



## THE COBRA SYSTEM

### HEATED C.T.A.

412-872-4149

Thank you for purchasing "The Cobra System".  
Please read important information  
below:

***THE COBRA SYSTEM must be installed by a certified electrician and plumber.  
Warranty is rendered null and void if not following specific directions while installing  
THE COBRA SYSTEM.***

**\*NOTE:**

- We recommend using Teflon tape for all pipe thread connections on all threaded fittings.
- Be sure there is no electric current going to The Cobra System CTA until units are filled with your wheel cleaning solution. Turn your pump on manually until all nozzles are spraying.
- You cannot make any adjustments to the digital thermostats they are preset and locked out to ensure non-tampering for the correct temperature.

### **COBRA TIPS FOR GETTING CLEANER WHEELS & TIRES**

1. No manual prepping. Keeping wheels and tires dry.
2. Prevent presoak spraying on the wheels.
3. Correct chemical ratio.
4. Spray pattern should be concentrated on wheel.
5. Allow wheel and tire chemical to stay concentrated as long as possible
6. Wheel blaster set 20 to 40 ft. from Cobra's if possible
7. Run alkaline not acidic on lower brushes
8. 90psi at air diaphragm pump (minimum) (G57 Flojet pump with 511 Hydrominder)

### **WARRANTY**

Parts manufactured by The Cobra System are covered for a period of 90 days from the shipment date and 1 (one) year on labor. Other parts which are purchased by The Cobra System used to manufacture The Cobra System products are covered by their respective manufacture warranties.

**WARRANTY TERMS:**

The Cobra System warrants to the original purchaser to be free of Defective Parts and Workmanship for a period of 1 (one) year. This warranty begins on the date of original retail delivery or original use, whichever occurs first. Repairs or replacements und warranty will not extend the warranty coverage. No benefits or remedies are available under this limited warranty while the invoice for the unit or related services remains outstanding. This warranty is Non-Transferable. If any part of the Cobra System C.T.A. Fails in normal use because of defective parts or workmanship performed by the manufacturer and is returned to us, then it will be repaired or assembly replaced. The alleged defective part of the assembly MUST be returned to the manufacturer, at your cost properly supported by purchase receipt, For inspection and credit consideration in order for the Replacement coverage to be applicable, As specified below.

**ALL WARRANTY REPLACEMENTS AND FIELD REPAIRS MUST BE PRE-APPROVED. AN IDENTIFICATION REFERENCE MUST BE OBTAINED BEFORE ANY SERVICE IS PERFORMED.**

## PARTS INCLUDED

- (2) Digital Temp. Controls
- (4) Poly ¼" x ¼" ball valves
- (4) V-Jet foaming spray nozzles  
and check valve nozzle bodies for **Chain Conveyor**
- (4) spray nozzles for **Belt Conveyor**
- (2) Orange 6" PVC caps
- (2) Wire restrainers for wire probes

## PARTS NOT INCLUDED

- (2) Watertight service boxes
- (1) 24 hour timer (on and off, business hours of operation)

## INSTALLATION INSTRUCTIONS FOR DIGITAL TEMPERATURE CONTROL SWITCH

### NEMA 4X Housing, Dual Stage, 20A Contact Rating

*(must be installed by a certified electrician)*

1. Remove CTA's from boxes.
2. Remove (3) ¼" x 3/4" lg. hex head bolts from outside bottom of unit to expose heater and wire probe. Probe is set in place to run to the Digital Control.
3. Before lagging them down, wait until the CTA's are fully ready to operate along with the wash at 100% ready to run vehicles before lagging them down. They will be heavy enough not to move to get a good placement to mount. The concentration of the chemical should be spraying on the rim. Chemical runoff to the tire for cleaning will happen.
4. a) Chain conveyors Driver Side: Place the CTA after your photo eye to get the heated chemical on a dry wheel before the Presoak Arch where it has time to activate properly to evenly spray the LARGEST WHEEL "ONLY" (not the tire). Approximately 14 inches to 18 inches from spray tip to wheel.  
b) Chain conveyors Passenger Side: From spray tips to wheel on widest vehicle, watch for coverage on "WHEEL ONLY" then lag down.  
c) Belt conveyor: Place both CTA's after your photo eye to get the heated chemical on a dry wheel before the Presoak Arch. Find the center of your Belt conveyor and place the widest vehicle in the middle on that center line. Then place both CTA's, Driver Side and Passenger Side, in the location where the concentration of the chemical is on the "WHEEL ONLY".
5. Mount watertight electrical boxes to both sides of your tunnel walls or in your mechanical room. Check length of Probe Wire before you mount boxes. (funnel walls, mount high)
6. Mount both Digital Temperature Control Switches inside the watertight service. (all connectors to be watertight)
7. Feed the Temperature Probe wire from the bottom section of both CTA's and feed each wire thru the ¼" stainless coupler into ½" PVC to make the connections inside the Digital Thermostat control box. Insert the 2 probe wires into the probe inputs. See wiring instructions on page 5 and inside control lid for power, heater and probe leads. *(Spray or apply electrical sealant to heating element connections)*
8. All Control Settings are factory set, LOCKED OUT, so tampering is not permitted. Attempting to reset this control will void warranty.
9. Once the power to the heating elements are connected and sprayed with electrical sealant, replace the top section of the CTA's.
10. When you finished wiring the Digital Control Switch. Replace switch and watertight service box covers. (tip: you may want to use a clear cover on the service boxes to see digital temperature), (always keep the watertight box covers on during business operations)

11. Now you are ready to bleed or purge the air out of the units. Install spray nozzles and DO NOT make any adjustments on the nozzle caps or your sprayer will not have equal pressure to open diaphragms. They should only be hand tightened and no more! Install your ¼" chemical ball valve and chemical feed to each CTA. Open the ball valve and then turn on your G57 Flojet pump and run it until you see chemical coming out of both CTA's. Turn the pump off then replace PVC caps.
12. Once the CTA's are powered up (after 15-20 minutes) you will see on the DIGITAL DISPLAY temperature of approximately 138 degrees F.
13. Then the temperature will decrease to an Operating Temperature of 125 degrees F. When it reaches the Lower Set Point (122 degrees F) the Temperature Control will send power to the heating element and maintain the Operating Temperature 125 F until power to the Control Switch is OFF. When the demand for heat recovery is needed power is turned back on to the Control Switch and will repeat they cycle of Operating Temperature.

*If you have any questions after or during installation, please call us at tech support at (724) 344-1492.*

**The Cobra System, LLC**  
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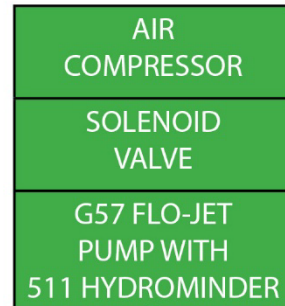
Operating Costs **\*\*ONLY\*\***  
\$1.43 a day!  
**TYPICAL INSTALLATION**

Do not make any adjustments to caps on spray nozzles.

COBRA SYSTEM INCLUDES:	
1	Set of C.T.A.'s
2	Temperature Control Switches
2	Poly Ball Valves - (Chemical Bleeders)
4	Diaphragm Check Valve Nozzle
4	V-Jet Foaming Nozzles
2	Pressure relief valves

- Thermostat & Probe Wire
- 110 or 24 Volt Electric
- Chemical

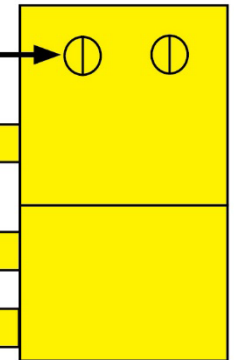
SUPPORT EQUIPMENT	
	Typical Installation 2 - Pneumatic Switches 1 - Normally open 1 - Normally closed
	Car Wash Controller 24 Vac Relay
	511 Hydro minder G57 Flo-Jet Pump Air Compressor



1/4" F.N.P.T. Chemical Inlet

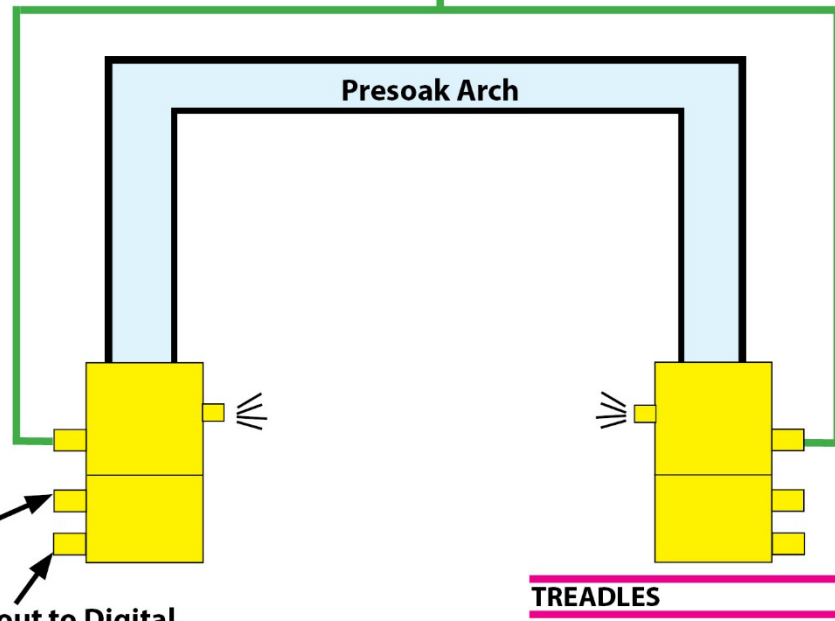
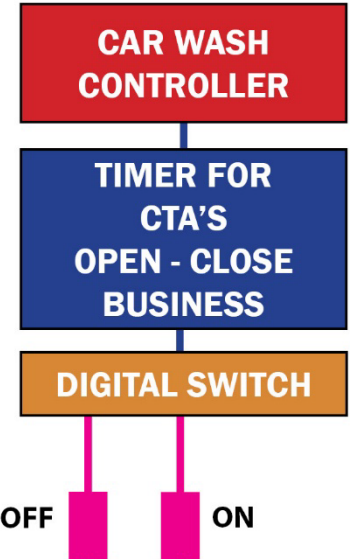
120v SO cable

Probe Wire



1/2" I.D. Supply to "T"

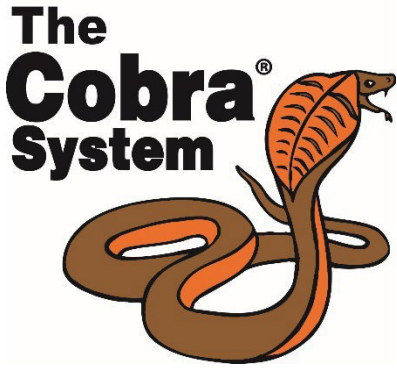
1/4" I.D. Supply both sides from "T"



120v SO cable (driver and passenger side)

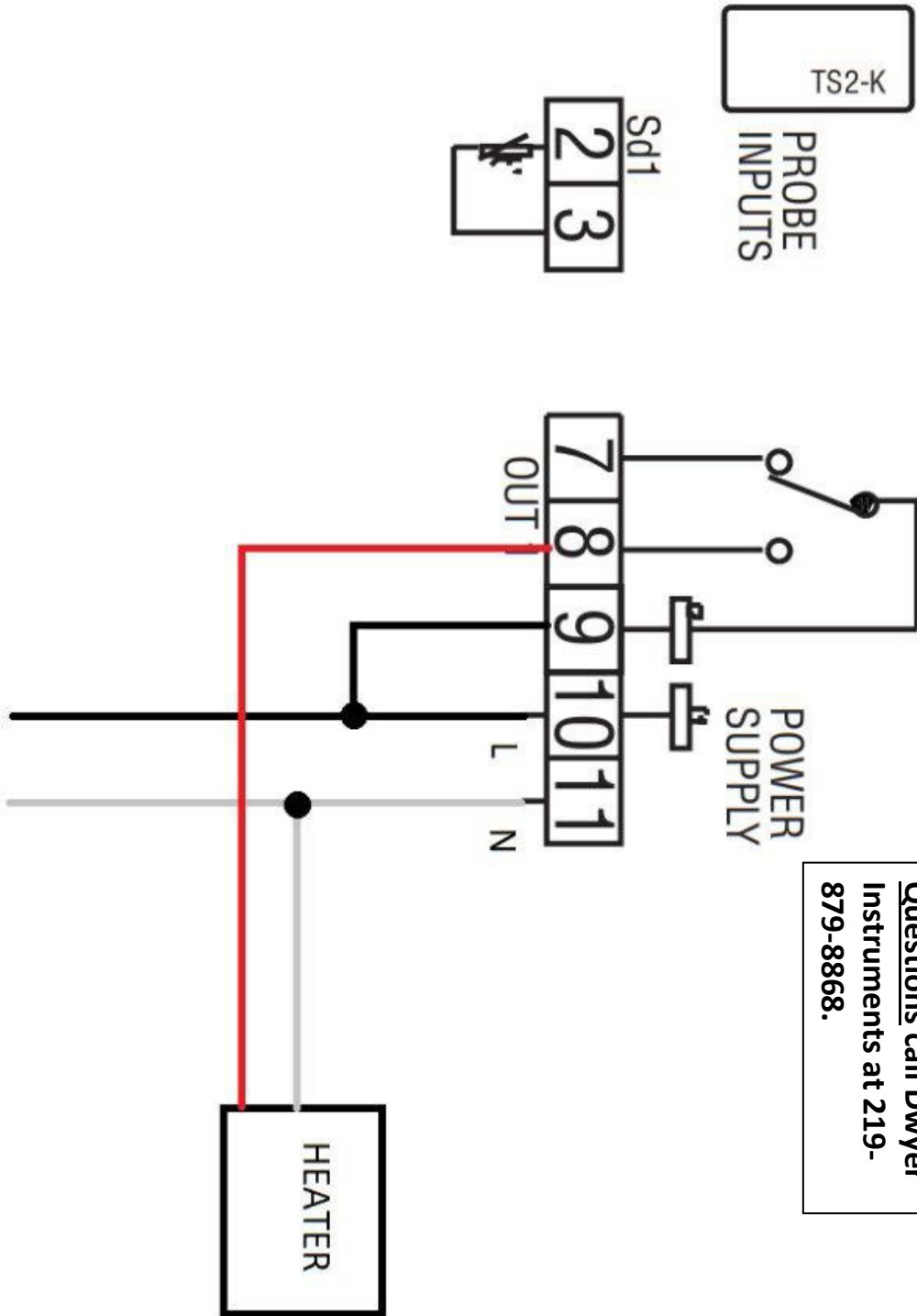
Probe Wire out to Digital Thermostat on wall

TREADLES



# HEATER WIRING

The Cobra System CTAs require a designated 20-amp breaker for each side.



For TSW-150 Digital Control Thermostat Questions call Dwyer Instruments at 219-879-8868.