TRANLUZ®

High Voltage


TRANLUZ ®

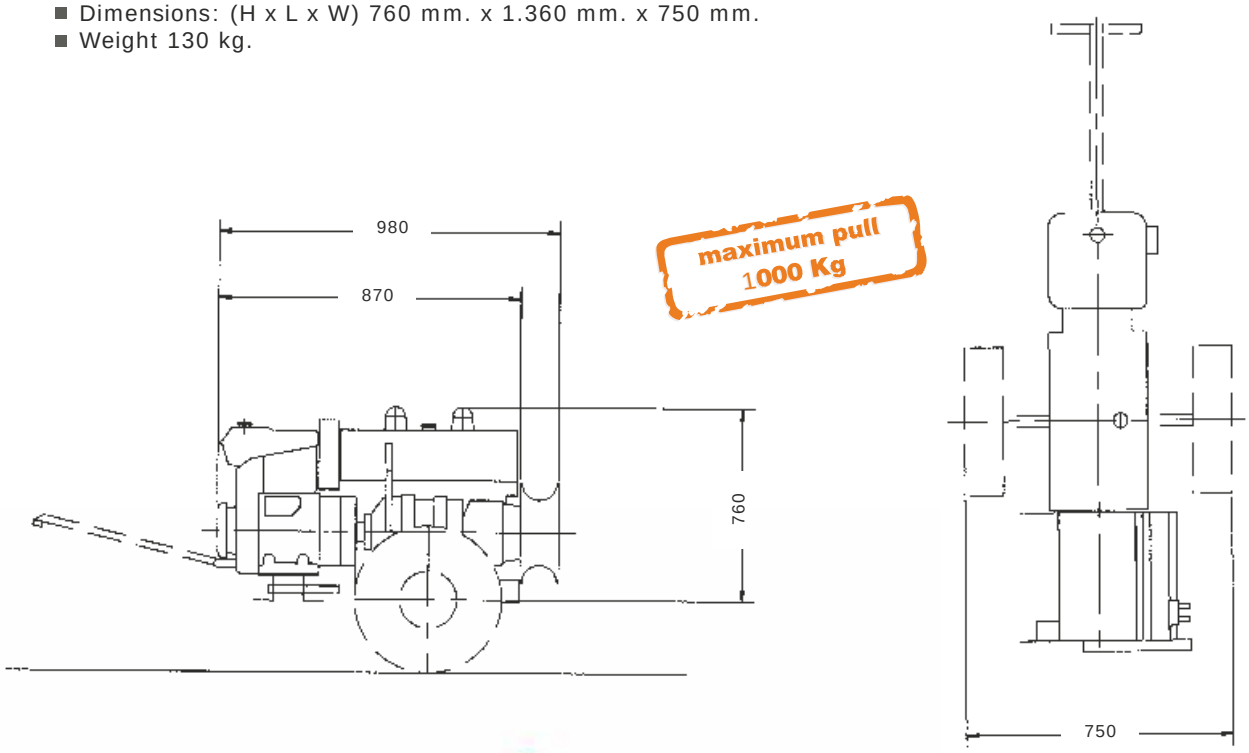
01
High Voltage

This chapter on High Voltage gives a clearly structured overview of the equipment required for overhead and underground cable laying. If you cannot find the equipment you need, please do not hesitate to contact our Sales Department.

TL4738
AMB101 Winch

AMB101 hydraulic winch for stringing medium and high voltage overhead cables, featuring a 350 mm diameter automatic feeder drum, with 300 metres of 8 mm diameter steel pilot cable with looped ends. Closed hydraulic circuit with variable speed in both directions of rotation. Negative hydraulic brake, automatic operation.

- Pull 1.000 kg.
- 7 hp (5.1 kW) air-cooled petrol enginerefrigerado por aire.
- Dimensions: (H x L x W) 760 mm. x 1.360 mm. x 750 mm.
- Weight 130 kg.



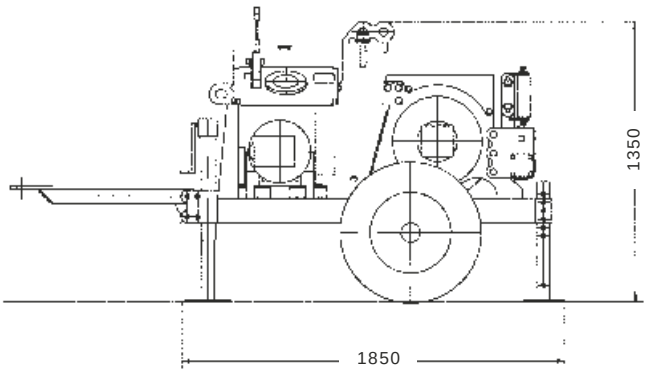
TL4740
AMC402 Winch

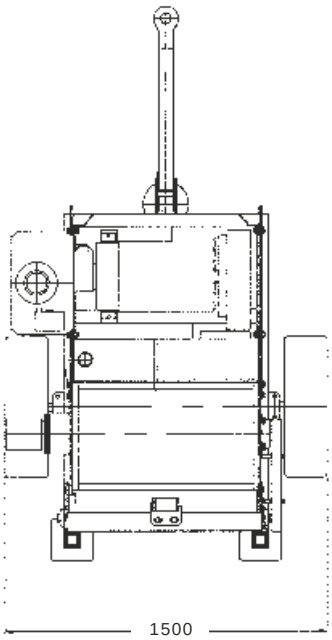
Single drum AMC402 hydraulic winch designed for overhead cable stringing and recovery, and for hoisting operations (e.g. lifting equipment and tools into towers). It contains 400 m of 14 mm diameter steel cable with loops on each end, on a 530 mm diameter automatic feeder drum.

Closed hydraulic circuit with variable speed in both directions of rotation. Negative hydraulic brake, automatic operation. Dynamometer for automatic pull control. Hydraulic fluid cooling system. Adjustable height tow bar and mechanical front stabiliser for different working positions.

- Pull 3.000 Kg.
- 34 Hp (25 kW) water-cooled diesel engine with 12v electronic start.
- Dimensions: (H x L x W) 1.350 mm. x 1.850 mm. x 1.500 mm.
- Weight 1.000 kg.

maximum pull 3000 Kg



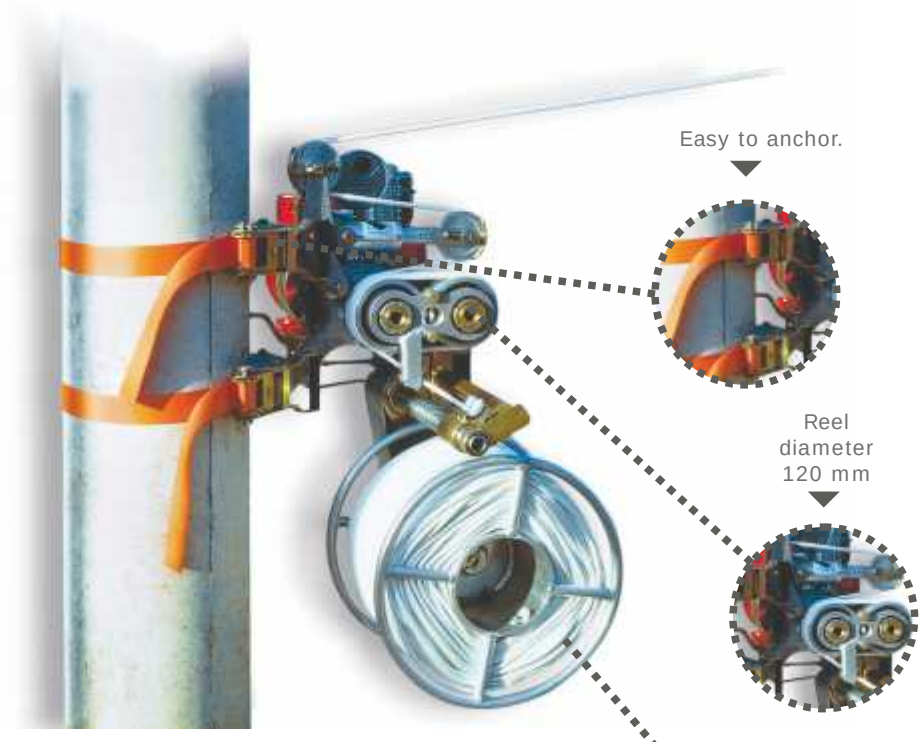


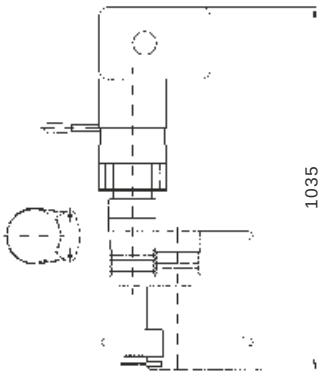
TL4741
ARS001 Winch

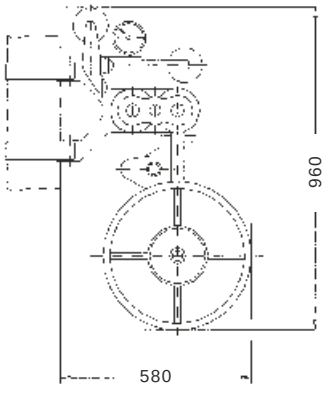
ARS001 hydraulic winch for stringing low voltage overhead cables. This is a modular unit for easy transport. It contains 500 metres of high strength 8 mm diameter nylon pilot cable with loops on each end, on a 120 mm reel with automatic feeder. Closed hydraulic circuit with variable speed in both directions of rotation. Mechanical brake with automatic control. Dynamometer for automatic pull control.

- Pull 500 kg.
- 4 hp (2.6 kW) petrol engine.
- Air cooled, manual start.
- Dimensions: (H x L x W) 960 x 580 x 1.035 mm.
- Weight 80 kg.

maximum pull 500 Kg

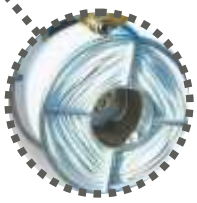






TL5486
ARS002 Winch

Insulated version



Available on reels with 180 metres of 14 mm insulated rope

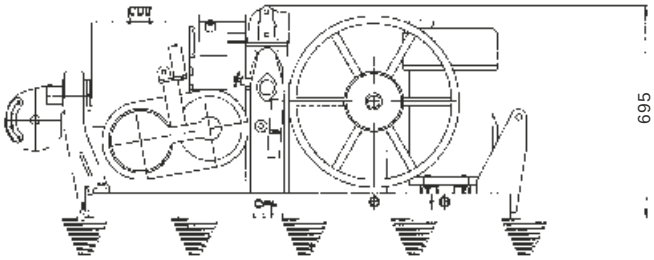
The same as above, but completely insulated for hot line work. Holds 180 metres of insulated 14 mm diameter polymer pilot rope with looped ends, on an insulated reel.

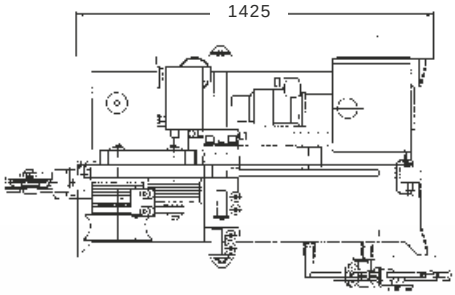
TL3338
ARS200 Winch

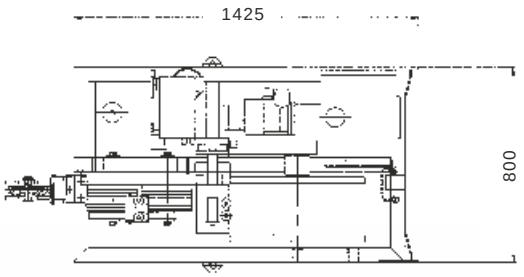
ARS200 hydraulic winch for underground cable laying. Contains 500 metres of 8 mm diameter steel pilot cable with looped ends, on a reel with an automatic feeder. Closed hydraulic circuit with variable speed in both directions of rotation. Negative hydraulic brake, automatic operation. Dynamometer for automatic pull control.

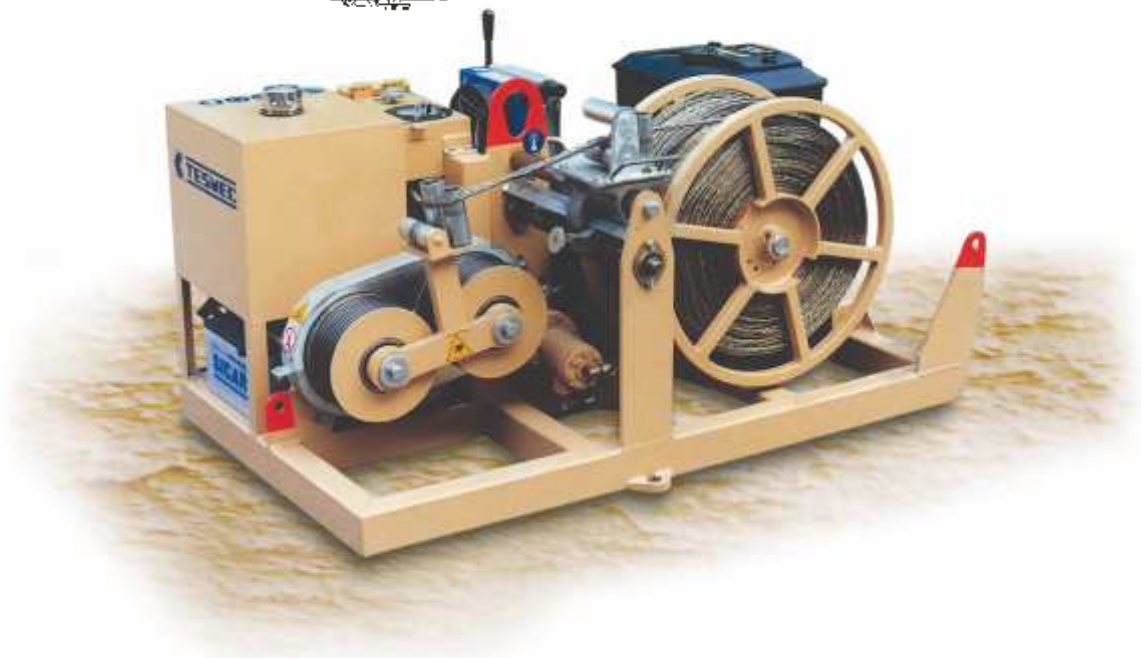
- Pull 1.500 kg
- 18 hp (13 kW) air-cooled petrol engine with 12v electronic start.
- 200 mm diameter drums, with heat-treated steel channels.
- Dimensions: (H x L x W) 695 mm. x 1.425 mm. x 800 mm.
- Weight 500 kg.

maximum pull
1500 Kg



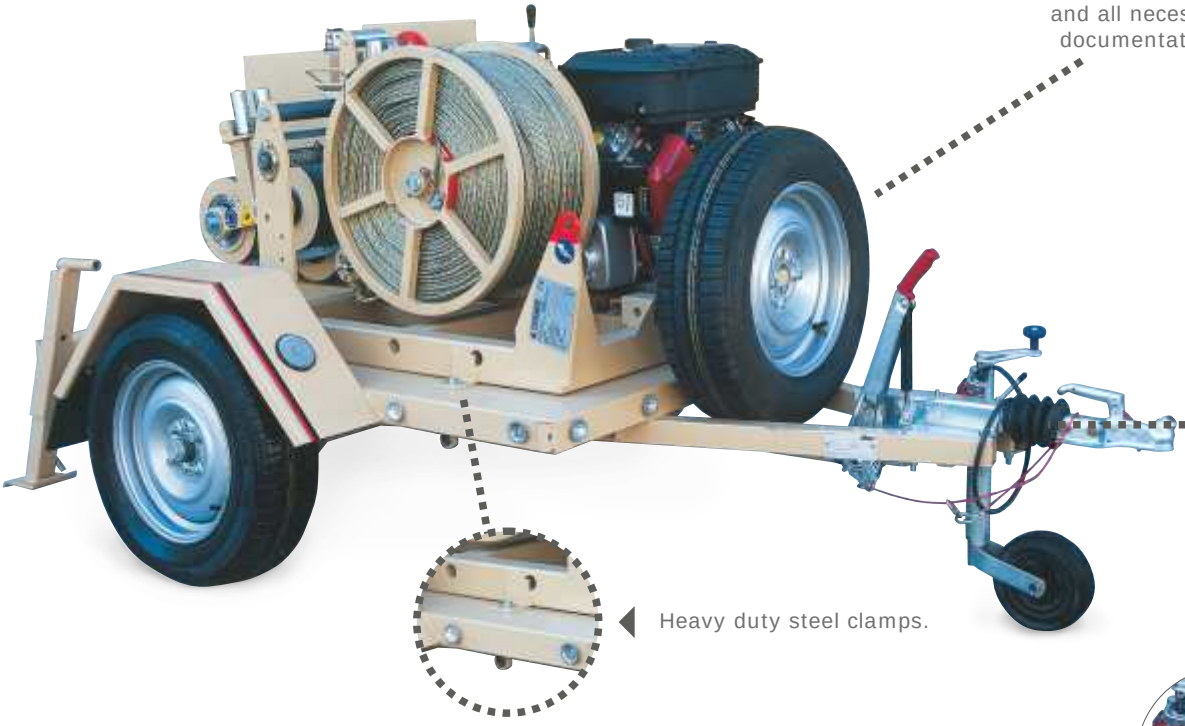






TL4671
Trailer

The TL4671 trailer, purpose-built to make the most of the features of the ARS200 winch, is an extremely cost efficient solution offering excellent performance and value. Supplied with spare wheel, protective frame and canvas cover. Complete documentation. Optional inertial brake.

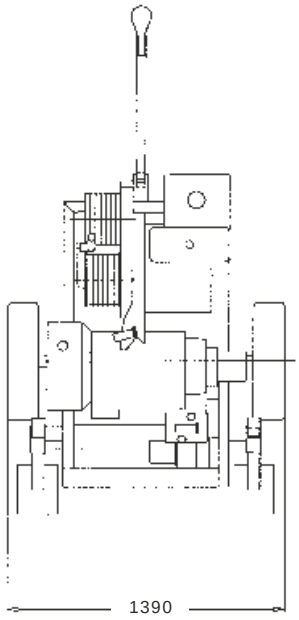


ADAPTED FOR AUTHORISED USE ON PUBLIC HIGHWAYS

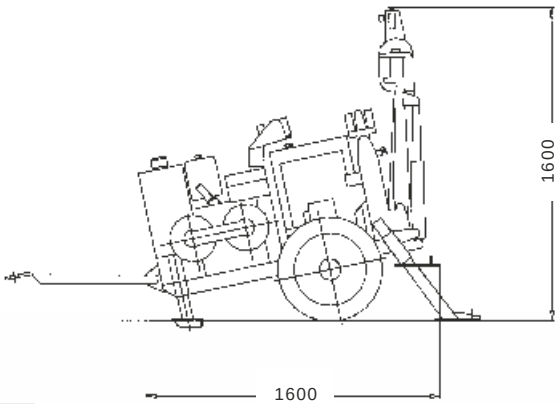
TL3339
ARS301 Winch

ARS301 hydraulic winch for overhead and underground cable laying. Closed hydraulic circuit with variable speed in both directions of rotation. Negative hydraulic brake, automatic operation. Dynamometer for automatic pull control. Hydraulic fluid cooling system. Control instrumentation for hydraulic circuits and engine. Rigid axle for transport at a maximum speed of 30 km/h. Autoloading rewinder equipped with automatic feeder, for 1,100 mm and 1,400 mm O.D. reels. Adjustable height mechanical front stabiliser. Programming system and pulling control. Preinstallation of pull recorder connection.

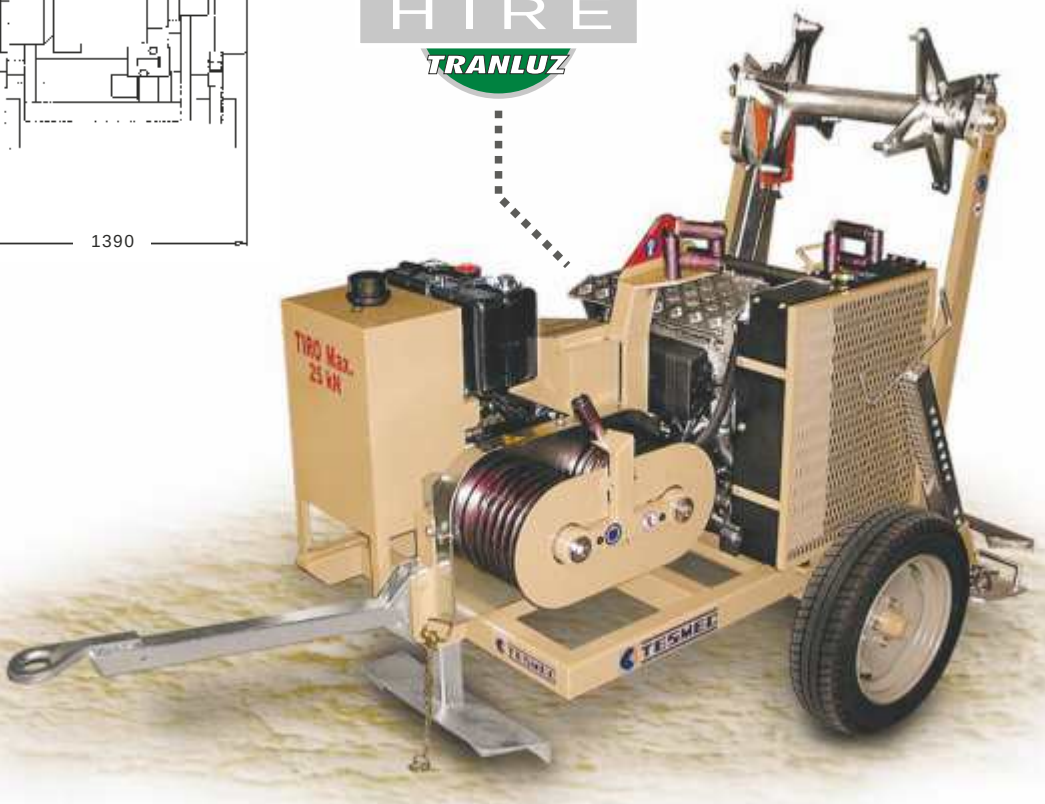
- Pull 2.500 kg.
- 34 hp (25 kW) water-cooled diesel engine with 12v electronic start.
- 250 mm diameter drums, with heat-treated steel channels.
- Dimensions: (H x L x W) 1.600 mm. x 1.600 mm. x 1.390 mm.
- Weight 700 kg.



maximum pull 2500 Kg



Available for HIRE TRANLUZ



TL4766

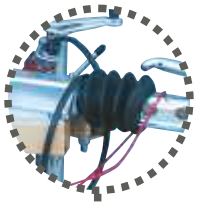
ARS301 winch adapted for public highways

The ARS301 winch adapted for use on public highways. Supplied with spare wheel, inertial brake, protective frame and canvas cover. Complete documentation.

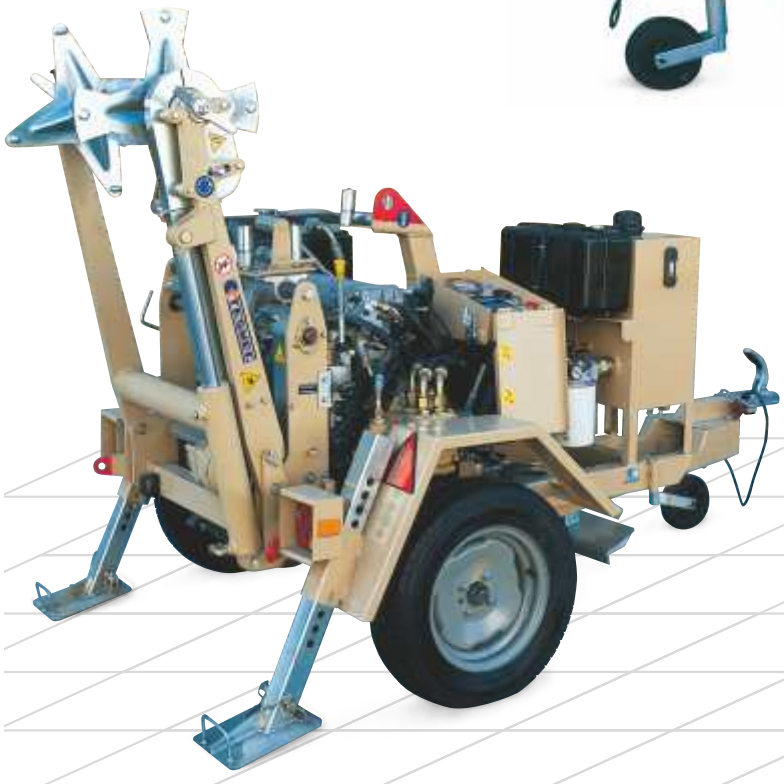
- Pull 2.500 kg.
- 34 hp (25 kW) water-cooled diesel engine with 12v electronic start.
- 250 mm diameter drums, with heat-treated steel channels.
- Dimensions: (H x L x W) 1.600 mm. x 1.600 mm. x 1.390 mm.
- Weight 700 kg.

NOTE
No special driving license is necessary to drive this equipment. A normal "B" license is sufficient.

maximum pull 2500 Kg



Supplied with inertial brake.



NOTE
Supplied with frame and canvas cover.

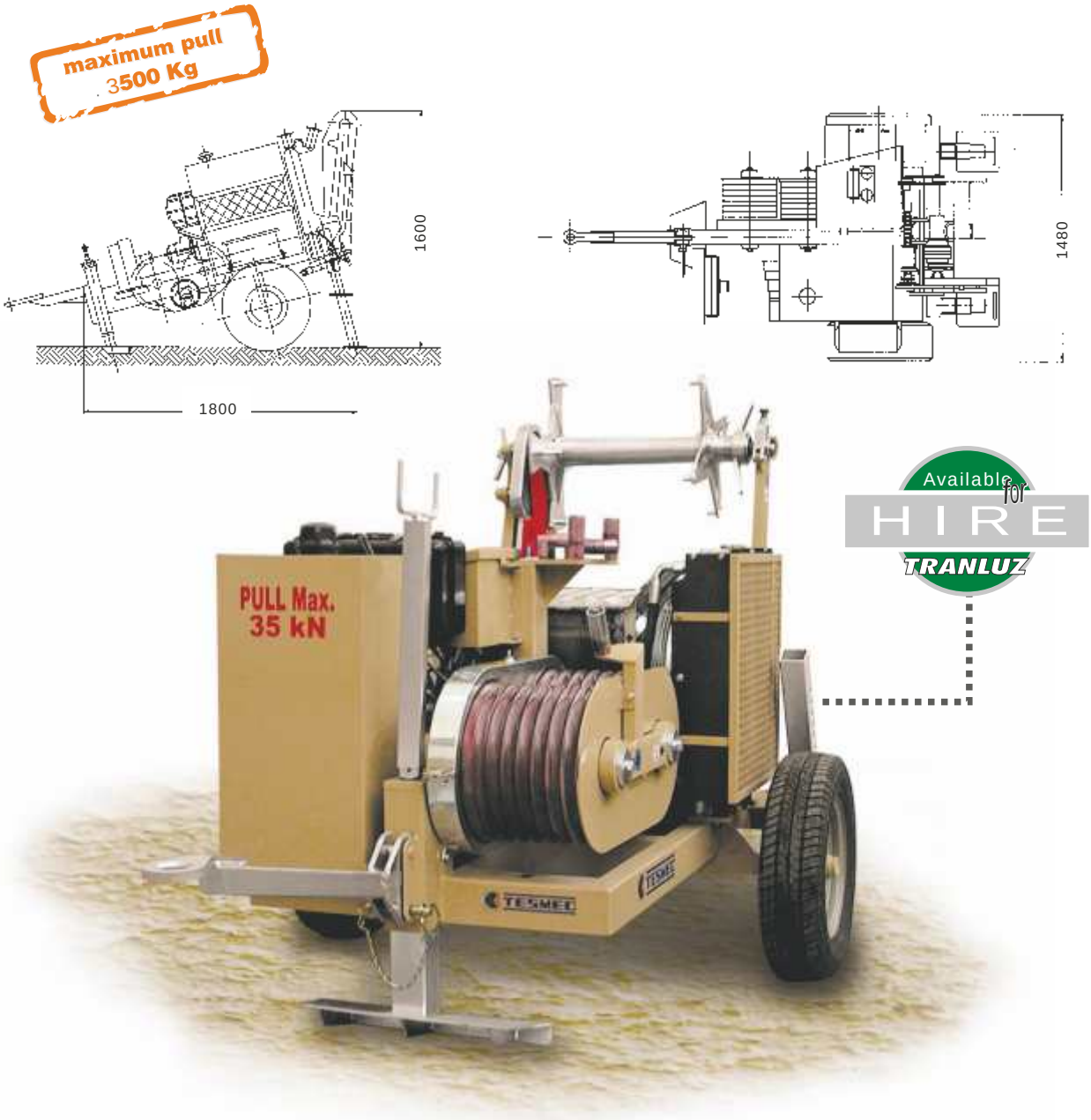
Available for HIRE TRANLUZ

ADAPTED FOR AUTHORISED USE ON PUBLIC HIGHWAYS

TL3343
ARS403 Winch

ARS403 hydraulic winch for overhead and underground cable laying.
Closed hydraulic circuit with variable speed in both directions of rotation. Negative hydraulic brake, automatic operation. Dynamometer for automatic pull control. Hydraulic fluid cooling system. Control instrumentation for hydraulic circuits and engine. Rigid axle for transport at a maximum speed of 30 km/h. Autoloading rewinder equipped with automatic feeder, for 1,100 mm and 1,400 mm O.D. reels. Adjustable height mechanical front stabiliser. Programming system and pulling control. Preinstallation of pull recorder connection.

- Pull 3.500 kg.
- 34 hp (25 kW) water-cooled diesel engine with 12v electronic start.
- 325 mm diameter drums, with heat-treated steel channels.
- Dimensions: (H x L x W) 1.600 mm. x 1.800 mm. x 1.450 mm.
- Weight 850 kg.



TL3341
ARS400 Winch

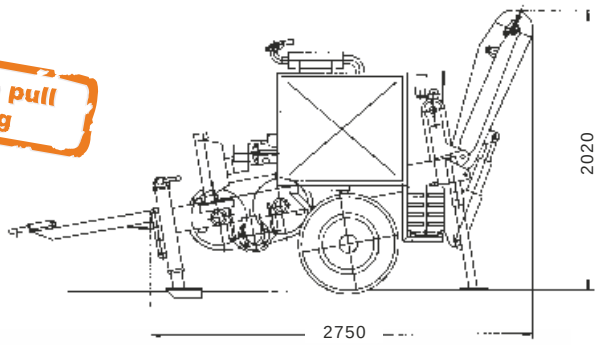
ARS400 hydraulic winch for overhead and underground cable laying. The machine is equipped with a totally electronic control system. Closed hydraulic circuit with infinitely variable speed in both directions of rotation. Programming and pull control system which maintains the preset value (even when the speed drops to "0"), and automatically adjusts the speed depending on friction or unexpected loads which may develop on the line. Negative hydraulic brake, automatic operation.
Dynamometer for automatic pull control.

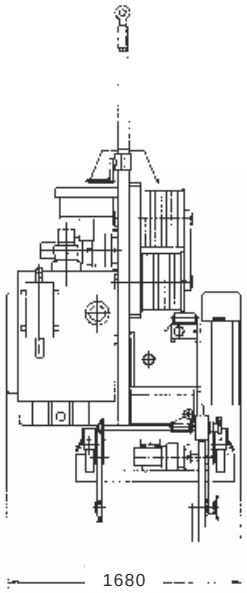
Hydraulic fluid cooling system. Control instrumentation for hydraulic circuits and engine. Rigid axle for transport at a maximum speed of 30 km/h. Autoloading rewinder equipped with automatic feeder, for 1,100 mm and 1,400 mm O.D. reels. Adjustable height mechanical front stabiliser. Preinstallation of pull recorder connection. Earthing circuit device.

- Pull 4.500 kg.
- 65 hp (48 kW) water-cooled diesel engine with 12v electronic start.
- 400 mm diameter drums, with heat-treated steel channels.
- Dimensions: (H x L x W) 2.020 mm. x 2.750 mm. x 1.680 mm.
- Weight 1.800 kg.

NOTE
Totally electronic.

maximum pull 4500 Kg



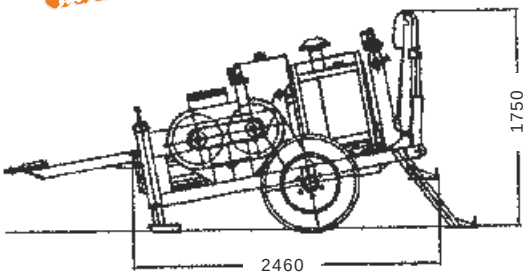


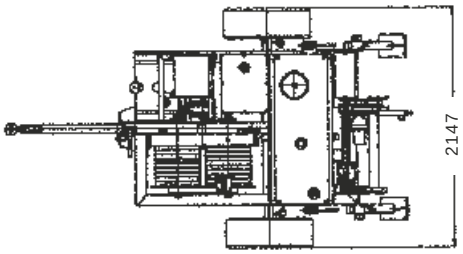
TL3346
ARS510 Winch

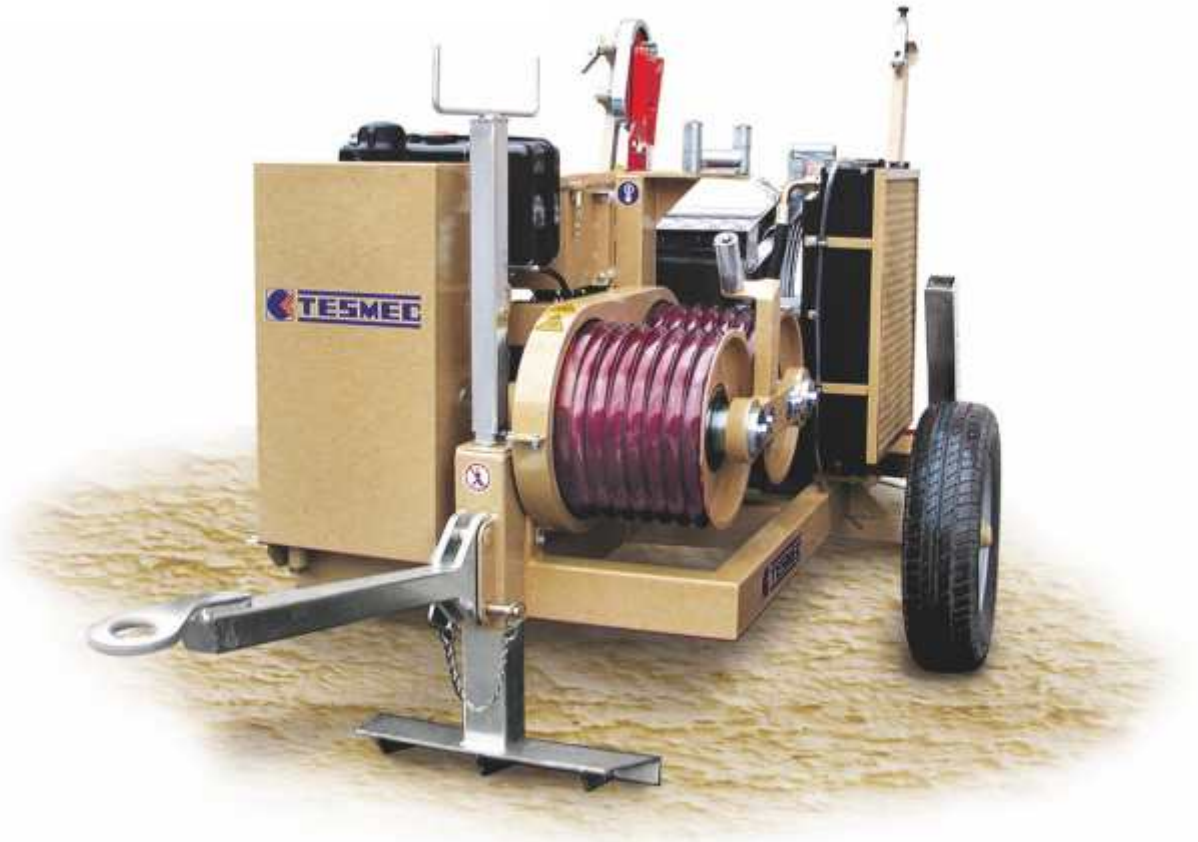
ARS510 hydraulic winch for overhead and underground cable laying. Closed hydraulic circuit with variable speed in both directions of rotation. Negative hydraulic brake, automatic operation. Dynamometer for automatic pull control. Hydraulic fluid cooling system. Control instrumentation for hydraulic circuits and engine. Rigid axle for transport at a maximum speed of 30 km/h. Autoloading rewinder equipped with automatic feeder, for 1,100 mm and 1,400 mm O.D. reels. Adjustable height mechanical front stabiliser.

- Pull 7.000 kg.
- 81 Hp (60 kW) water-cooled diesel engine with 12v electronic start.
- 400 mm. diameter drums, with heat-treated steel channels.
- Dimensions: (H x L x W) 1.750 mm. x 2.480 mm. x 2.147 mm.
- Weight 2.100 kg.

maximum pull 7000 Kg



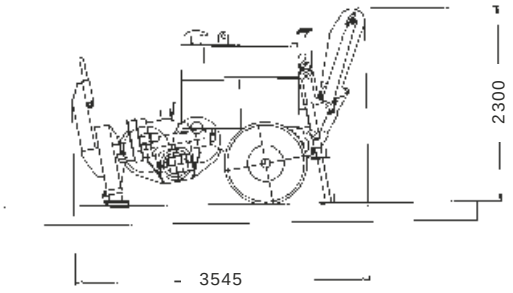




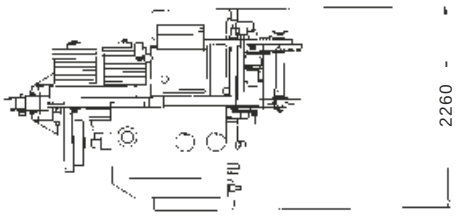
TL3344
ARS500 Winch

ARS500 hydraulic winch for overhead and underground cable laying. The machine is equipped with a totally electronic control system. Closed hydraulic circuit with infinitely variable speed in both directions of rotation. Programming and pull control system which maintains the preset value (even when the speed drops to "0"), and automatically adjusts the speed depending on friction or unexpected loads which may develop on the line. Negative hydraulic brake, automatic operation. Dynamometer for automatic pull control. Hydraulic fluid cooling system. Control instrumentation for hydraulic circuits and engine. Rigid axle for transport at a maximum speed of 30 km/h. Autoloading rewinder equipped with automatic feeder, for 1,100 mm and 1, 400 mm O.D. reels. Adjustable height mechanical front stabiliser. Programming system and pulling control. Preinstallation of pull recorder connection.

- Pull 9.000 kg.
- 140 hp (104 kW) water-cooled diesel engine with 12v electronic start.
- 450 mm diameter drums, with heat-treated steel channels.
- Dimensions: (H x L x W) 2.300 x 3.545 x 2.260 mm.
- Weight 3.250 k.



maximum pull
9000 Kg



NOTE
Totally electronic.

ELECTRONIC PULL CONTROL

TL4966
Electronic pull recorder

This device enables cable-laying operations to be monitored by recording specific data such as:

- Cable pulling with control of the preset limit value.
- Cable laying speed.
- Length of cable laid in metres.

The unit is able to record the following data for each operation:

- Date and time of monitoring start.
- Limit control value.
- Sampling distance time.
- Date and time of monitoring end.

The recorder also has a printer for printing all data shown on screen either in real time or later. A graphic of the work carried out can also be printed. The unit can be connected to a PC for data transfer.

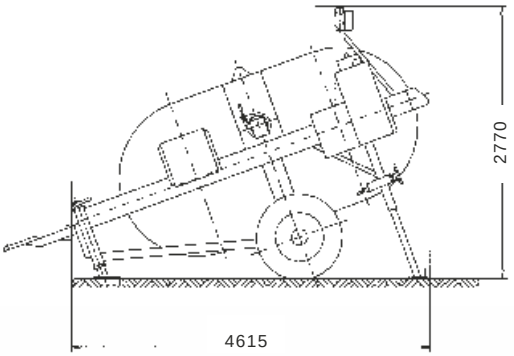
- Voltage: 10 or 28 V.
- Display: 2 rows of 16 characters.
- Dimensions:
  345 mm. x 200 mm. x 65 mm.

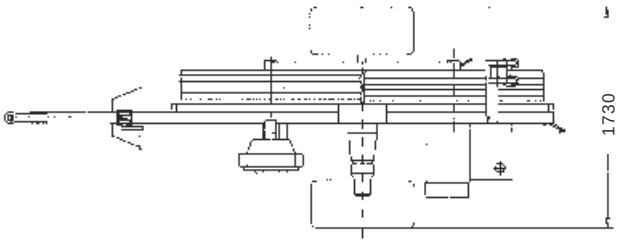
All Tesmec equipment is backed by continuous development and product enhancement, and technical assistance is guaranteed throughout Spain.

TL3426
FRS301 Tensioner

FRS301 hydraulic tensioner for tensing overhead cables and fibre optic (OPGW) cables. Open hydraulic circuit with highly sensitive tensioning control, negligible deviations from the preset tension value if the speed changes. Negative hydraulic brake, automatic operation.
Dynamometer for automatic pull control. Hydraulic fluid cooling system. Mechanical meter counter. Rigid axle for towing at a maximum speed of 30 km/h with mechanical parking brake. Earthing circuit device.

- 3 position gearbox:
  - Neutral position for loading/unloading conductors.
  - Low tension (150 kg. - 500 kg.) (1.5 - 5 kN).
  - Nominal tension.
- Adjustable height mechanical front stabiliser.
- Maximum tension 2.500 kg.
- 1.500 mm diameter reels, channels formed from interchangeable high strength nylon sections.
- Dimensions: (H x L x W) 2.770 mm. x 4615 mm. x 1730 mm.
- Weight 1.950 kg.





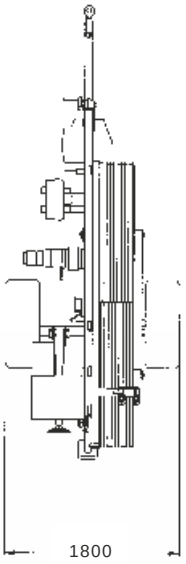
NOTE
Special 1.500 mm reels for fibre optic cable.

Available for HIRE TRANLUZ

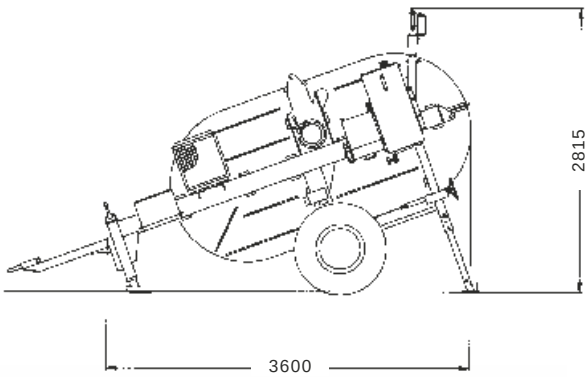
TL3428
FRS403 Tensioner

Hydraulic tensioner for tensioning one or two conductors and fibre optic cables (OPGW). Open hydraulic circuit with highly sensitive tensioning control, negligible deviations from the preset tension value if the speed changes. Negative hydraulic brake, automatic operation. Dynamometer for automatic pull control. Hydraulic fluid cooling system. Mechanical meter counter. Rigid axle for transport at a maximum speed of 30 km/h, with mechanical parking brake.

- 3 position gearbox:
  - Neutral position for loading/unloading conductors.
  - Low tension (200 kg. - 600 kg.) (2-6 kN).
  - Nominal tension.
- Adjustable height mechanical front stabiliser.
- Maximum tension 4.000 kg.
- 1.500mm diameter reels, channels formed from interchangeable high strength nylon sections.
- Dimensions: (H x L x W) 2.815 mm. x 3.600 mm. x 1.810 mm.
- Weight 2.300 kg.



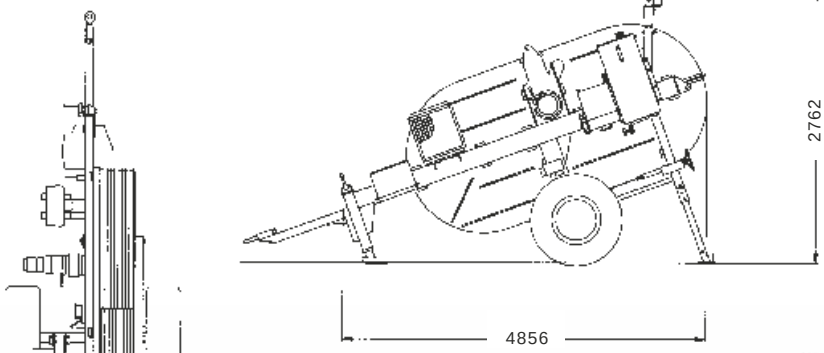
NOTE
Special 1.500 mm.
reels for fibre optic cable.



TL4851
FRS404 Tensioner + Rewinder

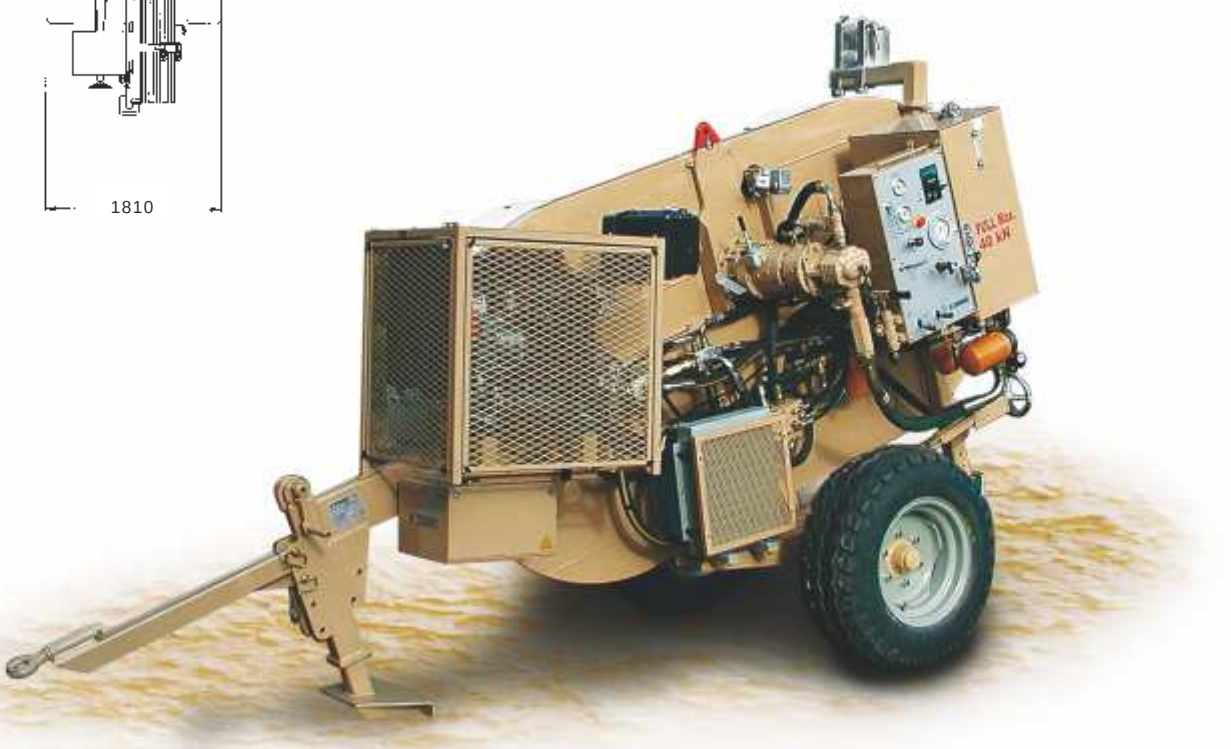
FRS404 tensioner with 34 hp (25 kW) diesel engine for rewinding operations.
Complete with power takeoff to power two reel stands and a hydraulic power head for non-independent command.Earthing circuit device.

- 3 position gearbox:
  - Neutral position for loading/unloading conductors.
  - Low tension (200 kg. - 600 kg.) (2-6 kN).
  - Nominal tension.
- Adjustable height mechanical front stabiliser.
- Maximum tension 4.000 kg.
- 1.500 mm diameter reels, channels formed from interchangeable high strength nylon sections.
- Dimensions: (H x L x W) 2.762 mm. x 4.856 mm. x 1.810 mm.
- Pull: 4.000 kg.
- Weight 2.600 kg.



maximum pull 4000 Kg

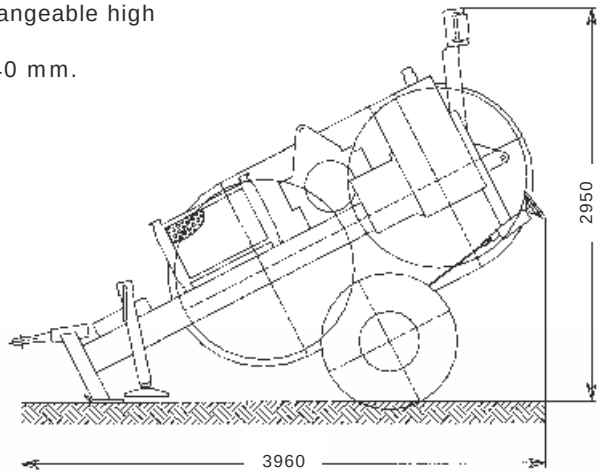
NOTE
For rewinding operations.

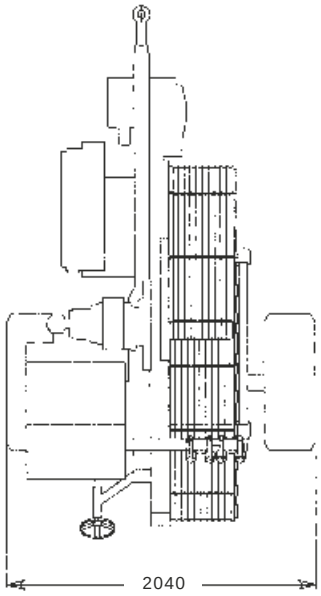


TL5487
FRS506 Tensioner

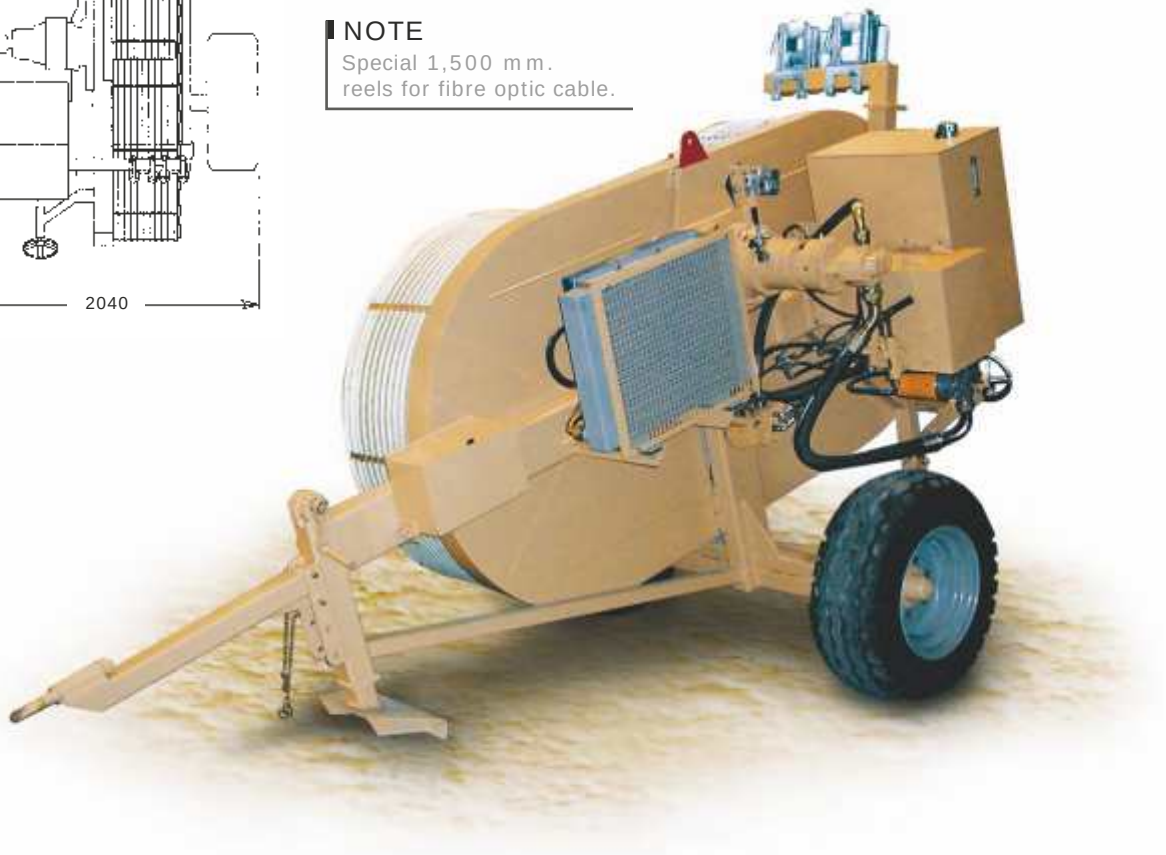
Hydraulic tensioner for tensioning one or two conductors and fibre optic cables (OPGW). Open hydraulic circuit with highly sensitive tensioning control, negligible deviations from the preset tension value if the speed changes. Negative hydraulic brake, automatic operation. Dynamometer for automatic pull control. Hydraulic fluid cooling system. Mechanical meter counter. Rigid axle for transport at a maximum speed of 30 km/h, with mechanical parking brake.

- 3 position gearbox:
  - Neutral position for loading/unloading conductors.
  - Low tension (500 kg. - 2.000 kg.) (5 - 20 kN).
  - Nominal tension.
- Adjustable height mechanical front stabiliser.
- Maximum tension 7.500 kg.
- 1.500 mm. diameter reels, channels formed from interchangeable high strength nylon sections.
- Dimensions: (H x L x W) 2.950 mm. x 3.960 mm. x 2.040 mm.
- Weight 2.900 kg.





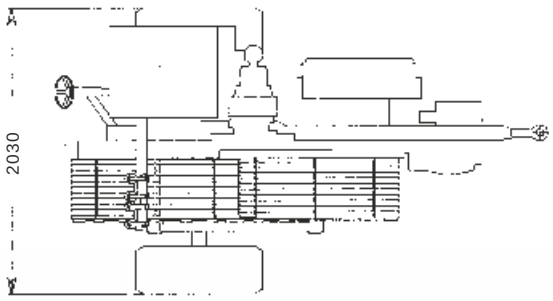
NOTE
Special 1,500 mm.
reels for fibre optic cable.

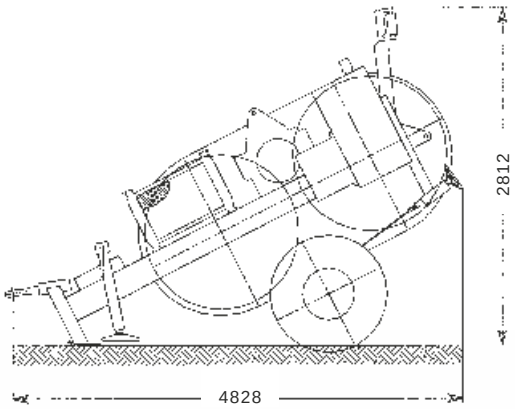


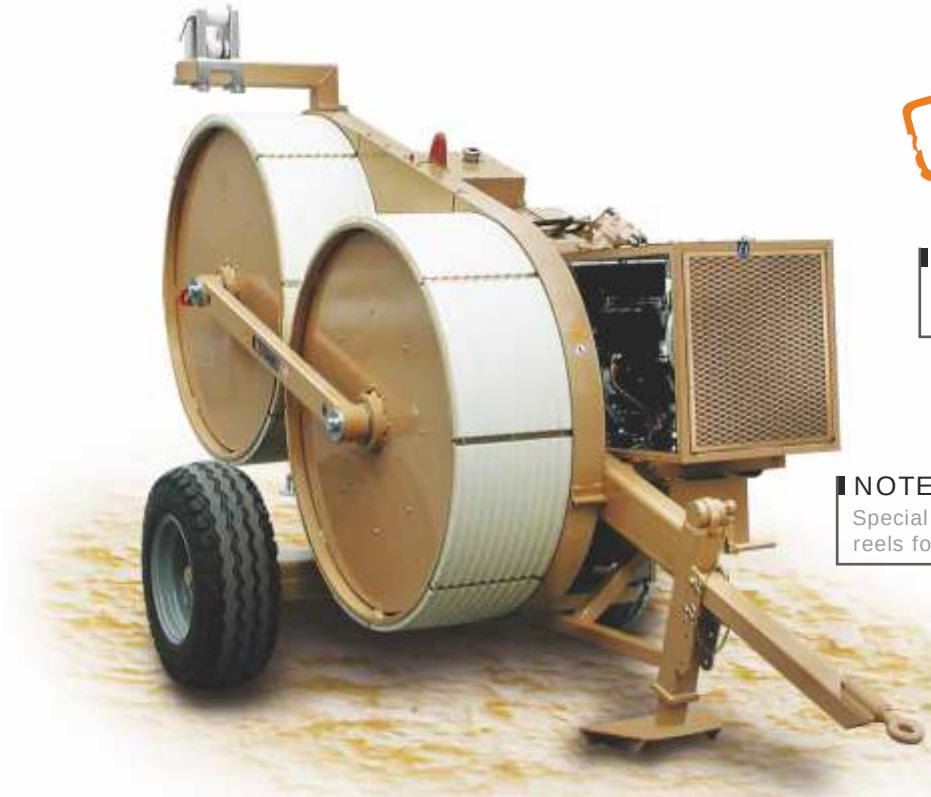
TL3429
FRS507 Tensioner + Rewinder

FRS507 tensioner with 34 hp (25 kW) diesel engine for rewinding operations.
Complete with power takeoff to power two reel stands and a hydraulic power head for non-independent command. Earthing circuit device.

- 3 position gearbox:
  - Neutral position for loading/unloading conductors.
  - Low tension (500 kg. - 2.000 kg.) (5 - 20 kN).
  - Nominal tension.
- Adjustable height mechanical front stabiliser.
- Maximum tension 7.500 kg.
- 1.500 mm diameter reels, channels formed from interchangeable high strength nylon sections.
- Dimensions: (H x L x W) 2.812 mm. x 4.828 mm. x 2.030 mm.
- Pull 7.500 kg
- Weight 3.100 kg







maximum pull 7500 Kg

NOTE
For rewinding operations.

NOTE
Special 1.500 mm. reels for fibre optic cable.

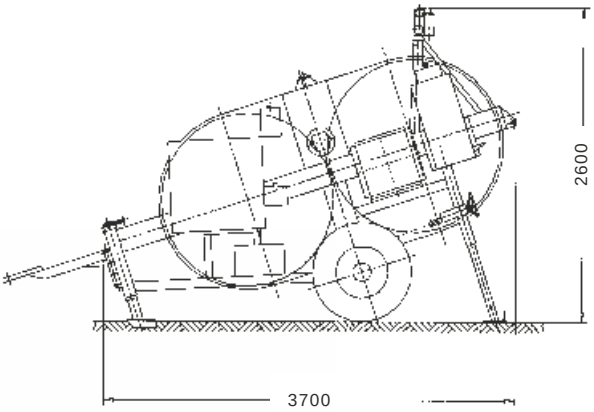
TLA582
Winch + Tensioner

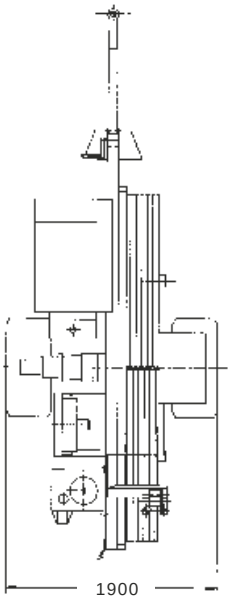
AFS301 hydraulic winch + tensioner for overhead cables. Closed hydraulic circuit with infinitely variable speed in both directions of rotation. The machine is equipped with a programming and pull control system which maintains the preset value (even when the speed drops to "0"), and automatically adjusts the speed depending on friction or unexpected loads which may develop on the line. Negative hydraulic brake, automatic operation. Dynamometer for automatic pull control. Hydraulic fluid cooling system. Mechanical meter counter. Control panel for hydraulic circuits and diesel engine. Rigid axle for transport at a maximum speed of 30 km/h, with mechanical parking brake. Earthing circuit device.

- 3 position gearbox:
  - Neutral position for loading/unloading conductors.
  - Low tension (150 kg.) (1.5 kN).
  - Nominal tension.
- Hydraulic power takeoff to power a reel stand with hydraulic power head or a rewinder.
- Adjustable height mechanical front stabiliser.
- Pull 2.500 kg.
- Maximum tension 2.500 kg.
- 34 hp (25 kW) water-cooled diesel engine with 12v electronic start.
- 1.500 mm. diameter reels, channels formed from interchangeable high strength nylon sections.
- Dimensions: (H x L x W) 2.600 mm. x 3.700 mm. x 1.900 mm.
- Weight 2.300 kg.

NOTA

Model AFS303 special version with electronic control and 34KW motor.





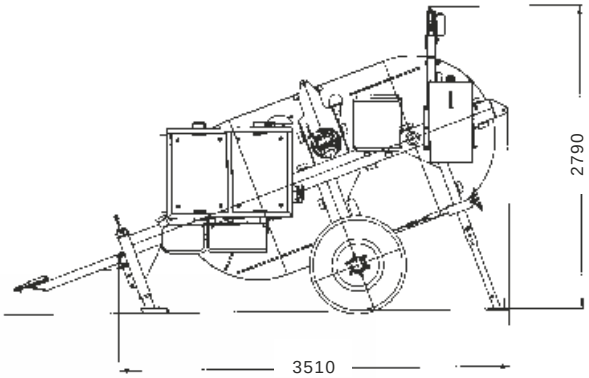
TL4737
Winch + Tensioner

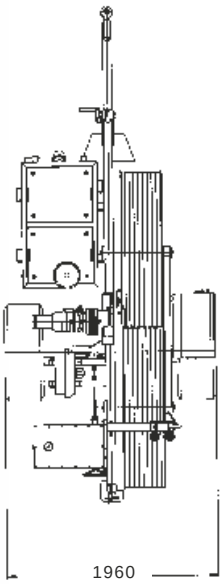
AFS404 hydraulic winch + tensioner for one or two overhead cables. This machine is equipped with a totally electronic control system. Closed hydraulic circuit with infinitely variable speed in both directions of rotation. The machine is equipped with a programming and pull control system which maintains the preset value (even when the speed drops to "0"), and automatically adjusts the speed depending on friction or unexpected loads which may develop on the line. Negative hydraulic brake, automatic operation. Dynamometer for automatic pull control. Hydraulic fluid cooling system. Digital meter counter. Control panel for hydraulic circuits and diesel engine. Rigid axle for transport at a maximum speed of 30 km/h, with mechanical parking brake. Earthing circuit device.

- 3 position gearbox:
  - Neutral position for loading/unloading conductors.
  - Low tension (1÷7 kN).
  - Nominal tension.
- Hydraulic power takeoff to power two reel stands with hydraulic power head or two rewinders.
- Adjustable height hydraulic front stabiliser.
- Pull 4.500 kg.
- Maximum tension 4.500 kg.
- 85 hp (63 kW) water-cooled diesel engine with 12v electronic start.
- 1.500 mm. diameter reels, channels formed from interchangeable high strength nylon sections.
- Dimensions: (H x L x W) 2.790 mm. x 3.510 mm. x 1.960 mm.
- Weight 3.000 kg.

NOTE
Totally electronic.

maximum pull 4500 Kg





CABLE REMOTE CONTROL

Can be used with all pulling equipment with a capacity of 4,000 kg or more (requires hydraulic pumps with electronic cards). The maximum operating range of this equipment is 30 metres. The case is constructed of special impact-resistant resin with protection in accordance with IP65. Cabled remote control devices are used for operating the machine controls away from the control panel.

In particular, they enable control of:

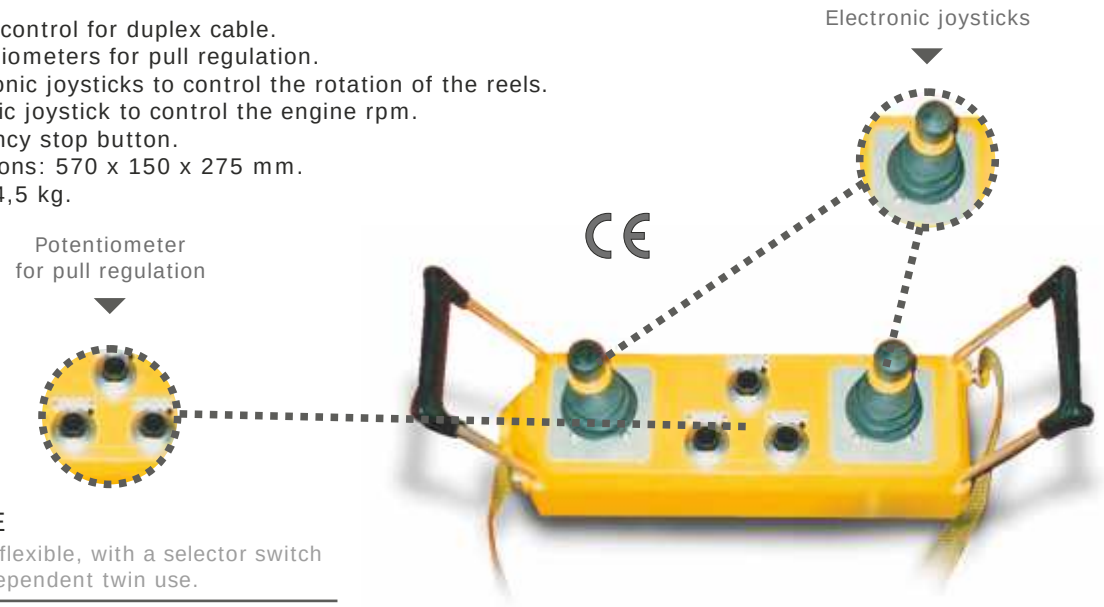
- Pull/tensioning value.
- Rotation speed and direction.
- Control of diesel engine rpm.
- Stop all machine functions.

TL5488
Model AXC005

- Remote control for single cable.
- Potentiometer for pull regulation.
- Electronic joystick to control the rotation of the reels.
- Electronic joystick to control the engine rpm.
- Emergency stop button.
- Dimensions: 570 x 150 x 275 mm.
- Weight 4,5 kg

TL5489
Model AXC006

- Remote control for duplex cable.
- 2 potentiometers for pull regulation.
- 2 electronic joysticks to control the rotation of the reels.
- Electronic joystick to control the engine rpm.
- Emergency stop button.
- Dimensions: 570 x 150 x 275 mm.
- Weight 4,5 kg.



NOTE

Highly flexible, with a selector switch for independent twin use.

WIRELESS REMOTE CONTROL

Can be used with all pulling equipment of 4,000 kg or higher capacity (Hydraulic pumps with electronic cards are available). The maximum operating range of this equipment is 150 metres. The case is constructed of special impact-resistant resin with protection in accordance with IP65. Wireless remote control devices are used for operating the machine controls away from the control panel.

In particular, they enable control of:

- Pull/tensioning value.
- Rotation speed and direction.
- Control of diesel engine rpm.
- Stop all machine functions.

TL5490
Model AXH007

- Individual wireless remote control with no screen, with the following devices.
- Potentiometer for pull regulation.
- Electronic joystick to control the rotation of the reels.
- Electronic joystick to control the engine rpm.
- Emergency stop button.
- Dimensions: 235 x 160 x 160 mm.
- Weight 2,1 kg

NOTE
Reference TL5492: Model AXH009.
This model has a screen to view pull parameters, stringing speed and meters strung.

TL5491
Model AXH008

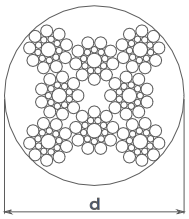
- Twin wireless remote control with no screen, with the following devices.
- 2 potentiometers for pull regulation.
- 2 electronic joysticks to control the rotation of the reels.
- Electronic joystick to control the engine rpm.
- Emergency stop button.
- Selector for single/twin use.
- Dimensions: 235 x 160 x 160 mm
- Weight 2.1 kg

NOTE
Reference TL5493: Model AXH010.
This model has a screen to view pull parameters, stringing speed and meters strung.

TL3433
Steel pilot cable

Anti-swivel braided steel cable. Extremely flexible cable, allowing high productivity in stringing operations. Supplied with looped ends on steel reels, model BOF or BOC as required.

REFERENCE	DIAMETER (mm)	BREAKING STRAIN(kn)	LONGITUDE (mts)
TL3433	10	68	0500
TL3434	10	68	1200
TL3438	13	105	0500
TL3440	13	105	0800
TL3437	13	105	1600
TL3444	16	160	0900



Cable Composition

NOTE

Measurements given are standard; other measurements are also available.

TL3381
Pilot rope

Extremely flexible and strong, ideal for overhead stringing and fibre optic cable. The product undergoes stringent safety testing at each stage of manufacture. It is supplied with looped ends on steel reels or in cardboard boxes (easy to coil).

REFERENCE	DIAMETER (mm)	BREAKING STRAIN (kn)	LONGITUDE (mts)
TL3381	12	35	1000
TL3383	14	43	1000
TL3386	16	50	1000
TL5494	18	70	1000

NOTE
Measurements given are standard; other measurements are also available.

TL5893

Anti-swivel rope designed for specific jobs where greater insulation levels are required.
Particularly suited for working near power lines.

REFERENCE	DIAMETER (mm)	BREAKING STRAIN(kn)	LONGITUDE (mts)
TL5893	12	20	1000
TL5894	14	27	1000
TL5895	16	36	1000

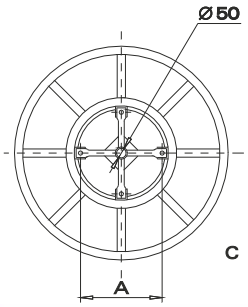
TL3353
Steel reels for pilot cables

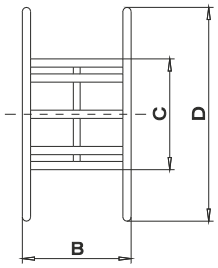
These reels are manufactured from welded steel with a protective paint finish. The reels may be fixed (BOF...) or dismountable or conical (BOC...).

REFERENCE	MODEL	A	B	C	D	WEIGHT(kg)
TL3353	BOF010	420	560	570	1100	065
TL3354	BOF020	420	560	570	1400	105
TL3355	BOF030	420	560	570	1900	135
TL3351	BOC040	420	560	590	1100	072
TL3352	BOC050	420	560	590	1400	112

Table of the most common reels and capacities:

	CABLES DIMENSIONS (mm)	10	12	13	14	16	18	20	22	24
Steel TL3353	CAPACITY (m)	2.400	1.600	1.600	1.100	900	-	-	-	-
Steel TL3354	CAPACITY (m)	3.600	2.400	2.400	2.200	1.800	1.200	1.000	900	800





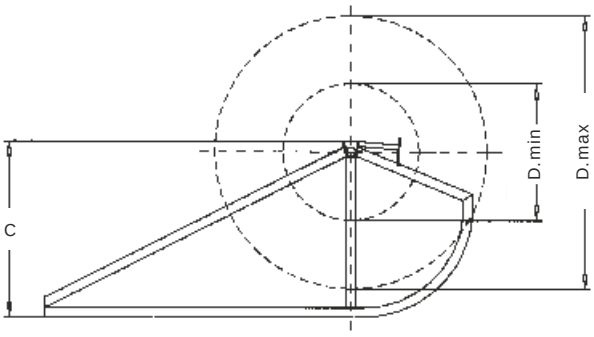
WEDGE-TYPE REEL LIFTER STANDS

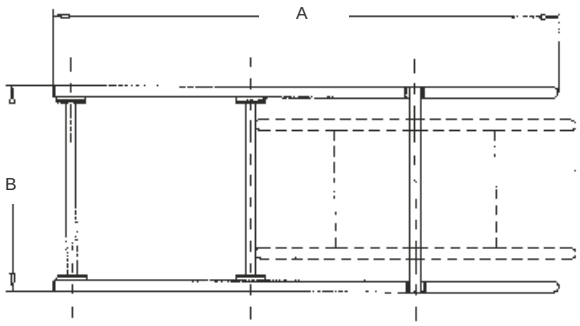
TL3400
Reel lift stands

Solidly constructed, easy-to-handle reel lift stands.Can be dismantled for transport.

		DIMENSIONS (mm)						
REFERENCE	MODEL	A	B	C	D min	D max	CAPACITY (kg)	WEIGHT(kg)
TL3400	CVC002	2550	1325	1060	1100	1400	2000	85
TL5495	CVC201	3020	1060	1130	-	1900	2600	150

NOTE
Can also be supplied with optional disc brake.

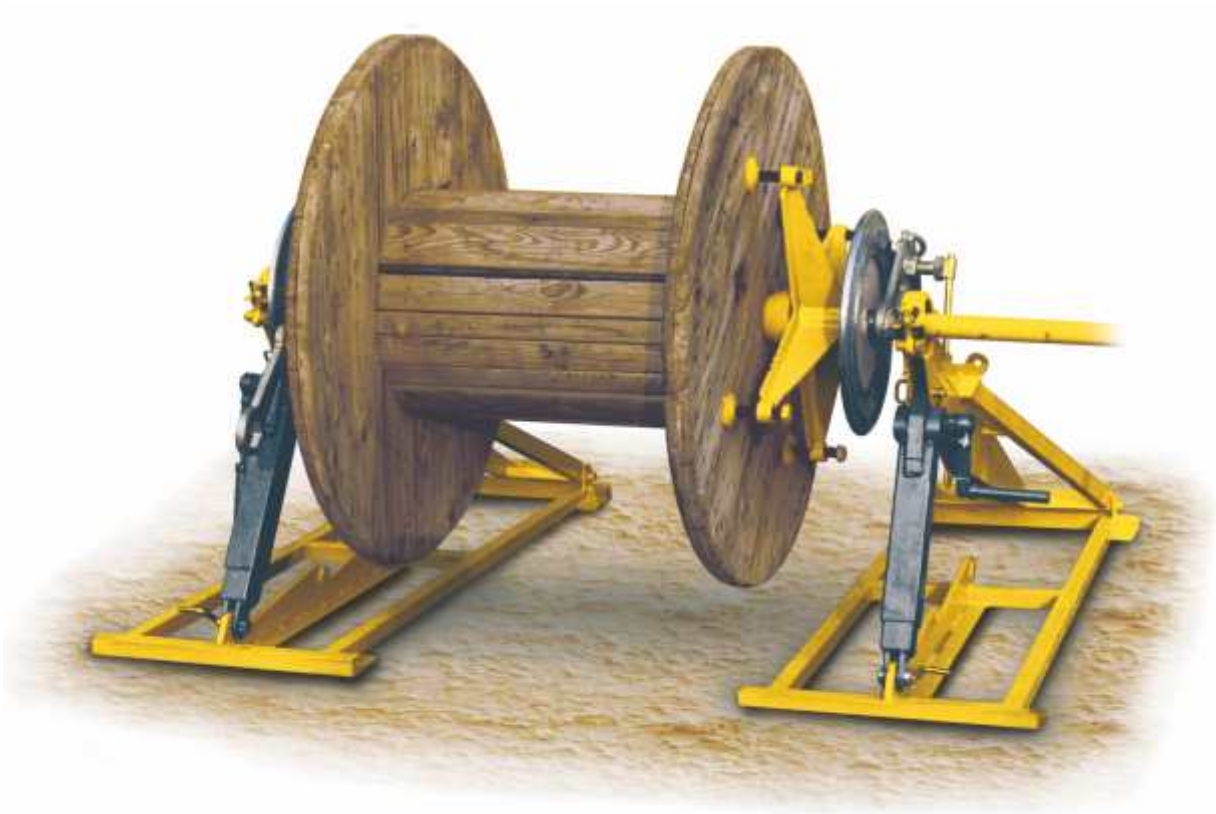


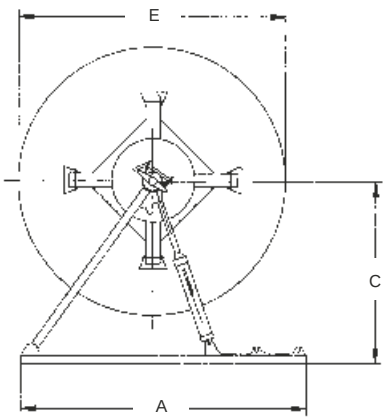


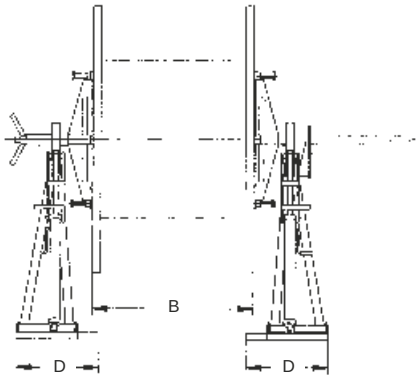
MECHANICAL REEL LIFTER

TL3402
Mechanical reel lifter

Solidly constructed, easy-to-handle reel lift stands. Can be dismantled for transport. Includes spider with fixed wedges for use with wooden reels. Includes a disc braking system to control the reel.





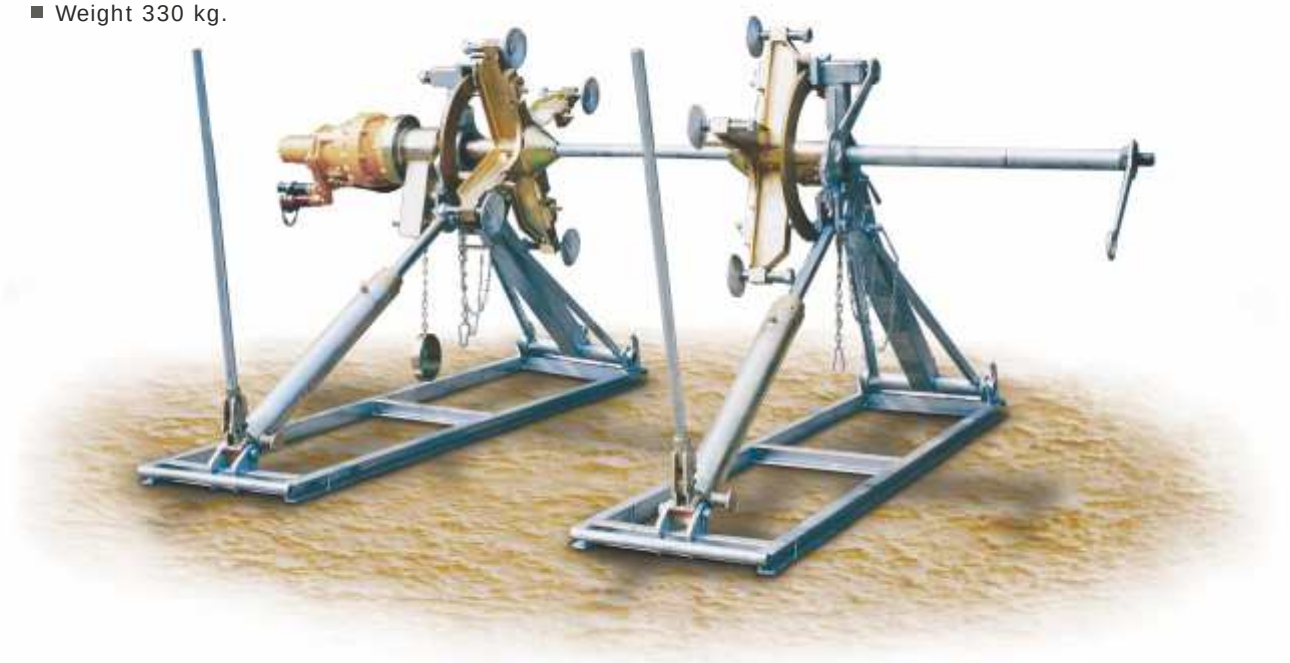


		DIMENSIONS (mm)									
REFERENCE	MODEL	A	B min	B max	C min	C max	D	E min	E max	CAPACITY (kg)	WEIGHT(kg)
TL3402	CVM200	1600	1000	1400	700	1100	610	1450	2000	4000	221

TL3401
Hydraulic reel lifter

These hydraulic reel lifters are made from high strength steel, and can be dismantled for easy transport. They are supplied with reel-holder axle and disc braking system for precise control of the reel during cable laying. Includes one disc brake (2nd disc optional).

- Minimum reel size 750 mm., maximum size 2.500 mm.
- Capacity 7.000 kg.
- Weight 330 kg.

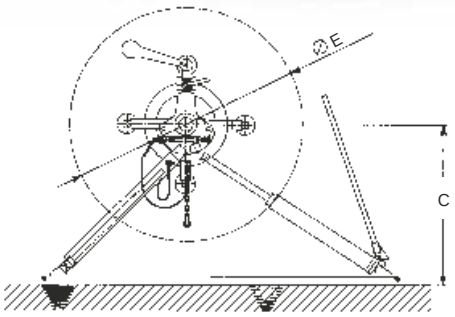


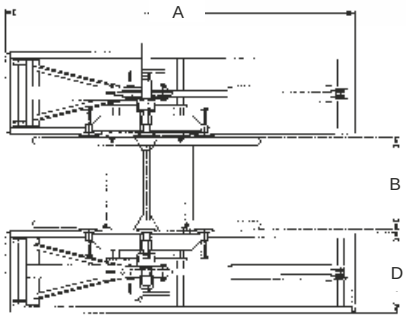
NOTE

Includes one disc brake (2nd disc optional).

With serrated safety structure for both hydraulic cylinders.

The hydraulic head is optional.





TL3559

TIH002 hydraulic power head to control payoff and synchronise braking.

- Torque 180 Kg/m.
- Maximum rotational speed 45 rpm.
- Weight 78 kg.

NOTE

TUT002 Hose set, length 10 m, weight 15 kg. Ref. TL3564

TL4745

CDA009 adapter for standard steel reels. (BOF010 - BOF020)

NOTE

Included in Ref. TL3401

HEAVY DUTY HYDRAULIC REEL LIFTERS

TL2937

Heavy duty hydraulic reel lifter

Hydraulic reel lifter manufactured from electrowelded steel. To lift the reels, the hydraulic cylinders are activated by a manual pump. For wood or steel reels. The brackets feature high load ball joints. Two disc brakes to control the rotation of the reel. Set of brackets and shaft, which can be adjusted to the diameter of the reel to be used.

Hydraulic power head to control reel rotation, whether in rewinding or tensioning mode. Power source.

- Maximum load: 30 TN.
- For reels up to 4.200 mm. diameter, 2.800 mm. wide.
- Dimensions: 2,80 x 0,70 m.
- Weight 1.600 kg.

REFERENCE	CAPACITY (TN)	DIAMETER Max. (mm)	DIAMETER Min. (mm)	WIDE STEEL (mm)	WEIGHT (kg)
TL5227	12	3500	2000	1600	600
TL5826	15	3500	2000	1600	700
TL5827	18	4000	2500	1800	700
TL2937	30	4200	2800	2400	1600

NOTE

All reel lifters are supplied with CE certification.

TL4668
Reel carrier trailer

Reel carrier trailer, authorised for use on public roads. Designed for maximum safety with an extremely sturdy frame. The reel is raised by means of hydraulic pistons activated by a manual pump. Inertial brake included.

- Capacity 1.700 kg.
- Maximum reel diameter 2.500 mm.
- Maximum reel width 1.350 mm.

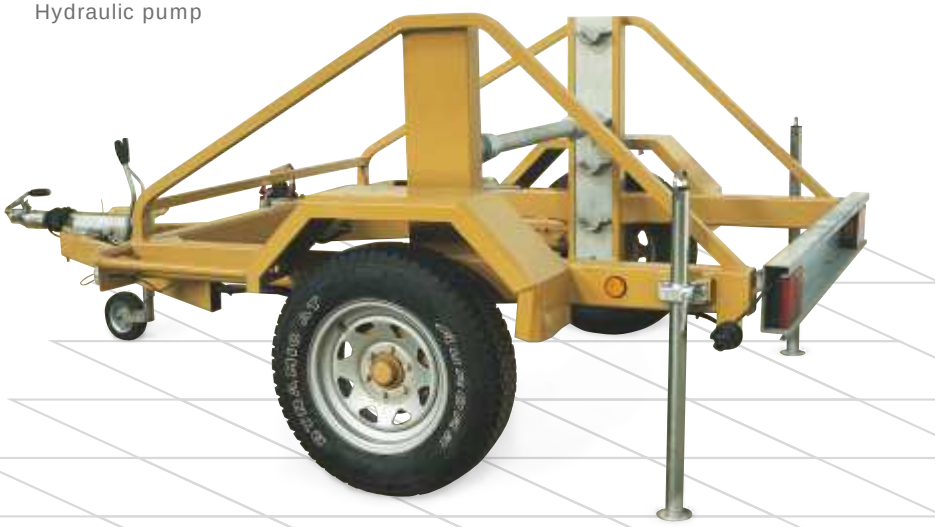
Supplied with spare wheel

Inertial brake

Hydraulic pump

NOTE
Reference TL4669 - Capacity 2.500 kg.
Reference TL4670 - Capacity 3.400 kg.

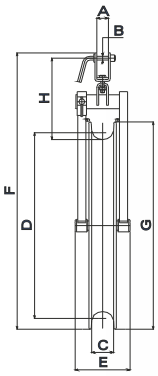
ADAPTED FOR AUTHORISED USE ON PUBLIC HIGHWAYS



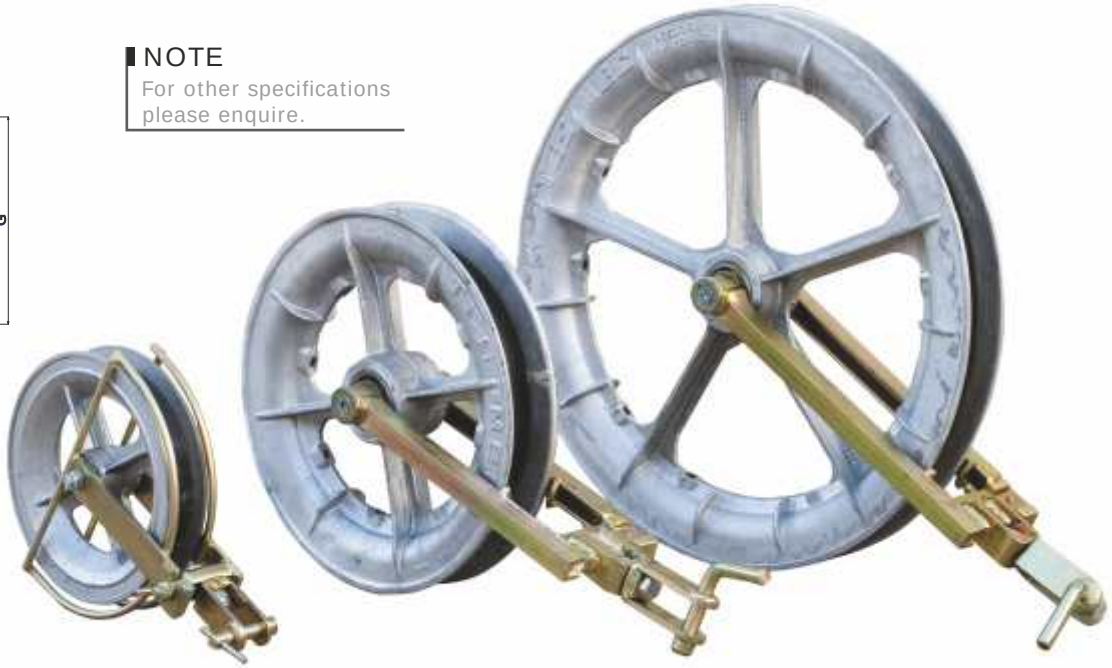
CABLE STRINGING PULLEYS

TL3357
Cable stringing pulleys

These cable stringing pulleys, manufactured from aluminium, are mounted on a zinc plated steel frame. Pulley grooves are fitted with a neoprene band. The following table specifies the most common models.



NOTE
For other specifications please enquire.



REFERENCE	MODEL	A	B	C	D	E	F	G	H	BREAKING STRAIN	WEIGHT(kg)
TL3357	CAS200	26	16	50	250	145	482	330	175	8000	7
TL3362	CAS402	40	20	68	400	186	850	520	365	10000	20
TL3364	CAS602	40	20	68	650	186	1052	775	315	10000	29
TL3367	CAS802	40	20	68	800	186	1157	880	315	12000	33

TL4247

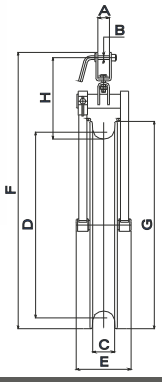
Cable stringing pulleys manufactured from aluminium, on a zinc plated steel frame.

- Diameter 250 mm.
- Weight 6 kg.
- Breaking load 1.240 Kg.

TL2921

Cable stringing pulleys manufactured from nylon, on a zinc plated steel frame.

- Diameter 250 mm.
- Weight 2,6 kg.
- Breaking load 2.762 Kg.

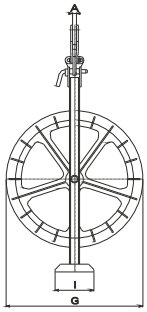


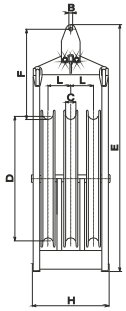
REFERENCE	MODEL	A	B	C	D	E	F	G	H	WEIGHT(kg)
TL4247	PT250	30	16	58	200	130	415	250	150	6
TL2921	PT250NY	30	28	70	180	135	400	250	180	2,6

CABLE STRINGING PULLEYS FOR TWO OR THREE CONDUCTORS

TL3370
CAT Pulleys

CAT pulleys are designed for stringing two or three conductors. They feature three aluminium sheaves; the outer sheaves have neoprene-lined grooves, and the inner sheave has interchangeable nylon sectors. Galvanized steel frame and fixed connector on one end.





REFERENCE	MODEL	A	B	C	D	E	F	G	H	I	L	BREAKING STRAIN	WEIGHT(kg)
TL3370	CAT506	25	24	68	500	1280	580	628	500	250	145	12000	95
TL3371	CAT612	25	24	68	650	1430	580	775	500	250	145	12000	110
TL3372	CAT613	25	24	95	650	1430	580	775	572	250	170	18000	130
TL3373	CAT812	25	24	68	800	1530	580	880	500	250	145	18000	125
TL3374	CAT813	25	24	95	800	1540	580	893	572	250	170	18000	160

CABLE STRINGING PULLEYS FOR FOUR CONDUCTORS

TL5497
CAQ Pulleys

CAQ pulleys are designed for stringing four conductors. They feature five aluminium sheaves; the four outer sheaves have neoprene-lined grooves, and the inner sheave has interchangeable nylon sectors. Galvanized steel frame and fixed connector on one end.

NOTE
We can supply detachable pulleys for two, three or four conductors.

REFERENCE	MODEL	A	B	C	D	E	F	G	H	I	L	BREAKING STRAIN	WEIGHT(kg)
TL5497	CAQ507	25	24	68	500	1290	595	628	700	100	145.5	12000	132
TL5498	CAQ614	25	24	68	650	1440	595	775	700	100	145.5	12000	155
TL5499	CAQ615	25	24	95	650	1440	595	775	826	130	170	18000	190
TL5500	CAQ814	25	24	68	800	1540	595	880	700	100	145.5	18000	180
TL5501	CAQ815	25	24	95	800	1540	595	893	826	130	170	18000	225

PULLEYS FOR STEEL CABLES

TL1670
Return pulley

Lifting pulley made from steel. Swivel hook with safety clip, with side opening to insert the cable. Sheave mounted on bearings.

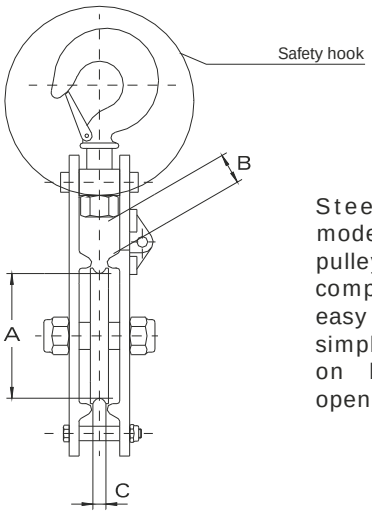
	REFERENCE		
FEATURES	TL1670	TL1671	TL1672
Safety Factor	3	3	3
Hook opening (mm)	25	34	43
Lost Total Height (mm)	425	480	592
Rated Capacity Load (Kg)	2.000	4.500	7.000
Maximum cable diameter (mm)	10	16	20
Diameter at base of groove (mm)	189	187	260
External diameter of sheave (mm)	227	227	310
Weight (Kg)	5,5	9,5	19
Width Sheave (mm)	29	48	67

UTILITY PULLEYS

TL3404
Steel utility pulley

		DIMENSIONS (mm)				
REFERENCE	MODEL	A	B	C	BREAKING STRAIN(kg)	WEIGHT(kg)
TL3404	CZA010	108	40	15	9000	5
TL3406	CZA030	138	40	15	18000	9,5

TL3407
Aluminium utility pulley



Steel and aluminium models available. These pulleys are extremely light, compact and safe, and are easy to handle for fast, simple operation. Mounted on bearings with side opening.

		DIMENSIONS (mm)				
REFERENCE	MODEL	A	B	C	BREAKING STRAIN(kg)	WEIGHT(kg)
TL3407	CZL050	100	30	22	3000	1.6
TL3408	CZL080	140	40	25	6000	2.8

TL4104
Insulated pulley

Made of polyamide with fibreglass. Side opening. Heavy duty 12.5 mm diameter spindle. 75 mm pulley wheel for rope of up to 16 mm diameter. Supplied with swivel clip with safety lock. Maximum load 450 kg.

TL4106
Insulated pulley with rope

Set of:
- Insulated pulley Ref. TI4104.
- Hook Ref. TL4136.
- Pulley carabiner Ref. TI4138.
- 30 m. insulated rope, diameter 12 mm.

TL4136
Utility hook

Manufactured from bronze, maximum work load 270 kg.

TL4138
Snap Hook for Pulleys

Manufactured from stamped steel, 16 mm. opening. Maximum work load 2.000 kg.

TL5502
Insulated pulley block set

Specially designed for hotline work. Made of polyamide with fibreglass. Swivel hooks with safety clips, large diameter ring for working with hot-line sticks. Two or three sheaves.

REFERENCE	DESCRIPTION	CAPACITY (kg)	WEIGHT(kg)
TL5502	2 vías	900	2.95
TL5503	3 vías	900	3.05

TL3998
Utility pulley

Snatch block type utility pulley, side-opening hinge, swivel hook with safety lock. Made of steel. 120 mm O.D. sheave.

- 22 mm, groove.
- Maximum work load 550 kg.
- Total height 310 mm.
- Weight 3,5 kg.

TL4004
Three way pulley block set

Three way utility pulley block set.
Manufactured from steel, includes swivel clip with safety lock.

- 60 mm O.D. sheave.
- 14 mm groove.
- Maximum work load 300 kg.
- Weight 3 kg (complete set).
- Total height 250 mm.

CABLE LEADERS

TL3528
Fibre optic cable leaders

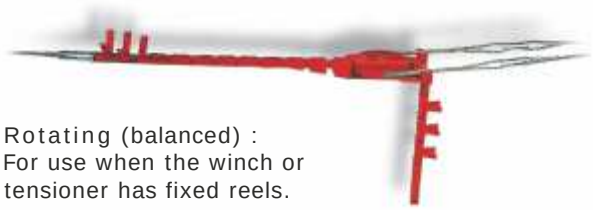
Cable leaders for OPGW fibre optic cable. These cable leaders are designed to connect fibre optic cable to the pulling rope. They are made up of a series of articulated rods linked together and an insulated hairpin to facilitate passage through the pulleys, with two counterweights to ensure proper balance.

REFERENCE	MODEL	DIMENSIONS (mm)	BREAKING STRAIN (kg)	WEIGHT(kg)	PULLEYS Ø (mm)
TL3528	RFF001	3900-330	3000	60	400/500/650
TL3529	RFF010	4300-500	3000	62	800/1000

More information available on request
Cable leaders for stringing

Running boards for stringing two or three bundled conductors. These running boards are designed to connect two or three conductors per phase to the pulling rope, with a maximum diameter of 24 mm. For four-conductor bundles the maximum diameter is 28 mm. All slings and joints or swivels required for use are included as standard. There are two types of running board: fixed and rotating.

- Fixed: For use when the winch or tensioner has independent reels.



- Rotating (balanced) : For use when the winch or tensioner has fixed reels.

CONNECTING LINKS

TL3457
Model GFT001

These links are specially designed to join sections of pilot rope or cable and pass easily over the drum of the winch or winch/tensioner. They minimize the risk of overload on the cable eye. Manufactured from high strength galvanized steel.

		DIMENSIONS (mm)							
REFERENCE	MODEL	A	B	C	D	H	R	BREAKING STRAIN(kg)	WEIGHT(kg)
TL3457	GFT001	59	28.5	10	15	11	11	7000	0.125
TL3458	GFT010	73.5	41	13	19.5	14	15	11000	0.325
TL3459	GFT020	91	49.5	16	20	19	18	16000	0.525
TL3460	GFT030	102	56	18	22	19	20	22000	0.750
TL3461	GFT040	121	60.5	24	27	26	22	36000	1.025
TL3462	GFT050	174	76.5	28	42	30	32	75000	3.025

SWIVEL LINKS

TL3463
Model GGT001

These links are specially designed to join the pull rope to the mesh cable grip placed over the conductor, avoiding the build-up of torque. Their unique design resists the high radial forces generated by passage through the stringing blocks. Manufactured from high strength galvanized steel.

		DIMENSIONS (mm)				
REFERENCE	MODEL	A	B	C	BREAKING STRAIN(kg)	WEIGHT(kg)
TL3463	GGT001	106	28	10	7000	0.300
TL3464	GGT010	143	40	13	11000	0.925
TL3465	GGT020	184	54	18	22000	2.150
TL3466	GGT030	234	60	24	36000	3.400
TL3467	GGT040	322	77	28	75000	8.200

CABLE GRIPS

The unique design and strict quality control during manufacture means that KLEIN cable grips can be used for all types of cables. Suitable for bare, PVC-coloured, aluminium, copper, and aluminium-steel cables.

Three types of jaw are available: V, double-V and round.
V jaws: Three points of contact with the conductor (small diameter and bare cable).
Double-V jaws: Four points of contact with the conductor, exerting more pressure on the conductor for proper alignment and greater grip, for example with steel conductors.
Round jaws: Provides maximum contact with the conductor without damaging it, ideal for aluminium-steel, aluminium and stranded copper cables.

TL4635
Parallel Jaw Grips

The long jaws grip the cable firmly, reducing the chance of slippage and damage to the cable. Includes a safety latch which prevents the grip from falling in case of disengagement from the cable. A large diameter eye at the back of the grip accommodates large hooks. The jaws have a double V contour.

			DIAMETER (mm)		BREAKING STRAIN
	REFERENCE	MODEL	MIN	MAX	MAXIM (kg)
	TL4635	KL1686-10	5.08	10.16	4545
	TL4636	KL1686-20(*)	5.08	10.16	4545
	TL4626	KL1671-10	9.40	19.05	4545
	TL4627	KL1672-10(*)	9.40	19.05	4545

NOTE
(*) = These models have serrated jaws, unlike the other two models, whose jaws are smooth.

TL4634
Curved Jaw Grips for EHS cables

When tensioning very high resistance galvanised EHS cables, the galvanised coating tends to coat and cover the jaws, producing slippage and damage to the cable. To avoid this, the jaws of these grips have been manufactured with a special curvature.

		DIAMETER (mm)		BREAKING STRAIN
REFERENCE	MODEL	MIN	MAX	MAXIM (kg)
TL4634	1684-74	5,54	13,97	3629

TL4622
Grips for PVC Covered Cables

The rippled jaws of this range are specially machined to allow for placement of the insulated conductor between them, reducing the danger of slippage, which is an important cause of damage to the insulation.

		DIAMETER (mm)		CARGA DE TRABAJO
REFERENCE	MODEL	MIN	MAX	MAXIM (kg)
TL4622	1659-20	5,08	10,67	2041
TL4623	1659-30	7,87	12,70	2041
TL4624	1659-40	12,45	20,07	3629
TL4625	1659-50	20,07	25,65	3629

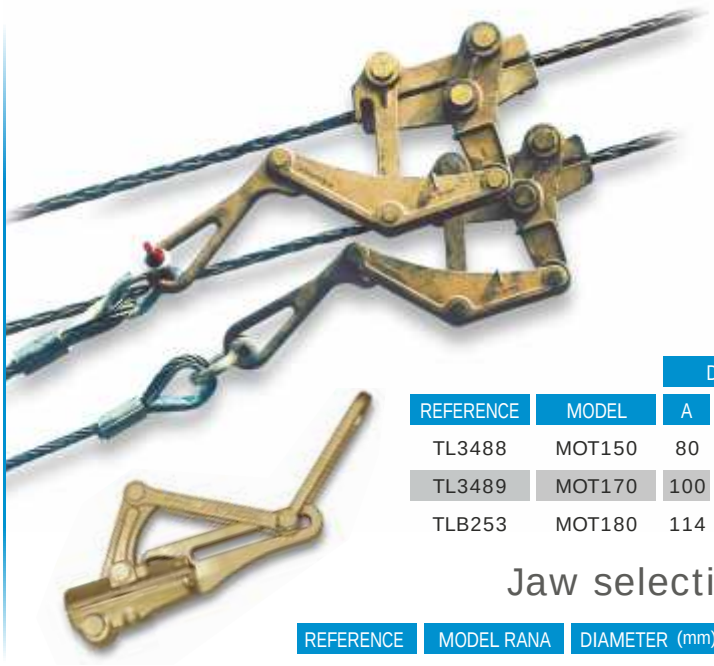
TL4617
Grips for Al-Steel, Aluminium and Braided Copper Cables

The round, smooth inner surface of the jaws in this series of grips is ideal for bare aluminium, aluminium-steel and copper cables. The smooth jaws with maximum contact surface are best for producing the least possible damage to the cable.

NOTE
Model numbers ending in "H" are grips for hotline work. They are placed on the cables using insulated sticks.

		DIAMETER (mm)		BREAKING STRAIN
REFERENCE	MODEL	MIN	MAX	MAXIM (kg)
TL4617	KL1656-20	5.08	10.16	2041
TL4600	KL1656-20H	5.08	10.16	2041
TL4618	KL1656-30	7.87	13.46	2041
TL4601	KL1656-30H	7.87	13.46	2041
TL4619	KL1656-40	13.46	18.80	3629
TL4602	KL1656-40H	13.46	18.80	3629
TL4620	KL1656-50	18.80	21.84	3629
TL4603	KL1656-50H	18.80	21.84	3629

TL3488
Grips with Interchangeable Jaws



TL3488

Cable grips with interchangeable jaws are used on bare aluminium, aluminium-steel and copper cables. They are manufactured from high strength steel, with special surface treatment to give guaranteed protection against corrosion.
This system of interchangeable jaws makes it possible to cater for a wide range of cable diameters with a single grip and a small number of jaws.

		DIMENSIONS (mm)						
REFERENCE	MODEL	A	B	C	D	BREAKING STRAIN (kg)	WEIGHT (kg)	STEEL CABLE
TL3488	MOT150	80	225	380	14-23	125	7	-
TL3489	MOT170	100	300	535	22.8-32	225	13	si
TLB253	MOT180	114	353	604	32-64	280	19,5	si

Jaw selection table

REFERENCE	MODEL RANA	DIAMETER (mm)	USO
TI3482	MOT150	14 - 17	Aluminium Conductor
TL3483	MOT150	17 - 20	Aluminium Conductor
TL3484	MOT150	20 - 23	Aluminium Conductor
TL3479	MOT170	22,8 - 26	Aluminium Conductor
TL3480	MOT170	26 - 29	Aluminium Conductor
TL3481	MOT170	29 - 32	Aluminium Conductor
TLB354	MOT180	32 - 35	Aluminium Conductor
TLB355	MOT180	35 - 38	Aluminium Conductor
TLB356	MOT180	38 - 41	Aluminium Conductor
TLB357	MOT180	41 - 44	Aluminium Conductor
TLB358	MOT180	44 - 46	Aluminium Conductor

(*) Specify diameter on the purchase order.

TL2898
Grip for Fibre Optic Cable

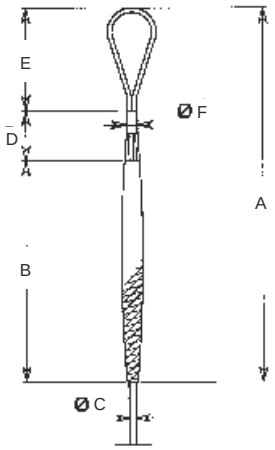
Interchangeable draw grip for fibre optic cables from 6 mm to 23 mm diameter. Manufactured from high strength steel. The interchangeable jaws are specially designed and manufactured to string fibre-optic cable without damaging it. The lower section is made from Teflon, and the upper from aluminium. When ordering, specify the diameter of the fibre-optic cable to be used.

- Maximum work load 5.000 kg.
- Breaking strain 12.500 kg.
- Weight 7 kg.

TL2901
Jaws for fibre-optic cable

TL3448
Steel Mesh Cable Pulls

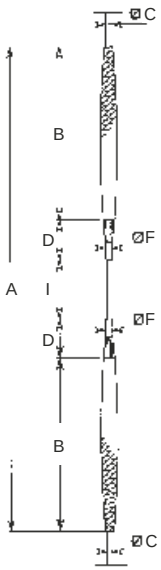
Designed for temporary connections to aluminium, steel or copper conductors. Extra long to provide a greater gripping surface on the conductor. Manufactured from high strength steel.



		DIMENSIONS (mm)						
REFERENCE	Ø CONDUCTOR (mm)	A	B	D	E	F	BREAKING STRAIN(kg)	WEIGHT(kg)
TL3448	08-17	1400	1100	140	160	22	3500	0.70
TL3449	17-29	1700	1360	160	180	28	8500	1.30
TL3450	29-38	1900	1470	200	230	30	13000	2.10
TL3452	38-50	2270	1820	200	250	34	18000	2.70

TL3453
Steel mesh conductor connector

Steel mesh connector. Designed for temporary connections to aluminium, steel or copper conductors. Extra long to provide a greater gripping surface on the conductor. Manufactured from high strength steel.

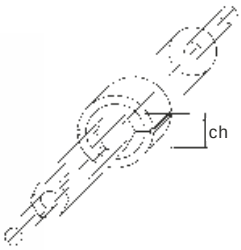


		DIMENSIONS (mm)					
REFERENCE	Ø CONDUCTOR (mm)	A	B	D	F	BREAKING STRAIN(kg)	WEIGHT(kg)
TL3453	08-17	2680	1100	140	22	3500	1,15
TL3454	17-29	3240	1360	160	28	8500	2,30
TL3455	29-38	3540	1470	200	30	13000	3,60
TL3456	38-50	4240	1820	200	34	18000	4,80

TL3523
Hydraulic presses

Crimping heads for cables and terminals, with quick connector for connection to a double-acting hydraulic unit with a maximum pressure of 700 bar. Hydraulic presses made of steel. Optimum weight/power ratio. Very short pressing cycle thanks to the hydraulic piston release.

		STRENGTH	HEXAGON "ch"		
REFERENCE	MODEL	COMPRESSION (tn)	MAXIM (mm)	WEIGHT(kg)	DIMENSIONS (mm)
TL3523	PRT001	64	44	26	350x180x410
TL3526	PRT060	120	65	52	520x280x450
TL5506	PRT020	184	90	145	600x430x600



Die selection table

	CONDUCTOR			DIE	
	DIAMETER (mm)		SECTION	∅ BETWEEN FACE (mm)	
DESIGNACIÓN	FOREIGN	STEEL	[mm2]	ALUMINIUM	STEEL
LA-110	14,00	6,00	116,20	25,50	11,00
LA-145	15,75	6,75	147,10	25,50	12,50
LA-180	17,50	7,50	181,60	25,50	13,50
ZIGOLO	19,38	7,14	222,39	34,50	14,50
LARK	20,44	8,76	248,39	34,50	16,00
LA-280 (HAWK)	21,80	8,04	281,10	34,50	16,00
LA-380 (GULL)	25,38	8,46	381,00	39,50	16,00
LA-455 (CONDOR)	27,72	9,24	454,50	39,50	19,00
LA-545 (CARDINAL)	30,42	10,14	547,30	45,00	22,00
LA-635 (FINCH)	32,85	10,95	536,60	49,00	22,00

HYDRAULIC DRIVES AND ACCESSORIES

TL3388
Model CPP001

700 bar double acting hydraulic pump.
With protective frame.

- Power 4,5 kW.
- Petrol tank capacity, 10 litres.
- Weight 54 kg.
- Dimensions 530 x 340 x 370 mm.

TL3560
Hose

TL3388 power hose, double acting connection, supplied with anti-drip quick connectors.

REFERENCE	MODEL	LENGTH (m)
TL3560	TUP 013	3
TL3561	TUP 014	6
TL3562	TUP 015	10
TL3563	TUP 017	30

JOINT COVERS AND THERMOMETERS

Joint cover

Designed to protect the final joint between conductors during tensioning operations. The cover consists of two galvanised steel shells with insulated ends housing rubber noses, making it possible to maintain the curvature radius of the conductor as it passes over the stringing pulleys.

NOTE
More information available on request.

TL3555
Conductor thermometer

An aluminium bulb which reproduces the surface and shape of the conductor.

- Weight 0,6 - 1,00 kg.
- Length 0,58 metres.

NOTE
Specify the conductor diameter when placing the order.

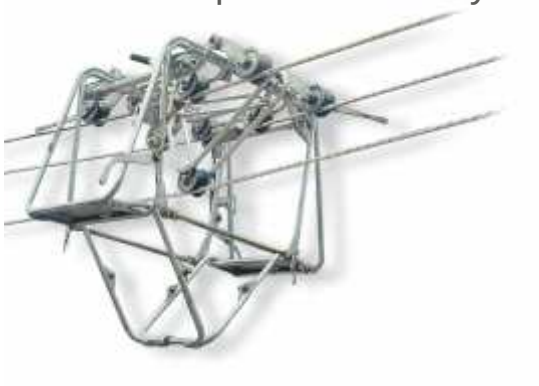
LINE INSPECTION TROLLEYS

TL3392
Line inspection trolleys

Manufactured from aluminium, the CRS010 inspection trolley allows one person to inspect individual lines. Provided with a footrest and a parking brake, with an optional metre counter and safety belt.

- Capacity 100 kg.
- Weight 13 kg.
- Dimensions 725 x 570 x 250 mm.
- Distance between pulleys 380 mm.

TL3389
Line inspection trolleys



Model CRB020 is manufactured from light aluminium alloy and allows two persons to inspect binary lines. Provided with a footrest and a parking brake.

- Capacity 200 kg.
- Weight 43 kg.
- Dimensions 840 x 1.330 mm.

NOTE
Specify the distance between the conductors when ordering.
For 3-conductor bundles, add option CYT001.
For 4-conductor bundles, add option CYQ002.

LINE BICYCLE FOR INSTALLING SPACERS

Designed for the installation of warning spheres on single lines, and spacers on bundles of 2, 3 or 4 conductors. When the operator pedals forward, the bicycle moves backwards to provide the necessary working space. Equipped with a disk brake on the drive wheel and a safety brake which clamps directly onto the conductor. Provided with metre counter and safety chain.

TL3349
Model BIB011 2-bundle line

- Weight 34 kg.

NOTE
OPTION BDC003
Spacer transport basket.

TL3350
Model BIS002 Single line

- Weight 19 kg.

NOTE
OPTION BDC002
Warning sphere
transport basket.

SAG SCOPE

TL3558
Sag scope

Designed to make it easy to regulate overhead line conductors using the direct vision method to measure sag. Even though there are other more advanced, high-tech methods, this system is still the easiest, the quickest and the most cost effective, and provides precise, reliable measurements.

LADDERS

TL3545
Hanging ladders

These ladders have been specifically designed for suspended work. They are manufactured from aluminium, with rails specially designed for the integrated anti-fall device, and have non-slip rungs and galvanised steel suspension hooks.

	CHARGE (kN)		LENGTH	
REFERENCE	BREAKAGE	WORK	METRES	BY SECTION (m)
TL3545	1500	300	3,5	3,5
TL3547	1500	300	4,5	4,5
TL3548	1500	300	6	6
TLA587	1500	300	6	4+2

Detail of anti-fall device

TL3540
Anchoring Ladder

These ladders have been specifically designed for anchoring work. They are made of aluminium, and have non-slip rungs and galvanised steel suspension hooks. An additional swivel hook is also supplied with the ladder, which can rest on the conductor to allow the operator to work in a horizontal position.

Two types are available:
- Triangular section.
- Trapezoidal section.

	CHARGE (kg)		LENGTH		
REFERENCE	BREAKAGE	WORK	METRES	BY SECTION (m)	SECTION
TL3540	0750	150	4	4	Triangular
TL3541	0750	150	6	6	Triangular
TL3542	0750	150	6	4+2	Triangular
TL3536	1500	300	3,5	3,5	Trapezoidal
TL3537	1500	300	4,5	4,5	Trapezoidal
TL3538	1500	300	6,5	4,5+2	Trapezoidal

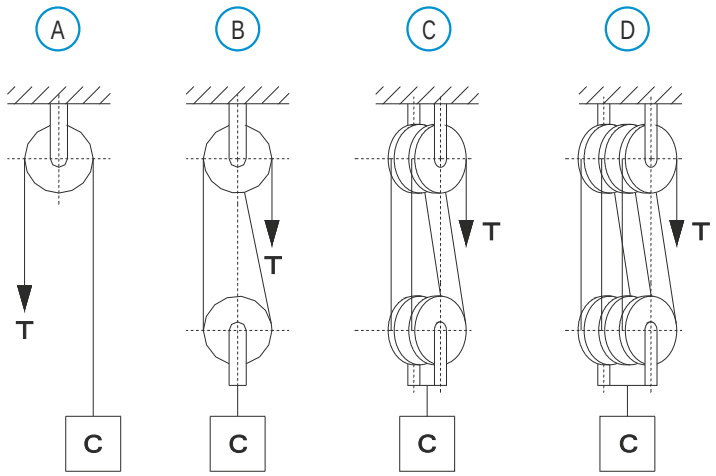
TL5582
SDA001 Anti-fall Device

This is an individual protection guide track type device made of aluminium, which automatically locks onto the rigid anchoring rail in case of accident. It includes polyamide mini shock absorbers and carabiners for connection to the safety harness which must be worn by the operator. It allows the operator to move freely along the ladder while providing protection against falls. It also includes a limit switch device to prevent it disengaging from the anchor rail.

NOTE
Complies with European Standard 89/686/CEE. All hanging ladders include anti-fall devices.

ALUMINIUM AND STEEL JIBS

These welded reticular steel or aluminium alloy jibs are specially designed for erecting vertical structures. They are available in different lengths which can be joined to achieve the required size. All jibs are supplied with a swivel head and a lower hook, and are fitted for an external cable.



Te specify the jib correctly, please state:
- Total length.
- Working position. (E - F - G)
- Payload. [C].

TABLE 1

CAPACITY	C = LIFTING LOADING (kg) POSITION			
TOTAL (kg)	A	B	C	D
0300	0150	0200	240	255
0400	0200	0265	320	340
0500	0250	0330	400	430
0700	0350	0460	560	600
0800	0400	0530	640	685
1000	0500	0600	800	855
1300	0650	0860	1040	1115
1600	0800	1065	1280	1370
2000	1000	1300	1600	1715
2500	1250	1660	2000	2140
3000	1500	2000	2400	2570
3800	1900	2530	3040	3255
4000	2000	2665	3200	3425
5000	2500	3330	4000	4285
6200	3100	4130	4960	5315
8000	4000	5330	6400	6850

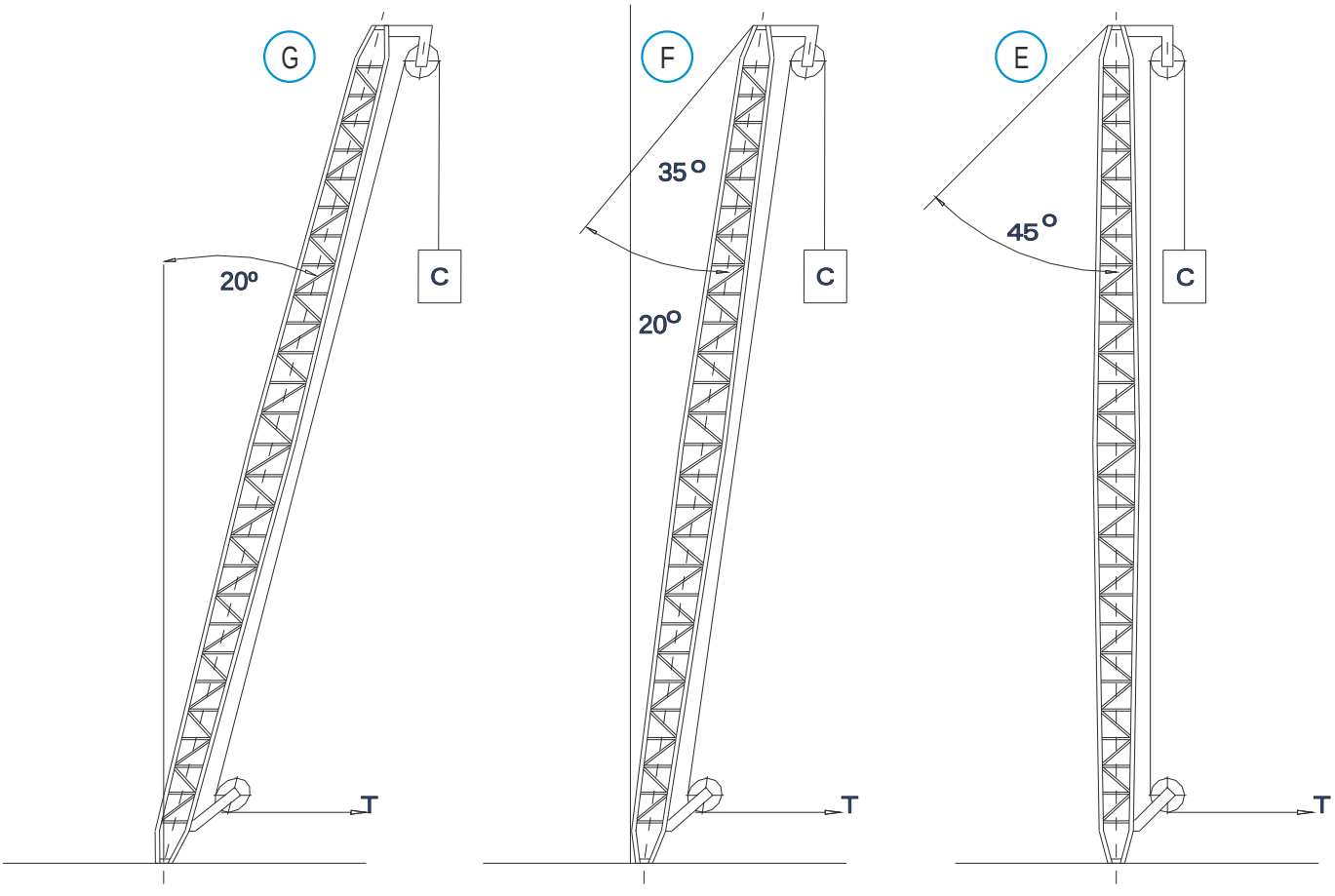
See Table 1 for the total capacity required, depending on the type of lifting system used. Then use the tables to determine the jib required depending on the required capacity and working position. Special length jibs can be supplied, with provision for laying the cable inside the jib and fixing to a bucket.

TABLE 2

		TOTAL CAPACITY (kg)			LENGTH		
REFERENCE	MODEL	POSITION E 0º	POSITION F 20º	POSITION G 20º	METRES	BY SECTION (m)	WEIGHT(kg)
TL7327	FAL001	1300	1000	300	8	4+4	40
Check	FAL010	1300	1000	300	12	4+4+4	65
TLB052	FAL020	2000	1600	400	8	4+4	45
TL8778	FAL030	2000	1600	400	10	4+2+4	60
Check	FAL040	2000	1600	400	12	4+4+4	70
TL8372	FAL050	2500	2000	500	8	3+2+3	50
Check	FAL060	2500	2000	500	12	4+4+4	80
Check	FAL070	2500	2000	500	16	5+6+5	110
TL8414	FAL080	3800	3000	700	12	4+4+4	100
Check	FAL090	3800	3000	700	16	5+6+5	130
Check	FAL100	3800	3000	700	18	6+6+6	180

NOTE

For steel jibs, please enquire.



DYNAMOMETERS

TL1659
Digital Dynamometer

Electronic dynamometer with digital display. Works in any position to measure forces, and when suspended measures masses.

- Precision: +/- 0.8% of the nominal capacity.
- Coefficient of use: greater than 6.
- Liquid crystal display: 5 x 18 mm high digits.
- Working temperature: -10 ºC to +40 ºC.
- Effective seal as per EN 60 529: IP65.
- Painted aluminium alloy body.
- Power: 3 x 1.5V AA or R6 batteries.
- Battery life approximately 200 hours.

REFERENCIA	CAPACIDAD (kg)	PRECISIÓN +/- (kg)	LECTURA (min)	PESO (kg)
TL1659	0500	4	1	1.1
TL1663	1000	8	2	1.1
TL1664	2000	15	5	1.3
TL1665	3200	25	5	1.5
TL1666	6400	50	10	2.3

TL1592
Hydraulic dynamometer

Standalone hydraulic tensometer (dynamometer), factory calibrated and sealed, with a precision of +/- 2% of the maximum reading. Nickel-plated to protect against corrosion and rust, it is supplied in a metal case with a cushioned interior to avoid impact damage.

A hook at one end and a ring at the other facilitate the placing of the load. The device records the force in kilos, and, in addition to the standard indicator, has a maximum indicator for predetermined loads or for measuring the maximum stress recorded during a particular testing session.

- Weight 3,9 kg.

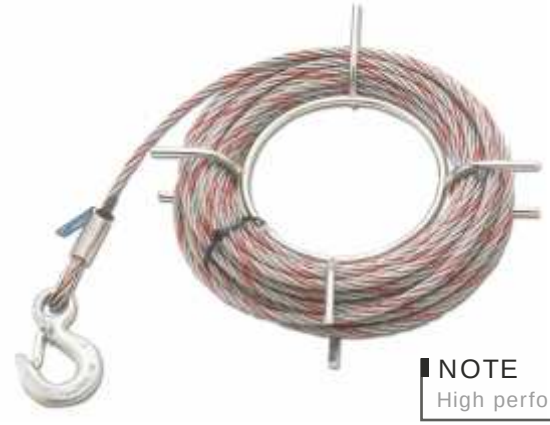
LIFTING AND TRACTION EQUIPMENT

TL1674
Tirfor T-07

Two blocks of self-closing jaws pull the cable in turn, with total, progressive safety: the higher the load, the stronger the grip. A declutching mechanism allows the cable to be fed through the jaws. They can be used in any position, with unlimited cable length. The use of pulley blocks multiplies their nominal capacity. The cable is easy to insert and remove.

REFERENCE	MODEL	CHARGEmax (kg)	WEIGHT(kg)
TL1674	T-07	0750	07
TL1675	T-13	1500	17
TL1676	T-35	3000	28

TL1635
Tractel Cable Roll



Standard Tirfor cable, supplied on a roller with a steel hook at one end and a conical point on the other. Red identification strand in cable. Available in different lengths as required, from 10 to 100 metres.

REFERENCE	LENGTH (metres)	DIAMETER (mm)	APPARATUS	STRAIN BREAKAGE(mm)	WEIGHT(kg)
TL1635	20	8.3	TL1674 (T-07)	4000	5.6
TL1641	20	11.5	TL1675 (T-13)	8000	10.7
TL1648	10	16.3	TL1676 (T-35)	16000	9.9

NOTE
High performance.

TL1636
Lever Hoist

Manufactured from high quality steel, this is a lightweight, reliable product which can be used in the most difficult situations. The structure is designed for ease of use and safety. The chain has short links to comply with current standards and articulated hooks with safety latches, and has a no-load neutral position.

REFERENCE	CHARGE(kg)	Nº RAMAL	WEIGHT(kg)
TL1636	0750	1	07
TL1645	1500	1	11
TL1647	3000	1	20
TL1654	6000	2	30

NOTE
Supplied with 1,5 m of chain.

TL1660
Tirvit tensioning device

The Tirvit, made from aluminium and forged steel, consists of a guide framework with a lever which acts in turn on two self gripping cam-driven jaws which pull a cable or wire. It has a pulling capacity of 400 to 800 kg, depending on the model. Every time the lever is moved, the two jaws move symmetrically along their guide rail. One jaw pulls the cable, while the other moves back freely to pull on the cable when the lever movement is inverted. Light, easy to use and with a small footprint. Its main applications are electricity and telephone lines.

REFERENCE	MODEL	FEATURES MAX(kg)	Ø CABLE (mm)	WEIGHT(kg)
TL1660	F2	400	02-08	4
TL1661	F3	600	07-15	5.2
TL1662	F4	800	14-18	6.2

TL1667
Jaw and grip accessories

Spare jaw supplied with slotted cam and recovery spring. The cable grips have a similar design to the jaws, and enable cables or wires to be held in tension while they are joined or adjusted. If fitted to the shackle of the device, they can be used to draw together the cables to be joined.

	JAWS		CABLE GRIPS	
F-2	TL1667	M2	TL1624	G2
F-3	TL1668	M3	TL1633	G3
F-4	TL1669	M4	TL1628	G4

TL2895
Tensioning device for braided cables

Allows tensioning, regulation and final fixing of braided wires for L.V. overhead lines, with significant reductions in working time. Continuous pull, can be used in any position. The high strength aluminium jaws are provided with rubber protectors to prevent damage to the conductor.

- Maximum work load 400 kg.
- Maximum diameter 39 mm.
- Weight 8 kg.

TL2889
Grip for braided cable

The ELI-GRIP is used for stringing 95 mm² and 150 mm² M.V. braided cables. This is a compact, safe tool: the internal neoprene jaws are the exact shape of the braided cable, and so can pull it directly without damaging it.

- Maximum pulling capacity
- 1.600 kg.
- Breaking strain 5.000 kg.
- Length 390 mm.
  Weight 10 kg.

TL2891
Cable lasher

Used for lashing overhead L.V. electricity cables and telephone lines to a supporting strand. Made of aluminium. Easy to use, polyamide resin gears.

TL2890
Reel of lashing wire

Plastic reel with 140 m. of PVC coated zinc steel wire.
Reel: Diameter 128 mm; width 66 mm., centre spindle diameter 14 mm.
Wire: Diameter 1.2 mm., breaking strength 45 kg.

TL1681
Multi-filament utility rope

3 or 4 strand ropes available. This is the lightest rope available, and is ideal for jobs requiring floating ropes.

- Light.
- Very little stretching.
- Soft texture.
- Water absorption +/- 0.5 to 1%.
- Good flexibility.
- Good abrasion resistance.
- Low resistance to UV rays.

REFERENCE	DIAMETER (mm)	CHARGE ROTURA (mm)	WEIGHT(kg) 100 m.
TL1681	08	0893	3
TL1682	10	1392	4,7
TL1683	12	2001	6.8
TL1684	14	2721	9.3
TL1685	16	3549	12.1
TL1686	18	4487	15.3
TL1687	20	5535	18.9

Supplied in 100 m rolls.

TL2693
Insulated utility rope

Rope designed for work requiring maximum installation protection. During the manufacturing process, additives are included to improve resistance to ultraviolet rays, and it is impregnated with substances which counteract the absorption of moisture. Made up of three strands.

- Hard texture.
- Water absorption +/- 0.01%.
- Round section.
- Negative conductivity.
- Density 0.91
- Low flexibility.
- Good resistance to UV rays.
- Low abrasion resistance.

REFERENCE	DIAMETER (mm)	CHARGE BREAKAGE(mm)
TL2693	06	0516
TL2694	08	0893
TL2695	10	1366
TL2696	12	2030
TL2697	14	2790
TL2698	16	3348
TL2699	18	4450

Supplied in 200 m. rolls.

TL2717
Polyester slings

Round or flat polyester slings, manufactured from high-strength materials in accordance with DIN 61360, EN 1492-1 and EN 1492-2. They are heat-treated and have a polyurethane coating on the fibre which provides extraordinary resistance to ultraviolet rays and greater durability. They can also be supplied with a special cut-resistant cover.

CAPACITY	LENGTH (1 m.)	(2 m.)	(3 m.)	(4 m.)
1000	TL2717	TL2718	TL2719	TL2720
1500	TL2722	TL2723	-	-
2000	TL2724	TL2725	TL2726	TL2727
3000	TL2729	TL2730	TL2731	TL2732
4000	TL2735	TL2736	TL2737	TL2738
5000	TL2740	TL2741	TL2742	TL2743
6000	TL2744	TL2745	TL2746	TL2747

01
High Voltage

AMPAC

Tool for connecting distribution networks and electricity transmission lines. Manufactured from high quality steel.

TL4647

Tool for installing and removing red and blue connectors.

Consists of:
- Tool for red and blue connectors.
- Extraction platform for red connectors.
- Extraction platform for blue connectors.
- Mounting platform for red connectors.
- Cleaning tool.
- Carrying case.

TL4648

Tool for installing and removing red, blue and yellow connectors.

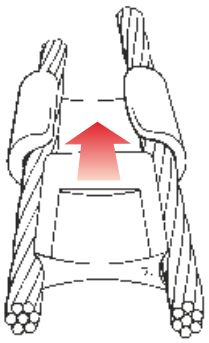
Consists of:
- Tool for red and blue connectors.
- Extraction platform for red connectors.
- Extraction platform for blue connectors.
- Mounting platform for red connectors.
- Cleaning tool.
- Extraction platform for yellow connectors.
- Head for yellow connectors.
- Carrying case.

NOTE
For aluminium-aluminium and aluminium-copper connectors, from 25 mm to 185 mm.

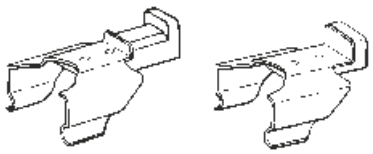
The head for yellow connectors can be supplied separately.

Red, blue and yellow cartridges

Pressure wedge connector



Extraction platforms



ALUMINOTHERMIC WELDING

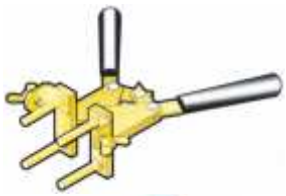
This process makes use of the high temperatures generated in the reaction caused by the reduction of copper oxide by aluminium. This reaction takes place inside a graphite crucible-mould, in which the parts to be welded have been previously inserted; the molten metal from the aluminothermic reaction flows over them, fusing them together and forming a compact, uniform mass. The equipment is light and portable, does not need any external energy source, and is therefore ideal for fieldwork. It does not require skilled personnel to produce optimum electrical connections of a very high mechanical quality in a very short time.

Mould

The moulds are machined from a block of refractory material (graphite). Their average lifetime in normal use is between 70 and 100 welds. A metal cover provides protection against splashes of material at the moment of ignition.

Tongs and Holders

These are designed to handle the moulds with complete safety, and can open and close the mould while it is hot. Two types of tongs are used depending on the size.



Powder cartridges

Plastic cartridges containing the aluminothermic charge at one end (coloured cap) and the ignition powder at the other end (black cap). The disc is used to block the nozzle before the charge is deposited.

Ignition Gun

Used to light the ignition powder. It uses standard cigarette lighter flints.

Wire brush

Used for cleaning the cables to be welded.

Mould scraper

Specially shaped to clean the loading hopper of the mould.

Brush

Used to clean the inside of the mould after each weld.

MOST COMMON JOINTS

01
High Voltage

INSTALLATION TOOLS

TL4516
Scriber

Special line scriber manufactured from chrome/vanadium steel and treated for maximum hardness. Extremely robust and efficient.

- Diameter 20 mm.
- Length 180 mm.
- Weight 0,3 kg.

TL2681
Crowbar

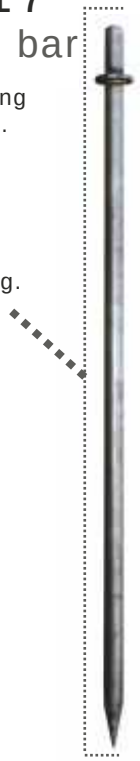
Manufactured from treated steel alloy, resistant to bending and breaking.

- Diameter 16 mm.
- Length 457 mm.
- Weight 0,6 kg.

TL4717
Digging bar

40 mm digging bar with ring.

1,2 m long.



TL2275
Spade

Easy to use spade for digging post holes, supplied without handle.

TL2276
Post hole bar

Hexagonal steel bar with one pointed end and one straight chisel end.

- 22 mm. hexagon.
- Length 2.000 mm.
- Weight 6,5 kg.

COLD GALVANISING

True galvanisation with cathodic properties which can be applied by any operator, using a brush, roller, spray gun or aerosol. Non-toxic. This is an excellent means of restoring hot-galvanised areas in poor condition, for retouching, and for welding seams.

TL2420
Aerosol

Aluminium look finish. Designed to recoat galvanised areas with an aluminium-like finish. Can be applied on any material. Quick drying.

TL2421
Aerosol

Aerosol: Very practical for maintenance, retouching, assemblies, etc.

TL2419
Tin

1 kg tin. 2-5 and 10 kg containers available by special order.

TL2414
Solvent

In 1 litre container.

CLIMBING RUNGS FOR HIGH VOLTAGE TOWERS

TL2813
Climbing rung

Manufactured from galvanised steel, these rungs have been specially designed for work on high voltage towers. They are easily fixed to the structure, and do not affect its structural strength. Several rungs placed at suitable distances make the task of climbing up and down the tower for maintenance purposes considerably easier and safer.

The TL2813 climbing rung assures a perfectly horizontal and therefore stable support for the operator.

The TL2813 rung can optionally be supplied with a fixed vertical safety line system (8 mm cable)(Reference TL2814). This extremely useful option simplifies the procedures necessary prior to climbing the tower (avoiding the installation of temporary safety lines), saving time and effort.

Reference TL2814 includes the rung and a special anchorage for the safety line.

Perfect fit on the steel section.

TL2815
Platform

Galvanised steel platform, the ideal complement for climbing rung TL2813. Solid, safe and easy to install, this is the perfect solution for working with absolute safety and high performance.

- Platform size 800 x 250 mm. (Other measurements available.)