



THYRATRON

DESCRIPTION

The FG-172 is a double-grid, mercury-vapor thyatron. Double-grid tubes are designed for applications where the grid is actuated from a high-impedance source and where the available grid power is very small. The all-metal construction results in a sturdy tube for industrial applications.

TECHNICAL INFORMATION

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

GENERAL CHARACTERISTICS

Number of electrodes.....	4				
Electrical		Continuous Service		Welder-Control Service	
Cathode—Indirectly heated type					
Voltage.....	5.0			5.5 volts	
Current, approx.....	10.0			11.0 amperes	
Heating time, typical.....	5			5 minutes	
Peak voltage drop, typical.....	16			16 volts	
Approximate control characteristics					
Anode voltage.....	100	2000	100	2000 volts	
Shield-grid voltage.....	0	0	0	0 volts	
Control-grid voltage.....	+1.0	-14	+1.0	-14 volts	
Anode to grid capacitance, approx.....	0.07			0.07 micromicrofarad	
Ionization time, approx.....	10			10 microseconds	
Deionization time, approx.....	1000			1000 microseconds	



TECHNICAL INFORMATION (CONT'D)

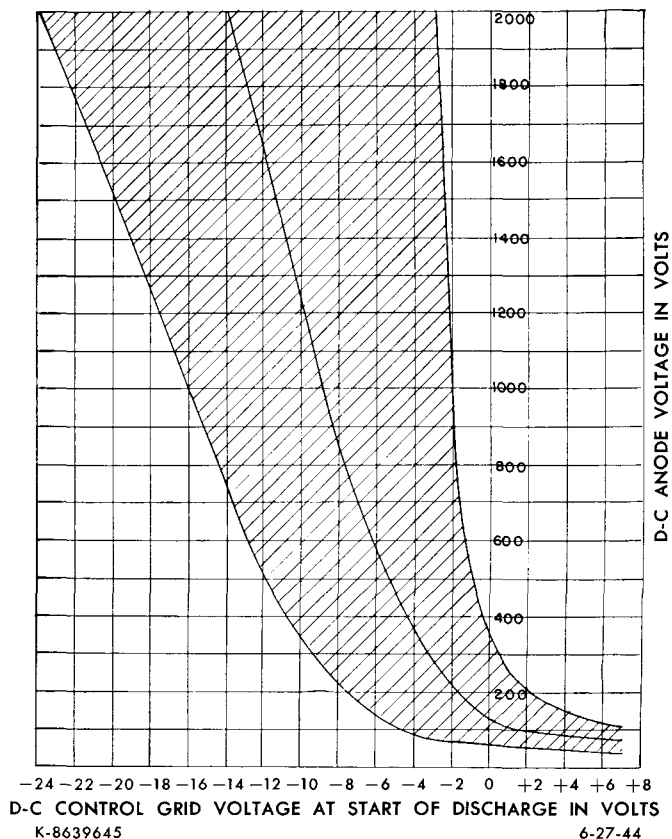
Mechanical

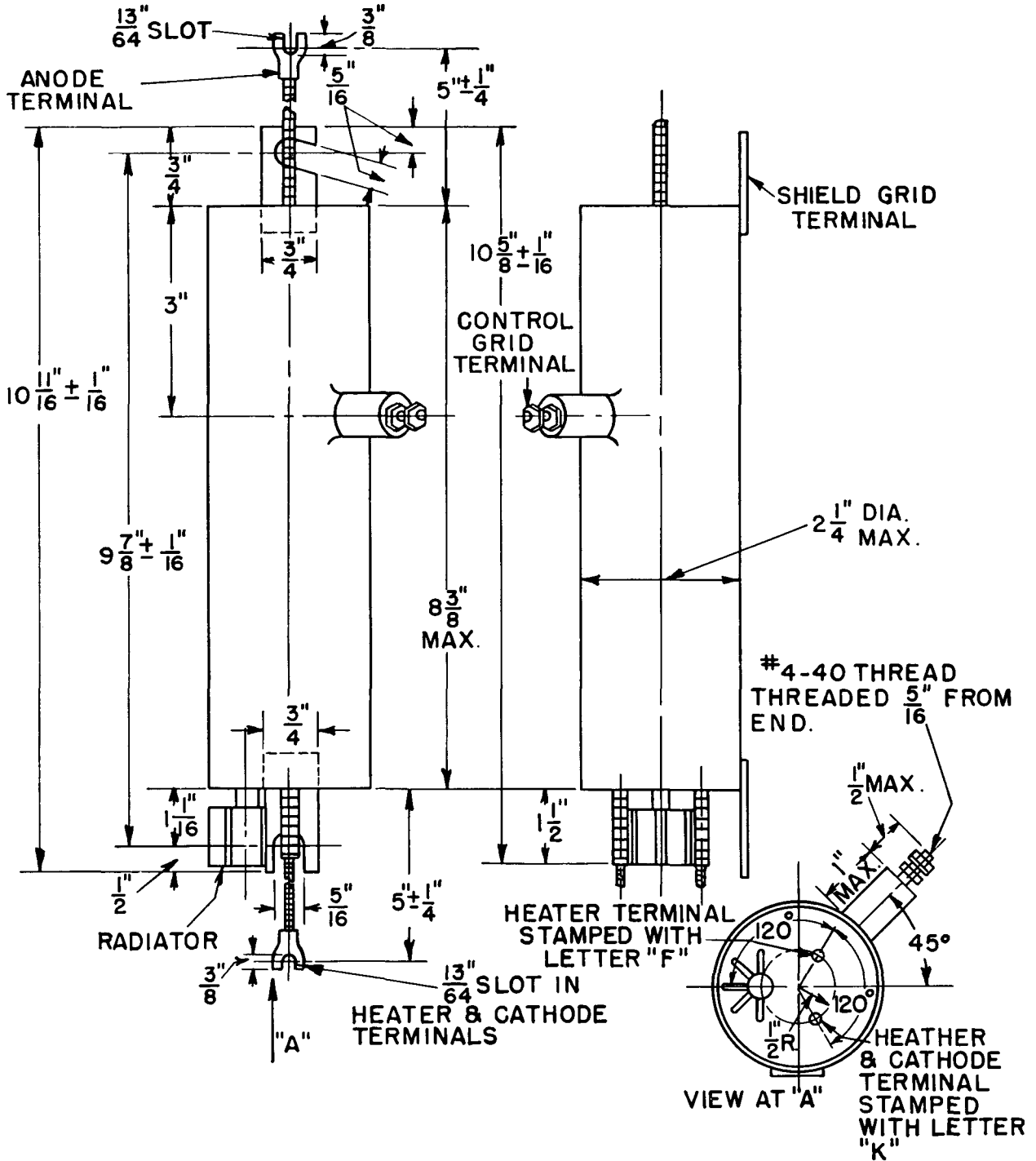
Net weight, approx.....	22 ounces
Shipping weight, approx.....	7 pounds
Mounting position.....	vertical, radiator down

MAXIMUM RATINGS

	Continuous Service	Welder-Control Service
Maximum peak anode voltage		
Inverse.....	2000	750 volts
Forward.....	2000	750 volts
Maximum negative control-grid voltage		
Before conduction.....	1000	1000 volts
During conduction.....	10	10 volts
Maximum negative shield-grid voltage		
Before conduction.....	300	300 volts
During conduction.....	5.0	5.0 volts
Maximum anode current		
Instantaneous, 25 cycles and above.....	40	77 amperes
Instantaneous, below 25 cycles.....	13.0	13.0 amperes
Average.....	6.4	2.5 amperes
Surge, for design only.....	400	400 amperes
Duration of surge current.....	0.1	0.1 second
Maximum control-grid current		
Instantaneous.....	1.0	1.0 ampere
Average.....	0.25	0.25 ampere
Maximum shield-grid current		
Instantaneous.....	2.0	2.0 amperes
Average.....	0.50	0.50 ampere
Maximum time of averaging current.....	15	15 seconds
Temperature limits, condensed mercury.....	+40 to +80	+30 to +95 centigrade
Recommended temperature, condensed mercury.....	40	40 centigrade

FG-172 TYPICAL CONTROL CHARACTERISTIC
SHADED AREA SHOWS RANGE OF CHARACTERISTIC
CONDENSED-MERCURY TEMP 40 C, SHIELD GRID CONNECTED TO CATHODE





OUTLINE
FG-172 THYRATRON

