





# FLIP 180 BOPLAN KICK RAILS AND WHEEL CHOCKS

Revision: 20 November 2023 3:23 PM  
Boplan reference: PL181...

## PRODUCT SPECIFICATIONS

APPLICATION	
Environment	<b>Ground level protection</b> <ul style="list-style-type: none"> <li>- Wall protection (refrigerator walls, decorative walls, sandwich panels)</li> <li>- Wheel guide for pallet trucks or trolleys in busy traffic lanes</li> <li>- Protection of machines and infrastructure</li> <li>- Below a Boplan traffic barrier system</li> <li>- Indoor and outdoor use</li> <li>- Food Industry</li> </ul>
MATERIAL	
Plinth	Novilene® - UV resistant - Fire class E <sup>+</sup> - Non conductive - Impervious to most chemicals**
Endcap	SEBS rubber Black
STANDARD COLORS	
Plinth	Yellow - Black / Black - Yellow

\*Classification according to EN 13501-1:2007 +A1:2009 - Fire classification of construction products and building elements.  
\*\*Ask your local sales office for resistance to specific chemicals.

		FIXATIONS	
		ZC (Zinc coated)	SS (Stainless steel)
STANDARD	Concrete screw	 Ø17mm x 135mm	Not available
	Anchor rod (Chemical)	 M16 x 120mm + Chemical resin	M16 x 120mm + Chemical resin
ALTERNATIVES	Wedge Anchor	 M16 x 140mm	Not available
	Asphalt anchor	 Bolt M16 x 50mm + Screw Ø22 x 100mm	Not available



**FEATURES AND FUNCTIONALITY - FLIP 180**

IMPACT LABEL FOR SAFETY BARRIERS			
BOPLAN FLIP 180			
<b>IMPACT RATING</b> 	45°	90° PAS 13:2017 compliant	
	E80 < 80 kJ		
	E60 < 60 kJ		
	E50 < 50 kJ		
	E40 < 40 kJ		
	E35 < 35 kJ		
	E30 < 30 kJ		
	E25 < 25 kJ		
	E20 < 20 kJ		
	E15 < 15 kJ		
	E10 < 10 kJ	7kj	5kj
E5 < 5,0 kJ			
E2 < 2,5 kJ			
<b>DEFLECTION</b> At maximum impact energy 	$\alpha = \text{NA}$ $D = \text{NA}$	$\alpha = 51^\circ$ $D = 127\text{mm}$	
	<b>TEST CONDITIONS</b> TEMPERATURE: 20°C IMPACT ANGLE: 90° - IMPACT HEIGHT: 65 mm STANDARD PRODUCT LENGTH: 2000 mm TEST FLOOR: CONCRETE C25/30 - 160 mm MANUFACTURER ANCHOR PULL OUT: 21 kN	<b>TEST VEHICLE</b> WEIGHT: 3762 KG TYPE: BOPLAN IMPACT TEST VEHICLE SIZE (L x W x h): 3100 x 1100 x 1150 mm CONTACT AREA: STEEL BUMPER WIDTH: 1000 mm	<b>BOPLAN TEST LAB</b>  Muizelstraat 12 8560 Moorsele Belgium
<b>SUCCESS CRITERIA</b> - VEHICLE STOPPED - ASI (ACCELERATION SEVERITY INDEX) < 0.5			

SIZE	
Height	180 mm
Profile section	180 mm x 150 mm (10 thick)
Standard rail length	1000 mm - 2000 mm - 3000 mm (other sizes: 500 - 2999 mm)

REQUIREMENTS	
Concrete quality	minimum C25/30
Concrete floor plate thickness	minimum 150 mm
Operational temperature	-10°C up to +40°C
Water and humidity	<b>Zinc coated fixations:</b> indoor and outdoor use in most environments

**REFERENCE LIST - FLIP 180**

	YELLOW/Black	BLACK/Yellow
500mm (2fix)	PL1810-0500-0001YB	PL1810-0500-0001BY
1000mm (2fix)	PL1810-1000-0001YB	PL1810-1000-0001BY
2000mm (3fix)	PL1810-2000-0001YB	PL1810-2000-0001BY
3000mm (4fix)	PL1810-3000-0001YB	PL1810-3000-0001BY
501-1300mm (2fix)	PL1811-1300-0001YB	PL1811-1300-0001BY
1301-2200mm (3fix)	PL1811-2200-0001YB	PL1811-2200-0001BY
2201-2999mm (4fix)	PL1811-2999-0001YB	PL1811-2999-0001BY

