

World Class Solutions Provider

BARRIERS

CLADDING

TOPDECK

INDUSTRIAL

SECURITY

STRUCTURAL

ENERGY

SPECIAL PROJECTS

Specifier Pack








Barrier Systems

For over 50 years' Berry Systems has been the market leader in vehicle restraint systems offering the most modern, extensive, cost effective, fully type tested and approved solutions to its clients.

Berry System's vehicle restraint systems (VRS) have been independently type tested and certified to meet all car park industry regulations and standards. These include BS 1991-1-1, together with the latest recommendations from the Institute of Civil Engineers and the Institution of Structural Engineers.

From initial structural survey and pre-engineering through to using specialist test rigs and load testing equipment on site, Berry Systems operates in accordance with structural engineering criteria recommended by the Institute of Structural Engineers. Working to its 'Design Recommendations for Multi Storey and Underground Car Parks', Berry Systems ensures all barrier systems are designed to meet the required BS EN 1991-1-1 standard and adhere to the latest impact force formula, also undertaking in-house and dynamic testing at 3rd party testing centre Mira.

Column Mounted	Floor Mounted	Wall Mounted	Industrial	Column Protection Units
				
<ul style="list-style-type: none"> • System 3 • Brisafe • Berrycade 	<ul style="list-style-type: none"> • RB1 • RB1X • Flexi Post • P224 (bolt down or cast in) • HD Buffer 	<ul style="list-style-type: none"> • WH Buffer • Rubber Fenders 	<ul style="list-style-type: none"> • Pedestrian Segregation • Bollards • Wheel Guides • Speed Restraint 	<ul style="list-style-type: none"> • Column Mounted • Floor Mounted



For more information download our technical sheets and library.



Barrier Design Service

Berry Systems offers a complete design service to ensure the integrity of the barrier systems for the appropriate application.

We ensure compliance to varying standards by only installing and supplying tested and approved systems to maintain the safety of people and assets.

Barrier Design Service

Early involvement and pre-engineering is crucial to ensure the design and specification of the barriers for the appropriate application. Our in house design consultancy – using the very latest CAD based software technology and Berry's bespoke Barrier and Car Park Design Advisory Service - is founded on more than five decades of design experience and knowledge. This means we can ensure projects requiring vehicle restraint systems are delivered to the very highest industry standards and – supported by in-house and 3rd party testing facilities – ensures products perform to the most stringent regulatory requirements.

Twice Force

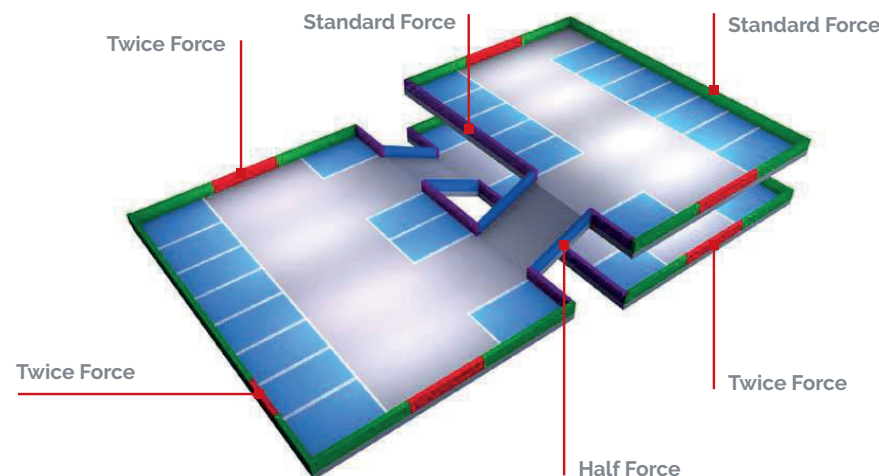
Opposite the ends of straight ramps intended for downward travel which exceed 20m in length, the barrier has to withstand twice the force.

Standard Force

Split level
AND
When the direct vehicle approach to the barrier is less than 20m.

Half Force

Typically used on ramps due to the angle of impact changing to 45°. The barrier systems have to withstand half the force given within BS EN 1991-1-1.



50+
years experience



Certified
BS EN 1991-1-1



In house
Design Engineers



Modern
Construction Methods



Cost
Effective Solutions



Fully
Type Tested,
Superior Protection

Berry Systems provides fully certified barriers to protect personnel and assets from vehicle impact up to 450kN. Offering a range of tested barrier systems 75kN, 150kN, 300 kN and 450 kN.

Material, Testing and Construction

Quality and safety is key to everything we do at Berry Systems ensuring our customers and our projects benefit from high performance steel and coating systems providing proven, strong, impact resistant and durable barrier solutions to protect both people and assets.



Using the latest equipment and machinery, we performance test vehicle restraint systems, anchors and general condition before project delivery providing detailed results and recommendations.



We undertake structural and general surveying to provide precise, clear-cut and comprehensive reporting with all the information and recommendations required to make the right choice for each project.

Not only are all our products tested to meet the most stringent and exacting standards, but we provide an expert in-depth site testing service for existing multi-storey car parks. We also conduct installation compliance testing, which is recommended for car parks every 16 years to ensure safety standards are still being met.

For more information download our technical sheets and library.



Column Mounted

- Independently tested to BS EN 1991 -1-1
- Require no anchorage into the car park deck
- Zero bay footprint
- Integrated anti-climb system
- Stylish vehicle and pedestrian protection
- Cost-effective single panel replacement
- Design integration with building envelope & structure

Column Mounted

Brisafe



The Berry Brisafe system is based on three lengths of wire rope anchored under tension to the car park structure. These ropes can then be fitted with anti-climb in-fill panels. On impact, the wire ropes deflect absorbing the impact energy forces and then return to their normal 'resting' position. Following an impact, any damaged in-fill panels can be swiftly removed and replaced. The wire rope elements are fully re-usable and can be re-tensioned on site if required.

System 3



System 3 utilises steel bars instead of wire ropes. The system is 'locked off' at each column location. Where suitable columns are not available, the Berry Flexi-Bollard can be employed to give absolute design flexibility and even lower deflection levels when subjected to an impact. The steel bars can be easily and speedily replaced if necessary. The reduced impact deflection figures make System 3 attractive for both new build and refurbishment projects.

Flexible Floor Mounted

The Berry Spring Steel Buffer System has been the benchmark, flexible, floor mounted system in UK car parks for more than 50 years. Over that time, it has been improved and developed to incorporate a range of buffer types to suit almost all circumstances and more recent changes to standards has led to the development of integral pedestrian handrails and anti-climb mesh.

Spring Steel Buffer – RB1 & RB1X



This flexible system offers an economical footprint and the deflection from impacts can be contained within the barrier area by reducing post centres. Deflection during the type of impact defined in the relevant BS EN Standard is typically about 300mm. This means the

impact forces are absorbed by the buffers rather than transmitted directly to the mounting bolts or towards the deformation of the rail. Frequently they only require 1 (or at most 2) x 20mm bolts. Embedment can be a minimal 75mm and the pull-out loading is less than 50kN. Compared to rigid posts, this is a quarter of the number of bolts at half the depth. A major saving in terms of installation time and materials.

The RB1X can also feature our patented BS EN6180 restraint strap to offer limited handrail deflection under pedestrian loading, while not compromising the beneficial flexibility of the spring steel posts.

Flexi Post



A semi-flexible floor mounted system, the upper part of the post is mounted into a rubber shock absorber which allows a limited deflection of the post. Also reducing the anchor bolt force and the risk of damage to both barrier and vehicle. Bespoke posts and centre spacings are available to suit your requirements. Berry Flexi-Posts use 4 x 14mm screw anchor bolts, 150mm embedment and a pull-out loading of only 75kN. They are ideal when a limited amount of space is available for barrier deflection, but reduced anchor bolt loading is essential compared to a rigid system.

Flexible HD Buffer



The HD Buffer is specifically designed to withstand impacts from HGVs and other larger vehicles used regularly in off-road environments, particularly warehousing and industrial. It can absorb the impact of a 40-tonne vehicle travelling at 3.35mph from a 90° impact. This buffer can facilitate an Open Box Beam profile and is available with handrail and mesh as optional extras. The HD buffer system can withstand impacts up to 450kN.

Flexible Floor Mounted

Berry Systems offer two types of flexible floor mounted systems each with a choice of three rail profiles - Berry Beam, Barrier Rail or Open Box Beam.

Spring Steel

- Economical footprint
- Energy absorbing
- Reduced loads
- Shallow anchor embedment option

Flexi Post

- Limited deflection
- Reduced loads
- Semi-flexible

For more information download our technical sheets and library.



Rigid Floor Mounted

Berry Systems offers a floor mounted rigid system, with a choice of three rail profiles - Berry Beam, Barrier Rail or Open Box Beam.

Rigid Post

- Minimal footprint
- Limited deflection & deformation
- Pedestrian protection

Rigid Floor Mounted

Berry Rigid Barriers have a near zero deflection and so deformation of the barrier rail and damage to the vehicle is likely with any significant impact. Because of their solidity, high anchor bolt forces are generated and so they require substantial footings. The bolt down type of rigid post uses 4 x M20 resin type anchor bolts with 170mm embedment. These have a pull out loading of 100kN and are best used where there is no room for any barrier deflection and minimising damage can not be a priority.

P224 - Bolt down



These posts are bolted directly into the structure itself using substantial anchor bolts to install the full post and beam profile system, creating a full vehicle restraint system with low deflection and deformation of the barrier rail.

P224 – Cast In



Similar to the Bolt Down post, the Cast In Rigid Post system is where the posts are fixed directly into the substrate. These will also have zero to minimal deflection and deformation to the barrier rail upon impact and is tested to the same standards as the P224 Bolt Down Post (this is dependent on surrounding substrate).

Combination of Mounted and Floor Mounted Systems

Split Level



Split level protection (150kN) is to prevent vehicles and pedestrians falling through the open spaces in between floor levels. Any drop greater than 380mm needs to be protected and a simple barrier system is the minimum requirement. A mesh infill system is also recommended to further increase safety to pedestrians. Lighter weight systems can generally be used taking advantage of the free space behind for barrier deflection and to minimise incursion into the parking bay lengths.

Ramps



A protection system must be in place on ramps (75kN) to absorb potential impact forces and to prevent vehicles from falling. To further increase these safety measures, our pedestrian barrier and combined mesh infill system ensures pedestrians are unable to climb on the ramp or fall through the gap between levels whilst still withstanding a vehicle impact.

Twice Force Systems

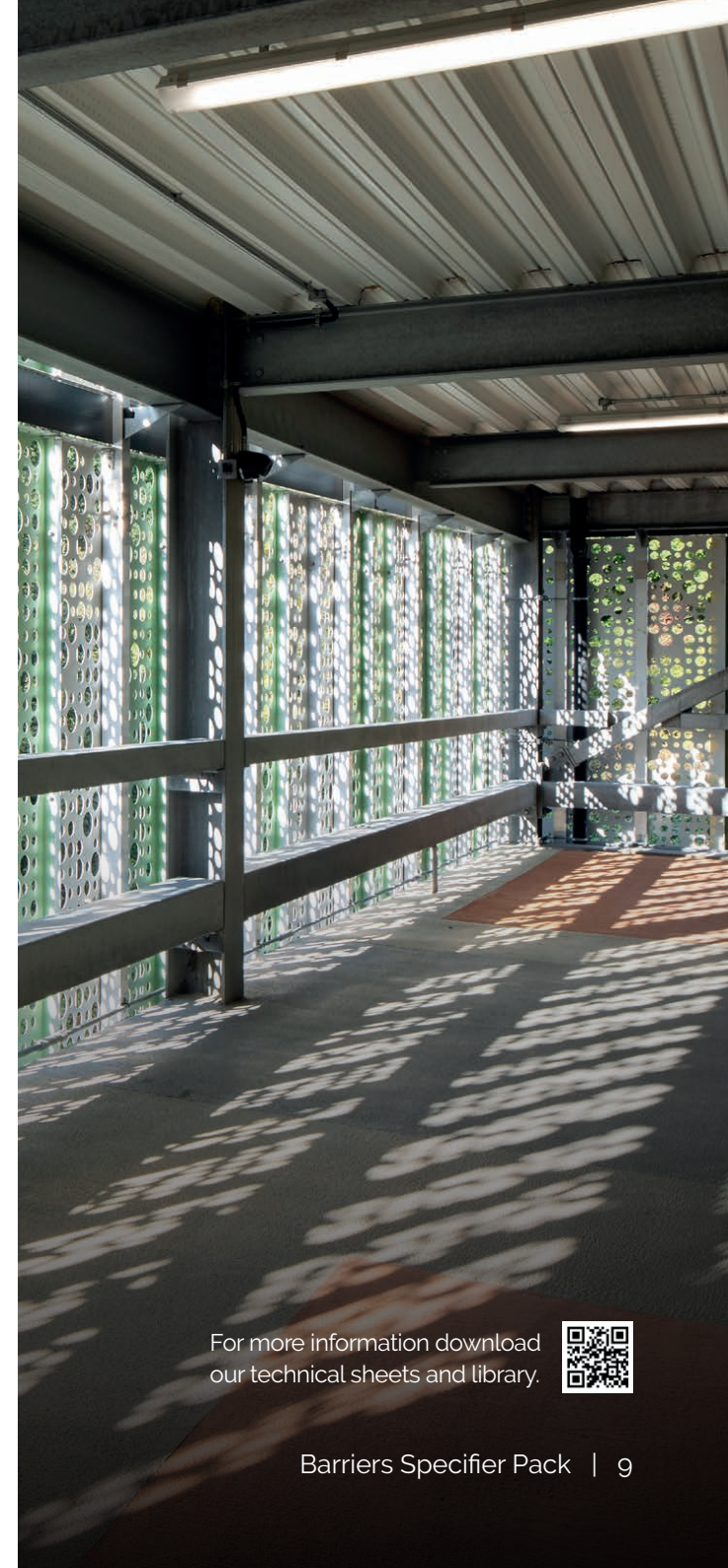


The latest BS EN Standard defines the need for a 'twice force' (i.e. 300kN) system where traffic travel can exceed 20m in length. Twice force barriers need to withstand a 1500kg car travelling head on at 14.4mph. Primarily this relates to traffic flow aisle ends and opposite ramps of downward travel. This requirement is achieved by either using heavier duty systems or, in some cases, halving the post centres on standard systems.

Pedestrian Protection



Pedestrian handrail systems in parking structures should be able to withstand a 1.5kN load. All of our vehicle barrier systems can incorporate a handrail and mesh design. These are designed and tested to the latest standards (BS 6180).



For more information download our technical sheets and library.



Wall Mounted

- Asset protection
- Pipework protection options available
- Tailored to your precise needs.

Wall Mounted

WH Buffer and Rubber



WH Buffer is a wall mounted system to offer nudge protection to walls adjacent to traffic areas that would result in costly maintenance and repair. In areas where there is insufficient room for a surface or floor mounted barrier, Berry's WH Buffers are an ideal solution as they are affixed directly into the wall to protect it from the full force of a collision. This system is comprised of spring steel so will slightly deflect upon impact to contain it.

Column Protection Units

I Beam Protection



I-Beam Protectors from Berry Systems utilise warehouse barriers formed to a circular shape to completely surround a column, enabling 360° protection from vehicle impact. The I-Beam is fitted to minimise encroachment on the surrounding space. I-Beam Protectors can be manufactured to accommodate any universal beam column size.

Monostrut Rail



A light and economic spring steel system, the Monostrut Rail CPU offers protection against small pallet movers and passenger vehicles travelling at low speeds. This system is suitable for both interior and exterior use as it is galvanised to prevent weathering.

Column Buffer Plus



The column buffer units utilise our RB1 posts with a radius warehouse rail semi circle, available in 500/750 and 1000mm diameter units as standard. Using the warehouse rail allows us to achieve tight radiuses and the configurations can be made to suit most column sizes.

Column Protection Units

- Floor and column mounted
- Sized to site requirement
- Multiple height options
- Half circle and wall mount for pipework protection

For more information download our technical sheets and library.



Column Protection Units

- Space saving column mounted options
- Rubber nudge protection
- High visibility
- HGV protection

Column Mounted



The rubber block CPU acts as a visual deterrent unit attached directly onto the columns. Hi Viz PPC corners with black EPDM rubber provide a perfect solution against scrapes and light impacts.

Column Sentry



Made from semi-flexible and stress crack resistant plastic, our Column Sentry CPUs restrict access to vehicles and protect pedestrians using an air cushion method designed to absorb energy generated by impact.

Heavy Duty CPU



The Heavy Duty CPU is built to withstand impacts from larger vehicles, making it ideal for industrial yards where HGVs are present. The additional protection this CPU provides reduces the risk of collisions into supporting columns, structural items, stock and machinery.

Industrial

We understand the changing demands on facility management and the protection of people and assets where vehicles and heavy-duty vehicles are involved for car parking and production activities. By talking with us early in the design process we can help to future proof your development. Our team will advise on the latest developments in vehicle restraint and barrier systems and a wide range of safety and perimeter solutions. Rigid and Flexible options available.

Pedestrian Segregation



It is vital that pedestrian areas are segregated with handrails within industrial premises, distribution yards, car parks and warehouses to prevent collisions with vehicles. Berry Handrail systems provide a sturdy and effective standalone pedestrian safety barrier that can be installed in traffic flow areas to provide excellent delineated protection.

Bollards



Our range of bollards and parking posts is available in multiple finishes including Galvanised, Stainless Steel, Powder Coated. These are available in Bolt-down or Cast-In options, maintaining the safety of all those using the car park facility.

Industrial

- Pedestrian segregation
- Bollards
- Wheel guides
- Speed restraint

For more information download our technical sheets and library.



Industrial

- Forklift and HGV guidance
- Pedestrian protection

Wheel Guides



Wheel Guides from Berry Systems are a heavy-duty solution to facilitate dock deliveries, enabling drivers to accurately reverse into position to load or unload the vehicle. The guides are positioned to line up with each individual dock, preventing collisions and promoting efficient deliveries.

Speed Restraint

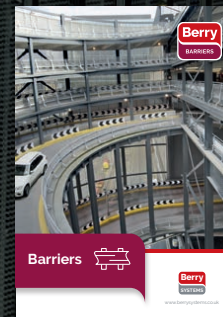


Easily installed into most surfaces and also suitable for HGV use, this solution can be implemented to increase safety on site, reducing speeds of both light and heavy goods vehicles.



For more information download
our technical sheets and library.

Berry Systems offers an extensive range of barrier solutions for both retrofit and new build car park projects. Please contact the sales team to discuss your requirements. Go to website to download more information. www.berrysystems.co.uk





World Class Solutions Provider

A world class engineering solutions provider, Berry Systems is the market leader in the design, engineering, supply and construction of a wide portfolio of products offering eight core service streams.



Barriers



Cladding



TopDeck



Industrial



Security



Structural



Energy



Special Projects

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OPERATING IN UK AND REST OF THE WORLD



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website via the QR code.

