

# BASIC HINGE INFORMATION

## How to Select the Proper Hinge

To select the proper hinge for an application, the following factors should be considered:

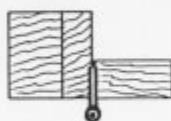
1. Hinge type
2. Hinge size
3. Type of material and finish
4. Hand of hinge
5. Pin or tip style

Each of these factors is detailed in the next portion of this catalog.

### HINGE TYPE

National's hinges fall into the following main categories.

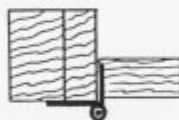
**Full Mortise:** Designed for mortising one leaf into the butt edge of a door with the other leaf mortised into the edge of a frame.



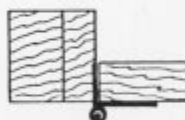
**Full Surface:** Designed for attaching one leaf to the face of a door and the other leaf to the face of the door frame.



**Half Mortise:** Designed for mortising one leaf into the butt edge of a door and attaching the other leaf to the surface of the door frame.



**Half Surface:** Designed for attaching one leaf to the face of a door with the other leaf mortised into the edge of a frame.



### HINGE SIZE

To select a hinge size, determine the following variables:

1. Door size, thickness and weight
2. Frequency of operation
3. Trim clearance required

When two dimensions are given, the first dimension always indicates hinge height (the length of the barrel not including tips) and the second dimension is the width of the hinge (measured across the leaves when the hinge is fully opened).

Two hinges should be used for doors measuring 5' or less in height. Doors of greater height require one hinge for each 2 1/2' or fraction thereof in height.

In using the following chart, if the door is considered high frequency, use an extra-heavy hinge. National's extra-heavy hinges include #453 (3 1/2" and 4"), #504 (3 1/2", 4",

4 1/2" and 5"), #505 (3 1/2", 4", 4 1/2" and 5"), #560 (3 1/2", 4", 4 1/2" and 5"), #502T (3 1/2", 4", 4 1/2" and 5") and #503T (4" and 4 1/2").

Door Dimensions	Height of Hinge
3/4" and 7/8" cabinet doors up to 24" wide	2 1/2"
7/8" and 1 1/8" screen doors up to 36" wide	3"
1 1/8" doors other than screen up to 36" wide	3 1/2"
1 1/4" and 1 3/8" doors up to 32" wide	3 1/2"
over 32" wide up to 37" wide	4"
1 3/4" doors up to 37" wide *	4 1/2" or 5"
Over 37" wide up to 43" wide †	5"

\* 4 1/2" or 5" size depends on weight of doors (e.g., a hollow-core door of light weight would not require more than 4 1/2" hinge).

† Doors of this size usually have high-frequency use and extra-heavy hinges will be needed.