

# GB-KALEE

# Everything for the Cinema & Theatre

## RECTIFIERS

### Hewittic

Mercury bulb type rectifier. Three models suitable for cinema use are described in this leaflet. Illustrated is the "Standard Unitarc" model for single phase supply, and on page two is shown the "Unitarc Major" for three phase.

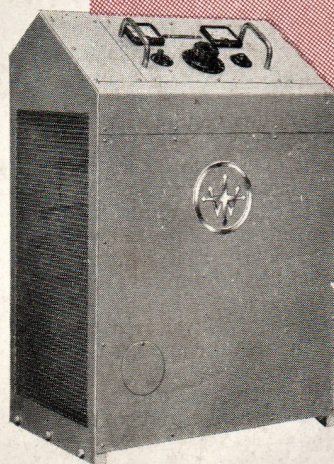
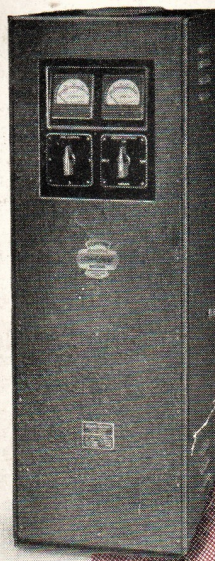
### Nevelector

Mercury bulb type rectifier. Two models available for use on single phase supply. Illustrated is the standard model of which an interior view is shown on page three.

### Westinghouse

Westalite metal plate type rectifier. Two models suitable for cinema use are described on page four. Illustrated on the right is the latest introduction for use on single phase supply.

Illustrations and prices in this list are not binding and are subject to alteration without notice. Delivery, free on kerb, within Railway Company's free delivery area. Cases will be charged for but credited in full, provided they are received within 28 days, carriage paid, and in good condition.



ALL MAKES CAN BE SUPPLIED ON HIRE PURCHASE TERMS OVER 1, 2 OR 3 YEARS

## **“Hewittic” Rectifiers** **Unitarc Major Three Phase**

The “Unitarc Major” recently developed is a 3-phase rectifier built on the unit construction principle. It has been introduced to meet the case where there is a definite preference for 3-phase rectification whilst at the same time offering most of the advantages associated with the modern form of unit construction. Designed for operation on any 3-phase 50 cycle supply over a voltage range of 360 to 440 volts, the “Unitarc Major” will feed direct any make of arc lamp burning H. I. carbons over a wide range of arc current up to a maximum loading of 75 amps. By slight modification to the chokes it can be made suitable to supply L. I. trims.

### **NO FALL OFF IN LIGHT DURING CHANGE-OVER.**

Built on the Unit construction principle, one equipment as illustrated is required for each arc. This provides for each arc circuit being complete and independent and therefore no fall-off in light occurs during change-over when both arcs are on together.

### **HIGH EFFICIENCY AND LOW RUNNING COSTS.**

Operating on the “Econotrol” principle the equipment supplies the arc direct without employment of ballast resistance, thus giving a high overall efficiency and minimum running costs.

### **SIMPLICITY OF CONTROL.**

When energised from the A.C. supply it is simply a matter of striking the arc in the usual way and the rectifier comes into instant operation. A control box of neat and attractive design suitable for wall or pedestal mounting is supplied with each unit and provides the means of obtaining the reduced current values for striking and burning in the arc. A three position rotary selector switch of robust design marked “STRIKE”, “BURN-IN”, and “RUN”, gives these reduced current values, and a scaled M/C ammeter and voltmeter is provided for measuring the arc current and voltage.

### **ARC CURRENT VARIATION.**

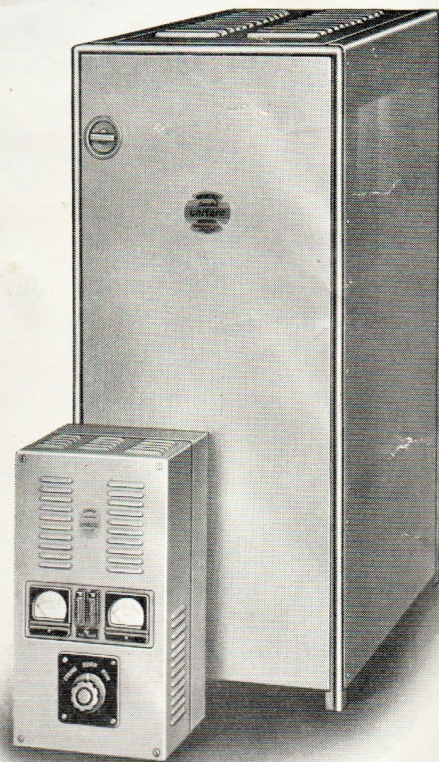
Tappings on the rectifier transformer controlled by easily adjustable off load plug-in type links provide for a wide range of arc current variation sufficient to meet the normal requirements of any theatre.

### **Home Office County Council Regulations.**

To comply with the regulation, that it must be possible to de-energise completely the rectifier unit from the operating enclosure, an A.C. contactor is incorporated on the incoming A.C. side of the rectifier and this is controlled from an approved type switch mounted on the control box.

### **Ease of Handling and Simplicity of Installation.**

Measuring 23" x 22" x 48" high the equipment will pass through narrow passageways, thus facilitating ease of in-



**Price £185 each**

stallation. A 3 core cable taking the A.C. supply to the rectifier and a 2 core cable from the rectifier to the control box installed in the projection enclosure, constitutes the main cabling and a 2 core pilot cable from the A.C. contactor to the control switch completes the wiring.

### **Negligible Maintenance.**

The equipment being static in operation requires negligible maintenance, and will give years of service without adjustment.

### **Finish.**

The rectifier unit is given a high quality black crackle finish while the control box in the projection enclosure can be finished Black, Mid-Stone or Light Grey, to tone with other equipment installed.

## **Unitarc Standard Single Phase Price £150 each**

The Standard Unitarc Rectifier, illustrated on front page, is suitable for operation on any single phase 50 cycle A.C. supply over a voltage range of 200/250 volts.

Like the “Unitarc Major” it is built on the unit construction principle, and one rectifier is required for each arc. It is a genuine “Econotrol” rectifier and provides for a wide range of arc loadings over 25 to 65 amperes, suitable for either high or low intensity running.

It is outstandingly simple both in control and installation. Operating on a supply voltage not exceeding 250 volts and measuring only 17" x 20" x 45" the equipment may, where regulations permit, be installed adjacent to the arc lamp it has to supply.

The electrical installation then simply involves a twin cable from the A.C. supply to the rectifier and the same from the rectifier to the arc lamp.

Two rotary switches enable the required arc current and voltage to be obtained for any regular carbon trim

either high or low intensity, and to bring the equipment into operation it is simply a matter of turning one switch to the “low” position and striking the arc in the usual manner. The correct running current and voltage for the arc can then be obtained by suitable adjustment of the two rotary switches.

### **Remote Control.**

Where there is insufficient space or the local regulations will not permit the installation of rectifiers in the operating enclosure, the instrument and switch control unit can be easily removed from the main unit and mounted in the projection room, whilst the rectifier itself can be installed in a separate room.

### **Finish.**

The “Standard Unitarc” can be supplied in the following finishes, Crackle Black, two shades of Brown or two shades of Grey.

## **Unitarc Minor Single Phase Price £115 each**

The “Unitarc Minor” although lower in cost than the “Standard Unitarc” retains its principal advantages of low running cost, negligible installation charges, simple and reliable operation. It is designed for the operation of high or low intensity carbon trims over a current range of 35 to 45 amperes from any single phase A.C. supply between 200 - 250 volts.

Being extremely compact and measuring 16" x 19" x 34" it is ideal for installation inside the projection enclosure for which it has been specifically designed and consequently has no remote control feature.

The “Unitarc Minor” is the ideal equipment for the small hall where there is no need for the wide range of arc current or the remote control feature of the Standard equipment.

# **"Nevelector"**

## **Single Phase Rectifier**

An efficient and economical rectifier of pleasing appearance and extreme flexibility, which enables you at the turn of a switch to :-

- 1 Change from L.I. to H.I. or from Projector to Spot.
- 2 Change your D.C. arc lamps at will.
- 3 Burn-in on low currents and get perfect craters.
- 4 Step-up current on foggy days or for dense prints

**Price £140 each**

The "Nevelector" consists essentially of a Nevelin Mercury Arc Rectifier Bulb with associated control choke, transformer and smoothing unit. The whole is mounted in a sheet steel cubicle of pleasing modern design and finish. A flood-lit control panel carries, in addition to coarse and fine control switches, a pair of Grade 1 accuracy moving coil instruments which respectively record the current flowing in and the voltage impressed across the arc, thus providing the projectionist with constant and accurate information concerning what is happening in the lamphouse. Suitable for High and Low Intensity Arcs: the output control provides a stepped supply up to 65 amperes. The unit is very simple to install, only two pairs of leads being necessary, one to connect the input to the 50 cycle single-phase 200/250 mains and the other pair to connect the output to the arc. The A.C. input terminals of the Nevelector should be wired to the supply mains through a double pole ironclad switch situated in the projection room which enables the operator to throw the entire rectifier out of circuit, if necessary. The D.C. leads are taken through an isolating switch which can be pulled whilst carboning.

The "Nevelector" is readily portable and can easily be carried up narrow winding stairs, the steel cubicle measuring 19" wide, 16" deep, 3' 9" high and weighs 290 lbs. Due to its compact size the rectifier can be installed, wherever regulations permit, alongside the arc lamp it supplies. A special feature is the sprung mounting of the rectifier bulb to take care of rough handling in transport, and permitting the tilting of the rectifier or laying on its side during transit enabling the rectifier to be put into operation immediately it is delivered on site.

### **LOW OPERATING COSTS.**

The conversion efficiency is as high as 70% varying according to load factor, which figure represents the OVER-ALL efficiency i.e. indicating the percentage of electrical energy taken from the mains supplied to the arc. There are no ballast resistances to waste energy in the form of heat

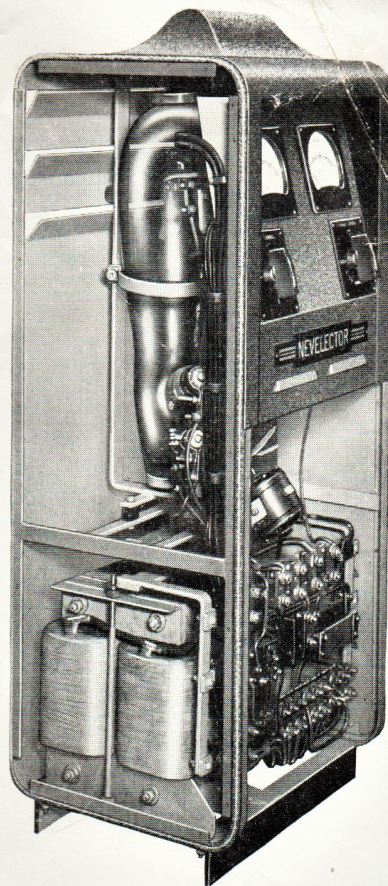
and the efficiency of the Nevelector is indefinitely maintained. The Nevelector, having no hot cathode to lose emission and no devices to safeguard against overload at the expense of putting a restriction upon the output characteristics, is therefore capable of an efficiency even higher than the figures given would indicate. The Nevelector is controlled in the A.C. circuit which means that when the coarse control is switched on, current is immediately available for the arc, and when it is switched off no current whatever flows in the rectifier. There is no exciter circuit to be kept running and no time is wasted in "warming up," current is only used as and when needed.

### **LOW MAINTENANCE COSTS.**

The specification of the "Nevelector" provides throughout a far more generous factor of safety than is normally demanded of electrical engineering products, and it is unlikely that maintenance should be required in any direction. The life of the rectifier bulb is measured in years and there is no falling off in its efficiency—in ten years it will be as efficient as when new. The "Nevelector" has been designed to do its job thoroughly, to save trouble and expense.

### **REMOTE CONTROL**

In the case where there is insufficient space or the local regulations will not permit the installation of rectifiers in the operating enclosure, the equipment can be supplied with the control panel as a separate unit, at no extra cost.



## **"Nevelector" Junior Single Phase Price £110 each**

A development of the rectifier made originally for use with the Gaumont-Kalee "40" equipment. It is intended for use in cinemas of small seating capacity where the initial cost of new equipment is a matter for careful consideration. As with the standard "Nevelector," it will feed low intensity arcs as well as high intensity, and

one rectifier is required for each arc. The output control provides nine operating positions, permitting a stepped supply between 15 to 35 amperes in the low intensity range, and 30 to 45 amperes in the high intensity. It is a very compact unit measuring only 1' 2" x 1' 6" x 2' 9" high, and is of pleasing appearance.

# WESTINGHOUSE **WESTALITE Rectifiers**

## Single Phase

The latest addition to the well known range of Westinghouse rectifiers, illustrated on the front page, is transportable, and designed for fixing at the rear of the lamphouse. No glass bulbs, moving parts or cooling fans are used, and it is capable of operating either high or low intensity arc lamps. With high intensity arcs, the output is continuously variable from 35 to 65 amperes, and low intensity can be operated at currents up to 40 amperes.

### CIRCUIT AND CONTROL

The special circuit converts the single phase input into three phase which is then fed into a standard three phase full-wave rectifier circuit. Control is effected by the use of a rheostat, which provides a continuously variable output throughout the whole range from open to short circuit. As the rheostat is incorporated in an auxiliary control circuit, its power losses are negligible.

### REMOTE CONTROL.

If desired the control panel can be mounted on the arc lamp pedestal, and the rectifier situated in another room.

### EFFICIENCY and POWER FACTOR.

The overall efficiency from single-phase mains to the arc is about 70% at a Power Factor of 0.83 at 38 arc volts.

**Price £162 : 15 : 0 each**

## Three Phase Twin H.I.60

The Westinghouse three phase rectifier has been developed from the well known pre-war copper-oxide type which has given long trouble-free service in many cinemas. No glass bulbs, moving parts or cooling fans are used.

### CIRCUIT.

A specially patented circuit is employed for ballast purposes which enables the equipment to behave as though it had an infinite line voltage, thus giving constant arc current regardless of arc volts. Accurate maintenance of arc focus is, therefore, simplified, and in the event of carbon breakage, the arc can be restruck instantly on full load.

### EFFICIENCY.

The efficiency of the rectifier by itself is 84% and due to the special ballast circuit, the overall efficiency from the A.C. supply mains to the arc itself, is over 78%.

### POWER FACTOR.

The power factor is 0.85 and this, combined with the high efficiency, means a large saving in the units consumed and in the maximum demand charge, whether this is based on Kilowatts or KVA demand.

### GEAR CONTROL.

Two individual arc control switches are provided for fitting near the projectors. These operate contactors, built into the rectifier, and give a reduced output for "strike" "burn-in" and "run."

### A.C. POWER SUPPLY.

Suitable for use on any supply mains from 346 to 440 volts, three phase, 50 cycles, A.C.

### DIMENSIONS AND WEIGHTS.

The rectifier is made in two sections to facilitate installation. The upper section weighs approximately  $1\frac{1}{2}$  cwts., and the lower  $3\frac{1}{2}$  cwts. The complete equipment measures 2' 1" wide, 1' 9" deep, and 5' 3" high. Entry for the leads and cables is at the rear of the cabinet.

The Westinghouse three phase twin H.I. 60 rectifier will operate two 65 amp. arcs simultaneously during changeover.

**Price £304 : 10 : 0 each**

## SPECIFICATION

### RECTIFIER

Westalite double-voltage rectifiers are used to give three phase full wave rectification.

### TRANSFORMER and CHOKES.

Vacuum impregnated to comply with B.S.S.171.

### CONTROL GEAR.

There are no contactors. Once the set has been switched on, it is entirely controlled by means of the rheostat which is mounted on the panel together with a moving-coil voltmeter, a moving-coil ammeter, an on-off switch and indicator lamp.

### BALLAST.

Ballast is not necessary and must not be used.

### A.C. POWER SUPPLY.

The set is suitable for use on any single phase 50 c.p.s. power supply of 200-250 volts.

At maximum output of 65 amperes on high intensity lamps, the A.C. line current is 17 amperes at 230 volts.

### DIMENSIONS.

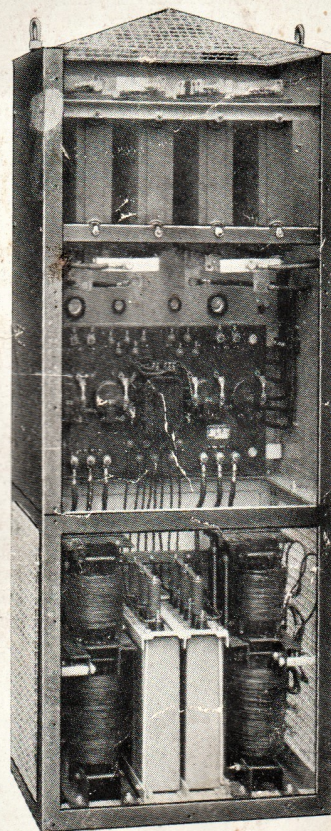
Height 28". Width 24". Depth  $17\frac{1}{2}$ ".

### WEIGHT.

440 lbs. approximately.

### WIRING.

Two alternative sets of conduit entries are provided for the incoming A.C. cables and D.C. leads to the arc. Removal of the back panel gives access to terminals for external wiring.



Three Phase Twin H.I.80  
Three Phase Twin L.I.35

To operate two 80 amp., arcs simultaneously.  
To operate two 35 amp., arcs simultaneously.

Price £393 : 15 : 0 each  
Price £232 : 11 : 0 each