

# TB 400 PLUS

## SAFETY BARRIERS

Revision: 30 May 2024 5:04 PM  
Boplan reference: TP4000-...



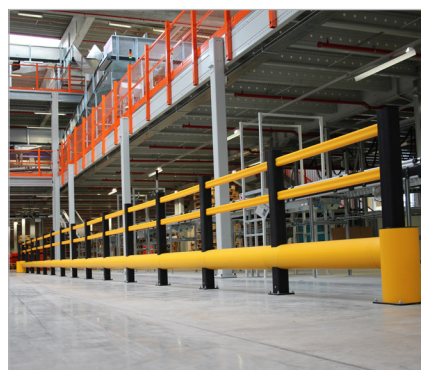
### PRODUCT SPECIFICATIONS

| APPLICATION               |                                                                                                                                        |                          |                         |
|---------------------------|----------------------------------------------------------------------------------------------------------------------------------------|--------------------------|-------------------------|
| Environment               | The TB 400 Plus is used for creating walkways and protecting pedestrians from pallet trucks, lift trucks, forklifts or other vehicles. |                          |                         |
| Impact performance at 90° | 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           | Extrilene® - UV resistant - Fire class E <sup>+</sup> - Non conductive - Impervious to most chemicals**                                |                          |                         |
| Caps                      | Sustainable elastomer                                                                                                                  |                          |                         |
| STANDARD COLOURS          |                                                                                                                                        |                          |                         |
| End post                  | Black RAL 9005                                                                                                                         |                          |                         |
| Mid post                  | Black RAL 9005                                                                                                                         |                          |                         |
| Impact tube               | Yellow RAL 1003                                                                                                                        |                          |                         |
| Handrails                 | Yellow RAL 1003                                                                                                                        |                          |                         |
| BASEPLATES                |                                                                                                                                        |                          |                         |
|                           | Steel                                                                                                                                  | Zinc Coated Steel        | Stainless steel         |
| Material                  | Steel 37                                                                                                                               | Steel 37                 | Stainless steel 304     |
| Coating                   | Lacquered                                                                                                                              | Electroplated + Laquered | No lacquer / No coating |
| Colour                    | High gloss black                                                                                                                       | Mat black                | Natural colour          |

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

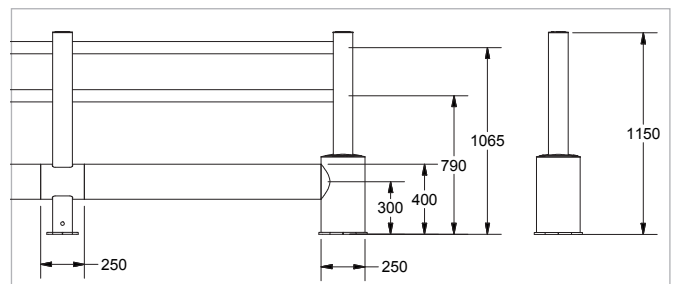
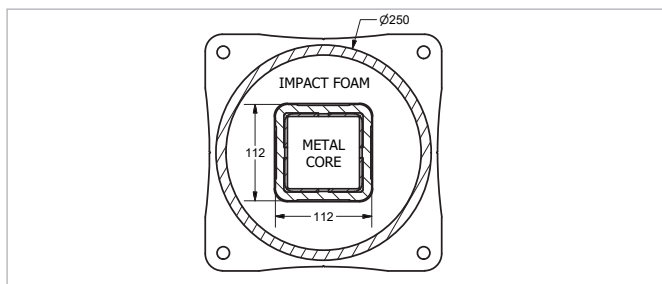
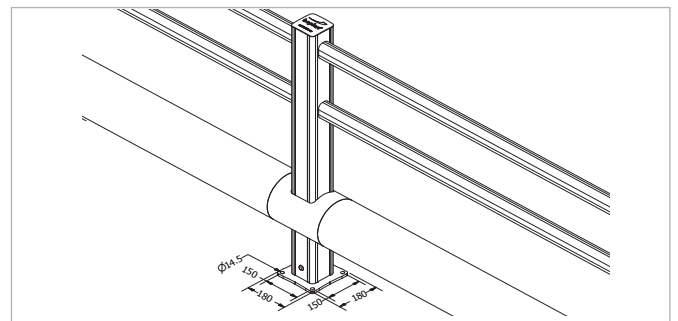
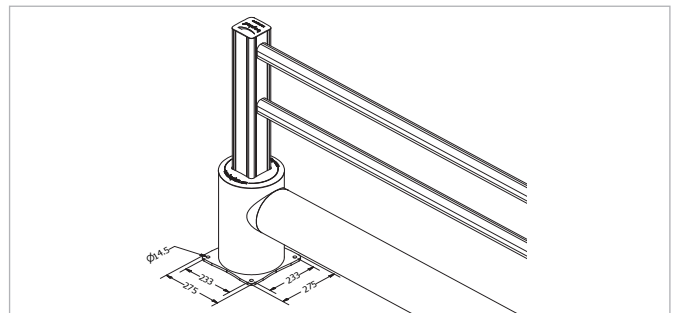


## FEATURES AND FUNCTIONALITY - TB 400 PLUS

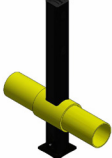
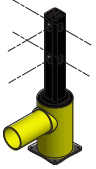
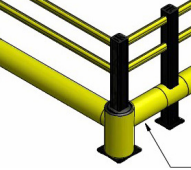
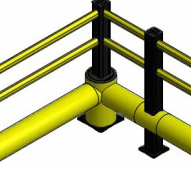
| SIZE                      |                                                                                        |
|---------------------------|----------------------------------------------------------------------------------------|
| Height end posts          | 1150 mm                                                                                |
| 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)<br>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 thick)<br>Mid Post: 180 mm x 180 mm x (10 mm thick) |

| 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                        | <b>Steel</b> (standard): dry indoor use only.<br><b>Zinc coated</b> : outdoor use in most environments.<br><b>Stainless Steel</b> : outdoor use or frequent exposure to water and humidity. |

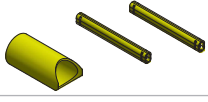
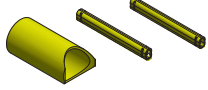
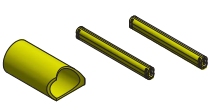
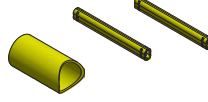
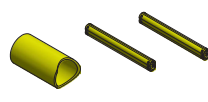
| IMPACT LABEL FOR SAFETY BARRIERS                                                                                                                                          |                                                                                                                                                             |                                                                                                                              |
|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------|
| BOPLAN TB 400 PLUS                                                                                                                                                        |                                                                                                                                                             |                                                                                                                              |
| IMPACT RATING                                                                                                                                                             | 45°                                                                                                                                                         | 90°                                                                                                                          |
| 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                                                                                                                                                               |                                                                                                                                                             |                                                                                                                              |
| <b>TEST CONDITIONS</b><br>TEMPERATURE: 20°C<br>IMPACT HEIGHT: 300 mm<br>IMPACT ANGLE: 90°<br>TEST FLOOR: CONCRETE C25/30 - 160 mm<br>MANUFACTURER ANCHOR PULL OUT: 7,9 kN | <b>TEST VEHICLE</b><br>WEIGHT: 2300 KG<br>TYPE: COMMERCIAL FORK LIFT<br>SIZE (L x W x h): 1890 x 1020 x 1970 mm<br>CONTACT AREA: STEEL BUMPER WIDTH: 600 mm | <b>ACCREDITED TEST LABORATORY</b><br>620 Route des Fromentaux<br>01500 Saint-Maurice-de-Rémens<br>01360 Bèlignieux<br>France |
| <b>SUCCESS CRITERIA</b> VEHICLE STOPPED - ASI (ACCELERATION SEVERITY INDEX) < 0.5                                                                                         |                                                                                                                                                             |                                                                                                                              |



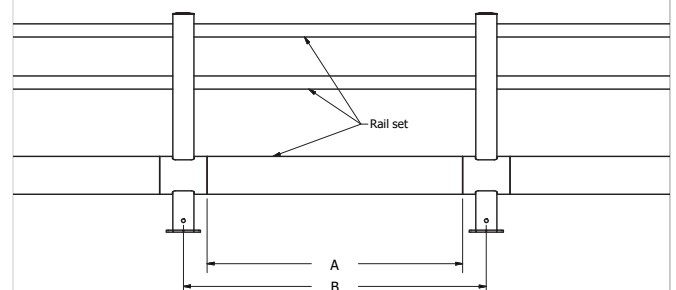
## REFERENCE LIST - TB 400 PLUS

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

\* 2 caps included to close handrail hole

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

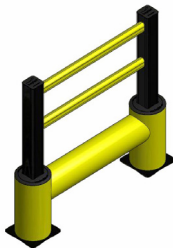
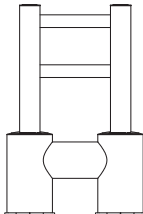
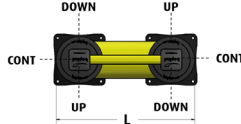
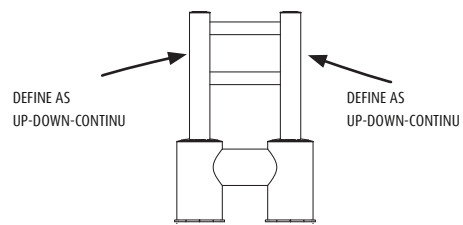
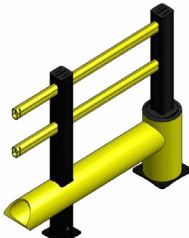
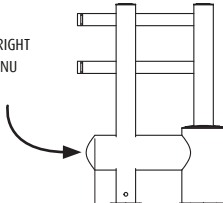
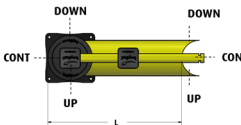
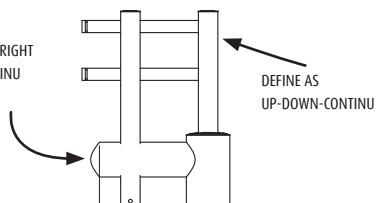
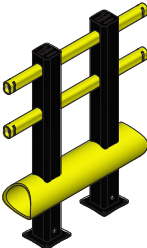
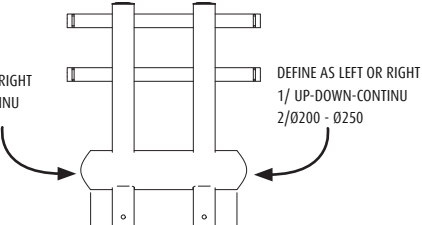
| RAIL SETS     |                 |               |                    |
|---------------|-----------------|---------------|--------------------|
|               | Tube length (A) | CC length (B) | Reference          |
| Standard rail | 750 mm          | 1000 mm       | TP4000-0750-1000YE |
| Standard 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.

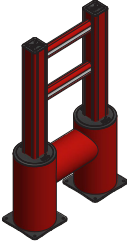
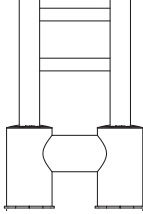
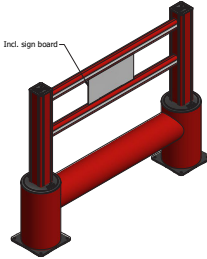
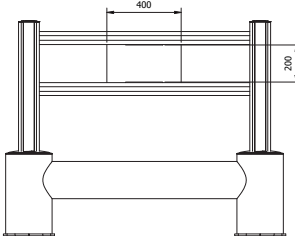
## REFERENCE LIST - TB 400 PLUS

### FIXED UNITS

| TYPE      |                                                    | LENGTH      | BASE              | REFERENCE YE                                                     |                                                                                     |                                                                                                                                                          |
|-----------|----------------------------------------------------|-------------|-------------------|------------------------------------------------------------------|-------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------|
| no curves | Endpost                                            | 750 mm      | Steel<br>ZC<br>SS | TP4000-0750-FUYE<br>TP4000-0750-FUYEZ<br>TP4000-0750-FUYES       |    |                                                                       |
|           |                                                    | 751-1750 mm | Steel<br>ZC<br>SS | TP4001-1750-FUYE<br>TP4001-1750-FUYEZ<br>TP4001-1750-FUYES       |                                                                                     |                                                                                                                                                          |
|           | Post<br><i>Up</i><br><i>Down</i><br><i>Continu</i> | 750 mm      | Steel<br>ZC<br>SS | TP4002-0750-FUYE<br>TP4002-0750-FUYEZ<br>TP4002-0750-FUYES       |    |                                                                       |
|           |                                                    | 751-1750 mm | Steel<br>ZC<br>SS | TP4002-1750-FUYE<br>TP4002-1750-FUYEZ<br>TP4002-1750-FUYES       |                                                                                     |                                                                                                                                                          |
| 1 curve   | Endpost                                            | 750 mm      | Steel<br>ZC<br>SS | TP4000-0750-FU1CYE<br>TP4000-0750-FU1CYEZ<br>TP4000-0750-FU1CYES |  | DEFINE AS LEFT OR RIGHT<br>1/ UP-DOWN-CONTINU<br>2/ Ø200 - Ø250<br> |
|           |                                                    | 751-1750 mm | Steel<br>ZC<br>SS | TP4001-1750-FU1CYE<br>TP4001-1750-FU1CYEZ<br>TP4001-1750-FU1CYES |                                                                                     |                                                                                                                                                          |
|           | Post<br><i>Up</i><br><i>Down</i><br><i>Continu</i> | 750 mm      | Steel<br>ZC<br>SS | TP4002-0750-FU1CYE<br>TP4002-0750-FU1CYEZ<br>TP4002-0750-FU1CYES |  | DEFINE AS LEFT OR RIGHT<br>1/ UP-DOWN-CONTINU<br>2/ Ø200 - Ø250<br> |
|           |                                                    | 751-1750 mm | Steel<br>ZC<br>SS | TP4002-1750-FU1CYE<br>TP4002-1750-FU1CYEZ<br>TP4002-1750-FU1CYES |                                                                                     |                                                                                                                                                          |
| 2 curves  | -                                                  | 750 mm      | Steel<br>ZC<br>SS | TP4000-0750-FU2CYE<br>TP4000-0750-FU2CYEZ<br>TP4000-0750-FU2CYES |  | DEFINE AS LEFT OR RIGHT<br>1/ UP-DOWN-CONTINU<br>2/ Ø200 - Ø250<br> |
|           |                                                    | 751-1750 mm | Steel<br>ZC<br>SS | TP4001-1750-FU2CYE<br>TP4001-1750-FU2CYEZ<br>TP4001-1750-FU2CYES |                                                                                     |                                                                                                                                                          |

## REFERENCE LIST - TB 400 PLUS

### FIXED UNITS

| TYPE                       | LENGTH  | BASE        | REFERENCE RE |                  |                                                                                                                                                                         |
|----------------------------|---------|-------------|--------------|------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 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 |   |