# MERCURY VAPOUR RECTIFIER

# AH211



**Service Type CV532**

## INTRODUCTION

The AH211 is a maintenance type only. For new designs the AH211A is recommended.

## GENERAL DATA

**(See also Preamble to Rectifier Section of this catalogue)**

### Electrical

| | | |
|---|---|---|
| Filament | Oxide Coated | |
| Filament Voltage | 2·5 | V |
| Filament Current | 30 | A |
| Filament Heating Time | 1 | Minute |
| Condensed Mercury Temperature | 25 to 50 | °C |
| Max Peak Inverse Voltage | 16 | kV |
| Max Anode Current: | | |
| Peak | 8 | A |
| Mean‡ | 2 | A |
| Under fault conditions (0·1 seconds Max duration) | 100 | A |

### Mechanical

| | | | |
|---|---|---|---|
| Overall Length | 12·38 inches | (314 mm) | Max |
| Overall Diameter | 3·19 inches | ( 81 mm) | Max |
| Net Weight | 1 pound | (460 gm) | Approx |
| Mounting Position | | Vertical, base down | |
| Base | | *(See outline drawing)* | |

## CONTROL OF CONDENSED MERCURY TEMPERATURE

On the following pages two curves are given showing:

1. Total heating time for any value of ambient temperature. This is for use when the valve is being switched on from cold.
2. Rise of condensed mercury temperature above ambient plotted against heating and cooling time. This can be used as indicated by the example in the preamble to this section of the catalogue.

## MAXIMUM OPERATING CONDITIONS
**(Absolute Values—see Preamble)**

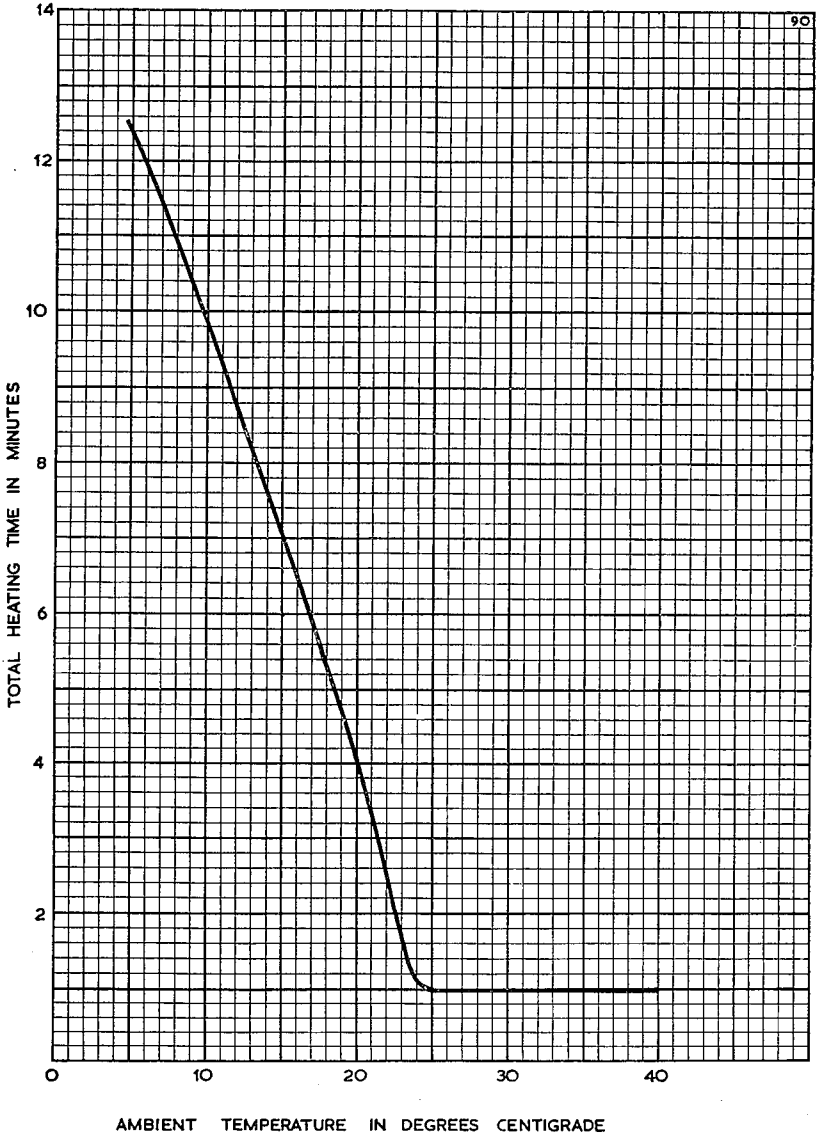
| Circuit | * Diagram | Condensed Mercury Temp. °C | Peak Inverse Voltage (50-60 c/s) kV | Anode current in Amperes | | Transformer Secondary Voltage (R.M.S.) kV | Max D.C. Output | |
|---|---|---|---|---|---|---|---|---|
| | | | | Peak | Mean‡ | | kV | Amps |
| Single Phase Full Wave | A | 25–50 | 16 | 8 | 2·0 | 5·6 | 5·0 | 4 |
| Single Phase Full Wave Bridge | B | 25–50 | 16 | 8 | 2·0 | 11·2 | 10·1 | 4 |
| Three Phase Half Wave | C | 25–50 | 16 | 8 | 2·0 | 6·5† | 7·6† | 6 |
| Three Phase Full Wave | D | 25–50 | 16 | 8 | 2·0 | 6·5 | 15·2 | 6 |

*For diagrams see Typical Rectifier Circuits for Choke Input Filters in the preamble to this section of the catalogue.

†For operation with constant full load. If the load resistance is increased the secondary voltage should be decreased (to avoid excessive peak inverse voltage) until at no load the reduction is 14%. The D.C. output voltage will be correspondingly decreased.

‡Mean anode currents are averaged over any period of 30 seconds maximum.

## TOTAL HEATING TIME CHARACTERISTIC



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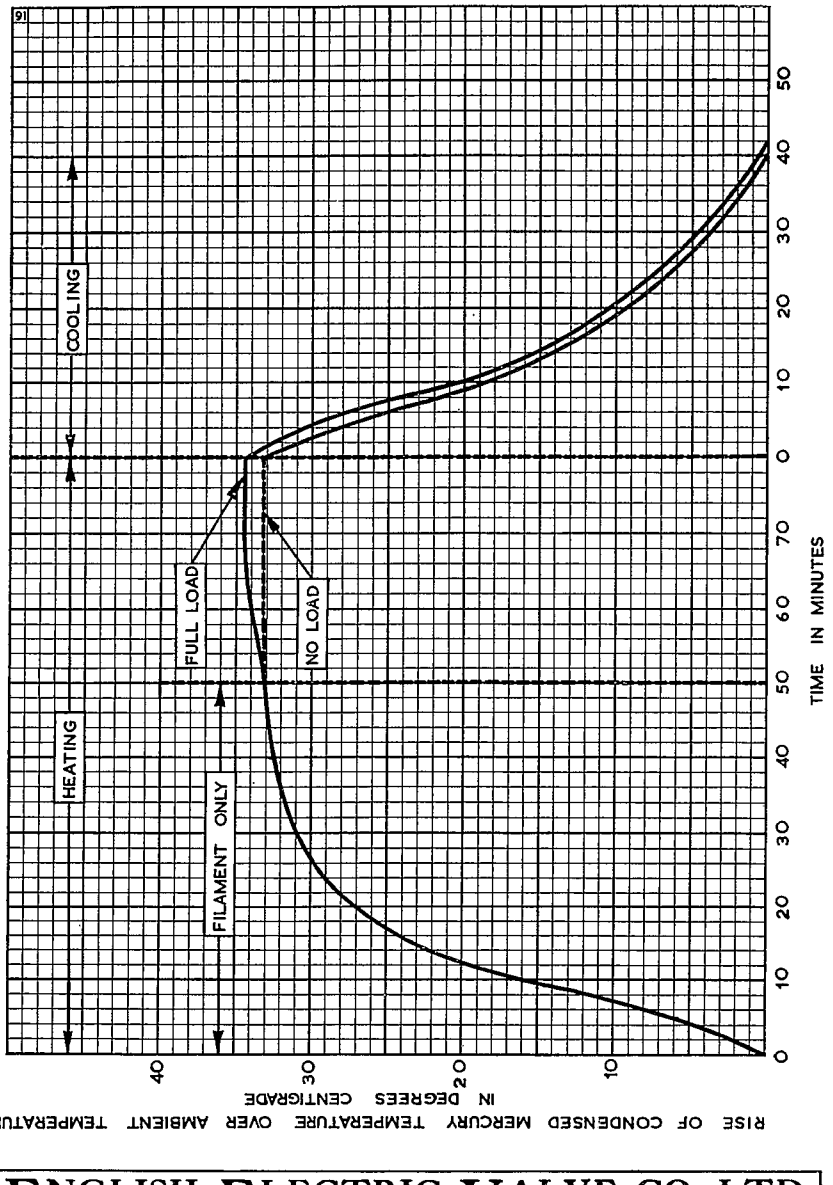
## HEATING AND COOLING CHARACTERISTIC



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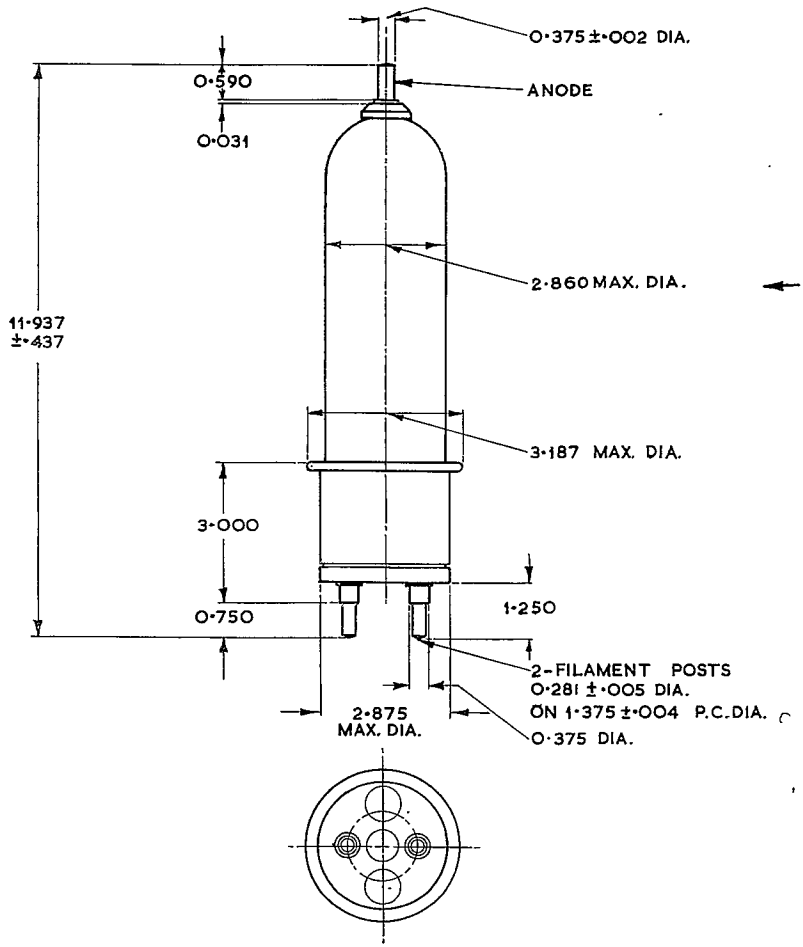
## OUTLINE

528




ALL DIMENSIONS IN INCHES

INDICATES A CHANGE ←

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