



ISQUARED R ELEMENT CO., INC.

12600 Clarence Center Road, P.O. Box 390, Akron, New York 14001, Phone (716)542-5511, Fax (716)542-2100  
 e-mail: sales@isquaredrelement.com [www.isquaredrelement.com](http://www.isquaredrelement.com)

### Moly-D Maximum Recommended Amperes

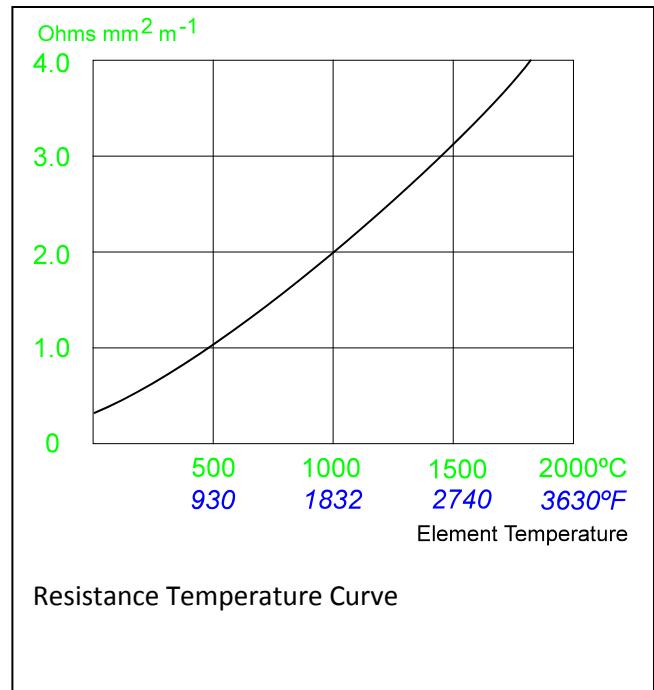
The molybdenum disilicide heating element is extremely brittle and exhibits a positive temperature coefficient of resistivity. Because of this it is important to utilize a properly designed power supply which provides a proportional controlled, phase angle fired electric energy source with current limiting capability. The power supply should provide a maximum power rating to the heating elements during start up.

The power supply should be sized to provide the maximum recommended output at the operating temperature. The specified voltage is determined by the maximum recommended watt loading at furnace temperature and the element resistance at this temperature.

The specified voltage should not be exceeded to prevent overheating and possible damage to the elements.

The maximum output current will occur upon initial heating when the elements are at (or near) room temperature. The current limit feature on the SCR will be required to limit the current during initial heat up. As the elements heat up and increase in resistivity they will become self-limiting with respect to current -- provided the maximum recommended operating voltage is not exceeded.

Below is the maximum recommended current for each standard hot zone/cold end diameter at start up. The hot zones can take more power but the cold ends tend to over heat and cause strap and clamp failure.



| <b>Maximum Recommended Amperes at start up</b> |     |     |      |      |       |
|--|-----|-----|------|------|-------|
| Hot Zone/Cold End Diameter in mm               | 3/6 | 4/9 | 6/12 | 9/18 | 12/24 |
| Current Amperes                                | 75  | 115 | 200  | 365  | 560   |