

## VCMA-20-PRO Condensate Pump Series

This **QuickStart Guide** includes basic installation, setup, and operation information. For additional important safety and operation information, please refer to the **VCMA-20-PRO Owner's Manual** available at:

[www.littlegiant.com](http://www.littlegiant.com).

### Safety Instructions

#### **DANGER**



#### **Risk of death, personal injury, or property damage due to explosion, fire, or electric shock.**

- Do not use to pump flammable, combustible, or explosive fluids such as gasoline, fuel oil, kerosene, etc.
- Do not use in explosive atmospheres or hazardous locations as classified by the NEC, ANSI/NFPA70.
- Do not handle a pump or pump motor with wet hands or when standing on a wet or damp surface, or in water.
- When a pump is in its application, do not touch the motor, pipes, or water until the unit is unplugged or electrically disconnected.
- If the power disconnect is out of sight, lock it in the open position and tag it to prevent unexpected application of power.

#### **WARNING**



#### **Risk of severe injury or death by electrical shock.**

- To reduce risk of electrical shock, disconnect power before working on or around the system.
- Wire pump system for correct voltage.
- Be certain that this pump is connected to a circuit equipped with a ground fault circuit interrupter (GFCI) device if required by code.
- Check electrical outlets with a circuit analyzer to ensure power, neutral, and ground wires are properly connected.
- Some pumps are supplied with a grounding conductor and grounding-type attachment plug. To reduce risk of electric shock, be certain that it is connected only to a properly grounded grounding-type receptacle. Do not remove the third prong from the plug. The third prong is to ground the pump to help prevent possible electric shock hazard.
- Some pumps are supplied with lead wires and are intended to be hardwired using a junction box or other approved enclosure. The pumps include a grounding connector. To reduce risk of electric shock, be certain that it is properly connected to ground.
- In a 230 V direct wire installation, one side of the line going to the pump is always electrically energized, regardless of whether the liquid level control switch is open or closed. To avoid hazards when installing or servicing, install a double-pole disconnect near the pump installation.
- The flexible jacketed cord assembly mounted to the pump must not be modified in any way, with the exception of shortening the cord to fit into a control panel. Any splice between the pump and the control panel must be made within a junction box and comply with the National Electrical Code.
- Check local electrical and building codes before installation. The installation must be in accordance with their regulations as well as the most recent National Electrical Code (NEC) and the Occupational Safety and Health Act (OSHA).
- Do not use the power cord for lifting the pump.
- Do not use an extension cord.
- The pump should only be used with liquids compatible with pump component materials. If the pump is used with liquids incompatible with the pump components, the liquid can cause failure to the electrical insulation system resulting in electrical shock.

#### **CAUTION**



#### **Risk of bodily injury, electric shock, or equipment damage.**

- This equipment must not be used by children or persons with reduced physical, sensory or mental abilities, or lacking in experience and expertise, unless supervised or instructed. Children may not use the equipment, nor may they play with the unit or in the immediate vicinity.
- Equipment can start automatically. Lockout-Tagout before servicing equipment.
- An inoperative or malfunctioning pump could lead to flooding, resulting in personal injury or property damage.
- In applications where property damage and/or personal injury might result from an inoperative or leaking pump due to power outages, discharge line blockage, or any other reason, a backup system(s) (e.g. auxiliary switch) and/or alarm should be used and monitored.
- The high level switch should be connected to a Class II Low Voltage circuit. The two switch wires are black. Do not confuse these wires with the line voltage power conductors.
- The high level switch is placed in an orientation that reverses the normal function of normally open and normally closed terminals. Pay close attention to the instructions in the owner's manual.
- The pump has been evaluated for use with water only.

## NOTICE

### Risk of damage to pump or other equipment.

- Before installing pump, allow air conditioner to cycle several times, collecting condensate in a separate container to help flush any residual oils that may remain in the system. Failure to flush the system can result in damage to the pump and drain line plumbing components.
- When operating in a gas furnace environment, care must be taken to ensure acidity of condensate does not fall below the average pH of 3.4 (to prevent a localized pocket of acid that acts like a battery causing pitting) by routinely cleaning or flushing tank with fresh water.
- Support pump and piping when assembling and when installed. Failure to do so may cause piping to break, pump to fail, motor bearing failures, etc.
- Do not install the pump in a manner that will subject it to splashing or spraying.
- Periodically inspect pump and system components. Regularly check hoses for weakness or wear, making certain that all connections are secure.
- Schedule and perform routine maintenance as required and in accordance with the Maintenance section of the manual.
- Pump is for indoor use only.
- Do not use this pump inside an air plenum.

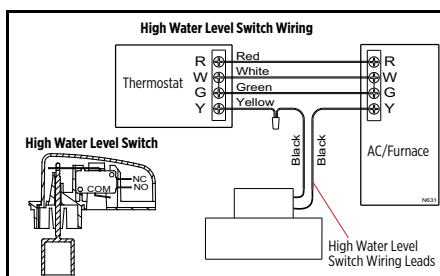
## Physical Installation

1. Install on a strong, level surface with the inlet below the coil drain or mount on wall using the mounting bracket.
  - Do not block the air vents.
  - The surface must support the water filled tank.
2. Cut end of pipe(s) from evaporator or furnace drain at a 45° angle.
3. Route pipe(s) into the inlet openings, ensuring no interference with float operation.
4. Install 3/8" diameter tubing into check valve and secure with plastic ty-rop (not provided).
  - Route outlet tubing straight up, not exceeding 75% of pump total dynamic head capacity.
5. At the top, slope discharge line down slightly above the drain area. Then, turn down and route to a suitable drain at a point below or approximately level with the bottom of the pump.
  - If it is not possible to slope the discharge line down, make an inverted "U" trap directly above the pump at the highest point.

## Electrical Installation

1. If the model is supplied with a power cord, connect it to its own circuit with a constant source of power matching the nameplate voltage.
  - Connect to a circuit equipped with a ground fault circuit interrupter (GFCI) if required by code.**IMPORTANT:** If the power cord is damaged, the whole unit must be replaced.
2. If the model is supplied with a stripped wire cord end, make connections to its own circuit within a junction box in compliance with the National Electrical Code.
  - Wire colors are Green/yellow = Ground; Brown = Line; Blue = Line (230 V) or Neutral (115 V)
  - Do not connect to a fan or any device that runs intermittently.
  - Make sure the fuses or circuit breaker are of ample capacity.
  - Connect the high water level safety switch to class 2 low voltage circuit only.

**NOTE:** The high water level switch is factory wired to the NO and COM terminals. Refer to the VCMA-20-PRO Owner's Manual for more information or to reconfigure.



For technical assistance, parts, or repair, please contact:

**800.701.7894 | littlegiant.com**

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