



Rev022520

Smart Gate

# Installation Instructions/Operation and Maintenance Manual

### **Patent Pending**



#### Models:

SG-60-PCY \*Refer to page 15 for required size dimensions.

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### **Contact Information**

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#### **IMPORTANT!** Read entire Instruction and Operations Manual to become familiar with the product.

**NOTICE** This product is a fall protection product. The effectiveness of the product is directly related to the proper installation and operation of this product. Failure to properly maintain this product **will** affect performance.

#### **Publication Notice**

This manual has been compiled and published covering the latest product descriptions and specifications.

The contents of this manual and the specifications of this product are subject to change without notice.

PS Safety Access<sup>™</sup> reserves the right to make changes without notice in the specifications and materials contained herein and shall not be responsible for any damages (including consequential) caused by reliance on the materials presented, including but not limited to typographical and other errors relating to the publication.

PS Safety Access and/or its respective suppliers may make improvements and/or changes in the product(s)/ service(s) offered and/or the program(s) at any time without notice.

Retain this manual for future reference.

If you would like to download a copy of this manual, please go to pssafetyaccess.com

Product registration is an essential step to protecting your product, register Online at psindustries.com/contact/register-your-product/



## **Safety Precautions**

#### The following icons are used throughout this Manual.

A DANGER Indicates an imminently hazardous situation which, if not avoided, will result in death or serious injury.
A WARNING Indicates a potentially hazardous situation which, if not avoided, could result in death or serious injury.
A CAUTION Indicates a potentially hazardous situation which, if not avoided, may result in minor or moderated injury.
NOTICE Indicates manufacturer's statement of additional information.

NOTICE indicates manufacturer's statement of additional in

**IMPORTANT!** Indicates a required action.

**CRITICAL** Indicates a vital component to product performance.

### **Product Information**

**NOTICE** Unauthorized modification of or to the Product voids this Limited Warranty. Authorized modifications, received in writing from PS Industries® Incorporated, as long as the modification is accomplished in strict accordance with PS Industries' instructions, does not void warranty. If this product is modified or altered without manufactures permission, manufacturer is no longer responsible for the product design, engineering, or performance and owner assumes all responsibility. To request product modifications contact PS Industries Incorporated, 1150 S. 48th Street, Grand Forks, ND 58201, phone 877-446-1519, email: 4psinfo@psindustries.com

#### **I. General Information**

- A. This manual contains information regarding installation, operation, and maintenance of the PS Safety Access' Smart Gate.
- B. PS Safety Access recommends that the owner implement a regular preventative maintenance program to inspect and maintain the Smart Gate at a minimum, in accordance with the recommendations in this manual.

#### **II. Operation Guidelines**

- A. The Smart Gate is designed to meet OSHA Railing Standard 1910.29(b).
- B. Operation in a manner other than intended could result in damage or less than acceptable performance at time of need, for which the manufacturer will not be held responsible.
- C. The SG-60-PCY is adjustable from a minimum of 48" to a maximum 78" clear opening. The Gate will fit 48", 54", 60", 66", 72" and 78" doors.

#### **III. Safety Precautions**

- A. Ensure opening is clear of all obstructions through the entire proposed travel of the Smart Gate during operation.
- B. Comply with all OSHA and ANSI Safety Regulations and/or company safety policies when installing.
- ▲ DANGER Ensure area below installation is blocked off from personnel during installation, and mounting surface is capable of supporting all loading. Structural analysis of mounting surface is the responsibility of the owner.
- **IMPORTANT!** Verification of the structural sufficiency of supplied anchors based on site specific conditions and the existing structure is the responsibility of the installer/customer. Refer to the anchor manufacturer's installation instructions for installation requirements.

#### **IV. Storage Prior to Installation of Product**

A. Store materials in a dry, ventilated location. If outdoor storage is required, block materials and tarp in a tent-like arrangement, elevated above the product with open sides to allow airflow.

#### V. Installation Site Preparation

- **NOTICE** Before starting site preparation and installation of the Smart Gate, read the entire Operation and Maintenance Manual and review all installation instructions thoroughly.
  - A. Clear work area of any debris.
  - B. Ensure you have the necessary tools available.
  - C. Obtain all required permits.

#### **Product Information**

- D. Personnel: Determine the appropriate number of personnel required to perform installation and have them readily available at the project site. (1-2 people recommended)
- E. Ensure all installation personnel utilize appropriate fall protection equipment and procedures during installation.

NOTE: Review inventory to ensure all parts are present for assembly/installation. Refer to part list below.



#### VI. Smart Gate Installation

**NOTICE** Refer to parts list on Page 3 for part item numbers and descriptions.

**NOTICE** Base plates are slotted to allow adjustment for alignment.

**STEP 1.** Mark holes for the Gate Post and anchor with concrete floor anchors. Measure and mark the center of the wall opening, using the Gate Size Reference Table to assist in centering the gate on the wall opening. (Gate Size Reference Drawing on Page 15).



SG SIZE REFERENCE TABLE							
	CLEARANCE HEIGHT						
SG-60-PCY*	48", 54" 60", 66", 72", 0R 78"	94 <sup>1</sup> / <sub>4</sub> " - 124 <sup>1</sup> / <sub>4</sub> "					

\*SG-60-PCY:

a. Adjustable from a minimum of 48" to a maximum 78" clear opening. b. Gate will fit 48", 54", 60", 66", 72" and 78" doors.

IMPORTANT! Follow Anchor Manufacturer's technical data manual/installation instructions for installation requirements and proper installation procedures. Field concrete foundation design and complete consolidation of concrete surrounding embedded item(s) anchorage points NOT by PS Safety Access.

- **STEP 2.** Attach Adjustable Clevis (*red decal*) with (2) 3/8" x 4" hex bolts, (2) 3/8" nylock nuts, and (4) 3/8" flat washers.
  - a. Tighten bolts, bracket height will be adjusted later in installation steps.



- **STEP 3.** Use rubber mallet to gently hammer flange bearings into both sides of 2" Lift Arm.
  - a. Slide 2" Lift Arm (red decal) into Adjustable Clevis (red decal).
    - b. Insert  $^3\!/_8"$  x 3" hex bolt and tighten  $^3\!/_8"$  nylock nut.



- **NOTICE** The 1 <sup>3</sup>/<sub>4</sub>" Lift Arms have a series of pre-drilled holes to allow for adjustable gate width. See Size Reference Table (page 4) to determine available width adjustment.
- **NOTICE** To protect the Powder Coat finish, do <u>not</u> slide beyond desired length.
- **STEP 4.** Slide  $1^{3}/_{4}$ " Lower Lift Arm (*green decal*) into 2" Lift Arm (*red decal*) to the desired gate width. a. Insert  $3/_{8}$ " x 2  $1/_{4}$ " hex bolts aligning with pre-drilled holes and tighten  $3/_{8}$ " nylock nuts.



- **STEP 5.** Use rubber mallet to gently hammer flange bearings into both sides of  $1 \frac{3}{4}$ " Lower Lift Arm.
  - a. Slide the Gate End (green decal) over the  $1^{3/4}$ " Lower Lift Arm (green decal).
  - b. Insert 3/8" x 2 3/4" hex bolt and tighten 3/8" nylock nut.



- STEP 6. Use rubber mallet to gently hammer flange bearings into both sides of 2" Upper Lift Arm.
  - a. Slide 2" Upper Lift Arm (red decal) into Adjustable Clevis (red decal) on Gate Post.
  - b. Insert 3/8" x 3" hex bolt and tighten 3/8" nylock nut.



- **STEP 7.** Slide  $1 \frac{3}{4}$ " Upper Lift Arm (*blue decal*) into 2" Lift Arm (*red decal*). a. Insert  $\frac{3}{8}$ " x 2  $\frac{1}{4}$ " hex bolts and  $\frac{3}{8}$ " nylock nuts at pre-drilled holes.
- **NOTICE** To protect the Powder Coat finish, do <u>not</u> slide beyond desired length.



**STEP 8.** Use rubber mallet to gently hammer flange bearings into both sides of  $1 \frac{3}{4}$ " Upper Lift Arm.

- a. Slide the Gate End (*blue decal*) over the  $1 \frac{3}{4}$ " Upper Lift Arm (*blue decal*).
- b. Insert 3/8" x 2 3/4" hex bolt and tighten 3/8" nylock nut.



**NOTICE** Base plates are slotted to allow adjustment for alignment.

STEP 9. Mark out holes for the Gate Catch and anchor with concrete floor anchors.



**STEP 10.** Add bumpers to Lower Lift Arms at both locations and snug with 1/4" bolts and 1/4" nylock capped nuts.

**NOTICE** Do <u>not</u> over-tighten, bumper should be snug but <u>not</u> compressed.



**STEP 11.** Slide Dampener Mount Link into slot in  $1 \frac{3}{4}$ " Lift Arm. a. Insert  $\frac{3}{8}$ " x 2  $\frac{1}{4}$ " hex bolt and tighten  $\frac{3}{8}$ " nylock nut.



**STEP 12.** Rotate gate to the open position (gate arms vertical). Remove Gate Post from concrete floor anchors to free up the assembly, and lay on the ground in the extended position for improved access during dampener installation.

**NOTICE** To protect the Powder Coat finish, lay on cardboard.



**A WARNING** The Smart Gates are heavy, verify weights, and use appropriate lifting procedures and equipment.

**STEP 13.** Install dampener first into the Gate End with 3/8" shoulder bolt (Illustration A). a. Insert 5/16" x 1" hex bolt and tighten 5/16" nylock nut into the Dampener Mount Link (Illustration B).



- **STEP 14.** Fully extend assembly upward, anchor Gate Post back onto the floor surface, and tip gate down into Gate Catch. As the gate approaches fully closed, you should hear a loud noise of the dampener self-setting.
- **STEP 15.** Visually verify that the dampener self-set into the appropriate location. a. Insert 3/8" x 2 1/4" hex bolt and tighten 3/8" nylock nut.
- **A DANGER** Keep fingers clear of dampener pivot points, dampener is under high pressure.



STEP 16. To ensure the gate opens to precisely 90°, the Adjustable Clevis needs to be set.

- a. Loosen 3/8" hex bolts and nylock nuts in Adjustable Clevis.
- b. Tip gate vertically to 90° and re-tighten 3/8" hex bolts and nuts.



### **Disassembling Gate Instructions**

#### VII. Disassembling Gate Instructions

**NOTICE** Only complete depressurization process if disassembling Smart Gate.

- ▲ DANGER System under high pressure. Refer to depressurization instructions in Operations and Maintenance Manual before doing any maintenance on the gate.
- STEP 1. With gate in the closed position (gate arms horizontal).
  - a. Remove  $\frac{3}{8}$ " x 2  $\frac{1}{4}$ " hex bolt and  $\frac{3}{8}$ " nylock nut from Dampener Mount Link (as shown in Illustration).



- **STEP 2.** Rotate gate to the open position (gate arms vertical) before proceeding with Step 3.
- ▲ CAUTION High internal gate forces! Before removing Gate Post baseplate fasteners, the gate must be in the open position (gate arms vertical) so the dampener is in a non-compressed state.
- **STEP 3.** Remove Gate Post from concrete floor anchors to free up the assembly and lay on the ground to enable access to the dampener.
- **STEP 4.** Remove  $\frac{5}{16}$ " x 1" hex bolt and  $\frac{5}{16}$ " nylock nut from Dampener end.
- A DANGER Keep fingers clear of Dampener ends and dampener mount link.

**NOTICE** To protect the Powder Coat finish, lay on cardboard.



**STEP 5.** Remove the 3/8" shoulder bolt from Dampener at Gate end.

# **IMPORTANT!** RETURN TO INSTALLATION STEPS <u>13-15</u> TO INSTALL NEW DAMPENER, AS SHOWN IN THIS OPERATIONS AND MAINTENANCE MANUAL.



**NOTICE** For locking your Smart Gate in the closed position, call PS Safety Access at 877.446.1519 to order an Edge-Safe<sup>™</sup> Lockout Kit (part #514582).

# **Replacement Parts List**

#### **IX. Replacement Parts List**





Replacement Parts List								
ITEM #	DESCRIPTION	QTY	PART #					
1	LDSG;GATE POST PCY	1	513414					
2	LDSG;GATE CATCH PCY	1	513424					
3	LDSG;ADJ CLEVIS PCY	1	513420					
4	LDSG;2" LIFT ARM 5FT PCY	2	514158					
5	LDSG;1.75" LIFT ARM 5FT PCY	2	514160					
6	LDSG;GATE END PCY	1	513437					
7	PLUG; SQ TUBE 2" OD	2	513134					
8	LDSG;DAMPENER 5 W/ ENDS	1	514163					
9	SG;HARDWARE BAG 60	1	514648					
9.1	BEARING;FLANGE .3765IDX.50300D	8	514702					
9.2	WASHER;FLAT 3/8" 16 ZN	4	501947					
9.3	NUT; NYLOCK 3/8" 16 ZN	11	501120					
9.4	NUT;NYLOCK 5/16"18 HEAVY ZN	1	513780					
9.5	ANCHOR;PWRSTUD+SD1-3/8"X3"CS	8	513454					
9.6	BOLT; HEX 3/8" 16X2 1/4GR5ZN	6	500405					
9.7	BOLT;SHOULDER3/8"X2-1/4"	1	513779					
9.8	BOLT; HEX 3/8" 16X2 3/4 GR5ZN	2	500406					
9.9	BOLT; HEX 1/4" 20X3 1/2 GR5ZN	2	502651					
9.10	BOLT;HEX3/8"16X4 GR5ZN	2	502859					

FINISH OPTIONS

PCY Powder Coat Safety Yellow

For EdgeSafe<sup>™</sup> Lockout Kit order (part #514582.) Kit includes (1)Storage Bracket, (1)Lock Pin, (2)Bolts, (2) Nylock Nuts, and Installation Instructions.

#### TO ORDER PARTS CONTACT PS SAFETY ACCESS AT 877.446.1519 or 4psinfo@psindustries.com

Replacement Parts List									
ITEM #	DESCRIPTION	QTY	PART #						
9.11	BOLT; HEX 3/8" 16X 3GR5ZN	2	500411						
9.12	BUMPER;ROUND 1-1/2"DIAX1-1/2	2	513133						
9.13	LDSG;DAMPENER MOUNT LINK SS	1	514162						
9.14	BOLT;HEX5/16"18X1GR5ZN	1	500422						
9.15	NUT;NYLOCK 5/16"18 ZN	1	501126						
9.16	SPACER;NYLON .406 X .625 X .60	2	514165						
9.17	NUT;NYLOCK 1/4"20 ZN NYL CAP	2	514472						
9.18	WASHER;NYLON .274X.1.75X.25	1	514164						
10	DECAL;LDSG, SG, & MG DANGER	2	513488						
11	DECAL;LDSG MARKETING	2	513489						
12	DECAL;LDSG THIS SIDE UP	2	513490						
13	LDSG; WARNING LABEL	1	513745						

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# SG Size Reference Drawing

#### X. SG Size Reference Drawing

SG Size Reference Table							
	CLEARANCE HEIGHT						
SG-60-PCY	48", 54", 60", 66", 72", OR 78"	94 <sup>1</sup> / <sub>4</sub> " - 124 <sup>1</sup> / <sub>4</sub> "					





### **Inspection and Maintenance**

#### XI. Inspection and Maintenance (Minimum Annually)

**IMPORTANT!** Consult parts list before replacing fasteners, as all have specific design load requirements. Only use like items for replacement.

- A. Gate:
  - 1. Inspect components for damage and misalignment. Adjust, repair, or replace as needed, to meet original design tolerance.
  - 2. Check for proper alignment with catch. Adjust as necessary to achieve proper alignment.
  - 3. Dampeners are maintenance free, replace dampener if assisting force has diminished.
  - 4. Inspect bumpers for damage or wear, replace as needed.
- B. Fasteners and mechanical connections:
  - 1. All fasteners must be in place and adjusted to their original design standard. Replace any damaged components.
  - 2. Check all mounting connections, making sure they meet original design standards (refer to instructions).
  - 3. If gate closes too quickly, fasteners at four corners of the gate can be tightened to reduce closing speed.
  - 4. If gate closes too slowly, fasteners at four corners of the gate can be loosened to increase closing speed.
- C. Finishes:
  - 1. Inspect and clean finishes periodically.
  - 2. Touch up repair finishes, or refinish as necessary to protect the structural integrity of the Smart Gate.
  - 3. The PCY Smart Gate comes with a polyester powder coat finish. Use finish materials compatible with powder coat. Follow paint manufacturers' instructions for prep and touch-up.
- D. Housekeeping:
  - 1. To ensure your product continues to operate and last, upon completion of proper installation, complete the following:
    - a. Clean all surfaces.
    - b. If project is ongoing, protect installed products until final completion of project.
    - c. Touch-up, repair, or replace damaged components.
  - 2. Ensure the horizontal bars are clear of debris and interferences.
- E. Labels and Placards:
  - 1. Inspect all labels and placards.
  - 2. Replace any labels and placards which are unreadable/missing.

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nspect at minimum annually.				CORRECTED BY (Print & Sign)								
<b>CRITICAL</b> Periodic Inspection and Maintenance Required. Inspect at minimum annually.		Opening Identifier/ Number:		CORRECTIVE ACTION								
<b>CRITICAL</b> Periodic Inspectio		Opening	Location:	INSPECTION ITEMS NOTED								
Inspection and Maintenance Log				INSPECTED BY (Print & Sign)								
Inspection a	Date Installed: Product:	Model Number:	Serial Number:	DATE INSPECTED								

# **PS INDUSTRIES® INCORPORATED – LIMITED WARRANTY**

Limited Warranty: Subject to the terms of this Limited Warranty, PS Industries<sup>®</sup> Incorporated warrants to the original user or consumer (the "Owner") of a PS Industries product (the "Product") that, for a period of one (1) year from date of shipment, the Product will be free from defects in material and workmanship under normal use and service, and provided the Product is installed, operated and maintained in accordance with instructions supplied by PS Industries. The terms and limitations of this Limited Warranty apply to all repaired or replacement Products for a term equal to the balance of the warranty remaining on the Product that was repaired or replaced as of the date of such repair or replacement. Register online at: www.psindustries.com/contact/register-your-product

**PS Flood Barriers<sup>™</sup> Product Warranty Registration:** For PS Flood Barriers<sup>™</sup> Products, this Limited Warranty will only be valid if the Owner completes the Warranty Registration Form provided within thirty (30) days of Product installation. To request a copy of the Warranty Registration Form, contact PS Industries Incorporated, 1150 S. 48th Street, Grand Forks, ND 58201, phone 877-446-1519, email: 4psinfo@psindustries.com. Register online at: www.psindustries.com/contact/register-your-product/ Additional Warranty Registration Forms can be downloaded at www.psfloodbarriers.com/download-center/

Warranty Exclusions: Notwithstanding anything to the contrary, this Limited Warranty does not cover any of the following:

- 1. Normal wear and tear (including, but not limited to, normal wear and tear to gaskets and weather seals); damage or accidents resulting from freight damage, from failure to follow precautionary safety measures, or applied paint failure; abuse, misuse or unauthorized modification of the Product; misapplication; improper installation; or any defects, damage or other harm that is not the result of the acts or omissions of PS Industries.
- 2. Cost of field labor or other charges incurred by Owner in removing and/or re-affixing the Product or any part or component thereof.
- 3. Transportation costs.

Unauthorized modification of or to the Product voids this Limited Warranty. Authorized modifications, received in writing from PS Industries, as long as the modification is accomplished in strict accordance with PS Industries' instructions, does not void warranty. To request product modifications contact PS Industries, 1150 S. 48th Street, Grand Forks, ND 58201, phone 877-446-1519, email: 4psinfo@psindustries.com.

**Claim Procedure:** To make a claim under this Limited Warranty, the claim must be received by PS Industries before the expiration of the above stated Limited Warranty period together with proof of purchase. Contact PS Industries at the address shown below.

PS Industries Incorporated Toll Attention: Warranty Pho 1150 S. 48th Street Fax: Grand Forks, ND 58201 E-m

Toll Free: 877-446-1519 Phone: 701-746-4519 Fax: 701-746-8340 E-mail: 4psinfo@psindustries.com

An authorized PS Industries representative must be given a reasonable opportunity to inspect and investigate the alleged Product defect prior to any work being done that affects the Product or its installation. PS Industries reserves the right to charge reasonable amounts for travel and labor associated with investigation of claims. PS Industries may also require photographs of the alleged Product defect or return of the Product or part to a designated PS Industries location, freight prepaid. A return goods authorization must be received prior to the return of the Product or part. Please contact PS Industries to determine the designated location for return and to obtain the return material authorization.

**Exclusive Remedy:** In the event of a warranty claim that PS Industries determines to be covered by this Limited Warranty, PS Industries will replace or repair, at PS Industries' discretion, the Product or any part of the Product found to be defective.

**Disclaimers:** The above warranty and remedy is the sole express warranty and remedy given by PS Industries on its Product. No warranties or representations at any time made by any representative from PS Industries shall vary or expand the provisions hereof. TO THE EXTENT PERMITTED BY LAW, ALL EXPRESS AND IMPLIED WARRANTIES (INCLUDING IMPLIED WARRANTIES OF MERCHANTABILITY, FITNESS FOR A PARTICULAR PURPOSE AND NON-INFRINGEMENT) OTHER THAN THE EXPRESS LIMITED WARRANTY SET FORTH ABOVE ARE EXPRESSLY DISCLAIMED. UPON THE EXPIRATION OF THE ABOVE STATED LIMITED WARRANTY PERIOD, ANY AND ALL APPLICABLE IMPLIED WARRANTIES, INCLUDING, WITHOUT LIMITATION, WARRANTIES OF MERCHANTABILITY, FITNESS FOR A PARTICULAR PURPOSE AND NON-INFRINGEMENT, ARE DISCLAIMED. SOME STATES DO NOT ALLOW LIMITATION ON HOW LONG AN IMPLIED WARRANTY LASTS, SO THE ABOVE LIMITATION MAY NOT APPLY TO OWNER.

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THIS WARRANTY GIVES OWNER SPECIFIC LEGAL RIGHTS AND OWNER MAY ALSO HAVE OTHER RIGHTS, WHICH VARY FROM STATE TO STATE.

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