

## Operating instructions

### pro's pro® MT-250 electric drive



We would like to thank you for the trust you have placed in us by purchasing our electric drive and hope you enjoy using it.

The appliance is intended exclusively for indoor use and only in conjunction with a stringing machine for stringing tennis, squash and badminton rackets using a suitable string.

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## IMPORTANT NOTES



### **WARNING AND SAFETY INSTRUCTIONS**

For your own safety and proper use, please read the user manual carefully, including the warnings, before assembling and using the machine for the first time. To avoid unnecessary errors and accidents, it is essential that all persons using the appliance are sufficiently familiar with its operation and safety features. Keep this manual in a safe place and ensure that it always remains with the appliance.

#### **Safety of children and sensitive persons**

This appliance must not be used by persons (including children) with reduced physical, sensory or mental capabilities or persons without experience and knowledge of the appliance.

**The appliance may only be operated by adults. The appliance may ONLY be operated with safety goggles!**

- There is a risk of suffocation, keep all packaging material out of the reach of children.
- Pull the plug out of the socket when the device is not in use.

#### **General safety regulations**

WARNING - This appliance is intended for indoor use only.

WARNING - If the power cable is damaged, it must be replaced to avoid a hazard.

#### **Electrical safety**

- Make sure that the power plug is not pinched or damaged.
- Do not pull on the cable.
- Do not insert the power plug if the power plug socket is loose. There is a risk of fire or electric shock.

#### **Care and cleaning**

- Switch off the appliance before maintenance and disconnect the mains plug from the socket. The electric drive must not be cleaned with liquids.

#### **Installation Important!**

- Follow the instructions in this manual carefully during the electrical connection.
- Unpack the appliance and check it. If it is damaged, do not connect the appliance to the power supply, but contact the dealer from whom you purchased the appliance immediately. In this case, please keep all packaging materials.

#### **Service**

- All electrical maintenance work should be carried out by a qualified electrician or a competent person.

#### **Installation of your new device:**

- Please read the operating instructions carefully before using the appliance for the first time and keep them for future reference.
- Place the appliance in a dry place to avoid damage caused by moisture.
- Do not expose the appliance to direct sunlight, rain or frost. Do not place the appliance near heat sources (stove, heater or open fire)

#### **Connection to the mains**

- The appliance must be properly earthed. The manufacturer accepts no responsibility for any damage caused by failure to observe these safety instructions.

**DESCRIPTION OF THE DEVICE:**

**Scope of delivery**

The MT-250 electronic drive is supplied in 1 cardboard box. Box dimensions: approx. 470\*210\*300 mm, weight approx. 6.56 kg

Compatible with lever arm and crank tensioning machines (A suitable, optionally available adapter is required. This is included in the scope of delivery depending on the order). Further information on fixing the drive can be found from page 8 onwards.

Included in the scope of delivery:

- Electric drive MT-250 (with contoured pull system and Tip2Pull function (precisely adjustable up to +/- 0.1)
- AC/DC adapter (AC100-240V 50/60Hz / current output DC+24V/4A)
- Including power cable (power supply 24V 96W)
- Allen key set with mounting screws



Drive overview



\*The USB port is used to update the program of the computer control board and can only be operated by professionals who know this software program well.

## Commissioning

Connect the operator to the power cable (100V to 204V). The drive performs a self-test. The display counts down from "999" and the quick tensioner moves back and forth at a slow speed. Please ensure that no string is inserted during this self-test phase and do not press any buttons during the test.

## Touchpad



**SPEED:** Press and hold, with "+" or "-" you can select one of the three speeds (1, 2, 3)

**CONSTANT PULL:** Constant pull. When the stringing weight is reached, the drive maintains the stringing weight with a constant pull. Adjustments can still be made. If the button is not active, the drive pulls up to the desired weight and stops there. No constant tension is applied to the string. Tension may be lost. Important: When activated, the LED lamp lights up. Please pay attention to this.

**TEST:** Select this item if you have not worked with the drive for a long time.

**SOUND:** Set the volume. Choose between 2: loud, 1: quiet, 0: silent

**KG:** Press the button to select "Kilogram" (when activated, the corresponding LED lights up)

**LBS:** Press the button to select "Pound" (when activated, the corresponding LED lights up)

"-": Reduces the stringing weight. Minimum weight: 15 pounds or 7KG "+":

Increases the stringing weight. Maximum weight: 90 pounds or 40.9KG

**STOCK:** Memory function. Up to 4 stringing weights can be saved. To save the weight, proceed as follows:

Select a pre-stored weight and change it to the desired weight using the "+" or "-" button. Press and hold the "STOCK" button until you hear two double beeps

**PRE-STRETCH:** Press the button. Press and hold the button and select "+" or "-" to select the desired pre-stretch level. If you do not want to pre-stretch, press the button until the LED goes out.

**KNOT:** Knot function. The weight is increased by 10%. After setting the node, the weight is reset to the original weight.

**PULL/RELEASE:** activate and release the train

**Inserting the string & stringing**

When inserting the string, please ensure that the inner jaws of the quick-release are pressed together and that the string is firmly clamped.



To start the stringing process

- simply press the PULL / RELEASE button on the touchpad or
- press the release button directly next to the quick-release downwards or
- tap the quick release from right to left "tap2pull"

The string must always be held firmly (preferably at a slight angle so that the quick release contracts and the string is thus clamped by the jaws of the quick release).

If the error code "E07" appears, the string is not clamped correctly. Please check whether the string is slipping in the holding clamp or in the quick release and repeat the process.

Connect the power cable and switch on the drive.

As soon as the drive is connected to the power supply and the self-test is complete, you can start with the individual settings.

## Mounting options

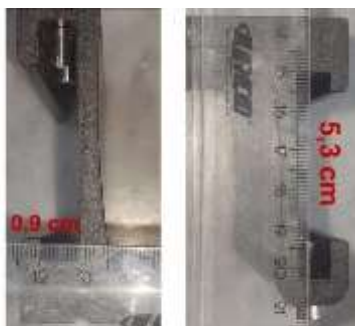
The drive can be mounted on mechanical machines using various adapters.

### Assembly examples



### Crank pull system:

The T510 adapter is required for mounting on crank tractors.



**T510 adapter**  
inner height 5,30 cm / width 0,9 cm

Dimensions of the T510 adapter (inner dimensions 0.9 or 5.3 cm). Please make sure that the rail of your crank traction machine has the appropriate dimensions to be able to slide the adapter onto it.

Assembly:

Remove the crank pull system - to do this, you must first loosen the marked screw



Now slide the crank off the rail



Attach the actuator to the adapter from below (the 3 silver-colored mounting screws are included with the adapter)



Now slide the adapter with the drive onto the rail and secure the two lower screws



To fix the MT-250 electric drive to Phoenix-1 / Pioneer One or Phoenix-2 / Pioneer Two, an additional elevation is required for the clamping cage. The installation instructions for this can be found on page 11

**Lever arm system:**

The T640b adapter is required for mounting on a lever arm machine. (for Challenger series)



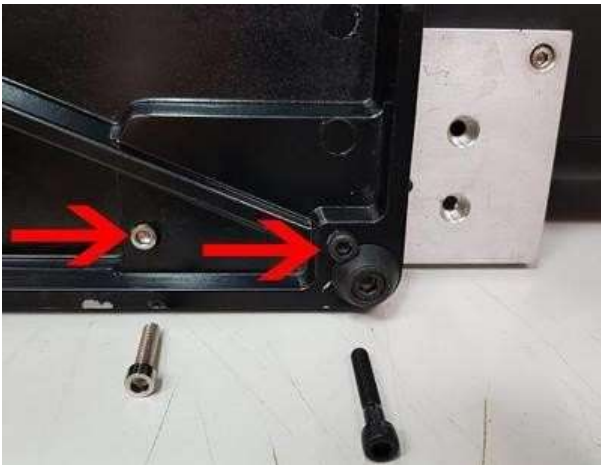
To do this, check that the distance between the lever arm mounting holes on the base of your machine is 7 cm (measured center to center). 'See red marking



1. Step: **Fix the drive** to the mounting plate using the 3 black screws (supplied with the drive)



Attach the drive including adapter to the base plate of your stringing machine using these 2 screws from below



2. Step: **Raise the clamping basket** / turntable (in case the handle of the clamped mallet hits the drive unit) and for the

#### Fixation on the Hornet



Remove the 4 screws in the center of the turntable



Place the adapter



Reattach the clamping basket using the 4 black screws (which were included with the adapter in your delivery)

**TX series or SX-01:**

The T640a adapter is required for mounting on an electronic stringing machine of the TX-500, TX-600, TX-700 and SX-01 models.

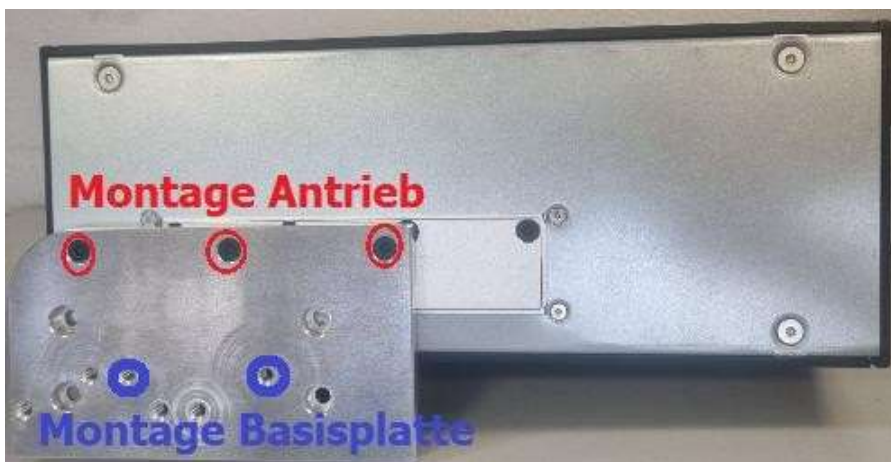


To do this, check that the distance between the two mounting holes on the base of your machine is 5.5 cm (measured center to center).

See red marking



1. Step: **Fix the drive** to the mounting plate using the 3 black screws (supplied with the drive)



Attach the drive including adapter to the base plate of your stringing machine using the 2 short silver screws (included with the adapter). Please note, however, that the head of these screws is smaller than the two drill holes on the base of your machine. You will therefore need either 2 large washers or 2 new screws (not included)



2. Step: **Raising the clamping basket** / turntable (in case the handle of the clamped mallet hits the drive)

Remove the 4 screws in the center of the turntable



Place the adapter



Reattach the clamping cage using the 4 black screws (supplied with the adapter)



**TROUBLESHOOTING**

**Adjusting the quick release - only if necessary**

The quick release can be adjusted to the appropriate string thickness. To do this, please turn the small screw (see picture). If you turn it clockwise, the jaws will narrow.



Adjustment screw: Already inserted in the quick-release mechanism at the factory and screwed deep into the thread (therefore not visible!)



The jaws of the quick-release should always move smoothly. If this is not the case, please drip very good quality machine oil into the channels/ball bearings of the quick-release mechanism. Routine maintenance of electromechanical devices includes lubricating moving parts.

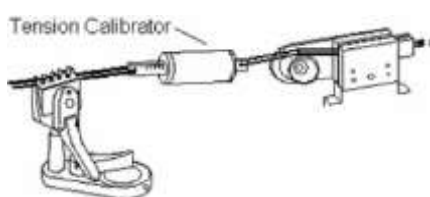
**Electric drive:**

**Error codes**

W00	Self-test has expired.	Check AC/DC adapter. 24V/3A
E01	Zero point not found or too unstable	Calibrate the drive
E02	Zero point too low	Contact the dealer
E03	No endpoint was found during the self-test	Repeat the self-test - make sure that there is no string in the quick release
E07	Quick release has reached its end point	string slips through the quick release, press the Clamp the jaws well together so that the string is held firmly.
E08	Error in the supply voltage	Check AC/DC adapter. 24V/3A
E16	Internal program error	Contact the dealer
E17	Internal data loss	Switch the drive on again.
E18	Low supply voltage	Check AC/DC adapter. 24V/3A
O-L	Overload - set weight too high	Reduce the stringing weight

The actuator is delivered to you calibrated. If you detect a deviation using a suitable checking device (electronic spring balance), please calibrate the actuator as follows:

1. Start the drive
2. **Select LBS (pounds)** - the calibration must be carried out in LBS and not in kilograms!
3. Press and hold the "SPEED" button. Then press the "KNOT" button to start calibration mode
4. Install the Tension Calibrator and press the Pull/Release button
5. Use the - and + buttons to change the weight on the display according to the weight shown on the Tension Calibrator.
6. If both weights match, press the "TEST" button to save the weight and start a restart.
7. Remove the tension calibrator immediately



It is recommended to switch off the drive briefly after calibration. Additional information: The digital display may "jump" after the string has been pulled. This does not mean that the drive unit needs to be calibrated. This "jumping" may be due to the mechanical performance of the drive.

## DISPOSAL OF THE DEVICE

Packaging materials are recyclable. Dispose of this packaging in a suitable collection container for recycling.



Correct disposal of the product:

The product must not be disposed of as normal household waste. Take your disused appliance to a collection point for the recycling of old electrical and electronic appliances.



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