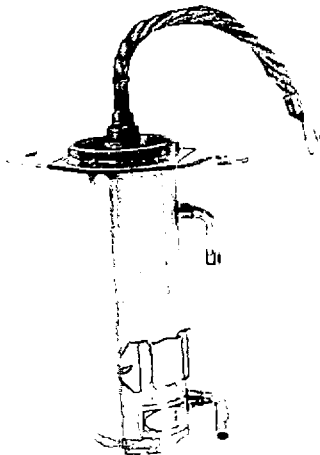


IGNITRON
Coaxial

PULSE-WELDER SERVICE—2000 AMPERES PEAK



ADAPTED TO WATER-FLOW
CONTROL

ADAPTED TO TEMPERATURE
CONTROL

The GL-7670 is a sealed, stainless-steel-jacketed, water-cooled ignitron designed to control the high-current, short-duration power pulses required in pulse-welding service. In such use two tubes in inverse-parallel connection will control 2000 amperes peak at voltages up to 2500 volts peak at a frequency of 60 cycles. The tube is also useful in other high-peak-current applications such as capacitor-discharge circuits.

The 7670 features a new coaxial con-

struction in which current flows through the tube from anode to cathode, then up the tube wall to a coaxial cathode terminal at the top. This coaxial current flow provides a magnetic shield to eliminate the arc deflection which the high peak currents of this tube might cause in standard design ignitrons.

A slotted mounting plate permits convenient mounting of a thermostat to provide control of the water flow or over-temperature protection.

Electrical

Cathode Excitation—Cyclic	
Cathode Spot Starting—Ignitor	
Number of Electrodes	
Main Anodes	1
Main Cathodes	1
Ignitors	1
Arc Drop at 2500 Peak Amperes	25 Volts
Arc Drop at 150 Amperes	13 Volts

Mechanical

Envelope Material—Stainless Steel	
Net Weight	3.6 Pounds

Thermal

Type of Cooling—Water	
Inlet Water Temperature, minimum	10 C
Inlet Water Temperature, maximum	30 C
Outlet Water Temperature, maximum	35 C
Water Flow, minimum, solenoid	
water-valve open	1.0 Gallons per Minute
Characteristics for Water Cooling at Rated Minimum Flow	
Water Temperature Rise, maximum	4 C
Pressure Drop at 1 Gallon per	
Minute	1.8 Pounds per Square Inch

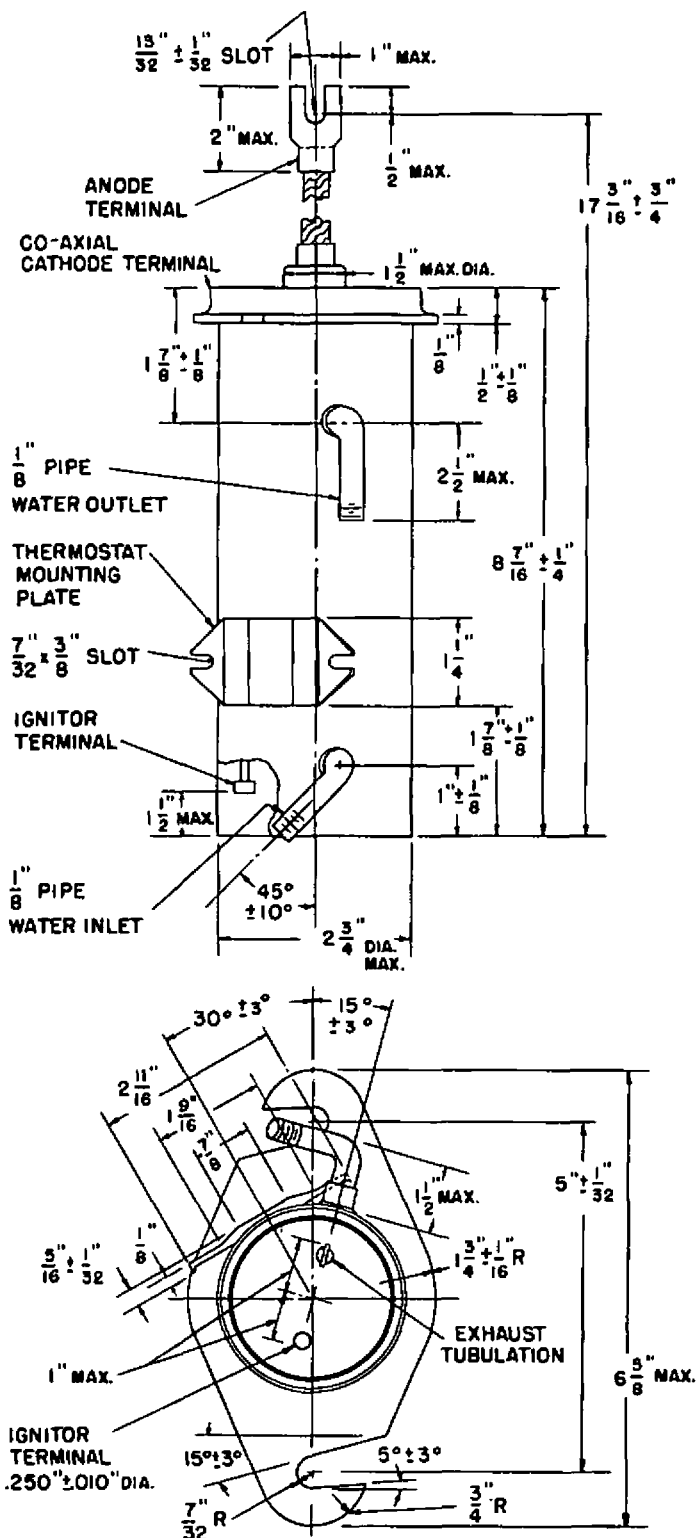
MAXIMUM RATINGS—PULSE WELDER SERVICE

Peak Forward Anode Voltage	2500 Volts	Peak Anode Current	2000 Amperes
Peak Inverse Anode Voltage	2500 Volts	Average Anode Current	10 Amperes
Initial Inverse Voltage*	1250 Volts	Averaging Time	2 Seconds
		Anode Current Repetition Rate	60 Pulses per Second
		Anode Current Pulse Width	1000 Microseconds

Cathode Excitation Requirements

Ignitor Voltage Required to Fire	200 Volts	Ignitor	
Ignitor Current Required to Fire	30 Amperes	Maximum Voltage	
Starting time at Required Voltage or		Positive—Anode Voltage	
Current	100 Microseconds	Negative	5 Volts
		Maximum Current	
		Peak	100 Amperes
		Root Mean Square	10 Amperes
		Average	1 Ampere
		Maximum Averaging Time	5 Seconds

* Initial inverse voltage is the negative voltage applied to the anode immediately after anode current conduction.



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