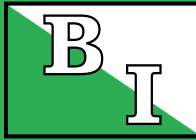


**OPTIONAL ACCESSORIES  
For Protected Enclosures**



**MODEL PIAD  
PURGEABLE INSTRUMENT  
ACCESS DOORS**

**PIAD Description**

Model PIAD Purgeable Instrument Access Doors are custom-built door and mounting frame assemblies. They are intended for any application when standard size and construction features from other manufacturers are not acceptable. Specifically, Bebcos PIADs are designed to cover electrical devices which penetrate the surface of a protected enclosure and are unsuitable for exposure to the surrounding atmosphere. Designed for rugged duty, all Bebcos PIADs feature 14 gauge carbon steel, aluminum or stainless steel bodies, continuous stainless hinges, 1/4" Laminated Safety Glass or Mareguard™ Lexan® windows and replaceable, open core tubular door gasketing. Brushed finishes are available on stainless steel bodies, a black anodized finish is available on aluminum bodies and an enamel paint finish is available on all bodies. Door fastening is accomplished with hand, key or tool actuated vice action compression latches.

CME Division Technical Bulletin PIAD-R1.1

07/04



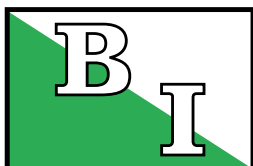
**Model PIAD-A-CG-1-T-L**

CARBON STEEL FRAME, SAFETY GLASS WINDOW, BLACK ENAMEL PAINT FINISH,  
TOOL OPERATED LATCH ASSEMBLY & LEFT SIDE HINGE



**Model PIAD-A-SG-4-H-L**

316 STAINLESS STEEL FRAME, SAFETY GLASS WINDOW, VERTICAL BRUSH  
FINISH, HAND OPERATED LATCH ASSEMBLY & LEFT SIDE HINGE



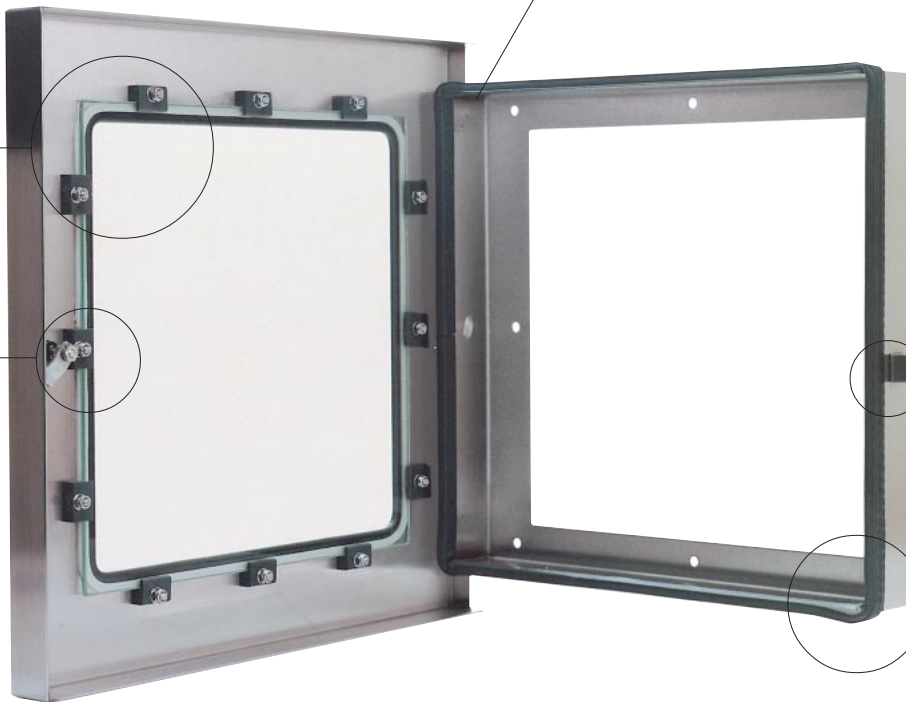
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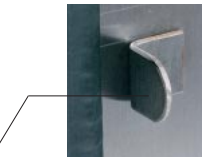
# PIAD Construction Features

Bebco's unique method of securing the PIAD window utilizes Trim-Lok™ neoprene rubber molding and closed cell neoprene gasketing placed between the glass or Lexan® window and the PIAD door frame. The window is held in place with custom molded santoprene rubber clips and stainless steel hardware. This unique method of attachment secures the window in a suspended fashion, allowing damaged windows to be easily removed and replaced, without the need for special tools or sealant application.

All Bebco PIADs incorporate a welded (bolt fastened on aluminum bodies) continuous stainless steel hinge to provide an extra degree of corrosion protection, prevent door "sagging" and ensure proper door to frame alignment with each operation.



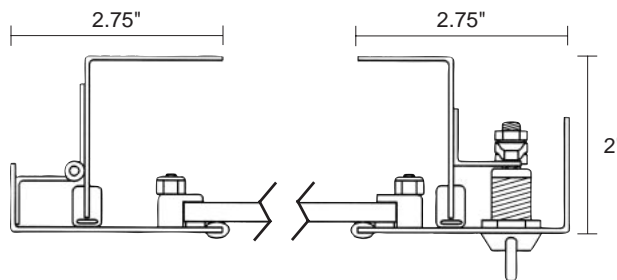
**Model PIAD-A-SG-4-H-L**  
INTERIOR VIEW



The PIAD Latch Clip is constructed of the same material as specified for the PIAD, e.g. carbon steel, stainless steel or aluminum. The Latch Clip is securely welded to the PIAD mounting frame for added durability.



The vice action compression latch secures the PIAD door firmly to the mounting frame in the closed position. Latching mechanisms are available with hand, key or tool actuated operators. This method of latching provides quick and easy access to protected equipment.



**Model PIAD-A-SG-4-H-L**  
CROSS SECTION VIEW



Utilizing Trim-Seal™ replaceable, open core tubular door gasketing provides a continuous positive seal between the PIAD door and mounting frame, which meets or exceeds NEMA 4 standards.

## PIAD Ordering Method

- Step 1 - Determine Overall Dimensions of Device(s) to be protected**  
measure overall height and width of device(s), including all bezels and trim
- Step 2 - Determine PIAD Window Dimensions**  
add 0.25" to overall height and width dimensions of device(s)
- Step 3 - Determine Overall PIAD Dimensions**  
add 5.5" to PIAD window height and width dimensions
- Step 4 - Determine Hinge Position**  
select location of hinge in relation to face of PIAD
- Step 5 - Allocate Space for PIAD Mounting Frame & Hinging Motion**  
reserve 3.25" of clearance around all sides of the device(s)  
add 1.5" of additional clearance on hinge side of PIAD
- Step 6 - Calculate Window Area**  
multiply window height by window width
- Step 7 - Specify PIAD Model Number**  
select appropriate size range and desired construction features
- Step 8 - Specify Window Dimensions and Internal Clearance**
- Step 9 - Specify Custom Finish and Fabrication Requirements**

## PIAD Ordering Example

- Step 1 - Overall Device Height = 4.0" Overall Device Width = 8.0"**
- Step 2 - Window Height = 4.25" Window Width = 8.25"**
- Step 3 - Overall PIAD Height = 9.75" Overall PIAD Width = 13.75"**
- Step 4 - Hinge Position - Left Side**
- Step 5 - Clearances: Left Side - 4.75" / Right, Top & Bottom - 3.25"**
- Step 6 - Height x Width = Area**  
4.25 x 8.25 = 35 sq. in.
- Step 7 - Base Size PIAD PIAD Fastener Hinge Model Range Material Finish Type Position**  
PIAD - A - CG - 1 - H - L
- Step 8 - Window Dimensions: 4.25" H x 8.25" W x 2" IC**

### SPECIAL NOTES

INTERNAL CLEARANCE OF 2" MINIMUM IS STANDARD INTERNAL CLEARANCE UP TO 10" MAXIMUM MAY BE SPECIFIED AT TIME OF ORDER. EXTREME CARE SHOULD BE TAKEN TO ENSURE ADEQUATE MOUNTING & HINGING CLEARANCES.

## Optional PIAD Latches

The vice action compression latches utilized on Bebcos model PIAD provide single or multiple point latching while sealing the entire door gasket to meet NEMA 4 standards. The compression latches are available in three different styles, as described below:



**Hand Operated Latch** - A matte black polyester powder coated die cast zinc knob allows easy operation of the compression latch with a thumb and forefinger. This latch is recommended when general or unregulated access to the PIAD is required and the enclosed equipment is not protected by pressurization.  
**IMPORTANT NOTE:** If utilized on pressurized enclosures, an electrical interlock rated for the area is required to deenergize power to all non rated equipment to comply with section 3-5.2 of the NFPA 496-1993 edition.



**Key Operated Latch** - This latch requires a special key to operate. One key is supplied with each PIAD and additional keys are available upon request. This latch is recommended when authorized or regulated access to the PIAD is required and/or when the enclosed equipment is protected by pressurization.  
**IMPORTANT NOTE:** When utilized with a pressurized enclosure, the key operated latch complies with section 3-5.2 of the NFPA 496-1993 edition, eliminating the need for electrical interlock switches.



**Tool Operated Latch** - This latch requires a customer supplied 5/32" hex head tool to operate. This latch is recommended when authorized or regulated access to the PIAD is required and/or when the enclosed equipment is protected by purging or pressurization.  
**IMPORTANT NOTE:** When utilized with a pressurized enclosure, the tool operated latch complies with section 3-5.2 of the NFPA 496-1993 edition, eliminating the need for electrical interlock switches.

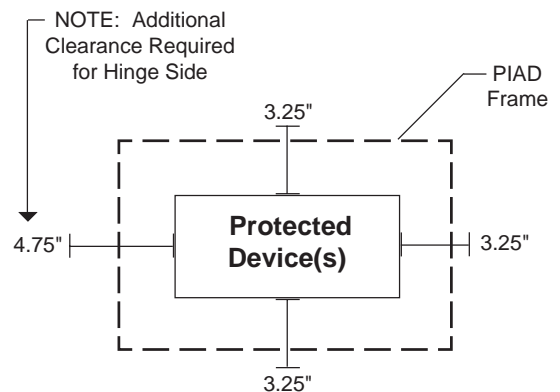
## Latch Placement Guidelines

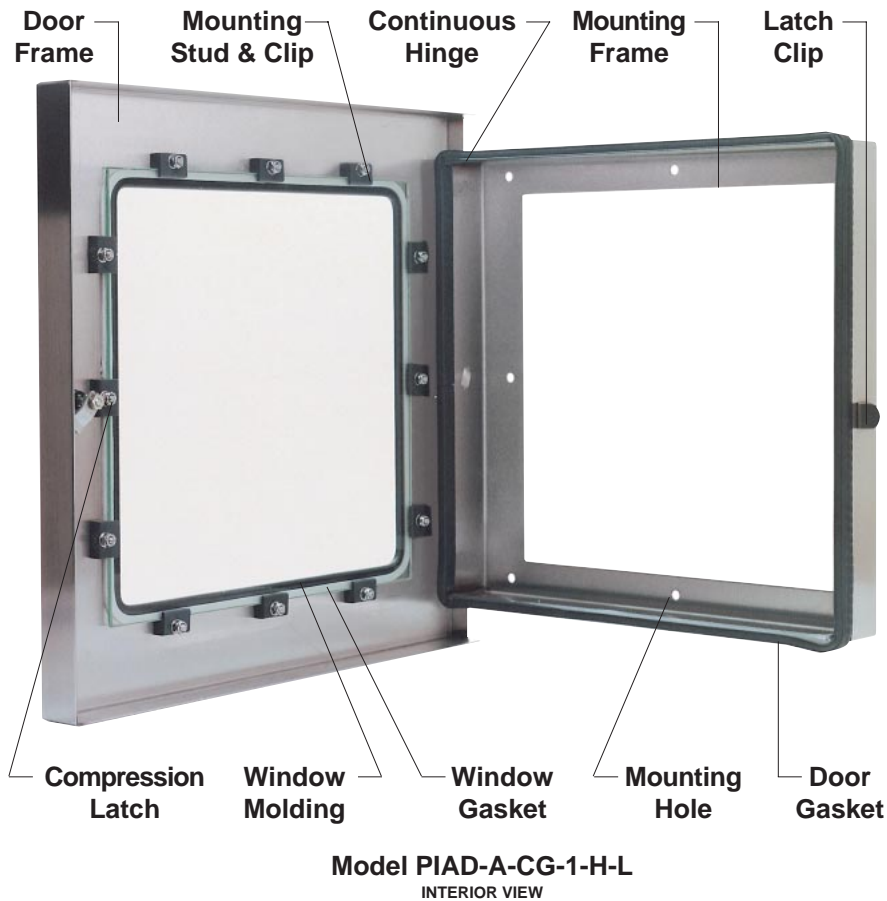
- All 12" x 12" or smaller PIADs shall feature one (1) fastening latch opposite the hinge side, center line of door.
- Door sides adjacent to hinge side which exceed 24 inches shall feature a minimum of one (1) fastening latch, center line of door.
- In all cases, the maximum distance (1) between the edge of the door and a fastening latch, or (2) between multiple fastening latches shall not exceed 18 inches.

## PIAD Mounting Clearance

To accommodate the flanges and hinging action space requirements of Bebcos PIADs, please ensure that the following minimum clearance around the protected device(s) is provided on the enclosure.

Hinge side - 4.75" All remaining sides - 3.25"





## Model Number Designations

|                                |   |   |   |   |    |   |   |   |   |   |   |
|--------------------------------|---|---|---|---|----|---|---|---|---|---|---|
|                                | PIAD                                      | - | A | - | CG | - | 1 | - | H | - | L |
| <b>Series Model Number</b>     |   |   |   |   |    |   |   |   |   |   |   |
| <b>Window Size Range</b>       |   |   |   |   |    |   |   |   |   |   |   |
| <b>A</b>                       | - 000 to 144 square inches                |   |   |   |    |   |   |   |   |   |   |
| <b>B</b>                       | - 145 to 288 square inches                |   |   |   |    |   |   |   |   |   |   |
| <b>C</b>                       | - 289 to 432 square inches                |   |   |   |    |   |   |   |   |   |   |
| <b>D</b>                       | - 433 to 576 square inches                |   |   |   |    |   |   |   |   |   |   |
| <b>E</b>                       | - 577 to 2304 square inches               |   |   |   |    |   |   |   |   |   |   |
| <b>Body Material</b>           |   |   |   |   |    |   |   |   |   |   |   |
| <b>C</b>                       | - 14 Gauge Carbon Steel                   |   |   |   |    |   |   |   |   |   |   |
| <b>A</b>                       | - 3/32" 5052 Aluminum                     |   |   |   |    |   |   |   |   |   |   |
| <b>S</b>                       | - 14 Gauge 316 Stainless Steel            |   |   |   |    |   |   |   |   |   |   |
| <b>Window Material</b>         |   |   |   |   |    |   |   |   |   |   |   |
| <b>G</b>                       | - 1/4" Laminated Safety Glass             |   |   |   |    |   |   |   |   |   |   |
| <b>L</b>                       | - 1/4" GE Marguard™ Lexan®                |   |   |   |    |   |   |   |   |   |   |
| <b>Body Finish</b>             |   |   |   |   |    |   |   |   |   |   |   |
| <b>1</b>                       | - 3 Mil. Flat Black Textured Enamel Paint |   |   |   |    |   |   |   |   |   |   |
| <b>2</b>                       | - Black Anodized (Alum only)              |   |   |   |    |   |   |   |   |   |   |
| <b>3</b>                       | - Horizontal Brush (SS only)              |   |   |   |    |   |   |   |   |   |   |
| <b>4</b>                       | - Vertical Brush (SS only)                |   |   |   |    |   |   |   |   |   |   |
| <b>5</b>                       | - Custom Finish *                         |   |   |   |    |   |   |   |   |   |   |
| <b>Door Fastening Hardware</b> |   |   |   |   |    |   |   |   |   |   |   |
| <b>H</b>                       | - Hand Operated Compression Latch         |   |   |   |    |   |   |   |   |   |   |
| <b>K</b>                       | - Key Operated Compression Latch **       |   |   |   |    |   |   |   |   |   |   |
| <b>T</b>                       | - Tool Operated Compression Latch ***     |   |   |   |    |   |   |   |   |   |   |
| <b>Hinge Position</b>          |   |   |   |   |    |   |   |   |   |   |   |
| <b>L</b>                       | - Left Side                               |   |   |   |    |   |   |   |   |   |   |
| <b>R</b>                       | - Right Side                              |   |   |   |    |   |   |   |   |   |   |
| <b>T</b>                       | - Top Side                                |   |   |   |    |   |   |   |   |   |   |
| <b>B</b>                       | - Bottom Side                             |   |   |   |    |   |   |   |   |   |   |

## Material Specifications

|   |  |
|---|--|
| Door & Mounting Frame:<br>- choice of 3 materials | 14 Gauge Carbon Steel<br>3/32" 5052 Aluminum<br>14 Gauge 316 Stainless Steel |
| Window:<br>- choice of 2 materials                | 1/4" Laminated Safety Glass<br>1/4" GE Marguard™ Lexan®                      |
| Window Mounting Studs:<br>Hinge & Screw Hardware: | - to match frame choice<br>316 SS  |
| Compression Latch Housing:                        | Die Cast Zinc w/ Matte Black Polyester Powder Coat                           |
| Compression Latch Cam:                            | 1075 Case Hardened Steel   |
| Compression Latch Dacrotized® Sleeve:             | 1065 Case Hardened Steel   |
| Compression Latch Dacrotized® Shaft:              | 12L14 Steel, Zinc Alloy Plate plus Sealer                                    |
| Compression Latch Mounting Nut:                   | 12L14 Steel, Zinc Alloy Plate plus Sealer                                    |
| Compression Latch Jam Nuts & Lockwashers:         | 316 Stainless Steel  |
| Compression Latch Pawl:                           | 1010 Steel, Zinc Alloy Plate plus Sealer                                     |
| Compression Latch Pin:                            | Case Hardened 1008 Steel, Zinc Plated, Yellow Chromate Dip                   |
| Compression Latch Spring & Retainer:              | 302 Stainless Steel, Passivated  |
| Compression Latch O-Ring:                         | Buna-N Rubber, Black   |
| Hand Operated Latch Knob:                         | Die Cast Zinc, Matte Black Polyester Powder Coated                           |
| Tool Operated Latch Cap:                          | Die Cast Zinc, Matte Black Polyester Powder Coated                           |
| Key Operated Latch Cap:                           | 303 Stainless Steel, Matte Black Polyester Powder Coated                     |
| Key Operated Latch Key:                           | Steel, Nickel Plated   |
| Window Gasket:                                    | Closed Cell Neoprene   |
| Window Molding:                                   | Neoprene Rubber  |
| Door Gasket:                                      | Polypropylene w/ steel retainer clips  |

Lexan® is a Registered Trademark of the General Electric Company  
Dacrotized® is a Registered Tradename of Metal Coatings International, Inc.

Prices for Sizes A-D are preestablished.

Prices for Size E quoted at time of inquiry.

\* Custom Finishes may include, but are not limited to epoxy or powder coating, passivation & clear anodize

\*\* Key Operated Compression Latch requires special key to operate (one (1) key supplied with each PIAD)

\*\*\* Tool Operated Compression Latch requires a 5/32" hex head tool to operate (not supplied with PIAD)

## Local Sales Representative

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### IMPORTANT NOTES

All specifications subject to change without notice.

Warranty & Liability policies available upon request.