# Architectural Hinge Selector

**Type of Door**

- Full Mortise
  - Hollow Metal or Wood
  - Hollow Metal or Wood
- Half Mortise
  - Hollow Metal or Wood
  - Hollow Metal or Wood
- Full Surface
  - Composite or Tubular Steel
  - Channel Iron
- Half Surface
  - Composite or Wood
  - Channel Iron
  - Hollow Metal or Wood

## Hinge Description

<table>
<thead>
<tr>
<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>
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<td>Channel Iron</td>
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</tr>
</tbody>
</table>

### Dimensions

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

### List of Hinges

- **Tri-Conn, Std. Wt., PB, Steel**
  - Full Mortise: 700
  - Half Mortise: 800
  - Full Surface: AB700
  - Half Surface: AB800

- **Tri-Conn, Std. Wt., AB, Brass/Str. St.**
  - Full Mortise: AB701
  - Half Mortise: AB702
  - Full Surface: AB801
  - Half Surface: AB802

- **Tri-Conn Std. Wt., AB, Brass/Str. St.**
  - Full Mortise: AB703
  - Half Mortise: AB704
  - Full Surface: AB803
  - Half Surface: AB804

- **Tri-Conn Hvy. Wt., AB, Steel**
  - Full Mortise: AB751
  - Half Mortise: AB752
  - Full Surface: AB851
  - Half Surface: AB852

- **Tri-Conn Hvy. Wt., AB, Brass/Str. St.**
  - Full Mortise: AB753
  - Half Mortise: AB754
  - Full Surface: AB853
  - Half Surface: AB854

- **Spring Hinge Std. Wt., Steel**
  - Full Mortise: 1250
  - Half Mortise: 1129
  - Full Surface: 1173
  - Half Surface: 1173

- **Std. Wt., PB, Steel**
  - Full Mortise: 1191
  - Half Mortise: BB1279
  - Full Surface: BB1129
  - Half Surface: BB2171

- **2BB, Std. Wt., Steel**
  - Full Mortise: BB1191
  - Half Mortise: BB1199
  - Full Surface: BB1199
  - Half Surface: BB1199

- **4BB, Hvy. Wt., Steel**
  - Full Mortise: 4BB1868
  - Half Mortise: 4BB1856
  - Full Surface: 4BB2256
  - Half Surface: 4BB2256

- **5K/5K Anchor Hinge Steel, One Prong**
  - Full Mortise: AB7506
  - Half Mortise: BB1160
  - Full Surface: BB1196
  - Half Surface: BB1196

- **5K/5K Anchor Hinge Brass/Str. St., One Prong**
  - Full Mortise: AB8506
  - Half Mortise: BB1160
  - Full Surface: BB1196
  - Half Surface: BB1196

- **5K/5K Anchor Hinge Steel, Two Prong, Square Edge Door**
  - Full Mortise: AB7506
  - Half Mortise: BB1160
  - Full Surface: BB1196
  - Half Surface: BB1196

- **5K/5K Anchor Hinge Brass/Str. St., Two Prong, Square Edge Door**
  - Full Mortise: AB8506
  - Half Mortise: BB1160
  - Full Surface: BB1196
  - Half Surface: BB1196

- **5K/5K Anchor Hinge Steel, Two Prong, Beveled Edge Door**
  - Full Mortise: AB7506
  - Half Mortise: BB1160
  - Full Surface: BB1196
  - Half Surface: BB1196

- **5K/5K Anchor Hinge Brass/Str. St., Two Prong, Beveled Edge Door**
  - Full Mortise: AB8506
  - Half Mortise: BB1160
  - Full Surface: BB1196
  - Half Surface: BB1196

- **5K/5K Anchor Hinge Steel, One Long/One Short Prong, Square Edge Door**
  - Full Mortise: AB7507
  - Half Mortise: BB1165
  - Full Surface: BB1195
  - Half Surface: BB1195

- **5K/5K Anchor Hinge Brass/Str. St., One Long/One Short Prong, Square Edge Door**
  - Full Mortise: AB8507
  - Half Mortise: BB1165
  - Full Surface: BB1195
  - Half Surface: BB1195

- **5K/5K Anchor Hinge Steel, One Long/One Short Prong, Beveled Edge Door**
  - Full Mortise: AB7509
  - Half Mortise: BB1167
  - Full Surface: BB1197
  - Half Surface: BB1197

- **5K/5K Anchor Hinge Brass/Str. St., One Long/One Short Prong, Beveled Edge Door**
  - Full Mortise: AB8509
  - Half Mortise: BB1167
  - Full Surface: BB1197
  - Half Surface: BB1197

<table>
<thead>
<tr>
<th>Type of Frame</th>
<th>Full Mortise</th>
<th>Half Mortise</th>
<th>Full Surface</th>
<th>Half Surface</th>
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</tr>
</tbody>
</table>

### Notes

- **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 1/2". 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 3½ x 3½, 4 x 4, 4½ x 4, 4½ x 4½, 5 x 4½, 5 x 4, 5 x 4½ and 5 x 5
Heavy Weight/High Frequency
AB750 — Concealed Ball Bearing — Steel
AB850 — Concealed Ball Bearing — Brass/Stainless Steel
Available in sizes 4½ x 4½, 5 x 4½, 5 x 5, 6 x 4½, 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 4½ " and 5"
Heavy Weight/High Frequency
AB751 — Concealed Ball Bearing — Steel
Available in sizes 4½ " 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 4½ " and 5"
Heavy Weight/High Frequency
AB752 — Concealed Ball Bearing — Steel
AB852 — Concealed Ball Bearing — Brass/Stainless Steel
Available in sizes 4½ " 5" and 6"
Concealed, Non-Rising, Removable Pin
Threaded Concealed Plug Beveled Surface Leaves Non-Handed

HALF SURFACE
Standard Weight/Medium Frequency
AB703 — Concealed Ball Bearing — Steel
AB803 — Concealed Ball Bearing — Brass/Stainless Steel
Available in sizes 4½ " and 5"
Heavy Weight/High Frequency
AB753 — Concealed Ball Bearing — Steel
AB853 — Concealed Ball Bearing — Brass/Stainless Steel
Available in sizes 4½ " 5" and 6"
Concealed, Non-Rising, Removable Pin
Threaded Concealed Plug Beveled Surface Leaf 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
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, 5 x 5,
6 x 4½, 6 x 5, 6 x 6, 8 x 6 and 8 x 8

Five Knuckle Button Tip
"With Stainless Steel Pin"

FULL SURFACE
Standard Weight/Medium Frequency
BB2110 — Two Ball Bearing — Brass/Stainless Steel
BB2117 — Two Ball Bearing — Steel

Available in sizes 4½” and 5”

Heavy Weight/High Frequency
BB2109 — Four Ball Bearing Brass/Stainless Steel

Available in sizes 4½”, 5” and 6”

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

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"

HALF SURFACE
Standard Weight/Medium Frequency
BB1173 — Two Ball Bearing — Steel
BB2112 — Two Ball Bearing — Brass/Stainless Steel

Available in sizes 4”, 4½” and 5”

Heavy Weight/High Frequency
BB2113 — Four Ball Bearing — Brass/Stainless Steel

Available in sizes 4½”, 5” and 6”

Five Knuckle Button Tip Beveled Surface Leaf
Non-Rising Removable Pin Reversible

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.

AB7502, AB7512, BB1265, BB1263 — When used on
beveled Edge Doors.
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 electric 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 ¼" 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.

<table>
<thead>
<tr>
<th>1250 Series</th>
<th>Max. Door Wt. (lbs.)</th>
<th>* Spring Hinges</th>
<th>B/B Hinges</th>
</tr>
</thead>
<tbody>
<tr>
<td>(Full Mortise)</td>
<td>60</td>
<td>1 ea</td>
<td>2 ea</td>
</tr>
<tr>
<td>4&quot; x 4&quot;</td>
<td>85</td>
<td>2 ea</td>
<td>1 ea</td>
</tr>
<tr>
<td></td>
<td>110</td>
<td>3 ea</td>
<td>—</td>
</tr>
<tr>
<td>(Full Mortise)</td>
<td>70</td>
<td>1 ea</td>
<td>2 ea</td>
</tr>
<tr>
<td>4½&quot; x 4&quot;</td>
<td>115</td>
<td>2 ea</td>
<td>1 ea</td>
</tr>
<tr>
<td>4½&quot; x 4½&quot;</td>
<td>150</td>
<td>3 ea</td>
<td>—</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
AB8500/BB1190 — ANCHOR HINGE BRASS / STN STL ONE PRONG
AB7506/BB1162 — ANCHOR HINGE STEEL TWO PRONG / SQUARE
AB8509/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 / BB1175 / AB8597 / BB1175
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 (AB7505, BB1168 or BB1199) to be used with the Anchor Hinge.

Note: Anchor Hinges 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 3' wide or 7' high.

NO radius required on end of door.

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, ¾" swage.
AB7012 — Both leaves tapped. Steel, ¾" swage.
AB8011 — One leaf tapped. Brass or Stainless Steel, ¾" swage.
AB8012 — Both leaves tapped. Brass or Stainless Steel, ¾" swage.

Three Knuckles 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, 4½ x 4, 4½ x 4½
Note: BB7011 and BB8011 are handed, specify hand.

1277, BB1277 — Both leaves tapped. Steel, ¾" swage.
1278, BB1278 — One leaf tapped. Steel, ¾" swage.
1577, BB1577 — Both leaves tapped. Brass or Stainless Steel Pin, ¾" swage.
1578, BB1578 — One leaf tapped. Brass or Stainless Steel Pin, ¾" swage.

Five Knuckles Non-Rising Removable Pin. Button Tip
Available in sizes 3½ x 3½, 4 x 4, 4½ x 4, 4½ x 4½
Note: 1579, BB1579, 1278, BB1278 are handed, specify hand.

DOUBLE LIPPED STRIKE

For use with Hagers' 510, 511, 512, 600, 611 & 612 Hospital sets. Protects door frame from latch bold drag. Available in US26D - Satin Chrome finish.
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>
</tr>
</tbody>
</table>

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>
</tr>
</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>1¼</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></td>
<td>43 to 50</td>
<td>6 Heavy Wt.</td>
</tr>
</tbody>
</table>

TRIM CLEARANCE FOR WOOD OR HOLLOW METAL DOORS

Clearance is estimated on hinges set back ¼" for door up to 2½", and ½" for doors 2½" to 3" in thickness.

<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>1¼</td>
<td>4</td>
<td>1¼</td>
</tr>
<tr>
<td></td>
<td>4½</td>
<td>2½</td>
</tr>
<tr>
<td>2</td>
<td>4½</td>
<td>1½</td>
</tr>
<tr>
<td></td>
<td>5</td>
<td>2½</td>
</tr>
<tr>
<td></td>
<td>6</td>
<td>3½</td>
</tr>
<tr>
<td>2½</td>
<td>5</td>
<td>3</td>
</tr>
<tr>
<td></td>
<td>6</td>
<td>2½</td>
</tr>
<tr>
<td></td>
<td>8</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 A5111 Steel ANSI A8111
With Stainless Steel Pin
SIZE OPEN (Inches) 4¼ x 4¼, 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.
Silicon 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 PUSH/PULL PLATE SETS

25P
4¼ x 16¼ PLATE SIZE
½" PROJECTION
1¾" x 3½" OPENING
¾" 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
4¼ x 16¼ PUSH PLATE
½" PROJECTION
4¼ x 9¼ PULL PLATE
2¼" 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.

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
# TRIM & AUXILIARY HARDWARE

## WROUGHT DOOR PULLS

1. **MODIFIED HALF ROUND**
   - 1½" x 1" Base / 2" Projection
   - 1½" Clearance
   - Available
     - With Standard Base Centers (CTC)
     - (OTHER CENTERS ON SPECIAL ORDER)

2. **RECTANGULAR**
   - 3/8" x 1½" Base / 2" Projection
   - 1½" Clearance
   - Available
     - With Standard Base Centers (CTC)
     - (OTHER CENTERS ON SPECIAL ORDER)

3. **ROUND**
   - 3/4" Dia. Base / 2½" Projection
   - 1½" Clearance
   - Available
     - With Standard Base Centers (CTC)
     - (OTHER CENTERS ON SPECIAL ORDER)

4. **OVAL**
   - 3/8" Oval Base / 2½" Projection
   - 1½" Clearance
   - Available
     - With Standard Base Centers (CTC)
     - (OTHER CENTERS ON SPECIAL ORDER)

## CAST DOOR PULLS

5N - 3/8" x 1½" Base / 2" Projection
- 1½" Clearance / 6½" Length
- 5½" Base Centers

6N - 1" Dia. Base / 2½" Projection
- 1½" Clearance / 6½" Length
- 5½" Base Centers

7N - 2" Dia. Base / 2½" Projection
- 1½" Clearance / 7½" Length
- 5½" Base Centers

8N - 2" Dia. Base / 2½" Projection
- 1½" Clearance / 7½" Length
- 5½" Base Centers

## OFFSET PULLS

11 - **ROUND**
- 3/4" Dia. Base / 2½" Projection
- 3" Offset
- Available
  - With Standard Base Centers (CTC)
  - (OTHER CENTERS ON SPECIAL ORDER)

12 - **ROUND**
- 1" Dia. Base / 2½" Projection
- 3" Offset
- Available
  - With Standard Base Centers (CTC)
  - (OTHER CENTERS ON SPECIAL ORDER)

**NOTE:** Pulls may be ordered STB. See Fig. 3. Change first digit to 2, ie "21E"

## FLUSH PULLS

15N - **FLUSH CUP PULL**
- 3½" x 5" Face
- 3½" x 3½" Opening
- 3½" Projection
- ¾" Clearance in Cup

**16N** - **FLUSH CUP PULL PLATE**
- 4" x 16" .050 Plate Size
- 3½" x 3½" Opening
- ¾" Clearance in Cup

**16R** - **FLUSH CUP PULL PLATE**
- 4" x 16" .050 Plate Size
- 3½" x 3½" Opening
- ¾" Clearance in Cup

16N - **FLUSH CUP PULL**
- 1½" x 3" Face
- 1½" x 3¼" Base
- ¾" Projection
- ¾" Clearance in Cup
- MATERIAL: Cast Brass
- FINISHES: 3, 10, 10B, 26 & 26D Only

17N - **FLUSH CUP PULL**
- 2½" x 4" Face
- 2½" x 3¼" Base
- ¾" Clearance in Cup
- MATERIAL: Cast Brass
- FINISHES: 3, 10, 10B, 26 & 26D Only
TRIM & AUXILIARY HARDWARE

PUSH PLATES
MATERIAL GAUGE .050" ALUMINUM, BRASS, BRONZE & STAINLESS STEEL
STANDARD SIZES: 3" x 12", 3 1/2" 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>
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<tbody>
<tr>
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30 SERIES 40 SERIES 50 SERIES

PUSH BAR UNITS

125S – 3/8" X 1 1/4" BAR SIZE
Base Plate 1" x 3"
Projection 2 1/8"

126S – 3/8" X 1 1/4" BAR SIZE
Base Plate 1" x 3"
Projection 2 1/8"

127S – 3/8" X 1 1/4" BAR SIZE
Base Plate 1" x 3"
Projection 2 1/8"

PUSH BAR SETS ARE CUSTOM MADE TO FIT SPECIFIED DOOR WIDTHS.

PUSH/PULL SETS

PUSH/PULL SET
138P – 1" ROUND BAR
Bases: 1" Dia., 2 1/8" Projection
139P – 3/4" ROUND BAR
Bases: 3/4" Dia., 2 1/4" Projection

PUSH/PULL SET
150 – 3/4" ROUND BAR
Bases: 3/4" Dia., 2 1/8" Projection, Pull 8" CTC
151 – 3/4" ROUND BAR
Bases: 3/4" Dia., 2 1/4" Projection, Pull 10" CTC
152 – 5/8" ROUND BAR
Bases: 5/8" Dia., 2 1/4" 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
159 – 1" ROUND BAR
Push Bar: 2 1/8" 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 3/4" minus 1/2"
181 series 1 3/4" plus 1/2"
182 series 1 3/4" plus 1/2"

150G CORNER GUARD

MATERIAL: Aluminum or Stainless Steel
FINISH: US28, US32D
SIZE: 3' x 3' x 40' Standard
PACKED: One per Bag w/6 x 5/8" Truss Head Screws
OPTION: Mounting w/Double Face Tape Instead of Screws

PACKED: One per Bag with #6 x 3/4" flat-head tapping screws.
STANDARD LENGTHS: 40'-42'. Other lengths made to order.
OPTIONS: Butt cutoffs, finish details.

Staples without bolts are handled.

TO ORDER: Give number, size, finish and order thickness.
Meets ASHRAE 780-60 for Door Edging type No. 180 & 181.

DOOR PROTECTION PLATES

STANDARD SIZE: Mop plate 4" x 6" High; Kick Plate 8".
10", 12" High; Armor Plate 14" to 48" High
PACKED: One per Bag with #6 x 1/2" Truss-head screws.
OPTION: At extra charge, counter sunk holes, specify "CSK"

TO ORDER: Give number, size, height first and finish.
Plates 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

WALL STOPS W/CONCEALED MOUNTINGS

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

2332W CONVEX WALL STOP
2 1/4" Diameter
1 5/16" Projection

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

237W CONCAVE WALL STOP
2 1/8" Diameter
1 1/8" Projection

DOME STOPS

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

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

FLOOR AND WALL STOPS

267F CAST STOP
2 1/8" Diameter Base
3" High

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

252F CAST STOP
1 1/8" x 2 1/8" Base
2 1/4" High

255W CAST STOP
2 1/2" Diameter Base
3 5/8" High

256W CAST STOP and HOLDER
2 1/4" Diameter Base
3 13/16" 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

283D

281D

*For Wood Composite Door Specify "283D"

282D

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: 11/16" Bolt: 1/2"
Throw: 15/16"
Knob: 1/2" Dia.: 11/16" Proj.
Material: Brass
Finishes: 3 and 26D only

AUTOMATIC FLUSH BOLT SETS

281D - FOR WOOD COVERED COMPOSITE DOORS

283D - FOR METAL DOORS
SET CONSISTING OF
1 SELF LATCHING AND
1 AUTOMATIC

CONSTANT SELF-LATCHING

AUTOMATIC

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 3 3/8"
STRIKE SIZE: 1 1/8" x 2 3/4"
.060" Wrought Metal
FINISH: 10, 10B & 26D only.

1442 ROLLER LATCH
MATERIAL: Forged Brass
LATCH FACE: 1" x 3 3/8"
STRIKE SIZE: 1 1/8" x 2 3/4"; Cast Metal
FINISH: 10, 10B & 26D only.

1443 ROLLER LATCH
MATERIAL: Forged Brass
LATCH FACE: 1" x 3 3/8"
STRIKE SIZE: ASA 1 1/4" x 4 7/8"
.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: 1 1/2" WIDE; 4 1/2" x 1/2" Angle Stop;
Silencers Integral with Latch
STRIKE SIZE: 1 1/8" x 2 3/4" Wrought Metal
FINISH: 108 & 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 3 1/4"
with 1755 Viewer "OPTION" ENGRAVING

MISCELLANEOUS PRODUCTS

307D DOOR SILENCER
For Metal Frames

308D DOOR SILENCER
For Wood Frames

270F DOOR HOLDER
1 1/8" x 2 3/4" Base
4 3/4" Arm

271F DOOR HOLDER
1 1/8" x 2 3/4" Base
5 1/2" Arm
Cast Brass

368W ADA TACTILE SIGNAGE – WOMEN
MATERIAL: 1/8" Thick Plastic with Lettering and
Symbols 1/2" 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: 1/8" Thick Plastic with Lettering and
Symbols 1/2" 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: 1/8" Thick Plastic with Lettering and
Symbols 1/2" 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.

ENGRAVED ADA PLATES

1755 160° DOOR VIEWER
Solid Brass
Adjustable For Doors
1 3/8" To 2 1/8" TK,
Requires 1/2" Hole in Door
Finish: 3-26D

1756 200° Door Viewer
Solid Brass
Adjustable for Doors
1 3/8" To 2 1/8" TK
Requires 1/8" Hole in Door
Finish: 3-26D
780-210 and 780-210HD
Retrofit full-surface wide throw hinge. HD Model for high frequency or heavy medium frequency doors. 1 3/6" frame face required. Additional clearance not required.

780-211 and 780-211HD
Retrofit hinge same as 780-210 for damaged wood frames. Minimum 3/8" clearance required. Frame face minimum dimension 1 3/6".

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

780-157 and 780-157HD
Full surface retrofit for narrow frameface (3/4" 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 3/8" clearance required.

Double-egress door conversion illustrated.
750-134
For medium frequency 1\(\frac{3}{8}\)" 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\(\frac{3}{8}\)" frames.

Solid core wood only.

750-138
For medium frequency 1\(\frac{3}{8}\)" 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\(\frac{3}{8}\)" patient room doors and for handicapped classroom conversions.

Note door corner protection lip and full rabbet coverage in standard 1\(\frac{3}{8}\)" frames.

780-112 and 780-112HD
For entrance doors. HD model for high frequency or heavy medium frequency doors. 1\(\frac{1}{16}\)" Leaf Depth. No Inset. Requires additional clearance 1\(\frac{1}{16}\)".

Note flush mounting of door (no inset) with 780-112. For a 1\(\frac{1}{16}\)" door inset, see illustration 780-224.

Available with ratings up to 1\(\frac{1}{2}\)" hours

780-224 and 780-224HD
For 1\(\frac{3}{4}\)" entrance doors. HD Model for high frequency or heavy medium frequency doors. 1\(\frac{1}{8}\)" door inset. Requires additional clearance 1\(\frac{1}{16}\)".

Note Door Corner Protection Lip

Available with ratings up to 1\(\frac{1}{2}\)" hours

780-045 and 780-045HD
Retrofit hinge for inset door position (1\(\frac{3}{4}\" inset). HD Model for high frequency or heavy medium frequency doors. Frame leaf depth 1\(\frac{3}{8}\".
Rabbit to door edge leaf 3\(\frac{3}{4}\"

Note 1\(\frac{3}{4}\" inset. For use with 1\(\frac{3}{4}\" doors and applied stop frames, or 1\(\frac{3}{4}\" doors in 1\(\frac{3}{4}\" frames.

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

780-053 with 1\(\frac{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\(\frac{3}{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\(\frac{3}{8}\".
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 Wannock Hersey ratings up 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.

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