

# Conley Casting Supply Corp.

## INSTALLING & OPERATING - DIGITAL FURNACE CONTROL

- 1) Locate furnace stand to the right of air cast machine 12 inches from a fire retardant wall, or at least 36 inches from combustible materials.
- 2) **!!WARNING!! EXTREME TEMPERATURE MAY CAUSE FIRE!**
- 3) **!! WARNING!! PROPER VENTILATION IS REQUIRED!**
- 4) **!! WARNIG!! VAPORS FROM ALLOYS MAY BE DANGEROUS TO YOUR HEALTH!**
- 5) Attach the power line to 120 Vac 1 amp single phase power line from your electric panel.
- 6) Attach black lead wire to black lead wire and white lead wire to white lead wire to gas valve for a gas furnace or power relay for electric furnace.
- 7) Fill pot with 8-10 bars of lead, tin, zinc, or pewter alloy.
- 8) Turn on/off switch to the "ON" position, set the temperature to desired temperature 0° - 1000°F
- 9) Wait 30-65 minutes for the metal to be up to reach set point.
- 10) For optimum life expectancy of cast iron pot, level of alloy should be maintained at ¾ full or more during casting operation.
- 11) For zinc alloys; speed of first melt of the day, lower alloy to 1/3 full at the end of each day.
- 12) For Zinc alloys; use a stainless steel liner insert in the cast iron pot to reduce expansion stress.

## TROUBLE SHOOTING - DIGITAL FURNACE CONTROL

- 1) **!!WARNING!! - ELECTRICAL HAZARD - USE A LICENSSED ELECTRICIAN**
- 2) Power line from furnace must be connected directly to 15 amp line.
- 3) If no power light turns on check the main 1 Amp fuse.
- 4) If power light turns on but there is no heat to the pot check the relay output to the gas valve/heaters.
- 5) If temperature appears high – make sure thermocouple is properly inserted in the cast iron well.



6)

Ship date \_\_\_\_\_ Serial # \_\_\_\_\_

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## TEMPERATURE CONTROL SETUP FOR THE FUTURE FDC4100 DIGITAL FURNACE CONTROL

THE FACTORY SETTING IS 0°F.

MAXIMUM SET TEMPERATURE IS 1000°F

PEWTER TEMPERATURE 480-550°F

LEAD TEMPERATURE 700-850°F

ZINC TEMPERATURE 750-900°F

TO CHANGE TEMPERATURE;

PUSH ▼ or ▲ TO ADJUST TEMPERATURE.

SP1 TEMPERATURE IS LOCKED OUT AT THE 1000°F

THIS IS THE HIGH SET POINT

PV = PROCESS VALUE TEMPERATURE

SV = SET POINT VALUE TEMPERATURE

THE CONTROL IS LOCKED AND SET FOR TEMPERATURE CHANGE ONLY.



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160 Electric  
Furnace  
- Schematic -  
FWTWR FDC 4100

