



Aluminium Lighting Company

Echalon® MK III Raise & Lower

Rail Applications



Aluminium Lighting Company

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COMPANY INTRODUCTION



The Aluminium Lighting Company distributes lighting columns and traffic and sign posts together with brackets and other embellishments made from aluminium.

ALC is well-established with a strong, secure and growing customer base amongst Councils, wholesalers and contractors.

Although our main markets are in street lighting and highways lighting, we have established a growing market in the Rail sector since 2011 with installations across the whole of the UK. This growth has been based mainly on sales of our Echalon® MK III Raise & Lower. We have developed international partnerships to sell the Echalon® MK III Raise & Lower on Rail projects in France and Belgium. We have worked with designers and other suppliers on product development and sales in new sectors such as CCTV, communication speaker supports and supports for weather data collection equipment.

At ALC we take pride in working closely with key players in the market to form mutually beneficial partnerships. We insist on working hard at all levels so that the customer enjoys the highest possible level of customer service. Our mission is:

‘Customer first without question, lead the market and outperform the competition’

Many of our products are designed in-house to meet the specific needs of clients. ALC holds and develops several patents and the Company’s products have technical features and specifications that exceed those of our main competitors.

COMPANY ACCREDITATIONS:

- ISO 9001
- ISO 14001
- Certificate of Constancy of Performance – EN 40-6
(approval to issue CE marks)
- Railway Industry Supplier Qualification Scheme – Qualified by Audit
(Achilles database)
- National Highway Sector Scheme 6
- HEA-HEMSA Council - Member

NETWORK RAIL PRODUCT APPROVAL

- PA05/07262
Echalon® Mk3 Hinge and associated 6m Post Top drawing
MA-EHC36-010100-01 tested in accordance with EN 40-3-2:2013



ECHALON® MK III RAISE & LOWER

ALC®

Our bestselling Echalon MK III Raise & Lower is being used to support a wide range of equipment that needs easy access for regular maintenance, cleaning or calibration: lanterns, CCTV, solar panels, and weather monitors. Our patented mechanism offers a safe and controlled way to lower the column and gain access to equipment for maintenance purposes.

It is popular in rail and lighting markets, both in the UK and internationally. It reduces the need for possession orders, night working, and expensive scaffolding or lifting equipment. With a design life of 50 years and no need for a protective coating and maintenance, the lifetime costs of the aluminium column are very favourable compared to steel columns.

THE CLEAR ADVANTAGES ARE:

- ONE PERSON OPERATION – the unit is safely and easily operated by one person reducing maintenance time and labour costs
- SAFE – the unit addresses Working At Heights or Manual Handling issues by bringing the lantern or other equipment down to the operator and reducing the risk of personal injury
- NO SPECIAL TOOLS – there is no need for complicated and expensive equipment, just a simple tool supplied with the columns; no need for HIABs etc as the equipment at the top of the support is brought down to the operator
- LIGHT AND EASILY TRANSPORTED – made from aluminium, they can often be carried into position by two people and are often used where it is difficult to have vehicles and lifting gear; also they can easily be delivered in large numbers reducing energy costs and carbon footprint
- POWDER COATED COUNTER BALANCE SPRING – this works with the operator, reducing the effort required in controlled lowering and raising of the column and making it a one person operation
- SELF CONTAINED UNIT – there are no removable parts
- FITTED INTO A RANGE OF COLUMNS - from 4m to 9m; we have seven springs that could be used depending on the loading on the column and the height above the hinge cartridge; we will make sure that you have a verified design that is both fully functional and cost effective to meet your needs
- VERY STRONG - designed for use in North America, where there are much higher wind speeds and higher altitudes than in Europe



ECHALON® MK III RAISE & LOWER - RAIL INSTALLATIONS



These are just some examples – there are projects all over the UK. Please contact us for details of place and type of installation (eg DOO, lighting columns cameras, level crossings etc).

SCOTLAND

Borders

EASTERN

Anglia Route
Greater Anglia
Norfolk
Wickford

NORTH WEST & CENTRAL

Chester
Upton
Neston

SOUTHERN

Surrey Rail
Chatham
Horsham

WALES & WEST

Aberystwyth
Cardiff
Reading West
Swansea

LONDON

DLR
Euston
Tottenham
Hale

INTERNATIONAL

Belgium - Infrabel
France - SNCF

OTHER

Long Marston

NETWORK RAIL PRODUCT APPROVAL - PA05/07262;

Echalon MK III Raise & Lower and associated 6m Post Top drawing MA-EHC36-010100-01 tested in accordance with EN 40-3-2:2013.

The product is for use at level crossings for mounting of non-operational CCTV cameras only.



RAIL RELATED CUSTOMERS

Chiltern Railways



abellio greateranglia



SOUTH WEST TRAINS



C2C

First Great Western



southeastern

ECHALON® MK III RAISE & LOWER – OTHER RAIL APPLICATIONS

SEA (Systems Engineering & Assessment Ltd)

The standard SEA Hinge column is installed at level crossings across the UK to monitor road user behaviour.

The support can carry equipment for Automatic Number Plate Recognition; motion detection; a processor and control box; and cameras to record video and images.

The cameras and supports need to be sufficiently stable as the videos and images are used as evidence to prosecute criminal behaviour. The supports and equipment are painted yellow, as cameras and supports used for prosecution evidence have to give fair warning to road users.

The picture (right) is a demonstration sample for exhibitions with the hinge installed at a low position. Usually, the columns are 5m or 6m height.

RAIL PRODUCTS IN DEVELOPMENT

OFF GRID

Network Rail have responsibility for remote level crossings and bridleways. Previously the general policy was to connect lighting and other equipment to mains electricity. This could be very expensive with long underground cables and landscaping costs.

ALC are working with Network Rail to provide a column bearing a solar panel and a wind turbine to give independent power to a luminaire/camera etc.

TRAIN RADAR DETECTION

Network Rail are introducing trackside train monitoring devices using radar. ALC are working with Network Rail to produce standard and hinged aluminium columns to support such equipment.

LONDON UNDERGROUND

London Underground have a pilot installation using the Echalon Hinge for signalling supports. This makes cleaning and calibration of signalling equipment quick and easy.



ECHALON® MK III RAISE & LOWER - RAIL INSTALLATIONS

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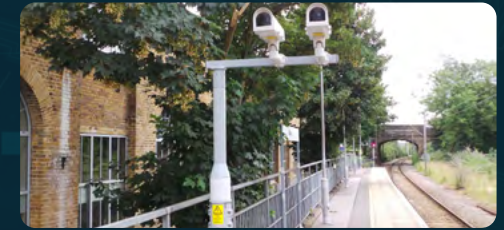
Barking Riverside



PA05/07262 Columns on staggered crossing



Dinas Powys



Ware



Southend Central



Aberystwyth



Llangammarch Wells



Queen's Road, Peckham



Bow Street

ECHALON® MK III RAISE & LOWER - RAIL INSTALLATIONS

ALC®



Rail Alliance, Long Marston



Edmonton Green



West Ham



Project Title:
Rhiwbina Station

Client:
SSE/Network Rail

Location:
Rhiwbina Station, Cardiff, Wales

Key Facts:
Restricted column installation space, limited working area for maintenance

ALC Benefits:
Bespoke designs for installation and access. Precise orientation of the hinged column.
One person operation.

Client Scheme

Rhiwbina Station presented several challenges. Columns could not be installed on the platform: they had to be outside of a fence. Some could not be installed in the ground because of access issues and varying unhelpful ground levels. Brackets could not be mounted centrally onto uneven concrete surfaces and there were limited fixing points.

Columns had to be positioned so they could be lowered above the fence level and had to fall approximately 600mm into a narrow safe working space.

ALC[®]

Columns had to be placed either side of fence posts. We had to design a back plate and a spacer tube to provide four equal stress points to hold the bracket and column securely.

The Echalon hinges are fitted individually at the right height and fixed at 10 degrees off set to the base, so the column can be lowered over the fence and bring the lantern into the safe working area. Column doors are accessible through specially designed doors cut into the fence.

One of the columns installed in the ground has an extended root to bring the hinge up to the correct height to clear the fence.



ALC - INTERACTIVE ENQUIRY FORM



ATTACHMENT DETAILS:

COLUMN HEIGHT (M):

LOCATION:

LANTERN / ADDITIONAL ATTACHMENTS DETAIL:

ROOT OR FLANGE MOUNTED:

☐ ROOT ☐ FLANGE

ADDITIONAL NOTES:

FORM INFO
By clicking submit, this form will open your email client and prepare your information to be sent back to ALC.



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