



## Z-HFFP 203

### CERTIFIED SHALLOW MOUNTED BOLLARD

This shallow mounted bollard is designed to protect and preserve people, buildings, shops and areas. With a foundation depth of only 200 mm, the Z-HFFP 203 is not only suitable for applications in the high security area. The bollards can be installed at embassies, prisons or critical infrastructures, as well as in inner city market places, walkways or bicycle lanes. The extremely low installation depth of only 200 mm avoid collisions with supply- and media lines and reduces costs.

ZABAG`s bollard Z-HFFP204 successfully passed the crash test and stopped and destroyed a 7.2 ton truck at a speed of 50 km/h. This corresponds to a kinetic energy of 670 kJ. The **penetration of the truck was only 0,2 m (dynamic)**, which was a perfect result. Due to design and construction, the system can be integrated perfectly into its surroundings by followings curves and by using different bollard covers. Pedestrians, cyclists, wheelchair and baby buggy users can pass the bollards without disturbance.

This bollard can be easily combined with ZABAG`s electro-hydraulic security bollards to ensure controlled passage for authorized vehicles.

#### IMPACT:

- Truck-weight: 7,2 t
- Speed: 50 km/h
- Kinetic Energie: 670 kJ
- Static Load: 335 kN

#### CERTIFIED TO:

- IWA 14-1:2013 Bollard V/7200(N2B)/50/90/0,2
- ASTM F2656/F2656M -20 C730

#### PENETRATION: P1

(dynamic): 0.2 m

#### INSTALLATION DEPTH:

- 200 mm incl. 40 mm Covering (i.e. Tarmac)

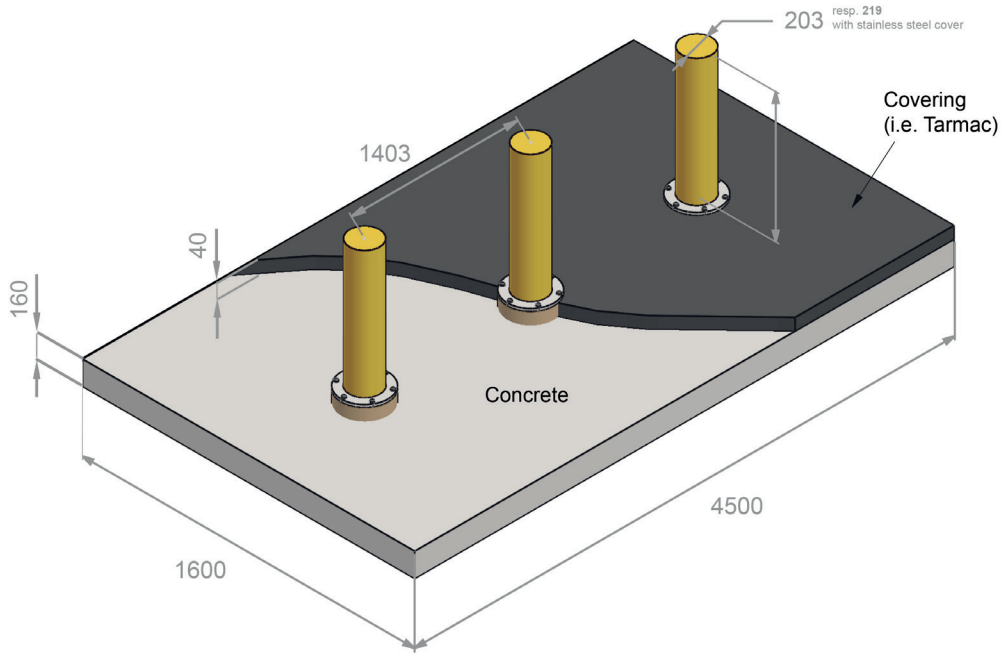
#### APPLICATIONS:

- Inner Cities
- Data Centres
- Critical infrastructure
- Military institutions

#### FEATURES:

- **Lowest installation depth** with highest possible tested safety
- **Bollard removable due to bayonet lock**
  - temporary opening of the passage possible
- **Integration into the local conditions:**
  - Construction adapted to the road course
  - Various bollard covers
  - Can be integrated into street furniture e.g. flower tubs, benches, advertising boards





**TECHNICAL DETAILS**

Corrosion protection	3Plus - All steel parts are shot blasted, hot zinc sprayed, powder primed and then powder coated to the finished RAL colour. This special finish ensures the highest possible resistance against damages caused by ultraviolet light, scratches, chemicals or oil.
Installation depth	200 mm (160 mm concrete + 40 mm covering )
Blocking Height	1100 mm
Diameter	<ul style="list-style-type: none"> <li>• 203 mm - without cover</li> <li>• 219 mm - incl. stainless steel cover</li> </ul>
Certified to	IWA 14-1:2013 Bollard V/7200[N2B]/50/90/0,2   ASTM F2656/F2656M -20 ; P1

We reserve the right to make changes in accordance with technical improvements.

