



ISQUARED R ELEMENT CO., INC.



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Moly-D Installation Instructions

- 1.) Carefully unpack the Moly-D elements from the packaging material in the master carton. Several individual cartons (5 or 6) will be taped together in the master carton. Lift the bundle out of the master carton and lay it on a table or flat surface.
- 2.) Cut the tape holding the individual cartons together and lay each individual carton flat on the table, with the chip box edge up. Cut the tape and allow the chip box to open. Carefully remove the two or three layers of foam exposing the individual element.
- 3.) When unpacking individual elements care should be taken to avoid any bending or twisting of the element. DO NOT squeeze the aluminum sprayed ends together.
- 4.) Place the element horizontally on a table and insert the terminal ends in the passage brick ensuring that the correct length of terminal ends are protruding from the top of the brick. Do not remove the wooden spacer until the terminal ends have been inserted in the brick. Then remove the spacer. Be careful not to scratch the glaze coating on the Lu section.
- 5.) Pack the appropriate grade ceramic fiber loosely into the terminal holes approximately .5" to 1" in from the cold face. DO NOT pack too tightly; allow for expansion. This packing is only to prevent heat from chimneying out attacking the terminal straps.
- 6.) Attach the element holders to each terminal leg and tighten in place. Be sure each leg has the same dimension from the top of the holder to the end of the leg. Be careful not to twist or bend the element during this process. When determining the position of the element holder it is critical that the tapered section between the heating section and the terminal end be completely below the hot face of the lining. If any part of the tapered section is in the refractory lining it may overheat causing element failure or refractory damage.
- 7.) Connect the aluminum braided strap to the terminal ends of the element. Do not bend or twist the element during this procedure. Be sure to connect the strap to the element before attaching the strap to the bus bar.
- 8.) The element is now ready for installation into the furnace.
- 9.) Once the element is positioned in the furnace, connect the terminal strap to the bus bar. Do not pack insulating material in the terminal compartment (over the braid) or the braid will get too hot and fail.
- 10.) Now check the element to be sure it is free to expand and contract on heating.

- 11.) Turn the power on to the elements and bring them up to temperature.

To grow the protective glaze on the elements, the elements should be raised to a temperature of 1500°C or higher, and operated at this temperature for about 15 minutes. The 1500°C should be obtained as quickly as possible (1 to 3 minutes) The furnace does not have to reach temperature, only the elements. This can be accomplished with the door open or closed. We caution that the amperes through individual elements not be exceeded, 3/6--75 amps, 4/9--115 amps, 6/12--200 amps, 9/18--365 amps, 12/24--560 amps.

- 12.) After the initial heat up, turn the power off and check that both the element holders and the braid connections are tight. Sometimes expansion takes place on heating, resulting in loose connections. Be sure the element has not slipped or cocked in the terminal holes, by checking that both terminal ends are equal.