



THE FUTURE OF RETRACTABLE BOLLARDS

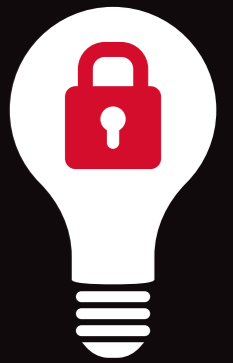
BULLYBOY PRODUCT INFORMATION

**STRENGTH
SIMPLICITY
INTELLIGENCE**

**THE ONLY
NEW ZEALAND**
MANUFACTURER OF AUTOMATED SECURITY BOLLARDS



**PATENTED
DESIGN**
NZ DESIGNED AND DEVELOPED



**MINIMAL
MAINTENANCE**
ONLY ONE MOVING PART (THE BOLLARD RAM ITSELF)



**EASILY
INTEGRATED**
INTO EXISTING SECURITY MONITORING SYSTEMS



BULLBOY LTD BACKGROUND

BULLBOY bollards were developed by engineers Charles and David Broadhurst. The father and son wanted to install retractable bollards as a security measure for their rural property at Paremoremo, Auckland but could find nothing suitable on the market – so they decided to develop their own. Now they compete with multinational security providers and more than hold their own in quality of design and product performance.

They created an automated retractable bollard that is unique because it is pneumatic, rising through air pressure, rather than hydraulic and therefore does not incorporate motors, pumps, valves, hydraulics, off the shelf pneumatic cylinders or high voltage wiring, which are prone to failure and corrosion.

The automated bollards have just one moving part (the barrier ram itself), use a single conduit for the air pipe and electricity and have sophisticated electronic controls enabling activation by pin pad, swipe card or remotely by cell phone.

Today BULLBOY bollards are used in New Zealand and Australia for traffic management, site health and safety and security in public spaces, businesses, schools and universities, churches, banks and private residences. They are reliable, low maintenance, tough, intelligent, built-to-last, beautifully designed, easy to install and due to the smart design and local manufacture, both high quality and cost effective.



PRODUCT DETAILS

BULLBOY bollards employ a patented, sealed and totally unique design which provides a number of true benefits to our customers:

STRENGTH & SECURITY



- **Deep ground embedment:** 40% of the moving barrier ram remains underground when the bollard is raised. The result is a deep foundation which achieves high strength without requiring a complex and expensive casing.
- **Solid barrier ram:** Surrounding the bollard cylinder, the bollard ram is strengthened from top to bottom with 15 lengths of 20mm reinforcing bar encased in 80MPA grout. The barrier ram is made from marine grade stainless steel, is extremely strong and difficult to cut through.
- **A patented "lifting" mechanism to move the bollard barrier ram:** The lifting mechanism is inherently robust and insensitive to overloads such as a vehicle wheel driving over the bollard, even when in a slightly raised position.
- **Reinforced Concrete Foundation:** The entire bollard assembly is encased in concrete foundation. A soft drainage layer is NOT required beneath the bollard casing.

DURABILITY & RELIABILITY



- **Simplicity in Design:** In contrast to competitor's products a BULLBOY bollard assembly does NOT contain electric motors, pumps, valves, off-the-shelf pneumatic cylinders, hydraulic or electrical components. Eliminating this type of equipment from the bollard assembly greatly improves reliability and simultaneously lowers maintenance requirements.
- **Corrosion Free Design:** BULLBOY bollards are free of corrosion issues ensuring a long service life. This has been achieved through careful design and selection of construction materials.



LOW INSTALLATION COSTS



- **No requirement for drainage:** BULLBOY automatic bollards do not require drainage to be provided as part of the foundation. In most cases this greatly reduces the complexity and cost of required earthworks.
- **No High Voltage Cables:** Rather than deep trenches needed for high voltage cables, BULLBOY bollards only require a 24VDC data cable which can run in the same conduit as the pneumatic pipes, just below the road surface.
- **Pneumatic System:** No hydraulics to be purged or primed. No expensive hydraulic hoses and connectors.

LOW MAINTENANCE COSTS



- **Sealed Assembly:** A BULLBOY bollard assembly is substantially sealed to prevent ingress of dirt, silt and water. Our custom seal geometry is highly effective and very well proven. Unlike most bollards a BULLBOY bollard assembly does not need to be “cleaned out”.
- **A single moving part:** The only moving part in the bollard assembly is the barrier ram itself. This simple design ensures minimal maintenance requirements.
- **Stainless Steel Finish:** BULLBOY does not employ paints or similar coatings which would typically need to be maintained, “touched up” and re-applied.

SERVICE & MAINTENANCE



- **Local technicians:** NZ based manufacturing means NZ based servicing, issue resolution, and maintenance. All parts (if required) are available in NZ.
- **Annual service:** An annual service is offered. This involves checking road seals, checking lighting modules, assessing bollard deployment speed, removing and checking any heavily marked bollards.
- **Replacement process:** Due to the patented cassette ram design (where all in road items are removed as one) a bollard ram can be removed and replaced quickly minimising down time.

SAFETY & SECURITY



- **Fail Safe Operation:** Mains and battery backup power supply is not required to lower the bollards. There is no requirement for manual override locks and mechanics in the bollard assembly. Such items are prone to tampering, vandalism and moisture/dirt ingress. Access for emergency services can remain unimpaired.
- **Fail Secure Configuration:** As opposed to a fail-safe configuration the system may be configured to keep the bollards raised in the event of loss of mains power supply or loss of battery backup power supply..
- **Emergency Close (optional):** A dedicated emergency close input enables high speed rise of the automatic bollards. Optional safety devices (loop detectors and obstruction detection) which would normally prevent the bollards from rising vehicle can be disabled during emergency close.

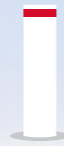


SAFETY IN OPERATION



- **Elimination of pinch points:** Exposed (unguarded) components where relative motion occurs typically present a pinch point hazard to personnel and the public. BULLBOY's construction detail around the round surface collar, wiper seal and moving barrier ram with no catch points eliminate this hazard.
- **Obstruction Detection:** Excessive weight on a rising bollard is detected. The bollard will automatically retract to the lowered position and optionally automatically retry.
- **Dedicated Fire Alarm Input:** Designed specifically for interfacing to building fire alarm systems. When asserted the fire alarm input overrides all other functions to lower the bollards to allow emergency services access.

LED LIGHTING MODULES (OPTIONAL)



- **Low Voltage Wiring:** All wiring to the automatic bollards is low voltage DC (24 Volts). This eliminates the cost of installing high voltage cables.
- **Clear Stop & Go Indication:** High power, long life red and green LED lighting provide stop-go indication. Flashing red while bollards are moving and optionally for a preset period before the bollards begin rising. Green for vehicle to proceed.
- **Robust & Durable Construction:** Electronics are housed in a completely sealed enclosure manufactured from high impact acrylic. Damage to exposed outside acrylic lens will not enable moisture to reach electronics assembly allowing the module to continue functioning while minimizing cost of repairs.

ELEGANCE & AESTHETICS

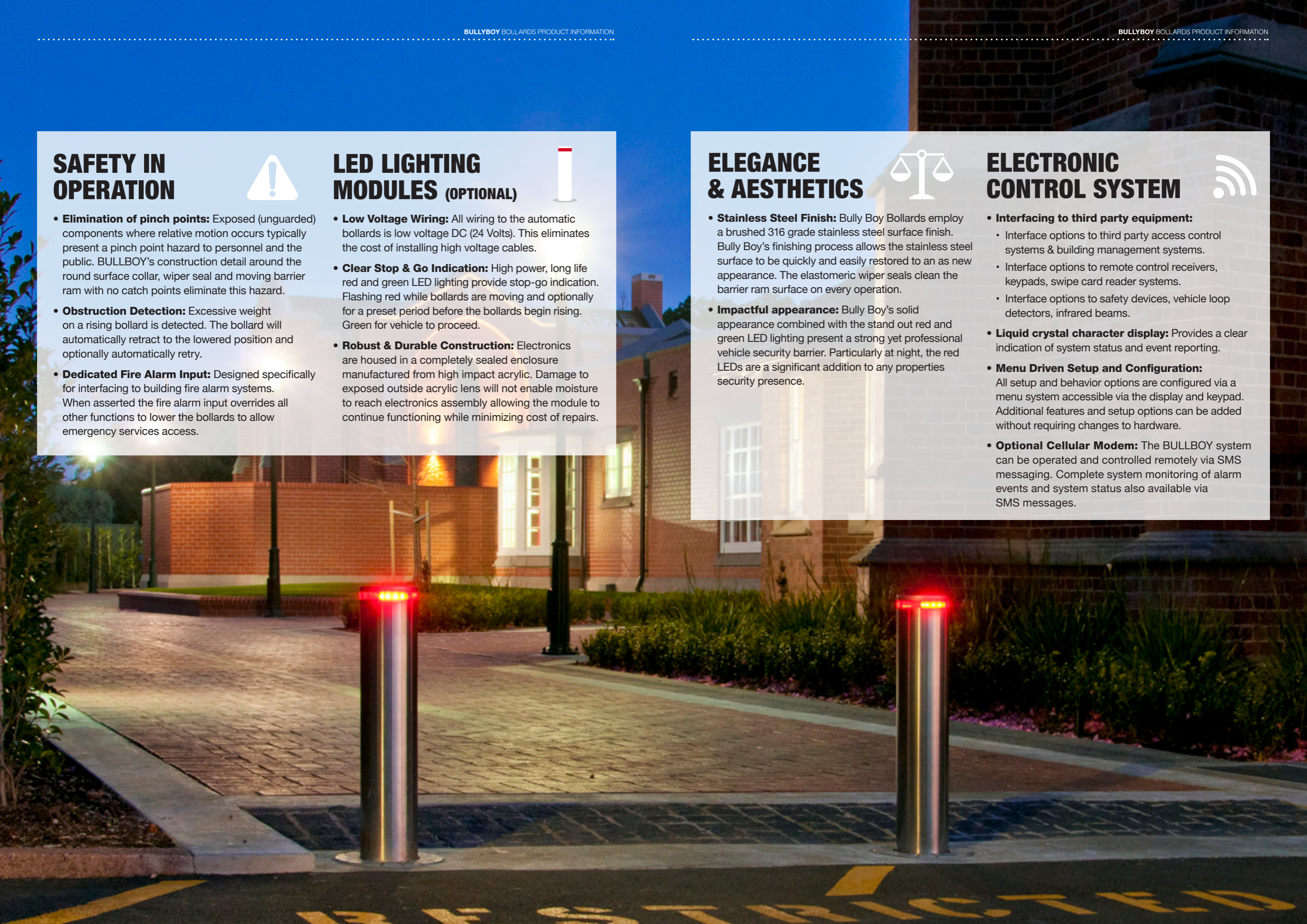


- **Stainless Steel Finish:** Bully Boy Bollards employ a brushed 316 grade stainless steel surface finish. Bully Boy's finishing process allows the stainless steel surface to be quickly and easily restored to an as new appearance. The elastomeric wiper seals clean the barrier ram surface on every operation.
- **Impactful appearance:** Bully Boy's solid appearance combined with the stand out red and green LED lighting present a strong yet professional vehicle security barrier. Particularly at night, the red LEDs are a significant addition to any properties security presence.

ELECTRONIC CONTROL SYSTEM



- **Interfacing to third party equipment:**
 - Interface options to third party access control systems & building management systems.
 - Interface options to remote control receivers, keypads, swipe card reader systems.
 - Interface options to safety devices, vehicle loop detectors, infrared beams.
- **Liquid crystal character display:** Provides a clear indication of system status and event reporting.
- **Menu Driven Setup and Configuration:** All setup and behavior options are configured via a menu system accessible via the display and keypad. Additional features and setup options can be added without requiring changes to hardware.
- **Optional Cellular Modem:** The BULLBOY system can be operated and controlled remotely via SMS messaging. Complete system monitoring of alarm events and system status also available via SMS messages.

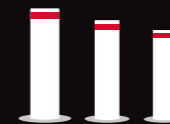


PNEUMATIC SYSTEM



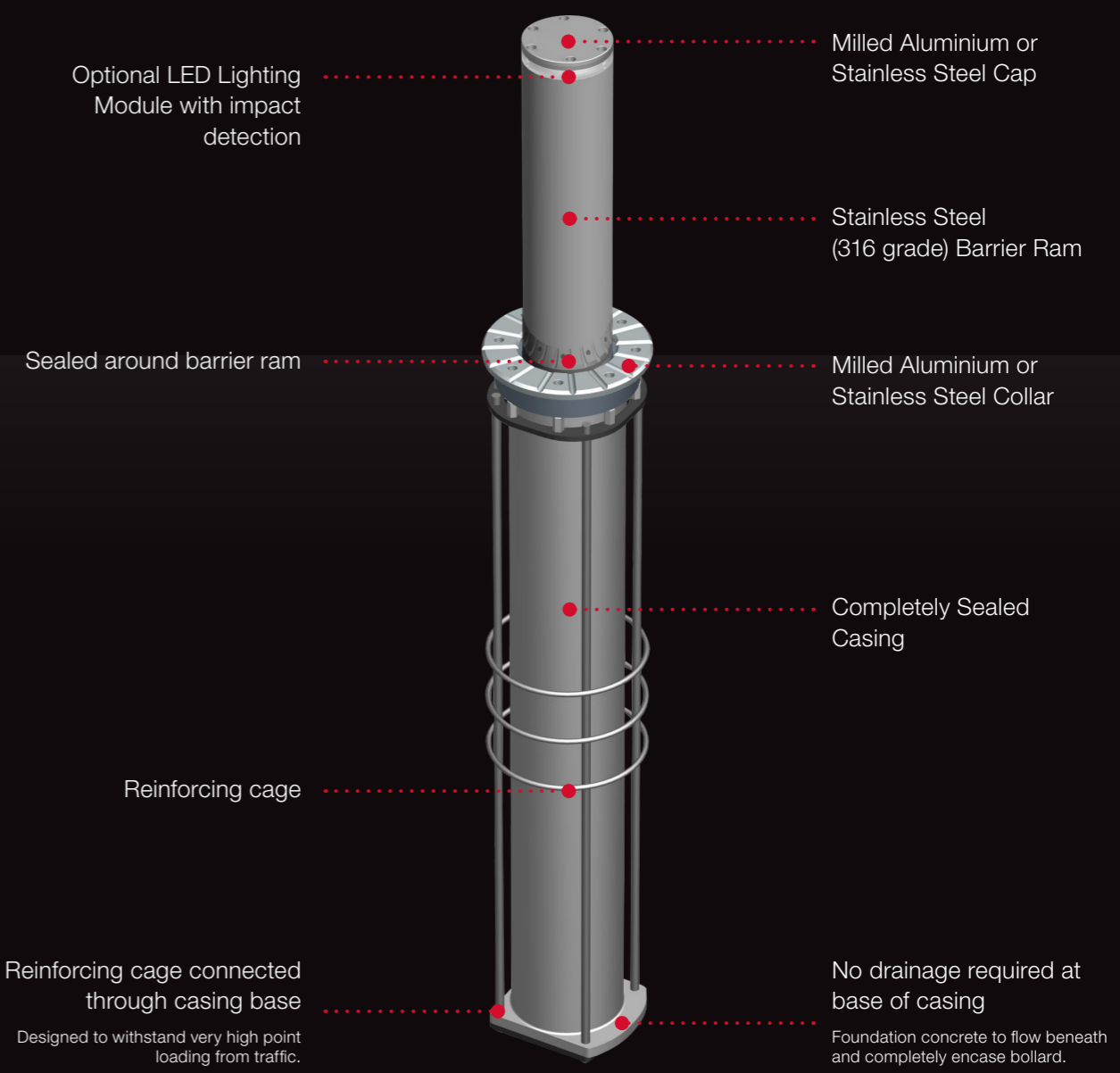
- **Simple and clean:** Compared to hydraulic systems compressed air systems are clean and easy to setup and install. No hydraulic systems to be purged or primed.
- **Oil-less System:** BULLBOY systems employ only low noise, oil-less air compressors. Environmental concerns related to hydraulic fluid spills and leaks are absent in the BULLBOY system. No hydraulic fluid reservoirs to be level checked and “topped up”.

STANDARD PRODUCT RANGE:



SERIES (diameter)	S6 AUTO (152.4mm)	S6 STATIC (152.4mm)	S6 REMOVABLE (152.4MM)	S8 AUTO (203.2mm)	S8 STATIC (203.2mm)	S11 AUTO (279.4mm)	S11 STATIC (279.4mm)
Heights	600mm	600mm	600mm	600mm	600mm	600mm	600mm
	750mm	750mm	750mm	750mm	750mm	750mm	750mm
	900mm	900mm	900mm	900mm	900mm	900mm	900mm

BULLYBOY AUTOMATIC BOLLARD



Founded in February 2008 Bully Boy Ltd is a private company owned and managed by the developers of the product. The company is based in Auckland, New Zealand.

Please make contact if you would like to discuss your bollard security requirements and arrange for an initial estimate.

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