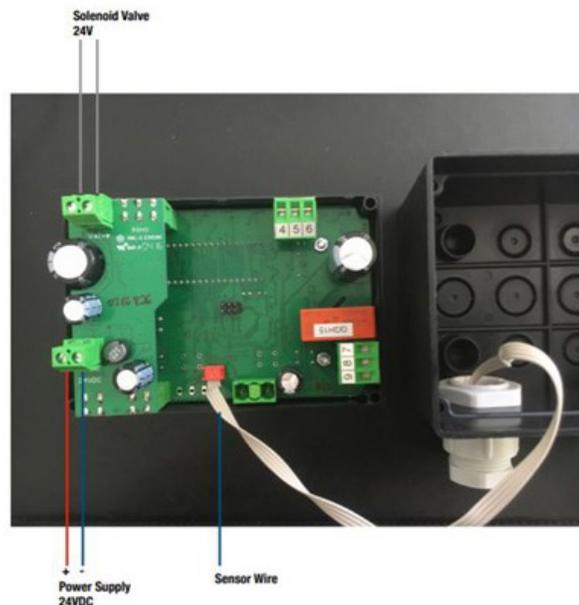
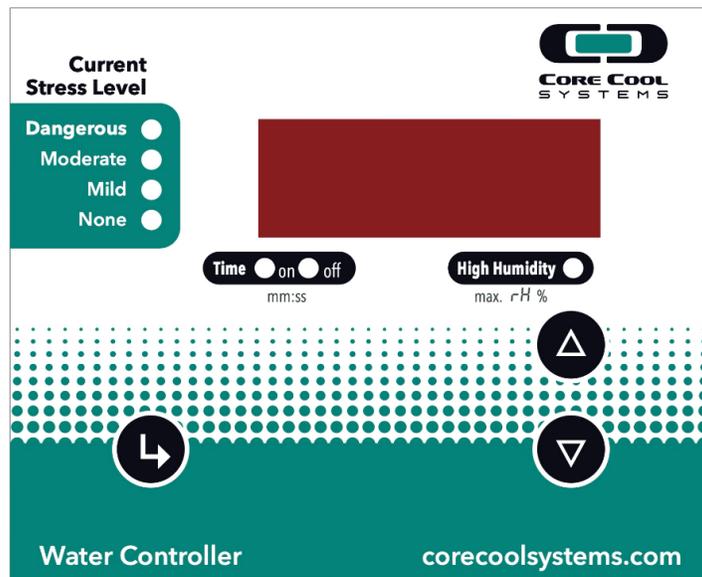
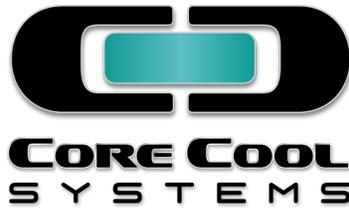
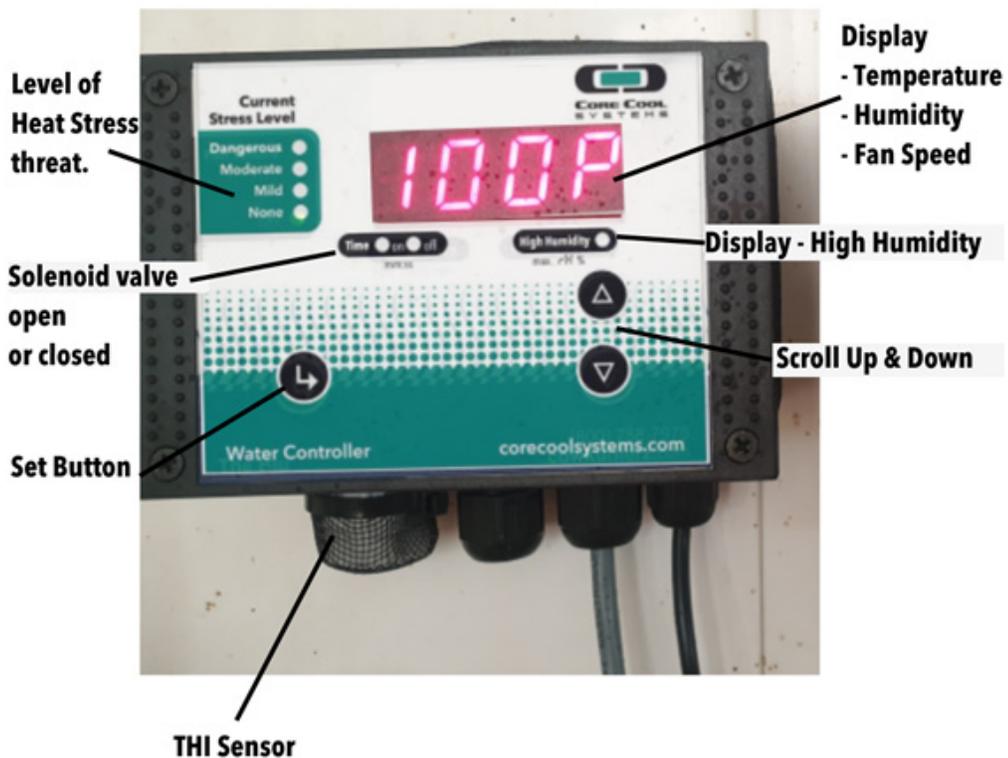


## WATER CONTROLLER



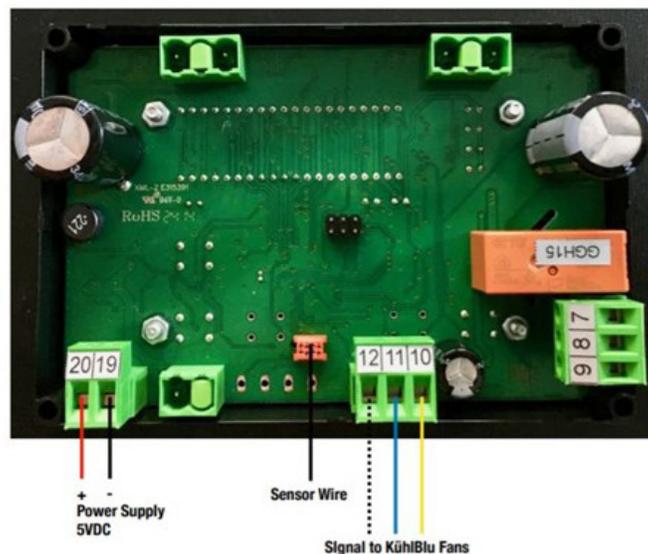
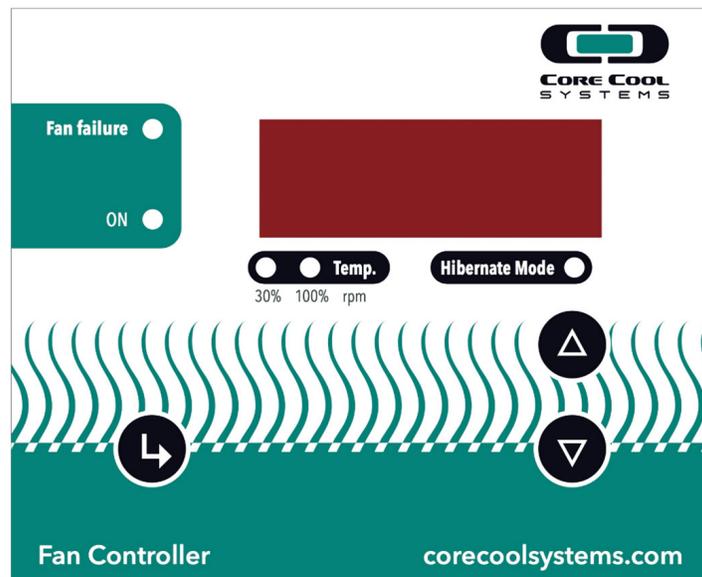


## WATER CONTROLLER LABELLED



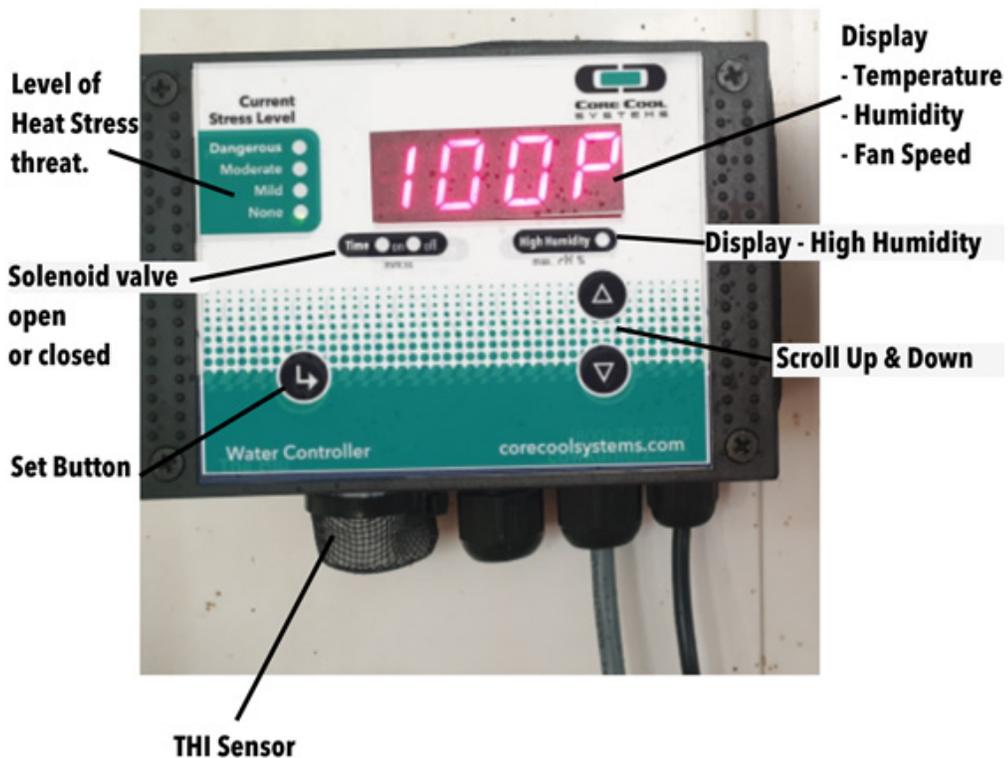


## FAN SPEED CONTROLLER





## WATER CONTROLLER LABELLED





## HELPFUL NOTES FOR SETTING THE CONTROLLER FOR THE WATER CONTROLLER & SPEED FAN CONTROLLER

### A) COMFORT ZONE OF COWS

The comfort zone of dairy cows is determined by their daily yield (kg milk/cow).

For cows producing 35 kg/day the comfort zone ranges from -2°C to 10°C / 28.5°F to 50°F

For cows producing 40 kg/day the comfort zone ranges from -4°C to 8°C / 25°F to 46.5°F

### B) MOISTURE

Barns have a problem during the colder days with moisture/humidity.

The bedding accumulates moisture and the somatic cell count and Mastitis can go up.

Therefore, it would be helpful to use the fans not only to cool the cows during the hot days, but also move air during the colder days.

### C) CONTROLLER SETTING

Based on the cooling needs of the cows and the need to keep the barn dry during colder days, the ideal setting would be:

#### The Fan Speed Controller:

Start at 50°F (30% rpm) – This temp can be set between 50°F and 61°F

Full speed at 65°F (100% rpm) – This Temp can be set between 64°F and 77°F

#### The Water Controller:

The Reub is calculating the THI and is controlling the water cycle based on the THI

Yellow: ON = 30 Sec. / OFF = 240 Sec.

Orange: ON = 30 Sec. / OFF = 120 Sec.

Red: ON = 30 Sec. / OFF = 60 Sec.

High Humidity: 75%



## QUAD TIP NOZZLE HINTS

Calculations for the non-return valves.

The maximum head-pressure that must not be exceeded is:

- 10 ft for the L-Type
- 20 ft for the H-Type
- 40 ft for the X-Type

The setting of the pressure reducer needs to include the head-pressure from the line-drops.  
Example:

- X-type valves open at 37 psi
- If head-pressure is 30 ft. or 13 psi
- Pressure Reducer needs to be set above 25 psi to open the valves.

An additional issue will be the volume of water that is in the 3/4" PVC-Lines.

The change to X-type valves should stop the leaking of the nozzles.

The volume in the lines will determine how long it takes to release the pressure down to 21 psi (pressure when x-type valves shut off).

If the time is too long, the volume could be reduced by installing the solenoid valve right in front of the first drop and put a drain valve (to flush lines and release air) after the last drop.

In case of questions, please give me a call. 1-844-GET-KUHL or [nancy@corecoolsystems.com](mailto:nancy@corecoolsystems.com)