# Description

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<td>D7</td>
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<td>H12-H13</td>
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<td>Standard Weight Wide Throw</td>
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<td>I1-I4</td>
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<td>Extra Heavy Duty Bearing Pivot Hinge</td>
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<td>PV872</td>
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<td>Anchor Hinge Ball Bearing (5”/4”)*</td>
<td>Heavy Weight</td>
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<td>J6</td>
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<td>Anchor Hinge Ball Bearing (5”/7.5”)*</td>
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<td>J7</td>
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<td>Anchor Hinge Ball Bearing (5”/0”)*</td>
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<td>4.5”, 5”</td>
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<td>Full Mortise Ball Bearing Welding Butt</td>
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<td>4.5”, 5”</td>
<td>WB4B: 81</td>
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</table>

*(Anchor Leaf 1/Anchor Leaf 2)*
**BUTT HINGES** - Table 2-8A of the National Fire Protection Association (NFPA) handbook No. 80 sets forth the minimum quantity, size and weight (thickness) for swinging fire doors. Table 2-8A also stipulates that “All hinges or pivots, except spring hinges, must be of the BALL BEARING type.” As far as quantity is concerned, Table 2-8A requirements correspond exactly with the hardware industry standards (up to 60 inches in height, 2 hinges and an additional hinge for each additional 30 inches or fraction thereof) and should be followed in all cases. Table 2-8A calls for size 4-1/2 inch hinges to be used on full sized doors with mortise or surface type hinge application. Good hardware practice would require 5 inch hinges to be used on doors over 3 feet 6 inch in width. The difference between 5 and 4-1/2 inch hinges, in terms of bearing surfaces, pin sizes, fastenings and weight of leaf metal, is vast. A knowledgeable hardware consultant will insist upon the larger size where wide, heavy doors are being used.

Thickness or gauge of hinge metal, more commonly referred to as weight, varies with the door size. Standard weight hinges in size 4-1/2 inch have leaves of 0.134 thickness, while heavy weight hinges in the same size have leaves of 0.180 thickness. Table 2-8A (below) allows the former to be used on doors up to 4’0x8’0x1-3/4” in size, while calling for the heavy on doors up to 4’0x10’0x1-3/4”. Since these two requirements overlap, the practical effect is to permit standard weight hinges to be used on all size doors to and including 4’0x8’0x1-3/4”, and to call for the heavy weight hinge only on larger doors.

Here again good practice calls for a somewhat different rule. If 4-1/2 inch hinges are being used, heavy weight should be provided on all door widths greater than 3’0. For door size exceeding 3’6x8’0x1-3/4” hinges should be 5 inches high on 0.190 (heavy weight) thick.

Steel hinges of the olive knuckle type may be used on labeled doors when permitted in the door manufacturer’s procedure. Observe hinge and door size limitations as listed in Table 2-8A.

**NOTE:** All hinges or pivots, except spring hinges, must be of the ball bearing type.

Doors up to 60 inches in height shall be provided with two hinges and an additional hinge for each additional 30 inches of height or fraction thereof.
APPLICATION DETERMINES KIND OF HINGE
Use Three Hinges To A Door - Use Anti-Friction Bearing Hinges On Doors Equipped With Closers

TO SELECT THE PROPER HINGE
THE FOLLOWING FACTORS SHOULD BE CONSIDERED

• The material of the door and frame determine method of application, i.e. mortised, surface mounted, half surface mounted, or half mortised.

• The size, thickness and weight of the door - Wider doors, put more strain on hinges, so taller hinges should be used. Thicker doors require wider hinges. Heavy doors require taller, heavier gauge, narrower hinges.

• Clearance of the trim when a door swings 180° effects the width of the hinge.

• The frequency of use and the abuse the door will be subjected to effect hinge choice... heavy duty ball bearing, average ball bearing or non-ball bearing hinges. It also effects the need for additional hardware such as closers, panic devices, etc.
HOW TO SELECT THE PROPER WEIGHT AND BEARING STRUCTURE

There are three groups of hinges:
- Standard Weight - Plain Bearing
- Standard Weight - Ball Bearing
- Heavy Weight - Ball Bearing

To determine the weight and structure of the hinge you must consider:
1. Frequency of use
2. Weight of door
3. Weight of door hardware

Ball bearing hinges should always be used on doors where door closers are applied and in all fire rated openings. Heavy weight ball bearing hinges should be used on heavy doors and high frequency use doors.

HOW TO DETERMINE THE FREQUENCY OF USE

Type of Building/Use

Frequency Of Use General Guidelines

<table>
<thead>
<tr>
<th>Type of Building/Use</th>
<th>Expected Frequency</th>
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<td>High Frequency</td>
<td>Daily</td>
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<tr>
<td>Large Department Store Entrance</td>
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<tr>
<td>Large Office Building Entrance</td>
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<tr>
<td>Hospital Corridor and Surgical Doors</td>
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<td>School Entrance</td>
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<td>Office Space</td>
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<td>Medium Frequency</td>
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<td>Hospital Consultation Rooms</td>
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<td>School Corridor</td>
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<tr>
<td>Office Building Corridor</td>
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HOW TO DETERMINE THE DOOR WEIGHT

Estimated Door Weights in Pounds Per Sq. Foot

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<th>1-3/8”</th>
<th>1-3/4”</th>
<th>2”</th>
<th>2-1/4”</th>
<th>2-1/2”</th>
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<td>6.0</td>
<td>6.8</td>
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<td>5.0</td>
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<td>5.8</td>
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<td>Hollow Metal 15 gauge</td>
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<td>6.5</td>
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<tr>
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<td>Hollow Metal 13 gauge</td>
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<td>8.7</td>
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<tr>
<td>Hollow Metal 12 gauge</td>
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<td>Hollow Metal 10 gauge</td>
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<tr>
<td>1-3/4” Wood + 1/16” Lead</td>
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<td>8.7</td>
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<td>1-3/4” Wood + 1/8” Lead</td>
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The above table represents relative weights of most common doors and is intended to be a guide or approximation.

HOW TO SELECT THE PROPER HINGE SIZE

1. Door Height
2. Door Weight
3. Door Width
4. Door Thickness
5. Trim Dimension Required

First find the height of hinge. The following chart is only an example. Job situation will vary.

<table>
<thead>
<tr>
<th>Thickness of Door</th>
<th>Width of Door</th>
<th>Height of Hinge</th>
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<tbody>
<tr>
<td>INCHES</td>
<td>INCHES</td>
<td>INCHES</td>
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<tr>
<td>1-3/8” Door</td>
<td>1-3/8” Door</td>
<td>3-1/2”</td>
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<tr>
<td>1-3/4” Door</td>
<td>1-3/4” Door</td>
<td>4”</td>
</tr>
<tr>
<td>2”</td>
<td>2”</td>
<td>4-1/2”</td>
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<tr>
<td>2 1/4” 2-1/2” Door</td>
<td>2”</td>
<td>5”</td>
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<tr>
<td>2 1/4” 2-1/2” Door</td>
<td>2”</td>
<td>5”</td>
</tr>
<tr>
<td>3”</td>
<td>3”</td>
<td>6” Heavy Weight</td>
</tr>
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</table>

LOCATION OF HINGES ON DOORS

- Top hinge 5” from jamb rabbet to top edge of barrel.
- Bottom hinge 10” from bottom edge of barrel to finished floor.
- Third hinge centered between top and bottom hinges.

The above is U.S. Standards procedure.

* Certain western states use as standard 7” from top and 11” from the bottom.

HOW TO DETERMINE THE NUMBER OF HINGES PER DOOR

- As a general rule you will want to use 1 hinge per every 30” of door or fraction thereof.
- Referring to door height:

<table>
<thead>
<tr>
<th>Door Height</th>
<th>Number of Hinges</th>
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<tbody>
<tr>
<td>Under 60”</td>
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<tr>
<td>60” to 90”</td>
<td>3</td>
</tr>
<tr>
<td>Over 90”</td>
<td>4</td>
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</tbody>
</table>

HOW TO DETERMINE THE HINGE WIDTH

You need:
1. Door Thickness
2. Backset
3. Clearance required

Wood Door x Wood Frame: The door would be flush with the casing or face of the frame.

Wood or Metal Door x Hollow Metal Frame: The door inset would be 1/8”.

Doors up to 2-1/4” Thick: The hinge is set back 1/4” from the back face of the door.

Doors over 2-1/4” Thick: The hinge is set back 3/8” from the back face of the door.

Once these dimensions are known you can apply the following formula:

Take the door thickness, minus the backset, times two, plus the clearance required plus inset (if any). If the size is not standard move up to the next larger hinge width. The first dimension of a full Mortise hinge is the hinge height. The second dimension is the hinge width when both leaves are in the open position. It may be necessary to extend the width of the hinge to clear trim or wall conditions.
HAND OF DOORS
All doors are handed - right or left. The following illustration indicated clearly this “handling” as it is understood within the hardware industry.

REGULAR DOORS OPENING IN

- **OUTSIDE**
  - Left hand door takes left hand hinges
  - Right hand door takes right hand hinges

REVERSED DOORS OPENING OUT
Including Bookcase, Closet and Cupboard Doors

- **OUTSIDE**
  - Left hand reverse door takes right hand hinges
  - Right hand reverse door takes left hand hinges

DOUBLE ACTING

When standing on outside of door and hinges are on the right, it is right hand. When hinges are on the left, it is left hand.

A double acting door opens from you and toward you, therefore is not called reverse like a single acting door. When specifying two finishes on the same hinge, stand in the doorway facing the jamb to determine the right or left side.

HINGE SWAGING
Swaging is the slight offset in the hinge leaves which permits them to close to parallel position as the door closes.

- **HINGE OPENED**
- **HINGE CLOSED**

All hinges for full mortise application are swaged. Normal swaging on standard and heavy gauge hinges provides a clearance of 1/16” when leaves are parallel. Full mortise swing clear hinges have a clearance of 3/32”.

- **HINGE OPENED**
- **HINGE CLOSED**

Hinges for full surface application are not swaged. Blank hinges are for full surface welded application and are always furnished “flat back” unless otherwise specified.

- **HINGE OPENED**
- **HINGE CLOSED**

HINGE WITH ONE LEAF SWAGED
When only one leaf is swaged, the non-swaged leaf is approximately 1/16” shorter. Exception—on template hinges for metal door and metal frame application both leaves must be the same width, so specify: “Leaves must be equal.” These hinges also require right or left hand specification.

- **HINGE OPENED**
- **HINGE CLOSED**

HINGE WITH ONE LEAF SWAGED FLAT
When only one leaf is swaged, the non-swaged leaf is approximately 3/32” shorter. Exception—on template hinges for metal door and metal frame application both leaves must be the same width, so specify: “Leaves must be equal.” These hinges are handed requiring right or left hand specification.

TEMPLATE HINGES
All PBB template hinges are made to close tolerances and conform to the America National Standard Institutes (ANSI) specifications wherever applicable.

Template hinges will exactly fit the cutout and screw hole location in hollow metal doors and hollow metal frames made to similar template.

Each hinge is carefully inspected and held within close commercial tolerances.

We recommend the use of blueprint templates, which are available on all sizes, when physical sample of a template hinge is not required. These are drawings which show actual measurements, gauge of metal, location, and size. (Note: Some template drawings are not to scale).

Use of physical samples to make cutouts on metal doors or frames is not recommended.
PBB has developed the exclusive Concealed Bearing hinge specifically for those who seek the ultimate in slimline hinges. The Concealed Bearing hinge combines classic simplicity of style with precision-crafted durability. The three-knuckle hinge, with nested concealed friction free micro smooth brushings was designed for a precise new fitting that eliminates barrel bulge.

**CARE IN MAINTENANCE**

If a rust-resistant base is desired. PBB hinges are either zinc plated or copper plated prior to the final finishing.

Plated finishes are all well lacquered to retard oxidation of the finish.

For a BHMA specification category, a PBB hinge will meet or exceed BHMA requirements - gauge of metal, hinge size supporting specified door weight, type of finish. We are under constant testing and evaluation with both Warnock Hersey and Underwriters Laboratories.

Refinements are included such as special milling of the knuckles on all bearing hinges for proper seating of the bearing surface.

The streamline design of PBB’s five-knuckle and concealed bearing series, meets the demands of today’s architectural standards without sacrificing quality, strength, serviceability, or price.

**LIFE-TIME BEARINGS**

PBB’s ball bearing hinges are available with two bearings or four bearings. Half of the Bearing unit supports the vertical load. One bearing of a two-bearing hinge carries the vertical load, and only two bearings of a four bearing hinge carry the load.

Four-bearing hinges are needed to provide continued floating silent service for the heavy doors or doors receiving frequent use. PBB’s complete line of slim, modern hinges is designed to match the needs of contemporary architecture. These fine precision crafted hinges represent our dedication to progress and our pledge to constantly provide the best in quality and style.

**PRECISION BALL BEARINGS**

**BALL BEARING ASSEMBLIES HAVE BEEN:**

- Designed to conform to the circumference of the barrel, thus giving a clean, slim appearance to the hinge
- Engineered to dependable, permanent service

**FULL COUNT HIGH CARBON ALLOY STEEL BALLS.**

**KNUCKLE RIDES ON**

**PRECISION HARDENED STEEL TOP RACEWAY.**

**THREE KNUCKLE SEPARATION OF BALL RACES PROVIDES MAXIMUM THRUST SUPPORT.**

**ONE PIECE CUP JACKET SEALS AND PROTECTS BALLS AND RACES FROM DIRT AND MOISTURE.**

**PRECISION HARDENED STEEL BOTTOM RACEWAY CARRIES VERTICAL THRUST.**

**FOUR POINTS OF SHEAR STRENGTH ON FULL SIZE PIN.**

**PERMANENTLY LUBRICATED WITH NON-FIUID GREASE.**

**THE COMPLETE LINE OF PBB’S PRECISION HINGES IS MANUFACTURED IN COMPLIANCE WITH ALL APPLICABLE FEDERAL AND ANSI SPECIFICATIONS.**

**ELECTRIC**

Gauges available: .130, .134, .146, .180, .190

Electric hinges allow electrical current and signals to pass from jamb through the hinge into the door in an invisible manner. Available in ball bearing type only. (For options available see below, under extras).

**EXTRAS**

RC - 1/4” Radius Corner
RC5 - 5/8” Radius Corner
NRP - Non Removable Pin
MAX - Maximum Security Stud w/NRP
H - Hospital Tip
Z - Rust Resistant Base
BP - Brass Pin
SP - Stainless Steel Pin
BT - Ball Tip
ST - Steeple Tip
UT - Urn Tip
NH - No Holes

**ELECTRIC HINGES**

EL - Electric Through Wire
EM - Electric Monitor
EMW - Electric Monitor w/ Through Wire

**BASE MATERIALS**

**STEEL**

PBB Wrought Steel is durable yet corrosive. Best if used on interior applications where temp and humidity are controlled. Steel ball bearing hinges may be used on fire rated openings.

**BRASS**

PBB Wrought Brass is rust resistant and decorative. Apply brass hinges where appearance is of great concern yet humidity is also a factor. Brass hinges may not be used on fire rated openings.

**STAINLESS STEEL**

PBB Stainless Steel AISI Types 302/304. Rust resistant, durable and decorative. Apply stainless steel hinges on highly corrosive areas such as chemical storage, seacoast, or industrial areas where acids or atmospheric conditions exist. Stainless steel ball bearing hinges may be used on fire rated openings.
<table>
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<th>TYPE</th>
<th>PBB</th>
<th>ANSI</th>
<th>HAGER</th>
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<tr>
<td>US9</td>
<td>Bright Bronze</td>
<td>637</td>
<td>637</td>
<td>611</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>US10</td>
<td>Dull Bronze</td>
<td>639</td>
<td>639</td>
<td>612</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>US10B</td>
<td>Antique Bronze, Oiled</td>
<td>613</td>
<td>-</td>
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<tr>
<td>US10B</td>
<td>Dark Antique Bronze/Oiled</td>
<td>813</td>
<td>640</td>
<td>-</td>
<td>613</td>
<td>-</td>
</tr>
<tr>
<td>US10A</td>
<td>Antique Bronze, Lacquered</td>
<td>641</td>
<td>641</td>
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</tr>
<tr>
<td>US11</td>
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<td>-</td>
<td>643</td>
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</tr>
<tr>
<td>US14</td>
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<td>645</td>
<td>645</td>
<td>618</td>
<td>618</td>
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<tr>
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<td>647</td>
<td>647</td>
<td>620</td>
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<td>Nickel Plated, Blked, Relv</td>
<td>648</td>
<td>648</td>
<td>621</td>
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<td>US20A</td>
<td>Statuary Bronze, Dark</td>
<td>-</td>
<td>650</td>
<td>-</td>
<td>624</td>
<td>-</td>
</tr>
<tr>
<td>US26</td>
<td>Bright Chromium</td>
<td>651</td>
<td>651</td>
<td>625</td>
<td>625</td>
<td>-</td>
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<tr>
<td>US26D</td>
<td>Dull Chromium</td>
<td>652</td>
<td>652</td>
<td>626</td>
<td>626</td>
<td>-</td>
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<td>US28</td>
<td>Anodized Dull Aluminum</td>
<td>628</td>
<td>-</td>
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<td>628</td>
</tr>
<tr>
<td>US32</td>
<td>Polished Stainless Steel</td>
<td>629</td>
<td>-</td>
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<td>-</td>
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<tr>
<td>US32D</td>
<td>Dull Stainless Steel</td>
<td>630</td>
<td>-</td>
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<tr>
<td></td>
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<td></td>
<td>Aluminum Lacquer</td>
<td>-</td>
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<tr>
<td></td>
<td>Zinc Plated-Buffed Bright</td>
<td>-</td>
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<td>Zinc Plated-Dull</td>
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<tr>
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<td>CO-Lacquer, Light</td>
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<td>CO-Lacquer, Medium</td>
<td>694</td>
<td>-</td>
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<td>CO-Lacquer, Dark</td>
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<td>-</td>
<td>-</td>
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<td>-</td>
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<tr>
<td></td>
<td>CO-Lacquer, Black</td>
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<td>Anodized, Dark Aluminum</td>
<td>710</td>
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<tr>
<td></td>
<td>Brown Lacquer</td>
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<td></td>
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<td></td>
<td>-</td>
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<tr>
<td></td>
<td>D. Brz, Powder Coat</td>
<td>810</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
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<tr>
<td></td>
<td>Off-White</td>
<td>830</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>14P</td>
</tr>
<tr>
<td></td>
<td>Off-White, Powder Coat</td>
<td>831</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td></td>
<td>Dull Gold</td>
<td>887</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td></td>
<td>Bright Gold</td>
<td>888</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
</tr>
</tbody>
</table>
This notice is in response to the use of several of our products to help achieve Leadership in Energy & Environmental Design (LEED) certification. It references the LEED Green Building Rating System for new Construction & Major Renovations (LEED-NC) as published by the United States Green Building Council (USGBC). The following table outlines different materials for PBB Commercial hinges support MR Credit 4.1, 4.2, and MR Credit 5.1:

<table>
<thead>
<tr>
<th>Brand</th>
<th>Product</th>
<th>Post Consumer Recycled Content</th>
<th>Post Industrial Recycled Content</th>
<th>Total LEED Recycled Content Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>PBB</td>
<td>Barrel Type Steel Continuous Hinges</td>
<td>15%</td>
<td>10</td>
<td>20%</td>
</tr>
<tr>
<td>PBB</td>
<td>Barrel Type Stainless Steel Continuous Hinges</td>
<td>15%</td>
<td>10</td>
<td>20%</td>
</tr>
</tbody>
</table>

The total is calculated using 100% of Post Consumer and 50% of Post Industrial.

**Recycled content defined in accordance with industry standards.

**Pre-consumer recycled content refers to waste material that is diverted from the waste stream and immediately placed back into the production cycle.

<table>
<thead>
<tr>
<th>Brand</th>
<th>Product</th>
<th>Post Consumer Recycled Content*</th>
<th>Pre-Consumer Recycled Content**</th>
<th>Total LEED Recycled Content Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>PBB</td>
<td>Commercial Steel Spring Hinges</td>
<td>15%</td>
<td>0</td>
<td>20%</td>
</tr>
<tr>
<td>PBB</td>
<td>Commercial Stainless Steel Spring Hinges</td>
<td>15%</td>
<td>0</td>
<td>20%</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Brand</th>
<th>Product</th>
<th>Post Consumer Recycled Content</th>
<th>Pre-Consumer Recycled Content++</th>
<th>Total LEED Recycled Content Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>PBB</td>
<td>Commercial Steel Hinges</td>
<td>15%</td>
<td>0</td>
<td>15%</td>
</tr>
<tr>
<td>PBB</td>
<td>Commercial Stainless Steel Hinges</td>
<td>25%</td>
<td>0</td>
<td>25%</td>
</tr>
<tr>
<td>PBB</td>
<td>Commercial Brass and Bronze Hinges</td>
<td>35%</td>
<td>0</td>
<td>35%</td>
</tr>
</tbody>
</table>

**Recycled content defined in accordance with industry standards.

**Pre-consumer recycled content refers to waste material that is diverted from the waste stream and immediately placed back into the production cycle.

+ Waste materials generated by the production of PBB hinges are collected and shipped off site where it then reenters the recycle stream.

**LEED Category: Material and Resources (MR)**

**MR Credit(s) 4.1 and 4.2 Recycled Content: Post Industrial**
Product contains post industrial content as defined by Guides for the Use of Environmental Marketing Claims, 16 CFR 260.7 (e) (available at www.ftc.gov/bcp/gmrule/guides980427.htm) and therefore qualify as credit.

**MR Credit(s) 4.1 and 4.2 Recycled Content: Post Consumer**
Product contains post industrial content as defined by Guides for the Use of Environmental Marketing Claims, 16 CFR 260.7 (e) (available at www.ftc.gov/bcp/gmrule/guides980427.htm) and therefore qualify as credit.

**MR Credit 5.1 Regional Materials: Manufactured Regionally**
The hinges are manufactured by PBB, Inc. in Yangzhou, China. If this facility is less than 500 miles from the project site, they qualify for credit.
# Explanation of Numbering Systems & Symbols

**FIRST TWO/FOUR CHARACTER DENOTES STYLE/FUNCTION OF HINGE:**

<table>
<thead>
<tr>
<th>Code</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>2B</td>
<td>2 Knuckle Ball Bearing</td>
</tr>
<tr>
<td>2H</td>
<td>2 Knuckle Ball Bearing Heavy Weight</td>
</tr>
<tr>
<td>2P</td>
<td>2 Knuckle Plain Bearing</td>
</tr>
<tr>
<td>4B</td>
<td>4 Ball Bearing Heavy Weight</td>
</tr>
<tr>
<td>4C</td>
<td>Concealed Bearing Heavy Weight</td>
</tr>
<tr>
<td>4F</td>
<td>5 Knuckle Concealed Heavy Weight</td>
</tr>
<tr>
<td>PB</td>
<td>Plain Bearing</td>
</tr>
<tr>
<td>BB</td>
<td>Ball Bearing</td>
</tr>
<tr>
<td>CP</td>
<td>Concealed Plain Bearing</td>
</tr>
<tr>
<td>CB</td>
<td>Concealed Bearing</td>
</tr>
<tr>
<td>CH</td>
<td>Continuous Heavy Weight</td>
</tr>
<tr>
<td>FB</td>
<td>5 Knuckle Concealed Bearing</td>
</tr>
<tr>
<td>IT</td>
<td>3/16&quot; Slip-In Insert</td>
</tr>
<tr>
<td>IF</td>
<td>5/16&quot; Slip-In Insert</td>
</tr>
<tr>
<td>PF</td>
<td>Concealed Bearing Heavy Weight Prison Hinge</td>
</tr>
<tr>
<td>RB</td>
<td>Raised Barrel</td>
</tr>
<tr>
<td>RS</td>
<td>Residential Spring Hinge</td>
</tr>
<tr>
<td>RP</td>
<td>Residential Plain Bearing</td>
</tr>
<tr>
<td>SP</td>
<td>Spring Hinge</td>
</tr>
<tr>
<td>SC4B</td>
<td>Swing Clear Heavy Weight</td>
</tr>
<tr>
<td>SCPB</td>
<td>Swing Clear Plain Bearing</td>
</tr>
<tr>
<td>SCBB</td>
<td>Swing Clear Ball Bearing</td>
</tr>
<tr>
<td>WT4B</td>
<td>Wide Throw Heavy Weight</td>
</tr>
<tr>
<td>WTPB</td>
<td>Wide Throw Plain Bearing</td>
</tr>
<tr>
<td>WTBB</td>
<td>Wide Throw Ball Bearing</td>
</tr>
<tr>
<td>WB</td>
<td>Welding Butt</td>
</tr>
</tbody>
</table>

**THIRD/FIFTH CHARACTER DENOTES BASE MATERIAL USED:**

<table>
<thead>
<tr>
<th>Code</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>8</td>
<td>Wrought Steel</td>
</tr>
<tr>
<td>5</td>
<td>Stainless Steel</td>
</tr>
<tr>
<td>3</td>
<td>Aluminum</td>
</tr>
<tr>
<td>2</td>
<td>Wrought Brass</td>
</tr>
</tbody>
</table>

**FOURTH/SIXTH CHARACTER DENOTES TYPE OF HINGE:**

<table>
<thead>
<tr>
<th>Code</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Full Mortise</td>
</tr>
<tr>
<td>2</td>
<td>Half Mortise</td>
</tr>
<tr>
<td>3</td>
<td>Full Surface</td>
</tr>
<tr>
<td>4</td>
<td>Half Surface</td>
</tr>
</tbody>
</table>

**Examples:**

- **Example 1 = PB81**  
  - PB = Plain Bearing  
  - 8 = Steel  
  - 1 = Full Mortise

- **Example 2 = 4B24**  
  - 4B = Four Bearing Heavy Weight  
  - 2 = Brass  
  - 4 = Half Surface

- **Example 3 = SP51**  
  - SP = Spring Hinge  
  - 5 = Stainless Steel  
  - 1 = Full Mortise

- **Example 4 = SCB83**  
  - SC4B = Swing Clear Heavy Weight  
  - 8 = Steel  
  - 3 = Full Surface
PBB CERTIFIED COMPLIANCE TO ANSI/BHMA PRODUCT STANDARDS

MATERIAL CERTIFICATIONS
Material used in the manufacturing of the PBB hinges are certified first quality, meeting ANSI requirements A156.18, Section 4.1. The metals used in the making of PBB hinges are Wrought Steel, Stainless Steel and Wrought Brass. Each of the base materials has a different quality about them, please read our selection of materials on page 5 of this catalog.

FINISH CERTIFICATIONS
Finishes are in strict accordance with ANSI standards. Finish testing has been completed satisfactorily for USP - prime coat, US26D - satin chrome, US10A - satin bronze, oxidized & lacquered, US-3 - polish brass plated & lacquered and stainless steel.

CYCLE TESTING CERTIFICATION
Cycle testing has been completed successfully in accordance with ANSI/BHMA A156.1-2000 for:

Grade 1, Heavy Weight Ball Bearing Hinge for 2,500,000 cycles
Grade 2, Ball Bearing Hinge for 1,500,000 cycles
Grade 3, Plain Bearing Hinge for 350,000 cycles

Spring hinge door closer Model SP81 and SP51 was subjected to and passed a 1,000,000 cycle test in accordance with Underwriter Laboratories for door holder closers, with or without integral smoke detectors. The spring hinge has been granted the listing mark of Underwriter Laboratories, Inc. Number UL 49S6 and is listed by U.L. to Grade 1. Copies of the above test results are on file.

PBB’s product is under constant testing with Warnock Hersey, ITS and Underwriters Laboratories. Copies of test results are on file.
Security Hinge (Suffix S)
Maximum security offered to prevent slipping of leaves as stud on one leaf projects into hole in opposite leaf when hinge is in closed position. Full mortise hinges only
Non-Removable pin feature included. This feature is intended as a deterrent only.

Round Corners (Suffix R=1/4", R2=5/32", R5=5/8")
Round Corners-5/8", 1/4", 5/32" radius corners available on all hinges
Please specify size when ordering product

Non Removable Pin (Suffix N)
Set screw tapped into barrel and set against groove in pin. Set screw inaccessible when the door is in closed position. N.R.P. is intended as a deterrent only and not considered for high security applications.

Hospital Tip (Suffix H)
Hospital tip hinges have radius knuckle ends which are sloped to prevent the hanging or mounting of objects on them.

Shear Resistance Stud (Suffix SS)
A 7/16" diameter stud that projects from the back of each hinge leaf which slips into a hole in the reinforcing plate of both the frame and the door. This prevents hinge removal if the screws have been sheared off from abuse of hinge battering. This feature is intended as a deterrent only.
Ball Tips
- Standard Weight Tips-BT45
- Heavy Weight Tips-BT45EH

Steeple Tips
- Standard Weight Tips-ST45
- Heavy Weight Tips-ST45EH

Urn Tips
- Standard Weight Tips-UT45
- Heavy Weight Tips-UT45EH

Classic Tips
- Standard Weight Tips-CT45
- Heavy Weight Tips-CT45EH

Globe Tips
- Standard Weight Tips-GT45
- Heavy Weight Tips-GT45EH

Queen Tips
- Standard Weight Tips-QT45
- Heavy Weight Tips-QT45EH

**NOTE:** Conversion tips and pins for architectural grades:
- **Standard Weight** - 3-1/2”, 4”, 4-1/2”, 5”
- **Heavy Weight** - 4-1/2”, 5”

ALL TIPS AVAILABLE IN ANY FINISH.
FILTER MORTISE TEMPLATE PLAIN BEARING

GENERAL PRODUCT INFORMATION: PBB, Inc. template hinges are manufactured to close tolerances and meet all specifications and requirements set by the American National Standards Institute (ANSI).

HINGE SWAGING: A standard swaging of our standard weight full mortise hinge when closed to parallel position provides a 1/16” clearance between leaves.

MATERIAL GAUGE:
- 0.092 ± 0.005 for 3” x 3”
- 0.092 ± 0.005 for 3 1/2” x 3 1/2”
- 0.098 ± 0.005 for 4” x 4”

OTHER SPECIFICATIONS:
- Height of hinge:
  - 3.00 ± 0.010 for 3” x 3”
  - 3.50 ± 0.010 for 3 1/2” x 3 1/2”
  - 4.00 ± 0.010 for 4” x 4”
- Width:
  - 3.00 ± 0.010 for 3” x 3”
  - 3.50 ± 0.010 for 3 1/2” x 3 1/2”
  - 4.00 ± 0.010 for 4” x 4”

3” STANDARD SCREW SIZE
- PHWS - 9 x 3/4”

3 1/2” STANDARD SCREW SIZE
- PHMS - 10-24 x 1/2”
- PHWS - 10 x 1”

4” STANDARD SCREW SIZE
- PHMS - 10-24 x 1/2”
- PHWS - 10 x 1”

PACKAGING INFORMATION:

<table>
<thead>
<tr>
<th>Hinge Size</th>
<th>Hinge per plastic bag</th>
<th>Hinges Qty Per Unit Carton</th>
<th>Screw Pack Per Unit Carton</th>
<th>Hinges Per Master Shipping Carton</th>
<th>Bulk Pack Pcs. Per Carton</th>
</tr>
</thead>
<tbody>
<tr>
<td>3.0” x 3.0”</td>
<td>1</td>
<td>2</td>
<td>1</td>
<td>86</td>
<td>100</td>
</tr>
<tr>
<td>3.5” x 3.5”</td>
<td>1</td>
<td>2</td>
<td>1</td>
<td>86</td>
<td>100</td>
</tr>
<tr>
<td>4.0” x 4.0”</td>
<td>3</td>
<td>2</td>
<td>1</td>
<td>84</td>
<td>80</td>
</tr>
</tbody>
</table>
GENERAL PRODUCT INFORMATION: PBB, Inc. template hinges are manufactured to close tolerances and meet all specifications and requirements set by the American National Standards Institute (ANSI).

HINGE SWAGING: A standard swaging of our standard weight full mortise hinge when closed to parallel position provides a 1/16” clearance between leaves.

MATERIAL GAUGE:
- .092 ± .005 for 3" x 3"
- .092 ± .005 for 3 1/2" x 3 1/2"
- .098 ± .005 for 4" x 4"

OTHER SPECIFICATIONS:
- Height of hinge:
  - 3.00 ± .010 for 3" x 3"
  - 3.50 ± .010 for 3 1/2" x 3 1/2"
  - 4.00 ± .010 for 4" x 4"
- Width:
  - 3.00 ± .010 for 3" x 3"
  - 3.50 ± .010 for 3 1/2" x 3 1/2"
  - 4.00 ± .010 for 4" x 4"

PACKAGING INFORMATION:

<table>
<thead>
<tr>
<th>Hinge Size</th>
<th>Hinge per plastic bag</th>
<th>Hinges Qty Per Unit Carton</th>
<th>Screw Pack Per Unit Carton</th>
<th>Hinges Per Master Shipping Carton</th>
<th>Bulk Pack Pcs. Per Carton</th>
</tr>
</thead>
<tbody>
<tr>
<td>3.0&quot; x 3.0&quot;</td>
<td>1</td>
<td>2</td>
<td>86</td>
<td>100</td>
<td></td>
</tr>
<tr>
<td>3.5&quot; x 3.5&quot;</td>
<td>1</td>
<td>2</td>
<td>86</td>
<td>100</td>
<td></td>
</tr>
<tr>
<td>4.0&quot; x 4.0&quot;</td>
<td>3</td>
<td>1</td>
<td>84</td>
<td>80</td>
<td></td>
</tr>
</tbody>
</table>

3" STANDARD SCREW SIZE
- PHWS - 9 x 3/4"

3 1/2" STANDARD SCREW SIZE
- PHMS - 10-24 x 1/2"
- PHWS - 10 x 1"

4" STANDARD SCREW SIZE
- PHMS - 10-24 x 1/2"
- PHWS - 10 x 1"
PB81 (ANSI A8133) Steel - Polished and Plated or Bonderized and Prime Coated for Painting.

PB21 (ANSI A2133) Brass - Polished and Plated

PB51 (ANSI A5133) Stainless Steel - Polished and Satin Finish

• For use on medium weight doors or doors requiring low frequency service.
• Not for use with door closers.
• For hospital type, add HT to suffix of part number.
• 3", 3-1/2", 4" available in square, 5/8" and 1/4" Radius Round Corners.
• All hinges are ANSI template.

GENERAL PRODUCT INFORMATION: PBB, Inc. template hinges are manufactured to close tolerances and meet all specifications and requirements set by the American National Standards Institute (ANSI).

HINGE SWAGING: A standard swaging of our standard weight full mortise hinge when closed to parallel position provides a 1/16" clearance between leaves.

MATERIAL GAUGE:
.092 ± .005 for 3" x 3"
.123 ± .005 for 3-1/2" x 3-1/2"
.130 ± .005 for 4 1/2"

OTHER SPECIFICATIONS:
Height of hinge:

<table>
<thead>
<tr>
<th>Height</th>
<th>Tolerance</th>
</tr>
</thead>
<tbody>
<tr>
<td>3.00</td>
<td>± .000</td>
</tr>
<tr>
<td>3.50</td>
<td>± .015</td>
</tr>
<tr>
<td>4.00</td>
<td>± .015</td>
</tr>
</tbody>
</table>

Width:

<table>
<thead>
<tr>
<th>Width</th>
<th>Tolerance</th>
</tr>
</thead>
<tbody>
<tr>
<td>3.00</td>
<td>± .015</td>
</tr>
<tr>
<td>3.50</td>
<td>± .015</td>
</tr>
<tr>
<td>4.00</td>
<td>± .015</td>
</tr>
</tbody>
</table>

Template screw hole locations for all 3-1/2 x 3-1/2 Full Mortise Template butts are punched to Commercial Standard CS9-65.

PACKAGING INFORMATION:
One hinge per plastic bag, 3 hinges and 1 screw pack per unit carton.
16 unit cartons or 48 hinges per master shipping carton.
1 screw pack includes all machine screws (24), and 1/2 wood screws (12). ATMS & AWS also available.
For 3-1/2 x 3-1/2, 1 screw pack includes (18) machine screws and (18) wood screws.
*Non-template
PB81 (ANSI A8133) Steel - Polished and Plated or Bonderized and Prime Coated for Painting.

PB21 (ANSI A2133) Brass - Polished and Plated

PB51 (ANSI A5133) Stainless Steel - Polished and Satin Finish

• For use on medium weight doors or doors requiring low frequency service.
• Not for use with door closer.
• For hospital type, add HT to suffix of part number.
• All hinges are ANSI template.

GENERAL PRODUCT INFORMATION: PBB, Inc. template hinges are manufactured to close tolerances and meet all specifications and requirements set by the American National Standards Institute (ANSI).

HINGE SWAGING: A standard swaging of our standard weight full mortise hinge when closed to parallel position provides a 1/16” clearance between leaves.

MATERIAL GAUGE:
.134 ± .005 for 4-1/2” x 4”
.134 ± .005 for 4-1/2” x 4-1/2”

OTHER SPECIFICATIONS:
Height of hinge:
4.50 ± 0.005 for 4-1/2” x 4”

Width:
4.00 ± 0.015 for 4-1/2” x 4”
4.50 ± 0.015 for 4-1/2” x 4-1/2”

PACKAGING INFORMATION:
One hinge per plastic bag, 3 hinges and 1 screw pack per unit carton.
16 unit carton or 48 hinges per master shipping carton.
1 screw pack includes all machine screws (24), and 1/2 wood screws (12). ATMS & AWS also available.

4-1/2” STANDARD SCREW SIZE

<p>| | |</p>
<table>
<thead>
<tr>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>FHMS</td>
<td>12-24 x 1/2”</td>
</tr>
<tr>
<td>FHWS</td>
<td>12 x 1-1/4”</td>
</tr>
</tbody>
</table>
PB81  (ANSI A8133)
Steel-Polished and Plated or Bonderized and Prime Coated for Painting.

PB21  (ANSI A2133)
Brass-Polished and Plated

PB51  (ANSI A5133)
Stainless Steel-Polished and Satin Finish
-For use on medium weight doors or doors requiring low frequency service.
-Not for use with door closers.
-For hospital type, add HT to suffix of part number.
-All hinges are ANSI template.

GENERAL PRODUCT INFORMATION: PBB, Inc. template hinges are manufactured to close tolerances and meet all specifications and requirements set by the American National Standards Institute (ANSI).

HINGE SWAGING: A standard swaging of our standard weight full mortise hinge when closed to parallel position provides a 1/16” clearance between leaves.

MATERIAL GAUGE:
.146 ± .005 for 5” x 4”
.146 ± .005 for 5” x 4-1/2”
.146 ± .005 for 5” x 5”

OTHER SPECIFICATIONS:
Height of hinge:
5.00  + .000  for 5” x 4”
5.00  − .015

5.00  + .000  for 5” x 4-1/2”
5.00  − .015

Width:
4.00 ± .015 for 5” x 4”
4.50 ± .015 for 5” x 4-1/2”
5.00 ± .015 for 5” x 5”

5” STANDARD SCREW SIZE
| FHMS - 12-24 x 1/2” |
| FHWS - 12 x 1-1/4” |

PACKAGING INFORMATION:
One hinge per plastic bag, 3 hinges and 1 screw pack per unit carton.
12 unit carton or 36 hinges per master shipping carton.
1 screw pack includes all machine screws (24), and 1/2 wood screws (12). ATMS & AWS also available.
2-KNUCKLE FULL MORTISE PLAIN BEARING

STANDARD WEIGHT
4 1/2" x 4" 4 1/2" x 4 1/2"

2P81   (ANSI A8133)
Steel-Polished and Plated or Bonderized and Prime Coated for Painting.

2P51   (ANSI A5133)
Stainless Steel-Polished and Satin Finish

• For use on medium weight doors or doors requiring low frequency service.
• Not for use with door closer.
• Secure: Door cannot be lifted off when in closed position.
• Vertical load taken by nylon washer
• Hinding of hinge is required.
• All hinges are ANSI template.

GENERAL PRODUCT INFORMATION: PBB, Inc. template hinges are manufactured to close tolerances and meet all specifications and requirements set by the American National Standards Institute (ANSI).

HINGE SWAGING: A standard swaging of our standard weight full mortise hinge when closed to parallel position provides a 1/16” clearance between leaves.

OTHER SPECIFICATIONS:
Height of hinge:
4.50 + .000 – .015 for 4-1/2” x 4”

Width:
4.00 ± .015 for 4-1/2” x 4”
4.50 ± .015 for 4-1/2” x 4-1/2”

MATERIAL GAUGE:
.134 ± .005 for 4-1/2” x 4”
.134 ± .005 for 4-1/2” x 4-1/2”

PACKAGING INFORMATION:
One hinge per plastic bag, 3 hinges and 1 screw pack per unit carton.
16 unit carton or 48 hinges per master shipping carton.
1 screw pack includes all machine screws (24), and 1/2 wood screws (12). ATMS & AWS also available.

4-1/2” STANDARD SCREW SIZE

<table>
<thead>
<tr>
<th>FHMS</th>
<th>FHWS</th>
</tr>
</thead>
<tbody>
<tr>
<td>12-24 x 1/2”</td>
<td>12 x 1-1/4”</td>
</tr>
</tbody>
</table>
GENERAL PRODUCT INFORMATION: PBB, Inc. template hinges are manufactured to close tolerances and meet all specifications and requirements set by the American National Standards Institute (ANSI).

HINGE SWAGING: A standard swaging of our standard weight full mortise hinge when closed to parallel position provides a 1/16” clearance between leaves.

MATERIAL GAUGE:
- .123 ± .005 for 3-1/2” x 3-1/2”
- .130 ± .005 for 4” x 4”

OTHER SPECIFICATIONS:
- Height of hinge:
  - 3.50 ± .015 for 3-1/2” x 3-1/2”
  - 4.00 ± .015 for 4” x 4”
- Width:
  - 3.50 ± .015 for 3-1/2” x 3-1/2”
  - 4.00 ± .015 for 4” x 4”

Template screw hole locations for all 3-1/2 x 3-1/2 Full Mortise Template butts are punched to Commercial Standard CS9-65.

PACKAGING INFORMATION:
One hinge per plastic bag, 3 hinges and 1 screw pack per unit carton.
16 unit carton or 48 hinges per master shipping carton.
1 screw pack includes all machine screws (24), and 1/2 wood screws (12). ATMS & AWS also available.
For 3-1/2 x 3-1/2, 1 screw pack includes (18) machine screws and (18) wood screws.
GENERAL PRODUCT INFORMATION: PBB, Inc. template hinges are manufactured to close tolerances and meet all specifications and requirements set by the American National Standards Institute (ANSI).

HINGE SWAGING: A standard swaging of our standard weight full mortise hinge when closed to parallel position provides a 1/16” clearance between leaves.

MATERIAL GAUGE:
.134 ± .005 for 4-1/2" x 4"
.134 ± .005 for 4-1/2" x 4-1/2"

OTHER SPECIFICATIONS:

<table>
<thead>
<tr>
<th>Height of hinge:</th>
<th>± .000</th>
<th>for 4-1/2” x 4”</th>
</tr>
</thead>
<tbody>
<tr>
<td>4.50</td>
<td>-.015</td>
<td></td>
</tr>
<tr>
<td></td>
<td>+ .000</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Width:</th>
</tr>
</thead>
<tbody>
<tr>
<td>4.00 ± .015 for 4-1/2” x 4”</td>
</tr>
<tr>
<td>4.50 ± .015 for 4-1/2” x 4-1/2”</td>
</tr>
</tbody>
</table>

PACKAGING INFORMATION:
One hinge per plastic bag, 3 hinges and 1 screw pack per unit carton.
16 unit carton or 48 hinges per master shipping carton.
1 screw pack includes all machine screws (24), and 1/2 wood screws (12). ATMS & AWS also available.
BB81   (ANSI A8112)
Steel - Polished and Plated or Bonderized and Prime Coated for Painting.

BB21   (ANSI A2112)
Brass - Polished and Plated

BB51   (ANSI A5112)
Stainless Steel - Polished and Satin Finish

- For use on medium weight doors or doors requiring average frequency service.
- Ball bearing hinges must be used on doors in conjunction with door closers and on all fire rated openings.
- For hospital type, add HT to suffix of part number.
- All hinges are ANSI template.

GENERAL PRODUCT INFORMATION: PBB, Inc. template hinges are manufactured to close tolerances and meet all specifications and requirements set by the American National Standards Institute (ANSI).

HINGE SWAGING: A standard swaging of our standard weight full mortise hinge when closed to parallel position provides a 1/16" clearance between leaves.

MATERIAL GAUGE:
- .146 ± .005 for 5” x 4”
- .146 ± .005 for 5” x 4-1/2”
- .146 ± .005 for 5” x 5”

OTHER SPECIFICATIONS:
Height of hinge:
- 5.00 + .000 − .015 for 5” x 4”
- 5.00 + .000 − .015 for 5” x 4-1/2”
- 5.00 + .000 − .015 for 5” x 5”

Width:
- 4.00 ± .015 for 5” x 4”
- 4.50 ± .015 for 5” x 4-1/2”
- 5.00 ± .015 for 5” x 5”

5” STANDARD SCREW SIZE
| FHMS - 12-24 x 1/2” | FHWS - 12 x 1-1/4” |

PACKAGING INFORMATION:
One hinge per plastic bag, 3 hinges and 1 screw pack per unit carton.
12 unit carton or 36 hinges per master shipping carton.
1 screw pack includes all machine screws (24), and 1/2 wood screws (12). ATMS & AWS also available.
GENERAL PRODUCT INFORMATION: PBB, Inc. template hinges are manufactured to close tolerances and meet all specifications and requirements set by the American National Standards Institute (ANSI).

HINGE SWAGING: A standard swaging of our standard weight full mortise hinge when closed to parallel position provides a 1/16” clearance between leaves.

MATERIAL GAUGE:
- .160 ± .005 for 6” x 4-1/2”
- .160 ± .005 for 6” x 5”
- .160 ± .005 for 6” x 6”

OTHER SPECIFICATIONS:

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<thead>
<tr>
<th>Height of hinge</th>
<th>+ .000</th>
<th>- .015</th>
</tr>
</thead>
<tbody>
<tr>
<td>6.00</td>
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<td></td>
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</tbody>
</table>

<table>
<thead>
<tr>
<th>Width:</th>
<th>+ .000</th>
<th>- .015</th>
</tr>
</thead>
<tbody>
<tr>
<td>4.50</td>
<td></td>
<td>.015</td>
</tr>
<tr>
<td>5.00</td>
<td>.015</td>
<td></td>
</tr>
<tr>
<td>6.00</td>
<td>.015</td>
<td></td>
</tr>
</tbody>
</table>

6” STANDARD SCREW SIZE
- FHMS - 1/4-20 x 1/2”
- FHWS - 14 x 1-1/2”

PACKAGING INFORMATION:
One hinge per plastic bag, 3 hinges and 1 screw pack per unit carton.
8 unit carton or 24 hinges per master shipping carton.
1 screw pack with all machine screws (30), and 1 screw pack with 1/2 wood screws (15). ATMS & AWS also available.
GENERAL PRODUCT INFORMATION: PBB, Inc. template hinges are manufactured to close tolerances and meet all specifications and requirements set by the American National Standards Institute (ANSI).

HINGE SWAGING: A standard swaging of our standard weight full mortise hinge when closed to parallel position provides a 1/16” clearance between leaves.

MATERIAL GAUGE:
- .134 ± .005 for 4-1/2” x 4”
- .134 ± .005 for 4-1/2” x 4-1/2”

OTHER SPECIFICATIONS:
- Height of hinge:
  - 4.50 ± .015 for 4-1/2” x 4”
  - 4.50 ± .015 for 4-1/2” x 4-1/2”
- Width:
  - 4.00 ± .015 for 4-1/2” x 4”
  - 4.50 ± .015 for 4-1/2” x 4-1/2”

4-1/2” STANDARD SCREW SIZE
- FHMS - 12-24 x 1/2”
- FHWS - 12 x 1-1/4”

PACKAGING INFORMATION:
- One hinge per plastic bag, 3 hinges and 1 screw pack per unit carton.
- 16 unit carton or 48 hinges per master shipping carton.
- 1 screw pack includes all machine screws (24), and 1/2 wood screws (12). ATMS & AWS also available.
2B81   (ANSI A8112)
Steel-Polished and Plated or Bonderized and Prime Coated for Painting.

2B51   (ANSI A5112)
Stainless Steel-Polished and Satin Finish

• For use on medium weight doors or doors requiring average frequency service.
• Secure: Door cannot be lifted off when in closed position
• Concealed Delrin bearing takes both vertical and lateral loads
• Handing of hinge is required
• All hinges are ANSI template.

GENERAL PRODUCT INFORMATION: PBB, Inc. template hinges are manufactured to close tolerances and meet all specifications and requirements set by the American National Standards Institute (ANSI).

HINGE SWAGING: A standard swaging of our standard weight full mortise hinge when closed to parallel position provides a 1/16” clearance between leaves.

MATERIAL GAUGE:
.134 ± .005 for 4-1/2” x 4”
.134 ± .005 for 4-1/2” x 4-1/2”

OTHER SPECIFICATIONS:
Height of hinge:  
4.50 ± .015 for 4-1/2” x 4”
4.50 ± .015 for 4-1/2” x 4-1/2”

Width:
4.00 ± .015 for 4-1/2” x 4”
4.50 ± .015 for 4-1/2” x 4-1/2”

PACKAGING INFORMATION:
One hinge per plastic bag, 3 hinges and 1 screw pack per unit carton.
16 unit carton or 48 hinges per master shipping carton.
1 screw pack includes all machine screws (24), and 1/2 wood screws (12). ATMS & AWS also available.

4-1/2” STANDARD SCREW SIZE
FHMS - 12-24 x 1/2”
FHWS - 12 x 1-1/4”
GENERAL PRODUCT INFORMATION: PBB, Inc. template hinges are manufactured to close tolerances and meet all specifications and requirements set by the American National Standards Institute (ANSI).

HINGE SWAGING: A standard swaging of our standard weight full mortise hinge when closed to parallel position provides a 1/16” clearance between leaves.

MATERIAL GAUGE:
.123 ± .005 for 3-1/2” x 3-1/2”
.130 ± .005 for 4” x 4”

OTHER SPECIFICATIONS:
Height of hinge:
3.50 + .000 - .015 for 3-1/2” x 3-1/2”
4.00 + .000 - .015 for 4” x 4”

Width:
3.50 ± .015 for 3-1/2” x 3-1/2”
4.00 ± .015 for 4” x 4”

Template screw hole locations for all 3-1/2” x 3-1/2” full mortise template butts are punched to commercial standard CS9-65.

<table>
<thead>
<tr>
<th>3-1/2” STANDARD SCREW SIZE</th>
</tr>
</thead>
<tbody>
<tr>
<td>FHMS - 10-24 x 1/2”</td>
</tr>
<tr>
<td>FHWS - 10 x 1”</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>4” STANDARD SCREW SIZE</th>
</tr>
</thead>
<tbody>
<tr>
<td>FHMS - 12-24 x 1/2”</td>
</tr>
<tr>
<td>FHWS - 12 x 1-1/4”</td>
</tr>
</tbody>
</table>

PACKAGING INFORMATION:
One hinge per plastic bag, 3 hinges and 1 screw pack per unit carton.
16 unit carton or 48 hinges per master shipping carton.
1 screw pack includes all machine screws (24), and 1/2 wood screws (12). ATMS & AWS also available.
For 3-1/2” x 3-1/2”, 1 screw pack includes (18) machine screws and (18) wood screws.
GENERAL PRODUCT INFORMATION: PBB, Inc. template hinges are manufactured to close tolerances and meet all specifications and requirements set by the American National Standards Institute (ANSI).

HINGE SWAGING: A standard swaging of our standard weight full mortise hinge when closed to parallel position provides a 1/16" clearance between leaves.

MATERIAL GAUGE:
.134 ± .005 for 4-1/2" x 4"
.134 ± .005 for 4-1/2" x 4-1/2"

OTHER SPECIFICATIONS:
Height of hinge:
4.50 + .000 for 4-1/2" x 4"
4.50 + .000 for 4 1/2" x 4-1/2"

Width:
4.00 ± .015 for 4-1/2" x 4"
4.50 ± .015 for 4-1/2" x 4-1/2"

PACKAGING INFORMATION:
One hinge per plastic bag, 3 hinges and 1 screw pack per unit carton.
16 unit carton or 48 hinges per master shipping carton.
1 screw pack includes all machine screws (24), and 1/2 wood screws (12). ATMS & AWS also available.
GENERAL PRODUCT INFORMATION: PBB, Inc. template hinges are manufactured to close tolerances and meet all specifications and requirements set by the American National Standards Institute (ANSI).

HINGE SWAGING: A standard swaging of our standard weight full mortise hinge when closed to parallel position provides a 1/16” clearance between leaves.

MATERIAL GAUGE:
.146 ± .005 for 5” x 4”
.146 ± .005 for 5” x 4-1/2”
.146 ± .005 for 5” x 5”

OTHER SPECIFICATIONS:
Height of hinge:
5.00  + .000 – .015  for 5” x 4”
5.00  + .000 – .015  for 5” x 4-1/2”
5.00  + .000 – .015  for 5” x 5”

Width:
4.00 ± .015 for 5” x 4”
4.50 ± .015 for 5” x 4-1/2”
5.00 ± .015 for 5” x 5”

PACKAGING INFORMATION:
One hinge per plastic bag, 3 hinges and 1 screw pack per unit carton.
12 unit carton or 36 hinges per master shipping carton.
1 screw pack includes all machine screws (24), and 1/2 wood screws (12). ATMS & AWS also available.
GENERAL PRODUCT INFORMATION: PBB, Inc. template hinges are manufactured to close tolerances and meet all specifications and requirements set by the American National Standards Institute (ANSI).

HINGE SWAGING: A standard swaging of our standard weight full mortise hinge when closed to parallel position provides a 1/16” clearance between leaves.

MATERIAL GAUGE:
.123 ± .005 for 3-1/2” x 3-1/2”
.130 ± .005 for 4” x 4”

<table>
<thead>
<tr>
<th>3-1/2” STANDARD SCREW SIZE</th>
</tr>
</thead>
<tbody>
<tr>
<td>FHMS - 10-24 x 1/2”</td>
</tr>
<tr>
<td>FHWS - 10 x 1”</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>4” STANDARD SCREW SIZE</th>
</tr>
</thead>
<tbody>
<tr>
<td>FHMS - 12-24 x 1/2”</td>
</tr>
<tr>
<td>FHWS - 12 x 1-1/4”</td>
</tr>
</tbody>
</table>

OTHER SPECIFICATIONS:
Height of hinge:
3.50 ± .000  for 3-1/2”
4.00 ± .000  for 4”

Width:
3.50 ± .015 for 3-1/2”
4.00 ± .015 for 4”

Template screw hole locations for all 3-1/2” x 3-1/2” full mortise template butts are punched to commercial standard CS9-65.

PACKAGING INFORMATION:
One hinge per plastic bag, 3 hinges and 1 screw pack per unit carton.
16 unit carton or 48 hinges per master shipping carton.
1 screw pack includes all machine screws (24), and 1/2 wood screws (12). ATMS & AWS also available.
For 3-1/2” x 3-1/2”, 1 screw pack includes (18) machine screws and (18) wood screws.
GENERAL PRODUCT INFORMATION: PBB, Inc. template hinges are manufactured to close tolerances and meet all specifications and requirements set by the American National Standards Institute (ANSI).

HINGE SWAGING: A standard swaging of our standard weight full mortise hinge when closed to parallel position provides a 1/16” clearance between leaves.

MATERIAL GAUGE:
.134 ± .005 for 4-1/2” x 4”
.134 ± .005 for 4-1/2” x 4-1/2”

OTHER SPECIFICATIONS:
Height of hinge: 4.50 ± .015 for 4-1/2” x 4”
   + .000
   – .015
Width: 4.50 ± .015 for 4-1/2” x 4-1/2”
   + .000
   – .015

PACKAGING INFORMATION:
One hinge per plastic bag, 3 hinges and 1 screw pack per unit carton.
16 unit carton or 48 hinges per master shipping carton.
1 screw pack includes all machine screws (24), and 1/2 wood screws (12). ATMS & AWS also available.
GENERAL PRODUCT INFORMATION: PBB, Inc. template hinges are manufactured to close tolerances and meet all specifications and requirements set by the American National Standards Institute (ANSI).

HINGE SWAGING: A standard swaging of our standard weight full mortise hinge when closed to parallel position provides a 1/16” clearance between leaves.

MATERIAL GAUGE:
.146 ± .005 for 5” x 4”
.146 ± .005 for 5” x 4-1/2”
.146 ± .005 for 5” x 5”

OTHER SPECIFICATIONS:
Height of hinge:
5.00 ± .000 – .015 for 5” x 4”
5.00 ± .000 – .015 for 5” x 4-1/2”
5.00 ± .000 – .015 for 5” x 5”

Width:
4.00 ± .015 for 5” x 4”
4.50 ± .015 for 5” x 4-1/2”
5.00 ± .015 for 5” x 5”

5” STANDARD SCREW SIZE
FHMS - 12-24 x 1/2”
FHWS - 12 x 1-1/4”

PACKAGING INFORMATION:
One hinge per plastic bag, 3 hinges and 1 screw pack per unit carton.
12 unit carton or 36 hinges per master shipping carton.
1 screw pack includes all machine screws (24), and 1/2 wood screws (12). ATMS & AWS also available.
FULL MORTISE TEMPLATE BALL BEARING

HEAVY WEIGHT

4 1/2” x 4”  4 1/2” x 4 1/2”

4B81   (ANSI A8111)
Steel-Polished and Plated or Bonderized and Prime Coated for Painting.

4B21   (ANSI A2111)
Brass-Polished and Plated

4B51   (ANSI A5111)
Stainless Steel-Polished and Satin Finish

•For heavy weight doors receiving high frequency service.
•Ball bearing hinges must be used on doors in conjunction with door closers and on all fire rated openings.
•For hospital type, add HT to suffix of part number.
•All hinges are ANSI template.

GENERAL PRODUCT INFORMATION: PBB, Inc. template hinges are manufactured to close tolerances and meet all specifications and requirements set by the American National Standards Institute (ANSI).

HINGE SWAGING: A standard swaging of our standard weight full mortise hinge when closed to parallel position provides a 1/16” clearance between leaves.

MATERIAL GAUGE:
.180 ± .005 for 4-1/2” x 4”
.180 ± .005 for 4-1/2” x 4-1/2”

OTHER SPECIFICATIONS:
Height of hinge:
4.50  + .000  – .015  for 4-1/2” x 4”
4.50  + .000  – .015  for 4 1/2” x 4-1/2”

Width:
4.00 ± .015 for 4-1/2” x 4”
4.50 ± .015 for 4-1/2” x 4-1/2”

4-1/2” STANDARD SCREW SIZE

<table>
<thead>
<tr>
<th>FHMS</th>
<th>12-24 x 1/2”</th>
</tr>
</thead>
<tbody>
<tr>
<td>FHWS</td>
<td>12 x 1-1/4”</td>
</tr>
</tbody>
</table>

PACKAGING INFORMATION:
One hinge per plastic bag, 3 hinges and 1 screw pack per unit carton.
16 unit carton or 48 hinges per master shipping carton.
1 screw pack includes all machine screws (24), and 1/2 wood screws (12). ATMS & AWS also available.
GENERAL PRODUCT INFORMATION: PBB, Inc. template hinges are manufactured to close tolerances and meet all specifications and requirements set by the American National Standards Institute (ANSI).

HINGE SWAGING: A standard swaging of our standard weight full mortise hinge when closed to parallel position provides a 1/16” clearance between leaves.

MATERIAL GAUGE:
.190 ± .005 for 5” x 4”
.190 ± .005 for 5” x 4-1/2”
.190 ± .005 for 5” x 5”

OTHER SPECIFICATIONS:
Height of hinge:
5.00 + .000 – .015 for 5” x 4”
5.00 + .000 – .015 for 5” x 4-1/2”
5.00 + .000 – .015 for 5” x 5”

Width:
4.00 ± .015 for 5” x 4”
4.50 ± .015 for 5” x 4-1/2”
5.00 ± .015 for 5” x 5”

PACKAGING INFORMATION:
One hinge per plastic bag, 3 hinges and 1 screw pack per unit carton.
12 unit carton or 36 hinges per master shipping carton.
1 screw pack includes all machine screws (24), and 1/2 wood screws (12). ATMS & AWS also available.
GENERAL PRODUCT INFORMATION: PBB, Inc. template hinges are manufactured to close tolerances and meet all specifications and requirements set by the American National Standards Institute (ANSI).

HINGE SWAGING: A standard swaging of our standard weight full mortise hinge when closed to parallel position provides a 1/16” clearance between leaves.

MATERIAL GAUGE:
.200 ± .005 for 6” x 4-1/2”
.200 ± .005 for 6” x 5”
.200 ± .005 for 6” x 6”

OTHER SPECIFICATIONS:
Height of hinge:
6.00 ± .000 – .015 for 6” x 4-1/2”
6.00 ± .000 – .015 for 6” x 5”
6.00 ± .000 – .015 for 6” x 6”

Width:
4.50 ± .015 for 6” x 4-1/2”
5.00 ± .015 for 6” x 5”
6.00 ± .015 for 6” x 6”

PACKAGING INFORMATION:
One hinge per plastic bag, 3 hinges and 1 screw pack per unit carton.
4 unit carton or 12 hinges per master shipping carton.
1 screw pack includes all machine screws (30), and 1/2 wood screws (15). ATMS & AWS also available.
GENERAL PRODUCT INFORMATION: PBB, Inc. template hinges are manufactured to close tolerances and meet all specifications and requirements set by the American National Standards Institute (ANSI).

HINGE SWAGING: A standard swaging of our standard weight full mortise hinge when closed to parallel position provides a 1/16” clearance between leaves.

MATERIAL GAUGE:
.200 ± .005 for 8” x 6”
.200 ± .005 for 8” x 8”

OTHER SPECIFICATIONS:
Height of hinge:
8.00 ± .005 for 8” x 6”
8.00 ± .005 for 8” x 8”

Width:
6.00 ± .015 for 8” x 6”
8.00 ± .015 for 8” x 8”

8” STANDARD SCREW SIZE
| FHMS - 1/4-20 x 1/2” |
| FHWS - 14 x 1-1/2” |

PACKAGING INFORMATION:
One hinge per plastic bag, 3 hinges and 1 screw pack per unit carton.
2 unit carton or 6 hinges per master shipping carton.
1 screw pack includes all machine screws (48), and 1/2 wood screws (24). ATMS & AWS also available.
GENERAL PRODUCT INFORMATION: PBB, Inc. template hinges are manufactured to close tolerances and meet all specifications and requirements set by the American National Standards Institute (ANSI).

HINGE SWAGING: A standard swaging of our standard weight full mortise hinge when closed to parallel position provides a 1/16” clearance between leaves.

MATERIAL GAUGE:
.180 ± .005 for 4-1/2” x 4”
.180 ± .005 for 4-1/2” x 4-1/2”

4F81 (ANSI A8111) Steel—Polished and Plated or Bonderized and Prime Coated for Painting.
4F21 (ANSI A2111) Brass—Polished and Plated
4F51 (ANSI A5111) Stainless Steel—Polished and Satin Finish
• For heavy weight doors receiving high frequency service.
• Concealed bearing for trouble free long life application.
• Hole in bottom tip for easy pin removal.
• Ball bearing hinges must be used on doors in conjunction with door closers and on all fire rated openings.
• For hospital type, add HT to suffix of part number.
• Non-rising removable pin.
• All hinges are ANSI template.

OTHER SPECIFICATIONS:
Height of hinge:
4.50 + .000 – .015 for 4-1/2” x 4”
4.50 + .000 – .015 for 4-1/2” x 4-1/2”
Width:
4.00 ± .015 for 4-1/2” x 4”
4.50 ± .015 for 4-1/2” x 4-1/2”

4-1/2” STANDARD SCREW SIZE
| FHMS - 12-24 x 1/2” | FHWS - 12 x 1-1/4” |

PACKAGING INFORMATION:
One hinge per plastic bag, 3 hinges and 1 screw pack per unit carton.
16 unit carton or 48 hinges per master shipping carton.
1 screw pack includes all machine screws (24), and 1/2 wood screws (12). ATMS & AWS also available.
GENERAL PRODUCT INFORMATION: PBB, Inc. template hinges are manufactured to close tolerances and meet all specifications and requirements set by the American National Standards Institute (ANSI).

HINGE SWAGING: A standard swaging of our standard weight full mortise hinge when closed to parallel position provides a 1/16” clearance between leaves.

MATERIAL GAUGE:
.180 ± .005 for 4-1/2” x 4”
.180 ± .005 for 4-1/2” x 4-1/2”

OTHER SPECIFICATIONS:
Height of hinge:

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<th>4.50</th>
<th>± .000</th>
<th>– .015</th>
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<tbody>
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<td></td>
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Width:

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<th></th>
<th>4.00</th>
<th>± .015</th>
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<th>± .015</th>
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<tr>
<td>4-1/2”</td>
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<td></td>
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4-1/2” STANDARD SCREW SIZE

<p>| |</p>
<table>
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</tr>
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<tbody>
<tr>
<td>FHMS - 12-24 x 1/2”</td>
</tr>
<tr>
<td>FHWS - 12 x 1-1/4”</td>
</tr>
</tbody>
</table>

PACKAGING INFORMATION:
One hinge per plastic bag, 3 hinges and 1 screw pack per unit carton.
16 unit carton or 48 hinges per master shipping carton.
1 screw pack includes all machine screws (24), and 1/2 wood screws (12). ATMS & AWS also available.
GENERAL PRODUCT INFORMATION: PBB, Inc. template hinges are manufactured to close tolerances and meet all specifications and requirements set by the American National Standards Institute (ANSI).

HINGE SWAGING: A standard swaging of our standard weight full mortise hinge when closed to parallel position provides a 1/16” clearance between leaves.

MATERIAL GAUGE:
.180 ± .005 for 4-1/2” x 4”
.180 ± .005 for 4-1/2” x 4-1/2”

OTHER SPECIFICATIONS:
Height of hinge:

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<th>– .015</th>
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</table>

<table>
<thead>
<tr>
<th>Width</th>
<th>4.50 + .000</th>
<th>– .015</th>
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</thead>
<tbody>
<tr>
<td>for 4-1/2” x 4-1/2”</td>
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<td></td>
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</tbody>
</table>

PACKAGING INFORMATION:
One hinge per plastic bag, 3 hinges and 1 screw pack per unit carton.
16 unit carton or 48 hinges per master shipping carton.
1 screw pack includes all machine screws (24), and 1/2 wood screws (12). ATMS & AWS also available.

4C81   (ANSI A8111)
Steel-Polished and Plated or Bonderized and Prime Coated for Painting.

4C21   (ANSI A2111)
Brass-Polished and Plated

4C51   (ANSI A5111)
Stainless Steel-Polished and Satin Finish

• For heavy weight doors receiving high frequency service.

• Concealed bearing for trouble free long life application.

• Hole in bottom tip for easy pin removal.

• Ball bearing hinges must be used on doors in conjunction with door closers and on all fire rated openings.

• For hospital type, add HT to suffix of part number.

• Non-rising removable pin.

• Attractive slim barrel with flush pins and plugs.

• All hinges are ANSI template.
GENERAL PRODUCT INFORMATION: PBB, Inc. template hinges are manufactured to close tolerances and meet all specifications and requirements set by the American National Standards Institute (ANSI).

HINGE SWAGING: A standard swaging of our standard weight full mortise hinge when closed to parallel position provides a 1/16” clearance between leaves.

MATERIAL GAUGE:
.190 ± .005 for 5” x 4”
.190 ± .005 for 5” x 4-1/2”
.190 ± .005 for 5” x 5”

4C81 (ANSI A8111) Steel-Polished and Plated or Bonderized and Prime Coated for Painting.
4C21 (ANSI A2111) Brass-Polished and Plated
4C51 (ANSI A5111) Stainless Steel-Polished and Satin Finish

• For heavy weight doors receiving high frequency service.
• Concealed bearing for trouble free long life application.
• Hole in bottom tip for easy pin removal.
• Ball bearing hinges must be used on doors in conjunction with door closers and on all fire rated openings.
• For hospital type, add HT to suffix of part number.
• Non-rising removable pin.
• Attractive slim barrel with flush pins and plugs.
• All hinges are ANSI template.

OTHER SPECIFICATIONS:

Height of hinge:

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<th>Tolerance</th>
<th>Dimensions</th>
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<tr>
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<td>+.000</td>
<td>-.015</td>
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Width:

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<th>Width</th>
<th>Tolerance</th>
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<tr>
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<td>+.000</td>
</tr>
<tr>
<td>4.50</td>
<td>+.000</td>
</tr>
<tr>
<td>4.00</td>
<td>+.000</td>
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</table>

5” STANDARD SCREW SIZE

<table>
<thead>
<tr>
<th>Size</th>
<th>Description</th>
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</thead>
<tbody>
<tr>
<td>FHMS</td>
<td>12-24 x 1/2”</td>
</tr>
<tr>
<td>FHWS</td>
<td>12 x 1-1/2”</td>
</tr>
</tbody>
</table>

PACKAGING INFORMATION:
One hinge per plastic bag, 3 hinges and 1 screw pack per unit carton.
12 unit carton or 36 hinges per master shipping carton.
1 screw pack includes all machine screws (24), and 1/2 wood screws (12). ATMS & AWS also available.
GENERAL PRODUCT INFORMATION: PBB, Inc. template hinges are manufactured to close tolerances and meet all specifications and requirements set by the American National Standards Institute (ANSI).

HINGE SWAGING: A standard swaging of our standard weight full mortise hinge when closed to parallel position provides a 1/16" clearance between leaves.

MATERIAL GAUGE:
.200 ± .005 for 6" x 4-1/2"
.200 ± .005 for 6" x 5"
.200 ± .005 for 6" x 6"

OTHER SPECIFICATIONS:
Height of hinge:
6.00 + .000 for 6" x 4-1/2"
6.00 + .000 for 6" x 5"
6.00 + .000 for 6" x 6"

Width:
4.50 ± .015 for 6" x 4-1/2"
5.00 ± .015 for 6" x 5"
6.00 ± .015 for 6" x 6"

6" STANDARD SCREW SIZE
| FHMS - 1/4-20 x 1/2" |
| FHWS - 1 1/2" |

PACKAGING INFORMATION:
One hinge per plastic bag, 3 hinges and 1 screw pack per unit carton.
4 unit carton or 12 hinges per master shipping carton.
1 screw pack includes all machine screws (30), and 1/2 wood screws (15). ATMS & AWS also available.
GENERAL PRODUCT INFORMATION: PBB, Inc. template hinges are manufactured to close tolerances and meet all specifications and requirements set by the American National Standards Institute (ANSI).

HINGE SWAGING: A standard swaging of our standard weight full mortise hinge when closed to parallel position provides a 1/16” clearance between leaves.

MATERIAL GAUGE:
.200 ± .005 for 8” x 6”
.200 ± .005 for 8” x 8”

OTHER SPECIFICATIONS:
Height of hinge:
8.00 ± .005 for 8” x 6”
8.00 ± .005 for 8” x 8”

Width:
6.00 ± .015 for 8” x 6”
8.00 ± .015 for 8” x 8”

8” STANDARD SCREW SIZE
| FHMS | 1/4-20 x 1/2” |
| FHWS | 14 x 1-1/2” |

PACKAGING INFORMATION:
One hinge per plastic bag, 3 hinges and 1 screw pack per unit carton.
2 unit carton or 6 hinges per master shipping carton.
1 screw pack includes all machine screws (48), and 1/2 wood screws (24). ATMS & AWS also available.
PH51 (ANSI A5111) Stainless Steel-Polished and Satin Finish

- Cast stainless steel base material
- Welded hospital tipped ends
- For heavy weight doors receiving high frequency service
- For schools, hospitals or other public buildings where security requirements exist.
- Torx head security machine screws available upon request
- Concealed bearing for trouble free long life application
- Reverse security stud casted into both leaves for added security feature
- All hinges are ANSI template

GENERAL PRODUCT INFORMATION: PBB, Inc. template hinges are manufactured to close tolerances and meet all specifications and requirements set by the American National Standards Institute (ANSI).

HINGE SWAGING: A standard swaging of our standard weight full mortise hinge when closed to parallel position provides a 1/16” clearance between leaves.

OTHER SPECIFICATIONS:
Height of hinge:  
4.50 ± .000 for 4-1/2”  
4.50 ± .015 for 4-1/2”

Width:  
4.50 ± .015 for 4-1/2”

MATERIAL GAUGE:  
.190 ± .005 for 4-1/2” x 4-1/2”

PACKAGING INFORMATION:  
One hinge per plastic bag, 3 hinges and 1 screw pack per unit carton.  
12 unit carton or 36 hinges per master shipping carton.  
1 screw pack includes all machine screws (24), torx head or wood screws available upon request.
GENERAL PRODUCT INFORMATION: PBB, Inc. template hinges are manufactured to close tolerances and meet all specifications and requirements set by the American National Standards Institute (ANSI).

HINGE SWAGING: A standard swaging of our standard weight full mortise hinge when closed to parallel position provides a 1/16” clearance between leaves.

MATERIAL GAUGE: .100 ± .005

3-1/2” STANDARD SCREW SIZE

<table>
<thead>
<tr>
<th>FHMS - 10-24 x 1/2”</th>
</tr>
</thead>
<tbody>
<tr>
<td>FHWS - 10 x 1”</td>
</tr>
</tbody>
</table>

Template screw hole locations for all 3-1/2 x 3-1/2 Full Mortise Template butts are punched to Commercial Standard CS9-65.

PACKAGING INFORMATION:
One hinge per plastic bag, 3 hinges and 1 screw pack per unit carton.
16 unit carton or 48 hinges per master shipping carton.
1 screw pack includes (18) machine screws and (18) wood screws.

OTHER SPECIFICATIONS:
Height of hinge: 3.50 ± .000
Width: 3.50 ± .015

RS81 (ANSI K8107)
Steel-Polished and Plated or Bonderized and Prime Coated for Painting.

*Spring hinge door closer Model K8107 passed a 250,000 cycle UL test in accordance with Underwriters Laboratories for door closers, with or without integral smoke detectors.

*All hinges are ANSI template. 3-1/2” available in square and in 1/4” & 5/8” radius round corners.

Maximum Door Size - 2’6” x 7’0”
The above quantities are based on 3 hinges per door.
Spring hinges are to be used only with bearing hinges.

Installation Instructions:
1. Install hinge with adjustment pin up.
2. Close door to adjust spring.
3. Turn adjustment pin 1/4 turn clockwise for each tension setting. Adjust one position at a time until proper tension is obtained. Roll pin is inserted approximately half way at each position to test tension.
   When testing tension, do not open door more than 90º.
4. When proper tension is obtained, insert roll pin completely.
   Caution:
   For 180º opening, two positions maximum tension.
   For 90º, three positions maximum tension.
5. Use of gasket for smoke or sound protection, wind condition or unbalanced air pressure may prevent door from latching. Additional closing power would be required. See installation instruction sheet.
RS81 (ANSI K8107)  
Steel-Polished and Plated or Bonderized and Prime Coated for Painting.  
• Spring hinge door closer Model K8107 passed a 250,000 cycle UL test in accordance with Underwriters Laboratories for door closers, with or without integral smoke detectors.  
• All hinges are ANSI template. 4" available in square and in 1/4" & 5/8" radius round corners.

GENERAL PRODUCT INFORMATION: PBB, Inc. template hinges are manufactured to close tolerances and meet all specifications and requirements set by the American National Standards Institute (ANSI).

HINGE SWAGING: A standard swaging of our standard weight full mortise hinge when closed to parallel position provides a 1/16” clearance between leaves.

OTHER SPECIFICATIONS:  
Height of hinge:  
4.00 ± .000
4.00 ± .015
Width:  
4.00 ± .015

Maximum Door Size  
For labeled doors 3' x 7' the maximum door size is based on the limits set forth by NFPA Standard #80. Labeled doors require Ball Bearing hinges.

For non-labeled doors 4'0" wide 4" x 4" Spring hinges are not recommended. For non-labeled doors over 7'6" in height, use an additional hinge for each additional 30" of height or fraction thereof.

NOTES:  
1. For complete warranty protection use all spring hinges or a combination of spring hinges and ball bearing hinges. Do not use plain bearing hinges as this voids all factory warranties.
2. Use of gasket for smoke or sound protection, wind condition or unbalanced air pressure may prevent door from latching. Additional closing power would be required. See installation instruction sheet.

PACKAGING INFORMATION:  
One hinge per plastic bag, 3 hinges and 1 screw pack per unit carton.  
16 unit carton or 48 hinges per master shipping carton.  
1 screw pack includes all machine screws (24), and 1/2 wood screws (12). ATMS & AWS also available.
GENERAL PRODUCT INFORMATION: PBB, Inc. template hinges are manufactured to close tolerances and meet all specifications and requirements set by the American National Standards Institute (ANSI).

HINGE SWAGING: A standard swaging of our standard weight full mortise hinge when closed to parallel position provides a 1/16" clearance between leaves.

MATERIAL GAUGE: .130 ± .005

4" STANDARD SCREW SIZE

FHMS - 12-24 x 1/2"
FHWS - 12 x 1-1/4"

SP81   (ANSI K8107)
Steel-Polished and Plated or Bonderized and Prime Coated for Painting.

SP51   (ANSI K5107)
Stainless Steel-Polished and Satin Finish

• Spring hinge door closer Model K8107 passed a 250,000 cycle UL test in accordance with Underwriters Laboratories for door closers, with or without integral smoke detectors.

• All hinges are ANSI template. 4” available in square and in 1/4" & 5/8” radius round corners.

OTHER SPECIFICATIONS:

| Height of hinge: + .000 |
| Width: 4.00 ± .015 |

Maximum Door Size

For labeled doors 3’ x 7’ the maximum door size is based on the limits set forth by NFPA Standard #80. Labeled doors require Ball Bearing hinges.

For non-labeled doors 4’0” wide 4” x 4” Spring hinges are not recommended. For non-labeled doors over 7’6” in height, use an additional hinge for each additional 30” of height or fraction thereof.

NOTES:

1. For complete warranty protection use all spring hinges or a combination of spring hinges and ball bearing hinges. Do not use plain bearing hinges as this voids all factory warranties.

2. Use of gasket for smoke or sound protection, wind condition or unbalanced air pressure may prevent door from latching. Additional closing power would be required. See installation instruction sheet.

PACKAGING INFORMATION:

One hinge per plastic bag, 3 hinges and 1 screw pack per unit carton.
16 unit carton or 48 hinges per master shipping carton.
1 screw pack includes all machine screws (24), and 1/2 wood screws (12). ATMS & AWS also available.
FULL MORTISE U.L. LISTED SPRING HINGE

SP81   (ANSI K8107)
Steel-Polished and Plated or Bonderized and Prime Coated for Painting.

SP51   (ANSI K5107)
Stainless Steel-Polished and Satin Finish

• Spring hinge door closer Model K8107/K5107 passed a 1,000,000 cycle UL test in accordance with Underwriters Laboratories for door closers, with or without integral smoke detectors.
• Both models comply and meet ANSI/BHMA specifications for ANSI/BHMA A156.17 Grade 1 and bear U.L.’s listing mark.
• All hinges are ANSI template.

GENERAL PRODUCT INFORMATION: PBB, Inc. template hinges are manufactured to close tolerances and meet all specifications and requirements set by the American National Standards Institute (ANSI).

HINGE SWAGING:
A standard swaging of our standard weight full mortise hinge when closed to parallel position provides a 1/16” clearance between leaves.

MATERIAL GAUGE:
.134 ± .005 for 4-1/2” x 4”
.134 ± .005 for 4-1/2” x 4-1/2”

PACKAGING INFORMATION:
One hinge per plastic bag, 3 hinges and 1 screw pack per unit carton.
16 unit carton or 48 hinges per master shipping carton.
1 screw pack includes all machine screws (24), and 1/2 wood screws (12). ATMS & AWS also available.

OTHER SPECIFICATIONS:
Height of hinge:
4.50 + .000 for 4-1/2” x 4”
  − .015
Width:
4.50 + .000 for 4-1/2” x 4-1/2”
  − .015
4.00 ± .015 for 4-1/2” x 4”
4.50 ± .015 for 4-1/2” x 4-1/2”

Maximum Door Size
For labeled doors 3’ x 7’ the maximum door size is based on the limits set forth by NFPA Standard #80. Labeled doors require Ball Bearing hinges.
For non-labeled doors 4’0” wide 4” x 4” Spring hinges are not recommended. For non-labeled doors over 7’6” in height, use an additional hinge for each additional 30” of height or fraction thereof.

NOTES:
1. For complete warranty protection use all spring hinges or a combination of spring hinges and ball bearing hinges. Do not use plain bearing hinges as this voids all factory warranties.
2. Use of gasket for smoke or sound protection, wind condition or unbalanced air pressure may prevent door from latching. Additional closing power would be required. See installation instruction sheet.
SA-81 (ANSI K81071)

Steel - Polished and Plated or Bonderized and Prime Coated for Painting.

• Single acting spring hinge is designed for 1-3/4” stock hollow metal or wood doors.
• UL Listed to Grade 2 ANSI/BHMA requirement A 156.17
• Permits doors to open in single direction and automatically return to the closed position.
• Pivot points do no align with standard full mortise hinges
• See template for exact dimensions
• All hinges are ANSI template

GENERAL PRODUCT INFORMATION: PBB, Inc. template hinges are manufactured to close tolerances and meet all specifications and requirements set by the American National Standards Institute (ANSI).

HINGE SWAGING: A standard swaging of our standard weight full mortise hinge when closed to parallel position provides a 1/16” clearance between leaves.

MATERIAL GAUGE:
.100 ± .005 for 4-1/2”, 6”, 7”

Barrel Diameter: 1.180

6” x 4-1/2”, 7” x 7” STANDARD SCREW SIZE

<table>
<thead>
<tr>
<th>Screw Size</th>
<th>FHMS</th>
<th>FHWS</th>
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<tbody>
<tr>
<td>6-24 x 1/2”</td>
<td></td>
<td></td>
</tr>
<tr>
<td>12 x 1-1/4”</td>
<td></td>
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</tr>
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6” x 6” STANDARD SCREW SIZE

<table>
<thead>
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<th>Screw Size</th>
<th>FHMS</th>
<th>FHWS</th>
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<td></td>
<td></td>
</tr>
<tr>
<td>10 x 1”</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

PACKAGING INFORMATION:
One hinge per plastic bag, 2 hinges and 1 screw pack per unit carton.
8 unit carton or 24 hinges per master shipping carton.
1 screw pack includes all machine screws (30), and 1/2 wood screws (15). ATMS & AWS also available.

SA-81 Series Maximum Door Sizes and Weights

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<tr>
<th>Series</th>
<th>2 Hinges</th>
<th>3 Hinges</th>
<th>Door Thickness</th>
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<td>Door Weight</td>
<td>Door Width</td>
<td>Door Weight</td>
<td>Door Width</td>
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<tr>
<td>SA-81 6” x 4-1/2”</td>
<td>125</td>
<td>3’-0”</td>
<td>155</td>
<td>4’-0”</td>
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<tr>
<td>SA-81 6” x 6”</td>
<td>125</td>
<td>3’-0”</td>
<td>155</td>
<td>4’-0”</td>
</tr>
<tr>
<td>SA-81 7” x 7”</td>
<td>130</td>
<td>3’-6”</td>
<td>175</td>
<td>4’-0”</td>
</tr>
</tbody>
</table>

DA - 81 Series Maximum Door Sizes and Weights

It is advisable to use three hinges on a door. The center hinge should be installed as close as possible to the top hinge for maximum support.

Hinge capacity decreases as door height decreases.

Request template from factory for door and frame clearance required.

Non Handed

DO NOT USE ON DOORS WITH HINGE EDGE BEVELED.

NOTE: Wind Conditions, excessive air pressure, use of gasket for smoke or sound protection may prevent door from latching.
GENERAL PRODUCT INFORMATION: PBB, Inc. template hinges are manufactured to close tolerances and meet all specifications and requirements set by the American National Standards Institute (ANSI).

HINGE SWAGING: A standard swaging of our standard weight full mortise hinge when closed to parallel position provides a 1/16” clearance between leaves.

MATERIAL GAUGE: .100 ± .005 for 4”, 6”, 7”
Barrel Diameter: 1.180

SA-84 (ANSI K81071)
Steel - Polished and Plated or Bonderized and Prime Coated for Painting.

• Single acting half surface spring hinge is designed to fit door 1 3/4” to 2” max thickness.
• Door flange is designed to surface mount metal or wood doors.
• Permits doors to open in single direction and automatically return to the closed position.
• Pivot points do no align with standard full surface hinges.
• See template for exact dimensions
• All hinges are ANSI template

OTHER SPECIFICATIONS:
Jamb Flange:
6.00 for 6” x 6”
7.00 for 7” x 7”
Door Flange:
5.50 for 6” x 6”
7.00 for 7” x 7”

SA-84 Series Maximum Door Sizes and Weights

<table>
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<tr>
<th>Series</th>
<th>Door Height</th>
<th>Door Weight Lbs.</th>
<th>Door Width</th>
<th>Door Weight Lbs.</th>
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<tbody>
<tr>
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<td>3'-0”</td>
<td>125</td>
<td>3'-0”</td>
<td>155</td>
<td>4'-0”</td>
<td>1 3/4”</td>
<td>7'-0”</td>
</tr>
<tr>
<td>SA-84 7”</td>
<td>3'-6”</td>
<td>130</td>
<td>3'-6”</td>
<td>175</td>
<td>4'-0”</td>
<td>2”</td>
<td>7'-0”</td>
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</tbody>
</table>

DA - 81 Series Maximum Door Sizes and Weights
It is advisable to use three hinges on a door. The center hinge should be installed as close as possible to the top hinge for maximum support. Hinge capacity decreases as door height decreases. Request template from factory for door and frame clearance required. Non Handed
DO NOT USE ON DOORS WITH HINGE EDGE BEVELED.
NOTE: Wind Conditions, excessive air pressure, use of gasket for smoke or sound protection may prevent door from latching.

SA-84 STANDARD SCREW SIZE
FHMS - 12-24 x 1/2”
FHWS - 12 x 1 1/2”
OHMS/NUT - 2” x 1/4-20

PACKAGING INFORMATION:
One hinge per plastic bag, 2 hinges and 1 screw pack per unit carton.
8 unit carton or 24 hinges per master shipping carton.
1 screw pack includes all machine screws (28), and 1/2 wood screws (14). ATMS & AWS also available.
GENERAL PRODUCT INFORMATION: PBB, Inc. template hinges are manufactured to close tolerances and meet all specifications and requirements set by the American National Standards Institute (ANSI).

HINGE SWAGING: A standard swaging of our standard weight full mortise hinge when closed to parallel position provides a 1/16” clearance between leaves.

MATERIAL GAUGE:
Jamb Flange  - .100 ± .005 for 6”
Door Flange  - .134 ± .005 for 4 1/2”

Barrel Diameter: 1.180

OTHER SPECIFICATIONS:
Height of hinge:
  Jamb Flange:  6.00 for 6”
  Door Flange:   4.50 for 4 1/2”

Width:
  Jamb Flange: 1.750 for 6”
  Door Flange:  1.650 for 4 1/2”

<table>
<thead>
<tr>
<th>Series</th>
<th>2 Hinges Door</th>
<th>3 Hinges Door</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Weight Lbs.</td>
<td>Width Lbs.</td>
</tr>
<tr>
<td>DA-81</td>
<td>75</td>
<td>107</td>
</tr>
<tr>
<td></td>
<td>2'-8”</td>
<td>3'-0”</td>
</tr>
<tr>
<td></td>
<td>1 3/4”</td>
<td>7'-0”</td>
</tr>
</tbody>
</table>

DA - 81 Series Maximum Door Sizes and Weights

It is advisable to use three hinges on a door. The center hinge should be installed as close as possible to the top hinge for maximum support. Hinge capacity decreases as door height decreases. Request template from factory for door and frame clearance required. Non Handed

DO NOT USE ON DOORS WITH HINGE EDGE BEVELED.

NOTE: Wind conditions, excessive air pressure, use of gasket for smoke or sound protection may prevent door from latching.

PACKAGING INFORMATION:
One hinge per plastic bag, 2 hinges and 1 screw pack per unit carton.
8 unit carton or 24 hinges per master shipping carton.
1 screw pack includes all machine screws (28), and 1/2 wood screws (14). ATMS & AWS also available.
**GENERAL PRODUCT INFORMATION:** PBB, Inc. template hinges are manufactured to close tolerances and meet all specifications and requirements set by the American National Standards Institute (ANSI).

**HINGE SWAGING:** A standard swaging of our standard weight full mortise hinge when closed to parallel position provides a 1/16” clearance between leaves.

**CONCEALED ELECTRIC THROUGH-WIRE:**
Two (20 gauge), four (28 gauge), six (30 gauge), eight (30 gauge), and ten (30 gauge) continuous electric conductors. Full mortise ball bearing, standard weight.

NRP-NOT NECESSARY.
To order use symbol "EL" as suffix.

**MATERIAL GAUGE:**
- .130 ± .005 for 4”
- .134 ± .005 for 4-1/2”
- .146 ± .005 for 5”

**NOTE: PURCHASE ORDERS PLACED FOR ELECTRIC MODIFICATION ARE NON CANCELLABLE**

**OTHER SPECIFICATIONS:**
- **Height of hinge:**
  - 4.00 ± .000 for 4”
  - .15 for 4”
  - 4.50 ± .000 for 4 1/2”
  - .15 for 4 1/2”
  - 5.00 ± .000 for 5”
  - .15 for 5”

- **Width:**
  - 4.00 ± .015 for 4” x 4”, 4-1/2” x 4”, 5” x 4”
  - 4.50 ± .015 for 4 1/2” x 4 1/2”, 5” x 4-1/2”
  - 5.00 ± .015 for 5” x 5”

<table>
<thead>
<tr>
<th>(4”/4-1/2”/5”) STANDARD SCREW SIZE</th>
</tr>
</thead>
<tbody>
<tr>
<td>FHMS - 12-24 x 1/2”</td>
</tr>
<tr>
<td>FHWS - 12 x 1-1/4”</td>
</tr>
</tbody>
</table>

Additional wire length may be purchased at additionally cost. See pricebook for additional cost.

All electric hinge modifications are to be placed in the center hinge position. Any other locations will void warranty.
For grout filled frames install PBB mortar box-Failure to install mortar box voids warranty.
Electrical Specifications - (Maximum Continuous Rating)

**EL2W** - 24 VAC/DC, @ 3 amps, continuous, 8 amp surge
**EL4W** - 24 VAC/DC, 1 pr @ 1 amp, 1 pr @ .25 amps
**EL6W** - 24 VAC/DC, 1 pr @ 1 amp, 2 pr @ .10 amps

*We do not recommend splicing hinges containing 26 AWG wire (EL4W, 6W) to any wire heavier than 18 AWG*

**EL8W** - 24 VAC/DC, 1 pr @ 1 amp, 3 pr @ .10 amps
**EL10W** - 24 VAC/DC, 1 pr @ 1 amp, 4 pr @ .10 amps

*We do not recommend splicing hinges containing 28 AWG wire (EL8W, 10W) to any wire heavier than 20 AWG*

Ratings are: 20 AWG pair @ 24 Volts AC/DC @ 3 amps continuous
20 AWG pair can be cycled at 8 amps surge for 100-200 m-sec for 15 seconds with a rest period of 15 seconds.

<table>
<thead>
<tr>
<th>MODELS AVAILABLE</th>
<th>CONSTRUCTION</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>EL2W</strong></td>
<td>Concealed electric through-wire.</td>
</tr>
<tr>
<td></td>
<td>2 PTFE coated 20 gauge high Am.</td>
</tr>
<tr>
<td><strong>EL2+4W</strong></td>
<td>Concealed electric through-wire.</td>
</tr>
<tr>
<td></td>
<td>2 PTFE coated 20 gauge.</td>
</tr>
<tr>
<td></td>
<td>4 PTFE coated 28 gauge.</td>
</tr>
<tr>
<td><strong>EL4W</strong></td>
<td>Concealed electric through-wire.</td>
</tr>
<tr>
<td></td>
<td>4 PTFE coated 28 gauge.</td>
</tr>
<tr>
<td><strong>EL6W</strong></td>
<td>Concealed electric through-wire.</td>
</tr>
<tr>
<td></td>
<td>6 PTFE coated 30 gauge.</td>
</tr>
<tr>
<td><strong>EL8W</strong></td>
<td>Concealed electric through-wire.</td>
</tr>
<tr>
<td></td>
<td>8 PTFE coated 30 gauge.</td>
</tr>
<tr>
<td><strong>EL10W</strong></td>
<td>Concealed electric through-wire.</td>
</tr>
<tr>
<td></td>
<td>10 PTFE coated 30 gauge.</td>
</tr>
</tbody>
</table>

**INSTALLATION:**

Do not disassemble hinge. Disassembly voids warranty.
Do not force hinge into perp. Binding hinges will shorten life and damage hinge.
Do not hang hinge from wires. Damage can occur.
After connections are made, slide wires through holes, making sure that wires are not pinched or rubbing on sharp edges.
GENERAL PRODUCT INFORMATION: PBB, Inc. template hinges are manufactured to close tolerances and meet all specifications and requirements set by the American National Standards Institute (ANSI).

HINGE SWAGING: A standard swaging of our standard weight full mortise hinge when closed to parallel position provides a 1/16" clearance between leaves.

CONCEALED ELECTRIC THROUGH-WIRE:
Two (20 gauge), four (28 gauge), six (30 gauge), eight (30 gauge), and ten (30 gauge) continuous electric conductors. Full mortise ball bearing, standard weight.

NRP-NOT NECESSARY.
To order use symbol "EL" as suffix

MATERIAL GAUGE:
.180 ± .005 for 4-1/2"
.190 ± .005 for 5"

**NOTE: PURCHASE ORDERS PLACED FOR ELECTRIC MODIFICATION ARE NON CANCELLABLE**

PACKAGING INFORMATION:
One hinge and 1 screw pack per unit carton. 1 screw pack includes all machine screws (8), and 1/2 wood screws (4). ATMS & AWS also available.

OTHER SPECIFICATIONS:
Height of hinge:
4.50 + .000 - .015 for 4 1/2"
5.00 + .000 - .015 for 5"

Width:
4.00 ± .015 for 4-1/2" x 4", 5" x 4"
4.50 ± .015 for 4 1/2" x 4 1/2", 5" x 4-1/2"
5.00 ± .015 for 5" x 5"

(4-1/2", 5") STANDARD SCREW SIZE
FHMS - 12-24 x 1/2"
FHWS - 12 x 1-1/4"

Additional wire length may be purchased at additionally cost. See pricebook for additional cost.

All electric hinge modifications are to be placed in the center hinge position. Any other locations will void warranty. For grout filled frames install PBB mortar box-Failure to install mortar box voids warranty.
Full Mortise Electric Ball Bearing

Electrical Specifications - (Maximum Continuous Rating)
- **EL2W** - 24 VAC/DC, @ 3 amps, continuous, 8 amp surge
- **EL4W** - 24 VAC/DC, 1 pr @ 1 amp, 1 pr @ .25 amps
- **EL6W** - 24 VAC/DC, 1 pr @ 1 amp, 2 pr @ .10 amps
  
  **We do not recommend splicing hinges containing 26 AWG wire (EL4W, 6W) to any wire heavier than 18 AWG**
- **EL8W** - 24 VAC/DC, 1 pr @ 1 amp, 3 pr @ .10 amps
- **EL10W** - 24 VAC/DC, 1 pr @ 1 amp, 4 pr @ .10 amps
  
  **We do not recommend splicing hinges containing 28 AWG wire (EL8W, 10W) to any wire heavier than 20 AWG**

Ratings are: 20 AWG pair @ 24 Volts AC/DC @ 3 amps continuous 20 AWG pair can be cycled at 8 amps surge for 100-200 m-sec for 15 seconds with a rest period of 15 seconds.

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<td><strong>EL2W</strong></td>
<td>Concealed electric through-wire.</td>
</tr>
<tr>
<td></td>
<td>2 PTFE coated 20 gauge high</td>
</tr>
<tr>
<td></td>
<td>Amp.</td>
</tr>
<tr>
<td><strong>EL2+4W</strong></td>
<td>Concealed electric through-wire.</td>
</tr>
<tr>
<td></td>
<td>2 PTFE coated 20 gauge.</td>
</tr>
<tr>
<td></td>
<td>4 PTFE coated 28 gauge.</td>
</tr>
<tr>
<td><strong>EL4W</strong></td>
<td>Concealed electric through-wire.</td>
</tr>
<tr>
<td></td>
<td>4 PTFE coated 28 gauge.</td>
</tr>
<tr>
<td><strong>EL6W</strong></td>
<td>Concealed electric through-wire.</td>
</tr>
<tr>
<td></td>
<td>6 PTFE coated 30 gauge.</td>
</tr>
<tr>
<td><strong>EL8W</strong></td>
<td>Concealed electric through-wire.</td>
</tr>
<tr>
<td></td>
<td>8 PTFE coated 30 gauge.</td>
</tr>
<tr>
<td><strong>EL10W</strong></td>
<td>Concealed electric through-wire.</td>
</tr>
<tr>
<td></td>
<td>10 PTFE coated 30 gauge.</td>
</tr>
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**INSTALLATION:**
- Do not disassemble hinge. Disassembly voids warranty.
- Do not force hinge into perp. Binding hinges will shorten life and damage hinge.
- Do not hang hinge from wires. Damage can occur.
- After connections are made, slide wires through holes, making sure that wires are not pinched or rubbing on sharp edges.
GENERAL PRODUCT INFORMATION: PBB, Inc. template hinges are manufactured to close tolerances and meet all specifications and requirements set by the American National Standards Institute (ANSI).

HINGE SWAGING: A standard swaging of our standard weight full mortise hinge when closed to parallel position provides a 1/16” clearance between leaves.

CONCEALED MONITOR: Miniature snap action switch is incorporated into frame leaf. Full mortise ball bearing, standard and heavy weight.

MATERIAL GAUGE: .
.130 ± .005 for 4”
.134 ± .005 for 4 1/2”
.146 ± .005 for 5”

**NOTE: PURCHASE ORDERS PLACED FOR ELECTRIC MODIFICATION ARE NON CANCELLABLE**

PACKAGING INFORMATION:
One hinge and 1 screw pack per unit carton.
1 screw pack includes all machine screws (8), and 1/2 wood screws (4). ATMS & AWS also available.

OTHER SPECIFICATIONS:
Height of hinge:
4.00 ± .000 for 4”
4.50 ± .000 for 4-1/2”
5.00 ± .000 for 5”

Width:
4.00 ± .015 for 4” x 4”, 4 1/2” x 4”, 5” x 4”
4.50 ± .015 for 4 1/2” x 4 1/2”, 5” x 4 1/2”
5.00 ± .015 for 5” x 5”

All electric hinge modifications are to be placed in the center hinge position, any other locations will void warranty. For grout fill frames, install PBB mortar box-Failure to install mortar box voids warranty.

<table>
<thead>
<tr>
<th>4” STANDARD SCREW SIZE</th>
</tr>
</thead>
<tbody>
<tr>
<td>FHMS - 12-24 x 1/2”</td>
</tr>
<tr>
<td>FHWS - 12 x 1-1/4”</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>4 1/2” STANDARD SCREW SIZE</th>
</tr>
</thead>
<tbody>
<tr>
<td>FHMS - 12-24 x 1/2”</td>
</tr>
<tr>
<td>FHWS - 12 x 1-1/4”</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>5” STANDARD SCREW SIZE</th>
</tr>
</thead>
<tbody>
<tr>
<td>FHMS - 12-24 x 1/2”</td>
</tr>
<tr>
<td>FHWS - 12 x 1-1/4”</td>
</tr>
</tbody>
</table>
GENERAL PRODUCT INFORMATION: PBB, Inc. template hinges are manufactured to close tolerances and meet all specifications and requirements set by the American National Standards Institute (ANSI).

HINGE SWAGING: A standard swaging of our standard weight full mortise hinge when closed to parallel position provides a 1/16” clearance between leaves.

CONCEALED MONITOR: Miniature snap action switch is incorporated into frame leaf. Full mortise ball bearing, standard and heavy weight. NRP-NOT NECESSARY. To order use symbol “EM” as suffix.

MATERIAL GAUGE: .
.180 ± .005 for 4 1/2”
.190 ± .005 for 5”

**NOTE: PURCHASE ORDERS PLACED FOR ELECTRIC MODIFICATION ARE NON CANCELLABLE**

PACKAGING INFORMATION:
One hinge and 1 screw pack per unit carton. 1 screw pack includes all machine screws (8), and 1/2 wood screws (4). ATMS & AWS also available.

OTHER SPECIFICATIONS:
Height of hinge:

| Size | 
|------|---|
| 4.50 | + .000 - .015 |
| 5.00 | + .000 - .015 |

Width:

| Size | 
|------|---|
| 4.00 | ± .015 for 4 1/2” x 4”, 5” x 4” |
| 4.50 | ± .015 for 4 1/2” x 4 1/2”, 5” x 4 1/2” |
| 5.00 | ± .015 for 5” x 5” |

All electric hinge modifications are to be placed in the center hinge position, any other locations will void warranty. For grout fill frames, install PBB mortar box. Failure to install mortar box voids warranty.

<table>
<thead>
<tr>
<th>4 1/2” STANDARD SCREW SIZE</th>
<th>5” STANDARD SCREW SIZE</th>
</tr>
</thead>
<tbody>
<tr>
<td>FHMS - 12-24 x 1/2”</td>
<td>FHMS - 12-24 x 1/2”</td>
</tr>
<tr>
<td>FHWS - 12 x 1-1/4”</td>
<td>FHWS - 12 x 1-1/4”</td>
</tr>
</tbody>
</table>
MORTAR BOX FOR ELECTRIC HINGES

ADJUSTABLE MORTAR BOX

MBG

Steel-Galvanized .040” sheet
• Furnished in 2C finish
• Adjustable from 6” to 7”
• Recommended for use with PBB Electric wire and monitor hinges
• Unit must be installed in center hinge position
• Any other location will void warranty
• Install according to instructions

• Removable cover plate for servicing
• Serves as mortar shield
• 7/8” knockouts top and bottom for standard conduit fittings for wires to pass through
• Fits hinge reinforcements for 4-1/2” or 5” contract grade hinges
• Can be installed by hollow metal manufacturers or installed on the job before frame is set.
• Made for spot weld application
• Must be adjusted to proper size before spot welding to hinge reinforcing plate
GENERAL PRODUCT INFORMATION: PBB, Inc. template hinges are manufactured to close tolerances and meet all specifications and requirements set by the American National Standards Institute (ANSI).

ALL HALF MORTISE HINGES ARE MADE FOR REVERSIBLE APPLICATIONS

MATERIAL GAUGE: .134 ± .005 for 4-1/2”

OTHER SPECIFICATIONS:
Height of hinge: 4.50 ± .005 for 4-1/2”

Width:
Jamb Leaf: (A) 1-1/2” (inches)
Door Leaf: (B) 2-1/16” (inches)
Offset (C) 7/16” (inches)

4-1/2” STANDARD SCREW SIZE
FHMS - 12-24 x 1/2”
OHMS - 12-24 x 1/2”

PACKAGING INFORMATION:
One hinge per plastic bag, 3 hinges and 1 screw pack per unit carton.
12 unit carton or 36 hinges per master shipping carton.
1 screw pack includes all machine screws (7).
GENERAL PRODUCT INFORMATION: PBB, Inc. template hinges are manufactured to close tolerances and meet all specifications and requirements set by the American National Standards Institute (ANSI).

ALL HALF MORTISE HINGES ARE MADE FOR REVERSIBLE APPLICATIONS

MATERIAL GAUGE: .134 ± .005 for 4-1/2"

OTHER SPECIFICATIONS:
Height of hinge: 4.50 ± .015 for 4-1/2"

Width:
Jamb Leaf: (A) 1-1/2"
Door Leaf: (B) 2-1/16"
Offset (C) 7/16"

PACKAGING INFORMATION:
One hinge per plastic bag, 3 hinges and 1 screw pack per unit carton.
12 unit carton or 36 hinges per master shipping carton.
1 screw pack includes all machine screws (7).
GENERAL PRODUCT INFORMATION: PBB, Inc. template hinges are manufactured to close tolerances and meet all specifications and requirements set by the American National Standards Institute (ANSI).

ALL HALF MORTISE HINGES ARE MADE FOR REVERSIBLE APPLICATIONS

MATERIAL GAUGE: .
.180 ± .005 for 4-1/2”

OTHER SPECIFICATIONS:
Height of hinge: 4.50 + .000
- .015 for 4-1/2”

Width:
Jamb Leaf: (A) 1-1/2”
Door Leaf: (B) 2-1/8”
Offset (C) 1/2”

PACKAGING INFORMATION:
One hinge per plastic bag, 3 hinges and 1 screw pack per unit carton.
12 unit carton or 36 hinges per master shipping carton.
1 screw pack includes all machine screws (7).
GENERAL PRODUCT INFORMATION: PBB, Inc. template hinges are manufactured to close tolerances and meet all specifications and requirements set by the American National Standards Institute (ANSI).

ALL HALF MORTISE HINGES ARE MADE FOR REVERSIBLE APPLICATIONS

MATERIAL GAUGE: .190 ± .005 for 5"

5" STANDARD SCREW SIZE

<table>
<thead>
<tr>
<th></th>
<th>FHMS</th>
<th>OHMS</th>
</tr>
</thead>
<tbody>
<tr>
<td>12-24 x 1/2&quot;</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

PACKAGING INFORMATION:
One hinge per plastic bag, 3 hinges and 1 screw pack per unit carton.
12 unit carton or 36 hinges per master shipping carton.
1 screw pack includes all machine screws (8).
GENERAL PRODUCT INFORMATION: PBB, Inc. template hinges are manufactured to close tolerances and meet all specifications and requirements set by the American National Standards Institute (ANSI).

ALL HALF MORTISE HINGES ARE MADE FOR REVERSIBLE APPLICATIONS

MATERIAL GAUGE:  
.134 ± .005 for 4-1/2"

OTHER SPECIFICATIONS:
Height of hinge:  4.50 ± .005 for 4-1/2"

Width:
Jamb Leaf:  (A) 1-1/2"
Door Leaf:  (B) 2-1/16"
Offset:  (C) 7/16"

4-1/2" STANDARD SCREW SIZE

<table>
<thead>
<tr>
<th>FHMS</th>
<th>OHMS</th>
</tr>
</thead>
<tbody>
<tr>
<td>12-24 x 1/2&quot;</td>
<td>12-24 x 1/2&quot;</td>
</tr>
</tbody>
</table>

PACKAGING INFORMATION:
One hinge per plastic bag, 3 hinges and 1 screw pack per unit carton.  
12 unit carton or 36 hinges per master shipping carton.  
1 screw pack includes all machine screws (7).
GENERAL PRODUCT INFORMATION: PBB, Inc. template hinges are manufactured to close tolerances and meet all specifications and requirements set by the American National Standards Institute (ANSI).

ALL HALF MORTISE HINGES ARE MADE FOR REVERSIBLE APPLICATIONS

MATERIAL GAUGE: .134 ± .005 for 4-1/2”

OTHER SPECIFICATIONS:
Height of hinge: 4.50 + .000 – .015 for 4-1/2”

<table>
<thead>
<tr>
<th>Width</th>
<th>Jamb Leaf: (inches)</th>
<th>Door Leaf: (inches)</th>
<th>Offset (inches)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>(A) 1-1/2”</td>
<td>(B) 2-1/16”</td>
<td>(C) 7/16”</td>
</tr>
</tbody>
</table>

4-1/2” STANDARD SCREW SIZE
FHMS - 12-24 x 1/2”
OHMS - 12-24 x 1/2”

PACKAGING INFORMATION:
One hinge per plastic bag, 3 hinges and 1 screw pack per unit carton.
12 unit carton or 36 hinges per master shipping carton.
1 screw pack includes all machine screws (7).
GENERAL PRODUCT INFORMATION: PBB, Inc. template hinges are manufactured to close tolerances and meet all specifications and requirements set by the American National Standards Institute (ANSI).

ALL HALF MORTISE HINGES ARE MADE FOR REVERSIBLE APPLICATIONS

MATERIAL GAUGE: .180 ± .005 for 4-1/2"

4C82   (ANSI A8211)
Steel-Polished and Plated or Bonderized and Prime Coated for Painting.

4C22   (ANSI A2211)
Brass-Polished and Plated

4C52   (ANSI A5211)
Stainless Steel-Polished and Satin Finish

•For heavy weight hollow metal doors with channel iron jambs receiving high frequency service.
•For hospital type, add HT to suffix of part number.
•Concealed bearing for trouble free longlife application
•Attractive slim barrel with flush pins and plugs
•All hinges are ANSI template.

Measurements below

OTHER SPECIFICATIONS:
Height of hinge: 4.50 ± .005 for 4-1/2"

Width:
Jamb Leaf: (A) 1-1/2"
Door Leaf: (B) 2-1/8"
Offset (C) 1/2"

4-1/2" STANDARD SCREW SIZE
FHMS - 12-24 x 1/2"
OHMS - 12-24 x 1/2"

PACKAGING INFORMATION:
One hinge per plastic bag, 3 hinges and 1 screw pack per unit carton.
12 unit carton or 36 hinges per master shipping carton.
1 screw pack includes all machine screws (7).
GENERAL PRODUCT INFORMATION: PBB, Inc. template hinges are manufactured to close tolerances and meet all specifications and requirements set by the American National Standards Institute (ANSI).

ALL HALF MORTISE HINGES ARE MADE FOR REVERSIBLE APPLICATIONS

MATERIAL GAUGE: .190 ± .005 for 5"

OTHER SPECIFICATIONS:

<table>
<thead>
<tr>
<th>Height of hinge:</th>
<th>+ .000</th>
<th>5.00</th>
<th>- .015</th>
<th>for 5&quot;</th>
</tr>
</thead>
</table>

<table>
<thead>
<tr>
<th>Width:</th>
<th>Jamb Leaf: (inches)</th>
<th>(A)</th>
<th>1-1/2&quot;</th>
</tr>
</thead>
<tbody>
<tr>
<td>Door Leaf: (inches)</td>
<td>(B)</td>
<td>2-1/8&quot;</td>
<td></td>
</tr>
<tr>
<td>Offset (inches)</td>
<td>(C)</td>
<td>1/2&quot;</td>
<td></td>
</tr>
</tbody>
</table>

5" STANDARD SCREW SIZE

| FHMS - 12-24 x 1/2" |
| OHMS - 12-24 x 1/2" |

PACKAGING INFORMATION:
One hinge per plastic bag, 3 hinges and 1 screw pack per unit carton.
12 unit carton or 36 hinges per master shipping carton.
1 screw pack includes all machine screws (8).
PB83 (ANSI A8333)  
Steel-Polished and Plated or Bonderized and Prime Coated for Painting

PB23 (ANSI A2333)  
Brass-Polished and Plated

PB53 (ANSI A5333)  
Stainless Steel-Polished and Satin Finish

• For medium weight mineral core doors or hollow metal doors with channel iron frames receiving low frequency service.
• For hospital type, add HT to suffix of part number.
• Not for use with door closer.
• All hinges are ANSI template.

GENERAL PRODUCT INFORMATION: PBB, Inc. template hinges are manufactured to close tolerances and meet all specifications and requirements set by the American National Standards Institute (ANSI).

ALL FULL SURFACE HINGES ARE MADE FOR REVERSIBLE APPLICATIONS

MATERIAL GAUGE: .134 ± .005 for 4-1/2”

OTHER SPECIFICATIONS:
Height of hinge: 4.50 ± .005 for 4-1/2”

Width:  
Jamb Leaf: (A) 1-1/2”  
Door Leaf: (B) 2-9/16”  
Door Leaf Offset: (C) 9/16”  
Jamb Leaf Offset: (D) 7/16”

PACKAGING INFORMATION:
One hinge per plastic bag, 3 hinges and 1 screw pack per unit carton.
12 unit carton or 36 hinges per master shipping carton.
1 screw pack includes all machine screws (6) and grommet nuts for 1-3/4” door.
GENERAL PRODUCT INFORMATION: PBB, Inc. template hinges are manufactured to close tolerances and meet all specifications and requirements set by the American National Standards Institute (ANSI).

ALL FULL SURFACE HINGES ARE MADE FOR REVERSIBLE APPLICATIONS

MATERIAL GAUGE: .134 ± .005 for 4-1/2”

OTHER SPECIFICATIONS:
Height of hinge: 4.50 +.000 – .015 for 4-1/2”

<table>
<thead>
<tr>
<th>Width</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Jamb Leaf:</td>
<td>(inches)</td>
</tr>
<tr>
<td>(A)</td>
<td>1-1/2”</td>
</tr>
<tr>
<td>Door Leaf:</td>
<td>(inches)</td>
</tr>
<tr>
<td>(B)</td>
<td>2-9/16”</td>
</tr>
<tr>
<td>Door Leaf Offset</td>
<td>(inches)</td>
</tr>
<tr>
<td>(C)</td>
<td>9/16”</td>
</tr>
<tr>
<td>Jamb Leaf Offset</td>
<td>(inches)</td>
</tr>
<tr>
<td>(D)</td>
<td>7/16”</td>
</tr>
</tbody>
</table>

PACKAGING INFORMATION:
One hinge per plastic bag, 3 hinges and 1 screw pack per unit carton.
12 unit carton or 36 hinges per master shipping carton.
1 screw pack includes all machine screws (6) and grommet nuts for 1-3/4” door.

<table>
<thead>
<tr>
<th>4-1/2” STANDARD SCREW SIZE</th>
</tr>
</thead>
<tbody>
<tr>
<td>OHMS - 12-24 x 1/2”</td>
</tr>
<tr>
<td>OHMS - 2” x 1/4-20</td>
</tr>
</tbody>
</table>

BB83 (ANSI A8312) Steel-Polished and Plated or Bonderized and Prime Coated for Painting.

BB23 (ANSI A2312) Brass-Polished and Plated

BB53 (ANSI A5312) Stainless Steel-Polished and Satin Finish

• For medium weight mineral core doors or hollow metal doors with channel iron frames receiving average frequency service.
• For hospital type, add HT to suffix of part number.
• Equipped with two lubricated non-detachable ball bearings.
• All hinges are ANSI template.

Measurements below}

Template No. BB83-45
GENERAL PRODUCT INFORMATION: PBB, Inc. template hinges are manufactured to close tolerances and meet all specifications and requirements set by the American National Standards Institute (ANSI).

ALL FULL SURFACE HINGES ARE MADE FOR REVERSIBLE APPLICATIONS

MATERIAL GAUGE: .
.180 ± .005 for 4-1/2”

4B83   (ANSI A8311)
Steel-Polished and Plated or Bonderized and Prime Coated for Painting.

4B23   (ANSI A2311)
Brass-Polished and Plated

4B53   (ANSI A5311)
Stainless Steel-Polished and Satin Finish
•For heavy weight mineral core doors or hollow metal doors with channel iron frames receiving high frequency service.
•For hospital type, add HT to suffix of part number.
•Equipped with four lubricated non-detachable ball bearings.
•All hinges are ANSI template.

OTHER SPECIFICATIONS:
Height of hinge: 4.50 ± .000 – .015 for 4-1/2”

Width:
Jamb Leaf: (inches) (A) 1-1/2”

Door Leaf (inches) (B) 2-9/16”

Door Leaf Offset (inches) (C) 5/8”

Jamb Leaf Offset (inches) (D) 1/2”

4-1/2” STANDARD SCREW SIZE
OHMS - 12-24 x 1/2”
OHMS - 2” x 1/4-20

PACKAGING INFORMATION:
One hinge per plastic bag, 3 hinges and 1 screw pack per unit carton.
12 unit carton or 36 hinges per master shipping carton.
1 screw pack includes all machine screws (6) and grommet nuts for 1-3/4” door.
GENERAL PRODUCT INFORMATION: PBB, Inc. template hinges are manufactured to close tolerances and meet all specifications and requirements set by the American National Standards Institute (ANSI).

ALL FULL SURFACE HINGES ARE MADE FOR REVERSIBLE APPLICATIONS

MATERIAL GAUGE: .190 ± .005 for 5"

OTHER SPECIFICATIONS:

Height of hinge: 5.00 ± .005 – .015 for 5"

Width:
- Jamb Leaf: (A) 1-1/2”
- Door Leaf: (B) 2-7/8”
- Door Leaf Offset: (C) 5/8”
- Jamb Leaf Offset: (D) 1/2”

5" STANDARD SCREW SIZE
- OHMS - 12-24 x 1/2”
- OHMS - 2” x 1/4-20

PACKAGING INFORMATION:
One hinge per plastic bag, 3 hinges and 1 screw pack per unit carton.
12 unit carton or 36 hinges per master shipping carton.
1 screw pack includes all machine screws (8) and grommet nuts for 1-3/4” door.
GENERAL PRODUCT INFORMATION: PBB, Inc. template hinges are manufactured to close tolerances and meet all specifications and requirements set by the American National Standards Institute (ANSI).

ALL FULL SURFACE HINGES ARE MADE FOR REVERSIBLE APPLICATIONS

MATERIAL GAUGE: .134 ± .005 for 4-1/2"

OTHER SPECIFICATIONS:
Height of hinge: 4.50 ± .000 – .015 for 4-1/2"

Width:
Jamb Leaf: (inches) (A) 1-1/2”
Door Leaf: (inches) (B) 2-9/16”
Door Leaf Offset: (inches) (C) 9/16”
Jamb Leaf Offset: (inches) (D) 7/16”

PACKAGING INFORMATION:
One hinge per plastic bag, 3 hinges and 1 screw pack per unit carton.
12 unit carton or 36 hinges per master shipping carton.
1 screw pack includes all machine screws (6) and grommet nuts for 1-3/4” door.
GENERAL PRODUCT INFORMATION: PBB, Inc. template hinges are manufactured to close tolerances and meet all specifications and requirements set by the American National Standards Institute (ANSI).

ALL FULL SURFACE HINGES ARE MADE FOR REVERSIBLE APPLICATIONS

MATERIAL GAUGE: .134 ± .005 for 4-1/2”

OTHER SPECIFICATIONS:
Height of hinge: 4.50 ± .000 – .015 for 4-1/2”

Width:
Jamb Leaf: (inches) (A) 1-1/2”
Door Leaf (inches) (B) 2-9/16”
Door Leaf Offset (inches) (C) 9/16”
Jamb Leaf Offset (inches) (D) 7/16”

4-1/2” STANDARD SCREW SIZE

OHMS - 12-24 x 1/2”
OHMS - 2” x 1/4-20

PACKAGING INFORMATION:
One hinge per plastic bag, 3 hinges and 1 screw pack per unit carton.
12 unit carton or 36 hinges per master shipping carton.
1 screw pack includes all machine screws (6) and grommet nuts for 1-3/4” door.
GENERAL PRODUCT INFORMATION: PBB, Inc. template hinges are manufactured to close tolerances and meet all specifications and requirements set by the American National Standards Institute (ANSI).

ALL FULL SURFACE HINGES ARE MADE FOR REVERSIBLE APPLICATIONS

MATERIAL GAUGE: .180 ± .005 for 4-1/2"

4-1/2" STANDARD SCREW SIZE
OHMS - 12-24 x 1/2"
OHMS - 2" x 1/4-20

PACKAGING INFORMATION:
One hinge per plastic bag, 3 hinges and 1 screw pack per unit carton.
12 unit carton or 36 hinges per master shipping carton.
1 screw pack includes all machine screws (6) and grommet nuts for 1-3/4" door.
GENERAL PRODUCT INFORMATION: PBB, Inc. template hinges are manufactured to close tolerances and meet all specifications and requirements set by the American National Standards Institute (ANSI).

ALL FULL SURFACE HINGES ARE MADE FOR REVERSIBLE APPLICATIONS

MATERIAL GAUGE: .190 ± .005 for 5”

OTHER SPECIFICATIONS:
- Steel-Polished and Plated or Bonderized and Prime Coated for Painting.
- Brass-Polished and Plated
- Stainless Steel-Polished and Satin Finish

• For heavy weight mineral core doors or hollow metal doors with channel iron frames receiving high frequency service.
• For hospital type, add HT to suffix of part number.
• Concealed bearing for trouble free long life application.
• Attractive slim barrel with flush pins and plugs
• All hinges are ANSI template.

PACKAGING INFORMATION:
One hinge per plastic bag, 3 hinges and 1 screw pack per unit carton.
12 unit carton or 36 hinges per master shipping carton.
1 screw pack includes all machine screws (8) and grommet nuts for 1-3/4” door.
GENERAL PRODUCT INFORMATION: PBB, Inc. template hinges are manufactured to close tolerances and meet all specifications and requirements set by the American National Standards Institute (ANSI).

ALL HALF SURFACE HINGES ARE MADE FOR REVERSIBLE APPLICATIONS

MATERIAL GAUGE: .134 ± .005 for 4-1/2"

PACKAGING INFORMATION:
One hinge per plastic bag, 3 hinges and 1 screw pack per unit carton.
12 unit carton or 36 hinges per master shipping carton.
1 screw pack includes all machine screws (7), and grommet nuts for 1-3/4" door.

PB84 (ANSI A8433)
Steel-Polished and Plated or Bonderized and Prime Coated for Painting

PB24 (ANSI A2433)
Brass-Polished and Plated

PB54 (ANSI A5433)
Stainless Steel-Polished and Satin Finish

• For medium weight mineral core doors or hollow metal doors with channel iron frames receiving low frequency service.
• For hospital type, add HT to suffix of part number.
• Not for use with door closer.
• All hinges are ANSI template.

MATERIAL GAUGE:
.134 ± .005 for 4-1/2"

OTHER SPECIFICATIONS:
Height of hinge: 4.50 ± .000 for 4-1/2"
Width:
Jamb Leaf: (A) 2-1/16"
Door Leaf: (B) 2-9/16"
Offset: (C) 9/16"

4-1/2" STANDARD SCREW SIZE
FHMS - 12-24 x 1/2"
OHMS - 2" x 1/4-20
GENERAL PRODUCT INFORMATION: PBB, Inc. template hinges are manufactured to close tolerances and meet all specifications and requirements set by the American National Standards Institute (ANSI).

ALL HALF SURFACE HINGES ARE MADE FOR REVERSIBLE APPLICATIONS

MATERIAL GAUGE: .134 ± .005 for 4-1/2”

OTHER SPECIFICATIONS:
Height of hinge: 4.50 + .000 – .015 for 4-1/2”

Width:
Jamb Leaf: (A) 2-1/16”
Door Leaf (inches) (B) 2-9/16”
Offset (inches) (C) 9/16”

4-1/2” STANDARD SCREW SIZE
- FHMS - 12-24 x 1/2”
- OHMS - 2” x 1/4-20

PACKAGING INFORMATION:
One hinge per plastic bag, 3 hinges and 1 screw pack per unit carton.
12 unit carton or 36 hinges per master shipping carton.
1 screw pack includes all machine screws (7), and grommet nuts for 1-3/4” door.
GENERAL PRODUCT INFORMATION: PBB, Inc. template hinges are manufactured to close tolerances and meet all specifications and requirements set by the American National Standards Institute (ANSI).

ALL HALF SURFACE HINGES ARE MADE FOR REVERSIBLE APPLICATIONS

MATERIAL GAUGE:  
.180 ± .005 for 4-1/2”

OTHER SPECIFICATIONS:
Height of hinge:  
4.50 ± .005 for 4-1/2”

Width:  
Jamb Leaf: (inches)  
(A) 2-1/8”

Door Leaf: (inches)  
(B) 2-9/16”

Offset: (inches)  
(C) 5/8”

PACKAGING INFORMATION:  
One hinge per plastic bag, 3 hinges and 1 screw pack per unit carton.  
12 unit carton or 36 hinges per master shipping carton.  
1 screw pack includes all machine screws (7) and grommet nuts for 1-3/4” door.
GENERAL PRODUCT INFORMATION: PBB, Inc. template hinges are manufactured to close tolerances and meet all specifications and requirements set by the American National Standards Institute (ANSI).

ALL HALF SURFACE HINGES ARE MADE FOR REVERSIBLE APPLICATIONS

MATERIAL GAUGE: .
.190 ± .005 for 5”

OTHER SPECIFICATIONS:
Height of hinge: 5.00 ± .005 .015 for 5”

Width:
Jamb Leaf: (A) 2-1/8”
Door Leaf (inches) (B) 2-7/8”
Offset (inches) (C) 5/8”

5” STANDARD SCREW SIZE
FHMS - 12-24 x 1/2”
OHMS - 2” x 1/4-20

PACKAGING INFORMATION:
One hinge per plastic bag, 3 hinges and 1 screw pack per unit carton.
12 unit carton or 36 hinges per master shipping carton.
1 screw pack includes all machine screws (8) and grommet nuts for 1-3/4” door.
GENERAL PRODUCT INFORMATION: PBB, Inc. template hinges are manufactured to close tolerances and meet all specifications and requirements set by the American National Standards Institute (ANSI).

ALL HALF SURFACE HINGES ARE MADE FOR REVERSIBLE APPLICATIONS

MATERIAL GAUGE: .134 ± .005 for 4-1/2”

OTHER SPECIFICATIONS:
Height of hinge: 4.50 for 4-1/2”
Width:
Jamb Leaf: (A) 2-1/16”
Door Leaf: (B) 2-9/16”
Offset: (C) 9/16”

4-1/2” STANDARD SCREW SIZE
| FHMS | 12-24 x 1/2” |
| OHMS | 2” x 1/4-20 |

PACKAGING INFORMATION:
One hinge per plastic bag, 3 hinges and 1 screw pack per unit carton.
12 unit carton or 36 hinges per master shipping carton.
1 screw pack includes all machine screws (7), and grommet nuts for 1-3/4” door.

CP84   (ANSI A8433) Steel-Polished and Plated or Bonderized and Prime Coated for Painting.
CP24   (ANSI A2433) Brass-Polished and Plated
CP54   (ANSI A5433) Stainless Steel-Polished and Satin Finish

• For medium weight mineral core doors or hollow metal doors with channel iron frames receiving average frequency service.
• For hospital type, add HT to suffix of part number.
• Equipped with two lubricated non-detachable ball bearings.
• All hinges are ANSI template.
GENERAL PRODUCT INFORMATION: PBB, Inc. template hinges are manufactured to close tolerances and meet all specifications and requirements set by the American National Standards Institute (ANSI).

ALL HALF SURFACE HINGES ARE MADE FOR REVERSIBLE APPLICATIONS

MATERIAL GAUGE: .134 ± .005 for 4-1/2”

OTHER SPECIFICATIONS:
Height of hinge: 4.50 for 4-1/2”

Width:
- Jamb Leaf: (A) 2-1/16”
- Door Leaf: (B) 2-9/16”
- Offset: (C) 9/16”

PACKAGING INFORMATION:
One hinge per plastic bag, 3 hinges and 1 screw pack per unit carton.
12 unit carton or 36 hinges per master shipping carton.
1 screw pack includes all machine screws (7), and grommet nuts for 1-3/4” door.
GENERAL PRODUCT INFORMATION: PBB, Inc. template hinges are manufactured to close tolerances and meet all specifications and requirements set by the American National Standards Institute (ANSI).

ALL HALF SURFACE HINGES ARE MADE FOR REVERSIBLE APPLICATIONS

MATERIAL GAUGE: .
.180 ± .005 for 4-1/2”

OTHER SPECIFICATIONS:
- Height of hinge: 4.50 ± .000 – .015 for 4-1/2”
- Width:
  - Jamb Leaf: (inches) (A) 2-1/8”
  - Door Leaf: (inches) (B) 2-9/16”
  - Offset: (inches) (C) 5/8”

PACKAGING INFORMATION:
One hinge per plastic bag, 3 hinges and 1 screw pack per unit carton.
12 unit carton or 36 hinges per master shipping carton.
1 screw pack includes all machine screws (7) and grommet nuts for 1-3/4” door.
GENERAL PRODUCT INFORMATION: PBB, Inc. template hinges are manufactured to close tolerances and meet all specifications and requirements set by the American National Standards Institute (ANSI).

ALL HALF SURFACE HINGES ARE MADE FOR REVERSIBLE APPLICATIONS

MATERIAL GAUGE: .190 ± .005 for 5”

OTHER SPECIFICATIONS:
Height of hinge: 5.00 ± .000 for 5”

Width:
Jamb Leaf: (inches) (A) 2-1/8”
Door Leaf: (inches) (B) 2-7/8”
Offset: (inches) (C) 5/8”

PACKAGING INFORMATION:
One hinge per plastic bag, 3 hinges and 1 screw pack per unit carton.
12 unit carton or 36 hinges per master shipping carton.
1 screw pack includes all machine screws (8) and grommet nuts for 1-3/4” door.
GENERAL PRODUCT INFORMATION: PBB, Inc. template hinges are manufactured to close tolerances and meet all specifications and requirements set by the American National Standards Institute (ANSI).

For use in hospitals, institutional or commercial type buildings for barrier-free environment. Wherever doors are required to meet barrier-free codes (ADA) or are required to swing completely clear of the openings so that wide equipment can pass through without damaging doors, frames or equipment, reducing opening maintenance.

MATERIAL GAUGE:
.123 ± .005 for 3-1/2"
.130 ± .005 for 4"

OTHER SPECIFICATIONS:
Height of hinge: + .000
3.50 – .015 for 3-1/2"
4.00 – .015 for 4"

Width: 3.50 ± .015 for 3-1/2"
4.00 ± .015 for 4"

Minimum Clearance Required
Dimension “A” (inches) 2-1/8” for 3-1/2"
2-1/2” for 4”

PACKAGING INFORMATION:
One hinge per plastic bag, 3 hinges and 1 screw pack per unit carton.
12 unit carton or 36 hinges per master shipping carton.
1 screw pack includes all machine screws (24), and 1/2 wood screws (12). ATMS & AWS also available.
For 3-1/2 x 3-1/2, 1 screw pack includes (18) machine screws and (18) wood screws.
GENERAL PRODUCT INFORMATION: PBB, Inc. template hinges are manufactured to close tolerances and meet all specifications and requirements set by the American National Standards Institute (ANSI).

For use in hospitals, institutional or commercial type buildings for barrier-free environment. Wherever doors are required to meet barrier-free codes (ADA) or are required to swing completely clear of the openings so that wide equipment can pass through without damaging doors, frames or equipment, reducing opening maintenance.

MATERIAL GAUGE: 
.134 ± .005 for 4-1/2

OTHER SPECIFICATIONS:
Height of hinge: 4.50 ± .000 for 4-1/2"
Minimum Clearance Required
Dimension “A” (inches) 2-1/8"
*NOTE: Specify square or beveled when ordering product.

PACKAGING INFORMATION: 
One hinge per plastic bag, 3 hinges and 1 screw pack per unit carton. 
12 unit carton or 36 hinges per master shipping carton. 
1 screw pack includes all machine screws (24), and 1/2 wood screws (12). ATMS & AWS also available.

SCBB81       (ANSI A8122) 
Steel-Polished and Plated or Bonderized and Prime Coated for Painting.

SCBB51       (ANSI A5122) 
Stainless Steel-Polished and Satin Finish

• All swing clear hinges are made for reversible applications.
• Designed to swing doors completely clear of the opening when door is opened 95º.
• When opened 90º door projects 3/32” past stop of jamb.
• Recommended for 3’0” x 7’0” x 1-3/4” doors not to exceed 150 lbs.
• For medium weight doors receiving average frequency service.
• For hospital type, add HT to suffix of part number.
• All hinges are ANSI template.

4-1/2" STANDARD SCREW SIZE

FHMS - 12-24 x 1/2”
FHWS - 12 x 1-1/4”
GENERAL PRODUCT INFORMATION: PBB, Inc. template hinges are manufactured to close tolerances and meet all specifications and requirements set by the American National Standards Institute (ANSI).

For use in hospitals, institutional or commercial type buildings for barrier-free environment. Wherever doors are required to meet barrier-free codes (ADA) or are required to swing completely clear of the openings so that wide equipment can pass through without damaging doors, frames or equipment, reducing opening maintenance.

THIS SPECIAL MODEL OF SWING CLEAR HINGE IS MADE TO SPECIFICALLY FIT TIMELY OR REDIFRAME TRIM CASING APPLICATIONS.

MATERIAL GAUGE:
.134 ± .005 for 4-1/2

<table>
<thead>
<tr>
<th>4-1/2&quot; STANDARD SCREW SIZE</th>
</tr>
</thead>
<tbody>
<tr>
<td>FHMS - 12-24 x 1/2&quot;</td>
</tr>
<tr>
<td>FHWS - 12 x 1-1/4&quot;</td>
</tr>
</tbody>
</table>

OTHER SPECIFICATIONS:
Height of hinge: 4.50 ± .000
Minimum Clearance Required
Dimension “A” (inches) 2-3/16”
Dimension “B” (inches) 2-21/32”
Dimension “C” (inches) 2-15/16”

PACKAGING INFORMATION:
One hinge per plastic bag, 3 hinges and 1 screw pack per unit carton.
12 unit carton or 36 hinges per master shipping carton.
1 screw pack includes all machine screws (24), and 1/2 wood screws (12). ATMS & AWS also available.
GENERAL PRODUCT INFORMATION: PBB, Inc. template hinges are manufactured to close tolerances and meet all specifications and requirements set by the American National Standards Institute (ANSI).

For use in hospitals, institutional or commercial type buildings for barrier-free environment. Wherever doors are required to meet barrier-free codes (ADA) or are required to swing completely clear of the openings so that wide equipment can pass through without damaging doors, frames or equipment, reducing opening maintenance.

MATERIAL GAUGE: .146 ± .005 for 5”

OTHER SPECIFICATIONS:
- Height of hinge: 5” ± .000 to ± .015 for 5”
- Minimum Clearance Required
- Dimension “A” (inches) 2-1/8”

*NOTE: Specify square or beveled when ordering product.

5” STANDARD SCREW SIZE

<table>
<thead>
<tr>
<th>Type</th>
<th>Size</th>
</tr>
</thead>
<tbody>
<tr>
<td>FHMS</td>
<td>12-24 x 1/2”</td>
</tr>
<tr>
<td>FHWS</td>
<td>12 x 1-1/4”</td>
</tr>
</tbody>
</table>

PACKAGING INFORMATION:
- One hinge per plastic bag, 3 hinges and 1 screw pack per unit carton.
- 12 unit carton or 36 hinges per master shipping carton.
- 1 screw pack includes all machine screws (24), and 1/2 wood screws (12). ATMS & AWS also available.
GENERAL PRODUCT INFORMATION: PBB, Inc. template hinges are manufactured to close tolerances and meet all specifications and requirements set by the American National Standards Institute (ANSI).

For use in hospitals, institutional or commercial type buildings for barrier-free environment. Wherever doors are required to meet barrier-free codes (ADA) or are required to swing completely clear of the openings so that wide equipment can pass through without damaging doors, frames or equipment, reducing opening maintenance.

MATERIAL GAUGE:
.180 ± .005 for 4-1/2”

OTHER SPECIFICATIONS:
Height of hinge: 4.50 ± .000 – .015 for 4-1/2”

Minimum Clearance Required Dimension “A” (inches) 2-1/8”

*NOTE: Specify square or beveled when ordering product.

4-1/2” STANDARD SCREW SIZE

| FHMS | 12-24 x 1/2” |
| FHWS | 12 x 1-1/4” |

PACKAGING INFORMATION:
One hinge per plastic bag, 3 hinges and 1 screw pack per unit carton.
8 unit carton or 24 hinges per master shipping carton.
1 screw pack includes all machine screws (24), and 1/2 wood screws (12). ATMS & AWS also available.
GENERAL PRODUCT INFORMATION: PBB, Inc. template hinges are manufactured to close tolerances and meet all specifications and requirements set by the American National Standards Institute (ANSI).

For use in hospitals, institutional or commercial type buildings for barrier-free environment. Wherever doors are required to meet barrier-free codes (ADA) or are required to swing completely clear of the openings so that wide equipment can pass through without damaging doors, frames or equipment, reducing opening maintenance.

MATERIAL GAUGE:
.190 ± .005 for 5”

OTHER SPECIFICATIONS:
Height of hinge: 5.00 + .000 – .015 for 5”

Minimum Clearance Required
Dimension “A” (inches) 2-1/8

*NOTE: Specify square or beveled when ordering product.

5” STANDARD SCREW SIZE
FHMS - 12-24 x 1/2”
FHWS - 12 x 1-1/4”

PACKAGING INFORMATION:
One hinge per plastic bag, 3 hinges and 1 screw pack per unit carton.
8 unit carton or 24 hinges per master shipping carton.
1 screw pack includes all machine screws (24), and 1/2 wood screws (12). ATMS & AWS also available.
GENERAL PRODUCT INFORMATION: PBB, Inc. template hinges are manufactured to close tolerances and meet all specifications and requirements set by the American National Standards Institute (ANSI).

For use in hospitals, institutional or commercial type buildings for barrier-free environment. Wherever doors are required to meet barrier-free codes (ADA) or are required to swing completely clear of the openings so that wide equipment can pass through without damaging doors, frames or equipment, reducing opening maintenance.

MATERIAL GAUGE:
.190 ± .005 for 5”

OTHER SPECIFICATIONS:
Height of hinge: 5.00 ± .000 for 5”, – .015

Minimum Clearance Required
Dimension “A” (inches) 2-1/8"

*NOTE: Specify square or beveled when ordering product.

PACKAGING INFORMATION:
One hinge per plastic bag, 3 hinges and 1 screw pack per unit carton.
11 unit carton or 33 hinges per master shipping carton.
1 screw pack includes all machine screws (24), and 1/2 wood screws (12).
GENERAL PRODUCT INFORMATION: PBB, Inc. template hinges are manufactured to close tolerances and meet all specifications and requirements set by the American National Standards Institute (ANSI).

For use in hospitals, institutional or commercial type buildings for barrier-free environment. Wherever doors are required to meet barrier-free codes (ADA) or are required to swing completely clear of the openings so that wide equipment can pass through without damaging doors, frames or equipment, reducing opening maintenance.

MATERIAL GAUGE:
.190 ± .005 for 5”

OTHER SPECIFICATIONS:
Height of hinge:
5.00 + .000
– .015 for 5”

Minimum Clearance Required
Dimension “A” (inches) 2-1/8”

PACKAGING INFORMATION:
One hinge per plastic bag, 3 hinges and 1 screw pack per unit carton.
4 unit carton or 12 hinges per master shipping carton.
1 screw pack includes all machine screws (12), and oval head machine screws (15) with grommet nuts.
GENERAL PRODUCT INFORMATION: PBB, Inc. template hinges are manufactured to close tolerances and meet all specifications and requirements set by the American National Standards Institute (ANSI).

For use in hospitals, institutional or commercial type buildings for barrier-free environment. Wherever doors are required to meet barrier-free codes (ADA) or are required to swing completely clear of the openings so that wide equipment can pass through without damaging doors, frames or equipment, reducing opening maintenance.

MATERIAL GAUGE:
.190 ± .005 for 5”

OTHER SPECIFICATIONS:
Height of hinge: 5.00 ± .000 – .015 for 5”
Minimum Clearance Required Dimension “A” (inches) 2-1/8

5” STANDARD SCREW SIZE

<table>
<thead>
<tr>
<th>JAMB LEAF OHMS</th>
<th>12-24 x 1/2”</th>
</tr>
</thead>
<tbody>
<tr>
<td>DOOR LEAF OHMS/NUT</td>
<td>2” x 1/4-20</td>
</tr>
</tbody>
</table>

PACKAGING INFORMATION:
One hinge per plastic bag, 3 hinges and 1 screw pack per unit carton.
4 unit carton or 12 hinges per master shipping carton.
1 screw pack includes all machine screws (12), and oval head machine screws (15) with grommet nuts.

SC4B84 (ANSI A8421)
Steel - Polished and Plated or Bonderized and Prime Coated for Painting.

SC4B54 (ANSI A5421)
Stainless Steel - Polished and Satin Finish

• All swing clear hinges are made for reversible applications
• Designed to swing doors completely clear of the opening when door is opened 95º.
• When opened 90º door projects 11/64” past stop of jamb.
• Removable plug for reversing pin for application needed.
• For use on pressed steel frames.
• For heavy weight or Kalamein doors receiving high frequency service in hospitals or institutions.
• For hospital type, add HT to suffix of part number
• All hinges are ANSI template.
GENERAL PRODUCT INFORMATION: PBB, Inc. template hinges are manufactured to close tolerances and meet all specifications and requirements set by the American National Standards Institute (ANSI).

For use in hospitals, institutional or commercial type buildings for barrier-free environment. Wherever doors are required to meet barrier-free codes (ADA) or are required to swing completely clear of the openings so that wide equipment can pass through without damaging doors, frames or equipment, reducing opening maintenance.

MATERIAL GAUGE:
.134 ± .005 for 4-1/2

SCCB81       (ANSI A8122)
Steel-Polished and Plated or Bonderized and Prime Coated for Painting.

SCCB51       (ANSI A5122)
Stainless Steel-Polished and Satin Finish

• All swing clear hinges are made for reversible applications.
• Designed to swing doors completely clear of the opening when door is opened 95°.
• When opened 90° door projects 3/32” past stop of jamb.
• Recommended for 3’0” x 7’0” x 1-3/4” doors not to exceed 150 lbs.
• For medium weight doors receiving average frequency service.
• For hospital type, add HT to suffix of part number.
• Concealed bearing for trouble free long life application.
• All hinges are ANSI template.

OTHER SPECIFICATIONS:
Height of hinge:
4.50 + .000 for 4-1/2”
− .015

Minimum Clearance Required
Dimension “A” (inches) 2-1/8”

NOTE: Specify square or beveled when ordering product.

PACKAGING INFORMATION:
One hinge per plastic bag, 3 hinges and 1 screw pack per unit carton.
12 unit carton or 36 hinges per master shipping carton.
1 screw pack includes all machine screws (24), and 1/2 wood screws (12). ATMS & AWS also available.
GENERAL PRODUCT INFORMATION: PBB, Inc. template hinges are manufactured to close tolerances and meet all specifications and requirements set by the American National Standards Institute (ANSI).

For use in hospitals, institutional or commercial type buildings for barrier-free environment. Wherever doors are required to meet barrier-free codes (ADA) or are required to swing completely clear of the openings so that wide equipment can pass through without damaging doors, frames or equipment, reducing opening maintenance.

MATERIAL GAUGE:
.146 ± .005 for 5”

OTHER SPECIFICATIONS:
Height of hinge:

5” + .000 for 5”
- .015

Minimum Clearance Required
Dimension “A” (inches) 2-1/8”

NOTE: Specify square or beveled when ordering product.

PACKAGING INFORMATION:
One hinge per plastic bag, 3 hinges and 1 screw pack per unit carton.
12 unit carton or 36 hinges per master shipping carton.
1 screw pack includes all machine screws (24), and 1/2 wood screws (12). ATMS & AWS also available.
GENERAL PRODUCT INFORMATION: PBB, Inc. template hinges are manufactured to close tolerances and meet all specifications and requirements set by the American National Standards Institute (ANSI).

For use in hospitals, institutional or commercial type buildings for barrier-free environment. Wherever doors are required to meet barrier-free codes (ADA) or are required to swing completely clear of the openings so that wide equipment can pass through without damaging doors, frames or equipment, reducing opening maintenance.

MATERIAL GAUGE: 
.180 ± .005 for 4-1/2”

Minimum Clearance Required
Dimension “A” (inches) 2-1/8”

OTHER SPECIFICATIONS:
Height of hinge: 4.50 ± .000 – .015 for 4-1/2”

*NOTE: Specify square or beveled when ordering product.

PACKAGING INFORMATION:
One hinge per plastic bag, 3 hinges and 1 screw pack per unit carton. 12 unit carton or 36 hinges per master shipping carton. 1 screw pack includes all machine screws (24), and 1/2 wood screws (12). ATMS & AWS also available.
SC4C81 (ANSI A8121) Steel-Polished and Plated or Bonderized and Prime Coated for Painting.

SC4C51 (ANSI A5121) Stainless Steel-Polished and Satin Finish

- All swing clear hinges are made for reversible applications.
- Designed to swing doors completely clear of the opening when door is opened 95°. When opened 90° door projects 11/64" past stop of jamb.
- Concealed bearing for trouble free long life.
- Attractive slim barrel with flush pins and plugs
- For heavy weight doors receiving high frequency service.
- For hospital type, add HT to suffix of part number.
- All hinges are ANSI template.

GENERAL PRODUCT INFORMATION: PBB, Inc. template hinges are manufactured to close tolerances and meet all specifications and requirements set by the American National Standards Institute (ANSI).

For use in hospitals, institutional or commercial type buildings for barrier-free environment. Wherever doors are required to meet barrier-free codes (ADA) or are required to swing completely clear of the openings so that wide equipment can pass through without damaging doors, frames or equipment, reducing opening maintenance.

MATERIAL GAUGE:
.190 ± .005 for 5"

Minimum Clearance Required Dimension “A” (inches) 2-1/8"

OTHER SPECIFICATIONS:
Height of hinge:
5.00 ± .000 for 5"

*NOTE: Specify square or beveled when ordering product.

5" STANDARD SCREW SIZE
FHMS - 12-24 x 1/2"
FHWS - 12 x 1-1/2"

PACKAGING INFORMATION:
One hinge per plastic bag, 3 hinges and 1 screw pack per unit carton.
8 unit carton or 24 hinges per master shipping carton.
1 screw pack includes all machine screws (24), and 1/2 wood screws (12). ATMS & AWS also available.
GENERAL PRODUCT INFORMATION: PBB, Inc. template hinges are manufactured to close tolerances and meet all specifications and requirements set by the American National Standards Institute (ANSI).

For use in hospitals, institutional or commercial type buildings for barrier-free environment. Wherever doors are required to meet barrier-free codes (ADA) or are required to swing completely clear of the openings so that wide equipment can pass through without damaging doors, frames or equipment, reducing opening maintenance.

MATERIAL GAUGE: 
.190 ± .005 for 5”

OTHER SPECIFICATIONS:
Height of hinge:
5.00 ± .000 for 5”
- .015

Minimum Clearance Required
Dimension “A” (inches) 2-1/8”

*NOTE: Specify square or beveled when ordering product.

PACKAGING INFORMATION:
One hinge per plastic bag, 3 hinges and 1 screw pack per unit carton. 
11 unit carton or 33 hinges per master shipping carton. 
1 screw pack includes all machine screws (24), and 1/2 wood screws (12).
GENERAL PRODUCT INFORMATION: PBB, Inc. template hinges are manufactured to close tolerances and meet all specifications and requirements set by the American National Standards Institute (ANSI).

For use in hospitals, institutional or commercial type buildings for barrier-free environment. Wherever doors are required to meet barrier-free codes (ADA) or are required to swing completely clear of the openings so that wide equipment can pass through without damaging doors, frames or equipment, reducing opening maintenance.

MATERIAL GAUGE:
.190 ± .005 for 5”

OTHER SPECIFICATIONS:
Height of hinge: 5.00 ± .000 for 5”
Minimum Clearance Required
Dimension “A” (inches) 2-1/8”

PACKAGING INFORMATION:
One hinge per plastic bag, 3 hinges and 1 screw pack per unit carton.
4 unit carton or 12 hinges per master shipping carton.
1 screw pack includes all machine screws (12), and oval head machine screws (15) with grommet nuts.

5” STANDARD SCREW SIZE
JAMB LEAF FHMS - 1/2” x 1/4-20
DOOR LEAF OHMS/NUT - 2” x 1/4-20

SC4C83 (ANSI A8321) Steel—Polished and Plated or Bonderized and Prime Coated for Painting.
SC4C53 (ANSI A5321) Stainless Steel—Polished and Satin Finish

• All swing clear hinges are made for reversible applications
• Designed to swing doors completely clear of the opening when door is opened 95º.
• When opened 90º door projects 3/32” past stop of jamb.
• Removable plug for reversing pin for application needed.
• For use on channel iron or pressed steel jambs.
• For heavy weight or Kalamein doors receiving high frequency service in hospitals or institutions.
• Hinges can be furnished hospital type.
• All hinges are ANSI template.
SC4C84  (ANSI A8421)
Steel - Polished and Plated or Bonderized and Prime Coated for Painting.

SC4C54  (ANSI A5421)
Stainless Steel - Polished and Satin Finish

- All swing clear hinges are made for reversible applications
- Designed to swing doors completely clear of the opening when door is opened 95°.
- When opened 90° door projects 11/64” past stop of jamb.
- Removable plug for reversing pin for application needed.
- For use on pressed steel frames.
- For heavy weight or Kalamein doors receiving high frequency service in hospitals or institutions.
- For hospital type, add HT to suffix of part number
- All hinges are ANSI template.

GENERAL PRODUCT INFORMATION: PBB, Inc. template hinges are manufactured to close tolerances and meet all specifications and requirements set by the American National Standards Institute (ANSI).

For use in hospitals, institutional or commercial type buildings for barrier-free environment. Wherever doors are required to meet barrier-free codes (ADA) or are required to swing completely clear of the openings so that wide equipment can pass through without damaging doors, frames or equipment, reducing opening maintenance.

OTHER SPECIFICATIONS:
Height of hinge: 5.00 ± .000 for 5”
Minimum Clearance Required
Dimension “A” (inches) 2-1/8"

MATERIAL GAUGE:
.190 ± .005 for 5”

5” STANDARD SCREW SIZE
JAMB LEAF OHMS - 12-24 x 1/2”
DOOR LEAF OHMS/NUT - 2” x 1/4-20

PACKAGING INFORMATION:
One hinge per plastic bag, 3 hinges and 1 screw pack per unit carton.
4 unit carton or 12 hinges per master shipping carton.
1 screw pack includes all machine screws (12), and oval head machine screws (15) with grommet nuts.
**GENERAL PRODUCT INFORMATION:** PBB, Inc. template hinges are manufactured to close tolerances and meet all specifications and requirements set by the American National Standards Institute (ANSI).

**HINGE SWAGING:** A standard swaging of our standard weight full mortise hinge when closed to parallel position provides a 3/32” clearance between leaves.

**MATERIAL GAUGE:**

.123 ± .005 for 3-1/2” x 4” & 5”

**OTHER SPECIFICATIONS:**

Height of hinge:

<table>
<thead>
<tr>
<th>Width</th>
<th>Height</th>
</tr>
</thead>
<tbody>
<tr>
<td>3-1/2”</td>
<td>3.50 ± .000 for 3-1/2”</td>
</tr>
<tr>
<td>Width:</td>
<td>Width:</td>
</tr>
<tr>
<td>4.00 ± .015 for 3-1/2” x 4”</td>
<td>5.00 ± .015 for 3-1/2” x 5”</td>
</tr>
</tbody>
</table>

**PACKAGING INFORMATION:**

One hinge per plastic bag, 3 hinges and 1 screw pack per unit carton.

11 unit carton or 33 hinges per master shipping carton.

1 screw pack includes all machine screws (24), and 1/2 wood screws (12). ATMS & AWS also available.
WTPB81  (ANSI A8133)  
Steel-Polished and Plated or Bonderized and Prime Coated for Painting.

WTPB21  (ANSI A2133)  
Brass-Polished and Plated

WTPB51  (ANSI A5133)  
Stainless Steel-Polished and Satin Finish

• For use on medium weight doors requiring low frequency service.
• For use where doors must clear molding or protrusion, positioning the door out further, when open.
• Not for use with door closer.
• For hospital type, add HT to suffix of part number.
• All hinges are ANSI template.

GENERAL PRODUCT INFORMATION: PBB, Inc. template hinges are manufactured to close tolerances and meet all specifications and requirements set by the American National Standards Institute (ANSI).

HINGE SWAGING: A standard swaging of our standard weight full mortise hinge when closed to parallel position provides a 3/32” clearance between leaves.

OTHER SPECIFICATIONS:
Height of hinge:
4.00 ± .000 for 4”
\[4.00 - .015\] for 4”

Width:
4.50 ± .015 for 4” x 4-1/2”
5.00 ± .015 for 4” x 5”
6.00 ± .015 for 4” x 6”

MATERIAL GAUGE:
.130 ± .005 for 4” x 4-1/2”, 5”, 6”

PACKAGING INFORMATION:
One hinge per plastic bag, 3 hinges and 1 screw pack per unit carton.
11 unit carton or 33 hinges per master shipping carton.
1 screw pack includes all machine screws (24), and 1/2 wood screws (12). ATMS & AWS also available.

4” WIDE THROW STANDARD SCREW SIZE

<table>
<thead>
<tr>
<th>SCREW SIZE</th>
<th>DESCRIPTION</th>
</tr>
</thead>
<tbody>
<tr>
<td>FHMS</td>
<td>12-24 x 1/2”</td>
</tr>
<tr>
<td>FHWS</td>
<td>12 x 1-1/4”</td>
</tr>
</tbody>
</table>

ALL ITEMS ABOVE CAN BE MADE IN THREE OR FIVE KNUCKLE CONFIGURATION.
GENERAL PRODUCT INFORMATION: PBB, Inc. template hinges are manufactured to close tolerances and meet all specifications and requirements set by the American National Standards Institute (ANSI).

HINGE SWAGING: A standard swaging of our standard weight full mortise hinge when closed to parallel position provides a 3/32” clearance between leaves.

MATERIAL GAUGE: 
.134 ± .005 for 4-1/2” x 5”, 6”, 7”, 8”

OTHER SPECIFICATIONS:
Height of hinge: 
4.50 ± .000 – .015 for 4-1/2”

Width:
5.00 ± .015 for 4-1/2” x 5”
6.00 ± .015 for 4-1/2” x 6”
7.00 ± .015 for 4-1/2” x 7”
8.00 ± .015 for 4-1/2” x 8”

4-1/2” WIDE THROW STANDARD SCREW SIZE
| FHMS       | 12-24 x 1/2” |
| FHWS       | 12 x 1-1/4”  |

ALL ITEMS ABOVE CAN BE MADE IN THREE OR FIVE KNUCKLE CONFIGURATION.

PACKAGING INFORMATION:
One hinge per plastic bag, 3 hinges and 1 screw pack per unit carton.
8 unit carton or 24 hinges per master shipping carton.
1 screw pack includes all machine screws (24), and 1/2 wood screws (12). ATMS & AWS also available.
FULL MORTISE TEMPLATE PLAIN BEARING

STANDARD WEIGHT WIDE THROW
5” x 6”  5” x 7”  5” x 8”

WTPB81  (ANSI A8133)
Steel-Polished and Plated or Bonded and Prime Coated for Painting.

WTPB21  (ANSI A2133)
Brass-Polished and Plated

WTPB51  (ANSI A5133)
Stainless Steel-Polished and Satin Finish

• For use on medium weight doors requiring low frequency service.
• For use where doors must clear molding or protrusion, positioning the door out further, when open.
• Not for use with door closer.
• For hospital type, add HT to suffix of part number.
• All hinges are ANSI template.

GENERAL PRODUCT INFORMATION: PBB, Inc. template hinges are manufactured to close tolerances and meet all specifications and requirements set by the American National Standards Institute (ANSI).

HINGE SWAGING: A standard swaging of our standard weight full mortise hinge when closed to parallel position provides a 3/32” clearance between leaves.

MATERIAL GAUGE:
.146 ± .005 for 5” x 6”, 7”, 8”

OTHER SPECIFICATIONS:
Height of hinge:
5.00 + .000 for 5”
- .015

Width:
6.00 ± .015 for 5” x 6”
7.00 ± .015 for 5” x 7”
8.00 ± .015 for 5” x 8”

5” WIDE THROW STANDARD SCREW SIZE

| FHMS - 12-24 x 1/2” |
| FHWS - 12 x 1-1/4” |

ALL ITEMS ABOVE CAN BE MADE IN THREE OR FIVE KNuckle CONFIGURATION.

PACKAGING INFORMATION:
One hinge per plastic bag, 3 hinges and 1 screw pack per unit carton.
8 unit carton or 24 hinges per master shipping carton.
1 screw pack includes all machine screws (24), and 1/2 wood screws (12). ATMS & AWS also available.
FULL MORTISE TEMPLATE BALL BEARING
STANDARD WEIGHT WIDE THROW
3 1/2” x 4”  3 1/2” x 5”

WTBB81  (ANSI A8112)
Steel-Polished and Plated or Bonderized and Prime Coated for Painting.

WTBB21  (ANSI A2112)
Brass-Polished and Plated

WTBB51  (ANSI A5112)
Stainless Steel-Polished and Satin Finish
• For use on medium weight doors requiring average frequency service.
• For use where doors must clear molding or protrusion, positioning the door out further, when open.
• For hospital type, add HT to suffix of part number.
• All hinges are ANSI template.

GENERAL PRODUCT INFORMATION: PBB, Inc. template hinges are manufactured to close tolerances and meet all specifications and requirements set by the American National Standards Institute (ANSI).

HINGE SWAGING: A standard swaging of our standard weight full mortise hinge when closed to parallel position provides a 3/32” clearance between leaves.

MATERIAL GAUGE:
.123 ± .005 for 3-1/2” x 4” & 5”

OTHER SPECIFICATIONS:
Height of hinge: 3.50 + .000 – .015 for 3-1/2”
Width: 4.00 ± .015 for 3-1/2” x 4”
5.00 ± .015 for 3-1/2” x 5”

<table>
<thead>
<tr>
<th>3-1/2” WIDE THROW STANDARD SCREW SIZE</th>
</tr>
</thead>
<tbody>
<tr>
<td>FHMS - 12-24 x 1/2”</td>
</tr>
<tr>
<td>FHWS - 12 x 1-1/4”</td>
</tr>
</tbody>
</table>

ALL ITEMS ABOVE CAN BE MADE IN THREE OR FIVE KNUCKLE CONFIGURATION.

PACKAGING INFORMATION:
One hinge per plastic bag, 3 hinges and 1 screw pack per unit carton.
11 unit carton or 33 hinges per master shipping carton.
1 screw pack includes all machine screws (24), and 1/2 wood screws (12). ATMS & AWS also available.
GENERAL PRODUCT INFORMATION: PBB, Inc. template hinges are manufactured to close tolerances and meet all specifications and requirements set by the American National Standards Institute (ANSI).

HINGE SWAGING: A standard swaging of our standard weight full mortise hinge when closed to parallel position provides a 3/32” clearance between leaves.

MATERIAL GAUGE: .130 ± .005 for 4” x 4-1/2”, 5”, 6”

OTHER SPECIFICATIONS:

<table>
<thead>
<tr>
<th>Height of hinge:</th>
<th>4.00 ± .005 for 4”</th>
</tr>
</thead>
<tbody>
<tr>
<td>Width</td>
<td>4.50 ± .015 for 4” x 4-1/2”</td>
</tr>
<tr>
<td></td>
<td>5.00 ± .015 for 4” x 5”</td>
</tr>
<tr>
<td></td>
<td>6.00 ± .015 for 4” x 6”</td>
</tr>
</tbody>
</table>

4” WIDE THROW STANDARD SCREW SIZE

| FHMS - 12-24 x 1/2” |
| FHWS - 12 x 1-1/4” |

ALL ITEMS ABOVE CAN BE MADE IN THREE OR FIVE KNUCKLE CONFIGURATION.

PACKAGING INFORMATION:
One hinge per plastic bag, 3 hinges and 1 screw pack per unit carton.
11 unit carton or 33 hinges per master shipping carton.
1 screw pack includes all machine screws (24), and 1/2 wood screws (12). ATMS & AWS also available.
GENERAL PRODUCT INFORMATION: PBB, Inc. template hinges are manufactured to close tolerances and meet all specifications and requirements set by the American National Standards Institute (ANSI).

HINGE SWAGING: A standard swaging of our standard weight full mortise hinge when closed to parallel position provides a 1/16" clearance between leaves.

MATERIAL GAUGE:
.134 ± .005 for 4-1/2" x 5", 6", 7", 8"

OTHER SPECIFICATIONS:
Height of hinge:
4.50 ± .000 for 4-1/2"
5.00 ± .015 for 4-1/2" x 5"
6.00 ± .015 for 4-1/2" x 6"
7.00 ± .015 for 4-1/2" x 7"
8.00 ± .015 for 4-1/2" x 8"

4-1/2" WIDE THROW STANDARD SCREW SIZE
| FHMS - 12-24 x 1/2" |
| FHWS - 12 x 1-1/4" |

ALL ITEMS ABOVE CAN BE MADE IN THREE OR FIVE KNUCKLE CONFIGURATION.

PACKAGING INFORMATION:
One hinge per plastic bag, 3 hinges and 1 screw pack per unit carton.
8 unit carton or 24 hinges per master shipping carton.
1 screw pack includes all machine screws (24), and 1/2 wood screws (12). ATMS & AWS also available.
GENERAL PRODUCT INFORMATION: PBB, Inc. template hinges are manufactured to close tolerances and meet all specifications and requirements set by the American National Standards Institute (ANSI).

HINGE SWAGING: A standard swaging of our standard weight full mortise hinge when closed to parallel position provides a 3/32” clearance between leaves.

MATERIAL GAUGE:
.146 ± .005 for 5” x 6”, 7”, 8”

OTHER SPECIFICATIONS:
Height of hinge:
5.00 ± .000 – .015 for 5”

Width:
6.00 ± .015 for 5” x 6”
7.00 ± .015 for 5” x 7”
8.00 ± .015 for 5” x 8”

5” WIDE THROW STANDARD SCREW SIZE
| FHMS - 12-24 x 1/2” |
| FHWS - 12 x 1-1/4” |

ALL ITEMS ABOVE CAN BE MADE IN THREE OR FIVE KNUCKLE CONFIGURATION.

PACKAGING INFORMATION:
One hinge per plastic bag, 3 hinges and 1 screw pack per unit carton.
8 unit carton or 24 hinges per master shipping carton.
1 screw pack includes all machine screws (24), and 1/2 wood screws (12). ATMS & AWS also available.
GENERAL PRODUCT INFORMATION: PBB, Inc. template hinges are manufactured to close tolerances and meet all specifications and requirements set by the American National Standards Institute (ANSI).

HINGE SWAGING: A standard swaging of our heavy weight full mortise hinge when closed to parallel position provides a 3/32" clearance between leaves.

MATERIAL GAUGE:
.180 ± .005 for 4-1/2" x 5", 6", 7", 8"

OTHER SPECIFICATIONS:
Height of hinge: 4.50 ± .000 - .015 for 4-1/2"

Width: 5.00 ± .015 for 4-1/2" x 5"
6.00 ± .015 for 4-1/2" x 6"
7.00 ± .015 for 4-1/2" x 7"
8.00 ± .015 for 4-1/2" x 8"

4-1/2" WIDE THROW STANDARD SCREW SIZE
- FHMS - 12-24 x 1/2"
- FHWS - 12 x 1-1/4"

ALL ITEMS ABOVE CAN BE MADE IN THREE OR FIVE KNUCKLE CONFIGURATION.

PACKAGING INFORMATION:
One hinge per plastic bag, 3 hinges and 1 screw pack per unit carton.
8 unit carton or 24 hinges per master shipping carton.
1 screw pack includes all machine screws (24), and 1/2 wood screws (12). ATMS & AWS also available.
WT4B81  (ANSI A8111)
Steel-Polished and Plated or Bonderized and Prime Coated for Painting.

WT4B21  (ANSI A2111)
Brass-Polished and Plated

WT4B51  (ANSI A5111)
Stainless Steel-Polished and Satin Finish

• For use on heavy weight doors requiring high frequency service.
• For use where doors must clear molding or protrusion, positioning the door out further, when open.
• For hospital type, add HT to suffix of part number.
• All hinges are ANSI template.

GENERAL PRODUCT INFORMATION: PBB, Inc. template hinges are manufactured to close tolerances and meet all specifications and requirements set by the American National Standards Institute (ANSI).

HINGE SWAGING: A standard swaging of our heavy weight full mortise hinge when closed to parallel position provides a 3/32" clearance between leaves.

OTHER SPECIFICATIONS:
Height of hinge: 5.00 ± .000 for 5"

Width: 6.00 ± .015 for 5" x 6"
7.00 ± .015 for 5" x 7"
8.00 ± .015 for 5" x 8"

MATERIAL GAUGE: .190 ± .005 for 5" x 6", 7", 8"

PACKAGING INFORMATION:
One hinge per plastic bag, 3 hinges and 1 screw pack per unit carton.
8 unit carton or 24 hinges per master shipping carton.
1 screw pack includes all machine screws (24), and 1/2 wood screws (12). ATMS & AWS also available.

ALL ITEMS ABOVE CAN BE MADE IN THREE OR FIVE KNUCKLE CONFIGURATION.
FULL MORTISE 3/16” INSERT BALL BEARING

STANDARD WEIGHT
4 1/2” x 4”  4 1/2” x 4 1/2”

IT81   (ANSI A8112)
Steel-Polished and Plated or Bonderized and Prime Coated for Painting.

IT21   (ANSI A2112)
Brass-Polished and Plated

IT51   (ANSI A5112)
Stainless Steel-Polished and Satin Finish

• Hinges are handed, specify handing.
• For use on aluminum doors with aluminum frames.
• Hinge is designed to insert in slot in the door or frame.
• For use on medium weight doors or doors requiring average frequency service.
• Ball bearing hinges must be used on doors in conjunction with door closers and on all fire rated openings.
• For hospital type, add HT to suffix of part number.
• All hinges are ANSI template.

GENERAL PRODUCT INFORMATION: PBB, Inc. template hinges are manufactured to close tolerances and meet all specifications and requirements set by the American National Standards Institute (ANSI).

HINGE SWAGING: A standard swaging of our standard weight full mortise hinge when closed to parallel position provides a 3/16” clearance between leaves.

MATERIAL GAUGE:
.134 ± .005 for 4-1/2” x 4”
.134 ± .005 for 4-1/2” x 4-1/2”

PACKAGING INFORMATION:
One hinge per plastic bag, 3 hinges and 1 screw pack per unit carton.
16 unit carton or 48 hinges per master shipping carton.
1 screw pack includes 1/2 machine screws (12), and 1/2 wood screws (12).

OTHER SPECIFICATIONS:
Height of hinge:  
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<thead>
<tr>
<th>+ .000</th>
<th>− .015</th>
<th>for 4-1/2” x 4”</th>
</tr>
</thead>
<tbody>
<tr>
<td>4.50</td>
<td>– .015</td>
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<table>
<thead>
<tr>
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<th>for 4 1/2” x 4-1/2”</th>
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Width:
<table>
<thead>
<tr>
<th>+ .000</th>
<th>− .015</th>
<th>for 4-1/2” x 4”</th>
</tr>
</thead>
<tbody>
<tr>
<td>4.00</td>
<td>– .015</td>
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<table>
<thead>
<tr>
<th>+ .000</th>
<th>− .015</th>
<th>for 4-1/2” x 4-1/2”</th>
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<tbody>
<tr>
<td>4.50</td>
<td>– .015</td>
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4-1/2” STANDARD SCREW SIZE

<table>
<thead>
<tr>
<th>FHMS - 12-24 x 1/2”</th>
</tr>
</thead>
<tbody>
<tr>
<td>FHWS - 12 x 1-1/4”</td>
</tr>
</tbody>
</table>
GENERAL PRODUCT INFORMATION: PBB, Inc. template hinges are manufactured to close tolerances and meet all specifications and requirements set by the American National Standards Institute (ANSI).

HINGE SWAGING: A standard swaging of our standard weight full mortise hinge when closed to parallel position provides a 5/16” clearance between leaves.

MATERIAL GAUGE:
.134 ± .005 for 4-1/2” x 4”
.134 ± .005 for 4-1/2” x 4-1/2”

OTHER SPECIFICATIONS:

<table>
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<tr>
<th>Height of hinge:</th>
<th>+ .000</th>
<th>– .015</th>
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<tr>
<td>4.50 ± .000</td>
<td>for 4-1/2” x 4”</td>
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</tr>
<tr>
<td>4.50 ± .015</td>
<td>for 4 1/2” x 4-1/2”</td>
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</table>

<table>
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<tr>
<th>Width:</th>
<th>+ .000</th>
<th>– .015</th>
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<tr>
<td>4.00 ± .015</td>
<td>for 4-1/2” x 4”</td>
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<tr>
<td>4.50 ± .015</td>
<td>for 4-1/2” x 4-1/2”</td>
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PACKAGING INFORMATION:
One hinge per plastic bag, 3 hinges and 1 screw pack per unit carton.
16 unit carton or 48 hinges per master shipping carton.
1 screw pack includes all machine screws (24).
GENERAL PRODUCT INFORMATION: PBB, Inc. template hinges are manufactured to close tolerances and meet all specifications and requirements set by the American National Standards Institute (ANSI).

HINGE SWAGING: A standard swaging of our standard weight full mortise hinge when closed to parallel position provides a 1/16” clearance between leaves.

MATERIAL GAUGE: 
.134 ± .005 for 4-1/2” x 4-1/2”

OTHER SPECIFICATIONS:
Height of hinge: 4.50 + .000 – .015 for 4 1/2” x 4-1/2”

PACKAGING INFORMATION:
One hinge per plastic bag, 3 hinges and 1 screw pack per unit carton. 16 unit carton or 48 hinges per master shipping carton. 1 screw pack includes all machine screws (24), and 1/2 wood screws (12). ATMS & AWS also available.
**EXTRA HEAVY DUTY BEARING PIVOT HINGE**

**PV872**

(ANSI A8782)

**Steel** - Polished and Plated or Bonderized and Prime Coated for Painting.

- Full 180 degree opening
- For doors up to 150 lbs
- For doors 1-3/8" to 1-3/4" thick
- Made from extra heavy .190 gauge steel
- Bearings take both vertical and lateral loads
- PV872 comes in a set
- PV872 is reversible; use on doors of either hand

- Ideal for plastic laminated doors and wardrobe doors
- Designed for mullion mounting
- Doors can be installed floor to ceiling
- Screw holes allow both vertical and horizontal adjustment
- Extra long screws for secure attachment

<table>
<thead>
<tr>
<th>PV872 SCREW SIZE</th>
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<tbody>
<tr>
<td>FHWS - 12 x 1-1/2&quot;</td>
</tr>
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</table>

Set consists of one top and one bottom hinge / one pack screws / Installation instructions
GENERAL PRODUCT INFORMATION: PBB, Inc. template hinges are manufactured to close tolerances and meet all specifications and requirements set by the American National Standards Institute (ANSI).

HINGE SWAGING: A standard swaging of our standard weight full mortise hinge when closed to parallel position provides a 1/16” clearance between leaves.

MATERIAL GAUGE: .190 ± .005 for 5”

DOOR STRAP / FRAME STRAP: 5.00” x 1.25” / 4.00” x 1.25”

OTHER SPECIFICATIONS:
Height of hinge: 5.00 ± .000 for 5”
Width: 4.50 ± .015 for 5”

PACKAGING INFORMATION:
One hinge per plastic bag, 3 hinges and 1 screw pack per unit carton.
16 unit cartons or 48 hinges per master shipping carton.
1 screw pack includes all machine screws (24), and 1/2 wood screws (12). ATMS & AWS also available.
GENERAL PRODUCT INFORMATION: PBB, Inc. template hinges are manufactured to close tolerances and meet all specifications and requirements set by the American National Standards Institute (ANSI).

HINGE SWAGING: A standard swaging of our standard weight full mortise hinge when closed to parallel position provides a 1/16” clearance between leaves.

OTHER SPECIFICATIONS:
Height of hinge: \(5.00 \pm .015\) for 5”

Width: \(4.50 \pm .015\) for 5”

MATERIAL GAUGE:
.190 ± .005 for 5”

DOOR STRAP / FRAME STRAP:
5.00” x 1.25” / 4.00” x 1.25”

PACKAGING INFORMATION:
One hinge per plastic bag, 3 hinges and 1 screw pack per unit carton. 16 unit cartons or 48 hinges per master shipping carton. 1 screw pack includes all machine screws (24), and 1/2 wood screws (12). ATMS & AWS also available.
GENERAL PRODUCT INFORMATION: PBB, Inc. template hinges are manufactured to close tolerances and meet all specifications and requirements set by the American National Standards Institute (ANSI).

HINGE SWAGING: A standard swaging of our standard weight full mortise hinge when closed to parallel position provides a 1/16” clearance between leaves.

MATERIAL GAUGE:
.190 ± .005 for 5”

DOOR STRAP / FRAME STRAP:
5.00” x 1.25” / 7.5” x 1.25”

5” STANDARD SCREW SIZE
- FHMS - 12-24 x 1/2”
- FHWS - 12 x 1-1/4”

PACKAGING INFORMATION:
One hinge per plastic bag, 3 hinges and 1 screw pack per unit carton.
16 unit cartons or 48 hinges per master shipping carton.
1 screw pack includes all machine screws (24), and 1/2 wood screws (12). ATMS & AWS also available.
GENERAL PRODUCT INFORMATION: PBB, Inc. template hinges are manufactured to close tolerances and meet all specifications and requirements set by the American National Standards Institute (ANSI).

HINGE SWAGING: A standard swaging of our standard weight full mortise hinge when closed to parallel position provides a 1/16” clearance between leaves.

OTHER SPECIFICATIONS:
Height of hinge: 5.00 ± .000 – .015 for 5”
Width: 4.50 ± .015 for 5”

MATERIAL GAUGE:
.190 ± .005 for 5”

DOOR STRAP / FRAME STRAP:
5.00” x 1.25” / 7.5” x 1.25”

5” STANDARD SCREW SIZE
| FHMS | 12-24 x 1/2” |
| FHWS | 12 x 1-1/4” |

PACKAGING INFORMATION:
One hinge per plastic bag, 3 hinges and 1 screw pack per unit carton.
16 unit cartons or 48 hinges per master shipping carton.
1 screw pack includes all machine screws (24), and 1/2 wood screws (12). ATMS & AWS also available.
GENERAL PRODUCT INFORMATION: PBB, Inc. template hinges are manufactured to close tolerances and meet all specifications and requirements set by the American National Standards Institute (ANSI).

HINGE SWAGING: A standard swaging of our standard weight full mortise hinge when closed to parallel position provides a 1/16" clearance between leaves.

OTHER SPECIFICATIONS:
Height of hinge: 5.00 ± .015 for 5”
Width: 4.50 ± .015 for 5”

MATERIAL GAUGE:
.190 ± .005 for 5”

DOOR STRAP:
5.00” x 1.25”

5” STANDARD SCREW SIZE
FHMS - 12-24 x 1/2”
FHWS - 12 x 1-1/4”

PACKAGING INFORMATION:
One hinge per plastic bag, 3 hinges and 1 screw pack per unit carton.
16 unit cartons or 48 hinges per master shipping carton.
1 screw pack includes all machine screws (24), and 1/2 wood screws (12). ATMS & AWS also available.
**GENERAL PRODUCT INFORMATION:** PBB, Inc. template hinges are manufactured to close tolerances and meet all specifications and requirements set by the American National Standards Institute (ANSI).

**HINGE SWAGING:** A standard swaging of our standard weight full mortise hinge when closed to parallel position provides a 1/16" clearance between leaves.

**MATERIAL GAUGE:**
.190 ± .005 for 5"

**DOOR STRAP:**
5.00" x 1.25"

**OTHER SPECIFICATIONS:**
- Height of hinge: + .000
  5.00 – .015 for 5"
- Width: 4.50 ± .015 for 5"

**5" STANDARD SCREW SIZE**
- FHMS - 12-24 x 1/2"
- FHWS - 12 x 1-1/4"

**PACKAGING INFORMATION:**
- One hinge per plastic bag, 3 hinges and 1 screw pack per unit carton.
- 16 unit cartons or 48 hinges per master shipping carton.
- 1 screw pack includes all machine screws (24), and 1/2 wood screws (12). ATMS & AWS also available.
**GENERAL PRODUCT INFORMATION:** PBB, Inc. template hinges are manufactured to close tolerances and meet all specifications and requirements set by the American National Standards Institute (ANSI).

**HINGE SWAGING:** PBB can swage hinge to any application to fit your requirement. Please specify when ordering.

**MATERIAL GAUGE:**
- .134 ± .005 for 4-1/2” x 4”
- .134 ± .005 for 4-1/2” x 4-1/2”

**OTHER SPECIFICATIONS:**
- **Height of hinge:**
  - 4.50 ± .000 for 4-1/2” x 4”
  - 4.50 ± .000 for 4-1/2” x 4-1/2”
- **Width:**
  - 4.00 ± .015 for 4-1/2” x 4”
  - 4.50 ± .015 for 4-1/2” x 4-1/2”

**PACKAGING INFORMATION:**
One hinge per plastic bag, 3 hinges and 1 screw pack per unit carton. 16 unit carton or 48 hinges per master shipping carton.
GENERAL PRODUCT INFORMATION: PBB, Inc. template hinges are manufactured to close tolerances and meet all specifications and requirements set by the American National Standards Institute (ANSI).

HINGE SWAGING: PBB can swage hinge to any application to fit your requirement. Please specify when ordering.

MATERIAL GAUGE:
- .146 ± .005 for 5” x 4”
- .146 ± .005 for 5” x 4-1/2”
- .146 ± .005 for 5” x 5”

OTHER SPECIFICATIONS:
Height of hinge:
- 5.00 ± .005 for 5” x 4”
- 5.00 ± .005 for 5” x 4-1/2”
- 5.00 ± .005 for 5” x 5”

Width:
- 4.00 ± .015 for 5” x 4”
- 4.50 ± .015 for 5” x 4-1/2”
- 5.00 ± .015 for 5” x 5”

PACKAGING INFORMATION:
One hinge per plastic bag, 3 hinges and 1 screw pack per unit carton.
16 unit carton or 48 hinges per master shipping carton.

WBPB81
Steel-Bonderized and prime coated, zinc plated or plain steel
- Furnished flat back
- Furnished with loose pin
- Button pin available
- Special hole locations can be supplied if specified.
- For use on medium weight doors or doors requiring low frequency service.
- Not for use with door closer.
- For hospital type, add HT to suffix of part number.
GENERAL PRODUCT INFORMATION: PBB, Inc. template hinges are manufactured to close tolerances and meet all specifications and requirements set by the American National Standards Institute (ANSI).

HINGE SWAGING: PBB can swage hinge to any application to fit your requirement. Please specify when ordering.

MATERIAL GAUGE:
.134 ± .005 for 4-1/2" x 4"
.134 ± .005 for 4-1/2" x 4-1/2"

OTHER SPECIFICATIONS:

<table>
<thead>
<tr>
<th>Height of hinge</th>
<th>4.50 ± .015</th>
<th>for 4-1/2&quot; x 4&quot;</th>
</tr>
</thead>
<tbody>
<tr>
<td>Width</td>
<td>4.00 ± .015</td>
<td>for 4-1/2&quot; x 4&quot;</td>
</tr>
<tr>
<td></td>
<td>4.50 ± .015</td>
<td>for 4-1/2&quot; x 4-1/2&quot;</td>
</tr>
</tbody>
</table>

PACKAGING INFORMATION:
One hinge per plastic bag, 3 hinges and 1 screw pack per unit carton.
16 unit carton or 48 hinges per master shipping carton.
**BALL BEARING WELDING BUTT**

**WBBB81**

**Steel** - Bonderized and prime coated, zinc plated or plain steel

- Furnished flat back
- Furnished with loose pin
- Button pin available
- Special hole locations can be supplied if specified.
- For use on medium weight doors or doors requiring average frequency service.
- Ball bearing hinges must be used on doors in conjunction with door closers and on all fire rated openings.
- For hospital type, add HT to suffix of part number.

**GENERAL PRODUCT INFORMATION:** PBB, Inc. template hinges are manufactured to close tolerances and meet all specifications and requirements set by the American National Standards Institute (ANSI).

**HINGE SWAGING:** PBB can swage hinge to any application to fit your requirement. Please specify when ordering.

**MATERIAL GAUGE:**

- .146 ± .005 for 4-1/2" x 4"
- .146 ± .005 for 4-1/2" x 4-1/2"

**OTHER SPECIFICATIONS:**

- **Height of hinge:**
  - + .000
  - 5.00 – .015 for 5"

- **Width:**
  - 4.00 ± .015 for 4"
  - 4.50 ± .015 for 4-1/2"
  - 5.00 ± .015 for 5"

**PACKAGING INFORMATION:**

One hinge per plastic bag, 3 hinges and 1 screw pack per unit carton.

16 unit carton or 48 hinges per master shipping carton.
WB4B81
Steel-Bonderized and prime coated, zinc plated or plain steel
• Furnished flat back
• Furnished with loose pin
• Button pin available
• Special hole locations can be supplied if specified.
• For use on heavy weight doors receiving high frequency service.
• Ball bearing hinges must be used on doors in conjunction with door closers and on all fire rated openings.
• For hospital type, add HT to suffix of part number.

GENERAL PRODUCT INFORMATION: PBB, Inc. template hinges are manufactured to close tolerances and meet all specifications and requirements set by the American National Standards Institute (ANSI).

HINGE SWAGING: PBB can swage hinge to any application to fit your requirement. Please specify when ordering.

OTHER SPECIFICATIONS:
Height of hinge: 4.50 ± .015 for 4-1/2” x 4”
4.50 ± .015 for 4-1/2” x 4-1/2”
Width:
4.00 ± .015 for 4-1/2” x 4”
4.50 ± .015 for 4-1/2” x 4-1/2”

MATERIAL GAUGE:
.180 ± .005 for 4-1/2” x 4”
.180 ± .005 for 4-1/2” x 4-1/2”

PACKAGING INFORMATION:
One hinge per plastic bag, 3 hinges and 1 screw pack per unit carton.
16 unit carton or 48 hinges per master shipping carton.
GENERAL PRODUCT INFORMATION: PBB, Inc. template hinges are manufactured to close tolerances and meet all specifications and requirements set by the American National Standards Institute (ANSI).

HINGE SWAGING: PBB can swage hinge to any application to fit your requirement. Please specify when ordering.

MATERIAL GAUGE:
.190 ± .005 for 5” x 4”
.190 ± .005 for 5” x 4-1/2”
.190 ± .005 for 5” x 5”

PACKAGING INFORMATION:
One hinge per plastic bag, 3 hinges and 1 screw pack per unit carton.
8 unit carton or 24 hinges per master shipping carton.
<table>
<thead>
<tr>
<th>Description</th>
<th>Weight</th>
<th>Dimensions</th>
<th>Template</th>
<th>Page #</th>
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</thead>
<tbody>
<tr>
<td>Full Mortise Template/Non-Template</td>
<td>Residential</td>
<td>3’ x 3’</td>
<td>RP30/RPY30: 81, 51, 21</td>
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<td>RP40/RPY40: 81, 51, 21</td>
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<td>L8</td>
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<td>4.5’ x 4’, 4.5’ x 4.5’</td>
<td>4B45: 81, 51, 21</td>
<td>L10</td>
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<td>Full Mortise U.L. Listed Spring Hinge</td>
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<td>Full Mortise U.L. Listed Spring Hinge Non-Template</td>
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<td>7’ x 7’</td>
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<td>Standard</td>
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</table>

**Installation Instruction For All EM/EMW Models**

**Installation Instruction For All EL Models**

<table>
<thead>
<tr>
<th>Description</th>
<th>Weight</th>
<th>Dimensions</th>
<th>Template</th>
<th>Page #</th>
</tr>
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<tbody>
<tr>
<td>Full Mortise Electrical Ball Bearing</td>
<td>Standard</td>
<td>4’ x 4’</td>
<td>BB/CB40EL: 81, 51, 21</td>
<td>L27</td>
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<td>Standard</td>
<td>4.5’ x 4’</td>
<td>BB/CB45EL: 81, 51, 21</td>
<td>L28</td>
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<tr>
<td>Full Mortise Electrical Ball Bearing</td>
<td>Standard</td>
<td>5’ x 4’, 5’ x 4.5’, 5’ x 5’</td>
<td>BB/CB50EL: 81, 51, 21</td>
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<td>Full Mortise Monitor Ball Bearing</td>
<td>Standard</td>
<td>4’ x 4’</td>
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<td>Full Mortise Monitor Ball Bearing</td>
<td>Standard</td>
<td>4.5’ x 4’, 4.5’ x 4.5’</td>
<td>BB45EM/EMW: 81, 51, 21</td>
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<td>5’ x 4’, 5’ x 4.5’, 5’ x 5’</td>
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<td>L38</td>
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<tr>
<td>Half Mortise Template</td>
<td>Standard Weight</td>
<td>4.5”</td>
<td>BB45: 82, 52, 22</td>
<td>L42</td>
</tr>
<tr>
<td>Half Mortise Template</td>
<td>Heavy Weight</td>
<td>4.5”</td>
<td>4B4S: 82, 52, 22</td>
<td>L43</td>
</tr>
<tr>
<td>Half Mortise Template</td>
<td>Heavy Weight</td>
<td>5”</td>
<td>4B50: 82, 52, 22</td>
<td>L44</td>
</tr>
<tr>
<td>Full Surface Template</td>
<td>Standard Weight</td>
<td>4.5”</td>
<td>BB45: 83, 53, 23</td>
<td>L45</td>
</tr>
<tr>
<td>Full Surface Template</td>
<td>Heavy Weight</td>
<td>4.5”</td>
<td>4B4S: 83, 53, 23</td>
<td>L46</td>
</tr>
<tr>
<td>Full Surface Template</td>
<td>Heavy Weight</td>
<td>5.0”</td>
<td>4B50: 83, 53, 23</td>
<td>L47</td>
</tr>
<tr>
<td>Half Surface Template</td>
<td>Standard Weight</td>
<td>4.5”</td>
<td>BB45: 84, 54, 24</td>
<td>L48</td>
</tr>
<tr>
<td>Half Surface Template</td>
<td>Heavy Weight</td>
<td>4.5”</td>
<td>4B4S: 84, 54, 24</td>
<td>L49</td>
</tr>
<tr>
<td>Half Surface Template</td>
<td>Heavy Weight</td>
<td>5”</td>
<td>4B50: 84, 54, 24</td>
<td>L50</td>
</tr>
<tr>
<td>Swing Clear Full Mortise Template</td>
<td>Standard Weight</td>
<td>3.5”</td>
<td>SCBB35: 81, 51</td>
<td>L51</td>
</tr>
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<td>Swing Clear Full Mortise Template</td>
<td>Standard Weight</td>
<td>4”</td>
<td>SCBB40: 81, 51</td>
<td>L52</td>
</tr>
<tr>
<td>Full Mortise Swing Clear Template</td>
<td>Standard Weight</td>
<td>4.5”</td>
<td>SCBB4S: 81, 51</td>
<td>L53</td>
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<tr>
<td>Full Mortise Swing Clear Template  For Rediframe</td>
<td>Standard Weight</td>
<td>4.5”</td>
<td>SCBB4ST: 81, 51</td>
<td>L54</td>
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<td>Swing Clear Full Mortise Template</td>
<td>Standard Weight</td>
<td>5”</td>
<td>SCBB50: 81, 51</td>
<td>L55</td>
</tr>
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<td>Swing Clear Full Mortise Template</td>
<td>Heavy Weight</td>
<td>4.5”</td>
<td>SC4B45: 81, 51</td>
<td>L56</td>
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<td>Swing Clear Half Mortise Template</td>
<td>Heavy Weight</td>
<td>5”</td>
<td>SC4B50: 81, 51</td>
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<tr>
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<td>Heavy Weight</td>
<td>5”</td>
<td>SC4B50: 82, 52</td>
<td>L58</td>
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<tr>
<td>Swing Clear Full Surface Template</td>
<td>Heavy Weight</td>
<td>5”</td>
<td>SC4B50: 83, 53</td>
<td>L59</td>
</tr>
<tr>
<td>Swing Clear Half Mortise Template</td>
<td>Heavy Weight</td>
<td>5”</td>
<td>SC4B50: 84, 54</td>
<td>L60</td>
</tr>
<tr>
<td>Full Mortise Template Wide Throw</td>
<td>Standard Weight</td>
<td>3.5” x 4”, 3.5” x 5”</td>
<td>WTB335: 81, 51, 21</td>
<td>L61</td>
</tr>
<tr>
<td>Full Mortise Template Wide Throw</td>
<td>Standard Weight</td>
<td>4.5” x 4.5”, 4” x 5”, 4” x 6”</td>
<td>WTB40: 81, 51, 21</td>
<td>L62</td>
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<tr>
<td>Full Mortise Template Wide Throw</td>
<td>Standard Weight</td>
<td>4.5” x 5”, 4.5” x 6”, 4.5” x 7”, 4.5” x 8”</td>
<td>WTB45: 81, 51, 21</td>
<td>L63</td>
</tr>
<tr>
<td>Full Mortise Template Wide Throw</td>
<td>Standard Weight</td>
<td>5” x 6”, 5” x 7”, 5” x 8”</td>
<td>WTB50: 81, 51, 21</td>
<td>L64</td>
</tr>
<tr>
<td>Full Mortise Template Wide Throw</td>
<td>Heavy Weight</td>
<td>4.5” x 5”, 4.5” x 6”, 4.5” x 7”, 4.5” x 8”</td>
<td>WTB45: 81, 51, 21</td>
<td>L65</td>
</tr>
<tr>
<td>Full Mortise Template Wide Throw</td>
<td>Heavy Weight</td>
<td>5” x 6”, 5” x 7”, 5” x 8”</td>
<td>WTB50: 81, 51, 21</td>
<td>L66</td>
</tr>
<tr>
<td>Full Mortise 3/16” Insert Ball Bearing</td>
<td>Standard Weight</td>
<td>4.5” x 4”, 4.5” x 4.5”</td>
<td>IT45: 81, 51, 21</td>
<td>L67</td>
</tr>
<tr>
<td>Full Mortise 3/16” Insert Ball Bearing</td>
<td>Standard Weight</td>
<td>4.5” x 4”, 4.5” x 4.5”</td>
<td>IF45: 81, 51, 21</td>
<td>L68</td>
</tr>
<tr>
<td>Full Mortise Template Raised Barrel</td>
<td>Standard Weight</td>
<td>4.5” x 4.5”</td>
<td>BBR45: 81, 51</td>
<td>L69</td>
</tr>
<tr>
<td>Full Mortise Template Raised Barrel Beveled</td>
<td>Standard Weight</td>
<td>4.5” x 4.5”</td>
<td>BBR45B: 81, 51</td>
<td>L70</td>
</tr>
<tr>
<td>Extra Heavy Duty Bearing Pivot Hinge</td>
<td>Heavy Weight</td>
<td>5” x 4.5”</td>
<td>PY872</td>
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</tr>
<tr>
<td>Full Mortise Anchor Hinge</td>
<td>Heavy Weight</td>
<td>5” x 4.5”</td>
<td>AA4B81: 81, 51</td>
<td>L72</td>
</tr>
<tr>
<td>Full Mortise Anchor Hinge</td>
<td>Heavy Weight</td>
<td>5” x 4.5”</td>
<td>AA4B81B50: 81, 51, 21</td>
<td>L72</td>
</tr>
<tr>
<td>Full Mortise Anchor Hinge</td>
<td>Heavy Weight</td>
<td>5” x 4.5”</td>
<td>AB4B81: 81, 51</td>
<td>L73</td>
</tr>
<tr>
<td>Full Mortise Anchor Hinge</td>
<td>Heavy Weight</td>
<td>5” x 4.5”</td>
<td>AB4B81B50: 81, 51, 21</td>
<td>L73</td>
</tr>
<tr>
<td>Full Mortise Anchor Hinge</td>
<td>Heavy Weight</td>
<td>5” x 4.5”</td>
<td>AC4B81: 81, 51</td>
<td>L74</td>
</tr>
<tr>
<td>Full Mortise Welding Butt Template</td>
<td>Standard Weight</td>
<td>4.5” x 4”, 4.5” x 4.5”</td>
<td>WBB88145</td>
<td>L75</td>
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<tr>
<td>Full Mortise Welding Butt Template</td>
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<td>5” x 4”, 5” x 4.5”, 5” x 5”</td>
<td>WBB88150</td>
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<tr>
<td>Full Mortise Welding Butt Template</td>
<td>Heavy Weight</td>
<td>4.5” x 4”, 4.5” x 4.5”</td>
<td>WB4B8145</td>
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<td>Heavy Weight</td>
<td>5” x 4”, 5” x 4.5”, 5” x 5”</td>
<td>WB4B8150</td>
<td>L78</td>
</tr>
</tbody>
</table>
### Template: RP30/RPY30

**March 25, 2010**

**Do Not Scale**

---

**RP 3" x 3"**

**Template**

- **E**
- **R**
- 6-9#
- 1.500 (38.10)
- 3.000 (76.20)
- 0.580 (14.73)
- 0.312 (7.93)
- 1.188 (30.18)
- 0.052 (1.32)

**Non-Template**

- **E**
- **R**
- 6-9#
- 1.500 (38.10)
- 3.000 (76.20)
- 0.580 (14.73)
- 0.312 (7.93)
- 1.188 (30.18)
- 0.052 (1.32)

---

**Part Number**

<table>
<thead>
<tr>
<th>Steel</th>
<th>Brass</th>
<th>Stainless</th>
</tr>
</thead>
<tbody>
<tr>
<td>RP81/</td>
<td>RP21/</td>
<td>RP51/</td>
</tr>
<tr>
<td>RPY81</td>
<td>RPY21</td>
<td>RPY51</td>
</tr>
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<table>
<thead>
<tr>
<th>Gauge of Metal</th>
<th>&quot;E&quot; Outside Dia.</th>
<th>&quot;R&quot; Corner Radius</th>
</tr>
</thead>
<tbody>
<tr>
<td>0.092&quot;</td>
<td>0.418&quot;</td>
<td>1/4&quot;, 5/8&quot;, Square</td>
</tr>
</tbody>
</table>

**NOTE:**
- 2 hinges and 1 screw pack per unit carton.
- Bulk pack 100 pcs. per carton.
- Screw size: PHWS - 9 x 3/4"
- All hinges are ANSI template.

---

PBB, Inc.

World Class Hinges

1311 E. Philadelphia Street • Ontario • CA 91761 • USA

PBB reserves the right to make changes without notice.
**Template: RP35/RPY35**

**APRIL 1, 2005**

**DO NOT SCALE**

---

**RP**
3-1/2” x 3-1/2”

**Non-Template**

**RPY**
3-1/2” x 3-1/2”

<table>
<thead>
<tr>
<th>Part Number</th>
<th>Steel</th>
<th>Brass</th>
<th>Stainless</th>
<th>Gauge of Metal</th>
<th>“E” Outside Dia.</th>
<th>“R” Corner Radius</th>
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</thead>
<tbody>
<tr>
<td>RP81/ RPY81</td>
<td>RP81/ RPY21</td>
<td>RP51/ RPY51</td>
<td>.091”</td>
<td>.418”</td>
<td>1/4”, 5/8”, Square</td>
<td></td>
</tr>
</tbody>
</table>

**NOTE:**
- Bulk pack 80 pcs. per carton.
- Screw size: PHWS - 9 x 3/4”
- All hinges are ANSI template.
NOTE:
• Bulk pack 80 pcs. per carton
• Screw size:  PHMS - 10-24 x 1/2”  
  PHWS - 10 x 1”  
  PHMS - 12-24 x 1/2”  
  PHWS - 12 x 1-1/4”  
• All hinges are ANSI template.
Part Number | Gauge of Metal | "E" Outside Dia. | "R" Corner Radius
--- | --- | --- | ---
PB81/PBY81 Steel | .092" | .418" | 1/4", 5/8", Square
PB21/PBY21 Brass | | | |
PB51/PBY51 Stainless | | | |

NOTE:
- 2 hinges and 1 screw pack per unit carton.
- Bulk pack 100 pcs. per carton.
- Screw size: PHWS - 10 x 3/4"
- All hinges are ANSI template.
FULL MORTISE STANDARD WEIGHT TEMPLATE

BB - PB - CB - CP - FB
3-1/2" X 3-1/2"

NOTE:
• 1 screw pack includes machine screws (18), and wood screws (18).
• Screw size:  FHMS - 10-24 x 1/2"
  FHWS - 10 x 1"
• All hinges are ANSI template.

<table>
<thead>
<tr>
<th>Part Number</th>
<th>Gauge of Metal</th>
<th>“E” Outside Dia.</th>
<th>“L” Leaf Width</th>
<th>“S” Swage Line</th>
<th>“R” Corner Radius</th>
</tr>
</thead>
<tbody>
<tr>
<td>Steel</td>
<td>Brass</td>
<td>Stainless</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>BB81/CB81</td>
<td>BB21/CB21</td>
<td>BB51/CB51</td>
<td>.123&quot;</td>
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<td>1.75&quot;</td>
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<tr>
<td>PB81/CP81</td>
<td>PB21/CP21</td>
<td>PB51/CP51</td>
<td>.123&quot;</td>
<td>.535&quot;</td>
<td>1.75&quot;</td>
</tr>
</tbody>
</table>
**FULL MORTISE STANDARD WEIGHT TEMPLATE**

**BB - PB - CB - CP - FB**

4" x 3", 4" x 4"

---

**Part Number**

<table>
<thead>
<tr>
<th>Material</th>
<th>Steel</th>
<th>Brass</th>
<th>Stainless</th>
<th>Gauge of Metal</th>
<th>&quot;E&quot; Outside Dia.</th>
<th>&quot;L&quot; Leaf Width</th>
<th>&quot;S&quot; Swage Line</th>
<th>&quot;R&quot; Corner Radius</th>
</tr>
</thead>
<tbody>
<tr>
<td>BB81/CB81</td>
<td>BB21/CB21</td>
<td>BB51/CB51</td>
<td></td>
<td>.130&quot;</td>
<td>.550&quot;</td>
<td>1.50&quot;</td>
<td>1.17&quot;</td>
<td>Square, 1/4&quot;, 5/8&quot;</td>
</tr>
<tr>
<td>BB81/CB81</td>
<td>BB21/CB21</td>
<td>BB51/CB51</td>
<td></td>
<td>.130&quot;</td>
<td>.550&quot;</td>
<td>1.50&quot;</td>
<td>1.17&quot;</td>
<td>Square, 1/4&quot;, 5/8&quot;</td>
</tr>
<tr>
<td>BB81/CB81</td>
<td>BB21/CB21</td>
<td>BB51/CB51</td>
<td></td>
<td>.130&quot;</td>
<td>.550&quot;</td>
<td>2.00&quot;</td>
<td>1.67&quot;</td>
<td>Square, 1/4&quot;, 5/8&quot;</td>
</tr>
<tr>
<td>PB81/CP81</td>
<td>PB21/CP21</td>
<td>PB51/CP51</td>
<td></td>
<td>.130&quot;</td>
<td>.550&quot;</td>
<td>2.00&quot;</td>
<td>1.67&quot;</td>
<td>Square, 1/4&quot;, 5/8&quot;</td>
</tr>
</tbody>
</table>

**NOTE:**
- 1 screw pack includes all machine screws (24), and 1/2 wood screws (12). ATMS & AWS also available.
- Screw size: FHMS - 12-24 x 1/2"
  FHWS - 12 x 1-1/4"
- All hinges are ANSI template.
### FULL MORTISE STANDARD WEIGHT TEMPLATE

**BB - PB - CB - CP - FB**

4-1/2" x 4", 4-1/2" x 4-1/2"

---

**Part Number**

<table>
<thead>
<tr>
<th>Steel</th>
<th>Brass</th>
<th>Stainless</th>
<th>Gauge of Metal</th>
<th>“E” Outside Dia.</th>
<th>“L” Leaf Width</th>
<th>“S” Swage Line</th>
<th>“R” Corner Radius</th>
</tr>
</thead>
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<tr>
<td>BB81*/CB81</td>
<td>BB21/CB21</td>
<td>BB51/CB51</td>
<td>.134”</td>
<td>.600”</td>
<td>2.00”</td>
<td>1.63”</td>
<td>Square, 1/4”, 5/8”</td>
</tr>
<tr>
<td>PB81*/CP81</td>
<td>PB21/CP21</td>
<td>PB51/CP51</td>
<td>.134”</td>
<td>.600”</td>
<td>2.00”</td>
<td>1.63”</td>
<td>Square, 1/4”, 5/8”</td>
</tr>
<tr>
<td>BB81*/CB81</td>
<td>BB21/CB21</td>
<td>BB51/CB51</td>
<td>.134”</td>
<td>.600”</td>
<td>2.25”</td>
<td>1.88”</td>
<td>Square, 1/4”, 5/8”</td>
</tr>
<tr>
<td>PB81*/CP81</td>
<td>PB21/CP21</td>
<td>PB51/CP51</td>
<td>.134”</td>
<td>.600”</td>
<td>2.25”</td>
<td>1.88”</td>
<td>Square, 1/4”, 5/8”</td>
</tr>
</tbody>
</table>

*Also available as welding butts with identical dimensions and the exclusion of screw holes.*

**NOTE:**

- 1 screw pack includes all machine screws (24), and 1/2 wood screws (12). ATMS & AWS also available.
- Screw size: FHMS - 12-24 x 1/2”
  FHWS - 12 x 1-1/4”
- All hinges are ANSI template.
### Part Number Table

<table>
<thead>
<tr>
<th>Part Number</th>
<th>Gauge of Metal</th>
<th>“E” Outside Dia.</th>
<th>“L” Leaf Width</th>
<th>“S” Swage Line</th>
<th>“R” Corner Radius</th>
</tr>
</thead>
<tbody>
<tr>
<td>BB81*/CB81</td>
<td>.146”</td>
<td>.624”</td>
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<td>1.62”</td>
<td>Square, 1/4”, 5/8”</td>
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<td>.146”</td>
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<td>2.50”</td>
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<td>Square, 1/4”, 5/8”</td>
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<td>PB81*/CP81</td>
<td>.146”</td>
<td>.624”</td>
<td>2.00”</td>
<td>1.62”</td>
<td>Square, 1/4”, 5/8”</td>
</tr>
<tr>
<td>PB81*/CP81</td>
<td>.146”</td>
<td>.624”</td>
<td>2.25”</td>
<td>1.87”</td>
<td>Square, 1/4”, 5/8”</td>
</tr>
<tr>
<td>PB81*/CP81</td>
<td>.146”</td>
<td>.624”</td>
<td>2.50”</td>
<td>2.12”</td>
<td>Square, 1/4”, 5/8”</td>
</tr>
</tbody>
</table>

*Also available as welding butts with identical dimensions and the exclusion of screw holes.

**NOTE:**
- 1 screw pack includes all machine screws (24), and 1/2 wood screws (12). ATMS & AWS also available.
- Screw size: 
  - FHMS - 12-24 x 1/2”
  - FHWS - 12 x 1-1/4”
- All hinges are ANSI template.
### FULL MORTISE STANDARD WEIGHT TEMPLATE

**BB - PB - FB**

6” x 4-1/2”, 6” x 5”, 6” x 6”

---

<table>
<thead>
<tr>
<th>Part Number</th>
<th>Gauge of Metal</th>
<th>“E” Outside Dia.</th>
<th>“L” Leaf Width</th>
<th>“S” Swage Line</th>
</tr>
</thead>
<tbody>
<tr>
<td>Steel</td>
<td>Brass</td>
<td>Stainless</td>
<td></td>
<td></td>
</tr>
<tr>
<td>BB81/PB81</td>
<td>BB21/PB21</td>
<td>BB51/PB51</td>
<td>.160”</td>
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</tr>
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<td>BB81/PB81</td>
<td>BB21/PB21</td>
<td>BB51/PB51</td>
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<td>BB81/PB81</td>
<td>BB21/PB21</td>
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<td>.160”</td>
<td>.652”</td>
</tr>
</tbody>
</table>

**NOTE:**
- 1 screw pack includes all machine screws (30), and 1/2 wood screws (15). ATMS & AWS also available.
- Screw size: FHMS - 1/4-20 x 1/2”
  - FHWS - 14 x 1-1/2”
- All hinges are ANSI template.
### FULL MORTISE HEAVY WEIGHT TEMPLATE

**2B - 2P - 4B - 4C - 4F**  
4-1/2" x 4", 4-1/2" x 4-1/2"

---

#### Part Number Table

<table>
<thead>
<tr>
<th>Steel</th>
<th>Brass</th>
<th>Stainless</th>
<th>&quot;E&quot; Outside Dia.</th>
<th>&quot;L&quot; Leaf Width</th>
<th>&quot;S&quot; Swage Line</th>
<th>&quot;R&quot; Corner Radius</th>
</tr>
</thead>
<tbody>
<tr>
<td>2B81/2P81</td>
<td>-</td>
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<td>Square</td>
</tr>
<tr>
<td>2B81/2P81</td>
<td>-</td>
<td>2B51/2P51</td>
<td>.134&quot;</td>
<td>2.25&quot;</td>
<td>1.88&quot;</td>
<td>Square</td>
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<tr>
<td>4B81*/4C81</td>
<td>4B21/4C21</td>
<td>4B51/4C51</td>
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</tbody>
</table>

*Also available as welding butts with identical dimensions and the exclusion of screw holes.

---

**NOTE:**

- 1 screw pack includes all machine screws (24), and 1/2 wood screws (12). ATMS & AWS also available.
- Screw size:  
  - FHMS - 12-24 x 1/2"
  - FHWS - 12 x 1-1/4"
- All hinges are ANSI template.
**FULL MORTISE HEAVY WEIGHT TEMPLATE**

**TEMPLATE: 4B50**

**JUNE 1, 2003**

**DO NOT SCALE**

4B - 4C - 4F

5" x 4", 5" x 4-1/2", 5" x 5"

---

**Part Number** | Gauge of Metal | "E" Outside Dia. | "L" Leaf Width | "S" Swage Line | "R" Corner Radius
--- | --- | --- | --- | --- | ---
Steel 4B81*/4C81 | Brass 4B21/4C21 | Stainless 4B51/4C51 | .190" | .740" | 2.00" | 1.56" | Square, 1/4", 5/8"

- Also available as welding butts with identical dimensions and the exclusion of screw holes.

**NOTE:**

- 1 screw pack includes all machine screws (24), and 1/2 wood screws (12). ATMS & AWS also available.
- Screw size: FHMS - 12-24 x 1/2"
  FHWS - 12 x 1-1/2"
- All hinges are ANSI template.
**FULL MORTISE HEAVY WEIGHT TEMPLATE**

**Template: 4B60**

**JUNE 1, 2003**

**DO NOT SCALE**

<table>
<thead>
<tr>
<th>Part Number</th>
<th>Steel</th>
<th>Brass</th>
<th>Stainless</th>
<th>Gauge of Metal</th>
<th>“E” Outside Dia.</th>
<th>“L” Leaf Width</th>
<th>“S” Swage Line</th>
<th>“R” Corner Radius</th>
</tr>
</thead>
<tbody>
<tr>
<td>4B81/4C81</td>
<td>4B21/4C21</td>
<td>4B51/4C51</td>
<td>Stainless</td>
<td>.200” *</td>
<td>.740”</td>
<td>2.25”</td>
<td>1.80”</td>
<td>Square, 1/4”, 5/8”</td>
</tr>
<tr>
<td>4B81/4C81</td>
<td>4B21/4C21</td>
<td>4B51/4C51</td>
<td>Stainless</td>
<td>.200” *</td>
<td>.740”</td>
<td>2.50”</td>
<td>2.05”</td>
<td>Square, 1/4”, 5/8”</td>
</tr>
<tr>
<td>4B81/4C81</td>
<td>4B21/4C21</td>
<td>4B51/4C51</td>
<td>Stainless</td>
<td>.200” *</td>
<td>.740”</td>
<td>3.00”</td>
<td>2.55”</td>
<td>Square, 1/4”, 5/8”</td>
</tr>
</tbody>
</table>

**NOTE:**
- 1 screw pack includes all machine screws (30), and 1/2 wood screws (15). ATMS & AWS also available.
- Screw size: FHMS - 1/4-20 x 1/2”
  FHWS - 14 x 1-1/2”
- Stainless steel hinges have .190” (4.83) material thickness.
- All hinges are ANSI template.
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**FULL MORTISE HEAVY WEIGHT TEMPLATE**

**4B-4F**

8" x 6", 8" x 8"

---

**NOTE:**
- 1 screw pack includes all machine screws (48), and 1/2 wood screws (24). ATMS & AWS also available.
- Screw size: FHMS - 1/4-20 x 1/2"
  - FHWS - 14 x 1-1/2"
- **Stainless steel hinges have .190" (4.83) material thickness.**
- All hinges are ANSI template.

---

**Part Number Gauge of Metal “E” Outside Dia. “L” Leaf Width “S” Swage Line “R” Corner Radius**

<table>
<thead>
<tr>
<th>Steel</th>
<th>Brass</th>
<th>Stainless</th>
<th>.200&quot;</th>
<th>.766&quot;</th>
<th>3.00&quot;</th>
<th>2.46&quot;</th>
<th>Square, 1/4&quot;, 5/8&quot;</th>
</tr>
</thead>
<tbody>
<tr>
<td>4B81/4F81</td>
<td>4B21/4F21</td>
<td>4B51/4F51</td>
<td>.200&quot;</td>
<td>.766&quot;</td>
<td>3.00&quot;</td>
<td>2.46&quot;</td>
<td>Square, 1/4&quot;, 5/8&quot;</td>
</tr>
</tbody>
</table>

---

**Template: 4B80**

---

**JUNE 1, 2003**
**DO NOT SCALE**

---

**NOTE:**
- 1 screw pack includes all machine screws (48), and 1/2 wood screws (24). ATMS & AWS also available.
- Screw size: FHMS - 1/4-20 x 1/2"
  - FHWS - 14 x 1-1/2"
- **Stainless steel hinges have .190" (4.83) material thickness.**
- All hinges are ANSI template.
**Full Mortise Heavy Weight Template**

**Template: 2H45**  
June 1, 2003  
Do not scale

### Part Number

<table>
<thead>
<tr>
<th>Part Number</th>
<th>Gauge of Metal</th>
<th>“E” Outside Dia.</th>
<th>“L” Leaf Width</th>
<th>“S” Swage Line</th>
</tr>
</thead>
<tbody>
<tr>
<td>2H81</td>
<td>Brass 2H51</td>
<td>.180”</td>
<td>.720”</td>
<td>2.00”</td>
</tr>
<tr>
<td>2H81</td>
<td>Brass 2H51</td>
<td>.180”</td>
<td>.720”</td>
<td>2.25”</td>
</tr>
</tbody>
</table>

**NOTE:**
- 1 screw pack includes all machine screws (24), and 1/2 wood screws (12). ATMS & AWS also available.
- Screw size:  
  - FHMS - 12-24 x 1/2”  
  - FHWS - 12 x 1-1/4”  
- All hinges are ANSI template.

---

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NOTE:
- 1 screw pack includes all machine screws (24) torx head or wood screws available upon request.
- Screw size: FHMS - 1/2" x 1/4-20
- Reverse security stud casted into both leaves for added security feature.
- All hinges are ANSI template.

Full Mortise Institutional Template

PH 4-1/2" x 4-1/2"

Part Number Gauge of Metal "E" Outside Dia.

<table>
<thead>
<tr>
<th>Steel</th>
<th>Brass</th>
<th>Stainless</th>
<th>.190&quot;</th>
<th>.850&quot;</th>
</tr>
</thead>
<tbody>
<tr>
<td>-</td>
<td>-</td>
<td>PH51</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

PBB, Inc.
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PBB reserves the right to make changes without notice.
NOTE:
• 1 screw pack includes (18) machine screws and (18) wood screws.
• Screw size: FHMS - 10-24 x 1/2"
  FHWS - 10 x 1"
• All hinges are ANSI template.
NOTE:
• 1 screw pack includes (24) machine screws and 1/2 (12) wood screws. ATMS & AWS also available.
• Screw size:  
  FHMS - 12-24 x 1/2"
  FHWS - 12 x 1-1/4"
• All hinges are ANSI template.
NOTE:
• 1 screw pack includes (18) machine screws and (18) wood screws.
• Screw size: FHMS - 10-24 x 1/2"  
  FHWS - 10 x 1"
• All hinges are ANSI template.
NOTE:
• 1 screw pack includes all machine screws (24), and 1/2 wood screws (12). ATMS & AWS also available.
• Screw size:  FHMS - 12-24 x 1/2"
             FHWS - 12 x 1-1/4"
• All hinges are ANSI template.
### Part Number

<table>
<thead>
<tr>
<th>Steel</th>
<th>Brass</th>
<th>Stainless</th>
<th>Gauge of Metal</th>
<th>“E” Outside Dia.</th>
</tr>
</thead>
<tbody>
<tr>
<td>SA81</td>
<td>-</td>
<td>-</td>
<td>.100&quot;</td>
<td>1.180</td>
</tr>
</tbody>
</table>

**NOTE:**

- 1 screw pack includes all machine screws (30), and 1/2 wood screws (15). ATMS & AWS also available.
- Screw size: FHMS - 12-24 x 1/2"
  FHWS - 12 x 1-1/4"
- All hinges are ANSI template.
Full Mortise Single Acting Spring Hinge

Part Number

<table>
<thead>
<tr>
<th>Steel</th>
<th>Brass</th>
<th>Stainless</th>
<th>&quot;E&quot; Outside Dia.</th>
</tr>
</thead>
<tbody>
<tr>
<td>SA81</td>
<td>-</td>
<td>-</td>
<td>.100&quot;</td>
</tr>
</tbody>
</table>

NOTE:

• 1 screw pack includes all machine screws (30), and 1/2 wood screws (15). ATMS & AWS also available.
• Screw size: FHMS - 12-24 x 1/2”
  FHWS - 12 x 1-1/4”
• All hinges are ANSI template.
### Full Mortise Single Acting Spring Hinge

**Part Number:** SA81

<table>
<thead>
<tr>
<th>Steel</th>
<th>Brass</th>
<th>Stainless</th>
<th>&quot;E&quot; Outside Dia.</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td>.100&quot;</td>
</tr>
<tr>
<td>.180&quot;</td>
<td></td>
<td></td>
<td>1.180</td>
</tr>
</tbody>
</table>

**NOTE:**
- 1 screw pack includes all machine screws (30), and 1/2 wood screws (15). ATMS & AWS also available.
- Screw size: FHMS - 12-24 x 1/2"
  FHWS - 12 x 1-1/4"
- All hinges are ANSI template.

---

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**NOTE:**

1. Screw pack includes all machine screws (28), and 1/2 wood screws (14). ATMS & AWS also available.
2. Screw size:
   - FHMS - 12-24 x 1/2"
   - FHWS - 12 x 1 1/2"
   - OHMS/NUT - 2" x 1/4-20
3. All hinges are ANSI template.
NOTE:
• 1 screw pack includes all machine screws (28), and 1/2 wood screws (14). ATMS & AWS also available.
• Screw size:  
  FHMS - 12-24 x 1/2”  
  FHWS - 12 x 1 1/2”  
  OHMS/NUT - 2” x 1/4-20
• All hinges are ANSI template.
NOTE:

- 1 screw pack includes all machine screws (28), and 1/2 wood screws (14). ATMS & AWS also available.
- Screw size:  
  - FHMS - 12-24 x 1/2”  
  - FHWS - 12 x 1 1/2”
- DO NOT USE ON DOORS WITH HINGE EDGE BEVELED.
- All hinges are ANSI template.

CONTINUED...
NOTES:
1. This hinge is not to be used on doors with hinge edge beveled.
2. Refer to catalog for door weight and hinge size.
3. Hinges should be inverted on one door of a pair for proper centering.

<table>
<thead>
<tr>
<th>Frame Clearance</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Hinge Mounting</strong></td>
</tr>
<tr>
<td>Surface Applied</td>
</tr>
<tr>
<td>Door Flange Mortised</td>
</tr>
</tbody>
</table>
Door Preparation - For EM hinges that include through wires, the wire chase should be drilled through the door with a 3/8” drill bit starting at point noted on the hinge on the door, since the modified hinge no longer meets manufacturers load bearing specifications. A starter hole of 3/4” diameter x 1-1/2” deep is recommended for positioning the slice of the hinge wire and lock through wire.

*Be careful not to pinch wires between the door and hinge when securing hinge to door. This may cause hinge to malfunction.*

**Note:** In fire rated conditions be sure to confirm the maximum starter hole diameter and depth with the appropriate testing agency.

Frame Preparation - Position template at appropriate hinge location on frame. Mark and drill a 7/8” hole to recieve the wires and cap from the EM hinge.

*Be careful not to pinch wires between the frame and hinge when securing hinge to door. This may cause hinge to malfunction.*

**Note:** Steel based hinges are for interior use only. Use stainless steel or brass based hinges for exterior installations.

***Do not allow hinge to dangle from its wires during installation***

Burglar alarm system applications:

The EM hinges are used to monitor door position only. When added to an electric transfer hinge it monitors the door position, passes low voltage power from a frame hinge jamb to the door to power lock sets and is used with options such as request-to-exit switches, etc.

Electric specifications for through-wires -(Maximum Continuous rating)

- EM2W - 3.0 amps @ 24V
- EM4W - 1.0 amps @ 24V (each pair) - Wire leads greater 2ft but less than 10ft rated 0.4 amps @ 24V (each pair)
- EM6W - 1.0 amps @ 24V (each pair) - Wire leads greater 2ft but less than 10ft rated 0.4 amps @ 24V (each pair)

*We do not recommended splicing hinges containing 26 AWG wire (EM4W, 6W) to any wire larger than 18 AWG.*

- EM8W - 1.0 amps @ 24V (each pair) - Wire leads greater 2ft but less than 10ft rated 0.4 amps @24V (each pair)

*We do not recommended splicing hinges containing 28 AWG wire (EM8W) to any wire larger than 20 AWG.*

Adjustment Instructions:

- Clockwise Wider Gap (see fig. 1)
- Counter Clockwise Narrow Gap (see fig. 1)

****Hinge is adjusted with a 1/4” gap from factory which equates to the door opening 1 1/2” for a 3ft door and 2” for a 4ft door before triggering the monitor switch****

![Adjustment Screw](image)

<table>
<thead>
<tr>
<th>Minimum Hinge gap 3/16”</th>
<th>Maximum Hinge gap 3/8&quot;</th>
</tr>
</thead>
<tbody>
<tr>
<td>3 ft Door Gap</td>
<td>1”</td>
</tr>
<tr>
<td>4 ft Door Gap</td>
<td>1 1/2”</td>
</tr>
</tbody>
</table>

Wire Specifications for monitor switch:

- Yellow with Black Stripe - Common
- Blue with White Stripe - Normally Closed
- Red with White Stripe - Normally Open

Switch Ratings:

- Electrical:
  - 50 to 100 mA, 30VDC
  - Inrush Current
  - NC: 0.5 A max
  - NO: 0.5 A max

Operating Frequency:

- Mechanical: 60 operations per minute
- Electrical: 20 operations per min

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See EL Templates

Door Preparation:
- The wire chase should be drilled through the door with a 3/8” drill bit starting at point noted on the hinge template.
- The EL hinge should always be positioned as one of the center hinges on the door, since the modified hinge no longer meets manufacturers load bearing specifications.
- A starter hole of 5/8” Dia. x 1-1/2” deep is recommended for positioning the splice of the hinge wire and lock through wire.
- Be careful not to pinch wires between the door and hinge when securing hinge to door.
  This may cause hinge to malfunction.

Note: In fire rated conditions be sure to confirm the maximum starter hole diameter and depth with the appropriate testing agency.

Frame Preparation:
- Position template at appropriate hinge location on frame. Mark and drill hole to receive the wires from the EL hinge. Drill 5/8” hole 1-1/2” deep for service loop and connection.
- Be careful not to pinch wires between the frame and hinge when securing hinge to door.
  This may cause hinge to malfunction.

Note: Steel based hinges are for interior use only. Use stainless steel or brass based hinges for exterior installations.

***Do not allow hinge to dangle from its wires during installation***

Burglar alarm systems applications:
The EL hinges are used to pass low voltage power from a frame hinge jamb to the door to power lock sets, exit devices and door monitoring devices such as door position switches, request-to-exit switches, etc.

<table>
<thead>
<tr>
<th>Electrical Specifications - (Maximum Continuous Rating)</th>
</tr>
</thead>
<tbody>
<tr>
<td>EL2 - 24 VAC/DC, @ 3 amps, continuous, 8 amp surge</td>
</tr>
<tr>
<td>EL2+4 - 24 VAC/DC, @ 3 amps, continuous, 8 amp surge</td>
</tr>
<tr>
<td>24 VAC/DC, 1 pr @ 1 amp, 1 pr @ .25 amps</td>
</tr>
<tr>
<td>EL4 - 24 VAC/DC, 1 pr @ 1 amp, 1 pr @ .25 amps</td>
</tr>
<tr>
<td>EL6 - 24 VAC/DC, 1 pr @ 1 amp, 2 pr @ .10 amps</td>
</tr>
<tr>
<td>We do not recommend splicing hinges containing 26 AWG wire (EL4W, 6W) to any wire heavier than 18 AWG</td>
</tr>
<tr>
<td>EL8 - 24 VAC/DC, 1 pr @ 1 amp, 3 pr @ .10 amps</td>
</tr>
<tr>
<td>EL10 - 24 VAC/DC, 1 pr @ 1 amp, 4 pr @ .10 amps</td>
</tr>
<tr>
<td>We do not recommend splicing hinges containing 28 AWG wire (EL8W, 10W) to any wire heavier than 20 AWG</td>
</tr>
</tbody>
</table>

Ratings are: 20 AWG pair @ 24 Volts AC/DC @ 3 amps continuous
20 AWG pair can be cycled at 8 amps surge for 100-200 m-sec for 15 seconds with a rest period of 15 seconds.

<table>
<thead>
<tr>
<th>EL MODELS AVAILABLE</th>
</tr>
</thead>
<tbody>
<tr>
<td>EL2 Wire Concealed electric through-wire.</td>
</tr>
<tr>
<td>2 PTFE coated 20 gauge high Amp.</td>
</tr>
<tr>
<td>EL2+4 Wire Concealed electric through-wire.</td>
</tr>
<tr>
<td>2 PTFE coated 20 gauge high Amp.</td>
</tr>
<tr>
<td>4 PTFE coated 28 gauge</td>
</tr>
<tr>
<td>EL4 Wire Concealed electric through-wire.</td>
</tr>
<tr>
<td>4 PTFE coated 28 gauge</td>
</tr>
<tr>
<td>EL6 Wire Concealed electric through-wire.</td>
</tr>
<tr>
<td>6 PTFE coated 30 gauge</td>
</tr>
<tr>
<td>EL8 Wire Concealed electric through-wire.</td>
</tr>
<tr>
<td>8 PTFE coated 30 gauge</td>
</tr>
<tr>
<td>EL10 Wire Concealed electric through-wire.</td>
</tr>
<tr>
<td>10 PTFE coated 30 gauge</td>
</tr>
</tbody>
</table>

INSTALLATION:
Do not disassemble hinge. Disassembly voids warranty.
Do not force hinge into perp. Binding hinges will shorten life and damage hinge.
Do not hang hinge from wires. Damage can occur.
After connections are made, slide wires through holes, making sure that wires are not pinched or rubbing on sharp edges.

If you have any problems, call 1-800-726-3414
Hinges are non-load bearing and must be mounted in the center position only.

For use with 4.000 inch full mortise 3 & 5-knuckle ball bearing hinges. Standard weight only.

Note: Use manufacturer's templating for mounting hole dimensions. Installation holes for wires to be burr free.

<table>
<thead>
<tr>
<th>Part Number</th>
<th>Gauge of Metal</th>
<th>&quot;E&quot; Outside Dia.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Steel</td>
<td>Brass</td>
<td>Stainless</td>
</tr>
<tr>
<td>BB81EL</td>
<td>BB21EL</td>
<td>BB51EL</td>
</tr>
<tr>
<td>CB81EL</td>
<td>CB21EL</td>
<td>CB51EL</td>
</tr>
</tbody>
</table>

Note:
- 1 screw pack includes all machine screws (8), and 1/2 wood screws (4). ATMS & AWS also available.
- Screw size: FHMS - 12-24 x 1/2"
  FHWS - 12 x 1 1/4"
- All hinges are ANSI template.
Hinges are non-load bearing and must be mounted in the center position only.

For use with 4.500 inch full mortise 3 & 5 knuckle ball bearing hinge standard weight only.

<table>
<thead>
<tr>
<th>Part Number</th>
<th>Steel</th>
<th>Brass</th>
<th>Stainless</th>
<th>&quot;E&quot; Outside Dia.</th>
<th>&quot;L&quot; Leaf Width</th>
</tr>
</thead>
<tbody>
<tr>
<td>BB81EL</td>
<td>BB21EL</td>
<td>BB21EL</td>
<td>BB51EL</td>
<td>0.134&quot;</td>
<td>2.00&quot;</td>
</tr>
<tr>
<td>CB81EL</td>
<td>CB21EL</td>
<td>CB21EL</td>
<td>CB51EL</td>
<td>(4.5&quot; x 4&quot;)</td>
<td></td>
</tr>
<tr>
<td>BB81EL</td>
<td>BB21EL</td>
<td>BB21EL</td>
<td>BB51EL</td>
<td>0.134&quot;</td>
<td>2.25&quot;</td>
</tr>
<tr>
<td>CB81EL</td>
<td>CB21EL</td>
<td>CB21EL</td>
<td>CB51EL</td>
<td>(4.5&quot; x 4.5&quot;)</td>
<td></td>
</tr>
</tbody>
</table>

**NOTE:**
- 1 screw pack includes all machine screws (8), and 1/2 wood screws (4). ATMS & AWS also available.
- Screw size: FHMS - 12-24 x 1/2"  
  FHWS - 12 x 1-1/4"
- All hinges are ANSI template.
HINGES ARE NON-LOAD BEARING AND MUST BE MOUNTED IN THE CENTER POSITION ONLY.

For use with 5.000 inch full mortise 3 & 5 knuckle ball bearing hinge standard weight only.

<table>
<thead>
<tr>
<th>Part Number</th>
<th>Steel</th>
<th>Brass</th>
<th>Stainless</th>
<th>“E” Outside Dia.</th>
<th>“L” Leaf Width</th>
</tr>
</thead>
<tbody>
<tr>
<td>BB81EL</td>
<td>BB21EL</td>
<td>CB21EL</td>
<td>BB51EL</td>
<td>.146”</td>
<td>2.00” (5” x 4”)</td>
</tr>
<tr>
<td>CB81EL</td>
<td></td>
<td></td>
<td>CB51EL</td>
<td>.146”</td>
<td>2.25” (5” x 4.5”)</td>
</tr>
<tr>
<td>BB81EL</td>
<td>BB21EL</td>
<td>CB21EL</td>
<td>BB51EL</td>
<td>.146”</td>
<td>2.50” (5” x 5”)</td>
</tr>
<tr>
<td>CB81EL</td>
<td></td>
<td></td>
<td>CB51EL</td>
<td>.146”</td>
<td></td>
</tr>
</tbody>
</table>

NOTE:

NOTE:
- 1 screw pack includes all machine screws (8), and 1/2 wood screws (4). ATMS & AWS also available.
- Screw size: FHMS - 12-24 x 1/2”
  FHWS - 12 x 1-1/4”
- All hinges are ANSI template.

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NOTE:
- 1 screw pack includes all machine screws (8), and 1/2 wood screws (4). ATMS & AWS also available.
- Screw size: FHMS - 12-24 x 1/2”
  FHWS - 12 x 1 1/4”
- All hinges are ANSI template.

<table>
<thead>
<tr>
<th>Part Number</th>
<th>Steel</th>
<th>Brass</th>
<th>Stainless</th>
<th>Gauge of Metal</th>
<th>“E” Outside Dia.</th>
</tr>
</thead>
<tbody>
<tr>
<td>BB81EM/EMW</td>
<td>BB21EM/EMW</td>
<td>BB51EM/EMW</td>
<td>.130”</td>
<td>.550”</td>
<td></td>
</tr>
</tbody>
</table>

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NOTE:
• 1 screw pack includes all machine screws (8), and 1/2 wood screws (4). ATMS & AWS also available.
• Screw size: FHMS - 12-24 x 1/2”
  FHWS - 12 x 1 1/4”
• All hinges are ANSI template.
NOTE:

- 1 screw pack includes all machine screws (8), and 1/2 wood screws (4). ATMS & AWS also available.
- Screw size: FHMS - 12-24 x 1/2"
  FHWS - 12 x 1 1/4"
- All hinges are ANSI template.

<table>
<thead>
<tr>
<th>Part Number</th>
<th>Steel</th>
<th>Brass</th>
<th>Stainless</th>
<th>&quot;E&quot; Outside Dia.</th>
</tr>
</thead>
<tbody>
<tr>
<td>CB81EM/EMW</td>
<td>CB21EM/EMW</td>
<td>CB51EM/EMW</td>
<td>.134&quot;</td>
<td>.600&quot;</td>
</tr>
</tbody>
</table>
NOTE:
• 1 screw pack includes all machine screws (8), and 1/2 wood screws (4). ATMS & AWS also available.
• Screw size: FHMS - 12-24 x 1/2”
  FHWS - 12 x 1 1/4”
• All hinges are ANSI template.
NOTE:

• 1 screw pack includes all machine screws (8), and 1/2 wood screws (4). ATMS & AWS also available.
• Screw size:
  - FHMS - 12-24 x 1/2”
  - FHWS - 12 x 1 1/4”
• All hinges are ANSI template.
FULL MORTISE CONCEALED ELECTRIC TEMPLATE

4B6EL - 4C6EL - 4FEL
4-1/2" x 4", 4-1/2" x 4-1/2"

L37

NOTE:

- 1 screw pack includes all machine screws (8), and 1/2 wood screws (4). ATMS & AWS also available.
- Screw size:
  - FHMS - 12-24 x 1/2"
  - FHWS - 12 x 1-1/4"
- All hinges are ANSI template.

Hinges are non-load bearing and must be mounted in the center position only.

For use with 4.500 inch full mortise 3 & 5 knuckle ball bearing hinge heavy weight only.

<table>
<thead>
<tr>
<th>Part Number</th>
<th>Steel</th>
<th>Brass</th>
<th>Stainless</th>
<th>Gauge of Metal</th>
<th>“E” Outside Dia.</th>
<th>“L” Leaf Width</th>
</tr>
</thead>
<tbody>
<tr>
<td>4B81EL</td>
<td>4B21EL</td>
<td>4B51EL</td>
<td>4C81EL</td>
<td>.180&quot;</td>
<td>.720&quot;</td>
<td>2.00&quot; (4.5&quot; x 4)</td>
</tr>
<tr>
<td>4C81EL</td>
<td>4C21EL</td>
<td>4C51EL</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>4B81EL</td>
<td>4B21EL</td>
<td>4B51EL</td>
<td>4C81EL</td>
<td>.180&quot;</td>
<td>.720&quot;</td>
<td>2.25&quot; (4.5&quot; x 4.5&quot;)</td>
</tr>
<tr>
<td>4C81EL</td>
<td>4C21EL</td>
<td>4C51EL</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

NOTE:

Use manufacturers templating for mounting hole dimensions. Installation holes for wires to be burr free.
Hinges are non-load bearing and must be mounted in the center position only.

<table>
<thead>
<tr>
<th>Part Number</th>
<th>Gauge of Metal</th>
<th>“E” Outside Dia.</th>
<th>“L” Leaf Width</th>
</tr>
</thead>
<tbody>
<tr>
<td>4B81EL, 4C81EL</td>
<td>.190”</td>
<td>.740”</td>
<td>2.00” (5” x 4”)</td>
</tr>
<tr>
<td>4B21EL, 4C21EL</td>
<td>.190”</td>
<td>.740”</td>
<td>2.25” (5” x 4.5”)</td>
</tr>
<tr>
<td>4B51EL, 4C51EL</td>
<td>.190”</td>
<td>.740”</td>
<td>2.50” (5” x 5”)</td>
</tr>
</tbody>
</table>

NOTE:
- Use manufacturers templating for mounting hole dimensions. Flip print for left hand mounting.
- Installation holes for wires to be burr free.

**NOTE:**
- 1 screw pack includes all machine screws (8), and 1/2 wood screws (4). ATMS & AWS also available.
- Screw size: FHMS - 12-24 x 1/2”, FHWS - 12 x 1-1/4”
- All hinges are ANSI template.
### Full Mortise Monitor Ball Bearing Heavy Weight

**Template: 4B/4C45EM/EMW**

**April 1, 2005**

**Do Not Scale**

<table>
<thead>
<tr>
<th>Part Number</th>
<th>Steel Grade</th>
<th>Brass Grade</th>
<th>Stainless Grade</th>
<th>Gauge of Metal</th>
<th>&quot;E&quot; Outside Dia.</th>
</tr>
</thead>
<tbody>
<tr>
<td>4B81EM/EMW</td>
<td>4B21EM/EMW</td>
<td>4B51EM/EMW</td>
<td>4C81EM/EMW</td>
<td>.180&quot;</td>
<td>.725&quot;</td>
</tr>
<tr>
<td>4C81EM/EMW</td>
<td>4C21EM/EMW</td>
<td>4C51EM/EMW</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**Note:**
- 1 screw pack includes all machine screws (8), and 1/2 wood screws (4). ATMS & AWS also available.
- Screw size: FHMS - 12-24 x 1/2"
  FHWS - 12 x 1 1/4"
- All hinges are ANSI template.
NOTE:
- 1 screw pack includes all machine screws (8), and 1/2 wood screws (4). ATMS & AWS also available.
- Screw size:  FHMS - 12-24 x 1/2"
  FHWS - 12 x 1 1/4"
- All hinges are ANSI template.
NOTE:
- Zinc Plated .040 Sheet
- Adjustable from 6" to 7"
- Must be adjusted before spot weld.
- Removable cover plate for service.
- 2 - #8 x 1/4
### Template: BB8245

**April 1, 2005**

**Do Not Scale**

### Half Mortise Template

**PB - CP - BB - CB - 4B - 4C**

4-1/2"

### Part Number

<table>
<thead>
<tr>
<th>Steel</th>
<th>Brass</th>
<th>Stainless</th>
<th>&quot;E&quot; Outside Dia.</th>
<th>&quot;A&quot; To Center Line</th>
<th>&quot;B&quot; To Center Line</th>
<th>&quot;C&quot; Jamb Leaf Offset</th>
</tr>
</thead>
<tbody>
<tr>
<td>PB82/CP82</td>
<td>PB22/CP22</td>
<td>PB52/CP52</td>
<td>.134&quot;</td>
<td>2-1/16&quot;</td>
<td>1-1/2&quot;</td>
<td>7/16&quot;</td>
</tr>
<tr>
<td>BB82/CPB82</td>
<td>BB22/CPB22</td>
<td>BB52/CPB52</td>
<td>.134&quot;</td>
<td>2-1/16&quot;</td>
<td>1-1/2&quot;</td>
<td>7/16&quot;</td>
</tr>
</tbody>
</table>

### NOTE:
- 1 screw pack includes all machine screws (7).
- Screw size: FHMS - 12-24 x 1/2"  
  OHMS - 12-24 x 1/2"
- All half mortise hinges are made for reversible applications.
- All hinges are ANSI template.

---

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World Class Hinges
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PBB reserves the right to make changes without notice.
**Part Number Gauge**

<table>
<thead>
<tr>
<th>Steel</th>
<th>Brass</th>
<th>Stainless</th>
<th>&quot;E&quot; Outside Dia.</th>
<th>&quot;A&quot; To Center Line</th>
<th>&quot;B&quot; To Center Line</th>
<th>&quot;C&quot; Jamb Leaf Offset</th>
</tr>
</thead>
<tbody>
<tr>
<td>4B82/4C82</td>
<td>4B22/4C22</td>
<td>4B52/4C52</td>
<td>.180&quot;</td>
<td>.725&quot;</td>
<td>2-1/8&quot;</td>
<td>1-1/2&quot;</td>
</tr>
</tbody>
</table>

**NOTE:**
- 1 screw pack includes all machine screws (7).
- Screw size: FHMS - 12-24 x 1/2"
  OHMS - 12-24 x 1/2"
- All half mortise hinges are made for reversible applications.
- All hinges are ANSI template.
**NOTE:**
- 1 screw pack includes all machine screws (8).
- Screw size: FHMS - 12-24 x 1/2"
  OHMS - 12-24 x 1/2"
- All half mortise hinges are made for reversible applications.
- All hinges are ANSI template.
## FULL SURFACE TEMPLATE

### PB - CP - BB - CB

4-1/2"

<table>
<thead>
<tr>
<th>Part Number</th>
<th>Gauge of Metal</th>
<th>&quot;E&quot; Outside Dia.</th>
<th>&quot;C&quot; Door Leaf Offset</th>
<th>&quot;D&quot; Jamb Leaf Offset</th>
</tr>
</thead>
<tbody>
<tr>
<td>Steel</td>
<td>Brass</td>
<td>Stainless</td>
<td></td>
<td></td>
</tr>
<tr>
<td>PB83*/CP83</td>
<td>PB23/CP23</td>
<td>PB53/CP53</td>
<td>0.134</td>
<td>0.603&quot;</td>
</tr>
<tr>
<td>BB83*/CB83</td>
<td>BB23/CB23</td>
<td>BB53/CB53</td>
<td>0.134</td>
<td>0.603&quot;</td>
</tr>
</tbody>
</table>

*Also available as welding butts with identical dimensions and the exclusion of screw holes.

### NOTE:
- 1 screw pack includes all machine screws (6) and grommet nuts for 1-3/4" door.
- Screw size: OHMS - 12-24 x 1/2"
  - OHMS - 2" x 1/4-20
- All full surface hinges are made for reversible applications.
- All hinges are ANSI template.
**Part Number**

<table>
<thead>
<tr>
<th>Steel</th>
<th>Brass</th>
<th>Stainless</th>
<th>Gauge of Metal</th>
<th>“E” Outside Dia.</th>
<th>“C” Door Leaf Offset</th>
<th>“D” Jamb Leaf Offset</th>
</tr>
</thead>
<tbody>
<tr>
<td>4B83*/4C83</td>
<td>4B23/4C23</td>
<td>4B53/4C53</td>
<td>.180</td>
<td>.725&quot;</td>
<td>5/8&quot;</td>
<td>1/2&quot;</td>
</tr>
</tbody>
</table>

*Also available as welding butts with identical dimensions and the exclusion of screw holes.

**NOTE:**
- 1 screw pack includes all machine screws (6) and grommet nuts for 1-3/4" door.
- Screw size: OHMS - 12-24 x 1/2"
  OHMS - 2" x 1/4-20
- All full surface hinges are made for reversible applications.
- All hinges are ANSI template.
PBB reserves the right to make changes without notice.

---

**NOTE:**
- 1 screw pack includes all machine screws (8) and grommet nuts for 1-3/4" door.
- Screw size: OHMS - 12-24 x 1/2"
  - OHMS - 2" x 1/4-20
- All full surface hinges are made for reversible applications.
- All hinges are ANSI template.
### Half Surface Template

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---

**Part Number**

<table>
<thead>
<tr>
<th>Steel</th>
<th>Brass</th>
<th>Stainless</th>
<th>Gauge of Metal</th>
<th>&quot;E&quot; Outside Dia.</th>
<th>&quot;A&quot; To Center Line</th>
<th>&quot;B&quot; To Center Line</th>
<th>&quot;C&quot; Jamb Leaf Offset</th>
</tr>
</thead>
<tbody>
<tr>
<td>PB84/CP84</td>
<td>PB24/CP24</td>
<td>PB54/CP54</td>
<td>.134&quot;</td>
<td>.603&quot;</td>
<td>2-1/16&quot;</td>
<td>2-9/16&quot;</td>
<td>9/16&quot;</td>
</tr>
<tr>
<td>BB84/CP84</td>
<td>BB24/CP24</td>
<td>BB54/CP54</td>
<td>.134&quot;</td>
<td>.603&quot;</td>
<td>2-1/16&quot;</td>
<td>2-9/16&quot;</td>
<td>9/16&quot;</td>
</tr>
</tbody>
</table>

**NOTE:**

- 1 screw pack includes all machine screws (7) and grommet nuts for 1-3/4" door.
- Screw size: FHMS - 12-24 x 1/2"  
  OHMS - 2" x 1/4-20
- All half surface hinges are made for reversible applications.
- All hinges are ANSI template.

---

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NOTE:
- 1 screw pack includes all machine screws (7) and grommet nuts for 1-3/4 door.
- Screw size: FHMS - 12-24 x 1/2"
  OHMS - 2" x 1/4-20
- All half surface hinges are made for reversible applications,
- All hinges are ANSI template.
### Half Surface Template

**Template: 4B8450**

**April 1, 2005**

**Do Not Scale**

<table>
<thead>
<tr>
<th>Part Number</th>
<th>Steel</th>
<th>Brass</th>
<th>Stainless</th>
</tr>
</thead>
<tbody>
<tr>
<td>4B84/4C84</td>
<td>4B24/4C24</td>
<td>4B54/4C54</td>
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</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Gauge of Metal</th>
<th>“E” Outside Dia.</th>
<th>“A” To Center Line</th>
<th>“B” To Center Line</th>
<th>“C” Jamb Leaf Offset</th>
</tr>
</thead>
<tbody>
<tr>
<td>.190”</td>
<td>.725”</td>
<td>2-1/8”</td>
<td>2-7/8”</td>
<td>5/8”</td>
</tr>
</tbody>
</table>

**NOTE:**
- 1 screw pack includes all machine screws (8) and grommet nuts for 1-3/4 door.
- Screw size: FHMS - 12-24 x 1/2”
  OHMS - 2” x 1/4-20
- All half surface hinges are made for reversible applications,
- All hinges are ANSI template.

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NOTE:

• 1 screw pack includes (18) machine screws and (18) wood screws.
• Screw size: FHMS - 10-24 x 1/2"
  FHWS - 10 x 1"
• All hinges are ANSI template.

<table>
<thead>
<tr>
<th>Part Number</th>
<th>Gauge of Metal</th>
<th>&quot;E&quot; Outside Dia.</th>
</tr>
</thead>
<tbody>
<tr>
<td>SCPB81</td>
<td>SCPB51</td>
<td>.123&quot;</td>
</tr>
</tbody>
</table>
NOTE:
• 1 screw pack includes (18) machine screws and (18) wood screws.
• Screw size:  FHMS - 12-24 x 1/2"
  FHWS - 12 x 1-1/4"
• All hinges are ANSI template.
NOTE: This hinge alters the normal pivot point of door. For door closers, friction or overhead door holders, to be used in conjunction with this hinge, consult manufacturer for the device to be used for application details.

<table>
<thead>
<tr>
<th>Part Number</th>
<th>Gauge of Metal</th>
<th>&quot;E&quot; Outside Dia.</th>
</tr>
</thead>
<tbody>
<tr>
<td>SCBB81/SCBB81B</td>
<td>SCBB51/SCBB51B</td>
<td>.134&quot; .603&quot;</td>
</tr>
<tr>
<td>SCCB81/SCCB81B</td>
<td>SCCB51/SCCB51B</td>
<td>.134&quot; .603&quot;</td>
</tr>
</tbody>
</table>

NOTE:
- 1 screw pack includes all machine screws (24), and 1/2 wood screws (12). ATMS & AWS also available.
- Screw size: FHMS - 12-24 x 1/2"
  FHWS - 12 x 1-1/4"
- All swing clear hinges are made for reversible applications.
- All hinges are ANSI template.
NOTE:
• 1 screw pack includes all machine screws (24), and 1/2 wood screws (12). ATMS & AWS also available.
• Screw size: FHMS - 12-24 x 1/2"
  FHWS - 12 x 1-1/4"
• This special model of swing clear hinge is made to specifically fit timely or rediframe trim casing applications.
• All hinges are ANSI template.

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PBB reserves the right to make changes without notice.
NOTE: This hinge alters the normal pivot point of door. For door closers, friction or overhead door holders, to be used in conjunction with this hinge, consult manufacturer for the device to be used for application details.

<table>
<thead>
<tr>
<th>Part Number</th>
<th>Steel</th>
<th>Brass</th>
<th>Stainless</th>
<th>“E” Outside Dia.</th>
</tr>
</thead>
<tbody>
<tr>
<td>SCBB81/</td>
<td>-</td>
<td></td>
<td>SCBB51/</td>
<td>.146” .624”</td>
</tr>
<tr>
<td>SCBB81B</td>
<td></td>
<td></td>
<td>SCBB51B/</td>
<td></td>
</tr>
<tr>
<td>SCCB81/</td>
<td>-</td>
<td></td>
<td>SCCB51/</td>
<td>.146” .624”</td>
</tr>
<tr>
<td>SCCB81B</td>
<td></td>
<td></td>
<td>SCCB51B/</td>
<td></td>
</tr>
</tbody>
</table>

NOTE:
• 1 screw pack includes all machine screws (24), and 1/2 wood screws (12). ATMS & AWS also available.
• Screw size: FHMS - 12-24 x 1/2”
  FHWS - 12 x 1-1/4”
• All swing clear hinges are made for reversible applications.
• All hinges are ANSI template.
NOTE: This hinge alters the normal pivot point of door. For doors closers, friction or overhead door holders, to be used in conjunction with this hinge, consult manufacturer of the device to be used for application details.

### Part Number

<table>
<thead>
<tr>
<th>Steel</th>
<th>Brass</th>
<th>Stainless</th>
<th>Gauge of Metal</th>
<th>&quot;E&quot; Outside Dia.</th>
</tr>
</thead>
<tbody>
<tr>
<td>SC4B81/</td>
<td>-</td>
<td>SC4B51/SC4B51B</td>
<td>.180&quot;</td>
<td>.725&quot;</td>
</tr>
<tr>
<td>SC4B81B</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>SC4C81/</td>
<td>-</td>
<td>SC4C51/SC4C51B</td>
<td>.180&quot;</td>
<td>.725&quot;</td>
</tr>
<tr>
<td>SC4C81B</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**NOTE:**

- 1 screw pack includes all machine screws (24), and 1/2 wood screws (12). ATMS & AWS also available.
- Screw size: FHMS - 12-24 x 1/2"
  - FHWS - 12 x 1-1/4"
- All swing clear hinges are made for reversible applications.
- All hinges are ANSI template.
NOTE: This hinge alters the normal pivot point of door. For door closers, friction or overhead door holders, to be used in conjunction with this hinge, consult manufacturer for the device to be used for application details.

<table>
<thead>
<tr>
<th>Part Number</th>
<th>Steel</th>
<th>Brass</th>
<th>Stainless</th>
</tr>
</thead>
<tbody>
<tr>
<td>SC4B81/SC4B81B</td>
<td>-</td>
<td>SC4B51/SC4B51B</td>
<td>.190”</td>
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<tr>
<td>SC4C81/SC4C81B</td>
<td>-</td>
<td>SC4C51/SC4C51B</td>
<td>.190”</td>
</tr>
</tbody>
</table>

NOTE:
- 1 screw pack includes all machine screws (24), and 1/2 wood screws (12). ATMS & AWS also available.
- Screw sizes: FHMS - 12-24 x 1/2”
  FHWS - 12 x 1-1/4”
- All swing clear hinges are made for reversible applications.
- All hinges are ANSI template.
For bevel edge doors only

NOTE: This hinge alters the normal pivot point of door. For door closers, friction or overhead door holders, to be used in conjunction with this hinge, consult manufacture of the device to be used for application details.

<table>
<thead>
<tr>
<th>Part Number</th>
<th>Gauge of Metal</th>
<th>“E” Outside Dia.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Steel</td>
<td>Brass</td>
<td>Stainless</td>
</tr>
<tr>
<td>SC4B82/SC4C82</td>
<td>-</td>
<td>SC4B52/SC4C52</td>
</tr>
</tbody>
</table>

NOTE:
• 1 screw pack includes all machine screws (24), and 1/2 wood screws (12).
• Screw size: JAMB LEAF FHMS - 1/2” x 1/4-20
  DOOR LEAF FHWS - 12 x 1-1/2”
  DOOR LEAF FHMS - 12-24 x 1/2”
• All swing clear hinges are made for reversible applications.
• All hinges are ANSI template.
NOTE: This hinge alters the normal pivot point of door. For door closers, friction or overhead door holders, to be used in conjunction with this hinge, consult manufacturer for the device to be used for application details.

<table>
<thead>
<tr>
<th>Part Number</th>
<th>Gauge of Metal</th>
<th>“E” Outside Dia.</th>
</tr>
</thead>
<tbody>
<tr>
<td>SC4B83/SC4C83</td>
<td>SC4B53/SC4C53</td>
<td>.190” .725”</td>
</tr>
</tbody>
</table>

NOTE:
- 1 screw pack includes all machine screws (12), and oval head machine screws (15) with grommet nuts.
- Screw size: JAMB LEAF FHMS - 1/2” x 1/4-20
  DOOR LEAF OHMS/NUT - 2” x 1/4-20
- All swing clear hinges are made for reversible applications.
- All hinges are ANSI template.
NOTE:
- 1 screw pack includes all machine screws (12) and oval head machine screws (15) with grommet nuts.
- Screw size: JAMB LEAF OHMS - 12-24 x 1/2"
  DOOR LEAF OHMS/NUT - 2" x 1/4-20
- All swing clear hinges are made for reversible applications.
- All hinges are ANSI template.
<table>
<thead>
<tr>
<th>Part Number</th>
<th>Steel</th>
<th>Brass</th>
<th>Stainless</th>
<th>Gauge of Metal</th>
<th>“E” Outside Dia.</th>
<th>“L” Leaf Width</th>
</tr>
</thead>
<tbody>
<tr>
<td>WTBB81/</td>
<td>WTBB21/</td>
<td>WTBB51/</td>
<td>.123”</td>
<td>.534”</td>
<td>2.00”</td>
<td></td>
</tr>
<tr>
<td>WTPB81</td>
<td>WTPB21</td>
<td>WTPB51</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>WTBB81/</td>
<td>WTBB21/</td>
<td>WTBB51/</td>
<td>.123”</td>
<td>.534”</td>
<td>2.50”</td>
<td></td>
</tr>
<tr>
<td>WTPB81</td>
<td>WTPB21</td>
<td>WTPB51</td>
<td></td>
<td></td>
<td></td>
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</tr>
<tr>
<td>WTCB81/</td>
<td>WTCB21/</td>
<td>WTCB51/</td>
<td>.123”</td>
<td>.534”</td>
<td>2.00”</td>
<td></td>
</tr>
<tr>
<td>WTCP81</td>
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<td>WTCP51</td>
<td></td>
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</tbody>
</table>

**NOTE:**

- 1 screw pack includes all machine screws (24), and 1/2 wood screws (12). ATMS & AWS also available.
- Screw size:  
  - FHMS - 12-24 x 1/2”  
  - FHWS - 12 x 1-1/4”
- All hinges are ANSI template.
### Part Number

<table>
<thead>
<tr>
<th>Steel</th>
<th>Brass</th>
<th>Stainless</th>
<th>&quot;E&quot; Outside Dia.</th>
<th>&quot;L&quot; Leaf Width</th>
<th>&quot;S&quot; Swage Line</th>
<th>&quot;R&quot; Corner Radius</th>
</tr>
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<tbody>
<tr>
<td>WTBB81/ WTPB81</td>
<td>WTBB21/ WTPB21</td>
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</table>

### NOTE:
- 1 screw pack includes all machine screws (24), and 1/2 wood screws (12). ATMS & AWS also available.
- Screw size: FHMS - 12-24 x 1/2"  
  FHWS - 12 x 1-1/4"
- All hinges are ANSI template.
## Wide Throw Full Mortise Standard Weight Template

### WTBB - WTPB - WTCB - WTCP - WTFB

4-1/2" x 5", 4-1/2" x 6", 4-1/2" x 7", 4-1/2" x 8"

### Specifications

<table>
<thead>
<tr>
<th>Part Number</th>
<th>Steel</th>
<th>Brass</th>
<th>Gauge of Metal</th>
<th>&quot;E&quot; Outside Dia.</th>
<th>&quot;L&quot; Leaf Width</th>
<th>&quot;S&quot; Swage Line</th>
<th>&quot;R&quot; Corner Radius</th>
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</thead>
<tbody>
<tr>
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<td>WTBB51/ WTPB51</td>
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<td>3.63&quot;</td>
<td>Square, 1/4&quot;, 5/8&quot;</td>
</tr>
</tbody>
</table>

*Also available as welding butts with identical dimensions and the exclusion of screw holes.

### Notes:
- 1 screw pack includes all machine screws (24), and 1/2 wood screws (12). ATMS & AWS also available.
- Screw size: FHMS - 12-24 x 1/2"  
  FHWS - 12 x 1-1/4"
- All hinges are ANSI template.

---

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### Wide Throw Full Mortise Standard Weight Template

**WTBB - WTPB - WTCB - WTCP - WTFB**

5" x 6", 5" x 7", 5" x 8"

---

**Part Number**

<table>
<thead>
<tr>
<th>Steel</th>
<th>Brass</th>
<th>Stainless</th>
<th>Gauge of Metal</th>
<th>&quot;E&quot; Outside Dia.</th>
<th>&quot;L&quot; Leaf Width</th>
<th>&quot;S&quot; Swage Line</th>
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*Also available as welding butts with identical dimensions and the exclusion of screw holes.

---

**NOTE:**

- 1 screw pack includes all machine screws (24), and 1/2 wood screws (12). ATMS & AWS also available.
- Screw size: FHMS - 12-24 x 1/2"
  FHWS - 12 x 1-1/4"
- All hinges are ANSI template.
## WIDE THROW FULL MORTISE HEAVY WEIGHT TEMPLATE

**WT4B - WT4C - WT4F**

4-1/2" x 5", 4-1/2" x 6", 4-1/2" x 7", 4-1/2" x 8"

---

<table>
<thead>
<tr>
<th>Part Number</th>
<th>Steel</th>
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<th>&quot;L&quot; Leaf Width</th>
<th>&quot;S&quot; Swage Line</th>
<th>&quot;R&quot; Corner Radius</th>
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*Also available as welding butts with identical dimensions and the exclusion of screw holes.

---

**NOTE:**

- 1 screw pack includes all machine screws (24), and 1/2 wood screws (12). ATMS & AWS also available.
- Screw size: FHMS - 12-24 x 1/2"  
  FHWS - 12 x 1-1/4"
- All hinges are ANSI template.
**Part Number**

<table>
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*Also available as welding butts with identical dimensions and the exclusion of screw holes.*

**NOTE:**
- 1 screw pack includes all machine screws (24), and 1/2 wood screws (12). ATMS & AWS also available.
- Screw size: FHMS - 12-24 x 1/2"
  FHWS - 12 x 1-1/4"
- All hinges are ANSI template.
**Full Mortise Standard Weight Insert Template**

**ITBB - ITPB - ITCB - ITCP - ITFB**

4-1/2" x 4", 4-1/12" x 4-1/12"

---

**Part Number**

<table>
<thead>
<tr>
<th>Steel</th>
<th>Brass</th>
<th>Stainless</th>
<th>Gauge of Metal</th>
<th>&quot;E&quot; Outside Dia.</th>
<th>&quot;L&quot; Leaf Width</th>
<th>&quot;S&quot; Swage Line</th>
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<td>ITBB51/ITCB51</td>
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<td>ITPB51/ITCP51</td>
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<td>1.63&quot;</td>
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<td>.600&quot;</td>
<td>2.25&quot;</td>
<td>1.88&quot;</td>
</tr>
</tbody>
</table>

**NOTE:**
- 1 screw pack includes 1/2 machine screws (12), and 1/2 wood screws (12).
- Screw size: FHMS - 12-24 x 1/2"
  FHWS - 12 x 1-1/4"
- All hinges are ANSI template.
### Full Mortise Standard Weight Insert Template

#### IFBB - IFPB - IFCB - IFCP - IFFB

4-1/2" x 4", 4-1/2" x 4-1/2"

---

#### Part Number and Dimensions

<table>
<thead>
<tr>
<th>Steel</th>
<th>Brass</th>
<th>Stainless</th>
<th>&quot;E&quot; Outside Dia.</th>
<th>&quot;L&quot; Leaf Width</th>
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<tr>
<td>IFBB81/IFCB81</td>
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<td>IFPB81/IFCP81</td>
<td>IFPB21/IFCP21</td>
<td>IFPB51/IFCP51</td>
<td>.134&quot;</td>
<td>.600&quot;</td>
</tr>
</tbody>
</table>

---

**NOTE:**

- 1 screw pack includes all machine screws (24).
- Screw size: **FHMS - 12-24 x 1/2"**
  **FHWS - 12 x 1-1/4"**
- All hinges are ANSI template.
RAISED BARREL TEMPLATE FOR SQUARE EDGE DOORS

BBRB
4 1/2" X 4 1/2"

Notes:
1. Clearance between door and jamb determined by depth of mortise.
   (1/16 Min.) 1.6mm
2. Recommended for approx. 1/16 (1.6) clearance between door and stop.
3. For raised barrel templates hinge for square edge doors.

<table>
<thead>
<tr>
<th>Part Number</th>
<th>Gauge of Metal</th>
<th>“E” Outside Dia.</th>
<th>“A” Barrel C/L to Back of Jamb Leaf</th>
<th>“F” (See Note 2)</th>
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</thead>
<tbody>
<tr>
<td>Steel</td>
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<tr>
<td></td>
<td></td>
<td></td>
<td>0.603&quot;</td>
<td>11/32&quot;</td>
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</table>

PBB, Inc.
World Class Hinges
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PBB reserves the right to make changes without notice.
Notes:

1. Clearance between door and jamb determined by depth of mortise. (1/16 Min.) 1.6mm

2. Recommended for approx. 1/16 (1.6) clearance between door and stop.

3. For raised barrel templates hinge for bevel edge doors.

<table>
<thead>
<tr>
<th>Part Number</th>
<th>Gauge of Metal</th>
<th>&quot;E&quot; Outside Dia.</th>
<th>&quot;A&quot; Barrel C/L to Back of Jamb Leaf</th>
<th>&quot;F&quot; (See Note 2)</th>
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</thead>
<tbody>
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<tr>
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<td></td>
<td></td>
<td></td>
<td>31/64&quot;</td>
</tr>
</tbody>
</table>
NOTE:
• Bearings take both vertical and lateral loads
• Screw size: FHWS - 12 x 1-1/2"
• Screw holes allow both vertical and horizontal adjustment.
**FULL MORTISE HEAVY WEIGHT ANCHOR HINGE**

For Square Edge Door

For Bevel Edge Door

<table>
<thead>
<tr>
<th>Part Number</th>
<th>Gauge of Metal</th>
<th>Knuckle Dia.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Steel</td>
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</tr>
<tr>
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<td>AC4C81</td>
<td>AC4C21</td>
<td>AC4C51</td>
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</table>

**NOTE:**
- 1 screw pack includes all machine and all wood screws.
- Screw size: FHMS - 12-24 x 1/2"
  FHWS - 12 x 1-1/4"
- All hinges are ANSI template.

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For Square Edge Door

For Bevel Edge Door

<table>
<thead>
<tr>
<th>Part Number</th>
<th>Gauge of Metal</th>
<th>Knuckle Dia.</th>
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</thead>
<tbody>
<tr>
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</tr>
<tr>
<td></td>
<td>.190”</td>
<td>.720</td>
</tr>
</tbody>
</table>

NOTE:
- 1 screw pack includes all machine and all wood screws.
- Screw size: FHMS - 12-24 x 1/2”
  FHWS - 12 x 1-1/4”
- All hinges are ANSI template.
FULL MORTISE HEAVY WEIGHT ANCHOR HINGE

AC4B - AC4C
5" X 4 1/2"

For Square Edge Door

For Bevel Edge Door

Right Handed Shown
Left Handed Opposite

<table>
<thead>
<tr>
<th>Part Number</th>
<th>Gauge of Metal</th>
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<tbody>
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<td>AC4C81</td>
<td>AC4C21</td>
<td>AC4C51</td>
</tr>
</tbody>
</table>

.190" .720

NOTE:
• 1 screw pack includes all machine and all wood screws.
• Screw size: FHMS - 12-24 x 1/2"
  FHWS - 12 x 1-1/4"
• All hinges are ANSI template.

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FULL SURFACE WELDING BUTT TEMPLATE

WBPB - WBBB
4 1/2" x 4"  4 1/2" x 4 1/2"

Part Number Gauge of Metal "L" Leaf Width "R" Corner Radius
<table>
<thead>
<tr>
<th>Steel</th>
<th>Brass</th>
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</tbody>
</table>

NOTE:
• 16 unit carton or 48 hinges per master shipping carton.
• All hinges are ANSI template.
**FULL SURFACE WELDING BUTT TEMPLATE**

**WBPP - WBPP**

5" x 4" 5" x 4 1/2" 5" x 5"

---

**Part Number Gauge of Metal "L" Leaf Width "R" Corner Radius**

<table>
<thead>
<tr>
<th>Steel</th>
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<th>&quot;R&quot; Corner Radius</th>
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</table>

**NOTE:**
- 16 unit carton or 48 hinges per master shipping carton.
- All hinges are ANSI template.
**Part Number Gauge of Metal**

<table>
<thead>
<tr>
<th>Steel</th>
<th>Brass</th>
<th>Stainless</th>
</tr>
</thead>
<tbody>
<tr>
<td>WB4B81</td>
<td>-</td>
<td>-</td>
</tr>
</tbody>
</table>

**NOTE:**
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- All hinges are ANSI template.

PBB, Inc.
World Class Hinges
1311 E. Philadelphia Street • Ontario • CA 91761 • USA
PBB reserves the right to make changes without notice.
Part Number | Gauge of Metal | “L” Leaf Width | “R” Corner Radius
--- | --- | --- | ---
WB4B81 Steel - - | .190” | 2.00” | Square, 1/4”, 5/8”
WB4B81 Stainless - - | .190” | 2.25” | Square, 1/4”, 5/8”

NOTE:
8 unit carton or 24 hinges per master shipping carton.
All hinges are ANSI template.