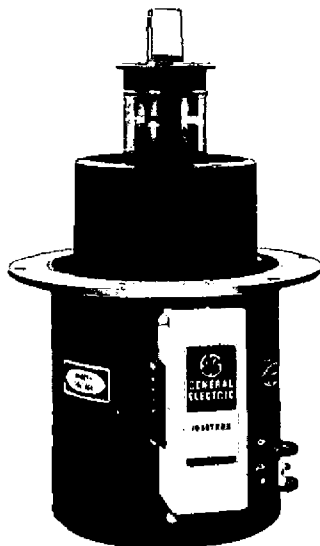




GL-8420

COAXIAL IGNITRON**INTEGRAL CONTROL THERMOSTAT
FORCED-AIR COOLED****ELECTRONIC CONTACTOR SERVICE
1000 AMPERES**

The GL-8420 is a forced-air-cooled ignitron for use in railroad locomotive service as an electronic contactor. In such application two tubes in an inverse-parallel connection control the a-c voltage input to a semiconductor rectifier.

Features include a coaxial construction in which current flows from anode

to cathode, then up the tube wall to a coaxial cathode terminal. Coaxial current flow provides a magnetic shield to eliminate arc deflection caused by high peak currents. An integral thermostat provides protection against excessive temperature and loss of cooling air. An ignitor terminal block on the periphery of the tube facilitates connecting to the ignitor.

Electrical

Cathode Excitation—Cyclic	
Cathode Spot Starting—Ignitor	
Number of Electrodes	
Main Anodes.....	1
Main Cathodes.....	1
Ignitors.....	1
Arc Drop, at 1100 Amperes Peak.....	19 Volts

Mechanical

Envelope Material—Steel	
Net Weight.....	130 Pounds
Mounting Position—Vertical, Anode Terminal Up	

Thermal

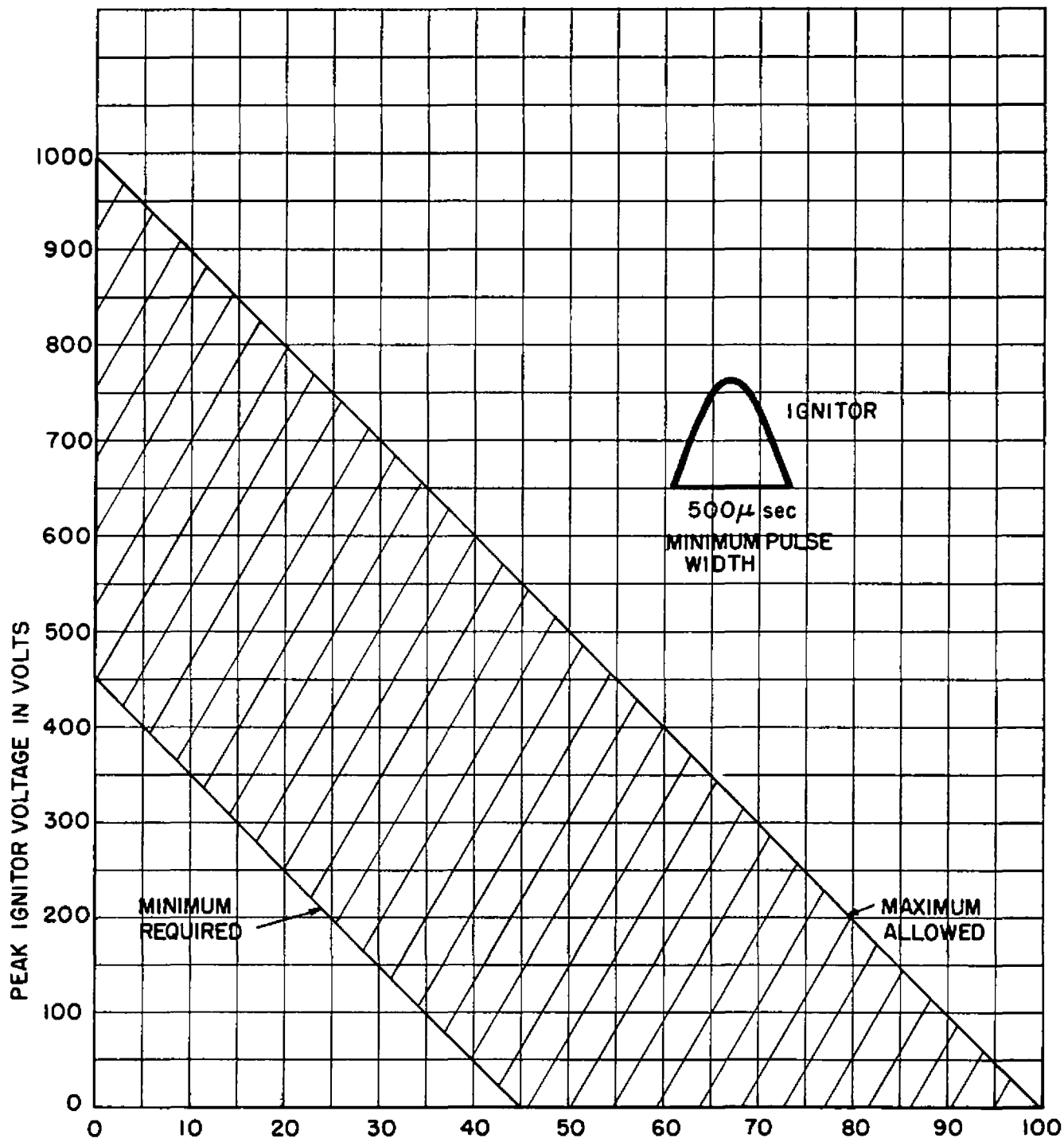
Type of Cooling—Forced Air	
Cooling Air Temperature	
Maximum.....	45 C
Minimum.....	10 C
Air Flow at Rated Load, minimum.....	600 Cubic Feet per Minute
Static Incoming Air Pressure at Minimum Flow.....	3.9 Inches—Water
Incoming Air Enters Beneath Tube—(See Outline Drawing)	

**MAXIMUM RATINGS—AC CONTACTOR SERVICE
(Two Tubes in Inverse Parallel, Ratings per Tube)**

Peak Forward and Inverse Anode Voltage.....	1000 Volts	Ignitor Requirements	
Average Anode Current		Maximum Voltage	
5 Cycles.....	1000 Amperes	Positive—Anode Voltage	
2 Minutes.....	130 Amperes	Negative.....	5 Volts
Frequency Range.....	25-60 Cycles per Second	Maximum Current	
		Peak.....	100 Amperes
		Root Mean Square.....	15 Amperes
		Average.....	2 Amperes
		Maximum Averaging Time.....	10 Seconds
		Volt-Ampere Time Requirements—See Curve K-69087-72A982	
		Temperature-Control-Switch Ratings	
		Maximum Current, at 32 Volts DC.....	1 Ampere
		Maximum Peak Potential Difference Between Tube Cylinder and Switch Current	1500 Volts

GENERAL  ELECTRIC

IGNITOR VOLT-AMPERE REQUIREMENTS FOR SEPARATE EXCITATION



THE IGNITOR FIRING CIRCUIT SHOULD BE DESIGNED TO
OPERATE WITHIN THE SHADED AREA

