

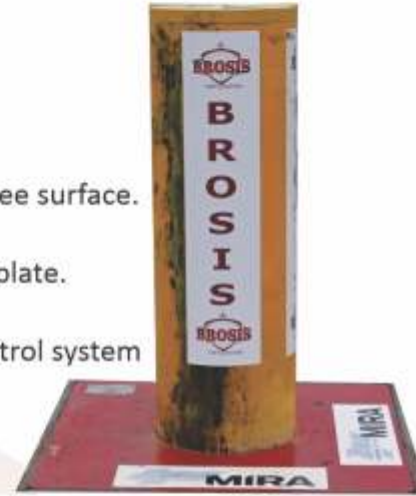
FORCE B12



BROSIS FORCE B12 retractable hydraulic bollard is physically K12 crash tested in HORIBA MIRA, UK according to IWA 14-1: 2013 std. Our single FORCE B12 can stop vehicle of 7.2 ton travelling at the speed of 50mph (80km/h). We have achieved zero static penetration and 0.7 m dynamic penetration (P1). FORCE B12 remained operational post-test.

Special Features

- ✓ Single bollard physically crash tested by HORIBA MIRA to IWA 14-1:2013 std.
- ✓ Performance Rating: IWA 14-1:2013 Bollard V/7200[N2A]/80/90:0.7
- ✓ Achieved zero static penetration and 0.7m dynamic penetration.
- ✓ Hot dip galvanized followed by anti - UV epoxy powder coating for corrosion free surface.
- ✓ Embedded LED lighting
- ✓ Composite die casting anti-slip Aluminum moving cylinder top & load bearing plate.
- ✓ Operating in harsh environments.
- ✓ Readily available configuration in control unit for integration with all access control system
- ✓ Manual operation in case of power breakdown.



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MEMORANDUM OF PERFORMANCE

Manufacturer:	Brosis International : www.brosisint.com / www.brosis.in
Product Reference:	FORCE B12
Product Description:	Rising Bollard B12 355mm Diameter 1210mm High
Test Standard:	IWA14-1:2013 Impact Test Specification for Vehicle Security Barriers
Test Class:	N2A
Target Speed (Km/h):	80
Target Impact Energy (kJ):	1777.8
Target Impact Angle (°)	90
Impact Point:	Target impact point was centreline of the truck to centreline of the product.
Test Date:	14/05/2021
Test House Ref:	1223787-002/Y0030



Performance Rating:	IWA 14-1:2013 Bollard V/7200[N2A]/80/90:0.7
Vehicle Penetration (m):	0.7

Approved By:	Dave Johnstone	
Date: 17/05/2021	Consultant – HSPI Test Centre	



FORCE B12

Technical Specification

MODEL	FORCE B12 (HORIBA MIRA U.K certified)
Anti-Ram class / Crash rating	IWA 14-1:2013 Bollard V/7200[N2A]/80/90:0.7
Impact load	7.2 ton @ 80 km/h with zero penetration and 0.7 m dynamic penetration (P1).
Drive unit (External)	B12 - H (Hydraulic) , B12 - P (Pneumatic)
Rising height	700 - 1200 mm
Diameter of bollard	270 - 355 mm
Material	Superior quality high tensile structural steel
Cylinder thickness	25 mm
Cylinder top plate	Anti-slip die cast aluminum
Input Voltage	440 VAC ± 10%, 50/60 Hz, 3 phase
Rising time	4-6 sec
Lowering time	3-4 sec
Oil tank	100 lt. - 350 lt. (depend on number of bollards to operate at a time)
Protection class	IP 67
Finish	Anti-UV epoxy powder coating or SS chrome finish
Blocking in raised position	Hydraulic lock/Pneumatic lock
Breakout resistance	17,78,000 J
Duty cycle	100%
Operating temperatures	-20°C to +70°C
MTBF	60,00,000
SAFETY	
Safety against vehicles	Loop detector
Safety against humans	Photo sensors
Control unit	PLC/microprocessor based control unit with readily available integration with all access control devices
Visual & Sound	Embedded LED lights on the top of aluminum head & buzzer for operational alert with Red/Yellow radium reflective strips
Driver alert	Traffic light (Red/Green) - optional
POWER FAILURE	
Power failure	Manual hand pump
Manual	Mechanical manual release device/Pressure relief valve
Accumulator (optional)	Accumulator for 03 cycles up/down operations in case of emergency

Dimensions For Reference

All dimensions are in MM

