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BULLYBOY PRODUCT INFORMATION

STRENGTH SIMPLICITY INTELLIGENCE







BULLY BOY BOLLARDS LTD BACKGROUND

BULLYBOY bollards were first developed by Auckland based engineers when they couldn't find a local provider for a bollard product to secure their lifestyle property, there simply wasn't anything suitable in the local market – so they decided to develop their own.

They created an automated retractable bollard that is unique because it is pneumatic, rising through air pressure rather than hydraulics and therefore does not incorporate the associated inground motors, pumps, valves, hydraulic oil or high voltage wiring, which can be 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 low voltage electricity and have sophisticated electronic controls enabling activation by all common access control systems, including cell phone operation. Today BULLYBOY 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-tolast, beautifully designed, easy to install and due to the smart design and local manufacture, both high quality and cost effective.

BULLYBOY Bollards now compete with multinational security providers and more than hold their own in quality of design and product performance.

PRODUCT DETAILS

BULLYBOY 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 a full length of high strength steel reinforcing pipe encased in an 80MPA composite internal structure. The exterior of the bollard ram is made from 316 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 BULLYBOY bollard assembly does NOT contain electric motors, pumps, valves, off-theshelf 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: BULLYBOY bollards are free of corrosion issues ensuring a long service life. This has been achieved through careful design and selection of construction materials

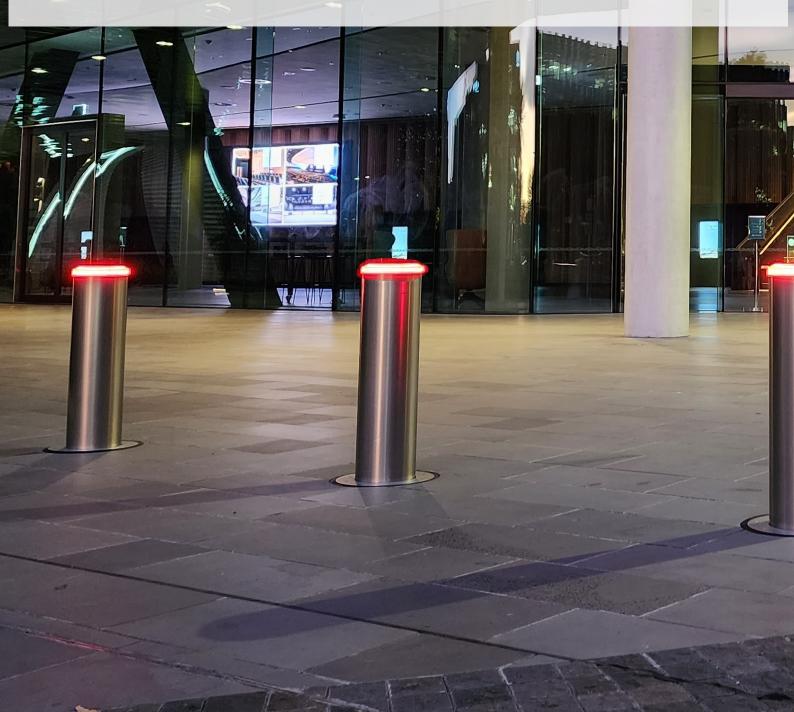


LOW INSTALLATION COSTS



- **No requirement for drainage:** BULLYBOY 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, BULLYBOY 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.

- **Sealed Assembly:** A BULLYBOY 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: BULLBYOY 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 lightingmodules, 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.
- **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.
- 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

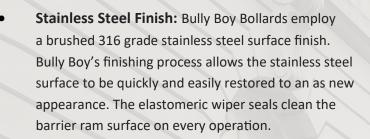


- Elimination of pinch points: Exposed (unguarded)
 components where relative motion occurs typically present a pinch point hazard to personnel and the public. BULLBOY's construction detail around the round surface collar, wiper seal and moving barrier ram with no catch points eliminate this hazard.
- Safety device integration: Optional safety devices can be installed to detect the presence of vehicles, the bollards will retract to the lowered position if a vehicle is detected during the raising stage of operation.
 - **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.

ELEGANCE & AESTHETICS



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.
- **LED light indicators:** Provides a clear indication of system status
- **Optional Cellular Modem:** The BULLYBOY system can be operated and controlled remotely via a Mobile phone APP or by calling the system directly



PNEUMATIC SYSTEM

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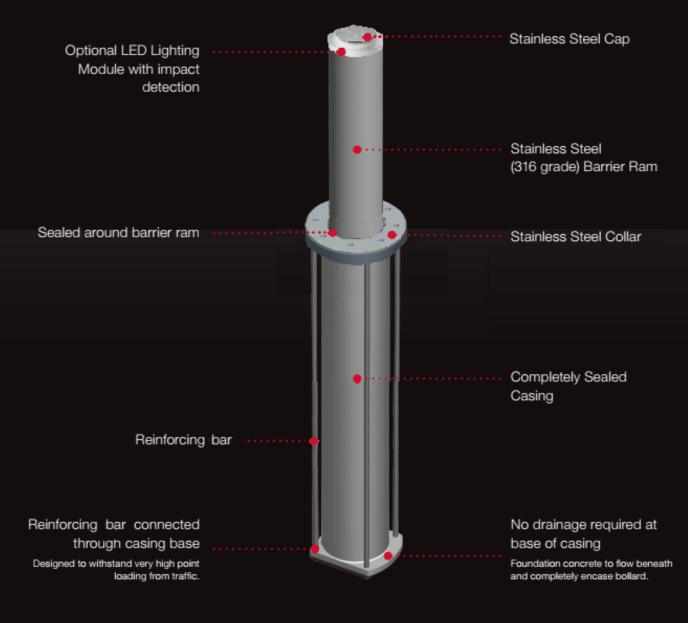
- Simple and clean: Compared to hydraulic systems compressed air systems are clean and easy to setup and install. No hydraulic systems to be purged or primed.
- Oil-less System: BULLBOY systems employ only low noise, oil-less air compressors. Environmental concerns related to hydraulic fluid spills and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

STANDARD PRODUCT RANGE:

SERIES (diameter)	S4 AUTO (101.6 mm)	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	600mm
	750mm	750mm	750mm	750mm	750mm	750mm	750mm	750mm
		900mm	900mm	900mm	900mm	900mm	900mm	900mm

Static bollards in all diameters can be custom made to suit your requirements

BULLYBOY AUTOMATIC BOLLARD



Bully Boy Bollards Ltd is a private company with offices in Auckland and Christchurch, New Zealand

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