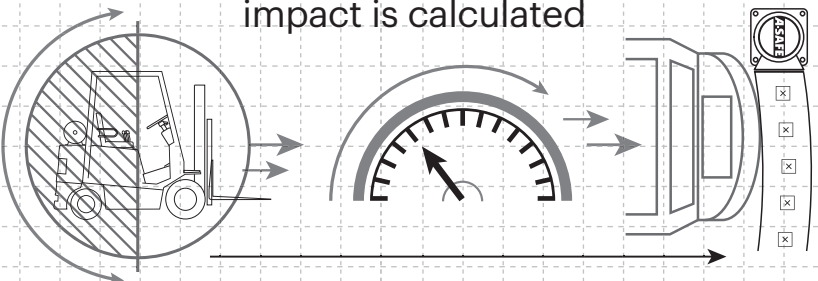


Technical Information

How the energy from a vehicle impact is calculated




$\frac{1}{2} \text{ Mass} \times \text{Speed}^2 = \text{Joules}$

**Tested Impact Energy**

**6,900 Joules**

Equivalent vehicle and speed



4.3 tonne

X

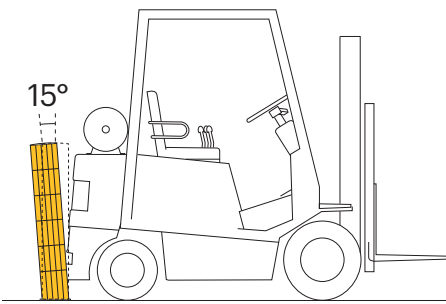
4 mph impact

90° Impact on Bollard

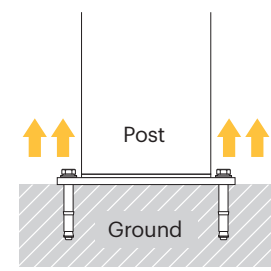
**Impact Test**

Max Energy (Joules) at 90° **6,900**

Deflection at Max Energy  
15° Lean

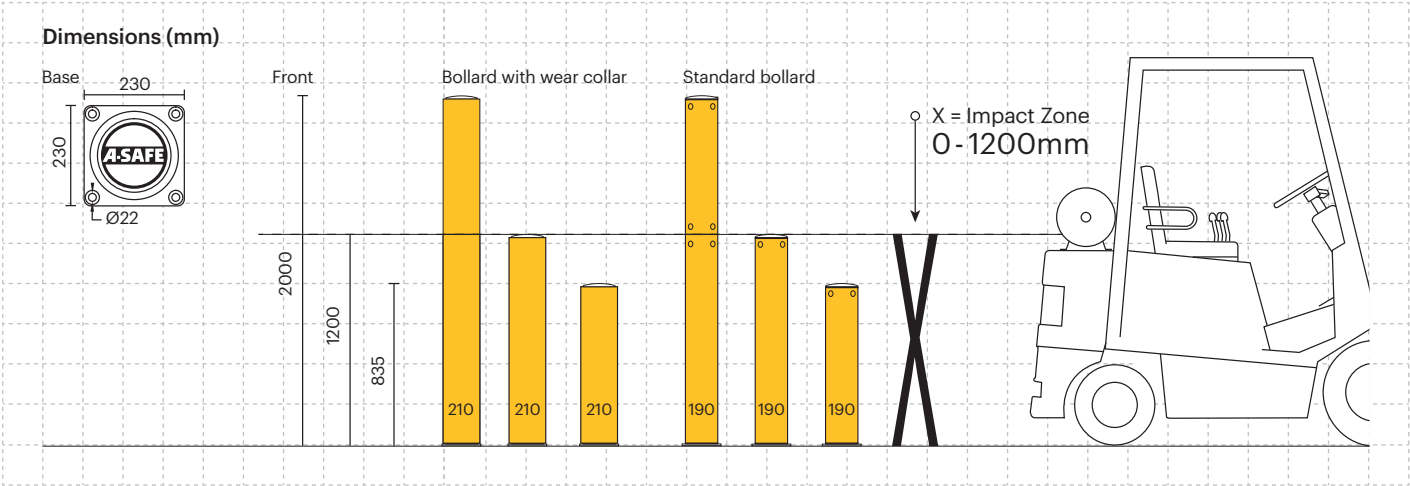


Force to Bolt  
33kN



Material Properties	MEMAPLEX™
Temperature Range	-10°C to 50°C
Ignition Temperature	370°C to 390°C
Flash Point	350°C to 370°C
Toxicity	Not Hazardous
Chemical Resistance	Excellent - ISO/TR 10358
Weathering Stability (Grey Scale)	5/5*
Light Stability (Blue Wool Scale)	7/8**
Static Rating (Surface Resistivity)	1015 - 1016 Ω
Hygiene Seals	No

\* Weathering scale 1 is very poor and 5 is excellent  
\*\* Light stability scale 1 is very poor and 8 is excellent



**Bollard Options**



Standard Yellow  
RAL 1007\*  
PANTONE 7548\*



Standard Grey  
RAL 9007\*  
PANTONE Cool Grey 5\*

**Colour Combinations**

\*Please note that the RAL and PANTONE colours listed are the closest match to standard A-SAFE colours, but may not be exact matches of the actual product colour and should be used for guidance only.



iFlex™  
Bollard

A-SAFE

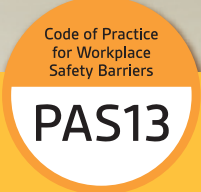
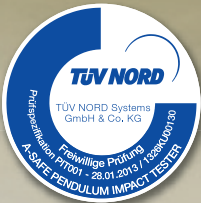
Est. 1984



A-SAFE bollards are a multi-functional product used extensively in industrial, commercial and public environments.

Designed to protect structures and equipment from impact damage, and provide a robust physical presence to prevent access or guide vehicles and pedestrians.

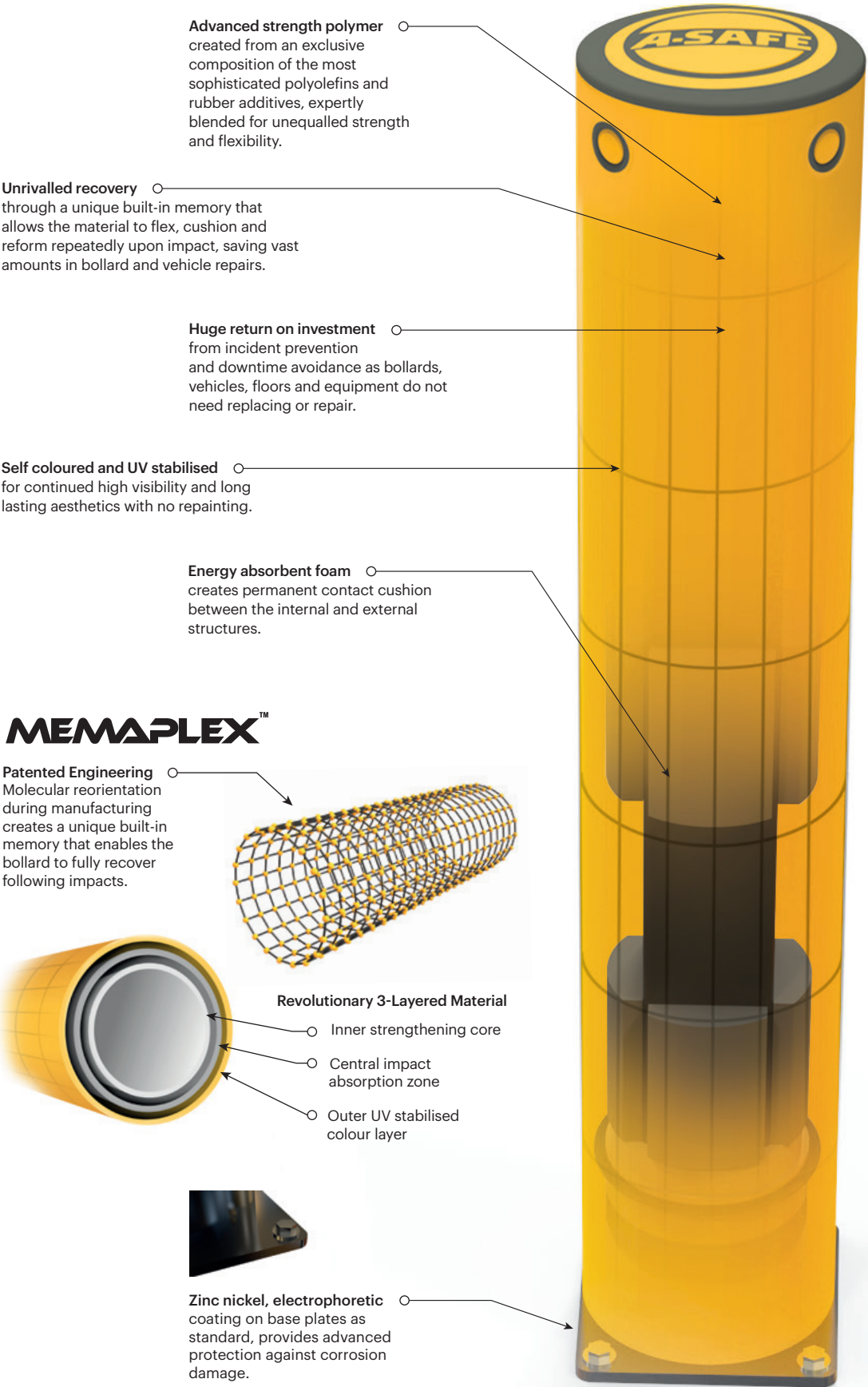
Strong, durable and highly visible, A-SAFE bollards permanently reinforce a driver's attention to safe driving and can also act as guidance along traffic routes.





# Engineered for performance

A-SAFE's state of the art products are meticulously engineered to deliver the highest performance. Designed, developed, tested and manufactured in-house at our cutting-edge facility, each unique component is carefully crafted and purpose-built to play a vital role in the product's performance.



## In-line coupling for height flexibility

The iFlex in-line coupling introduces a new level of modularity to the vertical height of a range of A-SAFE products. The coupling enables customers to take the standard 1200mm bollard up to 2000mm.

**Four pin positioning** to top and bottom sections gives increased rigidity and stability.

**Seamless join** enables easy stacking of top and bottom bollard sections.

**Moulded pins** lock securely into the internal layer with a quarter turn.

## Rotating wear collar for advanced deflection

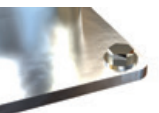
The wear collar adds an extra layer of protection along the full height of the bollard.

The rotating action deflects force from repeat glancing blows. Preventing expensive on-going maintenance costs.

## ADDITIONAL BASE OPTIONS



**Countersunk Bolts**  
Creates a flat surface, preventing tyre damage where vehicles are in close proximity.



**Stainless Steel 316 Countersunk**  
Ultimate performance option, no corrosion or rusting and resistant to powerful cleaning agents. Ideal for hygiene environments.



A versatile product that can be used to protect door frames on vehicle routes where impacts are likely to occur.



Higher level bollards give a strong visual alert for reversing HGV drivers, preventing costly damage to service yard infrastructure.



Ideal for use on vehicle routes with sharp angle turns such as car parks.



Allow constant access to frequent-use machinery and equipment, whilst protecting from impact with a high strength visual alert.



Protect infrastructure such as building supports where irregular base fixings are present or access is needed for maintenance.