



## Automatic Gates Slide

### STG

Technical Data:	Type	STG N	STG S
Mechanism		STA 210	K46DT80
Opening Speed	mm/sec	200	500
Closing Speed	mm/sec	200	500
Power	W	500	750
Supply Voltage	VAC	240	240
Frequency	Hz	50	50
Current	A	3.1	3.5
Duty Cycle	%	80	80
Built-In Thermo Protection	C	100	N/A
Max. gate opening length	mm	9000	9000
Housing width	mm	800	800
depth	mm	400	400
Height	mm	2350	2350

#### Description

The STG series of Magnetic Cantilever slide gates eliminate the need for ground tracks or overhead rails, thereby providing a fast operating, reliable and efficient method of controlling vehicle passage at security access points.

#### Construction

Fully welded RHS steel section is used in the manufacture of the gate frame, support tower and back runner track. All fabricated steel is hot dip galvanised for total protection and maximum life time. The design allows for single leaf spans of up to nine (9) metres.

#### Technology

The standard speed drive system incorporates an STA 210 Magnetic torque drive which operates from a single phase 240 volt power supply. This is mounted onto a pivoted sub assembly with in-built shock absorber. A 24v DC brake is incorporated with the motor and is used to positively lock and retain the fully open or closed positions in a fail safe condition.

The output shaft of the motor drive attaches to a spur gear which engages with rack sections on the upper rail of the gate. Position control is achieved with a proximity sensor identifying striker blocks attached to the gate.

The high speed drive system incorporates a 3 phase induction motor/gear box. It operates from a single phase 240 volt power supply but derives 3 phase power from an inverter in the controller. This is mounted onto a pivoted sub assembly with in-built shock absorber. A 24v DC brake is incorporated with the motor and is used to positively lock and retain the fully open or closed positions in a fail secure condition.

Position feed back is provided by a proximity switch sensor identifying striker blocks attached to the gate. These signals are used to control ramp up, ramp down, high speed, low speed and end position conditions.

## Controller

The Magnetic programmable logic controller (PLC) is provided with an Eeprom chip or programmer to enable software adaption and interfacing with a variety of remote control devices, security access systems and key card readers. It also integrates the inputs from proximity switch and safety control devices. Outputs are provided for motor drivers, brake status conditions and warning lights. Control voltage is 24v DC and the controller is housed in a lockable IP65 steel enclosure which is located in the main housing.

Site specific features such as partial opening for pedestrian access only may be programmed on request. For fast speed gates, a frequency inverter is added to the PLC. This provides the 3 phase output to drive the motor at varying speeds by altering the frequency, nominally between 12Hz and 60Hz, as well as controlling the acceleration and deceleration times at the end approach stages.

## Safety

Safety devices, such as PE beams, loop detectors and safety edge strips are available to suit all applications.

The following safety points should be observed with regard to the installation and operation of the STG sliding gates:

The concrete foundation is to be provided in accordance with Magnetic's Works Documentation.

Opening and closing operations must be observed!

During operations the presence of persons or goods in the movement zone of the gate is not permitted.

For automatic operations safety beams and strip sensors on the gate and on the gate housing must be installed where vertical bars enter into the housing.

For traffic with trucks and trailers additional inductive loops are required.

## Options

- A variety of gate designs are possible including spikes, chain wire mesh and pressed metal cladding. Bi-parting gates can be applied to wide carriageways or where back runner restrictions exist.
- Battery back-up is recommended with a key switch connection to the brake circuit, enabling manual operation during power failure. Alternatively an uninterruptable power supply (UPS) may be permanently fitted to the controller so that normal operation can continue during power failure.

