

Grass 3000/4000

Snap-On 3000 Hinge System
Twist-Lock 4000 Hinge System

G*GRASS
The star in your cabinet





G+GFASS

G+GFASS



Unparalleled quality, unbelievable convenience ...the 3000/4000 Hinge System from Grass.

With its uncompromising commitment to design and engineering, the Grass 3000 Series has long been the benchmark of quality to which all others are compared. The 4000 Series offers the same standard of excellence in a Twist Lock hinge cup. Requiring only a single 35mm bore hole and no tools for installation, the Twist Lock series brings convenience to new levels, perfect for high production environments and on-site installations. All 3000 and 4000 hinges feature steel construction throughout, three dimensional adjustment, and a wide array of baseplates available to suit any application. It's what's *inside* that counts... why put anything but the best inside of your cabinets?

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Grass America

Company Information and Warranty

ABOUT GRASS

**Superior Grass performance.
Superior Grass value.**

Grass stands alone in providing unique solutions to specific hardware applications—balancing convenience, function and reliability to make installation easier while reducing labor costs. Each Grass product is backed by The Grass Promise, assuring your continued satisfaction for years to come. And behind it all stands a dedicated team of people who value your ideas and strive to provide you with world class service. So when you're thinking about functional hardware, there's only one thing to do. Think Grass. ■

OUR WARRANTY

The Grass Promise.

We stand behind the quality of all our products and our lifetime warranty represents our commitment to quality.

Grass America Inc. warrants its drawer slides, hinges, brackets, screws, and other associated products manufactured by Grass against defects in material and workmanship for as long as the original consumer purchaser owns the product. ■



3000/4000 Hinge Series

Features & Benefits



Hinge Cup is made of solid metal, available in screw-on or dowelled version.

All-Steel Mechanism: All moving mechanism parts, including axles, pivot pins, linkages and springs are hardened to ensure long-term durability.

Multiple Pivot Pins with extremely precise tolerances guarantee absence of play due to their special triple linkage arrangement. Minimum tolerances allow for precise movement through the entire opening cycle.

Heat Tempered Adjustment Plate is serrated to ensure maximum precision for side, height and depth adjustment.

One connector cup works for the entire Twist Lock series.

3-D Adjustment is integrated into the hinge arm. A single screw is used for any desired adjustment (height, side and depth). To guarantee maximum safety for the end user, the adjustment screws are riveted to avoid any accidental removal.

Snap-On technique automatically re-adjusts the hinge when stressed to guarantee long-term and tolerance-free positioning of hinge on baseplate. Snap-on hinge reduces installation time by 50%.

Upper section with **sturdy insertion hooks** and positioning nose ensure perfect stability of the hinge on the baseplate.

Twist Lock offers clean lines as the drilled cup hole is completely hidden by the hinge cup.

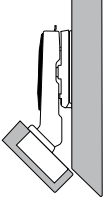
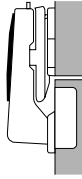
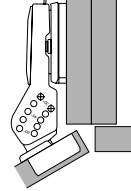
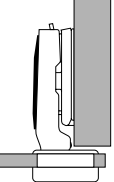
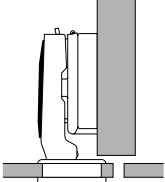
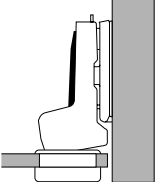
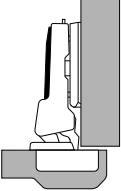
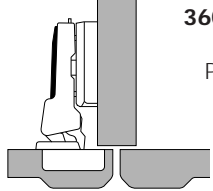
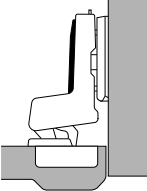
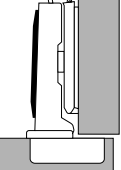
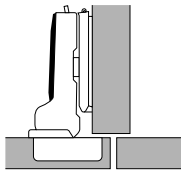
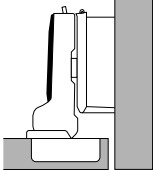
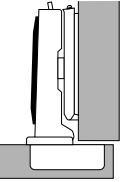
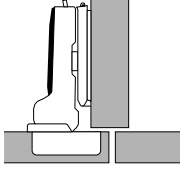
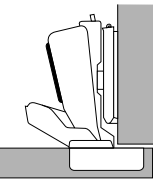
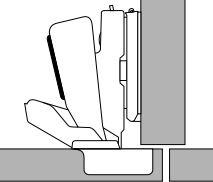
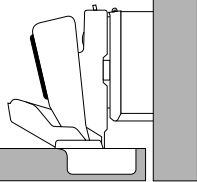
Cup drilling for the Twist Lock is a single 35mm bore hole and requires no tools for hinge assembly.

All-metal baseplate is available in straight or wing version, with or without pre-mounted dowels and/or Euro screws. A positioning tab on the upper section matches perfectly with a recess in the baseplate to ensure exact centering. The 3000 and 4000 hinge series use the same baseplate system.

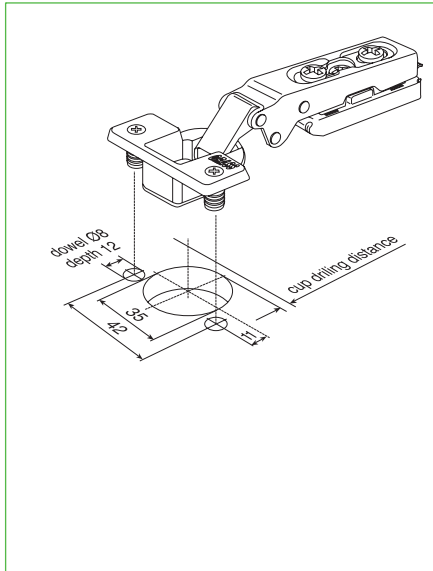
Steel Closing Mechanism is made of hardened steel and functions with a roller principle to maintain the closing force throughout the life of the hinge.

The Grass Promise. Lifetime Limited Warranty against defects in material and workmanship for as long as the original consumer owns the product.

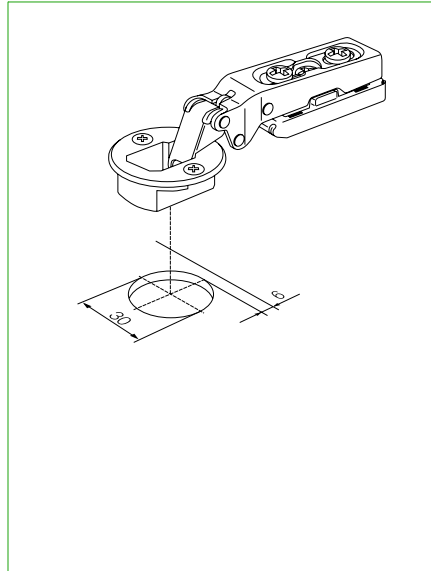
3000/4000 Overview

 <p>3203/4203 120° Page 8</p> <p>Negative 45°</p>	 <p>3303/4303 95° Page 10</p> <p>Blind Corner</p>	 <p>3403/4403 95° Page 12</p> <p>Diagonal Corner</p>
 <p>3503/100° Page 14</p> <p>Glass Door Overlay</p>	 <p>3503/100° Page 14</p> <p>Glass Door Half-Overlay</p>	 <p>3505/100° Page 14</p> <p>Glass Door Inset</p>
 <p>3606/4606 95° Page 16</p> <p>Thick Door-Overlay</p>	 <p>3606/4606 95° Page 16</p> <p>Thick Door-Half-Overlay</p>	 <p>3608/4608 95° Page 16</p> <p>Thick Door-Inset</p>
 <p>3703/4703 110° Page 18</p> <p>Overlay</p>	 <p>3704/4704 110° Page 18</p> <p>Half-Overlay</p>	 <p>3704/4704 110° Page 18</p> <p>Inset</p>
 <p>3803/4803 120° Page 20</p> <p>Overlay</p>	 <p>3804/4804 120° Page 20</p> <p>Half-Overlay</p>	
 <p>3903/4903 165° Page 22</p> <p>Overlay</p>	 <p>3904/4904 165° Page 22</p> <p>Half-Overlay</p>	 <p>3904/4904 165° Page 22</p> <p>Inset</p>

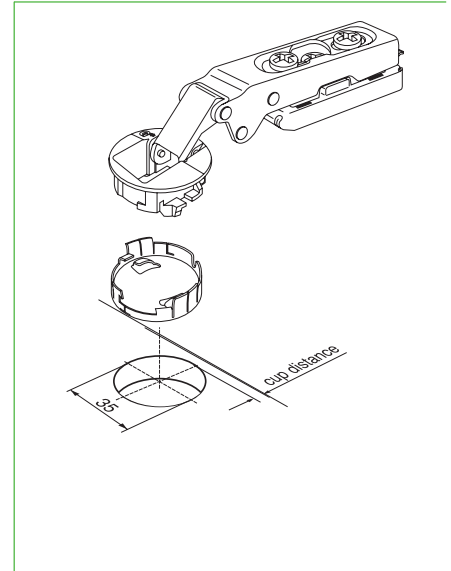
3000 Hinge Cup



3000 Glass Door Hinge Cup



4000 Hinge Cup

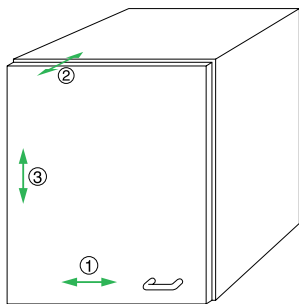


Adjustment Features

The Grass 3000/4000 Hinge Series offers 3-dimensional adjustment, allowing for corrections of assembly and installation inaccuracies.

The adjustment technology is integrated into the hinge arm and allows for independent screw action.

- ① Side Adjustment
- ② Depth Adjustment
- ③ Height Adjustment



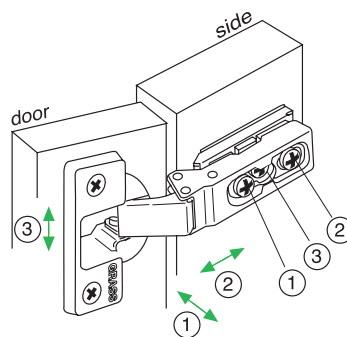
Snap-On 3000/4000 Series

Allows for three-way adjustments in the hinge arm. The side adjustment is a micro adjustment. The depth and height adjustment is held by a grid system.

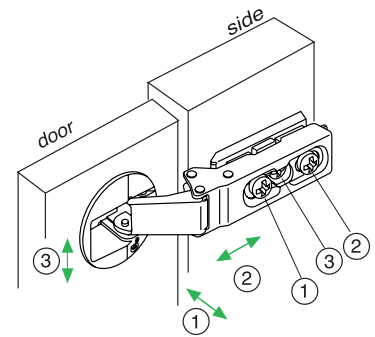
Use #2 POZIdrive screwdriver to adjust screws.

- ① Side Adjustment
- ② Depth Adjustment
- ③ Height Adjustment

3000 Series



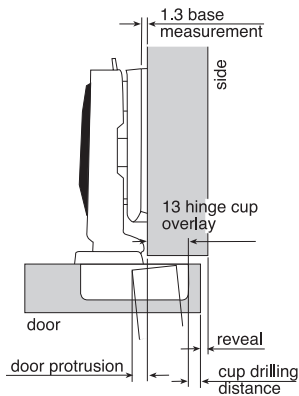
4000 Series



Technical Information

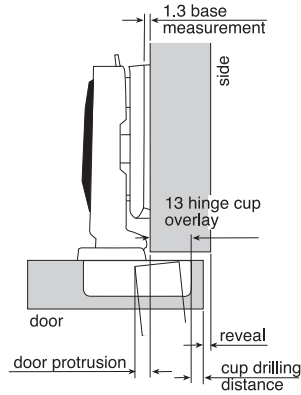
Door Overlay

All Grass hinges are set in neutral position, (no adjustment in the hinge arm has been utilized). The baseplate height of 1.3mm (= lowest baseplate height) represents the base measurement for the hinge cup overlay. Hinge cup overlay plus cup drilling distance equals door overlay. The possible cup drilling distance is stated on each catalog page.



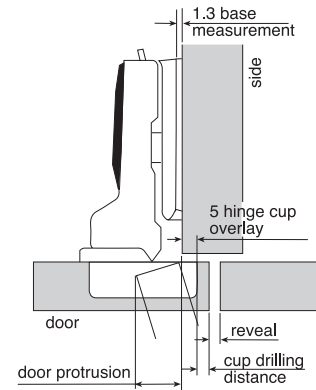
Overlay, zero-crank

The hinge cup overlay (in neutral position) is 13mm, unless otherwise stated in the catalog. The side adjustment screw allows for an adjustment of ± 2 mm.



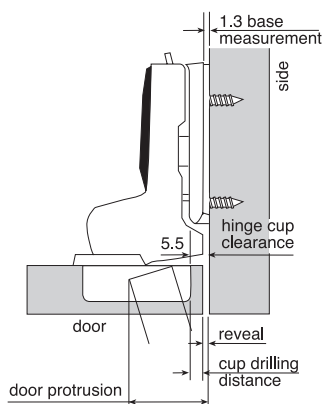
Half-Overlay, 8mm crank

The hinge cup overlay (in neutral position) is 5mm, unless otherwise stated in the catalog. The side adjustment screw allows for an adjustment of ± 2 mm.



Inset, 16mm crank

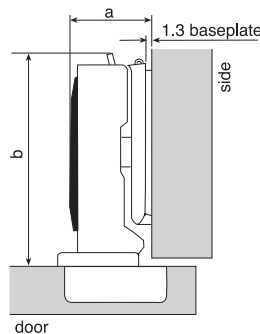
There is no hinge cup overlay. The hinge cup clearance is stated in the catalog. The side adjustment screw allows for an adjustment of ± 2 mm.



Note: For inset doors the baseplate setback is increased by the thickness of the door material +2mm.

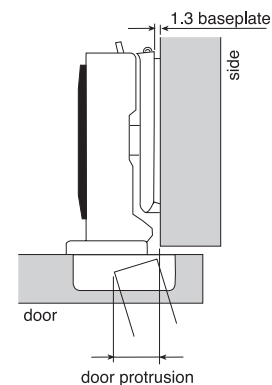
Space Requirement for Hinge

Mounting of hinge arm on the side panel requires a certain amount of space. Measurements "a" and "b" are given on each catalog page. Space requirement for hinge changes when side adjustment is used and baseplate height is altered.

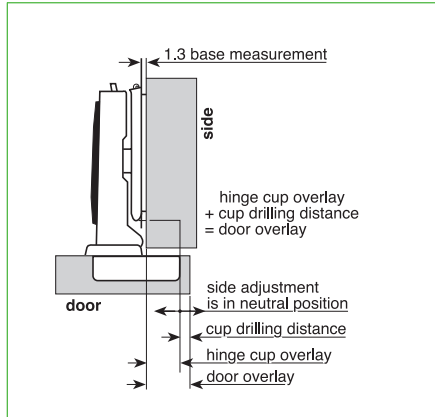


Door Clearance/Door Protrusion

The door clearance and door protrusion vary according to the hinge application in use and are stated on each of the catalog pages.



Calculating Baseplate Distance



Example: Using 3803VS Hinge with Cup Drilling Distance of a 3.5mm Baseplate Calculation

hinge cup overlay (from catalog)	13.0mm
+ cup drilling distance	3.5mm
<hr/>	
	= 16.5mm
- desired door overlay	14.5mm
<hr/>	
thickness adjustment	= 2.0mm
+ thinnest baseplate (from catalog)	1.3mm
<hr/>	
baseplate thickness	= 3.3mm

Choose the baseplate nearest to this thickness. In this case 4.3mm.

Adjusting Cup Drilling Distance

baseplate thickness	4.3mm
+ desired door overlay	14.5mm
<hr/>	
	= 18.8mm
- hinge cup overlay (from catalog)	13.0mm
<hr/>	
	= 5.8mm
- thinnest baseplate (from catalog)	1.3mm
<hr/>	
cup drilling distance	= 4.5mm

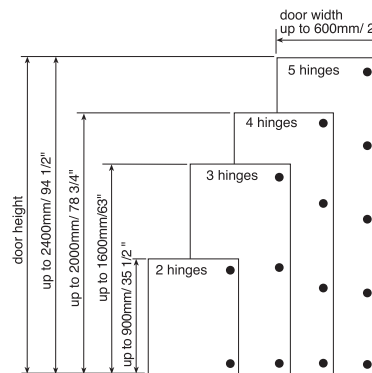
For this application use a 4.3mm baseplate with 4.5mm cup drilling distance on the 3803 hinge.

Recommended Number of Hinges per Door Systems 3000/4000

The number of hinges required depends on the size, weight and quality of the door. The distance between the hinges should be spaced as wide as possible. Use the diagram below to determine number of hinges needed.

- For doors to 24" wide, weighing up to 20lbs. - 2 hinges
- 20 - 40 lbs.- 3 hinges
- 40 - 60 lbs.- 4 hinges

These recommendations are for doors without accessory attachments only.



Exceptions to number of hinge recommendations

In abusive environments such as schools and hospitals:

- additional hinges should be added if doors are near the border line of size or weight chart.
- it is best to keep doors to a maximum of 508mm (20") in width. This prevents undue leverage against the doors.

In abusive environments, use the GRASS Atlas 9603 Hinge.

Do's & Don'ts of Hinge and Baseplate Applications

Do's

- Use POZIdrive screwdriver for adjusting all frameless hinges.
- Attach baseplate using ALL available screw holes.
- Keep hinges as close to top and bottom of door as possible. Maximum recommended distance 75mm (3") from end of door.
- Make sure hinge arm is 90 degrees to door.
- Make sure doors do not bind when opening.
- Make a trial mounting to ensure accuracy.

Don'ts

- Don't exceed maximum cup drilling distance. Door will bind on hinge.
- Don't overuse the hinge adjustments.
- Don't overload the door (mirrors, racks, etc.)
- Avoid doors which are wider than they are tall.
- Don't over tighten the wood screws.
- Don't use Phillips screwdriver to adjust frameless hinges.

3203/4203

Negative 45° Snap-On 3000 Series & Twist Lock 4000 Series



- Heat tempered, all-metal construction
- Three-dimensional adjustment in hinge arm
- Automatic, smooth-closing design for minimal abrasion and wear
- Available for overlay or inset application
- Designed for negative 45° diagonal doors
- Twist Lock requires a single 35mm bore hole and no tools for hinge assembly

3203/4203 Minimum Reveal (measured in millimeters)

Cup drilling distance	Door thickness							
	16	17	18	19	20	21	22	
3.0-4.5	1.2	1.4	1.6	2.8	4.5	6.2	8.0	
5.0	1.1	1.3	1.5	1.8	2.5	4.2	6.0	

Ordering Information

Packaging:
300 pieces 
(50 pieces per interior box)

For baseplate selection, refer to pages 26-28.

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 #
3203 Negative Angle - self-closing	3203 VS	24182	3203 VS8	24181

VS = vertical steel cup, VS8 = vertical steel cup with two 8mm dowels.

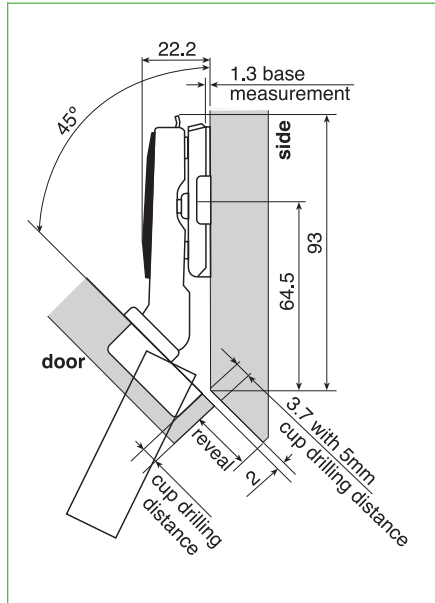
	Twist Lock Hinge Cup	
	Description	Item #
4203 Negative Angle - self-closing	4203-T	24183
4000-L varnish protection piece	4000-L	18937
4000-U twist connector for replacements, with tabs	4000-U	18839

T = Twist hinge, connector cup included; U = Connector cup.

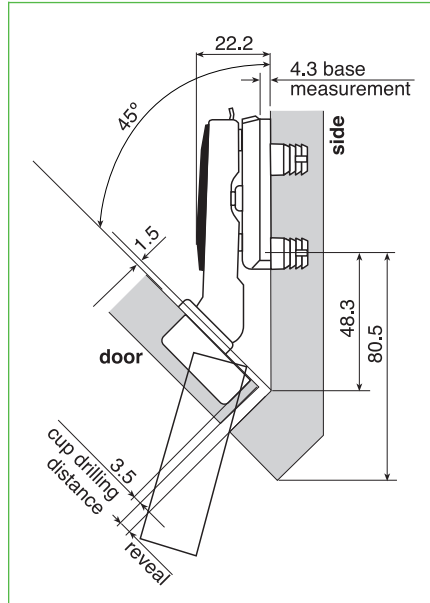
	Description	Item #	Packaging
3203/4203 Cover Caps	3203/4203 (black plastic)	12350	50 pieces (Imprinting available)
	3203/4203 (nickel plastic)	12351	50 pieces (Imprinting available)

Negative 45° Snap-On 3000 Series & Twist Lock 4000 Series

3203/4203 Overlay

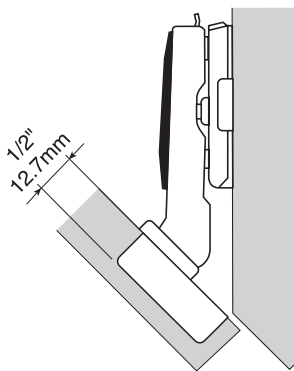


3203/4203 Inset



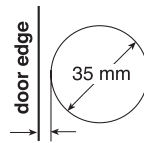
Maximum Door Thickness and Overlay

Maximum Door Overlay: 3.7mm (9/64")
 Maximum Door Thickness:
 (with corner radius of 1mm)
 16mm (5/8") - 22mm (7/8") overlay



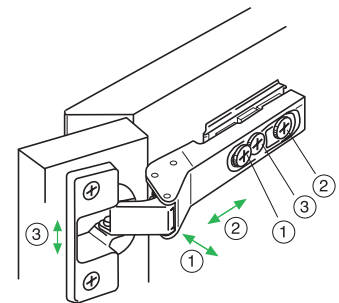
Cup Drilling

Cup Drilling Depth: 12.8mm (1/2")
 Cup Drilling Distance: 3mm (1/8") to
 5mm (3/16") 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



3303/4303

95° Snap-On 3000 Series & Twist Lock 4000 Series For Blind Corner



- Designed for flush blind corner applications
- Three-dimensional adjustment in hinge arm
- Automatic, smooth-closing design for minimal abrasion and wear
- Heat tempered, all-metal construction
- Twist Lock requires a single 35mm bore hole and no tools for hinge assembly

3303/4303 Minimum Reveal (measured in millimeters)

Door thickness

Cup drilling distance	16	17	18	19	20	21	22
3.0-5.0	1.0	1.0	1.0	1.0	1.4	2.4	2.8
5.5	1.0	1.0	1.0	1.0	1.2	1.6	2.1

IMPORTANT

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

Ordering Information

Packaging:

150 pieces

(50 pieces per interior box)

	Screw-On Hinge Cup		Dowelled Hinge Cup	
	Description	Item #	Description	Item #
3303 Blind Corner - self-closing	3303 VZ	11511	3303 VZ8	11606

VZ = vertical zinc cup, VZ8 = vertical zinc cup with two 8mm dowels

	Twist Lock Hinge Cup	
	Description	Item #
4303 Blind Corner - self-closing	4303-T	18809
4000-L varnish protection piece	4000-L	18937
4000-U twist connector for replacements, with tabs	4000-U	18839

T = Twist hinge, connector cup included; U = Connector cup.

	Description	Item #	Packaging
3303/4303 Wing Baseplates	G3/RZ 3303/4.3/6.5/14	55677	50 pieces
	G3/RZ 3303/4.3/5.2/14	11704	50 pieces

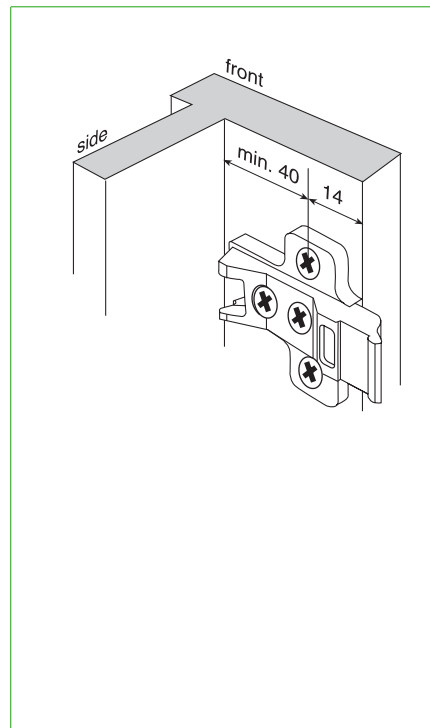
	Description	Item #	Packaging
3303/4303 Cover Caps	3303/4303 (black plastic)	12350	50 pieces (Imprinting available)
	3303/4303 (nickel plastic)	12351	50 pieces (Imprinting available)

95° Snap-On 3000 Series & Twist Lock 4000 Series For Blind Corner

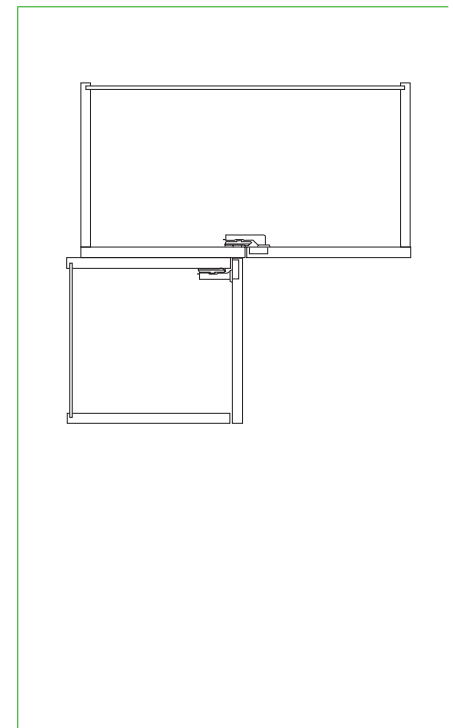
3303/4303 Blind Corner

3303/4303	Cup Drilling Distance 2.5 to 5 mm
Baseplate Description	G3/RZ 3303/4.3/6.5/14 G3/RZ 3303/4.3/5.2/14

Baseplate



Typical Application



Maximum Door Thickness

Maximum Door Thickness: 16mm (5/8") to 22mm (7/8") depending on reveal and shape of door. For flush front, door and end panel must be same thickness.

Cup Drilling

Cup Drilling Depth: 12.8mm (1/2")
Cup Drilling Distance: 2.5mm (3/32") to 5mm (3/16")

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

3403/4403

95° Snap-On 3000 Series & Twist Lock 4000 Series For Diagonal Corner Cabinets



- Heat tempered, all metal construction
- Three-dimensional adjustment in the hinge arm
- Automatic, smooth closing for minimal abrasion and wear
- Undue stress absorbed through self-tightening action
- Available for 45° corner applications
- Designed for diagonal corner cabinets
- Twist Lock requires a single 35mm bore hole and no tools for hinge assembly

3403/4403/45° Minimum Reveal (measured in millimeters)

Cup drilling distance	Door thickness						
	16	17	18	19	20	21	22
3.0-5.0	0.9	1.0	1.1	1.2	1.4	1.7	3.7

Ordering Information

Packaging:
150 pieces 
(50 pieces per interior box)

For baseplate selection, refer to pages 26-28.

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 #
3403/30°	- self-closing	3403/30 VZ	16376	3403/30 VZ8	16378
3403/37.5°	- self-closing	3403/37.5 VZ	18866	3413/37.5 VZ8	18868
3403/45°	- self-closing	3403/45 VZ	16380	3403/45 VZ8	16382
3403/52.5°	- self-closing	3403/52.5 VZ	18867	3403/52.5 VZ8	18869
3403/60°	- self-closing	3403/60 VZ	16384	3403/60 VZ8	16386

VZ = vertical zinc cup, VZ8 = vertical zinc cup with two 8mm dowels

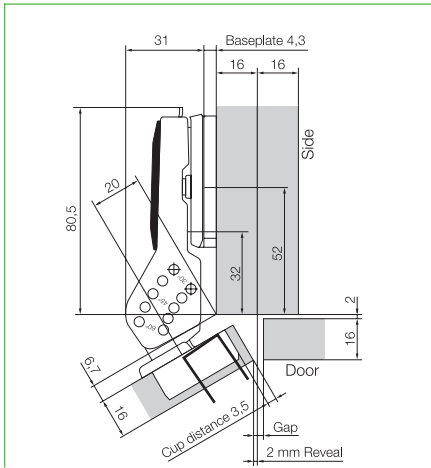
		Twist Lock Hinge Cup	
		Description	Item #
4403/45°	- self-closing	4403-T/45	18812
	4000-L varnish protection piece	4000-L	18937
	4000-U twist connector for replacements, with tabs	4000-U	18839

T = Twist hinge, connector cup included; U = Connector cup.

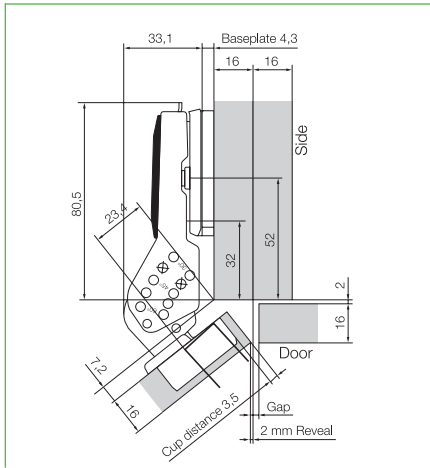
	Description	Item #	Packaging
3403/4403 Cover Caps	3403/4403 (black plastic)	12350	50 pieces (Imprinting available)
	3403/4403 (nickel plastic)	12351	50 pieces (Imprinting available)

95° Snap-On 3000 Series & Twist Lock 4000 Series For Diagonal Corner Cabinets

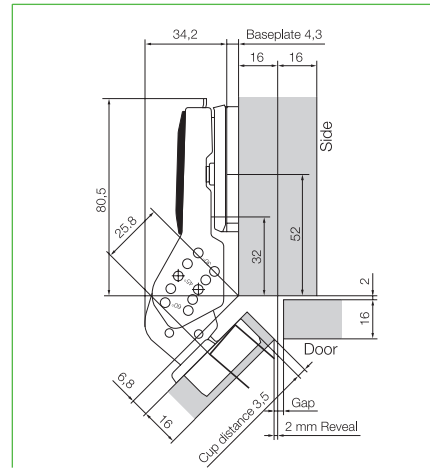
30° Corner Application



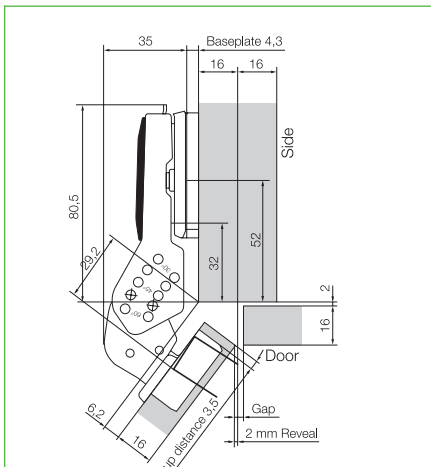
37.5° Corner Application



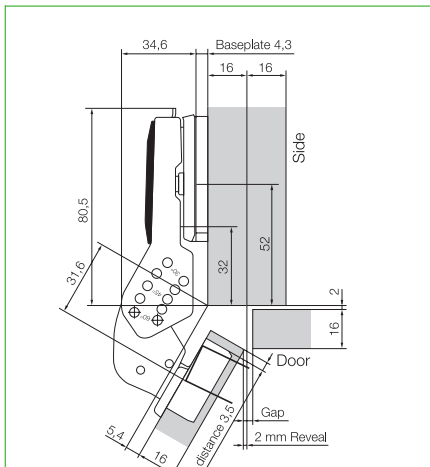
45° Corner Application



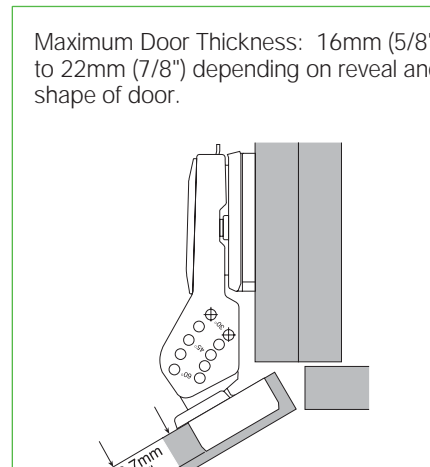
52.5° Corner Application



60° Corner Application

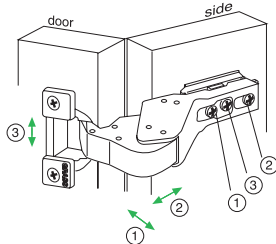


Maximum Door Thickness

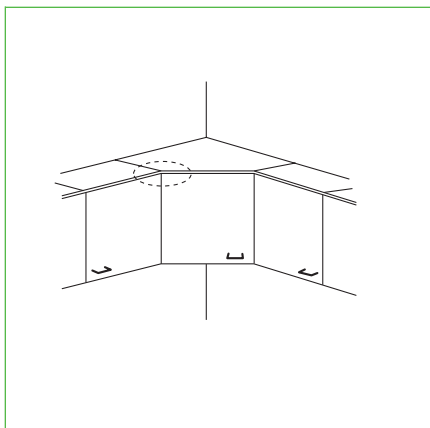


Hinge Adjustments

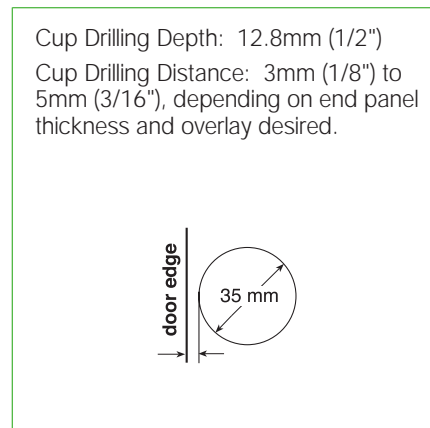
- ① Side Adjustment +/-2mm
 - ② Depth Adjustment +/-2mm
 - ③ Height Adjustment .. +/-2mm
- Note: Use a POZIdrive screwdriver for hinge adjustment.
Fastening Screws #6 x 5/8" FHP



Typical Application



Cup Drilling



3503

100° Snap-On 3000 Series For Glass Door



- Three-dimensional adjustment in hinge arm
- Automatic, smooth-closing design for minimal abrasion and wear
- Accommodates overlays up to 19mm (3/4")
- Reduces door installation time by 50%
- Undue stress absorbed through self-tightening action
- Decorative coverplates in a variety of shapes and finishes

3503 Minimum Reveal 1mm

Ordering Information

Packaging:

300 pieces 
(50 pieces per interior box)

For baseplate selection, refer to pages 26-28.

IMPORTANT

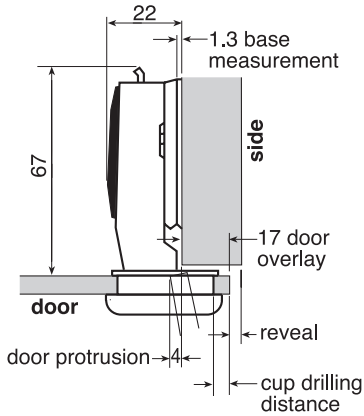
To determine the correct application, Grass strongly recommends a trial mounting for all hinges and baseplates.

Screw-On Hinge Cup

		Description	Item #	
3503 Overlay	- self-closing	3503 GT	50110	
3505 Inset	- self-closing	3505 GT	50111	
Decorative Coverplates	<input type="radio"/>	Matte black plastic	84221	Packaging: 50 pieces
	<input type="radio"/>	Polished nickel plated	83585	Packaging: 50 pieces
	<input type="radio"/>	Polished gold plated	83584	Packaging: 50 pieces
	<input type="checkbox"/>	Matte black plastic	84225	Packaging: 50 pieces
	<input type="checkbox"/>	Polished nickel plated	83823	Packaging: 50 pieces
	<input type="checkbox"/>	Polished gold plated	83836	Packaging: 50 pieces
Replacement Screws		2.9mm x 11	82401	
Cover Cap		3503 (black plastic)	12350	Packaging: 50 pieces (Imprinting available)
		3503 (nickel plastic)	12351	Packaging: 50 pieces (Imprinting available)
		3505 (black plastic)	12353	Packaging: 50 pieces (Imprinting available)
		3505 (nickel plastic)	12354	Packaging: 50 pieces (Imprinting available)

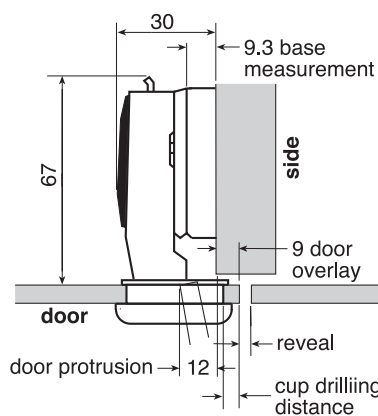
100° Snap-On 3000 Series For Glass Door

3503 Overlay



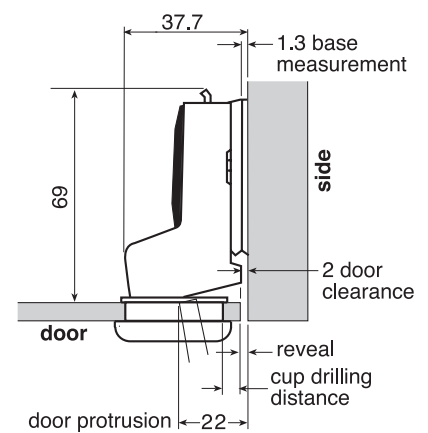
Overlay Chart		Cup Drilling Distance	
3503		6	
	1.3	17	
Baseplate	4.3	14	
Thickness	9.3	9	
	12.3	6	
	20.3	-2 (Inset)	

3503 Half-Overlay
using 9.3mm Baseplate



Half-Overlay Chart		Cup Drilling Distance	
3503		6	
Baseplate	9.3	9	
Thickness	12.3	6	

3505 Inset

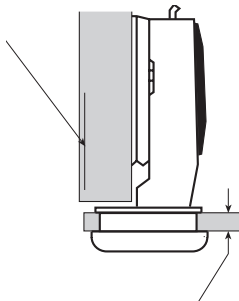


Option: 3503 with 20.3mm baseplate

Inset Reveal Chart		Cup Drilling Distance	
3505		6	
Baseplate	1.3	-2	
Thickness	4.3	-5	

Maximum Door Thickness
and Overlay

Maximum Door Overlay: 19.0mm (3/4") when using a 1.3mm baseplate and all available side adjustment.

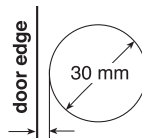


Maximum Door Thickness: Glass thickness from 3mm (1/8") to 7mm (9/32"). Maximum thickness of tempered glass doors is 4mm (5/32")

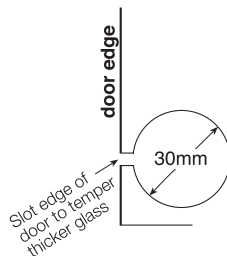
Note: For tempered glass, cup drilling distance must be 1 1/2 times the glass thickness. Therefore: maximum thickness for tempered doors is 4mm (5/32")

Cup Drilling

Cup Drilling Depth: Same as glass thickness
Cup Drilling Distance: 5.5mm (7/32") to 6.0mm (1/4")

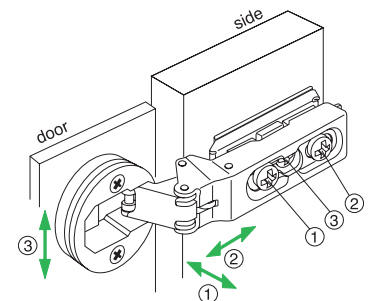


For Tempered Glass between 4-7mm thickness



Hinge Adjustments

- ① Side Adjustment +/-2mm
 - ② Depth Adjustment +/-2mm
 - ③ Height Adjustment +/-2mm
- Note: Use a POZIdrive screwdriver for hinge adjustment.
Screws are included in the box of hinges



3606/4606

95° Snap-On 3000 Series & 4000 Twist Lock Series For Thick Doors



- High quality hinge for door applications in excess of 22mm (7/8")
- Heat tempered, all metal construction
- Three-dimensional adjustment in hinge arm
- Automatic, smooth-closing design for minimal abrasion and wear
- Undue stress absorbed through self-tightening action
- Twist Lock requires a single 35mm bore hole and no tools for hinge assembly

3606/3608 & 4606/4608 Minimum Reveal (measured in millimeters)

Door thickness

Cup drilling distance	16-25	26	27	28	29	30	31	32	33	34	35
3.0-4.0	0.0	0.1	0.1	0.2	1.3	2.4	3.4	4.5	5.6	6.7	7.8
4.5-5.0	0.0	0.1	0.1	0.2	0.4	1.9	3.0	4.0	5.1	6.2	7.3

Ordering Information

Packaging:

300 pieces 
(50 pieces per interior box)

For baseplate selection, refer to pages 26-28.

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 #
3606 Overlay	- self-closing	3606 VZ	18481	3606 VZ8	18482
3608 Inset	- self-closing	3608 VZ	18483	3608 VZ8	18484

VZ = vertical zinc cup, VZ8 = vertical zinc cup with two 8mm dowels

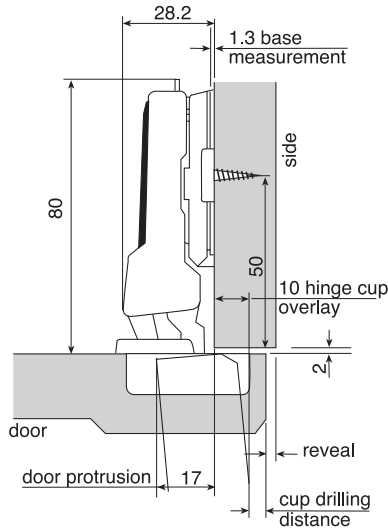
		Twist Lock Hinge Cup	
		Description	Item #
4606 Overlay	- self-closing	4606-T	18820
4608 Inset	- self-closing	4608-T	18821
4000-L varnish protection piece		4000-L	18937
4000-U twist connector for replacements, with tabs		4000-U	18839

T = Twist hinge, connector cup included; U = Connector cup.

	Description	Item #	Packaging
3606/4606/3608/4608	3606/4606 (black plastic)	55409	50 pieces (Imprinting available)
Cover Caps	3606/4606 (nickel plastic)	55410	50 pieces (Imprinting available)
	3608/4608 (black plastic)	12353	50 pieces (Imprinting available)
	3608/4608 (nickel plastic)	12354	50 pieces (Imprinting available)

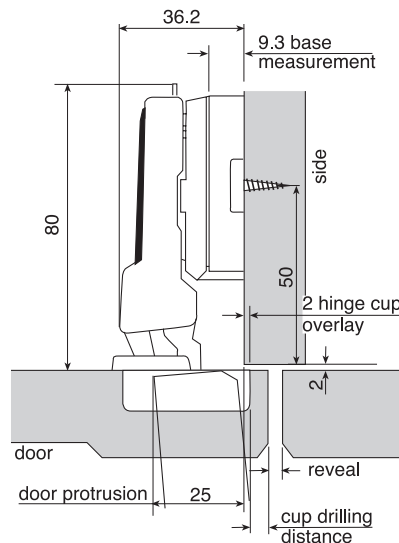
95° Snap-On 3000 Series & 4000 Twist Lock Series For Thick Doors

3606/4606 Overlay



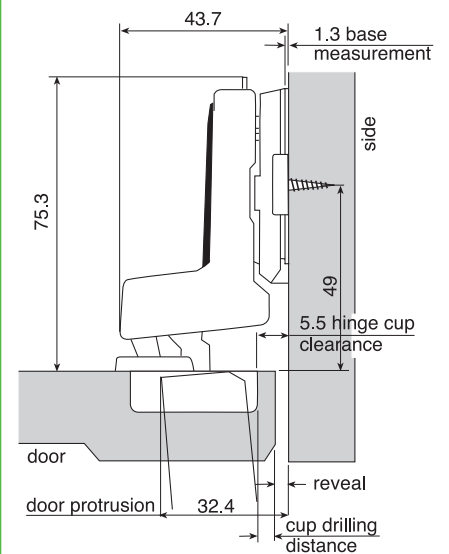
Overlay Chart 3606/4606	Cup Drilling Distance		
	3	4	5
Baseplate Thickness 1.3	13	14	15
Baseplate Thickness 4.3	10	11	12
Baseplate Thickness 9.3	5	6	7
Baseplate Thickness 12.3	2	3	4
Baseplate Thickness 20.3	-6	-5	-4 (Inset)

3606/4606 Half-Overlay
using 9.3mm Baseplate



Half-Overlay Chart 3606/4606	Cup Drilling Distance		
	3	4	5
Baseplate Thickness 9.3	5	6	7
Baseplate Thickness 12.3	2	3	4

3608/4608 Inset

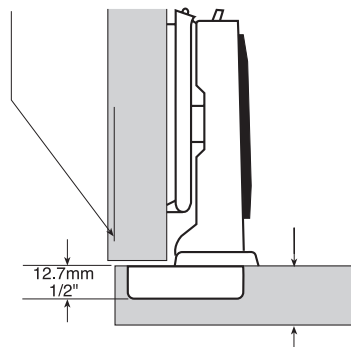


Option: 3606 with 20.3mm baseplate
4606 with 20.3mm baseplate

Inset reveal Chart 3608/4608	Cup Drilling Distance		
	3	4	5
Baseplate Thickness 1.3	-2.5	-1.5	-0.5
Baseplate Thickness 4.3	-5.5	-4.5	-3.5

Maximum Door Thickness
and Overlay

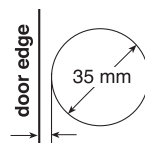
Maximum Door Overlay: 15mm (19/32") in neutral position on 1.3mm baseplate. For full flush 90° overlay, side panel must not exceed a thickness of 16mm (5/8"). The use of side panels thicker than 16mm (5/8") will result in side reveals.



Maximum Door Thickness: 16mm (5/8")-35mm (1 3/8"). Door over 25mm (1") must be beveled.

Cup Drilling

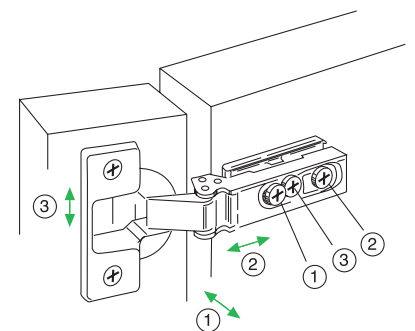
Cup Drilling Depth: 12.8mm (1/2")
Cup Drilling Distance: 3mm (1/8") to 5mm (3/16"), depending on end panel thickness and overlay desired.



Hinge Adjustments

- ① Side Adjustment +/-2mm
- ② Depth Adjustment +/-2mm
- ③ Height Adjustment .. +/-2mm

Note: Use a POZIdrive screwdriver for hinge adjustment.



3703/4703

110° Snap-On 3000 & Twist Lock 4000 Series




- Heat tempered, all-metal construction
- Three-dimensional adjustment in hinge arm
- Automatic, smooth-closing design for minimal abrasion and wear
- Accommodates overlays up to 21mm (26/32")
- Undue stress absorbed through self-tightening action
- Twist Lock requires a single 35mm bore hole and no tools for hinge assembly

3703/3704 & 4703/4704 Minimum Reveal (measured in millimeters)

Cup drilling distance	Door thickness									
	16	17	18	19	20	21	22	23	24	
3.0	1.4	1.7	2.0	2.2	2.6	2.9	3.9	5.3	6.7	
3.5	1.4	1.7	1.9	2.2	2.5	2.9	3.4	4.8	6.2	
4.0	1.4	1.7	1.9	2.2	2.5	2.9	3.2	4.3	5.7	
4.5	1.4	1.6	1.9	2.2	2.5	2.8	3.2	3.8	5.2	
5.0	1.4	1.6	1.9	2.1	2.5	2.8	3.1	3.6	4.7	
5.5	1.4	1.6	1.9	2.1	2.4	2.8	3.1	3.5	4.2	
6.0	1.4	1.6	1.9	2.1	2.4	2.7	3.1	3.5	3.9	

Ordering Information

Packaging:
300 pieces 
(50 pieces per interior box)
For baseplate selection, refer to
pages 26-28.

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 #
3703 Overlay	- self-closing	3703 VS	79839	3703 VS8	70039
	- free-swinging			3713 VS8	11157
3704 Half-Overlay	- self-closing	3704 VS	55411	3704 VS8	55413
	- free-swinging			3714 VS8	55414

VS = vertical steel cup, VS8 = vertical steel cup with two 8mm dowels

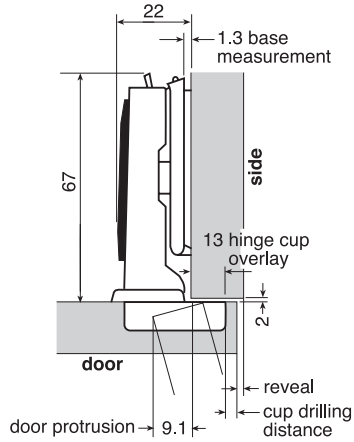
		Twist Lock Hinge Cup	
		Description	Item #
4703 Overlay	- self-closing	4703-T	18827
4704 Half-Overlay	- self-closing	4704-T	18828
4000-L varnish protection piece		4000-L	18937
4000-U twist connector for replacements, with tabs		4000-U	18839

T = Twist hinge, connector cup included; U = Connector cup.

	Description	Item #	Packaging
3703/4703/3704/4704	3703/4703 (black plastic)	12350	50 pieces (Imprinting available)
Cover Caps	3703/4703 (nickel plastic)	12351	50 pieces (Imprinting available)
	3704/4704 (black plastic)	55409	50 pieces (Imprinting available)
	3704/4704 (nickel plastic)	55410	50 pieces (Imprinting available)

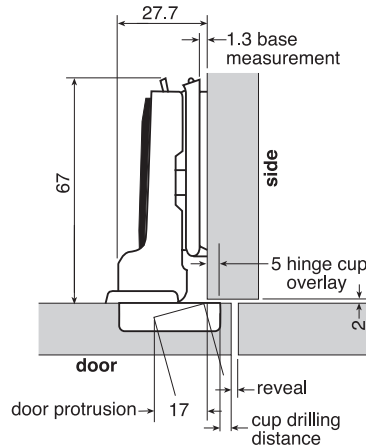
110° Snap-On 3000 Series & Twist Lock 4000 Series

3703/4703 Overlay



Overlay Chart		Cup Drilling Distance			
3703/4703		3	4	5	6
Baseplate Thickness	1.3	16	17	18	19
	4.3	13	14	15	16
	9.3	8	9	10	11
	12.3	5	6	7	8
	20.3	-3	-2	-1	0 (Inset)

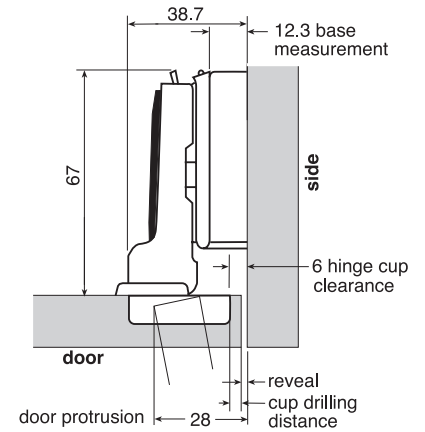
3704/4704 Half-Overlay



Option: 3703 with 9.3/12.3mm plate
4703 with 9.3/12.3mm plate

Half-Overlay Chart		Cup Drilling Distance			
3704/4704		3	4	5	6
Baseplate Thickness	1.3	8	9	10	11
	4.3	5	6	7	8
	9.3	0	1	2	3
	12.3	-3	-2	-1	0 (Inset)

3704/4704 Inset
using 12.3mm Baseplate

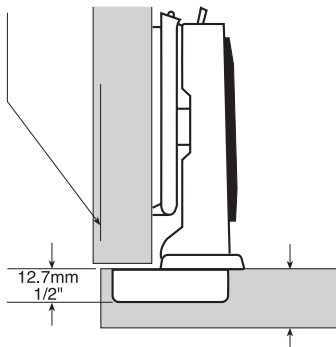


Option: 3703 with 20.3mm plate
4703 with 9.3/12.3mm plate

Inset Reveal Chart		Cup Drilling Distance			
3704/4704		3	4	5	6
Baseplate Thickness	12.3	-3	-2	-1	0

Maximum Door Thickness and Overlay

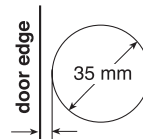
Maximum Door Overlay: 19mm (3/4") in neutral position on a 1.3mm baseplate.



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

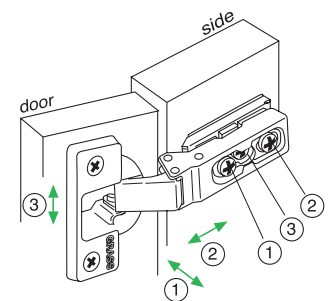
Cup Drilling

Cup Drilling Depth: 12.8mm (1/2")
Cup Drilling Distance: 3mm (1/8") to 6mm (1/4"), 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



3803/4803

120° Snap-On 3000 Series & Twist Lock 4000 Series




- Heat tempered, all-metal construction
- Three-dimensional adjustment in hinge arm
- Automatic smooth-closing design for minimal abrasion and wear
- Accommodates overlays up to 19mm (3/4")
- Undue stress absorbed through self-tightening action
- Twist Lock requires a single 35mm bore hole and no tools for hinge assembly

3803/3804 & 4803/4804 Minimum Reveal (measured in millimeters)

Cup drilling distance	Door thickness						
	16	17	18	19	20	21	22
3.0-4.5	1.4	1.7	2.0	2.4	4.1	5.8	7.6
5.0	1.2	1.6	1.9	2.1	2.5	3.8	5.6

Ordering Information

Packaging:
300 pieces 
(50 pieces per interior box)
*300 bulk
For baseplate selection, refer to
pages 26-28.

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 #
3803 Overlay - self-closing	3803 VS	79840	3803 VS8	70042
3804 Half-Overlay - self-closing	3804 VS	12634	3804 VS8	12638

VS = vertical steel cup, VS8 = vertical steel cup with two 8mm dowels

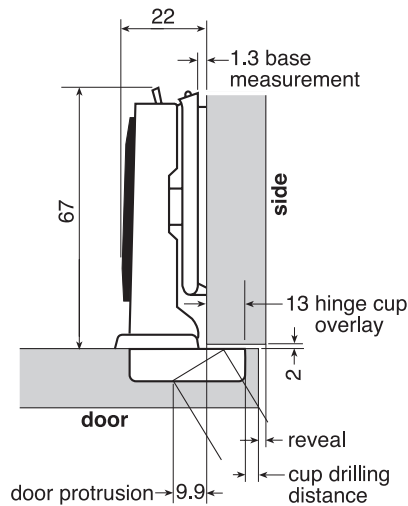
	Twist Lock Hinge Cup	
	Description	Item #
4803 Overlay - self-closing	4803-T	18831
4804 Half-Overlay - self-closing	4804-T	18832
4000-L varnish protection piece	4000-L	18937
4000-U twist connector for replacements, with tabs	4000-U	18839

T = Twist hinge, connector cup included; U = Connector cup.

	Description	Item #	Packaging
3803/4803/3804/4804	3803/4803 (black plastic)	12350	50 pieces (Imprinting available)
Cover Caps	3803/4803 (nickel plastic)	12351	50 pieces (Imprinting available)
	3804/4804 (black plastic)	55409	50 pieces (Imprinting available)
	3804/4804 (nickel plastic)	55410	50 pieces (Imprinting available)

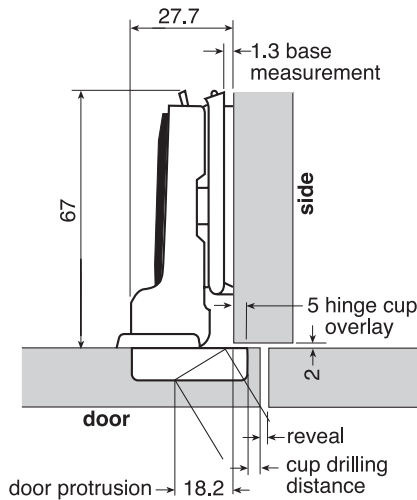
120° Snap-On 3000 Series & Twist Lock 4000 Series

3803/4803 Overlay



Overlay Chart 3803/4803	Cup Drilling Distance		
	3	4	5
Baseplate Thickness 1.3	16	17	18
4.3	13	14	15
9.3	8	9	10
12.3	5	6	7

3804/4804 Half-Overlay

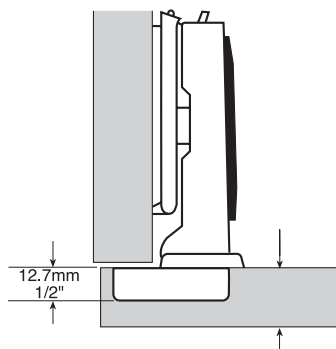


Option: 3803/4803 with 9.3/12.3mm plate

Half-Overlay Chart 3804/4804	Cup Drilling Distance		
	3	4	5
Baseplate Thickness 1.3	8	9	10
4.3	5	6	7
9.3	0	1	2

Maximum Door Thickness and Overlay

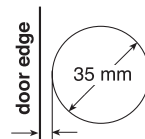
Maximum Door Overlay:
18mm (23/32") in a neutral position
on a 1.3mm baseplate.



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

Cup Drilling

Cup Drilling Depth: 12.8mm (1/2")
Cup Drilling Distance: 3mm (1/8") to
5mm (3/16"), depending on end panel
thickness and overlay desired.

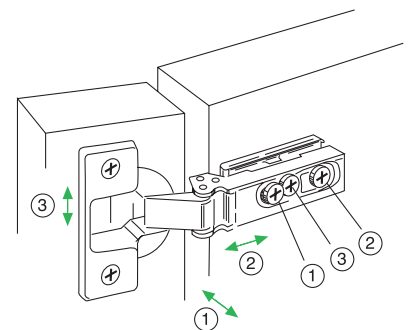


Hinge Adjustments

- 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



3903/4903

165° Snap-On 3000 Series & Twist Lock 4000 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")
- Twist Lock requires a single 35mm bore hole and no tools for hinge assembly

3903/3904 & 4903/4904 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 26-28.

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 #
3903 Overlay	- self-closing	3903 VZ	90110	3903 VZ8	09897
	- free-swinging			3913 VZ8	11154
3904 Half-Overlay	- self-closing	3904 VZ	18503	3904 VZ8	18504

VZ = vertical zinc cup, VZ8 = vertical zinc cup with two 8mm dowels

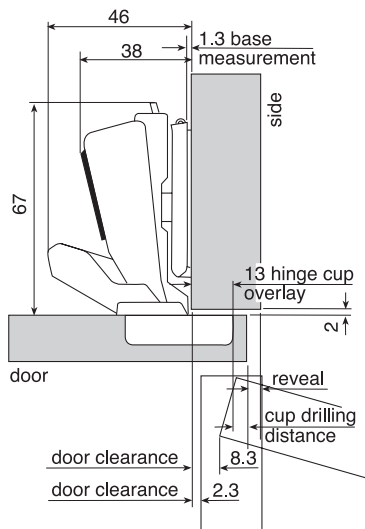
		Twist Lock Hinge Cup	
		Description	Item #
4903 Overlay	- self-closing	4903-T	18835
4904 Half-Overlay	- self-closing	4904-T	18836
4000-L varnish protection piece		4000-L	18937
4000-U twist connector for replacements, with tabs		4000-U	18839

T = Twist hinge, connector cup included; U = Connector cup.

	Description	Item #	Packaging
3903/4903/3904/4904	3903/3904/4903/4904 (black plastic)	89271	50 pieces (Imprinting available)
Cover Caps	3903/3904/4903/4904 (nickel plastic)	80322	50 pieces (Imprinting available)
Angle Reduction Clips	3903/4903/118°	12860	100 pieces
	3903/4903/135°	11590	100 pieces

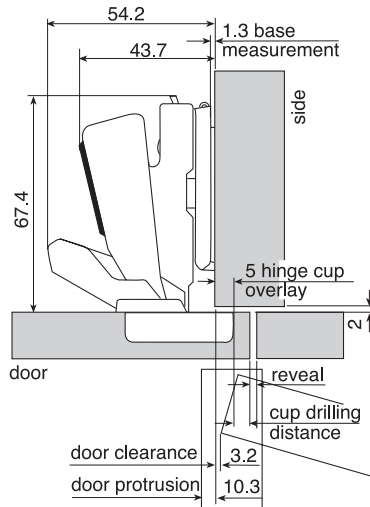
165° Snap-On 3000 Series & Twist Lock 4000 Series

3903/4903 Overlay



Overlay Chart 3903/4903		Cup Drilling Distance			
		3	4	5	6
Baseplate Thickness	1.3	16	17	18	19
	4.3	13	14	15	16
	9.3	8	9	10	11
	12.3	5	6	7	8
	20.3	-3	-2	-1	0 (Inset)
		Cup Drilling Distance			
		7	8	9	10
Baseplate Thickness	1.3	20	21	22	23
	4.3	17	18	19	20
	9.3	12	13	14	15
	12.3	9	10	11	12
	20.3	1	2	3	4

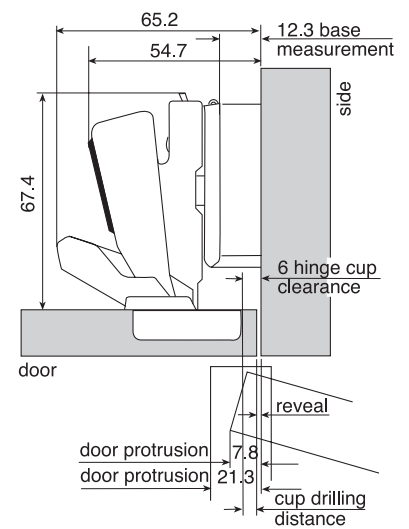
3904/4904 Half-Overlay



Option: 3903/4903 with 9.3/12.3mm plate

Half-Overlay Chart 3904/4904		Cup Drilling Distance			
		3	4	5	6
Baseplate Thickness	1.3	8	9	10	11
	4.3	5	6	7	8
	9.3	0	1	2	3
	12.3	-3	-2	-1	0 (Inset)
		Cup Drilling Distance			
		7	8	9	10
Baseplate Thickness	1.3	12	13	14	15
	4.3	9	10	11	12
	9.3	4	5	6	7
	12.3	1	2	3	4

3904/4904 Inset
using 12.3mm Baseplate

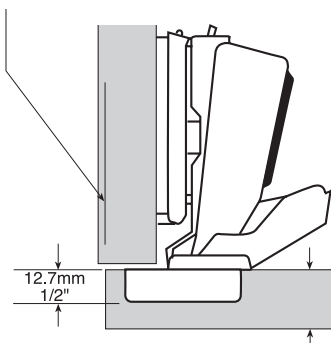


Option: 3903/4903 with 20.3mm plate

Inset Reveal Chart 3904/4904		Cup Drilling Distance			
		3	4	5	6
Baseplate Thickness	12.3	-3	-2	-1	0

Maximum Door Thickness
and Overlay

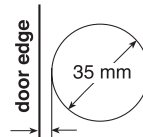
Maximum Door Overlay:
23mm (29/32") in neutral position
on a 1.3mm baseplate.



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

Cup Drilling

Cup Drilling Depth: 12.8mm (1/2")
Cup Drilling Distance: 3mm (1/8") to
10mm (3/8"), depending on end panel
thickness and overlay desired.

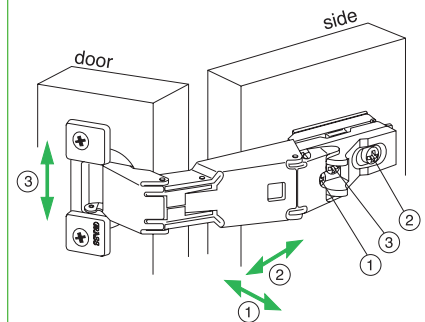


Hinge Adjustments

- 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

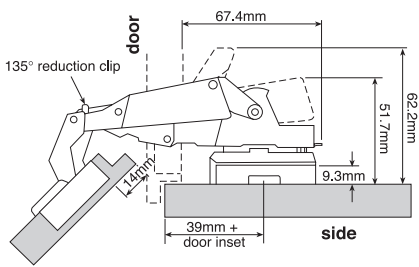


3903/4903

Special Applications

Lipped Door Application

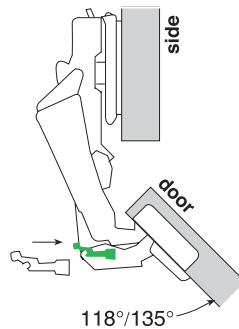
A lipped door application is possible using the 3904/4904 hinge and the 9.3mm baseplate. The boring distance for the hinge cup is moved to 14mm in order to clear the lip on the door. The use of the 135° reduction clip is also required to prevent the back edge of the door from striking the hinge arm.



118°/135° Reduction Clip Insertion

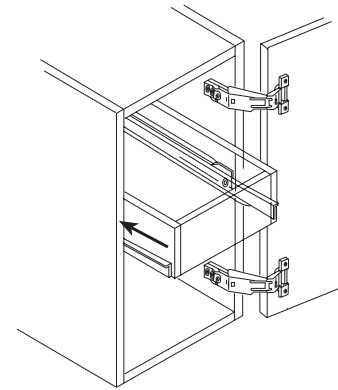
This clip can be added to any 3903/3904 and 4903/4904 hinge to reduce the opening angle from 165° to 135° or 118°. This may be necessary to prevent the door from striking an obstruction.

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.



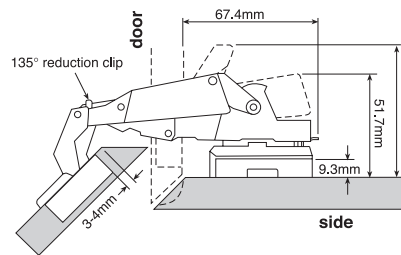
Zero Protrusion

In a full overlay application, the 3903/4903 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

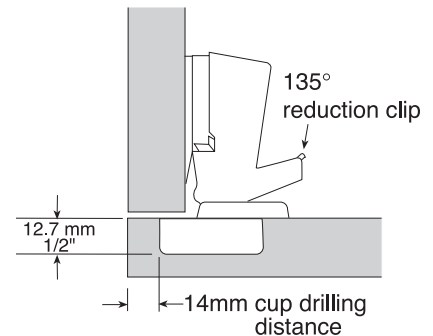
By mitering both the door and the end panel, a cabinet may be formed without panel edges being visible from either the front or the side. To accomplish this requires the use of the 3904/4904 hinge with the 135° reduction clip installed. The baseplate is 9.3mm for use on 16mm (5/8") or 19mm (3/4") panels. 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.



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

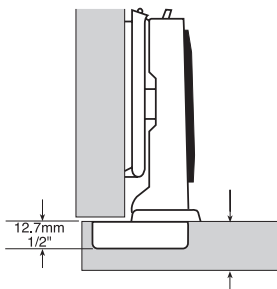
To determine the correct application, Grass strongly recommends a trial mounting for all hinges and baseplates.

- Heat tempered, all-metal construction
- Three-dimensional adjustment in hinge arm
- Automatic, smooth-closing design for minimal abrasion and wear
- Quick and simple installation and removal of hinge
- Dowels lock securely in material
- Available in overlay or half-overlay versions, inset applications optional with baseplates



Maximum Door Thickness and Overlay

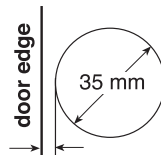
Maximum Door Overlay:
 3703VSM-21mm (26/32")
 3803VSM-19mm (3/4")
 3903VZM-25mm (1")



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

Cup Drilling

Cup Drilling Depth:
 12.8mm (1/2")
 Cup Drilling Distance:
 3703VSM-3mm (1/8") to 6mm (1/4")
 3803VSM-3mm (1/8") to 5mm (3/16")
 3903VZM-3mm (1/8") to 10mm (3/8")



Ordering Information

Packaging:
 300 pieces 
 *150 pieces
 (50 pieces per interior box)

IMPORTANT

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

		Overlay		Half-Overlay	
		Description	Item #	Description	Item #
3703, 110°	- self-closing	3703 VSM	28989	3704 VSM	28990
3803, 120°	- self-closing	3803 VSM	28992	3804 VSM	28991
3903, 165°	- self-closing	3903 VZM	28993*	3904 VZM	28994*

VSM = vertical steel cup, multilock. VZM = vertical zinc cup, multilock.
 See respective Grass catalog page for technical information.

Baseplates

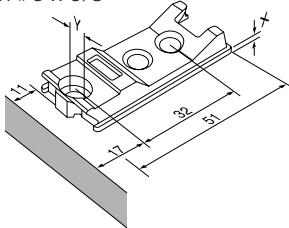
Straight Baseplates and Face Frame Adapters For 3000 & 4000 Series

- 3000 Snap-on baseplate system
- Straight and wing baseplates available in screw-on, dowelled and pre-mounted Euro screw
- Face Frame adapter plates for frame applications
- Face Frame adapter plates for inset applications



Screw-On Baseplates

Zinc baseplate
Attach with #6 x 5/8"



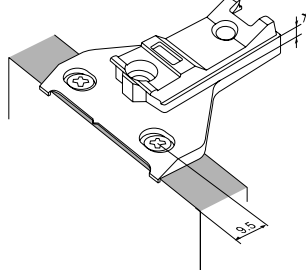
Straight Baseplates Screw-On

Description	Item #
G3/AZ 1.3/5.2	10717
G3/AZ 4.3/5.2	60174
G3/AZ 9.3/5.2	12355

Packaging: 1000 pieces
(50 pieces per interior bag)

Face Frame Adapter

Face Frame Adapter: FFA
Attach with 2x #6 x 5/8" FHP

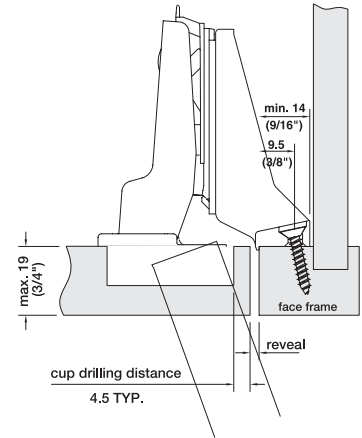


Face Frame Adapter

Description	Item #
G3/FFA 4.3mm	13159
G3/FFA 7.3mm	13160

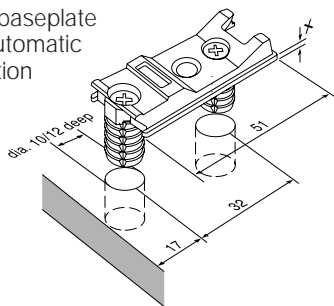
Face Frame Adapter, Inset

Attach with 2 #6 x 3/4" FHP screws. A third hole is available that will accept a #6 x 3/4" RHP screw.



Dowel Baseplates

Zinc baseplate
for automatic
insertion



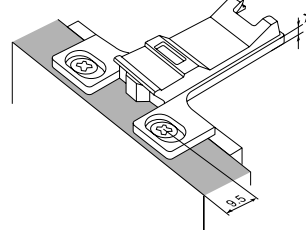
Straight Baseplates Dowelled

Description	Item #
G3/DZK 1.3/17	10722*
G3/DZK 4.3/17	60177*
G3/DZK 9.3/17	11519

Packaging: 500 pieces
(50 pieces per interior bag)
* 1000 pieces

Face Frame Adapter With Lip: FFAL

Attach with 4 x #6 x 5/8" FHP



Face Frame Adapter with Lip

Description	Item #
G3/FFAL 2.6mm	13158

Packaging : 300 pieces
(50 pieces per interior bag)

Face Frame Adapter, Inset

Description	Item #
G3/FFA/Inset 1.3mm (25/300)	39183
G3/FFA/Inset 9.3mm (25/300)	39184
FFA Inset Drill Template	31035

Packaging : 300 pieces
(25 pieces per interior bag)

Hinge Requirement Chart

Selected Hinge	Required Baseplate
3704/4704, 3904/4904	G3/FFA/Inset 1.3mm
3703/4703, 3903/4903	G3/FFA/Inset 9.3mm

G3 = Snap-on Baseplate, AZ = Straight, zinc die cast, DZK = 10mm dowels attached
FFA = Face Frame Adapter, FFAL = Face Frame Adapter with lip

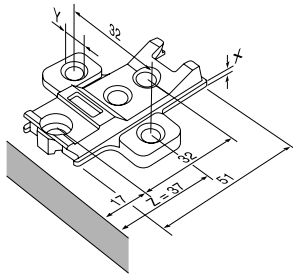
For overlay chart see page 28.

Wing Baseplates For 3000 & 4000 Series

Wing Baseplates - Screw-on

Zinc die cast, for use with wood screws or loose Euro screws

Attach with #6 x 5/8" FHP, 13mm Euro screw



Wing Baseplates
Screw-On

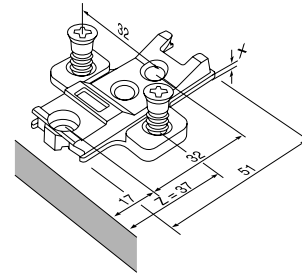
Description	Item #	Bulk Item #
G3/RZ 1.3/5.2/37 Nickel	10759	10760
G3/RZ 4.3/5.2/37 Nickel	10763	10764
G3/RZ 9.3/5.2/37 Nickel	10767	10768
G3/RZ 12.3/5.2/37 Nickel	30532	
G3/RZ 20.0/5.2/37 Nickel	30534	

Wing Baseplates
Euro Screw

Description	Item #	Bulk Item #
G3/RZ 1.3/6.8/37 Nickel	10761	10762
G3/RZ 4.3/6.8/37 Nickel	10765	10766
G3/RZ 9.3/6.8/37 Nickel	10769	10770
G3/RZ 12.3/6.5/37 Nickel	30533	
G3/RZ 20.0/6.5/37 Nickel	30535	
G3/RUK 3mm Wing Spacer	13462	

Wing Baseplates -
Pre-attached Euro screw

Zinc die cast, pre-attached Euro screws for easier handling



Wing Baseplates
Pre-attached Euro Screw

Description	Item #	Bulk Item #
G3/RZ 1.3/ES/37 Nickel	12643	06665
G3/RZ 4.3/ES/37 Nickel	10191	06668
G3/RZ 9.3/ES/37 Nickel	17672	06671

Packaging:

STANDARD PACK

- 1.3mm = 1000 pieces (50 pieces per interior bag)
- 4.3/9.3mm = 500 pieces (50 pieces per interior bag)
- 12.3/20mm = 300 pieces (50 pieces per interior bag)

BULK PACK

- 1.3/4.3mm = 1000 pieces bulk
- 9.3mm = 500 pieces bulk

G3 = Snap-on baseplate, ES = Pre-attached Euro screw, RZ = Wing, zinc die cast, RAW = Unplated baseplates

Note: To ensure maximum holding power, all screw holes must be utilized in all versions of baseplates

Baseplates

Baseplates for 3000 & 4000 Series

Hinge Overlay Chart For FFA Plates For 3000/4000 Hinge Series
For 3703/4703, 3803/4803, 3903/4903

Baseplate	Cup drilling distance	Ecopress fence setting	Overlay Hinge	Half-Overlay Hinge	
			Door overlay	Door overlay	
2.6	10	27.5	21.7	13.7	
2.6	9	26.5	20.7	12.7	
2.6	8	25.5	19.7	11.7	
2.6	7	24.5	18.7	10.7	
2.6	6	23.5	17.7	9.7	
2.6	5	22.5	16.7	8.7	
2.6	4	21.5	15.7	7.7	
2.6	3	20.5	14.7	6.7	
4.3	10	27.5	20	12	
4.3	9	26.5	19	11	
4.3	8	25.5	18	10	
4.3	7	24.5	17	9	
4.3	6	23.5	16	8	
4.3	5	22.5	15	7	
4.3	4	21.5	14	6	
4.3	3	20.5	13	5	
7.3	10	27.5	17	9	
7.3	9	26.5	16	8	
7.3	8	25.5	15	7	
7.3	7	24.5	14	6	
7.3	6	23.5	13	5	
7.3	5	22.5	12	4	
7.3	4	21.5	11	3	
7.3	3	20.5	10	2	

Refer to catalog pages for allowed cup drilling distances.

Cup Drilling Range

Hinge	Cup Drilling Distance Range
3703/4703	3mm-6mm
3704/4704	3mm-6mm
3803/4803	3mm-5mm
3804/4804	3mm-5mm
3903/4903	3mm-10mm
3904/4904	3mm-10mm

Hinge Overlay Chart For 3000/4000 Baseplate Series
For 3703/4703, 3803/4803, 3903/4903

Baseplate	Cup drilling distance	Ecopress fence setting	Overlay Hinge	Half-Overlay Hinge	Inset Hinge
			Door overlay	Door overlay	Inset reveal
1.3	10	27.5	23	15	
1.3	9	26.5	22	14	
1.3	8	25.5	21	13	
1.3	7	24.5	20	12	
1.3	6	23.5	19	11	
1.3	5	22.5	18	10	0.5
1.3	4	21.5	17	9	1.5
1.3	3	20.5	16	8	2.5
4.3	10	27.5	20	12	
4.3	9	26.5	19	11	
4.3	8	25.5	18	10	
4.3	7	24.5	17	9	
4.3	6	23.5	16	8	
4.3	5	22.5	15	7	
4.3	4	21.5	14	6	
4.3	3	20.5	13	5	
4.3 + spacer	10	27.5	17	9	
4.3 + spacer	9	26.5	16	8	
4.3 + spacer	8	25.5	15	7	
4.3 + spacer	7	24.5	14	6	
4.3 + spacer	6	23.5	13	5	
4.3 + spacer	5	22.5	12	4	
4.3 + spacer	4	21.5	11	3	
4.3 + spacer	3	20.5	10	2	
9.3	10	27.5	15	7	
9.3	9	26.5	14	6	
9.3	8	25.5	13	5	
9.3	7	24.5	12	4	
9.3	6	23.5	11	3	
9.3	5	22.5	10	2	
9.3	4	21.5	9	1	
9.3	3	20.5	8	0	
12.3	10	27.5	12	4	
12.3	9	26.5	11	3	
12.3	8	25.5	10	2	
12.3	7	24.5	9	1	
12.3	6	23.5	8	0	
12.3	5	22.5	7	-1	
12.3	4	21.5	6	-2	
12.3	3	20.5	5	-3	
20.0	6	23.5	0		
20.0	5	22.5	-1		
20.0	4	21.5	-2		
20.0	3	20.5	-3		

Refer to catalog pages for allowed cup drilling distances.

Spacer Wedge

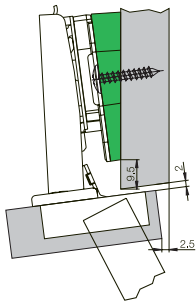
7.5° Spacer Wedge

- G3 Plastic Spacer Wedge is reversible for various angled door applications
- G3/RUK is used with 3000,4000 and Multi-Lock Hinge Series
- G3 Plastic Spacer, flat, is for use with wing baseplates for 3000, 4000, and Multi-Lock Series



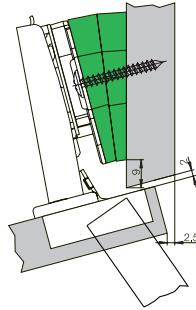
Overlay Application Solution 97.5°

With 1 Spacer Wedge

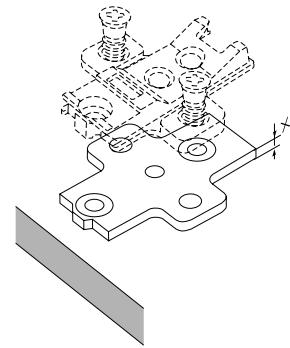


Overlay Application Solution 105°

With 2 Spacer Wedges

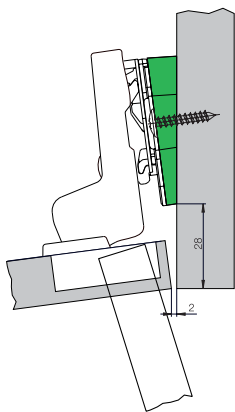


Plastic Spacer for Wing Baseplate, 3mm



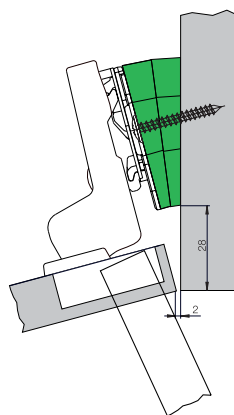
Inset Application Solution 97.5°

With 1 Spacer Wedge



Inset Application Solution 105°

With 2 Spacer Wedges



Ordering Information

Packaging:

50 pieces 

Description

Item #

Plastic Spacer Wedge 7.5°

G3/RUK 7.5°

38314

Plastic Spacer, Flat, 3mm

G3/RUK 3mm

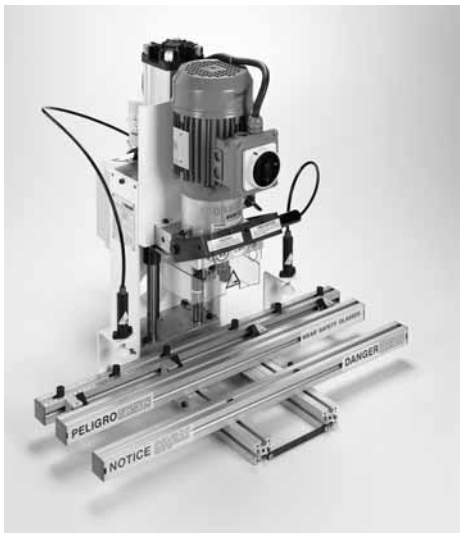
13462

Ecopress

Pneumatic and Manual Drilling and Insertion Machines

Ecopress - Pneumatic

- Easy add-on gearbox for 32mm drilling
- Bore depth automatically sets to material thickness
- Functional design
- Accurate fence is easily adjusted
- Chip removal by air
- Easy, fast and efficient operation
- Easy maintenance



Basic Outfit

Work table 450 x 730mm
 Pneumatic holddown kit
 5-spindle gearbox for hinges,
 baseplates and Zargen
 2 side stops, left
 1 side stop, right
 1 side stop, 13mm, right
 Insertion arm
 Tool set
 Operating instructions

Note: Bits not included
 Power supply
 Pneumatic: 80 psi compressed air, dry

Ordering Information

Description	Item #
Ecopress 440v/3ph	94559
Ecopress 220v/3ph	91932
Ecopress 220v/1ph	91931
Ecopress 110v/1ph	91933

Ecopress - Manual

- Easy add-on gearbox for 32mm drilling
- Bore depth automatically sets to material thickness
- Functional design
- Accurate fence is easily adjusted
- Easy, fast and efficient operation
- Easy maintenance
- No air required



Basic Outfit

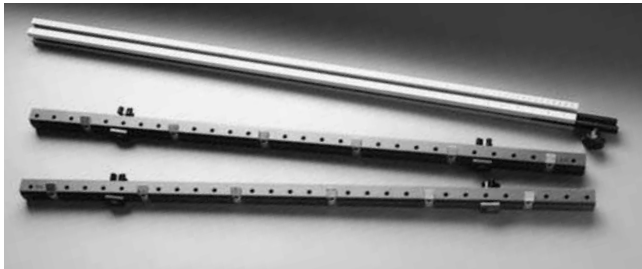
Work table 450 x 730mm
 5-spindle gearbox for hinges,
 baseplates and Zargen
 2 side stops, left
 1 side stop, right
 1 side stop, 13mm, right
 Insertion arm
 Tool set
 Operating instructions

Note: Bits not included

Ordering Information

Description	Item #
Ecopress 220v/1ph	91935
Ecopress 110v/1ph	91934

Extension Bar and Line Boring Guide



Gearbox and Insertion Dies



Ordering Information

Packaging: Each

Description	Item #
Ecopress 5-spindle gearbox for line boring	93785
3703/3803/383VS8 Insertion Die	90282
3903VZ8 Insertion Die	37552
3000 Straight Baseplate Insertion Die	90267
173/373/673VS8 Insertion Die - Plastic	30687
173/373/673VS8 Insertion Die - Aluminum	00011
193/393VZ8 Insertion Die	94351
Eco/Uni ID/Twist Lock	91285
9603 VZE Insertion Die	00055
TEC 862/861 Insertion Die - Plastic	30683
TEC 864/862/861 Insertion Die - Aluminum	00012
NOVA Front Clip Insertion Die	94488
Extension Bar, Type 1, 360-1360mm (1 pc)	37535
Extension Bar, Type 2, 1360-2360mm (1 pc)	37536
Line Boring Guide	13967
Linebore Guide for Hinging	30915
1/4" Ring Pin	30916
Ecopress Side-to-Side Stop	13902
NOVA Flipper	31029
Revolving Stop for Ecopress	93834
Additional Stop, Left	89610
Additional Stop, Right	89510
Additional Stop Quick Change Ratchet	30394
Raised Panel Stop	00292
Side Stop, Right Hand, 13mm	90520
Side Stop, Right Hand, 15mm	92045
Fence Pin	90521
2mm Spacer for Depth Stop	30952
3mm Spacer for Depth Stop	30951
5mm Spacer for Depth Stop	30950
Pneumatic Dryer with Bracket	00004
Filter for Pneumatic Dryer	00005

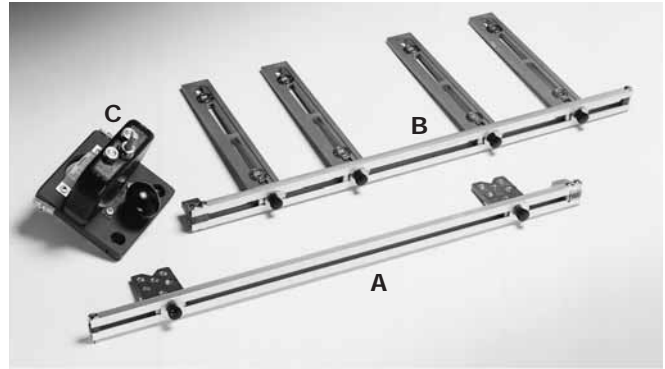
Assembly Tools

32mm Drill Template

Simple fixture for drilling 32mm line holes.
Requires the use of a Euro bit.



Assembly Tools



A Eurojig Baseplate locating tool for quick, easy baseplate positioning.

B Uniguide Drawer slide locating tool for fast, accurate cabinet member positioning.

C Euro Drill Compact, portable hand tool for Euro hinge drilling. (Requires drill - not included) (Bits not included) Can be used on a drill press with adapter stand.

Ordering Information

Packaging: Each 

Description	Item #
Uniguide Cabinet Member Drill Fixture	13951
Euro Drill - Model #300-G	13891
Euro Drill Stand Kit for Drill Press	30691
Euro Drill Stand extender bolts for thicker doors	30654
Eurojig (for baseplates)	30913
32mm Drill Template	31022
Euro Bit - for up to 6.5mm drill	31023
Drill for Euro Bit - 5mm	31024

Screws and Dowels

Euro Screws, Wood Screws and Dowels

Screws

Euro Screws: nickel plated, for use in 5mm system holes



Wood Screws: nickel plated, for hinge cups, baseplates, drawer slides, etc.



Dowels



Ordering Information

Packaging:
500 per bag



	Description	Item #	packaging
Euro Screws	13mm Euro Screw (1/2")	81015	
	18mm Euro Screw (11/16")	83000	
	7.5mm Euro Screw (5/16")	83001	
	13mm Euro Screw (1/2") Pan Head	13398	
Wood Screws	#6 x 1/2" FHP, NI	81014	
	#6 x 7/16" FHP, NI	81016	
	#6 x 5/8" FHP, NI	81001	
	#6 x 3/4" FHP, NI	81003	
	#6 x 1" FHP, NI	81004	
	#8 x 3/4" FHP, NI	81005	
	#10 x 5/8" PHP, NI, Pan Head w/shoulder	13397	
	#10 x 3/4" RHP, NI	81007	
Dowels	10mm dowel for baseplate	84902	each
	8mm dowel for VZ hinge cup	84938	each
	8mm dowel for VS hinge cup	30179	each
	8mm dowel for TEC 860 hinge cup	30670	each
	5mm dowel without screws (20 pcs)	98002	each
	6036 Dowel and screw set (D1)	12768	each
	6036 Dowel and Screw set (E1)	87398	each
	6036 Dowel	85685	each
6036 Screw	85686	each	

Assembly Hardware

Component Parts and Accessories

Screwdrivers



Door Stop



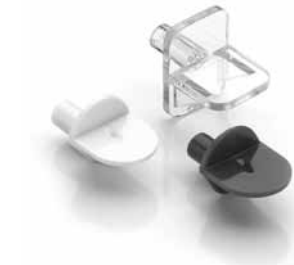
Bumper Pads



Press-in Bumpers



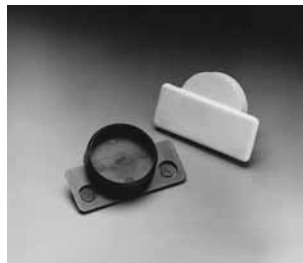
Shelf Supports



5mm Glass Shelf Support



Covercaps



Tape Measure



Bit Set



Twist Lock manual insertion tool



Assembly Hardware

Component Parts and Accessories

Ordering Information	Description	Item #	Packaging
Screw Drivers	Grass POZdrive screwdriver	98000	each
	Replaceable Tip POZdrive screwdriver	32373	each
	Replaceable POZdrive Tips	00071	each
Door Stops	H - 950 clear, door stop	00068	500/bag
	Face Frame door stop w/screw	00285	100/bag
Bumper Pads (plastic, round)	Round Bumper Pad, white, 1/8"	31001	500/bag
	Round Bumper Pad, clear, 1/8"	31002	500/bag
	Round Bumper Pad, white, 1/16"	31005	500/bag
	Round Bumper Pad, clear, 1/16"	31004	500/bag
Bumper Pads (foam, hexagonal)	Hexagonal Bumper Pad, butterscotch, 1/8"	00464	500/bag
Airsoft Pads (plastic, round)	3/32" (2.5mm) thick, 9.5mm (3/8") diameter, Clear	63480	500/bag
	3/16" (5mm) thick, 12mm (15/32") diameter, Clear	63481	500/bag
Press-in Bumpers	Brown	80130	100/bag
	Clear	80132	100/bag
	White	80131	100/bag
Shelf Supports (plastic, 5mm)	H - 802, clear, square	00036	500/bag
	H - 802, white, round	00054	500/bag
	H - 802, brown, round	00063	500/bag
Shelf Supports for Glass Shelves	10.5mm for 3mm line bore, nickel, black pad	80126	100/bag
	10.5mm for 3mm line bore, nickel, clear pad	80148	100/bag
	7.5mm for 5mm line bore, brass, black pad	80127	100/bag
	7.5mm for 5mm line bore, nickel, black pad	80128	100/bag
	7.5mm for 5mm line bore, nickel, clear pad	80147	100/bag
	10.5mm for 5mm line bore, nickel, black pad	80129	100/bag
	10.5mm for 5mm line bore, nickel, clear pad	80146	100/bag
	Locking Shelf Support, 3mm, nickel	80141	100/bag
	Locking Shelf Support, 5mm, nickel	80140	100/bag
	Cover Caps	35mm Cover cap, white	22227
35mm Cover cap, almond		22228	100/box
35mm Cover cap, brown		22229	100/box
Tape Measure	Grass Tape Measure 25'	00808	each
Drill Bits	American Bit Set (1x35mm RH, 2x8mm LH)	00213	each
	No Tip Bit Set (1x35mm RH, 2x8mm LH)	00008	each
Twist Lock manual insertion tool	Manual insertion tool, 4000 series hinges	91287	each

Conversion Charts

To decimal parts of inches and millimeters

Fraction	Inches	Millimeters
1/64	.0156	.3968
1/32	.0312	.7937
3/64	.0468	1.191
1/16	.0625	1.588
5/64	.0781	1.984
3/32	.0937	2.381
7/64	.1093	2.778
1/8	.125	3.175
9/64	.1406	3.572
5/32	.1562	3.969
11/64	.1718	4.366
3/16	.1875	4.763
13/64	.2031	5.159
7/32	.2187	5.556
15/64	.2343	5.953
1/4	.25	6.350
17/64	.2656	6.747
9/32	.2812	7.144
19/64	.2968	7.541
5/16	.3125	7.938
21/64	.3281	8.334
11/32	.3437	8.731
23/64	.3593	9.128
3/8	.375	9.525
25/64	.3906	9.921
13/32	.4062	10.391
27/64	.4218	10.715
7/16	.4375	11.113
29/64	.4531	11.509
15/32	.4687	11.906
31/64	.4853	12.303
1/2	.5	12.700

1 mm = .03937 in.

1 inch = 25.4 mm

1 meter = 3.2809 ft

To decimal parts of inches and millimeters

Fraction	Inches	Millimeters
33/64	.5156	13.097
17/32	.5312	13.494
35/64	.5468	13.891
9/16	.5625	14.288
37/64	.5781	14.684
19/32	.5937	15.081
39/64	.6093	15.478
5/8	.625	15.875
41/64	.6406	16.272
21/32	.6562	16.669
43/64	.6718	17.066
11/16	.6875	17.463
45/64	.7031	17.859
23/32	.7187	18.256
47/64	.7343	18.653
3/4	.75	19.050
49/64	.7656	19.447
25/32	.7812	19.844
51/64	.7968	20.241
13/16	.8125	20.638
53/64	.8281	21.034
27/32	.8437	21.431
55/64	.8593	21.828
7/8	.875	22.225
57/64	.8906	22.622
29/32	.9062	23.019
59/64	.9218	23.416
15/16	.9375	23.813
61/64	.9531	24.209
31/32	.9687	24.606
63/64	.9843	25.003
1	1	25.400





The star in your cabinet

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