

# —Standard Valves—

4030-C  
Valve

## 4030-C VALVE

DOUBLE ENDED WATER COOLED TRIODE.

### SPECIFICATION.

#### Cathode.

Pure tungsten filament.  
Constant voltage type.

#### Water Circulation.

Normal flow—22 gallons per minute.  
Pressure drop in water jacket at normal flow  
9 lbs. per sq. in. (0.63 Kg. per sq. cm.)  
Maximum water pressure in water jacket—  
35 lbs. per sq. in. (2.5 Kg. per sq. cm.)

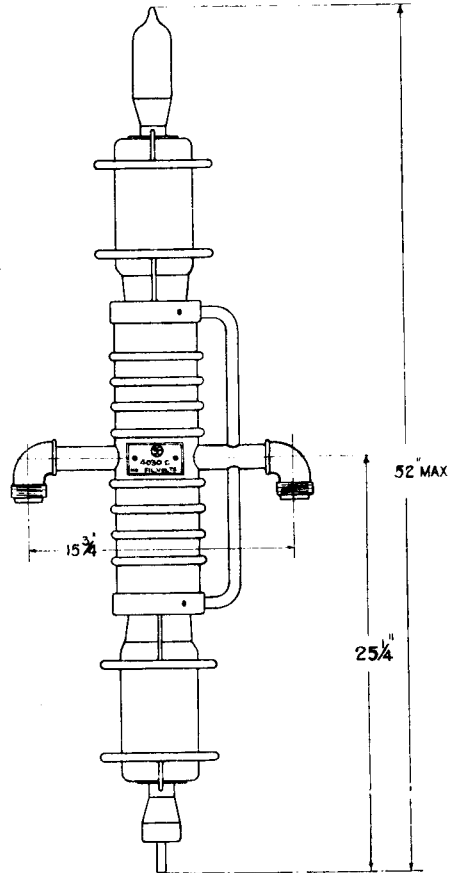
#### Dimensions.

Max. overall length 52" (132 cms.)  
Jacket diameter  $5\frac{3}{8}$ " (13.5 cms.)  
Packing crate See dwg.  
Net weight 35 lbs. (16,000 gms.)

#### Constants.

Filament voltage 25 volts  
(exact filament voltage marked  
on valve)  
Nominal filament current 250 amps.  
Total emission 45 amps.  
\*Impedance 1,800 ohms  
\*Amplification factor 36  
\*Mutual conductance 20 mA per volt  
Grid-anode capacity 61  $\mu\mu\text{F}$ .  
Anode-filament capacity 15  $\mu\mu\text{F}$ .  
Grid-filament capacity 45  $\mu\mu\text{F}$ .

\* at  $V_p = 17 \text{ KV}$ ,  $I_p = 5 \text{ amps}$ .



### LIMITING CONDITIONS FOR SAFE OPERATION.

Maximum direct anode voltage	17,500 volts
Maximum direct anode current	11 amps.
Maximum anode dissipation	80 Kw.
Maximum grid dissipation	1,500 watts
Maximum frequency for above ratings	2 Mc.
Maximum anode voltage for frequency of 22 Mc.	15,000 volts

Note.—The 4030-C Valve is shipped with Corona rings already fitted but is not supplied with grid and filament radiators or connectors. The code numbers of these parts, which must be ordered as a separate item, are as follows :—

Grid and filament radiators	type LP.77880	Filament connection	type Det.105
Filament radiator	type LP.77883	Filament connection	type Det.105A

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## TYPICAL OPERATING CONDITIONS.

	Class B A.F. Amp. and Mod. For balanced 2 valve circuit
Direct anode voltage	14,000 volts
Grid bias	—150 volts
Direct anode current per valve—zero signal	1.3 amps.
Direct anode current per valve—maximum signal	6.5 amps.
Anode dissipation	41 kW.
Load resistance—anode to anode	1,900 ohms
Maximum output—2 valves	100 kW.

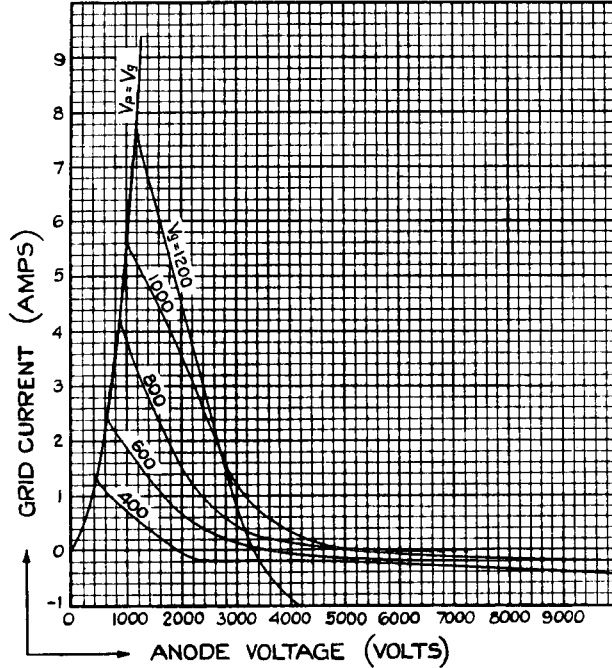
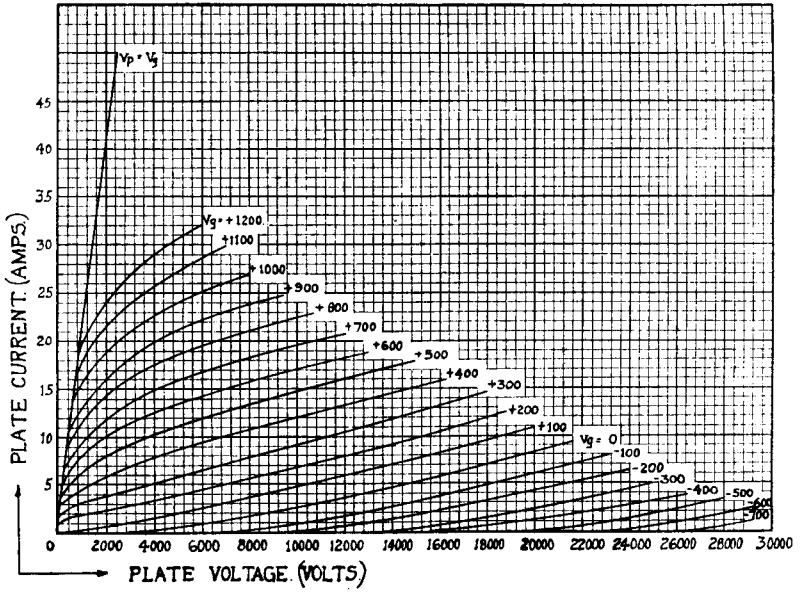
## RADIO FREQUENCY OPERATION.

	Class B Telephony Modulated carrier applied to grid			
Direct anode voltage	17.5	15	12	10 kV.
Direct anode current	4.8	4.8	4.8	4.8 amps.
Grid bias	—400	—300	—250	—150 volts
Power output	25	22	17	12 kW.
Anode dissipation	59	50	40	36 kW.
FREQUENCY	2	12	19	22 Mc.

	Class C Telephony				Class C Telegraphy			
	Subject to anode modulation				Unmodulated			
Direct anode voltage	12	11	10	9	17.5	15	12	10 kV.
Direct anode current	5	5	5	5	9.6	9.6	9.6	9.6 amps.
Grid bias	—600	—500	—450	—400	—600	—500	—450	—400 to
Carrier output	40	35	30	20	100	88	68	550 volts
Anode dissipation	20	20	20	25	68	56	47	48 kW.
FREQUENCY	2	12	19	22	2	12	19	22 Mc.

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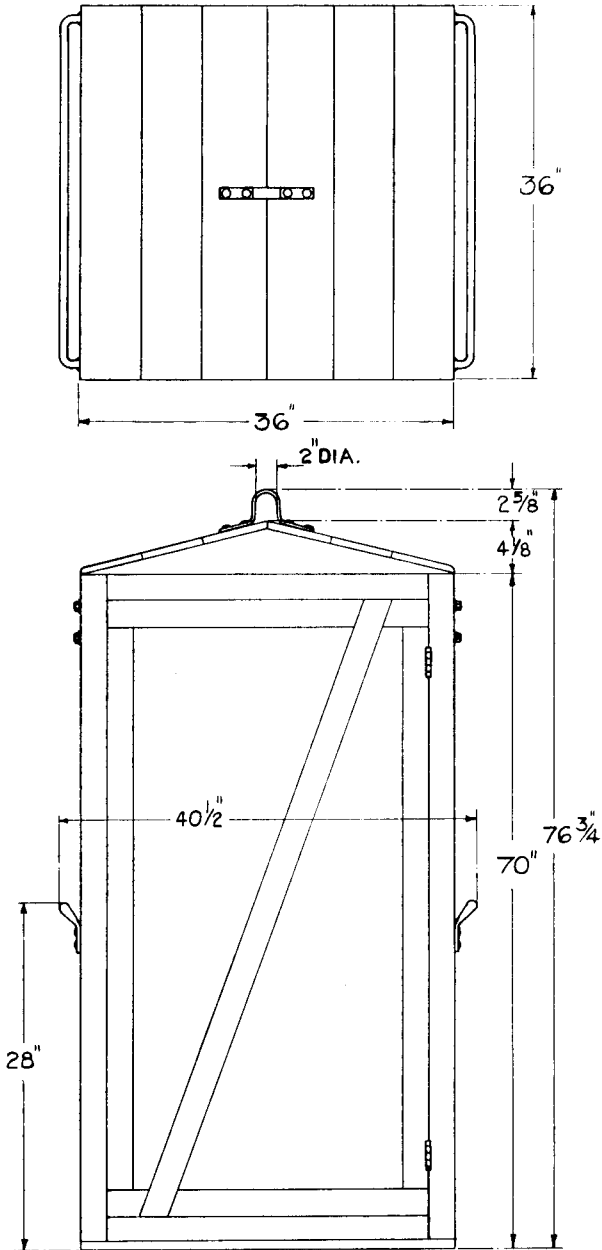
Tentative data

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PACKING CRATE.



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