

mounted on or near chambers or reactors, size is an important consideration. Reducing the size of a tuning network requires that particular attention be given to the RF field within the box since temperatures can rise dramatically and damage can be done. Placement of a single screw of magnetic material within the field can affect performance of the system.

The Auto-Match (AM-10, AM-20) series are extremely compact tuners utilizing two ceramic envelope vacuum variable capacitors. The position of these capacitors can be preset for ignition of the plasma and again for use in process control. This dual configuration allows quick and efficient turning by eliminating the need for the capacitors to search for the match-point. Utilization of a series LC (Inductor Capacitor) network as the variable inductance portion of the tuner, eliminates the arcing commonly associated with units utilizing roller coil inductors. Additionally, the "LC" configuration provides the DC block which allows for the necessary mechanism for DC bias.

Currently, there are three Auto-Match tuners: the AM-5* (40-500 watts), AM-10 (70-1500 watts), and the AM-20 (100-2000 watts). Each unit is equipped with an Auto-Match power supply (AMPS-2A). With this controller, the user may, with analog voltages, pre-position the capacitors for the optimum plasma striking potential, control the Auto-Match from a host computer, operate the Auto-Match from the remote controller or allow it to function in the usual automatic mode.

Extensive field testing of the Auto-Match series by systems OEM's (Original Equipment Manufacturers) has proven the reliability and versatility of these units. They can be retrofitted to most systems and will interface with any high frequency (13.56 MHz) RF generator.

Modular construction has significantly reduced the manufacturing costs of the Auto-Match tuners. Free evaluations are offered to qualified prospects.

*Lower power applications available, contact factory.

SPECIFICATIONS:

	AM-5	AM-10	AM-20
Dimensions	9"W x 16"D x 5"H	13 1/8"W x 15 5/8"D x 6 1/4"H	13 1/8"W x 15 5/8"D x 6 1/4"H
Connectors	Input 1 "N" Connector Output 2 "HN" in Parallel	Input 1 "N" Connector Output 2 "C" in Parallel	Input 1 "HN" Connector
Capacitors*	Load-Air Variable 1000 Pf Max Tune-Vacuum Variable 500 Pf Max	Load-Vacuum Variable 1000 Pf Max Tune-Vacuum Variable 500 Pf Max	Load-Vacuum Variable 1000 Pf Max Tune-Vacuum Variable 500 Pf Max
Inductor**	6 Turn Coil Taps on Coil for Changing Inductance	5 Turn Coil	5 Turn Coil
Cooling	Water	Air	Water

All units come standard with 0-5 KV DC probe installed.

*Load Capacitors: Shunt caps can be added for increased load tuning range.

**Custom inductor coils installed per customer specifications at no additional cost.



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