



1. Product Name
StrongArm™

2. Manufacturer
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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 and report critical security breaches while initiating automated, site-specific responses to these breaches. 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 kind of rigorous testing. All StrongArm models are rated at 2000 cycles/day.

BASIC USE

StrongArm™ is a durable, reliable and low maintenance barrier arm gate operator designed for controlling vehicular traffic at entrances ranging from narrow to wide. The powerful hydraulic operating system can support heavy wood, aluminum, fiberglass or aluminum-fiberglass arms to 36' (11 m) in length.

Engineered with fewer heavy duty components, StrongArm provides consistent perfor-



StrongArm 20 with 18' aluminum barrier arm installed at one of North America's leading seaports: Port of Tacoma

mance, reduces maintenance costs and avoids excessive parts inventory. StrongArm uses a 3/4 hp motor that is capable of opening the gate in 2 - 8 seconds, depending on arm size. All operators are equipped with soft stop features to prevent shock loads and prolong the life of the equipment. The heaviest arm model, StrongArm 36, also uses HySecurity's Soft Start technology to start the load gently, keeping the long barrier arm under full control at all times.

StrongArm is the preferred vehicle barrier system for high security corporate, industrial and governmental installations and is ideal for airports and other specialty applications with multiple lanes of traffic.

StrongArm is compatible with all standard access control equipment. Every model runs on all electrical voltages and phases.

COMPOSITION & MATERIALS

Mechanical Components

The StrongArm chassis is constructed of heavy duty, 10 gauge welded steel with uni-body construction and a catalyzed primer and polyurethane enamel paint finish. The chassis cover is constructed of 14 gauge sheet metal with the same catalyzed epoxy primer finish and polyurethane enamel coating as the chassis. All joints are welded, filled and ground smooth.

Barrier arms are available in wood, aluminum, fiberglass or aluminum-fiberglass. Depending on the model, arms are mounted into the side or center yoke adapter and bolted to the operator. Counterweights are

used for arms 20' (6.1 m) and longer.

StrongArm is powered by a totally enclosed fan cooled (TEFC), single- or 3-phase electric pump motor. This continuous duty 3/4 hp motor accepts standard voltages and has internal overload protection.

In the event of a power failure, manual operation is accomplished by the use of a "pull to release" bypass valve that unlocks the operator and allows the arm to be moved by hand.

Controls

StrongArm gate operators are controlled by the microprocessor based Smart Touch Controller, which 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, StrongArm conforms to UL 325 standard. Smart Touch Controller features include:

- LCD display for status and fault monitoring
- "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
- Anti-tailgate mode
- 17 user inputs
- 3 installer configurable outputs for many interface options
- 26 programmable output relay options
- EEPROM event logging capability for troubleshooting diagnostics

TABLE 1 SIZES, PHYSICAL PROPERTIES

Model	Fast StrongArm 14F	Standard StrongArm 20	Heavy Duty StrongArm 28	Heavy Duty StrongArm 36
Part Number	HTG 320-2	HTG 320-3	HTG 320-6	HTG 320-8
Duty Cycle	2000 cycles/day	2000 cycles/day	2000 cycles/day	2000 cycles/day
Horsepower	3/4 hp	3/4 hp	3/4 hp	3/4 hp
Arm Speed to Open	2 seconds	3 seconds	5 seconds	8 seconds
Arm Speed to Close	3 seconds	4 seconds	6 seconds	8 seconds
Arm Length Capacity	To 14' (4.3 m)	To 20' (6.1 m); side mount available for arms up to 18' (5.5 m)	To 28' (8.5 m)	To 36' (11 m)
Arm Designs	Side mount aluminum or fiberglass; wood up to 14' (4.3 m)	Side or center yoke aluminum or fiberglass; wood up to 14' (4.3 m)	Center yoke aluminum or fiberglass	Center yoke aluminum or fiberglass
1-Phase Power	115/208/230 50 & 60 Hz available	115/208/230 50 & 60 Hz available	115/208/230 50 & 60 Hz available	115/208/230 50 & 60 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
UL Listing	I, II, III, IV	I, II, III, IV	I, II, III, IV	I, II, III, IV
Soft Start	Not available	Not available	Not available	Standard
Soft Stop	Standard	Standard	Standard	Standard

Note - All StrongArm models can be configured for DC operation with Uninterruptible Power Supply (UPS) backup.

- RS232 port for laptop or other computer peripheral connection and RS485 connection for 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

Models

- StrongArm 14F - High-speed model designed for arms up to 14' (4.3 m) in length; side mounted; arm speed of 2 seconds to open and 3 seconds to close; designed for UL Class I - IV applications, 2000 cycles/day and available as DC operator with uninterruptible power supply
- StrongArm 20 - Standard model designed for arms up to 20' (6.1 m) in length; side or center yoke mounted; arm speed of 3 seconds to open and 4 seconds to close; designed for UL Class I - IV applications, 2000 cycles/day and available as DC operator with uninterruptible power supply
- StrongArm 28 - Heavy duty model designed for arms up to 28' (8.5 m) in length; center yoke mounted; arm speed of 5 seconds to open and 6 seconds to close; designed for UL Class I - IV applications, 2000 cycles/day and available as DC operator with uninterruptible power supply

- StrongArm 36 - Heaviest duty model designed for arms up to 36' (11 m) in length; center yoke mounted; arm speed of 8 seconds to open and 8 seconds to close; cable kit standard on arms 30' (9.2 m) in length or greater; designed for UL Class I - IV applications, 2000 cycles/day and available as DC operator with uninterruptible power supply

OPTIONAL CONFIGURATIONS

The UPS backup StrongArm models are powered using two 24 V DC motors to ensure consistent operation in the event of AC-power failure and provide at least 100 full open and close operations. A separate NEMA-3R enclosure holds fully sealed, maintenance-free batteries and a charger.

OPTIONS, ACCESSORIES

Safety

- Vehicle detector - Detects vehicles in the barrier arm's path and will not allow the arm to close if activated; will cause the arm to rise if the closing cycle is interrupted by a vehicle
- Photoelectric eye - If beam is obstructed, will not allow arm to start closing; will reverse arm if beam is interrupted during closing cycle

Cold Weather

StrongArm operators are rated for temperatures from -40 degrees F (-40 degrees C) without heaters. They can also be equipped with thermostat controlled heaters for extremely cold climates.

Convenience

- Timer to close - Signals the operator to close the gate after a user programmed interval; standard on all operators
- An in-ground vehicle sensing reset loop function controls closure so that the barrier arm closes immediately when a vehicle clears the barrier arm path; "free exit" activates the gate to open automatically from the inside
- Clock timer - A 7-day timer that can be programmed to open or close the gate automatically
- Radio controls - Wireless transmitters, similar to those used to open and close garage doors, signal a receiver in the operator to operate the gate

Access

- Card reader - Reads a card that, when verified, signals the operator to cycle
- Keypad - When properly addressed, signals the operator to cycle
- Keyswitch - A simple switch that is closed by turning a key in a lock cylinder, which in turn signals the operator to cycle. Typically employed as emergency open device

Note - The card reader, keypad and keyswitch are not sold by HySecurity, but are available from most HySecurity distributors.

Security

- Heavy, 14 gauge tamperproof steel cover to help withstand a physical attack on the operator housing



- Operator cover is secured by a keyed T-lock for extra security and vandal resistance

Other Options, Accessories

- Arm options include 1" x 6" (25.4 x 152 mm) wood single arms to 14' (4.3 m); 2" x 5" (51 x 127 mm) tubular aluminum arms to 24' (7.3 m); 2" x 5" (51 x 127 mm) aluminum-fiberglass arms to 36' (11 m)
- Side or yoke mount hardware included with arm
- Guy cable harness kit included for additional support with arms 30' (9.2 m) and longer

SIZES

See Table 1.

COLOR

Yellow polyurethane enamel finish is standard. Custom color matching is available.

BENEFITS

- Low maintenance
- Uses few industrial grade mechanical and electrical components, so replacement costs are kept low
- Capacity to operate gates from 10' - 36' (3 - 11 m) in length
- 2000 cycles/day and rapid arm speed from 2 - 8 seconds
- Tolerates temperature extremes from -40 degrees F -167 degrees F (-40 degrees C - 75 degrees C)
- Compatible with virtually all available access control, safety and vehicle detection equipment
- Appropriate for UL usage classes I, II, III and IV

LIMITATIONS

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

4. Technical Data

APPLICABLE STANDARDS

ASTM International (ASTM) - ASTM F2200 Standard Specification for Automated Vehicular Gate Construction

Underwriters Laboratories, Inc. (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 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.

Mount gate controls so that users cannot touch the barrier arm while operating the controls.

Make sure the arm stops smoothly at each end of travel and in both directions without any binding of the gate hardware.

METHODS

Install the gate operator in accordance with manufacturer's printed instructions. Coordinate locations of operators with contract drawings, other trades 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 available online at www.hysecurity.com.

PRECAUTIONS

The gate operator must be installed with at least 2 (0.6 m) of clearance between the operator, barrier arm and adjacent structures in order to reduce the risk of entrapment, and all exposed pinch points must be guarded. The barrier arm must not be modified in any way that creates a risk of entrapment or a possibility that some portion of the moving arm could snag onto the clothing of a pedestrian. Do not attach chains or other material to the barrier arm that could create such a hazard.

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 SlideDriver gate operator is supported by a 5 year or 500,000 cycle 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.

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.

