**Bollards**

**X-Last Protect**

*Applications:* Warehouse Racking, Machinery, Building Infrastructure, Inventory

The NAL X-Last Protect bollard range has been specifically designed to offer maximum protection with no maintenance requirements. These unique bollards can withstand repeated impact forces of 800kgs and above, stopping forklifts and other heavy machinery commonly found in the workplace. After impact the bollard returns to its upright position without any loss of impact strength.

The unique characteristics of this bollard system makes them the ideal choice for the protection of machinery, inventory, buildings, structures and pedestrians. Illuminated and solar versions are also available for areas that have poor lighting and visibility. Please refer to the Illuminated X-Last data sheet for further information on these systems.

**Advantages**

- Withstands forklift impact
- High resistance, requires 800kgs to bend
- Withstands over 1000 impacts
- Completely maintenance free bollard
- Non corrosive and durable material
- Wide range of colours
- Available with or without signage
- Illuminated and Solar options
- Simple bolt down or core drill installation
- Fits in Retention Socket enabling fast installation and removal for access or events
**Generic X-Last Protect Bollard Specification**

Bollards must be manufactured from Elastomeric Polymer with the base colour impregnated within the polymer material.

Top colours will be painted using elastic coatings.

Bollards must be UV, abrasion, moisture and weather resistant.

Bollards must withstand a min of 800kgs force before folding to 90 degrees of their upright position.

Bollards must be able to withstand multiple impacts without any loss of strength.

Bollards must have the ability to perform as above with temperatures ranges from -20 to +60 degrees Celsius.

All reflective banding must be to EN12899-1 Class RA2.

All cast in bollards must have a root no greater in than 190mm in depth.

Bollards must be supplied with cast in/bolt down or NAL Retention Socket installation options.

All Bollards must be provided to the above specification by NAL Ltd or an equally approved manufacturer.

**Generic X-Last Bollard Specification**

Material: Elastomeric Polymers

Base Colour: Impregnated in polymer material

Surface Finish: Elastic coated, UV impact, abrasion, moisture and weather resistant

Coating adhesion: DIN EN ISO2409

Working Temperature: -20° + 60°C

Rigidity: 326Kgs to bend 90°

**Purchase Specification**

Bollards will be manufactured from X-Last polymer with RAL colour base coat impregnated into the material. Top colours will be painted using elastic coatings.

Bollards will be passively safe and have been tested with a HIC value of under 600.

After vehicular impact of up to 80Kph the bollard will return to its upright planted position. It will take 326Kgs of pressure to fold the bollard to 90°.

X-Last bollards to be manufactured to the above specification by NAL Ltd.

The Retention Socket will be supplied with an IP68 LED uplighter which will be located below ground level.

**Optional Specification**

Manufactured in any RAL Colour.

Metallic colours available.

Reflective bands can be applied to any position.

Other removable sockets are available, please see dedicated drawing NALSOCK01.