

HINGE INFORMATION GUIDE

Factors for Selecting an Appropriate Replacement Hinge



i Please be aware that this serves solely as an informational guide, and only covers the common hinge types and cabinet scenarios. Given the nature of custom cabinetry, there may arise circumstances and cabinet configurations beyond the scope of this replacement hinge selection guide.

OVERVIEW

Choosing the right hinge for your cabinet can often be a daunting task as there is a myriad of options available. This guide serves as your roadmap to navigating the hinge choices available, helping you to make an informed decision that perfectly matches your cabinet's requirements.

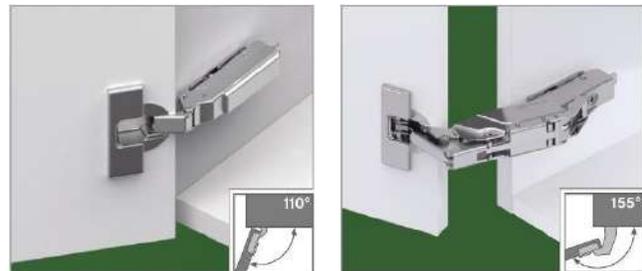
It's important to note that when replacing a hinge with one that differs from your current hinge, it's highly advisable to replace all hinges on the door to ensure uniformity. Using different hinges on the same door can lead to inconsistent opening patterns, which may strain the hinges and cause warping over time.

At Galvin Hardware, our primary brand of hinge is Grass. We offer the Grass brand hinge to suit a range of angles, overlays, fixing types and different drilling patterns like Blum, Hettich, Mepla, Salice and Grass.

Opening Angle:

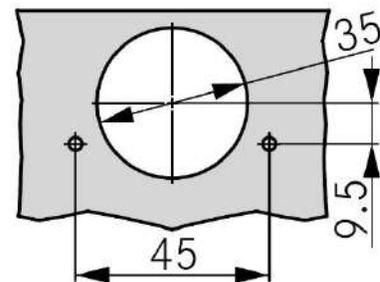
The first and most crucial variable to check is the opening angle of the hinge. This describes the total angle measured from the door in its closed position to the door in its maximum open position.

Common opening angles include 110° and 155°. It's important to note that the angle doesn't necessarily need to match precisely with your existing hinges. For instance, a 155° hinge can often substitute a 170° hinge effectively, provided that all hinges on the door are replaced for consistency. The 110° hinge is commonly used for regular cabinet doors in kitchens and furniture. The wide-angle 155° hinges are typically used in corner cabinets and pantry doors to allow better access by moving the door further out of the way.



Drilling Pattern:

The next variable to consider is the drilling pattern. Typically, a standard hinge features a 35mm diameter cup hole in the door, accompanied by two fixing points on either side of it. The drilling pattern specifies the placement of these fixing points relative to the cup hole. It's essential to ensure that the drilling pattern matches your existing setup, not only for ease of installation but also because the available patterns usually differ by only a few millimetres. Attempting to install a hinge with a different pattern may result in the new hole expanding into the existing holes, leading to a loss of material required to secure the hinge to the door. For a list of common drilling patterns, please refer to the last page of this document.



Example of Blum Drilling Pattern

Fixing Type:

Leading on from drilling patterns comes fitment type which describes how the hinge is fixed to the door. The three common types are as follows:



Screw-On Fixing:

This type of hinge is fixed to the cupboard door via screws. This type of fixing is the easiest to match as you can often remove dowels from knock-in hinges to convert it to a screw fix type. Be careful to not screw through your door.



Knock-In Fixing:

Sometimes called **Press Fit** or **Dowel Fixing**, this method relies on nylon dowel to be inserted into predrilled holes. Depending on the brand, these predrilled holes may be either 8mm or 10mm diameter.

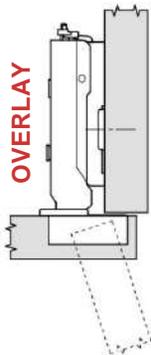


Tool-Less Fixing:

This type of fixing requires the 35mm cup hole and 2 dowel holes either side to be pre-drilled. Once inserted into the holes, a tab is folded over and the flanges expand to hold the hinge in place.

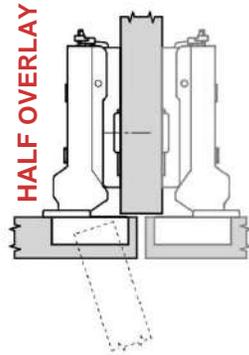
Overlay, Half Overlay or Inset:

These terms refer to the position of door in relation to the cabinet carcass. The factors that control this are the mounting plate thickness, the position that the hinge hole is bored and the hinge crank which will be covered in the next sections below. See the diagrams below:



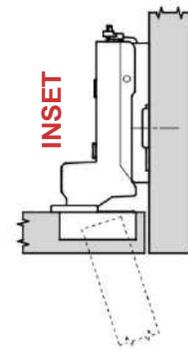
Overlay

Overlay Cabinet hinges are used for when the door covers majority of the carcass. This is the most common type of cabinet hinge and creates a streamline look where the carcass is not seen (or only partially visible.)



Half Overlay

Half overlay hinges are typically used when 2 doors share the same cabinet frame/carcass board. This allows them to sit approximately half way across the end of the board



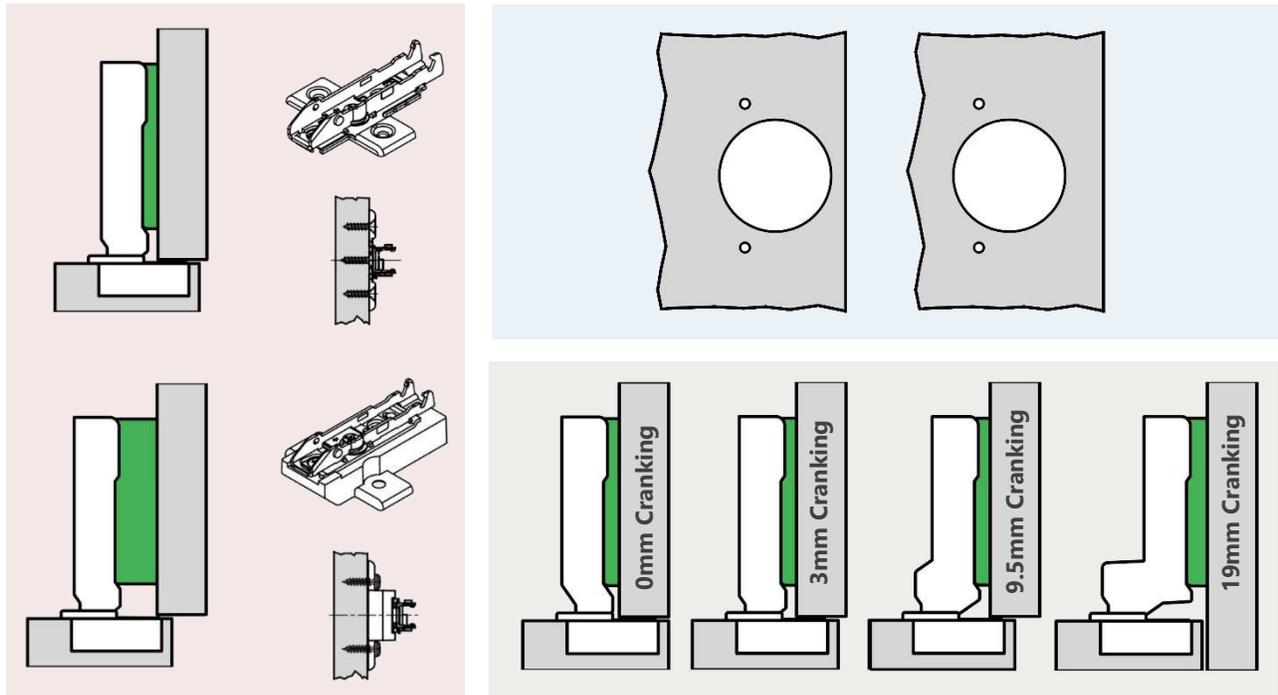
Inset

An inset hinge positions the door to sit on the inside of the carcass as shown in the diagram. This is typical to see in furniture pieces.



Mounting Plate, Boring Position & Hinge Cranking

These three factors work in tandem to set the alignment of the door in either the Overlay, Half Overlay or Inset position.



Mounting Plate

The diagram above illustrates how the thickness of the mounting plate influences the positioning of the cabinet door. Selecting the appropriate mounting plate is crucial to ensure the door aligns correctly. Typically, mounting plates are labelled with indications of their thickness, such as H02, D=2, or 2mm. These labels provide guidance on the plate's dimensions, aiding in choosing the right one for your cabinet door installation.

Boring Position

Another crucial factor impacting positioning is the distance from the edge of the door to where the hinge holes are drilled. While a standard practice might involve drilling the holes approximately 4mm away from the edge, it's essential to note that this distance can vary depending on the specific case or requirements of the installation as depicted in the diagram above.

Hinge Cranking

This term refers to the pre-set offset incorporated into a hinge. Determining this offset by visual inspection alone can be challenging. The most effective method is to consult the technical data provided by the hinge manufacturer. This data will specify the optimal cranking for various scenarios.

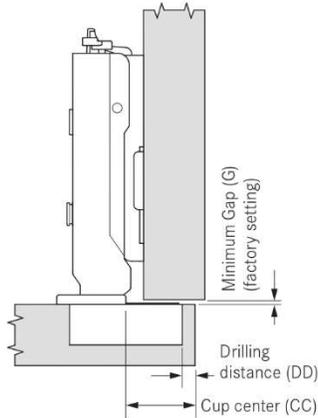
An example of how all of these factors works together is as follows:

- A 3mm cranked hinge combined with a 0mm mounting plate with the hole drilling being 4mm from the edge of the door will provide 16mm of overlay over the carcass.
- A 0mm cranked hinge combined with a 3mm mounting plate with the hole drilling being 4mm from the edge of the door will also provide 16mm of overlay over the carcass.

Minimum Gap

Drilling Distance

The **Minimum Gap (G)** is the gap between the closed door and the front of the cabinet.



Drilling Distance (DD)	Cup Center (CC)
3	20.5
4	21.5
5	22.5
6	23.5
7	24.5
8	25.5

The **Drilling Distance (DD)** is the distance between the edge of the door and the edge of the cup hole.

The **Cup Center (CC)** is the distance of the cup drilling distance plus 1/2 of the cup diameter.

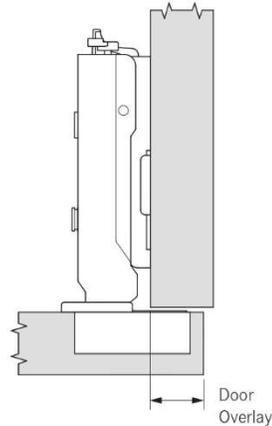
Example:

For a door thickness (DT) of 17mm and a drilling distance (DD) of 6mm a minimum gap of 1mm is needed.

	Drilling Distance (DD)					
	3	4	5	6	7	
24	1.0	1.0	1.0	1.2	2.1	
22	1.0	1.0	1.0	1.0	1.5	
21	1.0	1.0	1.0	1.0	1.2	
20	1.0	1.0	1.0	1.0	1.0	
19	1.0	1.0	1.0	1.0	1.0	
18	1.0	1.0	1.0	1.0	1.0	
17	1.0	1.0	1.0	1.0	1.0	
16	1.0	1.0	1.0	1.0	1.0	
						Minimum Gap (G)

Door Overlay

The **door overlay** is the part of the cabinet side wall or face frame that is covered by the door on the hinge side.



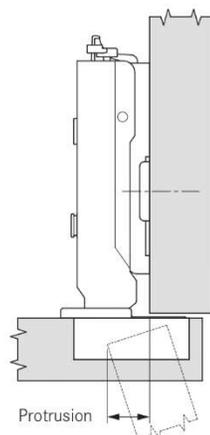
Example:

For a hinge with a cranking of 03, a base plate height (BPH) of 2mm, and a drilling distance (DD) of 4mm, the door overlay is 14mm.

	Drilling Distance (DD)					
	3	4	5	6	7	
19					0	
18				0		
17			0		2	
16.5						
16		0		2	3	
1.5					3.5	
15	0		2	3		
14.5				3.5		
14		2	3			
13.5			3.5			
13	2	3				
12.5		3.5				
12	3					
11.5	3.5					
						Base Plate Height (BPH)

Door Edge Protrusion

The **door edge protrusion** is the amount by which the edge of the open door protrudes into the opening and varies depending on the type of hinge and method of fixing. It is stated on the respective catalog page and refers to the stated base plate for the factory setting. It can be changed by changing the height of the base plate and adjusting the lateral adjustment.



Reveal

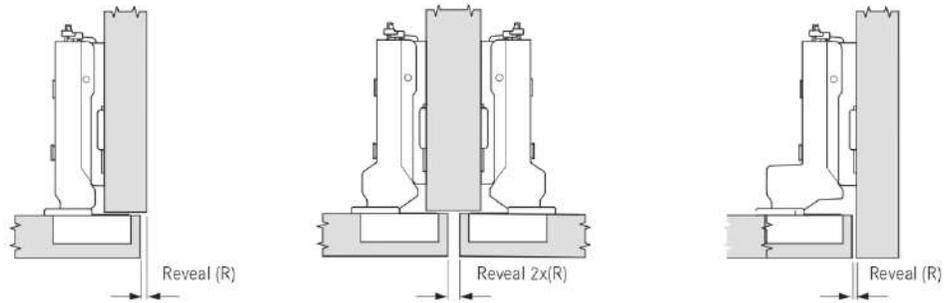
Full Overlay Door

Half Overlay Door

Inset Door

The reveal (R) is the distance required between two doors or between the door and side wall of the cabinet to allow sufficient space for opening the door. The required reveal width (R) depends on the thickness of the door.

Most cabinet makers prefer a reveal (R) of between 3mm and 6mm.



Reveal for Full Overlay, Overlay, and Half Overlay Doors

The table shows the reveal necessary between two doors or between door and side wall to allow enough space for opening the door.

Example:

For a door thickness of 19mm and a drilling distance of 6mm, a reveal of 0.9mm is needed.

Door thickness (DT)	Drilling Distance (DD)				
	3	4	5	6	7
24	2.4	2.1	2.1	2.1	2.0
21	1.6	1.6	1.6	1.5	1.5
21	1.4	1.3	1.3	1.3	1.3
20	1.1	1.1	1.1	1.5	1.1
19	0.9	0.9	0.9	0.9	0.9
18	0.7	0.7	0.7	0.7	0.7
17	0.6	0.6	0.6	0.6	0.6
16	0.6	0.6	0.6	0.6	0.6
	Reveal min. (R)				

Note:

Reveal dimensions were determined with a door edge radius of 1mm. Hinge dimensions and calculations of gap with factory settings.

IMPORTANT

To determine the correct application, it is strongly recommended to trail mount all hinges and mounting plates.

|| COMMON DRILLING PATTERNS

