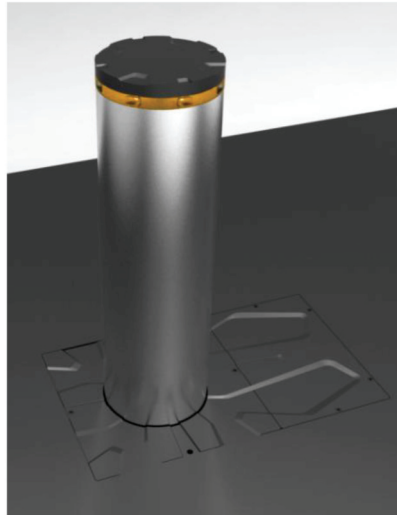




ANTI-TERROR AUTOMATIC HYDRAULIC BOLLARD OAK 1200.12



- **Crash-tested and certified by accredited third-party Laboratory according to IWA14-1:2013 V/7200[N3C]/80/90**, equivalent to PAS68:2010 7500/80/N3 and ASTM2656:2007 M50 (ex K12, SINGLE bollard)
- **Anti-terrorism protection with SINGLE bollard**
- **Designed for lowering functionality after impact**
- Independent hydraulic pump for each bollard: in case of pump failure, the other bollards keep working
- Easy access to hydraulic pump for simplified servicing, with anti-tampering switch
- Easy removal of bollard tube and hydraulic ram
- Impact resistance: up to **2 100 000 J** (estimated)
- Standard rising time: ≤ 5.3 s @ 25 °C ambient temperature
- Emergency rising time: ≤ 2.5 s (with additional device EFO, option)
- Lowering time: **4.0 s** typical, (factory adjusted, on-field adjustable)
- Max operating frequency: up to **2 000 op./day**
- MCBF: **3 000 000 cycles**
- Sensors for bollard positions: fully up and fully retracted
- Obstacle sensing, adjustable (with/without movement inversion)
- Bollard top cover with LED lights and buzzer
- Interfaces for remote control
- EFO device for "Emergency" rising time (option)
- Bollard will stay up even in case of power loss. It is possible to lower the bollard by means of a mechanical key



MECHANICAL	
External diameter, nominal	330 mm
Bollard height	1200 mm
Max underground depth	1990 mm
Bollard tube material	S355 (Fe510)
Bollard tube thickness	25 mm
Total bollard weight	~650 kg
Finishing	Cataphoresis, powder paint or optional cover stainless steel ¹
Colour	Blue grey RAL7031 standard, other colours on request
Foundation	Reinforced concrete, ~1500x1500x2000mm
Flange	Cast iron, cataphoresis black, double, separated for hydraulic pump access
Top cover	Cast iron, cataphoresis black, with LED lights and buzzer

ENVIRONMENTAL	
Operating ambient temperature	-20 °C .. +60 °C (down to -40 °C ²)
Operating humidity	up to 100%
IP grade	IP67
Salty mist resistance	480h (ISO 9227:2012), 1000h (ISO 9227:2012) for AISI316

ELECTRICAL	
Control unit	CDS-K
Power	1-phase 230 VAC +- 10%, 50-60 Hz
No. of controllable bollards	Max. 2 for each CDS-K, parallel control wiring possible for driving many groups of bollards or by RS485/TCP/IP (option)
Power consumption	1,55 kW for each bollard (max 3,10 kW)
Local/Remote control	<ul style="list-style-type: none"> • Digital inputs • Radio remote control • RS485, TCP/IP (option)
Signalling	LED lights and buzzer on top cover, programmable digital outputs
Sensors	Open passage, Close passage, Overpressure/Obstacle, Anti-tampering
IP grade	IP54
Operating ambient temperature	-20 °C .. +60 °C
Operating humidity	up to 95%, non condensing

OTHER	
Emergency device (option)	High pressure oil tank, activated by a solenoid valve with separate power supply
Applicable norms	IWA14-1:2013 V/7200[N3C]/80/90 PAS68:2010 7500/80/N3 ASTM2656:2007 M50 (replaces DoS/DoD K12) European Machine Directive/European Low Voltage Directive/ European EMC Directive

¹ option, AISI304 or AISI316

² with integrated TERMON heater