



# lumen tested projection carbons

"SHIP" carbons are produced in a plant which is unique among carbon manufacturing units in that it is devoted exclusively to the production of electrical arc lamp carbons. All the resources of this plant are concentrated in manufacturing carbons of the finest quality, produced under the most carefully controlled conditions, laboratory tested at every stage of their production, and despatched to users all over the world with the confident assurance that they will provide light second to none.

"SHIP" chemists and physicists are continually conducting research into ways and means of improving the performance of our products in the never-ceasing endeavour to provide the right carbon for the right job. That they have been highly successful in this is proved by the fact that "SHIP" carbons are now the recognised standard in upwards of ninety countries throughout the world.

"SHIP" carbons are justly proud of the prestige they have acquired for adequate light with economy of operation, and when projectionists fit "SHIP" carbons into their arcs they can be certain that all the resources of the Ship Organisation are behind them to ensure a successful performance.

"SHIP" carbons mean more than a name – it stands for a service which we, the manufacturers, gladly render to you, the users, through our representatives, agents and distributors the world over.

#### RECOMMENDATIONS

Every "SHIP" carbon which leaves our factory has been fully tested throughout its various stages of production to reach you in first class condition. In order that you may obtain the utmost benefit from using our products, we make the following recommendations:

### **CURRENT RATINGS**

On each piece of "SHIP" carbon is stamped the range of current over which it has been laboratory tested to give its most satisfactory performance. It is possible, under certain conditions of operation, to obtain satisfactory results outside these limits. As a general rule, however, it is recommended that, for a guaranteed performance, burning should be restricted to the limits indicated, particularly as our families of carbons of each type are designed to cover completely a wide range of operating conditions.

### ARC GAP

For efficient and steady burning of the arc we recommend that "SHIP" carbons are burned with the following arc gaps:

H.I. Rotating Positive Arcs . 14–20mm. depending on lamp

This does not preclude their use at other arc gaps which are governed by arc lamp design and power supply characteristics.

The wide flexibility of performance of all "SHIP" carbons enables them to accommodate different arc settings from those quoted, but where possible the above arc gaps should be used.

### **KEEP DRY**

This is most important. All carbons are liable to be adversely affected by moisture, so keep your carbons in a dry place for storage – they serve you best by being dry.

# **LOW INTENSITY**

MIRROR ARCS

### **POSITIVES**

**Luxo Positive:** gives a maximum light output and minimum burning rate over a wide range of current ratings. Has a specially designed pure carbon shell, and is produced both in composition and diameter to give the correct symmetrical crater shape for the recommended current ratings.

#### **NEGATIVES**

For use with LUXO POSITIVE carbons there are three different negatives, each suitable for the specific conditions as set out below:

**Luxo Negative No. 25:** has a pure carbon shell and a copper covered hard core inserted centrally in the shell to encourage correct point formation when burning. Provides stable operation and great flexibility at maximum currents. Is the accepted standard for normal loadings.

**Luxo Negative No. 27:** a solid negative carbon, ideally suited for use with a Luxo Positive carbon where lower than the normal current ratings are required.

Luxo Negative No. 28: a solid negative carbon, copper covered, made to match LUXO POSITIVE carbons at high current ratings. Being of smaller diameter than the two other grades is recommended where less obscuration of light is required. (Operating data supplied on application).

Positive	Negative	Amperes	Arc Volts	Average Burning Rates (inches per hour)	
			Aic voits	Positive	Negative
9mm.	6mm. No. 25 6mm. No. 27	12-16 8-13	48–52	2·5 2·1	2·5 1·9
10mm.	7mm. No. 25 7mm. No. 27	15-20 10-16	"	2·3 1·9	2·2 1·7
11mm.	7mm. No. 25 7mm. No. 27	20-25 12-20	",	2·2 1·8	2·4 1·9
12mm.	8mm. No. 25 8mm. No. 27	25–30 15–25	,,	2·2 1·7	2·3 1·8
13mm.	9mm. No. 25 9mm. No. 27	30–35 20–30	,, ,,	2·1 1·6	2·0 1·7
14mm.	9mm. No. 25 10mm. No. 27	35–40 25–35		1.9	2.2

# **HIGH INTENSITY**

D.C. NON-ROTATING ARCS

#### **POSITIVES**

**Cerex:** a copper-covered carbon having a core impregnated with rare earths, and designed to produce the maximum light output for a given arc wattage. Is intended for use where the electrical power supply is limited. At similar wattages will give a greater light output than the CERELITE grade, but at an increased rate of burning.

**Cerelite:** a copper-covered carbon with a core impregnated with rare earths, and is especially manufactured to provide an adequate light output for an economical rate of burning. Are at their best when burning towards their maximum current. Operate at about 5 amps, higher than the equivalent diameter carbon in the CEREX range.

#### **NEGATIVES**

Cere-neg: this is an all-purpose negative carbon designed to be used with both CEREX and CERELITE positives. Is made in 5mm. sizes from 5mm. to 8mm. Has a round core to give stability of burning under varying conditions and, at the same time, reducing carbide formations to a minimum.

Positive		Amperes	Arc Volts	Average Burning Rates (inches per hour)	
Positive	Negative			Positive	Negative
6mm. CEREX	5mm. CERE-NEG.	30-40	28-33	9.0	4.2
6mm. CERELITE	5mm. CERE-NEG.	35-45	28-35	10.8	4-6
7mm. CEREX	6mm. CERE-NEG.	40-50	32–36	8-7	3.8
7mm. CERELITE	6mm. CERE-NEG.	45-55	31-37	10,0	4.1
8mm. CEREX	6.5mm. CERE-NEG.	5060	36-40	8.8	3.5
	7 mm. CERE-NEG.	6065	40-42	12-4	3.6
8mm. CERELITE	6.5mm. CERE-NEG.	55-60	36-38	8-2	3.6
	7mm. CERE-NEG.	60-70	38-43	12-4	3.7
9mm. CEREX	7mm. CERE-NEG.	60-70	39-43	11.3	3.7
	7-5mm. CERE-NEG.	70-75	43-45	16-6	3.6
9mm. CERELITE	7-5mm. CERE-NEG.	75–90	39-50	16.4	3.9
10mm. CEREX	7mm. CERE-NEG.	6575	46-50	8.0	3.8
0mm. CERELITE	7.5mm. HILUX NEG.	80-90	47-52	12-2	3.7
0mm. CERELITE Mk. 'N'	8mm. HILUX H.D.	95–110	4856	16-2	3.6

(Where very high currents are required with the CERELITE and CERELITE MARK 'N' grades a HILUX negative carbon is used)

# **HIGH INTENSITY**

**ROTATING POSITIVE ARCS** 

#### **POSITIVES**

**Hilux:** a non-copper covered carbon having a specially developed shell and soft core impregnated with rare earths. Is intended for use in rotating positive arc lamps operated at 70–135 amps.

**Hilux Mark 55:** designed specifically for use in the modern rotating arcs employing amperages ranging from 80–190. Has a specially developed shell and a hard inlaid core impregnated with rare earths.

#### **NEGATIVES**

**Hilux Negative:** cored and copper coated designed to operate with either HILUX or HILUX MARK 55 positives. Has a round core to provide stability of operation under widely varying conditions – carbide formations reduced to a minimum.

Positive	Negative	Amperes	Arc Volts	Average Burning Rates (inches per hour)	
rostiive	Negative			Positive	Negative
9mm. HILUX	7.5mm. HILUX 8mm. HILUX	70–80 80–85	53-56	15.0	3.3
9mm. HILUX Mk. 55	8mm. HILUX	80–95	53-57	17:0	3.1
10mm. HILUX	8mm. HILUX	80–100	49–56	13.0	3.25
10mm. HILUX Mk. 55	9mm. HILUX	95–115	51-58	17.5	3.0
11mm. HILUX	9mm. HILUX	100-115	50-57	14.0	3.0
11mm. HILUX Mk. 55	9mm. HILUX H.D.	115–130	52-58	16.0	2.9
13·6mm. HILUX	11mm. HILUX	120-135	63-70	12.5	2.4
13-6mm. HILUX Mk. 55	11mm. HILUX 12mm. HILUX	135-150 150-160	60-66	14.5	2·8 2·5
13.6mm.HILUX Mk. 55 Supercharged	12mm. HILUX H.D.	170–190	68–72	21.0	2.6

### HIGH INTENSITY

for H.I. A.C. Projection

**Alternalux:** have specially developed shells which are copper covered, and cores impregnated with rare earths. Incorporate the necessary modifications to make them suitable for A.C. operation where two identical carbons are opposed to each other.

Provide a simple and economical source of light for projection whilst maintaining the quality of normal high intensity trims.

Trim Amperes   7mm. 60–75		Arc Volts	Average Burning Rate (inches per hour)
		23–25	4.7
8mm.	75–90	23–25	4-4
9mm.	90–105	24–26	4.0

# SPOTLIGHT

STAGE LIGHTING

#### POSITIVES

**Stage arc positive cored:** a round cored plain carbon suitable for operation on relatively low currents for stage and spot illumination. Has a pure carbon shell with a core specially manufactured to give the carbon stability of operation over its whole current range.

### **NEGATIVES**

For use with the same STAGE ARC POSITIVE carbon there are three different negative carbons, each suitable for the specific conditions as set out below.

Stage arc negative copper cored: has a copper covered core inserted in a plain pure carbon shell and has been developed to match the smaller diameter positive carbons.

Stage arc negative copper covered: in addition to having a core, the negative carbon is also copper covered in order to operate with the larger diameter positive carbons at high current ratings.

Stage arc negative solid: a plain pure carbon produced for the purpose of operating at low amperages, and has a consequent lower rate of consumption. Is ideal where an excessively bright illumination is not required.

Positive	Negative	Amperes	Arc Volts	Average Burning Rates (inches per hour)	
				Positive	Negative
10mm.	7mm. Copper Cored	1015	4852	2.7	2.4
Hmm.	7mm. Copper Cored	1520	48-52	2.6	2.7
12mm.	8mm. Copper Cored	20-25	48-52	2.7	2.3
14mm.	9mm. Copper Cored	25-35	48-52	2·3	2·2
	10mm. Solid	15-20	50-55	1·5	1·9
16mm.	10mm. Copper Cored	35-45	48-52	2·2	2·2
	12mm. Solid	25-30	50-55	1·7	1·8
18mm.	12mm. Copper Cored	45-55	48-52	2·1	1·9
	13mm. Solid	30-40	50-55	1·8	1·7
20mm.	10mm. Copper Covered	55-65	48–52	2·1	2·1
	15mm. Solid	40-50	50–55	1·7	1·8
22mm.	11mm. Copper Covered	65-75	48-52	1·9	1.9
	18mm. Solid	50-60	50-55	1·6	1.5
25mm.	12mm. Copper Covered	75-85	48-52	1·9	2·2
	20mm. Solid	60-70	50-55	1·4	1·3



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### THE SHIP CARBON COMPANY OF GREAT BRITAIN LTD

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SHIP CARBONS ARE AVAILABLE FROM:-