T&C
Power Conversion

T&C POWER CONVERSION

ATN - 5
AutoTuner Network

FEATURING:

- **Preset-in Controller for easy Plasma Ignition**
- **Lightweight Controller (2.5 lbs.)**
- **Accepts 110-240 VAC without tap changes**
- **Field testable and set-up friendly controls**
- **Optional DC Probe Output**
- **500 W at 13.56 MHz**
- **Series LC network allows wide range impedance tuning**
- **Can be retrofitted to most Plasma Systems**
- **Match 9W x 16D x 5H**
- **19" rack mount brackets available**

P&M Detector

Frequency Of Operation
13.56 MHz

RF Power Rating
up to 1000 W

Impedance Rating
50 Ohms

Mechanical

Matching Box
9 W x 16 D x 5 H

Input Connector
N type

Cooling
Air

PT-II-CE Controller

Electrical Power Required
110 - 240 VAC

Electrical Power Consumption
45 Watt

AC Power Connector
6DEI EMI Filter

Dimensions
8 W x 9 D x 1.5 H

GENERAL

The ICP Auto Tuner is designed to match the impedance of the load coil while maintaining 50 Ohms of reactive impedance to the RF Generator. During ignition and final tuning the match will vary over a small impedance range causing ionization of the argon or other gas. Upon ionization a more dense plasma will form and the Auto Tuner will adjust to couple the impedance match. Capacitors range until a null is seen in the detector circuit of the auto Tuner.

The complete unit is separated into two enclosures. The PT-II-CE is the controller unit and Auto Tuner is the impedance matcher. Both units are enclosed in aluminum, with the Auto Tuner being yellow irradiated for conductive ground purpose.

The Matching network contains an Air Variable Capacitors for tuning and load.

The unit is considered "L" shape configuration which gives the Auto Tuner direct coupling to Plasma effect. This is the most efficient method for power transfer in RF.

The controller in an all self contained power supply and servomotor control unit. The front panel has controls for both manual and auto modes. It also provides ignition preset potentiometers for efficient lighting and tuning of the Plasma Process.

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