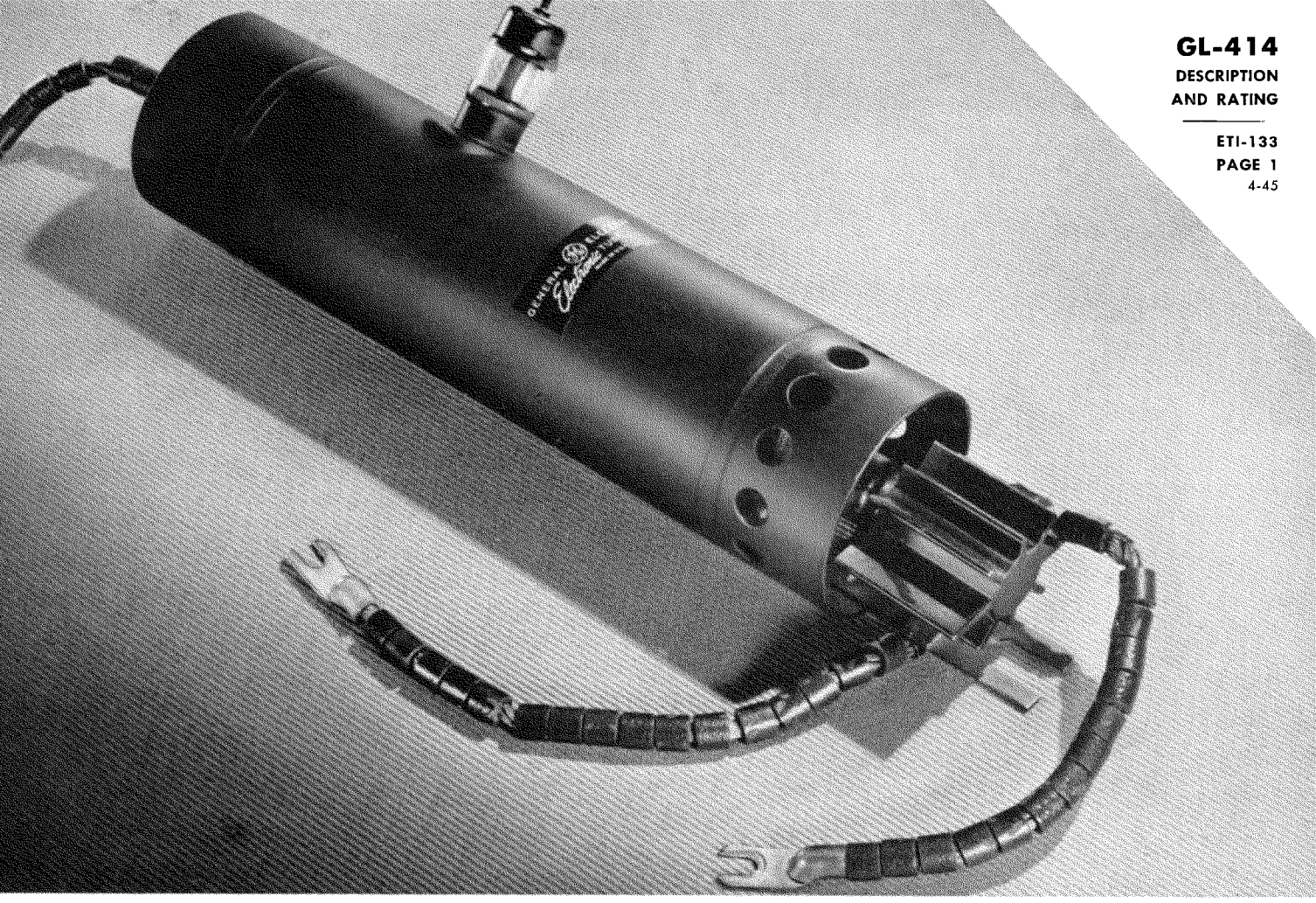


THYRATRON

DESCRIPTION

The GL-414 is a hot-cathode, mercury-vapor all-metal thyratron.

The low voltage-drop characteristic and high efficiency of mercury tubes are combined in the GL-414 with the mechanical strength and ease of installation inherent in the all-metal design. These features result in a tube especially satisfactory for industrial applications.

TECHNICAL INFORMATION

These data are for reference only. For design information refer to specifications.

GENERAL CHARACTERISTICS

Number of electrodes		4	
Electrical			
Cathode—Indirectly heated type			
Heater voltage		5.0	volts
Heater current, approx		20.0	amperes
Heating time, typical		10	minutes
Peak voltage drop, typical		16	volts
Approximate starting characteristics			
Anode voltage	100	2000	volts
Control-grid voltage	−1.0	−14.0	volts
Anode to control-grid capacitance		0.07	micromicrofarad
Ionization time, approx		10	microseconds
Deionization time, approx		1000	microseconds

Electronic TUBE

GENERAL ELECTRIC

TECHNICAL INFORMATION (CONT'D)

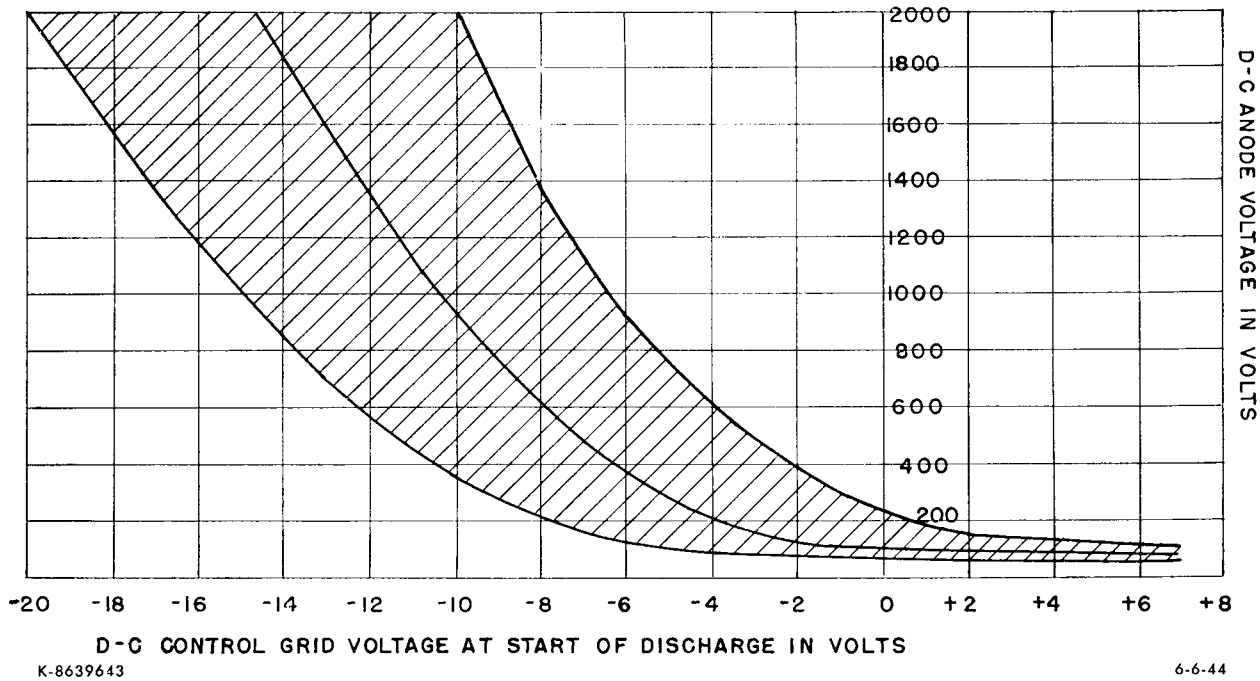
Mechanical

Net weight, approx	4	pounds
Shipping weight, approx	9	pounds
Mounting position		vertical

MAXIMUM RATINGS

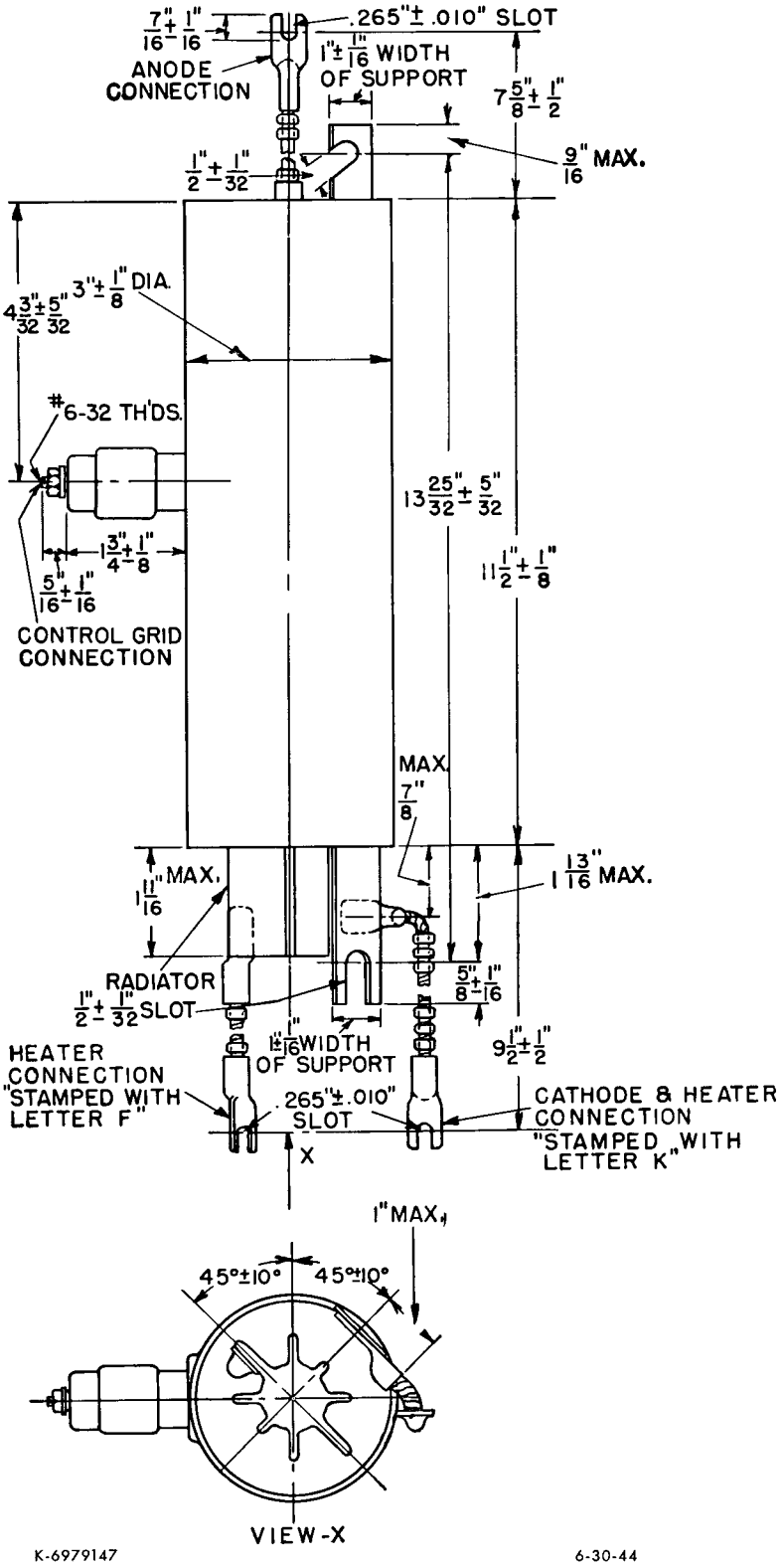
Maximum peak anode voltage		
Inverse	2000	volts
Forward	2000	volts
Maximum negative control-grid voltage		
Before conduction	1000	volts
During conduction	10	volts
Maximum anode current		
Instantaneous, 25 cycles and above	100	amperes
Instantaneous, below 25 cycles	25	amperes
Average	12.5	amperes
Surge, for design only	1500	amperes
Maximum control-grid current		
Instantaneous	5.0	amperes
Average	1.0	ampere
Maximum time of averaging current	30	seconds
Temperature limits, condensed mercury	+40 to +80	centigrade
Recommended temperature, condensed mercury	+40	centigrade

TYPICAL CONTROL CHARACTERISTIC
SHADED AREA SHOWS RANGE OF CHARACTERISTIC
CONDENSED-MERCURY TEMPERATURE 40 C
SHIELD GRID CONNECTED TO CATHODE



K-8639643

6-6-44



OUTLINE
GL-414 THYRATRON

Electronics Department
GENERAL ELECTRIC
Schenectady, N. Y.

4-45 (4M)
Filing No. 8850