

This is d-flexx!

## **Safety barrier solutions**







#### We are enhancing global safety.

d-flexx, a division of the Dancop Group, headquartered in Denmark, Europe extends its presence across EMEA, APAC, and the AMERICAS.



### d-flexx in a nutshell

d-flexx polymer safety barriers are engineered to effectively absorb the forces generated by impacts, subsequently returning to their original shape.

With an impressive capacity to absorb up to 80% of the energy generated during impact, these barriers minimize the transfer of energy to mounting structures and flooring. This feature not only minimize damage but also reduces the need for costly repairs.



#### Minimizes damages to other material and inventory

The flexible polymer barriers minimize damage to forklifts, flooring and racking by absorbing impact energy effectively.

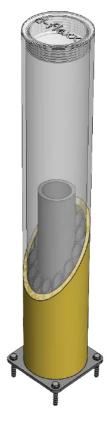
# d-flexx buffer pipe technology

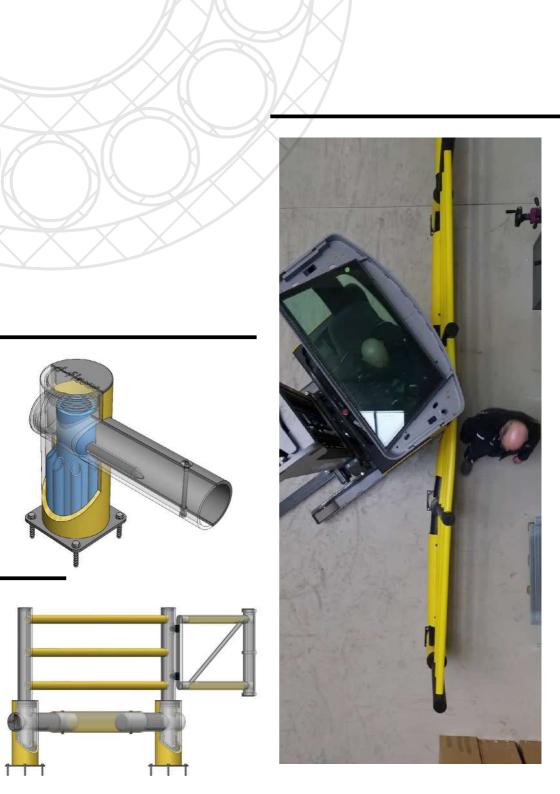
Embedded within every bollard and traffic barrier mid- and end posts lies a powerful innovation: d-flexx buffer pipe technology. This cutting-edge advancement features a robust core encased by buffer pipes, concealed within the structure.

As the name implies, the buffer pipes serve as an energy absorption zone between the outer pipe and the inner core. Collaborating seamlessly with the flexible d-flexx material, these buffer pipes culminate in a resilient, high-quality flexible post. This unique design enables the post to absorb impacts effectively without causing damage to the concrete floor.

d-flexx buffer pipe technology represents a significant leap forward in safety and durability for bollards and traffic barriers. By incorporating this innovative solution, businesses and organizations can enhance their security measures while safeguarding their infrastructure from potential damage.

Experience the power of d-flexx buffer pipe technology and elevate your safety standards today.





### One for all

#### Indoor and outdoor use

Versatility is key with d-flexx. Whether indoors or outdoors, our products deliver consistent safety and protection, adapting seamlessly to various environments.

#### Cold and warm stores

From cold stores to warm environments, d-flexx safety barriers maintain their structure and performance regardless of extreme temperatures.

#### Wide temperature range

With a temperature range spanning from -40°C to +50°C, d-flexx solutions persist in harsh environments, providing reliable safety measures regardless of the weather conditions

#### **UV-stability**

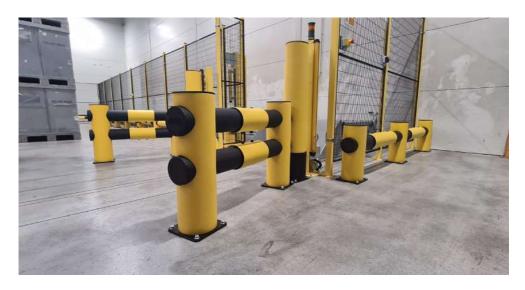
Our products are engineered with UV-stable materials, ensuring longevity and reliability even in outdoor environments exposed to sunlight.







### **Endless combinations**



d-flexx protects people, inventory, machines and buildings from moving traffic. All d-flexx products are highly modular and can be combined in numerous ways. d-flexx flexible barriers are all quick and easy to assemble and install, with minimum use of tools.



## Improved safety solutions



At d-flexx, we adhere to the PAS 13 standards when offering guidance in our safety solutions.

In essence, PAS 13 provides comprehensive guidelines for selecting appropriate safety solutions tailored to specific locations, prioritizing the safety of both traffic and pedestrians. This code of practice meticulously outlines the technical requirements for

safety barrier solutions, ensuring compliance with rigorous standards and best practices in the field of safety engineering.



#### d-flexx Safety Barriers: Ensuring Superior Performance

At d-flexx, ensuring the highest standards of safety and performance is paramount. To achieve this, we employ a rigorous testing process comprising seven methods to assess the force of impact that our safety barriers can withstand.

During testing, a designated barrier is subjected to controlled dynamic impacts from a striker. This dynamic motion assesses the barrier's resistance, measuring both deflection and the loads experienced by fixture systems and the ground.

#### **Testing Procedure**

- **1. Determine Testing Requirement:** Depending on the application, whether for safety barriers or ground-level protection, select the appropriate test(s).
- **2. Select Striker:** Choose the suitable striker bumper striker for safety barriers or two-fork striker for ground-level protection.
- **3. Choose Test Apparatus:** Opt for one of three test apparatus—pendulum, vehicle, or sled and ramp to impact the selected striker onto the barrier.
- **4. Repeat Testing:** Perform the test at least once with a new barrier to ensure consistency in results.

This meticulous testing process ensures that d-flexx safety barriers deliver unparalleled performance and reliability in safeguarding various environments.

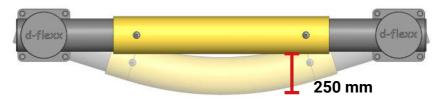


# Superior impact absorption explained

As standard, d-flexx foot plates are equipped with concrete screws, also referred to as concrete anchors or screw anchors. These specialized fasteners are meticulously designed for secure installation into concrete surfaces. Featuring a threaded design, they effectively cut into the drill hole within the concrete, providing robust anchoring for d-flexx products.

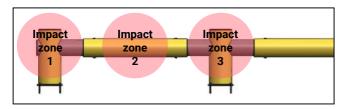


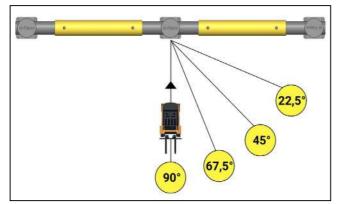
All TÜV-tested d-flexx products undergo rigorous testing with concrete screws to ensure optimal performance and reliability. Furthermore, concrete screws offer the added advantage of facilitating the repeated disassembly and reassembly of posts, particularly useful in cases of barrier damage.



#### **Deflection Zone**

Since the barrier absorbs an impact, there is a need for a deflection zone. This is set at 250 mm away from any object.





KE =  $\frac{1}{2}$  m x (vsin0)<sup>2</sup> where:

- KE = Kinetic energy [J]
- m = mass [Kg]
- v = velocity [m/s]
- Theta = angle [degrees]

The Joule figures associated with d-flexx products play a pivotal role in quantifying the material's remarkable energy absorption capabilities upon impact. These figures provide a comprehensive understanding of the intricate relationship between impact angle and energy absorption, revealing an exponential rise in Joule numbers as the impact angle diminishes.

When subjected to a 90° impact angle - the pinnacle of potential impact load - d-flexx products demonstrate their highest recorded Joule numbers, showcasing unparalleled energy absorption properties. This empirical evidence underscores the superior performance of d-flexx products, particularly pronounced at lower impact angles. In such scenarios, d-flexx products effectively mitigate the force of impacts, ensuring robust protection across a myriad of operational scenarios and environments.

The PAS13 also allows other impact angles to be specified, which means that the higher the angle, the lower the joule number.

# Advanced planning technology ...

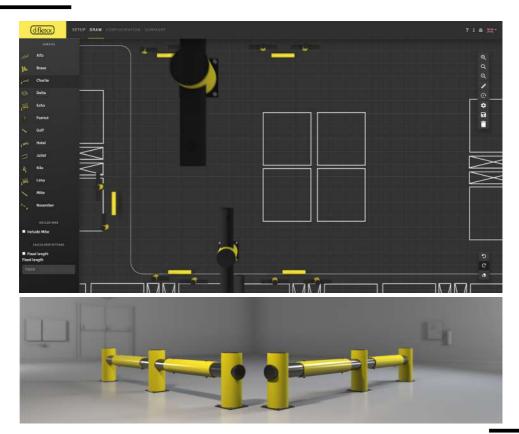


With our unique 3-D designer, we will be able to visualize your safety solutions, in a split second. We can easily change solutions and upscale or downscale elements.

We see ourselves as your trusted advisor and **together we create safety**, for your personal, buildings and inventory.

## ... for the right safety solution!

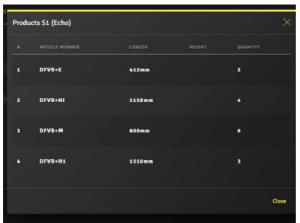
The d-flexx Designer takes the planning of your warehouse safety solution to a new level.



Our browser-based planning software, enables users to upload hall plans and blue prints and swiftly gets the right safety solution, integrating the necessary requirements seamlessly. Existing plans from architects or shelving suppliers can also serve as a foundation for planning.

### Installation

The d-flexx designer generates a detailled installation list for the installation team. All d-flexx products are ready to install with a minimum use of tools, minimizing installation time and saving money.







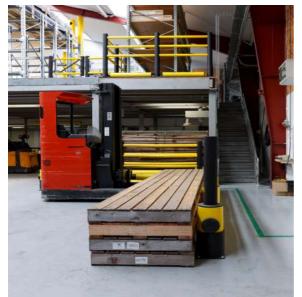
## **Customer solutions**

















## Together we create safety

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