# Architectural Hinge Selector

<table>
<thead>
<tr>
<th>Type of Door</th>
<th>Type of Frame</th>
<th>Full Mortise</th>
<th>Half Mortise</th>
<th>Full Surface</th>
<th>Half Surface</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Hollow Metal</td>
<td>Hollow Metal</td>
<td>Composite or</td>
<td>Composite or</td>
<td></td>
</tr>
<tr>
<td></td>
<td>or Wood</td>
<td>or Wood</td>
<td>Tubular Steel</td>
<td>Wood</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Hollow Metal</td>
<td>Channel Iron</td>
<td>Channel Iron</td>
<td>Hollow Metal</td>
<td></td>
</tr>
<tr>
<td></td>
<td>or Wood</td>
<td></td>
<td></td>
<td>or Wood</td>
<td></td>
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</table>

**Hinge Description**

<table>
<thead>
<tr>
<th>Hinge Description</th>
<th>Code</th>
</tr>
</thead>
<tbody>
<tr>
<td>Tri-Con, Std. Wt. PB, Steel</td>
<td>700</td>
</tr>
<tr>
<td>Tri-Con, Std. Wt. PB, Brass/Stn. Std</td>
<td>800</td>
</tr>
<tr>
<td>Tri-Con Std. Wt. AB, Steel</td>
<td>AB700</td>
</tr>
<tr>
<td>Tri-Con Std. Wt. AB, Brass/Stn. Std</td>
<td>AB800</td>
</tr>
<tr>
<td>Tri-Con Hvy. Wt. AB, Steel</td>
<td>AB750</td>
</tr>
<tr>
<td>Tri-Con Hvy. Wt. AB, Brass/Stn. Std</td>
<td>AB850</td>
</tr>
<tr>
<td>Spring Hinge Std. Wt. Steel</td>
<td>1250</td>
</tr>
<tr>
<td>Std. Wt. PB, Steel</td>
<td>1279</td>
</tr>
<tr>
<td>Std. Wt. PB, Brass/Stn. Std</td>
<td>1191</td>
</tr>
<tr>
<td>BB, Std. Wt. Steel</td>
<td>BB1279</td>
</tr>
<tr>
<td>BB, Std. Wt. Brass/Stn. Std</td>
<td>BB1191</td>
</tr>
<tr>
<td>4BB, Hvy. Wt. Steel</td>
<td>BB1168</td>
</tr>
<tr>
<td>4BB, Hvy. Wt. Brass/Stn. Std</td>
<td>BB1199</td>
</tr>
<tr>
<td>3K/5K Anchor Hinge Steel, One Prong</td>
<td>AB8505/BB1160</td>
</tr>
<tr>
<td>3K/5K Anchor Hinge Brass/Stn. Std, One Prong</td>
<td>AB8505/BB1190</td>
</tr>
<tr>
<td>3K/5K Anchor Hinge Steel, Two Prong, Square Edge Door</td>
<td>AB8506/BB1162</td>
</tr>
<tr>
<td>3K/5K Anchor Hinge Brass/Stn. Std, Two Prong, Square Edge Door</td>
<td>AB8506/BB1192</td>
</tr>
<tr>
<td>3K/5K Anchor Hinge Steel, Two Prong, Beveled Edge Door</td>
<td>AB8506/BB1166</td>
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<tr>
<td>3K/5K Anchor Hinge Brass/Stn. Std, Two Prong, Beveled Edge Door</td>
<td>AB8508/BB1196</td>
</tr>
<tr>
<td>3K/5K Anchor Hinge Steel, One Long, One Short Prong, Square Edge Door</td>
<td>AB7507/BB1165</td>
</tr>
<tr>
<td>3K/5K Anchor Hinge Brass/Stn. Std, One Long, One Short Prong, Square Edge Door</td>
<td>AB8507/BB1195</td>
</tr>
<tr>
<td>3K/5K Anchor Hinge Steel, One Long, One Short Prong, Beveled Edge Door</td>
<td>AB7509/BB1167</td>
</tr>
<tr>
<td>3K/5K Anchor Hinge Brass/Stn. Std, One Long, One Short Prong, Beveled Edge Door</td>
<td>AB8509/BB1197</td>
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<tr>
<td>Bronze Pivot Hinge, Top</td>
<td>495</td>
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<tr>
<td>Bronze Pivot Hinge, Intermediate</td>
<td>496</td>
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<tr>
<td>Bronze Pivot Hinge, Bottom</td>
<td>497</td>
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<tr>
<td>3K/5K Swing Clear, Std. Wt., BB Steel, Beveled Edge Door</td>
<td>AB7001/BB1260</td>
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<tr>
<td>3K/5K Swing Clear, Std. Wt., BB Steel, Beveled Edge Door</td>
<td>AB7002/BB1261</td>
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<tr>
<td>3K/5K Swing Clear, Hvy. Wt., BB Steel, Square Edge Door</td>
<td>AB7501/BB1262</td>
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<tr>
<td>3K/5K Swing Clear, Hvy. Wt., BB Steel, Beveled Edge Door</td>
<td>AB7502/BB1263</td>
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<tr>
<td>3K/5K Swing Clear, Hvy. Wt., BB Steel</td>
<td>AB7523/BB1266</td>
</tr>
<tr>
<td>3K/5K Std. Wt., PB, Wide Throw, Steel</td>
<td>WT700/WT1279</td>
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<tr>
<td>3K/5K Std. Wt., PB, Wide Throw, Brass/Stn. Std.</td>
<td>WT800/WT1191</td>
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<td>WTAB700/WTAB1279</td>
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<td>WTAB800/WTAB1191</td>
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<tr>
<td>3K/5K Hvy. Wt., AB Wide Throw, Steel</td>
<td>WTAB750/WTAB1168</td>
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<tr>
<td>3K/5K Hvy. Wt., AB Wide Throw, Brass/Stn. Std.</td>
<td>WTAB850/WTAB1199</td>
</tr>
</tbody>
</table>

For Hospital Type, use Prefix "HT" on above number. Hospital Type hinges are available on all architectural hinges with the exception of anchor hinges.

**Note:** For SPECIAL REQUIREMENTS, in the event a particular hinge is not found to meet your requirements, please contact our Sales Department and provide Hager with the specific requirements. The Hager Engineering Staff will prepare special drawings for the appropriate application.

**Note:** When ordering round corner hinges, please specify a radius of either 1/4" or 5/8". If radius is not specified, 1/4" will be supplied.
TRI-CON HINGES

FULL MORTISE
For Wood or Hollow Metal Doors (Template)
Standard Weight/Medium Frequency
700 – Plain Bearing – Steel
AB700 – Concealed Ball Bearing – Steel
800 – Plain Bearing-Brass/Stainless Steel
AB800 – Concealed Ball Bearing/Stainless Steel
Available in sizes 3\(\frac{1}{2}\) x 3\(\frac{1}{2}\), 4 x 4, 4\(\frac{1}{2}\) x 4, 4\(\frac{1}{2}\) x 4\(\frac{1}{2}\), 5 x 4, 5 x 4\(\frac{1}{2}\) and 5 x 5
Heavy Weight/High Frequency
AB750 – Concealed Ball Bearing – Steel
AB850 – Concealed Ball Bearing – Brass/Stainless Steel
Available in sizes 4\(\frac{1}{2}\) x 4\(\frac{1}{2}\), 5 x 4\(\frac{1}{2}\), 5 x 5, 6 x 4\(\frac{1}{2}\), 6 x 5 and 6 x 6
Concealed, Non-Rising, Removable Pin
Concealed Plug

HALF MORTISE
For Hollow Metal or Wood Door in Channel Iron Frames
Standard Weight/Medium Frequency
AB701 – Concealed Ball Bearing – Steel
AB801 – Concealed Ball Bearing – Brass/Stainless Steel
Available in sizes 4\(\frac{1}{2}\)” and 5”
Heavy Weight/High Frequency
AB751 – Concealed Ball Bearing – Steel
Available in sizes 4\(\frac{1}{2}\)”, 5” and 6”
Concealed, Non-Rising, Removable Pin
Threaded Concealed Plug Beveled Surface Leaf
Non-Handed

FULL SURFACE
Standard Weight/Medium Frequency
AB702 – Concealed Ball Bearing – Steel
AB802 – Concealed Ball Bearing – Brass/Stainless Steel
Available in sizes 4\(\frac{1}{2}\)” and 5”
Heavy Weight/High Frequency
AB752 – Concealed Ball Bearing – Steel
AB852 – Concealed Ball Bearing – Brass/Stainless Steel
Available in sizes 4\(\frac{1}{2}\)”, 5” and 6”
Concealed, Non-Rising, Removable Pin
Threaded Concealed Plug Beveled Surface Leaves
Non-Handed

SWING CLEAR HINGES
Full Mortise – AB7501 size 5”
Half Mortise – AB7511 size 5”
Full Surface – AB7523 size 5”
Half Surface – AB7534 size 5”
Three Knuckle Steel Pin Two Concealed Ball Bearings Self Lubricating Delrin Bushings Concealed Non Rising Removable Pin Threaded Concealed Plug

HALF SURFACE
Standard Weight/Medium Frequency
AB703 – Concealed Ball Bearing – Steel
AB803 – Concealed Ball Bearing – Brass/Stainless Steel
Available in sizes 4\(\frac{1}{2}\)” and 5”
Heavy Weight/High Frequency
AB753 – Concealed Ball Bearing – Steel
AB853 – Concealed Ball Bearing – Brass/Stainless Steel
Available in sizes 4\(\frac{1}{2}\)”, 5” and 6”
Concealed, Non-Rising, Removable Pin
Threaded Concealed Plug Beveled Surface Leaf
Non-Handed

For information concerning Wide Throw applications, contact your local Hager sales representative or the Hager sales office.
**5 KNUCKLE HINGES**

**FULL MORTISE**
For Wood or Hollow Metal Doors (Template)

- Standard Weight/Medium Frequency
  - 1279 — Plain Bearing — Steel
  - BB1279 — Two Ball Bearing — Steel
  - 1191 — Plain Bearing — Brass/Stainless Steel*
  - BB1191 — Two Ball Bearing — Brass/Stainless Steel*
    - Plain Bearing Available in sizes 2 x 2, 2½ x 2½, 3 x 3, 3½ x 3½, 4 x 4, 4½ x 4, 4½ x 4½, 5 x 4, 5 x 4½, 5 x 5, 6 x 4½, 6 x 5, 6 x 6 and 6 x 6
    - Ball Bearing Available in all above sizes except 2 x 2 and 2½ x 2½

- Heavy Weight/High Frequency
  - BB1199 — Four Ball Bearing — Brass/Stainless Steel*
    - Available in sizes 4½ x 4, 4½ x 4½, 5 x 4, 5 x 4½, 6 x 4½, 6 x 5, 6 x 6, 8 x 6 and 8 x 8

- Five Knuckle Button Tip
  - *With Stainless Steel Pin

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**HALF MORTISE**
For Hollow Metal or Wood Doors in Channel Iron Frames

- Standard Weight/Medium Frequency
  - BB1109 — Two Ball Bearing — Brass/Stainless Steel*
  - BB1129 — Two Ball Bearing — Steel
  - Available in sizes 4½" and 5"

- Heavy Weight/High Frequency
  - BB1138 — Four Ball Bearing — Steel
  - BB2098 — Four Ball Bearing — Brass/Stainless Steel*
  - Available in sizes 4½", 5" and 6"

- Five Knuckle Beveled Surface Leaf Non-Rising Removable Pin Reversible
  - *With Stainless Steel Pin

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**FULL SURFACE**

- Standard Weight/Medium Frequency
  - BB2110 — Two Ball Bearing — Brass/Stainless Steel*
  - BB2171 — Two Ball Bearing — Steel
    - Available in sizes 4½" and 5"

- Heavy Weight/High Frequency
  - BB2109 — Four Ball Bearing Brass/Stainless Steel*
  - BB2169 — Four Ball Bearing Steel
    - Available in sizes 4½", 5" and 6"

- Five Knuckle Beveled Surface Leaves Non-Rising Removable Pin Reversible
  - *With Stainless Steel Pin

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**SWING CLEAR HINGES**

- Half Mortise — BB1264 size 5"
- Full Surface — BB1266 size 5"
- Full Mortise — BB1262 sizes 4½" and 5"
- Half Surface — BB1270 size 5"

- Five Knuckle Steel with Stainless Steel Pin Four Ball Bearings

- Designed to swing doors completely clear of the opening when door is opened 95 degrees.
- When opened 90 degrees, door projects ¼" past stop of the frame.

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*AB7502, AB7512, BB1265, BB1263 — When used on beveled Edge Doors.*

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Tubelite P092 = BB1191 Special
SPECIALTY HINGES

EXPOSED ELECTRIC HINGES
Exposed Contacts
4" hinges are available with 2 or 3 contacts. 4½" and 5" are available with 2, 3 or 4 contacts.
Exposed Switches
Available in 4", 4½" and 5" hinges. Miniature push button is a break-before make, single pole, double throw switch, it is rated at 250 milliamps, 50 volts DC, non-inductive load.
Exposed Contacts/Switch Hinges
This is a combination of 2 or 3 contacts and 1 switch.
All Exposed Electric Contact and/or Switch Hinges are furnished with Non-Removable Pins.

CONCEALED ELECTRIC HINGES
Standard Wt.: AB700, AB800, BB1191, BB1279
Heavy Wt.: AB750, AB850, BB1168, BB1199
Available in sizes 4½" x 4", 4½" x 4½", 5" x 4", 5" x 4½". 5" x 5"
Material: Steel, Brass & Stainless Steel
Electric Monitor Only—EMN
The EMN is a monitoring hinge with a concealed switch. This switch is a subminiature, snap action, SPDT and rated at 1 AMP. 48 Volts. DC maximum and fully adjustable.
Electric Through-Wire Only—ETW
The ETW is a through-wire hinge which provides four (4) continuous electrical conductors for transfer of current or signals from frame to door.
Electric Through-Wire With Monitoring—ETM
The ETM is a combination of the Hager Through-Wire and Monitoring Hinges. This hinge offers both four (4) continuous electrical conductors and the concealed monitoring switch. Fully adjustable.
Patents and Underwriters Laboratory listings have been applied for.
Templates available upon request.

LOOSE JOINT HINGE FULL MORTISE
For Wood or Hollow Metal Doors (Template) Standard Weight/Medium Frequency
920—Plain Bearing, Steel
AB920—Anti-Friction Bearing, Steel
Available in sizes 4½ x 4", 4½ x 4½"
Two Knuckle Square Corner Steel Pins

SPRING HINGES – 1250 SERIES
1250 Standard Weight Square Corner Steel
Available in sizes 4 x 4, 4½ x 4, 4½ x 4½
1251 Standard Weight ¾" Radius Round Corner Steel
Available in sizes 4 x 4, 4½ x 4, 4½ x 4½
1252 Standard Weight ½" Radius Round Corner Steel
Available in sizes 4 x 4, 4½ x 4, 4½ x 4½

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 over 7'6" in height, use an additional hinge for each additional 30" of height or fraction thereof.

MAX. ELECTRICAL RATING

<table>
<thead>
<tr>
<th>SWITCH</th>
<th>CONTACT</th>
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<tbody>
<tr>
<td>VOLTS</td>
<td>VOLTS</td>
</tr>
<tr>
<td>30V dc</td>
<td>30V dc</td>
</tr>
<tr>
<td>AMPERES</td>
<td>AMPERES</td>
</tr>
<tr>
<td>500 MA</td>
<td>500 MA</td>
</tr>
<tr>
<td>or 30V dc/ac</td>
<td>or 30V dc/ac</td>
</tr>
<tr>
<td>1.0 A</td>
<td>1.0 A</td>
</tr>
</tbody>
</table>

1250 SERIES
Max. Door Wt. | Spring Hinges | B/B Hinges
<table>
<thead>
<tr>
<th>(lbs.)</th>
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</thead>
<tbody>
<tr>
<td>(Full Mortise)</td>
<td>60</td>
</tr>
<tr>
<td>4&quot; x 4&quot;</td>
<td>85</td>
</tr>
<tr>
<td>110</td>
<td><strong>3 ea</strong></td>
</tr>
<tr>
<td>(Full Mortise)</td>
<td>70</td>
</tr>
<tr>
<td>4½&quot; x 4&quot;</td>
<td>115</td>
</tr>
<tr>
<td>150</td>
<td><strong>3 ea</strong></td>
</tr>
</tbody>
</table>

NOTES: *1. For maximum versatility, use all spring hinges especially when excessive air pressure or other adverse job conditions are present.
**2. Spring tension may not be required on all hinges.
SPECIALTY HINGES

ANCHOR HINGES

Heavy Weight Anchor Type Hinges For Use on Average Weight Doors Receiving High Frequency Use.

AB7505/BB1160 — ANCHOR HINGE STEEL ONE PRONG
AB8505/BB1190 — ANCHOR HINGE BRASS / STN STL ONE PRONG
AB7506/BB1162 — ANCHOR HINGE STEEL TWO PRONG / SQUARE
AB8506/BB1192 — ANCHOR HINGE BRASS / STN STL TWO PRONG / SQUARE
AB7508/BB1166 — ANCHOR HINGE STEEL TWO PRONG / BEVELED
AB8508/BB1196 — ANCHOR HINGE BRASS / STN STL TWO PRONG / BEVELED
AB7507/BB1165 — ANCHOR HINGE STEEL 1 LONG / 1 SHORT PRONG / SQUARE
AB8507/BB1195 — ANCHOR HINGE BRASS / STN STL 1 LONG / 1 SHORT PRONG / SQUARE
AB7509/BB1167 — ANCHOR HINGE STEEL 1 LONG / 1 SHORT PRONG / BEVELED
AB8509/BB1197 — ANCHOR HINGE BRASS / STN STL 1 LONG / 1 SHORT PRONG / BEVELED

Anchor Hinges available in both three and five knuckle style hinges. AB7507 / BB1165 / AB8507 / BB1195 / AB7509 / BB1167 / AB8509 / BB1197 To be used with Concealed Door Holder and Closers

Anchor Hinges are ordered individually as "EACH". Order one pair of heavy weight full mortise hinges (AB750, BB1168 or BB1199) to be used with the Anchor Hinge.

Note: Anchor Hinges are Handed — specify hand.

ALUMINUM ENTRANCE DOOR HINGES (Slip-In Butts)

Slide in template. For Use on Aluminum Doors with Aluminum Frames when inserting the hinge leaves through a slot in the door or frame.

AB7011 — One leaf tapped. Steel, ⅜" swage.
AB7012 — Both leaves tapped. Steel, ⅜" swage.
AB8011 — One leaf tapped. Brass or Stainless Steel, ⅜" swage.
AB8012 — Both leaves tapped. Brass or Stainless Steel, ⅜" swage.

Three Knuckle Teflon Coated Steel Pin Two Concealed Ball Bearings Self Lubricating Delrin Bushings Concealed Non Rising Removable Pin Threaded Concealed Plug

Available in sizes 3½ x 3½, 4 x 4, 4 1/2 x 4, 4 1/2 x 4 1/2

Note: BB7011 and BB8011 are handed, specify hand.

1277, BB1277 — Both leaves tapped. Steel, ⅜" swage.
1278, BB1278 — One leaf tapped. Steel, ⅜" swage.
1577, BB1577 — Both leaves tapped. Brass or Stainless Steel Pin, ⅜" swage.
1578, BB1578 — One leaf tapped. Brass or Stainless Steel Pin, ⅜" swage.

Five Knuckles Non-Rising Removable Pin Button Tip

Available in sizes 3½ x 3½, 4 x 4, 4 1/2 x 4, 4 1/2 x 4 1/2

Note: 1579, BB1578, 1278, BB1278 are handed, specify hand.

CAMTROL HOSPITAL HARDWARE

Anchor arms are made of 1010 carbon cold rolled steel. Cam is investment cast non-magnetic stainless steel. Cam follower is nylon. Spring is .099" diameter music wire spring steel. Camtrol housing is heavy brass investment casting. Door Stop/Release has forged brass mounting plate and die cast roller segments enclosed in steel dust box.

Door Release 610 — Counter balanced rolling segment tilts forward when used as door stop. Stop rolls back into mortised segment when two way swing is desired.

Camtrol Double Acting Pivot — Specifically designed for use with door release to serve as rescue hardware set for hospitals and nursing homes.

Camtrol Pivot has only three moving parts. It is connected to door with anchor arms.

Camtrol is primarily designed for 1¾" door weighing not more than 100 pounds and not over 3¼" wide or 7½" high. No radius required on end of door.

510/600 — Hospital Door Set - Wood Floor Mortise Application: Set consists of Door Release and Camtrol Pivot for Mortise application.
Pivot Housing - 3¼" x 1¼" x ⅜"

511/611 — Hospital Door Set - Concrete Floor Application: Set consists of Door Release and Camtrol Pivot for Surface application.
Pivot Housing - 3¼" x 1¼" x ⅜"

512/612 — Hospital Door Set - Surface Application: Set consists of Door Release and Camtrol Pivot for Surface application.
Pivot Housing - 3¼" x 1¼" x ⅜"

500 Series Hospital set does not include Doorstop/Release

DOUBLE LIPPED STRIKE

PIVOT HINGES

REINFORCING PIVOT

Hager’s reinforcing Pivot Hinge is the only surface mounted reinforcing hinge available for onsite installation. Here’s the answer to that ever-present problem of hinges with excessive wear and tear. The Hager reinforcing pivot hinge can be installed without special preparation by normal maintenance personnel and is a simple solution to the problem of loose screws, distorted hinge leaves, pulled open knuckles and splits on wood doors. Handling must be specified. Gauge of metals is 187.

251
For Use With
3½" Wide Hinges

252
For Use With
4" Wide Hinges

253
For Use With
4½" Wide Hinges

254
For Use With
5" Wide Hinges

FULL SURFACE HINGE

255
For Use With
3½" Wide Hinges

256
For Use With
4" Wide Hinges

257
For Use With
4½" Wide Hinges

258
For Use With
5" Wide Hinges

HALF SURFACE HINGE

HINGE SELECTION DATA

NUMBER OF HINGES PER DOOR.

<table>
<thead>
<tr>
<th>Door</th>
<th>Number of Hinges</th>
</tr>
</thead>
<tbody>
<tr>
<td>60 inches high and under</td>
<td>2</td>
</tr>
<tr>
<td>Over 60 inches to 90 inches</td>
<td>3</td>
</tr>
<tr>
<td>Over 90 inches to 120 inches</td>
<td>4</td>
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SIZE FOR DOORS

Door sizes given are jamb opening dimensions. Hinges are regular weight except where indicated “heavy weight”. However, heavy weight hinges should be specified where high frequency service is expected, even though regular weight is shown in table.

<table>
<thead>
<tr>
<th>Thickness (inches)</th>
<th>Door width; (inches)</th>
<th>Hinge height (inches)</th>
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</thead>
<tbody>
<tr>
<td>Doors:</td>
<td></td>
<td></td>
</tr>
<tr>
<td>1½</td>
<td>to 36</td>
<td>3</td>
</tr>
<tr>
<td>1½</td>
<td>to 32</td>
<td>3½</td>
</tr>
<tr>
<td></td>
<td>33 and over</td>
<td>4</td>
</tr>
<tr>
<td>1½</td>
<td>to 36</td>
<td>4½</td>
</tr>
<tr>
<td></td>
<td>37 to 48</td>
<td>5</td>
</tr>
<tr>
<td></td>
<td>49 and over</td>
<td>6 Heavy Wt.</td>
</tr>
<tr>
<td>2½</td>
<td>to 42</td>
<td>5 Heavy Wt.</td>
</tr>
<tr>
<td>and 2½</td>
<td>43 to 50</td>
<td>6 Heavy Wt.</td>
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<table>
<thead>
<tr>
<th>Thickness of Door</th>
<th>Width of Hinge</th>
<th>Maximum Clearance Provided</th>
</tr>
</thead>
<tbody>
<tr>
<td>1½</td>
<td>3½</td>
<td>1½</td>
</tr>
<tr>
<td>4&quot;</td>
<td>1½</td>
<td>2½</td>
</tr>
<tr>
<td>4½&quot;</td>
<td>1&quot;</td>
<td>2½</td>
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<tr>
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<td>5&quot;</td>
<td>3½</td>
</tr>
<tr>
<td></td>
<td>6&quot;</td>
<td>3½</td>
</tr>
</tbody>
</table>

The hinge WIDTH of Half Mortise, Half Surface, and Full Surface Hinges is standard, depending on the hinge LENGTH. Note that in these hinge types, and amount of hinge clearance available is determined by the amount of offset and not by the hinge width.
INSTITUTIONAL HARDWARE

All Institutional Hardware shipped with Torx style fasteners as standard.

SECURITY HINGES

IHTAB750/IHTAB850
Institutional Prison Hinge - Abbreviation IHT
For use on Heavy Weight Doors ranging from 200-300 Lbs.
Stainless Steel ANSI A511L Steel ANSI A811L
With Stainless Steel Pin
SIZE OPEN (Inches) 4½ x 4½, 5 x 4½, 5 x 5

HB950/HB953
Full Mortise • Concealed Hagerton Bearings • Heavyweight • Template
Investment Cast Hinge, For use on Heavy Door ranging from 250-600 lbs.
Steel ANSI A8111 with steel pin
Stainless steel ANSI A5111 with stainless steel pin
SIZE OPEN (Inches) 4½ x 4½

990/992
Utility Hinge
Pass Through Hinge with Stop
Full Surface Heavy Weight Prison Hinge. For use on small doors, access doors and observation shutters. Two hinges support the weight of 150 lbs.
SIZE (Inches) 3 x 4

SECURITY PULLS

P4E
Pull for use on security hollow metal doors.
Stainless Steel

P8N
Pull for use on security hollow metal doors.
Silicone Bronze w/Security Screws

T4E
Pull with extender studs for use on security wood doors. Silicone Bronze w/Security Screws

SECURITY FLUSH PULLS

15P
Finger Pull with Lugs for use concealed mounting in security applications.
Finish 32D

26N
Finger Pull for use in security applications, with four security screws for mounting.
Finish US4, 32D

SECURITY RUBBER DOOR BUMPER

269F
Rubber Door Bumper for use in security application. Meets or exceeds the criteria set forth for a 300 pound impact test
Finish: 2C

Grout Fill

SECURITY PUSH/PULL PLATE SETS

25P
4" x 16" PLATE SIZE
1½" PROJECTION
1½" x 3½" OPENING
3⁄4" CLEARANCE IN CUP
MATERIAL: Stainless Steel
FINISHES: 32D
PACKED: 1 Set (2 Plates) per Box w/ 8/32 Security Torx FHMS and Blank Head Sex Nuts

122L
4" x 16" PUSH PLATE
1½" PROJECTION
4" x 9½" PULL PLATE
2½" LIP PROJECTION
MATERIAL: Stainless Steel
FINISHES: 32D
PACKED: 1 Set (1 Push/1Pull) per Box w/Security Torx, Fasteners and Blank Head Sex Nuts as Required.
### TRIM & AUXILIARY HARDWARE

#### WROUGHT DOOR PULLS

<table>
<thead>
<tr>
<th>1</th>
<th>MODIFIED HALF ROUND</th>
<th>3</th>
<th>ROUND</th>
</tr>
</thead>
<tbody>
<tr>
<td>1/2&quot; x 1&quot; Base / 2&quot; Projection</td>
<td>3/4&quot; Dia. Base / 2 1/4&quot; Projection</td>
<td>1/2&quot; Clearance</td>
<td>1/2&quot; Clearance</td>
</tr>
</tbody>
</table>

**Availability:**
- With Standard Base Centers (CTC)
- Other Centers on Special Order

#### CAST DOOR PULLS

<table>
<thead>
<tr>
<th>5N</th>
<th>5/8&quot; x 1 3/4&quot; Base / 2&quot; Projection</th>
<th>6N</th>
<th>1&quot; Dia. Base / 2 1/4&quot; Projection</th>
</tr>
</thead>
<tbody>
<tr>
<td>5/8&quot; Clearance / 6 1/2&quot; Length</td>
<td>1/2&quot; Clearance / 6 1/2&quot; Length</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**Availability:**
- With Standard Base Centers (CTC)
- Other Centers on Special Order

<table>
<thead>
<tr>
<th>7N</th>
<th>2&quot; Dia. Base / 2 1/4&quot; Projection</th>
<th>8N</th>
<th>2&quot; Dia. Base / 2 1/4&quot; Projection</th>
</tr>
</thead>
<tbody>
<tr>
<td>1/2&quot; Clearance / 7 1/2&quot; Length</td>
<td>1/2&quot; Clearance / 7 1/2&quot; Length</td>
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</tr>
</tbody>
</table>

**Availability:**
- With Standard Base Centers (CTC)
- Other Centers on Special Order

### OFFSET PULLS

<table>
<thead>
<tr>
<th>11</th>
<th>ROUND</th>
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<tbody>
<tr>
<td>3/4&quot; Dia. Base / 2 1/4&quot; Projection</td>
<td>3&quot; Offset</td>
</tr>
</tbody>
</table>

**Availability:**
- With Standard Base Centers (CTC)
- Other Centers on Special Order

### FLUSH PULLS

- **15N** - FLUSH CUP PULL
  - 3 1/4" x 1" Face
  - 1 1/4" x 3 1/4" Opening
  - 3/4" Projection
  - 3/4" Clearance in Cup

- **16N** - FLUSH CUP PULL PLATE
  - 4" x 16" Plate Size
  - 1 1/4" x 3 1/4" Opening
  - 3/4" Clearance in Cup

- **16R** - FLUSH CUP PULL PLATE
  - 4" x 16" Plate Size
  - 1 1/4" x 3 1/4" Opening
  - 3/4" Clearance in Cup

- **17N** - FLUSH CUP PULL
  - 2 1/2" x 4" Face
  - 2 1/4" x 3 1/4" Base
  - 3/4" Clearance in Cup

**Material:** Cast Brass

**Finish:**
- 3, 10, 106, 26 & 26D Only

---

**NOTE:** Pulls may be ordered STD. See Fig. 3. Change first digit to 2, i.e. "21E"
TRIM & AUXILIARY HARDWARE

PUSH PLATES
MATERIAL GAUGE .050" ALUMINUM, BRASS, BRONZE & STAINLESS STEEL
STANDARD SIZES: 3" x 12", 3 1/4" x 15", 4" x 16", 6" x 16", 8" x 16"

PULL PLATES
ANY WROUGHT OR CAST PULL CAN BE USED

PULL PLATES ARE SPECIFIED BY COMBINING PULL AND PLATE NUMBERS BELOW

<table>
<thead>
<tr>
<th>SQUARE CORNERS</th>
<th>ROUND CORNERS</th>
<th>ROUNDED</th>
<th>PULL NO.</th>
<th>PULL CTC</th>
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<tbody>
<tr>
<td>31E</td>
<td>41E</td>
<td>51E</td>
<td>1E</td>
<td>6&quot;</td>
</tr>
<tr>
<td>31G</td>
<td>41G</td>
<td>51G</td>
<td>1G</td>
<td>8&quot;</td>
</tr>
<tr>
<td>31J</td>
<td>41J</td>
<td>51J</td>
<td>1J</td>
<td>10&quot;</td>
</tr>
<tr>
<td>31L</td>
<td>41L</td>
<td>51L</td>
<td>1L</td>
<td>12&quot;</td>
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<tr>
<td>32E</td>
<td>42E</td>
<td>52E</td>
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<td>6&quot;</td>
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<td>32G</td>
<td>42G</td>
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<tr>
<td>32J</td>
<td>42J</td>
<td>52J</td>
<td>2J</td>
<td>10&quot;</td>
</tr>
<tr>
<td>32L</td>
<td>42L</td>
<td>52L</td>
<td>2L</td>
<td>12&quot;</td>
</tr>
<tr>
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<tr>
<td>33L</td>
<td>43L</td>
<td>53L</td>
<td>3L</td>
<td>12&quot;</td>
</tr>
<tr>
<td>34G</td>
<td>44G</td>
<td>54G</td>
<td>4G</td>
<td>8&quot;</td>
</tr>
<tr>
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</tr>
<tr>
<td>35N</td>
<td>45N</td>
<td>55N</td>
<td>5N</td>
<td>5 1/2&quot;</td>
</tr>
<tr>
<td>36N</td>
<td>46N</td>
<td>56N</td>
<td>6N</td>
<td>5 1/2&quot;</td>
</tr>
</tbody>
</table>

30S Beveled
40R Not Beveled
50T Not Beveled

PUSH BAR UNITS

125S – 3/4" X 1 1/4" BAR SIZE
Base Plate 1" x 3"
Projection 2 1/4"

126S – 3/4" X 1 1/4" BAR SIZE
Base Plate 1" x 3"
Projection 2 1/4"

127S – 3/4" X 1 1/4" BAR SIZE
Base Plate 1" x 3"
Projection 2 1/4"

PUSH BARS AND SETS ARE CUSTOM MADE TO FIT SPECIFIED DOOR WIDTHS.

PUSH/PULL SETS

PUSH/PULL SET
138P – 1" ROUND BAR
Bases: 1" Dia., 2 1/2" Projection

139P – 3/4" ROUND BAR
Bases: 3/4" Dia., 2 1/2" Projection

PUSH/PULL SET
150 – 3/4" ROUND BAR
Bases: 3/4" Dia., 2 1/2" Projection, Pull 8" CTC

151 – 3/4" ROUND BAR
Bases: 3/4" Dia., 2 1/2" Projection, Pull 10" CTC

152 – 3/4" ROUND BAR
Bases: 3/4" Dia., 2 1/2" Projection, Pull 12" CTC

PUSH/PULL SET
153 – 1" ROUND BAR
Bases: 1" Dia., 2 1/2" Projection, Pull 10" CTC

154 – 1" ROUND BAR
Bases: 1" Dia., 2 1/2" Projection, Pull 10" CTC

155 – 1" ROUND BAR
Bases: 1" Dia., 2 1/2" Projection, Pull 18" CTC

PUSH/PULL SET
156 – 3/4" ROUND BAR
Push Bar: 2" Projection
Pull 8" CTC, 2 1/4" Projection Offset 3" CTC

157 – 3/4" ROUND BAR
Push Bar: 2" Projection
Pull 10" CTC, 2 1/4" Projection Offset 3" CTC

158 – 3/4" ROUND BAR
Push Bar: 2" Projection
Pull 12" CTC, 2 1/4" Projection Offset 3" CTC

PUSH/PULL SET
159 – 1" ROUND BAR
Push Bar: 2 1/2" Projection
Pull 10" CTC, 2 1/4" Projection Offset 3" CTC

160 – 1" ROUND BAR
Push Bar: 2 1/2" Projection
Pull 12" CTC, 2 1/4" Projection Offset 3" CTC

161 – 1" ROUND BAR
Push Bar: 2 1/2" Projection
Pull 18" CTC, 2 1/4" Projection Offset 3" CTC
### TRIM & AUXILIARY HARDWARE

#### DOOR EDGINGS AND CORNER GUARDS

**MATERIAL:** .045-.050 Aluminum or Stainless Steel.  
**FINISH:** US28, US32D  
**STANDARD LENGTHS:** 40" - 42"  
**LEG ON THE DOOR EDGE:**  
- 180 series 1 3/8" minus 1/2"    
- 181 series 1 3/4" plus 1/2"    
- 182 series 1 3/4" plus 3/2"  

---

#### DOOR PROTECTION PLATES

**STANDARD SIZE:** Mop plate 4", 6" High; Kick Plate 8", 10", 12" High; Armor Plate 14" to 48" High  
**PACKED:** One per Bag with 6 x 3/8" Truss-head screws.  
**OPTION:** At extra charge, counter sunk holes, specify "CSK"  
**TO ORDER:** Give number, size, height first and finish. Planes are sized on even inches. Odd size available, priced next size larger. KICKPLATES 2" LESS THAN DOOR WIDTH  
**MOP PLATES 1" LESS THAN DOOR WIDTH**

<table>
<thead>
<tr>
<th>NUMBER</th>
<th>MATERIAL</th>
<th>THICKNESS</th>
<th>BAS GA</th>
<th>US GA</th>
<th>BEVEL</th>
<th>FINISH</th>
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</thead>
<tbody>
<tr>
<td>190S</td>
<td>Metal</td>
<td>.050</td>
<td>16</td>
<td>16</td>
<td>None</td>
<td>--</td>
</tr>
<tr>
<td>193S</td>
<td>Metal</td>
<td>.050</td>
<td>16</td>
<td>16</td>
<td>B3E</td>
<td>--</td>
</tr>
<tr>
<td>194S</td>
<td>Metal</td>
<td>.050</td>
<td>16</td>
<td>16</td>
<td>B4E</td>
<td>--</td>
</tr>
<tr>
<td>196R</td>
<td>Metal</td>
<td>.050</td>
<td>16</td>
<td>16</td>
<td>None</td>
<td>--</td>
</tr>
<tr>
<td>198S</td>
<td>Metal</td>
<td>.050</td>
<td>20</td>
<td>20</td>
<td>None</td>
<td>200</td>
</tr>
<tr>
<td>204S</td>
<td>Clear Plastic</td>
<td>1/8&quot;</td>
<td>--</td>
<td>--</td>
<td>B4E Clear &quot;PC&quot;</td>
<td></td>
</tr>
</tbody>
</table>
| 214S   | Plastic Laminate(2) | 1/8" | --     | --    | B4E Back "PK"  
|        |          |           |        |       | Brown "CO"  
| 220S   | Metal    | .062      | 14     | 16    | None   | --     |
| 223S   | Metal    | .062      | 14     | 16    | B3E    | --     |
| 224S   | Metal    | .062      | 14     | 16    | B4E    | --     |
| 225S   | Kydex(2) | 0.016     | 14     | 16    | None   | --     |

---

#### WALL Stops W/CONCEALED MOUNTINGS

- **232W CONVEX WALL STOP**  
  - 2 7/8" Diameter  
  - 1 3/8" Projection

- **236W CONCAVE WALL STOP**  
  - 2 7/8" Diameter  
  - 1 1/16" Projection

- **2332W CONVEX WALL STOP**  
  - 2 7/8" Diameter  
  - 1 1/16" Projection

- **237W CONCAVE WALL STOP**  
  - 2 7/8" Diameter  
  - 1 1/16" Projection

- **241F DOME STOP**  
  - 1 7/8" Diameter  
  - Base 1/8" TK.

- **243F DOME STOP**  
  - 1 7/8" Diameter  
  - Base 1/8" TK.

---

#### FLOOR AND WALL STOPS

- **267F CAST STOP**  
  - 2 1/4" Diameter Base  
  - 3" High

- **268F CAST STOP**  
  - and HOLDER  
  - 2 1/4" Diameter Base  
  - 3" High

- **252F CAST STOP**  
  - 1 1/2" x 2 1/8" Base  
  - 2 1/8" High

- **255W CAST STOP**  
  - 2 1/2" Diameter Base  
  - 3 3/8" High

- **256W CAST STOP**  
  - and HOLDER  
  - 2 1/2" Diameter Base  
  - 3 3/8" High

- **252F CAST STOP**  
  - 1 1/2" x 2 1/8" Base  
  - 2 1/8" High

---

**NOTE:** ABOVE STOPS ALSO AVAILABLE W/SURFACE MOUNTING.
**TRIM & AUXILIARY HARDWARE**

### MANUAL FLUSH BOLTS
- **280X** - DUST PROOF STRIKE
- **281D** - SLIDE FLUSH BOLT
- **282D/283D** - LEVER EXTENSION FLUSH BOLT

*For Wood Composite Door Specify "283D"*

### SURFACE BOLTS
- **275D/276D** - SURFACE BOLTS
  - **275D** - 8" Length
  - **276D** - 12" Length
  - 3/4" x 1" Bolt Size
  - 1" Bolt Throw

- **278D** - 6" or 8" SURFACE BOLT
  - Base: 1 1/8" Bolt: 1/8"
  - Throw: 15/16"
  - Knob: 1/2" Dia.: 11/16" Proj.
  - Material: Brass
  - Finishes: 3 and 260 only

### CONSTANT LATCHING FLUSH BOLT SETS
- **294D** - FOR WOOD COVERED COMPOSITE DOORS
  - SET CONSISTING OF
  - 1 SELF LATCHING AND
  - 1 AUTOMATIC

- **293D** - FOR METAL DOORS
  - SET CONSISTING OF
  - 1 SELF LATCHING AND
  - 1 AUTOMATIC

### AUTOMATIC FLUSH BOLT SETS
- **291D** - AUTOMATIC for WOOD COVERED COMPOSITE DOORS

- **292D** - AUTOMATIC for METAL DOOR

### COORDINATORS
- **296D** - COORDINATING DEVICE

- **297D** - COORDINATOR
  - Active door holding lever with adjustable tension
  - Coordinator housing
  - Preparation for head jamb latch bolts
  - Inactive door trigger
  - Filter piece
TRIM & AUXILIARY HARDWARE

ROLLER LATCHES

318D
ROLLER LATCH
MATERIAL: Forged Brass
LATCH FACE: 1" x 3½"
STRIKE SIZE: 1½" x 2½" .060" Wrought Metal
FINISH: 10, 10B & 26D only.

1442
ROLLER LATCH
MATERIAL: Forged Brass
LATCH FACE: 1" x 3½"
STRIKE SIZE: 1½" x 2½" Cast Metal
FINISH: 10, 10B & 26D only.

1443
ROLLER LATCH
MATERIAL: Forged Brass
LATCH FACE: 1½" x 3½"
STRIKE SIZE: ASA 1½" x 4½" .090" Wrought Metal
FINISH: 10, 10B & 26D only.

318D
ROLLER LATCH W/STOP
MOUNTS IN HEADER W/STRIKE IN TOP OF DOOR
MATERIAL: Forged Brass
LATCH FACE: 1½" WIDE; 4½" x ½" Angle Stop; Silencers Integral with Latch
STRIKE SIZE: 1½" x 2½" Wrought Metal
FINISH: 10B & 26D only.

PUSH/PULL LATCH

310D
PUSH/PULL LATCH
Optional Mounting Positions for 310D - 310L

310L
PUSH/PULL LATCH
FOR LEAD BARRIER DOORS

ENGRAVED LATCH HANDLES AVAILABLE BY SPECIAL ORDER

DOOR KNOCKERS

322V
WROUGHT BRASS
SIZE: 2" x 3½"
with 1755 Viewer “OPTION” ENGRAVING

322V
(ENGRAVED)

MISCELLANEOUS PRODUCTS

307D
DOOR SILENCER
For Metal Frames

308D
DOOR SILENCER
For Wood Frames

270F
DOOR HOLDER
1½" x 2½" Base
4½" Arm

271F
DOOR HOLDER
1½" x 2½" Base
5½" Arm
Cast Brass

1755
160° DOOR VIEWER
Solid Brass
Adjustable For Doors
1½" To 2½" TK.
Requires ½" Hole in Door
Finish: 3-26D

1756
200° Door Viewer
Solid Brass
Adjustable for Doors
1½" To 2½" TK.
Requires ½" Hole in Door
Finish: 3-26D

ENGRAVED ADA PLATES

368W
ADA TACTILE SIGNAGE – WOMEN
MATERIAL: ⅛" Thick Plastic with Lettering and Symbols ⅛" from Sign Surface, includes Grade 2 Braille Translation
Conforming to section 4.30 requirements.
SIZE: 6" x 8"
COLORS: Brown (W1) w/white symbol & lettering
Black (W2) w/white symbol & lettering
Blue (W3) w/white symbol & lettering
FASTENERS: Pressure sensitive tape
NOTE: Individually packed in a poly bag.

368M
ADA TACTILE SIGNAGE – MEN
MATERIAL: ⅛" Thick Plastic with Lettering and Symbols ⅛" from Sign Surface, includes Grade 2 Braille Translation
Conforming to section 4.30 requirements.
SIZE: 6" x 8"
COLORS: Brown (W1) w/white symbol & lettering
Black (W2) w/white symbol & lettering
Blue (W3) w/white symbol & lettering
FASTENERS: Pressure sensitive tape
NOTE: Individually packed in a poly bag.

368U
ADA TACTILE SIGNAGE – UNISEX
MATERIAL: ⅛" Thick Plastic with Lettering and Symbols ⅛" from Sign Surface, includes Grade 2 Braille Translation
Conforming to section 4.30 requirements.
SIZE: 8" x 8"
COLORS: Brown (W1) w/white symbol & lettering
Black (W2) w/white symbol & lettering
Blue (W3) w/white symbol & lettering
FASTENERS: Pressure sensitive tape
NOTE: Individually packed in a poly bag.

OTHER SIGNS AVAILABLE
**ROTON**

**780-210** and **780-210HD**
Retrofit full-surface wide throw hinge. HD Model for high frequency or heavy medium frequency doors. 1 3/8" frame face required. Additional clearance not required.

**780-211** and **780-211HD**
Retrofit hinge same as 780-210 for damaged wood frames. Minimum 1/4" clearance required. Frame face minimum dimension 1 3/8".

**780-300HD**
New or retrofit single-acting center-hung, 3/4" minimum inset, narrow or widestile doors. Available heavy-duty rating only.

**780-057** and **780-057HD**
Full-surface hinge for any thickness or material with sexbolts both leaves unless otherwise specified.

Please specify fastener types required.

**780-157** and **780-157HD**
Full surface retrofit for narrow frameface (1/8" required). HD Model for high frequency or heavy medium frequency doors.

**780-257HD**
Retrofit with center molding for two doors on one post (post width 1" to 2 3/4"). Available heavy-duty rating only.

**780-113** and **780-113HD**
"Safety" hinge (no hinge stop) for kindergartens, nursing homes.

**780-114** and **780-114HD**
For deep inset or flush-with-frame-face applications (thin or rabbeted doors). Also center-hung.

**780-155** and **780-155HD**
Retrofit hinge for double-egress conversion. Also for center-hung. Minimum 1/4" clearance required.

Double-egress door conversion illustrated.
**HAGER ROTON**

**750-134**
For medium frequency 1 1/8" solid core wood interior doors to 100 lbs., or low frequency to 150 lbs. See also 780-224.

Note door corner protection lip and full rabbet coverage in standard 1 1/4" frames.

Solid core wood only.

**750-138**
For medium frequency 1 1/4" solid core wood interior doors to 100 lbs., or any material, low frequency to 150 lbs. See also 780-112.

Solid core wood

**780-041**
and
**780-041HD**
Wide-throw hinge for medium frequency 1 1/8" patient room doors and for handicapped classroom conversions.

Note door corner protection lip and full rabbet coverage in standard 1 1/2" frames.

**780-112**
and
**780-112HD**
For entrance doors. HD model for high frequency or heavy medium frequency doors. 1 1/8" Leaf Depth. No Inset. Requires additional clearance 1/4".

Note flush mounting of door (no inset) with 780-112. For a 1/4" door inset, see illustration 780-224.

Available with ratings up to 1 1/2" hours

**780-224**
and
**780-224HD**
For 1 1/4" entrance doors. HD Model for high frequency or heavy medium frequency doors. 1/4" door inset. Requires additional clearance 1/4".

Rabbet to door edge leaf 3".

Available with ratings up to 1 1/2" hours

**780-045**
and
**780-045HD**
Retrofit hinge for inset door position (1/4" inset). HD Model for high frequency or heavy medium frequency doors. Frame leaf depth 1 1/4".

Note 1/4" inset. For use with 1 1/8" doors and applied stop frames, or 1 1/2" doors in 1 1/4" frames.

**780-053**
and
**780-053HD**
Retrofit hinge for 1 1/8" and 1 1/4" doors. HD Model for high frequency or heavy medium frequency doors. Frame leaf depth 1 1/8". Rabbet to door leaf edge 1 3/16". Allow 1/4" (1/4" min) leaf clearance.

780-053 with 1 1/4" door and frame assembly

**780-054**
and
**780-054HD**
Retrofit hinge same as 780-053, except for deeper frame leaf for complete frame rabbet coverage in 1 1/4" frames.

**780-046**
and
**780-046 HD**
Same as 780-045, except for deeper frame leaf for more complete frame rabbet coverage. Frame leaf depth 1 3/16".
HAGER COMpanIES
139 VICTOR ST.
ST. LOUIS, MO 63104
PH (314) 772-4400 (800) 325-9995
FAX (314) 772-0744 (800) 782-0149

HAGER CANADA LTD.
KITCHENER, ONTARIO

Model Selection Data

New Construction and Retrofit
Hinges are available for both new construction and renovation projects. Full surface and half surface models generally require no additional door and frame clearance. Fully concealed models require additional clearances for hinge leaves. Check the Hager® ROTON Catalog for specific clearance dimensions.

Standard Lengths
Hinges are manufactured for use on nominal door height. Standard hinge lengths are 83" (7'0" door), 95" (8'0" door) and 119" (10'0" door). Hinges may be ordered at actual door height.

Standard and Heavy-Duty Model
Heavy Duty models should be specified for all high frequency and/or medium frequency heavy doors. Standard Duty Models should be specified on low-medium frequency doors.

Finishes
Standard finishes are clear satin and dark bronze anodize. Gold, black and other anodize finishes are available upon request.

Installation Information
Installation instructions are packaged with all hinges. Specific dimension information is also available in the Hager® ROTON Catalog.

Lead Lined Doors
Hinges may be prepared for use on lead lined doors. Models 780-112 and 780-224 should be ordered by specifying "LL".

Fire Ratings
Fully concealed models 780-224 and 780-112 are available with Warnock Hersey ratings upon to 1½ hours. They may be ordered by specifying "FF".

ROTON ARCHITECTURAL SPECIFICATION

Door hinge to be ROTON Continuous Hinge in anodized aluminum, unhanded and finished as required. Hinge shall be a pinless assembly of three interlocking extrusions applied to the full height of the door and frame without mortising. The door leaf and jamb leaf shall be geared together for the entire length of the hinge, and joined by a channel. All unexposed working metal surfaces shall be coated with TFE dry lubricant. Vertical door loads shall be carried on acetal bearings through a full 180°. Screw holes shall be concentrated at the end of the hinge and proportionately spaced along its full length. Hardened steel fasteners to be furnished. Hinge joint to be monolithic in appearance. Hinges with visible knuckle separations are not acceptable.

ROTON is a registered trademark of the Hager Hinge Company.

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