

# MANUAL

Tor MT 400 Automatic  
Tor MJT 400 Hunting  
English

## Manual for Tor 400 Automatic, Tor MJT 400 Hunting

Before bolting the machine into position, install the launching arm guard, the magazine and the launching arm. Connect the wiring. Load a small amount of targets and test the launcher to determine the exact emerging point, make any minor adjustments by moving the machined left to right or forwards and backwards until a satisfactory result has been achieved.

Fasten the launcher in position.

**Ensure that tests and installation are carried out in a safe way before bolting.**

### Adjustment guide

Your BEOMAT launcher has undergone a complete pre-delivery inspection and should not require any adjustment at the time of installation.

Should your launcher not be performing correctly, before any adjustments are made, please check the following:

1. Confirm that the launching arm is straight. Remove the arm and visually inspect the same (after some time of use, a slight “banana shape” in the working direction is normal and acceptable). However, if the arm is bent either up or down, it will severely effect the target flight, or cause target breakage. In such a case, replace the arm before checking further. If you think the arm needs adjustment please see next page.
2. Verify that the elevator is adjusted correctly. The ideal clearance between the highest point of the elevator and the bottom rim of the target, should be between 3mm (1/8”) - 6mm (1/4”).
3. Confirm that the target retainer brush is “holding” the target close to the launching arm (permissible distance between the target and the launching arm is 6mm (1/4”)

Following instructions will help you maintain your BEOMAT launcher. Please check your launcher on a regular basis. Keep the launcher clean and do not load with damaged targets.

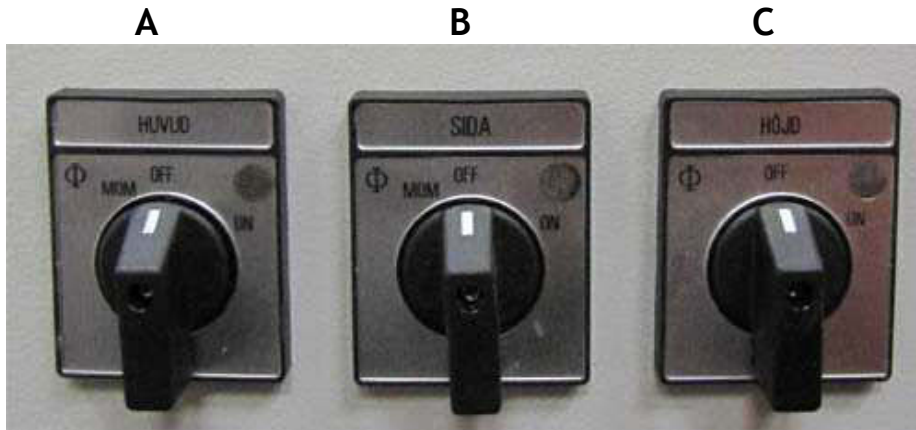
Further trouble shooting is available at the end of this manual.

### **WARNING!**

**Ensure that the power is turned off and the launcher is in a disarmed position when adjusting or maintaining the launcher!**

**All work on electrical appliances should for safety reasons be performed by a qualified electrician.**

## Control box panel



### **Switch A, Main power switch: MT, MJT**

To start the machine turn switch to ON position, this will load the launch arm.

Turn to MOM to release the last target. If the target is not released, turn the switch to MOM and hold for five seconds.

The machine has an engine saver function. The machine will be turned off after 5 minutes, it will start again with the release button

### **Switch B, programmed lateral movement: MJT**

In position ON, the lateral movement is pre-programmed. The lateral movement after pressing the release button. In position MOM, the machine can be positioned manually.

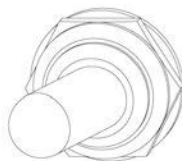
Observe, for the lateral movement to work, switch A has to be in position ON.

### **Switch C, programmed height adjustment: MT, MJT**

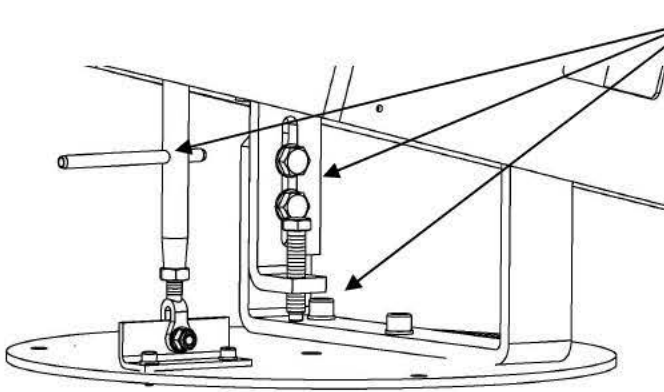
In the ON position the height is continuously moving.

Observe, for the height adjustment to work, switch A has to be in position ON.

With the switch placed on the side of the box you can choose between Timer and Direct function.



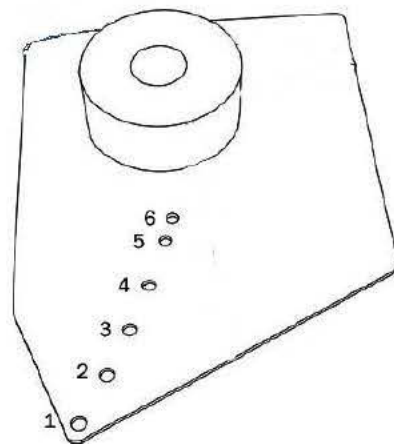
## Installation set up / Target trajectory adjustment



There are three points of adjustment. For leveling of the target trajectory, the right side support leg is adjustable. See the two lock bolts and a height adjustment bolt, which can be adjusted to achieve a perfectly flat trajectory. The vertical adjustment (target height) is simply done by a turnbuckle. Further adjustment can be made by loosening the bolt at the base plate. This will allow rotation of the machine to either side for wind adjustment.

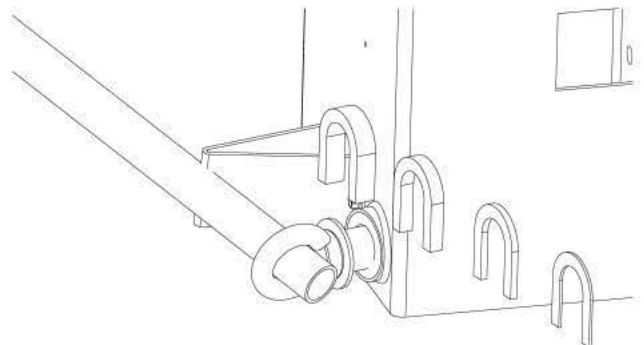
There are six holes to choose between.  
The machine is delivered with the basic setting.

Hole	Angle
1	$17,5+17,5=35$
2	$20+20=40$
3	$23+23=46$
4	$30+30=60$ (MT)
5	$37+37=74$
6	$45+45=90$ (MJT)



## Launch spring tension adjustment

The spring is installed without preload and two different systems for setting the target flight distance can be used. Spacers can be used to achieve desired distance with the spring as is. (For example, the thickest spacer will increase the distance by approx. 10m and the other spacers in descending order down to 1m.), or the spring lock nut can be loosened by turning the eyelet on the outside clockwise. When the desired distance has been reached, tighten the lock nut



## The launch arm

Avoid using the machine without targets.

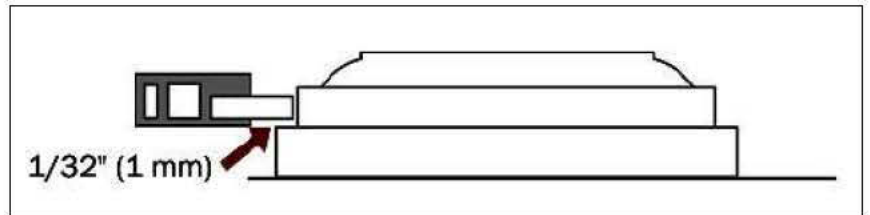
Check the launch arm often and replace when necessary.

The machine is mounted and tested for usage of international 110mm targets.

Different brands of targets are slightly different in size, which may require adjustment of the launch arm.

### Checking the launch arm (not relevant for Battue-targets)

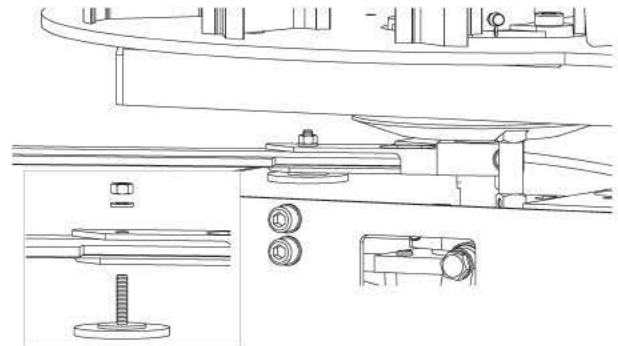
Check the launch arm with the releaser in locked mode and ensure the arm and target at the back of the machine are in the right position.



The distance between the rubber molding and the first rim of the clay target should be approx. 1mm.

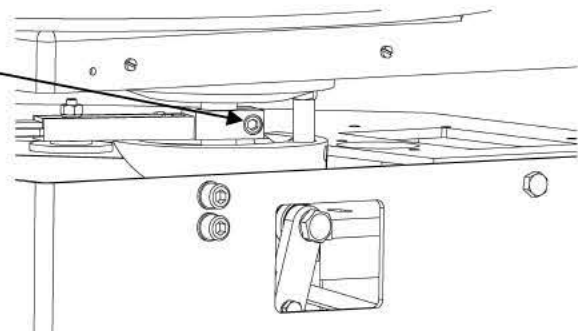
### Replacement of launch arm

Loosen the screw that holds the arm, then pull the launch arm holder out. Replace the launch arm and tighten the screw



### Adjusting the launch arm

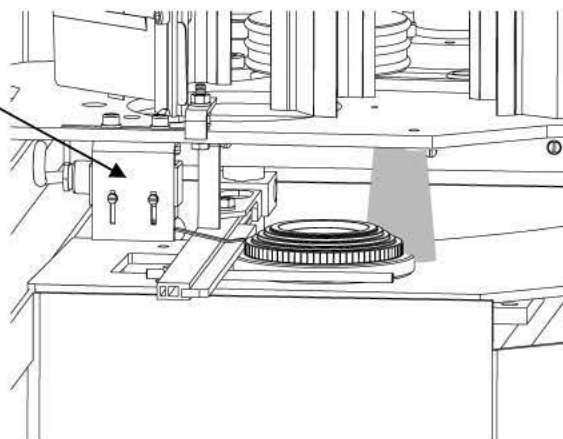
Use a 6 mm Allen key to loosen the bolt (see picture), approx. ½ to 1 turn. Move the launch arm up or down on the main shaft. Repete until it is in the desired position and tighten bolt again.



## Micro switch adjustment, To be done in disarmed condition!

Maybe one of the most common adjustments on the machine. For example, if the trap should start releasing targets on its own, an adjustment of the switch to the left or downwards will solve the problem. The switch controls the re-cocking of the machine and is activated by the launch arm.

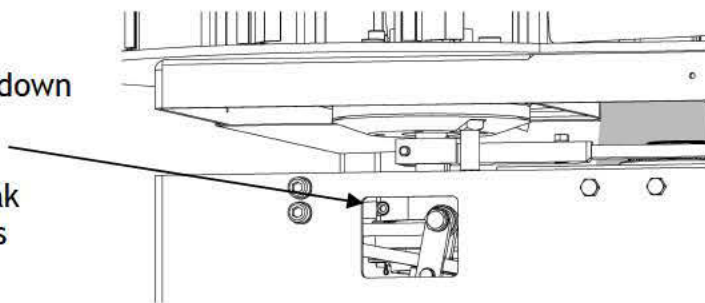
Adjust the height: Loosen the screws and adjust the switch up or down. Another adjustment is that the entire bracket can be moved in the mounting holes at the top of the bracket.



## Adjustment of the back lash brake

The break is mounted on the launch arm shaft and slows the launch arms movement down after it has released the target.

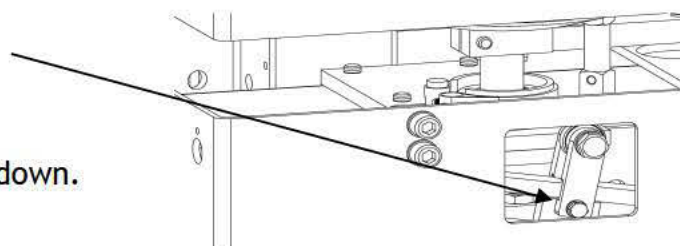
To adjust the brake use an Allen key. Turn the bolt clockwise to increase the break efficiency. Adjust until the launch arm stops without vibration.



## Height adjustment of the target elevator

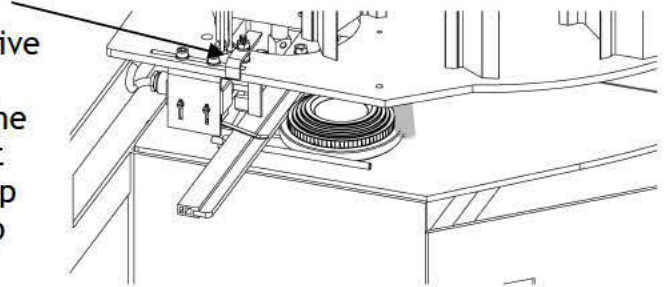
To adjust the elevator, loosen the bolt (see picture).

Adjust the target holder to the left, the target elevator will then go further down.



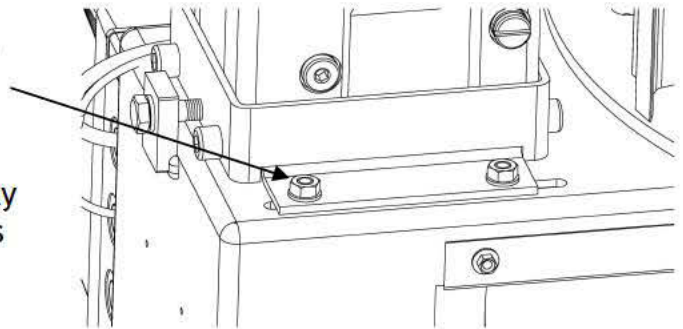
## Target separating knife (option)

A target separating knife is installed on your BEOMAT machine. The knife is installed inactive and has to be adjusted individually for each target type. To activate, loosen the bolt at the top and turn the knife to adjust the height. It may be necessary to bend the knife slightly up or down to adjust exactly. The knife will help with launching of wet targets.



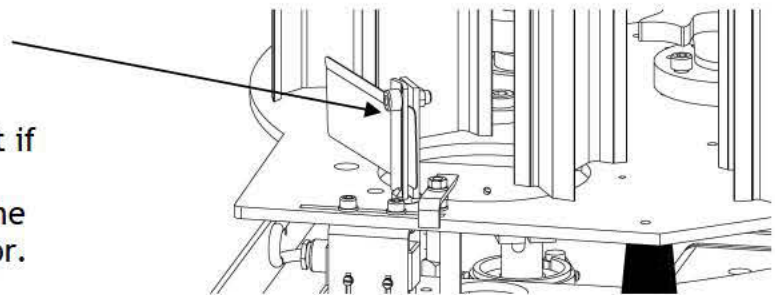
## Drive belt adjustment

Regular V-belts are used between the reduction gear and the launcher main shaft. After a while it may be necessary to tighten the drive belts. Loosen the two bolts (see picture) and then tighten the belt tension bolt approx. one turn. Too much tension may harm the drive motor. Tighten the two bolts after adjustment.



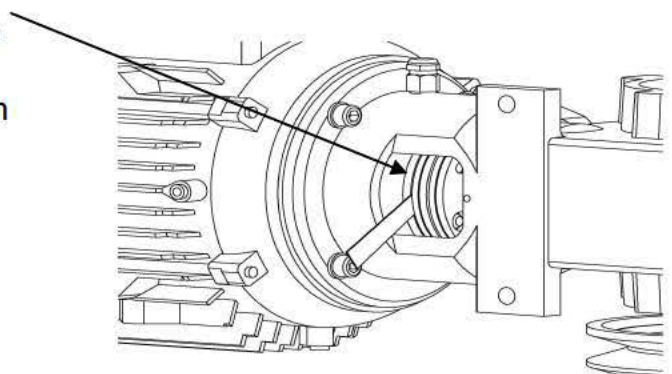
## Leaf spring plate

A leaf spring plate keeps the target stack in order. Adjustment would normally not be needed. However it may be necessary to replace or adjust if it has come out of position. Adjust when target stack is full and the first target is delivered to the elevator.



## Clutch adjustment

The electro magnetic clutch cocks the machine. The clutch is located between the main motor and the gearbox. The distance between rotor and stator should be between 0.3-0.4 mm. To adjust the clutch, loosen the two setscrews situated on the gearbox-input shaft and then slide the clutch forward or backward until the correct distance is obtained. Use a feeler gauge to obtain the correct distance.

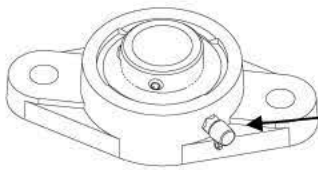


## Preventative Maintenance

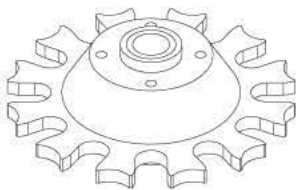
### DANGER WHEN MAINTAINING!

- △ Turn off the power!
- △ Ensure that target launcher is not cocked!
- △ Never load trap with damaged targets!
- △ Clear the trap from any fragments of broken targets!

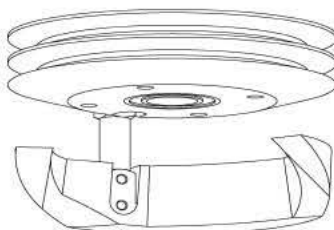
### Greasing:



- Grease the grease nipples after approx. 100,000 targets or at least once a year.



- Grease the magazine index wheel frequently. Also grease the twelve fingers on the wheel.



- Grease the elevator cam frequently.



## Troubleshooting

Problem	Cause	Solution
The trap does not start	No power	Check the power supply. Check the overload breaker situated on the side of the motor connector box. All electronic work should be carried out by a qualified electrician.
Targets are not released	Faulty relay	Replace the relay in the connector box.
Two targets delivered at the same time	Target retainer wheel O-rings are damaged	Replace the O-rings in the target elevator.
Broken targets	Fragment of broken targets	Clear the trap from broken target fragments.
	The launching arm is incorrectly adjusted	Adjust the launching arm.
	Launching arm is bent	Replace the launching arm.
	Target retainer wheel O-rings are damaged	Replace O-rings.
	The target retainer wheel is not turning	Remove the target magazine and the retainer wheel. Clean, then grease.
	Different target brands and sizes are used	Change targets.
The trap is launching continuously	Wet targets	Replace for dry targets.
	Faulty push button	Disconnect the release cord. If the trap stops launching targets, replace the push button.
	Faulty micro switch	Lift the metal trigger arm on the micro switch. If the trap does not stop launching targets, replace the micro switch.
	Faulty clutch	Adjust the clutch.



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