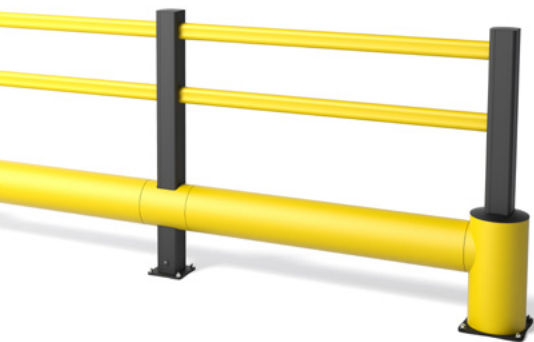


TB400 PLUS BOPLAN SAFETY BARRIER SPECIFICATION SHEET

Revision: 25 February 2022 3:18 PM
Boplan reference: TP4000 - ...



PRODUCT SPECIFICATIONS

APPLICATION

Environment	TB 400 Plus is used for creating walkways and protecting pedestrians from pallet trucks, lift trucks, forklifts or other vehicles.
Impact performance at 90° (in JOULE)	POST: 16100 Joule (Eq. to 5 ton - 9,1 km/h)
	RAIL: 20100 Joule (Eq. to 5 ton - 10,2 km/h)

MATERIAL

Posts and rails	Polyolefin - UV resistant - Fire class E ^s - Non conductive - Impervious to most chemicals**
Caps	SEBS rubber

STANDARD COLORS

End post	Yellow
Mid post	Yellow
Impact tube	Yellow
Handrails	Yellow

BASEPLATES

	Steel	Zinc Coated Steel	Stainless steel
Material	Steel 37	Steel 37	INOX (SS 304)
Coating	Lacquered	Lacquered + electro plating	No Itacquer / No coating
Color	High gloss black	Matt black	Natural color

*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	Wedge anchor	 M12 x 120mm	M12 x 120mm
	Wedge anchor Countersunk	 Not available	Not available
	Anchor rod (Chemical)	 M12 x 120mm + Chemical resin	M12 x 120mm + Chemical resin
ALTERNATIVES	Concrete screw	 Ø12mm x 100mm	Ø10mm x 100mm
	Asphalt anchor	 Bolt M10 x 40mm + Screw Ø16mm	Not available
	Spit anchor	 Bolt M12 x 100mm + Plug Ø20mm	Not available



FEATURES AND FUNCTIONALITY TB400 PLUS

SIZE	
Height end posts	1150 mm
Height mid post	1150 mm
Profile section tubes	Ø200 mm (11 mm thick)
Profile section handrails	50 mm x 70 mm (6 mm thick)
Profile section end posts	Outer tube: Ø250 mm (11 mm thick) Inner profile: 112 mm x 112 mm (10 mm thick)
Profile section mid posts	Profile: 112 mm x 112 mm (10 mm thick)
Standard rail length	1350 mm (other sizes: 750 mm - 1750 mm)
Baseplate	End Post: 275 mm x 275 mm x 10 mm Mid Post: 180 mm x 180 mm x 10 mm

REQUIREMENTS	
Concrete quality	minimum C25/30
Concrete floor plate thickness (mm)	minimum 150 mm
Concrete slab dimension around posts (mm)	600 (h) x 600 (w) x 300 (d)
Operational temperature	-10°C up to +40°C
Water and humidity	Steel (standard): dry indoor use only. Zinc coated: outdoor use in most environments. Stainless Steel: outdoor use or frequent exposure to water and humidity.

boplan READY FOR IMPACT

IMPACT LABEL FOR SAFETY BARRIERS

BOPLAN TB400 PLUS	45°	90°	
		PAS 13:2017 compliant	
IMPACT RATING			
E80 > 80 kJ			
E60 > 60 kJ			
E50 > 50 kJ			
E40 > 40 kJ			
E35 > 35 kJ			
E30 > 30 kJ	28,4 kJ		
E25 > 25 kJ		20,1 kJ	
E20 > 20 kJ			
E15 > 15 kJ			
E10 > 10 kJ			
E5 > 5,0 kJ			
E2 > 2,5 kJ			

TEST CONDITIONS

TEMPERATURE: 20°C
IMPACT HEIGHT: 300 mm
IMPACT ANGLE: 90°
TEST FLOOR: CONCRETE C25/30 - 160 mm
MANUFACTURER ANCHOR PULL OUT: 7,9 kN

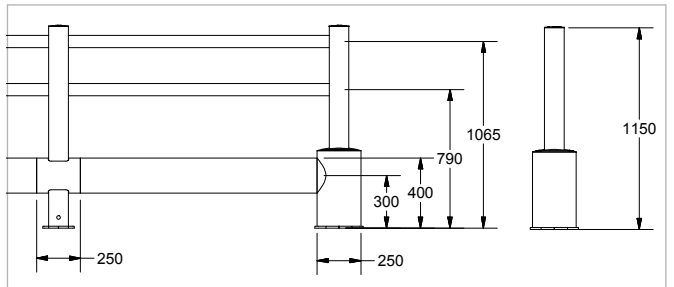
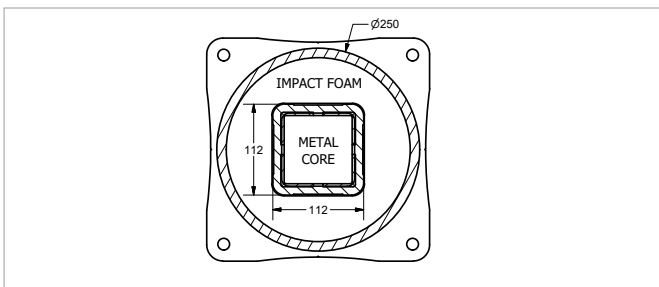
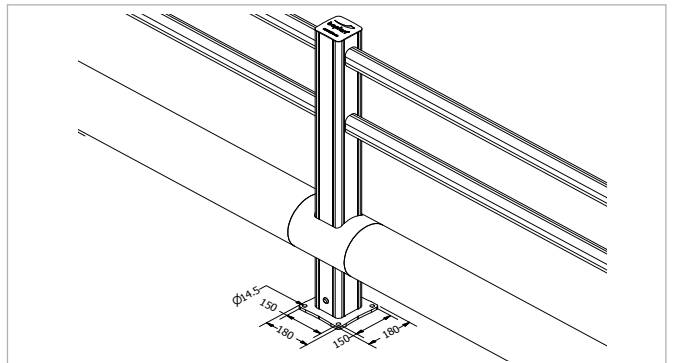
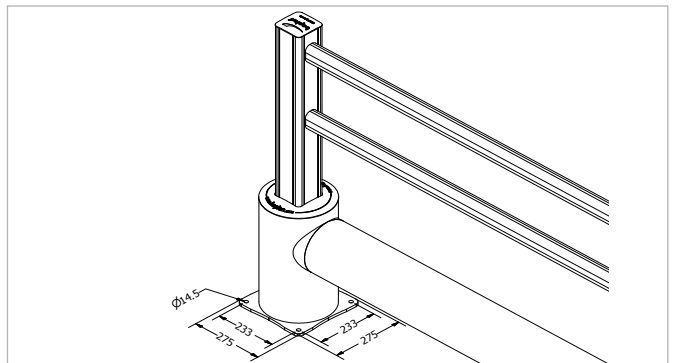
TEST VEHICLE

WEIGHT: 2300 KG
TYPE: COMMERCIAL FORK LIFT
SIZE (L x W x h): 1890 x 1020 x 1970 mm
CONTACT AREA: STEEL BUMPER WIDTH: 600 mm


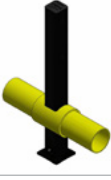
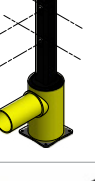
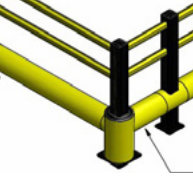
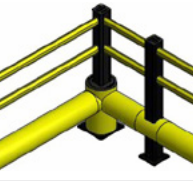
ACCREDITED TEST LABORATORY

620 Route des Fromentaux
01500 Saint-Maurice-de-Rémens
01360 Beligneux
France

SUCCESS CRITERIA VEHICLE STOPPED - ASI (ACCELERATION SEVERITY INDEX) < 0.5



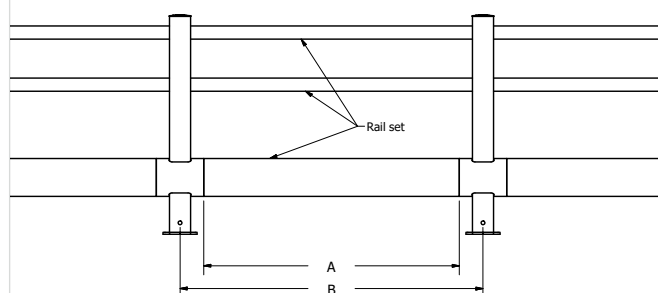
REFERENCE LIST - TB400 PLUS

POSTS		
End post End post - ZC End post - SS	TP4000-0001-EPYE TP4000-0001-EPYES TP4000-0001-EPYEZ	
Mid post Mid post - ZC Mid post - SS	TP4000-0001-MPYE TP4000-0001-MPYES TP4000-0001-MPYEZ	
T end post* T end post - SS* T end post - ZC*	TP4000-0001-TPYE TP4000-0001-TPYES TP4000-0001-TPYEZ	
Corner post - 90° - Up Corner post - 90° - Up - SS Corner post - 90° - Up - ZC	TP4000-0001-CPUYE TP4000-0001-CPUYES TP4000-0001-CPUYEZ	
Corner post - 90° - Down Corner post - 90° - Down - SS Corner post - 90° - Down - ZC	TP4000-0001-CPDYE TP4000-0001-CPDYES TP4000-0001-CPDYEZ	

* 2 caps included to close handrail hole

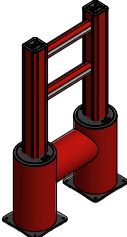
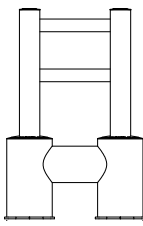
CURVES		
Conn.tube Ø200 Curve 350mm - YE	TP4000-0350-C200YE	
Conn.tube Ø200 - 45° Curve 350mm - YE	TP4000-0350-C204YE	
Conn.tube Ø200 - 90° Curve 350mm - YE	TP4000-0350-C209YE	
Conn.tube Ø250 Curve 350mm - YE	TP4000-0350-C250YE	
Conn.tube Ø250 - 90° Curve 350mm - YE	TP4000-0350-C259YE	

RAIL SETS			
	Tube length (A)	CC length (B)	Reference
Standard rail	750 mm	1000 mm	TP4000-0750-1000YE
Standard rail	950 mm	1200 mm	TP4000-0950-1200YE
Standard rail	1150 mm	1400 mm	TP4000-1150-1400YE
Standard rail	1350 mm	1600 mm	TP4000-1350-1600YE
Standard rail	1550 mm	1800 mm*	TP4000-1550-1800YE
Standard rail	1750 mm	2000 mm*	TP4000-1750-2000YE
Short rail	600-1349 mm	850-1599 mm	TP4009-1599-SRYE
Long rail	1351-1749 mm	1601-2000 mm*	TP4009-2000-LRYE



* The impact performance has not been tested for tube lengths > 1600 mm. Only use these lengths for non-critical applications.

FIXED UNITS						
TYPE	HANDRAIL	LENGTH	BASE	YELLOW		
no curves	Endpost	750 mm	Steel ZC SS	TP4000-0750-FUYE TP4000-0750-FUYEZ TP4000-0750-FUYES		
		751-1750 mm	Steel ZC SS	TP4001-1750-FUYE TP4001-1750-FUYEZ TP4001-1750-FUYES		
	Post <i>Up</i> <i>Down</i> <i>Continu</i>	750 mm	Steel ZC SS	TP4002-0750-FUYE TP4002-0750-FUYEZ TP4002-0750-FUYES		
		751-1750 mm	Steel ZC SS	TP4002-1750-FUYE TP4002-1750-FUYEZ TP4002-1750-FUYES		
1 curve	Endpost	750 mm	Steel ZC SS	TP4000-0750-FU1CYE TP4000-0750-FU1CYEZ TP4000-0750-FU1CYES		
		751-1750 mm	Steel ZC SS	TP4001-1750-FU1CYE TP4001-1750-FU1CYEZ TP4001-1750-FU1CYES		
	Post <i>Up</i> <i>Down</i> <i>Continu</i>	750 mm	Steel ZC SS	TP4002-0750-FU1CYE TP4002-0750-FU1CYEZ TP4002-0750-FU1CYES		
		751-1750 mm	Steel ZC SS	TP4002-1750-FU1CYE TP4002-1750-FU1CYEZ TP4002-1750-FU1CYES		
2 curves	-	750 mm	Steel ZC SS	TP4000-0750-FU2CYE TP4000-0750-FU2CYEZ TP4000-0750-FU2CYES		
		751-1750 mm	Steel ZC SS	TP4001-1750-FU2CYE TP4001-1750-FU2CYEZ TP4001-1750-FU2CYES		

FIXED UNITS						
TYPE	HANDRAIL	LENGTH	BASE	RED		
no curves	Endpost	750 mm	Steel	TP4000-0750-FURE		
		751-1750 mm	Steel	TP4001-1750-FURE		
no curves, with sign board	Endpost	751-1750 mm	Steel	TP4001-1750-FUSB	