# X-Guard Connection bollards

Use our X-Protect bollards to protect doorways, exposed corners and machinery. The black and yellow bollards also attract the fork lift driver's attention and act as guidance along traffic routes. If you have our machine guard system X-Guard installed, it is easy to integrate it with our X-Protect range.

The connection bollard comes in three heights to fit our most common panel options. Following on from the bollard you can then choose any configuration of X-Protect.
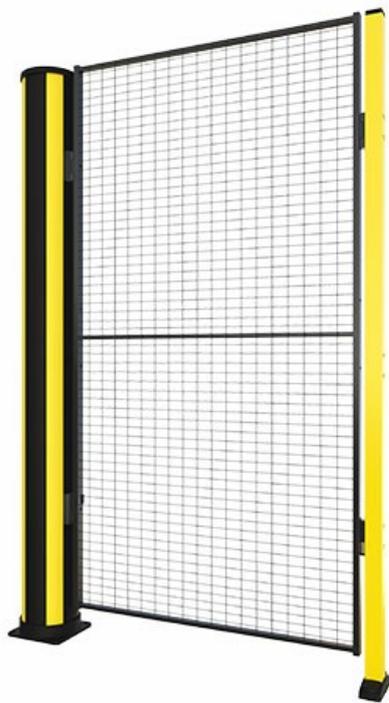
X-Protect is a unique approach to safety barriers. Unrivalled modularity, using only a few system components and damping that is built in to create a barrier system that changes with your work place. X-Protect allows rapid transformation, repair or replacement of existing barriers and bespoke configurations are limitless.

Models

ARTICLES / DESCRIPTION		WIDTH (MM)	HEIGHT (MM)	COLOR
	BCP0-230-0000 Bollard	200	2300	Zinc Yellow (RAL 1018) Graphite Black (RAL 9011)
	BCP0-200-0000 Bollard	200	2000	Zinc Yellow (RAL 1018) Graphite Black (RAL 9011)
	BCP1-200-0000 Bollard	200	2000	Zinc Yellow (RAL 1018)
	BCP0-140-0000 Bollard	200	1400	Zinc Yellow (RAL 1018) Graphite Black (RAL 9011)
	BCP1-140-0000 Bollard	200	1400	Zinc Yellow (RAL 1018)
	CCS3-230-XGC X-Guard Connection		2300	Graphite Black (RAL 9011)
	CCS3-200-XGC X-Guard Connection		2000	Graphite Black (RAL 9011)
	CCS1-200-XGC X-Guard Connection		2000	Zinc Yellow (RAL 1018)
	CCS3-140-XGC X-Guard Connection		1400	Graphite Black (RAL 9011)

Related products
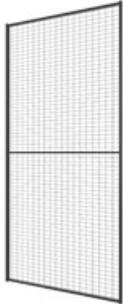
PANELS
Mesh panel

X-Guard mesh panels come in two sizes of mesh; Premium 50x20 and Classic 50x30 mm. The safety distance determines the size of mesh required. The Classic 50x30 mesh requires a minimum distance of 20...

75 articles

X-PROTECT IMPACT PROTECTION
Impact

Use the X-Protect Impact Barrier for ground level impact protection. It is ideal for segregating light weight vehicles or defining warehouse zones. Our modular rails and bollards allow for damaged...

15 articles

X-PROTECT IMPACT PROTECTION
Impact high

Use the X-Protect Impact High Barrier for high level impact protection. It is ideal for segregating light weight vehicles or defining warehouse zones. Our modular rails and bollards allow for damag...

15 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...

11 articles

X AXELENT

X-Protect components

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

BARRIERS & RAILS

Hand Rails

Width x Height:
68 × 72 mm | 2 11/16" × 2 27/32"
Length:
270 - 1770 mm | 10 5/8" - 69 11/16"

Impact Barriers

Width x Height:
116 × 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
Width:
200 mm
7 7/8"

Height:
350 –
1160 mm
13 13/16" –
45 11/16"
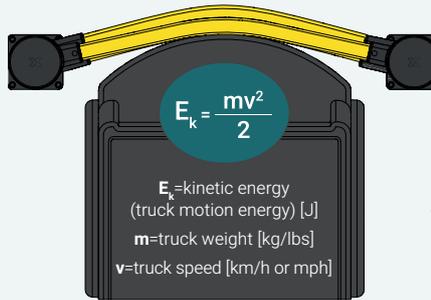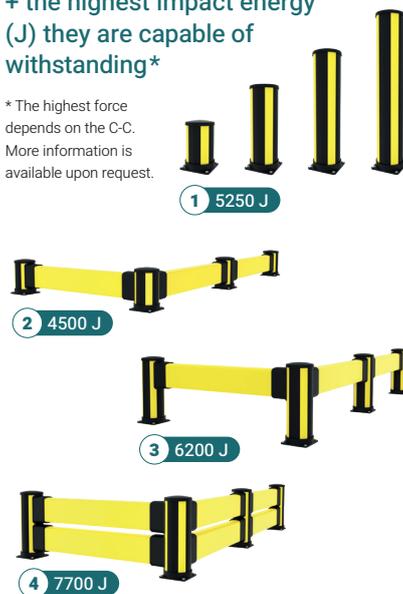
Essential
2 connection sides
Width:
132 mm
5 3/16"

Height:
620 –
1170 mm
24 7/16" –
46 1/16"

Impact testing

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

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

E_k = kinetic energy (truck motion energy) [J]
m = truck weight [kg/lbs]
v = truck speed [km/h or mph]

Loaded weight
3600 kg / 7930 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

Loaded weight
2700 kg / 5940 lbs

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

Loaded weight
2100 kg / 4620 lbs

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

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.

1 5250 J

2 4500 J

3 6200 J

4 7700 J

5 7000 J

6 5000 J

7 6700 J

8 8000 J

9 8300 J

10 0 J

11 1800 J

12 3000 J

13 1500 J

14 1700 J

15 2250 J

16 3100 J
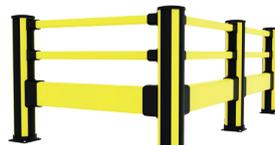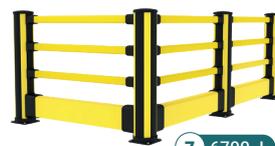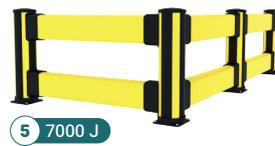
1. Bollards
2. Impact
3. Impact High
4. Double Impact Low
5. Double Impact High
6. Pedestrian
7. Pedestrian + Impact
8. Pedestrian + Impact High
9. Pedestrian + Double Impact
10. Pedestrian Gate
11. Column Guard
12. Floor Barrier*
13. Essential Bollards
14. Essential Pedestrian 2 rail
15. Essential Pedestrian
16. Essential Pedestrian + Impact High

* The Floor Barrier can be used in combination with configurations:
3, 6, 8 & 9