Installation, Operation & Maintenance Manual:

CAC-SEKO1

CAC-SEKO2

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CAC Seko1 and CAC Seko2 Pump

WHAT'S IN THE BOX?

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

- **CAC-Seko1 & CAC-Seko2** system;
- Instruction manual;
- Mounting kit;
- PVC tube: 7/16" OD x 5/16" ID (6 ft) each pump.

TECHNICAL FEATURES

- Power supply: 115/208/230 Vac 50/60 Hz
- Consumption: 14 W
- Fuse: 315mA @ 250VAC, 5x20 type
- Protection of the System: The gasketed enclosure on the CAC-Seko1 and CAC-Seko2 is highly water resistant and the electronics are further protected within the enclosure.

WARNINGS

the three available input voltages (115/208/230 vac) of the transformer inside the CAC-Seko1 .

All electrical connections to the CAC-SEKO1 & CAC-SEKO2 should first be verified with a meter. Application of incorrect voltage will permanently damage the unit and is not covered under warranty. Avoid wiring to any power source that has large fluctuations in voltage and/or is prone to surges. Refer to the wiring diagram in this manual for all power and signal connections.

For all connections, please refer to the circuit board schematic contained in this manual

Check the model of the equipment you have purchased for the references about installation, setting, and programming.

CAUTION: The CAC-SEKO1 & CAC-SEKO2 have high voltage connected to the transformer. Always disconnect power when servicing the unit.

CAUTION: During installation and electrical connections remove all power from the dishwasher.

Check the voltage of the main power source and make sure that it matches one of

Failure to follow these instructions may lead to personal injury, damage to the product or poor product performance.

MATERIALS REQUIRED DURING INSTALLATION

- Two pole wire: 2x0.75 - H-05 VVF (qty 2; length 6 ft - for trigger signal);
- ¼" OD copper tubing (qty 1; length 6 ft - for water solenoid valve).
- The lengths indicated above are for typical installations. Your installation may require different lengths.
- An installation kit is available (see Maintenance & Accessories).

INSTALLATION

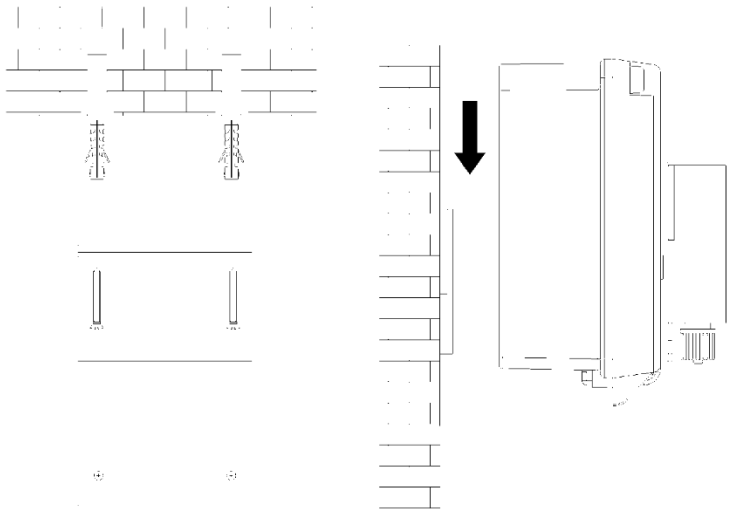
Mount the unit on a nearby wall (using suitable hardware) of the laundry machine.
Locate a mounting spot where operators can access the Start button and within 20 feet of the chemical supply.
Always install the system at a safe, convenient height for the operators to load or unload solid containers or to perform maintenance.

Check all applicable plumbing and electrical codes before proceeding with the installation. This will help to ensure that the system is installed in a safe and suitable manner. A wiring schematic of the laundry machine should be used as a reference for making electrical connections this is typically provided by the laundry machine manufacturer if one cannot be located on the machine itself.

MOUNTING THE SYSTEM

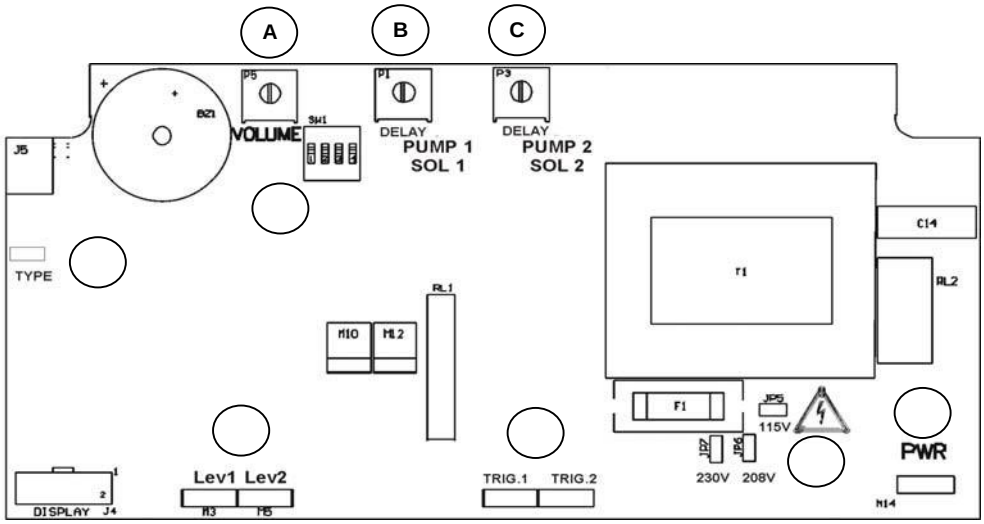
Apply the panel unit system with the brackets and screws supplied:

- 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 with the hardware provided;
- Mount the system with the bracket as the picture below;
- Open the Cabinet Front by unscrewing the upper screws ¼ of a turn:



CIRCUIT BOARD DIAGRAM

CAUTION!!! Turn off the circuit breaker before installing or servicing the CAC-Seko1 & CAC-Seko2.



A. Potentiometer for setting the volume of the buzzer (VOLUME).
B. Potentiometer for setting the delay time (DELAY) for pump/solenoid 1. Adjustable from 0 seconds to 5 minutes
C. Potentiometer for setting the delay time (DELAY) for pump/solenoid 2. Adjustable from 0 seconds to 5 minutes
D. Dip-switch for pause time (LOCK-OUT). Lockout times can be set in 5 minute increments up to 75 minutes by setting the dipswitches as follows:
    a. DIPSWITCH 1 5min
    b. DIPSWITCH 2 10min
    c. DIPSWITCH 3 20min
    d. DIPSWITCH 4 40min
E. Jumper for CALIBRATION
F. Input connector for level float switch:
    a. LEV1 for pump 1
    b. LEV2 for pump 2
G. Input connector for remote control:
    a. TRIG.1 for pump/solenoid 1
    b. TRIG.2 for pump/solenoid 2
H. The voltage to be applied may vary from 20 to 230
I. Jumper for selecting the power supply voltage of the device. The voltages that can be applied are 115 – 208 – 230 VAC.
J. Power-supply connector for device PWR

ELECTRICAL CONNECTIONS

CAUTION: The CAC-SEKO1 & CAC-SEKO2 has high voltage connected to the transformer. Always disconnect power when servicing the unit.

All electrical connections to the CAC-SEKO1 & CAC-SEKO2 system should first be verified with a meter. Application of incorrect voltage will permanently damage the unit and is not covered under warranty. Avoid wiring to any power source that has large fluctuations in voltage and/or is prone to surges. Refer to the wiring diagram in this manual for all power and signal connections. All wiring must conform to local electrical codes.

Main Power Connection (Picture 2) To wire main power connection:

- Check the voltage of the main power source and make sure that it matches one of the three available input voltages (115/208/230 Vac) of the transformer;
- Move the jumper to the proper terminals to set the input voltage (Picture 2) before connecting the power supply:
- Disconnect all power from the laundry machine
- Connect leads from the main power source to the Power terminals on the circuit board (Picture 2).

Other connections

- Connect leads from the terminals on the level float switch (optional) to the terminal (LEV-1/2) on the circuit board (Picture 2).
- If using the console (optional), connect leads from the console to the appropriate connector positioned on the display circuit board.

- For units using an external trigger signal, wire signal from signal source to the 20-230Vac signal input terminal (refer to wiring schematic).

The CAC-SEKO1 & CAC-SEKO2 is factory set for 230 Vac Power Supply.

Plumbing

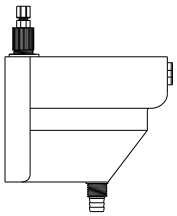
Liquid product plumbing:
Connect 7/16” OD x 5/16” ID tubing from the output (right) side of the pump to the injection point.
Connect 7/16” OD x 5/16” ID tubing from the chemical source to the suction (left) side of the pump.

Solid product plumbing:
A powder or solid type feeder (not provided) should be used for dispensing dry detergent products. Follow the instructions included with the detergent feeder for installation, and recommended water temperature/pressure. Make sure that the detergent feeder (bowl) is located in a position on the wall that allows the feeding of the detergent in the laundry machine through gravity.

- Cut a suitable length of ¼” OD copper tubing (not provided) and connect between the input side of the water solenoid valve and the water source;

- Cut a suitable length of ¼" OD copper tubing (not provided) and connect between the output of water solenoid to a powder or solid detergent feeder;
- Cut a suitable length of tubing (not provided) and connect between the output of detergent feeder to the elbow connector;

Carefully tighten the compression nuts on the water solenoid; over tightening may cause solenoid to leak. Tighten connections to the water source and detergent feeder as needed



The water solenoid valve does not have a set direction for input/output

Always use the foot filter and make sure that it reaches the bottom of the product container. Periodically check and clean the filter of buildup or debris.

SET UP & OPERATION

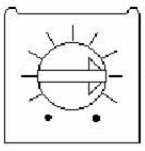
PROGRAMMING
Pump/Solenoid run time:
By calibration (max run time is 10 minutes)

1. Be sure the *DOSING* trimmer is set completely counter-clockwise
2. Locate the terminal labeled "TYPE" on the far-left side of the circuit board — close this terminal with the jumper to enter in CALIBRATION MODE. *(led are blinking red).*
3. While holding a measuring cup or flask under the outlet of the pump, press the "*Start Dosing"* switch and release when the pump starts *(led is steady red)*. Let the pump or solenoid run until the desired amount of chemical is dispensed then press the "*Start Dosing"* switch again to stop. (*led is blinking red) and the buzzer will sound (1 beep)*. The **CAC-Seko1 & CAC-Seko2** run time is now programmed. Repeat these steps if a new volume is required.
4. Remove the jumper from the terminal "TYPE" and leave the circuit open for "Operation" mode. (To prevent loss of the jumper replace it over one terminal pin).

Default dosing time is 1 second.

Delay time: (max delay time is 5 minutes)

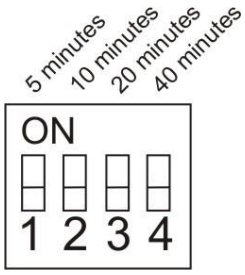
1. You set the delay, using the trimmer *DELAY* on the circuit board



1 s.5 minutes

Lock-out time: (max lock-out time is 75 minutes)

This feature defeats consecutive dispensing of product for a pre-determined interval. Select a combination of switches 1-4 to program total lock-out time.



Example: For 15-minute lock-out, set switches #1 and #2 to ON with all other switches OFF.

For maximum lock-out (75 min) set all switches ON. For no lock-out, set all switches OFF.

OPERATION

Manual activation

Press the "*Start Dosing"* button on the cover or on the remote switch. The **CAC-Seko1 & CAC-Seko2** will begin counting down the delay time (if used) *(the led is blinking green)* and will then run the pump/solenoid for the amount of time programmed *(the led is steady green)*. Once the lock-out time expires the pump/solenoid will be ready to restart.

Signal activation

When the signal input on the circuit board receives a 20-240 VAC trigger signal for at least 3 full seconds, the delay time (if used - the led is blinking green) will begin counting down. Then the pump/solenoid will run for the amount of time programmed *(the led is steady green).* Once the lock-out time expires the pump or solenoid will be ready to restart. **(NOTE: If <u>after</u> calibrating and connecting the trigger signals you want to disable the manual feed option, remove the jumpers inside the front cover for the "*Start Dosing*" switches).**

Lock-out signal feature

The lock-out time is independent for the system with two dispensers. During the lock-out time the led is blinking green.

Disabling the start button

There is a jumper marked "Pump1" or "Pump2" on the display circuit board that can be used to prevent manual activation in certain applications, or to allow manual activation by remote pushbutton only. This jumper only affects the integrated start button. A remote start button, or trigger signal, can always be used to activate the pump.

- When the jumper is ON (close), the on-board start button is functional.

When the jumper OFF(open), the on-board start button is disabled.

Alarms

The two-color *LED* will be *red* and the buzzer sounds when there is a level alarm status. It is necessary to connect a level probe. (Optional - *Picture 2*)

LED color descriptions:

Green: pump running.

Blinking green fast: the pump is in delay time.
Blinking green slow: the pump is in lock-out time.
Red: the pump is running in calibration mode. (See section 3.1.1 for full description)
Blinking red: the system is in calibration mode. (See section 3.1.1 for full description)

MAINTENANCE & ACCESSORIES

MAINTENANCE

Routine maintenance on the **CAC-SEKO1 & CAC-SEKO2** unit includes preventive maintenance on the squeeze tubes and keeping the unit clean. Repairs to the unit involve modular component replacements. This minimizes spare parts inventory requirements and speeds up the service process in the field.

Squeeze Tube Replacement
Replace squeeze tubes at regular maintenance intervals. A planned preventive maintenance schedule will ensure replacement before the tube fails. In the event the tube does rupture, clean all products from the pump with a damp cloth. • Disconnect power before servicing the unit;

- Remove the transparent lid from the pump;
- Before removing the old tube, position the roller assembly with rollers in a vertical position;
- Remove the old tube starting from the left; lift the tube and rotate the roller assembly clockwise;
- Before inserting the new tube, position the roller assembly with rollers in a horizontal position;
- Insert new tube with flat sides facing towards the front; from the left side rotate the roller holder clockwise as you press the pump tube in place;

Insert the transparent lid.

ACCESSORIES

It is possible to connect the system to a level float switch.

Material for the installation:

- Two pole wire: 2x0.75 - H-05 VVF (qty 2; length 6 ft - for trigger signal);
- ¼” OD copper tubing (qty 1; length 6 ft - for water solenoid valve);

TROUBLESHOOTING

- **POWER LIGHT DOES NOT ILLUMINATE:** Check fuses on the circuit boards.
- Check input terminals on board for correct input voltage. Refer to the circuit board diagram.

PUMP(S) OR SOLENOID WILL NOT ACTIVATE:
- Check pump output terminals for loose screws and disconnected wires.
- Check for proper voltage across motor windings (or solenoid contacts).
- Check for obstruction in the pump head (or solenoid).

TOO MUCH DETERGENT:
- Check the voltage to the system.
- Check the concentration set point for the proper setting.
- Check the probe in the wash tank for corrosion or foreign particles.

- Check for open wires between the probe and the connections to the circuit board barrier.

TOO LITTLE DETERGENT:

- Check the voltage to the system.
- Check pump operation for proper speed (or check bowl feeder for obstructions).

PUMP RUNS TOO SLOWLY:

- Check roller block for binding.
- Check for proper input voltage (24 VDC applied to the pump motor terminals will result in the highest speeds).

Check for lubrication on squeeze tube.

CONTACTING CIRCUL-AIR

Sometimes a problem or a question requires you to call Circul-Air support. If this happens, you can contact us through the telephone numbers listed below. Before calling Circul-Air support, have available the following so that the customer support representative can provide a fast and accurate solution to your problem:

- Product model name and number;
- Applicable error messages;
- Detailed specific questions.

Call (weekdays between 8:00 a.m. and 4 p.m. Eastern time):

Service. ……1 800 795 1150 opt 3

Email …… service@circul-air-corp.com

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SEKO Dosing System Corp. does not accept responsibility for the mishandling, misuse, or non-performance of the described items when used for purposes other than those specified in the instructions. Seller's warranty obligations and buyers remedies are solely and exclusively as stated herein. Seller shall have no other liability, direct or indirect, of any kind, including liability for special, incidental, or consequential damages or for any other claims for damage or loss resulting from any cause whatsoever, whether based on negligence, strict liability, breach of contract or breach of warranty.

SEKO Dosing System Corp. Limited Warranty
All Seko controls and pump systems are warranted against defects in material and workmanship for a period of ONE-YEAR. Warranty applies only to the replacement or repair of such parts when returned to the factory with a SEKO number, freight prepaid and found to be defective upon factory inspection. Rubber and synthetic rubber parts such as "O" rings, diaphragms, squeeze tubing and gaskets are considered expendable and are not covered under warranty. Warranty does not cover liability resulting from performance of this equipment nor the labor to replace this equipment. Product abuse or misuse voids warranty. No other warranty, oral, express or implied, including any warranty of merchantability or fitness for any particular purpose, is made for these products, and all other warranties are hereby expressly excluded. Seller's sole obligation under this warranty will be, at seller's option, to repair or replace products that meet the terms of this warranty