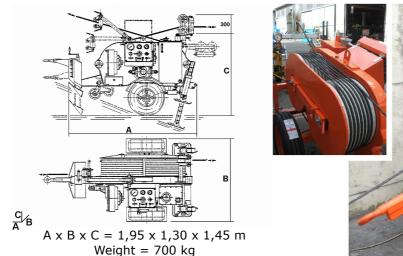


2

HYDRAULIC TENSIONERS



### Mod. F104.15





Hydraulic tensioner fit to tension one conductor. One hydraulic circuit lets to tension at constant force even varying the speed of stringing.

- One pair of steel capstans lined with multi-grooved nylon sectors.
- Machine control panel equipped with hydraulic dynamometer and mechanical metercounter.
- Safety negative hydraulic brake.
- Back fix conductor-driver with nylon rollers.
- Chassis with rigid axle, manual brake and detachable drawbar for towing at low speed in workplace.
- Stabilisers, share and attachments for anchoring the machine.

### **OPTIONAL DEVICES**

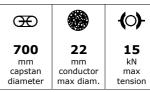
- 001.1 Freewheeling disconnection (neutral) of capstans.
- 010 Arrangement to use the machine as a puller (fed by a separated hydraulic power unit).
- 026 PVC cloth cover.
- 045.3 Manual clamp for rope/conductor.

FEATURES	
Capstans	2 x Ø 700 mm
Capstan grooves	4 + 4
Max conductor diameter	24 mm

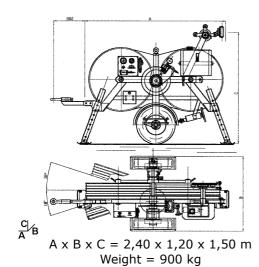
TENSION PERFORMANCES	
Max tension force	15 kN
Min tension force	1 kN
Max speed	5 km/h

also available mod. F104.25	
max tension force	25 kN
min tension force	1 kN
max speed	5 km/h

equipped with heat exchanger to cool the oil in the hydraulic circuit



### Mod. F75.20





Hydraulic tensioner fit to tension one conductor, specially fit for optical-fiber wires (OPGW).

One hydraulic circuit lets to tension at constant force even varying the speed of stringing.

- One pair of steel capstans lined with multi-grooved nylon sectors.
- Machine control panel equipped with hydraulic dynamometer and mechanical metercounter.
- Device to control low-force tensions, specially fit for optical fibers.
- Freewheeling disconnection (neutral) of capstans.
- Safety negative hydraulic brake.
- Back fix conductor-driver with nylon rollers.
- Chassis with rigid axle, manual brake and detachable drawbar for towing at low speed in workplace.
- Stabilisers, share and attachments for anchoring the machine.
- Heat exchanger to cool the oil in the hydraulic circuit.

### **OPTIONAL DEVICES**

- Arrangement to use the machine as a puller (fed by a 010 separated hydraulic power unit).
- 026 -PVC cloth cover.
- 045.3 Manual clamp for rope/conductor.

FEATURES	
Capstans	2 x Ø 1000 mm
Capstan grooves	5 + 5
Max conductor diameter	26 mm

TENSION PERFORMANCES	
Max tension force	20 kN
Min. tension force	1 kN
Max speed	5 km/h

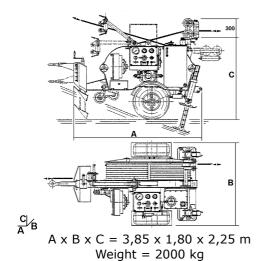
also available mod.	F75.30	
max tension force		30 kN
min tension force		1,5 kN
max speed		5 km/h
dimensions AxBxC	2,85 x	1,60 x 1,50 m
weight with no option	als	1500 kg

æ 1000 26 capstan conductor diameter

3120-0

rev. 05:12 EN

### Mod. F120.25





Hydraulic tensioner fit to tension one conductor or fiber optic cable.

One hydraulic circuit lets to tension at constant force even varying the speed of stringing.

- One pair of steel capstans lined with multi-grooved nylon sectors.
- Machine control panel equipped with hydraulic dynamometer and mechanical metercounter.
- Device to control low-force tensions (min. 1 kN), specially fit for optical fibers.
- Freewheeling disconnection (neutral) of capstans.
- Safety negative hydraulic brake.
- Back fix conductor-driver with nylon rollers.
- Chassis with rigid axle, manual brake and detachable drawbar for towing at low speed in workplace.
- Stabilisers, share and attachments for anchoring the machine.
- Heat exchanger to cool the oil in the hydraulic circuit.

### **OPTIONAL DEVICES**

- Arrangement to use the machine as a puller (fed by a 010 separated hydraulic power unit).
- Aluminium sectors with grooves, fit for tripolar cable ELICORD 80-mm dia.
- PVC cloth cover. 026 -
- 045.3 Manual clamp for rope/conductor.

FEATURES	
Capstans	2 x Ø 1500 mm
Capstan grooves	5 + 5
Max conductor diameter	34 mm

TENSION PERFORMANCES	
Max tension force	25 kN
Min tension force	1 kN
Max speed	5 km/h

ELICORD - with opt. 024.1	
Max diameter of elicord cable	80 mm

fit for three-polar cables **ELICORD** (with opt. 024.1)

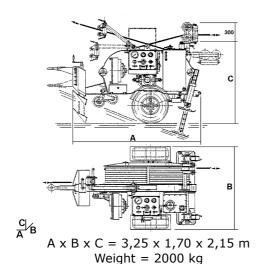
> æ 1500 capstan diameter



3140-2

rev. 02:12 EN

### Mod. F200.30





Hydraulic tensioner fit to tension one conductor or fiber optic

One hydraulic circuit lets to tension at constant force even varying the speed of stringing.

- One pair of steel capstans lined with multi-grooved nylon sectors.
- Machine control panel equipped with hydraulic dynamometer and mechanical metercounter.
- Device to control low-force tensions (1,5-15 kN), specially fit for optical fibers.
- Freewheeling disconnection (neutral) of capstans.
- Safety negative hydraulic brake.
- Back fix conductor-driver with nylon rollers.
- Chassis with rigid axle, manual brake and detachable drawbar for towing at low speed in workplace.
- Stabilisers, share and attachments for anchoring the machine.
- Heat exchanger to cool the oil in the hydraulic circuit.

### **OPTIONAL DEVICES**

Arrangement to use the machine as a puller (fed by a 010 separated hydraulic power unit).

tel. +39 035 838 092

fax +39 035 839 323

omac@omac-italy.it

- 026 -PVC cloth cover.
- 045.3 Manual clamp for rope/conductor.

FEATURES	
Capstans	2 x Ø 1200 mm
Capstan grooves	5 + 5
Max conductor diameter	34 mm

TENSION PERFORMANCES	
Max tension force	30 kN
Min. tension force	1,5 kN
Max speed	5 km/h

fit for fibre-optic cables

> æ 1200 34 capstan conductor

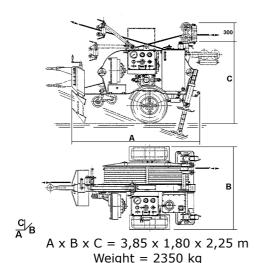
 $\langle 0 \rangle$ 30 max tension

3130-0

rev. 06:12 EN

## CMAC I TALY

### Mod. F120.30





Hydraulic tensioner fit to tension one conductor or fiber optic cable.

One hydraulic circuit lets to tension at constant force even varying the speed of stringing.

Possibility to use the machine as a puller for recovering conductors.

- One pair of steel capstans lined with multi-grooved nylon sectors.
- Machine control panel equipped with electronic instrument that operates as dynamometer, preselector of max pull force, metercounter and speedometer.
- Device to control low-force tensions (min. 1 kN), specially fit for optical fibers.
- Freewheeling disconnection (neutral) of capstans.
- Safety negative hydraulic brake.
- Back fix conductor-driver with nylon rollers.
- Chassis with rigid axle, manual brake and detachable drawbar for towing at low speed in workplace.
- Stabilisers, share and attachments for anchoring the machine.
- Heat exchanger to cool the oil in the hydraulic circuit.
- Auxiliary hydraulic circuit for controlling a reel-stand.

### **OPTIONAL DEVICES**

- 007 Chassis with amortised axle, overrun brake and drawbar for towing on road (homologation excluded).
- 024.1 Aluminium sectors with grooves, fit for tripolar cable ELICORD 80-mm dia.
- 026 PVC cloth cover.
- 037 Remote control by cable, with 10 m of cable.
- 038 Radio-control (max distance 50 m).
- 045.2 Automatic clamp for rope/conductor.
- 045.3 Manual clamp for rope/conductor.
- 069.2 Electronic device with USB port, to save the data of the pull.
- 069.5 Printer for the electronic recorder, with accessories.

FEATURES	
Capstans	2 x Ø 1500 mm
Capstan grooves	5 + 5
Max conductor diameter	34 mm

TENSION PERFORMANCES	
Max tension force	30 kN
Min tension force	1 kN
Max speed	5 km/h

ENGINE	
Feeding	diesel
Power	38 hp / 28 kW
Cooling system	acqua
Electric system	12 V

PULL-BACK PERFORMANCES	
Max pull	30 kN
Max speed	1 km/h

fit for three-polar cables

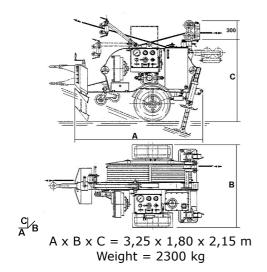
ELICORD Ø 80 mm

(with opt. 024.1)

1500 34 30 kN capstan diameter max diam.

# **CMAC**

### Mod. F200.35





Hydraulic tensioner fit to tension one conductor or fiber optic cable.

One hydraulic circuit lets to tension at constant force even varying the speed of stringing.

Possibility to use the machine as a puller for recovering conductors.

- One pair of steel capstans lined with multi-grooved nylon sectors.
- Machine control panel equipped with electronic instrument that operates as dynamometer, preselector of max pull force, metercounter and speedometer.
- Device to control low-force tensions (1,5-20 kN), specially fit for optical fibers.
- Freewheeling disconnection (neutral) of capstans.
- Safety negative hydraulic brake.
- Back fix conductor-driver with nylon rollers.
- Chassis with rigid axle, manual brake and detachable drawbar for towing at low speed in workplace.
- Stabilisers, share and attachments for anchoring the machine.
- Heat exchanger to cool the oil in the hydraulic circuit.
- Auxiliary hydraulic circuit for controlling a reel-stand.

### **OPTIONAL DEVICES**

- 007 Chassis with amortised axle, overrun brake and drawbar for towing on road (homologation excluded).
- 026 PVC cloth cover.
- 037 Remote control by cable, with 10 m of cable.
- 038 Radio-control (max distance 50 m).
- 045.2 Automatic clamp for rope/conductor.
- 045.3 Manual clamp for rope/conductor.
- 069.2 Electronic device with USB port, to save the data of the pull.
- 069.5 Printer for the electronic recorder, with accessories.

FEATURES	
Capstans	2 x Ø 1200 mm
Capstan grooves	5 + 5
Max conductor diameter	34 mm

TENSION PERFORMANCES	
Max tension force	35 kN
Min. tension force	1,5 kN
Max speed	5 km/h

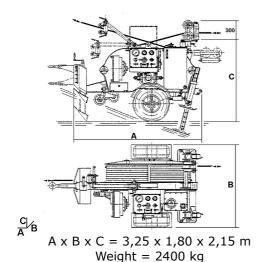
ENGINE	
Feeding	diesel
Power	38 hp / 28 kW
Cooling system	water
electric plant	12V

PULL-BACK PERFORMANCES	
Max pull force	35 kN
Max speed	0,9 km/h

1200 34 35 kN capstan diameter max diam. tension

## CNAC ITALY

### Mod. F200.40.2





Hydraulic tensioner fit to tension one or two conductors or optical fibre cables.

One hydraulic circuit lets to tension at constant force even varying the speed of stringing.

- One pair of steel capstans lined with multi-grooved nylon sectors.
- Machine control panel equipped with hydraulic dynamometer and mechanical metercounter.
- Device to control low-force tensions (1,5-20 kN), specially fit for optical fibers.
- Freewheeling disconnection (neutral) of capstans.
- Safety negative hydraulic brake.
- Two back fix conductor-driver with nylon rollers.
- Chassis with rigid axle, manual brake and detachable drawbar for towing at low speed in workplace.
- Stabilisers, share and attachments for anchoring the machine.
- Heat exchanger to cool the oil in the hydraulic circuit.

### **OPTIONAL DEVICES**

- 010 Arrangement to use the machine as a puller (fed by a separated hydraulic power unit).
- 026 PVC cloth cover.
- 045.3 Manual clamp for 2 ropes/conductors.

FEATURES	
Capstans	2 x Ø 1200 mm
Capstan grooves	6 + 6
Max conductor diameter	2 x 34 mm

TENSION PERFORMANCES	
Max tension force	40 kN
Min. tension force	1,5 kN
Max speed	5 km/h

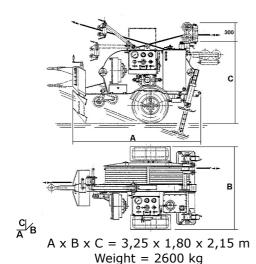
1200 2 mm capstan diameter

2 x 34

40 kN max tension

 $\langle 0 \rangle$ 

### Mod. F120.40.2





Hydraulic tensioner fit to tension one or two conductors or optical fibre cables.

One hydraulic circuit lets to tension at constant force even varying the speed of stringing.

- One pair of steel capstans lined with multi-grooved nylon sectors.
- Machine control panel equipped with hydraulic dynamometer and mechanical metercounter.
- Device to control low-force tensions (2-20 kN), specially fit for optical fibers.
- Freewheeling disconnection (neutral) of capstans.
- Safety negative hydraulic brake.
- Two back fix conductor-driver with nylon rollers.
- Chassis with rigid axle, manual brake and detachable drawbar for towing at low speed in workplace.
- Stabilisers, share and attachments for anchoring the machine.
- Heat exchanger to cool the oil in the hydraulic circuit.

### **OPTIONAL DEVICES**

- Arrangement to use the machine as a puller (fed by a 010 separated hydraulic power unit).
- 026 -PVC cloth cover.
- 045.3 Manual clamp for 2 ropes/conductors.

FEATURES	
Capstans	2 x Ø 1500 mm
Capstan grooves	8 + 8
Max conductor diameter	2 x 34 mm

TENSION PERFORMANCES	
Max tension force	40 kN
Min. tension force	1,5 kN
Max speed	5 km/h

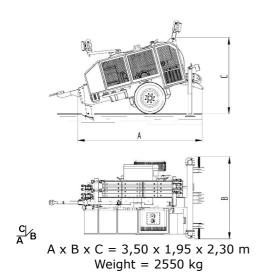
æ 1500 capstan diameter

2 x 34 mm conductor

40 max tension

 $\langle 0 \rangle$ 

### Mod. F200.45.2





Hydraulic tensioner fit to tension one or two conductors or optical fibre cables.

One hydraulic circuit lets to tension at constant force even varying the speed of stringing.

Possibility to use the machine as a puller for recovering conductors.

- One pair of steel capstans lined with multi-grooved nylon sectors.
- Machine control panel equipped with electronic instrument that operates as dynamometer, preselector of max pull force, metercounter and speedometer.
- Device to control low-force tensions (2-20 kN), specially fit for optical fibers.
- Freewheeling disconnection (neutral) of capstans.
- Safety negative hydraulic brake.
- Two back fix conductor-driver with nylon rollers.
- Chassis with rigid axle, manual brake and detachable drawbar for towing at low speed in workplace.
- Stabilisers, share and attachments for anchoring the machine.
- Heat exchanger to cool the oil in the hydraulic circuit.
- Two auxiliary hydraulic circuits for controlling 1 or 2 reelstands.

### **OPTIONAL DEVICES**

- 008 Amortised axle, air brake, drawbar and lights for towing on the road (homologation excluded).
- 026 PVC cloth cover.
- 037 Remote control by cable, with 10 m of cable.
- 038 Radio-control (max distance 50 m).
- 045.2 Automatic clamp for 2 ropes/conductors.
- 045.3 Manual clamp for 2 ropes/conductors.
- 069.2 Electronic device with USB port, to save the data of the pull.
- 069.5 Printer for the electronic recorder, with accessories.

FEATURES	
Capstans	2 x Ø 1200 mm
Capstan grooves	8 + 8
Max conductor diameter	2 x 34 mm

TENSION PERFORMANCES	
Max tension force	45 kN
Min. tension force	2 kN
Max speed	5 km/h

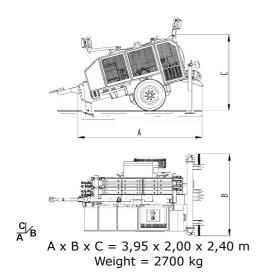
ENGINE	
Feeding	diesel
Power	38 hp / 28 kW
Cooling system	water
Electric system	12 V

PULL-BACK PERFORMANCES	
Pull force	45 kN
Max speed	0,8 km/h

1200 2 x 34 28 45
mm kW kN
capstan conductor diameter max diam. power tension

## CMAC ITALY

### Mod. F120.45.2





Hydraulic tensioner fit to tension one or two conductors or optical fibre cables.

One hydraulic circuit lets to tension at constant force even varying the speed of stringing.

Possibility to use the machine as a puller for recovering conductors.

- One pair of steel capstans lined with multi-grooved nylon sectors.
- Machine control panel equipped with electronic instrument that operates as dynamometer, preselector of max pull force, metercounter and speedometer.
- Device to control low-force tensions (2-20 kN), specially fit for optical fibers.
- Freewheeling disconnection (neutral) of capstans.
- Safety negative hydraulic brake.
- Two back fix conductor-driver with nylon rollers.
- Chassis with rigid axle, manual brake and detachable drawbar for towing at low speed in workplace.
- Stabilisers, share and attachments for anchoring the machine.
- Heat exchanger to cool the oil in the hydraulic circuit.
- Two auxiliary hydraulic circuits for controlling 1 or 2 reelstands.

### **OPTIONAL DEVICES**

- 008 Amortised axle, air brake, drawbar and lights for towing on the road (homologation excluded).
- 026 PVC cloth cover.
- 037 Remote control by cable, with 10 m of cable.
- 038 Radio-control (max distance 50 m).
- 045.2 Automatic clamp for 2 ropes/conductors.
- 045.3 Manual clamp for 2 ropes/conductors.
- 069.2 Electronic device with USB port, to save the data of the pull.
- 069.5 Printer for the electronic recorder, with accessories.

FEATURES	
Capstans	2 x Ø 1500 mm
Capstan grooves	8 + 8
Max conductor diameter	2 x 34 mm

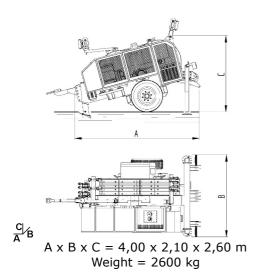
TENSION PERFORMANCES	
Max tension force	45 kN
Min. tension force	2 kN
Max speed	5 km/h

ENGINE	
Feeding	diesel
Power	38 hp / 28 kW
Cooling system	water
Electric system	12 V

PULL-BACK PERFORMANCES	
Pull force	45 kN
Max speed	0,8 km/h

1500 2 x 34 28 45 kW capstan conductor diameter max diam.

### Mod. F200.70.2





Hydraulic tensioner fit to tension one or two conductors or optical fibre cables.

One hydraulic circuit lets to tension at constant force even varying the speed of stringing.

- One pair of steel capstans lined with multi-grooved nylon sectors.
- Machine control panel equipped with hydraulic dynamometer and mechanical metercounter.
- Device to control low-force tensions (4-30 kN), specially fit for fibre-optic cables.
- Freewheeling disconnection (neutral) of capstans.
- Safety negative hydraulic brake.
- Two back fix conductor-driver with nylon rollers.
- Chassis with rigid axle, manual brake and detachable drawbar for towing at low speed in workplace.
- Stabilisers, share and attachments for anchoring the machine.
- Heat exchanger to cool the oil in the hydraulic circuit.

### **OPTIONAL DEVICES**

- Arrangement to use the machine as a puller (fed by a 010 separated hydraulic power unit).
- 026 -PVC cloth cover.
- 045.3 Manual clamp for 2 ropes/conductors.

FEATURES	
Capstans	2 x Ø 1200 mm
Capstan grooves	10 + 10
Max conductor diameter	2 x 38 mm

TENSION PERFORMANCES	
Max tension force	70 kN
Max speed	5 km/h

æ 1200 capstan diameter

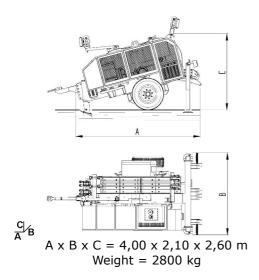
2 x 38 mm conductor

70 max tension

**(**)

rev. 09:12 EN

### Mod. F120.70.2





Hydraulic tensioner fit to tension one or two conductors or optical fibre cables.

One hydraulic circuit lets to tension at constant force even varying the speed of stringing.

- One pair of steel capstans lined with multi-grooved nylon sectors.
- Machine control panel equipped with hydraulic dynamometer and mechanical metercounter.
- Device to control low-force tensions (4-30 kN), specially fit for fibre-optic cables.
- Freewheeling disconnection (neutral) of capstans.
- Safety negative hydraulic brake.
- Two back fix conductor-driver with nylon rollers.
- Chassis with rigid axle, manual brake and detachable drawbar for towing at low speed in workplace.
- Stabilisers, share and attachments for anchoring the machine.
- Heat exchanger to cool the oil in the hydraulic circuit.

### **OPTIONAL DEVICES**

- Arrangement to use the machine as a puller (fed by a 010 separated hydraulic power unit).
- 026 -PVC cloth cover.
- 045.3 Manual clamp for 2 ropes/conductors.

FEATURES	
Capstans	2 x Ø 1500 mm
Capstan grooves	10 + 10
Max conductor diameter	2 x 40 mm

TENSION PERFORMANCES	
Max tension force	70 kN
Max speed	5 km/h

æ 1500 capstan diameter

2 x 40 mm conductor

**75** max tension

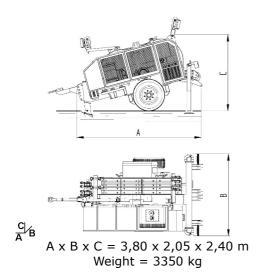
**(**)

3210-0

rev. 06:12 EN

## SMAC ITALY

### Mod. F200.75.2





Hydraulic tensioner fit to tension one or two conductors or optical fibre cables.

One hydraulic circuit lets to tension at constant force even varying the speed of stringing.

Possibility to use the machine as a puller for recovering conductors.

- One pair of steel capstans lined with multi-grooved nylon sectors.
- Machine control panel equipped with electronic instrument that operates as dynamometer, preselector of max pull force, metercounter and speedometer.
- Device to control low-force tensions (4-25 kN), specially fit for fibre-optic cables.
- Freewheeling disconnection (neutral) of capstans.
- Safety negative hydraulic brake.
- Two back fix conductor-driver with nylon rollers.
- Chassis with rigid axle, manual brake and detachable drawbar for towing at low speed in workplace.
- Stabilisers, share and attachments for anchoring the machine.
- Heat exchanger to cool the oil in the hydraulic circuit.
- Two auxiliary hydraulic circuits for controlling 1 or 2 reelstands.

### **OPTIONAL DEVICES**

- 008 Amortised axle, air brake, drawbar and lights for towing on the road (homologation excluded).
- 026 PVC cloth cover.
- 028.7 Device to start the diesel engine at low temperatures (up to -30°C).
- 037 Remote control by cable, with 10 m of cable.
- 038 Radio-control (max distance 50 m).
- 045.2 Automatic clamp for 2 ropes/conductors.
- 045.3 Manual clamp for 2 ropes/conductors.
- 069.2 Electronic device with USB port, to save the data of the pull.
- 069.5 Printer for the electronic recorder, with accessories.
- 174.2 Synchroniser device for matching 2 machines to tension more conductors simultaneously, complete with cablecontrol (20 m) for controlling the 2 machines.

FEATURES	
Capstans	2 x Ø 1200 mm
Capstan grooves	10 + 10
Max conductor diameter	2 x 38 mm

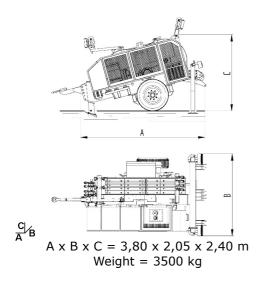
TENSION PERFORMANCES		
Max tension	70 kN	
Min. tension	4 kN	
Max speed	5 km/h	

ENGINE	
Feeding	diesel
Power	60 hp / 44 kW
Cooling system	water
Electric system	12 V

PULL-BACK PERFORMANCES	
Max pull	75 kN
Max speed	1 km/h

1200 2 x 38 44 75 KW engine diameter diameter power force

### Mod. F120.75.2





Hydraulic tensioner fit to tension one or two conductors or optical fibre cables.

One hydraulic circuit lets to tension at constant force even varying the speed of stringing.

Possibility to use the machine as a puller for recovering conductors.

- One pair of steel capstans lined with multi-grooved nylon sectors.
- Machine control panel equipped with electronic instrument that operates as dynamometer, preselector of max pull force, metercounter and speedometer.
- Device to control low-force tensions (4-30 kN), specially fit for fibre-optic cables.
- Freewheeling disconnection (neutral) of capstans.
- Safety negative hydraulic brake.
- Two back fix conductor-driver with nylon rollers.
- Chassis with rigid axle, manual brake and detachable drawbar for towing at low speed in workplace.
- Stabilisers, share and attachments for anchoring the machine.
- Heat exchanger to cool the oil in the hydraulic circuit.
- Two auxiliary hydraulic circuits for controlling 1 or 2 reel-stands.

### **OPTIONAL DEVICES**

- 008 Amortised axle, air brake, drawbar and lights for towing on the road (homologation excluded).
- 026 PVC cloth cover.
- 028.7 Device to start the diesel engine at low temperatures (up to -30 °C).
- 037 Remote control by cable, with 10 m of cable.
- 038 Radio-control (max distance 50 m).
- 045.2 Automatic clamp for 2 ropes/conductors.
- 045.3 Manual clamp for 2 ropes/conductors.
- 069.2 Electronic device with USB port, to save the data of the pull.
- 069.5 Printer for the electronic recorder, with accessories.
- 174.2 Synchroniser device for matching 2 machines to tension more conductors simultaneously, complete with cable-control (20 m) for controlling the 2 machines.

FEATURES	
Capstans	2 x Ø 1500 mm
No. of grooves	10 + 10
Max conductor diameter	2 x 40 mm

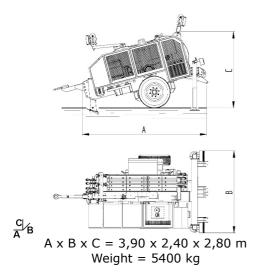
TENSION PERFORMANCES	
Max tension	70 kN
Min. tension	4 kN
Max speed	5 km/h

ENGINE	
Feeding	diesel
Power	60 hp / 44 kW
Cooling system	water
Electric system	12 V

PULL-BACK PERFORMANCES	
Max pull	75 kN
Max	1 km/h

1500 kW 75
mm capstan diameter diameter diameter power kW force

### Mod. F120.100.22





Hydraulic tensioner fit to string one or two conductors.

Two hydraulic circuits let to tension at constant force even varying the speed of stringing. The two circuits can be used independently or simultaneously, with automatic partition of the forces.

The machine is equipped with an engine for pull-back operations. In pulling-back usage, one hydraulic circuit lets to vary in continuous the speed in both directions, allowing to use one of the hydraulic circuits or both them matched.

- Two pairs of steel capstans lined with multi-grooved nylon sectors, fit for 2 conductors totally.
- Machine control panel equipped with 2 electronic instruments that operate as dynamometer, preselector of max pull force, metercounter and speedometer.
- Two safety negative hydraulic brakes.
- Back fix conductor-driver with nylon rollers.
- Chassis with rigid axle, manual brake and detachable drawbar for towing at low speed in workplace.
- Hydraulic share, hydraulic back stabilisers and eyes for anchoring and for lifting the machine.
- Heat exchanger to cool the oil in the hydraulic circuit.
- Mechanism to synchronise the motion of the capstans.
- Device with handle for coupling mechanically the 2 pairs of capstans.
- Two auxiliary hydraulic circuits for controlling 1 or 2 reel-stands.

- 005.1 Chassis with 2 dumped axles (tandem), air braking system and
- 008 Amortised axle, air brake, drawbar and lights for towing on the road (homologation excluded).
- 012 Predisposition of one hydraulic circuit to feed a press for high pressure joints (max. 700 bar).
- 017 Hydraulic/mechanical device (n.1, on 1 circuit) to control low braking values (3-30 kN), fit to string fiber optics.
- 026 PVC cloth cover.
- 028.7 Device to start the diesel engine at low temperatures (up to -30°C).
- 037 Remote control by cable, with 10 m of cable.
- 038 Radio-control (max distance 50 m).
- 045.2 Automatic clamp for 2 ropes/conductors.
- 045.3 Manual clamp for 2 ropes/conductors.
- 069.2 Two electronic devices with USB port, to save the data of the pull (n.1 each circuit).
- 069.5 Printer for the electronic recorder, with accessories.
- 174.2 Synchroniser device for matching 2 machines to tension more conductors simultaneously, complete with cable-control (20 m) for controlling the 2 machines.

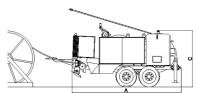
4 x Ø 1500 mm
10 + 10
2 x 42 mm

TENSION PERFORMANCES	
Max tension force	2 x 50 kN
or	1 x 100 kN
Max speed	5 km/h

ENGINE	
Feeding	diesel
Power	55 hp / 49 kW
Cooling	water
Electric system	12 V

PULL-BACK PERFORMANCES	
Max pull force	2 x 50 kN
or	1 x 100 kN
Max speed	0.8 km/h

also available mod. F120.80.22	
max tension force	2 x 40 kN
or	1 x 80 kN

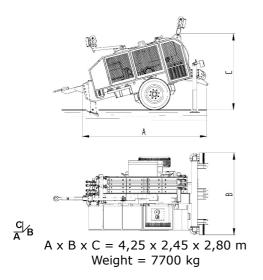


with opt.005.1

æ		kW	<b>(</b> )
1500	2 x 42	49	100
mm	mm	kW	kN
capstan	conductor	engine	max
diameter	max diam.	power	tension

# **CMAC**

### Mod. F110.140.22





Hydraulic tensioner fit to string one or two conductors.

Two hydraulic circuits let to tension at constant force even varying the speed of stringing. The two circuits can be used independently or simultaneously, with automatic partition of the forces.

The machine is equipped with an engine for pull-back operations. In pulling-back usage, one hydraulic circuit lets to vary in continuous the speed in both directions, allowing to use one of the hydraulic circuits or both them matched.

- Two pairs of steel capstans lined with multi-grooved nylon sectors, fit for 2 conductors totally.
- Machine control panel equipped with 2 electronic instruments that operate as dynamometer, preselector of max pull force, metercounter and speedometer.
- Two safety negative hydraulic brakes.
- Back fix conductor-driver with nylon rollers.
- Chassis with rigid axle, manual brake and detachable drawbar for towing at low speed in workplace.
- Hydraulic share, hydraulic back stabilisers and eyes for anchoring and for lifting the machine.
- Heat exchanger to cool the oil in the hydraulic circuit.
- Mechanism to synchronise the motion of the capstans.
- Device with handle for coupling mechanically the 2 pairs of capstans.
- Two auxiliary hydraulic circuits for controlling 1 or 2 reel-stands.

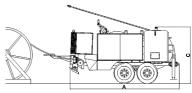
- 005.1 Chassis with 2 dumped axles (tandem), air braking system and
- 012 Predisposition of one hydraulic circuit to feed a press for high pressure joints (max. 700 bar).
- 017 Hydraulic/mechanical device (n.1, on 1 circuit) to control low braking values (4-40 kN), fit to string fiber optics.
- 026 PVC cloth cover.
- 028.7 Device to start the diesel engine at low temperatures (up to -30°C).
- 037 Remote control by cable, with 10 m of cable.
- 038 Radio-control (max distance 50 m).
- 045.2 Automatic clamp for 2 ropes/conductors.
- 045.3 Manual clamp for 2 ropes/conductors.
- 069.2 Two electronic devices with USB port, to save the data of the pull (n.1 each circuit).
- 069.5 Printer for the electronic recorder, with accessories.
- 174.2 Synchroniser device for matching 2 machines to tension more conductors simultaneously, complete with cable-control (20 m) for controlling the 2 machines.

FEATURES	
Capstans	4 x Ø 1700 mm
Capstan grooves	10 + 10
Max conductor diameter	2 x 46 mm
Max conductor diameter	2 x 46 mm

TENSION PERFORMAN	CES
Max tension force	2 x 70 kN
or	1 x 140 kN
Max speed	5 km/h

ENGINE	
Feeding	diesel
Power	87 hp / 64 kW
Cooling	water
Electric system	24 V

PULL-BACK PERFORM	ANCES
Max pull force	2 x 70 kN
or	1 x 140 kN
Max speed	0,9 km/h



with opt.005.1

æ		kW	<b>(</b> )
1700	2 x 46	<b>64</b>	140
mm	mm	kW	kN
capstan	conductor	engine	max
diameter	max diam.	power	tension

## CNAC ITALY

2 x Ø 1500 mm

12 + 12

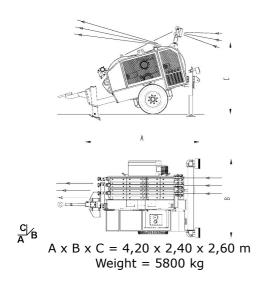
120 kN

5 km/h

12 V

3 x 44 mm

### Mod. F120.120.3





**FEATURES** 

Max tension

Electric system

Max speed

Capstan grooves

Max wire diameter

TENSION PERFORMANCES

Capstans

Hydraulic tensioner fit to tension 1, 2 or 3 conductors. One hydraulic circuit lets to tension at constant force even varying the speed of stringing.

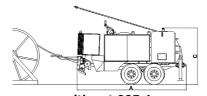
Possibility to use the machine as a puller for recovering conductors.

- One pair of steel capstans lined with multi-grooved nylon sectors.
- Machine control panel equipped with electronic instrument that operates as dynamometer, preselector of max pull force, metercounter and speedometer.
- Safety negative hydraulic brake.
- Three back fix conductor-driver with nylon rollers.
- Chassis with rigid axle, manual brake and detachable drawbar for towing at low speed in workplace.
- Stabilisers, share and attachments for anchoring the machine.
- Heat exchanger to cool the oil in the hydraulic circuit.
- Three auxiliary hydraulic circuits for controlling 1, 2 or 3 reelstands.

ENGINE	
Feeding	Diesel
Power	92 hp / 68 kW
Cooling system	water

PULL-BACK PERFORMANCES	
Max pull	120 kN
Max speed	1 km/h

- 005.4 Chassis with 2 rigid axles (tandem).
- 012 Predisposition of one hydraulic circuit to feed a press for high pressure joints (max. 700 bar).
- 017 Device to control low-force tensions, specially fit for fibre-optic cables.
- 026 PVC cloth cover.
- 028.7 Device to start the diesel engine at low temperatures (up to -30°C).
- 037 Remote control by cable, with 10 m of cable.
- 038 Radio-control (max distance 50 m).
- 045.2 Automatic clamp for 3 ropes/conductors.
- 045.3 Manual clamp for wire for 3 conductors.
- 069.2 Electronic device with USB port, to save the data of the pull.
- 069.5 Printer for the electronic recorder, with accessories.
- 174.2 Synchroniser device for matching 2 machines to tension more conductors simultaneously, complete with cablecontrol (20 m) for controlling the 2 machines.

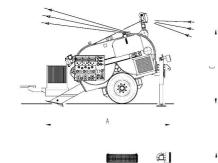


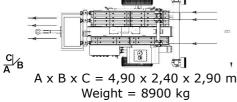
with opt.005.4

⊛		kW	<b>(</b> )
1500	3 x 44	68	120
mm	mm	kW	kN
capstan	conductor	engine	max
diameter	max diam.	power	tension

# **CMAC**

### Mod. F120.135.33







Hydraulic tensioner fit to tension 1, 2 or 3 conductors.

Three hydraulic circuits let to tension at constant force even varying the speed of stringing. The three circuits can be used independently or simultaneously, with automatic partition of the forces.

The machine is equipped with an engine for pull-back operations. In pull-back usage, one hydraulic circuit lets to vary in continuously the speed in both directions, allowing to use one of the hydraulic circuits or all of them.

- Three pairs of steel capstans lined with multi-grooved nylon sectors.
- Machine control panel equipped with 3 electronic instruments that operate as dynamometer, preselector of max pull force, metercounter and speedometer.
- Three safety negative hydraulic brakes.
- Front and back conductor-driver with nylon rollers.
- Chassis with rigid axle, manual brake and detachable drawbar for towing at low speed in workplace.
- Stabilisers, share and attachments for anchoring the machine.
- Heat exchanger to cool the oil in the hydraulic circuit.
- Mechanism to synchronise the motion of the capstans.
- Three auxiliary hydraulic circuits for controlling 1, 2 or 3 reelstands.

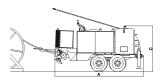
- 005.1 Chassis with 2 dumped axles (tandem), air braking system and lights.
- O12 Predisposition of one hydraulic circuit to feed a press for high pressure joints (max. 700 bar).
- 017 Hydraulic/mechanical device (n.1, on 1 circuit) to control low braking values, fit to string fiber optics.
- 026 PVC cloth cover.
- 028.7 Device to start the diesel engine at low temperatures (up to -30°C).
- 037 Remote control by cable, with 10 m of cable.
- 038 Radio-control (max distance 50 m).
- 045.2 Automatic clamp for 3 ropes/conductors.
- 045.3 Manual clamp for wire for 3 conductors.
- 069.2 Three electronic devices with USB port, to save the data of the pull (n.1 each circuit).
- 069.5 Printer for the electronic recorder, with accessories.

FEATURES	
Capstans	6 x Ø 1500 mm
Max conductor diameter	3 x 40 mm
Max joint diameter	50 mm

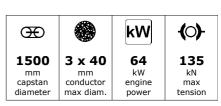
TENSION PERFORMANCES		
Max tension force	3 x 45 kN	
or	1 x 90 + 1 X 45 kN	
Max speed	5 km/h	

ENGINE	
Feeding	diesel
Power	87 hp / 64 kW
Cooling	water
Electric system	12 V

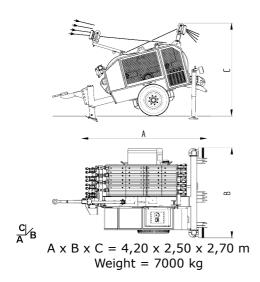
PULL-BACK PERF	ORMANCES
Max pull force	3 x 45 kN
or	1 x 90 + 1 x 45 kN
Max speed	1,5 km/h



with opt. 005.1



### Mod. F120.150.4





Hydraulic tensioner fit to tension 1, 2, 3 or 4 (up to 6 on demand) conductors.

One hydraulic circuit lets to tension at constant force even varying the speed of stringing.

Possibility to use the machine as a puller for recovering conductors.

- One pair of steel capstans lined with multi-grooved nylon sectors.
- Machine control panel equipped with electronic instrument that operates as dynamometer, preselector of max pull force, metercounter and speedometer.
- Safety negative hydraulic brake.
- Back fix conductor-driver with nylon rollers for 4 cond.
- Chassis with rigid axle, manual brake and detachable drawbar for towing at low speed in workplace.
- Stabilisers, share and attachments for anchoring the machine.
- Heat exchanger to cool the oil in the hydraulic circuit.
- Four auxiliary hydraulic circuits for controlling 1, 2, 3 or 4 reelstands.

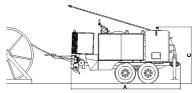
- 005.4 Chassis with 2 rigid axles (tandem).
- 012 Predisposition of one hydraulic circuit to feed a press for high pressure joints (max. 700 bar).
- 017 Device to control low-force tensions, specially fit for fibreoptic cables.
- 020.3 Set of nylon sectors with grooves fit for 6 conductors Ømax 31,5 mm(instead of standard set), and 2 hydraulic circuits to control 2 additional reel-stands (total 6).
- 026 PVC cloth cover.
- 028.7 Device to start the diesel engine at low temperatures (up to -30°C).
- 037 Remote control by cable, with 10 m of cable.
- 038 Radio-control (max distance 50 m).
- 045.2 Automatic clamp for 4 ropes/conductors.
- 045.3 Manual clamp for locking the conductor (for 3 and 4 conductors).
- 069.2 Electronic device with USB port, to save the data of the pull.
- 069.5 Printer for the electronic recorder, with accessories.
- 174.2 Synchroniser device for matching 2 machines to tension more conductors simultaneously, complete with cable-control (20 m) for controlling the 2 machines.

FEATURES	
Capstans	2 x Ø 1500 mm
Capstan grooves	16 + 16
Max conductor diameter	4 x 45 mm

TENSION PERFORMANCES	
Max tension	150 kN
Max speed	5 km/h

ENGINE	
Feeding	Diesel
Power	92 hp / 68 kW
Cooling system	water
Flectric system	24 V

PULL-BACK PERFORMANCES	
Max pull	150 kN
Max speed	0,8 km/h

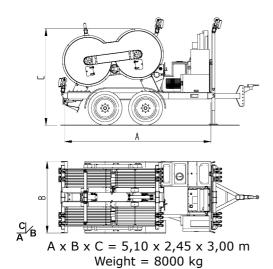


with opt.005.4

æ		kW	<b>(</b> )
1500 mm capstan diameter	4 x 45 mm conductor max diam.	<b>68</b> kW engine power	kN max tension



### Mod. F120.150.42





Hydraulic tensioner fit to tension 1, 2, 3 or 4 conductors. Two hydraulic circuits let to tension at constant force even varying the speed of stringing. The two circuits can be used independently or simultaneously, with automatic partition of the forces.

The machine is equipped with an engine for pull-back operations. In pulling-back usage, one hydraulic circuit lets to vary in continuous the speed in both directions, allowing to use one of the hydraulic circuits or both them matched.

- Two pairs of steel capstans lined with multi-grooved nylon sectors, fit for 2 conductors totally.
- Machine control panel equipped with 2 electronic instruments that operate as dynamometer, preselector of max pull force, metercounter and speedometer.
- Two safety negative hydraulic brakes.
- Front and back conductor-drivers with nylon rollers, for 4 cond.
- Chassis with two rigid axles (tandem), tires and drawbar for towing at low speed in workplace.
- Hydraulic share, hydraulic back stabilisers and eyes for anchoring and for lifting the machine.
- Heat exchanger to cool the oil in the hydraulic circuit.
- Mechanism to synchronise the motion of the capstans.
- Four auxiliary hydraulic circuits for controlling 1, 2, 3 or 4 reelstands.

### **OPTIONAL DEVICES**

- 005.1 Chassis with 2 dumped axles (tandem), air braking system and lights.
- 012 Predisposition of one hydraulic circuit to feed a press for high pressure joints (max. 700 bar).
- 017 Hydraulic/mechanical device (n.1, on 1 circuit) to control low braking values, fit to string fiber optics.
- 020.3 Set of nylon sectors with grooves fit for 6 conductors (3+3).
- 028.7 Device to start the diesel engine at low temperatures (up to -30°C).
- 037 Remote control by cable, with 10 m of cable.
- 038 Radio-control (max distance 50 m).
- 045.2 Automatic clamp for 4 ropes/conductors.
- 045.3 Manual clamp for locking the conductor (for 3 and 4 conductors).
- 069.2 Two electronic devices with USB port, to save the data of the pull (n.1 each circuit).
- 069.5 Printer for the electronic recorder, with accessories.

4 x Ø 1500 mm
10 (tot.40)
4 x 40 mm

TENSION PERFORMANCES		
Max tension	$150 \text{ kN} = 2 \times 75 \text{ kl}$	N
Max pension per cond	ductor 37,5 kl	N
Max speed	5 km/	h

ENGINE	
Feeding	Diesel
Power	87 hp / 64 kW
Cooling system	water
Electric system	12 V

PULL-BACK PERFORMANCES	
Max pull	2 x 75 kN
Max speed	1 km/h

1500 4 x 40 kW engine diameter max diam.

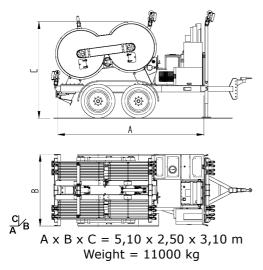
 $(\bigcirc)$ 

150

max

tension

### Mod. F120.200.44







Hydraulic tensioner fit to tension 1, 2, 3 or 4 conductors. Four hydraulic circuits let to tension at constant force even varying the speed of stringing. The 4 circuits can be used independently or simultaneously, with automatic partition of the forces.

The machine is equipped with an engine for pull-back operations. In pull-back usage, one hydraulic circuit lets to vary in continuously the speed in both directions, allowing to use one of the hydraulic circuits per time.

- Four pairs of steel capstans lined with multi-grooved nylon sectors.
- Machine control panel equipped with 4 electronic instruments that operate as dynamometer, preselector of max pull force, metercounter and speedometer.
- Four safety negative hydraulic brakes.
- Front and back conductor-drivers with nylon rollers, for 4 cond.
- Chassis with two rigid axles (tandem), tires and drawbar for towing at low speed in workplace.
- Stabilisers, share and attachments for anchoring the machine.
- Heat exchanger to cool the oil in the hydraulic circuit.
- Mechanism to synchronise the motion of the capstans.
- Four auxiliary hydraulic circuits for controlling 1, 2, 3 or 4 reelstands.

- 005.1 Chassis with 2 dumped axles (tandem), air braking system and lights.
- 012 Predisposition of one hydraulic circuit to feed a press for high pressure joints (max. 700 bar).
- 017 Hydraulic/mechanical device (n.1, on 1 circuit) to control low braking values, fit to string fiber optics.
- 028.7 Device to start the diesel engine at low temperatures (up to -30°C).
- 037 Remote control by cable, with 10 m of cable.
- 038 Radio-control (max distance 50 m).
- 045.2 Automatic clamp for 4 ropes/conductors.
- 045.3 Manual clamp for locking the conductor (for 3 and 4 conductors).
- 069.2 Four electronic devices with USB port, to save the data of the pull (n.1 each circuit).
- 069.5 Printer for the electronic recorder, with accessories.

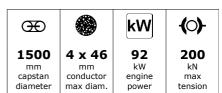
FEATURES	
Capstans	8 x Ø 1500 mm
Max conductor diameter	4 x 46 mm

TENSION PERFORM	ANCES
Max tension	2 x 100 kN
or	4 x 50 kN
Max speed	5 km/h

ENGINE	
Feeding	Diesel
Power	125 hp / 92 kW
Cooling system	water
Electric system	12 V

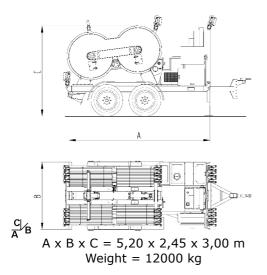
PULL-BACK PERFORMANCES		
Max pull	2 x 100 kN	
or	4 x 50 Kn	
Max speed	1 km/h	

also available mod. F120.180.44		
max tension	2 x 90 kN	
or	4 x 45 kN	



## CMAC ITALY

### Mod. F120.240.62





Hydraulic tensioner fit to string 1, 2, 3, 4 or 6 conductors. Two hydraulic circuits let to tension at constant force even varying the speed of stringing. The two circuits can be used independently or simultaneously, with automatic partition of the forces.

The machine is equipped with an engine for doing pull-back operations. In pulling-back usage, one hydraulic circuit lets to vary in continuous the speed in both directions, allowing to use one of the hydraulic circuits or both coupled.

- Two pairs of steel capstans lined with multi-grooved nylon sectors, fit for 2 conductors totally.
- Machine control panel equipped with 2 electronic instruments that operate as dynamometer, preselector of max pull force, metercounter and speedometer.
- Two safety negative hydraulic brakes.
- Front and back conductor-drivers with nylon rollers, for 6
- Chassis with two rigid axles (tandem), tires and drawbar for towing at low speed in workplace.
- Hydraulic share, hydraulic back stabilisers and eyes for anchoring and for lifting the machine.
- Heat exchanger to cool the oil in the hydraulic circuit.
- Mechanism to synchronise the motion of the capstans.
- Six auxiliary hydraulic circuits for controlling up to 6 reelstands.

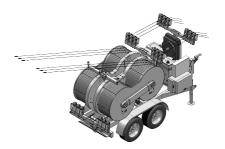
- 005.1 Chassis with 2 dumped axles (tandem), air braking system and lights.
- 012 Predisposition of one hydraulic circuit to feed a press for high pressure joints (max. 700 bar).
- 028.7 Device to start the diesel engine at low temperatures (up to -30°C).
- 037 Remote control by cable, with 10 m of cable.
- 038 Radio-control (max distance 50 m).
- 045.2 Automatic clamp for 6 ropes/conductors.
- 069.2 Two electronic devices with USB port, to save the data of the pull (n.1 each circuit).
- 069.5 Printer for the electronic recorder, with accessories.

FEATURES	
Capstans	4 x Ø 1500 mm
Grooves per capstan	12 (tot.48)
Max wire diameter	6 x 40 mm
	4 x 46 mm

TENSION PERFORMANCES			
Max tension	$240 \text{ kN} = 2 \times 120 \text{ kN}$		
Max pension per cor	d. 6 x 40 kN		
Max speed	5 km/h		

ENGINE	
Feeding	Diesel
Power	142 hp / 105 kW
Cooling system	water
Electric system	24 V

PULL-BACK PERFORMANCES		
Max pull	2 x 120 kN	
Max speed	0,8 km/h	



æ		kW	<b>(</b> )
1500	6 x 40	105	240
mm	mm	kW	kN
capstan	conductor	engine	max
diameter	max diam.	power	tension