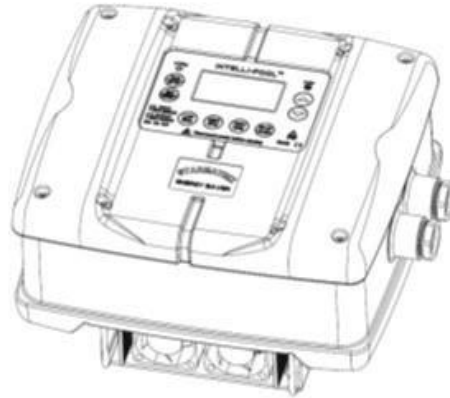


CLEVER-POOL ENERGY SAVER

Installation, Operation & Maintenance Instructions



**Please leave this instruction booklet with the owner as it contains important Maintenance and Safety information.
Read this manual carefully before commencing installation**

Manufactured to: EN61800-5-1:2007

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1. SAFETY AND CAUTION

1.1 READ BEFORE INSTALLATION

Clever-Pool uses vector frequency technology and is a highly advanced electronic device. To ensure personal and equipment safety, please read these instructions carefully before using.

There are marks [DANGER] or [CAUTION] in this book, please pay special attention to these areas when moving, installing, using or checking this product.

 DANGER	1. Please ensure you have the correct power supply to the unit.
	2. Please ensure the control panel is closed before connecting power to avoid electric shock or explosion.
	3. Please make sure you do not confuse the input and output terminals.
	4. If the Clever-Pool is stocked for over 2 years, please use a voltage adjuster to increase the voltage gradually during installation over a ten minute period.
	5. DO NOT touch the wire terminals when power is connected.
	6. Wait for 10 minutes after the power is cut off and all indication lights are off before opening.
	7. DO NOT use wet hands for operation.
	8. Installation and repair on the Clever-Pool should only be carried out by a qualified electrician

1. SAFETY AND CAUTION



CAUTION

1. Installation must conform to all local safety standards.
2. Installation and Maintenance must be carried out by a qualified electrician.
3. Connect power only after control panel is closed, electric shock could otherwise occur.
4. Do not touch the terminals, electric shock will occur if this rule is broken.
5. Do not disconnect power wires if power is connected, serious personal damage will occur if this rule is broken.
6. NEVER touch circuit board or components.
7. Do not attempt a voltage duration test, Clever-Pool's semiconductor elements may be damaged.
8. Ensure adequate air ventilation in summer or high ambient temperature, this will avoid condensate being formed and possible electrical faults.
9. Please install the Clever-Pool in a dry, well ventilated and cool place.

1.2 PRODUCT CHECKS BEFORE INSTALLATION

Each Clever-Pool is fully tested at the factory. After delivery you will need to check for any damage caused by transportation, if so please DO NOT connect to a power supply.

1. SAFETY AND CAUTION

1.3 ENVIRONMENT

The correct environment for the function and life of the Clever-Pool is stated below:

- Indoor use
- No direct sunshine
- No corrosive fluid
- Away from radioactive or flammable substances
- No direct rain or wet environment
- Ambient temperature: -10°C to +40°C
- No oil or salt
- No dust or metal particles
- No electromagnetic interference
- An RCD device **MUST** be used with this product.

2. PRODUCT DIMENSIONS AND PARAMETERS

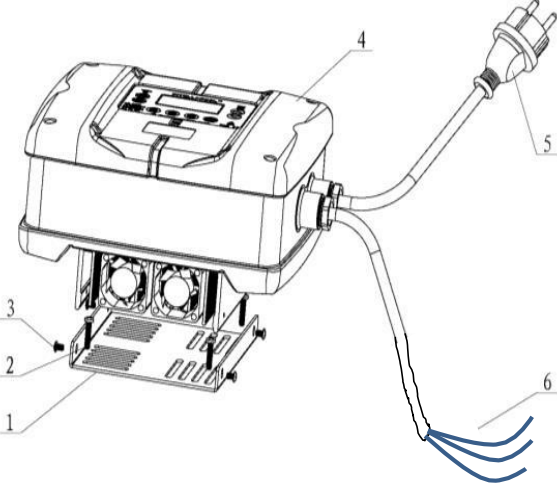
2.1 DIMENSIONAL AND TECHNICAL PARAMETERS

PARAMETER SHEET		Dimension
Model Item	Clever-Pool/220V	<p>139</p> <p>248</p> <p>200</p>
Input power	Single-phase AC	
Input voltage	220V±15%	
Input frequency	50Hz	
Output voltage	1~220V	
PUMP TYPE	SINGLE-PHASE	
Max. Power	MAX 2HP	
Max current	12A	
Mode option	Manual or Auto	
Cooling	By air	
Motor speed range	50Hz:1200~3000rpm	

3. INSTALLATION AND FUNCTION GUIDE

3.1 INSTALLATION

3.1.1 INSTALLATION SKETCH AND DESCRIPTION

Sketch for Installation	Procedure and instruction
	1. Use a cross-head screwdriver to take off the screws 3 as shown and plate 1
	2. Put plate 1 in your installation position and use screws 2 as shown to fix the plate 1 securely.
	3. Put the control box 4 back onto plate 1 and re-fix with screws 3 as shown.
	4. Connect the wire 6 as shown from the Clever-Pool to the pump.
	5. Connect plug 5 as shown to the correct power supply socket.
	6. Strictly follow the operation steps as indicated in this manual.

3.2 RUNNING

3.2.1 CHECKS BEFORE RUNNING

1. Check if installation and connections are 100% correct.
2. Check if any metal or foreign objects have been left inside the product.
3. Check all wire terminals are tight.
4. Check there are no bare wires on the terminals touching other terminals.
5. Check the control panel is properly closed.
- 6. An RCD device MUST be fitted with the system.**
7. Check the power supply frequency is correct for this model.
8. If all connections are correct, run for a short duration without load.

3.4 PROGRAMMING GUIDE

3.4.1 MODES

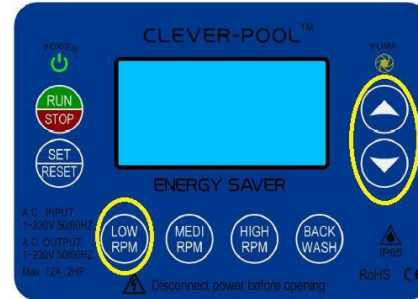
1. The Clever-Pool has two running modes: Manual mode and Auto mode.
- 1.1 Manual mode is used when you are connecting to a timer. The system time settings are not required to run in this mode.
- 1.2 Auto mode is used when there is no salt chlorinator or timer and includes up to 4 separate timers with individual speed options. This is ideal for when you want to run your pool pump at different times and speeds to take advantage of the lower electrical consumption rates.
- 1.3 In stop and manual mode press the SET/RESET button once to switch to Auto Mode. In stop and Auto mode press the RUN/STOP button to switch to Manual Mode.

3. INSTALLATION AND FUNCTION GUIDE

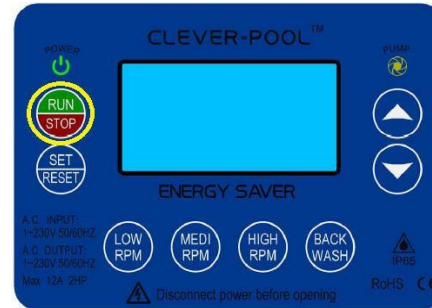
3.4.2 MANUAL MODE

In stop mode the display will now show MANUAL, LOW RPM and the speed in rpm.

Press the up or down buttons to select the speed. Alternatively press one of the systems, pre-set speed buttons LOW, MED, HIGH.



Press the RUN/STOP button to put it into run mode, this will start the pump. The CLEVER-POOL will store the speed and resume at that speed when switched on again.



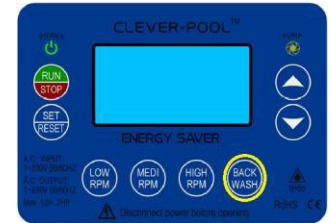
To stop the pump simply press the RUN/STOP button again.

3.4.3 MANUAL BACKWASH PROCEDURE

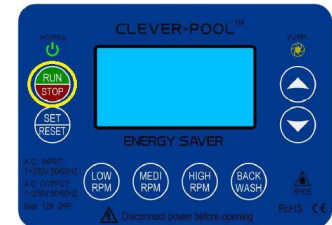
In stop mode press the SET/RESET button once. The display will now show MANUAL, LOW RPM and the speed in rpm.



Press the BACKWASH button. The display will now show backwash and the rpm.



Press the RUN/STOP button to put it into on mode, this will start the pump.

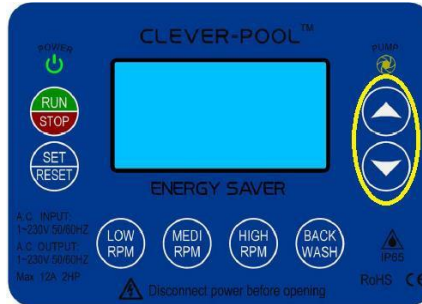


Press the RUN/STOP button to stop the pump

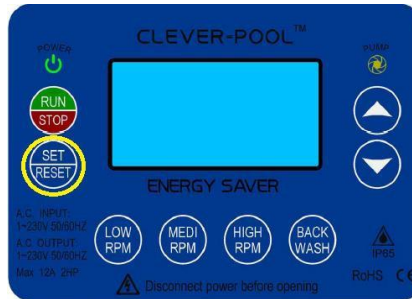
3.4.4 PROGRAMMING FOR AUTOMATED FUNCTION

4.1 Current time

In stop and Auto Mode, Press UP and Down button to set Current time,



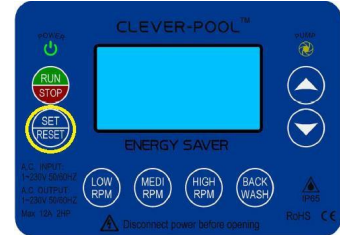
Press the SET/RESET button to step over from hours to minutes. The display will then flash the minute digits.



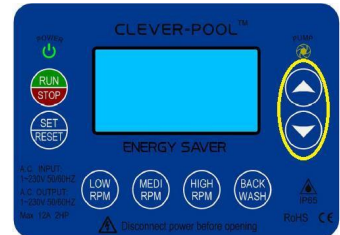
Press the SET/RESET button to store the time. The display will now show the current time with flashing cursor and the word now shown at the top.

4.2 Auto Mode timer and Speed setting

In stop mode press the SET/RESET button. The display should show CURRENT TIME, START TIME, STOP TIME and the stored time with hour digits flashing. This is the start time for AUTO MODE 1.



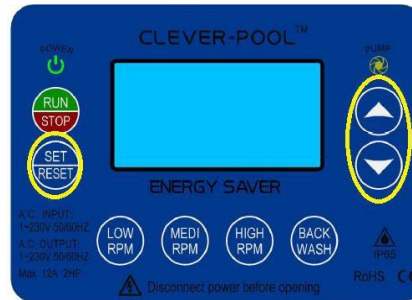
Press the up or down button to select the hours.



Press the SET/RESET button to step over from hours to minutes and from Start Time to Stop Time



Press the SET/RESET button to step to SPEED setting. The display will now show the flashing four digits for speed, which is the speed for AUTO MODE 1. Press the up or down button to change motor speed. Alternatively press one of the pre-set speed buttons LOW RPM, MEDI RPM, HIGH RPM.



Press the SET/RESET button to store the speed and step over to AUTO MODE 2. The display should show CURRENT TIME, START TIME, STOP TIME and the stored time with hour digits flashing. This is the start time for AUTO MODE 2.

Repeat steps above to set speed, start and stop times for AUTO MODE 2, 3 and 4. Pressing the SET/RESET button after selecting the speed for Auto mode 4 will finalise the timer settings.

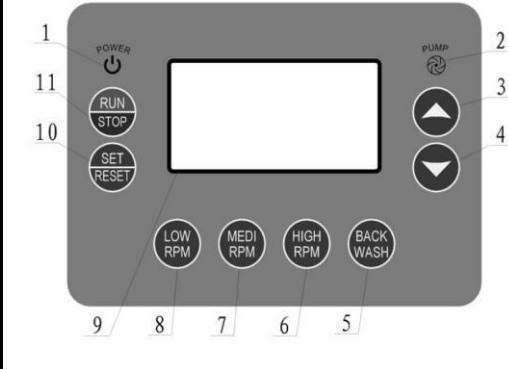
The display will go blank and return to stop mode with the current set time displayed.

Alternatively if you only require one time period per day press the SET/RESET button to cycle through time a speed settings of the remaining TIMERS ensuring all start and stop times are set to zero's or to the same time period. Please note all settings for AUTO MODE 1 to 4 will be retained in the event of power loss.

After all timers have been set. The CLEVER-POOL will then start and stop the pump at set times and speeds.

4. BUTTON AND FUNCTION KEY

4.1 BUTTONS AND FUNCTIONS

	Number	Name	Explanation
	1	Power light	Power supply connected or disconnected
	2	Pump light	Pump on or off
	3	Increase	Increase the parameter
	4	Decrease	Decrease the parameter
	5	Full RPM	Pump motor RPM setting
	6	High RPM	Pump motor RPM setting
	7	Medium RPM	Pump motor RPM setting
	8	Low RPM	Pump motor RPM setting
	9	LCD screen	Showing all parameters
	10	Setting	Parameter setting or re-set system
	11	Run/Stop	Manually control pump run or stop