



# 5555 IGNITRON

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## General:

### DATA

|  |                            |
|--|----------------------------|
| Cathode . . . . .  | Pool type                  |
| Number of Ignitors • . . . . .                                   | 2                          |
| Number of Main Anodes. . . . .                                   | 1                          |
| Number of Auxiliary Anodes . . . . .                             | 1                          |
| Peak Voltage Drop:   |                            |
| At 100 Amp Peak Anode Current. . . . .                           | 12.6 volts                 |
| At 300 Amp Peak Anode Current. . . . .                           | 14.1 volts                 |
| At 600 Amp Peak Anode Current. . . . .                           | 16.2 volts                 |
| At 1200 Amp Peak Anode Current . . . . .                         | 19.1 volts                 |
| Cooling:   |                            |
| Type . . . . .   | Water                      |
| Typical Flow . . . . .   | 3 to 5 gal./min.           |
| Pressure Drop at Above Flow. . . . .                             | 3 to 8 lb./sq.in.          |
| Temp. Rise at Lower Rate of Flow<br>(300 Amp per Anode). . . . . | 7°C                        |
| Mounting Position. . . . .                                       | Vertical, Flexible Lead Up |
| Maximum Rigid Length (Approx.) . . . . .                         | 18-1/2"                    |
| Diameter, Including Cooling Couplings. . . . .                   | 9" ± 1/8"                  |

### RECTIFIER SERVICE

For Frequencies from 25 to 60 cycles, Phase Retard = 0

#### Maximum Ratings, Absolute Values:

|  |            |           |       |
|--|------------|-----------|-------|
| PEAK FORWARD ANODE VOLTAGE . . . . .   | 900 max.   | 2100 max. | volts |
| PEAK INVERSE ANODE VOLTAGE . . . . .   | 900 max.   | 2100 max. | volts |
| PEAK ANODE CURRENT . . . . .           | 1800 max.  | 1200 max. | amp   |
| AVERAGE CONTINUOUS ANODE CUR. . . . .  | 200 max.   | 150 max.  | amp   |
| 2-HOUR AVERAGE ANODE CUR.* . . . .     | 300 max.   | 225 max.  | amp   |
| 1-MINUTE AVERAGE ANODE CUR.** . . . .  | 400 max.   | 300 max.  | amp   |
| SURGE ANODE CURRENT for                |            |           |       |
| 0.15 sec. max. . . . .                 | 12000 max. | 9000 max. | amp   |
| OUTLET WATER TEMPERATURE . . . . .     | 60 max.    | 45 max.   | °C    |
| INLET WATER TEMPERATURE. . . . .       | 6 min.     | 6 min.    | °C    |
| WATER FLOW, AT CONTINUOUS              |            |           |       |
| AVERAGE ANODE CUR. RATING . . . . .    | 3 min.     | 3 min.    | gpm   |
| WATER FLOW, AT NO LOAD# . . . . .      | 1 min.     | 1 min.    | gpm   |
| PEAK INVERSE AUXILIARY ANODE VOLTAGE:  |            |           |       |
| With anode conducting. . . . .         | 25 max.    | 25 max.   | volts |
| With anode not conducting. . . . .     | 150 max.   | 150 max.  | volts |
| AVERAGE AUXILIARY ANODE CUR. . . . .   | 5 max.     | 5 max.    | amp   |
| PEAK POSITIVE IGNITOR VOLTAGE. . . . . | 900 max.   | 2100 max. | volts |
| PEAK NEGATIVE IGNITOR VOLTAGE. . . . . | 5 max.     | ..        | volts |
| PEAK IGNITOR CURRENT . . . . .         | 100 max.   | ..        | amp   |
| AVERAGE IGNITOR CURRENT##. . . . .     | 2 max.     | ..        | amp   |
| IGNITION TIME. . . . .                 | 100 max.   | ..        | µsec  |

GENERAL REQUIREMENTS for SELF-EXCITATION and SEPARATE EXCITATION are given on the next page

•, \*, \*\*, #, ##: See next page.

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## IGNITRON

AC WELDER - CONTROL SERVICERatings for 2400 volts rms, 25 to 60 cycles

Maximum Ratings, Absolute Values:

|  |           |           |
|--|-----------|-----------|
| DEMAND . . . . .                         | 2400 max. | kva       |
| CORRESPONDING AVERAGE ANODE CURRENT.     | 135 max.  | amp       |
| AVERAGE ANODE CURRENT. . . . .           | 207 max.  | amp       |
| CORRESPONDING DEMAND . . . . .           | 1105 max. | kva       |
| TIME OF AVERAGING ANODE CURRENT          |           |           |
| at 2400 volts rms                        | 1.66 max. | sec       |
| SURGE ANODE CURRENT, for 0.15 sec.max.   | 6000 max. | amp       |
| WATER FLOW . . . . .                     | 3 min.    | gal./min. |
|  |           | °C        |
| OUTLET WATER TEMPERATURE . . . . .       | 30 max.   |           |
| PEAK INVERSE AUXILIARY ANODE VOLTAGE:    |           |           |
| With anode conducting . . . . .          | 25 max.   | volts     |
| With anode not conducting. . . . .       | 150 max.  | volts     |
| AVERAGE AUXILIARY ANODE CURRENT. . . . . | 5 max.    | amp       |
| PEAK POSITIVE IGNITOR VOLTAGE. . . . .   | 2400 max. | volts     |
| PEAK NEGATIVE IGNITOR VOLTAGE. . . . .   | 5 max.    | volts     |
| PEAK IGNITOR CURRENT . . . . .           | 100 max.  | amp       |
| AVERAGE IGNITOR CURRENT## . . . . .      | 2 max.    | amp       |
| IGNITION TIME. . . . .                   | 100 max.  | µsec      |

Demand-ampere requirements are shown on curve 92CM-6710  
under type 5554

SELF-EXCITATION (ANODE FIRING)

See Circuit 92CS-6722 under type 5554

|  |          |       |
|--|----------|-------|
| PEAK IGNITOR VOLTAGE . . . . .             | 150 min. | volts |
| PEAK IGNITOR CURRENT . . . . .             | 40 min.  | amp   |
| Ignitor series resistance for anode firing |          |       |
| at anode voltages of:                      |          |       |
| 600 volts or less (Approx.) . . . . .      | 4 . .    | ohms  |
| 601 to 1000 volts (Approx.) . . . . .      | 10 . .   | ohms  |
| 1001 to 1500 volts (Approx.) . . . . .     | 20 . .   | ohms  |
| 1501 to 2000 volts (Approx.) . . . . .     | 35 . .   | ohms  |
| 2001 to 2400 volts (Approx.) . . . . .     | 50 . .   | ohms  |

SEPARATE EXCITATION (CAPACITOR FIRING)

See Circuit 92CS-6722 under type 5554

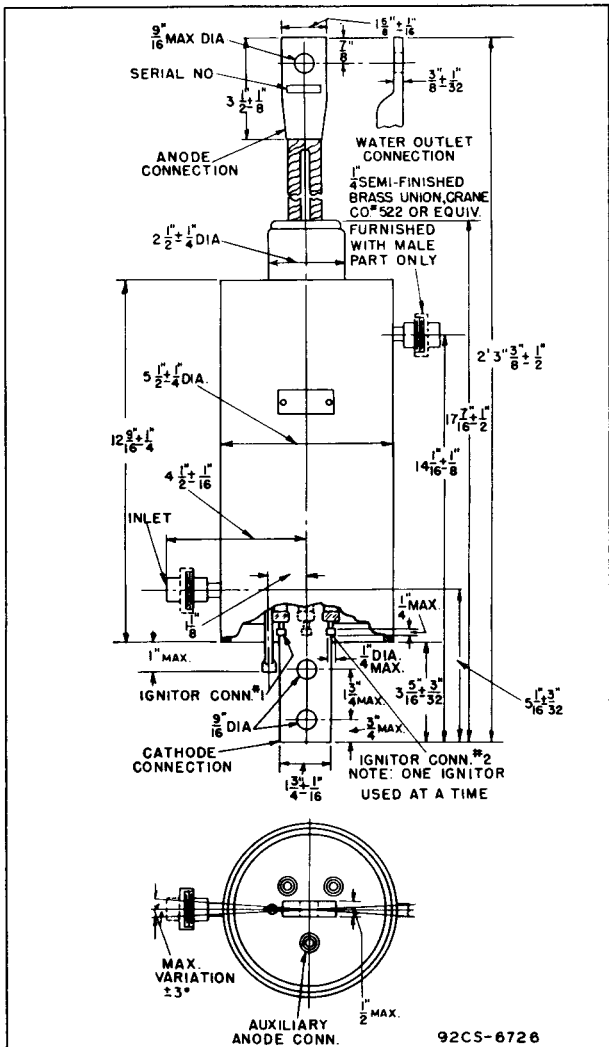
Minimum volt-ampere requirements are shown on curve 92CS-6723  
under type 5554

- Use only one ignitor at a time.
- \* Averaged over any 2-minute interval.
- \*\* Averaged over any 1-minute interval.
- # For systems in which the flow of water is controlled by the load.
- ## Averaged over any 10-second interval.



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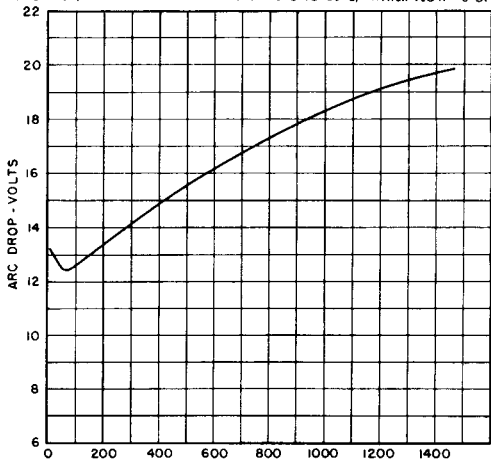


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# 5555 IGNITRON

ARC DROP, OUTLET WATER TEMPERATURE—40°C TO 60°C, WATER FLOW—3 GPM



92CS-6724