



**boplan**<sup>®</sup>

**READY FOR IMPACT**



**YOUR LAST LINE OF DEFENCE**

[www.boplan.com](http://www.boplan.com)



*“ Employees who feel safe at work are happier and more productive. It’s win-win for businesses and their teams. That’s why peace of mind is our key focus. BOPLAN unburdens clients from worries about safety in work environments.”*



▲ Boplan Head Office

## WHAT’S YOUR GAME PLAN? COMPLETE PEACE OF MIND

We all agree that every work accident is one too many. On top of the obvious human dimension, work accidents also affect the performance and even the image of your company.

Through more than 20 years of research and talking and working with a huge variety of companies from around the world, we gathered an unrivalled expertise in industrial safety to provide the right solution for every specific situation.

We consider safety not only to be a prerequisite for the well-being of your workforce, but also an important means to have a substantial positive impact on productivity, HS&E metrics, operational costs and workforce engagement.

So join us in our mission to protect people, equipment and infrastructure from injury or damage. Knowing that you have a solid line of defence in place – ready for impact – to protect your team and assets, is invaluable for peace of mind and getting the right focus on the job.

Let us know what your safety challenges are and we’ll come with a proposal to help you achieve your objectives. Together we are partners in the battle against accidents and injuries at work.

**Xavier Ramon**  
CEO & founder of  
BOPLAN Group

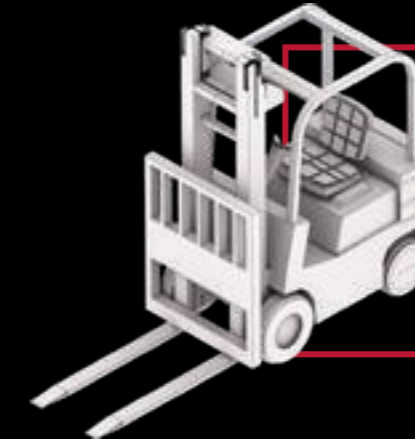


### CONTENT

FORKLIFTS AND PEOPLE DON’T MIX	4
FLEX IMPACT	12
AXES GATE	76
LINE PLAN	82
TEDDY PRO	86
SCIENTIFIC APPROACH TO SAFETY	88
TECHNICAL INFORMATION	92

© 2023, BOPLAN bv: Nothing included in this edition may be copied, stored in an automated database and/or published in any form or in any way, either electronically, mechanically, by photocopying, recording or in any other way without prior written consent of BOPLAN bv. All information in this brochure is free of obligation, replaces all prior information, prices and documentation and can be altered at any time. BOPLAN cannot be held liable for changes to its products. The pictures included in this brochure are merely illustrative and are often provided with options. Registered models, patents and patents pending. The colours in the brochure can differ from product to product and may not reflect the colour of the actual products. Colours in this brochure are non-binding and may vary by application, market and production cycle.

# FORKLIFTS AND PEOPLE DON'T MIX



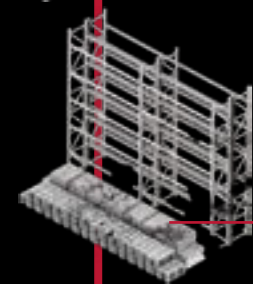
**FORKLIFTS**  
CAUSE JUST **1%** OF ALL  
WORKPLACE ACCIDENTS  
**BUT 10%**  
OF ALL INJURIES<sup>2</sup>



AVOID SERIOUS PROBLEMS  
**WITH FORKLIFT  
ACCIDENTS**



**EQUIPMENT  
DAMAGE**



**PROPERTY  
DAMAGE**



**PEOPLE  
COMPLAINTS**

## TRAFFIC SECURITY AND SAFETY PLAN

### SAFETY IN THE WORKSPACE: CHOOSE A COMPLETE SOLUTION

You do not want to go to different suppliers for each and every safety application. That would only increase the risk that you might overlook something. BOPLAN® provides you with a single point of contact and a single safety plan to increase safety in the workspace. We look beyond that one specific safety product that other parties offer to you. Our wide range of safety products allows us to cover a broad spectrum of possible risk situations in the workspace: fall protection, crash protection, anti-skid, etc.

### SAFETY PRODUCTS WITH MODULAR FLEXIBILITY

We offer high-tech solutions for each and every hazardous situation. Choosing a family of safety products ensures that all the modular components are fine-tuned to each other and that the system is future-proof. Our safety products not only flexibly absorb crashes, but we will still be able to install flexible modifications in future.

**43%**  
**PEDESTRIANS  
HIT BY FORKLIFT<sup>1</sup>**



▲ TB Super Triple

## SEPARATE PEDESTRIANS & TRAFFIC

### PREVENT COLLISIONS AND WORKPLACE ACCIDENTS

Prevention is better than cure. That's why a good preventive approach is necessary in order to prevent as many crashes and workplace accidents as possible. Our safety equipment, used to clearly demarcate and separate work traffic, pedestrians and hazardous zones, is available by default in a clearly visible yellow safety colour. Preventing collisions and workplace accidents is after all the essence of the BOPLAN® safety approach..

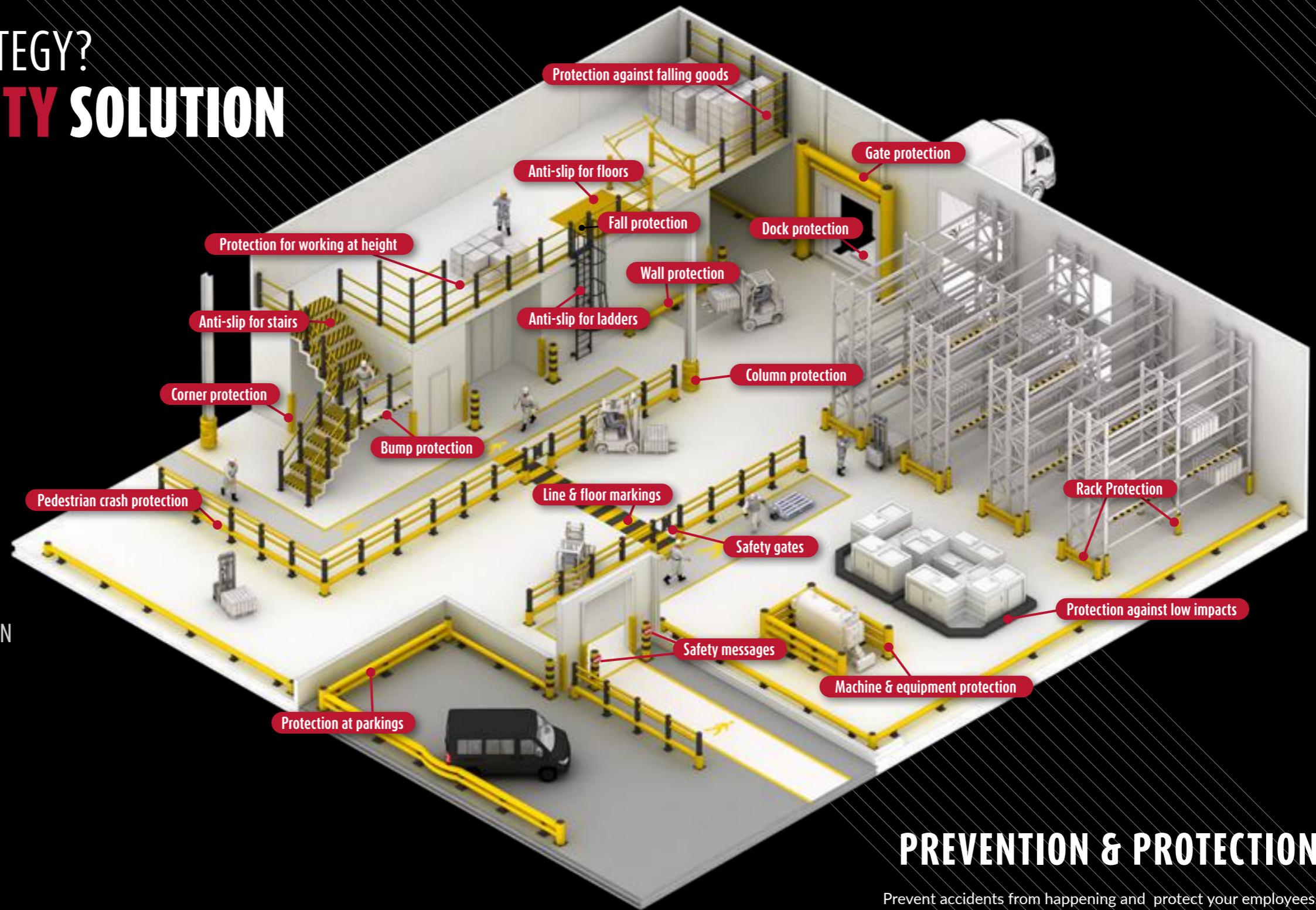
### SAFETY OF STAFF, MACHINES AND INFRASTRUCTURE IS A PRIORITY

BOPLAN® provides safety solutions that ensure the safety of your staff, machines and infrastructure. Our durable safety systems allow you to save workers and prevent unintended downtime. BOPLAN® safety products are already the current standard in dozens of sectors such as car parks, airports, warehouses, etc.

Sources: <sup>1</sup> (OSHA) Occupational Safety & Health Administration, US Bureau of Labor Statistics

<sup>2</sup> Evofenedex, network of Dutch trade and production companies with a logistical or international operation.

# WHAT'S YOUR STRATEGY? THE **TOTAL SAFETY SOLUTION**



CRASH PROTECTION



FALL & ACCES PROTECTION



ANTI-SLIP SOLUTIONS



FLOOR MARKINGS



PROTECTIVE BUMPER PROFILES

## PREVENTION & PROTECTION

Prevent accidents from happening and protect your employees, infrastructure, machines and vehicles with the right solution for each application. BOPLAN® products can easily be combined and are highly modular in order to adapt to changing layouts in your warehouse, factory, distribution center, cold storage, (petro)-chemical site, parking or airport.

# FLEXIBLE POLYMER WITH AN ACTIVE SHAPE MEMORY



## CRASH PROTECTION THAT WAS DESIGNED TO ABSORB ENORMOUS AMOUNTS OF ENERGY



The FLEX IMPACT® crash protection systems are known worldwide for their unique flexibility properties, without losing any of their strength. FLEX IMPACT has been specially designed to absorb the force released in a collision with a heavy vehicle such as a 4.5 ton forklift.

Flexible polymer with an active shape memory  
How does that actually work? Our FLEX IMPACT® safety products are made of highly flexible polymer, a synthetic material that possesses a kind of active shape memory, also known as 'active memory', enabling them to absorb massive amounts of force. In the event of a collision, the material simply bends and then returns to its original shape again afterwards. In contrast to a steel construction that will remain dented and damaged, FLEX IMPACT crash protection makes it look like nothing ever happened. Your safety fences, crash barriers, safety gates and protective posts will remain unscathed, just like your corporate reputation and professional look.

# SAFE WORKING ENVIRONMENT & HEALTHY COMPANY IMAGE

## INVESTING IN CRASH PROTECTION FOR A HEALTHY WORKING ENVIRONMENT

We sincerely hope you are not one of those companies that are solely concerned with making money. Entrepreneurship means working with people. People who love to do their jobs and derive satisfaction from working for your company should be cherished and cared for. When working in hazardous situations, you have every interest in protecting your people, because you have nothing when you have injured employees who are sick at home. That's why investing in reliable crash protection is vitally important to your company.

## PARTITIONING AND CRASH BARRIERS IN ORDER TO PREVENT DOWNTIME

Reliable partitioning allows you to seal off employee access to hazardous zones within your company or on the docks. Crash barriers provide effective crash protection which keeps your rolling stock within a certain zone and protects your workforce and infrastructure from accidents. The advantages of such reliable crash protection? A healthy workforce that need not be replaced, an intact infrastructure that need not be repaired, and no downtime shutting down your company temporarily. In short, a safe working environment and a healthy company image!

WHEN A FORKLIFT HITS A RACK IN THE WAREHOUSE & THE DRIVER GETS HURT  
**THIS CASE WILL COST YOU €10.000 - €20.000<sup>1</sup>**

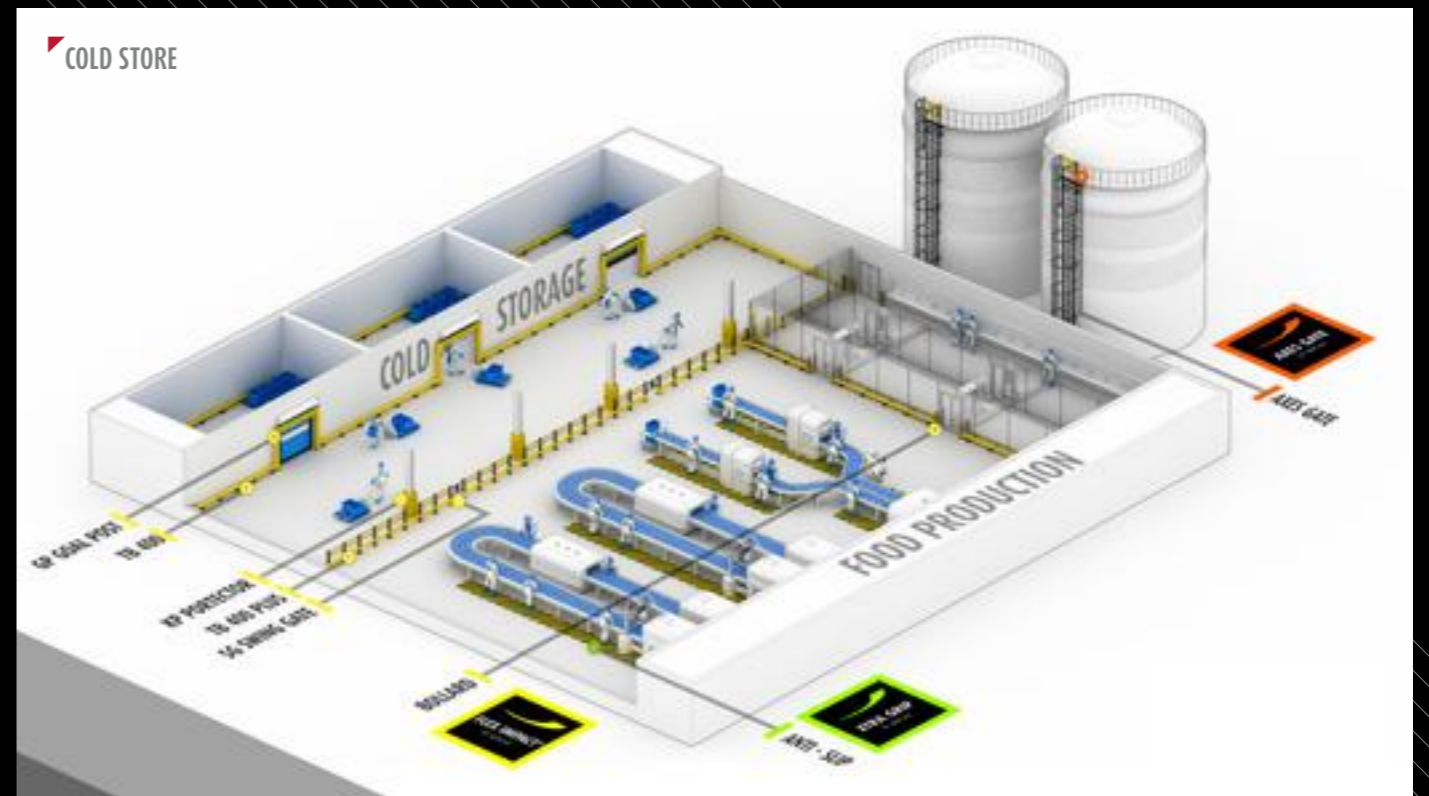


▲ HP Plus

# SAFETY & FUNCTIONAL AESTHETICS

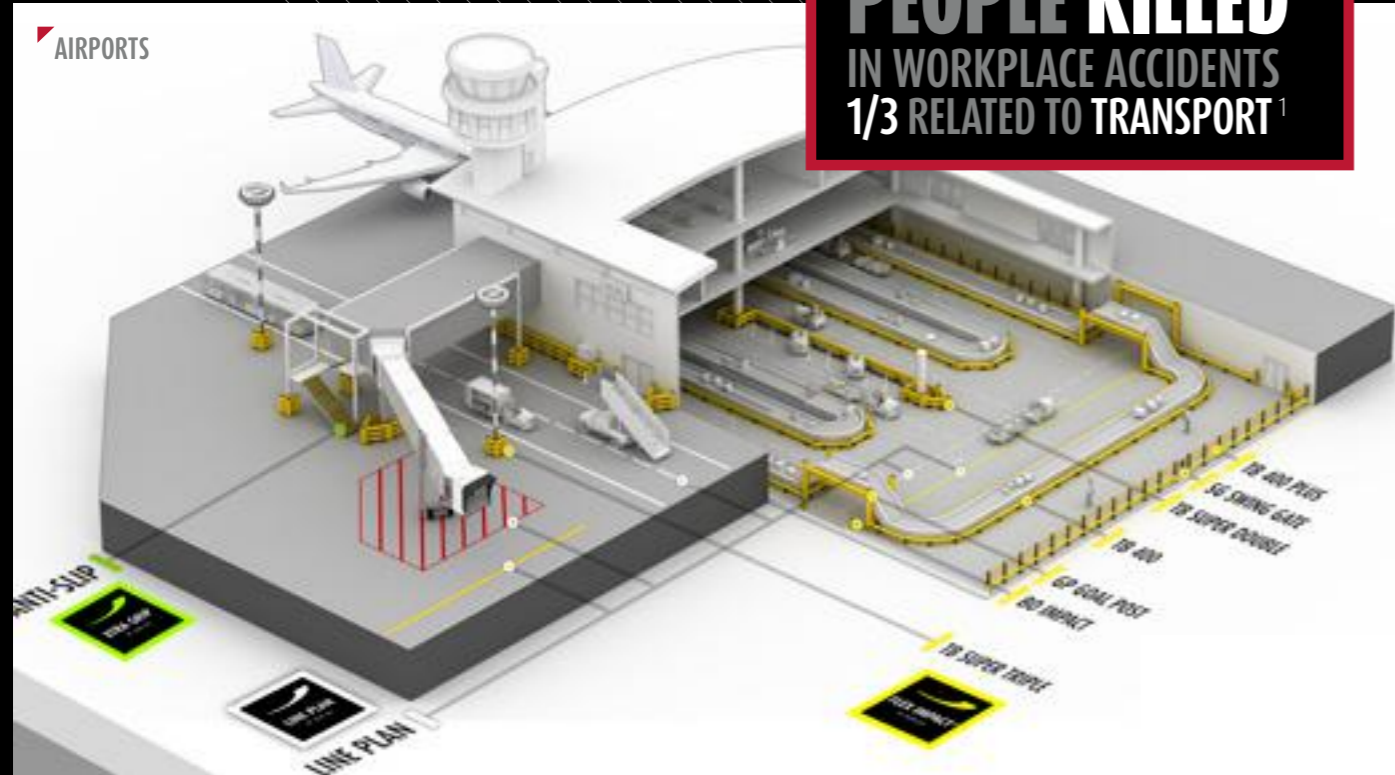
## INNOVATIVE SAFETY PRODUCTS, THE RESULT OF NON-STOP RESEARCH AND DEVELOPMENT

BOPLAN® safety systems are safer, smarter and stronger than ever. Over the years, BOPLAN® has invested heavily in research and development so it could launch new safety products on the market. Our product developers are constantly looking for easy-maintenance shapes and materials without having to sacrifice strength.



Sources: <sup>1</sup> Eurostat, European Commission, European statistics on accidents at work (ESAW)

EVERY YEAR **5.000**  
PEOPLE KILLED  
IN WORKPLACE ACCIDENTS  
1/3 RELATED TO TRANSPORT<sup>1</sup>



## SAFETY & LEGAL FRAMEWORK

### SAFETY IN THE WORKSPACE, A LEGAL AND MORAL OBLIGATION

Companies and employers have a legal obligation to guarantee safety in the workspace. Workplace accidents often lead to human suffering but also to lawsuits, which will have a negative impact on the company's reputation. Wherever possible, it is therefore imperative to prevent workplace accidents that could be attributable to a lack of safety.

### SAFETY IN YOUR COMPANY, A CONSCIOUS CHOICE

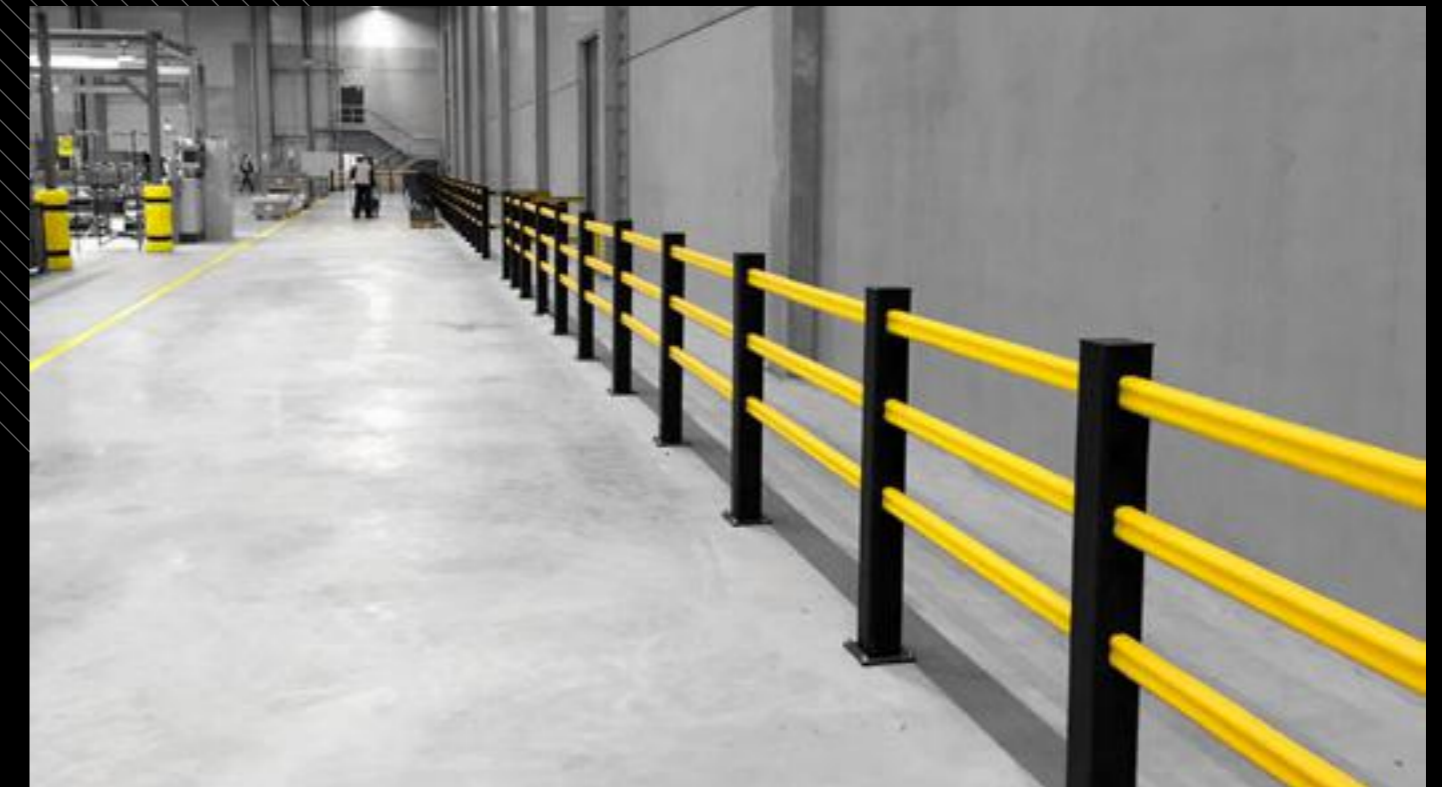
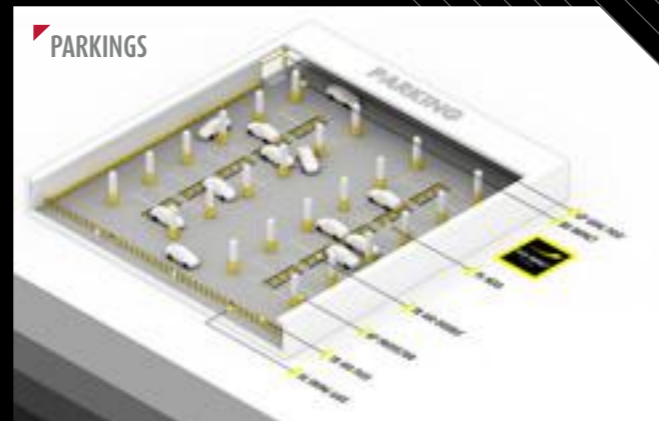
BOPLAN® provides a wide selection of safety solutions that could help prevent workplace accidents. Due to the innovative safety products offered by BOPLAN®, your company will be able to splash out with unprecedented safety in the workspace. The protection of people, vehicles, buildings and infrastructure will repay itself over time with a considerable reduction in costs and an excellent business reputation..



▲ RB RackBull

### INNOVATIVE SAFETY PRODUCTS, THE RESULT OF NON-STOP RESEARCH AND DEVELOPMENT

BOPLAN® prototypes are extensively tested and improved down to the smallest detail. For us, crash protection is not just a protective post or barrier. In terms of design, we pay a great deal of attention to the functional aesthetics of our safety products. Where it is a mere afterthought to others, BOPLAN® would also like to contribute to the look of the workspace in your company. Safety does not need to be a boring subject. Safety systems and aesthetics can go hand in hand. Companies are more than happy to make the extra effort nowadays.



▲ KP 150 with HP PLUS

### WHY CHOOSE OUR SAFETY SYSTEMS

- Flexible with active memory
- Long lifespan + Low maintenance = Cost saving
- Lightweight compared to steel
- Strength equivalent to steel
- Easy to use modular design
- Tested and approved
- No repaint
- No floor damage
- Optimal visibility
- No corrosion - chemical - UV resistant
- Recyclable, low ecological footprint.
- Chemical resistant

Sources: <sup>1</sup> (OSHA) Occupational Safety & Health Administration, US Bureau of Labor Statistics



# HIGH PERFORMANCE CRASH PROTECTION MADE FROM FLEXIBLE POLYMER

FLEX IMPACT® is a complete range of modular safety systems for the most demanding applications and designed to create a safe and cost effective work environment.

Made from **Novilene®**, a high-tech flexible polymer specifically developed for industrial safety applications, our FLEX IMPACT® range is extremely impact-resistant and shock-absorbent. Due to its "active memory", the material simply bends and then returns to its original shape after impact. In addition, FLEX IMPACT® is designed to be modular, making it a future-proof and very cost-effective solution: each and every element can be installed and replaced separately.

Use our FLEX IMPACT® products to protect your people, equipment, infrastructure and machinery and to visually and physically separate your pedestrian zones from busy forklift traffic zones, thus increasing dramatically the safety of your workplace.

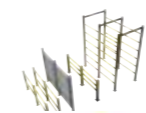
## PRODUCT GROUPS



**SAFETY BARRIERS** 24  
Collision prevention & protection from forklifts and other traffic



**BOLLARDS & GOAL POSTS** 34  
Robust protective posts and barriers for your gates and access ways



**HANDRAILS** 44  
Flexible polymer handrails for various applications



**SAFETY GATES** 50  
Innovative gate systems to ensure access to high-risk areas



**RACK PROTECTORS** 56  
Solutions for an optimum in warehouse protection



**COLUMN & CORNER PROTECTORS** 60  
The best protection for load-bearing pillars and columns



**KICK RAILS & WHEELSTOPS** 66  
Protection for low impacts and solutions for vehicle parking



▲ TB Super Double

# NOVILENE

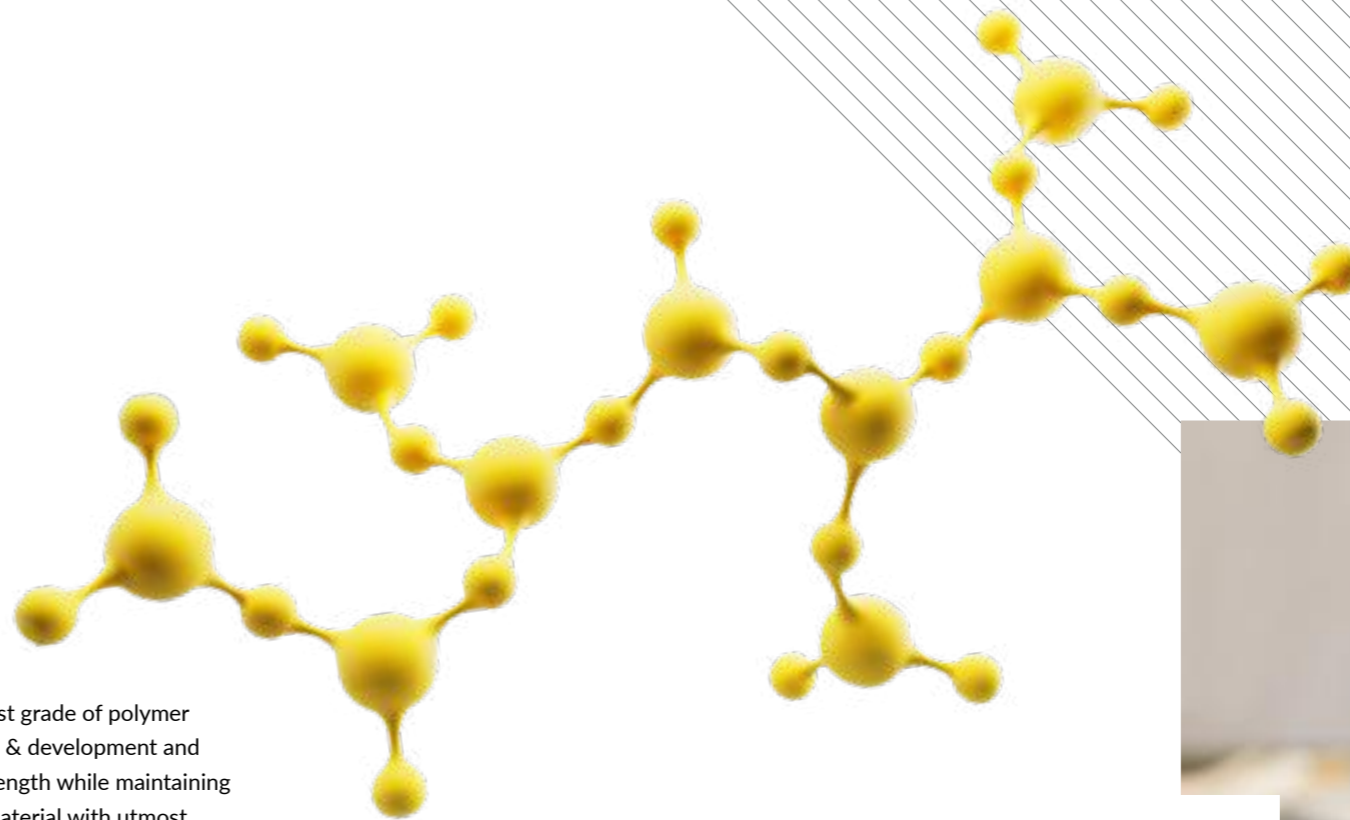
## THE ULTIMATE COMBINATION OF STRENGTH AND FLEXIBILITY

Novilene was especially developed for industrial safety applications and is the highest grade of polymer material available. Its unique composition is the result of years of advanced research & development and rigorous testing. The aligned molecular structure of Novilene provides unrivalled strength while maintaining maximum flexibility. The energy forces from an impact are conducted through the material with utmost efficiency. In combination with BOPLAN's unique slide-over tube system this results in collision protection solutions that have the highest impact resistance rates on the market.

For systems using multiple layers of polymer, the distortion on impact can cause the connection between the different layers to fail faster than the material itself. This results in the layers coming apart and the integrity of the product being compromised. BOPLAN® products on the other hand only use one solid layer of polymer material which eliminates the risk of delamination at impact.

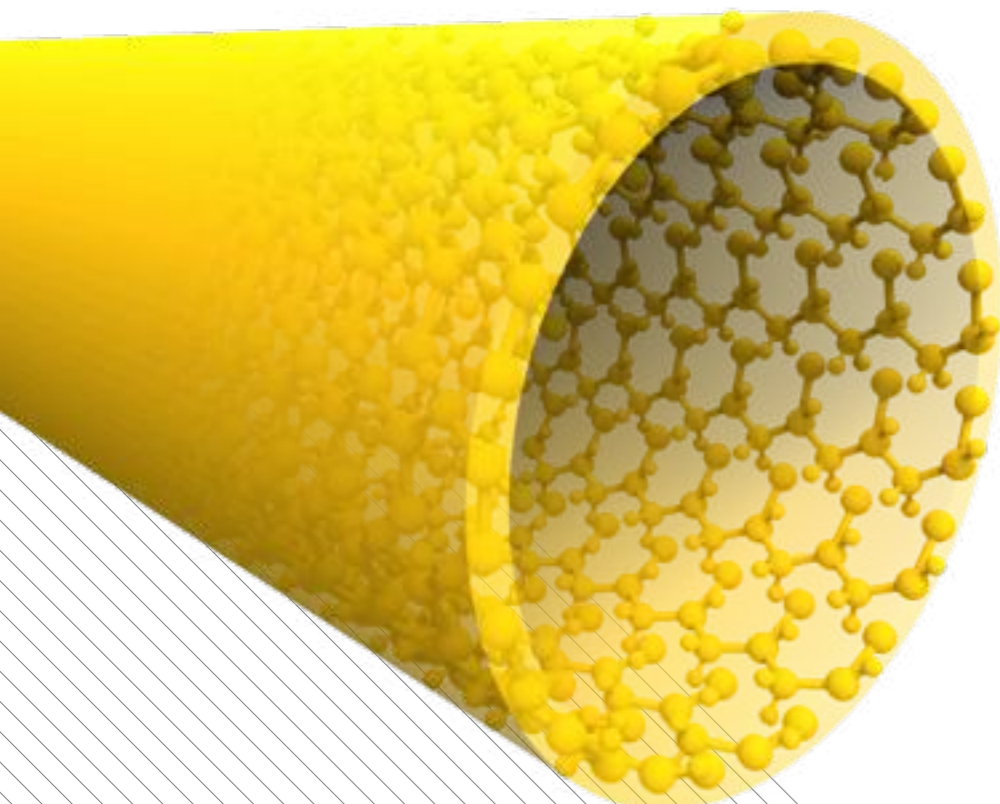
Novilene is extremely durable, colored to the core and UV stabilized. It is resistant to rust, corrosion and to most chemicals and is particularly suited for thick-walled tubes and profiles.

Novilene has excellent recycling properties and is – as opposed to single-use-plastics – extremely durable.



## ADVANCED RESEARCH & DEVELOPMENT AND RIGOROUS TESTING

*Extensive stress and strain tests show Novilene to have a lower tensile elongation ratio than other polyolefin materials. This results in only a limited deflection at impact and much less bending of the tubes and rails under their own weight.*



**AT BOPLAN WE RECOVER AND RECYCLE OUR PRODUCTION WASTE INTO SECONDARY RAW MATERIALS FOR THE MANUFACTURE OF NEW PRODUCTS.**





### ACTIVE MEMORY



FLEX IMPACT® has been specially designed to absorb the force released in a collision with a heavy vehicle. In the event of a collision, the material simply bends and then returns to its original shape again afterwards.

### EASY TO USE MODULAR DESIGN



Various modular building blocks can be used to compose a variety of configurations. The locking method doesn't require screws or bolts, allowing certain freedom of movement between connecting elements. A fixed locking method would increase the risk to break upon impact.

### LIGHTWEIGHT COMPARED TO STEEL



FLEX IMPACT® safety products are much lighter and therefore much easier to transport than their classic counterparts in steel. One might expect light materials to be weaker, but that is far from the truth.

### STRENGTH EQUIVALENT TO STEEL

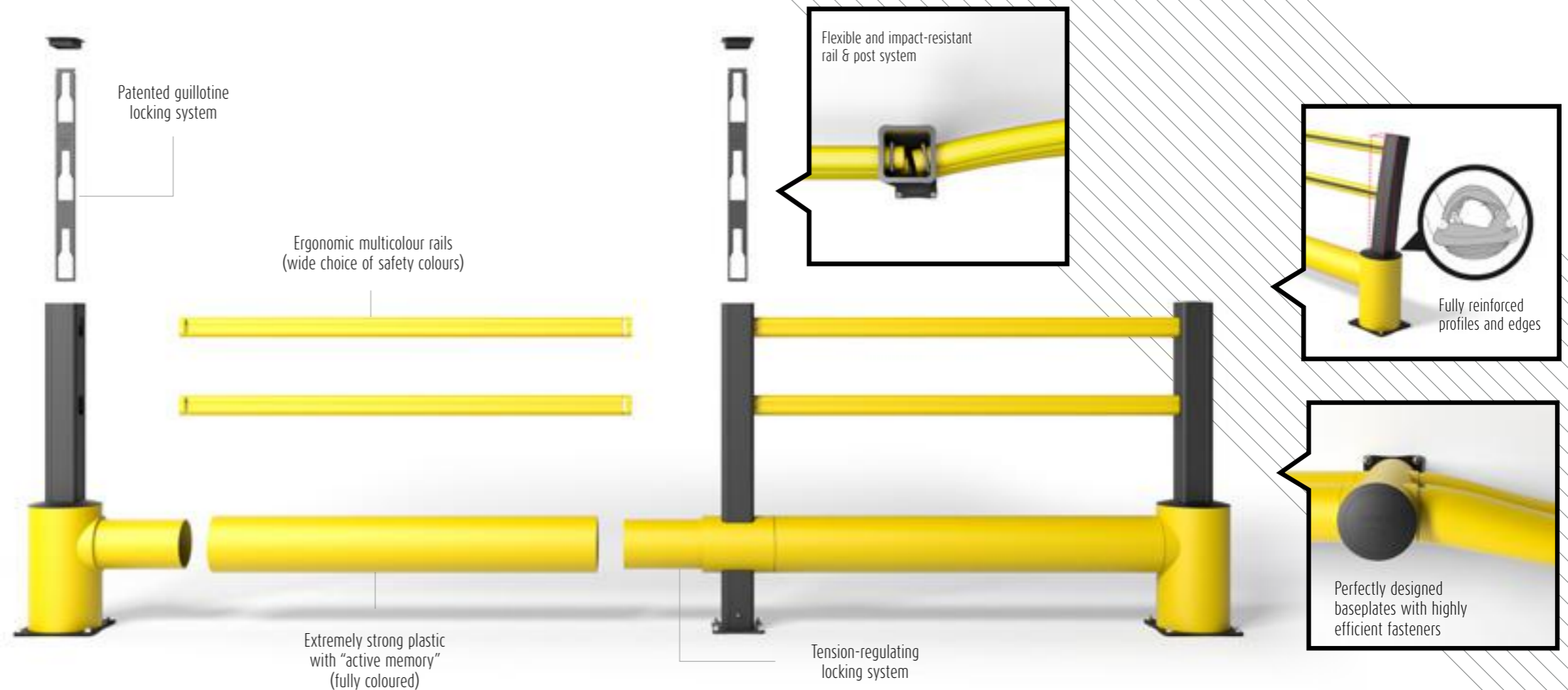


The flexible polymer used in our FLEX IMPACT® safety products is at least equal to the classic steel safety solutions that have been outpaced by modern technology.

### TESTED AND APPROVED



In the execution of the safety tests, we work in close collaboration with highly recommended partners, such as Transpolis L.I.E.R. laboratories. When the tests produce a successful result, these authorities grant us their certification and label.



### LONG LIFESPAN + LOW MAINTENANCE = COST SAVING



FLEX IMPACT® crash protection requires little to no maintenance. In addition, due to the impact resistance, the costs of restoration and replacement will be kept to a minimum.

### NO FLOOR DAMAGE



When colliding against one of our FLEX IMPACT® safety products, the force of the impact will be absorbed by the flexible polymer and subsequently distributed throughout the entire volume of the safety post or safety fences. The force of the impact will therefore no longer be focused on the base. This ensures that the FLEX IMPACT products will last much longer and withstand collisions far better without damaging the floor.

### NO REPAINT



All of our FLEX IMPACT® safety products are made from polymers that are coloured to the very core. In contrast to steel crash protection systems, when you use this system, no paint or finish will peel off in the collision. Repainting after a collision will be a definite thing of the past.

### OPTIMAL VISIBILITY



All of our FLEX IMPACT® safety materials have been made in bright and distinctive colours. By default, our products have all been made in yellow, the standard international safety color for all industries.

### NO CORROSION



The FLEX IMPACT® safety products are highly corrosion-resistant, retaining their characteristics even under the least-favourable conditions.

### UV RESISTANT



Due to this characteristic, your safety posts, fences and gates will retain their clearly visible and distinctive yellow colour, and preserve your company's reputation.

### CHEMICAL RESISTANT



The unique composition of our FLEX IMPACT® safety products makes them resistant to most of the prevailing chemical and corrosive substances in the chemical industry.

# FLEX IMPACT, A COST-EFFECTIVE INVESTMENT



▲ TB 400 Plus with Kick

FLEX IMPACT® security systems have been specially designed from flexible polymer, which is highly impact-resistant, flexible and shock-absorbent. All of our safety systems have been tested extensively over a long period of time in order to comply with the strictest standards of safety. In any kind of impact due to collision, the material simply bends and then returns to its original shape again afterwards. The unique thing about it is that our safety systems fully retain both their looks as well as their essential properties afterwards. In addition, FLEX IMPACT® uses a modular construction, making it possible to install each and every element separately. If necessary, each element can be replaced separately as well. This approach allows us to offer a durable safety product with a cost-efficient impact that should not be underestimated.



▲ HP Plus

## AVOID WORKPLACE ACCIDENTS BY USING CLEAR DEMARCATION OF PEDESTRIAN ZONES

Clearly visible FLEX IMPACT® barriers need to be installed in strategic places, at locations where forklift traffic is prohibited. These include the zones around your company restaurant, in the vicinity of your reflector, the location where you have your timekeeping administration, at the entrances, near your sanitary facilities, etc. Less logical locations would be the zones within your warehouse or outside on the company grounds, where you will have pedestrian traffic circulating alongside forklifts, vans and lorries. In these situations, it is also imperative to ensure the maximum safety of your pedestrian staff by placing clearly visible safety fences, safety posts, handrails and security gates. Indicating exclusive zones for pedestrians is best enforced within a radius of three meters, separated from any kind of traffic involving rolling stock such as forklifts. The best way to demarcate pedestrian zones in the workspace is by placing physical barriers.

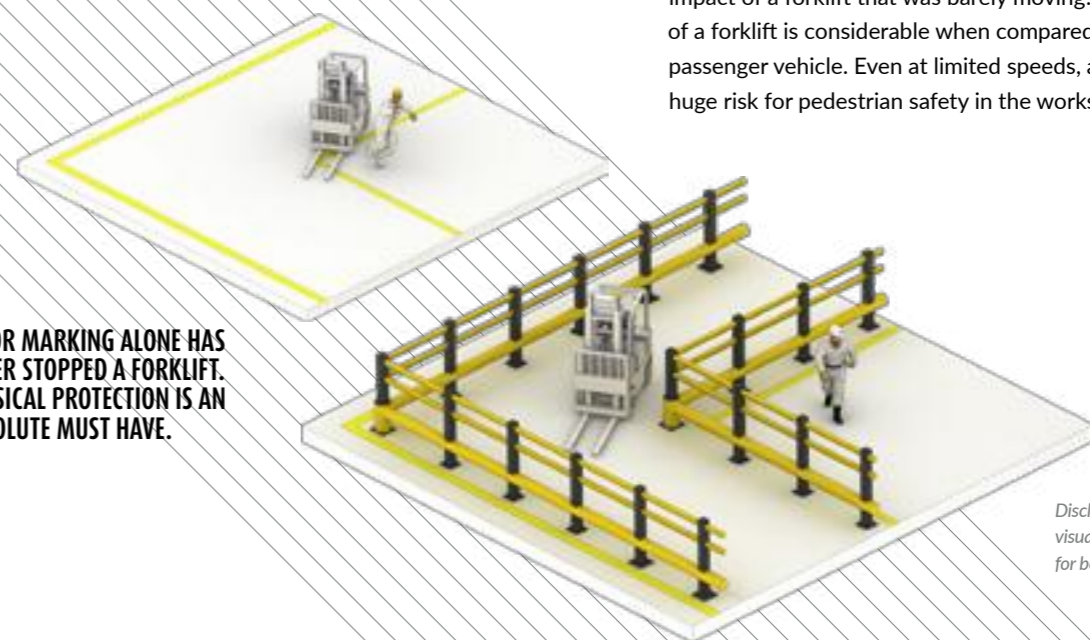


▲ TB 400 Plus with BO Impact and Kick

## A CLEAR AND PHYSICAL SEPARATION OF PEDESTRIAN ZONES AND FORKLIFT TRAFFIC

A clear and highly visible physical demarcation is the most efficient way to separate your traffic zones from the pedestrian zones in the workspace. Forklifts and pallet trucks are among the most dangerous types of rolling stock in the workspace. Almost half of all victims in collisions involving such machines are pedestrians. Our FLEX IMPACT® barriers offer a simple safety precaution to separate your pedestrian zones from busy forklift traffic zones.

**FLOOR MARKING ALONE HAS NEVER STOPPED A FORKLIFT. PHYSICAL PROTECTION IS AN ABSOLUTE MUST HAVE.**



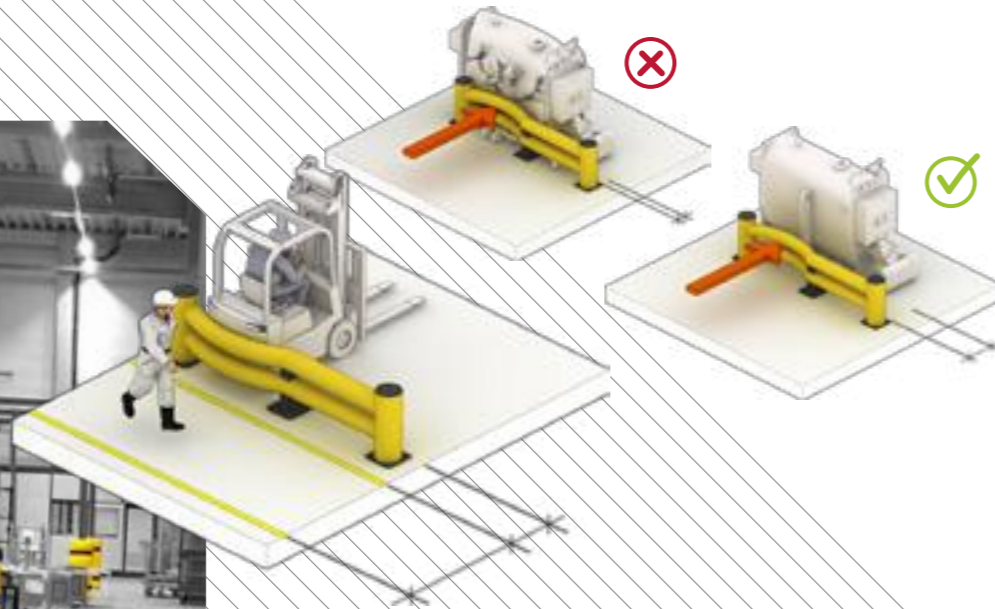
*Disclaimer: This is a simplified visualization of our products for better understanding*

## PEDESTRIANS ARE STILL CRUSHED BY FORKLIFTS FAR TOO FREQUENTLY

A large number of workplace accidents are caused by collisions between pedestrians and forklifts. Half of all victims of these types of collisions are pedestrians who perished from the crushing impact of a forklift that was barely moving! The weight per wheel of a forklift is considerable when compared to that of a regular passenger vehicle. Even at limited speeds, a forklift remains a huge risk for pedestrian safety in the workspace.



▲ KP 150



FLOORMARKING & SAFETY BARRIER PLACEMENT MUST TAKE IN ACCOUNT BARRIER DEFLECTION ZONE

## IMPACT-RESISTANT IMPACT PROTECTION, MADE OF DURABLE, FLEXIBLE POLYMER

FLEX IMPACT® consists of a series of systems to provide crash and impact protection, manufactured from flexible polymer with high-tech, highly impact-resistant properties, even at high collision speeds. The thick-walled, fortified polymer elements bend with each impact and reform to their original shape again afterwards.

## EXTENSIVE CRASH TESTS THAT COMPLY WITH THE HIGHEST STANDARDS OF SAFETY

As ultimate proof of the extreme impact resistance of our safety products, each and every one of them is subjected to a series of strict, extensive and very realistic crash tests. Specialised staff execute various static and dynamic tests. The actual proof comes from outdoor tests. On a racetrack, a forklift weighing 3.5 tons collides with our barriers from various angles and at increasing speeds. High-speed cameras register the various speeds, angles of impact, deformations and the exact point of impact. The crash protection not only survived the collision under all conditions, but the forklift retained its safe position after impact. These extensive crash tests enable us to launch safety products on the market that comply with the highest standards of safety.

## MARKET LEADER AND ADVISOR IN SAFETY STANDARDS IN CRASH PROTECTION

These crash tests have enabled us to develop special software that lets us use collision simulation to predict the behavior, burden, impact, deflection, tension and a series of other parameters for each of our products. In order to integrate all of that acquired knowledge into our products, we work in close collaboration with distinguished research firms and university research centres. Based on our know-how, we were called in as consultants to help determine the safety standards in our industry.

## CLEARLY DEMARCATATE PEDESTRIAN ZONES AND PREVENT A GREAT DEAL OF HUMAN SUFFERING

Do not wait for a deadly forklift accident to happen in your company. Prevent workplace accidents by reliably securing your workplace. FLEX IMPACT® offers a complete range of safety solutions that can be modularly combined to support your company's needs. This shows that pedestrians and forklifts need to be separated as much as possible. And the best way to do that is by forcibly and clearly demarcating pedestrian zones by placing clearly visible barriers. This investment will not only save you money over time, but also prevents a great deal of suffering.



▲ TB Super Double

## SUPERIOR PROPERTIES OF FLEXIBLE POLYMER VERSUS IRON AND STEEL

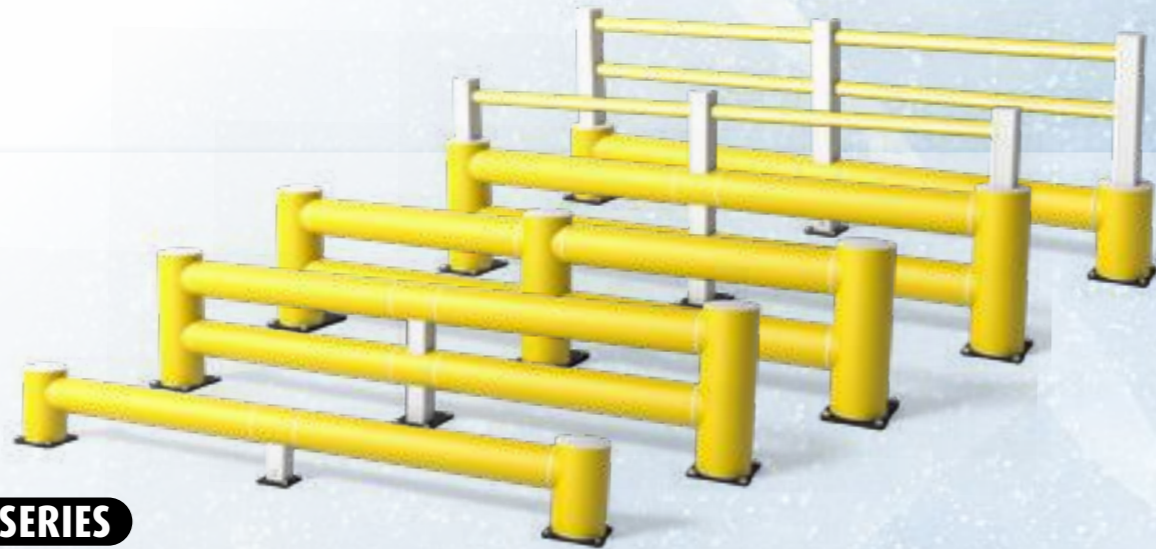
In addition to these superior impact-resistant properties, our polymer impact protection systems also have other advantages which will make it inevitable for their iron and steel predecessors to be replaced by the synthetic debutants on the market.

- Flexible polymer
- Does not need to be treated or painted after installation
- Reforms to its original shape after collision and therefore does not need to be repaired or replaced
- Ensures that the anchors are not ripped out of the ground, so the concrete floor is not damaged
- Is light and easy to transport
- Consists of modular elements that are easily installed and can be easily replaced if necessary
- Is durable and cost-efficient over time
- Is chemical resistant

# COLLISION PROTECTION FOR INDUSTRIAL COLD STORAGE



Processing and storing cooled and deep-frozen products often involve different work flows. For example, employees are only allowed to work in cold stores for short periods and must therefore work faster to complete their duties. In addition, heavy protective clothing limits their freedom of movement, glasses can fog-up, etc. These specific circumstances can create additional safety risks and require adapted solutions.



## TB 400 SERIES

The ICE FLEX® TB 400 barrier range protects people and infrastructure in the freezer against the impact of light and heavy forklifts. Depending on the type of forklift you can opt for a TB 400 protection with single or double tube including handrails.



## FLIP

This kick rail offers full ground level protection up to ankle height. Thanks to its flexible and modular design with connection pieces, it is possible to create an endless safety path. The FLIP is therefore the ideal partner to provide extra protection for sandwich panels and/or insulation walls in large cold stores against collisions with carts, transport pallets, etc. The ICE FLEX® Flip can be combined with other BOPLAN® traffic barrier systems, including the TB 400 series.



## KP SERIES

Prevent costly and structural damage to columns in your freezer with our range of ICE FLEX® column protectors. With a wide selection of sizes, the most suitable column protector can now be installed in any working environment, regardless of temperature.



## RACKEND

Collisions of storage racks by forklift trucks are among the most common industrial accidents in storage areas. The ICE FLEX® RackEnd rack protectors are therefore the ideal partner to protect the front end of shelves in the freezer and to prevent storage damage and human suffering.



## RACKBULL

This innovative system for rack protection helps to prevent the collapse of racks as a result of a collision. The RACKBULL® in ICE FLEX® version is a universal rack protection that fits on all types of stacking racks.



## HP PLUS

A safe organization of the movement of people in the workplace requires clear rules and a strict & secure application. The HP Plus ICE FLEX® handrails are specially designed to allow the circulation of pedestrians to take place in a logical, clear and above all safe way.



## BO IMPACT

The BO Impact ICE FLEX® bollard offers optimal protection against collisions near rolling gates and is ideal for protecting zones with an increased risk of impact such as access roads, gates and corners.

## GOAL POSTS 250

The ICE FLEX® Goal Post is a flexible height restriction that offers (high) gates, roofs and bridges in cold stores adequate protection against collisions with vehicles, trucks and buses.

With the ICE FLEX® range, BOPLAN® offers numerous safety solutions that have been specifically designed and tested for use in freezing temperatures down to -30°C. The standard BOPLAN® polyolefin has been adjusted so that the ICE FLEX® products offer optimum impact protection and maximum safety even in freezing conditions.





# SAFETY BARRIERS

COLLISION PROTECTION FROM FORKLIFTS AND OTHER TRAFFIC

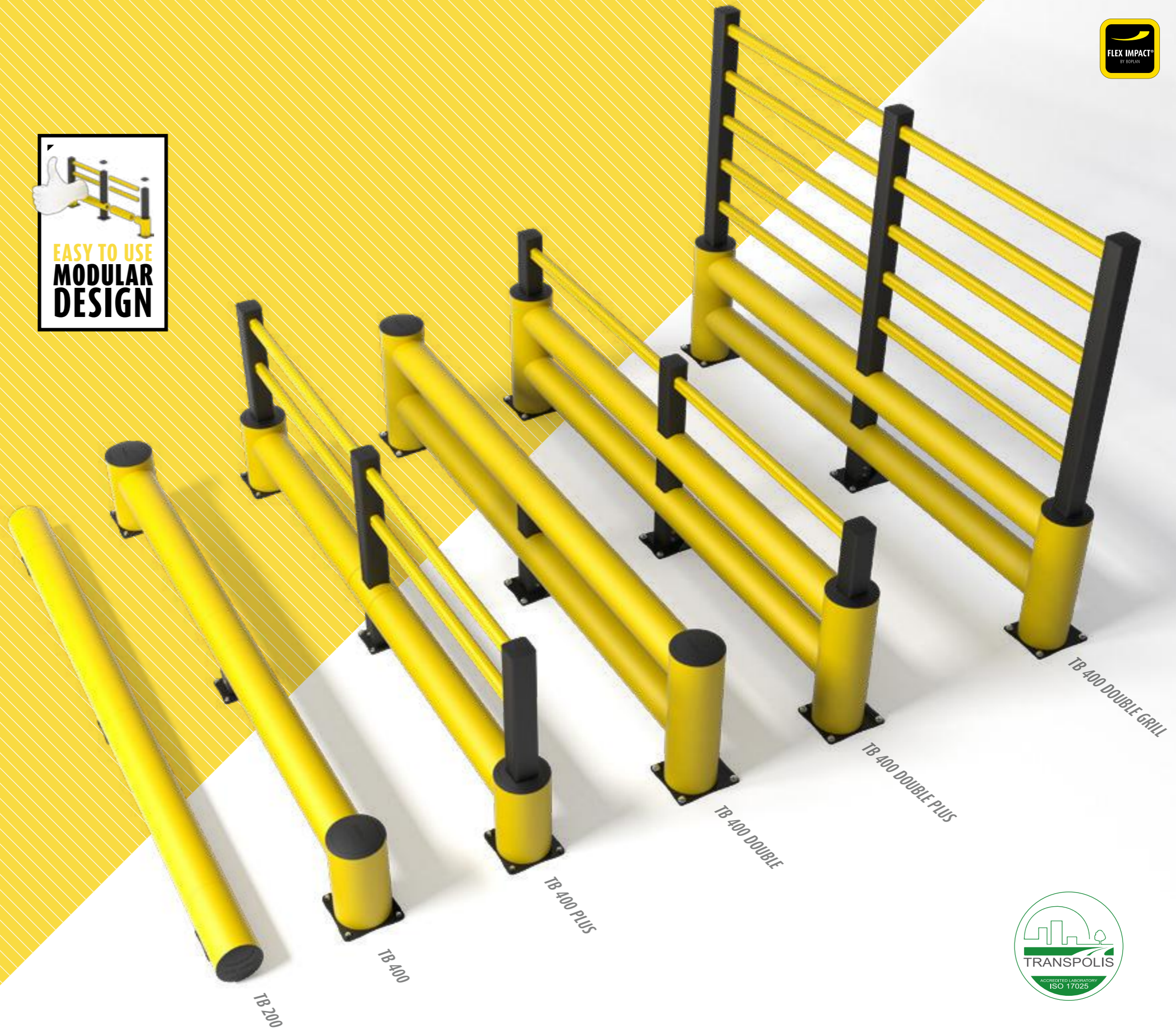
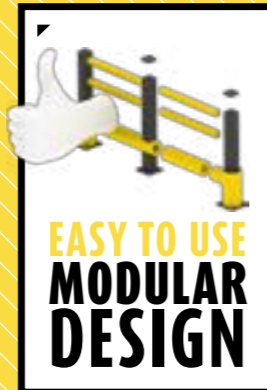
FLEX IMPACT® SAFETY BARRIERS are a form of impact protection specifically designed to protect machines and buildings from collisions with forklifts or other heavy vehicles. These impact protection materials are meant for high-speed transport environments or locations where heavy loads are moved or transported, such as warehouses, construction halls and airports.

## IMPACT-RESISTANT, FLEXIBLE IMPACT PROTECTION

Crash tests show that these SAFETY BARRIERS can withstand the impact of a high-speed collision with a 3.5-ton forklift. What is unique about this impact protection is that, even in the event of a collision, its anchor points are not ripped out of the ground and the flexible elements retain their original shape after impact. The modular construction of the SAFETY BARRIERS gives you the opportunity to finish the impact protection of your company one zone at a time or choose to expand at a later date.



▲ TB Super Triple



# TB 260 SERIES



## TB 260

A BARRIER WHICH IS LOWER TO THE GROUND FOR EXTRA IMPACT RESISTANCE

The TB 260 is similar to our TB 400 safety barrier but is lower to the ground. The lower centre of gravity provides extra strength.. This tube-shaped barrier is ideal for protecting against damage caused by forklift manoeuvres. The low tube prevents goods or pallets sliding under the barriers and getting damaged or causing damage to machines or equipment.

## TB 260 PLUS

PROVIDING AN EFFECTIVE BARRIER BETWEEN PEDESTRIAN AND TRAFFIC ZONES

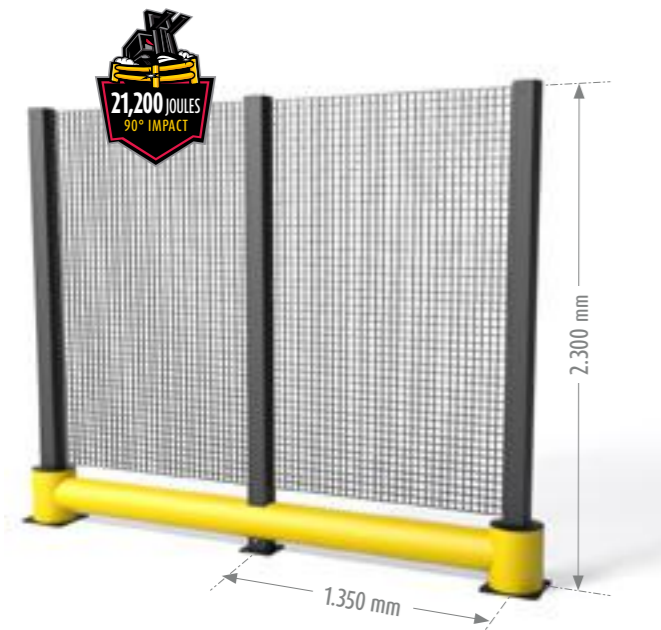
The TB Plus 260 barrier is very similar in design to the TB Plus but the protective tube is lower to the ground. This lower centre of gravity gives the barrier extra strength. The low tube prevents pallets or goods from sliding underneath the barrier whilst the double handrail provides additional safety for pedestrians.



## TB 260 PLUS FENCE

BUILT-IN FENCING TO PROTECT MACHINERY

This TB 260 Plus Fence is low to the ground for effective crash protection. The low centre of gravity gives the barrier extra strength and prevents goods or pallets sliding under the barrier. This makes them ideal for use in areas where forklift manoeuvres take place. The built-in fence is made from glass fibre reinforced resin and acts as a safety barrier between pedestrians and machinery. This minimises the risk of people getting caught in machinery or machinery being tampered with by unauthorised personnel.



## TB 260 DOUBLE

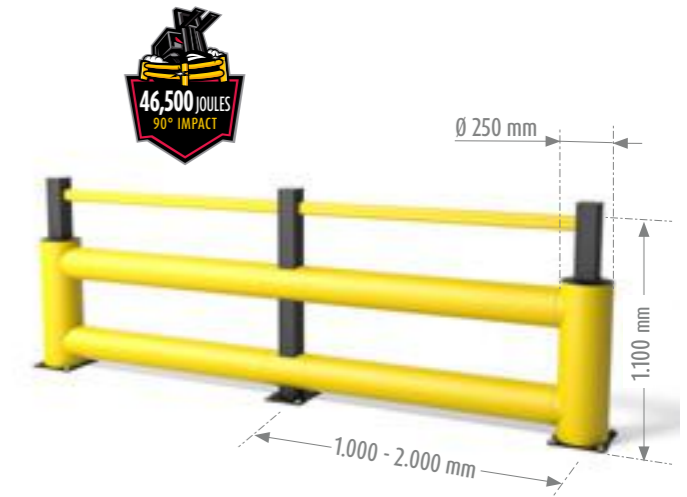
A DOUBLE BARRIER WHICH IS LOWER TO THE GROUND FOR EXTRA IMPACT RESISTANCE

The TB Double 260 is a double traffic barrier that closely resembles a guardrail which goes the extra mile in shielding pedestrians from vehicle collisions. The TB Double consists of two parallel horizontal tubes placed on top of each other, fortified by a mid-post but is lower to the ground. The lower centre of gravity provides extra strength. Essentially, the TB Double 260 is a TB 260 with an added extra protective line, making the barrier extra robust when a high-impact crash happens.

## TB 260 DOUBLE PLUS

PROVIDING ROBUST PROTECTION AGAINST COLLISIONS FROM HEAVIER VEHICLES

Just like our TB 400 Double Plus, the TB 260 Double Plus provides extra protection against impact from heavier vehicles. The difference is that the TB 260 Double Plus has a lower bottom barrier for extra strength. This flexible barrier is ideal for shielding pedestrians from vehicles with higher impact risk.



## TB 260 GRILL

CRASH PROTECTION AGAINST FALLING GOODS

The TB 260 GRILL traffic barrier protects pedestrians at the top and bottom. The single tube at the bottom prevents collisions with forklifts and prevents goods or pallets from sliding under the barrier while the rails offer extra protection against toppling or falling goods. This arrangement is available with a center-to-center distance between the rails of 275 mm.



## TB 400 SERIES



### TB 400

#### SHIELDING VEHICLE ZONES WITH AN IMPACT RISK

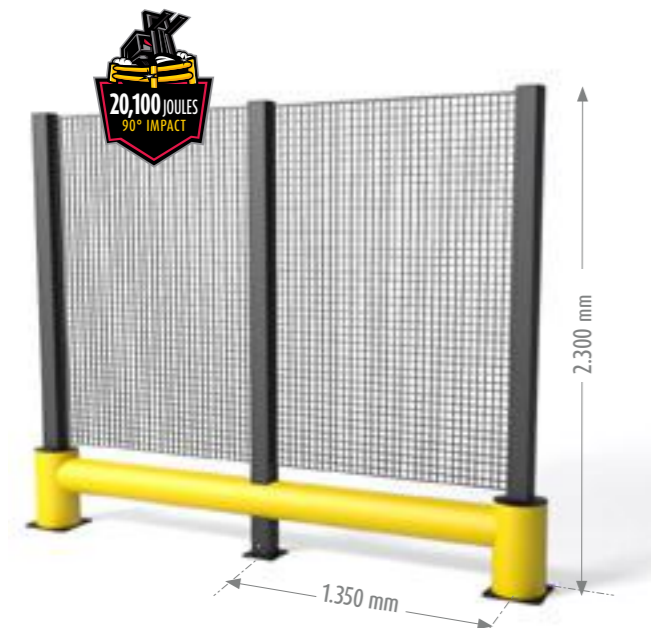
The TB 400 is a tube-shaped barrier from the FLEX IMPACT® family of traffic barriers with mid-posts. In spite its small tube diameter, its flexibility and impact resistance should not be underestimated.

The single-tube TB 400 is perfectly suited as a barrier for zones designated for vehicles with a certain impact risk. A wrong manoeuvre with a forklift can easily cause substantial damage to your building or your machines. This impact-resistant traffic barrier is part of a remarkably flexible system that provides highly effective crash protection with a collision involving a certain impact.

### TB 400 PLUS

#### A STRONG GUARDRAIL PROTECTING PEOPLE AGAINST FORKLIFT IMPACTS

The FLEX IMPACT® TB Plus upgrade is a hybrid between our TB single-tube guardrail and our HP Plus handrail. Combining both the strength and height makes this the ideal product for protecting pedestrians. TB Plus upgrades are extremely impact-resistant and after a crash this barrier retains its original shape, appearance and properties. The TB Plus is light, modular and easy to install. The TB Plus is used for creating walkways and protecting pedestrians from pallet trucks, lift trucks, forklifts or other vehicles with limited speeds.



### TB 400 PLUS FENCE

#### PROTECTION BY GUARDING MACHINERY FROM FALLING GOODS OR NEARBY PEDESTRIANS

The Plus fence upgrade provides the same shock absorbing properties as the TB single-tube guardrail with the added protection of a built-in fence. This upgrade provides excellent resistance where there is a risk of impact from vehicles such as forklifts. The built-in fencing offers further protection by guarding machinery from falling goods or nearby pedestrians. The fencing is made from flexible materials to minimise damage caused by impacts.

### TB 400 GRILL

#### CRASH PROTECTION AGAINST FALLING GOODS

The TB 400 GRILL with single tube protects people against the impact of forklifts and falling goods. Depending on the size of the (stacked) goods, one can opt for an arrangement with a centre distance between the rails of 275 mm or 550 mm.



### TB 400 DOUBLE

#### DOUBLE SHIELDING TO PROTECT FROM COLLISIONS WITH HEAVIER VEHICLES

The Double upgrade is a double traffic barrier that closely resembles a guardrail which goes the extra mile in shielding pedestrians from vehicle collisions. The Double upgrade consists of two parallel horizontal tubes placed on top of each other, fortified by a mid-post. Essentially, it's a TB single-tube guardrail with an added extra protective line, making the barrier extra robust when a high-impact crash happens.

### TB 400 DOUBLE PLUS

#### ROBUST BARRIER FOR PEDESTRIAN ZONES TO PROTECT FROM COLLISIONS WITH HEAVIER VEHICLES

The TB Double Plus upgrade is a double traffic barrier with an extra handrail that goes the extra mile in shielding pedestrians from collisions involving vehicles. The addition of a single handrail on top provides an extra protection from collisions with vehicles that have a higher impact risk.

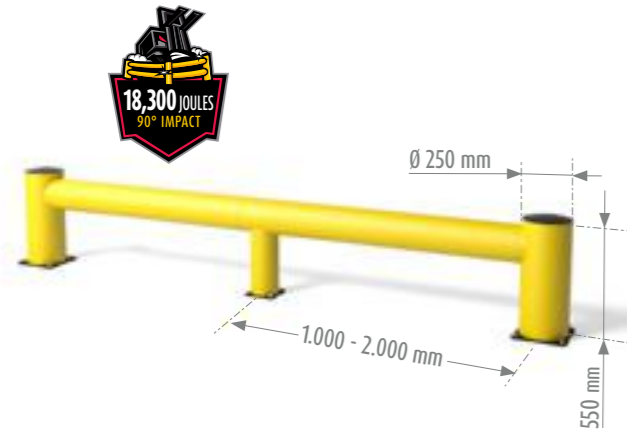


### TB 400 DOUBLE GRILL

#### CRASH PROTECTION AGAINST FALLING GOODS

TB 400 DOUBLE GRILL is an extremely robust, double traffic barrier for collision protection against heavy vehicles and (falling) goods. The TB DOUBLE-tube guardrail offers pedestrians increased safety in storage areas with a lot of forklift traffic. Depending on the size of the (stacked) goods, one can opt for an arrangement with a centre distance between the rails of 275 mm or 550 mm.

## TB 550 SERIES



### TB 550



FORTIFIED CRASH PROTECTION FOR VEHICLES INVOLVING INCREASED IMPACT

The TB 550 is a tube-shaped reinforced traffic barrier, derived from its smaller brother, the TB 400. However, the TB 550 has a fortified mid-post. The increased fortification of the traffic barrier enables it to absorb even heavier crashes.

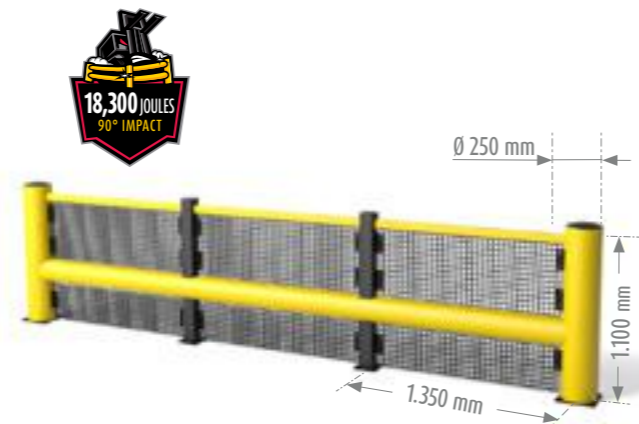
### TB 550 PLUS FENCE



SPECIALLY DESIGNED FOR USE IN CAR PARKS AND ON ACCESS RAMPS

The upgrade is specially designed for use in car parks and on access ramps. The strong flexible traffic barrier resists impact and absorbs shock whilst the built-in fence protects pedestrians.

The TB 550 Plus Fence is available in two sizes; 5 metres or 10 metres. The bright yellow colour increases visibility so that the barrier can be easily seen even in compromised lighting.



## TB SUPER SERIES



### TB SUPER DOUBLE



FORTIFIED PROTECTION FROM VEHICLES WITH A HIGH IMPACT RISK

The TB Super Double is the second heaviest traffic barrier in Boplan's FLEX IMPACT® range. As the name implies, this barrier is part of the ultimate in collision protection systems. The TB Super Double is assembled from two parallel protective lines supported by an extra fortified mid-post, with an added extra protective line, making the barrier extra robust when a high-impact crash happens.

### TB SUPER TRIPLE



THE HEAVIEST TRAFFIC BARRIER FOR YOUR BUSINESS-CRITICAL INSTALLATIONS

The TB Super Triple is the ultimate in protection for collisions in Boplan's FLEX IMPACT® array. With its three parallel protective lines on top of each other and its fortified mid-post, the TB Super Triple is the heaviest traffic barrier in our series.

With its three parallel protective lines, this most heavy-duty traffic barrier provides maximum impact resistance while retaining its shape, appearance and properties after a crash. The impact resistance as well as the modularity of the system have been subjected to the strictest tests. The TB Super Triple is the perfect traffic barrier to protect business-critical installations and buildings that have a significant chance at collisions in your company due to heavy traffic.





**LONG LIFESPAN**  
 + **LOW MAINTENANCE**  
 = **COST SAVING**

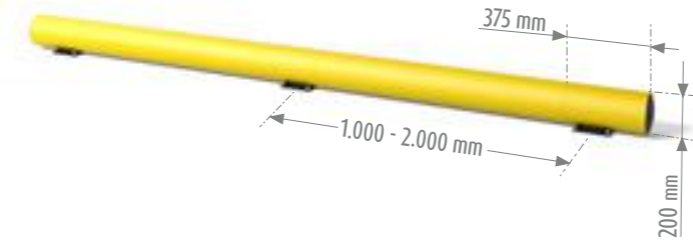


*"We know that we are better served with this type of railing over bolted down steel framing."*

- Warehouse Manager at Tetra Pak



## TB 200 SERIES



### TB 200

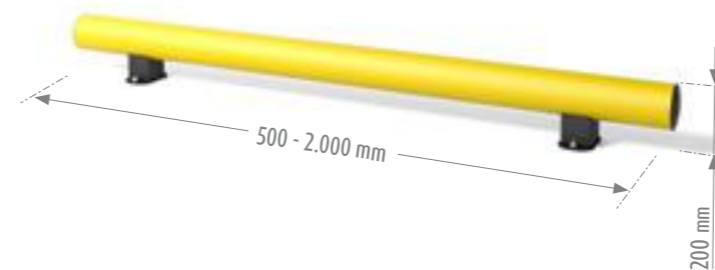


WHEEL GUIDES OR WHEEL STOPPERS AS DEMARCATIONS OF A TRAFFIC ZONE

The TB 200 is installed low to the ground and therefore serves primarily as a wheel guide or wheel stopper. This traffic barrier is often chosen to prevent vehicles from crossing the boundaries between pedestrian zones and traffic zones.

## TB MINI SERIES

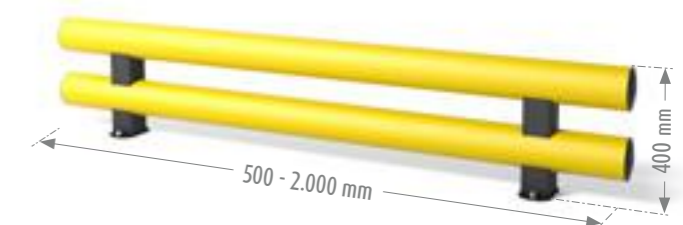
### TB MINI



PROTECTION FROM TROLLEYS, CARTS, LIGHT TRAFFIC WITH A LOW IMPACT RISK

The FLEX IMPACT® TB Mini is the smallest and lightest size of impact protection in our series and is specifically designed for use with light wheeled objects that have a low impact risk. This barrier consists of a smaller single tube low to the ground. And even though it is very light-weight, it holds well against any small rolling stock. The TB Mini is quick and easy to install.

### TB MINI DOUBLE



PROVIDING FLEXIBLE PROTECTION AGAINST LOW IMPACT OBJECTS

The TB Mini Double is similar in design to our TB Mini but with an additional tube for increased protection. The TB Mini Double is sufficiently strong enough to protect against light wheeled objects such as containers, pallet trucks and trolleys. This is the lightest traffic barrier in our FLEX IMPACT® range.



# BOLLARDS & GOAL POSTS

## EFFECTIVE PROTECTION OF YOUR GATES AND ACCESS WAYS

BOPLAN's impact-resistant FLEX IMPACT® range offers various types of protective posts and constructions for protection of vulnerable infrastructure such as gates and access ways. When even a simple collision with a pallet truck or forklift can cause a major disruption in the production process with important delays and downtime, it's important to have the right protection at the right location. The BOPLAN® Bollards and Goal Posts are available in different versions depending on the needs and local situation.

### BOPLAN® SIGNMARK 200

Efficient communication in the workplace can drastically improve safety and the prevention of accidents.

The BOPLAN® SignMark 200 is designed to fit on any 200mm diameter bollard or height restrictor and can be equipped with the message of your choice.



With optional shield



BO BEIT

BO LED

BO BEIT

BO IMPACT

BO SUPER

BO 200 FORCE

GP GOAL POST





## BO 200 FORCE

### PROTECTIVE BOLLARDS WITH EXTREME IMPACT RESISTANCE

Due to its strength and impact-resistant flexibility, the BO 200 FORCE is the most effective solution when it comes to protecting gates, access ways, corners and machines from impacts up to 16.000 joule. The deformation that occurs after each crash will disappear once the vehicle draws back. This eliminates the need for post-impact repairs. For the BO 200 FORCE, Boplan® developed a new, improved and patented polymer that can handle those extreme impact values.



**OPTIONAL BASE SHIELD**  
(see accessories)

### A REVOLUTIONARY BASEPLATE

The screws that anchor the round baseplate to the floor are protected by the Base Defender. This rubber cover makes it physically impossible to drive over the baseplate and damage the screws.

For a more finished look, cover the Base Defender with the Base Shield (optional). This provides additional protection from ground-level impacts and hygienic shielding from dirt and dust.

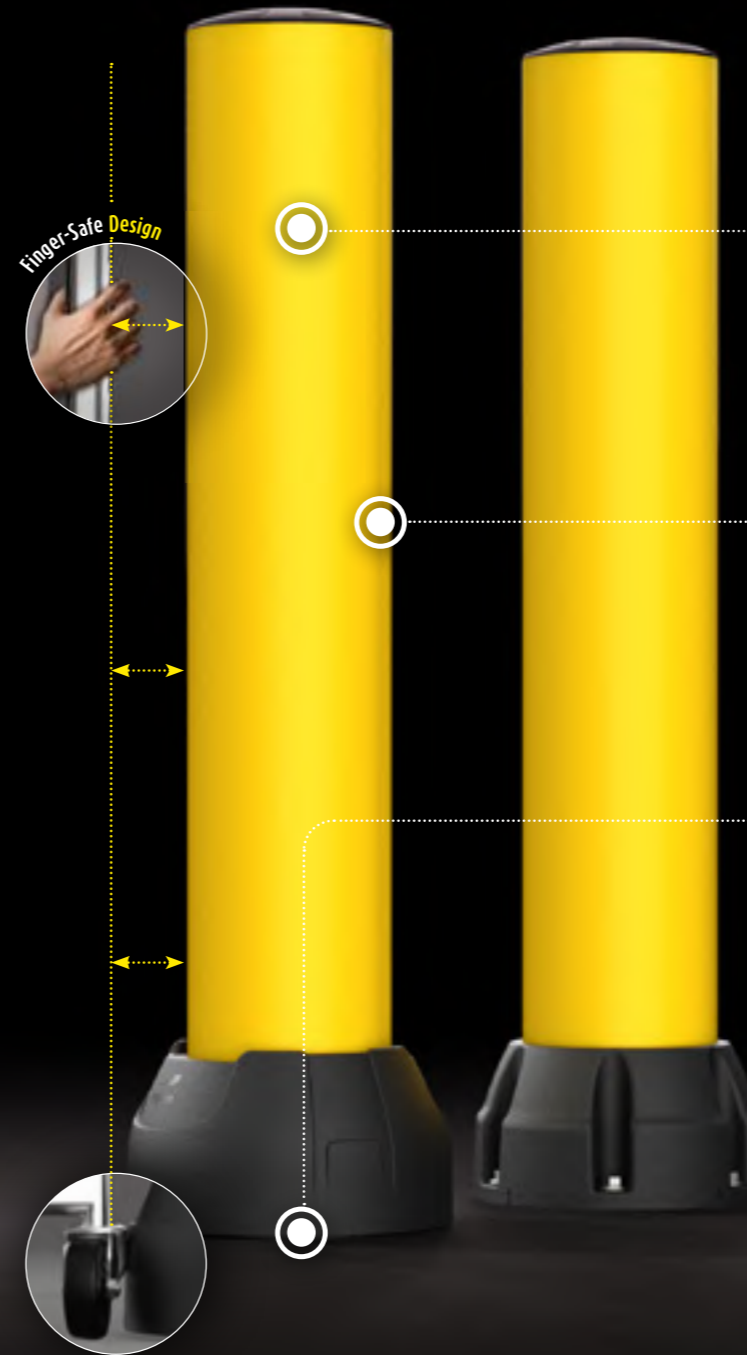
### AVAILABLE IN 3 HEIGHTS

- ▶ 750 mm
- ▶ 1000 mm
- ▶ 1200 mm

### MAXIMUM VISIBILITY

The BO 200 FORCE posts come in a variety of distinctive colors and patterns, making them highly visible in any situation.

- ▶ Yellow or Black (standard)
- ▶ Optional striping:
  - 1, 2 or 3 stripes
  - yellow, black or white striping



Finger-Safe Design

### ACCESSORIES

#### Boplan® SignMark 200

Convey the right message in the right place with the optional SignMark 200: one-way traffic, speed limits, mandatory safety equipment, special warnings, etc. The SignMark 200 is designed for a perfect fit on the BO 200 FORCE and can easily be replaced with a single click.



#### Rotor Sleeve

When a vehicle collides with a BO 200 FORCE, the Rotor Sleeve deflects the impact by rotating. This means that the bollard does not absorb the full force of the collision, reducing damage to your vehicle. This is beneficial in areas with an increased risk of collision, such as high traffic areas.



#### Base Shield

The Base Shield protects the Base Defender and the baseplate from ground-level impacts and provides hygienic protection from dirt and dust. And on top of that... it looks great.



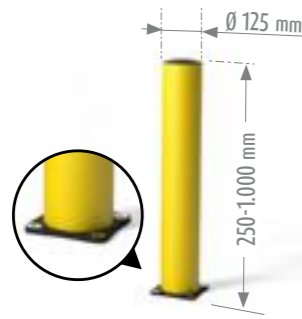
### ADVANTAGES

- ▶ Optimized Novilene® polymer formula for extreme impact resistance up to 16.000 joule
- ▶ Tested with TÜV certification
- ▶ Protected baseplate mounts
- ▶ Finger-safe design
- ▶ Sustainable design: easy to (dis-)assemble
- ▶ Patented technology
- ▶ Choice of options, colors and heights

### APPLICATIONS / TYPICAL ENVIRONMENTS

- ▶ Protection of gates, access ways, corners and machines
- ▶ Car park buildings
- ▶ Commercial real estate
- ▶ Distribution centers
- ▶ Industrial real estate
- ▶ Logistics, supply chain and material handling industries
- ▶ (Petro-)chemical plants
- ▶ Transport and logistics centers
- ▶ Warehouses and storage facilities





### BO LIGHT

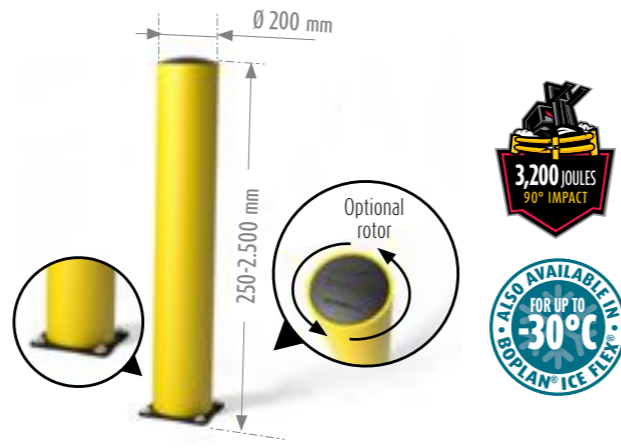
PROTECTIVE POSTS USED FOR COLLISIONS INVOLVING MINOR IMPACT RISK

The BO Light is a flexible protective post which provides protection from light crashes with vehicles. As a result, this protective post is the lightest in the series of impact-resistant bollards in Boplan's FLEX IMPACT® series.

### BO IMPACT

PROTECTIVE POSTS IN PLACES WHERE COLLISIONS FREQUENTLY OCCUR

The BO Impact protective post has a larger diameter than its lighter brother, the BO Light. As a result, the BO Impact is the most suitable flexible protective post that we can install as a standard protective feature in places where frequent impact risks occur.



### BO LED

PROTECTIVE POST FOR BADLY LIT ENVIRONMENTS AND LOADING DOCKS

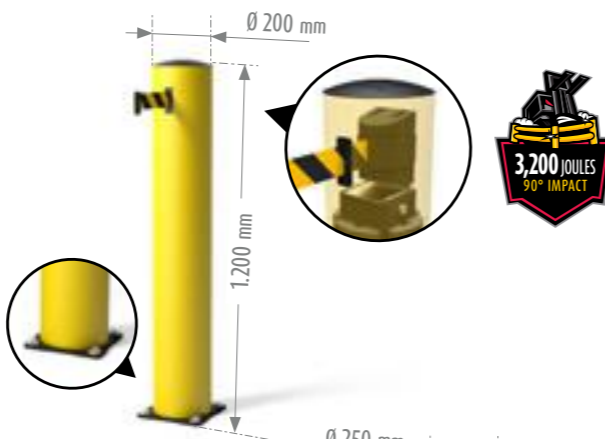
This BO Impact with LEDs offers the same benefits as our BO Impact product but with the addition of five LED lights that can be controlled by an on/off switch. Our protective posts are perfect for protecting areas where frequent impacts occur such as access ways, gates and corners.



### BO BELT

PROTECTIVE POST WITH INTEGRATED BELT BARRIER

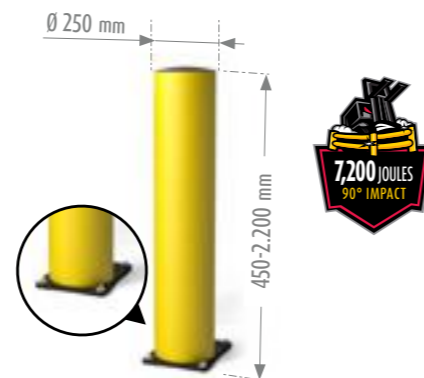
The BO Belt is a BO Impact bollard with an integrated belt barrier system. The belt barrier allows you to quickly close off areas of up to 5 meter to prevent pedestrians from entering (temporary) dangerous zones such as loading dock openings, doorways, areas under construction, gates etc. The belt has a yellow / black hazard design for optimal visibility.



### BO SUPER

PROTECTIVE POSTS FOR FREQUENT COLLISIONS WITH HEAVY VEHICLES

The BO Super protective post gives you a fortified version of the BO Impact. That makes the BO Super the ideal flexible protective post to protect gates, access ways, corners and machines from frequent crashes with heavier vehicles.



# BOPLAN GOES SMART

## 24/7 MONITORING OF CRITICAL HOT SPOTS

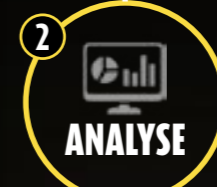
### REAL-TIME NOTIFICATIONS

Clearly you've made the right decision to have protection installed. Time to focus on critical hot spots.



### GET INSIGHTS

Gain valuable knowledge on protected locations, impact history, frequency, and strength levels.



### TRIGGER INSPECTIONS

Replace or upgrade protection if required or alter traffic flows where possible.



### SMART BOLLARD





**PERSONALIZE !**

Compatible with all standard stickers with a diameter of 200 mm

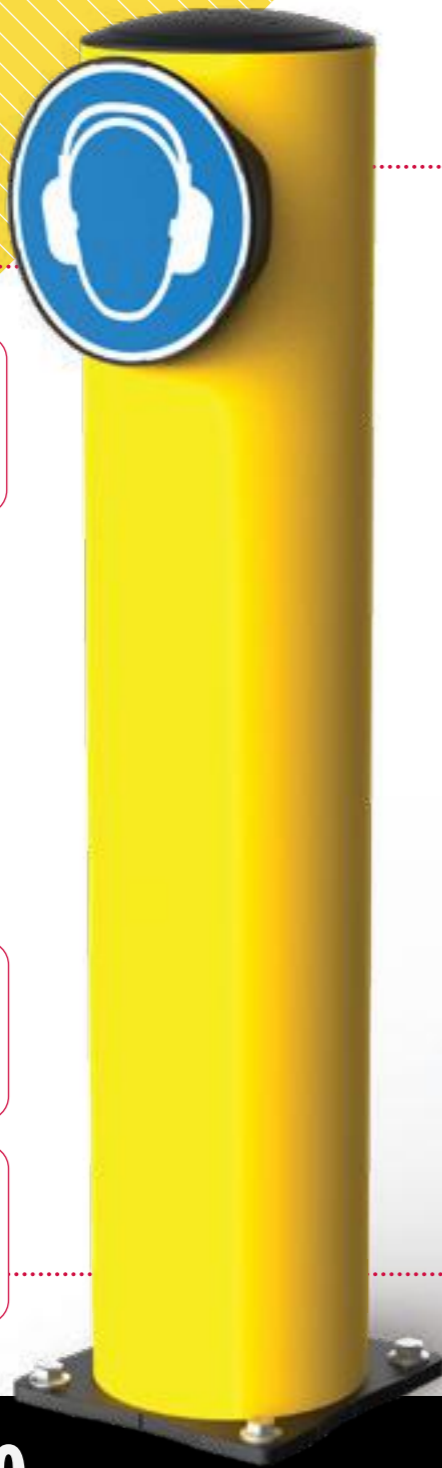
**AVAILABLE STICKERS**



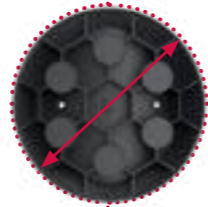
The SignMark 200 can be delivered with a BOPLAN® sticker of your choice

**PERFECT FIT**

The SignMark 200 is designed for a perfect fit on any Ø200mm tube, ensuring a clean and aesthetic look



**HOLDER**



**DIAMETER Ø200MM**



**EASY TO INSTALL**

The black cover panel can be clicked, screwed or glued onto the holder



**FLEXIBLE**

The SignMark 200 can be mounted at any height on a horizontal or vertical tube

# SIGNMARK 200

## HOLDER FOR WORKPLACE COMMUNICATION MESSAGES

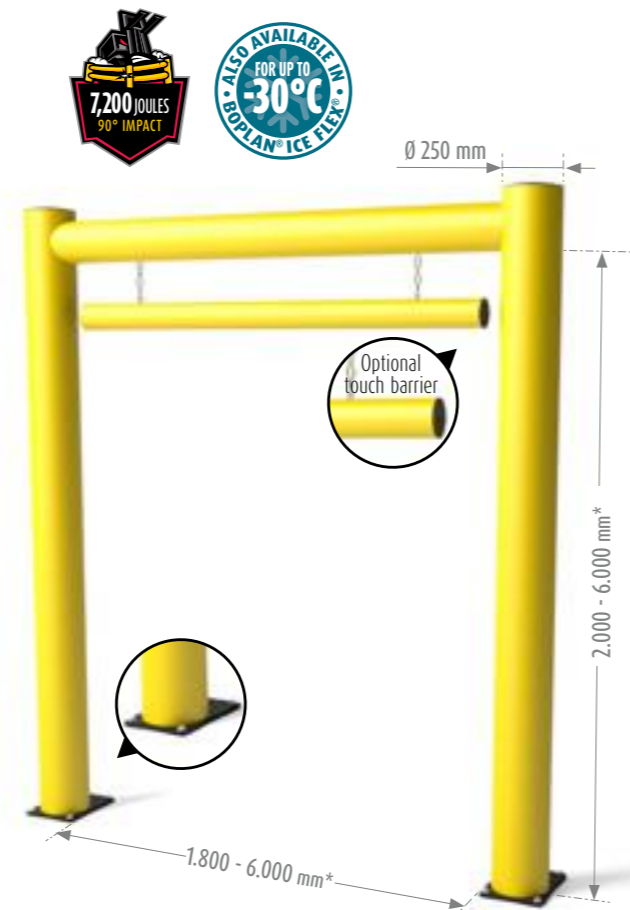
With the BOPLAN® SignMark 200 you can easily add important messages in the workplace there where they are most relevant and visible. The SignMark 200 can be installed on every Ø200mm tube of a bollard, goal post, traffic barrier or other in order to convey the right message at the right spot: one way traffic, speed limits, mandatory safety equipment, special warnings, etc. The sign boards are designed for a perfect fit and signs can easily be replaced with just a click.



GP GOAL POST 200



GP GOAL POST 250



\* Additional supports required if > 4.000 mm

FLEXIBLE HEIGHT LIMITER AND PROTECTIVE PORTAL TO PROTECT CRASH DAMAGE IN ELEVATED PLACES

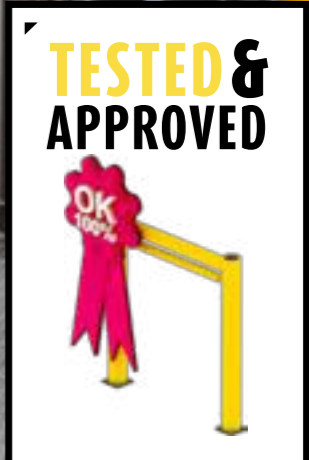
The Goal Post within the FLEX IMPACT® array is a flexible height limiter that protects your high gates, canopies and bridges from collisions with high vehicles, such as elevated work platforms, trucks and buses. A Goal Post consists of a portal and an

unattached, adjustable tube or touch barrier. The Goal Post is available in sizes tailored to your needs and in a variety of colours, with or without a touch barrier.



*“Since the installation we experienced how after impacts, even quite violent, the safety barriers protected the installations perfectly and no repair was necessary. We chose BOPLAN® because of the responsiveness and service received.”*

– Production Project Leader at SCA Hygiene Products





# HANDRAILS

FLEXIBLE PLASTIC HANDRAILS FOR VARIOUS APPLICATIONS

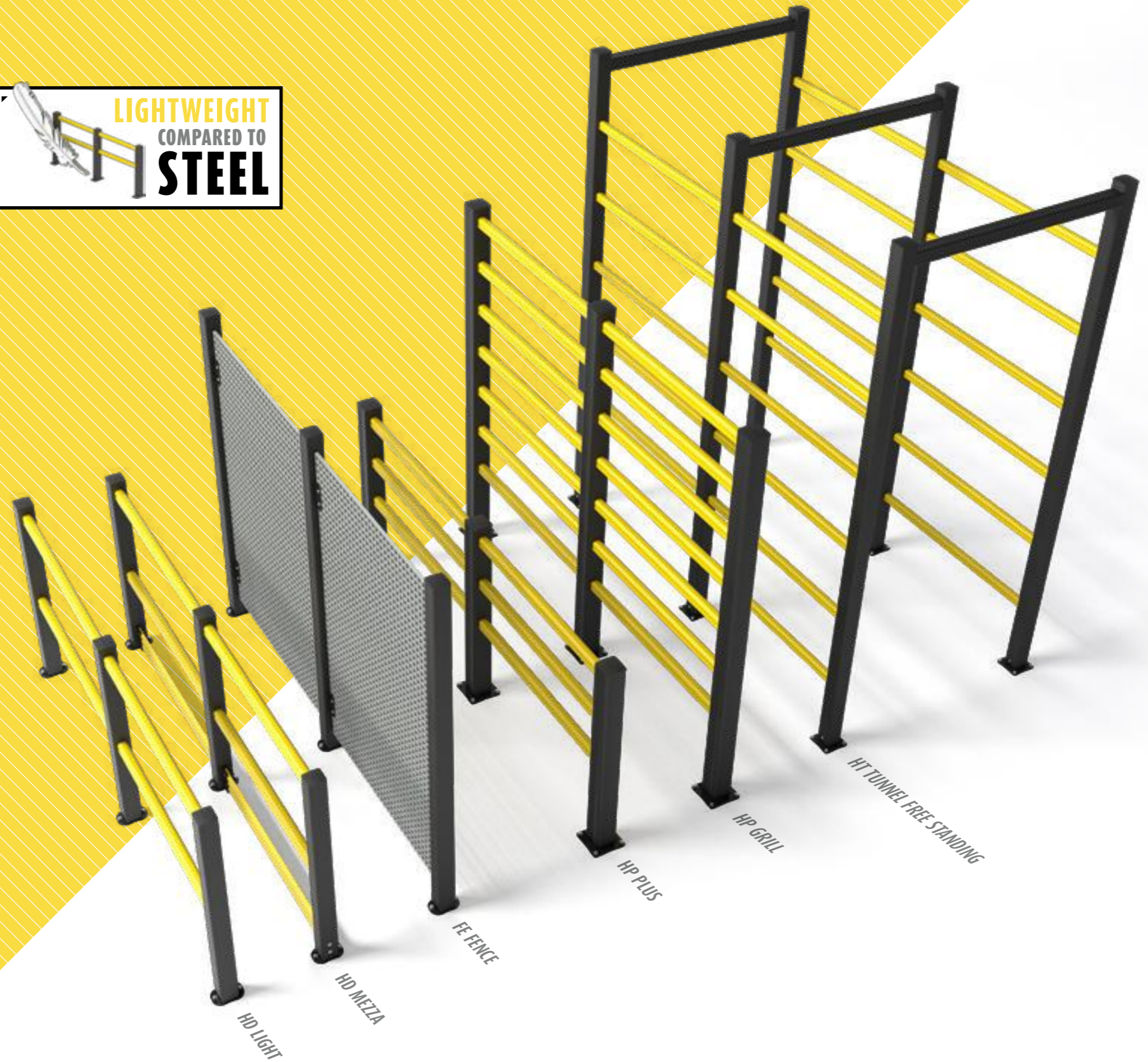
Peaceful cohabitation between man and vehicle requires strict rules and safe partitioning. Our FLEX IMPACT® handrails have been specifically designed to provide logical, clear separations between people and vehicles in busy, high-traffic areas. Our flexible handrails are available in three separate versions, from light to heavy, to help you with your safety needs. In addition, you also have the choice between handrails with two or three rails, in accordance with the situation that needs to be secured.

MULTIFUNCTIONAL RAIL SYSTEM AS SAFETY GATE, BOTH INSIDE AND OUTSIDE

The FLEX IMPACT® handrails provide a multifunctional rail system for various applications, indoor or outdoor. There is no idea too wild: from balustrade to safety gate, we provide the appropriate flexible and impact-resistant safety gate for any situation. All of our handrails are made of high-quality, high-performance synthetics, which will make the properties of traditional natural resources seem like yesterday's news.



▲ HP Plus with KP 150

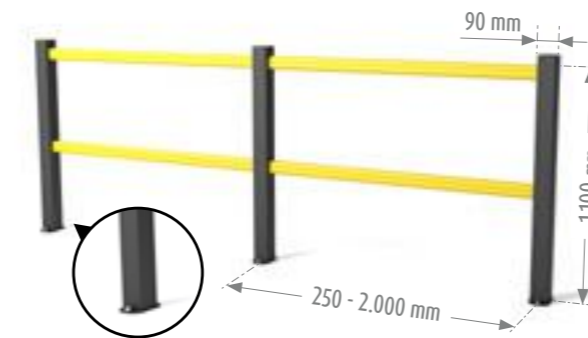




*“Everything was a success and the factory is taking a liking to it very well! We are extremely satisfied with the product here.”*

- Warehouse Manager at Nestlé

▲ HP Plus



### HD LIGHT



A LIGHT HANDRAIL, THE PERFECT ADDITION TO FLOOR MARKINGS

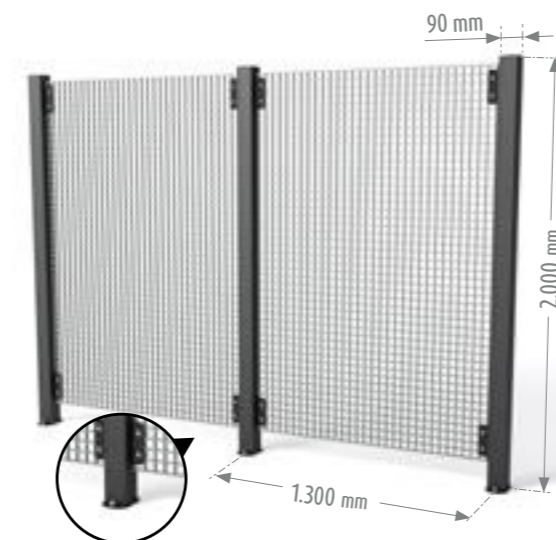
A physical barrier with HD Light handrails compels people to follow the prescribed route and therefore prevent possible accidents in the workspace. That is why we always advise to supplement Line Plan or any other floor demarcation system by a light safety gate or balustrade such as the HD Light. This approach allows us to offer a durable safety product with a cost-efficient impact that should not be underestimated.

### HD MEZZA



BALUSTRADE FOR PEDESTRIANS ON MEZZANINE AND HEIGHTS

The HD Mezza is an excellent choice when you are looking for a handrail with extra skirting board to provide fall protection for people and objects. The HD Mezza is suited as a balustrade to safeguard the safety of pedestrians who are working at height, such as on a mezzanine, a floor or a work platform.



### FE FENCE

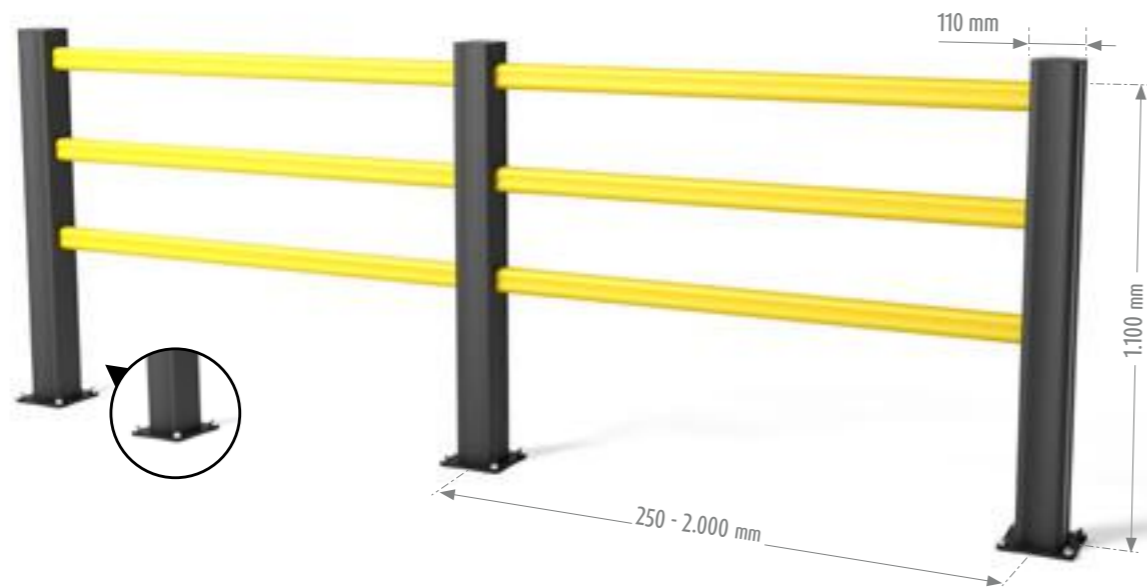


COST-EFFICIENT MACHINE GUARDING AND PROTECTION FOR PEDESTRIANS

Keep fingers and hands safe from machinery with the FE Fence. The FE fence is designed to protect pedestrians from machinery by creating a physical barrier between them and your equipment. It will keep pedestrians at a safe distance and stop them from falling onto equipment if they stumble or trip in the area.



**HP PLUS**



**REINFORCED SEPARATION FOR PEDESTRIANS AND BOUNDARIES FOR HIGH-RISK AREAS WITH TRAFFIC**

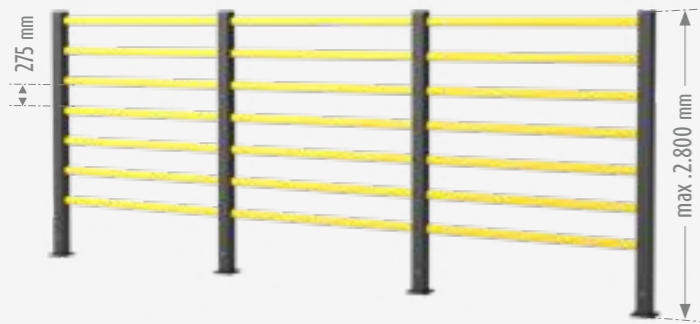
The HP Plus safety gates are the strongest version of the FLEX IMPACT® handrails. By adding a third extra horizontal rail and heavier posts, we want to focus on separating and shielding pedestrians from high-risk traffic zones where constant manoeuvring takes place.

**HP GRILL**



**CRASH PROTECTION AGAINST FALLING GOODS**

HP GRILL was designed to protect people against falling products in zones without forklift traffic. This separate shielding ensures a clear segregation between people and (stacked) goods. Depending on the size of the goods, one can opt for an arrangement with a centre distance between the rails of 275 mm or 550 mm.

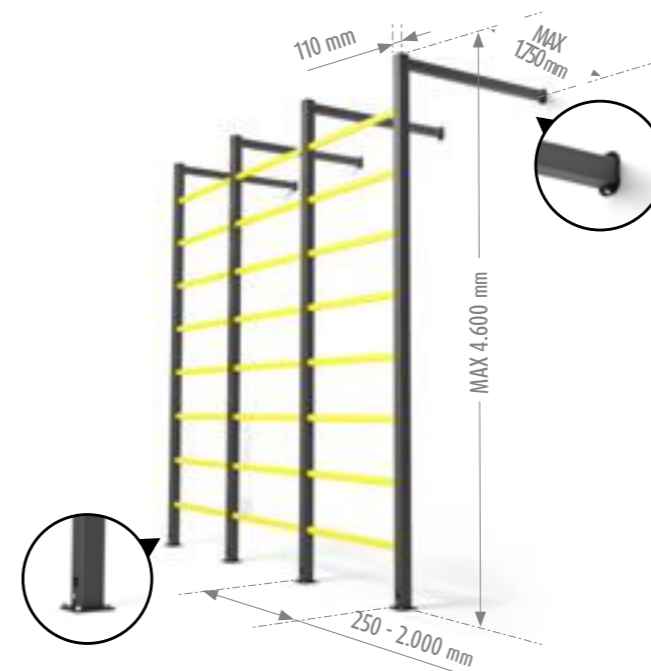


**HT TUNNEL FREE STANDING**



**PROTECT PEDESTRIAN WALKWAYS FROM FALLING PRODUCTS AND STACKED GOODS**

The HT Tunnel is designed to protect pedestrian walkways and is ideal for creating a safe passage between stacked goods. The flexible barriers on either side prevent falling products from landing on passing pedestrians. The free standing tunnel can be easily installed wherever needed to protect your people from lighter falling products.



**HT TUNNEL WALL FIX**



**PROTECT PEDESTRIAN WALKWAYS FROM FALLING PRODUCTS**

The HT Tunnel wall fix is very similar to the free standing version but is connected to a wall on one side. It is the ideal solution for pedestrian walkways that run alongside a wall. These could be next to stacked good, traffic zones or at height. The HT Tunnel offers flexible protection.



# SAFETY GATES

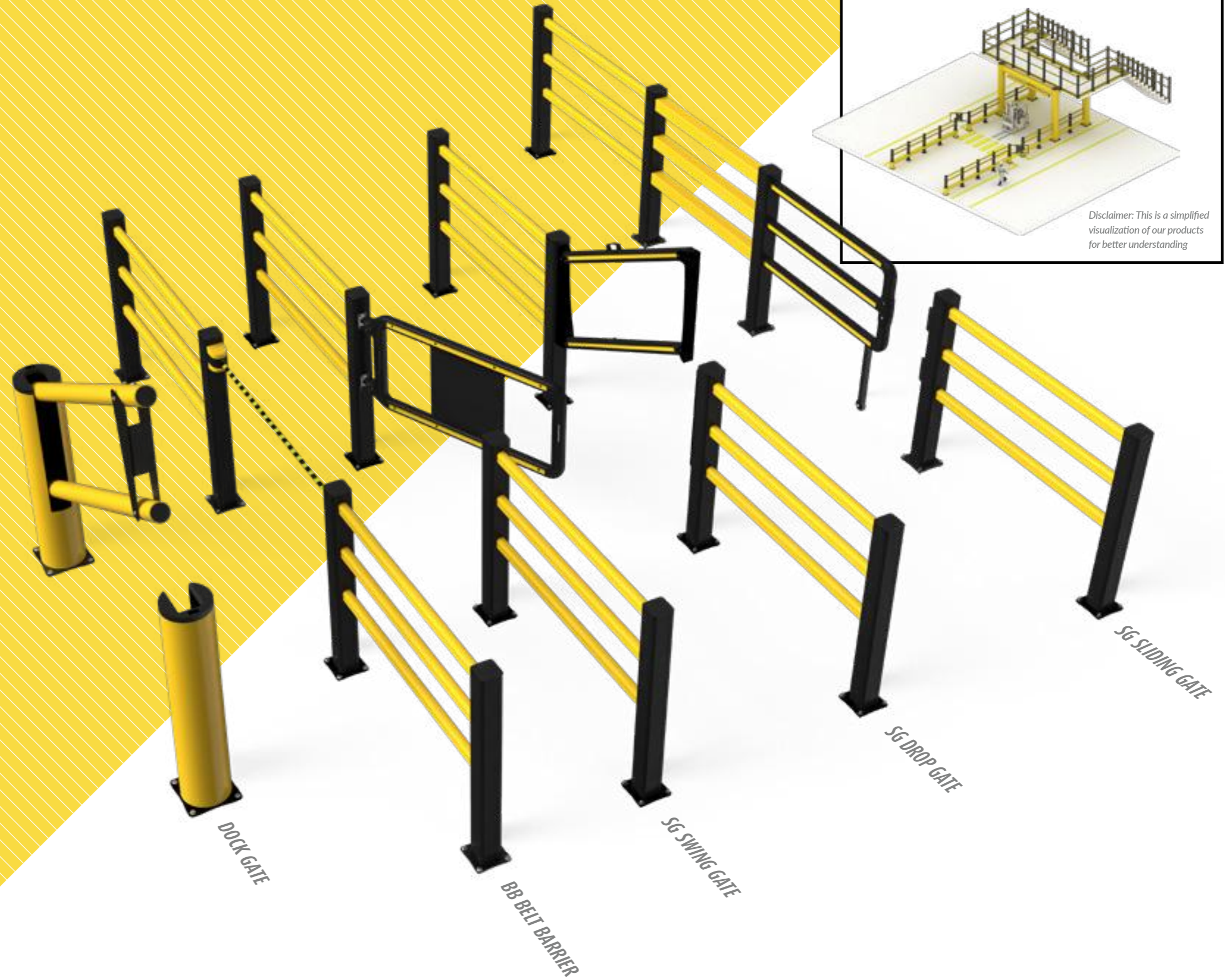
## INNOVATIVE SAFETY GATES AS A BARRIER TO UNAUTHORISED PERSONNEL

If we are talking about the polymer safety materials used in our FLEX IMPACT® family, we should not fail to mention our innovative safety gates. In locations where safety is a necessity, carelessly leaving gates open could lead to far-reaching consequences. Due to the various gates in our array of Safety Gates, you can easily eliminate these risks.

To ensure even greater safety, our access gates are supplied with accompanying balustrades. In addition, both the sliding gates and swing gates are provided with a self-closing system, ensuring that traffic between the various zones in your company not only proceeds at a faster pace, but also stays more secure. Safety gates are the perfect way to close off hallways and machine rooms of which access is restricted to authorised personnel.



▲ HP Plus with SG Swing Gate



Always physically separate traffic lanes from pedestrians, use safety gates at clearly marked crossings or dangerous areas.

Disclaimer: This is a simplified visualization of our products for better understanding



**LIGHTWEIGHT**  
 COMPARED TO  
**STEEL**



### SG SLIDING GATE 2.0



#### SAFETY GATE WITH A SLIDING DOOR

The SG SLIDING GATE 2.0 is a safety gate that opens and closes by means of a sliding door. This solution is particularly suitable for spaces with limited freedom of movement. The optimized ergonomic design allows a perfect fit with other BOPLAN safety systems such as TB400 Plus etc. The gate is available in a version for outdoor use.

### SG SWING GATE



#### SAFETY GATE WITH A SELF-CLOSING SIDWAYS SWING GATE

The SG Swing Gate is a safety gate that opens on both sides. The self-closing mechanism prevents doors and accesses to be left open, avoiding potentially dangerous situations. The robust door has an ergonomic design and is equipped with a signalization board.



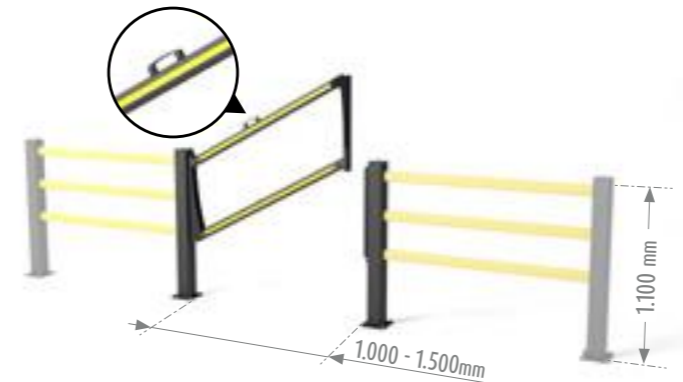
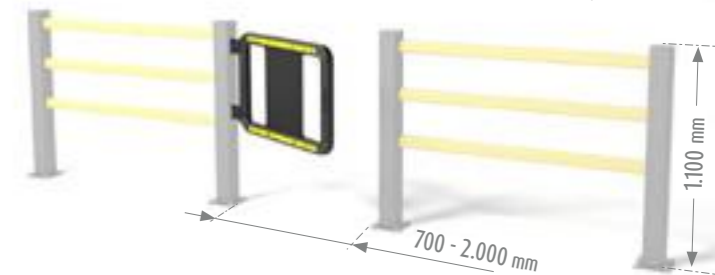
The SG SWING GATE can be mounted on a bollard by use of a special adapter.



Included closing block

Included gate stop

Standard wheel support for widths >1,500 mm



### BB BELT BARRIER



#### VISUALLY CLOSE OFF AREAS TO PREVENT PEDESTRIANS FROM ENTERING DANGEROUS ZONES

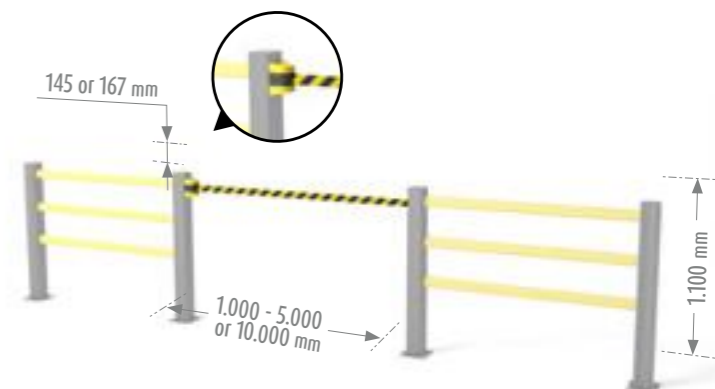
The belt barrier allows you to quickly close off an area such as a doorway, gate or loading dock opening. This prevents pedestrians from walking into the path of moving vehicles, stepping into an uncovered opening or entering into an area where maintenance is being carried out. The belt barrier is available in two belt lengths of either 5m or 10m.

### SG DROP GATE



#### SAFETY GATE THAT OPENS WITH AN UPWARD MOVEMENT

The SG Drop Gate is a safety gate that was specially developed for closing off access ways that have insufficient space to install a classic swing gate. This access gate opens with an upward movement.





### DOCK GATE



#### LOADING DOCK FALL PROTECTION SYSTEM

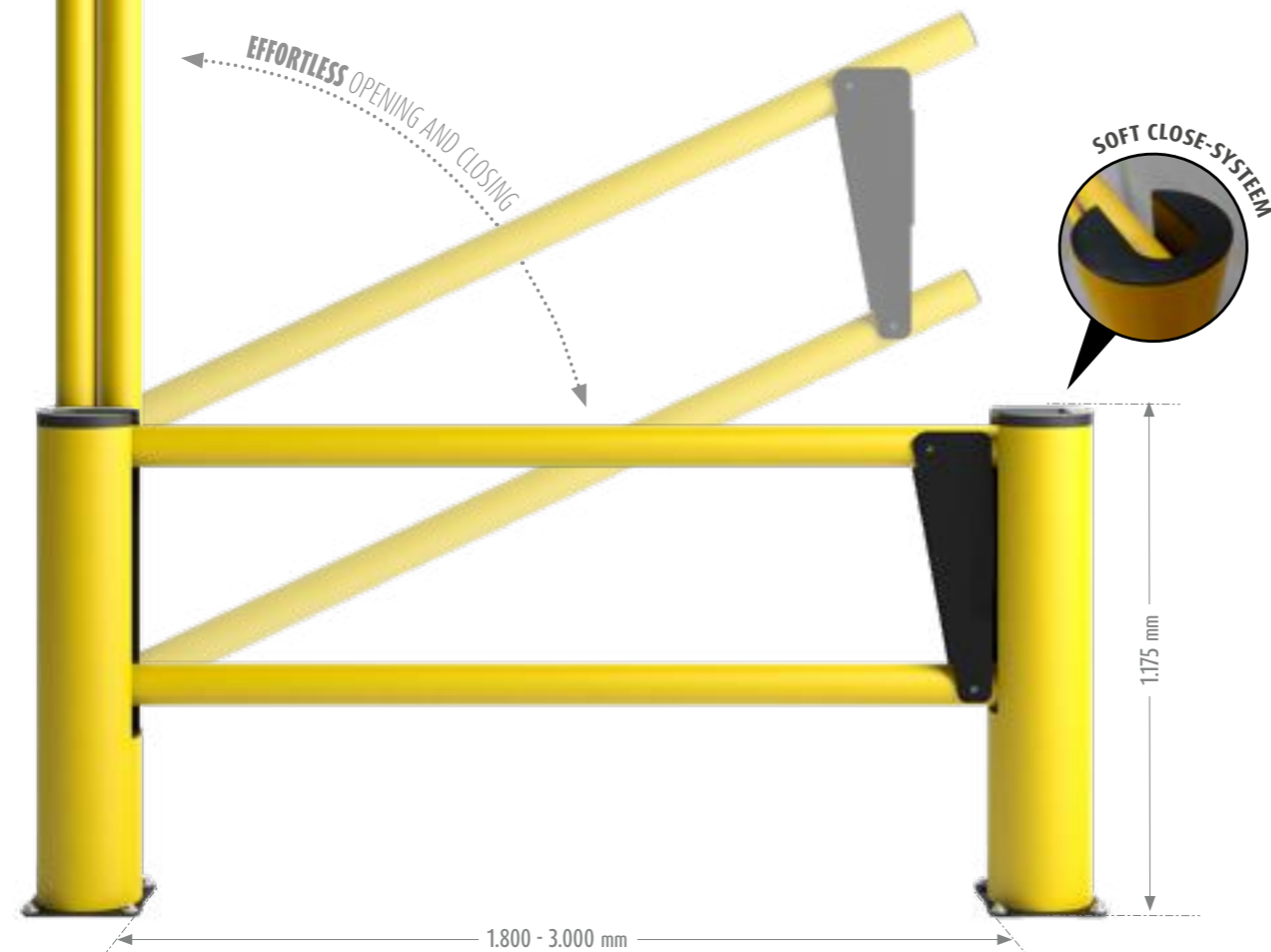
Gate with a double rail system for pedestrian fall protection at loading docks. The Dock Gate is equipped with a hydraulic assist mechanism for a smooth and easy operation. The soft close mechanism ensures that the gate closes automatically in a controlled and safe manner. In addition, the dock gate provides protection for your fragile door tracks. The sophisticated design with very few components enables the time of installation to be reduced to a minimum.



### DOCK GATE FORCE



The "Force" version of the Dock Gate offers a more robust protection to withstand impacts of up to 10.000 Joules. This gate is ideal for workplace areas that require extra protection due to an increased risk of collisions with forklifts.

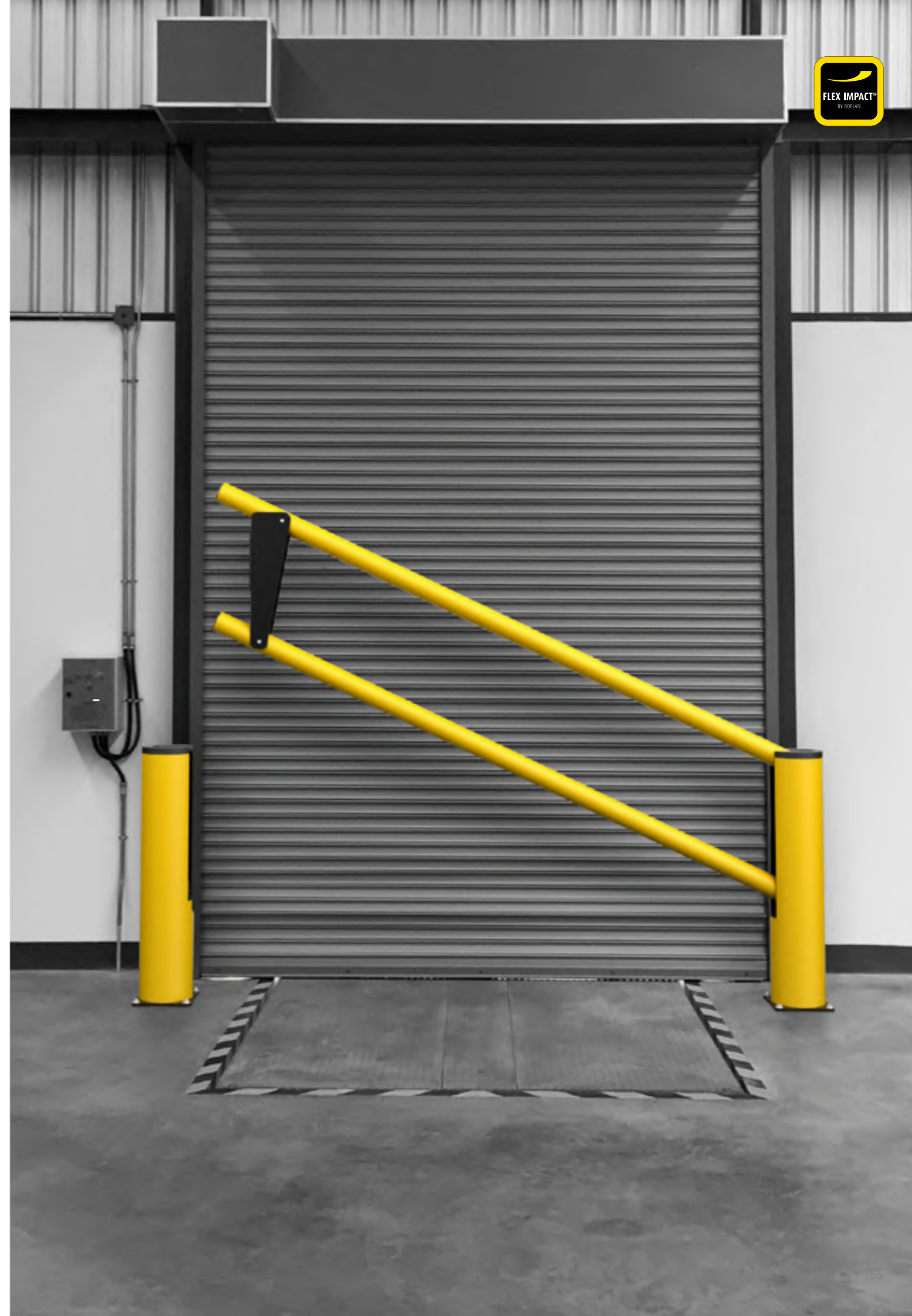


#### FEATURES

- ▶ Protected shutter mechanism
- ▶ Compact and straightforward design
- ▶ Indoor use
- ▶ Easy and fast installation
- ▶ Dock Gate Force version for increased protection
- ▶ Flexible and impact-resistant rail and post system

#### APPLICATIONS / TYPICAL ENVIRONMENTS

- ▶ Loading and unloading zones
- ▶ Distribution centres
- ▶ Warehouses and storage facilities
- ▶ Transport and logistics centres
- ▶ Logistics, supply chain and materials handling industries
- ▶ Commercial real estate





# RACK PROTECTORS

FOR OPTIMUM WAREHOUSE PROTECTION

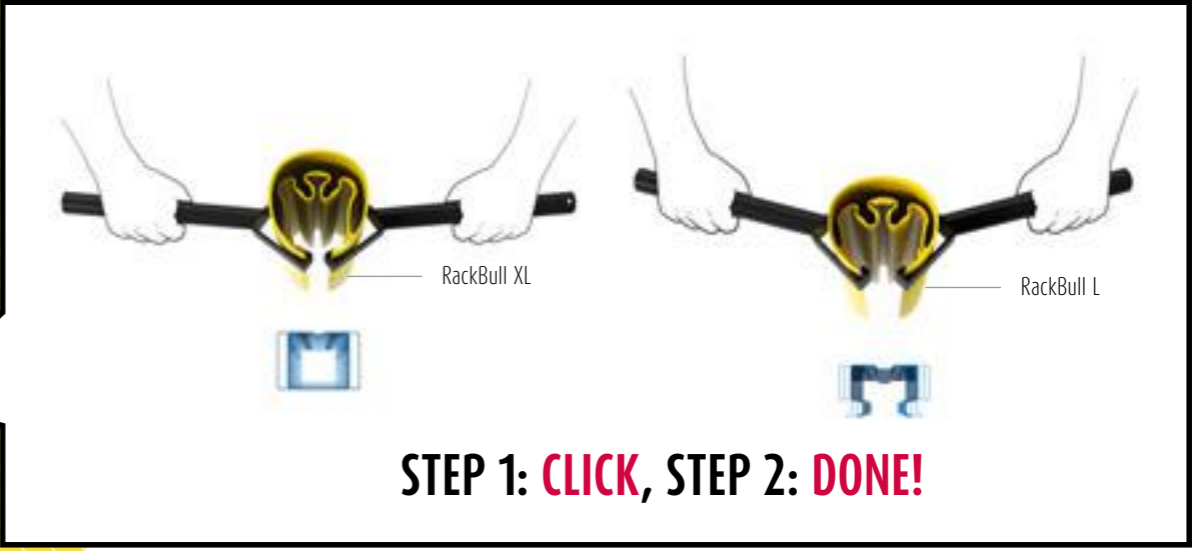
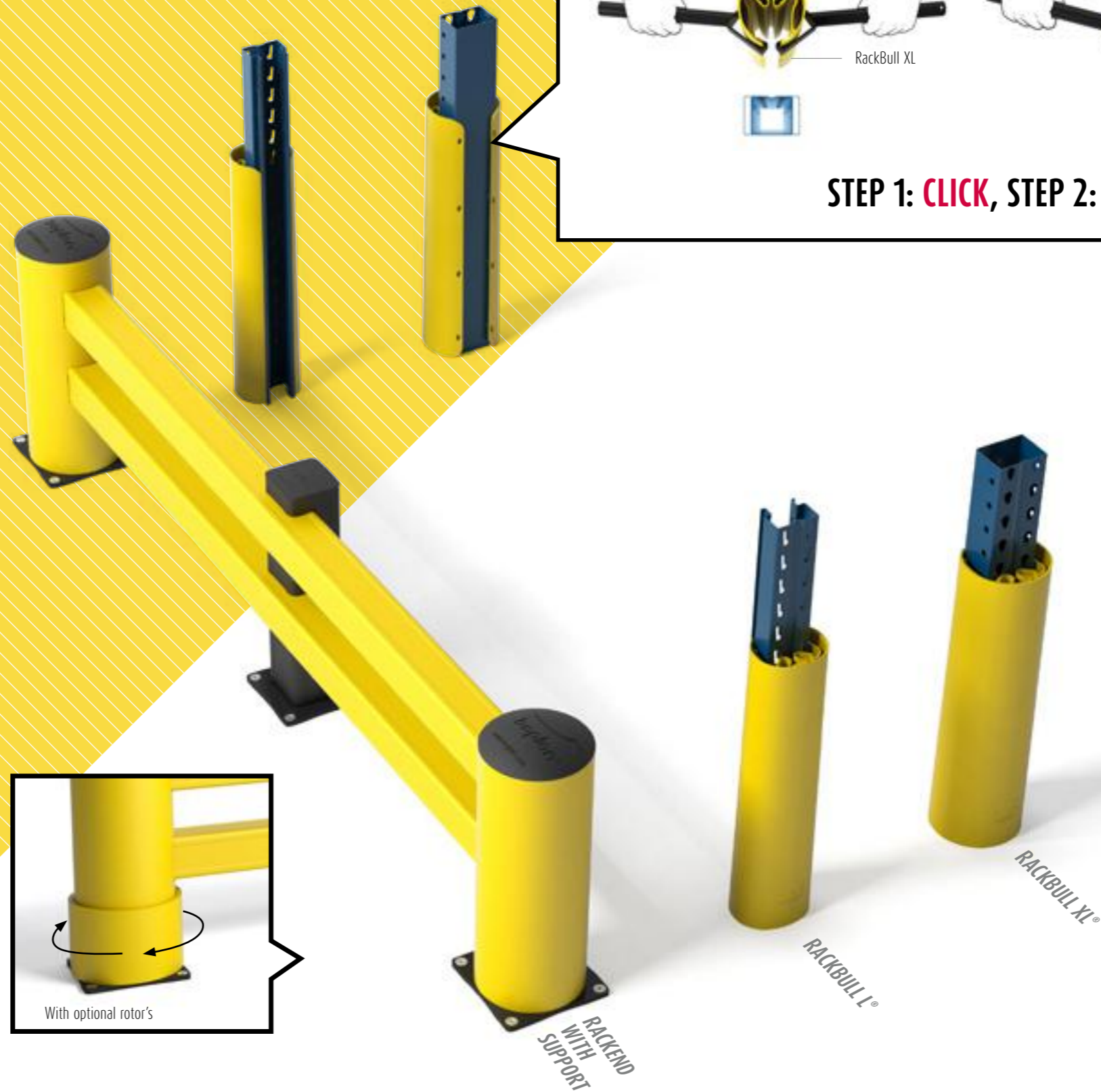
Rack protectors will not only save you from considerable warehouse damage, they will also help you prevent human suffering. Crashes between racking and forklifts are among the most common workplace accidents in warehouses. Warehouse operatives are often under severe time constraints and often have to manoeuvre quickly in a relatively small space. A crash against a rack is therefore an accident waiting to happen. Almost every time, these types of crashes lead to material damages with costs going through the roof, all because of rack collapse, often aggravated due to an uncontrollable domino effect. In addition, this almost always causes life-threatening situations for the forklift driver as well as the other staff that happen to be in the warehouse at that time.

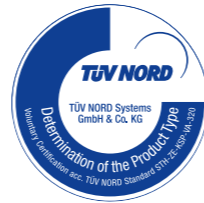
## PREVENT WORKPLACE ACCIDENTS WITH SOLID RACK PROTECTION

By installing Rack Protectors from Boplan's FLEX IMPACT® family, you can almost entirely eliminate the chances of this type of disaster scenario. This impact-resistant series of materials for rack protection is extraordinarily energy-absorbing and flexible. After a crash, the rack protection will return to its original shape and retains its external appearance and properties, whilst leaving your racking intact.



▲ TB RackBull with RE Rack End





RACKBULL® L



Optional Impact Foam    Optional Dust Cap

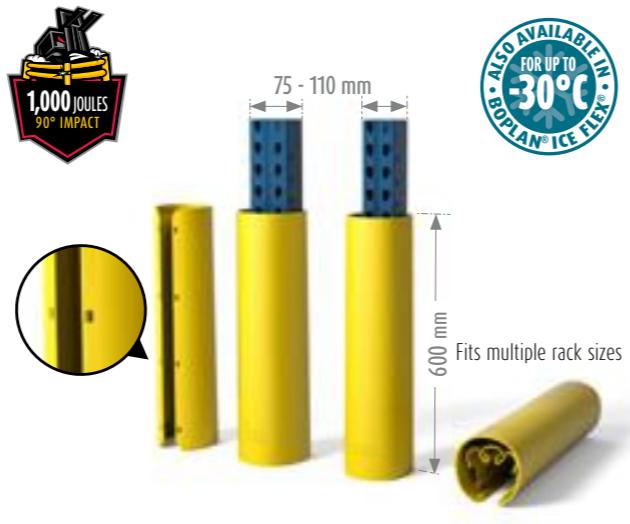
RACKBULL® XL



Optional Impact Foam    Optional Dust Cap



Fits multiple rack sizes



Fits multiple rack sizes

THE UNIVERSAL RACK PROTECTION THAT FITS ALL RACKING

The RackBull from BOPLAN® is an innovative rack protection system within the FLEX IMPACT® range to help prevent rack collapse due to crashes. The lack of a single international standard in racking dimensions makes it particularly difficult for companies to find rack protection that will fit on all of their racking. After

all, there are currently various diameters common in rack supports. RackBull deals with that problem in a spectacular way. With this rack protection, you won't have to worry about exact measurements anymore, because RackBull is the first universal rack protector in the market.

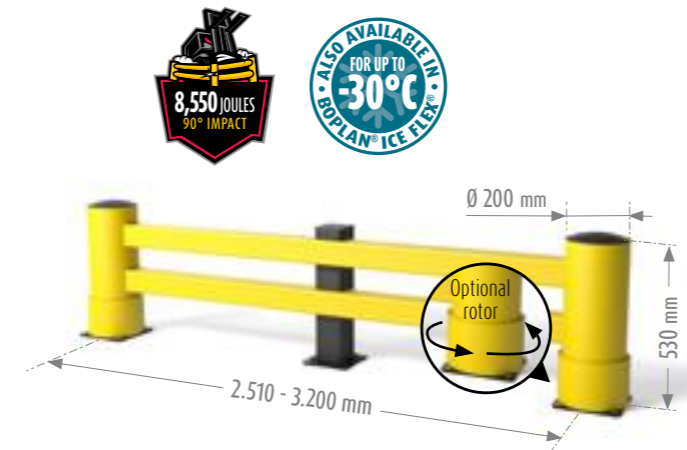
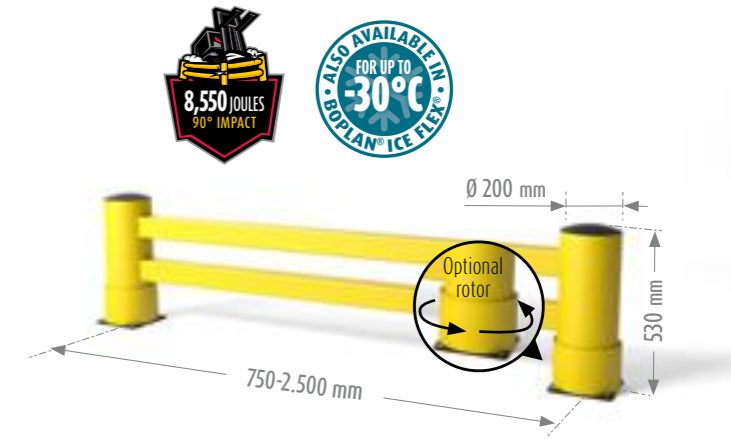


RE RACK END



CRASH PROTECTION AT THE ENDS OF YOUR RACKING

The RE Rack End is a perfect shield for the ends of your racking. Warehouse operatives are often under severe time constraints when they have to manoeuvre their forklifts, Clark lifters or pallet trucks in the aisles between the racks. A crash is often just a corner away, causing the collapse of the racking and sometimes even causing a serious domino effect.

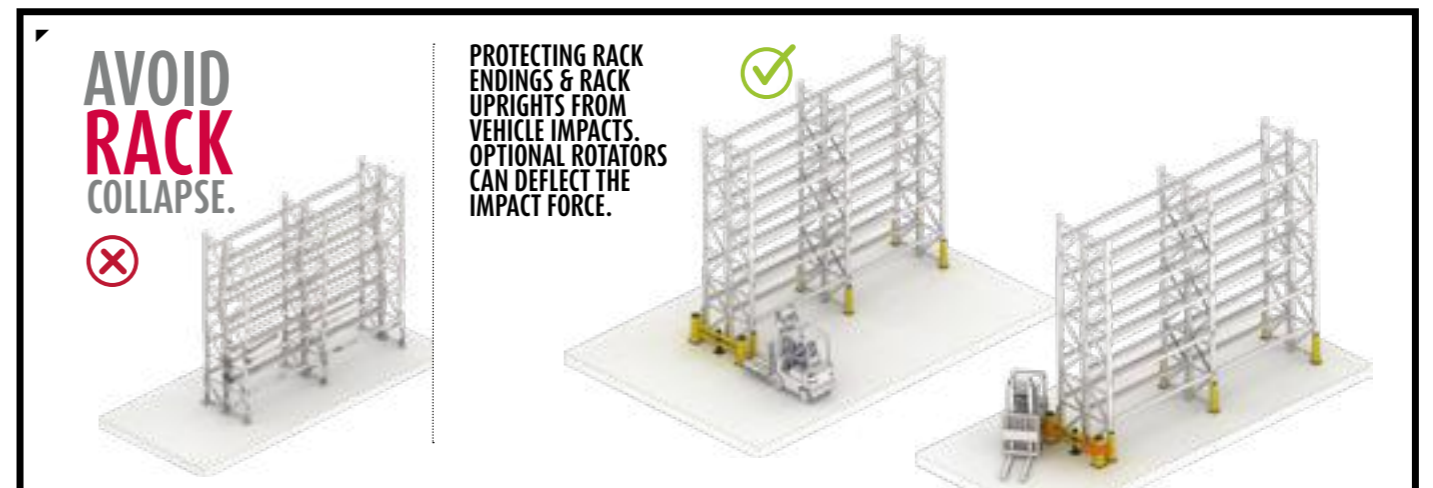


RE RACK END WITH SUPPORT



FORTIFIED CRASH PROTECTION FOR RACKING

The RE Rack End with Support is a fortified version of the existing RE Rack End from the rack protection series in the FLEX IMPACT® family. The fortified mid-post provides extra support and robust reinforcement, protecting from collisions involving the ends of your racking. Warehouse operatives who are often under severe time constraints sometimes collide with the racks when they have to manoeuvre their forklifts, Clark lifters or pallet trucks in the aisles of your warehouse. The consequences cannot be underestimated: rack collapse, damaged goods, and sometimes also physical injury.





# COLUMN & CORNER PROTECTORS

## THE BEST PROTECTION FOR LOAD-BEARING PILLARS AND COLUMNS

Industrial collision safety measures by means of column protectors prevent expensive and structural damage to columns, posts and pillars in warehouses, production halls, airports and parking facilities. Tested and approved, and developed in accordance with the most stringent safety standards, these products provide all-round protection.

Every year in numerous working environments all over the world, a great deal of damage is caused to columns, posts and pillars by collision with moving vehicles. BOPLAN® column protectors offer ideal protection for columns, pillars and posts. Not only will FLEX IMPACT® column protection enable you to prevent expensive damage to your building and vehicles, vehicle operators will be better protected against injury thanks to FLEX IMPACT®'s unique characteristics. BOPLAN® column protectors were designed specifically to enhance safety in industrial working environments, particularly in situations where forklift and pedestrian traffic regularly converge. The application of large BOPLAN® protectors is an attractive, versatile and highly visible method to guarantee a safe flow of traffic on the work floor and minimize expensive damage to freestanding columns in industrial buildings. BOPLAN® FLEX IMPACT® safety products were designed to provide columns, pillars and posts in working environments the highest possible degree of impact protection. They minimize the impact force with which colliding vehicles can damage columns, eliminating virtually all risk of damage through their absorption power and safeguarding the structural integrity of your pillars. BOPLAN® can offer suitable protection for pillars and columns of all possible sizes.



▲ KP 150

With a wide range in diameters, the most suitable form of column protection can be installed in every working environment. Made from flexible and unbreakable plastic or polyolefin, BOPLAN® column protectors provide an extra layer of protection around the most vulnerable pillars or columns in your warehouse. Thanks to the flexible synthetic material with which the column protectors are made, they fully absorb the impact of collisions, protecting your vehicles, pillars or columns, and drivers.



Stackable for protection at heights

Can be used on pillars and columns of various shapes and sizes

Air columns for controlled impact absorption

Installation in only a few seconds with broad Velcro® ties

Manufactured from polyolefin  
Colored through to the core  
UV-resistant  
Non-conductive  
Water-resistant

Ability to screw halves together



# KP SERIES

## OFFERS NUMEROUS ADVANTAGES

BOPLAN® offers high-quality, advanced and efficient column protection for your pillars, columns and buildings. BOPLAN® polyolefin protectors offer an extremely high degree of impact resistance and come in yellow as a standard, the colour commonly used to designate safety hazards. Thanks to "Active Memory", they retain their original shape and/or position after every collision. As synthetic materials do not rust or need painting, they are a cost-efficient solution for every warehouse.



Available in various shapes/sizes



Consists of two separate parts



Supporting smaller size underneath corners thanks to recesses\*



Can be fitted around round, square, octagonal or rectangular pillars\*\*

\*KP 400 & KP 600 excluded \*\* Optional extensions

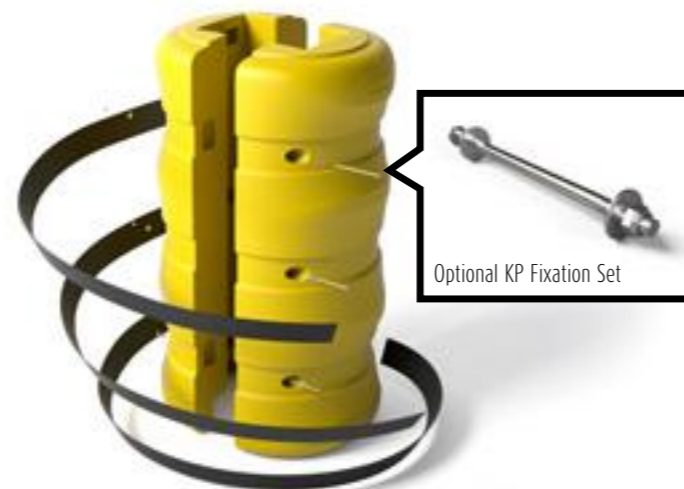


## INCREDIBLY STRONG & EXTREMELY IMPACT-ABSORBENT

- BOPLAN® column protectors are made from a flexible and unbreakable plastic or synthetic material.
- They minimize the collision impact caused by a forklift that can damage pillars, the surrounding support points and the forklift itself - or injure its driver.
- Strategically placed curves and recesses are installed around the column protector to eliminate collision forces on the column or pillar.
- Air columns eliminate interior air at a controlled speed during the collision, enabling the protectors to retain their resistance against colliding forces while deflating.
- BOPLAN® Column Protectors will never slide away, regardless of the collision angle.
- Our extensively tested protectors are elastic, flexible and shape-retaining, with a high impact absorption capacity.
- Following a collision with a vehicle or forklift against steel or concrete pillars of a building's skeleton or warehouse, the column protector will retain its original shape thanks to its extensive absorbing capacities.

## UNIQUELY PROMINENT APPEARANCE

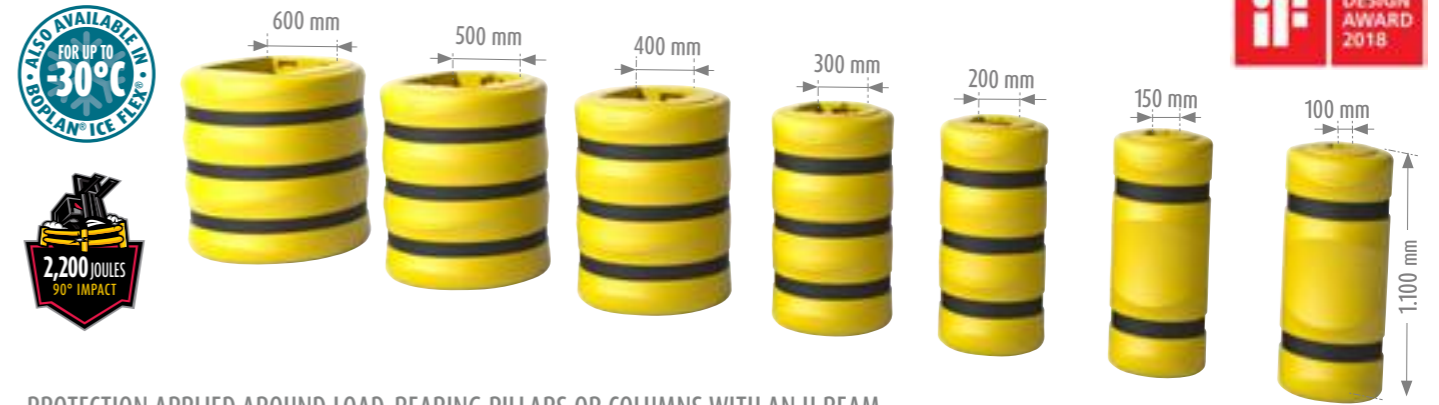
- Eye-catching yellow: prominently visible in the universal colour for designating a safety hazard (also available in other colours).
- UV-resistant plastic prevents loss of colour and discoloration.
- The shape and number of recesses are taken into consideration during the design phase to create a flowing design. This will prevent any dust or dirt from accumulating in angular recesses.
- The protectors are water-resistant, do not rust and are therefore easy to clean;
- Impervious to most chemical products and non-conductive.



Optional KP Fixation Set



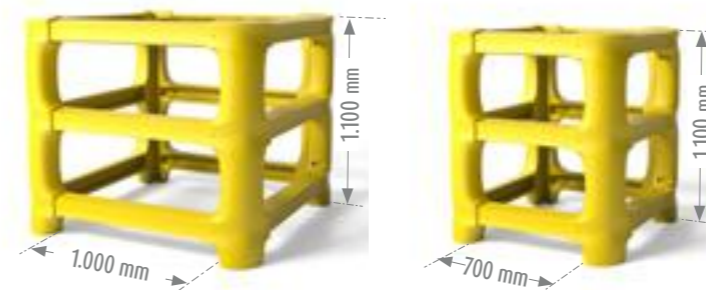
## KP PROTECTORS



### PROTECTION APPLIED AROUND LOAD-BEARING PILLARS OR COLUMNS WITH AN H BEAM

The KP Protector is a round column protector for all-round load-bearing pillars or columns with an H beam. This pillar protection will help you prevent collision damage to masts, load-bearing pillars and

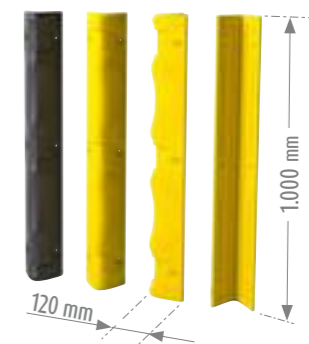
columns in factories and warehouses. The KP protector consists of two parts that can easily be snapped shut around the pillar.



## CP PROTECTOR

### CORNER PROTECTION FOR THE MOST VULNERABLE WALLS AND CORNERS

The CP Corner Protector provides an impact-resistant corner protection or wall protection for all types of walls, partitions and corners, but also for small pillars and machines in your company, garage, warehouse or shop. The CP corner protection is part of the flexible and durable FLEX IMPACT® collision protector series and is available in both yellow and black. The CP corner and wall protection is light, easy to install and will protect even the most vulnerable ends and corners of your walls and partitions.



## CP UNIVERSAL

### MODULAR AND UNIVERSAL PROTECTION OF LARGE COLUMNS AND MASTS

The CP Universal is part of the FLEX IMPACT® family and just as all other products in this series, is extremely impact-resistant. With its enormous capacity for compression, this product handles shocks, absorbing them even during the slightest collisions. Durable and maintenance-free synthetic column protection is available in highly visible signal yellow. Thanks to its modular 'one-size-fits-all' construction, it is suitable for pillars of all dimensions. After impact, the CP Universal column protector will retain its shape, appearance and characteristics.



# SOFT COLUMN COVER

PROTECTS INFRASTRUCTURE AND PEOPLE AGAINST LIGHTER IMPACTS

The BOPLAN® SOFT COLUMN COVER with its 50 mm thick impact-absorbing foam layer is designed to protect columns against impacts from lighter traffic and to prevent people from being injured by sharp edges of steel columns or other hard metal pillars. With a height of 1800 mm and a striking yellow color, the SOFT COLUMN COVER guarantees optimal visibility. Installation is quick and easy with Velcro® strips. The water and UV resistant, hard-wearing PVC covering is easy to clean. In addition, 3 different diameters are available for a perfect fit.



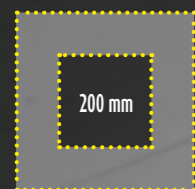
1,800 mm



200 mm



250 mm



300 mm



## APPLICATIONS / TYPICAL ENVIRONMENTS

- ▶ Protection of people and columns
- ▶ Car park buildings
- ▶ Commercial real estate
- ▶ Distribution centers
- ▶ Industrial real estate
- ▶ Logistics, supply chain and material handling industries
- ▶ (Petro-)chemical plants
- ▶ Transport and logistics centers
- ▶ Warehouses and storage facilities

## ADVANTAGES

- ▶ 5 cm thick foam layer absorbs impact
- ▶ Highly visible due to contrasting color and height (1800 mm)
- ▶ Choice of 3 different diameters for a tight fit
- ▶ Easy to install and remove with Velcro® strips
- ▶ Water and UV resistant
- ▶ Easy to clean
- ▶ Long-lasting and hard-wearing



# SAFETY TOTEM

EXTRA-LARGE POLYMER SAFETY CONE FOR OPTIMAL PROTECTION AND SIGNALING

The SAFETY TOTEM ensures effective protection of dangerous obstacles on the work site where there is traffic from forklift trucks, trucks, bulldozers or other (heavy) rolling stock.

Due to its height of 2m40 and striking yellow color, the totem also has a clear signaling function in which drivers and employees are remotely alerted to a possible danger even from e.g. a truck cabin. The totem has a large panel on the front on which all kinds of messages can be communicated. Large black arrows indicate which side to pass the totem. The totem can be weighted with water for optimal stability and has special recesses for easy transport with a forklift.



- 1 Lifting eye in galvanized steel for quick and easy installation
- 2 Replaceable arrows indicating which side the totem must be passed
- 3 Safety yellow for maximum visibility (UV resistant polymer)
- 4 Signage board (1030mm x 1370 mm)
- 5 Special recesses for easy transport with forklift



▲ Safety Totem

## APPLICATIONS / TYPICAL ENVIRONMENTS

- ▶ Loading and unloading platforms
- ▶ Transport and logistics centers
- ▶ Distribution centers
- ▶ Warehouse and storage facilities
- ▶ Workplace areas with vehicle traffic
- ▶ Areas where special attention is required



# KICK RAILS & WHEELSTOPS

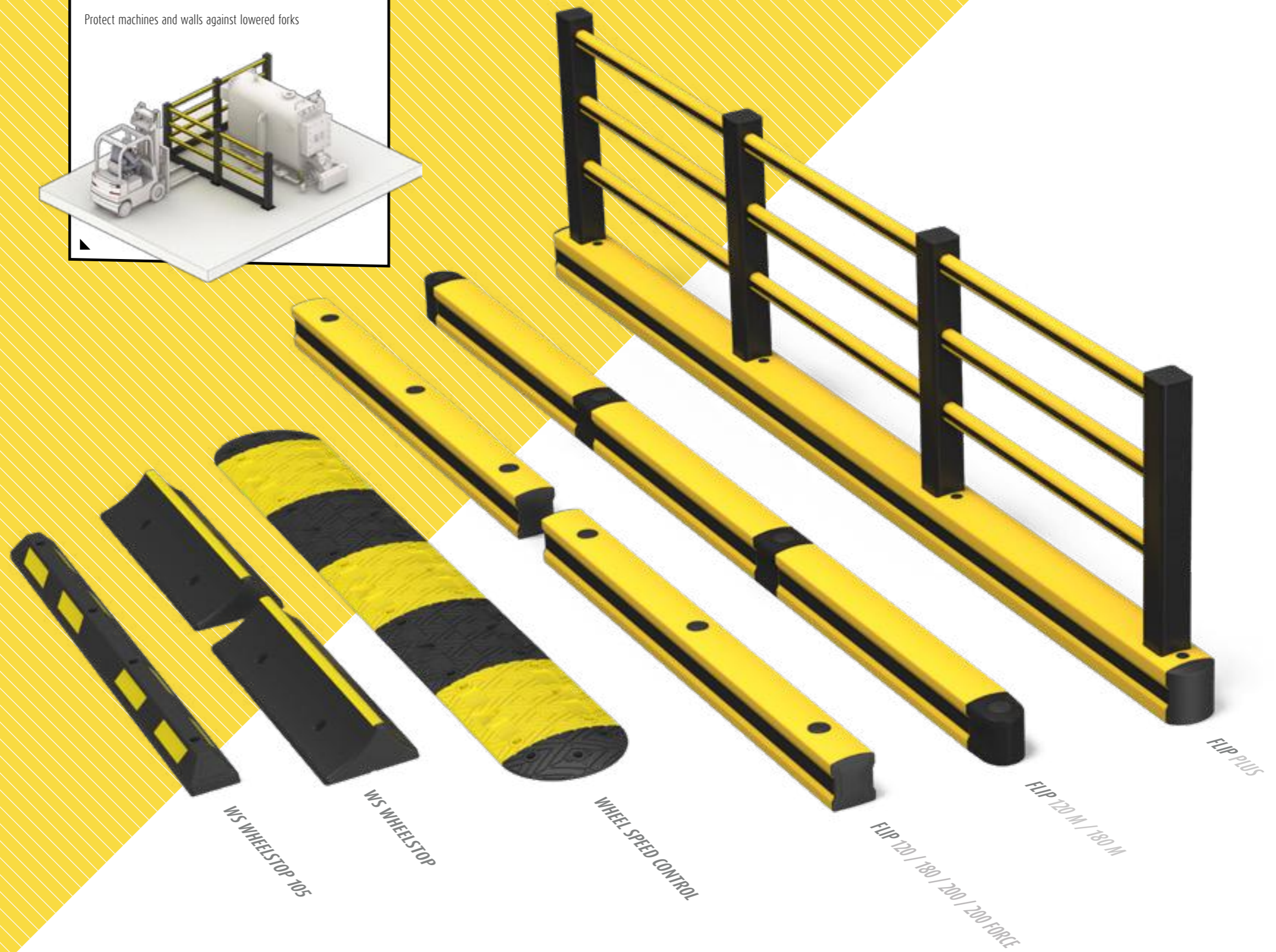
PROTECTION AGAINST IMPACTS AT LOW HEIGHT AND SOLUTIONS FOR VEHICLE PARKING

Our kick rails are ideal for protecting people, walls and machines from impacts at low height.

They also act as wheel guides or stoppers for light wheeled-equipment such as pallet trucks and trolleys. Next to our kick rails, we also offer specially designed wheelstoppers which prevent vehicles from overshooting their parking space. Our kick rails and wheelstoppers can be customized to fit the needs of your business.



▲ FLIP PLUS



WWS WHEELSTOP 105

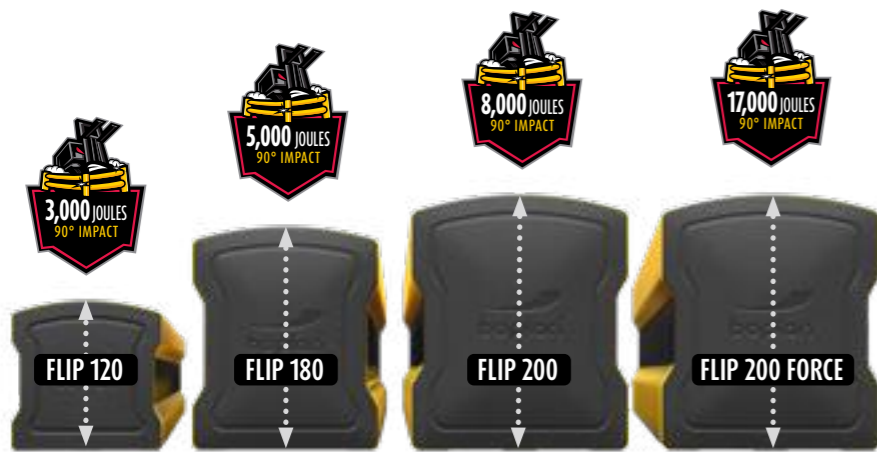
WWS WHEELSTOP

WHEEL SPEED CONTROL

FLIP 120 / 180 / 200 / 200 FORCE

FLIP 120 M / 180 M

FLIP PLUS



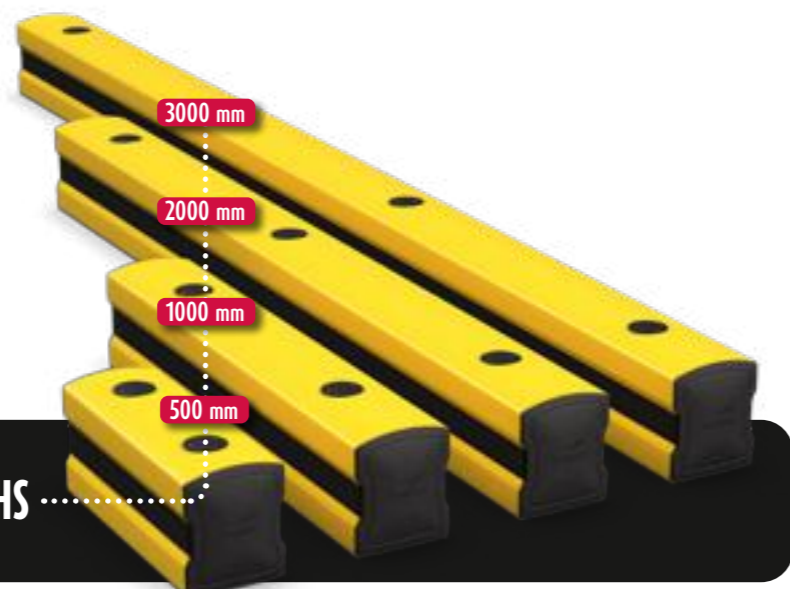
### FLIP 120 / 180 / 200 / 200 FORCE

THE NEW STANDARD FOR GROUND LEVEL PROTECTION

Our FLIP range of kickrails offers full ground level protection and is available in different strengths and versions depending on the needs. The innovative and robust I-shaped rail absorbs impacts of 3.000 Joules (FLIP 120) up to 17.000 Joules (FLIP 200 Force). FLIP is quick and easy to install and can be combined with other Boplan traffic barrier systems for maximum safety.



FLIP 200 FORCE



**EACH PROFILE IS AVAILABLE IN 4 LENGTHS**

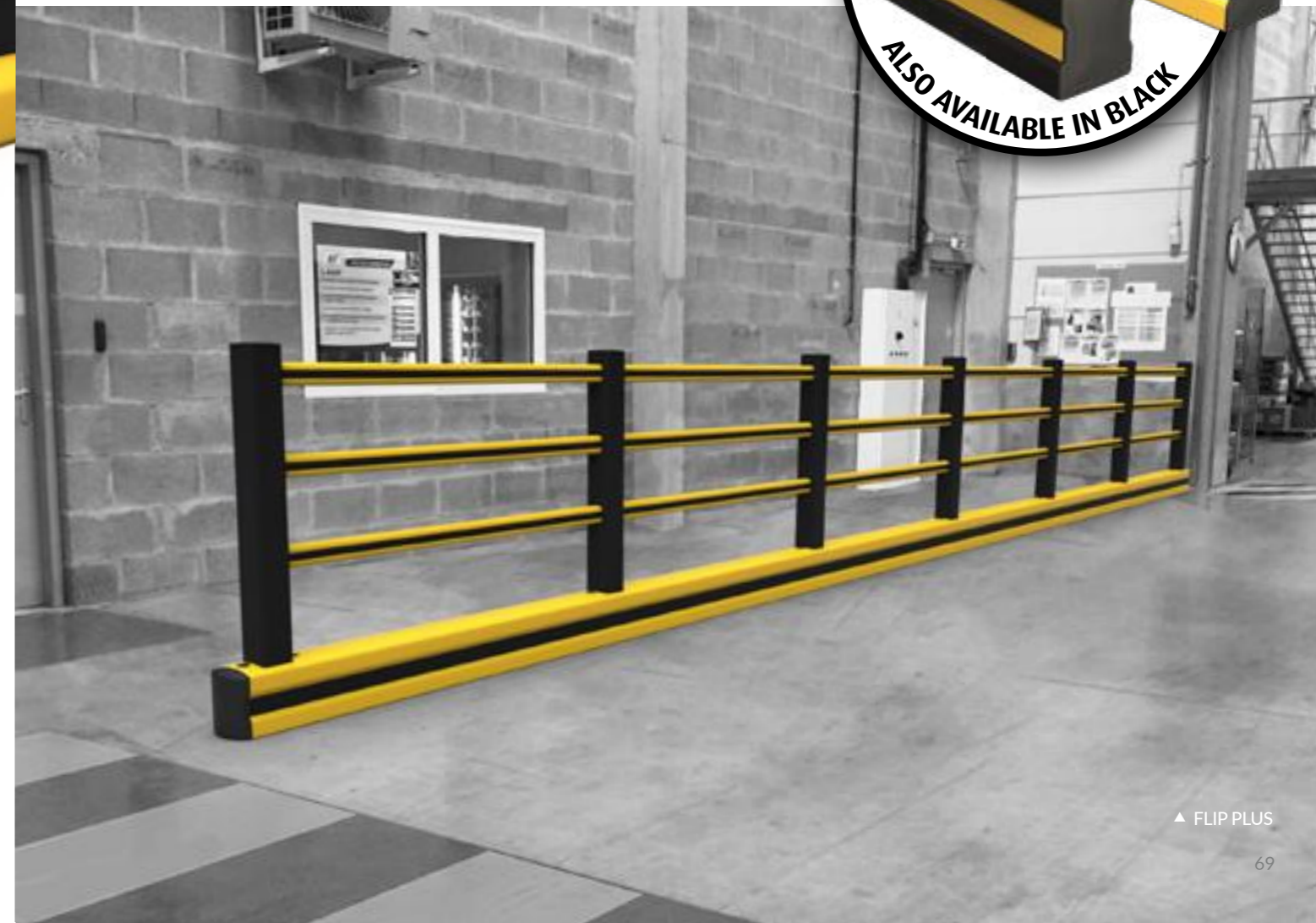


### FLIP PLUS

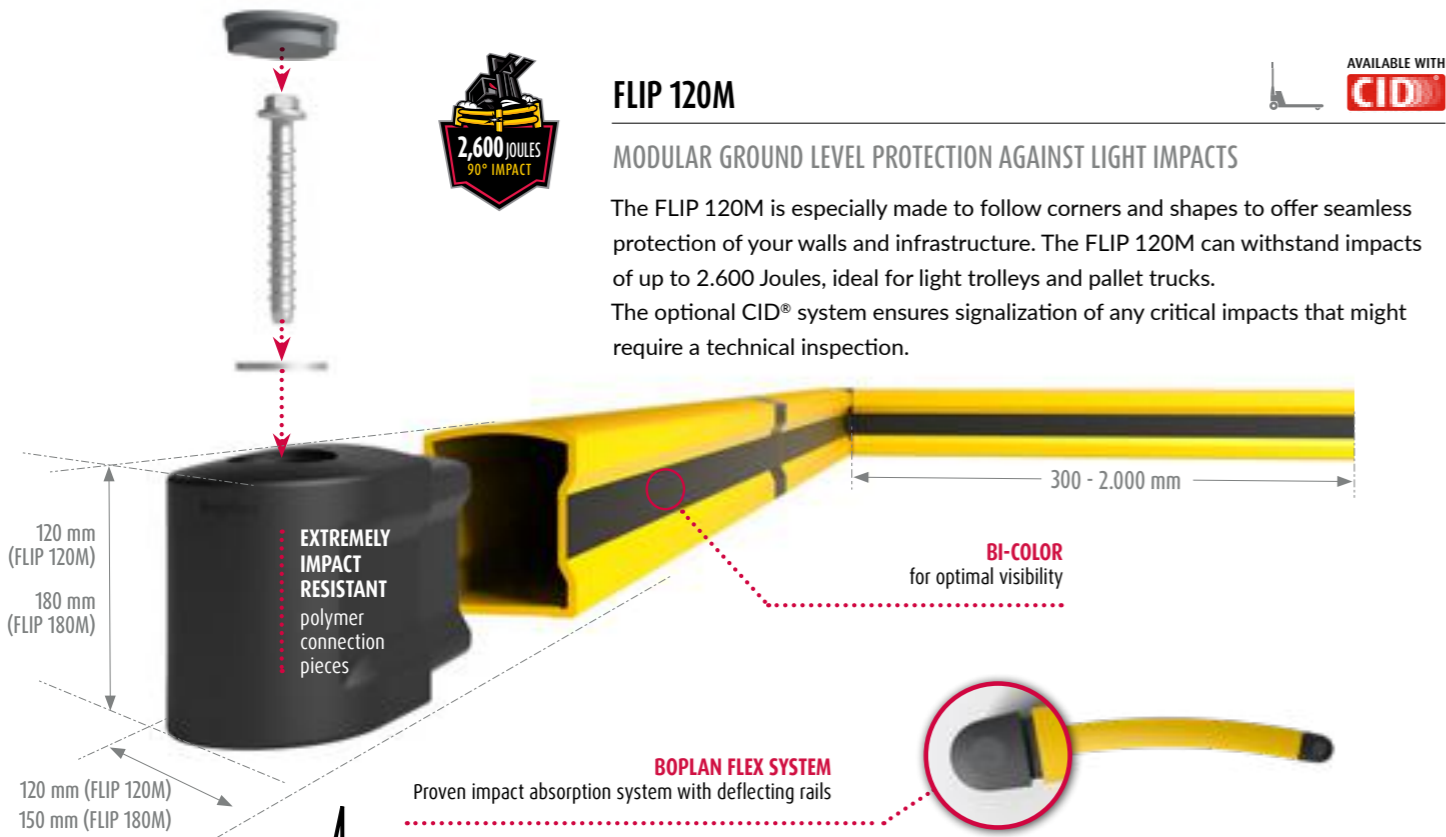
GROUND LEVEL PROTECTION FOR PEDESTRIANS

The FLIP PLUS is equipped with the FLIP 200 rail and is the most effective solution when it comes to protecting pedestrians from ground level impacts of up to 15.200 Joules. People are safely segregated from dangerous areas thanks to the ergonomic handrails.

FLIP PLUS comes with the ingenious Boplan CID® system (see page 71) as an option, allowing a quick visual inspection after a heavy impact.



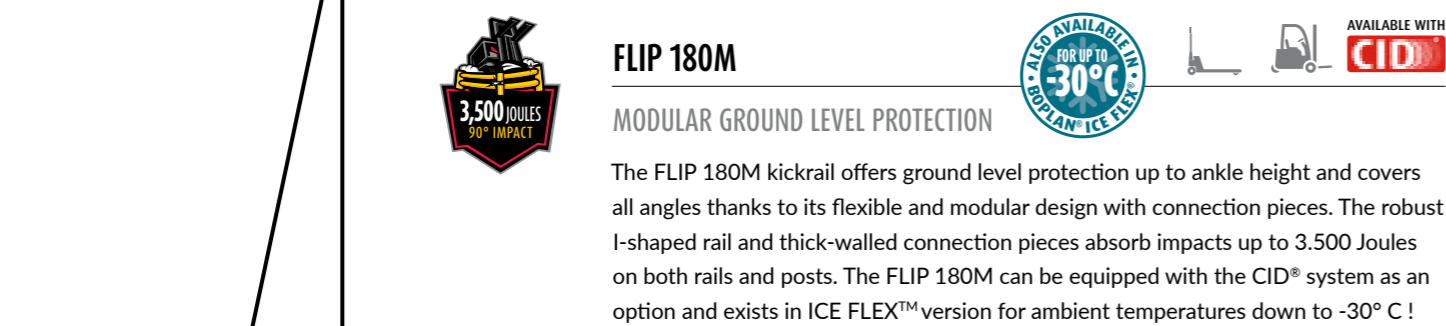
▲ FLIP PLUS



### FLIP 120M

#### MODULAR GROUND LEVEL PROTECTION AGAINST LIGHT IMPACTS

The FLIP 120M is especially made to follow corners and shapes to offer seamless protection of your walls and infrastructure. The FLIP 120M can withstand impacts of up to 2.600 Joules, ideal for light trolleys and pallet trucks. The optional CID® system ensures signalization of any critical impacts that might require a technical inspection.



### FLIP 180M

#### MODULAR GROUND LEVEL PROTECTION

The FLIP 180M kickrail offers ground level protection up to ankle height and covers all angles thanks to its flexible and modular design with connection pieces. The robust I-shaped rail and thick-walled connection pieces absorb impacts up to 3.500 Joules on both rails and posts. The FLIP 180M can be equipped with the CID® system as an option and exists in ICE FLEX™ version for ambient temperatures down to -30° C !



CORNER POST



END POST



MID POST



UNIVERSAL CORNERPOST

### APPLICATIONS / TYPICAL ENVIRONMENTS

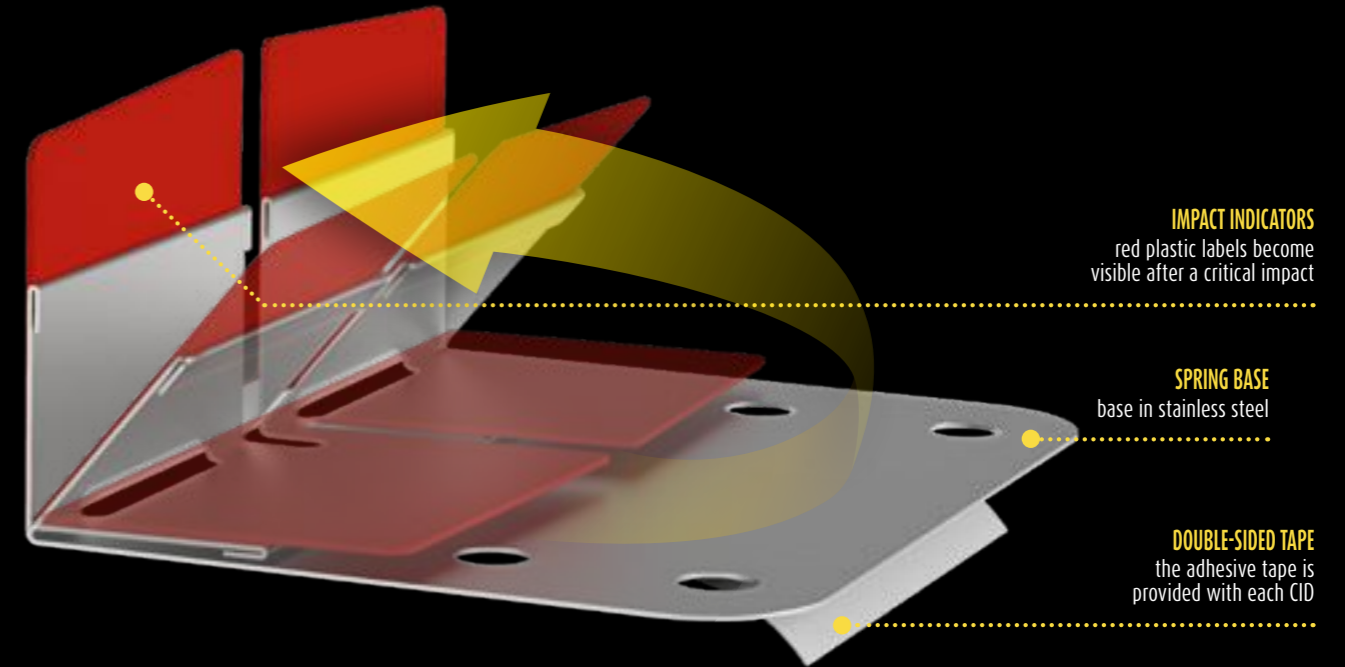
- ▶ Protection against ground level impacts
- ▶ Protection of sensitive walls (refrigerator walls / decorative walls / sandwich panels)
- ▶ Protection of people, machines and infrastructure
- ▶ Cost-efficient rack end
- ▶ Wheelguide for pallet trucks or trolleys in busy traffic lanes
- ▶ Food approved (compliant to food contact regulation)
- ▶ CID® system as option (FLIP PLUS & FLIP M)
- ▶ Quick & easy installation
- ▶ Can be combined with other Boplan traffic barrier systems



# CID®

## CRITICAL IMPACT DETECTOR

EASILY IDENTIFY WHERE A HEAVY IMPACT OCCURRED AND A TECHNICAL INSPECTION OF YOUR SAFETY EQUIPMENT IS NEEDED



WITH BOPLAN'S PATENTED CID® SYSTEM YOU GET INSTANT INSIGHT WHICH PARTS OF THE SAFETY PRODUCT HAVE BEEN HIT BY A HEAVY IMPACT.



BEFORE IMPACT



DURING IMPACT



AFTER IMPACT

Whereas in many cases the safety system looks undamaged to the outside, the impact could have caused a serious problem to its functional integrity which - without CID® - can only be established after a technical inspection.

The little red CID® flag only shows up after such critical impacts, providing an instant visual warning of possible risk areas where the safety could be compromised.

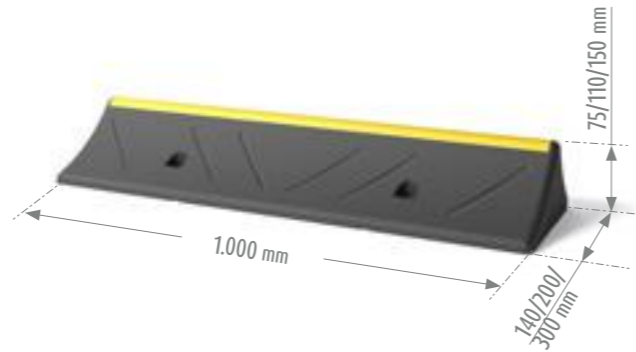
Moreover with CID® you can easily identify which areas in the workplace are particularly prone to heavy impacts and where additional protective and preventative measures are required. This optimization of safety may include a re-evaluation of the traffic plan, an adaptation of the workplace layout, additional signage and communication, increased awareness and accountability of your forklift drivers, the installation of heavier safety solutions, etc.

**WS WHEELSTOP**



RUBBER STOP USED IN PARKING BAYS TO RESTRICT COMMERCIAL VEHICLES REVERSING

Our rubber wheel stop is designed for use in HGV, LGV and domestic parking bays to restrict commercial vehicles reversing into perimeter fencing, walls etc. Each wheel stop incorporates 5 fixings suitable for tarmac or concrete. This makes it a very strong, reliable and robust solution. A rubber wheel stop is effective when providing a positive stop to HGV, LGV and domestic vehicles, aiding and guiding the driver where to stop and park.

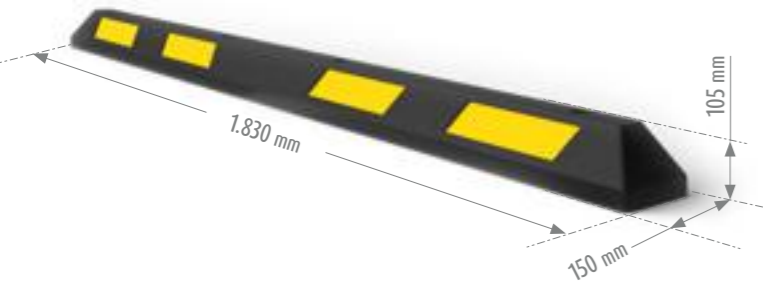


**WS WHEELSTOP 105**



PROVIDES CLEAR AND SAFE DELINEATION OF PARKING BAYS

This rubber wheel stop made entirely from recycled tyres is the ideal solution for effectively separating car parking spaces. The wheel stop features 8 integrated yellow reflector strips for optimal visibility under any circumstances.

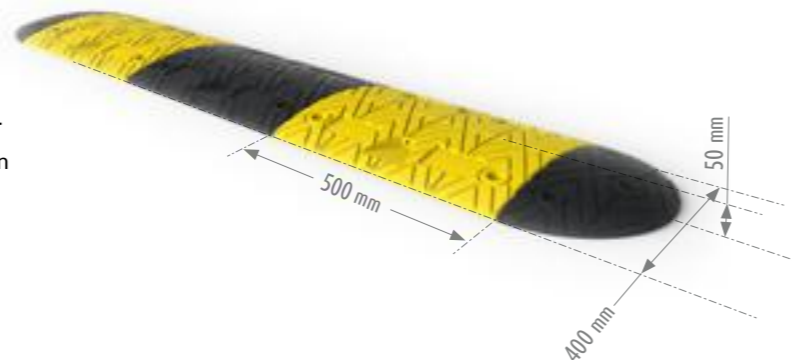


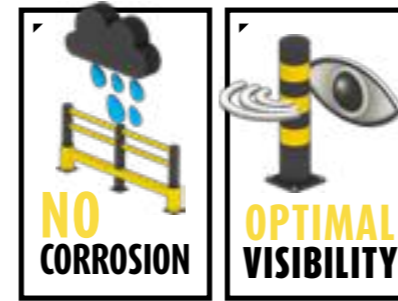
**WHEEL SPEED CONTROL**



HEAVY DUTY SPEED RESTRICTION BUMP MADE OF SOLID UV RESISTANT POLYMER.

The Wheel Speed Control has 4 integrated lens reflectors for increased visibility at night. Both end and mid parts are available in black or yellow and can be combined endlessly to fit any road or passage width. The speed ramp is suited for heavy vehicles and can be installed at virtually any location where a speed restriction is required..





## DOCK BUMPER



### LOADING DOCK PROTECTION

Protect your buildings, loading and unloading platforms and trucks with Boplan's DOCK BUMPER. Our robust, wear-resistant loading dock protection made from PU polymer, has a superior abrasion, cut and tear resistance compared to traditional EPDM rubber products on the market. Moreover, our DOCK BUMPER is reinforced with an integrated, zinc coated metal plate and designed to absorb large impacts of manoeuvring vehicles against the loading bay. The size and striking colour of the DOCK BUMPER provide extra visibility and safety when docking.



#### FEATURES

- ▶ Robust design with shock absorber fins
- ▶ Superior abrasion, cut and tear resistance
- ▶ Integrated zinc coated metal plate
- ▶ Long lifespan
- ▶ No mechanical components
- ▶ Chemical resistant (chemicals & oils)
- ▶ Highly visible for extra safety
- ▶ Only 2 fixation points
- ▶ Quick and straightforward installation
- ▶ Easy to replace (concrete screws, no chemical fixings or anchors)

#### APPLICATIONS/ TYPICAL ENVIRONMENTS

- ▶ Loading and unloading platforms
- ▶ Distribution centers
- ▶ Transport and logistics centers
- ▶ Warehouses and storage facilities
- ▶ Logistics, supply chain and materials handling industries
- ▶ and many more...

# DOCK BUMPER



# INDUSTRIAL SAFETY GATE FOR ROBUST FALL PROTECTION

Falling from a great height constitutes a genuine risk for many categories of employees. The consequences of such a fall can be catastrophic: serious injury, prolonged incapacity for work or a fatality in the worst case. No compensation can usually make up for the personal suffering caused. The consequences for the employer should not be underestimated either: the production process is halted or is subject to serious delays and time-consuming labour inspections follow. The company's reputation risks being damaged, the time lost is significant and costs get out of hand.

The **AXES GATE** prevents such situations because it provides robust fall protection, by constantly building on its extensive experience in diverse sectors. The AXES GATE was BOPLAN's very first product and has since been perfected down to the smallest details. The installation is extremely easy and once installed the fall protection does not require any further maintenance. The feedback that BOPLAN® has collected over the years has been systematically incorporated in the process to continuously perfect the system. The AXES GATE is just one of BOPLAN's many innovations that are part of the BOPLAN® total solution for increased safety at work.



### MOUNTS ANYWHERE

Round Tube*	Round Tube with adapter	Square Tube	Angle Iron

\*optional to order

# ADVANTAGES

## EXTENSIVELY TESTED AND DECLARED SAFE

The AXES GATE is extremely impact resistant, as proven by its compliance with the EN 14122-3 and 14122-4 standards. The AXES GATE can resist an impact of 100 kg with no problem whatsoever. Due to the use of flexible plastic, no cracks or dents appear that are typical of the traditional solutions made from iron and steel. 15 years of uninterrupted production experience has been translated into a product that has been perfected down to the smallest details.

## AUTOMATIC CLOSURE, WITH ADJUSTABLE CLOSURE FORCE

The negligence factor is eliminated thanks to the innovative self-lubricating hinge element. The gate shuts automatically, which means that any opening remains permanently screened off. You determine the force and the speed at which the gate shuts.

## ONE AXES GATE, OPENS IN TWO DIRECTIONS

A two-directional opening is possible with the very same AXES GATE. You simply tighten the spring in the direction of your choice. What's more the gate has a generous turning circle of 180°.

## CHEMICAL AND UV RESISTANT, ANTI-STATIC AXES GATES

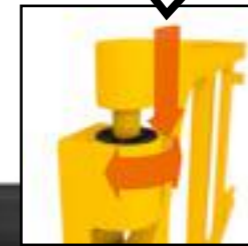
AXES GATES have been employed worldwide on a daily basis for the past 15 years in the harshest and most demanding situations, such as in the chemical industry and on offshore drilling platforms. They effortlessly resist severe weather conditions, extremely salty environments and highly corrosive chemical substances. The product's design, composition and properties make it suitable for any application in any sector. The AXES GATE is also entirely chemical and UV resistant.

## EXTREMELY LONG LIFESPAN

A known problem with traditional fall protection is metal fatigue. The AXES GATE totally excludes this risk factor due to its construction from high quality reinforced Polyurethane (PU). The spring on the hinge has been tested and guaranteed at over 100,000 cycles. Rust and corrosion don't have a chance with the AXES GATE's plastic and stainless steel components. These materials prevent any form of weakening to the structure and are also extremely maintenance friendly.



**AUTOMATIC CLOSURE**  
WITH ADJUSTABLE CLOSURE FORCE



## TWO TYPES IN DIFFERENT LENGTHS

Both the SINGLE AXES GATE and the DOUBLE AXES GATE are available in lengths ranging from 550 to 1,200 mm.

## EASY INSTALLATION

Installing an AXES GATE couldn't be simpler. It is delivered packaged in a box or pallet box as a fully assembled product. The supplied adapters for mounting on round pipes and the use of one-size bolts and nuts mean that an extensive array of tools is unnecessary. This facilitates easy, fast and safe installation at considerable heights.

## OPTIMAL VISIBILITY

The plastic used is coloured to the core with a striking yellow colour. No painting or repainting following impact damage is necessary. The AXES GATE also catches the eye in aesthetic terms. Pre-shaped slots make it possible to affix a warning sign.

## SAFE AND COST EFFECTIVE

Whatever you do, don't cut costs when it comes to the safety of your work environment. After all you cannot put a price on personal suffering and avoidable company costs. Any accident can cause your company financial and other damage: damage to its reputation, loss of time, delays, time-consuming and tedious labour inspections, etc. With the AXES GATE you no longer need to lie awake at night.

## NO SHARP EDGES, SO SAFE FOR THE HANDS

Our innovative hinge technology offers ultimate safety for the hands: the rounded elements prevent clothes or limbs getting caught. The product as a whole not only looks better in aesthetic terms but its functionality has been designed with the utmost attention to detail. Rust and corrosion don't have a chance with the AXES GATE's plastic and stainless steel components. These materials prevent any form of weakening to the structure and are also extremely maintenance friendly.







### SINGLE AXES GATE\*



PROTECTION AND RESTRICTED ACCESS TO HAZARDOUS ZONES ON GROUND LEVEL (NOT ON HEIGHTS)

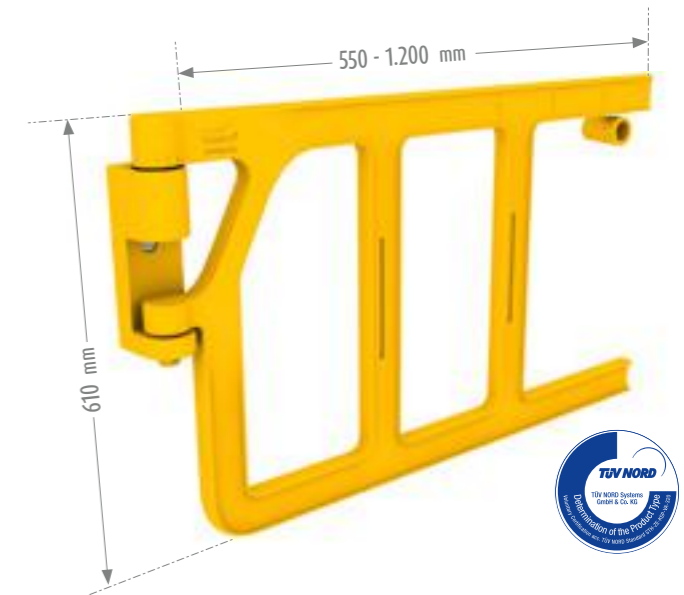
Our SINGLE AXES GATE has received wide acclaim for its very long life span. The safety gates of the AXES GATE family have been manufactured from high-quality, reinforced polyurethane (PU). This synthetic material puts the all-too-familiar problems with metal fatigue in traditional fall protection systems firmly in the past. Our safety gates are ultra-strong, robust and durable, and therefore highly reliable for restricting access to hazardous zones, machinery, elevated platforms, open water at sea, cage ladders, etc.

### DOUBLE AXES GATE



FALL PROTECTION FOR EMPLOYEES IN CAGE LADDERS AND ON WORK PLATFORMS

The DOUBLE AXES GATE is specifically developed as fall protection for sectors involving work in elevated places, such as on work platforms and in cage ladders. Employees that work in elevated places are constantly exposed to hazardous situations and therefore need to have the best safety measures to prevent falls. The DOUBLE AXES GATE is a robust, industrial safety gate that you can use to secure the openings of cage ladders and safely restrict access to your machines and work platforms.



### APPLICATIONS

- Ladders with safety cages
- Fire escapes
- Work platforms
- Silos
- Drilling platforms and the petrochemical industry
- Access to machines and ladders
- Integration in existing handrail systems (such as Flex Impact by BOPLAN®)
- ...

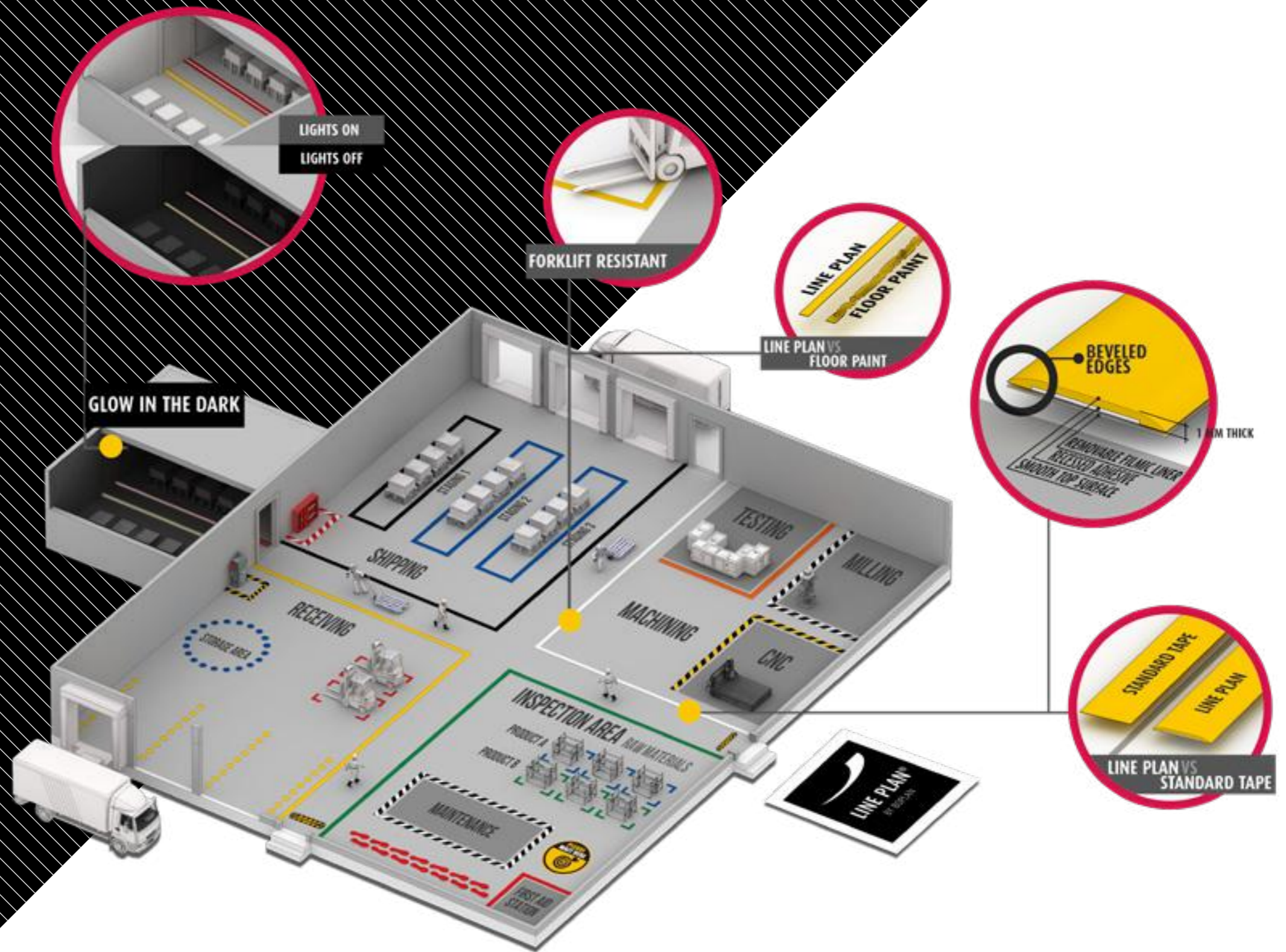
\* Our SINGLE AXES GATE is developed for environments on ground floor level. For environments at height the DOUBLE AXES GATE is the solution to go for.

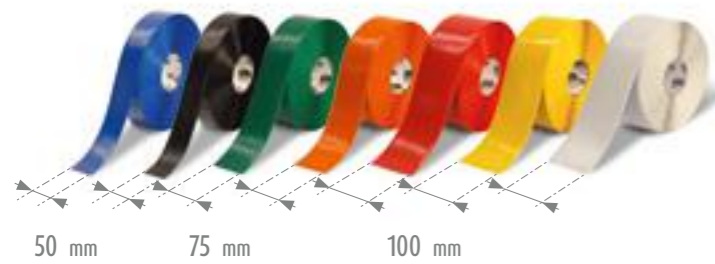


# INDESTRUCTIBLE FLOOR MARKINGS WITH AN UNDENIABLY PROFESSIONAL LOOK

LINE PLAN offers a superior system for floor markings, line markings and pictograms that spectacularly surpasses all other marking systems on the market. LINE PLAN floor markings have sloping edges, making it harder for them to get ripped off under the duress of constant heavy traffic from forklifts and trucks. While the floor tape used in most alternative floor marking systems tears loose at the slightest abrupt manoeuvre with a forklift, or even if people scuff their feet over it, LINE PLAN provides unparalleled resistance to any kind of friction or external influence.

LINE PLAN floor markings give you a sharply demarcated, safe work environment that will give your company that professional look, while at the same time protecting your employees. The LINE PLAN floor markings and line markings are suitable for every type of surface and use, including concrete floors, footpaths, hallways, work zones, traffic zones, warehouse floors, etc.





### LINE PLAN MARKING TAPE

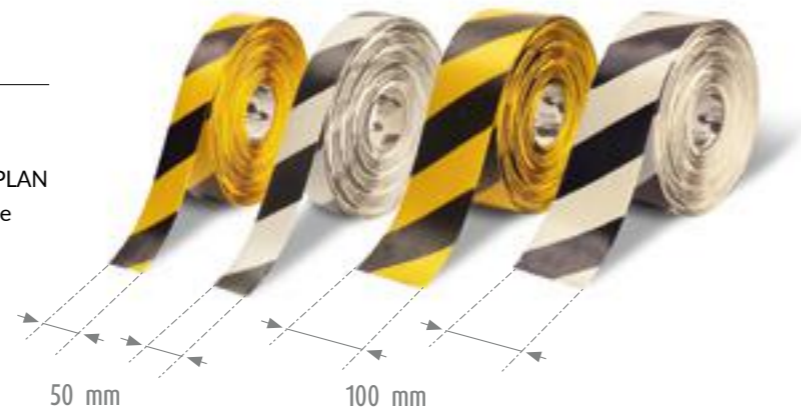
SOLID COLORED FLOOR TAPES WITH SLOPING EDGES

LINE PLAN solid colored floor tapes are the most popular tapes we offer. Our LINE PLAN floor tapes come in multiple sizes, colours and patterns. Using LINE PLAN floor tapes keep your facility neat and organized, as well as enhancing your facility's overall visual appearance.

### LINE PLAN MARKING TAPE CROSS

CONTRASTING FLOOR TAPES FOR POSSIBLE DANGER ZONES

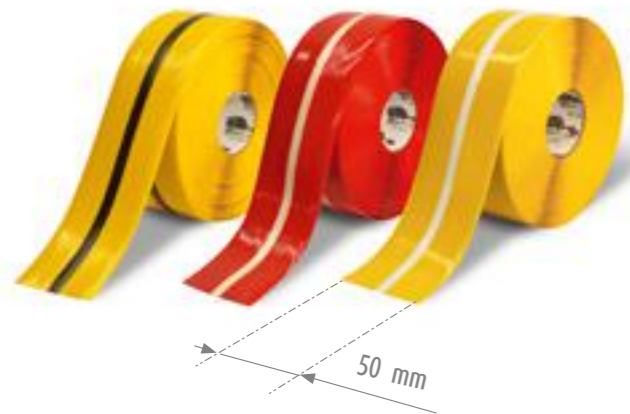
By contrasting 2 standard colours in a diagonal fashion, LINE PLAN has constructed a floor tape that allows employees to be made aware of possible danger zones within the work area. Our cross tape is offered in the multiple colours.



### LINE PLAN MARKING TAPE CENTER

TWO TONE CENTER-LINE TAPES TO CUSTOMIZE YOUR FACILITY

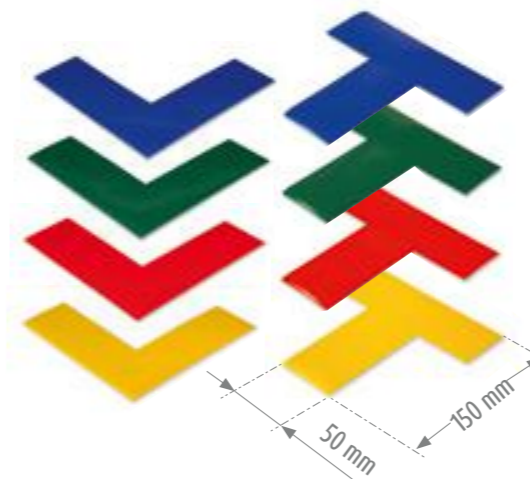
Not satisfied with the variety of our solid colored LINE PLAN floor tapes? Use our two tone center-line tapes to customize your facility. LINE PLAN also offers a variety of glow-in-the-dark center line floor tape offered in multiple standard colours. Glow-in-the-dark highlighted exit ways allow for workers to safely leave the area free of injury and worry due to unexpected power shortages.



### LINE PLAN MARKING TAPE ANTISLIP\*

FOR INDUSTRIAL APPLICATIONS IN DRY, WET OR OILY CONDITIONS

LINE PLAN offers a full range of functional, slip-resistant tapes suitable for industrial applications in dry, wet or oily conditions.



### LINE PLAN MARKING SIGN - L / T\*

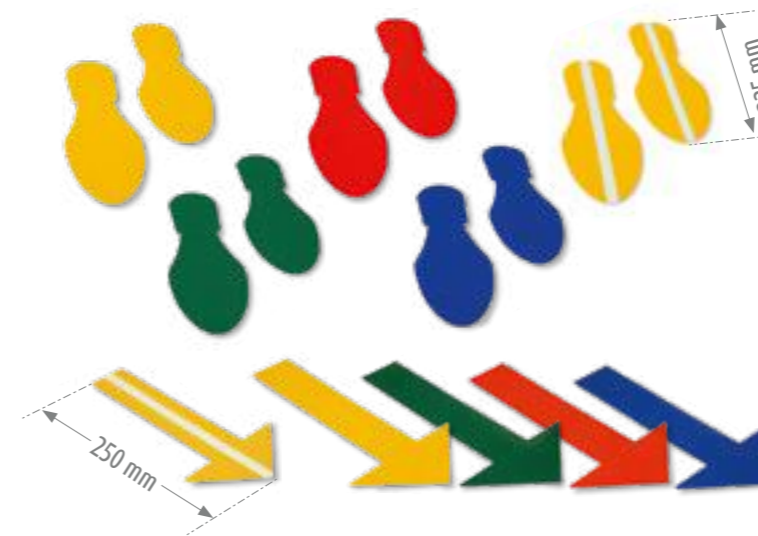
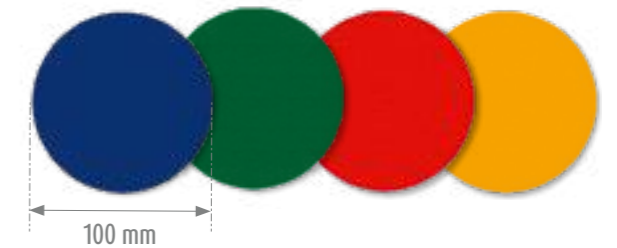
GREAT FOR MARKING OFF PALLETS AND MACHINERY ROW

LINE PLAN 5S Floor Marking L's and T's are great for marking off pallets and machinery rows. Use the LINE PLAN floor tape angles to mark your facility in different sizes and colours. LINE PLAN floor tape L's and T's have a peel and stick adhesive.

### LINE PLAN MARKING SIGN - DOT\*

GREAT FOR MAKING CURVED LINES

LINE PLAN 5s floor tape dots are great in high traffic areas where skids are dragged or pulled, reducing scraping and other damage. LINE PLAN floor marking dots are also great for making curved lines.



### LINE PLAN MARKING SIGN - FOOT / ARROW\*

GREAT FOR MARKING PEDESTRIAN AISLE WAYS

LINE PLAN 5s floor marking footprints and arrows are great for marking pedestrian aisle ways or segregating certain areas inside your 5s facility. LINE PLAN floor tape footprints are peel and stick and remove cleanly. Tell workers which area in the warehouse they are walking through with different colour standards of footprints in your facility. Glow-in-the-dark center lines are available as well.

### LINE PLAN MARKING SIGN - PICTO

FLOOR MARKING FOR INFECTION PREVENTION AND HEALTH IN THE WORKPLACE

Reduce the risk of workplace contamination for your employees and visitors by using the PICTO floor markings! Encourage workers and visitors to practice good hygiene by washing their hands and maintaining social distancing. Made of industrial-grade PVC, BOPLAN® PICTO floor markings have a long lifespan and can be used in wet environments.





# PROTECTIVE BUMPERS TO PREVENT INJURIES OR DAMAGE

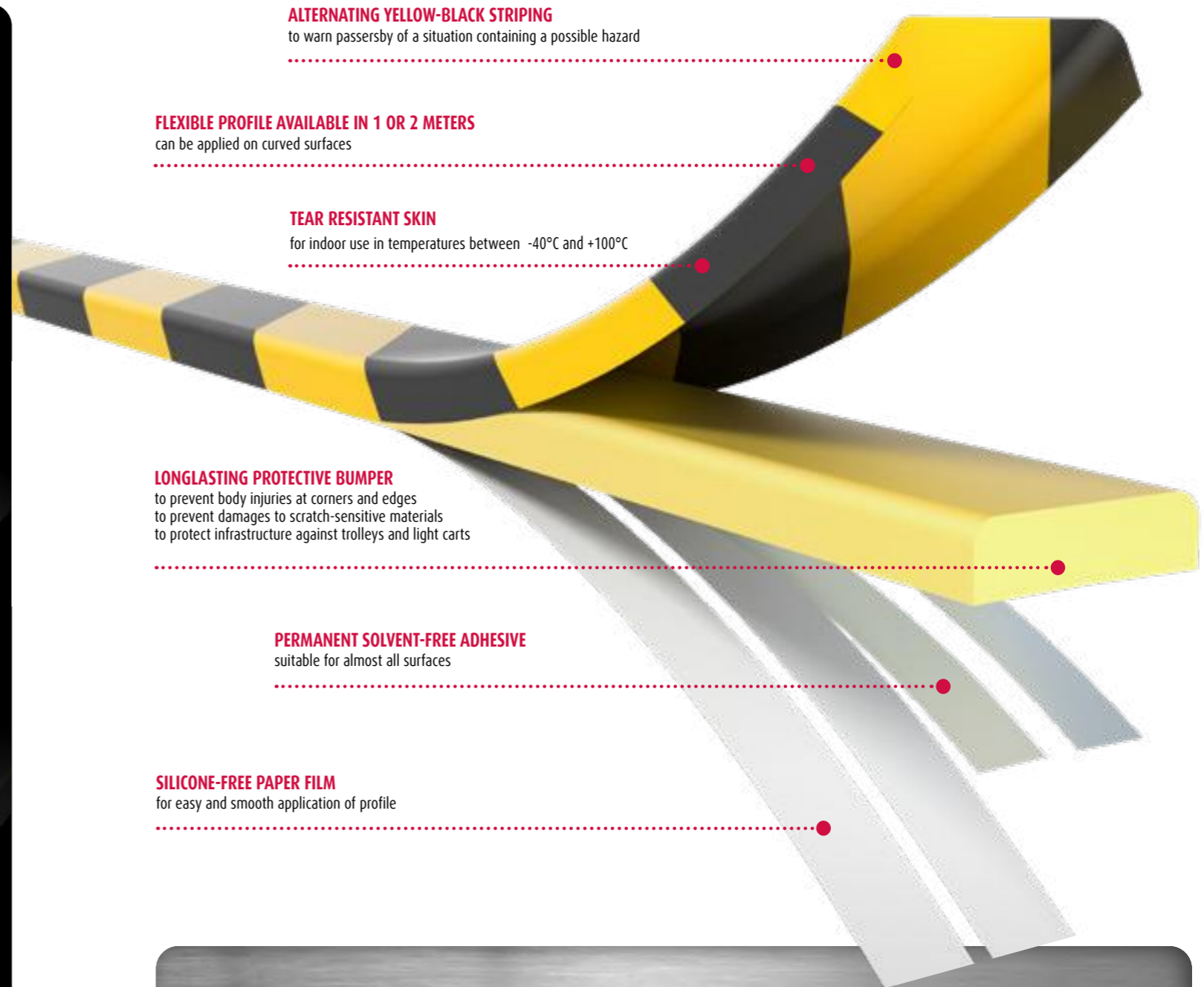
Teddy Pro are flexible and shock-absorbing profiles made from PU, and can be used for countless applications. They are meant to protect employees against corners and sharp edges involving any type of construction. In addition, this kind of bumper eliminates damages caused by carts or trolleys. This way you not only avoid injuring your staff, but you also keep your infrastructure and products both dent- and scratch free.

## 9 VERSIONS



▶ Type **AR 25**   ▶ Type **FL 40**   ▶ Type **EV 19**   ▶ Type **RR30**   ▶ Type **FR 28**

▶ Type **EU 19**   ▶ Type **VU 19**   ▶ Type **EV 35**   ▶ Type **FL 150**



**ALTERNATING YELLOW-BLACK STRIPING**  
to warn passersby of a situation containing a possible hazard

**FLEXIBLE PROFILE AVAILABLE IN 1 OR 2 METERS**  
can be applied on curved surfaces

**TEAR RESISTANT SKIN**  
for indoor use in temperatures between -40°C and +100°C

**LONGLASTING PROTECTIVE BUMPER**  
to prevent body injuries at corners and edges  
to prevent damages to scratch-sensitive materials  
to protect infrastructure against trolleys and light carts

**PERMANENT SOLVENT-FREE ADHESIVE**  
suitable for almost all surfaces

**SILICONE-FREE PAPER FILM**  
for easy and smooth application of profile

## AVAILABLE WITH STAINLESS STEEL BASE (SSB)

for installation on damp, oil soaked, brick, wooden or uneven surfaces



# SCIENTIFIC APPROACH TO SAFETY

## TESTS WITH ISO 17025 ACCREDITED LABORATORY TRANSPOLIS



BOPLAN® develops SAFETY BARRIERS for different industrial environments, ranging from low frequency traffic with manually operated trolleys up to busy traffic with heavy duty engine powered fork lift trucks.

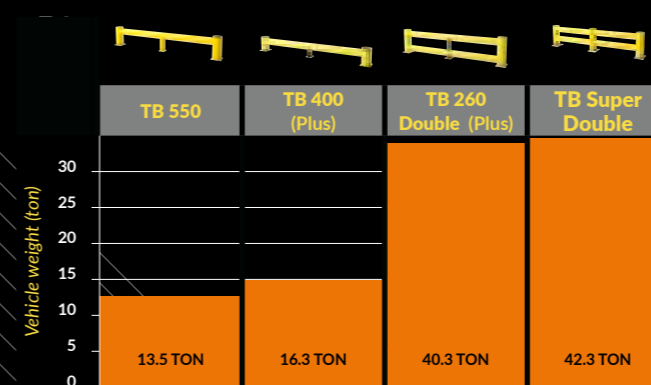
We strongly advise choosing the appropriate system for each situation. BOPLAN® has performed real life impact tests with the renowned ISO 17025 accredited laboratory Transpolis (formerly known as LIER) which has stakeholders such as Renault, Polaris Inc. USA, etc. BOPLAN® effectively designs and develops based upon scientifically based impact results and is capable to do custom impact simulations upon its safety barrier range thanks to the analyses of a professional team of scientists and engineers.



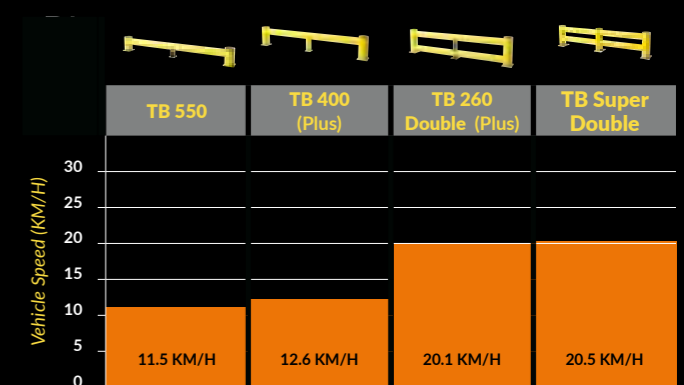
## MAXIMUM SPEED AND WEIGHT

- Speed weight diagrams obtained from the accredited laboratory Transpolis.
- These values originate from 90° impacts straight into the post.
- These diagrams are set up with values using a 2.5 ton forklift. Values for heavier vehicles and for higher speeds are translated and need to be interpreted with caution.

Maximum weight of a vehicle driving @5km/h - 90° impact on post.



Maximum speed of a vehicle of 2500kg - 90° impact on post.



## CONCLUSION

- Flex Impact safety barrier systems have been designed and tested for different kinds of vehicle impact.
- Real life tests were performed by scientific partners with experience in the car industry (Transpolis).
- The results clearly prove the impact capabilities.
- Maximum impact on the tubes is higher compared to the posts.

### IMPACT TESTS SUMMARY

		TB 550	TB 400 (Plus)	TB 260 Double (Plus)	TB Super Double
Max. impact energy (Joule) 90°	Breakpoint on Posts	13,500	16,100	39,800	41,900
	Breakpoint on Tubes	18,300	20,100	46,500	50,100

#### Clarification

Every safety barrier can absorb a certain amount of energy. Those energy values are fixed and should not be surpassed. Based on the formula where Energy = 0.5 x weight x speed² (E = 0.5 x m x v²), you'll quickly understand in case of higher impact speeds, the weight of the vehicle should be lower, or the other way round, lower speeds, allow higher vehicle weights upon impact.

Breakpoint: vehicle stopped but safety barrier broken.

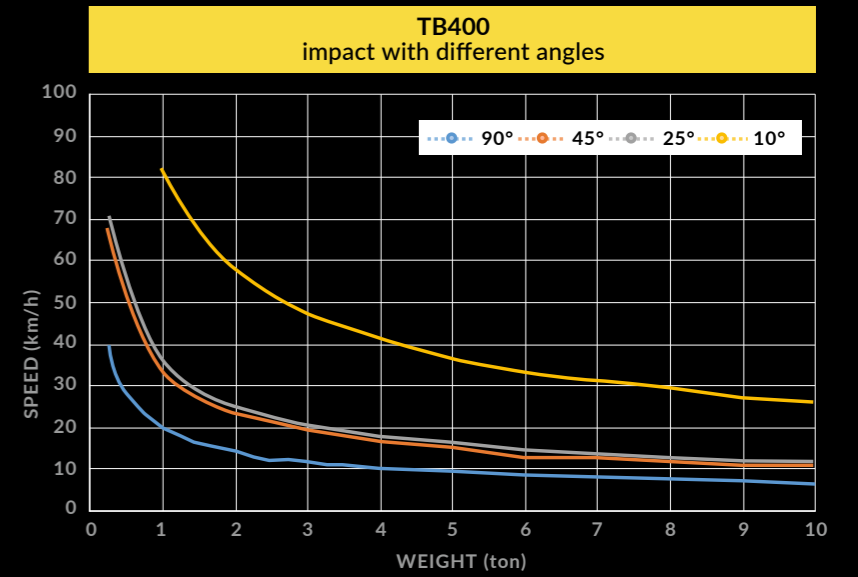


### IMPACT ANGLES

This graph shows the maximum speed for a vehicle with different weights driving under four different angles into a TB 400 barrier.

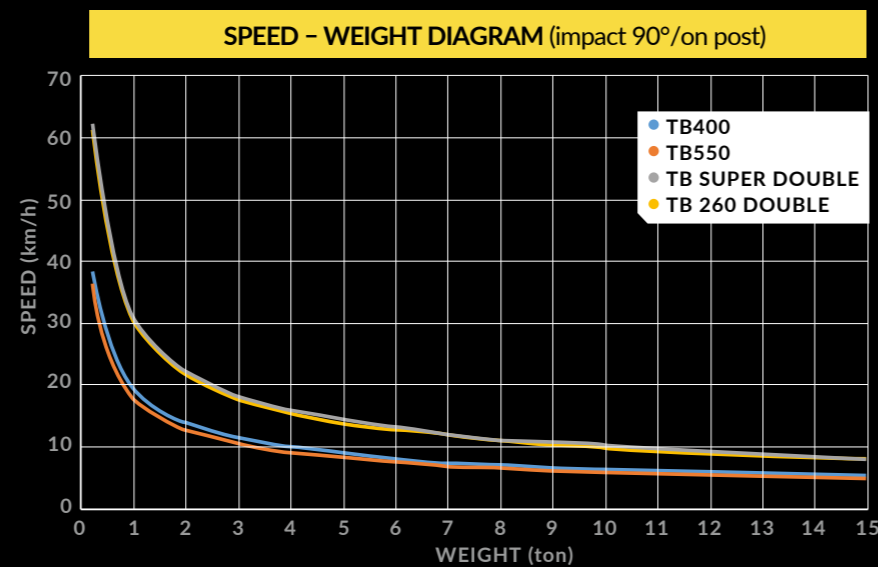
Examples:

1. Maximum impact for a TB 400 is equivalent to a four-ton forklift with a driving speed of approximately 10 km/hr, straight into a barrier (90°).
2. At an angle less than 10°, the maximum impact for a TB 400 is equivalent to a four-ton forklift with a driving speed of approximately 42 km/hr.



### MAXIMUM IMPACT RESISTANCE

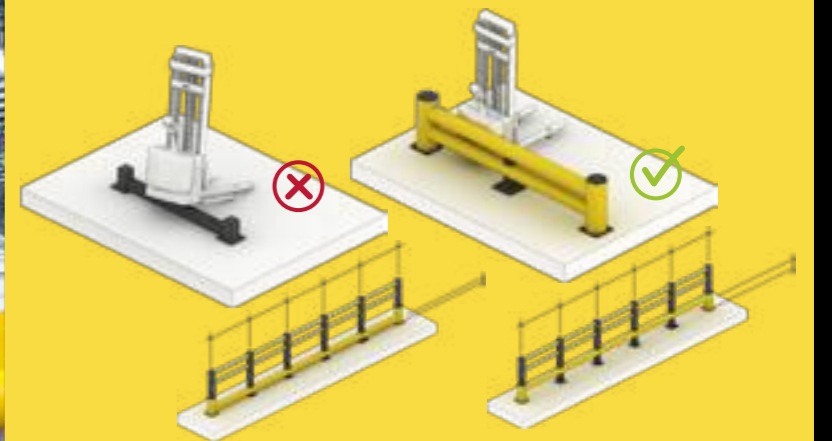
This is the ability to push back a fork lift in order to stop it. Each system has its own maximum capacity for holding back a crashing forklift. Exceeding the maximum impact resistance for a certain system will result in the forklift driving through the barrier. The graph below shows the maximum force values.



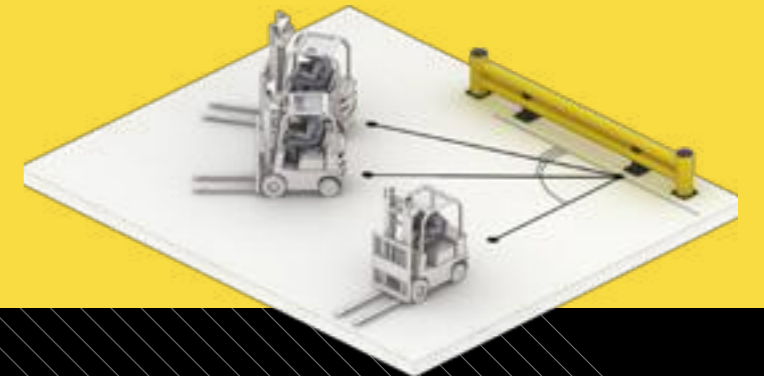
Ask your BOPLAN® representative for the detailed test reports.

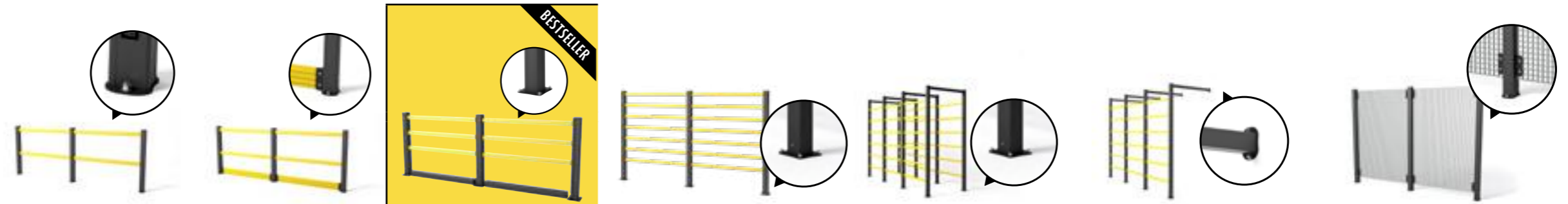
### CONCLUSION

- A tube has a higher impact value than a post.
- Increasing tube/rail lengths may decrease cost in amount of mid posts over a certain length but will increase deflection and decrease strength upon impact.
- A system with tubes lower to the ground will have higher impact force values (TB 400 vs TB 550; TB 260 Double vs TB Super Double).



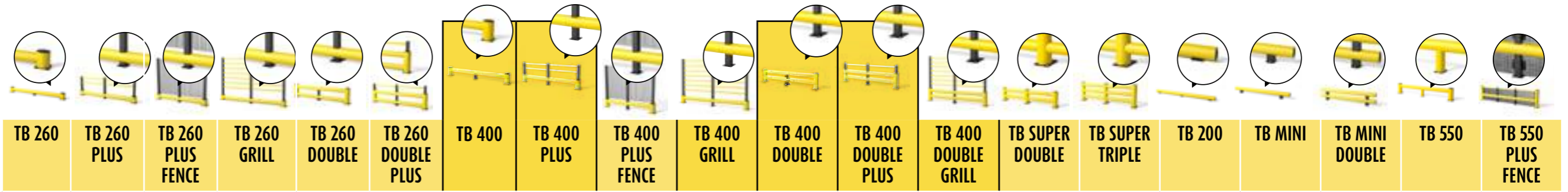
- Smaller impact angles permit higher maximum impact speeds.





	HD LIGHT	HD MEZZA	HP 3R	HP GRILL	HT TUNNEL FREE STANDING	HT TUNNEL WALL FIX	FE FENCE	
<b>SUITABILITY</b>								
Application	segregate pedestrians from traffic	segregate pedestrians on mezzanines	reinforced segregation of pedestrians from traffic	protect pedestrians from the toppling of stacked goods	protect pedestrians from the toppling of stacked goods	protect pedestrians from the toppling of stacked goods	segregate pedestrians from machines	
<b>MESH</b> (between 2 posts)								
Max. Height x Max. Width (mm)	-	-	-	-	-	-	1.800 x 1.200	
Cell Height x Width x Depth (mm)	-	-	-	-	-	-	33x33x13	
<b>RAILS SET</b> (between 2 posts)								
Impact Breakpoint (Joule)	Handrails are designed for pedestrian segregation. Use SAFETY BARRIERS for vehicle protection							
N° Rails	2	2	2 or 3	3,4,5,7 or 9	12 or 16	6 or 8	-	
Included	-	Skirting Board	-	-	-	-	-	
Rail Height x Width (mm)	70x50	70x50	70x50	70x50	70x50	70x50	-	
Standard Length (mm)*	500 750 1.000 1.250 <b>1.500</b> 1.750 2.000	500 750 1.000 1.250 <b>1.500</b> 1.750 2.000	500 750 1.000 1.250 <b>1.500</b> 1.750 2.000	500 750 1.000 1.250 <b>1.500</b> 1.750 2.000	500 750 1.000 1.250 <b>1.500</b> 1.750 2.000	<b>1.500</b>	<b>1.500</b>	-
Custom Length (mm)*	250 - 1.999	250 - 1.499	250 - 1.999	-	-	-	-	
Rail Colour(s) (body/stripes)	yellow black/yellow yellow/black black/red yellow/photoluminescent black/photoluminescent	yellow yellow/black (Skirting Board is always yellow)	yellow black/yellow yellow/black black/red yellow/photoluminescent black/photoluminescent	yellow black/yellow yellow/black black/red yellow/photoluminescent black/photoluminescent	yellow black/yellow yellow/black black/red yellow/photoluminescent black/photoluminescent	yellow black/yellow yellow/black black/red yellow/photoluminescent black/photoluminescent	yellow black/yellow yellow/black black/red yellow/photoluminescent black/photoluminescent	-
<b>POST</b>								
Height (mm)	1.100	1.100	1.100	1.700 - 2.800	3.500 5.000	3.500 5.000	2.000	
Width x Depth (mm)	90x90	90x90	110x110	110x110	110x110	110x110	90x90	
Length top rail (mm)	-	-	-	-	1.750	1.750	-	
Corner requires 2 posts	☐	☐	✗	✗	✗	✗	✗	
<b>BASEPLATES*</b>	Discover all available baseplates at the end of the catalog							

■ Advised safety length by Boplan. While increasing length may decrease cost in mid posts, it will also decrease strength and increase the deflection zone.  
 ■ Based on test results with a 90° impact angle using an object with a vertical flat surface.



SUITABILITY	TB 260	TB 260 PLUS	TB 260 PLUS FENCE	TB 260 GRILL	TB 260 DOUBLE	TB 260 DOUBLE PLUS	TB 400	TB 400 PLUS	TB 400 PLUS FENCE	TB 400 GRILL	TB 400 DOUBLE	TB 400 DOUBLE PLUS	TB 400 DOUBLE GRILL	TB SUPER DOUBLE	TB SUPER TRIPLE	TB 200	TB MINI	TB MINI DOUBLE	TB 550	TB 550 PLUS FENCE
Corners supported	☐	☐	✗	☐	☐	☐	☐	☐	✗	☐	☐	☐	☐	☐	☐	☐	✗	✗	☐	✗
Application																				
	where energy impacts are possible close to ground level	where energy impacts are possible closer to ground level with extra pedestrian handrail	where energy impacts are possible closer to ground level with extra fencing protection	where energy impacts are possible closer to ground level with extra pedestrian handrail + stacked goods	where high energy impacts are possible closer to ground level	where high energy impacts are possible closer to ground level and with pedestrian handrailing in mind	where energy impacts are possible with standard wheel arch height impact	where energy impacts are possible with standard wheel arch height and pedestrian handrailing in mind	where energy impacts are possible closer to ground level with standard wheel arch height and impact height in mind and extra fencing protection	where energy impacts are possible with standard wheel arch height and pedestrian handrailing in mind + stacked goods	where high energy impacts are possible	where high energy impacts are possible with pedestrian handrailing in mind	where high energy impacts are possible + stacked goods	where high energy impacts are possible, extra reinforced	where very high energy impacts are possible, extra reinforced	robust protection close to ground level	protection from hand pallets	protection from hand pallets with increased height	where energy impacts are possible with standard wheel arch height and reinforced midposts in mind	where energy impacts are possible with standard wheel arch height and reinforced midposts with fencing in mind

RAILS SET (between 2 posts)																				
TUBES																				
Impact Breakpoint (Joule) 90° on tube	21.200	21.200	21.200	21.200	46.500	46.500	20.100	20.100	20.100	20.100	39.100	39.100	39.100	50.100	48.300	21.800	5.000	5.000	18.300	18.300
N° Tubes	1	1	1	1	2	2	1	1	1	1	2	2	2	2	3	1	1	2	1	1
Diameter (mm)	Ø200	Ø200	Ø200	Ø200	Ø200	Ø200	Ø200	Ø200	Ø200	Ø200	Ø200	Ø200	Ø200	Ø200	Ø200	Ø200	Ø125	Ø125	Ø200	Ø200
Standard Length (mm)	750	750	750	750	750	750	750	750	750	750	750	750	750	750	750	750	750	750	750	600
	950	950	950	950	950	950	950	950	950	950	950	950	950	950	950	950	950	950	950	850
	1.150	1.150	1.100	1.150	1.150	1.150	1.150	1.150	1.150	1.150	1.150	1.150	1.150	1.150	1.150	1.150	1.150	1.150	1.150	900
	1.350	1.350	1.350	1.350	1.350	1.350	1.350	1.350	1.350	1.350	1.350	1.350	1.350	1.350	1.350	1.350	1.350	1.350	1.350	1.050
	1.550	1.550	1.550	1.550	1.550	1.550	1.550	1.550	1.550	1.550	1.550	1.550	1.550	1.550	1.550	1.550	1.550	1.550	1.550	1.200
	1.750	1.750	1.750	1.750	1.750	1.750	1.750	1.750	1.750	1.750	1.750	1.750	1.750	1.750	1.750	1.750	1.750	1.750	1.750	1.350
HANDRAILS																				
N° Rails	-	2	-	3 - 2 - 9	-	1	-	2	-	2,3,4,5,7 or 9	-	1	2,3,4,5,7 or 9	-	-	-	-	-	-	1
Height x Width (mm)	-	70x50	-	70x50	-	70x50	-	70x50	-	70x50	-	70x50	70x50	-	-	-	-	-	-	70x50
FENCES																				
N° Fences	-	-	1	-	-	-	-	-	1	-	-	-	-	-	-	-	-	-	-	2
Height x Width (mm)	-	-	1.800x1.220	-	-	-	-	-	1.944x1.220	-	-	-	-	-	-	-	-	-	-	500x(700-1,450) 310x(700-1,450)
END POST																				
Height (mm)	310	1.160	2.300	1.425 - 3.075	795	1.160	450	1.160	2.300	1.425 - 3.075	795	1.160	1.700 - 3.350	795	1.160	210	200	400	600	560
Width (mm)	250	250	250	250	250	250	250	250	250	250	250	250	250	250	250	375	100	100	250	250
MID POST																				
Impact Breakpoint (Joule) 90° on post	11.950	11.950	11.950	11.950	39.800	39.800	16.100	16.100	16.100	16.100	30.700	30.700	30.700	41.900	44.500	9.000	3.000	3.000	13.500	13.500
Height (mm)	260	1.160	2.300	1.425 - 3.075	750	1.160	400	1.160	2.300	1.425 - 3.075	750	1.160	1.700 - 3.350	750	1.160	-	-	-	560	560
Width (mm)	250	250	250	250	250	250	250	250	250	250	250	250	250	250	250	250	-	-	250	250
BASEPLATES																				
	Discover all available baseplates at the end of the catalog																			





SUITABILITY				
Application	with sufficient freedom of movement	with limited freedom of movement	with very limited freedom of movement	temporary close access point
Opening	swings 2-ways**	upwards	sideways	sideways
Closes automatically	☐***	✗	✗	☐
POST				
N° Posts included	0	0	2	0
Width x Depth (mm)	-	-	110x110	-
Height (mm)	-	-	1.100	-
GATE				
Impact Breakpoint (Joule)	Gates are designed for pedestrian segregation. Use SAFETY BARRIERS for vehicle protection			
Height (mm)	620	590	1.150	145 @ 5m length 167 @ 10m length
Standard Length (mm)	700 800 900 1.000 1.250 1.500 2.000*	1.000 1.500	1.000 1.500 2.000	5.000 10.000****
Custom Length (mm)	800 - 1.999	1.000 - 1.500	500 - 1.999	-
Gate Stop	included**	included	optional	included



(\*) Wheelsupport (included) for SG Swing Gate

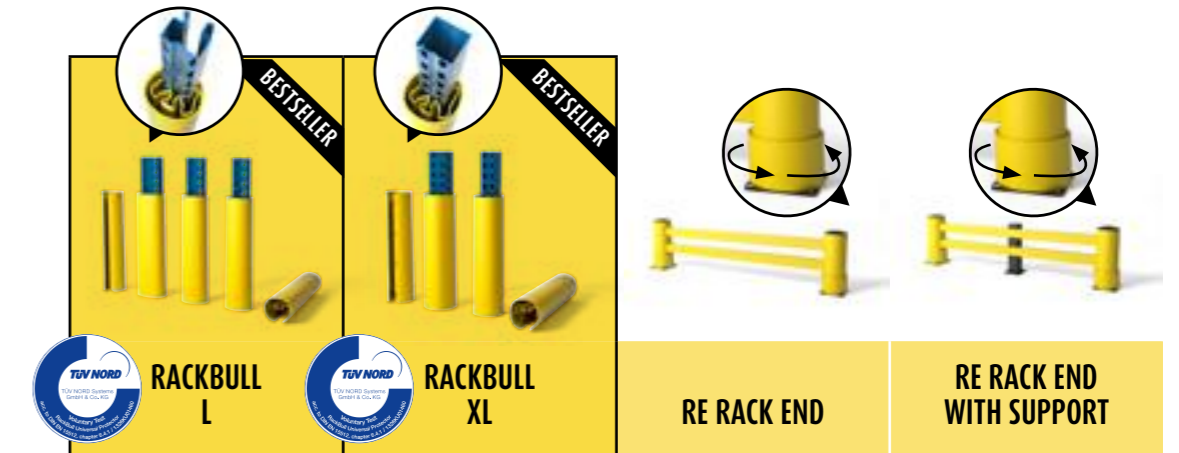


(\*\*) use gate stop for one-way swing



(\*\*\*) at 90° opening angle gate stays in the open position, unless it has an (included) push back block.

(\*\*\*\*) 10m version too wide to be installed onto Flex Impact 112x112 posts, choose BO Impact.



SUITABILITY				
Application	rack upright protection during placement and retrieval of pallets	rack upright protection during placement and retrieval of pallets	protection of ends of racking aisles	rack upright protection during placement and retrieval of pallets
RAILS SET (between 2 posts)				
Impact Breakpoint (Joule)	-	-	8.550	8.550
N° Rails	-	-	2	2
Height x Width (mm)	-	-	88x88	88x88
Custom Length (mm)*	-	-	750 - 2.500	2.510 - 3.200
Colour(s)	-	-	●	●
PRODUCT / POST				
Impact Breakpoint (Joule)	1.000	1.000	3.000	3.000
Height (mm)	600	600	530	530
Width (mm)	-	-	Ø200	Ø200
Rotor	-	-	optional	optional
Support	-	-	optional	standard
RACK LEG				
Width (mm)	110 100 90	110 100 90	-	-
Depth (mm)	34 - 45	70 - 80	-	-
ACCESSORIES				
Installation kit	optional	optional	-	-
Dust cap	optional	optional	-	-
Foam impact	optional	optional	-	-
Locker stainless steel	optional	optional	-	-
BASEPLATES				
Discover all available baseplates at the end of the catalog				



Can be fitted around round, square, octagonal or rectangular pillars



	CP CORNER PROTECTOR	CP UNIVERSAL L	CP UNIVERSAL XL	KP 100	KP 150	KP 200	KP 300	KP 400	KP 500	KP 600
<b>SUITABILITY</b>										
Application	Protect wall corners from damage of glancing vehicles	Protect columns from damage of glancing vehicles	Protect columns from damage of glancing vehicles				Protect columns from damage of glancing vehicles. The concentrated local impact of the vehicle is spread out over the constructive element			
<b>PROTECTOR COMPLETE</b>										
Impact Breakpoint (Joule)	-	2.200	2.200	2.200	2.200	2.200	2.200	2.200	2.200	2.200
Inner dimensions (mm) (straight & rotation)	-	700 to 200 (adjustable range)	1.000 to 200 (adjustable range)	100x100 (80x80)	150x150 (120x120)	200x200 (150x150)	300x300 (260x260)	400x400	500x500 (410x410)	600x600
Outer dimensions (mm)	120x120	inner dimension + 220 mm	inner dimension + 220 mm	Ø450	Ø450	Ø520	Ø620	Ø830	Ø930	Ø1.035
Height (mm)	1.000	1.000	1.000	1.100	1.100	1.100	1.100	1.100	1.100	1.100
For corners	85° - 100°	-	-	-	-	-	-	-	-	-
<b>PROTECTOR HALF</b>										
Inner dimensions (mm)	-	-	-	155x77	155x77	210x105	310x155	410x205	510x255	610x305
<b>FIXATION</b>										
Straps	-	-	-	2	2	3	3	3	3	3
Screws	6	12	12	optional	optional	optional	optional	optional	optional	optional
Extension (mm)	-	-	-	+100	+100	+100	+100	+100	+100	+100



	FLIP 120	FLIP 120 M	FLIP 180	FLIP 180 M	FLIP 200	FLIP 200 FORCE	FLIP PLUS *
<b>SUITABILITY</b>							
Impact Breakpoint (Joule)	3 kJ	2,6 kJ	5 kJ	3,5 kJ	8,6 kJ	17 kJ	15,2 kJ
Modularity	-	✓	-	✓	-	-	✓
Application	Wheel guides, wall & pedestrian protection from ground level impacts as a part of a BOPLAN traffic barrier system	Wheel guides, wall & pedestrian protection from ground level impacts as a part of a BOPLAN traffic barrier system	Wheel guides, wall & pedestrian protection from ground level impacts as a part of a BOPLAN traffic barrier system	Wheel guides, wall & pedestrian protection from ground level impacts as a part of a BOPLAN traffic barrier system	Wheel guides, wall & pedestrian protection from ground level impacts as a part of a BOPLAN traffic barrier system	Wheel guides, wall & pedestrian protection from ground level impacts as a part of a BOPLAN traffic barrier system	Wheel guides, wall & pedestrian protection from ground level impacts as a part of a BOPLAN traffic barrier system
Weight (kg)	-	-	-	-	-	-	-
Fixations	-	-	-	-	-	-	-
Width (mm)	120	120	150	150	175	175	175
Height (mm)	120	120	180	180	205	205	205 - 1150
Standard Length (mm)	500 - 1000 - 2000 - 3000	400 - 600 - 800 - 1000 - 1200 1400 - 1600 - 1800	500 - 1000 - 2000 - 3000	700 - 800 - 900 - 1000 - 1100 - 1200 1300 - 1400 - 1500 - 1600 - 1700 1800 - 1900 - 2000	500 - 1000 - 2000 - 3000	500 - 1000 - 2000 - 3000	750 - 950 - 1150 - 1350 1550 - 1750
Custom Length (mm)	501 - 2999	300 - 1799	501 - 2999	300 - 1999	501 - 2999	501 - 2999	600 - 1749

(\* Available with 2 or 3 rails)



	BO LIGHT	BO IMPACT	BO SUPER	BO 200 FORCE	BO LED	GOAL POST 200	GOAL POST 250
<b>SUITABILITY</b>							
Application	not suitable for motorised vehicles	where energy impacts are possible	where high energy impacts are possible	where very high energy impacts are possible	where energy impacts are possible while illuminating dark areas	doorway opening protection and height restriction	increased doorway opening protection and height restriction
<b>POST</b>							
Impact Breakpoint (Joule)	N/A*	3.200	7.200	16.000	3.200	3.200**	7.200**
Diameter (mm)	Ø125	Ø200	Ø250	Ø200	Ø200	Ø200	Ø250
Standard Height (mm)*	300 750 1.000	450 600 750 1.000 1.200	450 600 750 1.000 1.200	750 1.000 1.200	1.200	-	-
Custom Height (mm)*	250 - 1.000	250 - 1.200 1.201 - 1.500 1.600 - 2.000 2.100 - 2.500	550 - 1.200 1.201 - 1.500 1.600 - 2.000 2.100 - 2.500	-	-	inner height 2.000 - 3.000 3.100 - 4.000 4.100 - 4.500*	inner height 2.000 - 3.000 3.100 - 4.000 4.100 - 6.000*
Diameter horizontal tube (mm)	-	-	-	-	-	Ø125	Ø200
Inner width horizontal post (mm)	-	-	-	-	-	1.800 - 2.500 2.600 - 4.000	1.800 - 2.500 2.600 - 4.000 4.100 - 6.000
Stripes	0 - 1	0 - 3	0 - 3	0 - 3	-	-	-
Stripe Height (mm)	75	150	150	150	-	-	-
<b>LED</b>							
Lights	-	-	-	-	5	-	-
Temperature (K)	-	-	-	-	6.500	-	-
Light strength (lm)	-	-	-	-	800	-	-
Power (W)	-	-	-	-	16	-	-
Volt (V)	-	-	-	-	220	-	-
<b>ACCESSORIES</b>							
<b>ROTOR</b>							
Height (mm)	-	450 600 750 1.000	-	1.005	-	-	-
Diameter (mm)	-	Ø225	-	Ø225	-	-	-
<b>WALL FIX</b>							
Plastic version colour	-	-	-	-	-	●	●
Steel version colour	-	-	-	-	-	●	●
<b>TOUCH BARRIER</b>							
For inner length (mm)	-	-	-	-	-	1.800 - 2.500 2.600 - 4.000 4.100 - 6.000	1.800 - 2.500 2.600 - 4.000 4.100 - 6.000
Diameter (mm)	-	-	-	-	-	Ø125	Ø125
<b>BASEPLATES</b>	Discover all available baseplates at the end of the catalog						

(\*) for non-motorised transport only

### BASEPLATE FIXATIONS

All Traffic barrier, bollards and hand rail systems are delivered with fixations. Different types of fixations are used. Only fixations from premium suppliers are used. All fixations are ETA tested (European Technical Assessment). This ensures the specified performance values result from strict testing methods.

Fixations Category	Type	Head	Material	Design performance in concrete	Certification
Torque controlled expansion anchors	M8 up to M16	Thread and nut Hexagon head Counter-sunk hexagon socket	Zinc plated Stainless steel (SS)	Up to 17.1 kN	
Chemical anchors	M12 up to M16	Thread and nut	Zinc plated Stainless steel (SS)	Up to 20 kN	
Concrete screws	M12	Hexagon head	Zinc plated	Up to 27,8 kN	



**Installation requirements:**

- Non-cracked concrete floor with minimum quality C20/25. (Anchors can be used in cracked concrete, but performance will be lower)
- Concrete floor thickness at least 1.5 x length of the fixation.
- Fixations installed near the edge of a concrete floor will reduce the performance of the installation. Keep at least 300 mm from the edge.
- Installations in asphalt are discouraged. It is recommended to prepare a concrete slab in these cases.

**Remarks:**

- All necessary fixations are included when a product is ordered.
- Installation sheets are available must be followed accurately to guarantee the specified impact resistance.
- Stainless steel anchors are not standard, but are available on request.
- For long term outdoor installations, use stainless steel fixations.

### PRODUCT MATERIALS & COLOURS

Flex Impact Rails, Tubes & Posts	
Temperature Range	-10°C to +40°C
Material	Polyolefin
Abrasion and corrosion resistance	Excellent - ISO/TR 10358
Recyclable	100%
UV resistance	Northern regions: +/- 10 years Southern regions: +/- 5 years
Toxicity	Not Hazardous
Fire rating	E (EN 13501-1:2007 + A1:2009)

Flex Impact Column Protectors	
Temperature Range	-10°C to +40°C
Material	Polyolefin
Abrasion and corrosion resistance	Excellent - ISO/TR 10358
Recyclable	100%
UV resistance	Northern regions: +/- 10 years Southern regions: +/- 5 years
Toxicity	Not Hazardous
Fire rating	E (EN 13501-1:2007 + A1:2009)

Flex Impact Corner Protectors	
Temperature Range	-10°C to +40°C
Material	Polyolefin
Abrasion and corrosion resistance	-
Recyclable	100%
UV resistance	Northern regions: +/- 10 years Southern regions: +/- 5 years
Toxicity	Not Hazardous.
Fire rating	E (EN 13501-1:2007 + A1:2009)

Flex Impact RackBull	
Temperature Range	-10°C to +40°C
Material	HDPE
Abrasion and corrosion resistance	Excellent - ISO/TR 10358
Recyclable	100%
UV resistance	Northern regions: +/- 10 years Southern regions: +/- 5 years
Toxicity	Not Hazardous
Fire rating	E (EN 13501-1:2007 + A1:2009)

Axes Gates	
Temperature Range	-10°C to +40°C
Material	Solid colored reinforced PU (Polyurethane)
Abrasion and corrosion resistance	Excellent - ISO/TR 10358
Recyclable	No
UV resistance	Northern regions: +/- 10 years Southern regions: +/- 5 years
Toxicity	Not Hazardous
Fire rating	HB (UL 94 classification)

Line plan	
Temperature Range	-10°C to 50°C
Material	PVC with double sided tape
Abrasion and corrosion resistance	ASTM D1784 - Class B
Recyclable	yes
UV resistance	Northern regions: +/- 10 years Southern regions: +/- 5 years
Toxicity	Not Hazardous
Fire rating	V0 (UL 94 classification)

### BASEPLATE EXAMPLES

Baseplate /Post	Handrail Light Post	Handrail Post /Safety Barrier Midpost	Safety Barrier Post
Lacquered/ Galvanised			
Stainless steel			
Removable with slider stainless steel	N/A		
Removable with slider Cast iron lacquered (lockable with locking block)	N/A		
Removable with core-in	N/A		
Anchored countersunk	N/A		



	BO Light	TB Mini	TB 200	TB 260	TB 400	TB 550	TB 260 Double	TB 400 Double	TB Super Double	TB Super Triple	TB 260 Fence	TB 260 Plus	TB 260 Grill	TB 400 Fence	TB 400 Plus	TB 400 Grill	TB 260 Double Plus	TB 400 Double Plus	TB 400 Double Grill	BO Impact	BO Super	BO 200 FORCE	GP Goal Post 200	GP Goal Post 250	RE Rack End	HD Light	HP Plus	HP Grill	HT Tunnel	FE Fence	
BO Light	×	×	×	×	×	×	×	×	×	×	×	×	×	×	×	×	×	×	×	×	×	×	×	×	×	×	×	×	×	×	
TB Mini		×	×	×	×	×	×	×	×	×	×	×	×	×	×	×	×	×	×	×	×	×	×	×	×	×	×	×	×	×	
TB 200			✓	✓	✓	✓	×	×	×	×	✓	✓	✓	✓	✓	✓	×	×	✓	✓	×	×	✓	×	✓	×	×	×	×	×	
TB 260				✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	×	✓	✓	✓	×	×	×	×	×
TB 400					✓	✓	✓	✓	✓	✓	×	✓	×	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	×	×	×	×	×
TB 550						✓	✓	✓	✓	✓	×	×	×	×	×	×	✓	✓	✓	✓	✓	✓	✓	✓	✓	×	×	×	×	×	
TB 260 Double							✓	✓	✓	✓	×	×	×	×	×	×	✓	✓	✓	✓	✓	✓	×	✓	✓	×	×	×	×	×	
TB 400 Double								✓	✓	✓	×	×	×	×	×	×	✓	✓	✓	✓	✓	✓	✓	✓	✓	×	×	×	×	×	
TB Super Double									✓	✓	×	×	×	×	×	×	✓	✓	✓	✓	✓	✓	✓	✓	✓	×	×	×	×	×	
TB Super Triple										✓	×	×	×	×	×	×	×	×	×	×	✓	✓	✓	✓	✓	×	×	×	×	×	
TB 260 Fence											✓	×	×	×	×	×	×	×	×	×	×	×	×	×	×	×	×	×	×	×	
TB 260 Plus												✓	×	×	×	×	✓	✓	×	×	×	×	×	×	×	×	×	×	×	×	
TB 260 Grill													✓	×	×	×	×	×	×	×	×	×	×	×	×	×	×	×	×	×	
TB 400 Fence														✓	×	×	×	×	×	×	×	×	×	×	×	×	×	×	×	×	
TB 400 Plus															✓	×	×	×	×	×	×	×	×	×	×	×	×	×	×	×	
TB 400 Grill																✓	×	×	×	×	×	×	×	×	×	×	×	×	×	×	
TB 260 Double Plus																	✓	✓	✓	✓	×	×	×	×	×	×	×	×	×	×	
TB 400 Double Plus																		✓	✓	✓	×	×	×	×	×	×	×	×	×	×	
TB 400 Double Grill																				✓	×	×	×	×	×	×	×	×	×	×	
BO Impact																					×	×	×	×	×	×	✓	✓	×	×	×
BO Super																						×	×	×	×	×	×	×	×	×	
BO 200 FORCE																							×	×	×	×	×	×	×	×	
GP Goal Post 200																								✓	×	×	×	×	×	×	
GP Goal Post 250																									✓	×	×	×	×	×	
RE Rack End																										✓	×	×	×	×	
HD Light																											✓	✓	×	×	×
HP Plus																												✓	×	×	
HP Grill																												✓	×	×	
HT Tunnel																													✓	×	
FE Fence																														✓	
SG Sliding Gate	×	×	×	×	×	×	×	×	×	×	×	✓	×	×	✓	×	×	×	×	×	×	×	×	×	×	×	✓	×	×	×	
SG Swing Gate	×	×	×	×	×	×	×	×	×	×	×	✓	×	×	✓	×	×	×	×	×	✓	×	×	×	×	×	✓	×	×	×	
SG Drop Gate	×	×	×	×	×	×	×	×	×	×	×	✓	×	×	✓	×	×	×	×	×	×	×	×	×	×	×	✓	×	×	×	
AG Axes Gate	×	×	×	×	×	×	×	×	×	×	×	✓	×	×	✓	×	×	×	×	×	✓	×	×	×	×	×	✓	×	×	×	



SUITABILITY		
Impact Design Limit (113kg during 1min.)	□	□
Impact Design Limit (144kg during 1min.)	□	□
Application	 outdoor ground level only	 outdoor at heights
Min length (mm)	550	550
Max length (mm)	940 1.200	940 1.200
Height (mm)	326	610
Compliance	DIN EN ISO 14122-3 chapter 8.2	DIN EN ISO 14122-3 chapter 7.1.4 (kneerail) DIN EN ISO 14122-3 chapter 8.2 (strength)
Certification	TÜV Nord	TÜV Nord
Rails	1	2
Material	PUR	PUR
ACCESSORIES		
Magnetic lock (pullpower in kg)	7,5 16	7,5 16
Pipe fixing adapter (mm)	Ø40 Ø50	Ø40 Ø50
End cap (black)	✗	optional
Sign board	✗	optional



Optional end rail



Optional sign board



Optional Magnetic locking system



Optional Pipe Fixing System



SUITABILITY	MARKING TAPE	MARKING TAPE ANTISLIP	MARKING SIGN ARROW	MARKING SIGN FOOT
Application	indoor use only	indoor use only	indoor use only	indoor use only
Beveled edges	□	✗	✗	✗
Thickness (mm)	1,0	1,0	1,0	1,0
Width x length	50mm x 30m 75mm x 30m 100mm x 30m	50mm x 18m	150mm x 250mm	90mm x 240mm
Colour	yellow red white blue green black orange	yellow black photoluminescent	yellow red blue green	yellow red blue green
Center line	white on red (*) black on yellow (*) photoluminescent on yellow (*)	-	photoluminescent on yellow	photoluminescent on yellow
Cross	yellow/black (**) white/black (*)	yellow/black photoluminescent/black red/white	-	-



SUITABILITY	MARKING SIGN "L"	MARKING SIGN "T"	MARKING SIGN DOT	MARKING SIGN PICTO	MARKING SIGN PICTO
Application	indoor use only	indoor use only	indoor use only	indoor use only	indoor use only
Beveled edges	✗	✗	✗	✗	✗
Thickness (mm)	0,8	0,8	0,8	0,3	0,3
Width x length	50mm x 150mm	50mm x 150mm	Ø100mm	Ø 430 mm	800 mm x 120 mm
Colour	yellow red blue green	yellow red blue green	yellow red blue green	yellow / white / black	yellow / white / black
Center line	-	-	-	-	-
Cross	-	-	-	-	-



NOTES



# CHECKLIST

## YOUR LAST LINE OF DEFENSE

PROJECT LOCATION:

SUPERVISOR:

DATE:

Are **pedestrian aisle ways** defined and physically separated from industrial vehicle traffic conveyors and robotic equipment?  YES  NO

▶ See *Flex Impact Handrails, Safety Gates and Safety Barriers* on p. 44, 50 and 24.

Is perimeter guarding installed around **automated equipment** and does it meet guidelines published by the HSE or OSHA?  YES  NO

▶ See *Flex Impact Handrails (FE Fence) and Line Plan Floor marking* on p. 47 and 82.

Are gates, overhead bridges, conveyers and pipes properly guarded from vehicle traffic?  YES  NO

▶ See *Flex Impact Bollards and Goal Posts* on p. 34.

Are rack and shelving systems guarded to prevent loose objects from falling into walkways, work areas, or flues?  YES  NO

▶ See *Flex Impact Rack Protection* on p. 56

Are material handling entry points to fixed equipment and work cells properly guarded from vehicle traffic?  YES  NO

▶ See *Flex Impact Handrails (FE Fence)* on p. 47

Are pallet rack uprights in high traffic areas, tunnel bays, or end of rows protected from impact?  YES  NO

▶ See *Flex Impact Rack Protection* on p. 56

Are building columns in high vehicle traffic areas properly protected?  YES  NO

▶ See *Flex Impact Column Protection* on p. 60

Do mezzanines, elevated work platforms, and load/unload areas have proper guarding to prevent people or products from falling?  YES  NO

▶ See *Flex Impact Handrails (HD Mezza)* on p. 47

Are shipping docks protected from damage or falls?  YES  NO

▶ See *Double Axes Gate* on p. 76

Are fixed structures such as racks, in-plant offices, electrical equipment, or sprinkler main lines protected from industrial vehicle traffic?  YES  NO

▶ See *Flex Impact Safety Barriers* on p. 24

Are **personnel** in designated work cells isolated from vehicle traffic?  YES  NO

▶ See *Flex Impact Handrails and Line Plan Floor marking* on p. 44 and 82

Contact your BOPLAN® representative for expert advise on your specific safety needs.

[www.boplan.com](http://www.boplan.com)









**Boplan - Headquarter**  
Muizelstraat 12  
8560 Moorsele (Belgium)

T +32 (0)56 20 64 20  
E [info@boplan.com](mailto:info@boplan.com)



**Boplan UK**  
Science Centre, Wolverhampton Science Park  
Glaisher Drive, Wolverhampton WV10 9RU

T +44 (0)1902 82 4280  
E [info@boplan.co.uk](mailto:info@boplan.co.uk)



**Boplan France**  
617, Avenue de Bayonne  
64210 Bidart

T +33 (0)5 35 45 75 35  
E [info@boplan.fr](mailto:info@boplan.fr)



**Boplan Germany**  
IHP-Nord · Babenhäuser Str. 50  
63762 Großostheim

T +49 (0)6026 999 51 90  
E [info@boplan.de](mailto:info@boplan.de)



**Boplan Netherlands**  
Toermalijnring 100  
3316 LC Dordrecht

T +31 (0)85 13 07 500  
E [info@boplan.nl](mailto:info@boplan.nl)



**Boplan Spain**  
Pl Ramon Berenguer el Gran, 1  
08002 Barcelona

T +34 936 81 66 88  
E [info@boplan.es](mailto:info@boplan.es)



**Boplan USA**  
4350 W White Road, Ste 300  
Oakwood, GA 30542

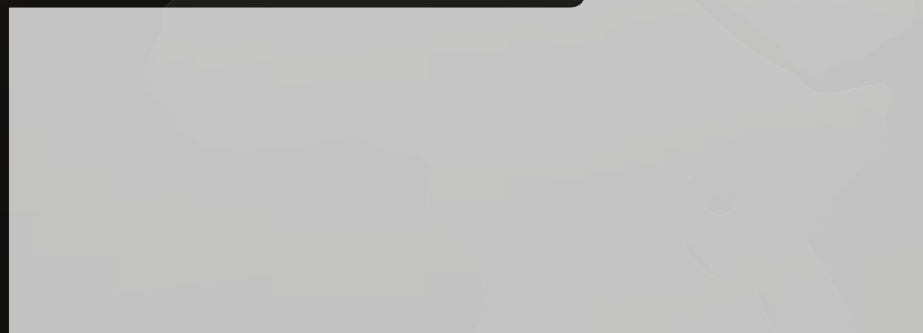
T +1 678-890-5906  
E [info@boplan.us](mailto:info@boplan.us)



**Boplan Poland**  
ul. Graniczna 34B  
41-300 Dąbrowa Górnicza

T +48 791 925 452  
E [info@boplan.pl](mailto:info@boplan.pl)

Please contact one of our 65 dealers or contact [sales@boplan.com](mailto:sales@boplan.com)



FOLLOW US    