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Operating Instructions for
Holding Shimaden SR92 Temperature Control

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1. FIRST FIRING OF KILN WITH HOLDING SR92 TEMPERATURE CONTROL

It is recommended that the first firing of a new kiln is a slow firing, with the kiln empty, to a temperature 10% - 15% less than the maximum temperature of the kiln. This is to enable the cement to mature and to remove moisture from the brickwork.

Holding Controller on this kiln will not turn off - must be manually turned off at required temperature after dry out firing.

Setting of Temperature Controller

150°C	4:00pm
300°C	8:00am
450°C	11:00am
600°C	2:00pm
900°C	4:00pm (hold for 2hours)

HOLD AT 900°C FOR 2HOURS AND THEN MANUALLY TURN OFF.

Do not fit bungs during dry out firing.
Allow kiln to cool completely before opening.
After first few firings, the dark stain on the walls will disappear.
The elements are held down with ceramic pins – **DO NOT REMOVE**

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2. OPERATING INSTRUCTIONS FOR A KILN FITTED WITH AN SR92 TEMPERATURE CONTROLLER

(HOLDING SYSTEM)

1. Power ON at wall isolator.

2. Display will illuminate displaying controller type, control mode, maximum temperature of controller and then displaying ambient temperature and previous set setpoint.

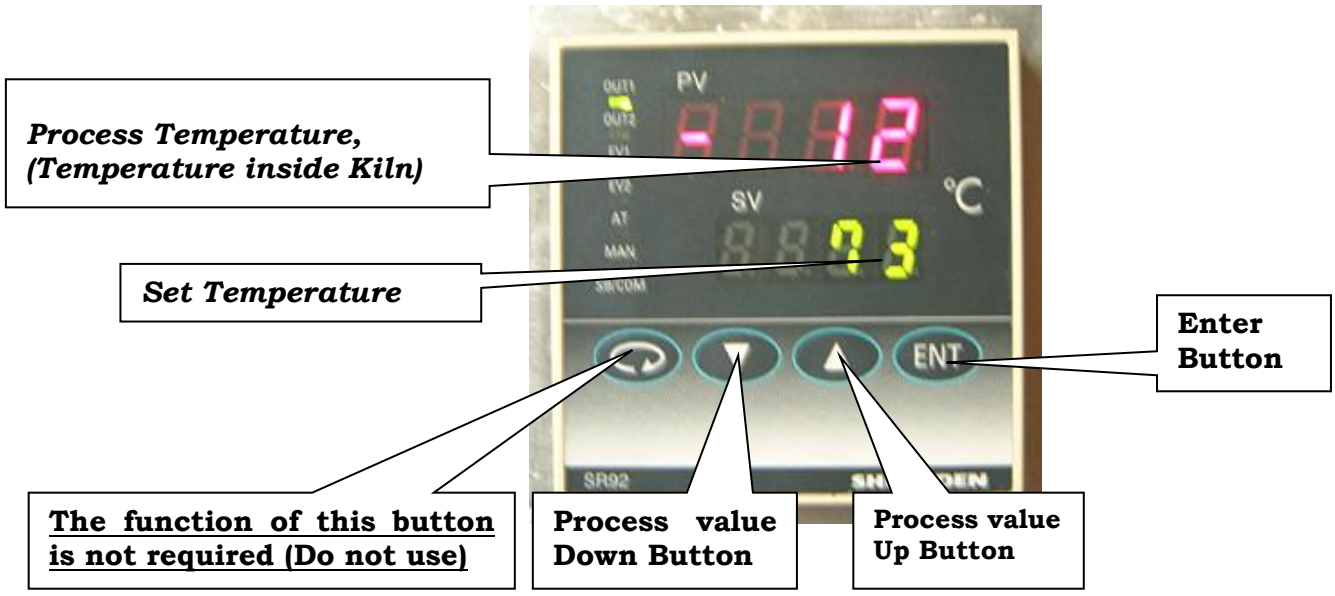
3. Actual internal temperature is P.V. red numbers. Set point is S.V. yellow numbers.

4. Use Δ or ∇ keys to select desired temperature. (S.V. yellow numbers. Yellow dot will start flashing.) Push ENT to register change. Yellow stops flashing.

5. Use energy regulator to control rate of temperature climb or put on 100% for maximum climb rate.

6. Kiln will remain at set temperature until the operator turns it off.

When using kiln for burnout, the ceramic vent blank off bung should be left out, this will help to evacuate by-product from the chamber and help to oxidise the elements.



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3. ENERGY REGULATOR

The energy regulator scutcheon plate is calibrated 0 – 100, this is %.
This is purely a retarding medium for controlling the rate of temperature increase, which it does by controlling the heat input to the kiln. It comprises an automatic switching device, the time periods during which the switch contacts are open and closed being infinitely variable. The length of time during which the contacts are closed is controlled by an adjusting knob, which is usually calibrated from 0 to 100 percent. When the knob is set to 25% the contacts are closed approximately 25 percent of the time the kiln temperature will rise at a somewhat slower rate than if on 50 or 75 percent when on 100 percent setting. The contacts are closed all the time and so the electricity supply to the elements is never interrupted, the kiln is therefore heating up at its maximum rate. A small indicator light is incorporated in the regulator, which is switched on when the regulator switch contacts are closed and switches off again when the contacts open. When the kiln elements are receiving electricity supply the indicator light therefore lights up and switches off again when the element supply is cut off.

An energy regulator is a very useful piece of equipment as the rate of temperature increase can be controlled so easily. Thus if thick-walled pots are being fired, the rate of temperature increase can very easily be reduced. If a pyrometer is fitted to the kiln and one wished to maintain the kiln at a particular temperature, the energy regulator setting could be adjusted until a position was found at which the elements were switched on and off at a rate slow enough to prevent any further temperature rise, but fast enough to prevent the temperature from dropping. This procedure, however, should only be done for short periods as otherwise the temperature may begin to drift.

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4. OPERATING A KILN WITH ONE ENERGY REGULATOR

Energy Regulator settings for firing of Gloss, Biscuit and China Firing

**** Always set controller to the maximum desired temperature eg. if you want 750°C, set controller at 750°C. ****

Gloss Firing Programs

Option 1

ER	Time
25%	2 hrs
50%	2 hrs
75%	2 hrs
100%	until kiln turns off at set temperature

Option 2

ER	Time
25%	2 hrs
50%	2 hrs
75%	1 hr
100%	until kiln turns off at set temperature

Biscuit Firing Program

ER	Time
0 - 5%	overnight
10%	2 hrs
40%	2 hrs
60%	2 hrs
80%	1 hr
100%	until kiln turns of at set temperature

China Painting Program

ER	Time
25%	1 hr
50%	1 hr
75%	1 hr
100%	until kiln turns off at set temperature

CLOSE VENTS AT APPROXIMATELY 750°C

ON ALL OF ABOVE PROGRAMS

These are suggested firings only, you should carry out testing firings to suit your requirement.

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5. OPERATING A KILN WITH MULTIPLE ENERGY REGULATORS

The multiple energy regulator are used to balance the temperature in the kiln.

The energy regulator scutcheon plate is calibrated 0 – 100, this is %.

Each energy regulator will control 1 zone of the kiln.

i.e The top energy regulator controls the top zone, the next energy regulator down controls the next zone down and so on.

i.e. If you had 3 energy regulators the kiln would be divided into 3 zones if you had 6 energy regulators the kiln would be divided into 6 zones.

By adjusting the energy regulator you will be able to balance the temperature in the kiln.

If you have 3 energy regulators, you may set the top energy regulator on 80%, middle on 90% and bottom on 100%. Setting of the energy regulator is totally dependent on how the kiln is stacked, firing speed, firing temperature etc.

The function of the energy regulator is that it turns the section of the kiln on and of that it controls i.e.; when set at 75% that section will cycle on and of 75% of the on time thus allowing you to bring the kiln into the balance that you require.

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6. WARRANTY

(Applicable only to products marketed and used within the Commonwealth of Australia.) Kiln has been thoroughly tested and inspected during manufacturing and is guaranteed against faulty materials and workmanship. Should there prove to be defective material or workmanship, within 12 months from date of purchase, it will be repaired free of charge, provided it is returned intact, freight paid to, Tetlow Kilns and Furnaces Pty Ltd. Naturally the warranty does not cover failure due to accidental damage, misuse, negligence, consequential damage, modification, or where the controller is not installed and operated in accordance with any statutory regulations, the appropriate installation code, or with details appearing on the controller rating plate. The warranty is valid wherever you live in Australia even if you move. For ready recognition of your warranty, record the date of purchase hereon and retain this for your record. Also retain proof of purchase as you may be asked to produce same in event of a service claim. This warranty is the sole guarantee by the manufacturers and they are not responsible for any other obligations assumed or expressed by any other person or persons.
No other remedy shall be available to the buyer (except the conditions contained in this warranty) for damage to kilns, ware or property, lost profits, or lost sales or any other consequential or accidental loss.

If service is required on this equipment on site, a service charge will be made according to time taken at normal trade rates including travelling time.

In case repair under guarantee is claimed, this guarantee must be tendered.
Please note that elements are not covered by guarantee.

For further information, locate us at our website, www.tetlow.com.au
Do not hesitate to contact us at Tetlow Kilns and Furnaces at 03 8545 8296 or info@tetlow.com.au