These instructions are for typical installations. Reference shop drawings for special notations on installations and glazing.

# TABLE OF CONTENTS

<table>
<thead>
<tr>
<th>Topic</th>
<th>Page</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>General Notes</strong></td>
<td>3-4</td>
</tr>
<tr>
<td><strong>Frames</strong></td>
<td></td>
</tr>
<tr>
<td>Typical Frame Assembly and Installation</td>
<td>5</td>
</tr>
<tr>
<td>Transom Glass Size Formula</td>
<td>6</td>
</tr>
<tr>
<td>Offset Pivot Frame with Surface Closer</td>
<td>7</td>
</tr>
<tr>
<td>Offset Pivot Frame with C.O.C. and Offset Arm</td>
<td>8</td>
</tr>
<tr>
<td>Butt Hung Frame with Surface Closer</td>
<td>9</td>
</tr>
<tr>
<td>Butt Hung Frame with C.O.C. and Offset Arm</td>
<td>10</td>
</tr>
<tr>
<td>Center Hung Frame with C.O.C.</td>
<td>11</td>
</tr>
<tr>
<td>Center Hung Frame with C.O.C. (Tubular Header)</td>
<td>12</td>
</tr>
<tr>
<td>Header for C.O.C. with Offset Arm (Series FL300)</td>
<td>13</td>
</tr>
<tr>
<td><strong>Entrance Doors</strong></td>
<td></td>
</tr>
<tr>
<td>Center Pivot Door with C.O.C.</td>
<td>14</td>
</tr>
<tr>
<td>Offset Pivot Door with C.O.C.</td>
<td>15</td>
</tr>
<tr>
<td>Butt Hung Door with C.O.C.</td>
<td>16</td>
</tr>
<tr>
<td>Door Glazing Instructions</td>
<td>17</td>
</tr>
<tr>
<td>Center Pivot Installation</td>
<td>18-21</td>
</tr>
<tr>
<td>Offset Pivot Installation</td>
<td>22-23</td>
</tr>
<tr>
<td>Intermediate Pivot Installation for Door and Frame</td>
<td>24-27</td>
</tr>
<tr>
<td>Butt Hinge Installation and Locations for Door and Frame</td>
<td>28-29</td>
</tr>
<tr>
<td>C.O.C. for Center Pivot Door</td>
<td>30-31</td>
</tr>
<tr>
<td>C.O.C. Header Locations</td>
<td>32-39</td>
</tr>
<tr>
<td>Offset Pivot</td>
<td>32-34</td>
</tr>
<tr>
<td>Butt Hung</td>
<td>35-36</td>
</tr>
<tr>
<td>C.O.C. Header Prep</td>
<td>37</td>
</tr>
<tr>
<td>Floor Closer Installation</td>
<td>38-39</td>
</tr>
<tr>
<td>Flush Bolt Installation</td>
<td>40-41</td>
</tr>
<tr>
<td>Muntin or Midrail Installation</td>
<td>42</td>
</tr>
<tr>
<td><strong>Push / Pull Hardware</strong></td>
<td></td>
</tr>
<tr>
<td>Standard Push Bars - DH300 Series Installation</td>
<td>43</td>
</tr>
<tr>
<td>Standard Push/Pull - DH300 Series Installation</td>
<td>44</td>
</tr>
<tr>
<td>Optional Pulls DH400 Push/Pull Installation</td>
<td>45-46</td>
</tr>
<tr>
<td>Push/Pull for Panic Doors</td>
<td>47</td>
</tr>
<tr>
<td>Standard Hardware Locations</td>
<td>48</td>
</tr>
</tbody>
</table>

_C.O.C. = CONCEALED OVERHEAD CLOSER_
RECOMMENDED GUIDELINES FOR ALL INSTALLATIONS:

1. REVIEW CONTRACT DOCUMENTS. Check shop drawings, installation instructions, architectural drawings and shipping lists to become thoroughly familiar with the project. The shop drawings take precedence and include specific details for the project. Field verified notations shown within shop drawings must be resolved prior to installation. The installation instructions are of general nature and cover most conditions.

2. INSTALLATION. All materials shall be installed plumb, level and true.

3. BENCHMARKS. All work should start from established benchmarks and column center lines established by the architect and general contractor.

4. FIELD WELDING. All field welding must be adequately shielded to avoid any splatter on glass or aluminum. Advise general contractor and other trades accordingly. All field welds of steel anchors must receive touch-up paint (zinc chromate) to avoid rust.

5. SURROUNDING CONDITIONS. Make certain that construction which will receive your materials is in accordance with the contract documents. If not, notify the general contractor in writing and resolve differences before proceeding with work.

6. ISOLATION OF ALUMINUM. Aluminum to be placed in direct contact with uncured masonry or incompatible materials should be isolated with a heavy coat of zinc chromate or bituminous paint.

7. SEALANTS. Sealants must be compatible with all materials with which they have contact, including other sealant surfaces. Consult with sealant manufacturer for recommendations relative to joint size, shelf life, compatibility, cleaning, priming, tooling, adhesion, etc. It is the responsibility of the Glazing Contractor to submit a statement from the sealant manufacturer indicating that glass and glazing materials have been tested for compatibility and adhesion with glazing sealants, and interpreting test results relative to material performance, including recommendations for primers and substrate preparation required to obtain adhesion. The chemical compatibility of all glazing materials and framing sealants with each other and with like materials used in glass fabrication must be established.

8. FASTENING. Only those fasteners used within the system are specified in these instructions. Due to the varying perimeter conditions and performance requirements perimeter fasteners are not specified in these instructions. Reference the shop drawings or anchor charts for perimeter fasteners.

9. BUILDING CODES. Due to the diversity in state, local and national codes that govern the design and application of architectural products, it is the responsibility of the architect, owner and installer to assure that products selected for use on each project comply with all the applicable building codes and laws. CORAL ARCHITECTURAL PRODUCTS exercises no control over the use or application of it’s products, glazing materials and operating hardware and assumes no responsibility thereof.

10. EXPANSION JOINTS. Expansion joints and perimeter seals shown in these instructions and shop drawings are shown at normal size. Expansion mullion gaps should be based on temperature at time of installation.
11. WATER HOSE TEST. After a representative amount of the storefront system has been glazed (500 square feet) and the sealant has cured, a water hose test should be conducted in accordance with AAMA 501.2 specifications to check the installation. This test should be repeated every 500 square feet during the glazing operation. Note: This test procedure should not be used for entrance doors.

12. COORDINATION WITH OTHER TRADES. Coordinate with the general contractor and sequence with other trades items which offset the storefront installation such as back-up walls, partitions, ceilings and mechanical ducts.

13. MATERIAL HANDLING:
   A. SHOP
      1. Cardboard wrapped or paper interleaved material must be kept dry.
      2. Immediately remove aluminum from cardboard wrapped or paper interleaved materials should it get wet to prevent staining or etching aluminum finish.
      3. Check arriving materials for quantity and keep record of where various materials are stored.

   B. JOB SITE
      1. Material at job site must be stored in a safe place well removed from possible damage by other trades.
      2. Cardboard wrapped or paper interleaved material must be kept dry. (See 13.A.2)
      3. Keep record of where various materials are stored.
      4. Protect materials after erection. Cement, plaster, mortar and other alkaline solutions are very harmful to the finish.

14. CARE AND MAINTENANCE. Final cleaning of exposed aluminum surfaces should be done in accordance with AAMA. 609.1 for anodized aluminum and 610.1 for painted aluminum.

15. CORAL ARCHITECTURAL PRODUCTS. It is the responsibility of CORAL ARCHITECTURAL PRODUCTS to supply a system to meet the architect’s specifications.
ASSEMBLY:

1. Verify opening size. Allow for 1/4" minimum sealant space at jambs and frame head.
2. Cut top of stock jamb to reduce frame transom height when required. Use drill jig for proper hole locations.
3. Attach threshold clips to jambs using AS20 screws.
4. Assemble head and transom bar (if applicable) to jambs as shown.

INSTALLATION:

1. Drill anchor holes in wall jamb and frame head as shown on shop drawings or anchor charts.
2. Set frame plumb and square into opening.
3. Anchor frame to substrate with fasteners as shown in anchor charts.
4. Install door stop with weathering into jambs and transom bar or head.
5. Position setting blocks in door header at quarter or eighth points as required and glaze transom. Glazing sash is required vertically at Series FL300 transom. See details on Pages 7-12.
6. Install sash glass stops.
7. Install NG1 glazing gaskets in transom area.
**TRANSOM GLASS SIZE FORMULA**

**TYPE “FT2” FRAME**

**FL200 Transom Bar Offset Hung Doors**
Glass Height = D.L.O. +5/8”

**FL200 Center Pivot**
Glass Width = Door Opening minus (-3/4”)

**FL200 Offset Hung**
Glass Width = Door Opening +5/8”

**TYPE “FT3” FRAME**

**FL300 Transom Bar Offset Hung Doors**
Glass Height = D.L.O. +7/8”

**FL300 Center Pivot**
Glass Width = Door Opening minus (-1”)

**FL300 Offset Hung**
Glass Width = Door Opening minus (-1”)

---

6 • Frames & Entrance Doors

July 2014
NOTE: Vertical and horizontal transom sash required for Series FL300.

NOTE: For FL300 system, use FL314 header
FRAME FOR OFFSET PIVOTED DOOR WITH C.O.C. AND OFFSET ARM

AS16
#14 X 1"
HHSTS

AS31
#6 X 3/8" PH

Header mounting bracket. Closer bracket not shown but included with closer package. (See hardware installation)

DH108 (R.H. shown)
DH108 (L.H. opp.)
Intermediate pivot

DH108 (R.H. shown)
DH108 (L.H. opp.)
Intermediate pivot

DS202-1
Applied arm covering with weathering at head

AS39
(#10 x 1-3/4"
FHP self drilling)

AS3
#12-24 X 1/2"
FHMS

R.H. (DH104) shown
L.H. (DH105) opposite supplied with door hardware

TH4

AS3
#12-24 X 1/2"
FHMS

TH400 Threshold Clip w/ (4)
AS3
#12-24 X 1/2" FHMS per side

NOTE: Vertical and horizontal transom sash required for Series FL300.

NOTE:
For FL300 System, use FL314 header

AS23
1/4-20 x 1 1/2" FPH x 82

AS22
1/4-20 x 3/4" FPH x 82

With C.O.C. and Offset Arm
OPEN BACK FRAME AND TRANSOM FOR BUTT HUNG DOOR WITH SURFACE CLOSER

Series FL200 shown
Series FL300 (similar)

NOTE: Vertical and horizontal transom sash required for Series FL300.

AS16  
#14 X 1” HHSTS

AS3 (4)  
#12 - 24 X 1/2”

BP459  
Butt Hinge back-up plate

FL209 (FL307)  
DS200-1 Snap-in door stop with weathering at head & jambs

DH109  
Butt Hinge w/ AS3  
(4) #12 - 24 X 1/2”

AS3 #12-24 X 1/2” FHMS  
TH4  
TH400 Threshold Clip w/ (4) AS3  
#12-24 X 1/2” FHMS per side

FL203  
Note: For FL300 system, use FL314 header.

FL202

FL518

CS113

FL209 (FL309)
NOTE: Vertical and horizontal transom sash required for Series FL300.

Series FL200 shown

AS3 (4) #12 - 24 X 1/2"

BP459 Butt Hinge Back-Up Plate

DH109 Butt Hinge
w/ AS3 (4) #12 - 24 X 1/2"

TH4

TH400 Threshold Clip w/ (4) AS3 #12-24 X 1/2" FHMS per side

AS3 #12-24 X 1/2" FHMS

AS39 (#10 x 1-3/4" FHP self drilling)

DS202-1 Applied arm covering with weathering at head

DS200-1 Snap-in door stop with weathering

FL209 (FL309)

FL518

CS115

FL202

NOTE: For FL300 System, use FL314 header

(2) #10-32 X 3/8" F.H.

AS23 1/4-20 x 1 1/2" FPH x 82

AS22 1/4-20 x 3/4" FPH x 82

Lock Nut and Washer

Header mounting bracket. Closer bracket not shown but included in closer package. (See hardware installation)
NOTE: Vertical and horizontal transom sash required for Series FL300.

NOTE: For FL300 System, use FL314 header.

Header mounting bracket. Closer bracket not shown but included in closer package. (See hardware installation)

CS112-1 Cover plate

AS24 #10-24 X 3/8" FHPUC

DH116 Threshold mounted bottom pivot

FL209 (FL309)

AS16 #14 X 1" H.H.S.T.S.

FL202

CS113

FL518 CS113

FL518 (FL308)

(2) #10-32 x 3/8" F.H.

AS23 1/4-20 x 1 1/2" FPH x 82

AS22 1/4-20 x 3/4" FPH x 82

FL518 with CS113

(2) 10-32 x 3/8"

Lock Nut and Washer

CS112

CS113

FL208 (FL308)

FL217 (FL317)

AS31 #6 X 3/8" PH

Header mounting bracket. Closer bracket not shown but included in closer package. (See hardware installation)
NOTE: Vertical and horizontal transom sash required for Series FL300.

FL217 Door jamb (FL317)

CS113

FL518

Horizontal and Vertical transom sash required.

AS31 #6 X 3/8" PH
Approx. 18" O.C.

FL212
(FL312)

See Page 11 & 13 for attachment to jamb.
HEADER FOR C.O.C. WITH OFFSET ARM FOR FL300 SERIES

To mount closer into 2” high headers, HBG5000E 1/4” plastic spacers are required.
For balance of header installation, see pages 33 through 39.

Secure closer mounting bracket to header with (2) AS17 screws (#10-32 x 3/4” FH)

(2 ea.) HBG5000E 1/4” plastic spacers

Closer mounting bracket

CLIPS SHOWN INVERTED TO VIEW BOTTOM AT WORK AREA

Remove gussets

Remove gussets and flange

TYPE “A” Standard Clip

TYPE “B” Modified Clip with gussets removed

TYPE “C” Modified Clip with gussets and flange removed

To mount closer into 2” high headers, HBG5000E 1/4” plastic spacers are required.

For balance of header installation, see pages 33 through 39.

See Page 33 for bracket location.

See Page 34 or 36 for bracket location.

90° swing
for offset pivot door

105° swing
for offset pivot or butt hung door
1. Install arm and bottom rail pivot retainer as shown. Position door upright in closed position outside of frame. Lift onto floor pivot and tilt to vertical.
2. Adjust top arm as required to receive closer spindle.
3. Install top clamping block using Allen wrench provided in closer package.
4. Attach adhesive back mylar dress plate.
5. Loosen or tighten adjusting screw at bottom pivot (door portion) for vertical adjustment. To center door in frame adjust top arm centering screws.

Glaze door as shown on Page 17.
OFFSET PIVOTED DOOR WITH C.O.C.

For layout see Page 37, also reference Pages 33 and 34.

1. Mount slide channel with (2) AS20 fasteners.
   Reverse side block if necessary for proper installation. See closer template.

2. Set door onto bottom pivot at an angle.
   Tilt to vertical holding top pivot pin down until it aligns with header pivot portion.
   Release pin.

3. Remove retainer arm pin using retainer ring pliers. With door in open position, slip arm over slide pin and secure with retainer.

4. Adjust closer to desired door speed.

5. Attach DS202-1 to door header with AS29 fasteners.
   Take care not to puncture door closer.

6. Glaze door as shown on Page 17.
BUTT HINGE DOOR WITH C.O.C.

For layout see Pages 36 and 37.

1. Mount slide channel with (2) AS20 fasteners. Reverse side block if necessary for proper installation. See closer template.

2. Attach butt hinges to door. Install door by fastening hinges to frame. Backup plates for door and frame are factory installed.

3. Remove retainer arm pin using retainer ring pliers. With door in open position, slip arm over slide pin and secure with retainer.

4. Adjust closer to desired door speed.

5. Attach DS202 to door header with AS29. Take care not to puncture door closer.

6. Glaze door as shown on Page 17.
DOOR GLAZING INSTRUCTIONS

1. Raise leveling screw to maximum retracted position.
2. Install vertical glass stops on one side of door only.
3. Center glass in opening resting on setting blocks.
4. Snap-in remaining glass stops.
5. Turn leveling screw to obtain a uniform clearance between top rail and header.
6. Adjust astragal screws for proper clearance between meeting stiles.

* If 1" Glass is Being Glazed Into Door, Install SP102 Plastic Tip Over SP101

NOTE: Use AS9 Leveling screw for D102 Top Rail
Hole for adjustment

(1) Hole for #10-32 PHMS
(After pivot has been adjusted)

(2) 1/4-20 PHMS
with lock washers

(1) 10-32 PHMS
Install after door pivot has been adjusted

3-3/4" 1-3/4"

D102

(DH114
Threshold mounting pivot

(2) AS3 (#12-24 x 12" F.H.M.S.

1/2" DIA. hole

2-3/4"

To adjust screw

7/16" DIA. hole for adjusting screw

(2) .390 ø holes for 1/4-20 AS13 rivnut
Install & crimp rivnut

D102

CENTER PIVOT - BOTTOM PORTION

BOTTOM DOOR VIEW

FRONT DOOR VIEW

3-3/4" 1-3/4"
CENTER PIVOT - TOP PORTION
FOR SURFACE CLOSER
OR FLOOR CLOSER

D112
NOTE: Centered in door Header

Pivot retractor screw

(2) 1/4-20 F.H.M.S.

(2) 1/4-20 P.H.M.S.

DH113
(Slotted holes allow for door adjustment)

D116

D119

D101

NARROW STILE

D102

MEDIUM STILE

WIDE STILE

FL212
(FL312)

D112

Spare channel
(factory installed)

w/(2) AS15

DB122-2
Spacer channel
(factory installed)
w/(2) AS15

DB122-2
Spacer channel
(factory installed)
w/(2) AS15

DH111

7/16" DIA.
hole for adjusting screw

(1) Hole for #10-32 PHMS
(After pivot has been adjusted)

(2) .390 ø holes for 1/4-20 AS13 rivnut

Install & crimp rivnut
CENTER PIVOT - BOTTOM RAIL
FOR MEDIUM & WIDE STILE DOORS

Reference Page 18 for isometric views

BOTTOM VIEW OF DOOR HEADER

TOP VIEW OF NARROW STILE

TOP VIEW OF MEDIUM STILE

TOP VIEW OF WIDE STILE
CENTER PIVOT - BOTTOM PORTION

1. Knock out pivot pin
2. Cut pivot down as required to provide 3/16" clearance at bottom of door.
3. Reinstall pivot pin.

Bottom door clearance should be 3/16". Recess floorplate into floor to achieve 3/16" clearance for applications w/o threshold.

Note: Door jamb must be anchored to structure near bottom. TH400 clip may be modified for attachment.

For conditions where lower threshold or no threshold is used, floor mounted pivot should be cut down as shown:

(3) #14 x 1-1/2" FHWS
Anchor attachment varies based on substrate

1" DIA. hole

FL217 or FL317
DH115
Floor mounted pivot

TH4

Fl217 or Fl317

Note: Door jamb must be anchored to structure near bottom. TH400 clip may be modified for attachment.

For conditions where lower threshold or no threshold is used, floor mounted pivot should be cut down as shown:

1" DIA. hole

(3) #14 x 1-1/2" FHWS
Anchor attachment varies based on substrate

1" DIA. hole

FL217 or FL317
DH115
Floor mounted pivot

TH4

Note: Door jamb must be anchored to structure near bottom. TH400 clip may be modified for attachment.

For conditions where lower threshold or no threshold is used, floor mounted pivot should be cut down as shown:

1" DIA. hole

(3) #14 x 1-1/2" FHWS
Anchor attachment varies based on substrate

1" DIA. hole

FL217 or FL317
DH115
Floor mounted pivot

TH4

Note: Door jamb must be anchored to structure near bottom. TH400 clip may be modified for attachment.

For conditions where lower threshold or no threshold is used, floor mounted pivot should be cut down as shown:
OFFSET PIVOT - TOP PORTION

(2) 1/4-20 x 3/8" Hex Head Cap screws with Lockwasher

DH101

(2) 1/4-20 x 1/2" FHMS

D103

Not Used For DH102

DH102 Factory installed

D101

27/32"

C

31/64"

1/8"

1/4"

17/32"

5/8"

9/16"

Drill and countersink for (2) 1/4-20 FHMS

CROSS SECTION

29/64"

3/4"

1 1/4"

20 3/32"
SLOT TYPE
OFFSET PIVOT - TOP PORTION

DOES NOT REQUIRE BACK-UP PLATE

PROCEDURE A
Hang door on top and bottom pivots. With door in closed position, slide intermediate pivot (assembled together) into frame and pivot (assembled together) into frame and door slots. Open door to secure pivot with fasteners provided. See Detail A

DETAIL A

ALTERNATE INTERMEDIATE DOOR AND FRAME PIVOT

PROCEDURE B
Install pivot leaves on frame and door. Remove cap screw from jamb portion of pivot and lower pin to clear. Hang door on top and bottom pivots. Raise pivot pin, as required and replace cap screw. See Detail B

DETAIL B

To remove existing doors with intermediate pivots, remove cap screw and lower pivot pin to clear.
DOOR AND FRAME PREPARATION

CROSS SECTION OF DOOR AND FRAME

PIVOT LOCATION
FOR STANDARD AND SPECIAL SIZE DOORS

Standard bottom clearance = 11/16" with 1/2" threshold.

CROSS SECTION OF DOOR AND FRAME

PIVOT LOCATION
FOR STANDARD AND SPECIAL SIZE DOORS

Standard bottom clearance = 11/16" with 1/2" threshold.

CROSS SECTION OF DOOR AND FRAME

PIVOT LOCATION
FOR STANDARD AND SPECIAL SIZE DOORS

Standard bottom clearance = 11/16" with 1/2" threshold.

CROSS SECTION OF DOOR AND FRAME

PIVOT LOCATION
FOR STANDARD AND SPECIAL SIZE DOORS

Standard bottom clearance = 11/16" with 1/2" threshold.

CROSS SECTION OF DOOR AND FRAME

PIVOT LOCATION
FOR STANDARD AND SPECIAL SIZE DOORS

Standard bottom clearance = 11/16" with 1/2" threshold.

CROSS SECTION OF DOOR AND FRAME

PIVOT LOCATION
FOR STANDARD AND SPECIAL SIZE DOORS

Standard bottom clearance = 11/16" with 1/2" threshold.

CROSS SECTION OF DOOR AND FRAME

PIVOT LOCATION
FOR STANDARD AND SPECIAL SIZE DOORS

Standard bottom clearance = 11/16" with 1/2" threshold.

CROSS SECTION OF DOOR AND FRAME

PIVOT LOCATION
FOR STANDARD AND SPECIAL SIZE DOORS

Standard bottom clearance = 11/16" with 1/2" threshold.

CROSS SECTION OF DOOR AND FRAME

PIVOT LOCATION
FOR STANDARD AND SPECIAL SIZE DOORS

Standard bottom clearance = 11/16" with 1/2" threshold.

CROSS SECTION OF DOOR AND FRAME

PIVOT LOCATION
FOR STANDARD AND SPECIAL SIZE DOORS

Standard bottom clearance = 11/16" with 1/2" threshold.
DOOR AND FRAME PREPARATION
INTERMEDIATE OFFSET PIVOT

Flange back-up plate (factory installed)

Door back-up plate (factory installed)

Hang door on top and bottom pivots.
Swing door open and install DH107 assembly with screws provided. See Detail A

(10) 1/4-20 x 5/8" F.H.M.S.
INTERMEDIATE PIVOT

DOOR AND FRAME SHOWN AT 180° OPEN CONDITION

- Rixon and Dor-o-matic pivot leaves have square corners

Floor line

Outside face of door

BP461
Door back-up plate (factory installed)

BP451
Frame back-up plate (factory installed)

Route
5/32" R. (Typ)

15/16"

5/16"

1-1/8"

1-1/8"

1/8"

1/4"

3/32"

1-15/16"

1-17/32"

3/4"

3/4"

3/4"

3/4"

3/4"

3/4"

3/4"

3/4"

3/4"

3/4"

1-1/2"

1-1/2"

1/16"

1/16"

11/32"

11/32"
Prepare frame and door for hinges, as shown. Back-up plates are factory installed in prepared doors and frames. Install butt hinges in door. Set door in place and fasten hinges to frame.

For butt hinges standard location, see Page 33.
STANDARD DH109 BUTT HINGE LOCATION

Frame and Door Preparation:
Prepare frame and door for hinges, as shown. Back-up plates are factory installed in prepared doors and frames. Install butt hinges in door. Set door in place and fasten hinges to frame. For butt hinges standard location, see Page 33.

Door Preparation:
(Optional intermediate hinge)

Top of frame
Header Dimension
Top of door

6-1/8" X 73-3/8" (For 84" Door Opening)

1/8" clearance

4 1/2" Typ.

3/16" clearance

9-11/16" (For 84" Door Opening)

72 11/16" (For 84" Door Opening)

5/32" (For 84" Door Opening)

1/2" Threshold
C.O.C. FOR CENTER PIVOTED DOOR

To mount closer into 2” high headers, HBG5000E 1/4” plastic spacers are required. For balance of header installation see Pages 32 through 38.

CLOSER
See template for closer adjustments

Required on FL200 & FL300

Required on FL300

To mount closer into 2” high headers, HBG5000E 1/4” plastic spacers are required. For balance of header installation see Pages 32 through 38.

For door preparation and top arm installation see Page 14.

For closer adjustments see template

Closer mounting bracket is already installed (See FRAME UNITS installation instructions).

1. Mount angle bracket to closer with (2) 1/4-20 hex head M.S. and (2) washers.
2. Install (2) 1/4-20 x 5/8” Fillister Head M.S. into lugs of closer. Do not tighten screws.
3. Insert closer lugs into mounting bracket at an angle and raise closer opposite end to align mounting screws with angle bracket holes. Secure bracket to mounting screws using (2) nuts and washers.
4. Tighten Fillister Head screws.
5. Snap in filler plate.
C.O.C. FOR CENTER PIVOTED DOOR

Header Preparation
FL212 1-3/4" X 4-1/2" Header shown
FL312 2" x 4-1/2" Header similar

Note: For bracket type required see Page13.

DHC CS112-1 12-1/2" cover plate
C.O.C. FOR OFFSET PIVOTED DOOR WITH TUBULAR HEADER

For door preparation and slide channel installation see Page15.

1. Mount corner clip into header with (2) AS17 10-32 x 3/4" FHMS. See Page 38 for clip location.

2. Mount angle bracket to closer with (2) 1/4-20 x 1/2" Hex Head M.S. and washers.

3. Install (2) 1/4-20 x 1/2" Fillister Head M.S. with washers into lugs of closer. Do not tighten screws.

4. Set closer onto header and align angle bracket holes with holes in header. Closer lugs shall rest on corner bracket.

5. Fasten angle bracket to header with (2) 10-24 x 3/8" FHMS. Tighten Fillister Head screws.

6. Install cover plate and secure to angle with (2) 10-24 x 3/8" FHMS.

7. Attach cover plate to closer at hinge side with (2) #8-32 x 1" FHMS fasteners included with cover plate.

8. Mount arm on spindle and secure with 1/4-20 x 7/8" Socket Head Cap Screw.

▲ Also used as head to jamb clip on frame for single door.
C.O.C. FOR OFFSET PIVOTED DOOR WITH 90° SWING

Header Preparation
FL212 1-3/4" x 4-1/2" Header shown
FL312 2" x 4-1/2" Header requires the use of a shim (see Page 13).

**Note:** Closer bracket needs to be modified (by installer) to clear header portion of top pivot. For bracket types see Page 13.

- Drill and countersink 82° for (4) #10 F.H.
- 7/16" Typ. at Jambs
- 1-7/16"
- 2-3/4"
- 3-3/4"
- 1-7/16" Typ. at Jambs
- 7/16" of closer
- 5/8" of closer
- 9-7/16" of spindle
- 8-19/32" of spindle
- 7/16" x 1-1/4" of closer

**Type “B”**
Header anchor bracket at Jambs

**Type “C”**
Closer mounting bracket

**Note:** Closer bracket needs to be modified (by installer) to clear header portion of top pivot. For bracket types see Page 13.

- Concealed Overhead Closer
- 1-3/4" x 4-1/2" Header shown
- 7/16" Typ. at Jambs

**HEADER TOP VIEW**

**HEADER SIDE VIEW**

**HEADER BOTTOM VIEW**

- (2) 5/16" DIA. access holes
- 3-3/4"
- 1-3/4"
- 3-3/4"
- 3-3/4"
- 3/8" of closer
- 7/16"x 1-1/4" of closer
- 1-3/4" DIA. clearance slot
- 3/8" DIA. clearance hole
- DH117 (modified) 11-13/16" cover plate
- 1-3/4" DIA. clearance hole
- 7/16"x 1-1/4" of closer
- 3/8" DIA. clearance hole
- 1-3/4" DIA. clearance hole
- DH117 (modified) 11-13/16" cover plate
- 1-3/4"
- 3-3/4"
- 3-3/4"
- 3-3/4"
- 3-3/4"
- 3-3/4"
C.O.C. FOR OFFSET PIVOTED DOOR WITH 105° SWING

Header Preparation
FL212 1-3/4" x 4-1/2" Header shown
FL312 2" x 4-1/2" Header requires the use of a shim (see Page 13).

Header TOP VIEW

Note: For bracket types see Page 13
Type "B" Header anchor bracket
Type "A" Closer mounting bracket
Concealed Overhead Closer

Note: Closer bracket needs to be modified (by installer) to clear header portion of top pivot.

HEADER SIDE VIEW

Drill and countersink 82° for (2) #8-32 F.H.

HEADER BOTTOM VIEW

FL209 (FL309)
7/16" Typ. at Jambs
2-3/16" Drill and countersink 82° for (4) #10 F.H.

FL212 1-3/4" X 4-1/2" Header shown
FL312 2" x 4-1/2" Header requires the use of a shim (see Page 13).

7/16" Typ. at Jambs
2-3/4" Q of closer

Note: For bracket types see Page 13
Type "B" Header anchor bracket
Type "A" Closer mounting bracket
Concealed Overhead Closer

HEADER TOP VIEW

Note: Closer bracket needs to be modified (by installer) to clear header portion of top pivot.

HEADER SIDE VIEW

Drill and countersink 82° for (2) #8-32 F.H.

HEADER BOTTOM VIEW

Note: For bracket types see Page 13
Type "B" Header anchor bracket
Type "A" Closer mounting bracket
Concealed Overhead Closer

Note: Closer bracket needs to be modified (by installer) to clear header portion of top pivot.

1. Mount corner bracket into header with (2) 10-32 x 3/8" FHMS. See Pages 38 for bracket location.

2. Mount angle bracket to closer with (2) 1/4-20 x 1/2" Hex Head M.S. and washers.

3. Install (2) 1/4-20 x 1/2" Fillister Head M.S. with washers into lugs of closer. Do not tighten screws.

4. Set closer onto header and align angle bracket holes with holes in header. Closer lugs shall rest on corner bracket.

5. Fasten angle bracket to header with (2) 10-24 x 3/8" FHMS. Tighten Fillister Head screws.

6. Install cover plate and secure to angle with (2) 10-24 x 3/8" FHMS.

7. Attach cover plate to closer at hinge side with (2) 8-32 x 1" FHMS fasteners included with cover plate.

8. Mount arm on spindle and secure with 1/4-20 x 7/8" Socket Head Cap Screw.
OVERHEAD CONCEALED CLOSER
FOR BUTT HUNG DOOR WITH 105° SWING

Header Preparation

FL212 1 3/4" X 4-1/2" Header shown
FL312 2" x 4-1/2" Header requires the use of a shim (see Page 13).

Header Preparation

Drill and countersink 82° for (4) #10 F.H.

Note: For bracket types see Page 42

Drill and countersink 82° for (4) #10 F.H.

(single door)

Type "A"
Header anchor bracket at Jambs

Type "A" Closer mounting bracket

Concealed Overhead Closer

HEADER TOP VIEW

HEADER SIDE VIEW

HEADER BOTTOM VIEW

Note: For bracket types see Page 42

Drill and countersink 82° for (2) #8 F.H.

Exterior edge

DH117 12-1/2" cover plate

7/16" Typ. at Jambs

7/16" Typ. at Jambs

7/16" Typ. at Jambs

7/16" Typ. at Jambs

7/16" Typ. at Jambs

7/16" Typ. at Jambs

DH117 12-1/2" cover plate

Note: For bracket types see Page 42

Drill and countersink 82° for (2) #8 F.H.

Exterior edge

DH117 12-1/2" cover plate

7/16" Typ. at Jambs

7/16" Typ. at Jambs

7/16" Typ. at Jambs

7/16" Typ. at Jambs

7/16" Typ. at Jambs

7/16" Typ. at Jambs
C.O.C.
Closer Location in Header

<table>
<thead>
<tr>
<th>DOOR TYPE</th>
<th>DEGREE HOLD OPEN</th>
<th>DIMENSION &quot;A&quot;</th>
<th>DIMENSION &quot;B&quot;</th>
<th>REFERENCE PAGE</th>
</tr>
</thead>
<tbody>
<tr>
<td>CENTER PIVOT</td>
<td>90º OR 105º</td>
<td>2-3/4&quot;</td>
<td>7/16&quot;</td>
<td>35</td>
</tr>
<tr>
<td>OFFSET PIVOT</td>
<td>105º</td>
<td>4-1/2&quot;</td>
<td>2-3/16&quot;</td>
<td>38</td>
</tr>
<tr>
<td></td>
<td>90º</td>
<td>3-3/4&quot;</td>
<td>1-7/16&quot;</td>
<td>37</td>
</tr>
<tr>
<td>BUTT HINGES</td>
<td>105º</td>
<td>3-3/4&quot;</td>
<td>1-7/16&quot;</td>
<td>41</td>
</tr>
</tbody>
</table>

SLIDE CHANNEL LOCATION IN TOP RAIL FOR OFFSET ARM

<table>
<thead>
<tr>
<th>DOOR TYPE</th>
<th>DEGREE HOLD OPEN</th>
<th>DIMENSION &quot;C&quot;</th>
</tr>
</thead>
<tbody>
<tr>
<td>OFFSET PIVOT</td>
<td>90º</td>
<td>4-15/16&quot;</td>
</tr>
<tr>
<td></td>
<td>105º</td>
<td>4-11/16&quot;</td>
</tr>
<tr>
<td>BUTT HINGES</td>
<td>105º</td>
<td>3-7/8&quot;</td>
</tr>
</tbody>
</table>

OFF-SET ARM COVER CHANNEL
LEFT HAND SHOWN RIGHT HAND OPPOSITE
CENTER PIVOTED DOOR - FLOOR CLOSER
BOTTOM ARM FOR RIXON
OR DOR-O-MATIC FLOOR CLOSER

Door corner block
Hinge arm pin
Shim set
(For doors with threshold)
Adjusting screw
Door bottom arm

(2) Alignment screws with oversized washers
(Included in closer package)

Use top (2) holes with threshold.
Use bottom (2) holes with floor plate.

1-1/16" for door with floor plate
11/16" for door with threshold

10 1/16" for door with threshold
10 1/2" for door with floor plate
(2) 5/8" DIA. holes for alignment screws

DOOR PREPARATION
OFFSET PIVOTED DOOR - FLOOR CLOSER ARM FOR RIXON FLOOR CLOSER (DOR-O-MATIC) SIMILAR

DP124-2 door bottom adaptor. (Factory installed in prepared doors)

Note: Use DP124-2 modified for doors with no threshold.

Door bottom arm (Handed)

(4) 1/4-20 F.H.M.S. to secure bottom adaptor to rail and corner block.

(4) 1/4-20 x 5/8" F.H.M.S. to secure bottom arm to bottom adaptor.

3/8" for doors with 1/2" threshold

7/8" for doors with no threshold

DP124-2 Door bottom adaptor. Use modified adaptor for doors with no threshold.
FLUSH BOLT STRIKE LOCATIONS

HEADER FABRICATION

Dimension to Center of Header

29/32" of Door Opening

Flush Bolt cut-out 3/4" x 17/32"

FL207 1-3/4" X 4-1/2" Header shown
FL312 2" x 4-1/2" Similar

THRESHOLD FABRICATION
(END FABRICATION NOT SHOWN)

Dimension to Center of Threshold

29/32" of Door Opening

Flush Bolt cut-out 3/4" x 17/32"

Drill and countersink for #12 F.H. screws

Inactive Side

(2) Equal Spaces at 36" Door
(4) Equal Spaces at 72" Door

Active Side

Inactive Side

Active Side
Use combination Corner Plate/Flush Bolt guides: BP213 Narrow Stile BP380 Medium Stile BPS500 Wide Stile

Drill and countersink for #8 F.H. screw 4 places.

Note: Top flush bolt cut-out location for door opening height of 84" or less should be 10" from top of door stile. See DETAIL A

1. Insert flush bolts through cut in nose of door stile and push latching rod through corner plate hole.
2. Attach top and bottom flush bolts with (2) # 8 F.H. screws each.
3. Place each lever in the lock position.
4. Adjust flush bolt rods to extend 1/2" beyond ends of door stile. See DETAIL B
5. Flip levers to retract both flush bolts.
MUNTIN OR MIDRAIL INSTALLATION WITH TH401 BRACKET

Position bracket in center channel and attach to door stile and mid rail with
AS7 #8 x 3/4" POH TEK

Typical midrail installation
AS7 (16) #8 x 3/4" POH TEK
OFFSET HUNG DOOR HARDWARE SET

DH400 (OPTIONAL)

1/4-20 Shoulder screw (2) at each pull handle

Set screw (4) at each pull handle

1/4-20 Shoulder screw (1) at each push bar

Set screw (1) at each push bar

37-1/2" to bottom of door & bottom of pull handle

PB401 Push bar

PH401 Pull handle

Lock stile

Hinge stile

(4) AS12 Nutsert Typical

PB401 Push bar

1/4-20 FH Screw

CORAL ARCHITECTURAL PRODUCTS

STOREFRONT SYSTEMS

OFFSET HUNG DOOR HARDWARE SET

DH400 (OPTIONAL)
CENTER HUNG DOOR HARDWARE SET

DH401 (OPTIONAL)

PB401 Push bar

1/4-20 FH Screw

Hinge stile

(4) AS12 Nutsert Typical

PB401 Push bar

37-1/2" to bottom of door

1/4-20 Shoulder screw (1) at each push bar

Set screw (1) at each push bar

Lock stile

1/4-20 Shoulder screw (1) at each push bar

SCREW

CORAL ARCHITECTURAL PRODUCTS

STOREFRONT                SYSTEMS

CENTER HUNG DOOR HARDWARE SET

DH401 (OPTIONAL)
PULL HARDWARE SET FOR PANIC DOOR
DH40P (STANDARD FOR PANIC DOORS)

See Chart on Page 48
STANDARD HARDWARE LOCATIONS

INTERMEDIATE HINGE & PIVOT LOCATION

<table>
<thead>
<tr>
<th>D.O. HEIGHT</th>
<th>BUTT HUNG</th>
<th>OFFSET PIVOT</th>
</tr>
</thead>
<tbody>
<tr>
<td>84&quot;</td>
<td>45-11/32&quot;</td>
<td>44-3/32&quot;</td>
</tr>
<tr>
<td>96&quot;</td>
<td>51-11/32&quot;</td>
<td>50-3/32&quot;</td>
</tr>
</tbody>
</table>

Note: All doors exceeding 87" in height or 42" in width require an intermediate hinge or pivot.

HARDWARE LOCATIONS FOR PANIC DOORS

<table>
<thead>
<tr>
<th>MANUFACTURER</th>
<th>PANIC DEVICE</th>
<th>DIM “X” OF CYLINDER</th>
<th>DIM “Y” OF PANIC</th>
<th>DIM “Z” TOP OF PULL</th>
</tr>
</thead>
<tbody>
<tr>
<td>FIRST CHOICE</td>
<td>3692 C.V.R.</td>
<td>41 - 9/16&quot;</td>
<td>40 - 5/8&quot;</td>
<td>46 - 9/16&quot;</td>
</tr>
<tr>
<td>FIRST CHOICE</td>
<td>3792 RIM</td>
<td>41 - 9/16&quot;</td>
<td>41 - 5/16&quot;</td>
<td>46 - 9/16&quot;</td>
</tr>
<tr>
<td>JACKSON</td>
<td>2086 C.V.R.</td>
<td>37 - 7/8&quot;</td>
<td>38 - 5/32&quot;</td>
<td>42 - 7/8&quot;</td>
</tr>
<tr>
<td>JACKSON</td>
<td>2095 RIM</td>
<td>38 - 13/32&quot;</td>
<td>38 - 5/32&quot;</td>
<td>43 - 13/32&quot;</td>
</tr>
</tbody>
</table>

STANDARD HARDWARE LOCATIONS, LOCK & FLUSH BOLT

<table>
<thead>
<tr>
<th>DESCRIPTION</th>
<th>DIM. “FB”</th>
</tr>
</thead>
<tbody>
<tr>
<td>TOP FLUSH BOLT (FOR 96&quot; DOOR)</td>
<td>22&quot;</td>
</tr>
<tr>
<td>TOP FLUSH BOLT (FOR 84&quot; DOOR)</td>
<td>10&quot;</td>
</tr>
<tr>
<td>BOTTOM FLUSH BOLT (FOR 84&quot; / 96&quot; DOOR)</td>
<td>10&quot;</td>
</tr>
</tbody>
</table>