



Operating Instructions

Promatic Rabbit

Clay target launcher

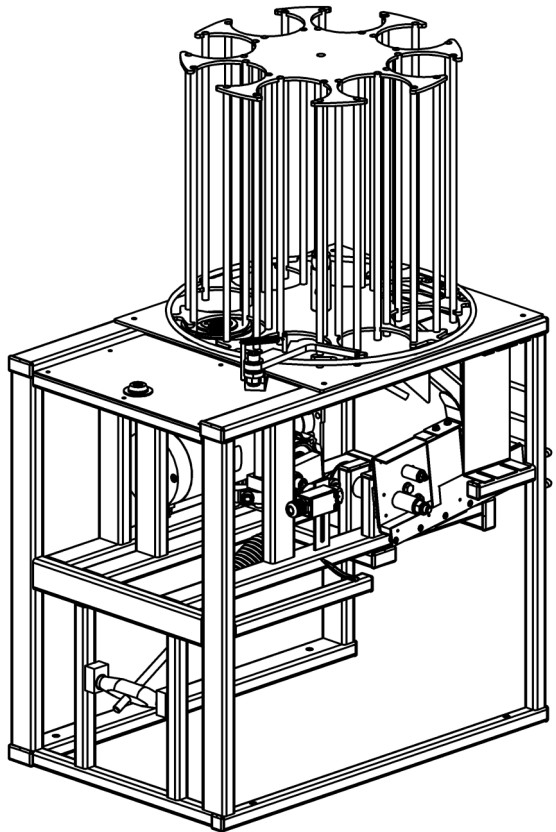
WARNING

Clay target launchers can be dangerous and must be treated with great care at all times to avoid accidents.

Never place any bodily part into the path of any mechanical piece whilst the machine is in motion or likely to be so.

You must treat a clay target launcher with the same caution that you would treat a loaded gun.

Assume at all times that a clay target launcher is armed and loaded and treat it accordingly



This document must be read in full before attempting to operate the machine

Preface:

Every effort has been made to ensure that the information contained within this manual is complete, accurate and up-to-date. Promatic International assumes no responsibility for errors beyond its control.

Conventions used within this manual:

Trap: Your Rabbit - Clay target launcher - commonly known as a clay trap and may be referred to in this manual as "The trap" or "The machine"

Warnings & Cautions:



Warning: This section contains instructions which, if ignored or carried out incorrectly, may result in risk of personal injury.



Caution: This section contains instructions which, if ignored or carried out incorrectly, may result in malfunction or damage to the equipment or consumables.



Note: This section contains additional information which the user may find useful, but is not essential to the operation of the product.

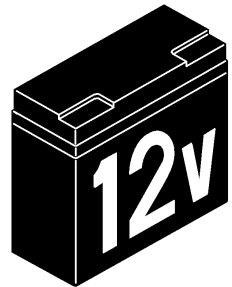


12v DC Power Source:

This Trap is designed to be powered from a 12v DC battery.

IT MUST NEVER BE DIRECTLY CONNECTED TO MAINS AC POWER

Battery: Where a trap is connected to any other suitable power source i.e. a Transformer - the relevant sections of instructions should still be observed, i.e. "Disconnect the battery" and applied to this or any other power source.



EYE PROTECTION MUST BE WORN WHEN WORKING ON OR AROUND A CLAY TARGET LAUNCHER AS SMALL SHARP PIECES OF CLAY MAY BE EJECTED.



Specifications:

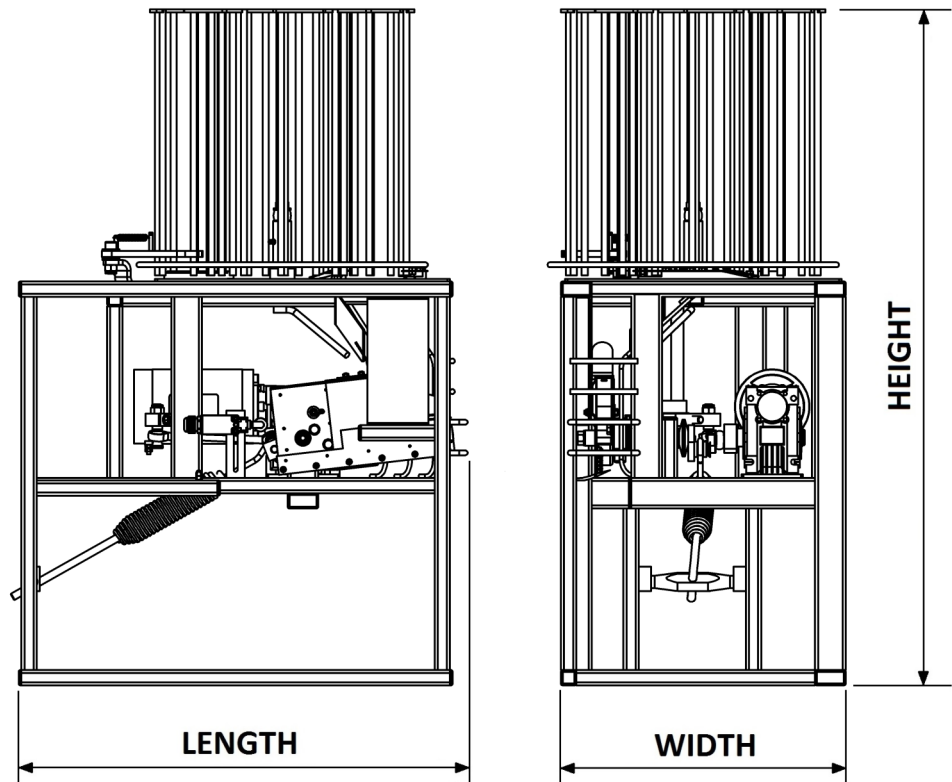
Rabbit

Carousel: **8 Stack - 300 Targets**

Length: **730 mm**
 28 3/4"

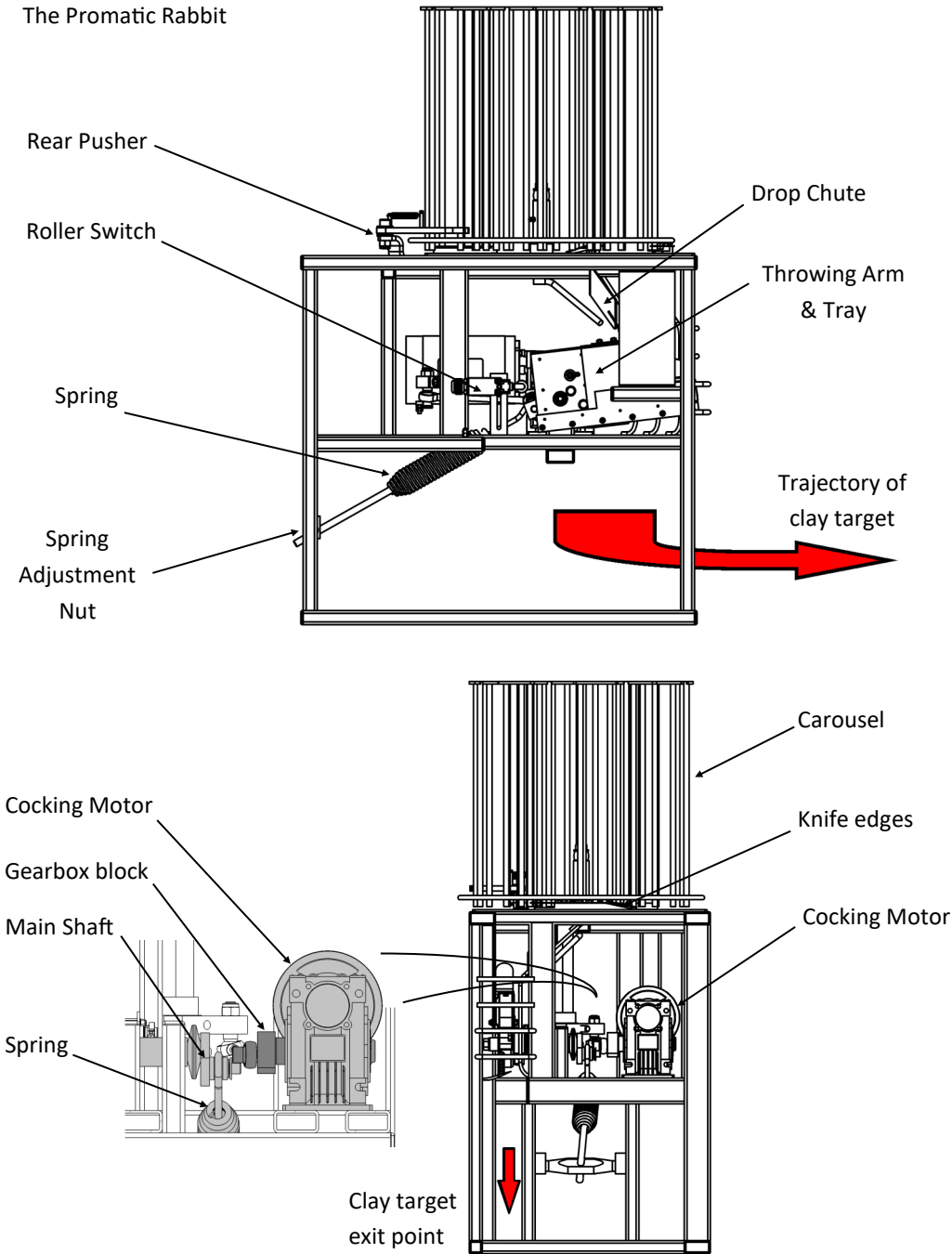
Width: **495 mm**
 19 1/2"

Height: **1105 mm**
 43 1/2"



Understanding your new trap:

The Promatic Rabbit





Ensure the machine is stable on firm level ground before use.

This machine should be bolted to a solid base or securely pegged before use.

Positioning the machine

1. Clay Target Launchers must be situated on firm level ground in a position that will allow unrestricted access to rear of machine.
2. There must be no obstructions to the path of the throwing arm.
3. Ensure that the power supply can be easily disconnected and cables cannot become tangled in any part of the mechanism.

Adjusting the clay trajectory

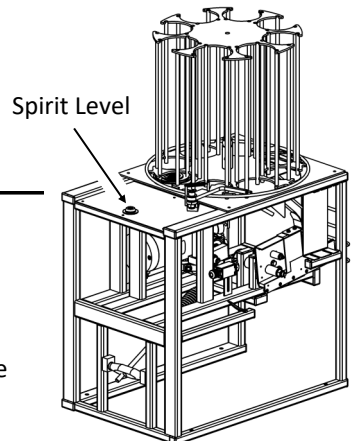
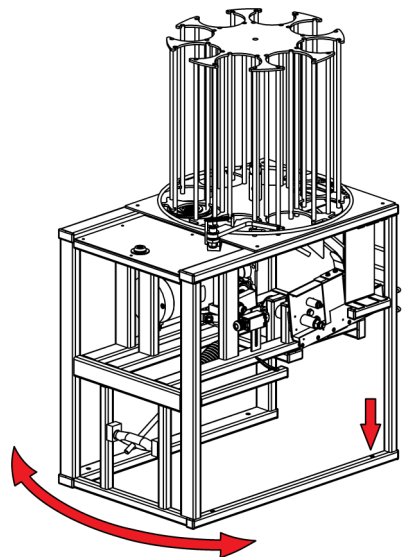
To check the clays exit direction, load a few clays and fire the trap momentarily as described on page 7 (long enough for the trap to fire, but not giving the machine a chance to rear)

With the trap in the DISARMED/SAFE position, place a fixing bolt or ground peg through one front hole in the base of the machine. Leave this bolt or peg reasonably loose so that the rear of the trap can be moved to adjust the trajectory of the clay target.

Move the rear of the trap to adjust the direction of the clays exit if required.

Once satisfied with the trajectory Insert the remaining bolts or ground pegs to fix the position and fill the magazine if required.

Should the clay have a tendency to roll off line, either to the left or right, it can be corrected by tipping the whole machine sideways to compensate.

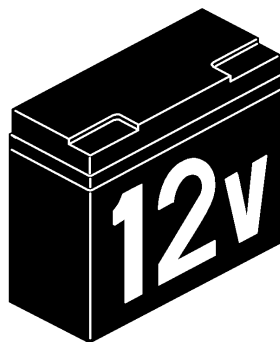


Set Level For Best Results

The upper body of the rabbit machine is fitted with a spirit level, adjust the footing of the machine by packing with washers or wedges (depending upon installation method) until the bubble is correctly centred in the clear dome.

Connecting the battery:

Ensure you are behind the machine, that the **ARM/DISARM** switch is in the **OFF** position and the trap in a safe condition (See safe mode on P7). Connect the red cable to the Red (+) terminal and the black cable to the Black or Blue (-) Terminal. Ensure the terminal fasteners are tight, the battery is safely positioned and the charger has been removed.



Never approach the machine from the front or sides, Do not assume the trap is safe, even without electrical power it may still be armed and can fire without power being applied.

Battery Troubleshooting :

Trap fails to re-arm - If after a period of prolonged use the trap fails to re-arm itself and is found to be stalled (may also be making a humming sound) then this is an indication that the battery is depleted, and the voltage has fallen too low to operate the trap. Disconnect the battery immediately and re-charge (or fit a replacement fully-charged battery).

Although the battery may appear to have recovered, the trap should not be used any further than necessary to make it safe as continued operation at low voltage may cause damage to the motor, Battery or other electrical components.

Circuit breaker has operated - The battery may have been incorrectly fitted (terminals reversed) or an excessive amount of current was drawn either due to a fault or obstruction within the trap.



If the circuit breaker has tripped due to an obstruction DO NOT ASSUME THE TRAP IS SAFE it may still be armed with the obstruction holding back the energy from the spring - carefully clear the obstruction whilst remaining in the safe area behind the trap BE AWARE of the path of the throwing arm AND the debris that may be ejected.

GENERAL WARNINGS - BEFORE OPERATING ANY TRAP

ALWAYS disarm the machine before any loading, adjustment or maintenance.

ALWAYS load clays from rear and **ONLY** if the machine is disarmed and safe.

NEVER approach the machine from the front or sides. **ALWAYS** from the rear.

NEVER allow children or untrained persons to approach or touch the machine.

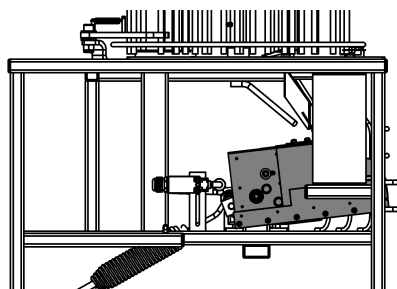
NEVER move an armed/loaded machine. **ALWAYS** disarm and disconnect battery.

REMOVE the main throwing spring before transport in a vehicle.

BE AWARE of the fall zone of both broken and unbroken clays and that a change in wind direction will affect this.

Disarming the machine (Safe mode).

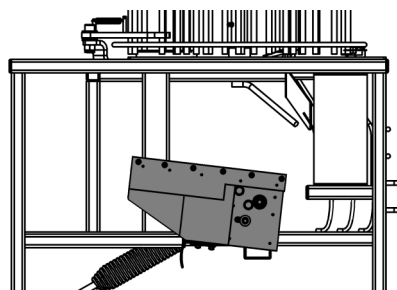
1. To disarm the machine push the **ARM/DISARM** switch momentarily to the **DISARM** position and immediately release (long enough for the trap to fire, but not giving the machine a chance to re-arm). The throwing arm should be pointing towards the front of the machine.
2. Turn the **ON/OFF** or **ⓘ** switch to the OFF or **⊙** position and disconnect the battery.



Arm Pointing Forward (fired & Powered off) TRAP IS SAFE

Firing the machine (Ensure the range is clear at the front of the trap.)

1. Turn the **ON/OFF** or **ⓘ** switch to the ON or **|** position and set the **ARM/DISARM** switch to the **ARM/LOAD** position. The machine will move automatically and arm itself ready to launch a loaded clay.
2. Press the **FIRE** button on the command cable to throw a clay. Rabbit machines also have a 'test fire' button on the electrical box, which also fires the trap.
3. The machine will fire every time the **FIRE** button is pressed and will automatically rearm itself, until disarmed and switched off. When switched off, disconnect the power source.



**Arm Pointing Backwards
TRAP IS ARMED & DANGEROUS
(even when powered off)**



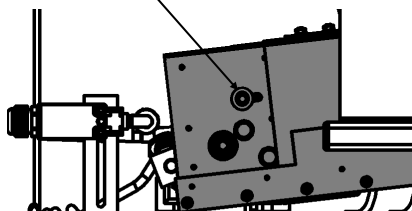
ALWAYS disarm the machine before carrying out loading, adjustment or maintenance.

Adjustment: Setting the rear stop

All rabbit machines have an adjustable rear clay stop within the throwing arm.

By slackening and moving this stop forward or backward in **small** increments, and retightening, it is possible to adjust the angle at which the clay leaves the machine.

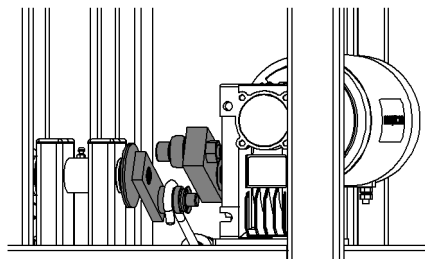
Rear Stop



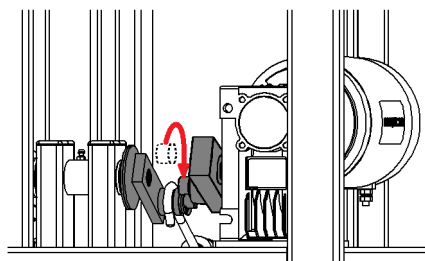
Adjustment:

Throwing point - arm adjustment

Push the arm/disarm rocker switch momentarily in direction of nudge just enough to fire the machine. The spring and arm crank will come to rest in line with each other.

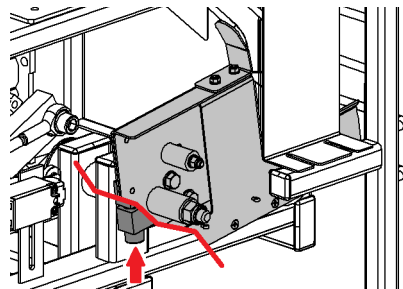


Using the arm/disarm rocker switch, nudge the motor so that the drive pin on the gear-box crank is as close to the pin on the main shaft as possible (this will be your start position and is a reference point for the main shaft).



Loosen the throwing tray clamp block. This is a Hex socket bolt located underneath the arm tray.

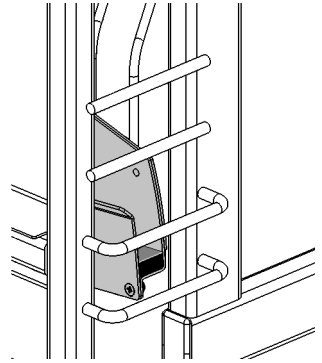
Ensure throughout the procedure that the clamp block remains in start position (pins touching).



Adjustment:

Throwing point - arm adjustment (continued)

Move the throwing arm by hand. The rubber strip on the bottom of the tray needs to be in between the bottom bar and the next one up in the series of bars on the front of the trap frame.



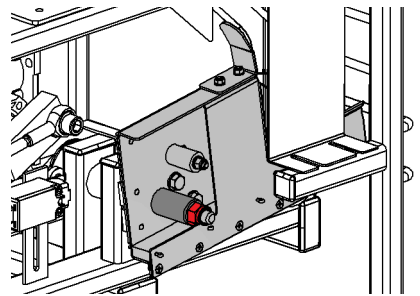
If you wish to change the amount of damping (see note below) make this adjustment now.

Re-tighten the Hex bolt to fix the throwing arm clamp block. Test the machine for correct operation. Repeat the procedure if necessary until the machine throws a correct clay.

Adjustment: Arm Damping

On rabbit traps the action of the arm is damped.

On the outside of the arm, there is a grey plastic tube with a Nyloc nut, tightening this nut (with the clamp block loose) will apply tension to the arm/mainshaft assembly. This allows a pair of Belleville washers to be pinched together adding friction to the arm assembly, preventing it from over-rotating and 'bouncing'.



Tighten the Nyloc nut to increase the amount of damping, Loosen it to decrease it. (this should only be adjusted in small increments, ideally just one 'nut face' at a time)



Note: It is important to remember that this adjustment needs to be made with the clamp block loosened (as the tension is pulled through the mainshaft) and that whilst adjusting tension the position of the arm should be retained.

The correct amount of arm damping, will depend on the amount of spring force being used, if the spring has been wound up fully then the amount of damping will need to be increased.

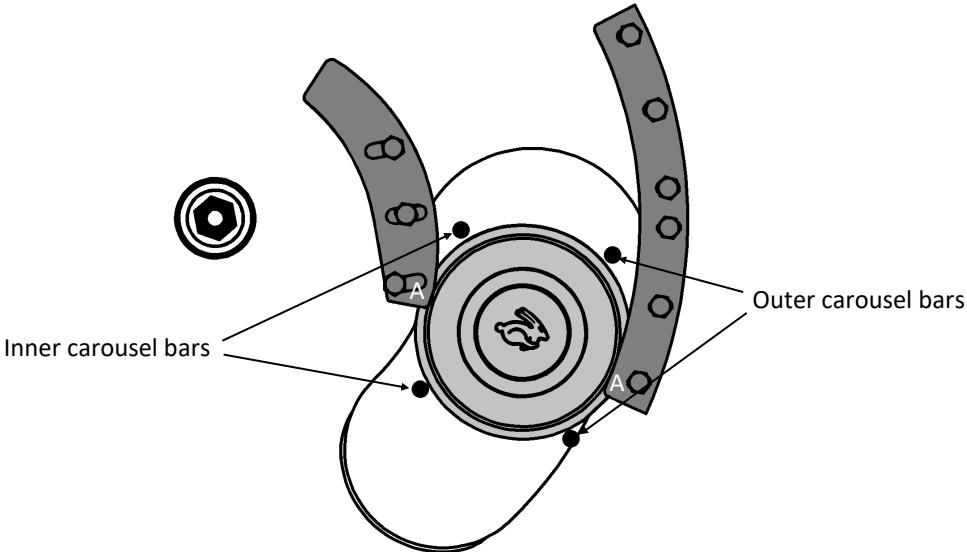
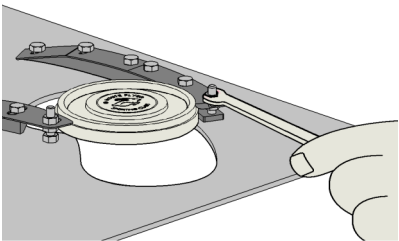
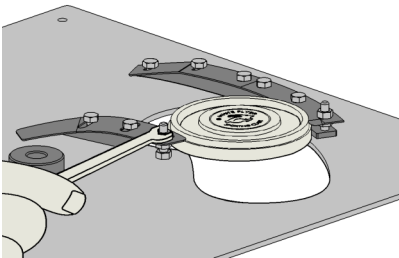
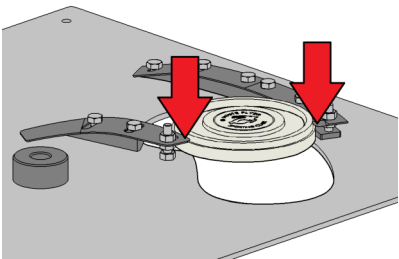
An arm with too little damping will bounce up and down rapidly as the clay is thrown, an arm with too much damping will stop hard, but not always in the same place. Either extreme will result in broken clays.

Adjustment: Setting up knife edges

Place a clay target on the top plate and slide it half way under the two knife edges.

Using a 10mm spanner/wrench, adjust the height of the inner and outer leading edge of each blade (Position A in bottom diagram). It is desirable to have no less than 0.5mm clearance between the under-side of the knife blades and the horizontal shoulder of the clay.

It is also important that the knife edges have the correct clearance around the diameter of the clay and that they support the skirt of the clay resting on the knife edges for its entire travel along the knife edge. To set this, hold the clay against the inner two carousel bars and gently tap the inner knife edge until there is approximately 1mm clearance between the upper shoulder of the clay and the knife edge. Tighten fixing bolts. Now hold the clay against the two outer carousel bars. Again gently tap the outer knife edge until there is approx. 1mm clearance between the upper shoulder of the clay and the knife edge. Tighten fixing bolts. Refer to the illustration below.





ALWAYS disarm the machine before carrying out loading, adjustment or maintenance.



Note: It is important that the Rabbit trap is ALWAYS operated with a reasonable spring tension. Too little spring tension will result in broken clays.

Adjustment: Spring Tension

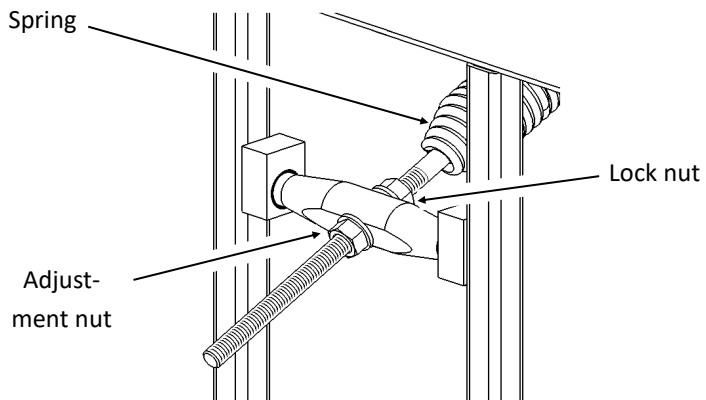
Increasing or decreasing the distance that the clay is thrown is achieved by winding tension on or off the spring. This should be done with the machine in the disarmed/safe condition.

Fire the trap momentarily as described on page 7 (long enough for the trap to fire, but not giving the machine a chance to rearm)

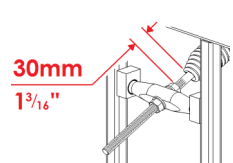
With the trap in the DISARMED/SAFE position stop and disconnect the battery. Loosen the spring adjustment nut.

To increase the spring tension, move the lock nut towards the coil spring and then tighten the Adjustment nut behind it.

To reduce the spring tension, move the adjustment nut away from the spring coil and tighten the lock nut behind it.



Important: leave 30mm (1 3/16") thread length between inside nut and spring coil. Increasing spring tension up to full length of thread will seriously detriment the performance of the machine and will cause spring damage or failure.





ALWAYS disarm the machine before carrying out loading, adjustment or maintenance.

Troubleshooting:

1. Machine does not arm (i.e. come to the loaded position).

- (a) Check the battery is charged and that connections are tight.
- (b) Check the toggle switch is in the down (ON) position.
- (c) Check the Throwing arm is clear of the Roller switch. If not, then press toggle switch up to nudge the arm around until it is clear, then switch it back down to the ON position.

2. Machine still does not arm.

- (a) Check all connections are tight including those inside the electrical box. Check for broken wires and damaged connections.
- (b) If there are no broken connections (battery connected, all switches on) press toggle switch up to “NUDGE”, listen and watch for the 12v relay operation in the control box.
- (c) If the relay operates but the motor does not turn - momentarily short across the 2 large contacts on the relay with a screw driver or piece of wire. (These are the two terminals with red wires connected to them). If the motor does not turn - then the motor is suspect. If the motor does turn - then the relay is faulty. Contacts may be dirty or worn out.
- (d) If the relay does not operate – check the fuse has not blown. Replace fuse if it has blown and try again.
- (e) If the motor does not turn - then short the brown wire to the yellow/green wire on the back of the toggle switch with the switch in the “NUDGE” position. If the relay operates and the motor turns then the toggle switch is faulty. If the relay still does not operate, then it’s the relay that is faulty.

3. Machine runs in “NUDGE” position, but not in “ON” position.

If the arm is clear of the Roller Switch then the Roller Switch may be faulty. Check

4. Machine arms, but will not fire on command cable button.

- (a) Either the connections, cable or command push button are faulty. Disconnect the Hirschmann connector from the control box socket and using a short piece of wire connect pins 2 & 3 in the socket (do not put anything into the other pin holes as one of these carries continuous +12v for radio use.)



If the trap does not fire then there is a broken wire in the cable or a bad connection within the Hirschmann connector or control box.

- (b) If the trap does fire then reconnect the command cable, remove the cover on the push button box and short across the two spade connectors. If the trap fires - then the push button is faulty. If the trap does not fire - then there is a broken wire in the command cable or a bad connection in the connector.

5. Trap fires by itself!

- (a) Disconnect the command cable and switch the trap back on. If the trap re-arms normally - then the command cable is damaged or shorted out. Alternatively, the push button switch is stuck in or faulty.
- (b) If the trap continues to fire - then check the arm to crank timing relationship as described on page 8 - 9 of this manual. If this relationship is correct then, after having put the trap into the disarmed/safe position, move the roller limit switch out along the slotted bracket to its maximum. If the machine now re-arms normally - then move the limit switch back to within 5mm of its original position. If the trap now fires by itself again then move the switch to 10mm of its original position and so on until the trap arms normally under all conditions.

ALWAYS disarm the machine before any loading, adjustment or maintenance.

ALWAYS load clays from rear and **ONLY** if the machine is disarmed and safe.

NEVER approach the machine from the front or sides. **ALWAYS** from the rear.

NEVER allow children or untrained persons to approach or touch the machine.

NEVER move an armed/loaded machine.

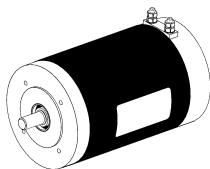
ALWAYS disarm and disconnect battery.

REMOVE the main throwing spring before Transport in a vehicle.

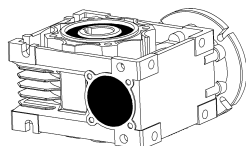
BE AWARE of the fall zone of both broken and unbroken clays and that a change in wind direction will affect this.

Spare Parts

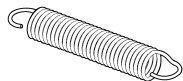
For parts not listed please
call Promatic or you local
dealer / service agent or
visit www.promatic.co.uk



Motor Only - Type: MP113
M02V/TEC113



Gearbox Only - Type:
NMRV50 R60:1 MOTOVARIO
M03V/MV50R60



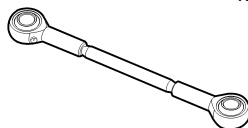
Rear Pusher Spring
S02Z/037D6



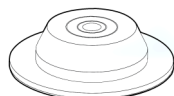
Rear pusher roller
D04N/RN25



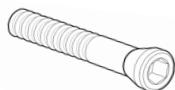
Spring Roller
RN6/2630



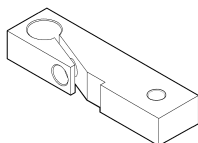
Crank Assembly
RB/2800



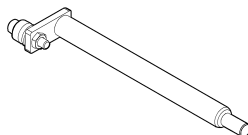
Spirit Level
D00A-CA43-F



Rear Pusher Linkage
Taper Bolt RB/9130



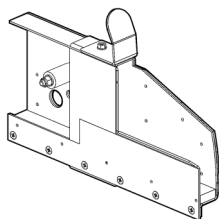
Rear Pusher Clamp
Block RB/4200



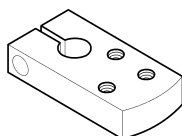
Mainshaft assembly
RB/2600



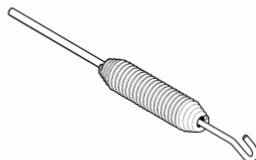
Belville Washer
C24Z/60



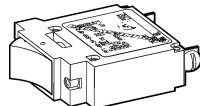
Arm assembly
RB/2010



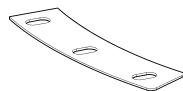
Arm Clamp Block
RB/2500



Short Hook Trap Spring
S01Z/SHTR



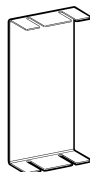
Trip Switch (50a)
E10V/MB50A 12v



Outer Knife-edge
A28S/AKIU



Inner Knife-edge
A28S/PAFA



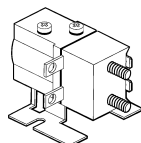
Deflector Plate
RB/3650



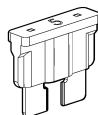
Plastic
Finger
RN6/3500



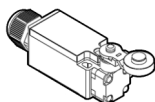
Quick Battery Terminal Clamp
Positive (Red) E06V/45100
Negative (Blue) E06V/45110



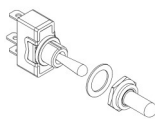
12v Relay
(Albright)
E09V/SW618



Fuse - 5amp
E10V/F05A



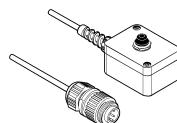
Roller switch
E11V/83850



Toggle switch
E11V/7430

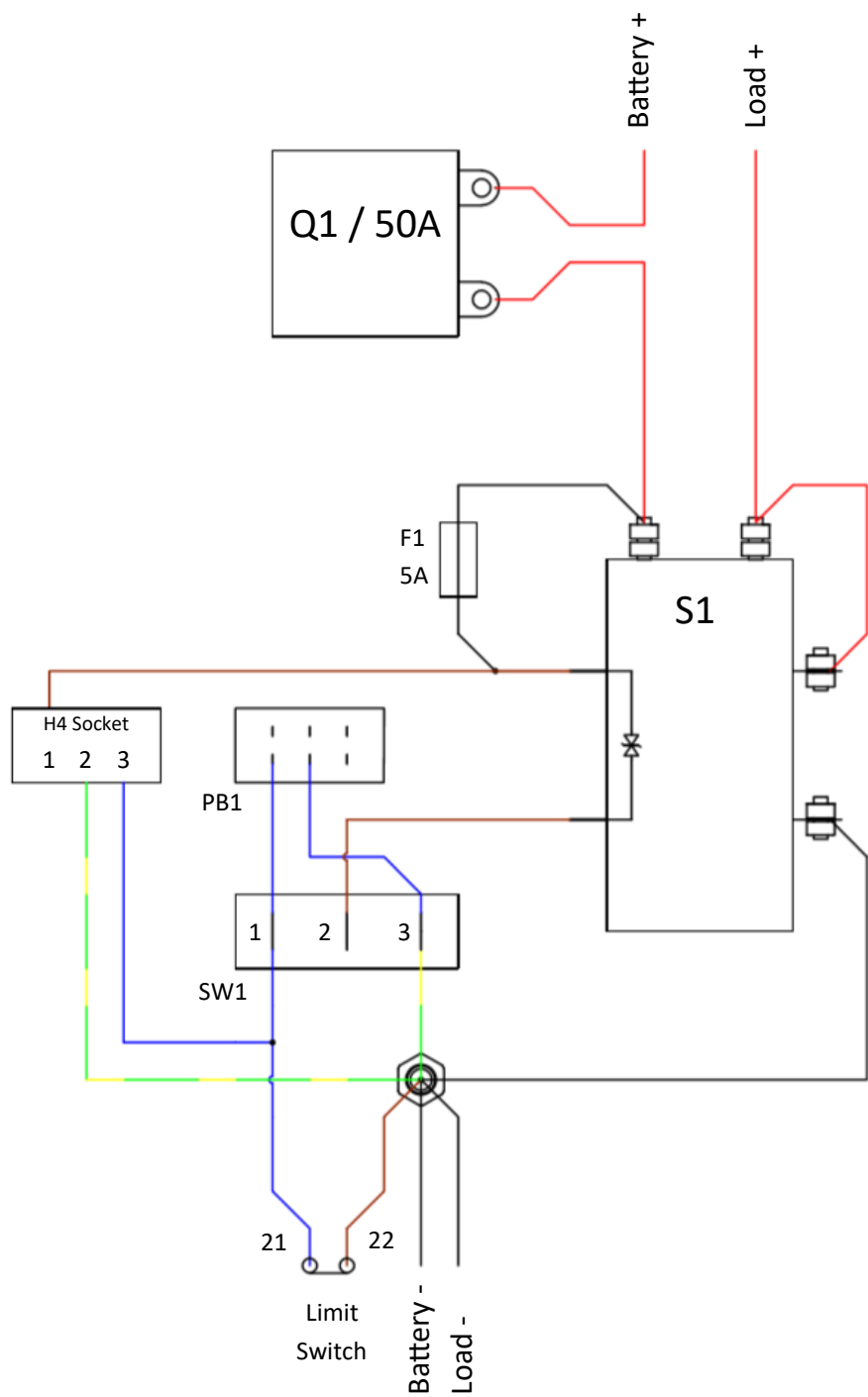


Fire Button
E11V/7410



Command cable
E03V/CCCH

Notes:



Electrical Schematics

Use this section to help identify any faults during any electrical troubleshooting, or to assist with the wiring of components if replacing parts.



Note: The layout of the schematics do not resemble the general arrangement of the components. This layout is to make the drawings as clear as possible.

Key:

Q = Circuit Breaker

SW = Switch

PB = Push Button

F = Fuse

S = Solenoid



ALWAYS disarm the machine before carrying out loading, adjustment or maintenance. Ensure that the machine has been isolated from the power source before proceeding with any maintenance on the control box.

Notes:



For Service and Supplies contact your local Trap Supplier.

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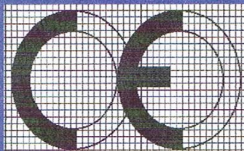


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Barclay-Phelps

CE Marking Consultants

Barclay Phelps CE Marking Consultants, 29/8 City Mill Lane, Gibraltar 646, Europe

CERTIFICATE & DECLARATION OF CONFORMITY FOR CE MARKING

Company contact details:

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Tel: +44(0)151 327 2220 Fax: +44(0)151 327 7075 e mail: info@promatic.co.uk

Promatic International Ltd. declares that their:

Clay Target Launchers listed as the following models

Elite, Hawk, Superhawk, Harrier, Harrier ABT/Wobble, Eagle, Eagle Battue, Falcon, Hobby / Merlin, Ranger 8, Osprey/All American Ranger, Ranger Battue, Ranger ABT/Wobble, Sporter 400TT, Sporter 400TT ABT/Wobble, Super Sporter Battue, Super Sporter, Super Sporter Downhill Thrower, Super Sporter ABT/Wobble, Rabbit, Squirrel, Ranger Chondell, Chondell, Hunter Wobble, Huntsman, Huntsman XP, Fieldsman, Club Skeet, Pro Skeet, Int Skeet, Olympic Trap, Club 275 DTL/ATA, International DTL/ATA, Pro ABT/Wobble, Auto Trap DTL/ATA/ABT/Wobble, International Doubles DTL/ATA/Wobble and Sporter Doubles DTL/ATA/Wobble

are classified within the following EU Directives:

Machinery Directive 2006/42/EC

Electromagnetic Compatibility Directive 2004/108/EC

and further conform with the following EU Harmonized Standards:

EN 12100-1:2003+A1:2009 EN 12100-2:2003+A1:2009

EN 61000-6-3:2007 EN 61000-6-1:2007

Dated: 19 April 2011

Position of signatory: Group Technical Director

Name of Signatory: Graham Stephen Fair

Signed below:

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