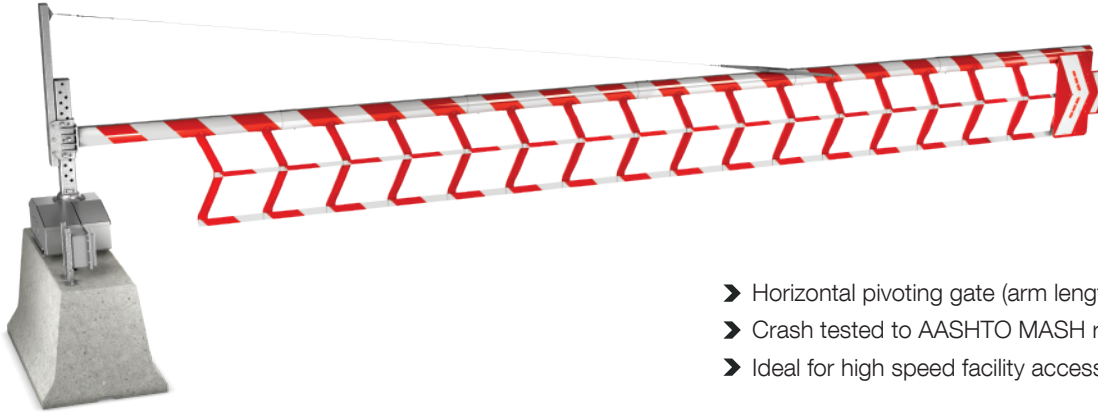


# AUTOMATED LANE CLOSURE SYSTEM

HORIZONTAL SWIFTGATE CRASHWORTHY (Model HSG-40CW)

PRODUCT SHEET

PATENTED



- Horizontal pivoting gate (arm length 2 m to 12 m)
- Crash tested to AASHTO MASH requirements
- Ideal for high speed facility access control

## SWIFTGATE SOLUTION OVERVIEW

SwiftGate is the Versilis automated gate solution specifically designed for motorway traffic control operations. Various types of gates, such as the Horizontal HSG-40CW, fall under the SwiftGate umbrella, as they all share the same design key features and communication technology. Whether the gates are short or long, pivot horizontally or vertically, Versilis has kept the same objectives in the design of each SwiftGate product: motorist safety, ease of integration and operational efficiency.

## HSG-40CW OVERVIEW

Gate HSG-40CW pivots horizontally and offers increased visibility using a high surface of reflective material and LED lighting. The gate arm's unique design provides strength, flexibility and durability. Manufactured with corrosion resistant materials, the HSG-40CW is designed to withstand harsh roadside conditions and weather environments. Operation and integration is made easy with the Versilis communication hardware which offers different communication options to allow gates to be operated, monitored, and sequenced, locally and remotely.

## HSG-40CW OPERATION

Gate HSG-40CW includes the necessary Versilis Control Unit to receive and execute commands. A system application may include one or many gate modules that can be activated individually, in sequence, in groups, or as part of an overall solution that brings together various traffic devices, including SwiftSign, lane control signs, flashing beacons, traffic light controllers, etc. Different communication interface options allow gates to be controlled and monitored remotely from a Traffic Management Center. For on-site operation and maintenance, a Smart Handheld Controller is available, as well as push buttons.

## HSG-40CW ARM

The HSG-40CW gate arm is built with easily replaceable high-density polyethylene arrow-shaped posts and aluminum tubing. The HSG-40CW is crash tested to AASHTO MASH requirements. The gate arm's arrow-shaped barricade design offers maximum visibility and reflectivity using an increased flat surface of high intensity retroreflective sheeting, more than double the surface of typical motorway gates. A very large flexible polycarbonate chevron sign with flashing LED lighting installed on the gate arm's extremity closest to traffic provides a clear and visible message to motorists that the access is closed. The chevron sign increases the overall visibility of the gate and protects the gate arm from nuisance hits. In the event of an impact, the arrow-shaped posts and chevron bend at the top, allowing the impacting vehicle to go through, minimizing damage to the gate and the vehicle. After impact, the arrow-shaped posts and chevron recover their original position.

## APPLICATIONS

- Tunnel/Bridge approaches
- Reversible lane access control
- Dynamic hard shoulders
- Extreme weather management
- Movable barrier operations
- On-ramp and off-ramp access control

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PERFORMANCE  
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## TECHNICAL FEATURES

### PHYSICAL

- Gate arm lengths available from 2 m to 12 m
- Pivoting range of 90 degrees (horizontal)
- Deployment or retraction time: typically less than 50 seconds
- Arm: high-density polyethylene arrow-shaped posts and aluminum sections with quick-connect junctions
- Reduced base support frame footprint
- Wind load: 128 km/h for gate arm length 12 m
- Designed according to AASHTO LTS-6 2013 (exceptions may apply)
- Crash tested to AASHTO MASH 2016 (Manual for Assessing Safety Hardware)

### REFLECTIVITY

- Gate arm retroreflective sheeting surface: exceeds 774 cm<sup>2</sup> per linear feet
- Chevron sign retroreflective sheeting surface: exceeds 6450 cm<sup>2</sup>
- Retroreflective sheeting colors and grade: high intensity Type XI or equivalent, alternating red and white, angled at either 45 or 90 degrees, or as specified
- Red flashing gate LED arrow or L8H class lamp mounted on chevron sign; configurable light intensity and flashing pattern i.e. synchronized or delayed through the gate system

### HOUSING

- Galvanized structure with removable aluminum panels
- Built-in anchoring plate, pre-drilled for anchors bolts
- Mounts on concrete barrier wall (81 cm to 127 cm)
- Housing dimension: 625 mm x 1055 mm
- Weight excluding arm: approx. 572 kg

### ELECTRICAL

- Standard Versilis Control Unit for electrical motor control, LED power management & flashing logic, and battery charger function
- Gate works on battery 12V DC (AGM type); also used as power backup for communication hardware and gate LED operation
- Charger input can be a solar panel or an external power supply
- Typical external power supply consumption: 1 A at 120V AC or 0.5 A at 230V AC (other voltages available)

### GATE MECHANISM - MOTORISATION

- Permanent magnet 12V DC electrical motor, IP65
- Gearbox worm type, self-locking integrated brake
- Speed reducer high efficiency
- Overload protection with variable frequency electronic drive
- Hand crank manual override

### COMMUNICATION INTERFACE OPTION

- Wireless (US 915-MHz ISM band)
- Wire RS-485 interface
- Fiber optic

### SMART HANDHELD CONTROLLER (with RF modem)

- Capable of managing up to 40 sites simultaneously
- Equipped with an ITS field device sequencer
- Enables control and monitoring of a Versilis Commander

### CONTROL OPTIONS

Ability to mix and match control options for added operational flexibility and redundancy.

#### Local Control Options:

- Versilis Smart Handheld Controller
- Push buttons

#### Remote Control Options:

- Versilis Commander for NTCIP and WEB access over Ethernet
- PLC using dry contacts



Gate chevron with flashing LED lighting



Tapered gates and gate with a directional arrow used to perform a lane closure



MASH crash test gate arm assembly

### ABOUT VERSILIS

Versilis takes pride in developing quality innovations and providing exceptional service. Everything we do is governed by three principles: quality, safety and efficiency. In an effort to meet the highest quality standards and respond to clients' evolving requirements, Versilis engineers work hard at continuous product improvement. For this reason, Versilis reserves the right to modify minor technical details listed in this product information sheet without warning.

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