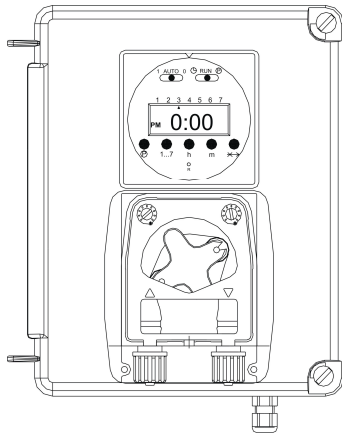
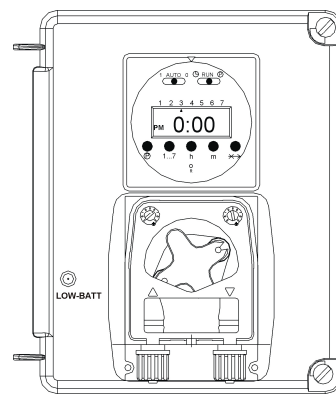


# INSTRUCCION MANUAL TDS SERIES

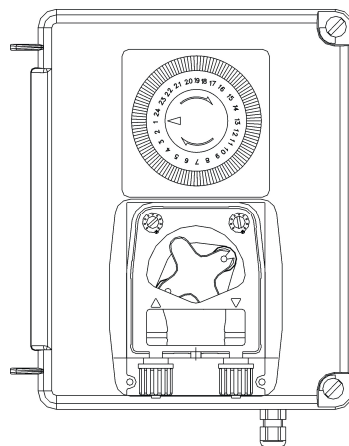
**TDS DD-230 or 115**



**TDS DD-Battery**



**TDS DA-230 or 115**



## Contents

1 Getting started.....	Page 2
2 Installation.....	Page 4
3 TDS-DA (Analog clock) - Set-Up & Operation.....	Page 6
4 TDS-DD (Digital clock) - Set-Up & Operation.....	Page 8
5 Maintenance & Accessories .....	Page 10
6 Troubleshooting .....	Page 12
7 Contacting SEKO .....	Page 12



## TDS – Timed Dosing System

### 1 GETTING STARTED

Thank you for buying this Seko product.

Seko's TDS systems are high quality products suitable for many applications requiring timed dosing. The simplicity of the programming process makes this system easy to use.

#### 1.1 Welcome

The TDS is a metering system with timed operation and a peristaltic pump. The pump is controlled by a *programmable analog or digital clock*.



**Please review this manual carefully. Pay particular attention to warnings and precautions. Always follow good safety procedures, including the use of proper clothing, eye and face protection.**



**Please be sure to read this manual and select operating mode before installation.**

#### 1.2 What's in the box?

Before you start, check that your box contains the following items:

- TDS system
- PVC ¼" OD tube 6 ft (2 m.)
- Poly ¼" OD tube 6 ft (2 m.)
- Mounting bracket.
- Anchors and screws.
- PVC suction filter and metal suction filter.
- Pool valve kit.
- Instruction manual.

#### 1.3 Technical features

##### **TDS DA**








- Power supply available: 115 or 230Vac
- Consumption: 5 W
- Flow rate: 0.8 oz/min (1.5 l/h)
- Back Pressure: 22 PSI (1.5 bar)
- Protection of the System: The gasketed enclosure on the TDS is highly water resistant and the electronics are further protected within the enclosure.
- Dimensions: H 8" ½ x W 6" ½ x D 4" ½
- Weight: 2 lbs (0.9 Kg).

##### **TDS DD**

- Power supply available: 115 or 230Vac or 12VDC (with 8 batteries "C" type)
- Consumption: 8 W
- Flow rate: 0.8 oz/min (1.5 l/h)
- Back Pressure: 22 PSI (1.5 bar)
- Protection of the System: The gasketed enclosure on the TDS is highly water resistant and the electronics are further protected within the enclosure
- Dimensions: H 8" ½ x W 6" ½ x D 4" ½
- Weight: 2 lbs (0.9 Kg).

## TDS – Timed Dosing System

### 1.4 Warnings

-  Read this manual carefully before installation and before starting up the TDS system.
-  Check the model of the equipment bought, when using the installation and programming settings indicated in this manual.
-  For all connections refer to the topographical diagram for the control circuit given in this manual.
-  **WARNING:** Always follow the necessary safety procedures, including the use of adequate protection for the eyes, face, hands, and clothing.
-  **WARNING:** When installing or carrying out maintenance on this equipment, always disconnect it from the power supply.
-  Seko is constantly striving to improve all its products, and we therefore reserve the right to make changes at any time without notice.
-  Failure to abide by the indications given in this manual may result in damage to people or property, or compromise or damage the equipment itself.


### 1.5 Material required during installation

-  An installation kit is available (see Maintenance & Accessories).

## TDS – Timed Dosing System

### 2 INSTALLATION

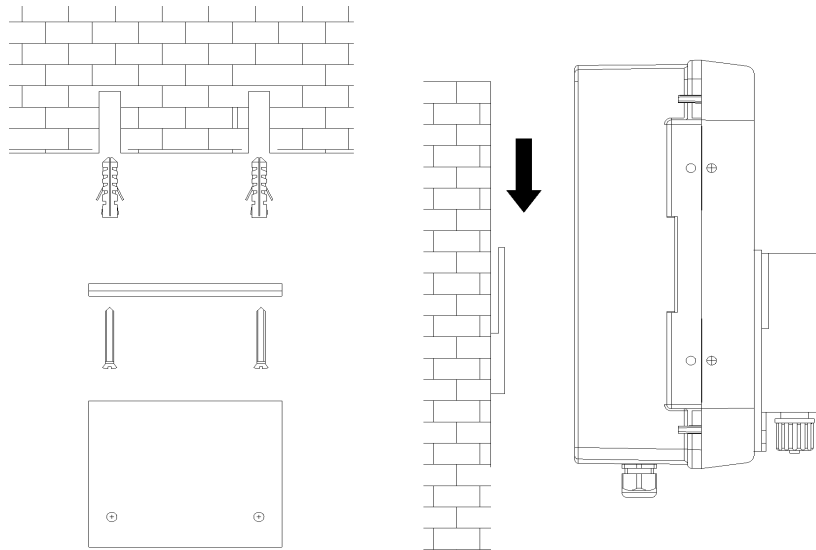
Check all applicable plumbing and electrical codes before proceeding with the installation. This will help to ensure that the system is installed in safe and suitable manner.

 **CAUTION:** Do not mount the unit in the direct path of steam. This can short circuit and permanently damage the unit.

 **WARNING:** Before installing the device and before intervening in any way on the metering unit, make sure that the power supply is disconnected.

#### 2.1 Mounting the system

- Apply the panel unit system with the brackets and screws supplied
- Determine a suitable location for the system
- Using the bracket as a template, mark and drill holes for bolting the system to the wall
- Insert the anchors in the holes
- Bolt the bracket in place (flat side against the wall with holes on bottom) with the hardware provided
- Open the cabinet front, completely unscrew the screws at the right.

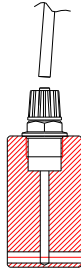


## TDS – Timed Dosing System

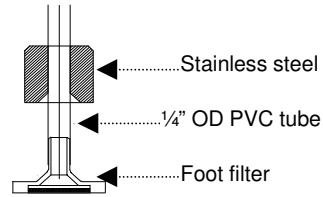
### 2.2 Plumbing

The following installation steps apply for detergent pump:

- Suction Line - Assemble the foot filter to insert in the product container. Insert the 1/4" OD PVC tube into the coupling nut and screw into connector. (See picture 2a and 2b).



**Picture 2a.** Foot filter for water treatment



**Picture 2b.** Foot filter for drain

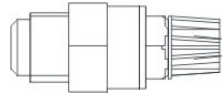


**Always use the foot filter and make sure that it reaches the bottom of the tank. Periodically clean it from possible residues.**

- Delivery Line - Attach PVC tube to delivery side of pump. Attach other end to duck check valve or injection fitting. The following components are included:

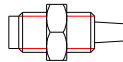
- duck check valve in Viton:

**Threads: 3/8" Standard**  
**Drill bit size: 9/16"**



- Injection fitting:

**Threads: 1/8" Standard**  
**Drill bit size: 5/16"**



- Adapter

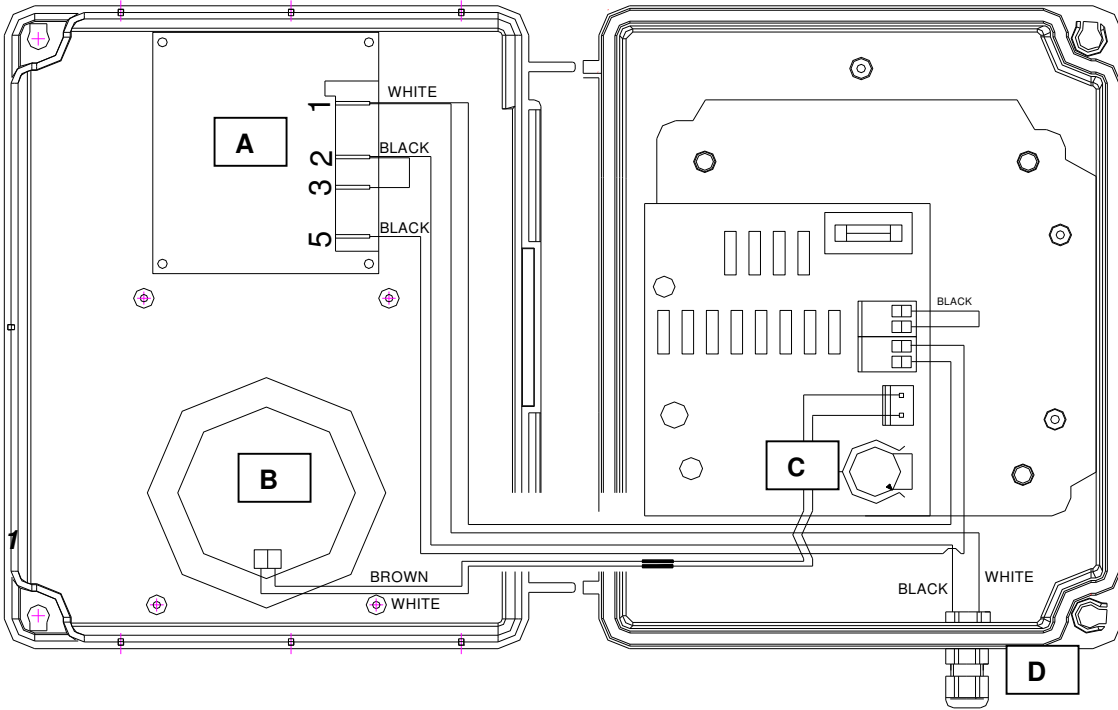
**Threads: 3/8" Standard Female -1/2" Standard Male**



TDS – Timed Dosing System

3 TDS DA (ANALOG CLOCK)

3.1 Circuit diagram



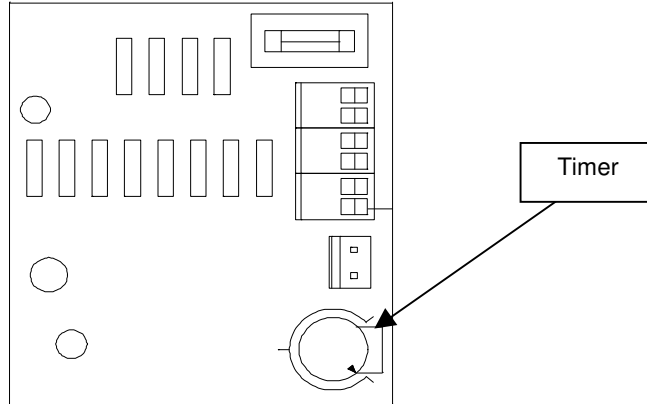
- |   |
|---|
| <p>A. Daily Clock<br/>         B. Peristaltic Pump<br/>         C. Timer 2..18 minutes<br/>         D. Power supply</p> |
|---|

## TDS – Timed Dosing System

### 3.2 Set dosing Time

Set dosing time with the potentiometer (Timer) on the circuit board. (See picture below). It is necessary to set Daily Clock to power on the circuit.

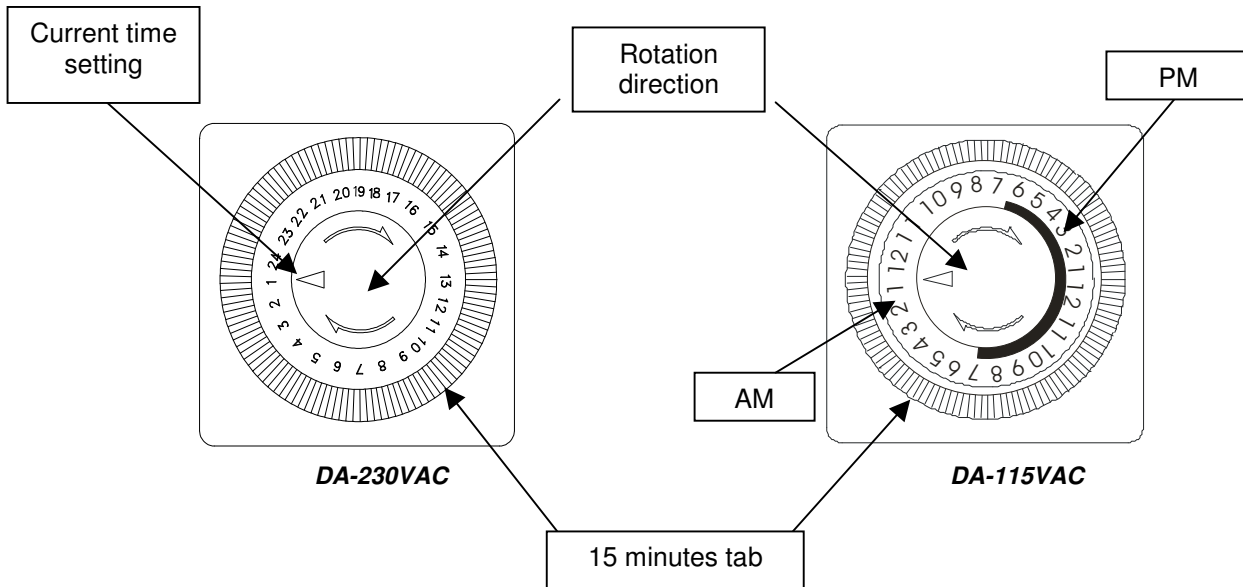
The dosing time can be adjusted from 2 to 18 minutes.



### 3.3 Set daily clock

Set the current time on the instrument, four wheel on rotation mode, your reference is the position time. Look next picture it have some tab on rotation wheel, if it press inside to set on. Every tab is 15 minutes.

**i** The daily clock is stopped if power supply not present.

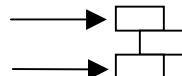


**i** TDS DA-230: 1-12 =>1-12am; 13-24=>1-12pm

#### Example

To set a dosing time of 30 minutes, following these steps:

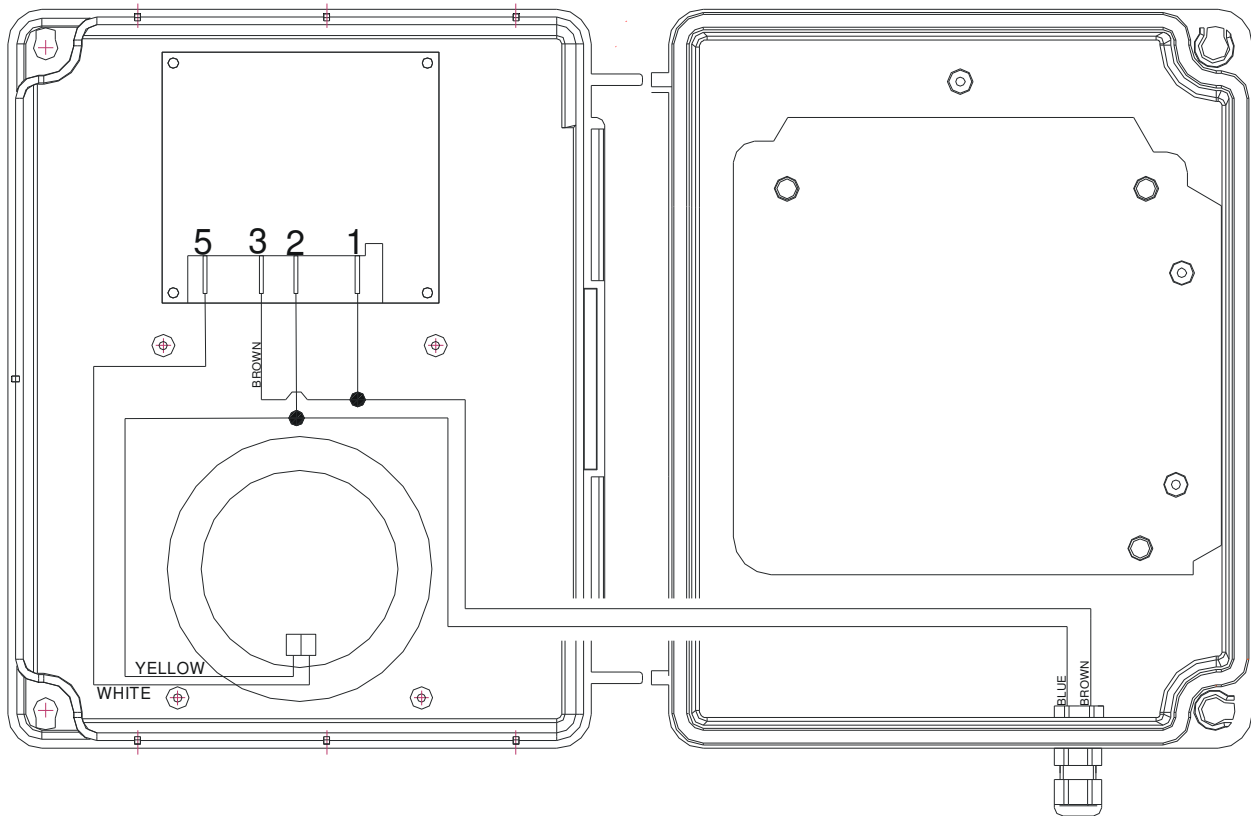
1. Set the potentiometer at 15 minutes;
2. Press two jumper as show the picture.



TDS – Timed Dosing System

4 TDS-DD (Digital lock)

4.1 Circuit diagram



## TDS – Timed Dosing System

### 4.2 PROGRAMMING

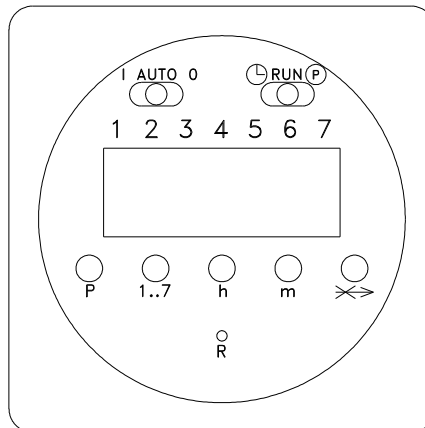
#### 4.2.1 Controls of the digital clock

The clock is situated on the inside of the front cover. On the front of the clock there are the following elements:

- **I AUTO O**: switch for selecting the operating mode, *continuous* (I), *automatic* (AUTO), system excluded (O).
- **⊕ RUN P**: selector for *setting the time on the timer* (⊕), for *operating the timer* (RUN), for *programming the timer* (P).
- **Numbers from 1 to 7**: series of numbers useful for programming the timer and the clock. They indicate the day(s) of the week by means of the symbol(s) ▲ on the display in positions corresponding to the numbers
- **push-button “P”**: to confirm the programming that has been done and go on to the next step
- **push-buttons “1...7”**: for selecting the programming blocks by means of the symbols ▲ shown on the upper part of the display.

The sequence is cyclic, and is: 1 (Monday), 2 (Tuesday), 3 (Wednesday), 4 (Thursday), 5 (Friday), 6 (Saturday), 7 (Sunday); 1...5 (from Monday to Friday), 6...7 (Saturday and Sunday); 1...6 (from Monday to Saturday), 1...7 (from Monday to Sunday).

- **push-button “h”**: for selecting the hours at the time of programming.
- **push-button “m”**: for selecting the minutes at the time of programming.
- **push-button “→”**: SKIP push-button.
- **push-button “R”**: reset.





## TDS – Timed Dosing System

### 4.2.2 Programming the digital timer

#### Step 1. – Set The Current Day And Current Time

Set upper left slide switch to middle or “AUTO” position  
Set upper right slide switch to the left (Clock Face Icon) position  
Use the 1...7 button to scroll to the current day – 1/Monday thru 7/Sunday  
Use the hour (h) and minute (m) buttons to set the current time

#### Step 2. – Set “Dosing Start” And “Dosing Stop” Times

Move the upper right slide switch completely to the right or “P” position  
(A light bulb icon and the number 1 will appear)  
Use the 1...7 button to scroll to the day or days that dosing is to occur (1 = Monday thru 7 = Sunday)  
Use the hour (h) and minute (m) button to set the “START DOSING” time  
Press “P” button to set

(The display will now be flashing and the number 2 will appear indicating that the “STOP DOSING” time must be set)

Use the 1...7 push button to scroll to the days that dosing will occur as above  
Use the hour (h) and minute (m) push button to set the “STOP DOSING” time  
(NOTE: With the standard squeeze tube, the SEKO TDS will feed approximately .8oz/min.)  
Press “P” button to set.

(The TDS accepts up to eight dosings per day by repeating the above instructions for program steps 3 thru 16).

If no more dosing times are to be set, move the upper right slide switch to the “RUN” position.



***The intervals of operation can be overlapped, as per the following example:***

***One weekly cycle from 9.00-12.00 a.m. and one daily cycle on Mondays from 11.00 a.m. to 2.00 p.m. will cause a cycle on Mondays from 9.00 a.m. to 2.00 p.m.***

#### 4.2.3 Cancelling cycles

To cancel a single cycle of activation of the system, proceed as follows:  
Select the time at which the cycle is to start using the “ P ” push-button. Keep the “ P ” and “ → ” push-buttons both pressed until the display flashes with the time 0.00. Repeat the same operation with the time at which the cycle is to end.

#### 4.2.4 Skip function

This function enables activation of the programs for the next day to be avoided, by pressing the “ → ” push-button (with the right-hand switch in the “ RUN ” mode). Activation is highlighted by the appearance of the → symbol on the display.

The SKIP order will start at 0.00 a.m. and end at 12.00 p.m. on the day following selection. It can only be revoked before the day for which the SKIP function has been activated.

When the SKIP function comes into effect, the symbol disappears from the display and the time of day will flash throughout the day. The push-button pad will be inactive for the whole SKIPPED day. Once the effect of this command has started, it can no longer be cancelled. Do not press the “ → ” push-button on the skipped day, otherwise the SKIP command will also be extended to the next day.

## TDS – Timed Dosing System

### 5 MAINTENANCE AND ACCESSORIES

#### 5.1 For TDS-DD Battery (Digital clock with batteries)

When the led in front of unit lights up the battery remaining life is about 50 hours. Replace the batteries to avoid missed dosings.

#### 5.2 For TDS DA (Analog clock)

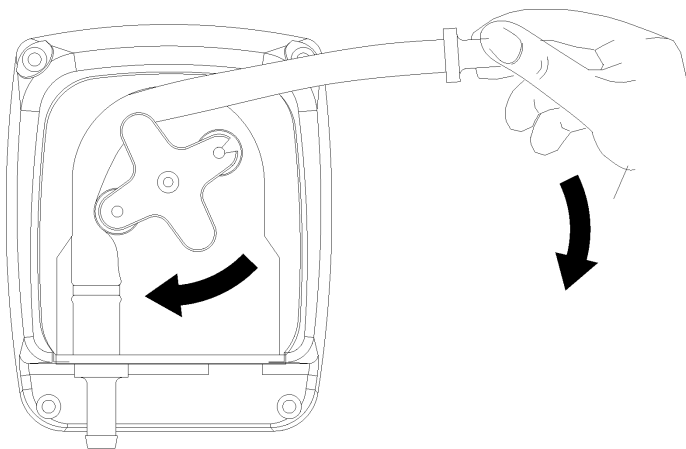
- If the pump has to dose more then 15 minutes it will be necessary to set daily clock at 30 minutes and adjust trimmer.
- Check Daily clock every week.

#### 5.3 Replacing the squeeze tube

Make sure that on the clock the left-hand switch is on the “ O ” position (for the TDS DD) and proceed as follows:

- Remove the snap-on cover protecting the peristaltic pump.
- Place the thumbscrew holder with the two thumbscrews in a vertical position.
- Remove the connector situated to the left of the pump from its seat and pull the pipe towards the front panel. While the pipe is being withdrawn, follow its path by turning the thumbscrew holder in a clockwise direction by hand until the connector to the right of the pump can also be removed.
- To re-assemble, move the thumbscrew holder with the two thumbscrews to a horizontal position.
- Push the connector to the left of the pump in as far as it will go, with the curved part towards the bottom;
- Press the pipe into its seat, following its path progressively by turning the thumbscrew holder in a clockwise direction by hand, until the connector situated to the right of the pump has also been seated as far as it will go.
- Put the protecting cover back into place starting with the upper edge, positioning it with the fitted edge towards the pump and pressing it slightly on the sides until it clicks audibly shut

It will now be possible to position the left-hand switch on “ I ” or “ AUTO ” (for the TDS DD), depending on requirements



## TDS – Timed Dosing System

### 6 TROUBLESHOOTING

#### 6.1 Pump will not activate:

- Check pump output terminals for loose screws and disconnected wires.
- Check for proper voltage across motor windings.
- Check for obstruction in pump head.

#### 6.2 Pump runs too slowly:

- Check roller block for binding.
- Check for lubrication on squeeze tube.

#### 6.3 Loss of pump prime:

- Check pickup line for any holes or air leaks.
- Check squeeze tubing in pump for any cracks or pin holes.
- Check tubing for deterioration.

### 7 CONTACTING SEKO

Web site: [www.sekousa.com](http://www.sekousa.com)



SEKO Italia  
SEKO Asia pacific  
SEKO Brasil  
SEKO Deutschland  
SEKO France  
SEKO Iberica  
SEKO Southern Africa  
SEKO UK  
SEKO USA