



1. Product Name
HydraLift™

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 and initiate automated, site-specific reports in response 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 rigorous testing.

BASIC USE

HydraLift™ is a secure, low maintenance vertical-lift gate operator designed for openings in which there is limited or inadequate space to operate a slide or swing gate or to clear multiple lanes of traffic quickly. Standard HydraLift operator assemblies raise gate panels weighing up to 2000 lb (907 kg) to a height of 16' (5 m), allowing for easy truck clearance. The gate panels are counterbalanced and are controlled from a remote hydraulic panel.



Two HydraLift 20 operators installed at Metropolitan Transit Authority in New York, NY

HydraLift provides security and quick, reliable performance for industrial, commercial and correctional applications with high traffic volumes. HydraLift operators are often found at metro transit facilities, truck freight depots, heavy equipment airport access sites, shipping ports and at industrial, multi-lane freight yards. They are also installed at entrances of high end apartment and condominium complexes, as well as in skyscraper parking garages.

HydraLift is available in 4 models offering 2 speeds to meet a variety of weight, length, speed and UL class requirements. Options include custom post heights and DC operation with uninterruptible power supply (UPS).

HydraLift is compatible with all standard access control equipment. All electrical voltages and phases are accepted.

COMPOSITION & MATERIALS

Mechanical Components

The standard HydraLift incorporates two 24' (7 m) posts consisting of 10" (254 mm) square tubing made of 1/4" (6 mm) galvanized steel. Each post is anchored to a welded anchor bolt cage, which is mounted underground and secured with a concrete footing.

Totally contained within each post are a hydraulic motor, #40 cadmium plated steel roller (lifting) chains and counterweights to raise and lower the gate panel. The shafts support the full weight of the gate and counterweights, and are made of 1 1/4" (32 mm) 4140 alloy steel.

An auto level system, consisting of a set of 1/8" (3.2 mm) auto level cable, prevents the gate panel from becoming wedged, jammed or misaligned.

Each post-housed hydraulic motor is controlled by a separate, totally enclosed fan cooled (TEFC), single- or 3-phase electric pump motor and control panel located within 100' (30 m) of the gate. The 2 hp, 4 hp or 5 hp electric motor (depending on model) accepts standard voltages and has internal overload protection.

HydraLift is delivered with up to 150' (46 m) of 3/8" (9.5 mm) hydraulic hose that is custom cut to meet project requirements.

All HydraLift models are equipped with soft stop features to keep the gate panel fully controlled at all times, to prevent shock loads and to prolong the equipment life. Heavier gate models, HydraLift 20 and 20F, also include HySecurity's Soft Start technology that enables the gate panel to be raised gently without lurching.

In the event of a power failure, manual operation can be accomplished by pulling and turning the hydraulic bypass valve or by removing the socket head screws from the special release sprockets on each hydraulic motor. A forklift may be required to lift the gate until sufficient counterweight has been installed. UPS back-up HydraLift models powered using two 24 volt DC motors are also available to ensure consistent operation in the event of AC-power failure.

TABLE 1 SIZES, PHYSICAL PROPERTIES

Model	Standard Hydralift 10	Heavy Duty Hydralift 20	Standard Hydralift 10F	Heavy Duty Hydralift 20F
Part Number	HVG 420	HVG 460	HVG 420 EX	HVG 460 EX
Duty Cycle	1000 cycles/day	1000 cycles/day	1000 cycles/day	1000 cycles/day
Horsepower	2 hp	2 hp	5 hp	5 hp
Gate Weight	1000 lb (454 kg) gate max.	2000 lb (907 kg) gate max.	1000 lb (454 kg) gate max.	2000 lb (907 kg) gate max.
Gate Length	50' (15 m) max.	80' (24 m) max.	50' (15 m) max.	80' (24 m) max.
Rate of Travel	1' (0.3 m)/second	1' (0.3 m)/second	2' (0.6 m)/second	2' (0.6 m)/second
1 Phase Power	208/230 50 and 60 Hz available	208/230 50 and 60 Hz available	230 60 Hz only	230 60 Hz only
3 Phase Power	208/230/460/575 50 and 60 Hz available	208/230/460/575 50 and 60 Hz available	208/230/460 50 and 60 Hz available	208/230/460 50 and 60 Hz available
UL Listing	I, II, III, IV	I, II, III, IV	III, IV	III, IV
Soft Stop	Standard	Standard	Standard	Standard
Brake Valves	Standard	Standard	Standard	Standard
Soft Start	Not available	Standard	Not available	Standard

Note - All Hydralift models can be configured for DC operation with uninterruptible power supply (UPS) back-up.

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, Hydralift 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
- 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

- Hydralift 10 - Standard 2 hp model designed for gates up to 50' (15 m) long and weighing up to 1000 lb (454 kg); gate speed of 1' (0.3 m) per second; meets UL Class I - IV and is available as DC operator with uninterruptible power supply (UPS); 1000 cycles/day
- Hydralift 20 - Heavy duty 2 hp model designed for gates up to 80' (24 m) long and weighing up to 2000 lb (907 kg); gate speed of 1' (0.3 m) per second; equipped with Soft Start system; meets UL Class I - IV and is available as a DC operator with uninterruptible

power supply (UPS); 1000 cycles/day

- Hydralift 10F - High speed 5 hp model designed for gates up to 50' (15 m) in length and weighing up to 1000 lb (454 kg); gate speed of 2' (0.6 m) per second; equipped with Soft Start system; meets UL Class III and IV and is available as a DC operator with uninterruptible power supply (UPS); 1000 cycles/day
- Hydralift 20F - High speed 5 hp model designed for gates up to 80' (24 m) long and weighing up to 2000 lb (907 kg); gate speed of 2' (0.6 m) per second; equipped with Soft Start system; meets UL Class III and IV and is available as a DC operator with uninterruptible power supply (UPS); 1000 cycles/day

OPTIONAL CONFIGURATIONS

- The UPS back-up Hydralift models are powered using two 24 volt DC motors to ensure consistent operation in the event of AC-power failure and provide at least 150 cycles of back-up gate operation

OPTIONS, ACCESSORIES

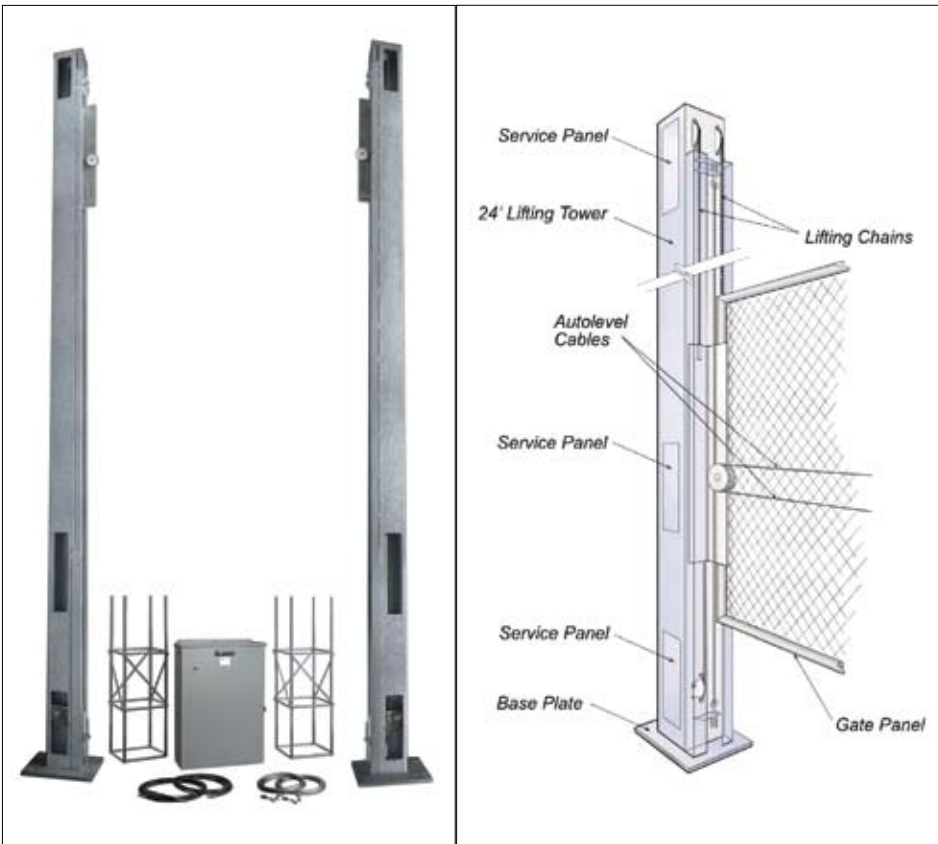
Safety

- 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



Hydralift 10F opening 30' (9 m) gate panel at 2/second





Two vertical posts, anchor bolt cages, hose lengths, cables and single electrical enclosure

- Uses a small number of industrial grade mechanical and electrical components, so replacement costs are kept low
- Suitable for sites where additional space for swing or slide gates is unavailable
- Capacity to operate gates up to 80' (24 m) in length
- Rapid gate travel of 1' (0.3 m) or 2' (0.6 m) per second
- Tolerates temperature extremes from -40 - 167 degrees F (-40 - 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/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.

Ensure that the gate lifts smoothly in both directions, without any binding of the gate hardware. If the gate is warped or hard to move, stop and fix the gate before attempting to automate.

Cold Weather

HydraLift 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 prescribed interval; standard on all operators
- An in-ground vehicle sensing reset loop function controls closure so that the gate closes immediately when a vehicle clears the gate 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

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

Security

HydraLift is locked by gravity and hydraulics; moving parts are enclosed out of sight and not subject to vandalism or destruction.

SIZES

See Table 1.

COLOR

Gray flame spray finish is standard.

BENEFITS

- Low maintenance

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

All exposed pinch points must be guarded. To reduce the risk of entrapment, the gate must also 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.

Covers for all exposed gate support wheels must be installed.

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 HydraLift 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 application environment is sandy, dusty and/or insect-prone, seal all holes in the electrical enclosure. Use compressed air to remove dust from the electric panel.

Gate

Inspect the gate 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, is available online at www.hysecurity.com.

10. Filing Systems

Additional product information is available from the manufacturer upon request.