



Installation Instructions/Operation and Maintenance Manual

Patent Pending



Models:

SG-60-PCY (48"- 78" Openings)

Table of Contents:

Safety Precautions	2
Product Information	
Installation Instructions	
Disassembling of Gate	12
Operation	
Replacement Parts List	
Size Reference Drawing	
Inspection and Maintenance	
Warranty Certificate	

Contact Information

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4psinfo@psindustries.com

Hours of Operation

8 A.M. to 5 P.M. CT Monday – Friday

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 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.

▲ 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.

IMPORTANT! Indicates a required action.

CRITICAL Indicates a vital component to product performance.

Smart Gate 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 INCORPORATED's instructions, does not void warranty. 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 maintenance program to inspect the Smart Gate as necessary.

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.

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! Anchorage: The concrete floor anchors provided have been engineered to structurally withstand OSHA loading requirements when installation. If existing mounting structure differs, the installer is responsible for ensuring the product is structurally mounted to resist all required field loads.

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. Obtained all required permits.
- 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)

1

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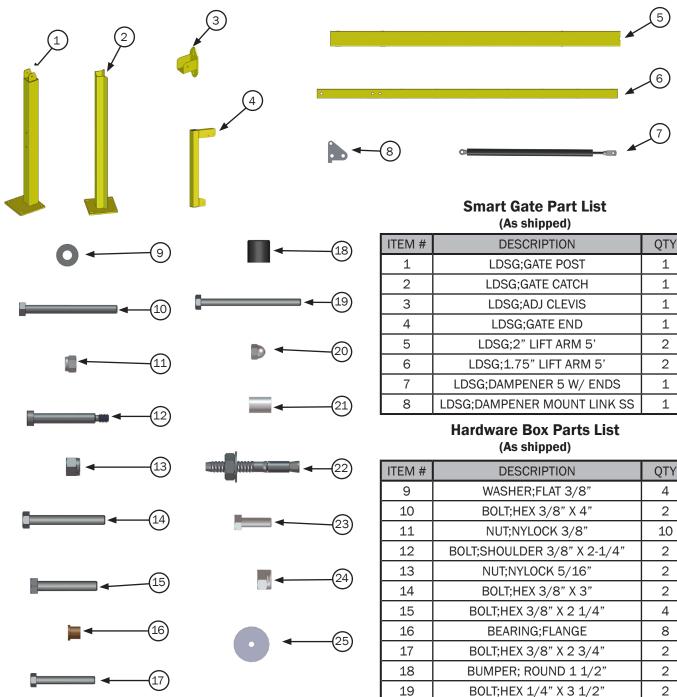
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Smart Gate Product Information

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



Recommended Tools:

- 1. Two (2) 9/16" Socket and Ratchets
- 2. Two (2) $\frac{1}{2}$ Socket and Ratchets
- 3. Two (2) $\frac{7}{16}$ Socket and Ratchets
- 4. One (1) Rubber Mallet
- 5. One (1) Tape Measure
- 6. One (1) 3/16" Allen Wrench

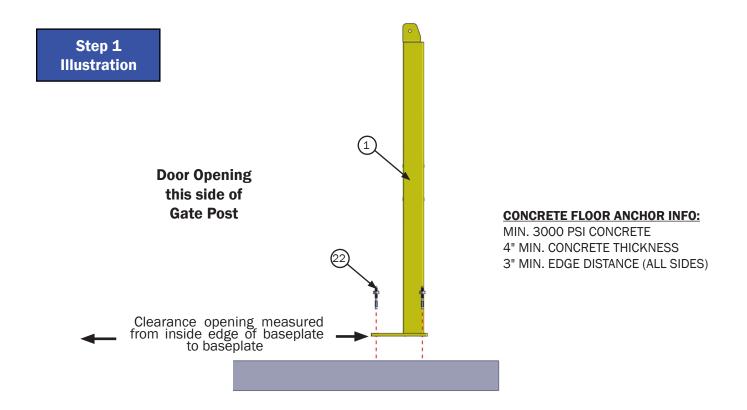
10	BOLT;HEX 3/8" X 4"	2
11	NUT;NYLOCK 3/8"	10
12	12 BOLT;SHOULDER 3/8" X 2-1/4"	
13	NUT;NYLOCK 5/16"	2
14	BOLT;HEX 3/8" X 3"	2
15	BOLT;HEX 3/8" X 2 1/4"	4
16	BEARING;FLANGE	8
17	BOLT;HEX 3/8" X 2 3/4"	2
18	18 BUMPER; ROUND 1 1/2" 19 BOLT; HEX 1/4" X 3 1/2"	
19		
20	NUT;NYLOCK 1/4" NYL CAP	2
21	SPACER;NYLON	1
22	ANCHOR;PWRSTUD 1 3/8" X 3"	8
23	BOLT;HEX 5/16" X 1	1
24	24 NUT;NYLOCK 5/16"	
25	WASHER;NYLON 1/4"	1

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).

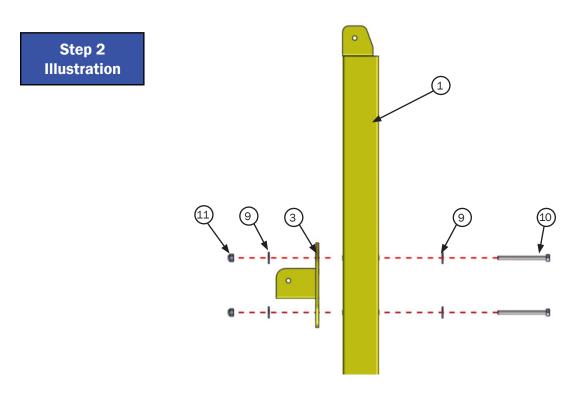


SG SIZE REFERENCE TABLE			
	CLEAR OPENING WIDTHS	CLEARANCE HEIGHT	
SG-60-PCY	48", 54" 60", 66", 72", OR 78"	94 1/4" - 124 1/4"	

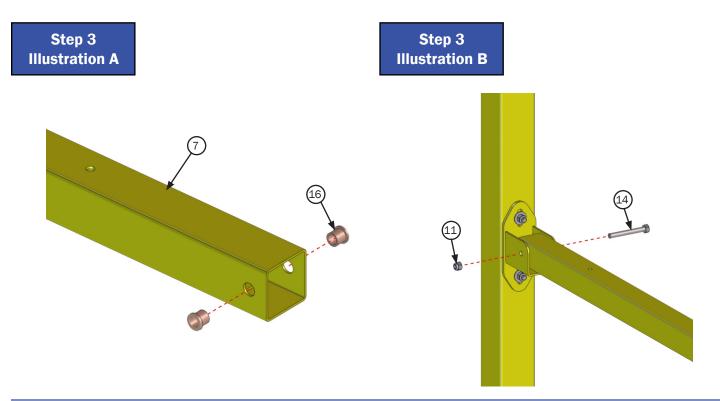
IMPORTANT! Follow Anchor Manufacturer's technical data manual/installation instructions for installation requirements and proper installation procedures.

<u>Field concrete foundation design and complete consolidation of concrete surrounding embedded item(s) anchorage points not by PS Safety Access.</u>

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



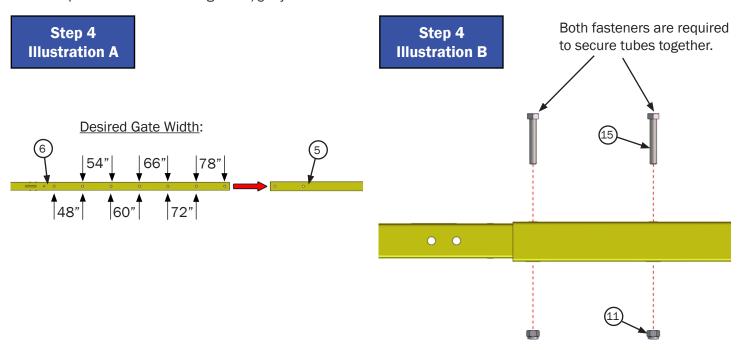
STEP 3. Use rubber mallet to gently hammer flange bearings into both sides of 2" Lift Arm. Slide 2" Lift Arm into Adjustable Clevis. Insert 3/8" x 3" hex bolt and tighten 3/8" nylock nut.



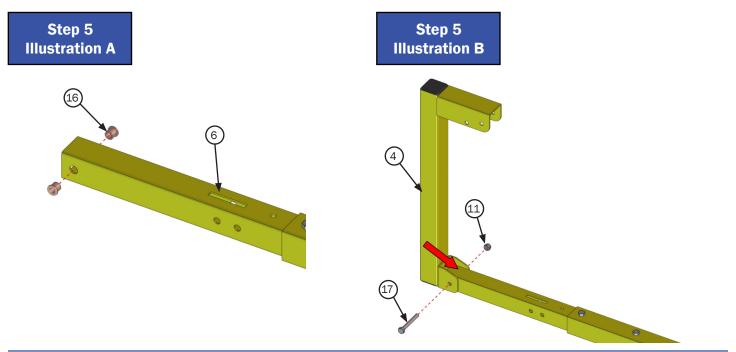
NOTICE The 1 ³/₄" Lift Arms have a series of pre-drilled holes to allow for adjustable gate width. See Size Reference Table (page 4) to determine available width adjustment.

NOTICE To protect the Powder Coat finish, do not slide beyond desired length.

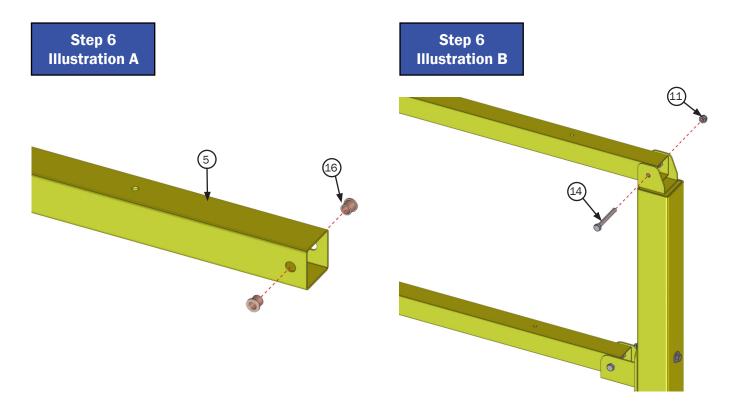
STEP 4. Slide 1 $^{3}/_{4}$ " Lift Arm into 2" Lift Arm to the desired gate width. Insert $^{3}/_{8}$ " x 2 $^{1}/_{4}$ " hex bolts aligning with pre-drilled holes and tighten $^{3}/_{8}$ " nylock nuts.



STEP 5. Use rubber mallet to gently hammer flange bearings into both sides of $1 \frac{3}{4}$ " Lift Arm. Slide the Gate End over the $1 \frac{3}{4}$ " Lift Arm. Insert $\frac{3}{8}$ " x $2 \frac{3}{4}$ " hex bolt and tighten $\frac{3}{8}$ " nylock nut.

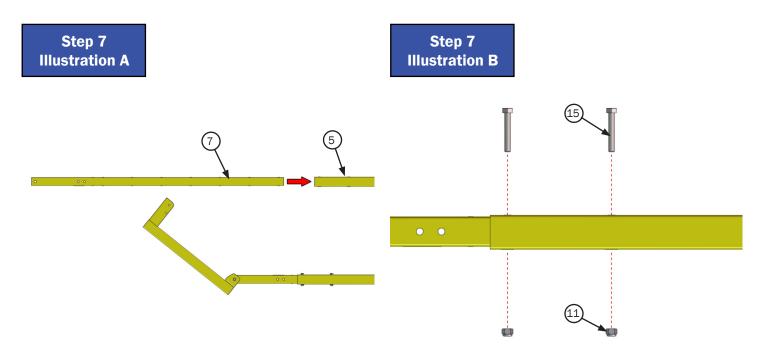


STEP 6. Use rubber mallet to gently hammer flange bearings into both sides of 2" Lift Arm, Insert 2" Lift Arm into Adjustable Clevis on Gate Post. Then insert $\frac{3}{8}$ " x 3" hex bolt and tighten $\frac{3}{8}$ " nylock nut.

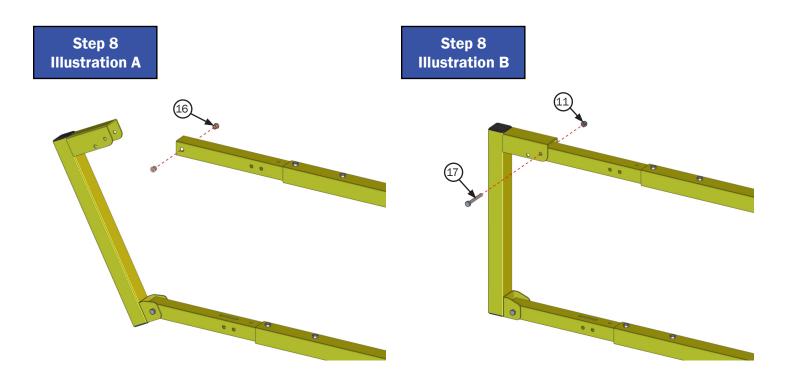


STEP 7. Slide 1 ³/₄" Lift Arm into 2" Lift Arm, then insert ³/₈" x 2 ¹/₄" hex bolts and ³/₈" nylock nuts at pre-drilled holes.

NOTICE To protect the Powder Coat finish, do not slide beyond desired length.



STEP 8. Use rubber mallet to gently hammer flange bearings into both sides of $1\,^3/_4$ " Upper Lift Arm. Slide the Gate End over the $1\,^3/_4$ " Upper Lift Arm. Insert $^3/_8$ " x $2\,^3/_4$ " hex bolt and tighten $^3/_8$ " nylock nut.

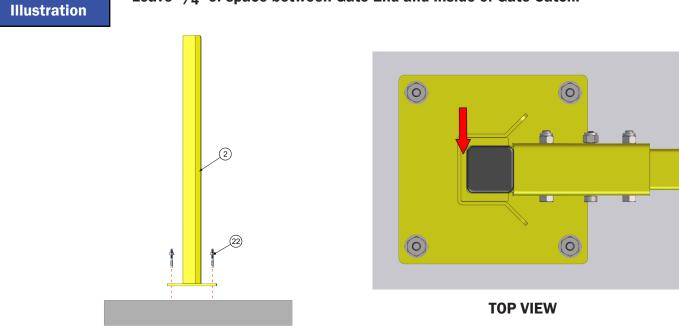


NOTICE Base plates are slotted to allow adjustment for alignment.

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

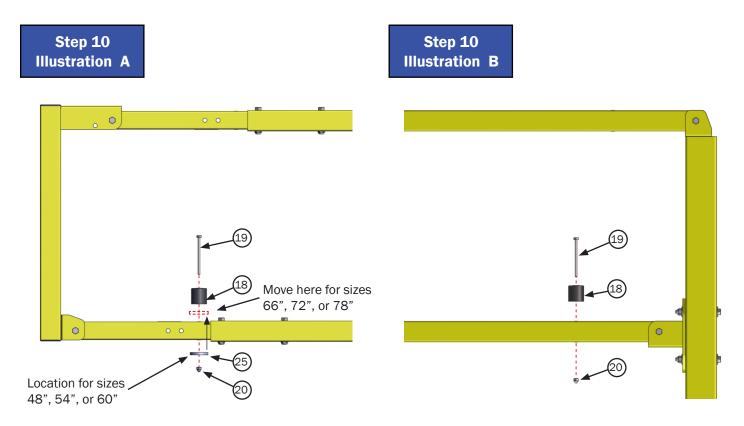


Leave $\frac{1}{4}$ " of space between Gate End and inside of Gate Catch.

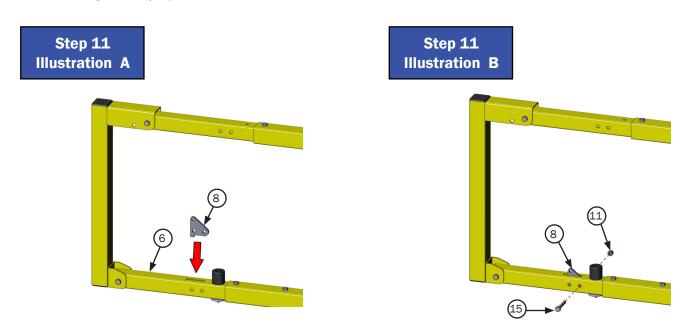


STEP 10. Add bumpers to Lower Lift Arms at both locations and snug with $\frac{1}{4}$ " bolts and $\frac{1}{4}$ " nylock capped nuts.

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

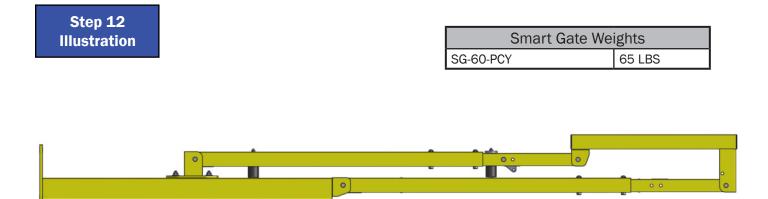


STEP 11. Slide Dampener Mount Link into slot in $1 \frac{3}{4}$ " Lift Arm (Illustration A), then insert $\frac{3}{8}$ " x $2 \frac{1}{4}$ " hex bolt and tighten $\frac{3}{4}$ " nylock nut (Illustration B).



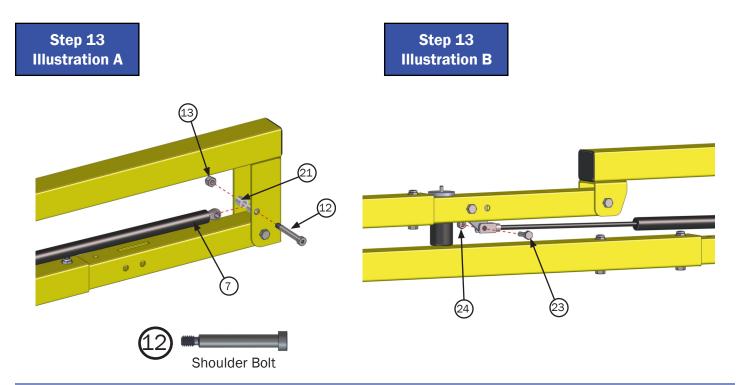
STEP 12. Rotate gate to the open position (gate arms vertical). Remove Gate Post from concrete floor anchors to free up the assembly, and lay on the ground in the extended position for improved access during dampener installation.

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.

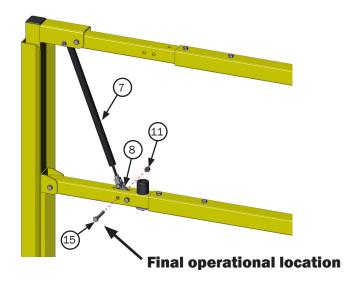
STEP 13. Install dampener first into the Gate End (Illustration A) using 3/8" shoulder bolt, then insert 5/16" x 1" hex bolt and tighten 5/16" nylock nut into the Dampener Mount Link (Illustration B).



- **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, insert 3/8" x 2 1/4" hex bolt and tighten 3/8" nylock nut.

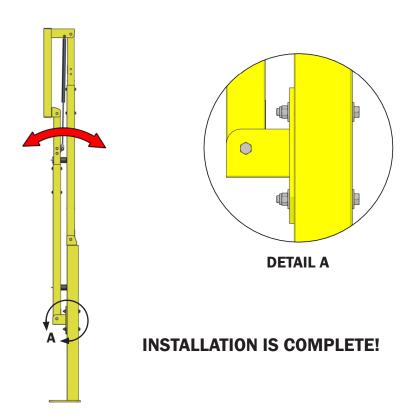
A DANGER Keep fingers clear of dampener pivot points, dampener are under high pressure.

Step 15
Illustration



STEP 16. To ensure the gate opens to precisely 90°, the Adjustable Clevis needs to be set. Loosen 3/8" hex bolts and 3/8" nylock nuts in Adjustable Clevis, tip gate vertically to 90°, and re-tighten 3/8" hex bolts and nuts.

Step 16
Illustration



Disassembling Gate Instructions

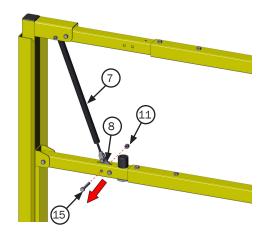
VII. Disassembling Gate Instructions

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), remove 3/8" x 2 1/4" hex bolt and 3/8" nylock nut from Dampener Mount Link (as shown in Illustration).

Step 1
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 are in a non-compressed state.

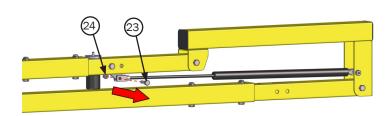
STEP 3. Remove Gate Post from concrete floor anchors to free up the assembly and lay on the ground to enable access to the dampener.

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 4
Illustration

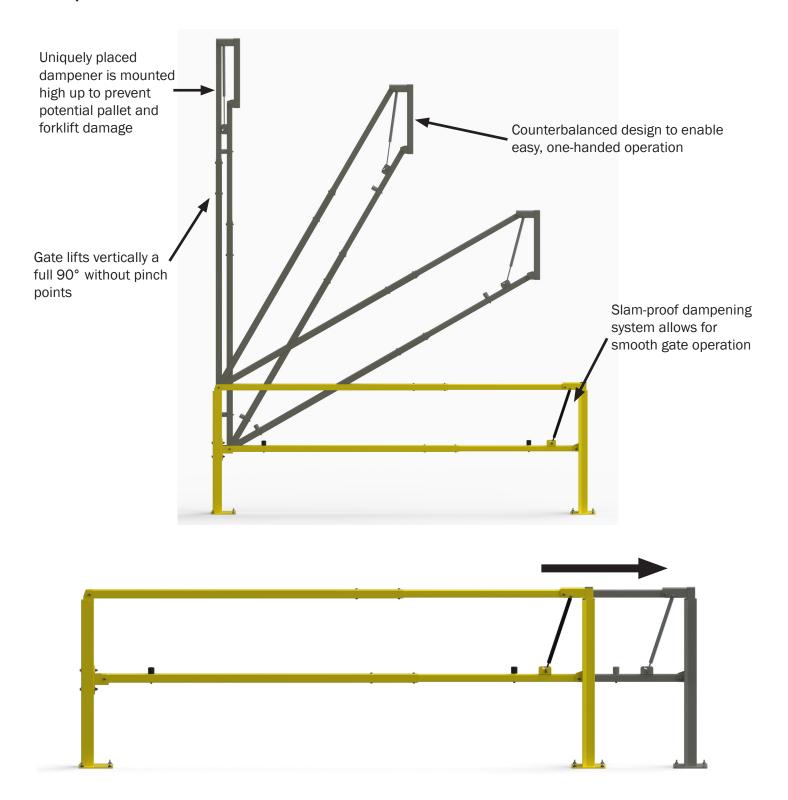


STEP 4. Remove 3/8" shoulder bolt from Dampener at Gate End.

RETURN TO INSTALLATION STEPS $\underline{13-15}$ TO INSTALL NEW DAMPENER, AS SHOWN IN THIS OPERATIONS AND MAINTENANCE MANUAL.

Operation

VIII. Operation



ADJUSTABLE TO FIT:

4'0" - 6'6" OPENINGS (SG-60-PCY)

Replacement Parts List

IX. Replacement Parts List

LDSG; 1.75" LIFT ARM 5' PCY

LDSG;DAMPENER 5 W/ ENDS

LDSG; DAMPENER MOUNT LINK SS

WASHER; FLAT 3/8" 16 ZN

BOLT; HEX 3/8" 16X4 GR5ZN

NUT; NYLOCK 3/8" 16 ZN

BOLT;SHOULDER3/8"X2-1/4"

NUT;NYLOCK 5/16"18 HEAVY ZN

BOLT; HEX 3/8" 16X 3GR5ZN

BOLT; HEX 3/8" 16X2 1/4 GR5ZN

BEARING; FLANGE .3765IDX.50300D

BOLT; HEX 3/8" 16X2 3/4 GR5ZN

BUMPER; ROUND 1-1/2" DIAX 1-1/2

BOLT; HEX 1/4" 20X3 1/2 GR5ZN

NUT; NYLOCK 1/4"20 ZN NYL CAP

SPACER; NYLON .406 X .625 X .60

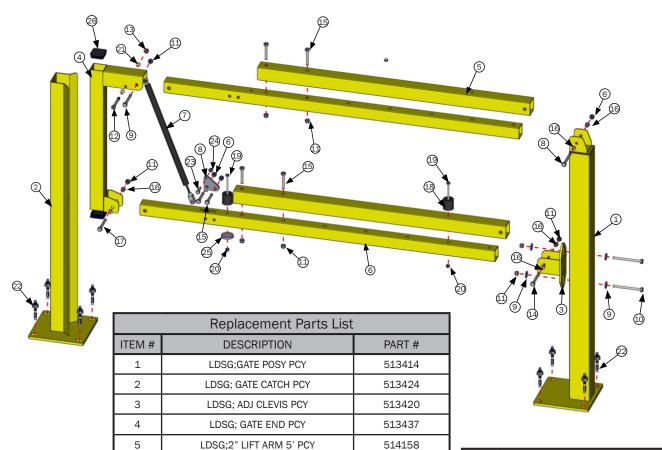
ANCHOR; PWRSTUD+SD1-3/8"X3"CS

BOLT; HEX5/16"18X1GR5ZN

NUT; NYLOCK 5/16"18 ZN

WASHER; NYLON .274X1.75X.25

PLUG; SQ TUBE 2" OD



	FINISH OPTIONS
PCY	Powder Coat Safety Yellow

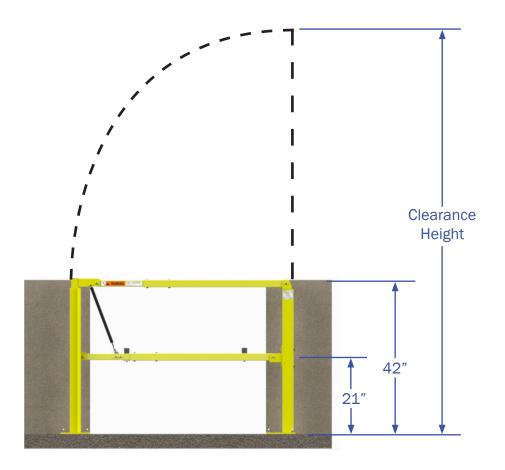
TO ORDER PARTS CONTACT PS SAFETY ACCESS AT 877.446.1519 or 4psinfo@psindustries.com

SG Size Reference Drawing

X. SG Size Reference Drawing

SG SIZE REFERENCE TABLE		
	CLEAR OPENING WIDTHS	CLEARANCE HEIGHT
SG-60-PCY	48", 54", 60", 66", 72", OR 78"	94 1/4" - 124 1/4"





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. Smart 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.

CRITICAL Periodic Inspection and Maintenance Required. Inspect at minimum annually.

CORRECTED BY (Print & Sign) **CORRECTIVE ACTION** Opening Identifier/ Number: _ Location: **INSPECTION ITEMS Inspection and Maintenance Log INSPECTED BY** (Print & Sign) Date Purchased: Model Number: Serial Number: INSPECTED DATE Product:

CRITICAL Periodic Inspection and Maintenance Required. Inspect at minimum annually. **Inspection and Maintenance Log**

CORRECTED BY (Print & Sign) **CORRECTIVE ACTION** Opening Identifier/ Number: Location: **INSPECTION ITEMS** INSPECTED BY (Print & Sign) Date Purchased: Model Number: Serial Number: INSPECTED DATE Product:

PS INDUSTRIES INCORPORATED – LIMITED WARRANTY

Limited Warranty: Subject to the terms of this Limited Warranty, PS INDUSTRIES INCORPORATED warrants to the original user or consumer (the "Owner") of a PS INDUSTRIES INCORPORATED 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 INCORPORATED. 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™ Product Warranty Registration: For PS Flood Barriers™ 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 INCORPORATED.
- 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 INCORPORATED, as long as the modification is accomplished in strict accordance with PS INDUSTRIES INCORPORATED's instructions, does not void warranty. To request product modifications contact PS INDUSTRIES INCORPORATED, 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 INCORPORATED before the expiration of the above stated Limited Warranty period together with proof of purchase. Contact PS INDUSTRIES INCORPORATED at the address shown below.

PS INDUSTRIES INCORPORATED
Attention: Warranty
1150 S. 48th Street
Toll Free: 877-446-1519
Phone: 701-746-4519
Fax: 701-746-8340

Grand Forks, ND 58201 E-mail: 4psinfo@psindustries.com

An authorized PS INDUSTRIES INCORPORATED 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 INCORPORATED reserves the right to charge reasonable amounts for travel and labor associated with investigation of claims. PS INDUSTRIES INCORPORATED may also require photographs of the alleged Product defect or return of the Product or part to a designated PS INDUSTRIES INCORPORATED location, freight prepaid. A return goods authorization must be received prior to the return of the Product or part. Please contact PS INDUSTRIES INCORPORATED 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 INCORPORATED determines to be covered by this Limited Warranty, PS INDUSTRIES INCORPORATED's 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 INCORPORATED on its Product. No warranties or representations at any time made by any representative from PS INDUSTRIES INCORPORATED 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.

LIABILITY LIMITATION: In no event will PS INDUSTRIES INCORPORATED'S liability to Owner or any other person or entity exceed the price paid to PS INDUSTRIES INCORPORATED for the defective Product. IN NO EVENT SHALL PS INDUSTRIES INCORPORATED BE LIABLE TO OWNER OR ANY OTHER PERSON OR ENTITY FOR INCIDENTAL, CONSEQUENTIAL, INDIRECT OR SPECIAL DAMAGES OF ANY DESCRIPTION, WHETHER ARISING OUT OF WARRANTY (INCLUDING ANY IMPLIED WARRANTIES) OR ANY OTHER CONTRACT, STRICT LIABILITY, NEGLIGENCE OR OTHER TORT, OR OTHERWISE, INCLUDING ARISING FROM INSPECTION OR REMEDY DELAYS. SOME STATES DO NOT ALLOW THE EXCLUSION OR LIMITATION OF INCIDENTAL OR CONSEQUENTIAL DAMAGES, SO THE ABOVE LIMITATION AND EXCLUSION MAY NOT APPLY TO OWNER.

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

Rev. 010719









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Product Registration: psindustries.com/contact/register-your-product