

RECTIFIERS OF RELIABILITY



RANK AUDIO VISUAL

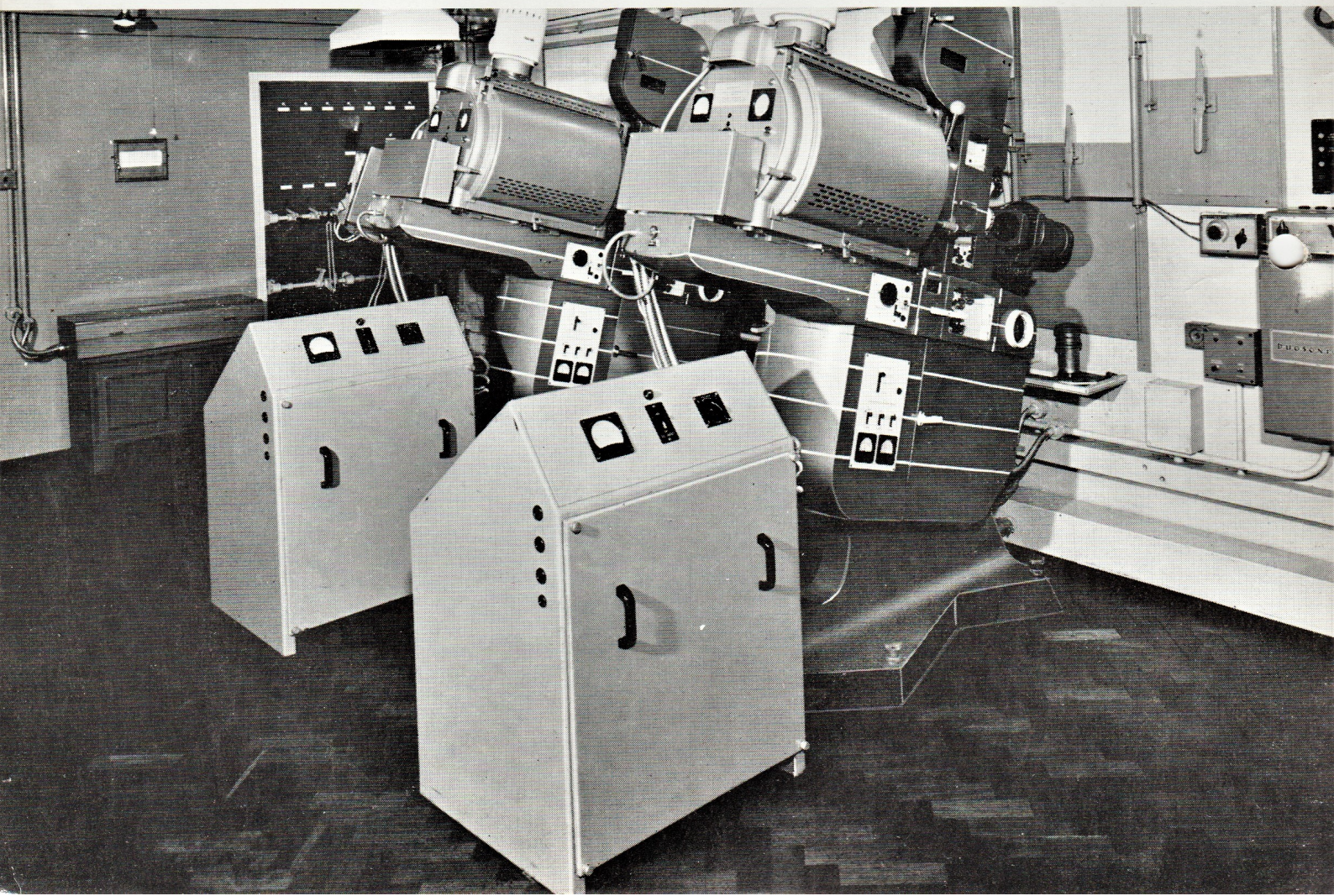
KALEE RECTIFIERS

Supply the current in cinemas throughout the world

KALEE rectifiers supplied by Rank Audio Visual assure smooth current output, low operating temperature, quiet operation and stability of arc control. Cooling is by convection, there being no fans or rotating parts to break down or cause failure. Conservative ratings and high quality construction throughout ensure long life and trouble-free operation. The rectifiers are of small dimensions, and each can be installed below the arc lamp it serves, if local authorities permit. The heavy gauge steel cabinets conform to British Home Office regulations. One rectifier is required for each arc or xenon lamp.

DEPENDABLE OPERATION. From Polar regions to the tropics, rectifiers supplied by Rank Audio Visual are today giving dependable, trouble-free service. All component parts are tropicalised.

Kalee rectifiers with high power XBO 2500W Xenon Lanterns at a Rank Odeon Cinema in London





HEAVY DUTY 3-phase SILICON DIODE RECTIFIER

**For carbon arc
lamps
65-140 amperes**

- * **High efficiency**
- * **Convection cooling**
- * **Requires no attention**
- * **Quiet arc operation**
- * **Low cost**
- * **Small dimensions**

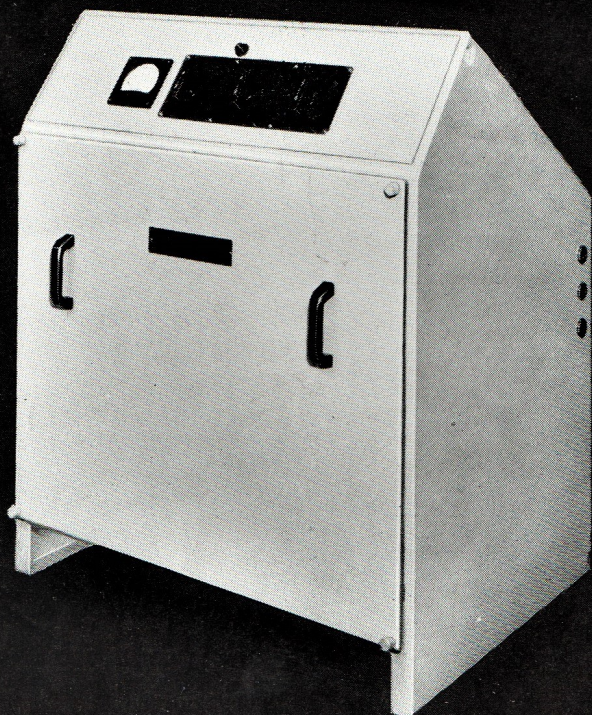
Silicon diodes can function at high current densities thus making possible a considerable reduction in the size of the rectifier stack, and consequently in the overall size of the complete cabinet unit. The silicon diode assembly in the Kalee '140' rectifier is conservatively rated for high efficiency with dependability, and noiseless arc operation. Cooling is by convection. The control panel is fitted with an AC input ON/OFF switch, two four-position "coarse" and "fine" switches, providing sixteen automatically stabilised arc current settings, a 79mm (3 $\frac{1}{2}$ ") DC ammeter, and pilot light. An additional DC smoothing choke and capacitors are fitted when the rectifier is for use with the Mole Richardson Super '70' arc lamp.

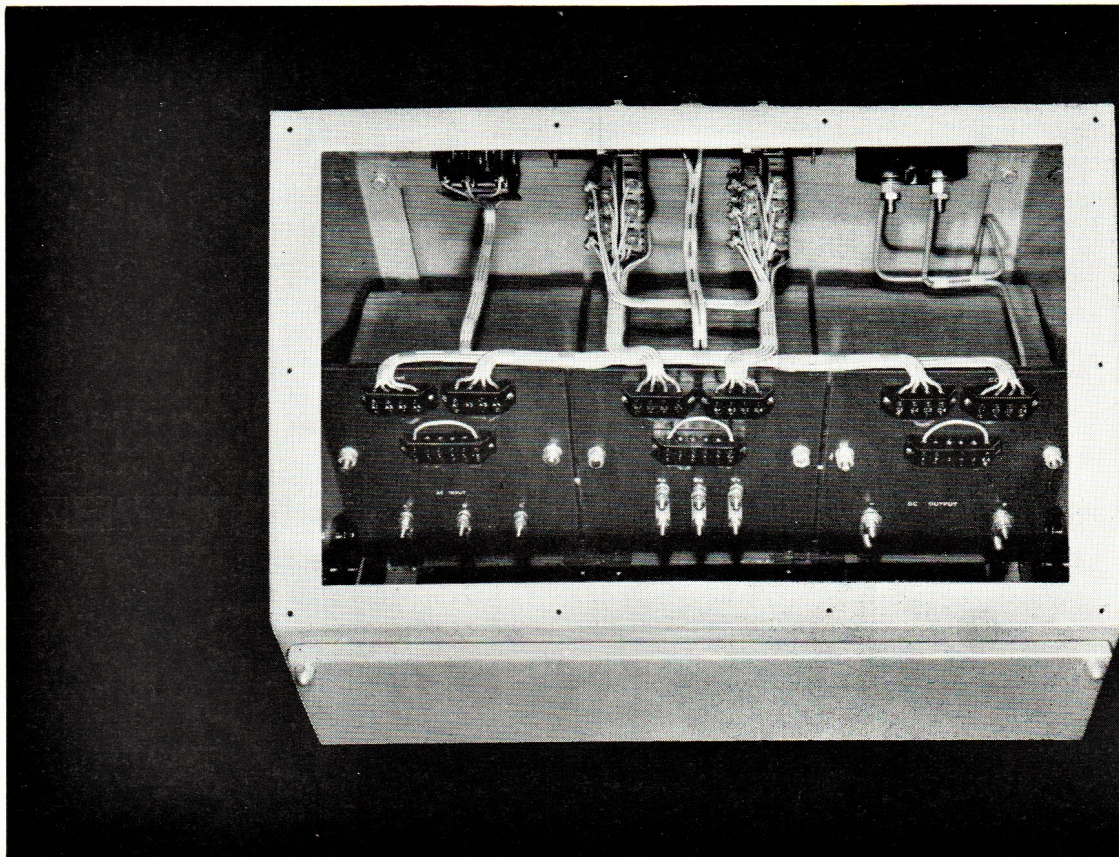
One rectifier is required for each arc lamp.

REMOTE CONTROL. Where local regulations or space limitations do not permit the installation of rectifiers in the operating enclosure, remote control is available. This comprises:

- A Triple pole 60 ampere AC contactor in sheet metal case for mounting on wall adjacent to the rectifier unit.
- B Ventilated sheet steel case, for mounting adjacent to the projector and arc lamp, with ON/OFF switch controlling the AC contactor, Burn-in resistor, Burn-in/Run switch, DC ammeter and voltmeter. This unit is also available without Burn-in resistor and Burn-in/Run switch.

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KALEE

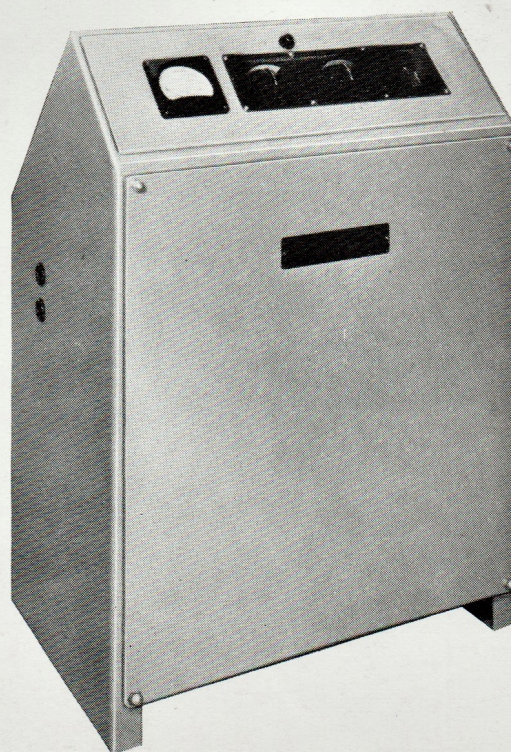
3-phase SELENIUM RECTIFIER

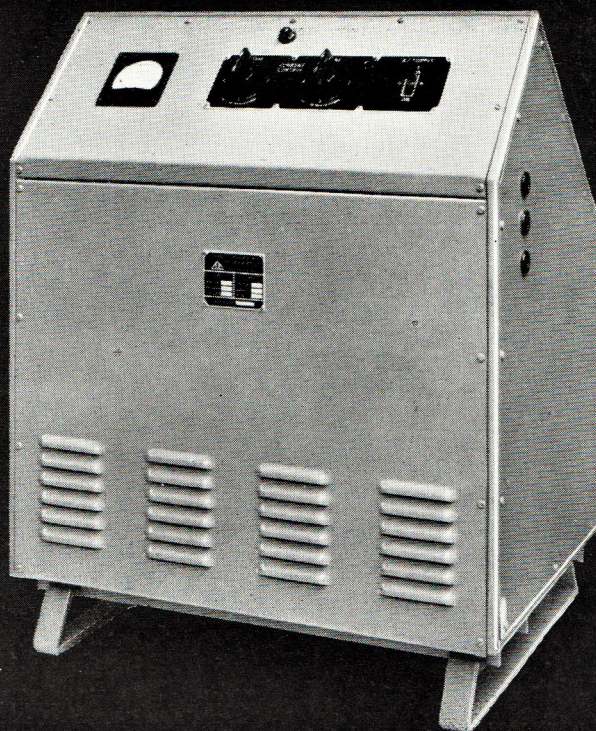
For carbon arc lamps 45-65-80 amperes

This leakage inductance stabilised equipment employs a conventional bridge rectifier circuit fed from separate transformers in each phase. Current control is by two four-position rotary switches, "coarse" and "fine". The rectifier is designed to give 45 amperes at 34 volts in a well-ventilated ambient temperature of 45° Centigrade, on a duty cycle 20 minutes ON/20 minutes OFF. The output can be increased to 80 amperes DC in a maximum ambient temperature not exceeding 30°C. The control panel is fitted with an AC ON/OFF input switch, DC ammeter, pilot light and two current selector switches. Input connections to each transformer provide by Star/Delta links for 360/440 volts and 210/250 volts, 3-phase, 50/60 cycles.

REMOTE CONTROL. When required, remote control facilities can be supplied, comprising a 3-phase contactor in steel case for mounting on wall adjacent to the rectifier unit, and a control cabinet with ON/OFF and Burn-in/Run switches, burn-in resistor, DC ammeter and volt meters, for mounting in proximity to the projector and arc lamp.

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KALEE Single-phase SELENIUM RECTIFIERS

For carbon arc lamps

A small and compact rectifier for use on 200/250 volts (in 10 volt steps) single-phase 50/60 cycles mains supply. Control panel is fitted with mains switch, two four-position rotary current selector switches giving sixteen arc current settings, DC ammeter, and pilot light.

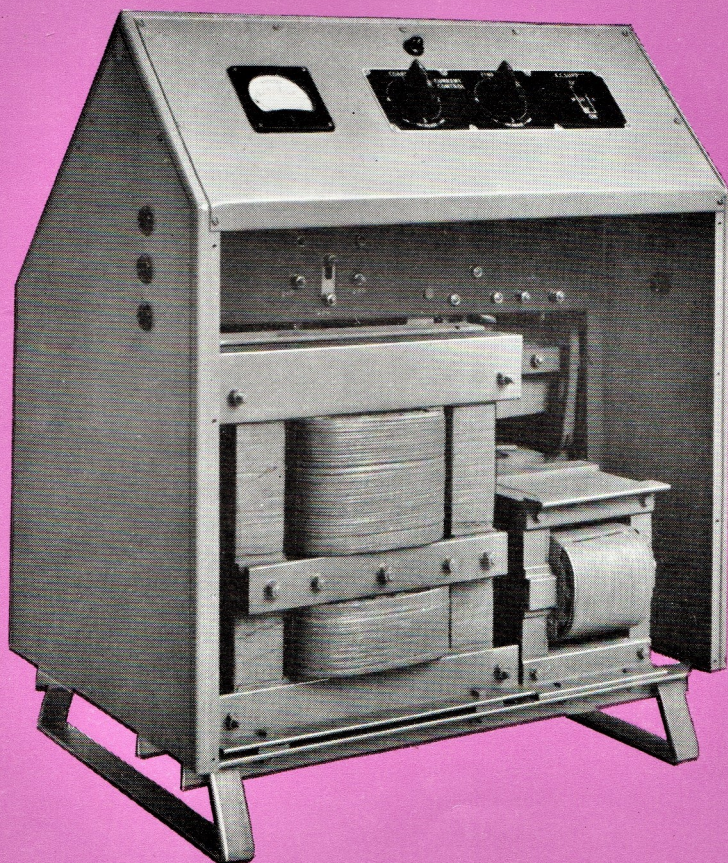
65 amperes DC

DC output 45-65 amperes on a duty cycle 20 minutes ON/20 minutes OFF, in a ventilated maximum ambient temperature of 45°C. The output can be increased to 80 amperes if the maximum ambient temperature does not exceed 30°C.

45 amperes DC

DC output 30-45 amperes on a duty cycle 20 minutes ON/20 minutes OFF, in a ventilated ambient temperature of 45°C. Not exceeding 30°C, the output can be increased to 50 amperes.

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KALEE 3-phase SELENIUM RECTIFIERS

For XENON Lanterns

These rectifiers are designed specifically for the modern Xenon lantern. They are fitted with suitable filter circuit and electrolytic capacitors to ensure a low output ripple, well within the limitations specified by xenon bulb manufacturers. An automatic current limiting device operates when 'striking'. The control panel is fitted with a rotary switch for smooth current variation, AC input ON/OFF switch, ammeter, and pilot lamp. Cooling is by convection. All components are tropicalised. The small size of the rectifier permits installation behind the projector (see illustration page 2).

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KALEE RECTIFIERS available for XENON bulbs

| <i>Bulb</i> | <i>Rectifier</i> |
|------------------|--|
| XBO 2500W | DC OUTPUT 55/95 amperes at 23/29 volts, 90 volts on 'no load'. |
| XBO 1600W | DC OUTPUT 45/75 amperes at 22/26 volts, 75 volts on 'no load'. |

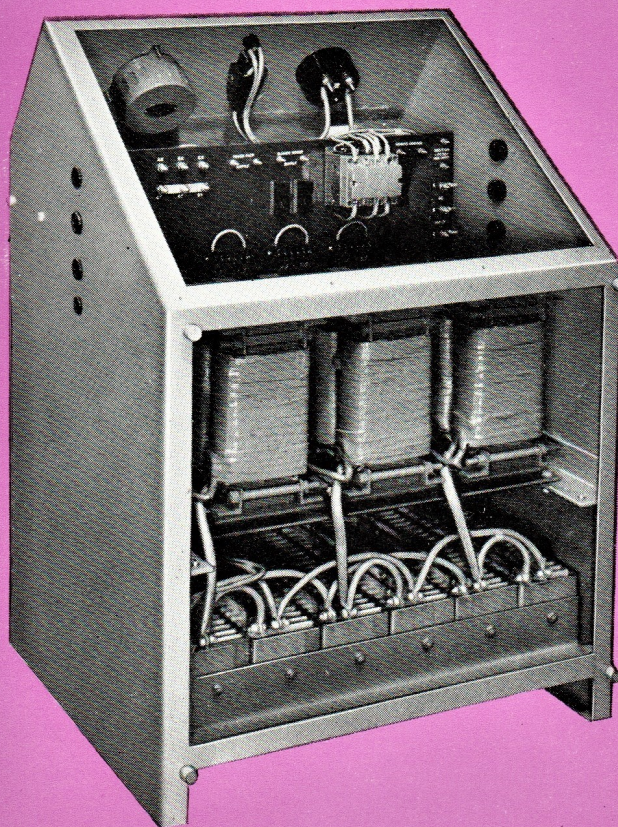
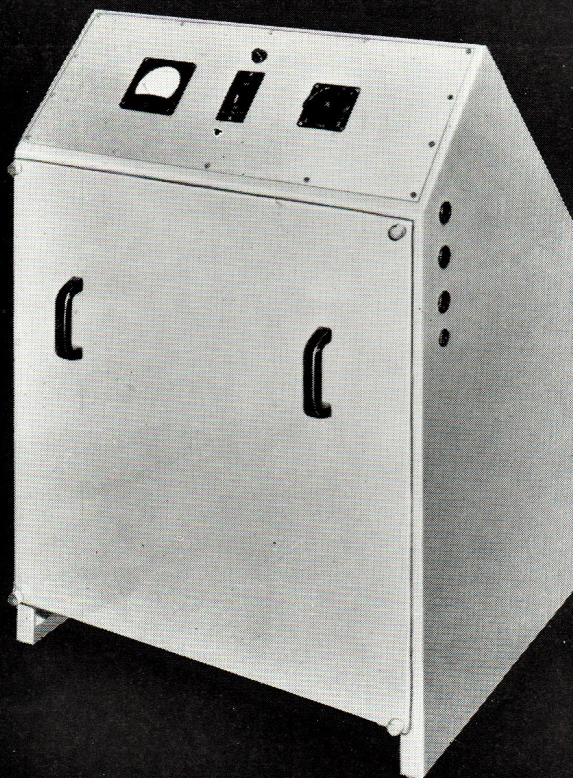
Above outputs are for continuous operation in well ventilated ambient temperatures up to 45°C.

AC INPUT All models, 360/440 volts, 210/250 volts by Star/Delta links, 3-phase 50/60 cycles.

Single-phase RECTIFIER For 1600w XENON Lantern

This rectifier, designed for 200-250 volts single-phase 50 cycles AC supply, will provide smooth DC current for the XBO 1600W Xenon bulb operating at 45/80 amps, 22/26 volts. It is fitted with automatic current limiting device, switch controls etc., as in the 3-phase equipment, detailed above.

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TECHNICAL DATA

WEIGHTS AND DIMENSIONS

140 amperes DC 3-PHASE SILICON TYPE DIODE

AC INPUT 360/440 volts and 210/250 volts by Star/Delta links, 3-phase 50/60 cycles.

DC OUTPUT 65 amperes at 43 volts increasing by coarse and fine switch control to 140 amperes at 42 volts.

RATING 60 minutes ON/20 minutes OFF in well ventilated ambient temperatures of 45°C.

| <i>Dimensions</i> | <i>Height</i> | <i>Width</i> | <i>Depth</i> |
|-------------------|--|-------------------|--------------|
| RECTIFIER | 39in 990mm | 32in 812mm | 25in 635mm |
| PACKED IN CASE | 45in 1193mm | 38in 965mm | 32in 813mm |
| <i>Weights</i> | NETT 665lb 300kg | GROSS 820lb 372kg | |
| | <i>With additional DC smoothing choke and capacitors</i> | | |
| | NETT 733lb 332kg | GROSS 878lb 400kg | |

REMOTE CONTROL

| | | | |
|--------------------|------------------|-------------|-------------|
| CONTACTOR CABINET | 13½in 336mm | 11¼in 285mm | 6¼in 158mm |
| CONTROL CABINET | 21½in 546mm | 16½in 419mm | 13½in 342mm |
| PACKED IN ONE CASE | 34in 863mm | 23in 584mm | 20in 508mm |
| <i>Weight</i> | GROSS 130lb 59kg | | |

45-65-80 amperes DC 3-PHASE SELENIUM

AC INPUT 360/440 volts and 210/250 volts by Star/Delta links, 3-phase 50/60 cycles.

DC OUTPUT 45 amperes at 34 volts increasing by coarse and fine switch control to 65 amperes at 42 volts.

RATING 20 minutes ON/20 minutes OFF in well ventilated ambient temperature of 45°C. Output can be increased to 80 amperes in maximum ambient temperatures not exceeding 30°C.

| <i>Dimensions</i> | <i>Height</i> | <i>Width</i> | <i>Depth</i> |
|-------------------|------------------|-------------------|--------------|
| RECTIFIER | 35in 889mm | 25in 635mm | 18in 455mm |
| PACKED IN CASE | 41in 1041mm | 31in 787mm | 24in 610mm |
| <i>Weights</i> | NETT 320lb 145kg | GROSS 420lb 190kg | |

REMOTE CONTROL

| | | | |
|--------------------|-------------------|------------|------------|
| CONTACTOR CABINET | 6in 152mm | 5½in 139mm | 3¾in 95mm |
| CONTROL CABINET | 13½in 335mm | 9¼in 235mm | 5½in 139mm |
| PACKED IN ONE CASE | 23in 584mm | 15in 381mm | 12in 305mm |
| <i>Weight</i> | GROSS 45lb 20.5kg | | |

65 amperes DC SINGLE-PHASE SELENIUM

AC INPUT 200/250 volts in 10 volt steps. Single-phase 50/60 cycles.

DC OUTPUT 45 amperes increasing by coarse and fine switch control to 65 amperes.

RATING 20 minutes ON/20 minutes OFF in maximum ventilated ambient temperature of 45°C. Output can be increased to 80 amperes in maximum ambient temperatures not exceeding 30°C.

| <i>Dimensions</i> | <i>Height</i> | <i>Width</i> | <i>Depth</i> |
|-------------------|------------------|-------------------|--------------|
| RECTIFIER | 35in 890mm | 28in 710mm | 21in 533mm |
| PACKED IN CASE | 41in 1040mm | 36in 914mm | 26in 660mm |
| <i>Weights</i> | NETT 480lb 218kg | GROSS 620lb 281kg | |

45 amperes DC SINGLE-PHASE SELENIUM

AC INPUT 200/250 volts in 10 volt steps. Single-phase 50/60 cycles.

DC OUTPUT 30 amperes increasing by coarse and fine switch control to 45 amperes.

RATING 20 minutes ON/20 minutes OFF in maximum ventilated ambient temperature of 45°C. Output can be increased to 50 amperes in maximum ambient temperatures not exceeding 30°C.

| <i>Dimensions</i> | <i>Height</i> | <i>Width</i> | <i>Depth</i> |
|-------------------|------------------|-------------------|--------------|
| RECTIFIER | 35in 890mm | 21in 532mm | 21in 532mm |
| PACKED IN CASE | 41in 1041mm | 29in 736mm | 26in 660mm |
| <i>Weights</i> | NETT 380lb 173kg | GROSS 480lb 218kg | |

XENON 3-PHASE SELENIUM for XBO 2500W XENON BULB

AC INPUT 360/440 volts and 210/250 volts by Star/Delta links, 3-phase 50/60 cycles.

DC OUTPUT 55/95 amperes at 23/29 volts. 90 volts on 'no load' minimum.

RATING Continuous in well ventilated ambient temperatures up to 45°C.

Dimensions
RECTIFIER
PACKED IN CASE
Weights

| <i>Height</i> | <i>Width</i> | <i>Depth</i> |
|------------------|-------------------|--------------|
| 39in 990mm | 29in 736mm | 25in 635mm |
| 47in 1195mm | 36in 914mm | 32in 813mm |
| NETT 635lb 288kg | GROSS 780lb 354kg | |

for XBO 1600W XENON BULB

AC INPUT 360/440 volts and 210/250 volts by Star/Delta links, 3-phase 50/60 cycles.

DC OUTPUT 45/80 amperes at 22/26 volts. 75 volts on 'no load'.

RATING Continuous in well ventilated ambient temperatures up to 45°C.

Dimensions
RECTIFIER
PACKED IN CASE
Weights

| <i>Height</i> | <i>Width</i> | <i>Depth</i> |
|------------------|-------------------|--------------|
| 39in 990mm | 29in 736mm | 25in 635mm |
| 47in 1195mm | 36in 914mm | 32in 813mm |
| NETT 525lb 238kg | GROSS 670lb 304kg | |

XENON SINGLE-PHASE for XBO 1600W XENON BULB

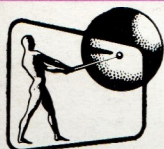
AC INPUT 200/250 volts in 10 volt steps, single-phase 50 cycles.

DC OUTPUT 45/80 amperes at 22/26 volts. Variable in 23 steps.

RATING Continuous in well ventilated maximum ambient temperature of 35°C.

Dimensions
RECTIFIER
PACKED IN CASE
Weights

| <i>Height</i> | <i>Width</i> | <i>Depth</i> |
|------------------|-------------------|--------------|
| 39in 990mm | 28in 710mm | 25in 635mm |
| 47in 1195mm | 34in 860mm | 31in 787mm |
| NETT 540lb 245kg | GROSS 660lb 299kg | |



The Rank Organisation RANK AUDIO VISUAL

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Branches and Agents throughout the world

Illustrations and details in this catalogue should not be taken as binding; alterations are made as occasion arises.