

Topple Barrier Impact

The X-Protect Topple Barrier Impact combines topple prevention and impact protection in warehouse and logistics environments with mixed pedestrian and vehicle traffic. Designed to maintain safe workflows and clear separation, the system helps protect personnel, goods and surrounding infrastructure.



The X-Protect Topple Barrier Impact is developed for warehouse, logistics and production environments where falling goods, pallet handling and vehicle traffic create safety risks for personnel and operations.

The reinforced configuration combines lower rails with impact protection and upper pedestrian protection to help prevent goods from entering walkways while providing additional protection against vehicle impacts. Its modular construction integrates directly with the X-Protect range, enabling flexible and continuous protection layouts throughout the facility.

Suitable for high-bay storage, loading areas, pick and pack zones and internal logistics routes, the barrier maintains open visibility and efficient workflows in demanding operational environments. The flexible design helps absorb impact forces while installation remains fast and straightforward using the same simple installation approach as the rest of the X-Protect range.

Key features

- Combined topple and impact protection
- Designed for forklift and [AGV traffic](#)
- Modular X-Protect integration

- Fast and easy installation

Impact test results

Product:	Area of impact	Load	Equivalent to	Equivalent to	90° deflection	Force to fixings
	Centre of barrier C - C as below					
Topple Barrier Impact 2300	2000 mm	6200 J	2500 kg 8 km/h	5000 kg 5,8 km/h	N/A	12,2 kN
	Post					
Topple Barrier Impact 2300	End post	5250 J	2500 kg 7,3 km/h	5000 kg 5,2 km/h	N/A	5,4 kN
Topple Barrier Impact 2300	Mid post	5250 J	2500 kg 7,3 km/h	5000 kg 5,2 km/h	N/A	5,9 kN
	Area of impact	Load		Equivalent to	90° deflection	Force to fixings
	Centre of barrier C - C as below					
Topple Barrier Impact 3400	2000 mm	6200 J	2500 kg 8 km/h	5000 kg 5,8 km/h	N/A	5,9 kN
	Post					
Topple Barrier Impact 3400	End post	5250 J	2500 kg 7,3 km/h	5000 kg 5,2 km/h	N/A	4,8 kN
Topple Barrier Impact 3400	Mid post	5250 J	2500 kg 7,3 km/h	5000 kg 5,2 km/h	N/A	5,1 kN

* Deflection of posts is equivalent or less than that of the rail/s and is not considered to be critical for product selection. Performance is tested at height of the lowest rail. The post will perform better for lower strikes and deflection. The Axelent Topple Barrier is tested for static load on top rail up to 400 kg.

Models

Height 2300 mm 4 articles

ARTICLES / DESCRIPTION		WIDTH (MM)	HEIGHT (MM)	COLOR
	BTC0-228-I2P4 Topple Impact corner		2300	Zinc Yellow (RAL 1018) Graphite Black (RAL 9011)
	BTE0-228-I2P4 Topple Double Impact end		2300	Zinc Yellow (RAL 1018) Graphite Black (RAL 9011)
	BTM0-228-I2P4 Topple Impact mid		2300	Zinc Yellow (RAL 1018) Graphite Black (RAL 9011)



BTT0-228-I2P4
Topple Double Impact T post

2300

Zinc Yellow (RAL 1018)
Graphite Black (RAL 9011)

Height 3400 mm 4 articles

ARTICLES / DESCRIPTION		WIDTH (MM)	HEIGHT (MM)	COLOR
	BTC0-340-I2P7 Topple Impact corner		3400	Zinc Yellow (RAL 1018) Graphite Black (RAL 9011)
	BTE0-340-I2P7 Topple Double Impact end		3400	Zinc Yellow (RAL 1018) Graphite Black (RAL 9011)
	BTM0-340-I2P7 Topple Double Impact mid		3400	Zinc Yellow (RAL 1018) Graphite Black (RAL 9011)
	BTT0-340-I2P7 Topple Double Impact T post		3400	Zinc Yellow (RAL 1018) Graphite Black (RAL 9011)

Impact rails 7 articles

ARTICLES / DESCRIPTION		WIDTH (MM)	HEIGHT (MM)	COLOR
	RCI1-047-0070 Impact rail			Zinc Yellow (RAL 1018)
	RCI1-077-0100 Impact rail			Zinc Yellow (RAL 1018)
	RCI1-127-0150 Impact rail			Zinc Yellow (RAL 1018)
	RCI1-177-0200 Impact rail			Zinc Yellow (RAL 1018)
	RCI1-227-0250 Impact rail			Zinc Yellow (RAL 1018)
	RCI1-277-0300 Impact rail			Zinc Yellow (RAL 1018)



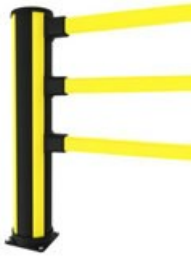
RCI1-027-0050
Impact rail

Zinc Yellow (RAL 1018)

Hand rails 5 articles

ARTICLES / DESCRIPTION	WIDTH (MM)	HEIGHT (MM)	COLOR
 RCP1-047-0070 Hand rail			Zinc Yellow (RAL 1018)
 RCP1-077-0100 Hand rail			Zinc Yellow (RAL 1018)
 RCP1-127-0150 Hand rail			Zinc Yellow (RAL 1018)
 RCP1-177-0200 Hand rail			Zinc Yellow (RAL 1018)
 RCP1-027-0050 Hand rail			Zinc Yellow (RAL 1018)

Related products



CLASSIC PEDESTRIAN

Pedestrian Barrier

Use the X-Protect Pedestrian Barrier configuration to define pedestrian routes and protect from light duty impacts. It is also possible to combine with a pedestrian gate. The pedestrian gate is sel...

9 articles

IMPACT PROTECTION

Floor Barrier



Designed to serve as a standalone solution, it provides safeguarding of building perimeters and vital infrastructure from the everyday risks of vehicle forks, pallets in transit, AMRs and AGVs, and...

11 articles



COLUMN GUARDS

Multifunction Column Guard

The Multifunction Column Guard is designed to protect large building columns and pillars from impacts caused by forklifts and other material handling equipment. With asymmetrical on-site adjustment...

3 articles



X-PROTECT BOLLARDS

Bollards

X-Protect Bollards safeguard corners, doorways and equipment from vehicle impacts. The black and yellow colour scheme enhances visibility and helps direct forklift traffic, creating safer, well-org...

7 articles

X-PROTECT DOCK GATE

Dock Gate



NEW

The X-Protect Dock Gate helps protect loading bays and dock areas in demanding warehouse and logistics environments. Designed for smooth and controlled operation, it combines reliable impact protec...

3 articles

X-Protect components

These are the building blocks of our modular Impact Protection range.

BARRIERS & RAILS

Pedestrian Rails



Width x Height:

68 x 72 mm | 2 11/16" x 2 27/32"

Length:

270 - 1770 mm | 10 5/8" - 69 11/16"

Impact Barriers



Width x Height:

116 x 220 mm | 4 9/16" x 8 21/32"

Length:

270 - 2770 mm | 10 5/8" - 109 1/16"

POSTS & BOLLARDS



Classic

4 connection sides

Height:

350 -

Width:

200 mm

7 7/8"

1160 mm

13 13/16" -

45 11/16"



Essential

2 connection sides

Height:

620 -

Width:

132 mm

5 3/16"

1170 mm

24 7/16" -

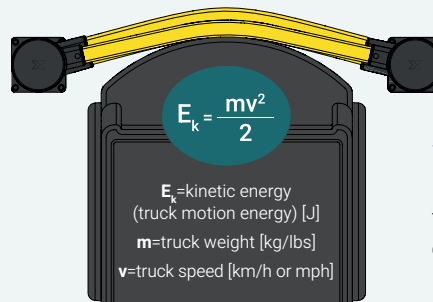
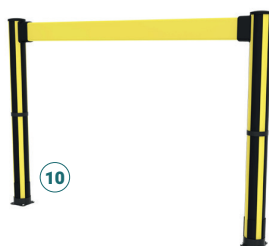
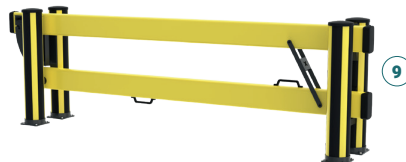
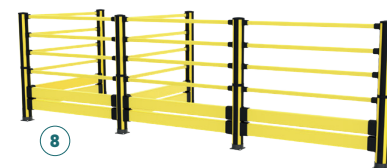
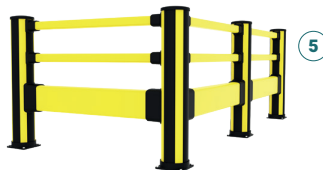
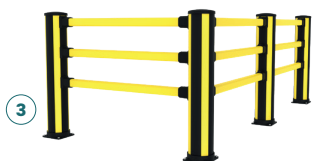
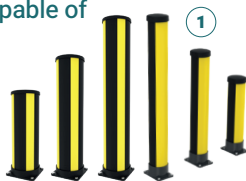
46 1/16"



X-Protect Standard Configurations

+ the highest impact energy (J) they are capable of withstanding*

* The highest force depends on the C-C. More information is available upon request.



$$E_k = \frac{mv^2}{2}$$

E_k = kinetic energy (truck motion energy) [J]

m = truck weight [kg/lbs]

v = truck speed [km/h or mph]

Impact testing

This is how we calculate the energy from a vehicle impact.



Loaded weight

3600 kg / 7930 lbs



Loaded weight

2700 kg / 5940 lbs



Loaded weight

2100 kg / 4620 lbs

Speed	Load
6 km/h 3.7 mph	5020 J
8 km/h 5 mph	8880 J
12 km/h 7.5 mph	19960 J

Speed	Load
6 km/h 3.7 mph	3770 J
8 km/h 5 mph	6660 J
12 km/h 7.5 mph	14970 J

Speed	Load
6 km/h 3.7 mph	2930 J
8 km/h 5 mph	5180 J
12 km/h 7.5 mph	11670 J

Component Colours



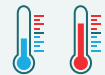
RAL 1018



RAL 9011

Operating temperature

-10°C → 40°C



1. Bollards

- Classic | 5220 J
- Essential | 1500 J

2. Impact Barriers

- Impact | 4500 J
- Impact High | 6200 J
- Double Impact Low | 7700 J
- Double Impact High | 7000 J

3. Pedestrian Rails

- Pedestrian | 5000 J
- Essential Pedestrian | 2250 J
- Essential Pedestrian 2 rail | 1700 J
- Essential Pedestrian | 2250 J

4. Floor Barrier | 2250 J

- Can be used both with Impact & Pedestrian configurations or as stand-alone protection.

5. Pedestrian Rails + Impact Barriers

- Pedestrian + Impact | 6700 J
- Pedestrian + Impact High | 8000 J
- Pedestrian + Double Impact | 8300 J
- Essential Pedestrian + Impact High | 3100 J

6. Pedestrian Gate | 0 J

7. Column Guard | 1800 J

8. Topple Barriers

- Pedestrian | 5250 J
- Impact | 6200 J

9. Dock Gate | 10200 J

10. Height Restrictors

- Goal Post | 4200 J
- Height Guard

11. Upright Protector