

INSTALLATION OF EREMA HEATING ELEMENTS

- 1) EREMA heating elements are made of ceramic. Avoid damage from mechanical shock.
- 2) The diameter of a piercing hole drilled through the furnace should be about 1.5 times the diameter of EREMA's end section.
Size under $\text{Ø}20\text{mm}$ is suitable for brick layers up to 150mm in thickness.
Size over $\text{Ø}25\text{mm}$ is suitable for brick layers up to 250mm in thickness.
 - (1) When bricklayers are thicker than the above thickness, widen the piercing hole diameter more 5mm.
 - (2) When SG-type element is used, take 5mm more margin than the above value.
- 3) EREMA elements are electrically conductive. Care should be taken to avoid electric leakage due to direct contact with a conductive material or electric shock to a human body
- 4) It is desirable to use EREMA elements of similar electric current ratings in the same circuit. The current rating is marked on EREMA's terminal area. Arrange those with close current values on the same circuit.
- 5) An equal length of EREMA's cold zone should protrude out of the furnace. EREMA elements should be installed so that the heating section (hot zone) does not intrude into the furnace wall..
Install EREMA heating elements at the center of the piercing hole, and lightly pack ceramic fibre around the EREMA element as shown in Figure 5.

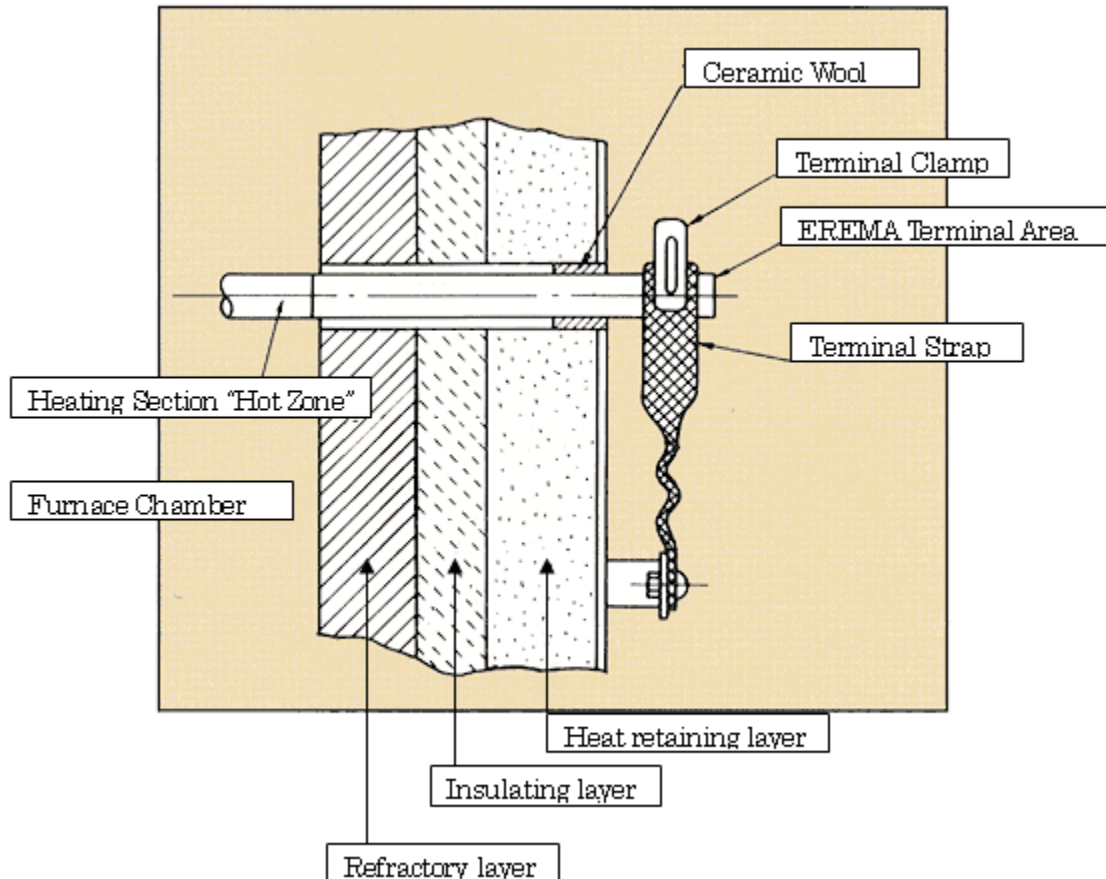


Fig 5) EREMA INSTALLATION WITH A TERMINAL CLAMP

- 6) Make sure that neither the terminal clamp nor the terminal strap will contact the furnace wall directly. The terminal strap must have enough slack to give under finger pressure.
- 7) After completing EREMA connections, turn on electricity after lightly pressing the heating element with a finger tip and making sure that it will move easily.
- 8) When replacing EREMA elements it is recommended to replace all heating elements in the same circuit, otherwise the resistance difference between new and old elements can cause a load imbalance. This imbalance results in the newer elements' loading being greater which could shorten its service life. It is recommended that older, or "aged" EREMA elements be used on the same circuit.
- 9) For safety, it is recommended to further increase the space between heating elements than the value shown in Fig.6.

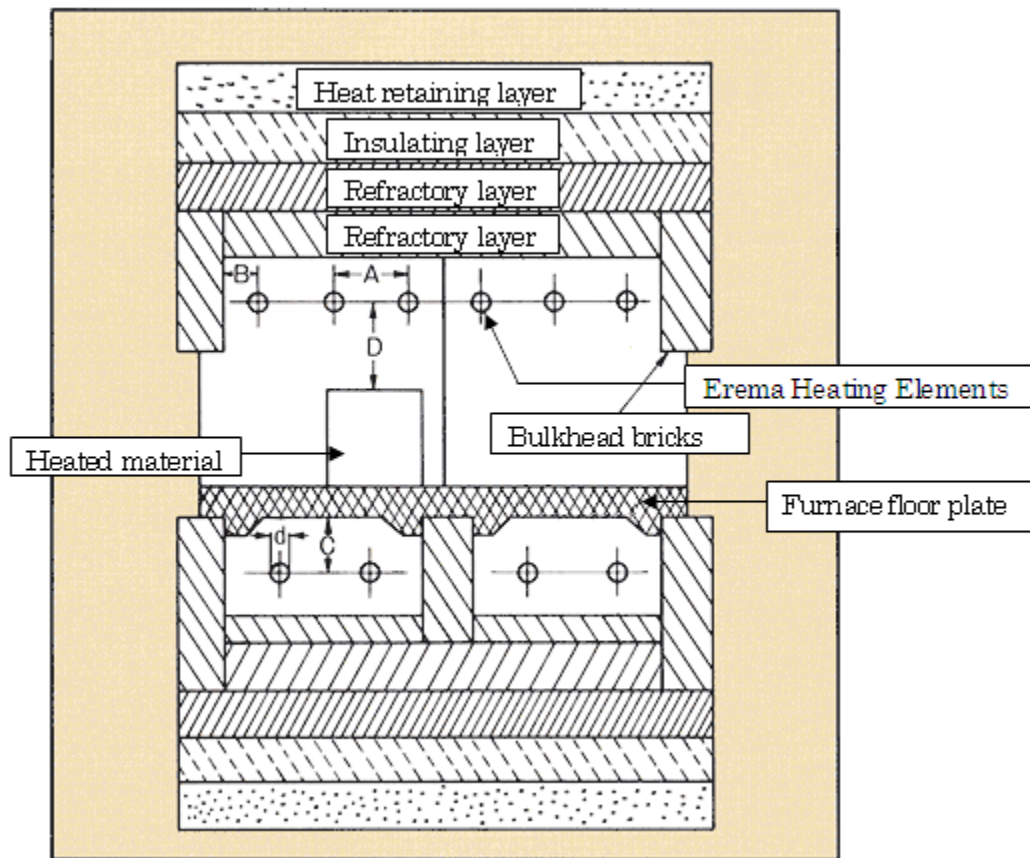


Fig 6) Installing space of heating elements

[Recommendable space for heating elements]

- d: Diameter of heating element
- A: Space of heating element 2b or over
- B: Distance from heating element to bulkhead bricks 2b or over (min. 3mm)
- C: Distance from heating element to furnace floor plate
- D: Space from heating element to heated material $\sqrt{2}A$ or over

Precautions To Take when Installing EREMA Type SG, & SGR

type SG and SGR have spirally cut grooves, and are consequently vulnerable to mechanical shock. exercise the utmost care when handling these types.

- 1) Unlike other heating elements, Type SG and SGR rotate slightly during expansion or contraction. It is important to allow extra piercing hole clearance and strap length.
- 2) Furnaces operated at high temperatures should adopt parallel connection.
- 3) When installing SGR, fitting highly pure aluminum tube into the piercing hole is recommended. (This prevents electrical short-circuiting which may be caused by slipping bricks and sticking of refractory fragments. It is recommended to keep SGR elements at the center of the piercing hole if it has to be hung.) Wind ceramic wool around the end section of EREMA before inserting it into the piercing hole.
- 4) If SGR is to be installed horizontally adequate support must be provided. For example, a hole drilled through the inner wall of the furnace chamber. (See Diagram 7)

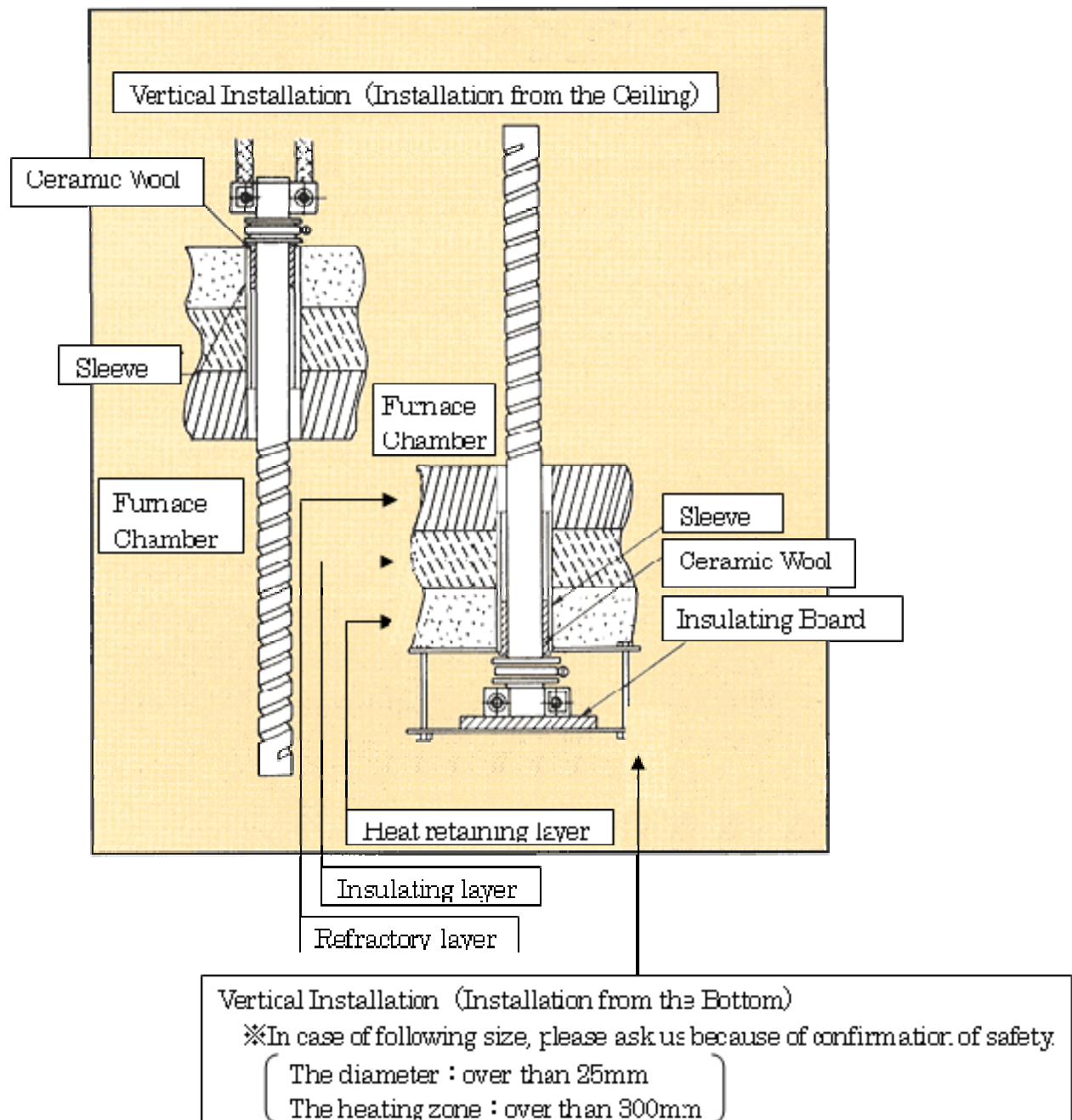


Fig 7) INSTALLATION OF TYPE SGR

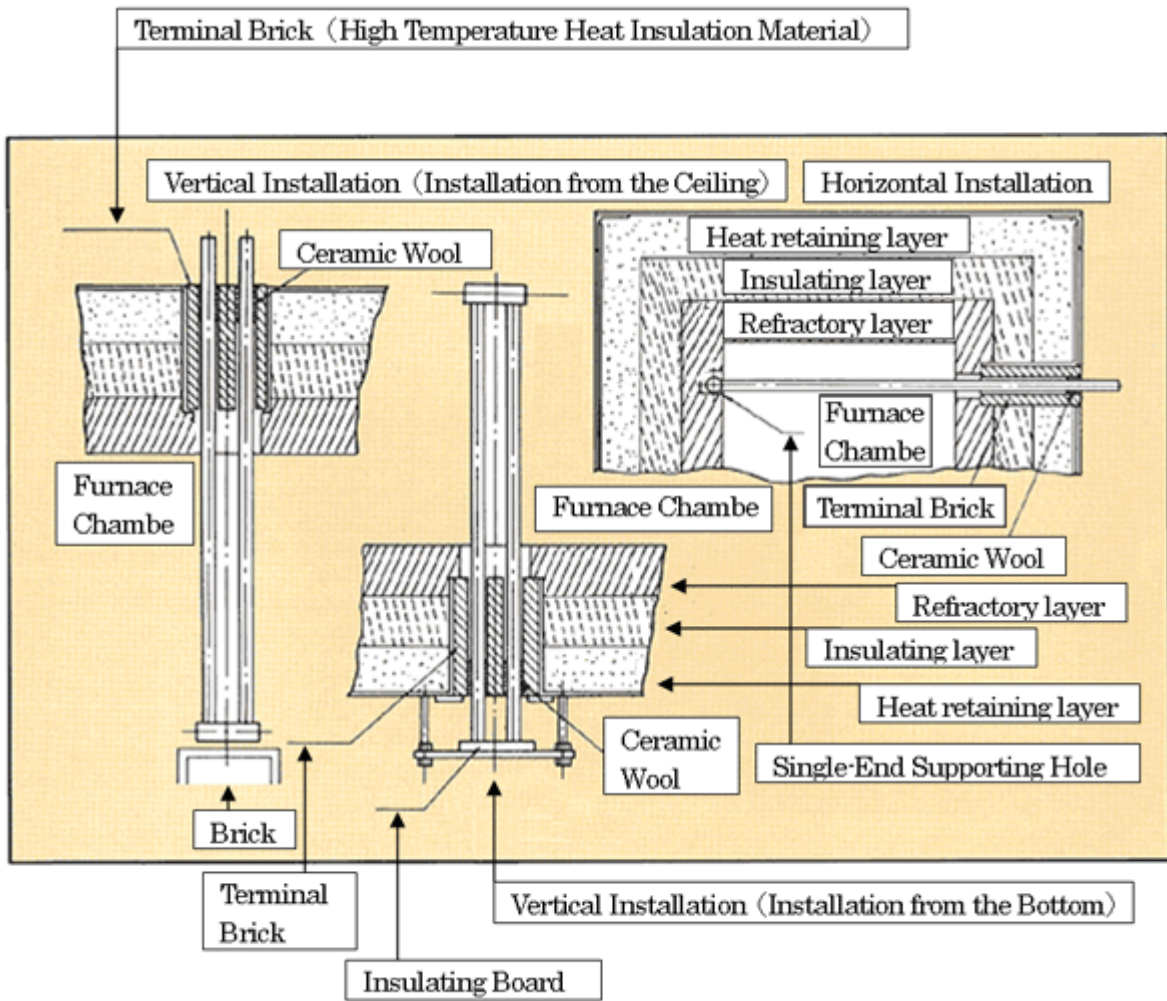


Fig 8) INSTALLATION OF TYPE U)

Note: A set pin can be used for the U-type vertical installation (ceiling insertion).

(Selection of pin hole size is option.)