



1. Product Name
SwingRiser™

2. Manufacturer
HySecurity
6623 South 228th Street
Kent, WA 98032
(800) 321-9947
(253) 867-3700
Fax: (888) 321-9946
E-mail: info@hysecurity.com
www.hysecurity.com

3. Product Description

HySecurity® gate operators meet the most stringent governmental, industrial, corporate and residential security and reliability requirements. They are installed at Baghdad International Airport, Fort Knox and The United Nations; numerous federal, state and municipal sites; correctional facilities, corporate campuses and power generation facilities; and at mini storages, gated communities and VIP residences.

HySecurity gate operators are fabricated for security, reliability, low maintenance, flexible speed and overall toughness. They are engineered to detect, report and trigger automated site-specific actions if critical security breaches occur. Abnormal operation or security breach reporting integrates easily to centralized security monitoring systems through HySecurity's Smart Touch controller.

Each gate operator design is tested for at least 200,000 cycles before release to the market. Slide, swing, traffic barrier and vertical lift operators all receive the same rigorous testing.

BASIC USE

SwingRiser™ is a robust swing gate operator that offers the ultimate in performance, reliability, security and low maintenance. SwingRiser can be configured to open single gate panels, and is also available in optional twin leaf and leaf delay configurations to move two bi-parting gates together.

- **Single Leaf Configuration** - In its single leaf configuration, SwingRiser opens single gate panels weighing up to 3000 lb (1361 kg) with widths to 16' (4.9 m), at speeds ranging from 14 - 30 seconds to open and 14 - 30 seconds to close



SwingRiser 19 Twin UPS with ornamental iron bi-parting gate installed at Colorado private golf course entrance

- **Twin Configuration** - Two SwingRiser posts and one power supply unit can be installed to operate twin leaf units on the same entrance or exit, enabling both gate panels to move in unison. When functioning in this twin configuration, both gate panels operate as one unit and are powered by one controller, one motor, and a single hydraulic system that divides the hydraulic fluid to each post
- **Leaf Delay Configuration** - For applications requiring 2 gate panels to operate independently of each other, a leaf delay configuration with 2 single-leaf operators is required. In this arrangement, each leaf requires separate power and separate hydraulic controls

During the gate opening cycle, the SwingRiser hydraulic cylinder rises to lift the gate panel a full 12" (305 mm) while rotating from 0 to 90 degrees or 100 degrees without the use of articulating arms, screw drives or mechanical devices. The graceful lift and swing movement allows the gate to clear adjacent obstructions, such as snow, rocks, curbs and gradient differences. At the end of the close cycle, the locking pin gently lowers into its receptacle, securely locking the gate without the use of externally operated electric or mechanical locks.

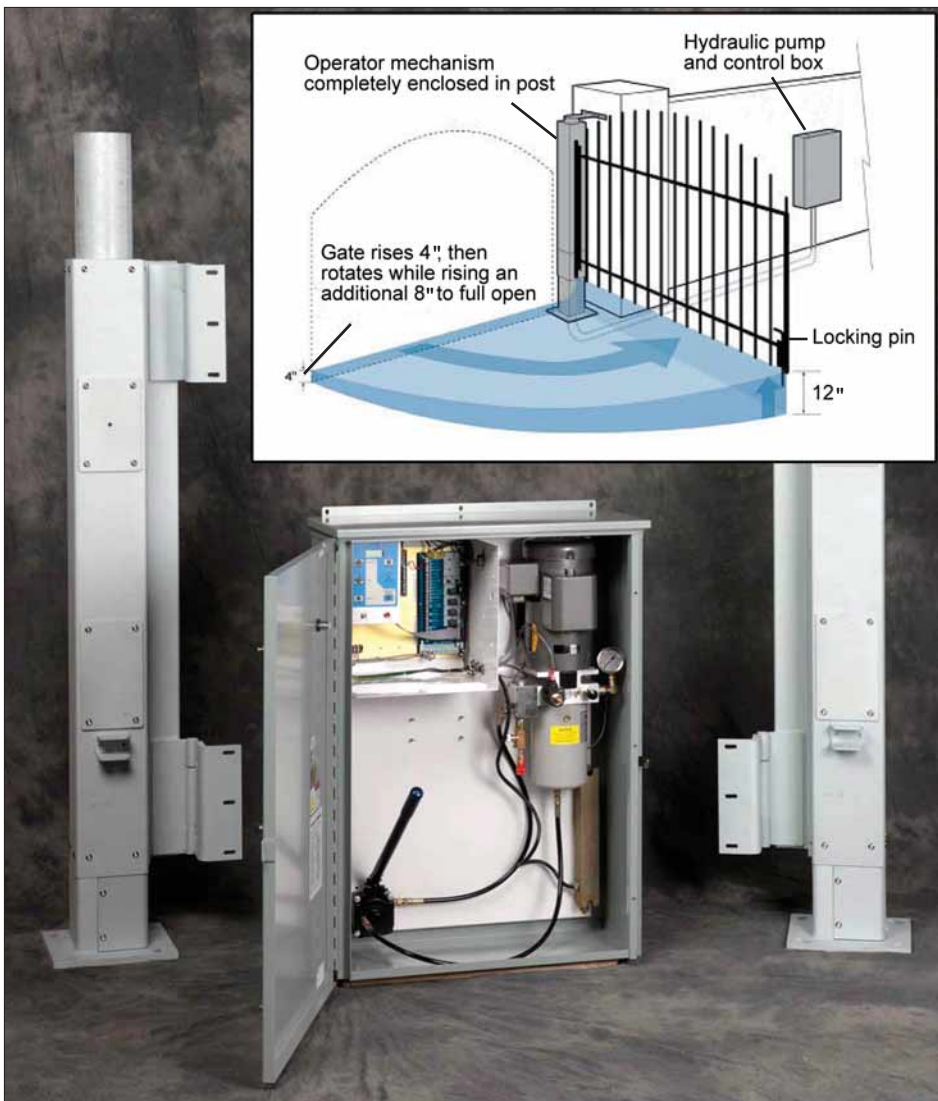
SwingRiser works equally well with ornamental gates, industrial gates or security gates in

high-end residential, industrial and government applications. Installed applications have included estate homes, parking garages, police departments, gated communities, prisons, memorial parks, railyards, airports, shopping malls, animal shelters, arenas and many others.

COMPOSITION & MATERIALS

Mechanical Components
Standard SwingRiser mechanical components include a fully enclosed post assembly with hydraulic cylinder; an actuator assembly, which is supported on non-lubricated synthetic bearing surfaces; an index arm to allow precise closing adjustments; 2 1/4" (57 mm) industrial quality sealed cam followers; a drop-bolt locking device; a power package that includes a 42" x 30" x 12" (1067 x 762 x 305 mm) NEMA 3R galvanized electric enclosure to securely house the electric controls, electric motor and hydraulic pump and valves; limit switches to limit travel in each direction; a hydraulic hand pump for emergency operation; and custom cut 1/4" (6.4 mm) hoses and hose fittings. Hydraulic hoses are normally enclosed in underground conduits.

Standard SwingRiser posts are 6.75' (2.1 m) tall and house the internal hydraulic cylinder and limit switches. The posts are available with 90 degree or 100 degree swing, and include support post brackets. Custom posts can be designed to fit specific gate sizes. The outer



Two SwingRiser posts and separate electrical enclosure that securely houses electrical controls, motor, hydraulic pump and valves.

post is zinc flame sprayed for ultimate rust and corrosion resistance. The inner post is hot dipped galvanized.

SwingRiser is powered by a totally enclosed fan cooled (TEFC), single- or 3-phase electric pump motor. This continuous duty 1 or 2 Hp motor accepts standard voltages and has a service factor of 1.15 or greater.

Electrical Components

SwingRiser models run on nearly any available worldwide voltage. They are available in DC uninterruptible power supply, battery backup models that continue to operate after an AC power outage. UPS single leaf SwingRiser models use a 3/4 Hp, 24 VDC motor. UPS Twin

models use a 2 Hp, 24 VDC motor. SwingRiser can also be manually operated by disengaging the index arm or using the hand pump located in the NEMA-3R enclosure.

Controls

The microprocessor-based Smart Touch Controller is listed for use with all UL class I - IV applications and conforms to UL 991 standard. As a system with a UL 991-compliant controller, SwingRiser conforms to UL 325 standard. Smart Touch Controller features include:

- Leaf delay
- Master/slave feature
- Outside loitering alert

- Timer to close
- Vehicle detection reverse or pause function
- Three user relays with normally-open or normally-closed connections and offering 24 programmable options
- Ability to connect SwingRiser to external access control, obstruction protection or security device
- Anti-tailgate mode
- Inherent entrapment sensor (IES)
- "Warn before operate" system
- Touch control in the operator for installer use
- Built-in heavy duty power surge protection
- 1-wire input terminal connections and common wire bus
- Menu Mode that can be configured for installer options or end user options
- 3 installer configurable outputs for many interface options
- 24 programmable output relay options
- EEPROM event logging capability for troubleshooting and diagnostics
- RS232 port for laptop or other computer peripheral connection and RS485 connection of master/slave systems

Smart Touch Controller's RS485 2-way communication bus allows maximum security system integration. Its ability to communicate between the operator and any remote system enables users to define automated activation of security equipment (security cameras, alarms, etc.) in response to specific reported incidents.

TYPES

There is a SwingRiser model to suit nearly every site and type of gate:

- SwingRiser 14 and SwingRiser 14 Twin for gates to 1000 lb (454 kg)/leaf and 13' (3.9 m) wide/leaf; opening and closing functions at rates of 14 seconds each; designed for UL Class I - IV applications; continuous duty rated
- SwingRiser 19 and SwingRiser 19 Twin for gates to 1600 lb (726 kg)/leaf and 16' (4.9 m) wide/leaf; opening and closing functions at rates of 19 seconds each; designed for UL Class I - IV applications; continuous duty rated
- SwingRiser 30 and SwingRiser 30 Twin for gates to 3000 lb (1361 kg)/leaf and 16' (4.9 m) wide/leaf; opening and closing functions at rates of 30 seconds each; designed for UL Class I - IV applications; continuous duty rated

See Table 1 to compare properties of each model.

OPTIONS, ACCESSORIES

Safety

- HySecurity HY-5A Vehicle Detector - Self-tuning; detects vehicles in the gate's path and will not allow the gate to close if activated; will cause the gate to reverse if the closing cycle is interrupted by vehicle; troubleshoots many loop failures; multiple detectors will not crosstalk
- Gate edge sensor - Attachment will reverse the gate if it contacts an object during closing
- Photoelectric eye - If beam is obstructed, will not allow gate to start closed; will reverse gate if beam is interrupted during closing cycle

Cold Weather

- Heater with thermostat control for extremely cold climates - Operator rated for -40 degrees F (-40 degrees C) temperatures without heater

Convenience

- Custom post height
- Variety of mounting bracket options
- 90 or 100 degrees of gate arc
- Left or right hand swing in or swing out configurations
- Custom index arm availability and mounting height
- Custom hinge quantity and placement
- Bulk loop wire
- Remote power pack
- Timer to close - Signals the operator to close the gate after a prescribed interval; standard on all operators
- Radio controls - Wireless transmitters, similar to those used to open and close garage doors, signal a receiver in the operator to operate the gate

Security

- Ground socket or post socket lock with optional locking pin
- Strobe light kit

SIZES

See Table 1.

COLOR

Posts are zinc flame sprayed for rust- and corrosion-resistance. If a specific post color is required, outer posts are ready for field painting.

BENEFITS

- Gate panel capacity of 1000 lb - 3000 lb (454 - 1361 kg) per gate leaf
- Speeds of 14 - 30 seconds each to open/close
- Site-specific operator control programming



SwingRiser 30 Twin operating heavy crash gates installed at Camp Dawson training facility in West Virginia

- Industrial grade hydraulics allow for temperature extremes from -40 degrees F - 150 degrees F (-40 degrees C - 65 degrees C)
- Vandal resistant - Fully enclosed electric motor, hydraulic pump and hydraulic cylinder
- Low maintenance
- Fully compatible with all standard access control equipment
- All components designed for easy removal during service
- Continuous-duty rated
- Delivered with a 200,000 cycle test certification
- Compliant with UL Class I - IV usage
- Uses industrial grade mechanical and electronic components, including high tensile steel, over-capacity shafts and bearings, limit cams and hydraulic cylinders
- Can be integrated with HySecurity StrongArm or SlideDriver for anti-tailgating operation

LIMITATIONS

Vehicle gates are not to be used for pedestrian access. Separate pedestrian gates must always be provided when foot traffic is present.

The degree of gate swing is built in at the factory and cannot be changed in the field.

4. Technical Data

APPLICABLE STANDARDS

ASTM International (ASTM) - ASTM F2200

Standard Specification for Automated Vehicular Gate Construction

Underwriters Laboratories (UL)

- UL 325 Door, Drapery, Gate, Louver, and Window Operators and Systems
- UL 991 Tests for Safety-Related Controls Employing Solid-State Devices

National Fire Protection Association (NFPA) - NFPA 70 National Electrical Code

PHYSICAL/CHEMICAL PROPERTIES

See Table 1.

5. Installation

PREPARATORY WORK

Deliver products in manufacturer's original, unopened, undamaged containers with identification labels intact. Store products upright in the original shipping containers, covered, ventilated and protected from all weather conditions.

Locate concrete mounting pad in accordance with approved shop drawings. Verify that site conditions are acceptable for installation. Do not proceed with installation until unacceptable conditions are corrected.

Make sure that supporting posts or pilasters are adequate to support the gate and operator. Do not proceed with installation if supports are inadequate.

TABLE 1 SIZES, PHYSICAL PROPERTIES

Model	SwingRiser 14	SwingRiser 14 Twin	SwingRiser 19	SwingRiser 19 Twin	SwingRiser 30	SwingRiser 30 Twin
Part #	HRG 220A	HRG 222A	HRG 220B	HRG 222B	HRG 220C	HRG 222C
Duty cycle	Continuous	Continuous	Continuous	Continuous	Continuous	Continuous
Horsepower	1 hp	2 hp	1 hp	2 hp	1 hp	2 hp
Drive	Hydraulic cylinder	Hydraulic cylinder	Hydraulic cylinder	Hydraulic cylinder	Hydraulic cylinder	Hydraulic cylinder
Gate size	To 13' (3.9 m) wide	To 13' (3.9 m) wide/leaf	To 16' (4.9 m) wide	To 16' (4.9 m) wide/leaf	To 16' (4.9 m) wide	To 16' (4.9 m) wide/leaf
Max. gate weight	1000 lb (454 kg)	1000 lb (454 kg)/leaf	1600 lb (726 kg)	1600 lb (726 kg)/leaf	3000 lb (1361 kg)	3000 lb (1361 kg)/leaf
Rate of travel	14 seconds each to open/close	14 seconds each to open/close	19 seconds each to open/close	19 seconds each to open/close	30 seconds each to open/close	30 seconds each to open/close
1 Phase power	115/208/230; 60 Hz, 50 Hz. available	208/230; 60 Hz, 50 Hz. available	115/208/230; 60 Hz, 50 Hz. available	208/230; 60 Hz, 50 Hz. available	115/208/230; 60 Hz, 50 Hz. available	208/230; 60 Hz, 50 Hz. available
3 Phase power	208/230/460/575; 60 Hz, 50 Hz. available	208/230/460/575; 60 Hz, 50 Hz. available	208/230/460/575; 60 Hz, 50 Hz. available	208/230/460/575; 60 Hz, 50 Hz. available	208/230/460/575; 60 Hz, 50 Hz. available	208/230/460/575; 60 Hz, 50 Hz. available
UL listing	I, II, III, IV	I, II, III, IV	I, II, III, IV	I, II, III, IV	I, II, III, IV	I, II, III, IV

Note - All SwingRiser models are also available with UPS backup for DC operation.

METHODS

Install gate operator in accordance with manufacturer's printed instructions. Coordinate locations of operators with other trades, contract drawings and shop drawings. Ensure that the electric service to the operator is at least 20 amps and that wire size conforms to specific operator requirements.

Test the basic operator functions through 10 full cycles and adjust to ensure gate operates smoothly without binding, scraping or uneven motion. Test limit switches for proper "at rest" gate position.

Detailed installation instructions are avail-

able online at www.hysecurity.com.

PRECAUTIONS

- To reduce the risk of entrapment, the gate must be installed so that enough clearance is provided between the gate and adjacent structures, both when opening and closing. Minimize the parallel gap between the gate and the fence
- Excessive speed, insufficient column support, or insufficient footing may cause premature post wear or other operator malfunction
- SwingRiser posts must be mounted to a structural column or wall that will support

the entire weight of the swing gate panel throughout its arc

BUILDING CODES

Installation must comply with the requirements of all applicable local, state and federal code jurisdictions.

6. Availability & Cost

AVAILABILITY

HySecurity operators, accessories and parts are stocked by distributors and installers worldwide. Contact the manufacturer for local distributor information.

COST

Contact HySecurity for pricing details and/or budget estimates.

7. Warranty

The HySecurity SwingRiser gate operator is supported by a 5-year warranty when it is installed by a licensed contractor. A nationwide network of distributors and installers is available to service the warranty. Labor and other costs to replace defective components are excluded from this factory warranty; however, these costs may be covered through the local installing company. Complete warranty terms and conditions are available from the manufacturer. For details, consult HySecurity.

8. Maintenance

Detailed maintenance instructions are available online at www.hysecurity.com. Brief maintenance guidelines are described below.



Separate electrical enclosure (left) operates both gate panels in unison in this SwingRiser Twin configuration.

Hydraulic System

Periodically inspect for leaks and check fluid levels. Replace oil at 5 year intervals.

Electrical Controls

No routine maintenance is needed for the electrical system or controls. If the environment is very sandy, dusty or has many insects, seal all holes in the electrical enclosure. Blow dust out of the electric panel with compressed air.

Gate

Gate should be inspected monthly to ensure smooth operation.

9. Technical Services

For project-specific technical assistance, contact HySecurity. For more detailed information, product literature, test results, project lists, assistance in preparing project specifications and arrangements for application supervision, contact HySecurity or visit www.hysecurity.com.

Detailed technical information, including installation instructions, schematics, troubleshooting information and technical bulletins, are available online at www.hysecurity.com.

10. Filing Systems

Additional product information is available from the manufacturer upon request.