



## **TSR Electric Storage Heaters**

## Assembly Instruction

		Automatic			Manual	
Model Nos:	79341S	79351S	79361\$	79344/6S	79354/6\$	79364/6S
Cat. Nos:	TSR12AW	TSR18AW	TSR24AW	TSR12MW	TSR18MW	TSR24MW



This product complies with the European Safety Standards EN60335-2-30 and the European Standard Electromagnetic Compatibility (EMC) EN55014, EN60555-2 and EN60555-3. These cover the essential requirements of EEC Directives 2006/95/EC and 2004/108/EC

© GDC Group Ltd. All rights reserved. Material contained in this publication may not be reproduced in whole or in part, without prior permission in writing. A division of the GDC Group Ltd, Millbrook House, Grange Drive, Hedge End, Southampton SO30 2DF

**IMPORTANT NOTES:** It is important to read these instructions carefully and also note the information given on the heater itself. As these particular instructions refer to the assembly and installation of a new heater, they should be retained by the installer; not left behind for the user as this would invite the dismantling and servicing by unqualified persons. FOR THE USER, there is a separate instruction leaflet explaining how the heater should best be operated. Please see that this leaflet is left with the heater for the user's purposes. A MEANS FOR DISCONNECTION IN ALL POLES MUST BE INCORPORATED IN THE FIXED WIRING IN ACCORDANCE WITH THE WIRING RULES, THE INSTALLATION SHOULD BE CARRIED OUT BY A COMPETENT ELECTRICIAN. CABLE HAVING A MINIMUM 'T' RATING OF 85°C MUST BE USED. Heaters forming part of a comprehensive space heating system should be wired with their own separate circuit, if however, 1 or 2 heaters are installed as a starter system these may be connected to a 30 amp ring main provided that the instructions below are observed, any further heaters installed must be connected by its own circuit. If connected to a 30 amp ring circuit the total rating of heaters connected must not exceed 3kW, where the circuit supplies a kitchen, or 4kW, where the circuit does not include a kitchen. The storage radiator is designed to run on cheap overnight electricity, therefore the means of connecting the heater to the ring main should include a timer. These should be connected to the supply with 3 core heat resistant cable, the size of which is dependant on heater loading i.e. loading up to 10 amps use 1 mm<sup>2</sup>, up to 13 amps use 1.5 mm<sup>2</sup> and for the larger heaters 2.5mm<sup>2</sup> cable. If installed in a bathroom the heater must not be accessible to a person using a bath, wash basin etc., and must be controlled by a fused, double pole switch within 2 metres of the appliances. It is not recommended that a heater installed in a bathroom should be connected to a ring main circuit. The heater must not be installed immediately below a fixed socket outlet. WARNINGS - THIS APPLIANCE MUST BE EARTHED - SPECIAL ATTENTION MUST BE PAID TO THE SECURITY OF THE HEATER'S WALL FIXINGS. THE HEATER MUST BE PLACED ON A LEVEL SURFACE AVOIDING ANY IRREGULARITIES. IF, DURING ANY REASSEMBLY OF THE HEATER, A PART OF THE THERMAL INSULATION SHOWS DAMAGE OR DETERIORATION WHICH MAY IMPAIR SAFETY, IT SHOULD BE REPLACED BY AN IDENTICAL PART.

This appliance is not intended for use by persons (including children) with reduced physical, sensory or mental capabilities, or lack of experience and knowledge, unless they have been given supervision for instruction concerning use of the appliance by a person responsible for their safety. Children should be supervised to ensure that they do not play with the appliance.

**WALL FIXING:** The heater must ALWAYS be mounted against, and fixed to a wall as it will not stand up by itself. A detachable bracket is provided for screwing to the wall, the heater is then placed in position and fixed to the bracket by a screw at each end. The heater must never be unscrewed or moved from the wall bracket whilst it is loaded with bricks. THE HEATER IS VERY HEAVY AND WILL BE DANGEROUS IF ITS WALL FIXING BECOMES INSECURE.

#### **Solid Brick and Concrete Walls**

No. 10 Rawlplug plastic inserts. Drill hole of 8mm dia to a depth of 15mm greater than depth of the insert.

#### **Timber Frame**

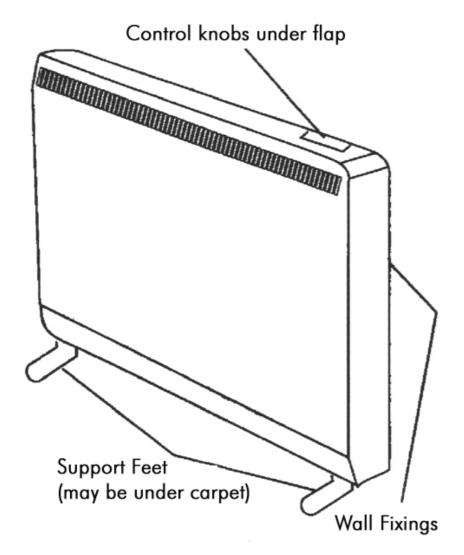
Seek specialist advice, some authorities suggest RAWLNUT

#### Panelled Wall, Paramount Board, Chipboard, Plasterboard, etc.

Check that the panel itself is adequately fixed to battens etc. Use Rawlplug M5 intersets; drill accurate 10mm dia holes in single skin plasterboard. One fixing should be in studwork.

#### Hollow concrete, Breeze Block and Thermolite Block Walls

RAWLPLUG 'RAWLOK R6054R'. Some authorities suggest UNIFIX LB 70/10mm.



#### PLEASE DON'T TAKE CHANCES

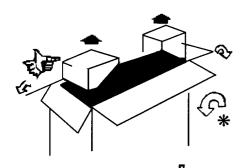
Site conditions may vary considerably and Creda cannot recommend the correct wall fixings to be used. It is the responsibility of the installer to ensure that adequate permanent fixing has been achieved. Purely for guidance the suggested fixings are made for certain wall materials but this list is not comprehensive or authoritative. Different wall constructions will need different inserts. Note that inserts incorporating plastic may be subject to shrinkage behind a warm storage heater and are therefore not recommended.

Wall fixings can be obtained from local stockists

**CARPETS:** For safety, the heater must be positioned in the room so that there at least 75mm (3") free air space all around it; under windows, ensure that curtains, when drawn, cannot touch or cover the heater casing. In order to maintain stability, it is essential that the heater be placed on a level surface and care should be taken to avoid irregular surfaces, such as may result from carpets or tiled surrounds partially protruding under the heater. The heater feet are designed to go underneath a carpet rather than standing on it; this permits the weight to be taken on a firm base and makes for neatness and ease of cleaning with vacuum cleaners, etc. underneath the heater. Carpet gripper should be removed from behind the heater feet.

**BRICKS:** The heater casing and the heater storage bricks with which it must be fitted, are delivered in separate packages. The brick is common to all heaters, packed in pairs.

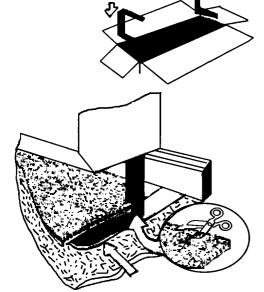
The brick catalogue number is 791402015. 7934 models have 8 bricks. 7935 models have 12 bricks. 7936 have 16 bricks.



First, turn carton upside down

Open bottom flaps on carton

Packing corner fitments contain heater feet



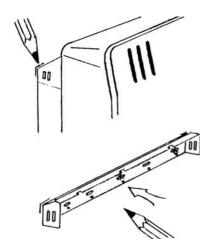
It is preferable to fit the heater feet whilst the heater is still in its carton. Turn the carton upside down and open the bottom flaps. The corner fitments contain both feet and the fixing kit.

The open ends of the feet are to face forward towards the grilles in the panel. After fitting, use the feet to lift the heater from the carton.

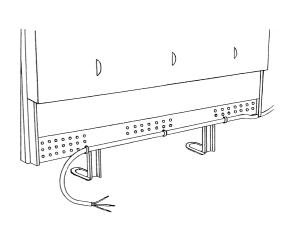
Cut underlay and remove carpet gripper to clear foot, allowing heater weight to be taken on floor proper; lay carpet over foot, slitting it as shown, it is unnecessary to cut carpet away.

2

Stand the heater against the wall in its intended position. Mark the position of the two outside corners of the wall bracket. Carefully place the heater aside, and remove the wall bracket from the heater by removing the screw at each end. Reposition the bracket against the wall using the corner marks for alignment. Mark through two slots in the bracket, one at each end. Allow mortar courses between bricks to be avoided, or battens, etc. to be found for the fixing holes.



If mains connection is to be made from the left hand side, at this point the mains lead must be secured to the back of the heater using ties provided in the fixing kit.

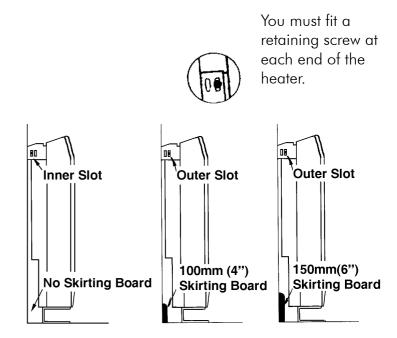


When bracket is securely fixed, replace the heater under the bracket angle and align screw holes on heaters ends. There are two fixing slots at each end of heater, allowing different stand-offs for different thicknesses of skirting board. Do not fully tighten these screws until the bricks are loaded into the heater as some settling of the heater may occur.

NOTE: NEVER REMOVE THESE SCREWS WITHOUT FIRST UNIOADING THE HEATER.

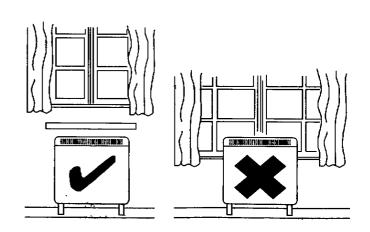
See also figure 1 regarding carpets where appropriate.

Note: Max. skirting size is 15 x 120mm.

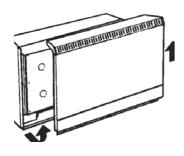


Note that the smallest wall spacing should be used only when the skirting board is of the modern slim type, or there is no skirting board at all. THE HEATER MUST STAND VERTICAL

A clear space of at least 3" (75mm) must be left at either side of the heater, and any projections or shelves must be at least 10" (250mm) above the heater casing. Curtains must not be draped around or in contact with the casing. A shelf unit is separately available for fitting above heaters.

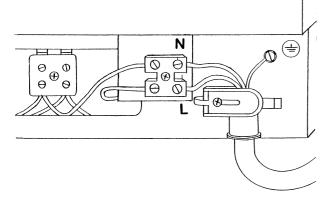


The top panel and front panel are joined and should be removed as one assembly. To do this,



remove the screws fixing the rear flange of the top panel, and remove the two screws along the bottom edge of the front panel. Carefully swing out bottom of front panel and lift assembly clear of casing, this operation also removes the control knobs under the flap. Put assembly in a safe place to avoid damage to paint etc.

5



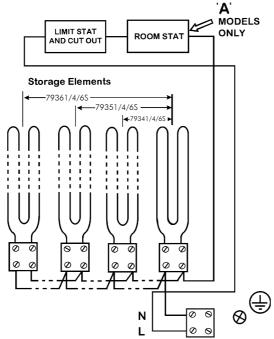
#### **MAINS TERMINALS**

IMPORTANT: for earthing, loosen the earth screw sufficiently to wrap the mains' earth wire around it between flat washer and cup washer, and retighten the earthing screw.

Feed the mains cable through the cable clamp and make connections as marked on the heater. Pull back any slack through the clamp and tighten clamping screw.

### **CONNECTING THE MAIN'S SUPPLY CABLE**

#### CIRCUIT DIAGRAM



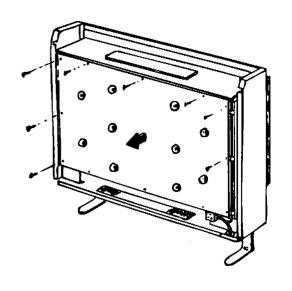
	Charge Period	Rated Charge	
79341/4/6\$	7 hours	12 kWh	
79351/4/6\$	7 hours	18 kWh	
79361/4/6S	7 hours	24 kWh	

Some heater variants may have other charge periods or acceptances. See heater rating plate.

# **7** WARNING

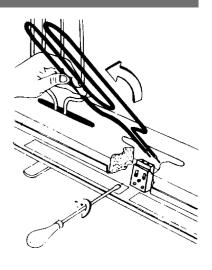
Remove the inner front panel; this carries on it's inner face the front insulation slab. Handle this with care, the insulation must not de damaged.

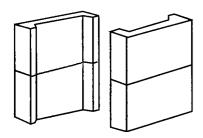
REMOVE ALL THE PACKING CARDBOARD FROM INSIDE THE STORAGE BRICK COMPARTMENT, IF LEFT INSIDE IT WILL BE SET ON FIRE WHEN THE HEATER IS SWITCHED ON. ENSURE THAT ALL PACKAGING MATERIAL IS REMOVED FROM THE BRICKS BEFORE FITTING THEM.



## Temporarily remove one central element to provide access for the rear rank of bricks.

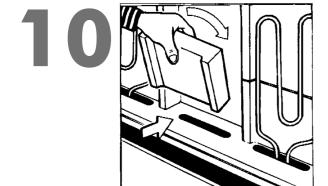
Loosen terminals on one of the elements and remove this to allow installation of rear rank of storage bricks. On heaters with 3 or 4 elements remove one of the central ones.





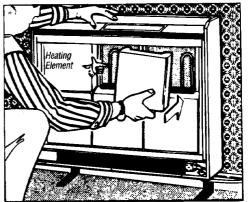
Note the way the bricks are positioned in the heater. Otherwise they will not fit.

9



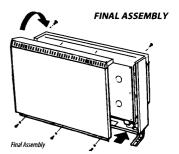
Put in place the rear rank of bricks, pushing them well back against the rear insulation. Replace the element, making sure that the connection is tight.

Now, place in position the front rank of bricks, again pushing them back to make room for the front insulation slab which is attached to the front panel.



11

Check that the front insulation slab is properly attached to the inner front panel and refit panel (insulation innermost) to the heater by locating its bottom edge behind the front lip of the chassis, and inserting retaining screws along the top and both sides. With the bricks



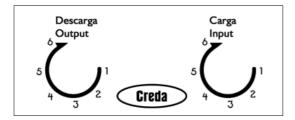
pushed well back, as mentioned earlier, and the insulation properly aligned, there should be no bulging of this panel and no undue force necessary to fix it.

Refit the front / top assembly by hooking the rear edge of the top panel over the rear edge of the casing, then swing the front panel carefully down against the casing. Replace the screws along the rear of the top and the base of the front panel which had been removed in Step 5. ENSURE WALL BRACKET SCREWS ARE TIGHTENED FULLY.

WARNING. When a new heater is run up to temperature, the materials will produce a slight smell for the first few days, these are normally harmless in a well ventilated room. It is best to make these first overnight charges with the 'Charge Controller/Auto-Set' knob at 'Maximum'. Caged birds, young children and people with chest ailments are best kept out of the room for this first period.

WET BRICKS: If accidentally, the bricks have become wet due to their having been left out-of-doors, some moisture may be driven off during the first overnight charging and this may drip on to the floor. If there is any doubt on this score, advise the customer to lay newspaper beneath the heater to protect carpets etc. REFIT THE CONTROL KNOBS: PLEASE OBSERVE THE FLAT ON THE 'D' SHAPED SPINDLE ALIGNS WITH THE FLAT ON THE KNOB BOSS.

#### **SETTING THE CONTROLS**



The controls are located under the lockable flap at the right hand corner of the top panel. To adjust the controls on the heater use a coin and engage it in the slot provided on the top surface of the knob. 13

**AUTOMATIC CHARGING DEVICE (AUTO-SET Fitted only on Sensor Plus)** The Auto-Set Control rations the overnight charge each night by sensing the room temperature.

The knob is marked with the numbers 1 to 6, turning the knob to a lower number will reduce the charge consequently, the level of room warmth the next day.

Once set, the knob should need no further adjustment and the Auto-Set will maintain automatically the room warmth each day by varying the charge according to the weather.

- 1. Set the room temperature (output) control knob to setting 4.
- 2. Turn the Auto-Set Knob clockwise as far as it will go.
- 3. Leave the heater to run in this condition for two nights in order to quickly disperse the 'new' smell which although slight, is better removed once and for all.
- 4. Instruct the user to set the Auto-Set down to his chosen setting on the third day.

  Instructions on this are given in the Users Guide which we ask you to ensure is left with the user.

#### **MANUALLY ADJUSTED HEATER (without Auto-Set Control)**

On this the user sets the overnight charge on the numbered knob marked 'Input'.

Setting up procedure;

- 1. Turn the 'Input' knob to maximum setting (6)
- 2. Set the 'Output' knob to setting No. 4.
- 3. Leave the heater to run in this condition for two nights in order to quickly disperse the new smell.
- 4. Instruct the user to set the 'Input' to his chosen setting on the third day. Instructions on this are given in the Users Guide which we ask you to ensure is left with the user.