ABN 48 127 005 529
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Product Brochure

Vehicular Control-CR8-Cantilever Gate

Vehicular Control-Cantilever Gate

The **CR8-Cantilever Gate** system is designed and engineered to Create Security's precise calculations and standards with a strong emphasis on safety.

Each CR8-Cantilever Gate comprises the following unique design elements.

- The gate main support portal.
- The gate leaf.
- The gate rear runner rail and Closing post.

The combination of gate design elements and concrete footing allows the gate to roll out over the relevant road opening, without tipping or sagging, basically travelling in free air.

Up to 12 metre road widths (for a single gate) are standard within our product range. The CR8-Cantilever gate system is completely self supporting needs no road rails, tracks or overhead supports.

Design Features

Each CR8-Cantilever gate system is designed with automation features as standard. An industrial three-phase drive motor, PLC control logic, frequency inverter and on-board limit controller, are some of the highly advanced products utilised within the product range.

The PLC system allows for special features and auxiliary equipment to be added, including access control, traffic management and warning signs.

An extensive array of safety devices and features form part of our standard product offering. We believe safety should not be an option and have designed the CR8-Cantilever gate system to comply with all OH&S requirements having been fully risk assessed for workplace compliance.

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Ease of Installation

Our wealth of knowledge and experience gained over the years has enabled Create Security to evolve and develop this premium product to suit a variety of ever- changing environments.

The Create slide gate system is not affected by road crowns, kerbs or falls for drainage in roads. All associated works to install a CR8-Cantilever gate system are performed off to the side of the relevant roadway, thereby avoiding closures, which can be inconvenient and costly to your business.

High reliability Low Maintenance

The Create cantilever sliding gate system has a reputation for reliability and quality with low maintenance costs. The design and development of the CR8-Cantilever gate system requires annual maintenance to ensure all systems are performing at their optimal levels. There in no need for more costly quarterly preventative maintenance program within standard installations.

The high performance and advanced technology built into the Create slide gate will ensure reliable operation for many years to come. Create Security boasts a large end- user customer base and continues to provide product and service to Australia's leading corporations.

Engineering Specifications-Typical

Fabrication and Construction

- The maximum spacing between all vertical bars is typically be 125mm
- The erected height of each gate system is typically 1800mm from ground level and includes 140mm maximum ground clearance, top of gate to be flat
- All vertical bars are fully seam/fillet welded (not stitched weld)
- The width of each gate opening is typically determined on site and will cover the entire road width
- Each gate system is typically constructed such that it is a bolt together assembly
- Each gate system has an end post constructed of 100mm RHS with locating flanges fitted
- The main equipment tower is typically two vertical 100 mm RHS sections connected top and bottom to form a solid full height support tower and equipment enclosure
- The cabinet is a powder coated two door system complete with separate cam locking; by law segregation of 240volt to equipment control has to be in separate compartment, IP67 Rating.
- The gate main tower service door is always on the secure side of the property and our enclosure can be either powder coated or stainless steel.
- The gate system is typically bolted to its concrete footing using 16mm chemset anchors (zinc plated) and raised off the ground via jacking nuts.

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Drive Rack

- The main drive rack used with each gate system is typically steel reinforced harden polycarbonate material

Guide Rollers

- Each gate system will be fitted with four main gate tower support guide rollers
  - Two mounted to suit the top rail of the gate
  - Two to suit the bottom rail.

  Each of these rollers is typically fitted with two sealed bearings.
  (If gate is powder coated install on top and bottom rails either side a 50mmx3mm aluminium strip the entire length of gate to prevent powder coat stripping from support roller guides).

Main Rollers

- The cantilever gate system to have two main front rollers on a pivot assembly and three rear pivot assembly rollers.
- The front main roller body is typically zinc plated mild steel. Each roller is typically fitted with two sealed bearings and a 30mm mild steel axle.
- The minimum load rating on the main roller is typically 40 tonnes.

Drive Motor and Gearbox

- The slide gate motor drive unit is a 3-phase .75KW unit (Single 10 Amp power only required).
- Motor gearbox units are IP67 rated and be of true industrial grade and quality. E.M.R C-tick approval is required by law.
- This drive motor gearbox unit must be rated for 100% duty cycle
- The motor gearbox drive system is an inbuilt safety mechanism to protect the unit from excessive drive torque.
- A power-fail brake system or lock is built into this drive motor gearbox system. This will lock the gate in the closed position and lock the gate during power fail.
- In the event of power failure a mechanical release is required the manual override function is a simple 2 turn dial operation.
- Each motor is typically installed on a cushion mounted motor platform, which allows for safe compression of components under load.
- The motor gearbox and platform assembly shall bolt together and this assembly is housed within the main gate frame or equipment tower.

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Electronic Equipment Enclosure

- Each gate control logic module is typically housed within a two door powder coated segregated IP67 enclosure, size is typically no less than 1250mm x 600mm x 400mm.
- Each enclosure shall have two separate hinged doors and key locking system.
- Each of these enclosures shall house a PLC, frequency inverter, power supply, loop detector, GPO, test button, buzzer and misc items such as duct, cable etc to suit the sliding gate system electronic control.
- All equipment mounted within these enclosures is typically installed on din rail.
- All cabling within each enclosure where practical is typically trunked within duct.
- No equipment is mounted on the enclosure door.
- All cable penetrations shall have suitable glands fitted.
- An electrical schematic is typically installed within a plastic sleeve on the inside of the enclosure door.
- All gate logic control modules are installed within the protection of the sliding gate main tower adjacent to the drive motor location.
- All work within these cabinets shall conform to all the relevant Australian Standards

Programmable Logic Controller

- Each gate motor drive system has a programmable logic controller (PLC) utilizing a SEW brand compact PLC (or approved equivalent).
- Each PLC is fully programmable and has a minimum of 14 inputs and outputs (being 8 outputs and 6 inputs).
- Has the capability of two channel mode operation.
- These control units are capable of being reprogrammed on site after installation for possible further ancillary functions.
- Each PLC is expandable if required and offer possibilities of networking.
- All safety systems described are constantly monitored by this PLC system.
- The background for the proposed program utilized on each gate PLC is typically field tried and proven for a minimum of two years.
- The pro logic controller (PLC) to be a generic controller NOT PASSWORD or a PROPRIETARY system.

Frequency Inverter

- The frequency inverter is provided for each gate system. This frequency inverter is typically incorporated with the PLC as one system to control the operating speeds and control the ramp up and ramp down settings.
- These units are suitable for up to 2HP motor ratings.

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- Each frequency inverter is typically set up to display reliable speeds of 640/940mm per second gate travel.
- The final set up speeds for each gate will be either 640-940mm per second opening and 200-300mm per second closing.

Curtain Array Photo-Electric Beam

- Each sliding gate system includes one 1500mm curtain array photo-electric beam sensing, total beams in a horizontal 8 and criss-cross patterning totalling 16 beams.
- Single beams will not be accepted.

Power Supply

- A switching power supply is installed in each gate system control logic module.
- This power supply is typically din rail mounted and suitable for industrial applications.
- These power supplies are of a regulated type i.e. voltage drop off with over current.

Test Button

- Each equipment module has a din rail mounted test button installed within the enclosure.
- This button when depressed shall pulse the gate system open.
- Closing will be automatic through the safety systems and or time out facility.

Miscellaneous Items

- Each gate control logic module has a main 240 volt isolator fitted.

Buzzer

- Each sliding gate system is typically fitted with a suitable low voltage, audible buzzer to announce gate movement.
- The buzzer is typically controlled by the gate system PLC.
- The buzzer must sound 1 second prior to gate movement and shall continue to pulse sound at 1-second intervals during the full open and close cycle for the relevant gate.
- Each gate buzzer is typically fitted to the inside of the control equipment enclosure. This buzzer is to be designed to warn pedestrians who may be close to the gate system that the gate is about to move.

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Flashing Light

- Each sliding gate system is typically supplied with a min two flashing LED amber low voltage strobe lights, which is typically fitted to the face of the main support frame of the gate.

Functionality

- On entry, the gate will open the entire 7.5m.
- On egress, the gate will open half way to allow for a vehicle to exit and then close automatically.

Safety Screens

- Each sliding gate system shall have a perforated metal safety screen fitted to the inside of the gate system.
- This sheet is typically min 1200mm wide x approx 1800mm high x 3-6mm thick.
- The sheet is rivet fixed to the gate leaf and silicone be applied when attaching the sheet to prevent vibration noise.
- The position for this sheet is typically adjacent to the gate housing when the gate is closed thus minimising the chance for riding or putting limbs through any gate bars at this pinch point.

Fore more information about this product or to arrange a practical demonstration of our range of Automation products contact

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CANTILEVER GATES VS GROUND MOUNTED TRACK GATES

Q: Why are cantilever slide gates superior to track mount slide gates?

A: The reliability, speed, quality and engineering of cantilever slide gates is superior to the conventional track mount slide gate. Cantilever slide gates are made from heavy robust industrial grade materials and require significantly less maintenance than track mount slide gates. Only cantilever gates can be installed on uneven ground surfaces or camber road surfaces.

Q: Are cantilever gates more reliable than cheaper track gate alternatives?

A: Track mount slide gates can require extensive maintenance which is often extremely expensive. Problems associated with track mount slide gates can compromise your client's security.

Some examples of common problems include:

- The ground mount track becomes loose from the compression of vehicles travelling over it and the alignment of the drive rack changes;
- Debris build-up around the track can cause the gate to become inoperable
- The gate leaf can be dislodged from the ground mount track due to stones, branches etc
- Low vehicles, forklifts (tongs) can hit the ground mount track and destroy or bend it
- Twisting and turning of vehicles on the ground track can bend the track.

These common problems cause the gate to become inoperable and components will need to be adjusted or replaced immediately or your client's security will be compromised.

- Generally a track mount slide gate requires a quarterly service whereas a cantilever slide gate usually only requires a twelve month service depending on the usage.

Q: Are cantilever gates easier to install and less obtrusive than cheaper track gate alternatives?

A: The installation of a cantilever slide gate requires three main concrete foundations (closing post, main support tunnel and the rear back runner). If an existing gate is in operation generally it can be used until the installation of the cantilever slide gate has been completed so that security to the site is maintained at all times.

Unlike cantilever solutions, the installation process for a track mount slide gate requires the entry and exit to the site closed until the trenching has been completed and the concrete has cured across the opening (generally 2-3 days).

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Q: What type of motor should be used on cantilever slide gates?

A: It is always recommended that a commercial/industrial grade drive motor be used on cantilever slide gates. Domestic grade motors are inadequate in all respects to drive a commercial/industrial grade cantilever slide gate. The duty cycle of the commercial/industrial grade motor is dependent upon the daily operations required.

Create Security highly recommends the use of a 3-phase (single phase 10amp power source) frequency inverter motor (75Kw with a 100% duty cycle).

Gate speeds can be adjusted via the standard frequency inverter. This is normally set at 640mm per second in the open cycle (1000mm per second can be achieved as an option). Closing speed is generally set at 200mm-640mm but higher speeds can be achieved on site to suit specific client needs.

The life span of the motors is approximately 20-30 years dependent upon usage and regular maintenance as per manufacturer's recommendations.

Q: What happens if there is a power failure?

A: A cantilever slide gate system can be easily operated manually in the event of a power failure. The cantilever slide gate motor is housed within the main equipment enclosure. Authorised personnel can access the locked equipment enclosure with keys to control the manual override dial on the motor to manually operate the gate.

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