

Technical Specification

10605

Trackless Bi-Folding Speed Gate



PHOTOGRAPH: British Consulate General - Istanbul

The 10605 trackless bi-folding speed-gate (Patents Pending) consists of a post onto which a bi-folding leaf is attached. Unlike other bi-folding gate systems, this does not require a track either in the ground or overhead to fold the leaf but uses a unique folding system.

Operating Speed Typically 6 - seconds

Rated for continuous operation - 100% duty cycle

Dimensions

Single unit:	Maximum width: 3.5m (between hinge post and receptor post)
	Height Typically: 2.4 – 3.0m
Bi-parting pair:	Maximum width: 7.0m (between hinge posts)
	Height Typically: 2.4 – 3.0m

1. For bi-parting pairs the roadway needs to be level between the posts or made-up to level on the Installation.
2. Typically the road receptor plate protrudes 50mm from the road surface.

Product Overview

The post hung section of the bi-fold leaf is driven by a unique innovation consisting of a motor drive unit connected to a crank arm assembly which locks the gate in both open and closed positions.

The gate leaf sections are fully welded assemblies. The leaf frames are constructed of RHS steel section stiles and top rail with a wide folded steel bottom rail section. The leaves are in-filled with closely spaced vertical bars and/or other infill materials to suit.

Unlike our model 10604 trackless speed-gate which had the folding mechanism located on the top of the gate leaf, the 10605 has its folding mechanism located at a lower level which leaves the top of the gate free for spikes, barbed wire, decorative ironmongery or other features as required.

Typically a system can consist of either a single unit of one post supporting one bi-folding leaf typically spanning up to 3.5 metres. The leading edge is received into a post on the other side of the roadway.

On wider openings typically up to 7 metres span then a pair of opposite handed units (a bi-parting pair) needs to be used. In the centre of the roadway a receptor plate will be required to receive the leading edge rollers when the gate reaches the fully closed position.

The operation of the torque drive motor is controlled by a Programmable Logic Controller (PLC) based unit located within the associated control cabinet.

10605 Series | Speed Gate

Safety

- The bi-folding method of gate operation requires considerably less power to operate than conventional swing gates and also has less wind effect – combined with the unique motor drive results in a relatively lower powered and thus safer drive.
- All gate systems come complete with a through photo beam system between posts. Additional photo beams can be added for extra protection.
- The leading edges of the leaves can be fitted with electrical rubber safe edges which, if in contact with an obstruction will stop the operation of the gate.
- It is recommended that all installations include a vehicle detection loop systems.
- Traffic signals are also recommended to control traffic and reduce tail gaiting problems.

Construction

POSTS:	200mm x 200mm RHS
LEAFS:	60mm x 60mm RHS stiles and top frame Lower section of 4mm thick folded steel
INFILL:	30mm x 30mm RHS @ 100mm maximum spacing between bars
BASES PLATES:	20mm thick configured to suit various types of installations
HINGES:	25mm diam stainless steel pins, DU self lubricating plain bearings and ball thrust bearings with stainless steel covers
DRIVE:	Special – (Patent Pending) Leaf – floating rack and pinion system (Patent Pending)



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Controls

- Controls are Programmable Logic Controller (PLC) based and therefore are very flexible and can be configured to suit customer's requirements.
- Optional features can include conventional push button station or Human-machine interface (HMI) terminals.
- Single or multiple control positions and all forms of access control can be utilised.

Installation

Generally there are two fixing methods either "surface-fix" or "sub-fix".

Surface-fix is for existing surfaces usually within a building or where it is difficult to provide sunken foundations. Simply the base plates are bolted directly to a suitable concrete surface using chemical anchors bolts. Base-plates can be angled to suit ramp gradients. On larger gates it is sometimes found necessary to cleat to the structure of the building or design bracing to increase rigidity.

Sub-fix is usual for perimeter applications whereby foundation blocks typically 1000mm deep are cast to a required size and to a level usually 400mm below the finished road level, service ducts are also provided at this level. This is known as the "first pour". The gates are then bolted down to these, levelled and ducts connected. Once the whole system has been proved, checked for level and operation then the "second pour" is applied to the finished level less any finishing surface. This method is usually self standing.

Electrical

Supply 240volt 50Hz single phase 10 amp.

Finishing

Grit blast to SA2.5, Hot zinc metal spray to 50 micron, pre-heat and etch, polyester powder coat to 50 micron minimum. Colours: most standard RAL colours are available normally to 30% gloss.