



# Passive Safety



## passive safety...

Road safety and passive safe solutions for post installations, including lighting columns, traffic signals and signposts, are primary objectives in the design of all roads. The European Standard EN12767:2007 (Passive Safety of Support Structures for Road Equipment) states: 'the severities of accidents for vehicle occupants are affected by the performance of support structures for items of road equipment under impact. Based on safety considerations, these can be made in such a way that they detach or yield under vehicle impact.'

EN12767 specifies performance requirements for passively safe support structures for permanent road equipment. It both defines and limits the levels of occupant injury severity when impacting these structures. This important advancement recognises the unacceptable number of people killed or seriously injured in single-vehicle collisions with street furniture. EN12767 and associated guidelines call for all those involved in the design, construction and operation of roads to actively consider the use of passively safe street furniture.

IPL group is a leading manufacturer and supplier in the passive safety industry and offers a complete range of passive safe products, including:

**RETENTION SYSTEM™ sockets for post installation**  
**PASSIVE SAFE BOLLARDS, SIGNAGE & RAILINGS**  
**PASSIVE SAFE POSTS for lighting columns and traffic signals**  
**CABLES & DISCONNECTION PLUGS**  
**ELECTRICAL ISOLATION SYSTEMS**



## safe road design...

The RETENTION SYSTEM™ and other passive safe solutions are listed in 'The Passive Revolution - Designing Safer Roadside' guide to best available products. IPL group and our partners work closely with many local authorities introducing innovative products and solutions. We actively endorse this and other safe roads initiatives. For further information visit: [www.thepassiverevolution.co.uk](http://www.thepassiverevolution.co.uk)



**The RETENTION SYSTEM™ can be combined with the latest technology and products available to provide post installations in accordance with best passive safety practices and EN12767:2007.**

## new standards...

The scope of EN12767 states: 'This European Standard specifies performance requirements and defines levels in passive safety terms intended to reduce the severity of injury to the occupants of vehicles impacting with the permanent road equipment support structures. Consideration is also given to other traffic and pedestrians. Three energy absorption types are considered and test methods for determining the level of performance under various conditions of impact are given.'

In order to achieve safer roads in accordance with best codes of practice and EN12767, designers need to consider the number, type and location of street furniture and roadside structures. Traditional steel posts (over Ø89mm with a wall thickness of 3.2mm or more) are not regarded passively safe and should be enclosed by crash barriers for road-user protection. The alternative option is the replacement of these structures with a more forgiving infrastructure consisting of passively safe tested and classified posts (which has the extra benefit of not requiring the additional expensive crash barriers). Road designers must not only consider the energy classification (HE / LE / NE) of passive safe columns, however, but must also factor in electrical safety (isolation in the event of damage or knockdown of a post) and overall ease and speed of repair, which includes making the area safe and ready for the reinstallation of a new post.

IPL group manufactures and supplies the RETENTION SYSTEM™ and a range of innovative products to worldwide markets. We work closely with our European and International partners in promoting passive safety and a variety of safe road solutions.

Further information on the RETENTION SYSTEM sockets for post installation is available at [www.retention-system.com](http://www.retention-system.com). Measurements and weights are approximate. The designs are the property of Innovative Products Ltd (IPL group) and may not be reproduced without express permission. Innovative Products reserve the right to amend specifications or to withdraw models without prior notice. © July 2009.



RETENTION SYSTEM™

intelligent foundation for post installation