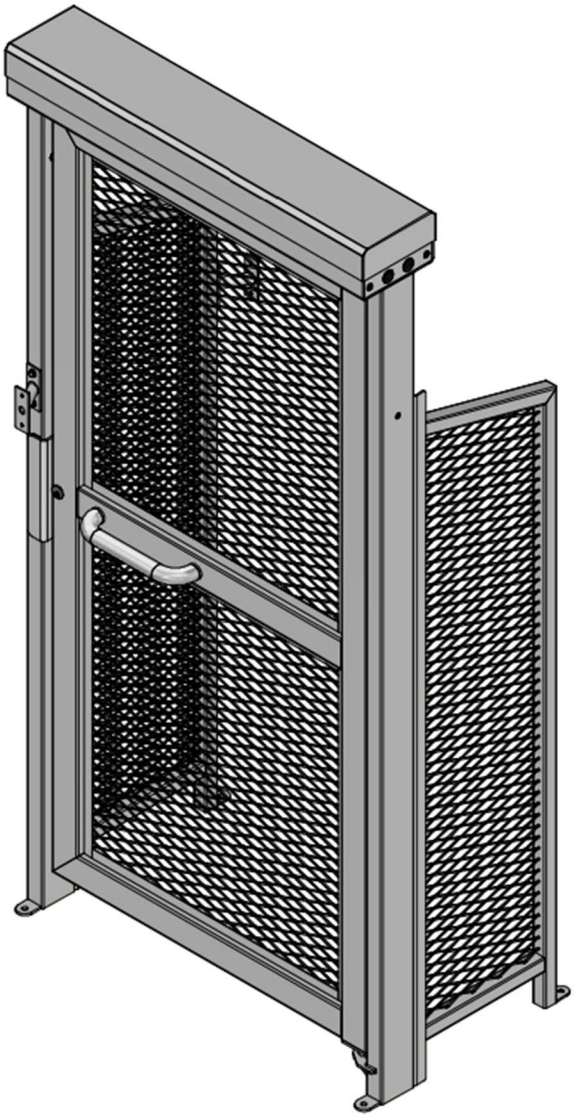
Helios PG-37 Series Pedestrian Gate



INSTALLATION AND OPERATION MANUAL

1. CONTENTS

2. INTRODUCTION

2.1. About This Manual

This manual provides installation, operation, and maintenance instructions for the semi-automatic electric strike gate. It is designed to assist installers, technicians, and end-users in ensuring proper setup and reliable performance.

Key topics covered include safety precautions, electrical wiring and mechanical assembly. Following the instructions in this manual will help ensure safe and efficient operation while maintaining compliance with industry regulations.

For additional support, contact us at:

Rizon Manufacturing Inc.

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3. SAFETY & WARNINGS

3.1. General Warnings

Failure to follow these instructions may result in serious injury, equipment damage, or voided warranty. Only qualified personnel should install, operate, or service this turnstile.

- Only trained and authorized personnel may install or service this gate.
- Always read and understand this manual before beginning work.
- Disconnect power before performing any installation or maintenance.
- Do not use the gate for any purpose other than pedestrian access.
- Children or untrained persons must not operate or tamper with the gate.

3.2. Safety Icons & Their Meaning

This manual uses the following safety icons to indicate important information regarding installation, operation, and maintenance. Please read all warnings carefully before proceeding.

CAUTION	
Highlights a potential risk to equipment, property, or minor injury, requiring careful attention.	

WARNING	
Indicates a hazardous situation that, if not avoided, could result in serious injury or death.	

RISK OF ELECTRIC SHOCK	
Warns of a critical risk of shock by electric power source.	

FIRE HAZARD	
Warns of the risk of a situation that may cause fire.	

INFORMATION	
Provides important information or tips to ensure proper installation, testing and operation.	

SAVE THIS PAGE

3.3. Electrical Safety

- Disconnect power before installation or servicing.
- All wiring must comply with local and national electrical codes.
- Use a properly rated circuit breaker. Do not bypass fuses or protective devices.
- Ensure correct polarity and grounding of all connections.
- Never work on live circuits as there is a risk of electric shock.

3.4. Mechanical Safety

- Gate assembly is heavy, approx. 260lb (120 kg); use lifting equipment and at least two installers.
- Keep clear of hinges, pivots, and closing edges to prevent crushing or pinching.
- Do not modify structural components (frame, push bar, strike, closer).
- Ensure push bar and emergency release remain free of obstruction.

3.5. Installation Safety

- Verify foundation and mounting surface can support the gate's weight.
- Use only specified fasteners and hardware for anchoring.
- Maintain correct alignment of frame, strike, and closer before energizing.
- Do not install in areas with risk of flooding or corrosive environments unless properly protected.
- Confirm operation of emergency exit function after installation.

3.6. Operational Safety

- Gate is for pedestrian access only.
- Do not force the gate open or closed; use the push bar or access control system.
- Ensure electric strike and closer function reliably before daily use.
- Children and untrained persons must not operate or tamper with the system.
- Inspect regularly for wear, unusual noise, or loose components — service immediately if faults are found.

4. PRODUCT OVERVIEW

4.1. Gate Description

The gate is a semi-automatic pedestrian security gate with a 37-inch clear opening. It is operated by a push bar with a rim-mounted electric strike and mechanical rim cylinder. The gate is designed for secure, single-direction pedestrian access and includes an overhead door closer for controlled closing.

4.2. Features

- Push bar operation with rim-mounted exit device
- Electric strike for access control integration
- External rim cylinder for key override
- Anti-reach frame for added security
- Transom-mounted door closer for safe, controlled closing
- Door probe sensor integrated into the frame
- External handle and override lock
- Heavy-duty welded steel frame and gate construction
- Surface finish suitable for indoor and outdoor use (galvanized and/or painted options)

4.3. Technical Specifications

- Clear opening: 37.3 in (948 mm)
- Overall height: 86.1 in (2186 mm)
- Base width: 43.3 in (1100 mm)
- Gate assembly weight: approx. 264 lb (120 kg)
- Frame construction: Mild steel rectangular tubing, 4.0 × 1.6 in (100 × 40 mm) and 3.1 × 1.6 in (80 × 40 mm)
- Locking system: Rim exit device with electric strike and external rim cylinder
- Closer: Transom-mounted inside enclosure, hold-open closer
- Finish options: Hot-dip galvanizing, powder coating, or custom finishes

5. SYSTEM COMPONENTS

5.1. Frame Assembly

Heavy-duty welded mild steel frame constructed from rectangular tubing. Provides the structural base for the gate, electric strike, and closer. Anchored to the floor and wall for secure installation.

5.2. Gate Leaf

Single leaf gate with push bar, external handle, and integrated override lock. Designed for controlled pedestrian access with a clear opening of 37.3 in (948 mm).

5.3. 5.3 Push Bar and Rim Cylinder Lock

Rim-mounted exit device with push bar for egress. External rim cylinder allows keyed access or override from outside.

5.4. Electric Strike

Electromechanical strike plate integrated with access control systems. Provides secure locking and controlled entry.

5.5. Door Closer

Transom-mounted, hold-open closer ensures smooth, automatic closing of the gate after passage.

5.6. Anti-Reach Frame

Secondary frame structure designed to prevent unauthorized manipulation of the lock or latch from outside the gate.

5.7. Sensors

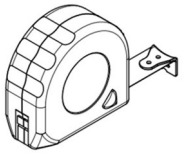
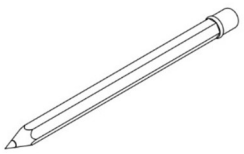
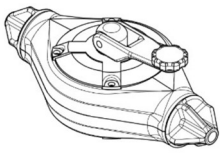
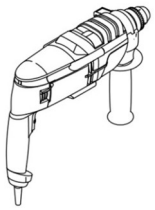
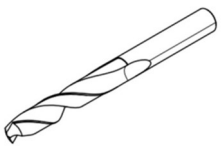
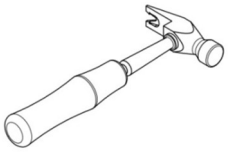
Door probe sensor in frame for monitoring gate position or triggering alarms. Optional additional sensors may be installed for enhanced access control, using the limit switch housed in the push bar.

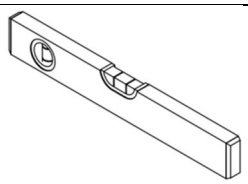
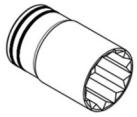
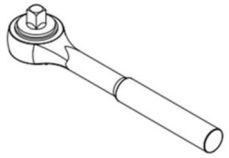
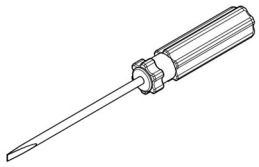
6. INSTALLATION INSTRUCTIONS

6.1. Tools and Materials

- Level, plumb line, tape measure
- Hammer drill with masonry bits, drill bits for steel
- Appropriate anchors and fasteners.
- Screwdrivers, hex keys, open-end spanners, ratchet driver with sockets, internal circlip pliers.
- Wire strippers, crimp tool, multimeter
- Non-permanent thread locker, shims, packers

The tools listed below are commonly required for assembly of the unit. However, it is recommended to bring a complete toolbox to ensure all installation needs can be met.

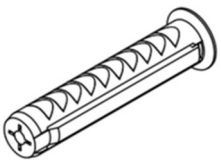
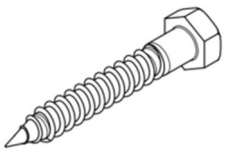
TOOLS & MATERIALS LIST		
Tool	Purpose	Illustration
Step ladder	Required for installing overhead components.	
Measuring tape 16ft (5m)	Ensures accurate positioning and alignment	
Marker pen/chalk & chalk line	For marking hole positions and alignment lines.	 
Hammer drill	Required for drilling anchor holes in the foundation.	
5/8" (16mm) masonry drill bit	Used for concrete anchor installation.	
Hammer	For setting anchors into place.	

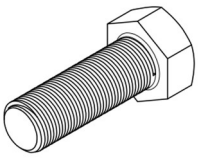
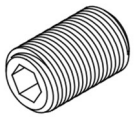
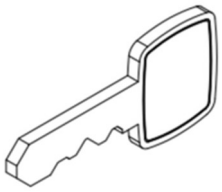
Spirit level	Ensures the turnstile is installed perfectly level.	
3/4" (19mm) hexagon flat spanner	Used for tightening 1” (M12) bolts.	
Socket ratchet handle and 3/4" (19mm) socket	Provides leverage for securing 1” (M12) bolts.	 
1/8" (3 mm) Hex key	For securing bottom gate 1/8” (M5) pivot set screw.	
#3 Flat (Slotted) Stubby Screwdriver	For adjusting door closer.	
1/8" (3 mm) Flat Blade Screwdriver	Required for electronic terminals.	

The following parts are supplied with the unit and are required to complete installation. Each part is illustrated for clarity and listed with its purpose and quantity.

While the gate is delivered fully assembled, these components are necessary for securely fixing the frame in place and ensuring proper operation. Installers should verify that all parts are present before beginning installation.

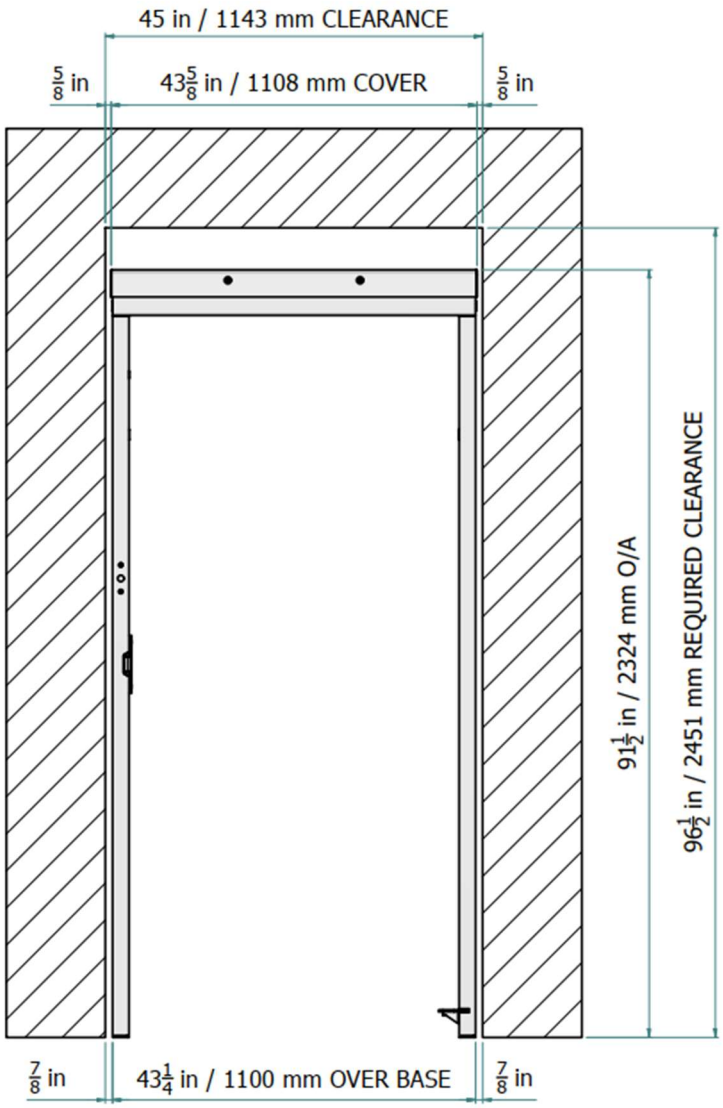
Note: The gate pivot frame may need to be removed temporarily to access the high-level fixing hole on the post where the gate swings.

ASSEMBLY PARTS LIST				
Part	Quantity	Purpose	Illustration	
Sleeve Anchor and Lag Bolt (3/8" × 3-1/8" (10 × 80 mm) nylon sleeve anchor & 3/8" × 5"	4	Required for setting frame in floor and wall.		

(M10 × 75) coach screw)				
Hex Bolt and Lock Nut ½"-13 × 1-3/8" (M12 × 35)	4	Optional – for frame-to-frame or frame-to-steel fixing.		
Socket Set Screw (Flat Point, Hex Socket Drive), #10-32 × 5/16" (M5 × 8 mm) (also known as grub screw)	2	For locking gate pivot pin.		
No. 198 Key	2	Required to unlock channel cover and access door closer and control panel.		

6.2. Pre-Installation Checks

- Confirm opening size, floor condition, and mounting surfaces are sound and level.
- Verify swing direction and clear opening of 37.3 in (948 mm).
- Check that all components are present and undamaged.
- Isolate electrical supply at the distribution panel.



The frame may be installed in a doorway, anchored against a wall, or fixed alongside a steel post or similar structure.

For maximum stability, it is recommended that both sides of the frame are securely anchored.

anti-reach bars can be fitted, which will also provide the required stability.

6.3. Removing the Gate Frame

In some installations it is more practical to remove the inner pivoting frame before anchoring the outer frame. This allows direct access to the side fixing holes and simplifies alignment.

Tools required:

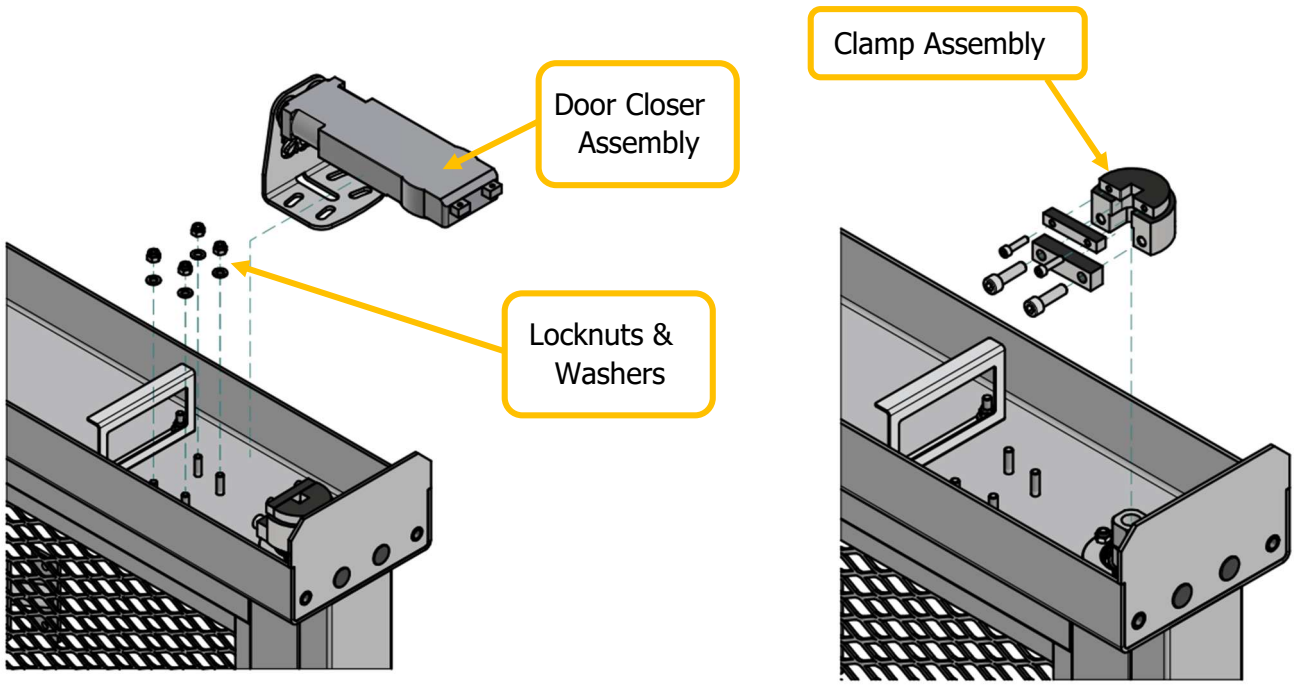
- Hex key (Allen) set: 2.5 mm, 5 mm, 8 mm
  - 2.5 mm for M5 grub screws
  - 5 mm for M6 socket head cap screws
  - 8 mm for M10 socket head cap screws

- Spanner or socket: 13 mm for M8 lock nuts only
- Retaining ring pliers for the circlip
- Soft-faced mallet, small pick or flat blade for clip removal
- Torque wrench
- Parts trays or bags for hardware, non-marring wedges or shims

Safety:

Isolate power to the electric strike. Support the gate leaf at all times. Use two installers for lifting and handling.

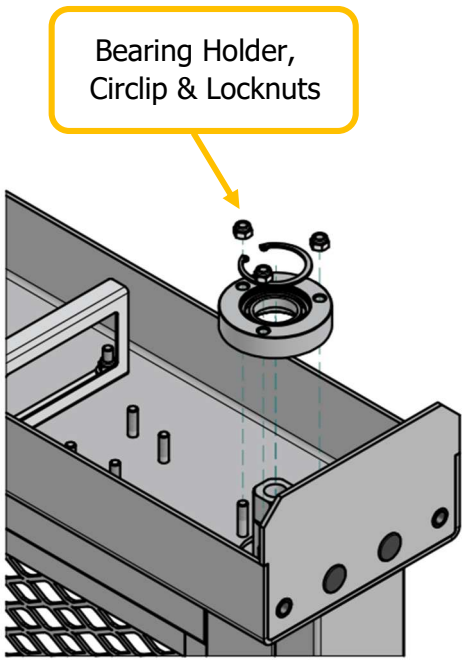
CAUTION	
Isolate power to the electric strike. Support the gate leaf at all times. Use two installers for lifting and handling	

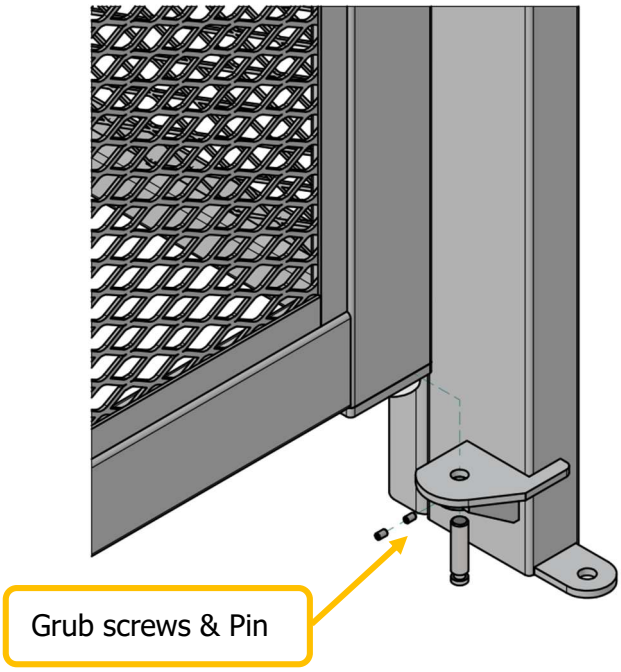


Procedure:

1. Remove the top cover.
2. Unlock with the supplied keys, lift the cover upward, then off. Place on a protected surface.
3. Allow a top service clearance of 4 in (102 mm) minimum for cover removal.
4. Loosen the clamp assembly head screws.
5. Undo 2x off - M6 × 25 socket head cap screws with a 5 mm hex key. The clamp plate will free with the screws. Store plate and screws for reuse.
6. Remove the door closer assembly.
7. Loosen the M8 Nylock lock nuts with a 13 mm spanner. Lift off the closer with its seating plate and nuts. Store together.
8. Remove the upper clamp assembly.

9. Undo 2x off - M10 × 35 socket head cap screws with an 8 mm hex key. Lift the clamping unit off the top of the gate shaft. Store hardware.
10. Remove the top bearing retainer.





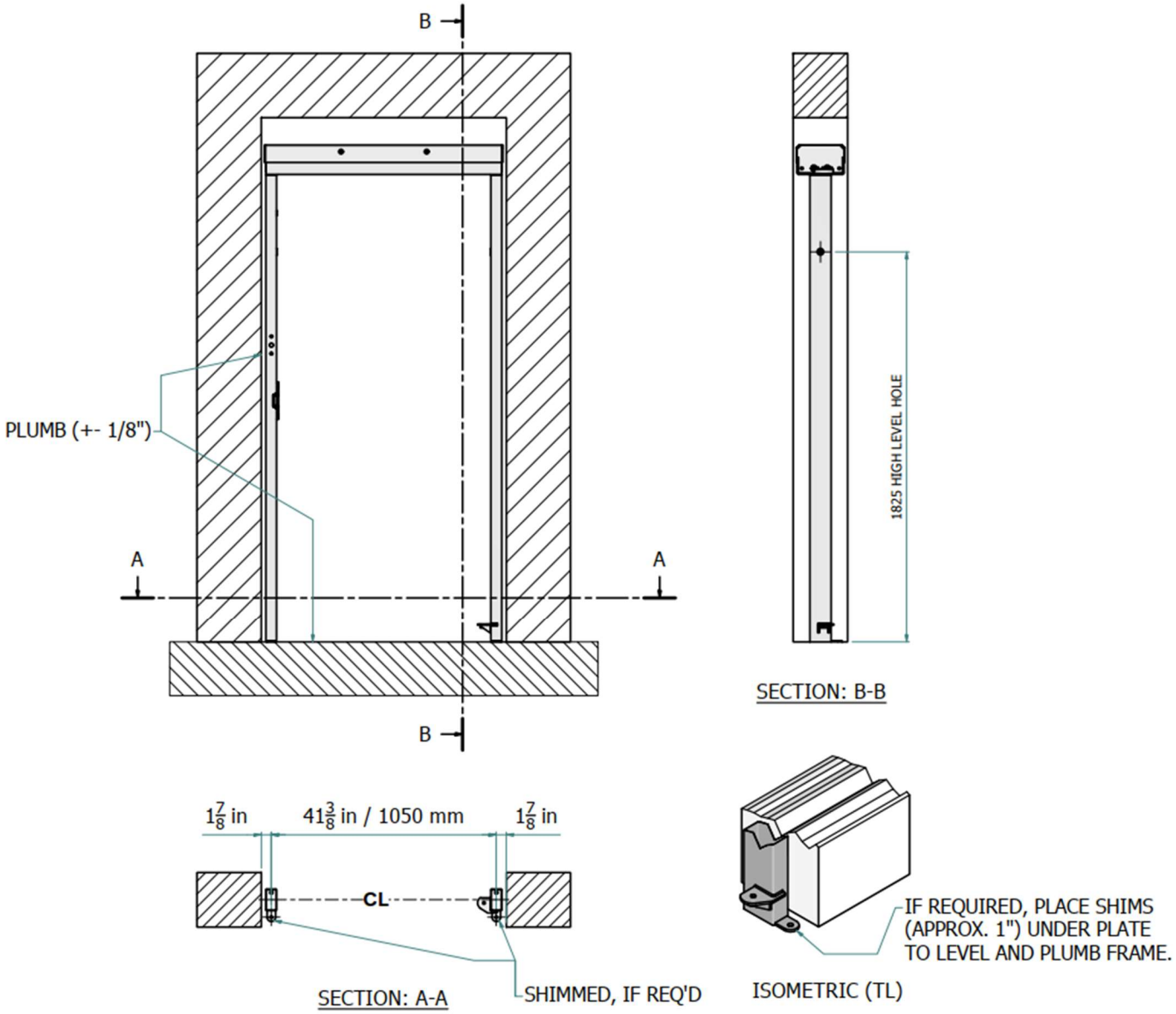
11. Remove the circlip from the top of the bearing holder using retaining ring pliers. Loosen the M8 lock nuts with a 13 mm spanner. Lift the bearing holder and bearing off the gate shaft and set aside.
12. Loosen the two M5 grub screws at the base of the gate using a 2.5 mm hex key.
13. Either drop the pivot pin out from below or lift the gate frame slightly to free it from the pin.
14. Remove the inner gate frame.
15. With one person supporting the weight, lift the gate clear of the outer frame and move it to a safe, protected area.
16. Proceed with outer frame installation.
17. Access to the side fixing holes is now unobstructed. Complete anchoring and alignment, then reinstall components in reverse order and torque.

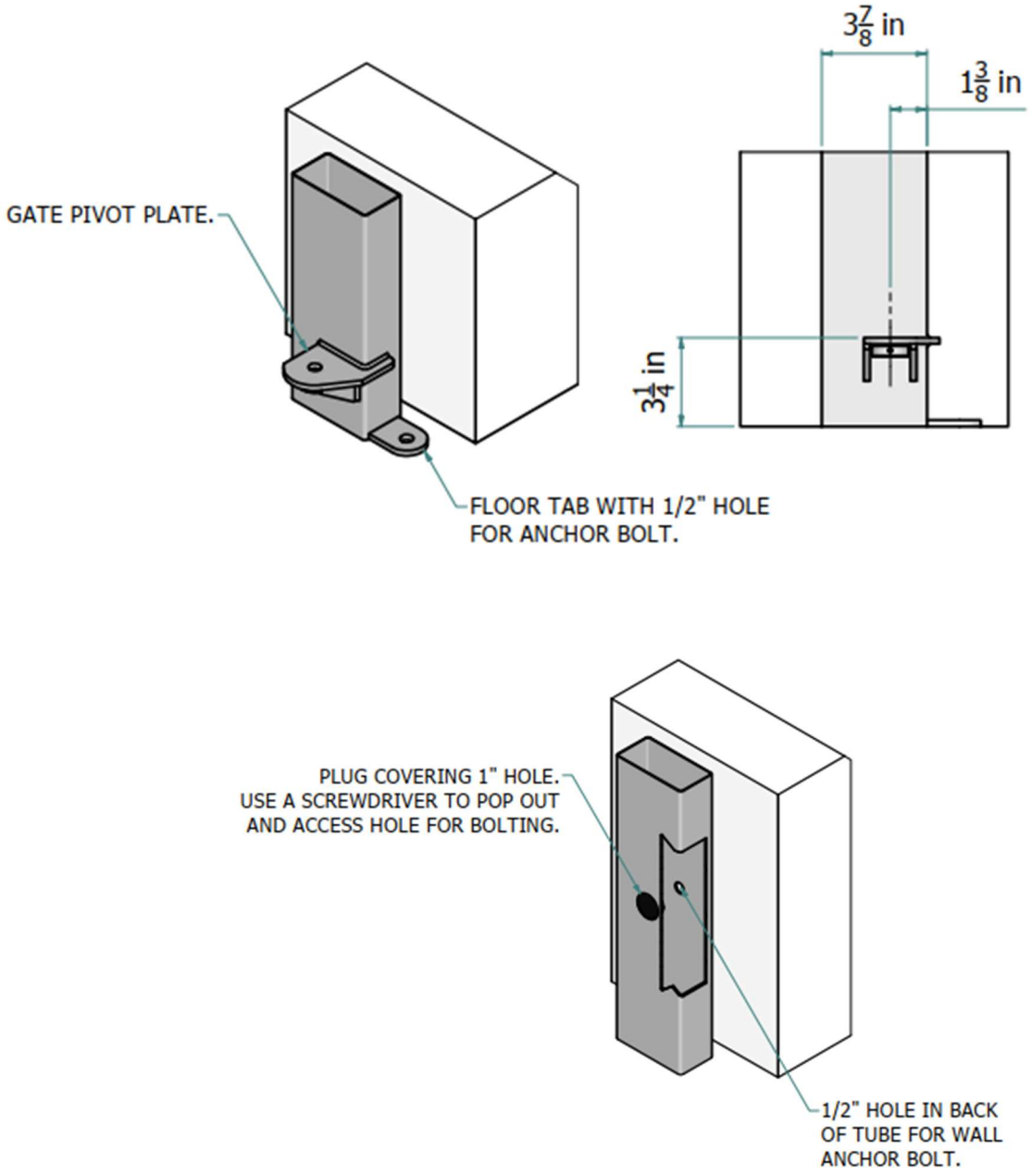
Reinstallation notes:

Confirm free swing and latch alignment before refitting the cover. Perform a full functional check of the push bar and electric strike after reassembly.

6.4. Positioning and Marking

- Place the frame in position. Shim to achieve plumb and level on both planes.
- Verify hinge clearance and strike alignment to the latch position on the gate leaf.
- Mark all anchor hole locations through the frame base tabs and wall holes.
- Remove the frame and drill the marked holes to diameter 0,5" (12-13mm) and 4" deep (100mm).





6.5. Securing the Frame

- Vacuum dust from holes and insert anchors as specified.
- Reposition the frame, install fasteners hand-tight, recheck plumb and level.
- Install spacers on the wall or frame high level holes, if required.
- Tighten anchors in a cross pattern. Reconfirm measurements after tightening.

6.6. Hanging the Gate Leaf

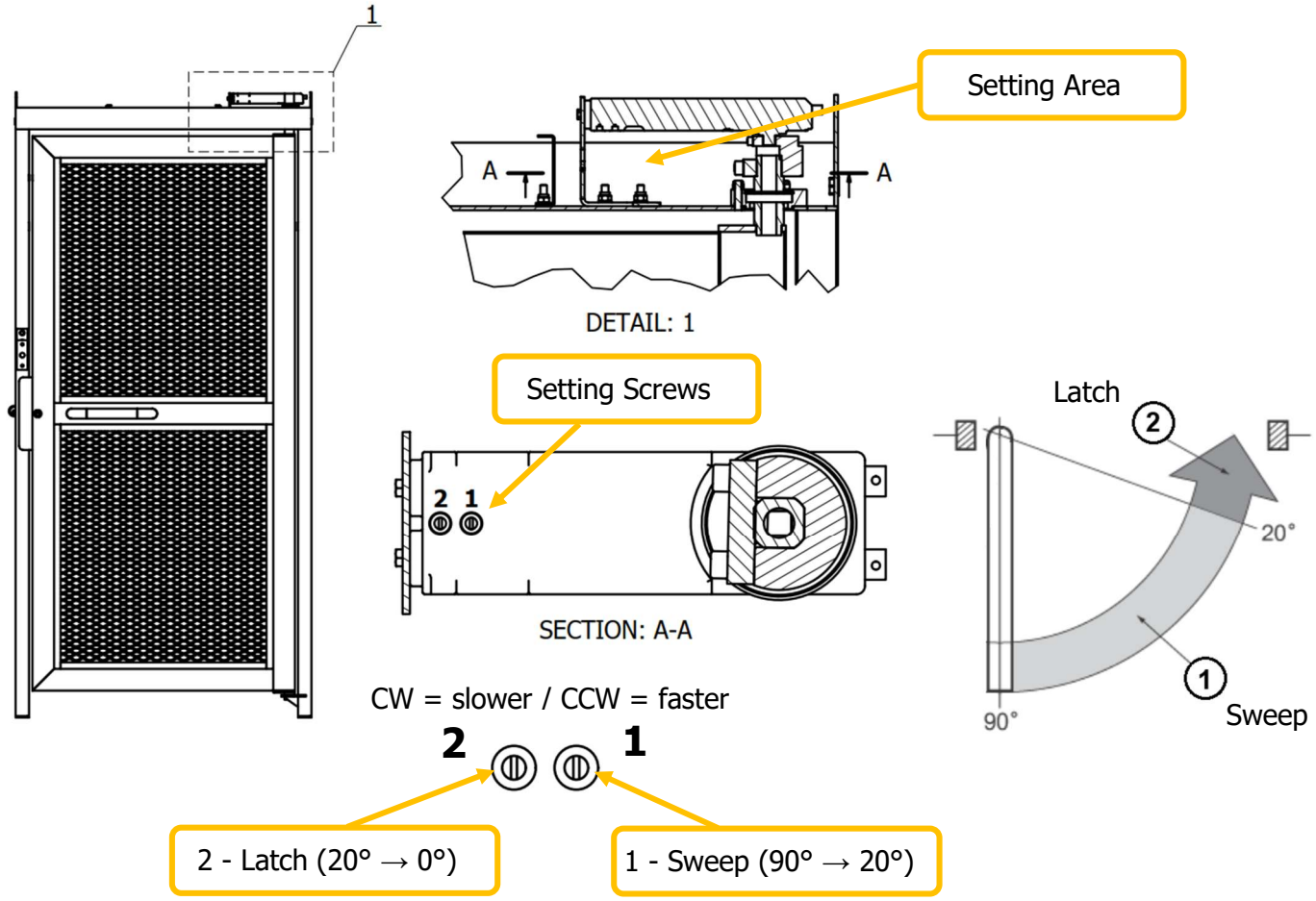
- See section *6.3 Removing the Gate Frame*, and use the reverse operation to reinstall the gate frame.

6.7. Electric Strike and Rim Cylinder

- Check that the electric strike is set to the frame at the latch height.
- Check the rim cylinder and confirm key operation.
- Check that the latch enters the strike pocket fully without rubbing.
- Adjust strike face and keeper with spacers if required.

6.8. Door Closer

- Set the spring power, closing speed, and latching speed using a stub flat screwdriver.
- Adjust Valve 1 (Sweep) for the first 70° of travel (approximately 90° to 20°). A clockwise turn slows the door; a counterclockwise turn speeds it up.
- Adjust Valve 2 (Latch) for the final 20° (approximately 20° to 0°). A clockwise turn slows the door; a counterclockwise turn speeds it up.
- Make changes in ⅛–¼ turn steps and test after each change. Do not remove the screws.
- Target timing: 5–7 seconds from 90° to 20° (sweep) and 1–1.5 seconds from 20° to fully closed (latch). The latch should engage cleanly without slam.
- Recheck with the strike powered and unpowered to confirm reliable latching.



INFORMATION

Adjust in small increments only. Do not back valves out beyond manufacturer's limit to avoid oil loss.

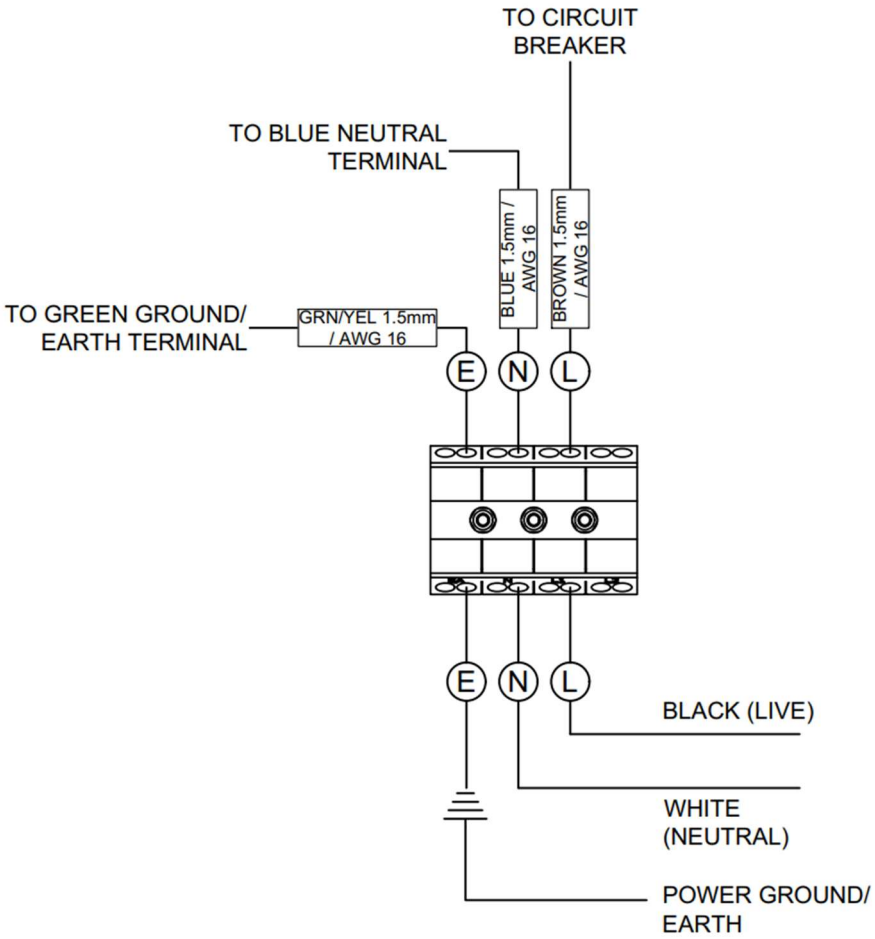
6.9. Connecting Power

RISK OF ELECTRIC SHOCK

Danger: Before connecting power, make sure the circuit breaker on the panel is off and that the mains power source is not live.

FIRE HAZARD

For continued protection, replace only with the same type and rating of circuit breaker.

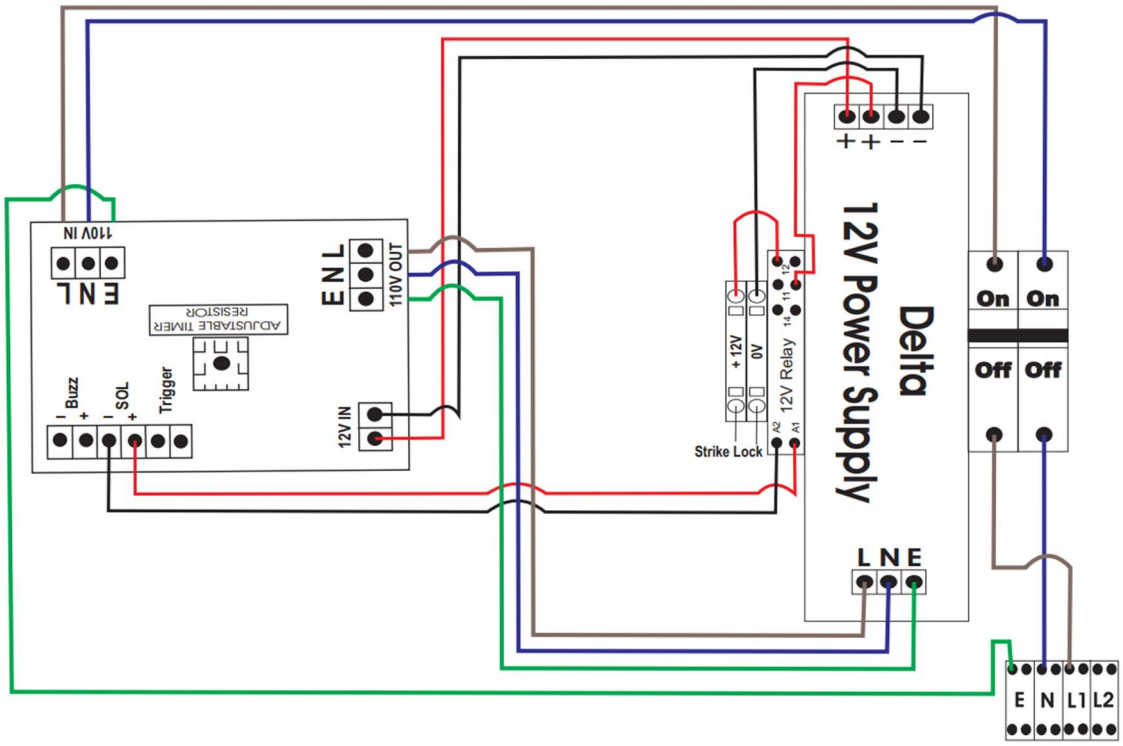


- Isolate power before wiring. Verify supply is 120V AC, 50Hz.
- Route the branch circuit to the black 3-pole terminal block and fit strain relief.
- Connect Hot (black) to L, Neutral (white) to N, and Equipment Ground (green or green/yellow) to E.
- Use copper conductors sized per local code; 16 AWG (1.5 mm²) or larger is typical.
- After wiring, confirm L–N ≈ 120 V, L–E ≈ 120 V, N–E ≈ 0 V, then power up and test.

6.10. Wiring to the Controller

- Isolate power at the breaker.
- Route 18 AWG (1.0 mm²) stranded, Class 2 cable through the frame conduit to the upper channel. Fit grommets and strain reliefs.
- Connect the access controller's relay output to the timer TRIGGER input as a dry contact: land the controller COM and NO to the timer TRIGGER pair. Do not apply voltage to the trigger.
- Power the 12 V supply with 120 V AC: L = Hot (black), N = Neutral (white), E = Ground (green/green-yellow) and switch on the breaker.
- Set the re-lock delay using the timer potentiometer: clockwise = longer, counterclockwise = shorter. Fully counterclockwise gives no delay.
- Test sequence:
  1. Measure +12 VDC at the strike during an access grant.
  2. Confirm push-bar egress at all times, including when the strike is unpowered.
  3. Cycle power and verify the strike relocks after the set delay.
  4. Tug-test terminals and secure cable dress.

Class 2 low-voltage wiring



6.11. Commissioning Checklist

Check	Method	Pass / Notes
Frame set and secured	Frame plumb and level; anchors torqued	
Free swing and reveals	Uniform gaps; no rubbing through full travel	
Latch alignment	Strike and latch engage reliably with power on and off	
Manual Unlock Function	Key opens the gate from the far side	
Push bar egress	One push release at all times; path is clear	
Closer timing	Sweep 90°→20° in 5–7 s; latch 20°→0° in 1–1.5 s	
Electrical verification	L–N ≈ 120 V, L–E ≈ 120 V, N–E ≈ 0 V	
Strike power Test	+12 VDC at strike during access grant; 0 V at rest	
Final checks	Covers and labels fitted; 10 cycle test including power loss; record unit ID and handover	

7. REVISION HISTORY

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