	29-38	1550	2400	40	3
CT 6	38-50	1650	2800	60	4,5

CT...

CABLE PULLING SOCK "DOUBLE HEAD" TYPE



MODEL	Conductor Ø	Dimensions (mm)		Working load	Weight
	mm	A	B	kN	kg
CT 00	7-11	900	2300	7	0,7
CT 7	11-14	1000	2600	8	0,8
CT 8	14-17	1050	2800	10	0,8
CT 9	17-23	1150	3000	17	1,2
CT 10	23-29	1300	3500	27	3,3
CT 11	29-38	1550	4100	40	5
CT 12	38-50	1650	4300	60	8,7





## CTT...

### CABLE PULLING SOCK "HEAD" TYPE



MODEL	Conductor Ø	Dimensions (mm)		Working load	Weight
	mm	A	B	kN	kg
CTT 00	8-17	1100	1400	12	0,70
CTT 00 R				17	0,90
CTT 01	17-29	1360	1700	28	1,30
CTT 01 R				33	1,50
CTT 02	29-38	1470	1900	43	2,10
CTT 02 R				50	2,50
CTT 03	38-50	1820	2270	60	2,70
CTT 03 R				70	3,00

NOTE: R = reinforced version

## CTG...

### CABLE PULLING SOCK "DOUBLE HEAD" TYPE



MODEL	Conductor Ø	Dimensions (mm)		Working load	Weight
	mm	A	B	kN	kg
CTG 00	8-17	1100	2680	12	1,15
CTG 00 R				17	1,25
CTG 01	17-29	1360	3240	28	2,30
CTG 01 R				33	2,50
CTG 02	29-38	1470	3540	43	3,60
CTG 02 R				50	3,80
CTG 03	38-50	1820	4240	60	4,80
CTG 03 R				70	5,00

NOTE: R = reinforced version

# EQUIPMENT FOR OVERHEAD CONDUCTORS STRINGING

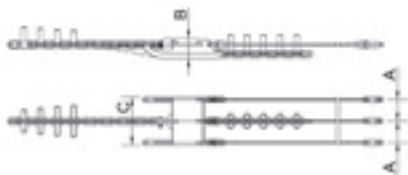
CO...

## FIX TYPE HEADBOARD FOR TWIN OR TRIPLE BUNDLED CONDUCTORS

Suitable to connect 2 or 3 conductors per phase to the pulling rope.

Recommended when operating with tensioner machines with two or more independent hydraulic circuits.

Complete with swivel joints and steel rope.



MODEL	Conductors	Dimensions (mm)			N° swivel joints		Rope length	For pulleys	Working load	Weight
	N°	A	B	C	250/BCR	250/DR	Ø16 mm*	Mod.	kN	kg
CO B1 F	2	146	146	326	2	1	2x3,5 m	025/5/5 - 025/5/5SC - 025/5/5E 025/3/1 - 025/3/1SC - 025/3/1E 025/4/3 - 025/4/3SC - 025/4/3E	93	90
CO T1 F	3	146	146	326	3	1	3x 3,5 m		93	100
CO B2 F	2	180	166	403	2	1	2 x3,5 m	025/3/1L - 025/3/1LSC - 025/3/1LE 025/4/3L - 025/4/3LSC - 025/4/3LE 025/6/3L - 025/6/3LSC	93	105
CO T2 F	3	180	166	403	3	1	3x 3,5 m		93	110
CO B3 F	2	222	170	487	2	1	2 x3,5 m	025/7/1L - 025/7/3L	93	120
CO T3 F	3	222	170	487	3	1	3x 3,5 m		93	135

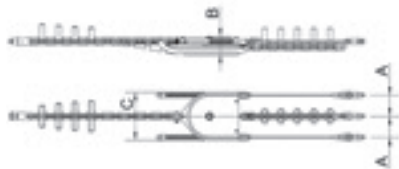
\* Ø18mm steel rope available upon request

## BALANCING HEADBOARD FOR TWIN OR TRIPLE BUNDLED CONDUCTORS

Suitable to connect 2 or 3 conductors per phase to the pulling rope.

Recommended when operating with single hydraulic circuit tensioner machines.

Complete with swivel joints and steel rope.



MODEL	Conductors	Dimensions (mm)			N° swivel joints		Rope length	For pulleys	Working load	Weight
	N°	A	B	C	250/BCR	250/DR	Ø16 mm*	Mod.	kN	kg
CO B1	2	145	139	340	2	1	1x30m	025/5/ - 025/5/5SC - 025/5/5E 025/3/1 - 025/3/1SC - 025/3/1E 025/4/3 - 025/4/3SC - 025/4/3E	100	120
CO T1	3	145	139	340	3	1	1x30m ÷ 1x15m		100	140
CO B2	2	180	154	410	2	1	1x30m	025/3/1L - 025/3/1LSC 025/3/1LE - 025/4/3L 025/4/3LSC - 025/4/3LE 025/6/3L - 025/6/3LSC	100	145
CO T2	3	180	154	410	3	1	1x30m ÷ 1x15m		100	160
CO B3	2	222	160	494	2	1	1x30m	025/7/1L - 025/7/3L	100	175
CO T3	3	222	160	494	3	1	1x30m ÷ 1x15m		100	195

\* Ø18mm steel rope available upon request



CO...

## FIX TYPE HEADBOARD FOR QUAD BUNDLED CONDUCTORS

Suitable to connect 4 conductors per phase to the pulling rope.  
Recommended when operating with tensioner machines with two or more in.  
Complete with swivel joints and steel rope.

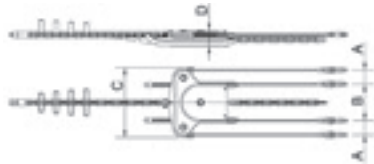


MODEL	Conductors	Dimensions (mm)				N° swivel joints		Rope length	For pulleys	Working load	Weight
		N°	A	B	C	D	250/BCR				
CO Q1 F	4	100	292	526	146	4	1	4X3,5 m	025/5/6 - 025/3/2 - 025/4/4	93	120
CO Q2 F	4	145	350	643	170	4	1	4X3,5 m	025/3/2L - 025/4/4L - 025/6/4L	93	140
CO Q3 F	4	145	290	635	170	4	1	4X3,5 m	025/5/6SC - 025/3/2SC - 025/4/4SC	93	125
CO Q4 F	4	175	350	755	170	4	1	4X3,5 m	025/3/2LSC 025/4/4LSC 025/6/4LSC	93	145
CO Q5 F	4	185	444	869	185	4	1	4X3,5 m	025/7/4L	93	165

\* Ø18mm steel rope available upon request

## BALANCING HEADBOARD FOR QUAD BUNDLED CONDUCTORS

Suitable to connect 4 conductors per phase to the pulling rope.  
Recommended when operating with single hydraulic circuit tensioner machines.  
Complete with swivel joints and steel rope.



MODEL	Conductors	Dimensions (mm)				N° swivel joints		Rope length	For pulleys	Working load	Weight
		N°	A	B	C	D	250/BCR				
CO Q1	4	100	290	540	139	4	1	2X30 m	025/5/6 - 025/3/2 - 025/4/4	100	170
CO Q2	4	140	360	690	154	4	1	2X30 m	025/3/2L - 025/4/4L - 025/6/4L	100	190
CO Q3	4	145	290	630	139	4	1	2X30 m	025/5/6SC - 025/3/2SC - 025/4/4SC	100	175
CO Q4	4	175	350	750	154	4	1	2X30 m	025/3/2LSC - 025/4/4LSC 025/6/4LSC	100	195
CO Q5	4	185	444	864	160	4	1	2X30 m	025/7/4L	100	215

\* Ø18mm steel rope available upon request

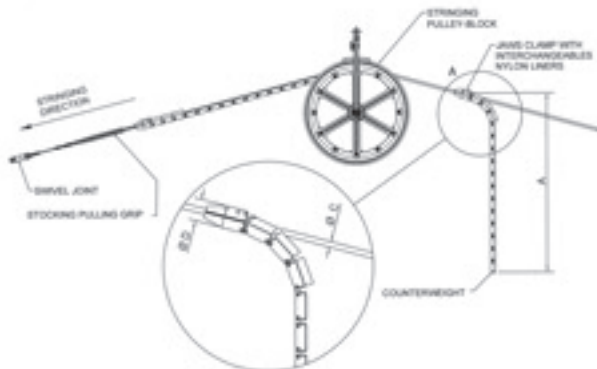
# EQUIPMENT FOR OVERHEAD CONDUCTORS STRINGING

## CO 60/...

### NON-ROTATING COUNTERWEIGHT DEVICE FOR OPGW CABLES STRINGING OPERATIONS

Upon placing the purchase order, please specify exact overall conductor diameter.

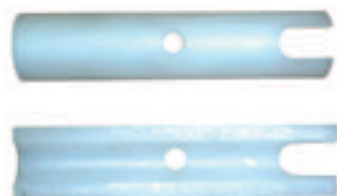
**NOTE:** one set consists of two counterweight devices.



MODEL	Dimensions counterweight (mm)		Weight kg	Ø Conductor "C" mm	Quantity per set
	"D"	"A" approx.			
CO 60/9	60	990	8	10 ÷ 17	2
CO 60/12	60	1330	10.5	17 ÷ 23	2
CO 80/12	80	1800	24	17 ÷ 27	2

#### Upon order please specify:

- Groove width of the aerial roller;
- Overall OPGW diameter, "C" dimension.



Interchangeable nylon liners

**Mod. CO60GN...**

**NOTE:** for optimal performances the two devices must be used in pairs.

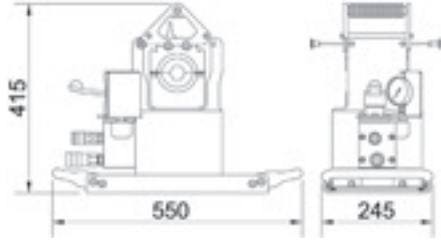
**NOTE:** Upon order, please specify the exact overall conductor diameter.



## P 8120

### HYDRAULIC PRESS (120 ton)

Hydraulic press 120 ton capacity, suitable for compression of conductor midspan and dead-end joints.  
 Max. compression force: 120 Tons at 700 bar.  
 Quick connectors.  
 360° rotating head.  
 Press weight: 55 kg  
 Compression dies weight: 2,5 kg  
 Max. hexagonal key: 65 mm  
 Press dimensions: 520x242x415 mm  
 Steel case weight: 26 kg  
 Steel case dimensions: 470x770x675 mm



#### Version on request:



Press unit equipped with anti-deformation support suitable for midspan joint



Dies **Mod. S 8120**



Hexagonal key circular dies, suitable for aluminum and steel joints.  
 Hexagonal key to be specified upon order confirmation.

#### Optional:



Hanging eye to allow the press machine to be securely used in suspension mode



Joint straightener **Mod. RD 8120**

Tools and dies			
Press	Joints to be compressed made of:	For hexagonal com-pression	Tool for joints straightening
P 8120	Steel	S 8120B/...	RD 8120
	Aluminum	S 8120A/...	

# EQUIPMENT FOR OVERHEAD CONDUCTORS STRINGING

## CM 8002

### MOTORIZED HYDRAULIC POWER UNIT

Petrol engine driven hydraulic pump.  
Complete with quick-connection type power take-off and protector frame.  
Suitable for use with press model P 8120.

#### Technical features:

Four stroke petrol engine of 4,3 HP  
Flow: 1.8 l/min  
Max. oil pressure: 700 bar  
Oil tank capacity: 10 litres  
Weight: 49 kg  
Dimension: 380x500x620 mm  
Steel case weight: 26 Kg  
Steel case dimensions: 470x770x675 mm



## PB 8000

### HYDRAULIC HAND PUMP

Two stages hand pump with pressure relief valve, and quick connectors.  
Suitable for connection to presses P 8120 and hydraulic punching machine 754H.

#### Technical features:

Max. oil pressure: 700 bar  
Oil delivery volume per pumping: 1st stage 40 cm<sup>3</sup>- 2nd stage: 2.6 cm<sup>3</sup>  
Oil tank capacity: 2,2 litres  
Weight: 8,5 kg  
Case dimensions: 80x27x23 cm

**NOTE:** for the hydraulic punching machine **Mod. 754H** is supplied the single hose version.



## T 8120...

### HYDRAULIC HOSES SET

Low and high pressure with quick connectors.

MODEL	Length (m)
T8120.003	3
T8120.006	6
T8120.010	10
T8120.015	15
T8120.030	30



## KTC 8120...

### QUICK CONNECTION TYPE JOINTS

Suitable for joining hoses of different lengths together.







## PG...

### JOINT PROTECTOR

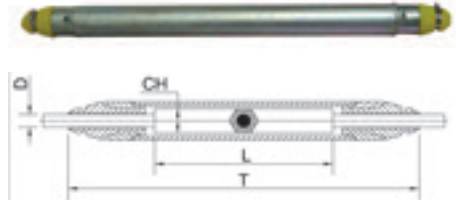
Suitable for protecting the mid-span joint while passing on pulley-blocks during conductor stringing operations.

Upon placing the purchase order, please specify:

L = joint length after compression

D = conductor diameter

CH = hexagonal key (joint section dimension after compression)



**RUBBER ENDS** (interchangeable)

Mod. PG 60/R....

Mod. PG 80/R....

Mod. PG 90/R....

Upon placing the purchase order, please specify conductor overall diameter.



MODEL	Pulley's groove width	Max hexagonal key	Breaking load
	mm	mm	kN
PG 60	68	40	20
PG 80	95	56	20
PG 90	95	65	20

## 654/...

### RATCHET TYPE CONDUCTOR CUTTER

MODEL	Suitable for cutting of:	Max cutting capacity	Length	Weight	Spare blades
		mm	mm	kg	
654/1	ACSR, AAC, AAAC, copper cond.	31	740	5	654/3
654/2	Steel wire	11	711	4	654/4



## 655/...

### HAND OPERATED HYDRAULIC CONDUCTOR CUTTER

MODEL	Max cutting capacity		Length mm	Weight kg	Spare blades
	Steel wire / earth wire	Bare conductor (*)			
655/1	13	24	370	2,7	655/1L
655/2A	18	45	550	7	655/2L



**NOTE:** (\*) ACSR-AAC-AAAC and copper;

- Supplied with case.

## TR01

### ACSR CABLE TRIMMER

For a fast and accurate cable trimming.

Standard set composed of: 1 cutter, 1 bush-support, 3 bushes and 1 plastic transport case.

**NOTE:** Upon placing the purchase order, please specify conductor overall diameter.



# EQUIPMENT FOR OVERHEAD CONDUCTORS STRINGING

## 400/04 – 400/05 – 400/07

### CONDUCTOR SELF-GRIPPING CLAMPS

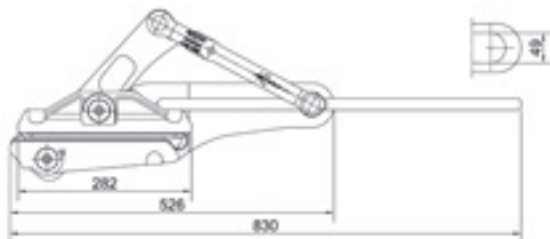
Suitable for A.C - AAC - ACSR and copper conductors.

Made of hot forged, heat treated, and cadmium plated high tensile alloy steel.

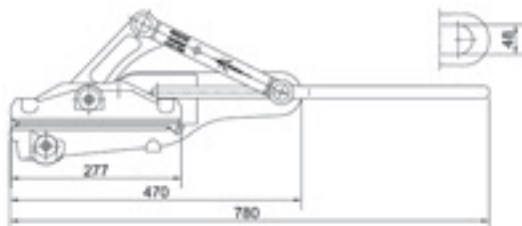
A complete range of interchangeable aluminum liners allows the clamp to fit the exact conductor diameter.

Each model of clamp is suitable for a wide range of conductors, therefore, the same clamp can be used for different conductors only by replacing aluminum liners.

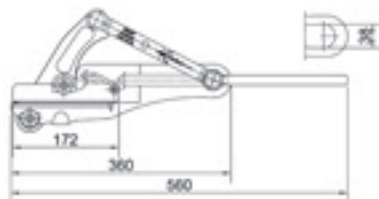
400-04



400-05



400-07



MODEL	Conductor Ø mm	Working load daN	S.WL daN	Breaking load daN	Weight kg
400-04	30 ÷ 45	5500	9170	28500	17,0
400-05	10 ÷ 33,5	4700	7830	23500	13,5
400-07	6 ÷ 23	3000	5000	15000	7,0

**NOTE:** Upon placing the purchase order, please specify conductor overall diameter or liners' measure.



## 410/04 – 410/05 – 410/07

### LINERS FOR CONDUCTOR CLAMPS

LINERS FOR 400/04			
Conductor Ø mm	Liners code for aluminum conductor	Liners for round shape steel rope	Liners for square pilot steel rope
30-31,5	410-04-13	For range 16-32mm, the liners are produced according to the exact rope diameter	For range 16-28mm, the liners are produced according to the exact rope diameter
31,5-33,0	410-04-14		
33-34,5	410-04-15		
34,5-36	410-04-16		
36-37,5	410-04-17		
37,5-39	410-04-18		
39-40,5	410-04-19		
From 40,5 to 45 specify conductor Ø			



LINERS FOR 400/05			
Conductor Ø mm	Liners code for aluminum conductor	Liners for round shape steel rope	Liners for square pilot steel rope
10-12	410-05-00	For range 13-22mm, the liners are produced according to the exact rope diameter	For range 13-24mm, the liners are produced according to the exact rope diameter
12-13,5	410-05-01		
13,5-15	410-05-02		
15-16,5	410-05-03		
16,5-18	410-05-04		
18-19,5	410-05-05		
19,5-21	410-05-06		
21-22,5	410-05-07		
22,5-24	410-05-08		
24-25,5	410-05-09		
25,5-27	410-05-10		
27-28,5	410-05-11		
28,5-30	410-05-12		
30-32	410-05-13		
32-33,5	410-05-16		



LINERS FOR 400/07			
Conductor Ø mm	Liners code for aluminum conductor	Liners for round shape steel rop	Liners for square pilot steel rope
6-6,5	410-07-01	For range 8-13mm, the liners are produced according to the exact rope diameter	For range 8-13mm, the liners are produced according to the exact rope diameter
6,5-8	410-07-02		
8-9,5	410-07-03		
9,5-11	410-07-04		
11-12,5	410-07-05		
12,5-14	410-07-06		
14-15,5	410-07-07		
15,5-17	410-07-08		
17-18,5	410-07-09		
18,5-20	410-07-10		
20-21,5	410-07-11		
21,5-23	410-07-12		



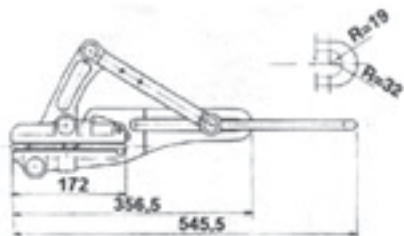
## 400/12

### OPTICAL GROUND WIRE "OPGW" SELF-GRIPPING CLAMPS

Self-gripping clamps with interchangeable liners suitable for OPGW cables from 6 to 23 mm diameter.

Made of hot forged, heat treated, and cadmium plated high tensile alloy steel.

- Maximum working load 3000 daN
- Maximum safety load 5000 daN
- Breaking load 15000 daN
- Weight: 7 kg



## 410/12

### OPTICAL GROUND WIRE "OPGW" CABLE LINERS

OPGW liners have been specifically designed to protect the optical fiber from any damage.

One set of liners consists of a lower liner made of polyurethane and an upper liner made of aluminum alloy. Liners are supplied in any size between diameters 6 and 23 mm.





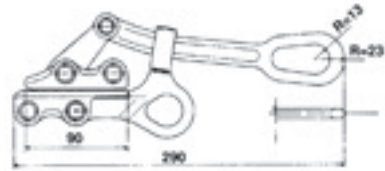
## 400/09

### WIRE ROPE AND COPPER CONDUCTORS SELF-GRIPPING CLAMPS

Self-gripping clamps suitable for wire rope and copper conductor with diameters ranging from 3 to 15 mm.

Made of hot forged, heat treated, and cadmium plated high tensile alloy steel.

- Maximum working load 980 daN
- Maximum safety load 1930 daN
- Breaking load 4900 daN
- Weight: 1,5 kg



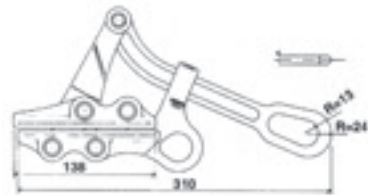
## 400/11

### SELF-GRIPPING CLAMPS

Self-gripping clamps with interchangeable liners suitable for aluminum, aluminum-steel, copper conductors and steel wires ranging from 7 to 16 mm diameter.

Made of hot forged, heat treated, and cadmium plated high tensile alloy steel.

- Maximum working load 1280 daN
- Maximum safety load 2135 daN
- Breaking load 6400 daN
- Weight 2,5 kg



#### LINERS FOR 400/11

Conductor Ø mm	Liners for aluminum conductor	Liners for copper conductor	Liners for steel rope (round or square shape rope)
	7-8,5	410-11-01	
8,5-10	410-11-02	410-11-R02	Produced in range 7-13mm specifying the exact rope Ø
10-11,5	410-11-03	410-11-R03	
11,5-13	410-11-04	410-11-R04	
13-14,5	410-11-05	410-11-R05	
14,5-16	410-11-06	410-11-R06	

# EQUIPMENT FOR OVERHEAD CONDUCTORS STRINGING

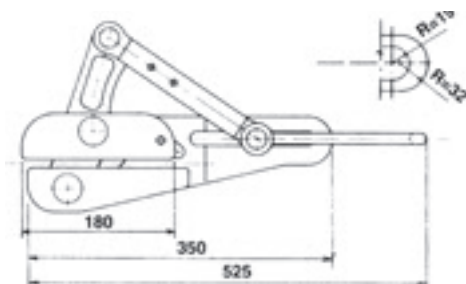
**400/06**

## WIRE ROPE AND STEEL GROUND WIRE SELF-GRIPPING CLAMPS

Self-gripping clamps suitable for ground wires and wire ropes with diameters ranging from 7,5 to 18 mm.

Made of hot forged, heat treated, and cadmium plated high tensile alloy steel.

- Maximum working load 2500 daN
- Maximum safety load 4170 daN
- Breaking load 12500 daN
- Weight: 7 kg

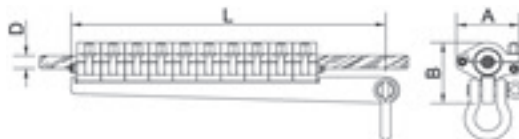


**402**

## BOLTED CLAMPS

Made of galvanized steel, supplied with aluminum liners to suit A.C - AAC - ACSR and AAAC conductors or bronze liners to suit steel wire ropes.

**NOTE:** Upon placing the purchase order, please specify conductor overall diameter.



MODEL	N° of elements	Dimensions	Rope Ø	Conductor Ø	Working load
		A x B x L mm	mm	mm	
40204	4	150 x 150 x 390	20	15÷26	24
40206	6	150 x 150 x 510	24	20÷35	36
40207	7	150 x 150 x 580	28	20÷35	40
40208	8	150 x 150 x 650	30	30÷40	48
40210	10	150 x 150 x 800	30	30÷40	60
40212	12	150 x 150 x 922	36	30÷40	76
40214	14	150 x 150 x 1100	40	30÷40	90
40216	16	150 x 150 x 1166	45	35÷50	100
40220	20	150 x 150 x 1400	50	40÷60	120





## 400/08

### SELF-GRIPPING CLAMPS FOR CONDUCTOR LIFTING

Self-gripping clamps with interchangeable liners suitable for lifting conductors with an overall diameter ranging from 7 to 38 mm.

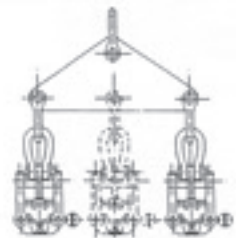
Made of hot forged, heat treated, and cadmium plated high tensile alloy steel.

- Maximum working load 1960 daN
- Maximum safety load 3270 daN
- Breaking load 9800 daN
- Weight: 5,5 kg



LINERS FOR 400/08	
Conductor Ø	Liners for aluminum conductor
mm	
7-11	410-08-01
9-12	410-08-02
12-16	410-08-03
16-23	410-08-04
22-36	410-08-05
30-38	410-08-06

#### How to use



Special liners available upon request

## 462

### SADDLE TYPE CONDUCTOR LIFTING DEVICE

Lifting device for conductors.

Suitable for single as well as bundled conductors.

Available on request: coated version for conductor protection.



# EQUIPMENT FOR OVERHEAD CONDUCTORS STRINGING

## MT 400

### MOBILE EARTHING DEVICE

Suitable to discharge inducted or static currents on cables, during stringing operations.

Consisting of 3 aluminum sheaves mounted on ball-bearings, insulated flexible copper cable, earthing clamp and metal box for storing.

Copper cable: length 6 m, section 50 mm<sup>2</sup>

Weight: 8,5 kg

Weight store box: 7,3 kg

**Available on request:** different cable lengths and sections.



## 490

### TEMPORARY GROUNDING DEVICE 150; 220; 400 KV

Supplied with:

- 3 conductor clamps made of light aluminum alloy suitable for range of diameters from 5 to 60 mm;
- 3 insulated copper cables coated with transparent thermoplastic material, 50-70-95 mm<sup>2</sup> section, 6 m each complete with crimped lugs;
- 3 tower grounding clamps with adjustable opening up to 33 mm;
- 1 insulated reinforced fiberglass rod, L=4,5-6 m with "G" type hook;
- 1 stick bag.

**Available on request:**

- Different copper cable sections;
- Different insulated rod lengths;
- Different insulated rod lengths;
- Steel box for transport.



"G" type hook



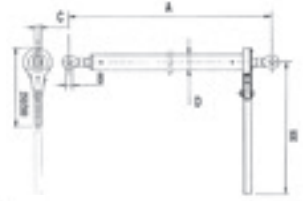
MODEL	Conductors Ø	Insulating stick		Copper cable section	Suitable for lines up to
		Length m	N° Sections		
490150...	5 ÷ 60	4,5	3	50	150
490220...	5 ÷ 60	4,5	3	50 - 95	220
490400...	5 ÷ 60	4,5 o 6	3	95	400



## TC/...

### RATCHET TYPE TURNBUCKLE

MODEL	Dimensions (mm)					Working load kg	Breaking load kg	Weight kg
	A min	A max	B	C	D			
TC 30	600	900	18	20	50	3000	9000	10
TC 50	650	1050	22	20	54	6000	18000	14
TC 100	950	1550	24	24	60	10000	30000	18



## BF-RBT

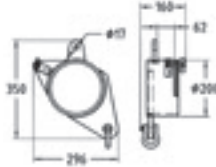
### TEMPORARY-ANCHORING CAPSTAN DEVICE

Suitable for rope anchoring. Complete with rope clamp to suit 10 to 20 mm diameter ropes. Aluminum alloy frame.

Working load: 500 daN

Breaking load: 1500 daN

Weight: 3,3 kg



## 209...

### SHACKLES

High carbon steel shackles with high alloy steel pin.

MODEL	Capacity daN	Dimensions (mm)						Weight kg
		A	B	C	D	E	H	
209 0050	500	12	20	6	8	18	32	0,05
209 0075	750	13	21	8	10	21	36	0,08
209 0100	1000	16	26	10	11	25	42	0,1
209 0150	1500	18	29	11	13	27	49	0,2
209 0200	2000	20	33	13	16	31	55	0,3
209 0325	3250	27	43	16	19	40	70	0,7
209 0475	4750	32	51	19	22	48	82	1
209 0650	6500	37	58	22	25	55	97	1,5
209 0850	8500	43	68	26	28	61	109	2,4
209 0950	9500	46	74	29	32	67	124	3,2



## 309 AA

NOTE: Other sizes available on request





### GALVANIZED STEEL SLINGS

With crimped eye both ends

Available on request:

- Sling supplied with metal core;
- Sling with thimble at each ends;
- Sling with rubber protection.



MODEL	Ø rope mm	Capacity (kg) (accordingly to the method of use)				Eye mm
						
309AA08...	8	700	1400	1210	990	64x128
309AA10...	10	1100	2140	1850	1510	80x160
309AA12...	12	1600	3200	2770	2260	96x192
309AA14...	14	2100	4160	3600	2940	112x224
309AA16...	16	2750	5460	4720	3860	128x256
309AA18...	18	3500	7000	6050	4950	144x288
309AA20...	20	4300	8560	7400	6050	160x320
309AA22...	22	5200	10300	8910	7280	176x352
309AA24...	24	6200	12400	10640	8690	192x384

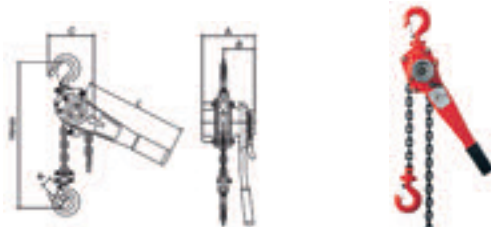
# EQUIPMENT FOR OVERHEAD CONDUCTORS STRINGING

## 650/...

### CHAIN LEVER HOIST

Available on request:

- Different chain lengths;
- Load limiter.



MODEL	Capacity	Standard chain length	Dimensions (mm)							Weight	Weight of each additional meter of chain
	daN	m	A	B	C	D	H	L	K	kg	kg/m
650/1	750	1.5	145	86	134	38	340	285	27	9,5	0,8
650/2	1500	1.5	175	100	150	48	380	410	36	11,5	1,4
650/3	3000	1.5	195	115	190	50	490	410	38	18,5	2,2
650/4	6000	1.5	195	115	242	65	620	410	48	27,5	4,4
650/5	9000	1.5	195	115	307	81	700	410	54	46	6,6

## 653/...

### PULLING HAND WINCH

MODEL	Capacity	Steel cable Ø	Dimensions	Lever length	Weight
	daN	mm	mm	mm	kg
653/1	800	8,3	440x265x63	405/609	9,0
653/2	1600	11,0	540x290x130	648/1147	16,0
653/3	3200	16,0	670x360x290	648/1147	31,0



## 653/...

### GALVANIZED STEEL CABLE SUITABLE FOR PULLING HAND WINCHES

MODEL	Cable length	Cable Ø	Breaking load
	m	mm	kg
653/1/1	10	8,3 (0,35kg/m)	4800
653/1/2	20		
653/1/3	30		
653/1/4	40		
653/2/1	10	11,0 (0,6kg/m)	9600
653/2/2	20		
653/2/3	30		
653/2/4	40		
653/3/1	10	16,0 (1,1kg/m)	19200
653/3/2	20		
653/3/3	30		
653/3/4	40		



#### NOTE:

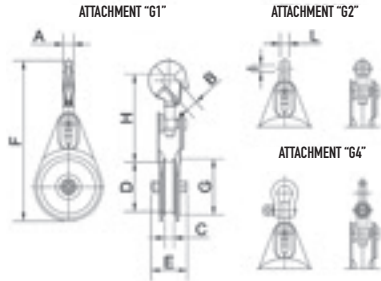
- On steel hand hasp;
- Different lengths available upon request.



## 020/.../N

### SNATCH BLOCK

Snatch block with nylon sheave on ball-bearings, galvanized steel frame with side opening, twisting hook attachment G1 type with safety latch provided in the standard version.



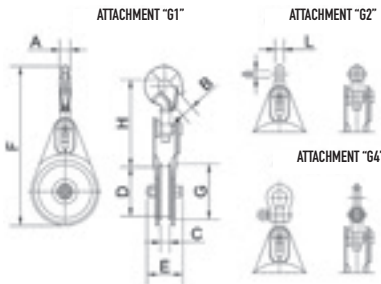
MODEL	Dimensions (mm)										Working load	Weight
	A	B	C	D	E	F	G	H	I	L	kN	kg
020/005/N	16	20	18	102	72	305	120	160	14	18	5	1,6
020/010/N	18	23	18	102	73	315	120	170	14	18	10	1,7
020/015/N	18	25	20	102	75	330	120	180	16	20	15	2,0

NOTE: "G2" or "G4" attachment type are available on request.

## 020/.../A

### SNATCH BLOCK

Snatch block with steel sheave on ball-bearings, galvanized steel frame with side opening, twisting hook attachment G1 type with safety latch provided in the standard version.



MODEL	Dimensions (mm)										Working load	Weight
	A	B	C	D	E	F	G	H	I	L	kN	kg
020/015/A	18	25	20	105	75	340	120	180	16	20	15	3,4
020/020/A	23	28	25	135	85	410	150	220	18	24	20	6,6
020/030/A	30	34	25	135	90	440	150	240	20	26	30	7,2
020/050/A	39	43	30	185	95	510	200	290	25	33	50	13,0
020/070/A (*)	32	32	30	205	100	470	235	210	-	-	70	33
020/100/A (*)	41	35	32	240	110	545	277	240	-	-	100	36

NOTE: - "G2" or "G4" attachment type are available on request;  
- (\*) Swivelling eye attachment "G2" standard supply.

# EQUIPMENT FOR OVERHEAD CONDUCTORS STRINGING

## 020/P.../AA

### HEAVY DUTY SNATCH BLOCK OPEN TYPE

Snatch block with steel sheave on ball-bearings, galvanized steel frame with hinged side-flap opening, twisting hook attachment G1 type with safety latch provided in the standard version.



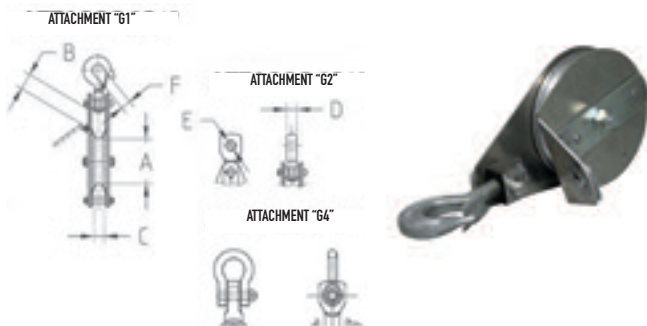
MODEL	Dimensions (mm)						Working load	Weight
	A	B	C	D	E	F	kN	kg
020/P/090/AA	108	40	15	22	19	28	18	5
020/P/180/AA	138	40	15	22	22	32	36	9,5
020/P/250/AA	185	55	30	22	26	42	50	12,0

NOTE: "G2" attachment type available on request.

## 020/P.../LL

### ALUMINUM ALLOY SNATCH BLOCK OPEN TYPE

Snatch block with aluminum sheave on ball-bearings, aluminum frame with hinged side-flap opening, twisting hook attachment G1 type with safety latch provided in the standard version.



MODEL	Dimensions (mm)						Working load	Weight
	A	B	C	D	E	F	kN	kg
020/P/030/LL	100	40	15	18	19	16	6	2,5
020/P/060/LL	140	40	15	28	19	21	12	4

NOTE: "G2" or "G4" attachment type are available on request.

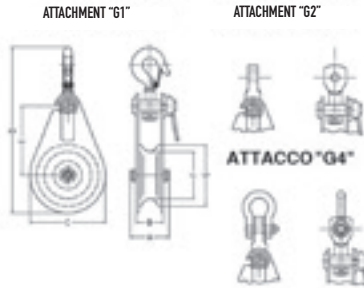




## 020/L.../LL

### ALUMINUM ALLOY SNATCH BLOCK OPEN TYPE

Snatch block with aluminum sheave on ball-bearings, aluminum frame with side opening, twisting hook attachment G1 type with safety latch provided in the standard version.



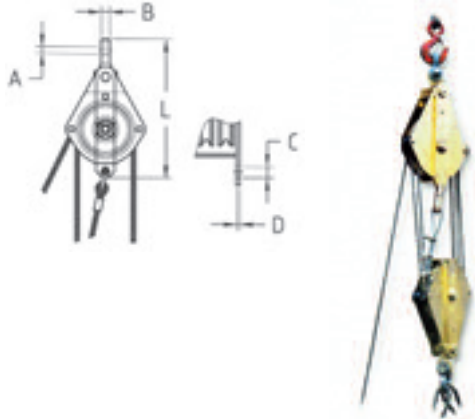
MODEL	Dimensions (mm)											Working load	Weight
	A	B	C	D	E	F	G	H	I	L	M	kN	kg
020/L/015/LL	72	47	126	303	122	84	120	20	20	16	16	3	1.5
020/L/045/LL	75	51	126	318	122	84	120	23	20	18	18	9	2
020/L/090/LL	85	59	126	351	130	84	120	26	20	24	20	18	3.25
020/L/150/LL	99	73	160	425	165	110	150	32	24	28	24	30	4.75

**NOTE:** "G2" or "G4" attachment type are available on request.

## 028/...

### TACKLE BLOCKS

Lifting tackles with steel sheaves mounted on ball-bearings, galvanized steel frame. Each set consists of two blocks (one pair).



MODEL	N° sheaves	Dimensions (mm)								Working load	Weight per pair
		Ø Sheave	Ø Rope	L max	A	B	C	D	kN	kg	
028/2/25	2	160	9	380	22	22	11	10	25	20	
028/2/30	2	180	9	370	22	22	11	10	30	25	
028/3/35	3	160	9	450	25	22	11	10	35	27	
028/3/45	3	180	9	410	25	22	11	10	45	30	
028/4/70	4	180	9	440	26	22	13	12	70	42	
028/5/100	5	208	12	500	35	32	13	12	100	56	

# EQUIPMENT FOR OVERHEAD CONDUCTORS STRINGING

## TE/900

### THERMAL IMAGE CONDUCTOR THERMOMETER

Mercury thermometer bulb fitted into an aluminum rod reproducing overall diameter and surface of the actual conductor.

Temperature range: -30°C - +60°C

Weight de 0,5 to 1 kg

**NOTE:** - Conductor's overall diameter to be provided upon order confirmation;

- Circular dial display version **Mod. TE/901** available on request.



## 658/...

### ELECTRONIC DYNAMOMETERS

Digital reading display.

Two shackles included with the 2500 and 5000 daN capacity version.

MODEL	Capacity	Accuracy	Minimum reading	Weight	Dimensions
	ton	kg	kg	kg	mm
2500	2,5	3,75	0,5	1,35	218x90x56
5000	5	7,5	1	1,85	230x90x56
10000	10	15	2	3,6	315x110x59

MODEL	Capacity	Accuracy	Minimum reading	Weight	Dimensions
	ton	kg	kg	kg	mm
12.5	12,5	25	5	3,8	310x110x58
25	25	50	10	6,6	600x134x68
50	50	100	20	3,6	440x164x98



## CO 04

### CABLE COUNTER-METER DEVICE

Suitable to measure the length of conductors or ropes during stringing operations

Weight: 3,5 kg



## SAG/900

### OPTICAL DEVICE FOR CONDUCTOR SAGGING - "SAG-SCOPE"

Optical device for an accurate conductor sag measurement.

Supplied with:

- Fixing bracket to the tower leg;

- Storage PVC case;

- Weight: 5,5 kg.





## 754 G

### MECHANICAL PUNCHING MACHINE

Steel punching machine, equipped with interchangeable punches and dies.

Suitable for drilling holes during assembly or modification of supports, without having to disassemble the element to be drilled.

Available on request: Ratchet wrench with special bush to reduce the effort during drilling.



MODEL	Punching Ø	Max punching thickness	Punching depth	Weight
	mm	mm	mm	kg
754 G17	4-17	9	35	9
754 G20	4-20	12	50	14
754 G25	4-25	16	63	26

**NOTE:** Supplied with 4 pairs of dies and punches.

Spares set punches/dies **Mod. CC755 G SPM.**

## 754 H

### HYDRAULIC PUNCHING MACHINE

Powerful perforations in 13mm thick mild steel with a 20,5mm maximum diameter hole without routers.

**Specifications:**

Throat depth: 70mm;

Oil volume required: 82cc ;

Output force: 304kN;

Size: 360 (H) x 210 (W) x 95(D) mm;

Weight: 13kg;

Supplied with carrying box and set of dies and punches 10.5, 13.5, 17.5, 20.5 .

**NOTE:** - For the hydraulic power unit please refer to page 94;

- Different sets of punches are available, on request, for copper and aluminum.



# ALUMINUM ALLOY EQUIPMENT

## SECTION 3



LADDERS, WORKING PLATFORMS,  
GIN-POLES, LINE CARTS



# ALUMINUM ALLOY EQUIPMENT FOR OVERHEAD LINES

## 011/...

### SUSPENSION LADDER

Suitable for operations on overhead transmission lines

Made of light aluminum alloy, welded [Certified TIG system] with skid-proof rungs

Certified according to UNI CEN/TS 16415:2013, UNI EN 795:2012 regulations and in compliance with EU 2016/425 regulation.

Complete with interchangeable galvanized steel hook with double safety chain.

Vertical working load 300 daN.

#### Upon request:

- C and A/B attachments available with opening size up to 400mm;
- Different lengths and compositions

MODEL	Sections number	Length (L)		Standard hook opening (A)		Weight kg
		m		mm		
011/2.5	1	2,5		220		9.2
011/3	1	3		220		10.3
011/3.5	1	3,5		220		11.2
011/4	1	4		220		12.3
011/5	1	5		220		14.8
011/6	1	6		220		17.2
011/6.2	2	6 (4+2)		220		17.8
011/8.2	2	8 (4+4)		220		22.6
011/10.2	2	10 (5+5)		220		27.5



## 011/A...

### SUSPENSION LADDER

Suitable for operations on overhead transmission lines

Made of light aluminum alloy, welded [Certified TIG system] with skid-proof rungs.

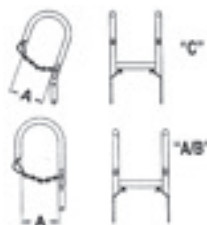
Certified according to UNI CEN/TS 16415:2013, UNI EN 795:2012 regulations and in compliance with EU 2016/425 regulation.

Complete with interchangeable galvanized steel hook with double safety chain and anti-fall profile (to be used with anti-fall device **Mod. MA 29/3**).

- Vertical working load: 300 daN.

#### Upon request:

- C and A/B attachments available with opening size up to 400mm;
- Different lengths and compositions;
- Ladder suitable for two linemen (2 antifall opposite profiles) **Mod. 011/B**.



Hook type

Cross section view

MODEL	Sections number	Length (L)		Standard hook opening (A)		Weight kg
		m		mm		
011/A 2.5	1	2,5		220		10
011/A 3	1	3		220		11,5
011/A 3.5	1	3,5		220		12,4
011/A 4	1	4		220		13,8
011/A 5	1	5		220		17
011/A 6	1	6		220		20
011/A 6.2	2	6 (4+2)		220		20,4
011/A 8.2	2	8 (4+4)		220		26,4
011/A 10.2	2	10 (5+5)		220		32,3







## 011/G...

### SUSPENSION LADDER/WORKING PLATFORM

Suitable for operations on overhead transmission lines, usable both horizontally and vertically.

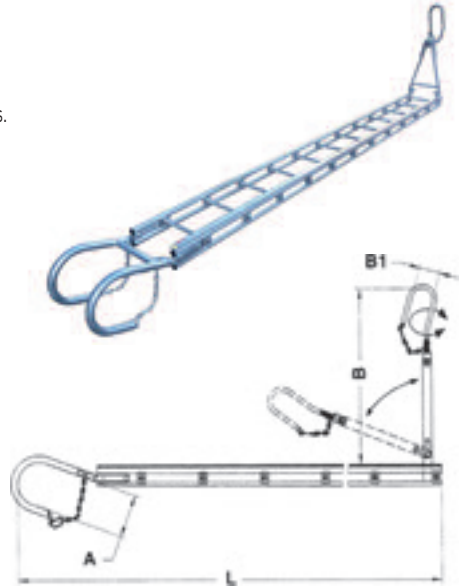
Made of light aluminum alloy, welded [Certified TIG system] with skid-proof rungs. Complete with interchangeable galvanized steel hook with safety chain (tower side) and swivelling/foldable hook (conductor side).

- Vertical working load 300 daN.
- Horizontal working load 100 daN.

#### Upon request:

- Adjustable/folding conductor side hook with nylon wheel **Mod. AG/SS-R**;
- Reinforced structure with horizontal working load of 200 daN.

MODEL	Sections number	Length (L)	(A)	(B)	(B1)	Weight kg
		m	mm	mm	mm	
011/G 2.5	1	2,5	220	900	100	12.2
011/G 3	1	3	220	900	100	13.5
011/G 3.5	1	3,5	220	900	100	14.8
011/G 4	1	4	220	900	100	16.2
011/G 5	1	5	220	900	100	18.8
011/G 6	1	6	220	900	100	21.5
011/G 6.2	2	6 (4+2)	220	900	100	22.5



Mod. "AG/SS"



Mod. "AG/SS-R"

## 011/AG...

### SUSPENSION LADDER/WORKING PLATFORM

Suitable for operations on overhead transmission lines, usable both horizontally and vertically.

Made of light aluminum alloy, welded [Certified TIG system] with skid-proof rungs, provided with anti-fall rail (to be used with the anti-fall device **Mod. MA 29/3**).

Complete with interchangeable galvanized steel hook with safety chain (tower side) and swivelling/foldable hook (conductor side).

- Vertical working load 300 daN.
- Horizontal working load 100 daN.

#### Upon request:

- Adjustable/folding conductor side hook with nylon wheel **Mod. AG/SS-R**;
- Reinforced structure with horizontal working load of 200 daN.

MODEL	Sections number	Length (L)	(A)	(B)	(B1)	Weight kg
		m	mm	mm	mm	
011/AG 2.5	1	2,5	220	900	100	13.2
011/AG 3	1	3	220	900	100	14.8
011/AG 3.5	1	3,5	220	900	100	16.3
011/AG 4	1	4	220	900	100	17.9
011/AG 5	1	5	220	900	100	21.1
011/AG 6	1	6	220	900	100	24.2
011/AG 6.2	2	6 (4+2)	220	900	100	25.2



# ALUMINUM ALLOY EQUIPMENT FOR OVERHEAD LINES

## 011/AGG...

### SUSPENSION LADDER/WORKING PLATFORM

Suitable for operations on overhead transmission lines, usable both horizontally and vertically.

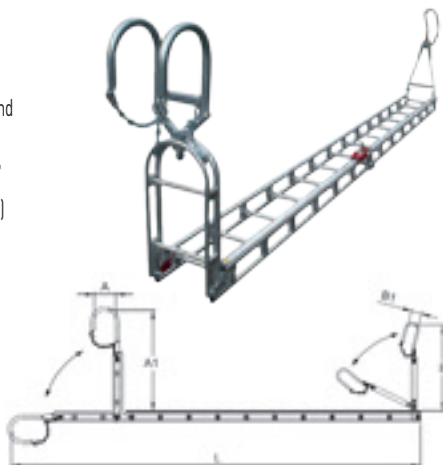
Made of light aluminum alloy, welded [Certified TIG system] with skid-proof rungs, provided with anti-fall rail (to be used with the anti-fall device **Mod. MA 29/3**).

Complete with interchangeable galvanized steel hook with safety chain (tower side) and swivelling/foldable hook **Mod. AG/SS** (conductor side).

- Vertical working load 300 daN.
- Horizontal working load 100 daN.

#### Upon request:

- Adjustable/folding conductor side hook with nylon wheel **Mod. AG/SS-R**;
- Reinforced structure with horizontal working load of 200 daN.



MODEL	Sections number	Length (L)	(A)	(A1)	(B)	(B1)	Weight kg
		m	mm	mm	mm	mm	
011/AGG 3	1	3	220	1000	900	100	19
011/AGG 3.5	1	3,5	220	1000	900	100	21
011/AGG 4	1	4	220	1000	900	100	22.5
011/AGG 5	1	5	220	1000	900	100	26.5
011/AGG 6	1	6	220	1000	900	100	32.5
011/AGG 6.2	1	6 (4+2)	220	1000	900	100	33.5



Mod. "AG/SS"



Mod. "AG/SS-R"

## 010/...

### TOWER CLIMBING LADDER

Suitable to climb towers in safe conditions.

Made of light aluminum alloy, welded [Certified TIG system] with skid-proof rungs.

Certified according to UNI EN 795:2012 regulation and in compliance with EU 2016/425 regulation.

Equipped with anti-fall rail (to be used with anti-fall device **Mod. MA 29/3.R**).

- Vertical working load 150 daN.

MODEL	Length (L)	Weight
	m	kg
010/1	3,7	9
010/2	4,7	11





## 013/G...

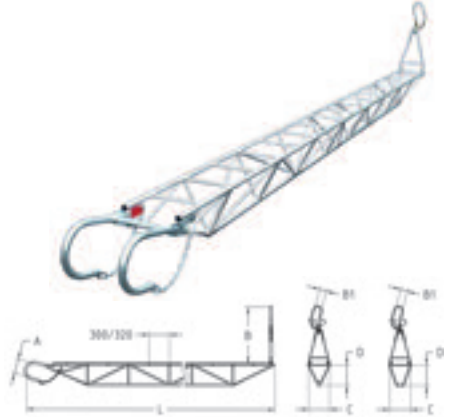
### TRIANGULAR SECTION HORIZONTAL PLATFORM STRUCTURE

Suitable to be used on vertical as well as horizontal position.  
 Made of light aluminum alloy, welded (Certified TIG system) with skid-proof rungs  
 galvanized steel hook with safety chain (tower side) and swivelling/foldable hook  
**Mod. AG/SS** (conductor side).

- Horizontal working load 200 daN.
- Vertical working load 300 daN.

#### Upon request:

- Adjustable/folding conductor side hook with nylon wheel **Mod. AG/SS-R**;
- Tower-side hook with opening size up to 400mm;
- Different lengths and compositions.



MODEL	Sections number	Length (L) m	(A) mm	(B) mm	(B1) mm	C mm	D mm	Weight kg
013/G 3.5	1	3,5	220	900	100	320	320	17
013/G 4	1	4	220	900	100	320	320	18.5
013/G 4.5	1	4,5	220	900	100	320	320	20
013/G 5	1	5	220	900	100	320	320	21.5
013/G 6	1	6	220	900	100	320	350	24.5
013/G 6.2	2	6 (4+2)	220	900	100	320	350	26
013/G 7.2	2	7 (4+3)	220	900	100	320	350	30.5
013/G 8.2	2	8 (4+4)	220	900	100	320	350	34

## 013/TP...

### TRAPEZOIDAL SECTION HORIZONTAL PLATFORM STRUCTURE

Suitable to be used on vertical as well as horizontal position.  
 Made of light aluminum alloy, welded (Certified TIG system) with skid-proof rungs.  
 Provided with galvanized steel hook with safety chain (tower side) and swivelling/foldable hook  
**Mod. AG/SS** (conductor side).

- Vertical working load 300 daN.
- Horizontal working load 300 daN.

#### Upon request:

- Adjustable/folding conductor side hook with nylon wheel **Mod. AG/SS-R**;
- Tower-side hook with opening size up to 400mm;
- Different lengths and compositions.

MODEL	Sections number	Length (L) m	(A) mm	(B) mm	(B1) mm	C mm	D mm	Weight kg
013/TP 3.5	1	3,5	220	900	100	320	320	19
013/TP 4	1	4	220	900	100	320	320	21
013/TP 4.5	1	4,5	220	900	100	320	320	23
013/TP 5	1	5	220	900	100	320	320	24.5
013/TP 6	1	6	220	900	100	320	350	28
013/TP 6.2	2	6 (4+2)	220	900	100	320	350	29.5
013/TP 7.2	2	7 (4+3)	220	900	100	320	350	34.5
013/TP 8.2	2	8 (4+4)	220	900	100	320	350	39



Mod. "AG/SS"

Mod. "AG/SS-R"



# ALUMINUM ALLOY EQUIPMENT FOR OVERHEAD LINES

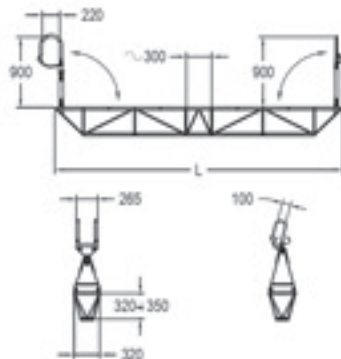
## 013G.GG... E 013TP.GG...

### TRIANGULAR/TRAPEZOIDAL SECTION HORIZONTAL PLATFORM STRUCTURE

Suitable to be used on vertical as well as horizontal position.

Made of light aluminum alloy, welded (Certified TIG system) with skid-proof rungs galvanized foldable and twisting hook **Mod. AGG/SS** (tower side) and swivelling/foldable hook **Mod. AG/SS** (conductor side).

- Horizontal working load 200 daN (triangular) or 300 daN (trapezoidal).
- Vertical working load 300 daN.



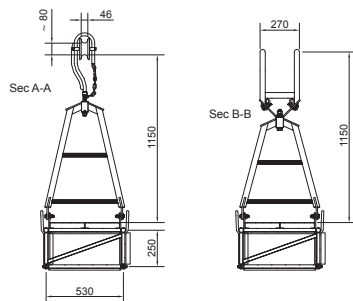
## 017

### RECTANGULAR SECTION HORIZONTAL PLATFORM STRUCTURE

Suitable to be used on horizontal position.

Made of light aluminum alloy, welded (Certified TIG system) with skid-proof floor "Graepel Gripp system". galvanized foldable and twisting hooks; double swivel hook (tower side), single hook with nylon roller (conductor side).

- Standard length 12m (4+4+4), other lengths upon request.
- Horizontal working load 300 daN.
- Weight 153 kg.

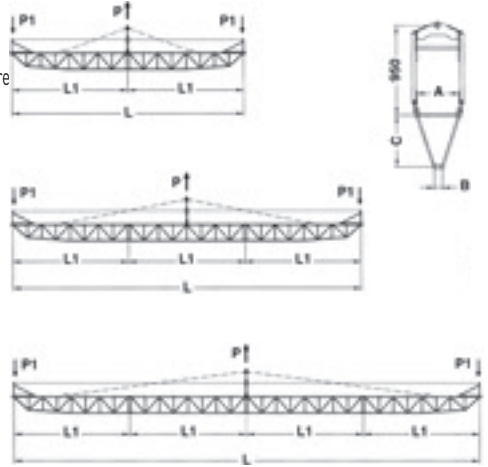




**070/...**

**SAGGING BRIDGE**

Made of light aluminum alloy, welded [Certified TIG system] modular structure complete with balanced hanging point, stay rod assembly (to suit different compositions and lengths) and galvanized steel lifeline (anti-fall barrier).



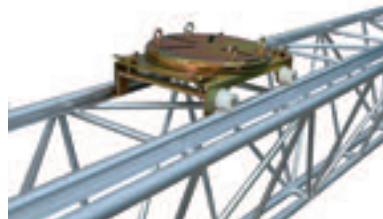
**Upon request:**

- press trolley track **Mod. 070/BP**;
- press trolley 360° angle rotation **Mod. 070/BPC** (weight 12 kg);
- Additional anti-fall barrier **Mod. 070/BAC**;
- Different lengths and compositions.

MODEL	Working load (P) (Max P1=300daN)	Breaking load	Total length (L)	Composition (L1)	Dimensions (mm)			Weight with antifall barrier kg
		daN	m		A	B	C	
070/4	600	1800	4	4	350	85	390	50
070/5	600	1800	5	5	350	85	390	56
070/6	600	1800	6	6	350	85	390	62
070/6.2	600	1800	6	3+3	350	85	390	65
070/7.2	600	1800	7	3,5+3,5	350	85	446	77
070/0.2	600	1800	8	4+4	350	85	446	86
070/10.3	600	1800	10	4+2+4	350	85	446	103
070/12.3	600	1800	12	4+4+4	350	85	446	115
070/14.3	600	1800	14	5+4+5	350	85	446	126
070/16.4	600	1800	16	4+4+4+4	350	85	446	144
070/10.3	600	1800	18	6+6+6	350	85	446	160
070/20.4	600	1800	20	5+5+5+5	450	85	550	200
070/24.4	600	1800	24	6+6+6+6	450	85	550	254



Lifeline (anti-fall barrier) **Mod. DT070BAC...**  
(Certified as "HORIZONTAL ANTI-FALL LIFE-LINE") EN 795 by ANCCP Certification Agency.



Press trolley rails **Mod. DT070BP**  
Press trolley **Mod. DT070BPC**

# ALUMINUM ALLOY EQUIPMENT FOR OVERHEAD LINES

050 / ...

## ALUMINUM GIN POLE

Aluminum gin pole for tower erection and hoisting operations. Modular lattice structures made of TIG welded light aluminum alloy pipes. Rated capacity (PN) at 0° inclination ranging from 1000 to 10000 daN.

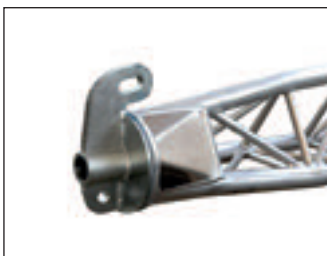
Complete with swivelling head and base and ground base plate. Available in two configurations: internal or external rope-passage arrangement.

### Upon request:

- Different lengths and capacities.
- Special steel gin poles.



External rope-passage swivelling head



External rope-passage swivelling base



External rope-passage swivelling base with hook



Internal rope-passage swivelling head with integrated sheave (pulley)



Internal rope-passage swivelling base with integrated sheave (pulley)



Base (ground) plate





$$PN = T + C$$

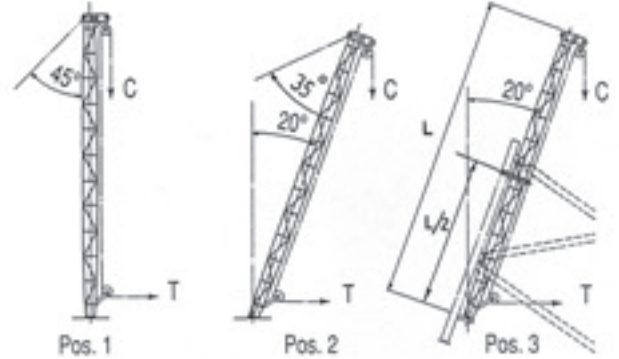
## ALUMINUM GIN POLE

Rated capacity of each gin-pole varies upon inclination and anchoring position.

At 0° inclination, it is defined by the formula  $PN = T + C$  where "T" is the pulling force [i.e., applied by the winch machine] and "C" is the weight lifted.

In other configurations, rated capacity has to be assessed on a case-by-case basis.

Please refer to this formula and below sketch to identify the correct model of gin pole to suit your requirement and calculating desired lifting capacity.



MODEL	Capacity "PN" = T+C (daN)			Total length m	Composition m	Weight for external rope passage version kg	Weight for internal rope passage version kg	Ground base weight kg
	PN POS. 1 $\alpha=0^\circ$	PN POS. 2 $\alpha=20^\circ$	PN POS. 3 $\alpha=20^\circ$					
050/1/6.2	1000	600	240	6	3+3	43	54	11,5
050/1/8.2	1000	600	240	8	4+4	54	66	
050/1.5/8.2	1500	900	360	8	4+4	65	74	16
050/1.5/10.2	1500	900	360	10	5+5	76	87	
050/1.5/12.3	1500	900	360	12	4+4+4	86	98	16
050/2/8.2	2000	1200	480	8	4+4	67	75	
050/2/10.3	2000	1200	480	10	4+2+4	80	88	16
050/2/12.3	2000	1200	480	12	4+4+4	91	99	
050/3/8.2	3000	1800	720	8	4+4	74	79	25
050/3/12.3	3000	1800	720	12	4+4+4	109	117	
050/3/16.4	3000	1800	720	16	4+4+4+4	146	155	
050/3/18.3	3000	1800	720	18	6+6+6	162	170	25
050/4/10.3	4000	2400	960	10	4+2+4	98	116	
050/4/12.3	4000	2400	960	12	4+4+4	113	131	
050/4/16.4	4000	2400	960	16	4+4+4+4	166	182	25
050/4/20.4	4000	2400	960	20	5+5+5+5	208	225	
050/5/12.3	5000	3000	1200	12	4+4+4	139	152	35
050/5/16.4	5000	3000	1200	16	4+4+4+4	208	221	
050/5/20.4	5000	3000	1200	20	5+5+5+5	266	278	
050/7/12.3	7000	4200	1680	12	4+4+4	160	198	76
050/7/16.4	7000	4200	1680	16	4+4+4+4	210	245	
050/7/20.4	7000	4200	1680	20	5+5+5+5	245	283	
050/10/16.4	10000	6000	2400	16	4+4+4+4	241	278	76
050/10/20.4	10000	6000	2400	20	5+5+5+5	291	325	

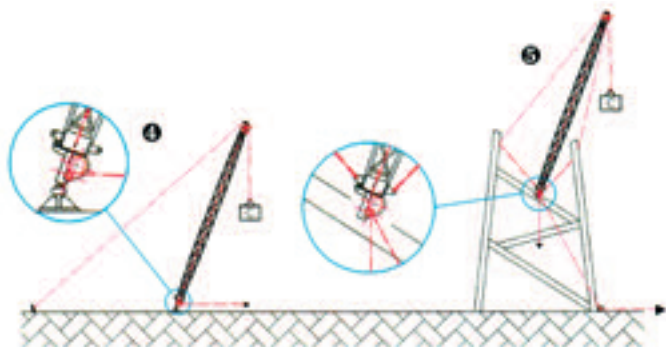


# ALUMINUM ALLOY EQUIPMENT FOR OVERHEAD LINES

EXAMPLE OF A PROPER USE OF AN EXTERNAL ROPE-PASSAGE GIN POLE



EXAMPLE OF A PROPER USE OF AN INTERNAL ROPE-PASSAGE GIN POLE



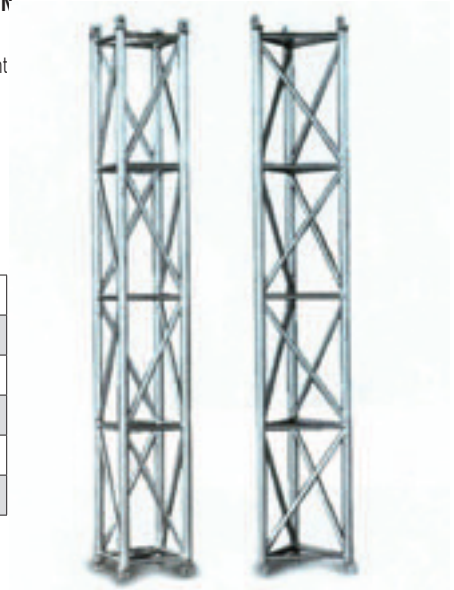


## 057/...058/...

### ALUMINUM POLE STRUCTURE FOR CONDUCTOR CROSSING PROTECTION

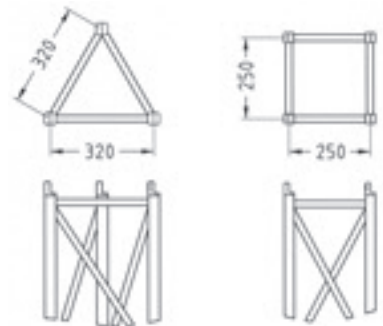
Suitable for road/existing lines crossing operations.  
 Triangular or square section modular (2 or 3 meter) elements, made of welded light aluminum alloy (certified TIG system).  
 Complete with galvanized steel accessories upon request.  
 Triangular section structure vertical capacity: 1000 daN  
 Square section structure vertical capacity: 1500 daN

MODEL	Length	Section	Weight
	m		kg
057/AL 2	2	Triangular	6,6
057/AL 4	4	Triangular	13,2
058/AL 2	2	Square	8,6
058/AL 4	4	Square	17,2



### ACCESSORIES

DESCRIPTION	Model for triangular section	Model for square section
V top device in galvanized steel for beam support	057/PT	058/PT
Ground base with picket in galvanized steel	057/B	058/B
Intermediate anchoring attachment for galvanized steel stays	057/IA	058/IA



# ALUMINUM ALLOY EQUIPMENT FOR OVERHEAD LINES

## 058 TR...

### CROSSING PROTECTION BEAM

The protection beam for crossings has been designed so that it can be installed on **Mod. 057** and **Mod. 058** structures after installing a specific head.

The beam is supplied complete with specific heads and is lined with polypropylene.



MODEL	Length	Weight	Capacity
	m	kg	kg
058 TR6	6	140	1000
058 TR9	9	220	1000



## XT 901...

### ROLLER CONVEYOR FOR CONDUCTOR PROTECTION

Provides support to the conductor while crossing roads, cables or pre-existing power lines in the event of a line's fall. Suitable for installation on beam **Mod. 058 TR** or directly placed on below conductor/cable.  
 Made of welded aluminum (TIG certified system) with nylon rollers mounted on bearings, manual traction system.

**NOTE:** other sizes and capacities available upon request.

MODEL	Capacity	Weight
	daN	kg
XT 901	400	33,5



# ALUMINUM ALLOY EQUIPMENT FOR OVERHEAD LINES

**032**

## LINE CART / INSPECTION TROLLEY FOR SINGLE CONDUCTOR

1 lineman towable trolley complete of nylon wheels on ball-bearings, stationary brake, footrest and nylon traps for back support.

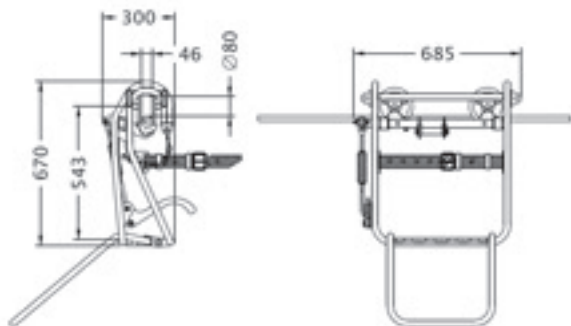
Made of welded aluminum alloy (certified TIG system).

Payload: 100 daN

Weight: 12 kg.

### Upon request:

- Counter meter device;
- Aluminum wheels.



**035**

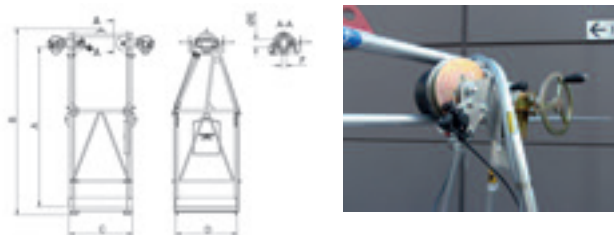
## LINE CART / INSPECTION TROLLEY FOR SINGLE CONDUCTOR

1 or 2 linemen towable trolley, complete with aluminum wheels on ball-bearings, anti-slip floor, n°2 stationary brakes, safety frame ropes and counter meter device.

Made of welded aluminum alloy (certified TIG system).

### Upon request:

- Dynamic disc brake device;
- Nylon wheels;
- Earthing device;
- "Custom-made" size available;
- Anchoring point in compliance with UNI EN 795:2012.



MODEL	N° linemen	A	B	C	D	E	F	Weight	Working load
		mm	mm	mm	mm	mm	mm	kg	daN
035-A	1	1650	1920	650	630	80	46	42	100
035-B	2	1650	1920	1000	630	80	46	46	200

## 035/L

### LINE CART / INSPECTION TROLLEY FOR SINGLE CONDUCTOR

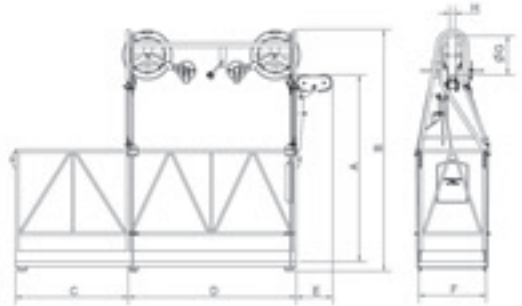
2 linemen towable trolley with large aluminum wheels (Ø 350mm) on ball-bearings with Nylon liners, anti-slip floor, n°2 stationary brakes, safety frame ropes and counter meter device.

Made of welded aluminum alloy (certified TIG system).

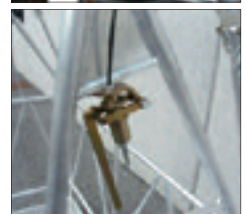
Completed with balancing wheels to allow the operator to work on the cantilever (so called "balcony").

#### Upon request:

- Dynamic disc brake device;
- Nylon wheels;
- Earthing device;
- "Custom-made" size available;
- Anchoring point in compliance with UNI EN 795:2012.



MODEL	A	B	C	D	E	F	G	H	Weight	Working load
	mm	mm	mm	mm	mm	mm	mm	mm	kg	daN
035/L-A	1650	2150	1000	1500	330	600	350	48	90	200





# ALUMINUM ALLOY EQUIPMENT FOR OVERHEAD LINES

036

## LINE CART / INSPECTION TROLLEY FOR BUNDLED CONDUCTORS

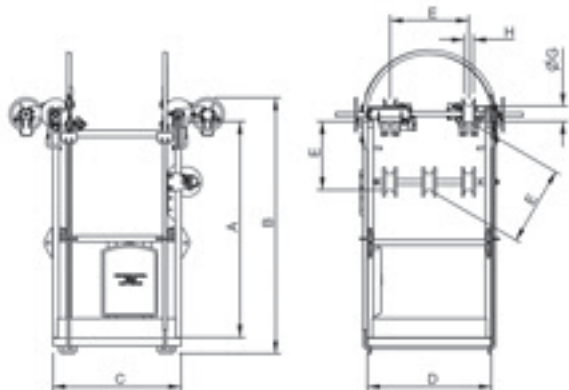
Suitable for 2, 3 or 4 bundled conductor configurations.





1 lineman towable trolley, with two cross-arms and a positioning bar complete with aluminum wheels on ball-bearings, anti-slip floor, n°2 stationary brakes, safety frame ropes and counter-meter device.

Made of welded aluminum alloy (certified TIG system).

### Upon request:

- Nylon wheels;
- Earthing device;
- "Custom-made" size available;
- Anchoring point in compliance with UNI EN 795:2012.



MODEL	N° linemen	A	B	C	D	E	G	H	Weight	Working load	For bundle
		mm	mm	mm	mm	mm	mm	mm	kg	daN	
036-A	1	1095	1300	650	630	400 457	80	46	43	100	
036-B	1	1095	1300	650	630	400 457	80	46	49	100	
036-C	1	1095	1300	650	815	400 457 500 600	80	46	50	100	
036-D	1	1095	1300	650	815	400 457 500 600	80	46	53	100	





## 036/M

### MOTORIZED LINE CARTS / INSPECTION TROLLEYS FOR BUNDLED CONDUCTORS

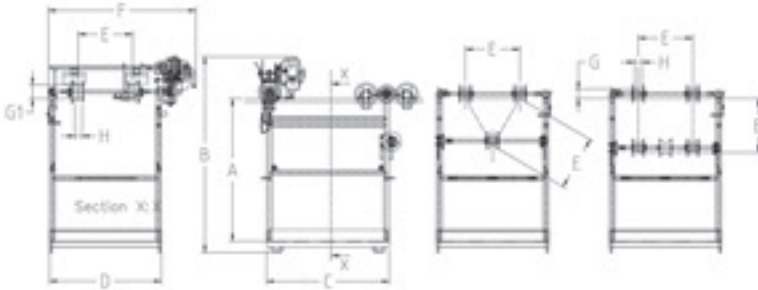
Available for 2, 3 or 4 bundled conductor configurations.  
 Single lineman's cart with mechanical motorized-driven traction system.  
 Made of tubular aluminum alloy welded structure (certified TIG system)

#### Features and performances:

- 2 stroke 50cc gasoline engine 2.4 HP (1.8 kW);
- Max speed 20 m/min (both directions);
- Max slope 25% (15°);
- Mechanical transmission, reversing drive direction with idle position;
- Transmission axle with rubber wheels for high adherence;
- Supporting and positioning cross-arms with aluminum wheels on ball-bearings;
- N° 2 stationary brakes, safety frame ropes and counter meter device.

#### Upon request:

- Nylon wheels;
- Earthing device;
- "Custom-made" size available;
- Anchoring point in compliance with UNI EN 795:2012.



MODEL	N° linemen	A	B	C	D	E	F	G	G1	H	Weight kg	Working load daN	For bundle
		mm	mm	mm	mm	mm	mm	mm	mm	mm			
036/M-A	1	1042	1450	900	815	400 457 500	1080	70	100	55	75	100	
036/M-B	1	1042	1450	900	815	400 457 500	1080	70	100	55	82	100	
036/M-C	1	1042	1450	900	915	400 457 500 600	1180	70	100	55	82	100	
036/M-D	1	1042	1450	900	915	400 457 500 600	1180	70	100	55	87	100	

# ALUMINUM ALLOY EQUIPMENT FOR OVERHEAD LINES

034/2

## LINE CARTS / INSPECTION TROLLEYS FOR BUNDLED CONDUCTORS

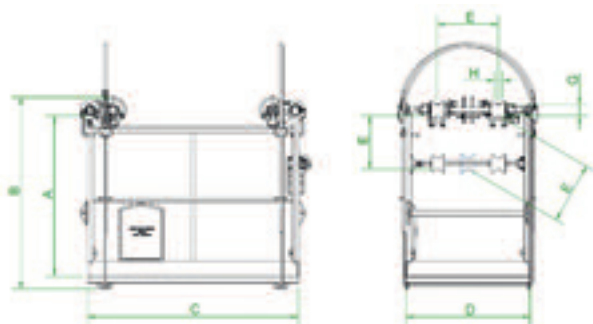
Suitable for 2, 3 or 4 bundled conductor configurations.  
 2 linemen towable trolley, with two cross-arms and a positioning bar complete with aluminum wheels on ball bearings, anti-slip floor, N°2 stationary brakes, safety frame ropes and counter-meter device.  
 Made of welded aluminum alloy (certified TIG system).

### Upon request:

- Nylon wheels;
- Earthing device;
- "Custom-made" size available;
- Lifting/positioning device **Mod. DT034MDSR**
- Anchoring point in compliance with UNI EN 795:2012.



Lifting/positioning device **Mod. DT034MDSR**



MODEL	N° linemen	A	B	C	D	E	G	H	Weight	Working load	For bundle
		mm	mm	mm	mm	mm	mm	mm			
034/2-A	2	1042	1250	1380	915	400 457 500 600	70	55	64	200	
034/2-B	2	1042	1250	1380	915	400 457 500 600	70	55	69	200	
034/2-C	2	1042	1250	1700	915	400 457 500 600	70	55	68	200	
034/2-D	2	1042	1250	1700	915	400 457 500 600	70	55	74	200	

## 034/M/2

### MOTORIZED LINE CARTS / INSPECTION TROLLEYS FOR BUNDLED CONDUCTORS

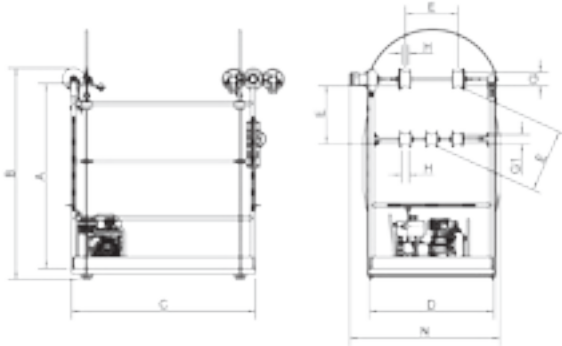
Suitable for 2,3 or 4 bundled conductor configurations.  
 Trolley for 2 linemen, with aluminum wheels mounted on two cross-arms, positioning bar, anti-slip floor, N°2 stationary brakes, safety frame ropes and counter-meter device.  
 Hydraulic driven transmission, aluminum traction wheels with rubber liners  
 Made of welded aluminum alloy (certified TIG system).

#### Features and performances:

- 4 stroke gasoline engine – 4 hp (2.95 kW);
- Max speed 30 m/min (both directions);
- Maximum slope 40% (22°).

#### Upon request:

- Nylon wheels;
- Earthing device;
- “Custom-made” size available;
- Lifting/positioning device **Mod. DT034MDSR**
- Anchoring point in compliance with UNI EN 795:2012.



Lifting/positioning device **Mod. DT034MDSR**



MODEL	N° linemen	A	B	C	D	E	G	G1	H	N	Weight kg	Working load daN	For bundle
		mm	mm	mm	mm	mm	mm	mm	mm	mm			
034/M/2-A	2	1075	1300	1380	940	400	100	70	55	1150	116	200	
						457							
						500							
						600							
034/M/2-B	2	1365	1590	1380	940	400	100	70	55	1150	132	200	
						457							
						500							
						600							

# ALUMINUM ALLOY EQUIPMENT FOR OVERHEAD LINES

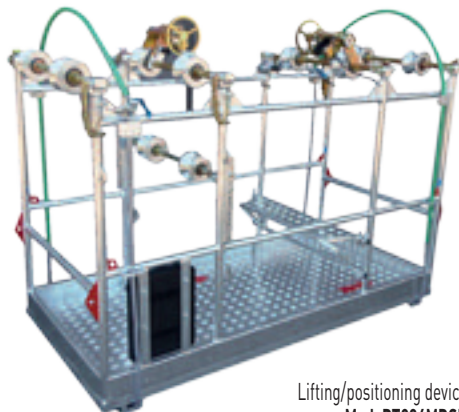
034/4

## LINE CARTS / INSPECTION TROLLEYS FOR BUNDLED CONDUCTORS

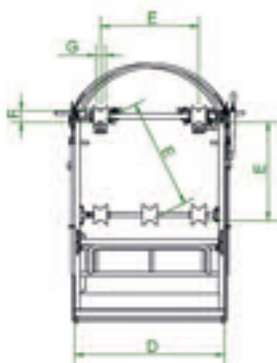
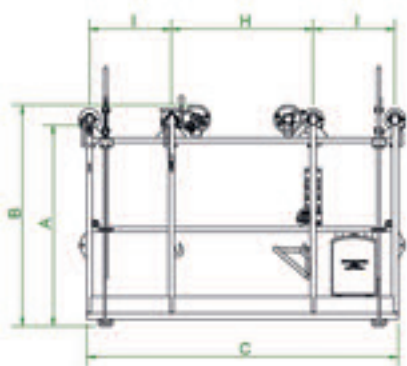
This model is designed for overpassing existing spacers. Suitable for 2,3 or 4 bundled conductor configurations. 2 linemen towable trolley, with four cross-arms and one positioning bar complete with aluminum wheels on ball-bearings and anti-slip floor, N°2 stationary brakes, safety frame ropes and counter-meter device. Made of welded aluminum alloy (certified TIG system).

### Upon request:

- Nylon wheels;
- Earthing device;
- Openable and articulated arms;
- "Custom-made" size available;
- Lifting/positioning device **Mod. DT034MDSR**
- Anchoring point in compliance with UNI EN 795:2012.





Lifting/positioning device  
**Mod. DT034MDSR**



Openable and articulated arms



MODEL	N° linemen	A	B	C	D	E	F	G	H	I	Weight kg	Working load daN	For bundle
		mm	mm	mm	mm	mm	mm	mm	mm	mm			
034/4-A	2	1042	1250	1900	915	400	70	55	865	500	105	200	
						457							
						500							
						600							
034/4-B	2	1142	1350	1900	915	400	70	55	865	500	112	200	
						457							
						500							
						600							

## 034/M/4

### MOTORIZED LINE CARTS / INSPECTION TROLLEYS FOR BUNDLED CONDUCTORS

This model is designed for overpassing existing spacers.  
 Suitable for 2,3 or 4 bundled conductor configurations.  
 2 linemen towable trolley, with aluminum wheels mounted on four cross-arms and 1 positioning bar, anti-slip floor, n°2 stationary brakes, safety frame ropes and counter-meter device  
 Hydraulic driven transmission, aluminum traction wheels with rubber liners.  
 Made of welded aluminum alloy (certified TIG system).

#### Features and performances:

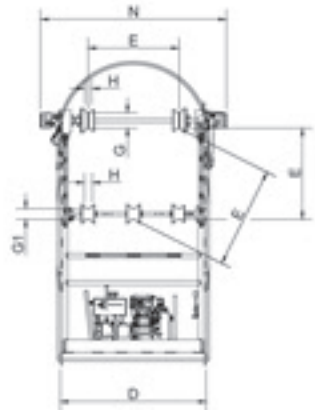
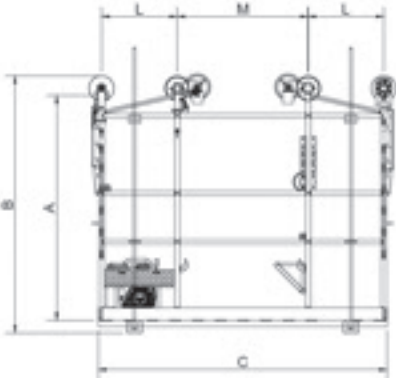
- 4 stroke gasoline engine – 4 hp (2.95 kW);
- Max speed 30 m/min (both directions);
- Maximum slope 40% (22°).

#### Upon request:

- Nylon wheels;
- Earthing device;
- Openable and articulated arms;
- "Custom-made" size available;
- Lifting/positioning device **Mod. DT034MDSR**;
- Anchoring point in compliance with UNI EN 795:2012.



Lifting/positioning device  
**Mod. DT034MDSR**



Openable and articulated arms



MODEL	N° linemen	A	B	C	D	E	G	G1	H	N	Weight	Working load	For bundle
		mm	mm	mm	mm	mm	mm	mm	mm	mm	kg	daN	
034/M/4	2	1470	1700	1900	940	400 457 500 600	100	70	55	1250	218	200	

# ALUMINUM ALLOY EQUIPMENT FOR OVERHEAD LINES

034D + 034E

SPECIAL CONFIGURATIONS UPON REQUEST



FOR HEXA BUNDLED CONDUCTORS



FOR QUAD BUNDLE CONDUCTORS







## BCN 038/...

### BICYCLE FOR TRANSLATION ON SPAN

Suitable for warning spheres and spacers installation on single or bundled conductor overhead lines.

Made of welded light aluminum alloy (certified TIG system).

#### Main features:

- Cardan joint transmission system
- Dynamic negative brake system
- Low transmission ratio to reduce effort on pedals
- Maximum (recommended) span inclination up to 30%
- Adjustable seat
- High tenacity nylon sheaves with high adhesion-coefficient material lining, on ball-bearing
- Stationary brake device
- Adjustable spacing distance: 400, 457, and 500 mm for Twin and Quad bundle configuration 400 mm (457, 500 mm on request) for Triple bundle configuration.
- Counter meter device

#### Motorized version available for all models:

Motorized bicycle **Mod. BCN 038/...M**

- 2 stroke gasoline engine – 2.4 HP (1.8 kW);
- Max speed 20 m/min;
- Maximum slope 25%;
- Neutral gear for pedalling;
- Additional weight of 12 kg compared to the standard version.



Stationary brake and meter counter device



Negative brake

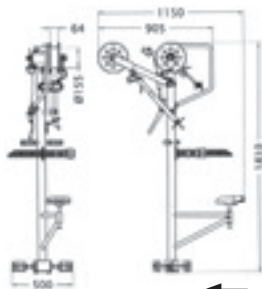


# ALUMINUM ALLOY EQUIPMENT FOR OVERHEAD LINES

**038/1**

## BICYCLE FOR SINGLE CONDUCTOR

Weight: 25 kg  
Working load/pay load: 100 daN



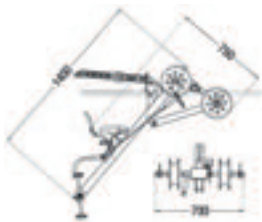
←  
DIRECTION OF TRAVEL



**038/2**

## BICYCLE FOR TWIN BUNDLE CONDUCTOR

Weight: 35 kg  
Working load/pay load: 100 daN



→  
DIRECTION OF TRAVEL



**038/3**

## BICYCLE FOR TRIPLE BUNDLE CONDUCTOR

Weight: 38 kg  
Working load/pay load: 100 daN



→  
DIRECTION OF TRAVEL



X= To be specified  
(Range between  
500mm and 500mm)



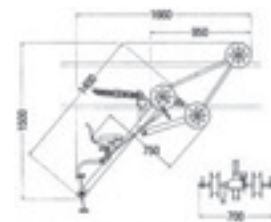
**038/4**

## BICYCLE FOR QUAD BUNDLE CONDUCTOR

Weight: 42 kg  
Working load/pay load: 100 daN

### Upon request:

Device to transform a Twin bundle model into a quad bundle model (Art. BCN 038/2-4)



→  
DIRECTION OF TRAVEL



## 038/1C

### BICYCLE FOR SINGLE CONDUCTOR

Cart version, suitable for warning spheres and spacers installation on single conductor overhead lines.

Made of welded light aluminum alloy (certified TIG system)

#### Main features:

- Cardan joint transmission system;
- Dynamic Negative brake system;
- Stationary brake device;
- Low transmission ratio to reduce effort on pedals;
- Maximum inclination 30%;
- Adjustable seat;
- Aluminum sheaves on ball-bearing;
- Counter meter device.

Working load/pay load: 150 daN

Weight: 67 kg



←  
DIRECTION OF TRAVEL

# ALUMINUM ALLOY EQUIPMENT FOR OVERHEAD LINES

014

## ALUMINUM LADDER WITH SAFETY DEVICE FOR STEEL AND CONCRETE POLE CLIMBING

Suitable for climbing circular and polygonal poles.

For quadrangular poles a special configuration is available upon request.

Made of welded light aluminum alloy (certified TIG system) with skid-proof rungs. Certified according to UNI CEN/TS 16415:2013, UNI EN 795:2012 regulations and in compliance with EU 2016/425 regulation.

Modular structure with base and top sections and as many intermediate elements as needed to reach the desired length (up to 30m).

The ladder is equipped with two anti-fall devices with anchoring points for operator's safety belt.

An aluminum alloy service platform for the operator is also available upon request.

Working load: 150 daN

\*Higher capacities upon request

### NOTE:

To prevent undesired torsions on the structure while operating on high poles (above 30m), a chain-locking device is also available on request. **(Mod. 014/BIP)**.

### Weights with standard accessories:

- Self-supporting base 014/B - 5.5 kg
- Intermediate element 014/I - 6 kg
- Upper part element 014/C - 6.5 kg
- Service platform 014/PL - 1 kg



Upper part element  
**014/C**



MA 29/3

Intermediate element  
**014/I**



MA 29/3.L

Manual Winch

Manual Winch



Self-supporting base  
**014/B**

Optional



Service platform  
**014/PL**



## MA 29/...

### ANTI-FALL DEVICE

Anti-fall device suitable for models 011/A, 011/AG, 011/AGG and 014.  
Complete with safety belt connector (carabiners) and shock absorber nylon strap. Designed in compliance with UNI EN 353-1:2018 standard and according to EU 2016/425 regulation.

MODEL	"T" profile	Capacity daN	Weight kg	Ladders model
	mm			
MA 29/3	40	150	1,03	011/A...
				011/B...
				011/AG...
				011/AGG...
MA 29/3.L	40	150	1,08	014/I
MA 29/3.R	40	150	1,03	010/...



## 071/EL...

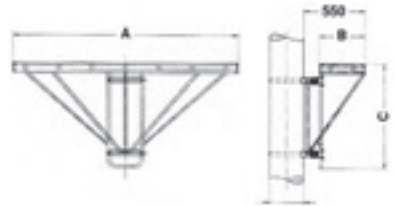
### POLE WORKING PLATFORM (Rectangular shape)

Suitable for circular/polygonal poles.  
Made of welded light aluminum alloy (certified TIG system), with skid-proof flooring complete with nylon strap locking device.  
Working load 150 daN.



MODEL	Dimensions (mm)			Weight kg
	A	B	C	
071/EL	684	410	488	8,5
071/EL 1.5	1500	410	925	13,5
071/EL 2.5	2500	410	925	17

**Upon Request:**  
- Different lengths



## 071V...

### POLE WORKING PLATFORM (Semi-circular shape)

Suitable for circular/polygonal poles.  
Made of welded light aluminum alloy (certified TIG system), with skid-proof flooring complete with nylon strap locking device.  
- Working load 200 daN  
- Weight 14 kg.



## VARIOUS APPLICATIONS









# EQUIPMENT FOR UNDERGROUND CABLE LAYING

## SECTION 4



PULLERS, REEL STANDS  
AND ACCESSORIES  
FOR UNDERGROUND CABLE LAYING



# PULLER

## 104R3

Hydraulic puller 30 kN capacity with automatic reel-winder suitable for underground cable installations.



### Performance

Max pull	30 kN
Max speed	45 m/min
Speed at max pull	15 m/min

### Characteristics

Bull-wheels diameter	200 mm
Max rope diameter	10 mm
Rope length	1000 m
Weight without rope	1100 kg

### Engine

Diesel	[25 hp] 19 kW
Cooling	Liquid
Emission standard - (UE)2016/1628	Stage V

### Standard features

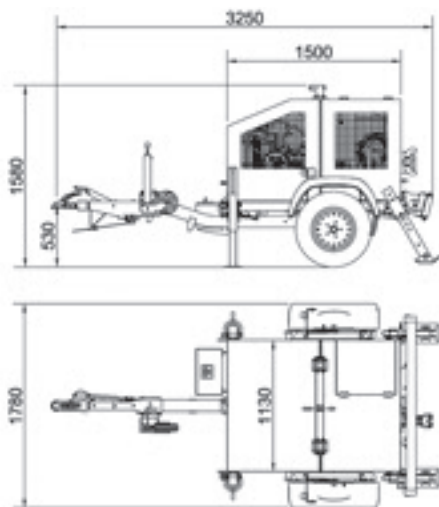
- Standard features
- 1 hydraulic circuit with negative brake system
- Control panel equipped with LCD touch screen 7" display which includes: preset for the maximum pulling force and instant indication, counter-meter, speed indicator and worked hours.
- USB output for pulling data recording
- Remote control unit c/w console 5 m cable
- Road trailer kit 1600 kg capacity (80 km/h) with fixed drawbar and ball coupling
- Balanced top lifting point and anchoring attachments

### Optional equipment

- 04-PW Radio control unit
- 06-PW Roller guiding device equipable with Telescopic rod cod. AT1.30
- 28-PW T4L remote monitoring system with GPS geolocation

### Special features upon request

- 13-PW Pre-heater (up to -30°C)
- 36-PW Engine emission standard Stage IIIA - (25 hp) 19 kW





## 104R5

Hydraulic puller 55 kN capacity with automatic reel-winder suitable for underground cable installations.



### Performance

Max pull	55 kN
Max speed	55 m/min
Speed at max pull	12 m/min

### Characteristics

Bull-wheels diameter	280 mm
Max rope diameter	13 mm
Rope length	1000 m
Weight without rope	1900 kg

### Engine

Diesel	(36,5 Hp) 27 kW
Cooling	Liquid
Emission standard - (UE)2016/1628	Stage V

### Standard features

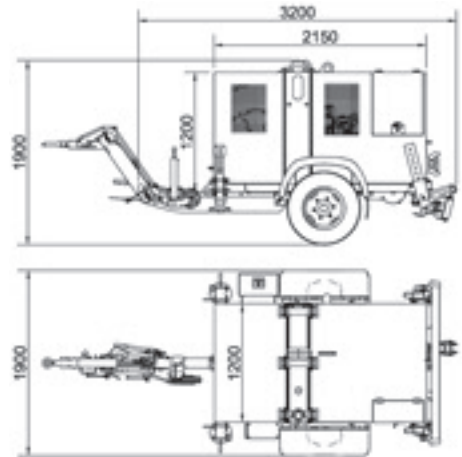
- Standard features
- 1 hydraulic circuit with negative brake system
- Control panel equipped with LCD touch screen 7" display which includes: preset for the maximum pulling force and instant indication, counter-meter, speed indicator and worked hours.
- USB output for pulling data recording
- Remote control unit c/w console 5 m cable
- Road trailer kit 2500 kg capacity (80 km/h)
- Balanced top lifting point and anchoring attachments

### Optional equipment

- 04-PW Radio control unit
- 06-PW Roller guiding device equipable with Telescopic rod cod. AT1.50
- 28-PW T4L remote monitoring system with GPS geolocation

### Special features upon request

- 13-PW Pre-heater (up to -30°C)
- 36-PW Engine emission standard Stage IIIA - (36,5 hp) 27 kW



# PULLER

## 104R10

Hydraulic puller 100 kN capacity with automatic reel-winder suitable for underground cable installations.



### Performance

Max pull	100 kN
Max speed	30 m/min
Speed at max pull	16 m/min

### Characteristics

Bull-wheels diameter	360 mm
Max rope diameter	16 mm
Rope length	800 m
Weight without rope	2860 kg

### Engine

Diesel	[73 hp] 54 kW
Cooling	Liquid
Emission standard - (UE)2016/1628	Stage V

### Standard features

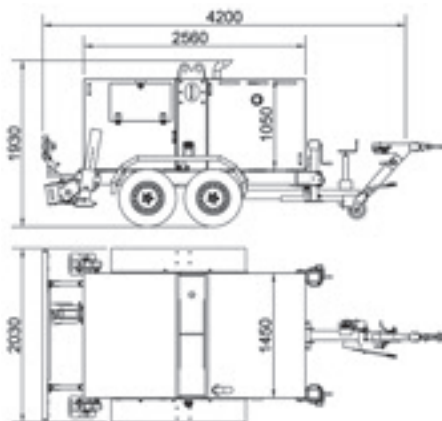
- Standard features
- 1 hydraulic circuit with negative brake system
- Control panel equipped with LCD touch screen 7" display which includes: preset for the maximum pulling force and instant indication, counter-meter, speed indicator and worked hours.
- USB output for pulling data recording
- Remote control unit c/w console 5 m cable
- Preset for telescopic rod cod. AT1.50
- Road trailer kit 3500 kg capacity (80 km/h)
- Balanced top lifting point and anchoring attachments

### Optional equipment

- 04-PW Radio control unit
- 28-PW T4L remote monitoring system with GPS geolocation

### Special features upon request

- 13-PW Pre-heater (up to -30°C)
- 36-PW Engine emission standard Stage IIIA - (85 hp) 63 kW





## 104R25

Hydraulic puller 250 kN capacity with automatic reel-winder suitable for underground cable installations.



### Performance

Max pull	250 kN
Max speed	30 m/min
Speed at max pull	6 m/min

### Characteristics

Bull-wheels diameter	480 mm
Max rope diameter	24 mm
Rope length	1000 m
Weight without rope	4200 kg

### Engine

Diesel	(73 hp) 54 kW
Cooling	Liquid
Emission standard - (UE)2016/1628	Stage V

### Standard features

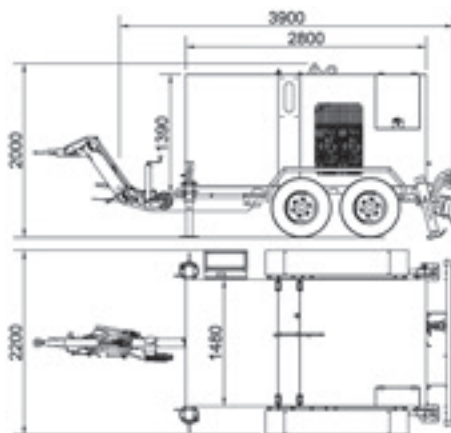
- 1 hydraulic circuit with negative brake system
- Control panel equipped with LCD touch screen 7" display which includes: preset for the maximum pulling force and instant indication, counter-meter, speed indicator and worked hours.
- USB output for pulling data recording
- Remote control unit c/w console 5 m cable
- Preset for telescopic rod cod. AT1.50
- Road trailer kit 6000 kg capacity (80 km/h)
- Balanced top lifting point and anchoring attachments

### Optional equipment

- 04-PW Radio control unit
- 28-PW GSM module with GPS geolocation

### Special features upon request

- 13-PW Pre-heater (up to -30°C)
- 36-PW Engine emission standard Stage IIIA - (85 hp) 63 kW





# PULLER

## 105RS15

Self-moving hydraulic puller 150 kN capacity with automatic reel-winder and undercarriage, suitable for P.E. lining operation and for underground cable installations..



### Performance

Max pull	150 kN
Max speed	32 m/min
Speed at max pull	10 m/min

### Characteristics

Bull-wheels diameter	360 mm
Max rope diameter	18 mm
Rope length	800 m
Weight without rope	5000 kg

### Engine

Diesel	[73 hp] 54 kW
Cooling	Liquid
Emission standard - (UE)2016/1628	Stage V

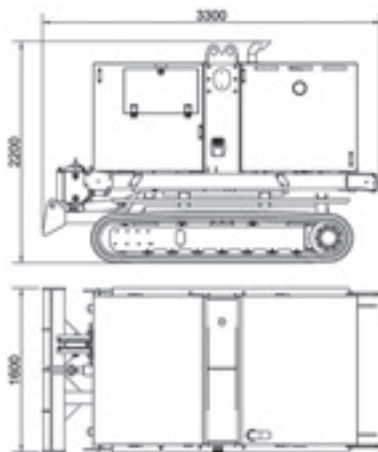
### Standard features

- 1 hydraulic circuit with negative brake system
- Control panel equipped with LCD touch screen 7 inch. display which includes: preset for the maximum pulling force and instant indication, counter-meter, speed indicator and worked hours.
- Hydraulic front stabilizer (self anchoring device)
- USB output for pulling data recording
- Radio control unit
- Tracked Undercarriages with radio remote control (integrated)

### Optional equipment

20-PW Dynamic speed pulling force control

36-PW Engine emission standard Stage IIIA - (85 hp) 63 kW



The image features a white background with a grey header at the top. Several thick, orange geometric shapes are scattered across the page, including a horizontal bar on the left, a large zig-zag shape in the center, and another horizontal bar on the left. The text 'UNDERGROUND CABLE LAYING ACCESSORIES' is centered in the middle of the page in a bold, orange, sans-serif font.

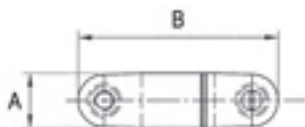
**UNDERGROUND CABLE  
LAYING ACCESSORIES**

# UNDERGROUND CABLE LAYING ACCESSORIES

## 250...R

### SWIVEL JOINT

Made of high tenacity galvanized steel, it is used as a junction element.



MODEL	A	B	Rope Ø	Capacity	Breaking load	Weight
	mm	mm	mm	kN	kN	kg
250 AR	32	120	15	26,7	80	0,50
250 BCR	45	170	19	60	180	1,20
250 DR	60	212	24	120	360	3,00
250 ER	77	320	28	250	750	8,20

## 461

### PULLING HEAD FOR UNDERGROUND LAYING OF UNIPOLAR INSULATED CABLES

Galvanized steel body with swivel eyelet, complete with interchangeable conical jaws. Supplied with transport box.



MODEL	Suitable for cables					
	Section mm <sup>2</sup>	Ø mm	Standard supply	Ø mm	kN	kg
461/240	95/150/240/300	11,5/13,8/18,3/20,7	95/150/240	60	25	2
461/1000	400/500/630/800/1000	23,4/25,4/29,4/30,4/36,3	630/800/1000	105	60	8
461/1600	400/630/1000/1600	22,4/29,4/37,4/47,4	1600	110	80	9

## 465

### PULLING HEAD FOR UNDERGROUND LAYING OF PREFORMED INSULATED CABLES

3x (1x95 mm<sup>2</sup>), 3x (1x150 mm<sup>2</sup>) and 3x (1x240 mm<sup>2</sup>).

Galvanized steel body with swivel eyelet, it is fixed directly to the cables. Each set is supplied in transport box complete with two heads (95-150), (150-240) and hex keys.





## F21

### REEL STAND

Crank operated cable reel stand, steel base and rollers mounted on ball-bearings for better reel rotation.

MODEL	Mod. 40	Mod. 70
Capacity kg	4000	7000
Minimum height cm	60	83
Maximum height cm	85	108
Weight kg (pair)	72	124
Total base cm	68x48	88x62



## 043

### REEL STAND

Reel stand with hydraulic jacks lifting system. Steel frame with rubber wheels.

MODEL	For Ø reel	Capacity	Weight
	mm	kg	kg
043/1	900 ÷ 2100	3000	55
043/2	1000 ÷ 3600	5000	80
043/3	1000 ÷ 3600	10000	110



## 043/4...

### CABLE DRUM SHAFT AND ACCESSORIES

Steel shaft and accessories for model 043 reel stands.



MODEL	Shaft	Shaft	Weight
	Ø mm	Lunghezza mm	kg
043/4/75.15	75	1500	14,6
043/4/75.18	75	1800	18,6
043/4/75.20	75	2050	19,6
043/4/90.15	90	1500	18,5
043/4/90.18	90	1800	22,2
043/4/90.20	90	2050	25,3

MODEL	Collar type	Cone type
	Weight kg	Weight kg
043/4/C/75	1,5	-
043/4/C/90	1,7	-
043/4/CN/75	-	2,2
043/4/CN/90	-	4,8

# UNDERGROUND CABLE LAYING ACCESSORIES

## 042

### REEL STAND

Mechanical lifting reel stand.  
Galvanized steel frame with removable rear foot.  
Shaft with ball bearings.

Available on request: **Mod. 042/AP**

Steel shaft complete with 2 fixing cones.



MODEL	Capacity	Dimensions	For Ø reel	Lifting stroke	Weight
	kg	mm	mm	mm	kg
042	1600	740 x 560 x 400	600 ÷ 1800	200	27
042/AP	1600	1400 x 48 dia	600 ÷ 1800	-	10

## 042/SI

### REEL STAND

Hydraulic lifting reel stand.  
Galvanized steel frame with rubber wheels for easy displacement.  
Shaft with ball bearings.

Available on request: **Mod. 042/SI/AP**

Steel shaft complete with 2 fixing cones.



MODEL	Capacity	Dimensions	For Ø reel	Lifting stroke	Weight
	kg	mm	mm	mm	kg
042/SI	5000	1240x700x500	800 ÷ 2800	200	82
042/SI/AP	5000	1800 x 76 dia	800 ÷ 2800	-	39

## 040

### HYDRAULIC REEL STAND

Capacity from 4 to 10 t.  
Complete with mechanical braking system.  
Suitable for conductor wooden drums or steel reels for aerial stringing operations and underground cabling.

Made in steel with foldable structure for ease of transport.

Drum lifting system by hydraulic jacks.

№ 2 mechanical disc brakes to control and adjust the torque force and counter-pull, with replaceable brake pads.

Steel shaft on ball-bearings with adjustment wedges.

Available on request:

- Hydraulic braking system;
- Mechanical locking system



MODEL	Lifting capacity	Suitable for reels	Dimensions (mm)					Ø min. hole version with hydraulic head (mm)	Weight
	kg	Ø mm	A	B	C	D	E	Ø min	kg
040/4	4000	800 ÷ 2800	1800	1400	2700	580	1400	60	230
040/7	7000	1000 ÷ 2800	2000	1500	2800	550	1600	90	280
040/10	10000	1500 ÷ 3200	2200	1500	3400	650	1800	90	500



**040**

**HYDRAULIC REEL STAND**

Capacity from 12 to 18 t.  
 Complete with hydraulic braking system and safety latches.  
 Suitable for conductor wooden drums or steel reels for aerial stringing operations and underground cabling.  
 Made in steel with foldable structure for ease of transport.  
 Drum lifting system by hydraulic jacks.  
 N°2 hydraulically operated disc brakes to control and adjust the torque force counter-pull, with replaceable brake pads.  
 Steel shaft on ball-bearings with adjustment wedges.

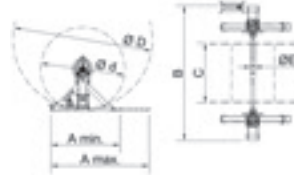


MODEL	Lifting capacity	Suitable for reels	Dimensions (mm)					Diam. min hole (mm)	Braking torque	Weight
	kg	Ø mm	A	B	C	D	E	Ø min	kNm	kg
040/12	12000	1900 ÷ 3800	2900	1900	3900	900	2000	120	400	1290
040/15	15000	1900 ÷ 3800	2900	1900	3900	900	2000	120	400	1305
040/18	18000	1900 ÷ 3800	2900	1900	3900	900	2000	120	400	1320

**043**

**HYDRAULIC REEL STAND**

Capacity from 20 to 35 t.  
 Complete with hydraulic braking system and safety latches.  
 Made in steel, this reel stand is suitable for conductor wooden drums or steel reels for underground cabling.  
 N°2 hydraulically operated disc brakes to control and adjust the torque force counter-pull, with replaceable brake pads.



MODEL	Lifting capacity	Dimensions (mm)						Pair weight
	kg	A min	A max	B max	C max	Ø d / Ø D	Ø E	kg approx
043/20	20000	2070	2670	3700	1800	2000 / 3200	120	1100
043/25	25000	2070	2670	4200	2300	2000 / 3200	120	1140
043/30	30000	2380	3380	4200	2000	2900 / 4800	120	1500
043/35	35000	2380	3380	4500	2500	2900 / 4800	120	1550



## UNDERGROUND CABLE LAYING ACCESSORIES

463

### CABLE DRUM LIFTING DEVICE

Galvanized steel construction, suitable for lifting of cable drums.

MODEL	Lifting capacity	Drum hole min/max	Device weight
	kg	mm	kg
463/2000	2000	60/140	8,5
463/5000	5000	90/160	18



464

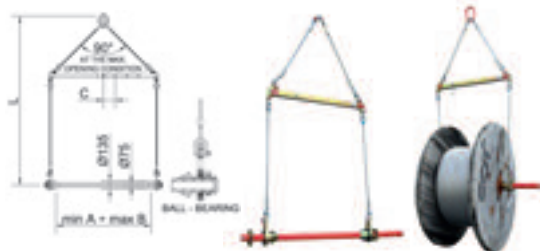
### LIFTING BEAM

Suitable for handling of cable/conductor reels.

Made of galvanized steel. Made of galvanized steel, adjustable in height, complete with steel slings.

Available on request:

- Steel shaft with cones mounted on ball-bearings.



MODEL	Capacity	For reel				L	Ø Shaft	Weight
	kg	Ø max. mm	A min.	B max.	C		mm	kg
464/4	4000	3000	1000	1600	200	2578	75 - 135	84
464/6	6000	3500	1000	1600	200	2891	75 - 135	100
464/8	8000	3000	1000	1600	200	2652	95-159	135
464/10	10000	3400	1500	2000	150	3035	95-159	162
464/15	15000	5000	2000	2500	125	4411	150-220	228

2400F.0

### COIL FOR POLYETHYLENE PIPES

Suitable for winding polyethylene pipes for fiber optics.

Steel structure with demountable sides tor to facilitate the insertion of bundle/single pipes.

MODEL	Ø External	Ø Drum	Width	Ø Hole	Weight
	mm	mm	mm	mm	kg
2400/F.0	2410	1340 ÷ 1640	1400	80	155





## PR 200.70

### REEL TRAILER

Reel trailer suitable to transport and pay out cable of the cable reels.

#### Characteristics and features:

- Chassis in steel structure with front towing bar protected by anti-rust primer coated treatment and painted;
- Axle with two independent suspension axles, with pneumatic wheels, mudguard and parking brake;
- Twisting and height-adjustable solid wheel on front towing bar;
- Towing eye attachment;
- Pneumatic braking plant (according to CE regulations);
- Rear lighting bar (according to CE regulations);
- Max permissible speed 25 Km/h with full weight 60 Km/h without pay load;
- Supplied with 2 hydraulic jacks with mechanically driven manual pump;
- Supplied with mechanically operated rear stabilizers;
- Reel shaft complete with cones and accessories.

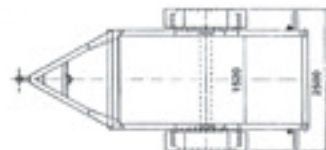
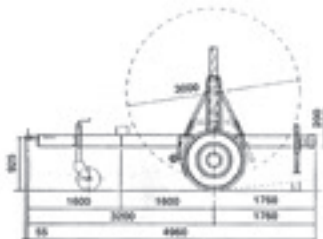
#### Dimensions and weights:

- Maximum coil diameter 3000 mm;
- Maximum coil width 1500 mm;
- Payload 7000 kg;
- Trailer length 4960 mm;
- Trailer width 2600 mm;
- Trailer empty weight 1800 kg.

#### Available on request:

- Cable reel winding/unwinding device driven by internal combustion engine

#### Mod. PR 200.70.R



# UNDERGROUND CABLE LAYING ACCESSORIES

## CABLE PULLING SOCK HEAD TYPE



MODEL	Cable	Standard length	Version "L" length	Standard length weight	Version "L" weight	Breaking load
	Ø mm	mm	mm	kg	kg	kN
CT 13	10 – 15	600	900	0,100	0,220	20
CT 14	15 – 20	600	900	0,180	0,250	20
CT 15	20 – 25	600	1000	0,250	0,450	25
CT 16	25 – 30	600	1200	0,270	0,500	30
CT 17	30 – 40	700	1500	0,300	0,550	45
CT 18	25 – 45	700	1500	0,350	0,600	50
CT 19	40 – 50	800	1500	0,600	1,200	50
CT 20	45 – 60	800	1600	0,700	1,250	50
CT 21	60 – 80	800	1800	0,900	1,800	80
CT 22	80 – 100	1000	2000	1,000	1,900	100
CT 23	100 – 140	1200	2000	1,100	2,000	100
CT 24	140 – 170	1200	2000	1,700	2,800	100
CT 25	170 – 200	1200	2000	2,200	3,500	100

### NOTE:

- "Long" version code CT...L
- Thimble eye version code CT...R

## CABLE PULLING SOCK DOUBLE HEAD TYPE



MODEL	Cable	Total length	Weight	Breaking load
	Ø mm	mm	kg	kN
CT 26	10 – 15	1200	0,180	20
CT 27	15 – 20	1200	0,300	20
CT 28	20 – 25	1200	0,450	25
CT 29	25 – 30	1200	0,500	30
CT 30	30 – 40	1400	0,550	45
CT 31	25 – 45	1400	0,600	50
CT 32	40 – 50	1600	1,200	50
CT 33	45 – 60	1600	1,250	50
CT 34	60 – 80	1600	1,700	80
CT 35	80 – 100	2000	1,850	100
CT 36	100 – 140	2400	2,000	100
CT 37	140 – 170	2400	3,000	100
CT 38	170 – 200	2400	4,000	100



## CABLE PULLING SOCK DOUBLE EYE OPEN TYPE



MODEL	Cable	Total length	Weight	Breaking load
	Ø mm	mm	kg	kN
CT 39	10 - 15	800	0,200	20
CT 40	15 - 20	800	0,230	20
CT 41	20 - 25	800	0,350	25
CT 42	25 - 30	800	0,400	30
CT 43	30 - 40	1000	0,450	45
CT 44	25 - 45	1000	0,500	50
CT 45	40 - 50	1000	0,800	50
CT 46	45 - 60	1000	0,950	50
CT 47	60 - 80	1000	1,100	80
CT 48	80 - 100	1200	1,300	100
CT 49	100 - 140	1400	1,700	100
CT 50	140 - 170	1400	2,100	100
CT 51	170 - 200	1400	2,800	100

## CABLE PULLING SOCK DOUBLE EYE OPEN TYPE WITH LATERAL OPENING



MODEL	Cable	Total length	Weight	Breaking load
	Ø mm	mm	kg	kN
CT 52	10 - 15	800	0,200	20
CT 53	15 - 20	800	0,230	20
CT 54	20 - 25	800	0,350	25
CT 55	25 - 30	800	0,400	30
CT 56	30 - 40	1000	0,450	45
CT 57	25 - 45	1000	0,500	50
CT 58	40 - 50	1000	0,800	50
CT 59	45 - 60	1000	0,950	50
CT 60	60 - 80	1000	1,100	80
CT 61	80 - 100	1200	1,300	100
CT 62	100 - 140	1400	1,700	100
CT 63	140 - 170	1400	2,100	100
CT 64	170 - 200	1400	2,800	100

# UNDERGROUND CABLE LAYING ACCESSORIES

**500/AL**

## STRAIGHT ROLLER

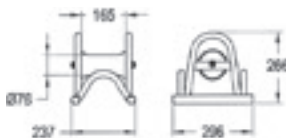
Aluminum roller for laying straight cables.  
Mounted on ball-bearings and galvanized steel frame.  
Weight 5 kg.



**500/AC**

## STRAIGHT ROLLER

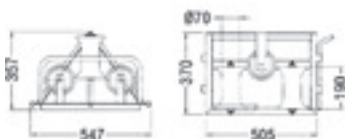
Galvanized steel roller for laying straight cables.  
Mounted on ball bearings and galvanized steel frame.  
Weight 3,5 kg.



**503/AL**

## CORNER ROLLER

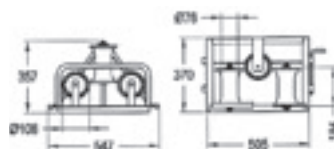
Aluminum rollers for laying cables in curves.  
Mounted on ball-bearings and galvanized steel frame.  
With hinges for laying several elements in curves.  
Weight 14 kg.



**503/AC**

## CORNER ROLLER

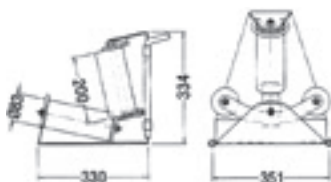
Steel rollers for laying cables in curves.  
Mounted on ball-bearings and galvanized steel frame.  
With hinges for laying several elements in curves.  
Weight 10 kg.



**609**

## CORNER ROLLER

Steel rollers for laying cables in curves.  
Mounted on ball-bearings and galvanized steel frame.  
Oscillating vertical rollers.  
With hinges for laying several elements in curves.  
Weight 17 kg.





## 608/...

### CABLE DUCT ENTRANCE DEVICE

In galvanized steel with 4 rollers arranged as a frame and a half sleeve, for cable installation in ducts.



MODEL	For duct internal diameter	Weight
	Ø mm	kg
608/1 (*)	60	3,4
608/2	80	3,8
608/3	100	4,6
608/4	120	5
608/5	140	6
608/6	160	6,5
608/7	180	7
608/8	200	8

## 608/... C

### CABLE DUCT ENTRANCE DEVICE

In galvanized steel with 4 rollers arranged as a frame and completely openable sleeve, for cable installation in ducts.



MODEL	For duct internal diameter	Weight
	Ø mm	kg
608/1 C (*)	60	4
608/2 C	80	4,4
608/3 C	100	5,5
608/4 C	120	6
608/5 C	140	6,8
608/6 C	160	7,5
608/7 C	180	8,5
608/8 C	200	9,8

## 508/AL

### CABLE DUCT ENTRANCE DEVICE

In galvanized steel with aluminium roller mounted on ball-bearings, and completely openable sleeve, for cable installation in ducts.



MODEL	For duct internal diameter	Weight
	Ø mm	kg
508/AL 1 (*)	60	4
508/AL 2	80	4,5
508/AL 3	100	5
508/AL 4	120	6
508/AL 5	140	7
508/AL 6	160	7,5
508/AL 7	180	8,8
508/AL 8	200	10

## 601/AL

### MANHOLE ENTRANCE ROLLER

Aluminum roller on ball-bearings, mounted on galvanized steel frame, suitable for manhole cable entrance.  
Weight 6,5 kg.



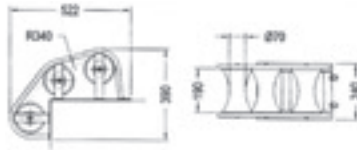


# UNDERGROUND CABLE LAYING ACCESSORIES

## 605/AL...

### MANHOLE ENTRANCE ROLLER

Aluminum rollers on ball-bearings, mounted on galvanized steel frame, suitable for manhole cable entrance.  
Weight 12 kg.



## 505/...

### CABLE GUIDING AND RUN-OFF FRAME

Steel guiding rollers on ball-bearings, mounted on galvanized steel frame, suitable during cable pay-out.

MODEL	Capacity daN	A mm	B mm	C mm	D mm	Weight kg
505	200	35	1000	500	500	12
505/R	500	60	1000	700	565	22

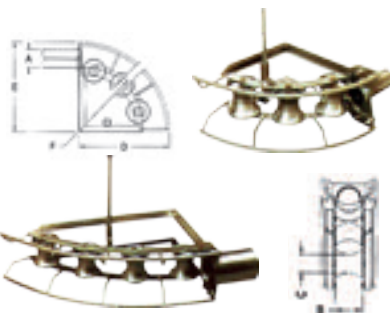


## 603 AL... - 604 AL...

### MANHOLE ENTRANCE ROLLER

Aluminum rollers on ball-bearings, mounted on galvanized steel frame, suitable for manhole cable entrance.  
Interchangeable sleeve in galvanized steel with fixing flanges.

MODEL	For duct internal diameter	B	C	D	E	F	Weight
	mm	mm	Ø mm	mm	mm	mm	kg
603 AL /1	80	126	83	505	500	340	18
603 AL/2	100	126	83	505	500	340	18,5
603 AL/3	120	126	83	505	500	340	19
604 AL/4	140	126	83	505	500	340	20



MODEL	For duct internal diameter	B	C	D	E	F	Weight
	mm	mm	Ø mm	mm	mm	mm	kg
604 AL/1	80	126	83	900	550	840	24
604 AL/2	100	126	83	900	550	840	24,5
604 AL/3	120	126	83	900	550	840	25
604 AL/4	140	126	83	900	550	840	26

## Mod. B...

### INTERCHANGEABLE SLEEVE IN GALVANIZED STEEL WITH FIXING FLANGES FOR 603 AL AND 604 AL



MODEL	For duct internal diameter
	mm
B1	80
B2	100
B3	120
B4	140



## 607AL...

### MANHOLE ENTRANCE GUIDING DEVICE

Suitable for cable laying at the manhole entrance with deviations or height differences.

Aluminum rollers on ball-bearings, mounted on galvanized steel frame with telescopic rod for adjustment.

MODEL	For duct internal diameter (A)	B	C	D	E	F	Weight
	mm	mm	Ø mm	mm	mm	min-max mm	kg
607 AL/1	80	190	83	350	370	1200-2100	24
607 AL/2	100	190	83	350	370	1200-2100	26
607 AL/3	120	190	83	350	370	1200-2100	28
607 AL/4	150	190	83	350	370	1200-2100	30



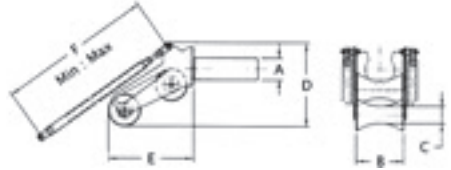
Deviation



Deviation



Difference in height



## 700

### CABLE PROTECTING BEND

Galvanized steel protection curve for ducts with an internal diameter of 100 mm.  
Weight 1,3 kg



## 701

### CABLE PROTECTING BEND

Galvanized steel protection curve with arresting fin for ducts with an internal diameter of 100 mm.  
Weight 1,3 kg



## 506

### CABLE PROTECTING BEND

Galvanized steel protection curve with corner support in for manhole cable entrance.  
Weight 1,6 kg



# UNDERGROUND CABLE LAYING ACCESSORIES

**507**

## CABLE PROTECTING SLEEVE

Galvanized steel protecting sleeve with fixing screws.  
Composed of two easily openable parts.



MODEL	Ø	Weight
	mm	kg
507/1	80	1,7
507/2	100	2
507/3	120	2,5
507/4	140	2,8

**SOM 6...**

## FIBERGLASS DUCT ROD

Fiberglass duct rod supplied with starting/ending threaded ends and starting spinner with pulling eyelet. Wound on steel reel and mounted on steel frame for horizontal use.

MODEL	Length	Rod	Frame	Weight
	m	Ø mm	Ø mm	kg
SOM 6.30	30	6	550	5,8
SOM 6.50	50	6	550	6,8
SOM 6.60	60	6	550	7,3
SOM 6.80	80	6	550	8,4



**SOM V 6...**

## FIBERGLASS DUCT ROD

Fiberglass duct rod supplied with starting/ending threaded ends and starting spinner with pulling eyelet.  
Wound on steel reel and mounted on steel frame for vertical use.

MODEL	Length	Rod	Frame	Weight
	m	Ø mm	Ø mm	kg
SOM V 6.30	30	6	550	6,8
SOM V 6.50	50	6	550	7,8
SOM V 6.60	60	6	550	8,3
SOM V 6.80	80	6	550	9,4

**SOM 9... SOM 11...**

## FIBERGLASS DUCT ROD

Fiberglass duct rod supplied with starting/ending threaded ends and starting spinner with pulling eyelet. Wound on steel reel and mounted on steel frame for vertical use, complete with rubber wheels for easy displacement.

MODEL	Length	Rod	Frame	Weight
	m	Ø mm	Ø mm	kg
SOM 9.60	60	9	700	20
SOM 9.80	80	9	700	22
SOM 9.100	100	9	1000	24
SOM 9.120	120	9	1000	25
SOM 9.150	150	9	1000	28
SOM 11.100	100	11	1000	35
SOM 11.120	120	11	1000	38
SOM 11.150	150	11	1000	43
SOM 11.200	200	11	1000	50
SOM 11.250	250	11	1000	58
SOM 11.300	300	11	1000	66



Fiberglass spare rod **Mod. SOM Ø/F**

**Available on request: Mod. SOM R...**

Fiberglass rod with copper core.



### SOM 14...G

Starting threaded spinner with shackle for rods with  $\varnothing$  6-9-11 mm.



### SOM 16...

Starting threaded aluminium roller for rods with  $\varnothing$  6-9-11 mm.



### SOM 13.6 - .9- .11

Swivel joint for connection of rods with  $\varnothing$  6-9-11 mm.



### SOM 17.6 - .9- .11

Stiff joint for connection of rods with  $\varnothing$  6-9-11 mm.



### SOM 18.6 - .9- .11

Starting/ending threaded ends for rods with  $\varnothing$  6-9-11 mm.



### SOM 19 C

Epoxy glue for rods.



### SOM/A 20...

Device (pair) to hook two rods.



### SOM 21/...

Nylon duct brushes.

- .../80 for ducts up to 80mm
- .../100 for ducts up to 100mm
- .../120 for ducts up to 120mm
- .../140 for ducts up to 140mm
- .../160 for ducts up to 160mm
- .../180 for ducts up to 180mm
- .../200 for ducts up to 200mm
- .../220 for ducts up to 220mm



