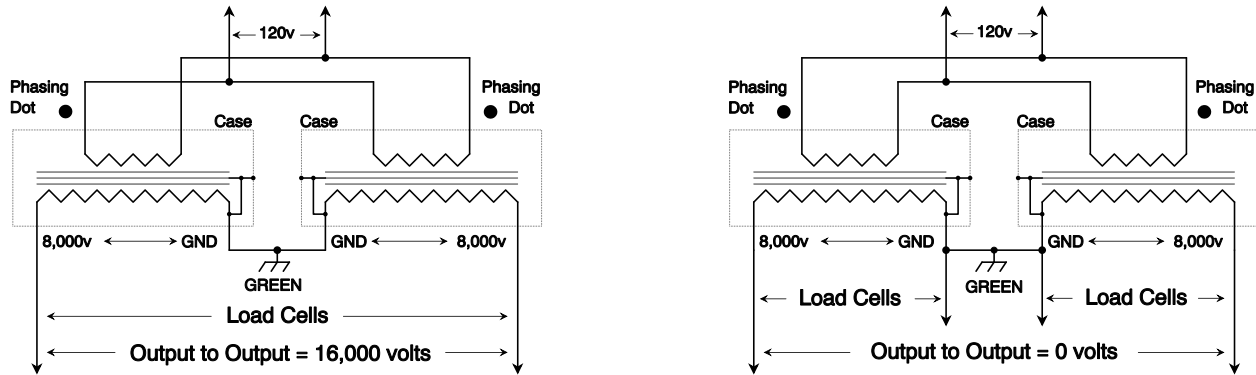




INSTALLATION & OPERATION MANUAL CUP TRANSFORMER



Typical Transformer Wiring Configurations



Application and Handling Information:

1. While the transformers will operate in any plane.
2. Transformers should be individually fused. Fusing can be between 1/2 to 1 amp over the normal operational current. Use a time delay or slow-blow type. Individual transformer fusing is a must, especially in systems with several transformers.
3. Systems with multiple transformers will encounter excessive corona and possibly high voltage flash-over if conventional high voltage transformers are used for ozone generation purposes. The PTI transformers are unique in that the high voltage output phase is guaranteed. This is accomplished by simply connecting the same line voltage wire (black for example) to the same colored wire on all primary terminal posts. This results in all high voltage wires being at the same potential. The transformer output leads should never be connected in series or parallel to achieve greater output.
4. Properly matching the ozone load to the transformer is essential if optimum systems longevity is to be achieved. While normal electrical measurements should always be taken and are of relative usefulness, they cannot be used alone as an absolute sizing criteria. When the input power begins to exceed 50% of the transformer rating, case temperature rise should be looked at more carefully. A maximum case temperature of **149°F (65°C) should not be exceeded**. The maximum operating temperature

encountered by the complete system under the most extreme field temperatures must be evaluated. For example, a transformer in an enclosure, on a roof in Phoenix, is basically installed in an oven. That temperature rise must be accounted for when calculating the anticipated maximum transformer case temperature. First measure the transformer case temperature in the final system while at maximum load conditions(all covers closed, fans running, etc.). It takes 5 to 7 hours for the transformer to reach thermal equilibrium. Next note the lab ambient temperature. For the purpose of this example say the lab is 70°F and the transformer case is 120°F. If the Phoenix roof example raises the ambient temperature to 125°F then the ambient increase is $125 - 70 = 55^\circ\text{F}$. We would therefore expect, at the field location, a transformer case temperature of $120 + 55 = 175^\circ\text{F}$. This is within the transformers working limits.

5. Over time the transformer termination's can oxidize if the transformer enclosure has minimal ventilation or is located in a caustic chemical environment. Long term serviceability can be preserved by using a high voltage anti-corrosive grease. The selection of the grease that best solves your particular problems is completely up to you. Following are some suggested materials:

Nonfluid Oil Corp., 298 Delancy St., Newark, NJ 07105, 1-201-344-5954, Fax 1-201-995-4417.

Suggested material: Chemplex #825

Novagard (formerly GE Silicone), 2720 East 79th St., Cleveland, OH, 44104, 1-216-344-1737, Fax 1-216-881-6977, Thomas Mylott.

Suggested materials: G661, G623, G624.

PTI Transformer Limited Warranty

The PTI Transformer is warranted by Plasma Technics, Inc., to the original purchaser to be free from defects in material and workmanship under normal use and service for a period of **Four (4) years** from the date of purchase under the following terms and conditions:

The obligation of Plasma Technics, Inc. is expressly limited to repairing or replacing, at the option of Plasma Technics, Inc., any PTI Transformer returned to it during the warranty period, which is determined by PTI to be defective in material or workmanship.

Any improper use /operation or installation other than in accordance with the published application materials, instructions and specifications established by Plasma Technics, Inc. shall void this warranty.

The obligation of Plasma Technics, Inc. Shall not include any transportation charges, costs of removal or installation, labor charges or any direct, indirect, consequential or delay damages.

Attachment or use of components or accessories not compatible with the PTI Transformer shall void this warranty.

Any alteration not authorized by Plasma Technics, Inc. in writing, accident, misuse, abuse or damage to the PTI Transformer shall void this warranty.

The transformer subject to this warranty is not warranted as suitable for any particular purpose or use of the purchaser. The suitability of any PTI Transformer for any purpose particular to the purchaser is for the purchaser in the purchaser's sole judgment, to determine. Plasma Technics, Inc. assumes no responsibility for the selection or furnishing of a transformer suitable to the purchaser's needs or the purposes of any particular purchaser.

This warranty is in lieu of any other warranty express or implied, including specifically but without limitation warranties of merchantability or efficacy and of all other obligations or liabilities in connection with the sale or use of the PTI Transformer.