

# 3903

## 165° Snap-On 3000 Series




- Three-dimensional adjustment in hinge arm
- Automatic, smooth-closing design for minimal abrasion and wear
- Zero protrusion in full overlay applications allows for pullouts
- Accommodates overlays up to 25mm (1")
- Reduces door installation time by 50%
- Undue stress absorbed through self-tightening action

### 3903/3904 Minimum Reveal (measured in millimeters)

No reveal required on the hinge side

Door width	600	500	400	300
Minimum reveal	0.4	0.5	0.6	0.7
Reveal between two doors	0.8	1.0	1.2	1.4

### Ordering Information

Packaging:  
150 pieces   
(50 pieces per interior box)

For baseplate selection, refer to pages 64-66.

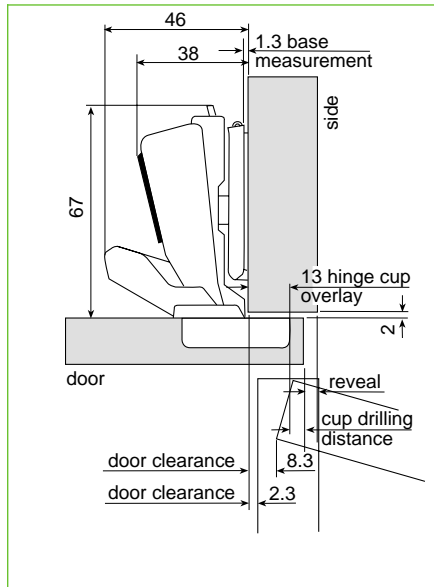
### IMPORTANT

To determine the correct application, Grass strongly recommends a trial mounting for all hinges and baseplates.

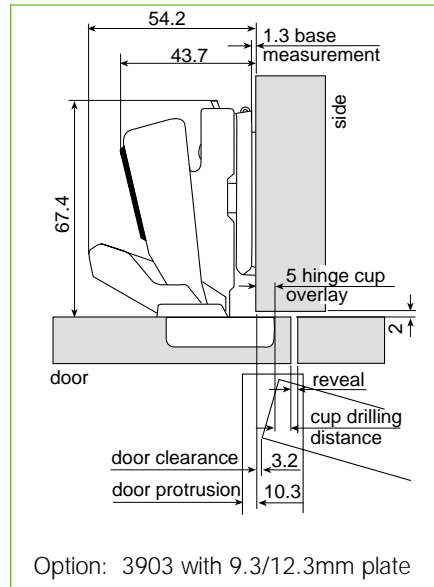
	Screw-On Hinge Cup		Dowelled Hinge Cup		
	Description	Item #	Description	Item #	
<b>3903 Overlay</b>	- self-closing	3903 VZ	3903 VZ8	09897	
	- self-closing		3903 VZ8-45	27841	
	- free-swinging	3913 VZ	12346	3913 VZ8	11154
<b>3904 Half-Overlay</b>	- self-closing	3904 VZ	18503	3904 VZ8	18504
	- free-swinging	3914 VZ	18521	3914 VZ8	18522
<b>Cover Cap</b>	3903/3904 (black plastic)	89271	Packaging: 50 pieces (Imprinting available)		
	3903/3904 (nickel plastic)	80322	Packaging: 50 pieces (Imprinting available)		
<b>Angle Reduction Clip</b>	3903/118°	12860	Packaging: 100 pieces		
	3903/135°	11590	Packaging: 100 pieces		

VZ = vertical zinc cup, VZ8 = vertical zinc cup with two 8mm dowels, VZ8-45 vertical zinc cup with two 8mm dowels in 45mm boring pattern

**3903 Overlay**

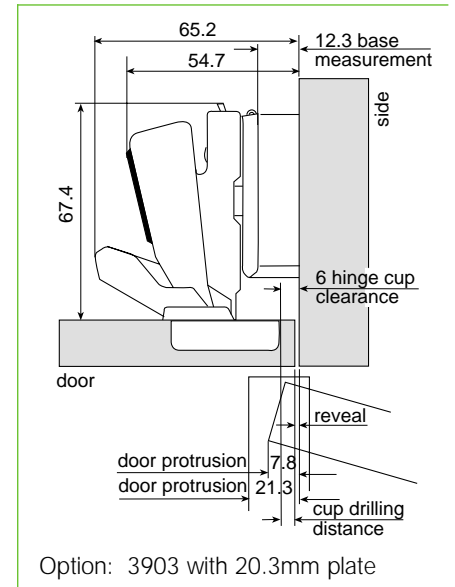


**3904 Half-Overlay**



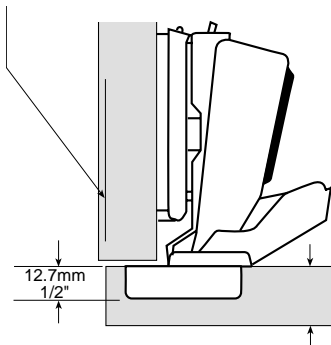
**3904 Inset**

using 12.3mm Baseplate



**Maximum Door Thickness and Overlay**

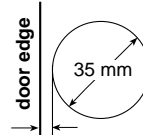
Maximum Door Overlay:  
23mm (29/32") in neutral position  
on a 1.3mm baseplate.



Maximum Door Thickness:  
16mm (5/8") - 22mm (7/8") overlay  
16mm (5/8") - 19mm (3/4") inset

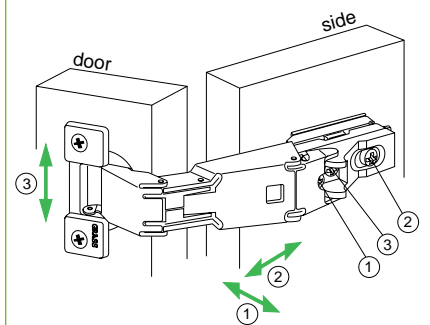
**Cup Drilling**

Cup Drilling Depth: 12.7mm (1/2")  
Cup Drilling Distance: 3mm (1/8") to  
10mm (3/8"), depending on end panel  
thickness and overlay desired.



**Hinge Adjustments**

- ① Side Adjustment ..... +/-2mm
  - ② Depth Adjustment ... +/-2mm
  - ③ Height Adjustment . +/-2mm
- Note: Use a POZIdrive screwdriver for hinge adjustment.  
Fastening Screws #6 x 5/8" FHP

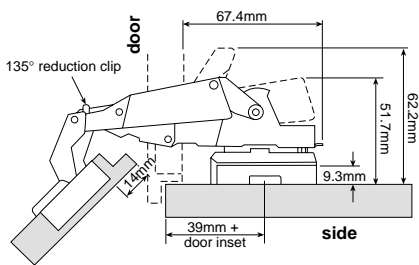


# 3903

## Special Applications

### Lipped Door Application

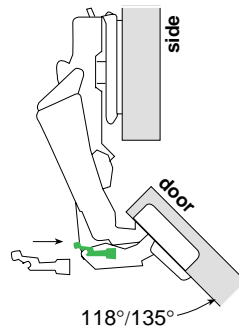
A lipped door application is possible using the 3904/3914 hinge and the 9.3mm baseplate. The boring distance for the hinge cup is moved to 14mm in order to clear the lip on the door. The use of the 135° reduction clip is also required to prevent the back edge of the door from striking the hinge arm.



### 118°/135° Reduction Clip Insertion

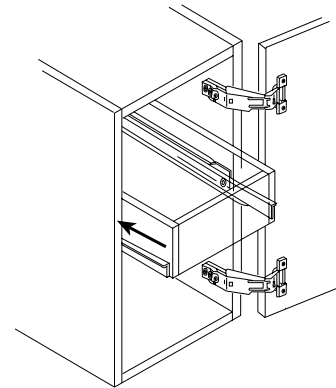
This clip can be added to any 3903/3904 hinge to reduce the opening angle from 165° to 135° or 118°. This may be necessary to prevent the door from striking an obstruction.

To install the clip: With the hinge cup opened to 100° angle, slide the reduction clip into the hinge arm as shown. Opening the door fully will lock the clip into place.



### Zero Protrusion

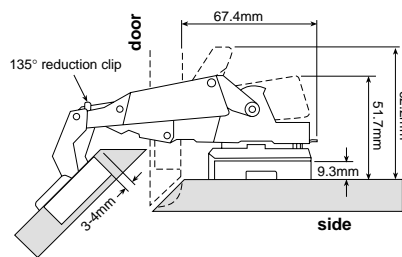
In a full overlay application, the 3903 is designed as a zero protrusion hinge (meaning the cabinet door clears the cabinet opening in a fully opened position). This allows for pull-out trays to be mounted directly to the end panel, thus, eliminating special brackets or blocking of drawer slides.



### Mitered Door Application

By mitering both the door and the end panel, a cabinet may be formed without panel edges being visible from either the front or the side. To accomplish this requires the use of the 3904/3914 hinge with the 135° reduction clip installed. The baseplate is 9.3mm for use on 16mm (5/8") or 19mm (3/4") panels. The cup drilling distance would be 3-4mm, measured from the edge of the 45-degree cut. This application has been tested on 5/8" and 3/4" stock thicknesses. Reveal on 3/4" material is 3-4mm unless relief cut is made on front edge of side panel. A trial mock-up should be made.

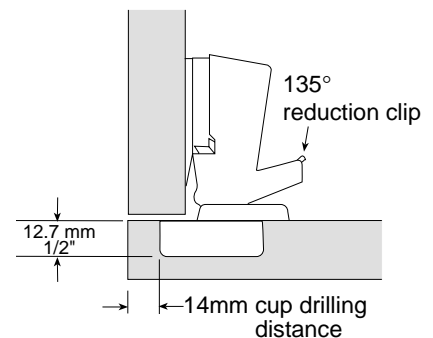
NOTE: These applications also achieved with 193/393 series when proper baseplates are available.



### Large Overlay Application

Larger overlays can be achieved by extending the cup drilling distance beyond the normal range. The 135° reduction clip must be used in order to prevent binding of the hinge arm.

Overlay: 29mm (1 1/8") when using a 1.3mm baseplate and all available side adjustment.



#### IMPORTANT

To determine the correct application, Grass strongly recommends a trial mounting for all hinges and baseplates.