

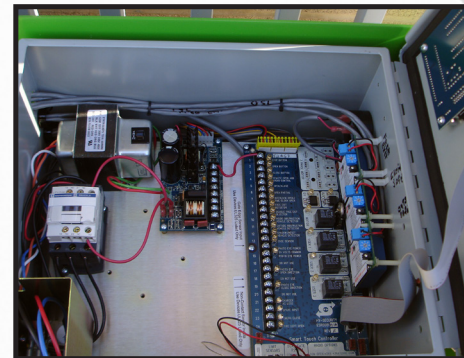
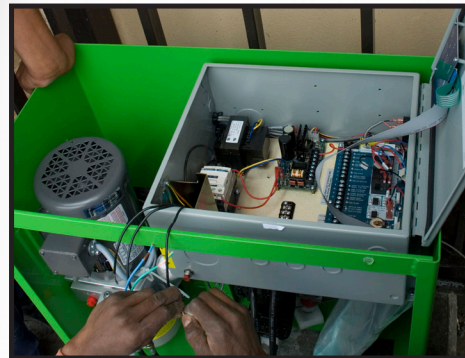


SlideDriver™

Installation Instructions

Models

SlideDriver 15	222 SS ST	1,500 lb (680 kg)	1 ft/s (30 cm/s)
SlideDriver 30F	222 EX 1.7 ST	3,000 lb (1,361 kg)	1.7 ft/s (50 cm/s)
SlideDriver 40	222 E ST	4,000 lb (1,814 kg)	1 ft/s (30 cm/s)
SlideDriver 50VF2/3	222 X3 ST	5,000 lb (2,268 kg)	2.2 ft/s (70 cm/s) or 3 ft/s (91 cm/s)
SlideDriver 80	222 X1 ST	8,000 lb (3,629 kg)	1 ft/s (30 cm/s)
SlideDriver 200	444 XS ST	20,000 lb (9,072 kg)	1 ft/s (30 cm/s)

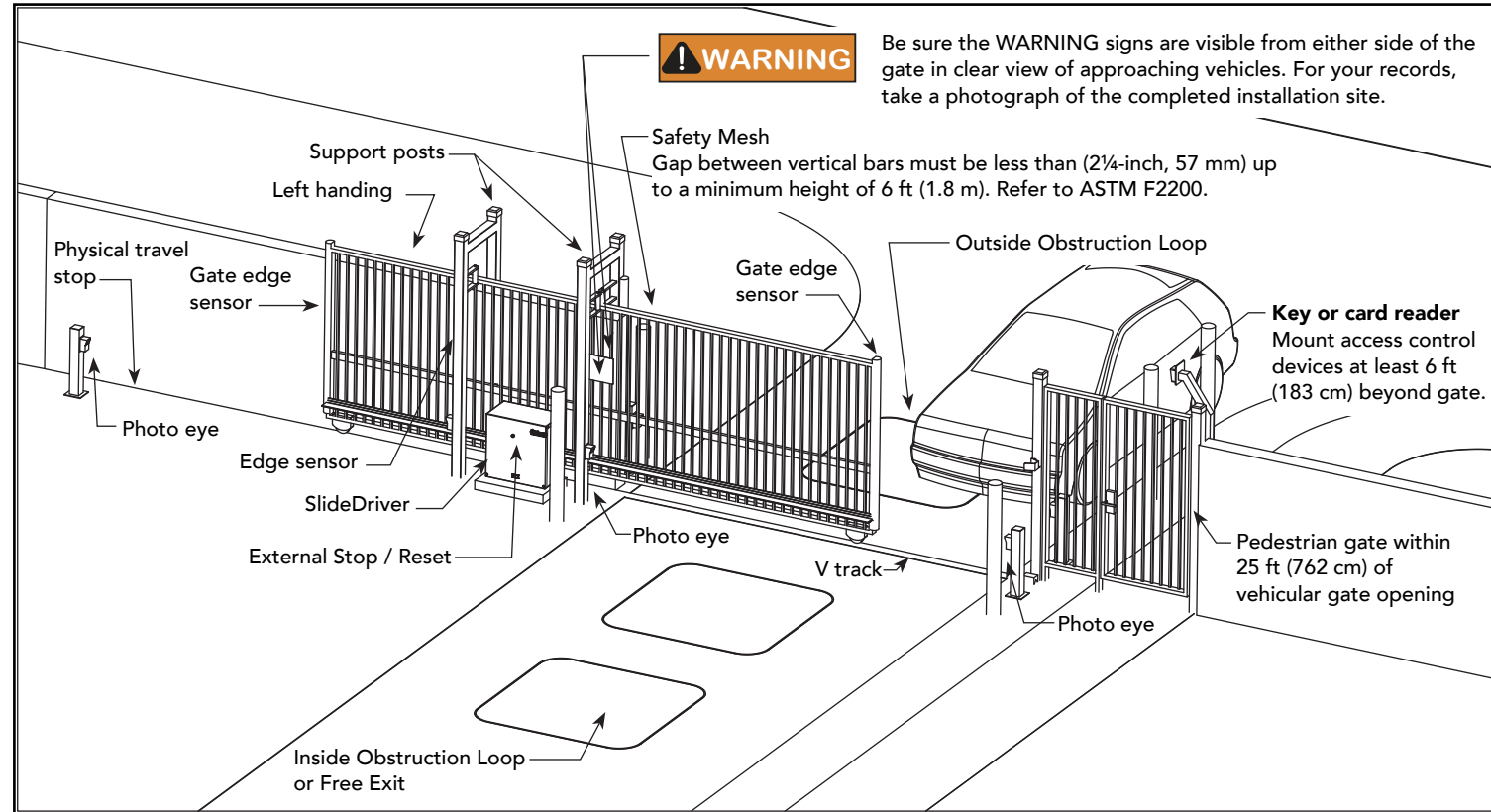


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The World's Most Rugged and Reliable High Security Slide Gate Operator

SlideDriver: Plan Site Design

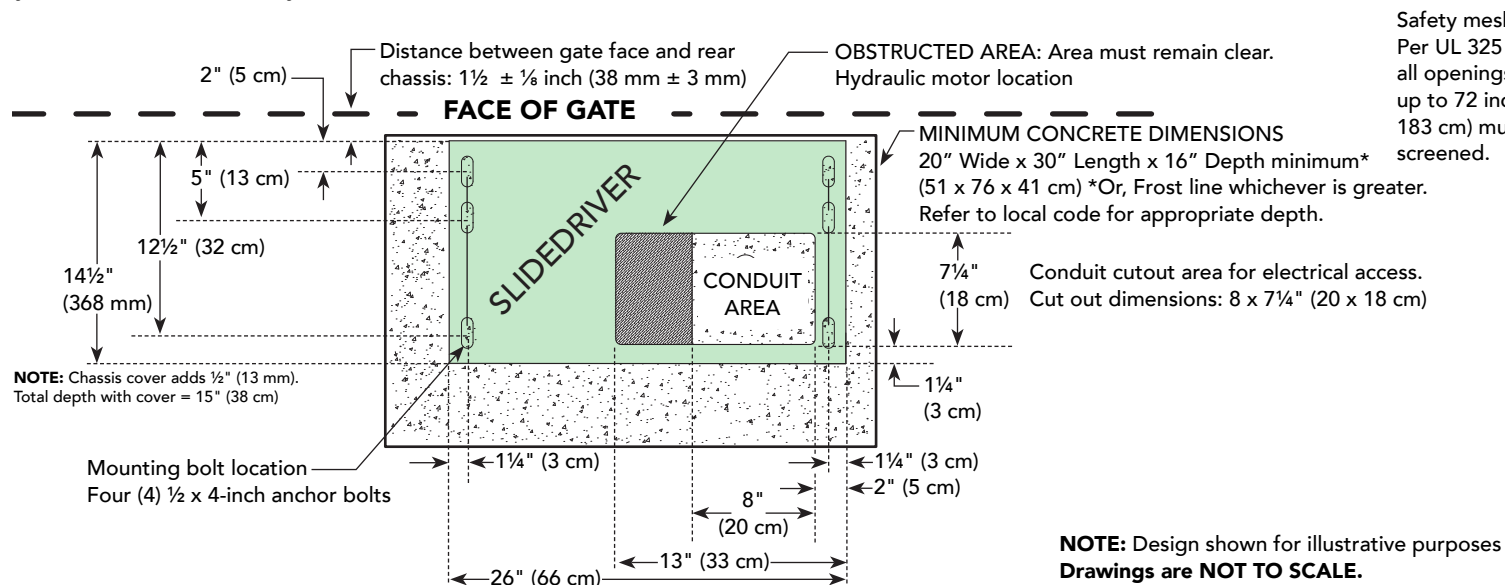


Minimum conduit required	No.	Min. Size	cm
AC Main power (incoming)	1	1 inch	2.5
Low voltage comm wires	1	3/4 inch	2
Ground	1	3/4 inch	2
Loop wires	1	3/4 inch	2

Add'l conduit may be needed for:	No.	Min. Size	cm
DC cables or hydraulic hoses	1	2 inch	5
Dual gate connection for low voltage wiring	1	1 inch	2.5
Emergency release options	1	3/4 inch	2

CAUTION
If you cut, drill or alter the chassis, you will void the Warranty.

DANGER
Know what's below! Many states subscribe to 811. Call the local utility number so underground utility lines can be marked before excavating.



NOTE: Design shown for illustrative purposes only. Drawings are NOT TO SCALE.

1 Read & Plan

Read and follow the *Important Safety Information* provided in the *Programming and Operations Manual* prior to installing the SlideDriver. Read and follow these installation instructions and make sure to conform to site specifications and all local and federal regulations and codes.

2 Measure and Calculate

Determine site placement. Pay attention to clearance around the gate operator's location and gate condition (hardware, ease of travel, and access). Consider right handing and left handing.

Use the illustrations for concrete pad dimensions, gate operator placement and drive rail alignment.

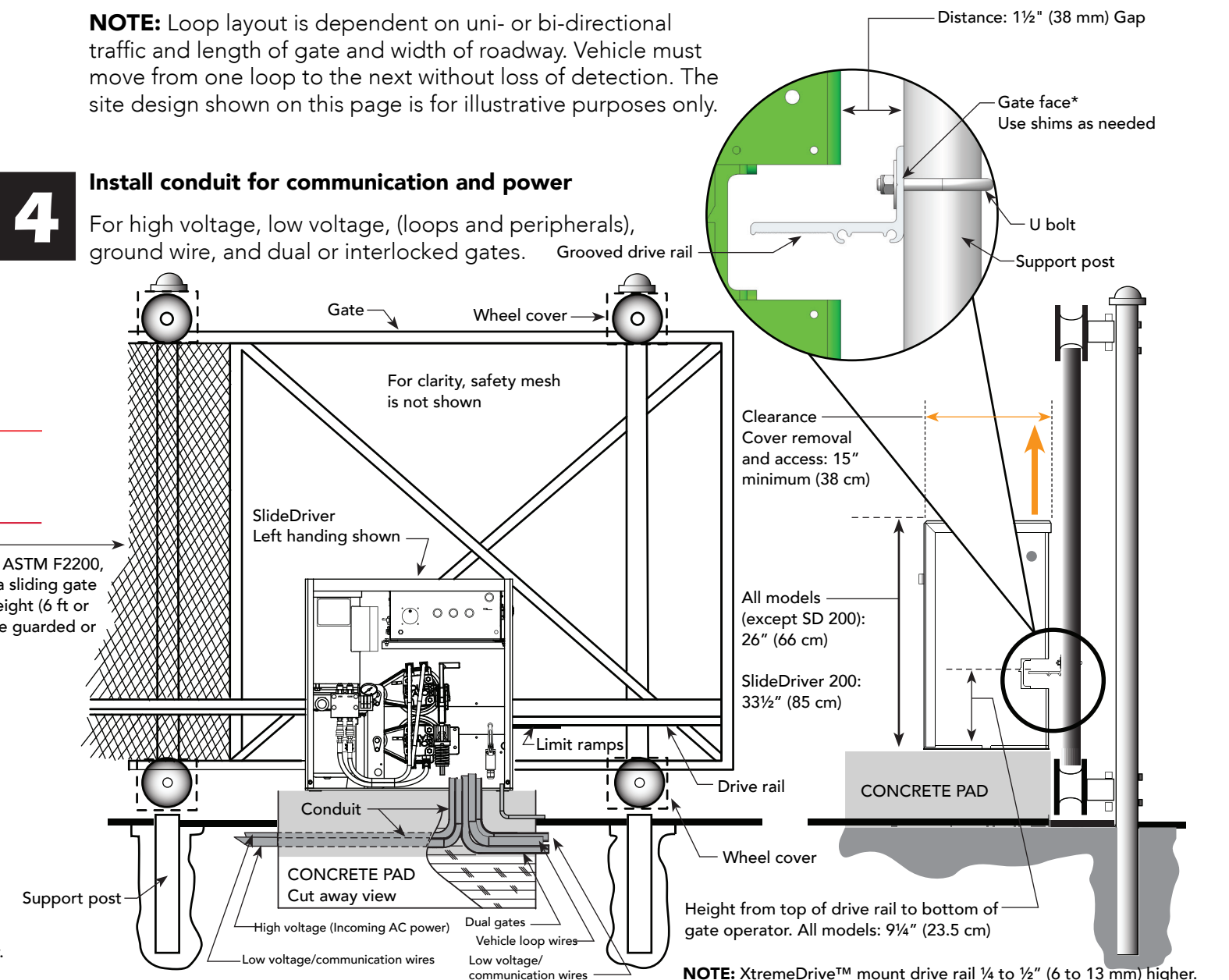
3 Design Vehicle Loops

Inside and Outside obstruction loops (IOLD and OOLD) are recommended to help prevent vehicle hits. IOLD and OOLD loops are required for tail gating logic.

NOTE: Loop layout is dependent on uni- or bi-directional traffic and length of gate and width of roadway. Vehicle must move from one loop to the next without loss of detection. The site design shown on this page is for illustrative purposes only.

4 Install conduit for communication and power

For high voltage, low voltage, (loops and peripherals), ground wire, and dual or interlocked gates.

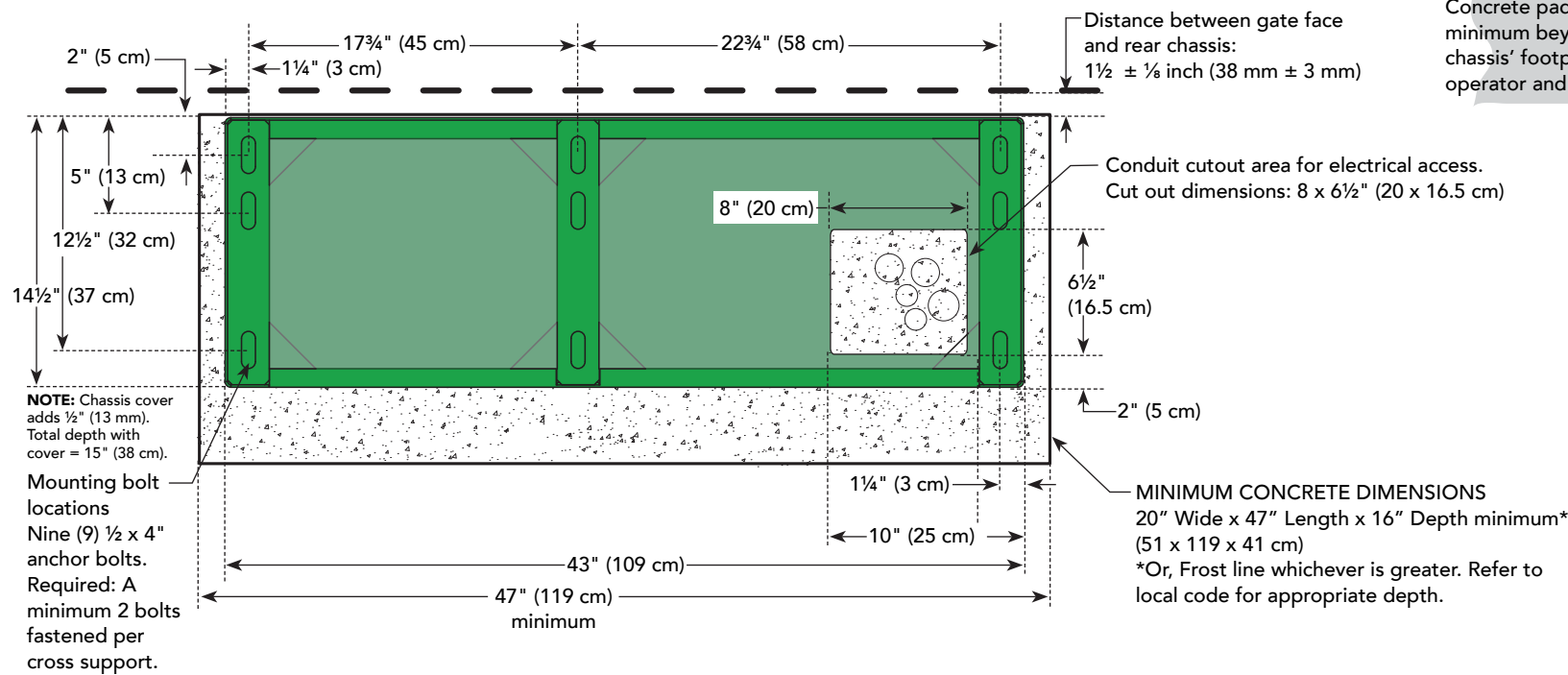


NOTE: XtremeDrive™ mount drive rail 1/4 to 1/2" (6 to 13 mm) higher.

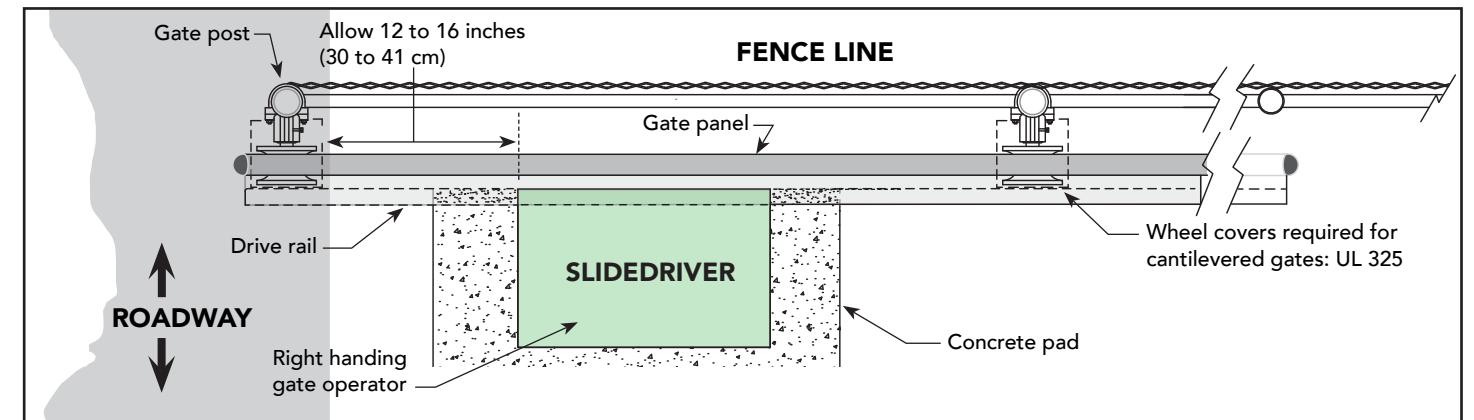
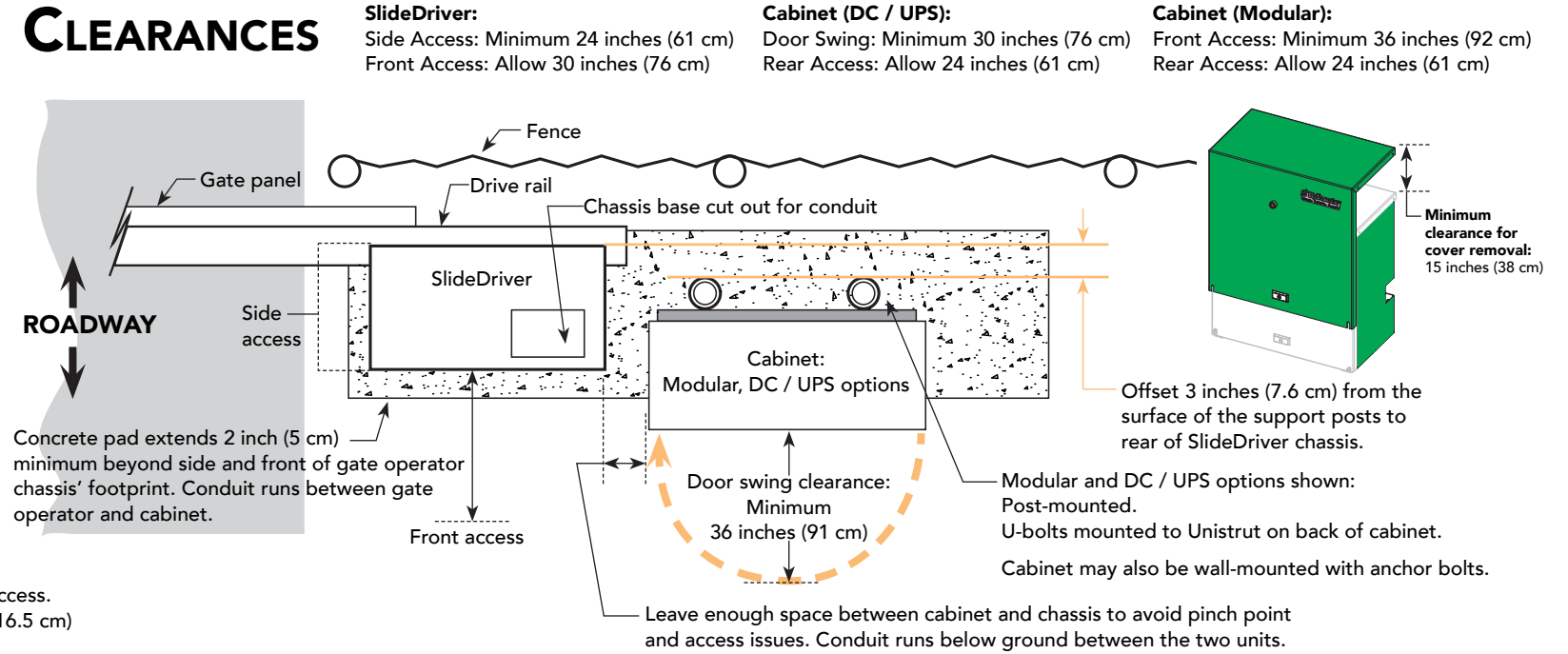
TOOLS REQUIRED

- Standard socket set with extension
 - Standard hex key set
 - Combination wrench set
 - Standard pliers and needle-nose pliers
 - Set of Phillips head and flat-head screwdrivers
 - Wire strippers & wire crimper
 - Digital Volt-Ohm meter
 - Level and measuring tape
 - Electric drill and drill bits (Unibit or Stepdrill)
 - Metal cutting saw
- For the full recommended list of tools and hardware, see the *SlideDriver Programming and Operations Manual*.

SLIDE DRIVER 200 SERIES



CLEARANCES



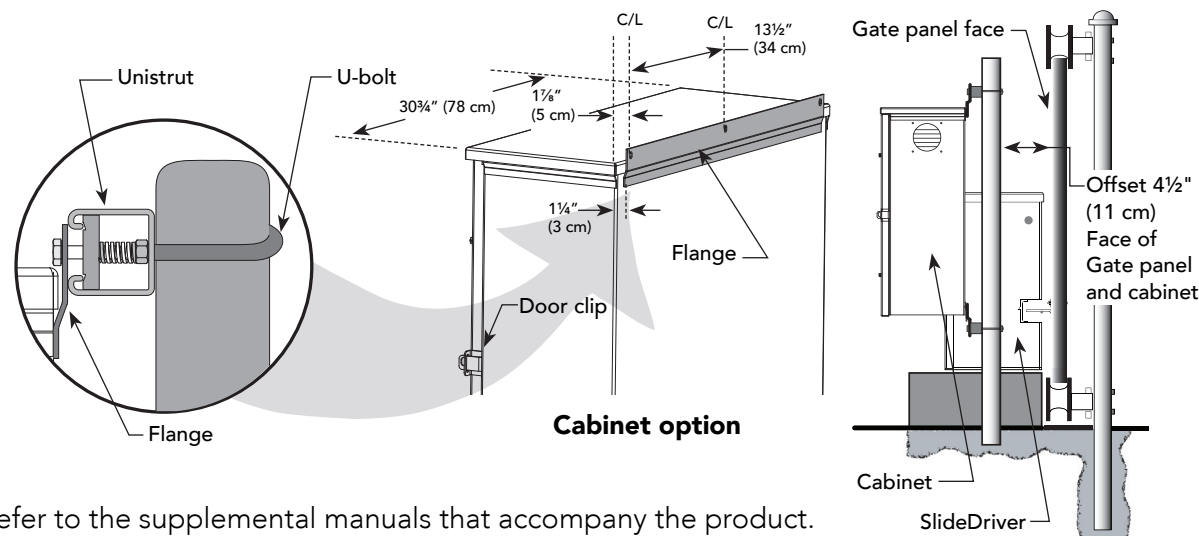
POST MOUNT FOR HYDRASUPPLY OR DC / UPS CABINET

For DC / UPS or Modular options, wall or post-mount the cabinet.

If planning a post mount, mounting holes need to be drilled (U-bolts, fasteners, and unistrut are not provided).

Cabinet may also be wall-mounted with anchor bolts.

NOTE: The mounting holes on the top and bottom flanges are 5/16-inch diameter. Mounting posts and hardware are not provided by HySecurity.

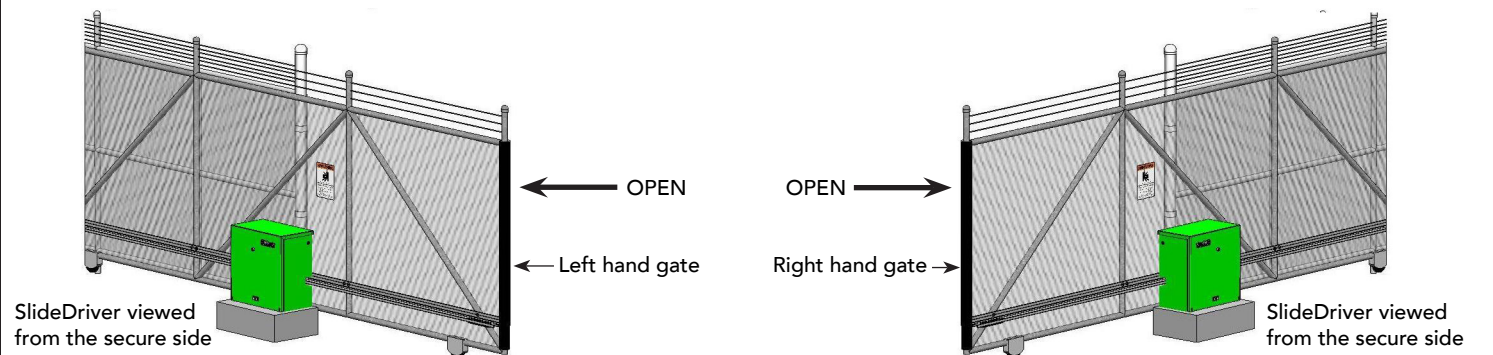


For more information, refer to the supplemental manuals that accompany the product.

OPERATOR HANDING

When you first apply power to the operator, it is locked in Menu mode and prompts appear on the display. The gate will not move and the controls will not function until the prompts have been answered. The prompts include:

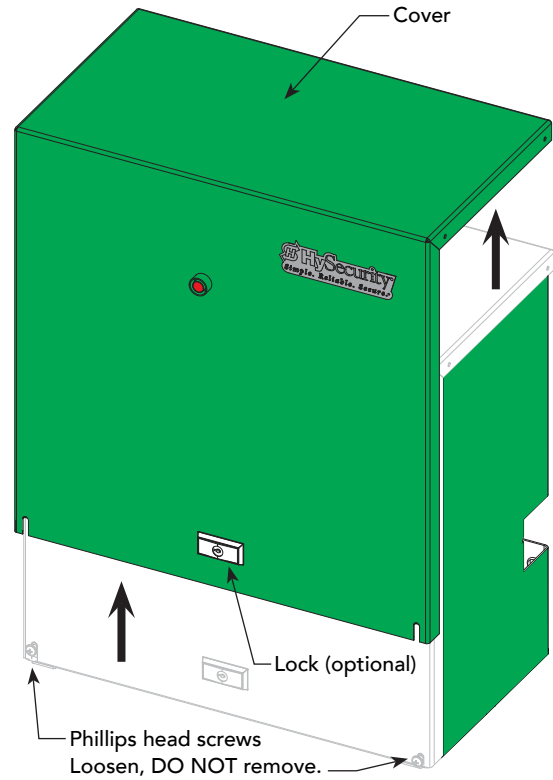
- Usage Class setting (UC)
- Gate operator handing (Set Handing: SH)
See page 9 for more information.



1 UNPACK THE SLIDE DRIVER



DO NOT pick the operator up by its sides or tip it. Hydraulic fluid can leak or damage to the chassis may occur and void the Warranty.



- Loosen two Phillips head screws.
NOTE: Leave sufficient overhead clearance to remove cover and open the control box.
- Remove the cover by tilting it slightly toward you while lifting it up off the top of the operator.
NOTE: Use the supplied keys to release the lock if your model includes that option.
- Remove the foam pieces around the motor and the red spring.
- Remove the ship with kit plastic bag.

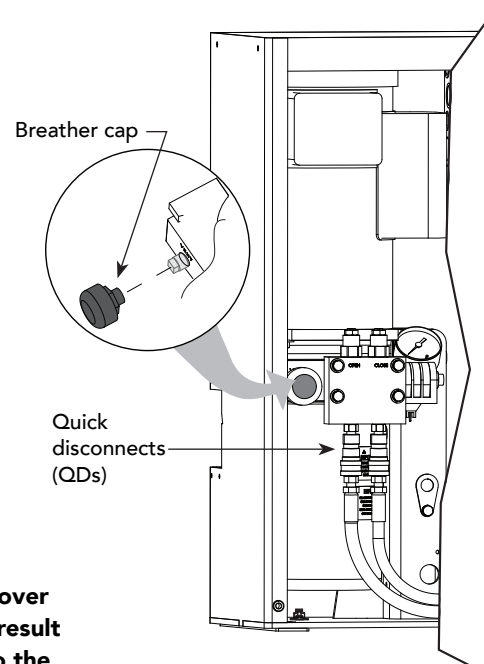


Obtain help before lifting or moving the operator. SlideDriver models can weigh over 260 lbs (118 kg). Failure to comply may result in serious injury to personnel, damage to the equipment, or both.

3 REPLACE THE VENT PLUG



Replace the vent plug with the breather cap before operating the SlideDriver. Air pressure vents through the cap instead of through the pump seal and helps prevent rust by allowing condensation to evaporate. If you do not replace the vent plug with the breather cap, you will void the Warranty.



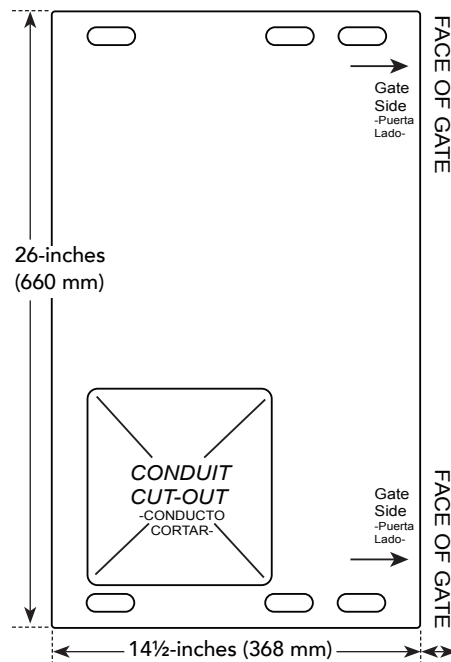
5 INSTALL THE EARTH GROUND



The potential for lightning discharge exists with all gates, fences and gate operators. National Electric Code (NEC) - Article 250 requires a separate earth ground in addition to the required equipment ground.

The gate operator must be grounded per NEC, NFPA 780 and local building standards and codes.

2 MARK THE ANCHOR BOLT LOCATIONS

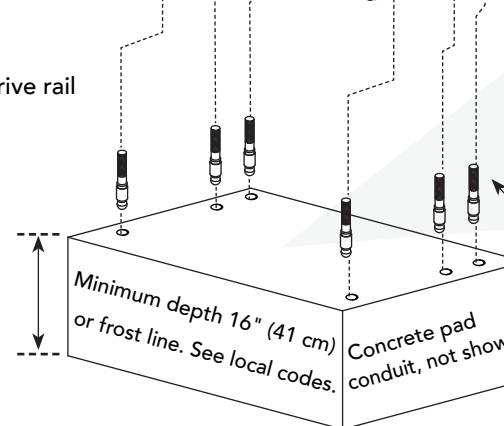
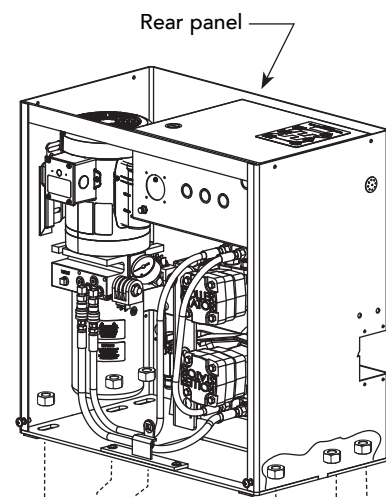
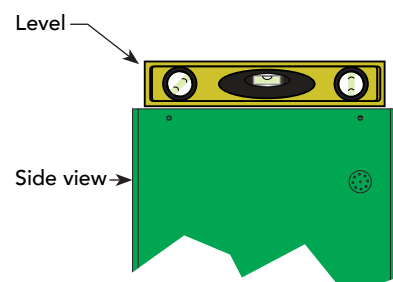


After you remove the operator, cut out the anchor bolt template on the side of the SlideDriver box.

Use the template to mark the location of the anchor bolts that will secure the SlideDriver to the concrete pad.

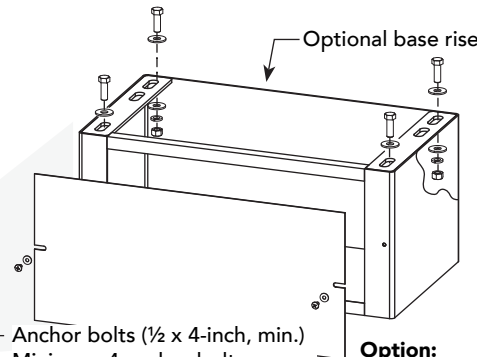


Review the dimensions on page 4. Proper alignment of the SlideDriver operator and its drive rail is critical.

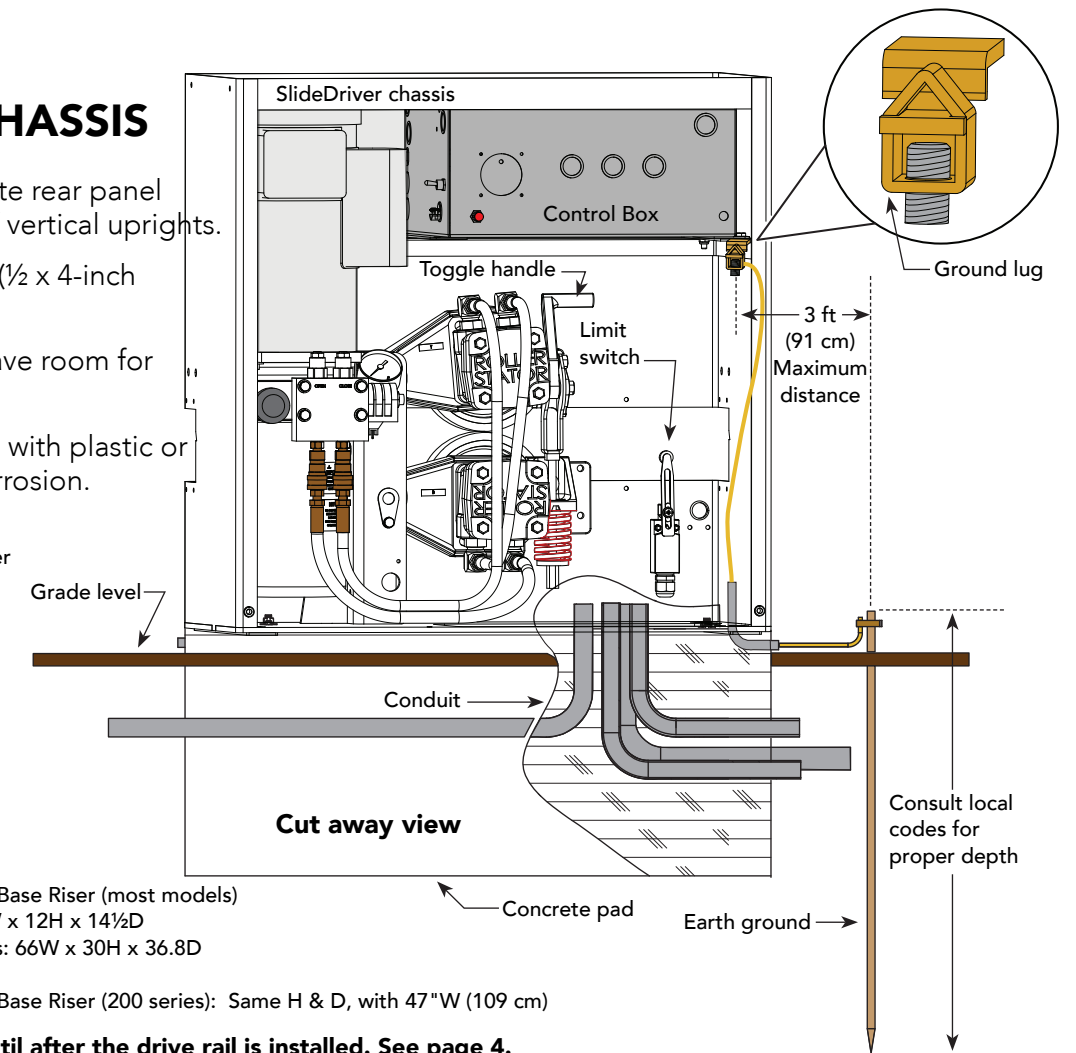


4 INSTALL THE CHASSIS

- Align the operator. Locate rear panel 1 1/2-inch from the face of vertical uprights.
- Install concrete anchors (1/2 x 4-inch minimum)
- Tighten the nuts, but leave room for adjustments.
- Level the operator. Shim with plastic or aluminum to prevent corrosion.



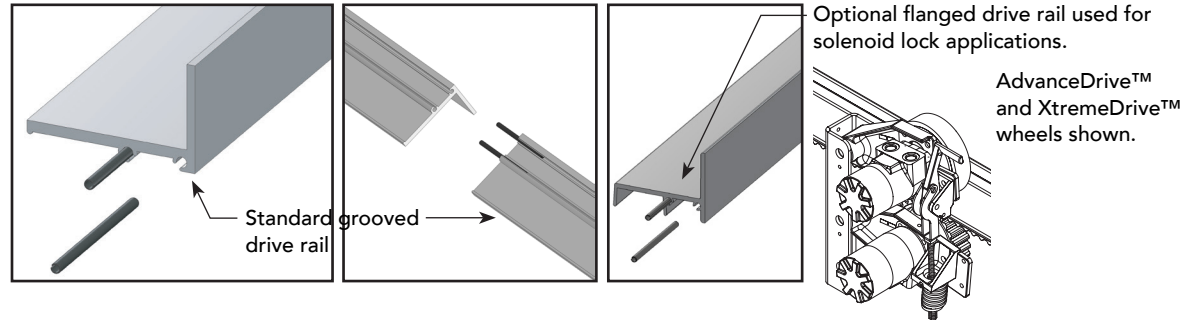
Do NOT fully tighten the anchor bolts until after the drive rail is installed. See page 4.



Assemble, Align & Install Drive Rail

1 Connect sections of the drive rail.

Use roll pins to join the sections of the drive rail. To prevent the pins from moving during assembly, crimp the pin channels with a pliers.



AdvanceDrive™ and XtremeDrive™ wheels shown.

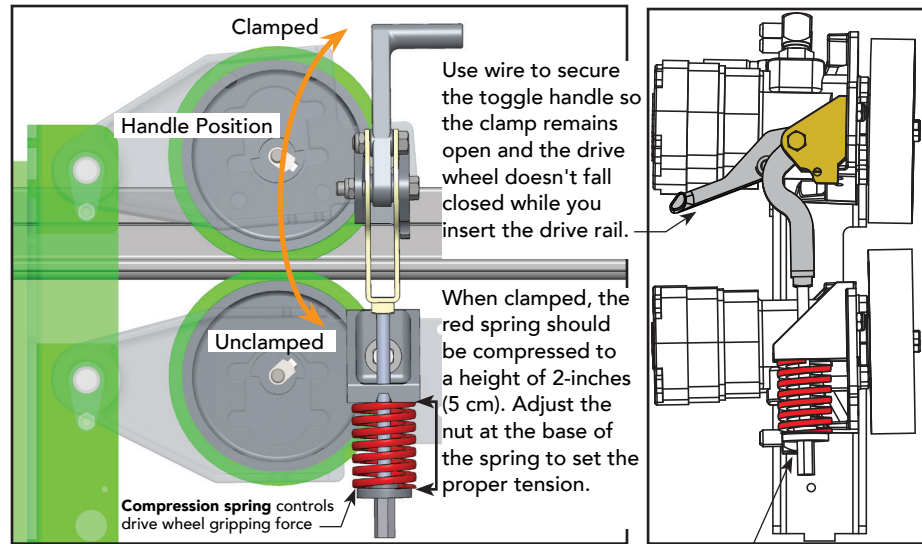
2 Secure the toggle handle.

Disengage the drive wheels by pulling on the toggle handle. Wire the toggle handle clamp open so the wheel doesn't fall closed when you insert the drive rail through the chassis



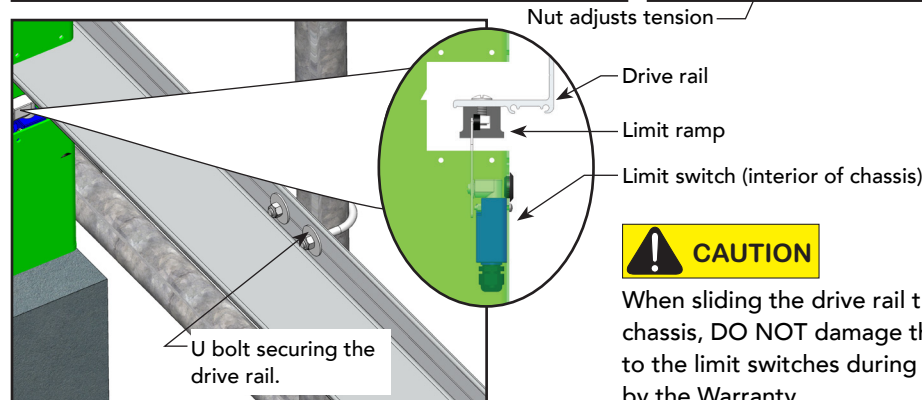
WARNING

Be careful where you place your hands and fingers when you disengage the drive wheels. The compression spring at the base of the clamp causes the handle to drop suddenly which can cause serious injury.



Use wire to secure the toggle handle so the clamp remains open and the drive wheel doesn't fall closed while you insert the drive rail.

When clamped, the red spring should be compressed to a height of 2-inches (5 cm). Adjust the nut at the base of the spring to set the proper tension.



CAUTION

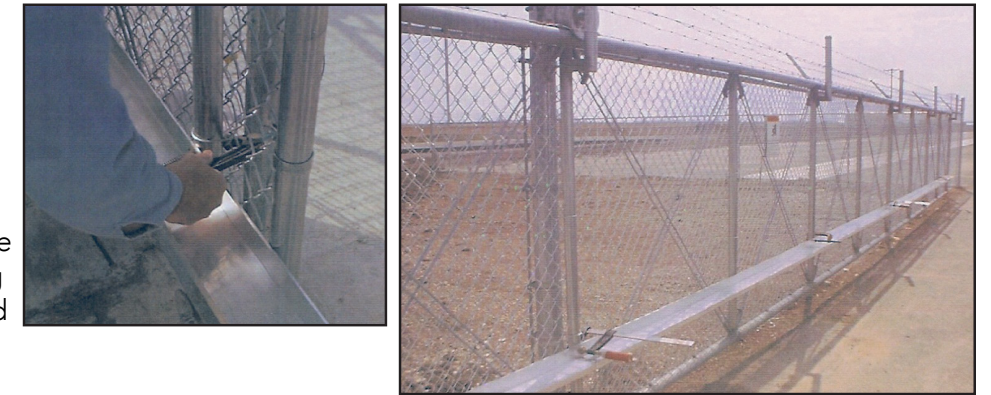
When sliding the drive rail through the cut out in the chassis, DO NOT damage the limit switches. Damage to the limit switches during installation is not covered by the Warranty.

3 Clamp Drive Rail to Gate

Identify the gate structure nearest the operator and temporarily clamp the drive rail onto the gate.

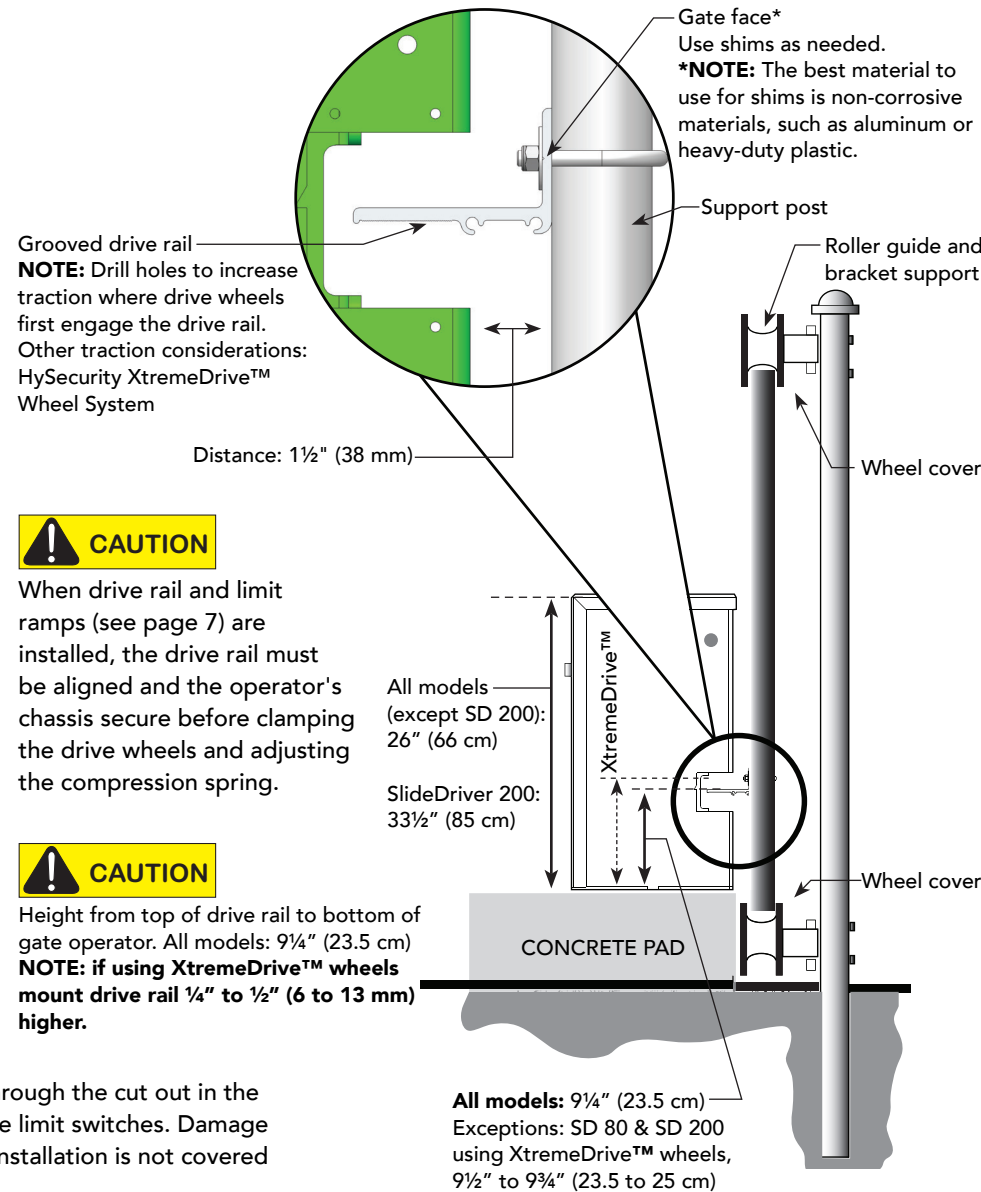
4 Set a String Line, Align Drive Rail and Insert Shims, if needed.

For reference, run a string line along the entire length of the drive rail. Compare the edge of the drive rail with the string line. Place shims between the upright support structure and drive rail to keep the drive rail straight and level.



5 Align and Secure Drive Rail

Align the top of the drive rail with the label on each side of the operator's chassis. If necessary, loosen the C-clamps and move the drive rail up or down along the length of the gate. Drill holes through the drive rail flange and insert U bolts from the far side. Install U bolts along the upright support structure, as needed. HySecurity recommends that you attach to a minimum of 3 supports per length of drive rail. Keep drive rail spans straight and level. Distance between attachment points should be less than 10 feet (3 m).



NOTE: Drill holes to increase traction where drive wheels first engage the drive rail. Other traction considerations: HySecurity XtremeDrive™ Wheel System



CAUTION

When drive rail and limit ramps (see page 7) are installed, the drive rail must be aligned and the operator's chassis secure before clamping the drive wheels and adjusting the compression spring.

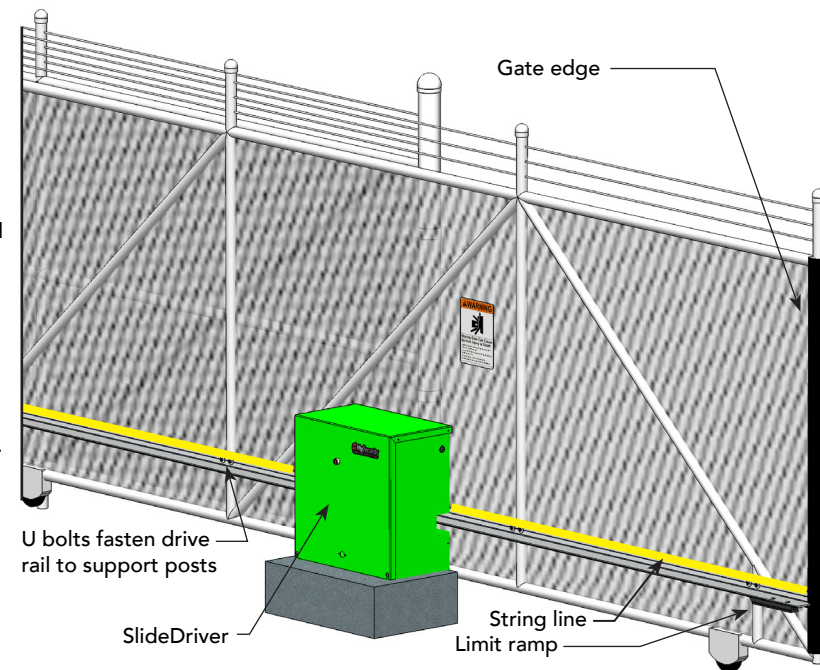


CAUTION

Height from top of drive rail to bottom of gate operator. All models: 9 1/4\" (23.5 cm) **NOTE: if using XtremeDrive™ wheels mount drive rail 1/4\" to 1/2\" (6 to 13 mm) higher.**

All models (except SD 200): 26\" (66 cm)
SlideDriver 200: 33 1/2\" (85 cm)

All models: 9 1/4\" (23.5 cm)
Exceptions: SD 80 & SD 200 using XtremeDrive™ wheels, 9 1/2\" to 9 3/4\" (23.5 to 25 cm)

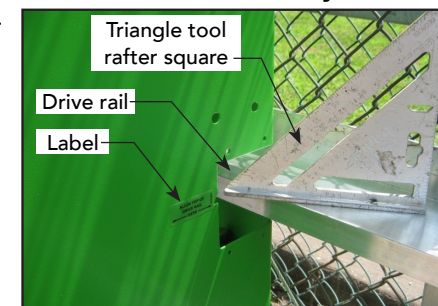


NOTE: DO NOT use through bolts or self-tapping screws because you won't be able to adjust the drive rail at a later date.

6 Remove the C clamps when the drive rail is fully secure.

Manually, open and close the gate.

Check and adjust the height of the drive rail.



Install additional U bolts, as necessary.

NOTE: Make sure the drive wheel will be centered on the drive rail when placed under load.

With the drive rail secure, tighten the chassis anchor bolts.

NOTE: Over its entire length, the drive rail must be level and aligned with the label on the chassis to within ± 1/4-inch (6 mm).

Install and Secure Limit Ramps

Before installing the limit ramps, review the illustrations on this page.

1 Determine Limit Ramp Location.

Position the gate fully-closed and mark the drive rail.

NOTE: The toggle handle needs to be in the "unclamped" position. See page 6.

2 Move the gate 6-inches (15 cm) from the fully closed position.

Determine where to place the Standard Limit Ramp so it will trip the limit switch approximately 6-inches (15cm) before the exact spot where you want the gate to stop (2-inches from the drive wheel).

3 Mark mounting holes.

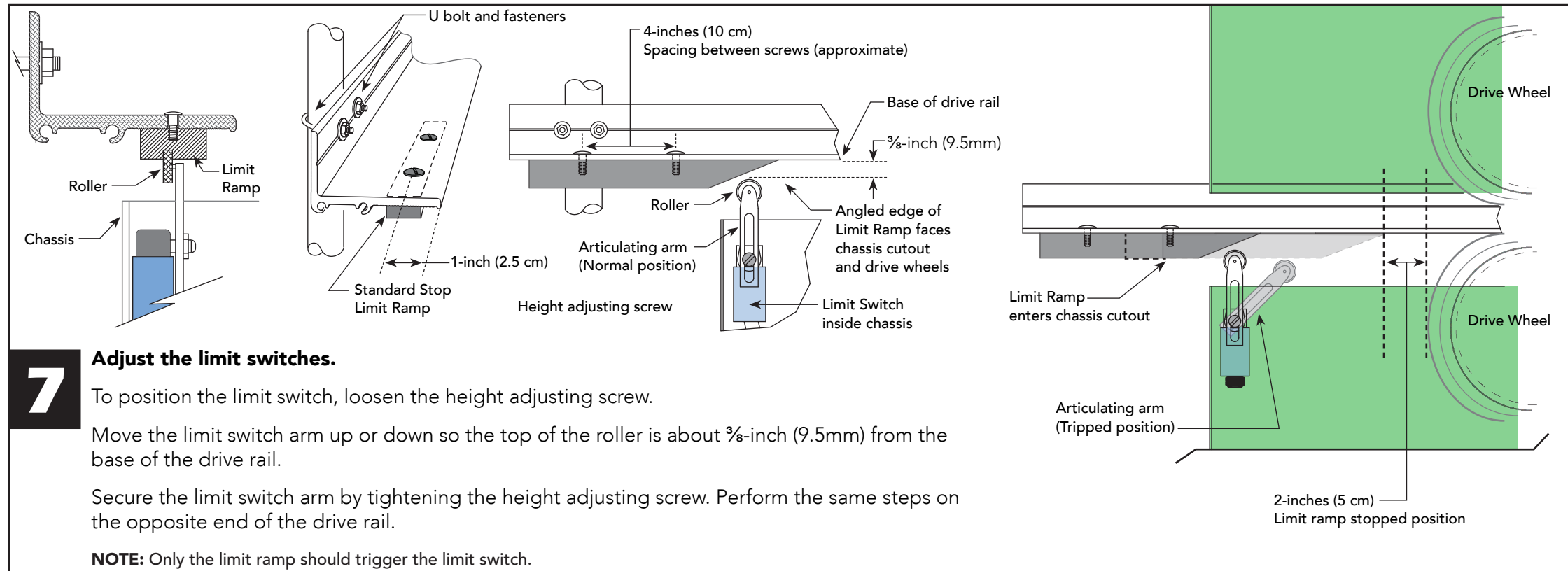
Measure and mark the mounting locations for the truss head screws 1-inch (2.5 cm) from the edge of the drive rail.

4 Drill one 3/8-inch (9.5 mm) mounting hole.

Place one nut in the limit ramp channel. Secure the Standard Stop Limit Ramp by inserting the screw through the drive rail and into nut. Finger-tighten.

5 Open and close the gate to check the position of the Standard Stop Limit Ramp.

Make adjustments as necessary and drill the remaining mounting hole about 4-inches (10 cm) from the first.

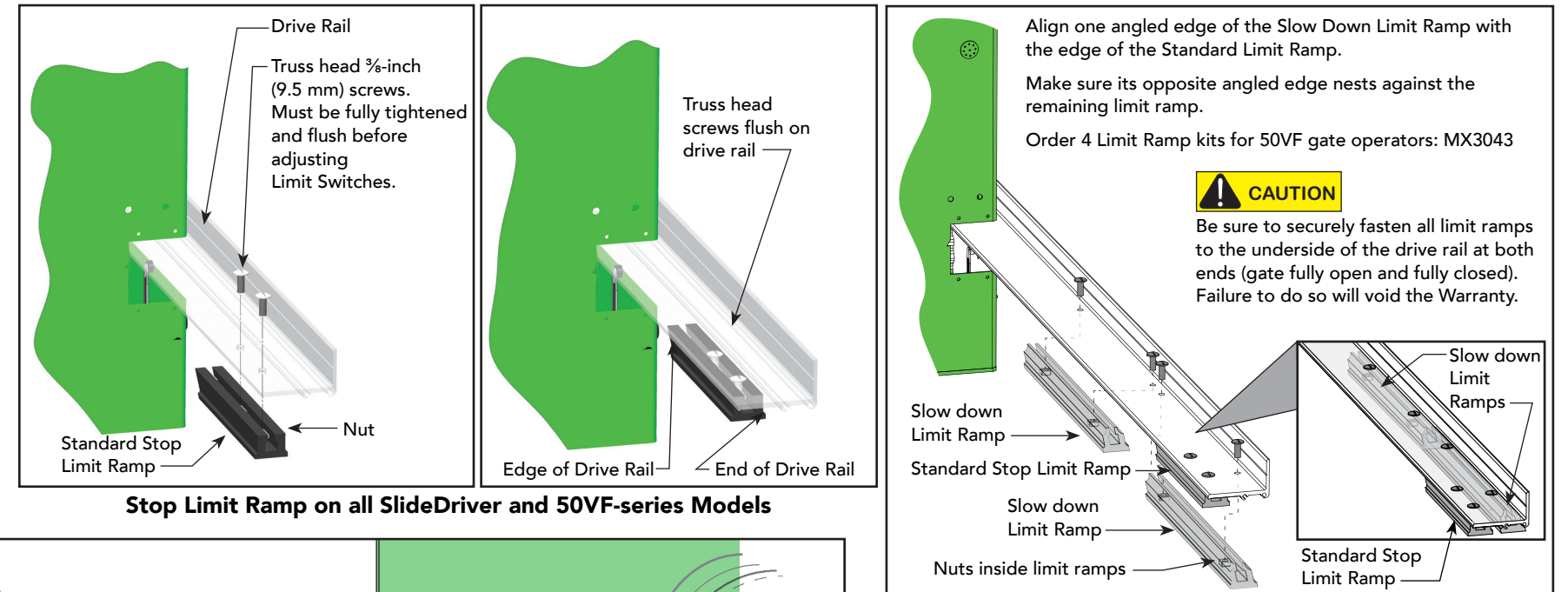


The Standard Limit Ramp is positioned on the drive rail so it will make contact with the limit switch and stop approximately 2-inches (5 cm) from the drive wheel.

- Limit ramps are attached to the underside of the drive rail when the gate is fully open *and* fully closed. Limit ramps install to both ends of the drive rail.
- Two truss head screws secure each limit ramp to the drive rail. The screws are spaced about 4-inches (10 cm) apart.

6 Secure the Standard Stop Limit Ramp to the drive rail with the fasteners provided.

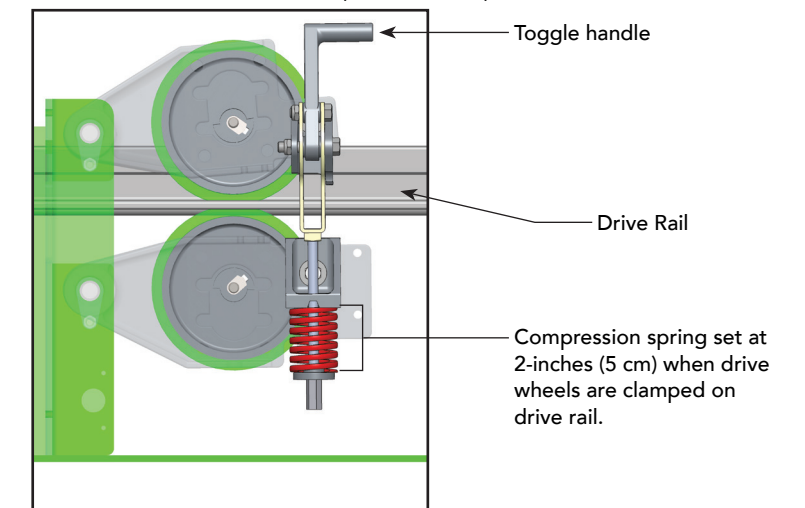
NOTE: If you are installing a SlideDriver 50VF-series gate operator, align the angled edge of the Slow Down Limit Ramp (MX3043 kit) with the edge of the Standard Stop Limit Ramp. Secure it and the remaining limit ramps to the drive rail.



SlideDriver50VF models add Slow Down Limit Ramps

8 Clamp drive wheels.

Refer to page 6 for WARNING. Place toggle handle in clamped (load) position.



Toggle Handle Assembly

Drawings NOT to Scale

Wiring AC Power



Turn OFF AC power at the source (circuit breaker panel) before accessing the wires in the gate operator. Follow facility Lock Out/Tag Out procedures. Make sure all power switches are in the OFF position. Follow all electrical code standards and regulations.

Power connections

Size the primary wires, appropriately. Consider the voltage, horsepower, and length of the wire run from the main power panel. The electrical wiring must be properly routed through conduit that enters the gate operator through its base cutout and feeds through one of the knockouts in the control box.

Verify you have the proper input voltage and conversion of voltage taps at the motor and transformer. Measure the line voltage with a volt meter to distinguish between 208V and 240V branch circuits or between 390V and 480V branch circuits.

Check that the primary tap on the control transformer matches the line voltage and frequency that you are connecting to the operator. The site voltage and operator set voltage must be the same and match the voltage on the operator motor's nameplate. A label on top of the transformer identifies the various voltage taps. See illustration.

- Connect to Power:** Three pig tails and a ground are available for connection to a 1 Phase (1Ø) and 3 Phase (3Ø) power sources.
- Connect AC Power:** Wire nut the incoming power wires to their appropriate pig tails on the control transformer. Attach the ground wire to the chassis.

Wire Size Charts

The maximum distance shown for each wire gauge run is from the operator to the AC power source panel box that has adequate capacity to support the motor load. The values are for one operator, with no other loads applied to the branch circuit. Always, avoid placing more than one operator to a circuit. If, for any reason, more than one operator is connected, reduce the maximum allowed wire run distance by half.

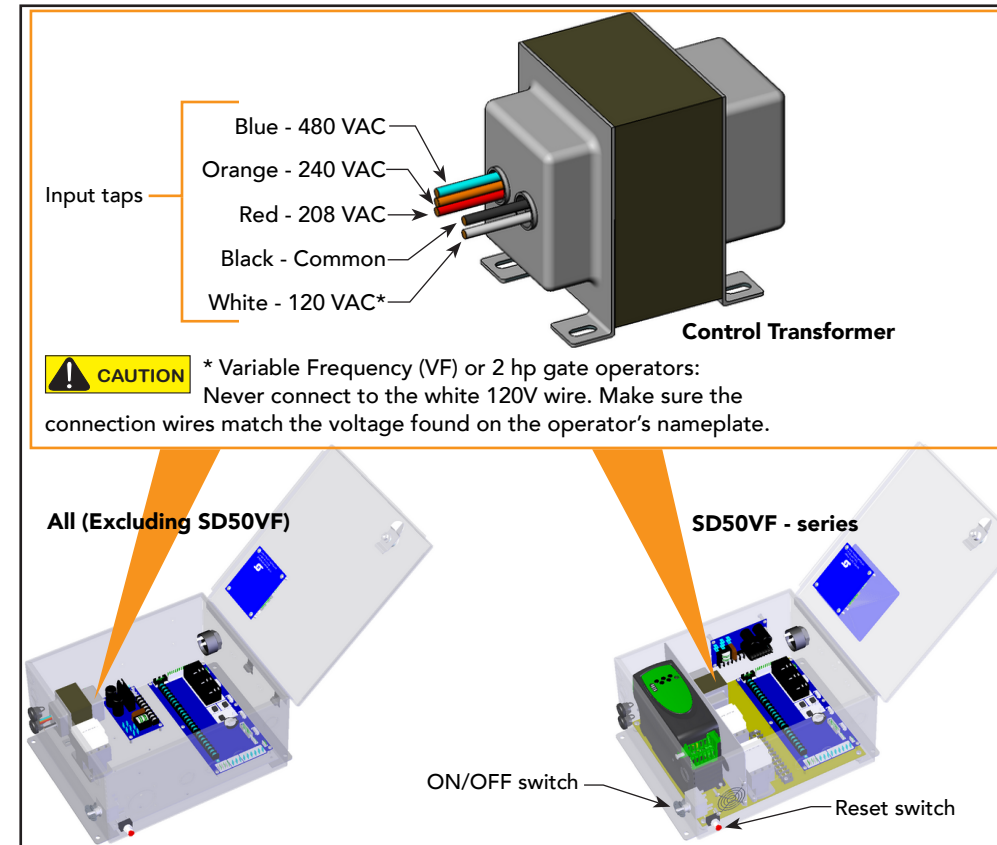
Make sure the proper wire gauge is being used. The charts here list the maximum allowable wire run from the power source to a single phase SlideDriver gate operator.

Wiring charts for 3Ø and the SlideDriver 50VF-series are found in the *SlideDriver Programming and Operations Manual*.

NOTE: Distance shown in U.S. Standard "feet." Metric equivalents are shown in parentheses.

SlideDriver Wire Size & Distance Run - 115V 1Ø					SlideDriver Wire Size & Distance Run - 208V 1Ø				
hp	1/2	3/4	1	2	1/2	3/4	1	2	3
Amps	10	11.6	14.4	27.2	5.5	6.1	7.6	14.2	16.2
12	90 (27m)	75 (23m)	60 (18m)	30 (9m)	290 (88m)	260 (79m)	205 (62m)	110 (33m)	100 (30m)
10	140 (43m)	120 (37m)	100 (30m)	50 (15m)	460 (140m)	415 (126m)	330 (101m)	175 (53m)	155 (47m)
8	220 (67m)	190 (58m)	155 (47m)	80 (24m)	725 (221m)	650 (198m)	525 (160m)	280 (85m)	245 (74m)
6	350 (107m)	300 (91m)	245 (75m)	130 (40m)	1150 (350m)	1040 (317m)	835 (254m)	445 (135m)	390 (119m)
4	555 (169m)	480 (146m)	385 (117m)	205 (62m)	1825 (556m)	1645 (501m)	1320 (402m)	710 (216m)	620 (189m)
2	890 (271m)	765 (233m)	620 (189m)	330 (101m)	2920 (890m)	2630 (801m)	2110 (643m)	1130 (344m)	1000 (305m)

SlideDriver Wire Size & Distance Run - 230V 1Ø						
hp	1/2	3/4	1	2	3	5
Amps	5.0	5.8	7.2	13.6	14.8	27.0
12	350 (107m)	300 (91m)	245 (75m)	130 (40m)	120 (37m)	65 (20m)
10	560 (171m)	480 (146m)	385 (117m)	205 (62m)	190 (58m)	105 (32m)
8	880 (268m)	760 (232m)	610 (186m)	325 (99m)	300 (91m)	165 (50m)
6	1400 (427m)	1120 (341m)	975 (297m)	515 (157m)	475 (145m)	260 (79m)
4	2220 (670m)	1915 (584m)	1550 (472m)	815 (248m)	750 (229m)	410 (125m)
2	3550 (1082m)	3080 (939m)	2465 (751m)	1305 (398m)	1200 (366m)	650 (198m)



Wiring of gate operators must conform to NFPA and NEC standards and comply with all local codes. When the installation is compliant and complete, turn on AC power at the source and at the control box. For Variable Frequency (VF) operators, make sure the connection wires match the voltage found on the operator's nameplate.

Site Considerations for AC Power

HySecurity gate operators are intended for permanent installation. Make sure to review all the information in this manual and prepare the site with the following considerations:

- Make sure all electrical wiring is properly routed via conduits.
- Check the distance of the wire run from the main panel to the gate operator. Make sure the wire size of the branch circuit supplying power to the gate operator is large enough to avoid excess voltage drop. See the wire size charts below.
- Make sure the available power source matches the electrical requirements specified on the voltage nameplate.



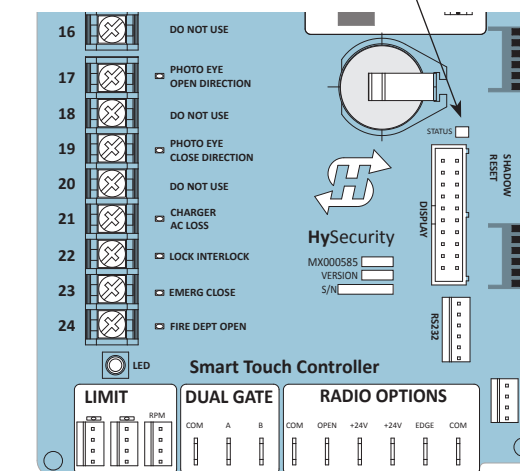
Each gate operator is built to run on a specific line power voltage and phase. Failure to ensure that the source voltage, phase and frequency match as specified on the equipment may result in severe damage to the equipment. See "Changing Electrical Connections in the Field" on page 9.

- Make sure a 20A circuit (minimum) protected with a 20A Inverse Time Breaker is provided for all AC power connections.
- Verify that the operator is electrically grounded per NFPA 780 and NEC Article 250, and local codes. Refer to the illustration on page 5.

NOTE: Refer to the *SlideDriver Programming and Operations* manual for Safety, programming, troubleshooting, maintenance and general information. Note that DC operators do not have a control transformer. For DC gate operators, refer to the *DC Power Supply with HyCharger supplemental manual* provided with the DC Power Supply cabinet.

Turning the Power Switch ON

Green LED flashes indicating processor is receiving power.



The AC power disconnect switch (ON/OFF switch) is located on the same enclosure (control box) where the electrical components, Smart Touch Controller, transformer, power module, etc., are found.

When power is turned ON, a green status light (D4) on the Smart Touch Controller blinks. The status light appears below the coin battery and indicates that the processor is receiving power.

Complete the Installation

Changing Electrical Connections in the Field



For in-field conversions, the NEC requires that the voltage label on the motor be changed to match the new configuration. Contact HySecurity for a replacement label.

To reconnect the electric motor and the 24V control transformer, refer to the motor connection diagram found either on the motor's nameplate or inside the motor connection box. Be sure to read the WARNINGS below if planning to convert from 1Ø to 3Ø, or vice versa. The electric motor will need to be replaced.

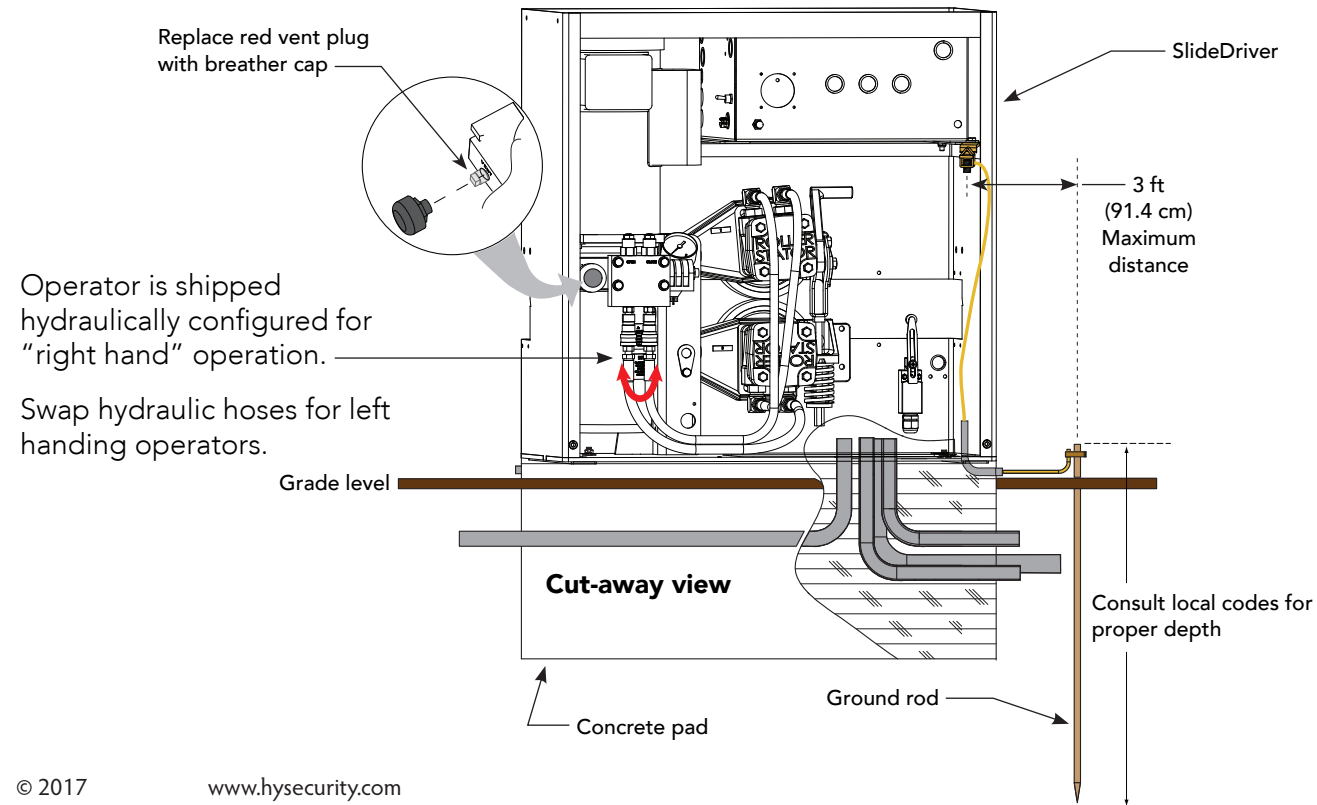


In-Field, Variable Frequency Drive Connections: SlideDriver operators are field re-configurable for 1Ø or 3Ø, 208/230VAC input power without changing the VFD. However, if reconfiguring from 208/230VAC to 460/480VAC the VFD Motor Controller in a 208/230VAC unit must be replaced with a VFD Motor Controller manufactured for the higher (460/480VAC) voltage input. Any electrical damage occurring to the operator will not be covered by the Warranty.

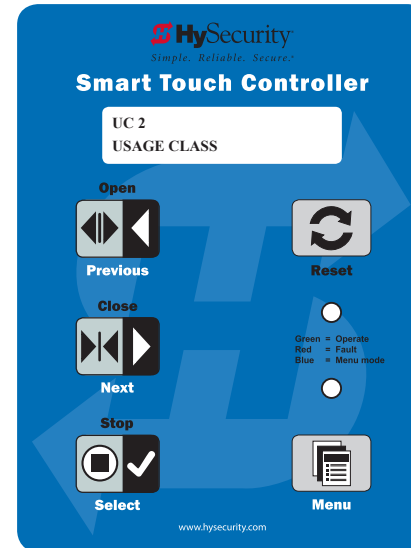


SlideDriver 50VF-series and all 2 hp operators CANNOT be connected to 115/120VAC, 1Ø power or 575V, 3Ø power. If any attempts are made to do so, serious injury and possible electrical shock may result. Any electrical damage occurring to the operator will not be covered by the Warranty.

Left Handing: Swapping Hydraulic Hose Positions

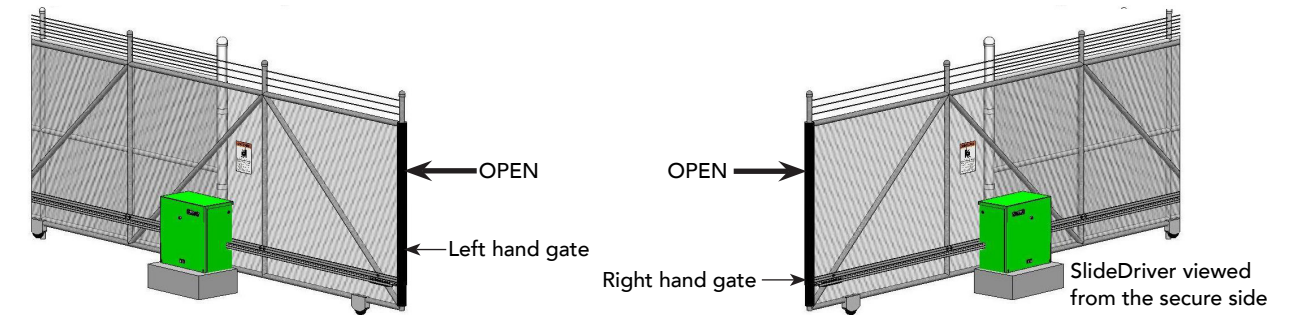


Initial Setup: Menu Mode

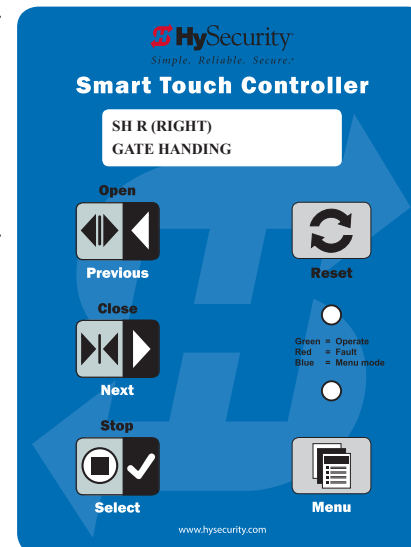


When the SlideDriver is installed, power connections made, and the operator turned ON, a setup menu appears. The gate will not move and the controls will not function until the prompts have been answered. The prompts include:

- Usage Class.** Set the usage class to I, II, III, IV depending on the site. Four different vehicular usage classes are defined by UL 325. Information about the classes can be found in the safety section of the *SlideDriver Programming and Operations Manual*, online through DASHA Technical Data Sheets www.dasma.com or UL 325 gate safety standards www.ul.com
- Set Handing.** SH 0 = gate disabled, SH L = Left hand, SH R = Right hand
Gate handing is determined by viewing the gate opening from the secure side. If the gate opens to the left, the gate must be set for left handing.



NOTE: All SlideDrivers are set at the factory for right handing. If the gate has left handing, you must swap the position of the hydraulic hoses. See the illustration this page.



Keypad Navigation

To navigate within Menu mode, use the following chart:

Menu Mode Navigational Buttons

To edit the Menu	To navigate through the selections	To choose what is on the display	To navigate between menus
Press Select Two left characters blink indicating the display is ready to accept a menu change.	Press Next or Previous Continue pressing Next to view all selections	Press Select Blinking characters become static	Press Next or Previous Advance = press Next Previous = press Previous

For More Information

Brake valve adjustment is described on the yellow tag (MX001853) wire tied to the gate operator.

Review the *SlideDriver Programming and Operations Manual* for information regarding gate operator programming configurations, user relays, troubleshooting, safety considerations, maintenance, and other requirements.



SlideDriver 50VF2/3



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