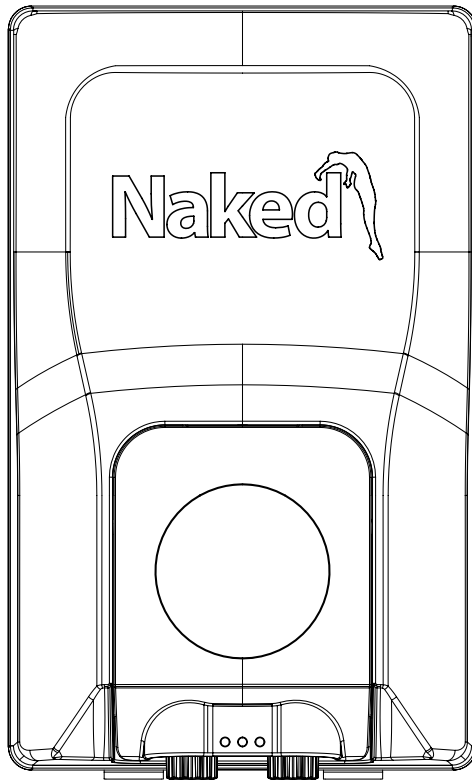


pH CONTROLLER

INSTALLATION & STARTUP GUIDE

MODEL: NKD-pHU



NOTE:

1. READ THIS DOCUMENT PRIOR TO INSTALLATION. IMPROPER INSTALLATION WILL VOID WARRANTY.
2. PRODUCT ONLY TO BE INSTALLED & SERVICED BY A SUITABLY QUALIFIED PROFESSIONAL.
3. THIS MANUAL CONTAINS IMPORTANT INFORMATION. ONCE INSTALLATION IS COMPLETE INSTALLER MUST PROVIDE THIS MANUAL TO OWNER/OPERATOR TO STORE IN A SAFE PLACE.



IMPORTANT SAFETY INSTRUCTIONS

When installing and using this electrical equipment, basic safety precautions should always be followed, including the following:

1. READ AND FOLLOW ALL INSTRUCTIONS.
2. WARNING: To reduce the risk of injury, do not permit children to use this product unless they are closely supervised at all times.
3. WARNING: Risk of Electric Shock. Connect only to a branch circuit protected by a ground-fault circuit-interrupter (GFCI). Contact a qualified electrician if you cannot verify that the receptacle is protected by a GFCI.
4. WARNING: To reduce the risk of electric shock, replace damaged cord immediately.
5. SAVE THESE INSTRUCTIONS.

The NKD-pHU Controller shall be installed according to US state, local ordinances, installation local codes and current National Electrical Codes (NEC), NFPA 70 standards.

To reduce the risk of accidents or incidents, when servicing the unit all pumps must be switched OFF and disconnected from any power source. If you are not familiar with the pool equipment, DO NOT adjust or service the NKD-pHU Controller without consulting a pool dealer or a qualified pool technician.



**WHEN MIXING ACID WITH WATER:
ALWAYS ADD ACID TO WATER. NEVER ADD WATER TO ACID.
ACID/WATER MIX RATIO = 1 : 3**



DO NOT PLUG UNIT IN IF CARTON HAS BEEN WET.



**WE RECOMMEND STORING ACID DRUMS IN A SAFE PLACE
PREFERABLY AT LEAST 6.5 ft / 2 m AWAY FROM ALL EQUIPMENT.**



IF ACID IS STORED INSIDE ENSURE ADEQUATE VENTILATION.

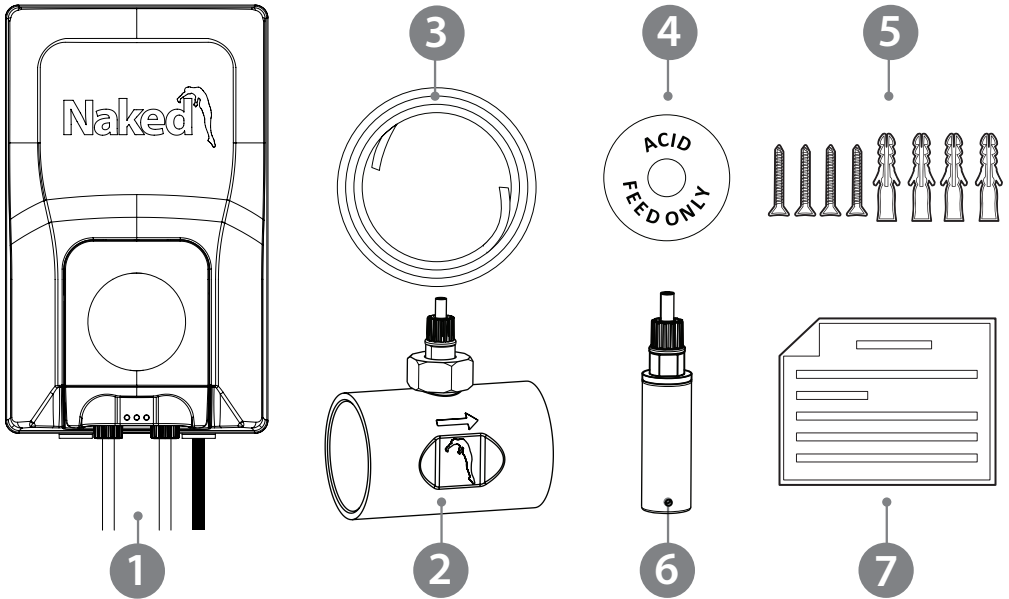
WATER BALANCE GUIDELINES - Ideal levels

POOL TYPE	pH	Salt	Total Alkalinity	Calcium Hardness
Concrete	7.4 - 7.6	500 - 700 ppm	80 - 150 ppm	200 - 250 ppm
Fiberglass or Vinyl	7.2 - 7.4	500 - 700 ppm	80 - 120 ppm	80 - 200 ppm

Specifications subject to change without notice.

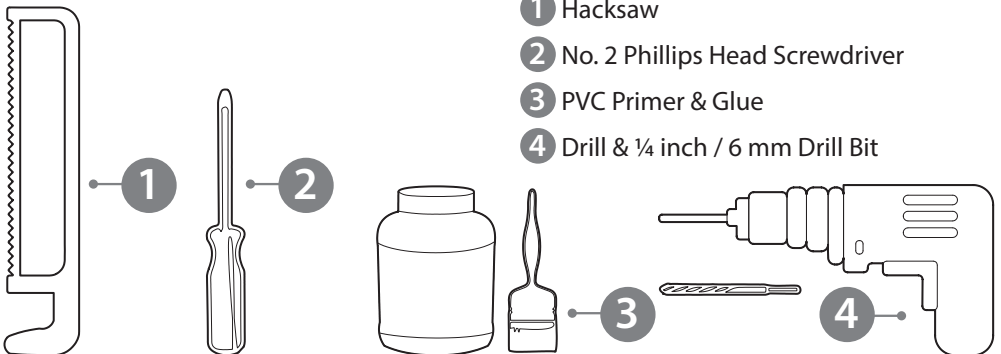
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pH CONTROLLER | PARTS SUMMARY

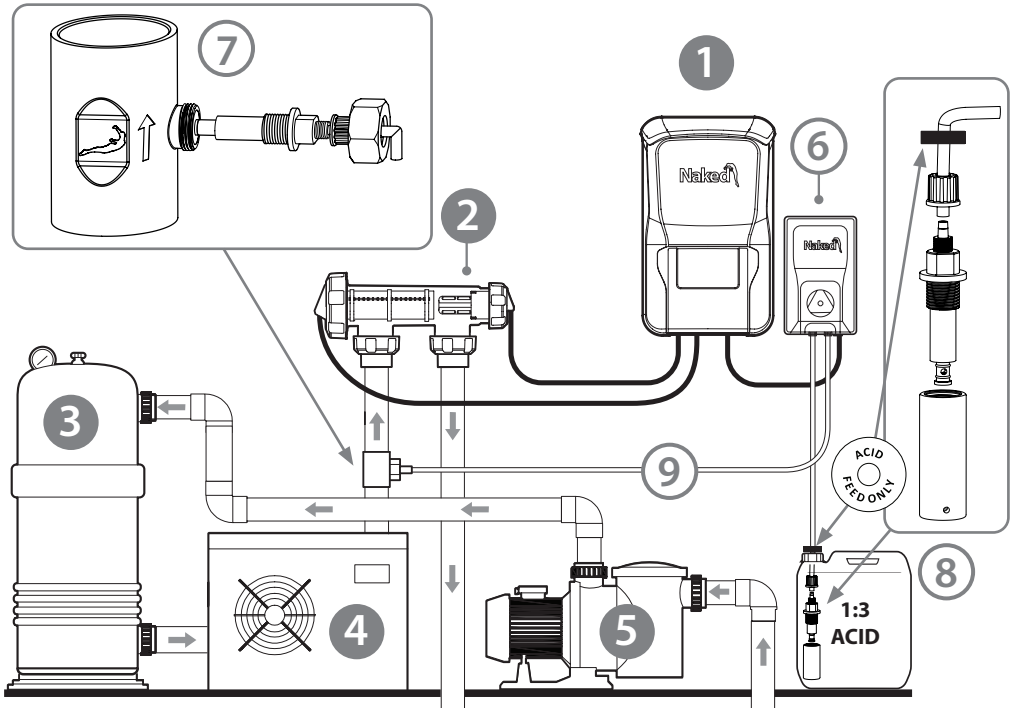


- 1 pHU Controller with Wall Mount Bracket
- 2 Clear Tee with Lock Nut, Injector Valve c/w Sleeve & Tube Nut Injector O'Ring
- 3 Clear PVC Flexible Tube (19.7 ft / 6 m)
- 4 Acid Drum Label
- 5 Wall Plugs & Mounting Screws (x4)
- 6 Drum Weight with Suction Valve c/w Tube Nut
- 7 Installation and Start-up Guide

TOOLS REQUIRED



TYPICAL SYSTEM INSTALLATION



➡ Indicates direction of water flow

- | | |
|----------------------|---|
| 1 Naked Control Unit | 6 NKD-pHU Controller |
| 2 OXI & ION Housing | 7 Clear Injection T-Piece |
| 3 Filter | 8 Acid Drum with weighted Suction Valve and Label |
| 4 Heater | 9 Clear PVC Flexible Tube |
| 5 Pool Pump | |



BEFORE YOU START:

- NKD-pHU uses a 1 : 3 Acid/Water mix ratio. Add 15.85 quarts / 15 L water then 5.28 quarts / 5 L of acid to a 21.13 quarts / 20 L drum. Always add acid to water, never water to acid.
- Install the Clear Injection Tee Piece before or after the OXI & ION Cell Housing taking note of the flow direction indicator.
- All installations must be after any heating.
- Store the acid drum at the furthest possible point away from all equipment.

INSTALLATION STEPS (Refer To Typical System Installation Diagram)

- STEP 1:** Detach the Wall Mounting Bracket from back of unit and mount in the desired location for the NKD-pHU using the Wall Plugs and Mounting Screws provided.
- STEP 2:** Snap the pH Controller into the locating pins of the Mounting Bracket.
- STEP 3:** Install the Clear Injection Tee Piece BEFORE or AFTER the OXI & ION Cell Housing taking note of the flow direction indicator. Note: This should be installed after any heating.
- STEP 4:** Measure and cut the Clear Flexible PVC Tube for the Clear Injection Tee Piece.
- STEP 5:** Use the remaining Clear Flexible PVC Tube for the acid drum, keeping the acid drum a minimum of 6.5 ft / 2 m from any equipment.
- STEP 6:** Drill a ¼ inch / 6 mm hole in the lid of the acid drum for the Clear PVC Flexible Tube and attach Acid Drum Label to the cap.
- STEP 7:** Connect the Clear PVC Flexible Tube to the base of the peristaltic pump (left side) and feed through the ¼ inch / 6 mm hole into the acid drum and attach to the Acid Drum with weighted Suction Valve.
- STEP 8:** Connect the Clear Flexible PVC Tube to the base of the peristaltic pump (right side) and attach to the Clear Injection Tee Piece.
- STEP 9:** Plug the pH Controller cable into the programming plug on the base of the Naked Control Unit.

OPERATING THE CONTROLLER

The NKD-pHU is based on an algorithm and is designed to dose acid into the pool each day based on a preset time in accordance with the pool size entered during the Initial Start-up.

The pH controller will be activated each day when the Control Unit starts and will run for the preset time based on the pool size.

If pH levels are high, longer running times will be required, and similarly if levels are low, run times will need to be decreased. Every swimming pool is different depending on the set up and environment.

To change dosing times simply press [OK] for the Main Menu within the Naked Control Unit and using the [+] and [-] buttons select M13 pH Control.

NOTE:

WHEN STARTING THE NKD-pHU FOR THE FIRST TIME THE ACID PUMP WILL AUTOMATICALLY PRIME WHEN TURNED ON BY THE CONTROL UNIT.

THERE ARE 2 MENUS FOR pH CONTROL

1. pH1 RUN TIME

- Adjusts the run time of the acid pump.
- Run time is displayed in minutes indicating the run time of the acid pump each day when T1 starts.
- If pH levels are high simply increase the time by pressing the [+] button.
- If pH levels are low simply decrease the time by pressing the [-] button.

Adjustments may be necessary, we recommend adjusting the Run Time by 1- 2 minutes and checking pH levels until the correct levels are achieved.

2. pH2 DEMAND or PRIME

- Used to manually dose acid or to prime the acid line after changing the acid drum.
- Displayed in ml, the default is 3.4 fl oz / 100 ml and can be adjusted up to 16.9 fl oz / 500 ml.
- The acid pump will dose the required amount entered and once completed will return to the RUN TIME in pH1.
- Calculate the amount of acid required by using the Dosing Calculator in the Naked Pools App. Simply select the fl oz / ml required by pressing the [+] and [-] buttons and [OK] to confirm.

MAINTENANCE

It is important to understand a certain amount of owner maintenance and care is required to keep your investment operating properly. We recommend the following basic maintenance and further information can be found on the Naked Pools App.

1. Injection Point on Injector Valve

Check the injection point periodically by inspecting the Clear Injection Tee Piece for build-up of solid matter at the end of the PVC tubing. While unscrewing the BLACK lock nut, take care not to lose the rubber O-ring.

MAINTENANCE (Continued)

2. Lubricate Squeeze Tube

Lubricate the pump squeeze tube every 3-6 months. Use a silicone-based lubricant only, as petroleum-based lubricants will cause damage to the tube and rollers.

3. Replace Squeeze Tube

Depending on usage, the squeeze tube may need replacement after 1-2 years of use. Before replacing, ensure that the suction and injection tubes are empty. We recommend using the original sized Tygon® Norprene® tube as incorrect sizing will damage the unit.

It is important to check the condition of the NKD-pHU Tri-Roller Block each time the squeeze tube is replaced and changing this part at least every 24 months.

To replace the squeeze tube and Tri Roller Block, please follow the instructions included with the replacement kit, or via the Naked Pools App.

TECHNICAL SPECIFICATIONS

Volts Input (Vac)	20
Amps Input - Max. (Aac)	0.65
Total Power Consumption (W)	13
pHU Control Unit Dimensions (in) (mm)	5.31 W x 8.66 H x 4.96 D 135 W x 220 H x 126 D
Output Controlled by Sanitizer (per hr)	0 - 33.8 fl oz 0 - 1.0 Lt
Rated Pressure (kPa)	350
Squeeze Tube	Tygon® Norprene® (Commercial spec)
Motor Speed (RPM)	12
Non-Return Injector Valve	PVC with viton sleeve
Clear Flexible PVC Tubing (ft & in) (m & mm)	20 ft x ¼ in 6 m x 6 mm
Roller Block	Heavy-duty PVC
Water Connection (in) (mm)	2 50
Water Flow Rate (GPM) (L / min)	21 - 172 80 - 650
IP Rating	35
Net Weight (lbs) (kg)	5.07 2.3

WARRANTY

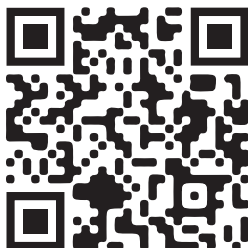
This product is warranted for twelve (12) months against defects in workmanship and materials when used for its intended purpose and maintained according to instructions. This warranty is limited to repair or replacement, depending on the problem of the product. If the product is found to have been misused or damaged due to water entry/mechanical damage/accidental damage, this will not be covered under warranty, and, in such cases, no warranty will apply.

What is covered? Repairs/parts/factory labour, or a replacement unit if applicable.

What is not covered? Damage due to accident, misuse, water penetration of the enclosure, tampering, or lack of prescribed maintenance is not covered.

Should you need to lodge a warranty, ensure to include the product serial number, purchase date, and type of failure. To lodge a warranty claim, please use menu under SUPPORT on our web site or directly from the Naked App.

This limited warranty is the sole and complete warranty for the NKD-pHU Controller. In no event shall Naked Pools be liable for incidental or consequential damages.



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