

AutoTrickler for Sartorius

by Adam MacDonald

Instructions for setup and use

For Sartorius GD503

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For updated instructions and optimization guide, visit the website:

www.autotrickler.com

Parts

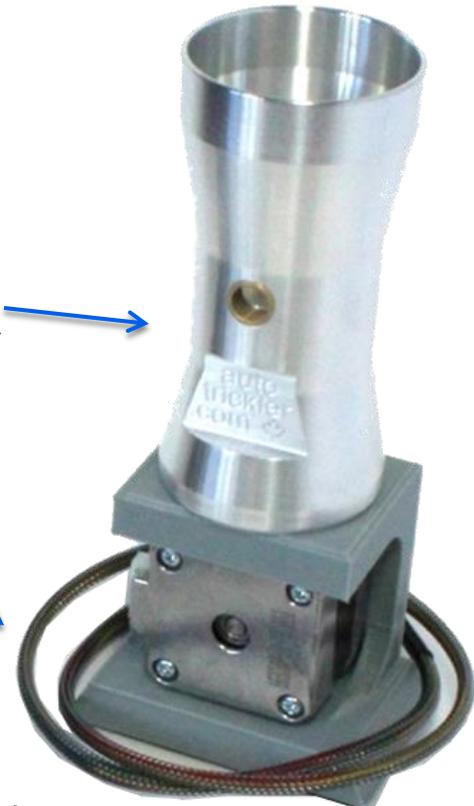
Trickler assembly

Motor cable

Pulley belt (2)

Power adapter

Electronics



Tray holder

Trickler tube and handle

Assembly: trickler tube



Slide the tube into the trickler as shown.

Turn by hand to ensure it spins freely.
It should turn with almost no friction.

Assembly: pulley belt

Connect the pulley belt with a twist, as shown.

The twist is important to ensure correct direction and tension.



Electronics



Plug the included power adapter into the electronics box.

Plug the serial cable into the scale.

Attach the AutoTrickler motor to connector #1.

Placement

Peel the backing tape and attach the tray holder to the scale platform.

Place the tray about an inch off of center so that you can rotate the scale pan to easily change the position of the tray.



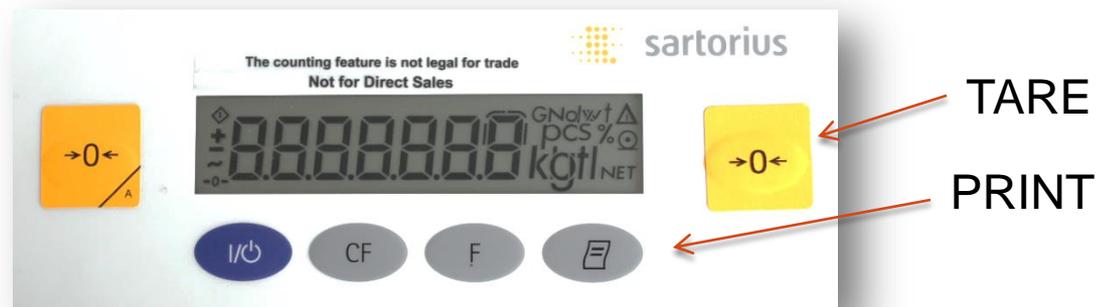
Ensure doors and windows are closed and the scale should easily be able to hold 1 milligram and trickle most efficiently.

Scale Configuration

To operate the trickler, a few scale settings need to be changed. The following few slides explain the process step-by-step.

To operate the scale menu:

- Turn the scale off and back on.
- While all display segments are visible, press TARE.
- Press TARE to switch between menu levels.
- Press PRINT to select and move to the next level.
- Hold PRINT for 2 seconds to select the new option.
- To go back, press PRINT repeatedly.
- To save changes and exit the menu, hold TARE for 2 seconds.



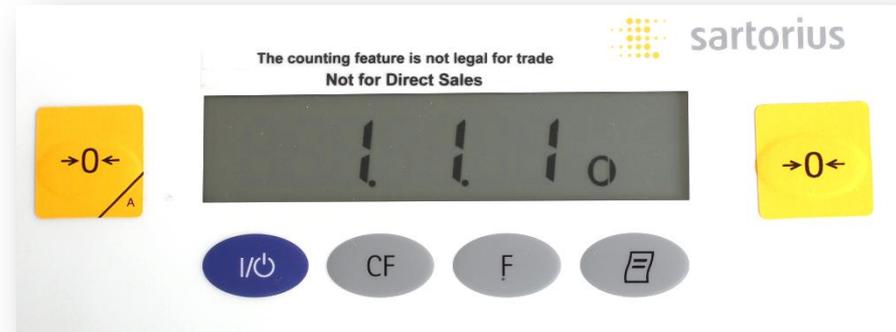
Refer to your GD503 manual for further details.

Scale Configuration

A 'o' mark will be displayed next to the menu option when selected.

Set the following options:

- 1.1.1 (fast response)
- 5.1.7 (9600 baud rate)
- 5.2.4 (even parity)
- 6.1.3 (automatic print without stability)
- 7.1.1 (print without data ID codes)
- 1.7.11 (primary unit grains)



Operation: Starting

The **BLACK** toggle switch is power for the trickler. Leave it **ON** while in use. You can reset the trickler electronics using this switch.

If you do not have the AutoThrow, the **RED** switch must be **OFF** in order to disable the AutoThrow when you turn the **BLACK** switch **ON**.

The **RED** toggle switch is used to set the target and activate the trickler.

To set a target weight and begin:

- Manually place your desired target weight on the scale.
- Switch the red toggle switch **ON**.
- Wait at least one second for the unit “GN” to appear.
- Replace the empty pan.

Dispensing will start automatically from within 0.02 grains of zero weight.

If the empty pan remains slightly above zero weight, and there is no fallen powder on the scale, it is possible there was a little extra powder in the pan at the start of the previous charge. Check the previous charge and re-zero the scale.

Operation: Stopping

To pause temporarily:

Lift the pan to pause dispensing.

Dispensing will resume automatically from a partial weight that is:

- Greater than 0.1 grains
- At least 0.1 grains below the target

If the weight goes over the target, remove a small amount of powder and allow the dispenser to resume and finish automatically.

To stop until started again:

Switch the red toggle switch **OFF** at any time to stop automatically dispensing.

The dispenser will remember your target weight.

Replace the empty pan and turn the red switch **ON** to resume with your previous target.

Or, place a new target weight manually and turn the red switch **ON** to use a new target.

Performance

The trickler should dispense **about 0.5 grains per second** at full speed. Shim the base of the trickler mount to achieve this flow rate.

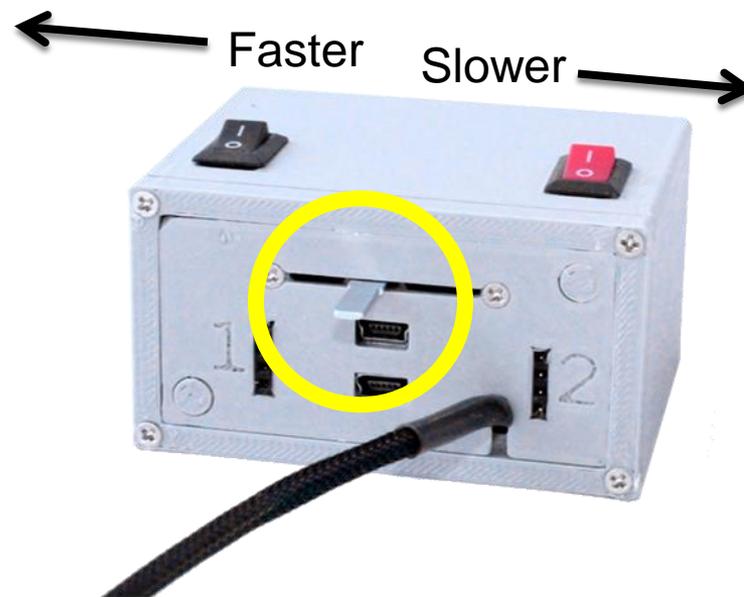
The flow rate is **very sensitive** to the tilt level of the tube. This adjustment is critical to ensure consistent performance.

The slider is not a flow rate control.

The slider is a fine adjustment of the ramp-down profile.

Start with the slider in the center and dispense a few charges.

Adjust the slider to achieve a suitable tradeoff between overall speed and frequency of small overthrows.



Adjust the tilt of the mount first, then use the slider for fine tuning.

Warnings / Warranty

WARNING: Ensure the tube is completely cleared of powder before switching to another powder.

ALWAYS VERIFY EACH CHARGE WEIGHT ON THE SCALE BEFORE LOADING POWDER INTO A CASE. This product is a tool for dispensing powder, not measuring. It does not prevent you from setting an unsafe target weight. It does not inform you that your charge is over the target or unsafe to fire. You are fully responsible for reading your scale and determining how much powder to put into your cases and into your firearm. Proper reloading practices must be used at all times. Do not use black powder or black powder substitutes. Black powder can be ignited by static discharge.

The Automatic Powder Trickler is warranted to be free from any defects in material or workmanship under normal use for the period of one (1) year from the shipping date. During the warranty period, any product or parts of the product that prove to be defective due to improper material or workmanship under normal use and maintenance will be repaired or replaced at no charge to the user. This warranty is extended only to the original purchaser and is non-transferrable. This product is intended for non-commercial use. Any other use of this product will void this warranty.

If a defect appears in the product, contact Adam MacDonald (adamjmac@gmail.com) to arrange repair/replacement.