

McKINNEY Hinge Catalog

Hinge Selection

Common Flush Door/Wall/Frame Application

McKINNEY

1-800-346-7707

www.mckinneyhinge.com

This section will seek to address different variations of door, frame and wall conditions which you might encounter in hanging the door and the product solutions offered by McKINNEY.

Included are some of the more common conditions and some of the not-so-common conditions. The focus here will be on the type of hinge to use within a given door/frame/wall condition. The following examples are

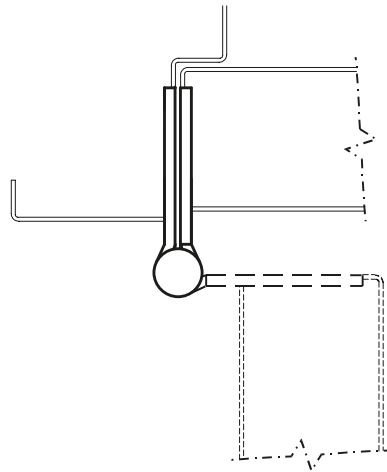
not intended to cover every possible situation in which a particular type hinge might be used, but only a representative sampling. Consult the factory for any unusual installation requirements not shown here.

Full Mortise Hinge

The most common application is a flush door/frame/wall condition using a hollow metal frame with a standard hollow metal or wood door which is flush or $\frac{1}{16}$ " inset from the face of the frame, with a wall which is either flush (or inset from the face of the frame. Recommended to hang door for 180° swing: **Full Mortise Hinge**. The same hinge could be used with a wood or aluminum frame provided the door/frame/wall conditions are flush.

Note: A fire labeled wood door requires sufficient hinge reinforcement to use this type hinge.

APPLICATION



MCK TA2714



Round Corner Option

Furnished as $\frac{1}{4}$ " radius unless specified otherwise. $\frac{5}{32}$ " may be specified on full mortise hinges $4\frac{1}{2}$ " or larger. Specify option "RC".

MCK RCT2714



McKINNEY Hinge Catalog

Hinge Selection

Uncommon Flush Door/Wall/Frame Applications

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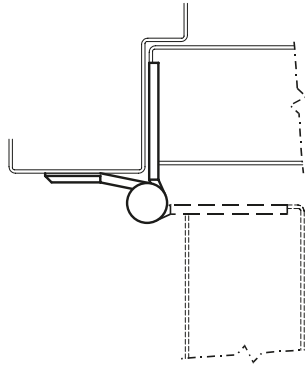
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Less common flush door/frame/wall conditions requiring different type hinges would include:

Half Mortise Hinge

A hollow metal or wood door with channel iron frame. Recommended to hang door for 180° swing:
Half Mortise Hinge.

APPLICATION



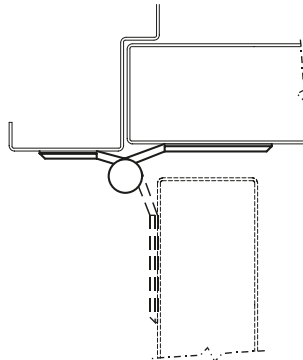
MCK TA2774



Full Surface Hinge

A fire labeled wood door (without sufficient hinge reinforcement) or a kalamein (metal-clad wood door) with channel iron frame. Recommended to hang door for 180° swing:
Full Surface Hinge. On fire labeled wood doors, the door leaf is hung using a back plate with grommet nuts and bolts. Another popular application for this type hinge is a tubular steel gate hung on a channel iron frame.

APPLICATION



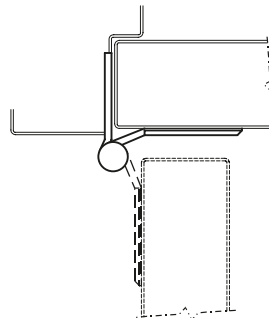
MCK TA2771



Half Surface Hinge

A fire labeled wood door (without sufficient hinge reinforcement) or a kalamein (metal-clad wood door) with hollow metal frame. Recommended to hang door for 180° swing: **Half Surface Hinge.** On fire labeled wood doors, the door leaf is hung using a back plate with grommet nuts and bolts.

APPLICATION



MCK TA2772



McKINNEY Hinge Catalog

Hinge Selection

Special Flush Door/Wall/Frame Applications

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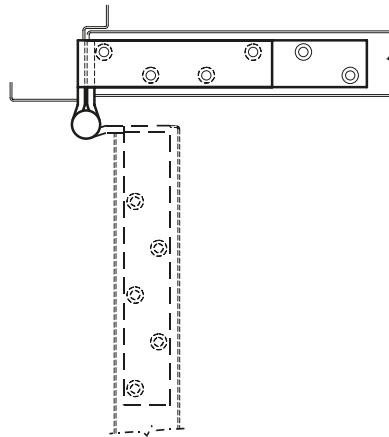
Variations of the basic hinge types may be needed to accommodate special situations in flush door/frame/wall conditions:

Note: General aforementioned guidelines regarding selection of basic hinge types with respect to door and frame types including fire labeled and applicable to any variations of those hinge types listed hereafter. Variations may not be listed or available in all basic hinge types. Consult the factory for availability.

Anchor Hinge

On high frequency and/or heavy wood or metal doors, additional anchoring of the hinges into the door and jamb may be necessary. This is a common application in schools, hospitals or any other buildings where heavy traffic and unusual strain on the doors, jamb and hinges is experienced. Recommended to hang door for 180° swing: **Full Mortise Anchor Hinge**. Sold in sets of one full mortise anchor hinge and two heavy weight full mortise hinges.

APPLICATION



MCK TA792



Note: Anchor hinges are handed and sold for either square edge doors on hinge side or beveled ($\frac{1}{8}$ " in 2") edge doors on hinge side. Hand and bevel (McKINNEY uses a "5" in front of the item number to indicate $\frac{1}{8}$ " in 2" bevel. Example: TA5792) should be specified.

Spring Hinge

Some door/frame/wall and even ceiling conditions make door closers impractical. An alternative closing device is the Spring Hinge. Generally, at least two hinges on a door must be spring hinges to provide adequate closing force. **Note:** NFPA requires a minimum of two (2) spring hinges on fire labeled doors. With adjustable spring tension on the hinge, the closing speed of the door is determined by the amount of closing force set on the hinge. Spring hinges may not be suitable for applications requiring a closing device with non-critical closing and latching speed adjustments. With respect to meeting ADA requirements for closing devices, carpeting and/or gasketing can interfere with latching. McKINNEY offers both **Full Mortise** and **Half Surface Spring Hinges**.

MCK 1502 (FULL MORTISE TYPE)



McKinney now offers a Reverse Action, 1502R, (by special request) which allows the door to remain in the open position. In addition, for high security applications, we offer the TRS option. This Tamper Resistant Screw is screwed into the tension ratchet after the proper tension has been set.

MCK 1572 (HALF SURFACE TYPE)



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Hinge Selection

Special Flush Door/Wall/Frame Applications

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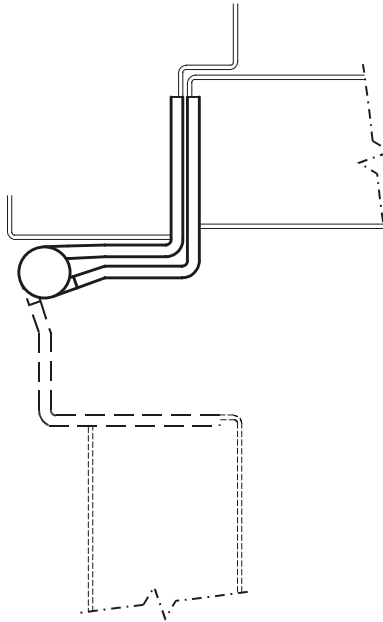
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Swing Clear Hinge

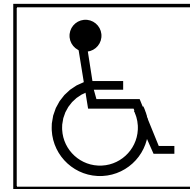
A condition which is common in barrier free openings, and especially in hospitals, is how to remove the door edge from the opening at 90° of swing with flush door/wall/ frame conditions. Recommended to hang door with swing to 180°: **Full Mortise Swing Clear Hinge**. The solution offered by this hinge is the offset of the hinge barrel to a location along the face of the hinge jamb, thereby removing the door edge and the barrel of the hinge as obstacles in the opening at 90° or more of swing. If the door is beveled on the hinge side, specify the appropriate bevelled hinge and handing for your application*.

* Consult individual Swing Clear catalog pages for bevelled hinge product numbers.

APPLICATION



MCK TA2895



Meets or exceeds
ANSI A117.1 - 1986
*Providing Accessibility
and Usability for
Physically
Handicapped People*

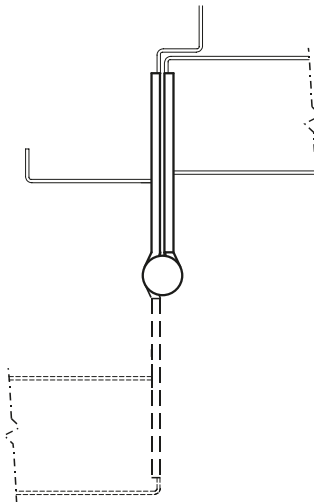
Not all door/frame/wall conditions are flush and, in order to hang the door, other variations on the basic hinge types may be needed.

Wide Throw Hinge

If the door is not flush with the frame, is sitting back in a deep reveal from the face of the frame with or without additional obstacles created by applied trim on the face of the frame or a deeper reveal caused by a projecting wall, and the door is to swing 180°, then a **Full Mortise Wide Throw Hinge** may be used in hanging the door.

Important in this regard is how to calculate the proper width of a wide throw hinge (rounded to the next higher whole number if result is not a whole number: e.g., 6", 7", 8", etc.)

APPLICATION



McK TA2798



How to Calculate

1. If the door is sitting inside a deep frame reveal with no other obstacles (i.e., projecting trim or wall), add the depth of the reveal (distance from the face of the frame to the face of the door) to the recommended width of hinge used under flush conditions.
Example: A 6" wide (wide throw) hinge would replace a 4½" wide regular mortise hinge (used under flush conditions) if the depth of the reveal is 1½".
2. If the door is to clear projecting trim or wall **and the barrel of the hinge is not obstructed**, then calculate as follows:

- (a) double the size of the door
- (b) subtract ½" if the door thickness is less than or equal to 2¼" or subtract ¾" if the door thickness is greater than 2¼"
- (c) add for the additional depth from the face of the obstruction to the face of the door
- (d) add for clearance between the door and the face of the obstruction at 180° of swing (generally 1" or more).

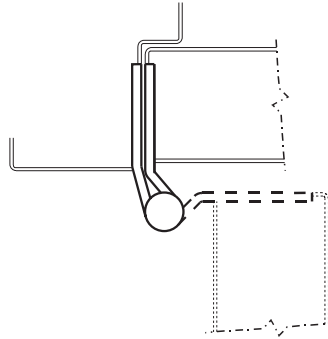
If, for instance, you have a 1¾" thick door:

- (a) 1¾" door thickness x 2 = 3½"
- (b) less ½" equals 3"
- (c) plus 3" for the additional depth from the face of the wall to the face of the door equals 6"
- (d) plus 1" for the clearance between the door and the face of the obstruction at 180° of swing equals 7" overall hinge width.

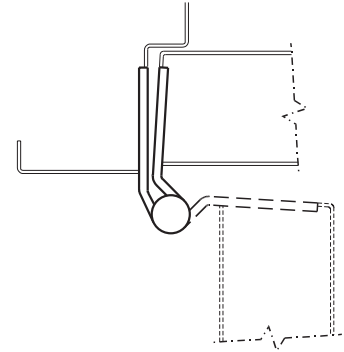
Raised Barrel Hinge

If the door is not flush with the frame but rather is sitting back in a deep reveal from the face of the frame a **Full Mortise Raised Barrel Hinge** may be used in hanging the door. The solution offered by this hinge is the offset of the hinge barrel away from the hinge jamb. Bevel of door edge should be specified.

RAISED BARREL SQUARE EDGE DOOR



RAISED BARREL BEVELED EDGE DOOR

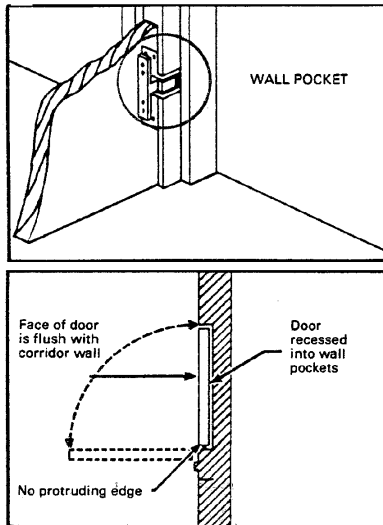


Pocket Hinge

An increasingly popular door, frame and wall condition in corridors is cross-corridor or double egress pairs of doors standing in wall pockets at 90° of swing, so as to be clear of the initial opening and out of the corridor altogether. Solution: **Pocket Hinge**.

As corridor doors are often fire labeled, the hardware must be approved for use in fire labeled openings. Solution: the **McKINNEY PH-4 Pocket Hinge**. U.L. approved for use on both hollow metal and steel covered composite fire doors rated up to 3 hours and on wood core type fire doors rated 20 minutes.

APPLICATION



MCK PH-4



Pivots

Recommended for use on average frequency double acting doors in schools, hospitals, institutions and other public buildings. Not for use on labeled doors and frames.

EP-5J



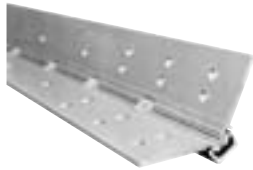
Aluminum Continuous Hinges – GUARANTEED FOR THE LIFE OF THE OPENING

McKINNEY Aluminum Continuous Hinges consist of two anodized, full-height, bearing-gearled leaves that are held together by a full-length channel cap. This design provides proper alignment and eliminates premature wear. The geared construction and full-length channel cap seals the gap between the door and frame and provides privacy and security against prying. This feature also provides safety against pinched fingers especially in public areas where children are apt to move throughout the opening. The gear design ensures identical operation of each leaf, and even-distribution of load stress along the full length of the door

and frame which eliminates door sag and binding. Mortising is not necessary, and the hinge doubles as weather stripping on the hinge side. These hinges are tested and **certified by UL® (USA & CANADA)** to standards UL 10C and UBC7.2 (positive pressure) for up to a 3-hour (A-Label) Fire Listing for all 4'0"x10'0" and 8'0"x10'0" door and frame assemblies. Fire testing certification applies to all approved hollow metal and wood door assemblies in dry wall or masonry wall construction. FirePins™ are now only required on **3-Hour (A-label) Assemblies**. These hinges have been

cycle tested using a 150 lb. Door and are now certified fully functional after 1.5 million cycles. The screw hole locations on these hinges are ideally suited for use on **lead lined doors** (i.e. hospital X-ray rooms). Refer to the Aluminum Continuous Hinge page section for additional information.

FULL MORTISE 12, 14, 25 SERIES



HALF-SURFACE 54 SERIES



FULL SURFACE CENTER PIVOT 58 SERIES



FULL SURFACE 22 SERIES
may be used as swing clear



Steel and Stainless Steel Continuous Hinges – GUARANTEED FOR THE LIFE OF THE OPENING

McKINNEY Steel or Stainless Continuous Hinges are fabricated from independently machined 14 gauge cold rolled steel and finished in prime coat, or 304 stainless steel door leaves. The concealed Teflon-coated stainless steel pin and twin self-lubricated nylon bearings at each knuckle provides for proper alignment and smooth operation.

These hinges are **UL® (USA & CANADA)** up to a 3-hour (A-label) Fire Listing for 4'0"x8'0" single doors and 8'0"x8'0" pairs of doors. The non-handed, slim barrel design is recommended for new construction and retrofit installations. Refer to the Steel and Stainless Continuous Hinge page section for additional information.

FULL SURFACE MCK-FS302



FULL MORTISE MCK-FM300, MCK-HG305, MCK-HG315



HALF MORTISE MCK-HM304, MCK-HG306



SWING CLEAR MCK-HG311



Note: Not all products shown. Refer to pages 113 - 122 for additional information.