



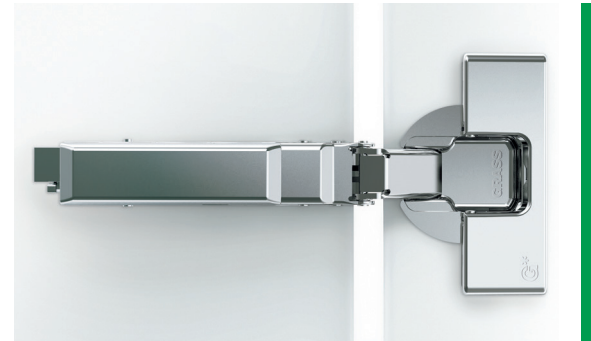
TIOMOS



G*GRASS®

TIOMOS HINGE SYSTEM

Integrated Soft-close, stylish design, maximum stability.
The best possible hinge solution for cabinet doors.







Tiomos, an elegant hinge system today that meets the technical and functional requirements of tomorrow.



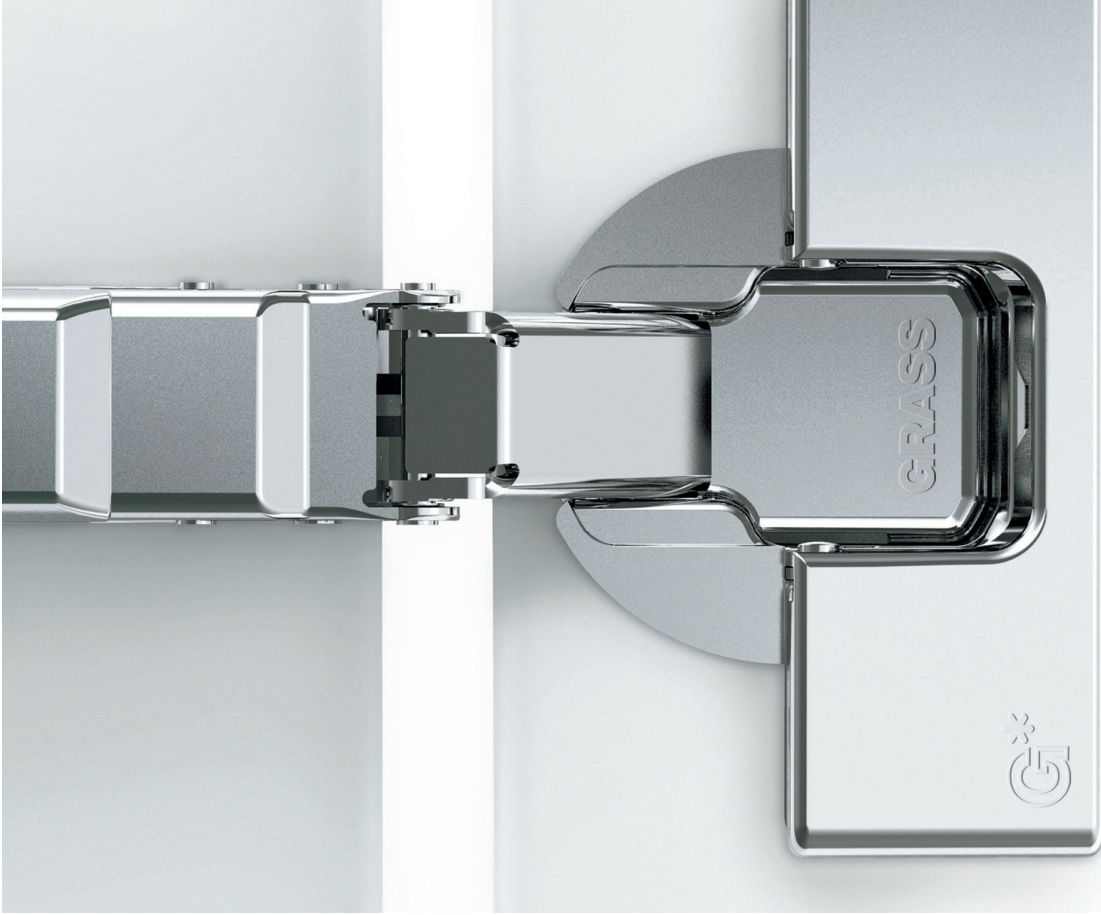
Our developers set out to create a completely new hinge system.

The result is Tiomos. Not only does Tiomos outperform any other hinge in the industry, it offers a timeless design as well as its own individual character.

The product range covers virtually every application, from standard doors to wide angle doors, from frameless applications to face frame applications. The Tiomos offers two closing actions: the standard Self-close and the popular Soft-close. The Soft-close offers a three tier adjustable mechanism, which is fully integrated and concealed in the hinge arm. The Soft-close

mechanism remains active through the duration of the close, resulting in an extremely smooth action. With the superb engineering and design, size and weight of the door will not be a factor. The doors pull open with ease and minimal gaps can be achieved due to the design of the hinge.

Tiomos - the ideal solution to the ever increasing requirements of today's manufacturers.



Tiomos - One hinge system to cover all applications.

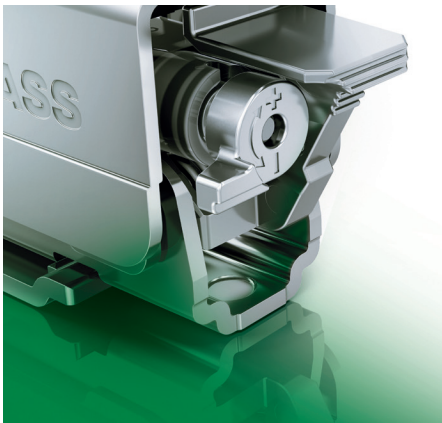
Meet Tiomos, an evolutionary hinge system that offers the best possible movement for cabinet doors.

Tiomos provides perfect movement for essentially every application, from standard doors to wide angle doors, from diagonal corner hinges to pie-cut corner hinges, and from frameless applications to face frame applications. Tiomos is available in a 45mm or 42mm boring pattern for dowelled hinges and 45mm for screw-on hinges. The Tiomos Impresso, the ever popular tool-free version, is available in a combined 42/45mm pattern.



TIOMOS HINGE SYSTEM

One hinge system featuring a multitude of innovative aspects.



Soft-close technology is concealed within the hinge arm.

Three levels of closing pressure are available with the Tiomos adjustable Soft-close mechanism, which is fully integrated and concealed in the hinge arm. The hinges arrive with the adjustment lever in the horizontal position. A turn to the left or the right will adjust the Soft-close mechanism to your individual requirements.



For stronger damping action, turn the adjustment lever by 90° to the right.



Perfect alignment with a twist of the hand.

For fine adjustment, the Tiomos hinge system offers 3-dimensional adjustment. Depth adjustment (+3/-2mm) is based on the worm screw principle and is continuous and self-locking. Depending on the type of base plate chosen, height adjustment ($\pm 2\text{mm}$) can be achieved via a worm screw or through elongated holes ($\pm 2.5\text{mm}$). Side adjustment ($\pm 2\text{mm}$) is on the hinge arm.



Tiomos hinges leave the factory with the adjustment lever in the horizontal position.



The kinematics inside Tiomos.

The complex inner workings of this high-tech hinge are hidden from view, but they are most impressive when working as one. With the kinematics in place the doors are extremely easy to open. This mechanism makes alignment with the smallest of gaps and reveals possible, opening up new possibilities to cabinet designers.



For a gentler closing action, the adjustment lever of the Soft-close damper is turned to the left by 90°.

Opening Angle		Description	Full Overlay	Overlay	Half Overlay	Inset	Page
		Features and Benefits					8
		Technical Information					10
110°		Tiomos 110 <ul style="list-style-type: none"> Optimal reveals up to 24mm door thickness Convenient depth adjustment via worm screw 					16
110°		Tiomos 110 Tipmatic Plus <ul style="list-style-type: none"> Push to open for handle-free doors Works with Grass Tipmatic Pin system 					17
120°		Tiomos 120 <ul style="list-style-type: none"> Optimal reveals up to 24mm door thickness Convenient depth adjustment via worm screw 					20
155°		Tiomos 155 <ul style="list-style-type: none"> Optimal reveals up to 32mm door thickness Zero protrusion For cabinets with inset drawers or pull-out shelves 					22
95°		Tiomos 95 <ul style="list-style-type: none"> Optimal reveals up to 36mm door thickness Convenient depth adjustment via worm screw 					26
110°		Tiomos 110/90 <ul style="list-style-type: none"> Hinge for blind corner cabinets Convenient depth adjustment via worm screw 					28
110°		Tiomos 110/30A <ul style="list-style-type: none"> For 30° angled cabinets, overlay Convenient depth adjustment via worm screw 					30
110°		Tiomos 110/45A <ul style="list-style-type: none"> For 45° angled cabinets, overlay Convenient depth adjustment via worm gear 					32
110°		Tiomos 110/45E <ul style="list-style-type: none"> For 45° angled cabinets, inset Convenient depth adjustment via worm screw 			Corner Angle 		34
120°		Tiomos 120/-15A <ul style="list-style-type: none"> For -15° angled cabinets, overlay Convenient depth adjustment via worm screw 					36
120°		Tiomos 120/-45A <ul style="list-style-type: none"> For -45° angled cabinets, overlay Convenient depth adjustment via worm screw 					38
110°		Tiomos PCC <ul style="list-style-type: none"> For pie-cut corner application Convenient depth adjustment via worm screw 					40

Table of Content

Opening Angle		Description	Full Overlay	Overlay	Half Overlay	Inset	Page
110°		Tiomos M9 <ul style="list-style-type: none"> For door thicknesses from 12mm (15/32") to 28mm (1 1/8") Convenient depth adjustment via worm screw 					42
125°		Tiomos M0 <ul style="list-style-type: none"> For door thickness from 6mm (1/4") to 10mm (3/8") Convenient depth adjustment via worm screw 					46
		Tiomos Base Plates <ul style="list-style-type: none"> Wing base plates Straight base plates Face frame base plates 					48
		Tipmatic <ul style="list-style-type: none"> For use with Grass Tipmatic Plus For handle-free wooden doors 					52
90°		Tiomos Flap Hinge <ul style="list-style-type: none"> For fold down flap For Flap thickness up to 21mm (13/16") Overlay up to 19mm (3/4") 					54
		Accessories					56
		Machinery <ul style="list-style-type: none"> Grass PRO1 for 45mm boring 					61

Features and Benefits

Tiomos

Features



- Adjustable 3-tier Soft-close mechanism integrated and concealed in the hinge arm
- Continuous, smooth closing action from the degree that the Soft-close is activated until the door is completely closed
- Uniform closing action regardless of the door size, weight, or materials
- Soft-close mechanism can be adjusted easily and without tools, even after doors are installed
- Wide selection of hinges and specialty hinges cover all application needs
- Increased applications:
 - Full overlay from 24 - 13.5mm
 - Overlay from 19 - 11.5mm
 - Half Overlay from 12.5 - 5mm
 - Inset

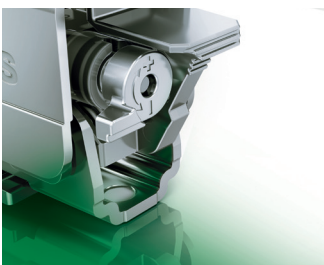
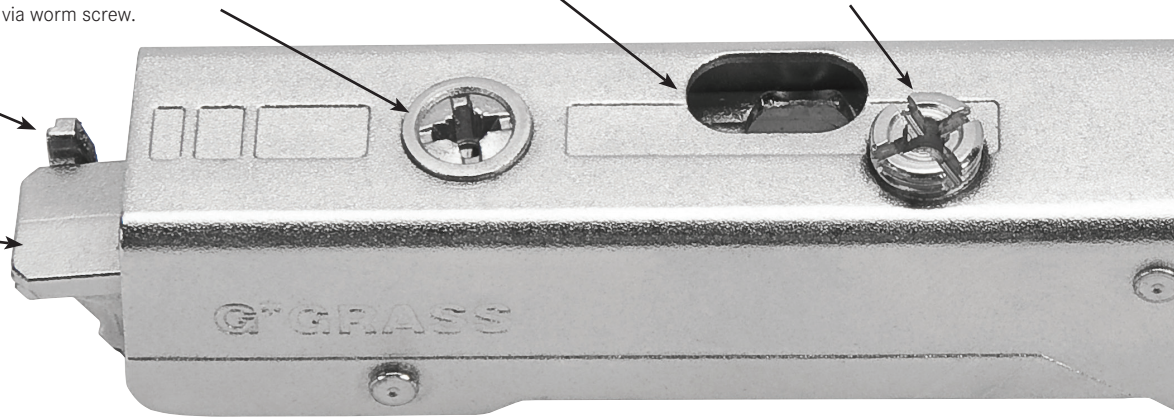
Integrated damper adjustment
with 3 Soft-close settings. Adjustment system is concealed in the hinge arm.

Depth adjustment (+3/-2mm)
is smooth and self-locking via worm screw.

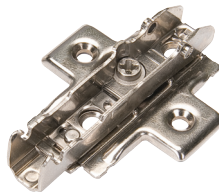
Easy height adjustment (± 2 mm)
via hinge arm on baseplate

Side adjustment (± 2 mm)
with overturn stop

Ergonomic clip
release with audible locking



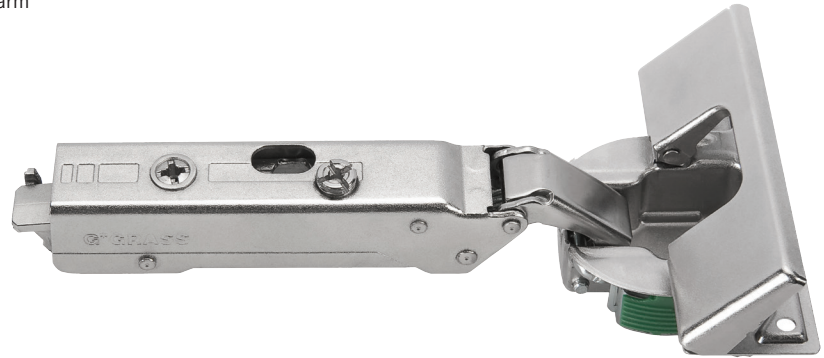
3 Soft-close settings
adjust to meet your individual Soft-close requirements.



Height adjustment
is based on the worm screw principle that is continuous and self-locking.

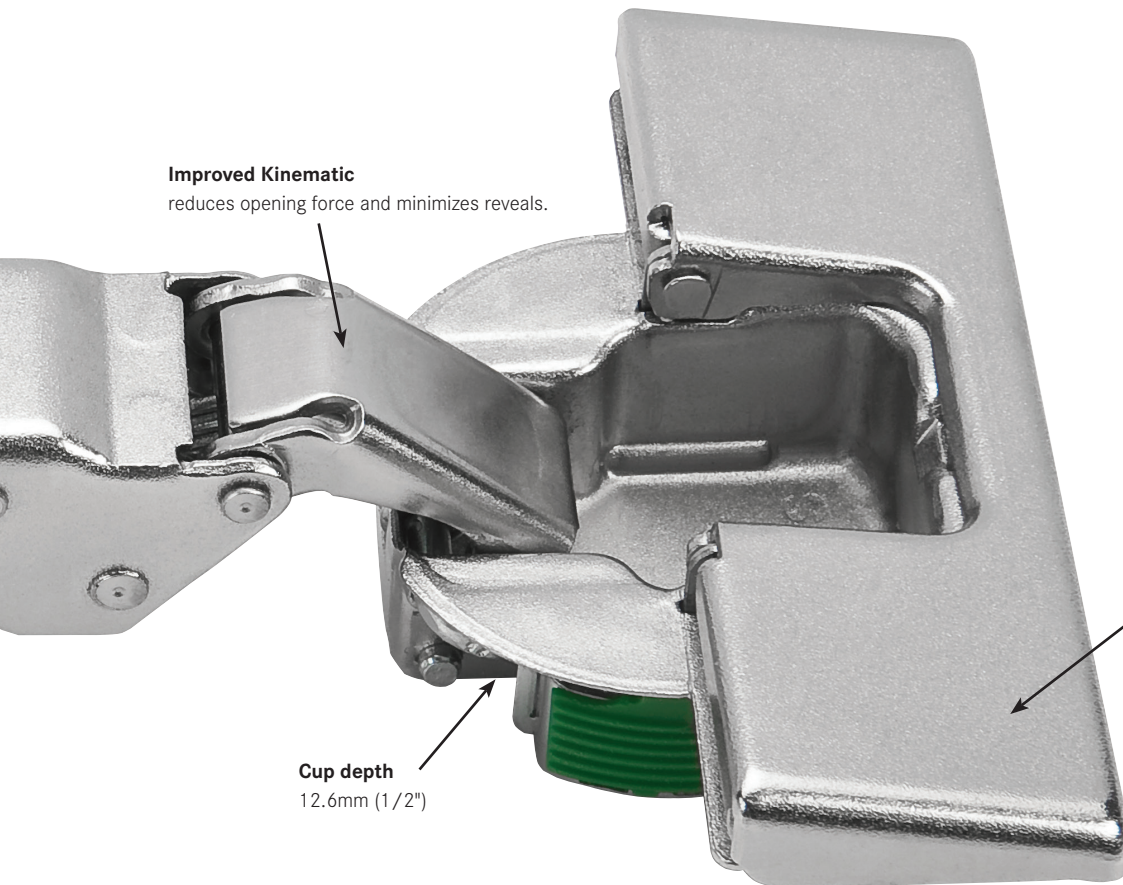
Features

- One hinge type for all door thicknesses up to 24mm
- 3-dimensional adjustment with suitable base plate
 - Depth adjustment +3/-2mm via self-locking worm screw
 - Height adjustment +/-2mm on base plate via hinge arm
 - Side adjustment with overturn stop +/-2 via hinge arm
- Soft-close or Self-close hinges are available
- For face frame or frameless applications
- Impresso for tool-free application
- 42mm and 45mm boring patterns



Impresso Hinges
for tool-free application
Insertion instructions on page 14.

Improved Kinematic
reduces opening force and minimizes reveals.



Tiomos Styles
42mm pattern, Dowelled
45mm pattern, Screw-on and Dowelled
42/45mm pattern, Impresso

Cup depth
12.6mm (1/2")

Dowelled and Screw-on
cup attachments. Dowelled available
in both 42mm and 45mm patterns.
Screw-on available in 45mm pattern.



Technical Information

For Tiomos

Number of Hinges Per Door

The number of hinges is determined by the door height, door weight, quality of the door material, and the fixing of the cup and base plate.

The load and height data refer to 24" standard door widths.

The table refers to hinges with and without integrated dampers.

Grass strongly recommends a trial mount for all hinges and base plates.

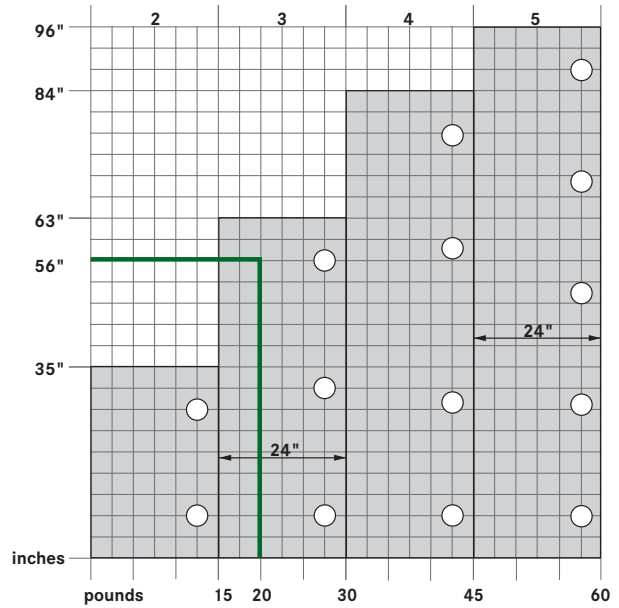
Attach base plates using all available screw holes.

Example:

For doors measuring 56" x 24" and weighing 19 lb, Grass recommends the installation of 3 hinges.

Note: The distance between the top and bottom hinge must be greater than the width of the door.

The **Tiomos** hinge meets and exceeds the minimum requirements of ANSI/BHMA A156.9 Standard.



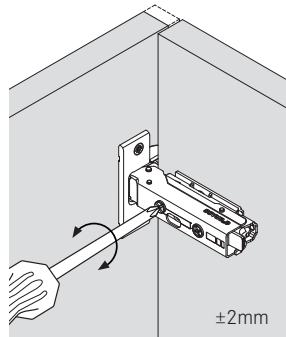
Adjustments

The options for height adjustment depend on the type of base plate. All adjustments can be made independent of one another.

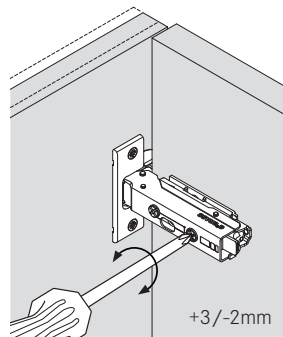
For depth adjustment, select base plates have worm screw adjustment access through the hinge arm.

Use a #2 POZI drive screwdriver for hinge adjustments.

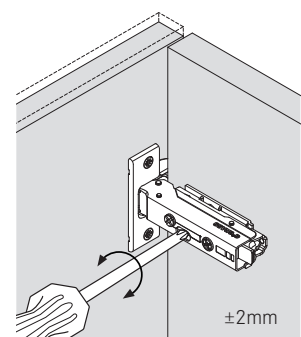
Attach base plates using all available screw holes.



Side adjustment



Depth adjustment via worm screw

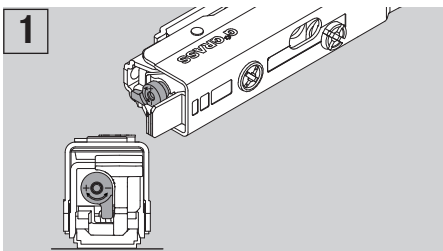


Height adjustment via base plate

Tool-free Soft-close Adjustment

Soft-closing performance can be regulated for any door size and weight with the Tiomos adjustable integrated Soft-close.

Depending upon the requirement, the Soft-close settings can be adjusted easily and without tools. With 2 hinges there are 6 Soft-close settings.

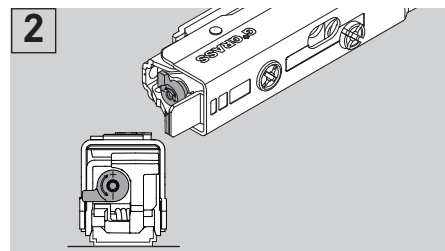


Light setting

Adjustment lever points toward the cabinet wall

Appropriate for:

- Small, light doors

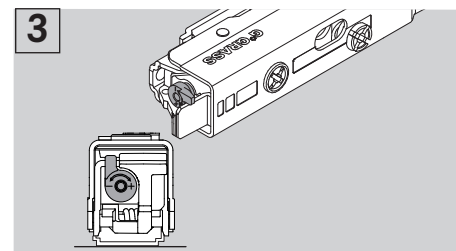


Medium setting (factory setting)

Adjustment lever is parallel to the cabinet wall. This setting covers 80% of door applications.

Appropriate for:

- Standard doors



Strong setting

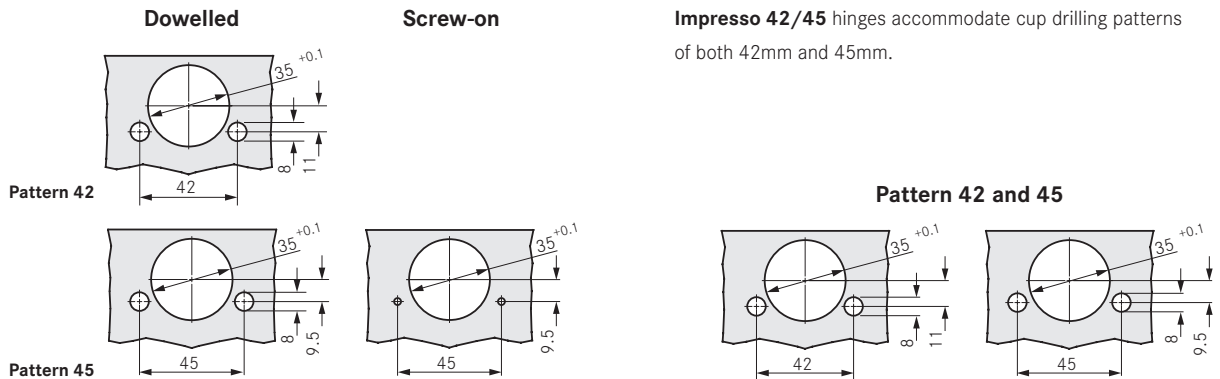
Adjustment lever points toward the cabinet interior

Appropriate for:

- Large, heavy doors

Tiomos Drilling Patterns

Tiomos Impresso Drilling Patterns

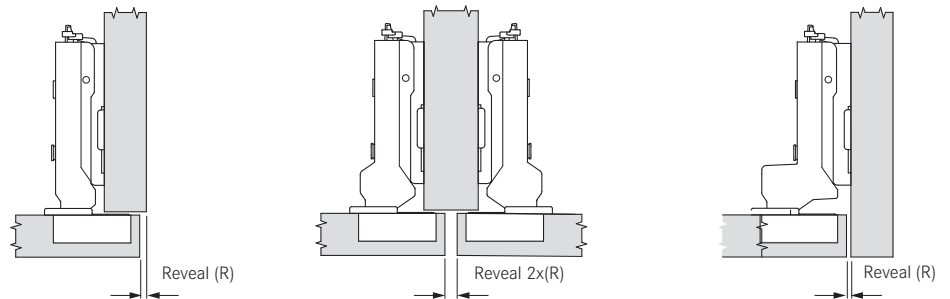


Impresso 42/45 hinges accommodate cup drilling patterns of both 42mm and 45mm.

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 Reveal for Inset Door

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)				

The table shows the minimum reveal for an inset door, depending on the drilling distance and base plate height.

Example: A drilling distance of 6mm results from using a base plate with height 03 in a reveal of 1mm.

Minimum Reveal (R)	Drilling Distance (DD)				
	3	4	5	6	7
0		0		2	3
.5					3.5
1	0		2	3	
1.5				3.5	
2		2	3		
3	2	3			
4	3				
	Base Plate Height (BPH)				

Note:

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

IMPORTANT

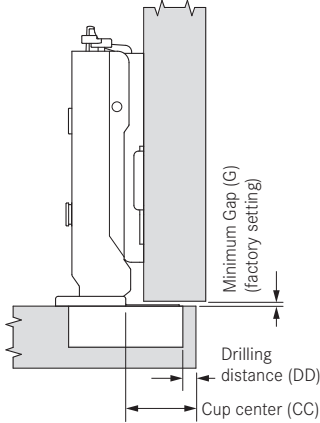
To determine the correct application Grass strongly recommends a trial mounting for all hinges and base plates.

Technical Information

Tiomos

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)	
1/8"	3	13/16"	20.5
5/32"	4	27/32"	21.5
3/16"	5	7/8"	22.5
1/4"	6	15/16"	23.5
9/32"	7	31/32"	24.5
5/16"	8	1"	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.

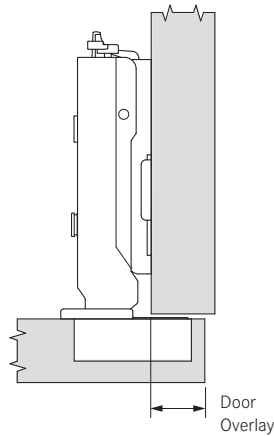
Example:

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

Door Thickness (DT)	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.



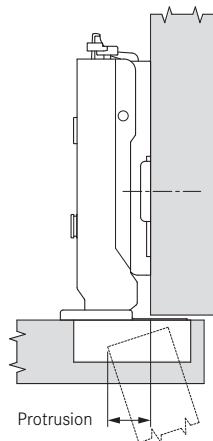
Example:

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.

Door Overlay	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.

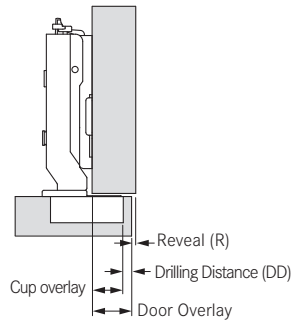


Door Positions

Achieve overlay with hinge cranking

Full Overlay (Cranking 00)

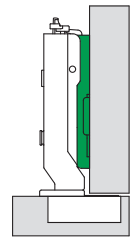
The cup overlay (factory setting) plus drilling distance determines the door overlay. Dimensions can be found in a table on the respective page of the catalog.



Achieve overlay with base plate

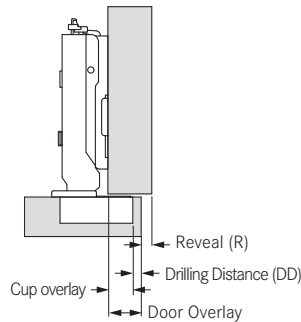
Full Overlay

Using a hinge with a cranking of 00 and a base plate height (BPH) 00



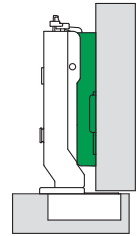
Overlay (Cranking 03)

The cup overlay (factory setting) plus drilling distance determines the door overlay. Dimensions can be found in a table on the respective page of the catalog.



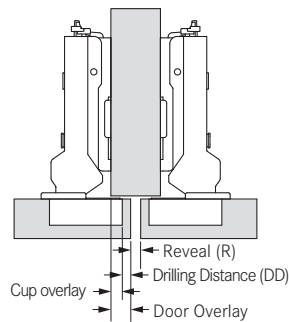
Overlay

Using a hinge with a cranking of 00 and a base plate height (BPH) 03



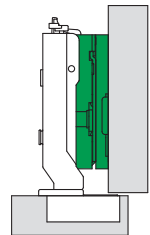
Half Overlay (Cranking 9.5)

The cup overlay (factory setting) plus drilling distance determines the door overlay. Dimensions can be found in a table on the respective page of the catalog.



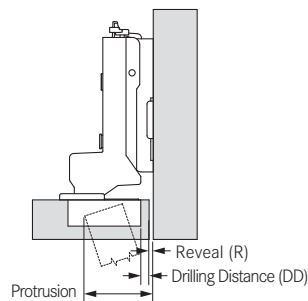
Half Overlay

Using a hinge with a cranking of 00 and a base plate height (BPH) 9.5



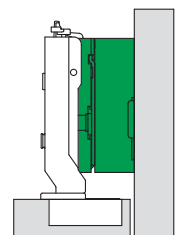
Inset (Cranking 19)

There is no door overlay. The reveal between the side of the cabinet and the door depends on the base plate height (BPH) and the drilling distance (DD). Dimensions can be found in a table on the respective page of the catalog.



Inset

Using a hinge with a cranking of 00 and a base plate height (BPH) 21



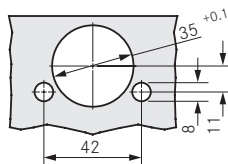
Insertion Instructions

Tiomos Impresso

Tiomos Impresso



The Tiomos Impresso is a high quality, performance hinge with superior strength. For the best results for cup insertion into a door, please follow the guide shown below.



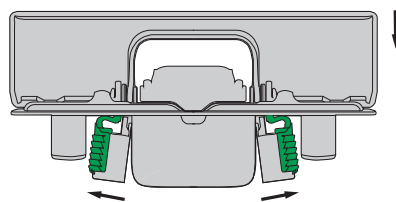
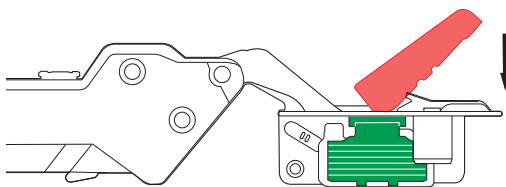
IMPORTANT

Cup bore hole diameter must be within 35mm - 35.1mm range.

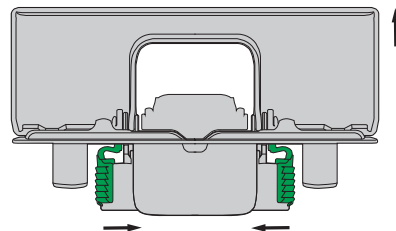
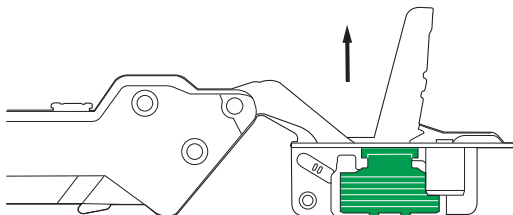
Instructions for Impresso Insertion

Begin with hinge in the open position and not mounted on door.

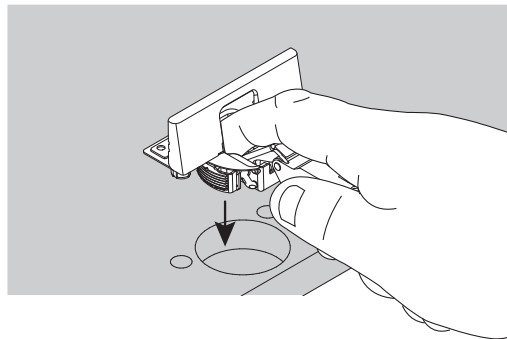
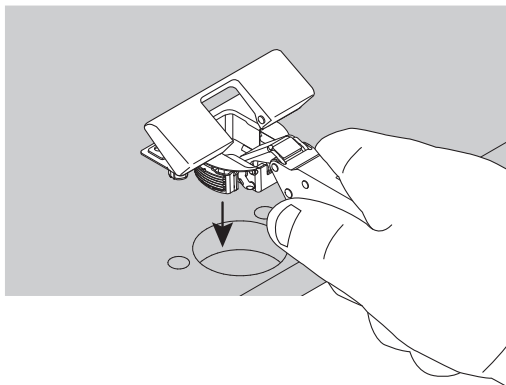
If the hinge cup flap is partially closed due to shipping and handling, lift flap to upright position before inserting into door as illustrated.



Ensure that expanding green brackets are in loose/neutral position before inserting into door.



For fast and easy insertion, use index finger to push cup into door.



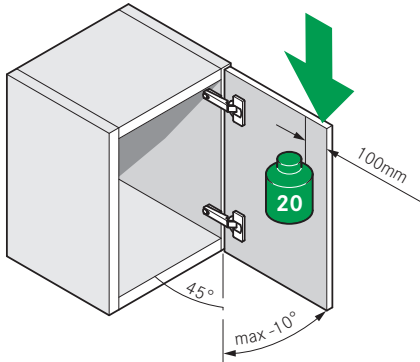
Testing Information

Tiomos

Functional Test

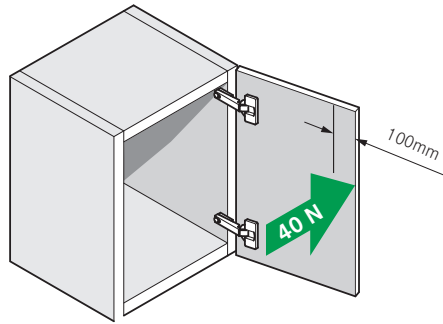
Static Load - vertical

Additional load: 44 lb (20 kg)
Opening angle: max -10°



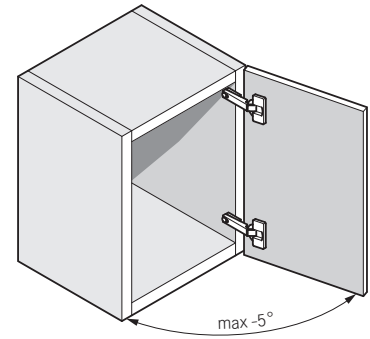
Static Load - horizontal

Force: 40 N



Endurance Test

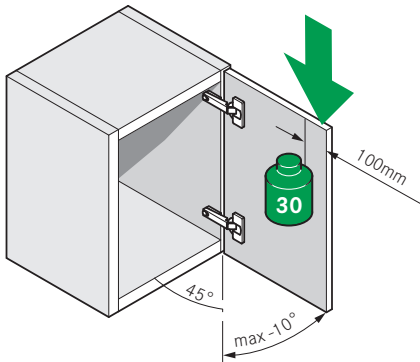
Opening angle: max -5°
Open and close movements: 100,000



Overload Testing

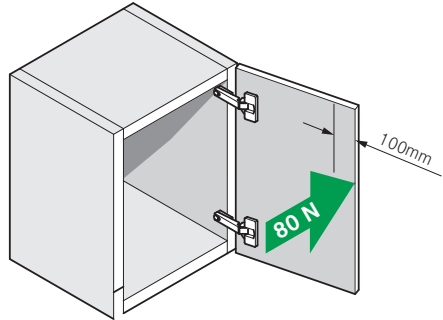
Vertical

Additional load: 66 lb (30 kg)
Opening angle: max -10°



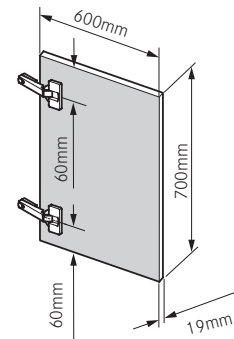
Horizontal

Force: 80 N



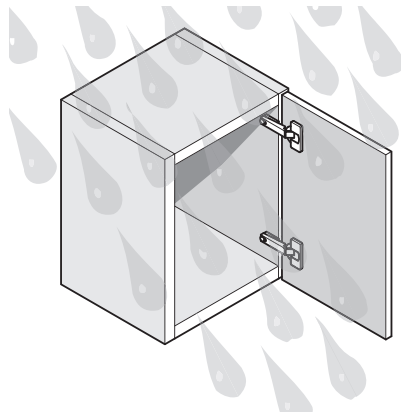
Test Door

Weight approximately 11.5 lb (5.2 kg)



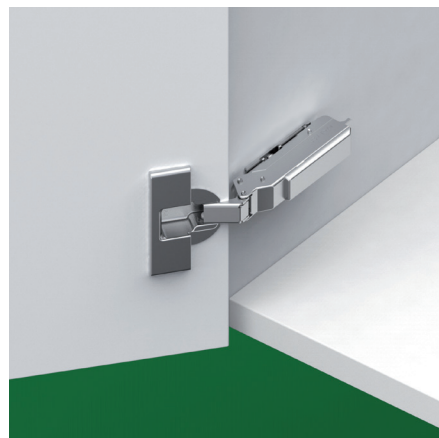
Salt Spray and Humidity Test

Based on DIN ISO 9227 and DIN 6270-2

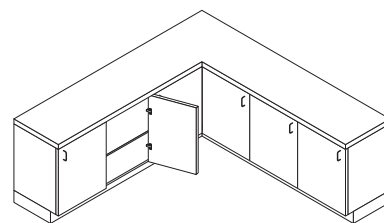


Tiomos 110

110° hinge for standard doors



- 3-dimensional adjustment with suitable base plate
- Accommodates overlays up to 24mm (15/16")
- Optimal reveal up to 24mm door thickness
- Soft-close or Self-close hinges available
- For face frame or frameless cabinets
- Convenient depth adjustment with worm screw



Tiomos 110 Opening Angle 110°						Impresso		Screw-On		Dowelled	
Full Overlay	Cranking 00	Pattern	Type	Item No.	PU	Pattern	Type	Item No.	Item No.	PU	
	Hinge cup: steel, nickel-plated	42/45	Soft-close	F017139414228	150	45	Soft-close	F028138519228	F028138523228	150	
	Hinge arm: steel, nickel-plated	42/45	Self-close	F034139385228	150	45	Self-close	F045138457228	F045138461228	150	
						42	Soft-close	-	F028138341228	150	
						42	Self-close	-	F045138279228	150	
Overlay	Cranking 03	Pattern	Type	Item No.	PU	Pattern	Type	Item No.	Item No.	PU	
	Hinge cup: steel, nickel-plated	42/45	Soft-close	F017139415228	150	45	Soft-close	F028138520228	F028138524228	150	
	Hinge arm: steel, nickel-plated	42/45	Self-close	F034139386228	150	45	Self-close	F045138458228	F045138462228	150	
		42/45	Free-swing	F035139443228	150	42	Soft-close	-	F028138342228	150	
						42	Self-close	-	F045138280228	150	
Half Overlay	Cranking 9.5	Pattern	Type	Item No.	PU	Pattern	Type	Item No.	Item No.	PU	
	Hinge cup: steel, nickel-plated	42/45	Soft-close	F017139416228	150	45	Soft-close	F028138521228	F028138525228	150	
	Hinge arm: zinc, nickel-plated	42/45	Self-close	F034139387228	150	45	Self-close	F045138459228	F045138463228	150	
		42/45	Free-swing	F035139444228	150	42	Soft-close	-	F028138343228	150	
						42	Self-close	-	F045138281228	150	
Inset	Cranking 19	Pattern	Type	Item No.	PU	Pattern	Type	Item No.	Item No.	PU	
	Hinge cup: steel, nickel-plated	42/45	Soft-close	F017139417228	150	45	Soft-close	F028138522228	F028138526228	150	
	Hinge arm: zinc, nickel-plated	42/45	Self-close	F034139388217	50	45	Self-close	F045138460228	F045138464228	150	
						42	Soft-close	-	F028138344217	50	
						42	Self-close	-	F045138282228	150	

Cover Cap with Clip Protector	Item No.	PU
Plastic, black	F072140504247	1000
For installation see page 57		

Hinge Clip Protector	Item No.	PU
Plastic, grey	F072135807540	500
For installation see page 57		

Cover Caps	Item No.	PU
Steel, nickel-plated	F072135500247	1000

Opening Angle Reduction Clip to 85°	Item No.	PU
Steel, nickel	F072135751517	50
For installation see page 56		

Hinge Cup Cover Cap	Item No.	PU
Steel, nickel-plated	F072135503228	150

Wood Screw, Nickel-plated	Item No.	PU
#6 x 5/8" FHP, NI	81001-43	500

PU - Packaging unit

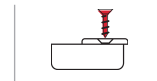
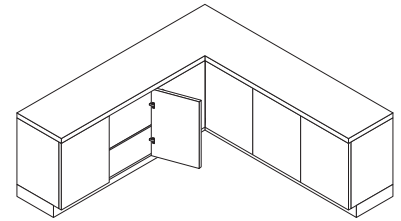
Tiomos 110 Tipmatic Plus



110° hinge for handle free doors



- Integrated spring in hinge arm assists Tipmatic Pin for handle-free door opening
- Extended opening angle
- Works with Tipmatic Pin system (page 54-55)
- 3-dimensional adjustment with suitable base plate
- Compatible with all Tiomos base plates





Tiomos 110 Tipmatic Plus Opening Angle 110° Screw-On

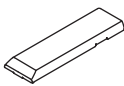
Overlay	Cranking 03	Pattern	Type	Item No.	PU
	Hinge cup: steel, nickel-plated; Hinge arm: steel, nickel-plated	45	TT Plus	F046140360213	25



Half Overlay	Cranking 9.5	Pattern	Type	Item No.	PU
	Hinge cup: steel, nickel-plated; Hinge arm: zinc, nickel-plated	45	TT Plus	F046140365213	25

Inset	Cranking 19	Pattern	Type	Item No.	PU
	Hinge cup: steel, nickel-plated; Hinge arm: zinc, nickel-plated	45	TT Plus	F046140366213	25

Cover Cap with Clip Protector	Item No.	PU	Hinge Clip Protector	Item No.	PU
 Plastic, black	F072140504247	1000	 Plastic, grey	F072135807540	500
		For installation see page 57			For installation see page 57

Opening Angle Reduction Clip to 85°	Item No.	PU	Tipmatic Pin	Item No.	PU
 Steel, nickel	F072135751517	50		F069135396513	25
		For installation see page 56			

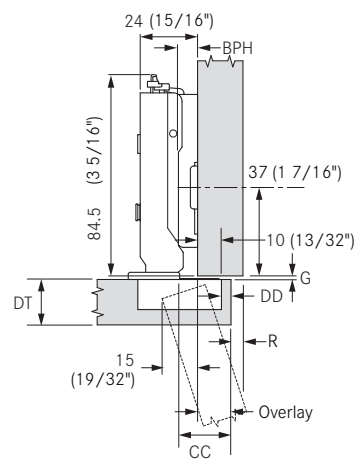
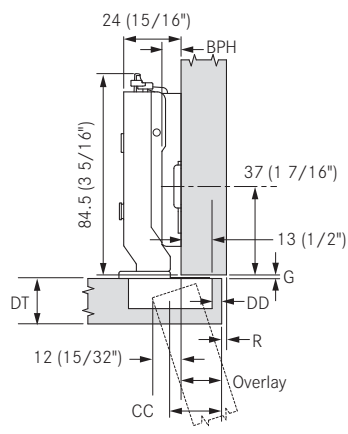
Cover Caps	Item No.	PU	Important Note:
 Steel, nickel-plated	F072135500247	1000	Tiomos Tipmatic Plus works with our recommended Tipmatic Pin. Grass does not accept any liability if a different system other than the recommended system is used. Before the Tipmatic Pin is inserted for gluing, the surface must be thoroughly cleaned and free from grease. Complete Tipmatic Pin System is shown on page 52-53.

Hinge Cup Cover Cap	Item No.	PU	Wood Screw, Nickel-plated	Item No.	PU
 Steel, nickel-plated	F072135503228	150	 #6 x 5/8" FHP, NI	81001-43	500

PU - Packaging unit

Full Overlay

Overlay



Drawings show Tiomos with a base plate, **(BPH) 02**.

Drawings show Tiomos with a base plate, **(BPH) 02**.

Door Overlay	Drilling Distance (DD)						
	3	4	5	6	7		
22.0					0		
21.0				0			
20.0			0	2			
19.0		0		2	3		
18.5				3.5			
18.0	0		2	3			
17.5			3.5				
17.0		2	3				
16.5			3.5				
16.0	2	3					
15.5		3.5					
15.0	3						
14.5	3.5						
							Base Plate Height (BPH)

Door Overlay	Drilling Distance (DD)						
	3	4	5	6	7		
19.0					0		
18.0				0			
17.0			0		2		
16.5							
16.0		0		2	3		
15.5					3.5		
15.0	0		2	3			
14.5				3.5			
14.0		2	3				
13.5			3.5				
13.0	2	3					
12.5		3.5					
12.0	3						
11.5	3.5						Base Plate Height (BPH)

Legend

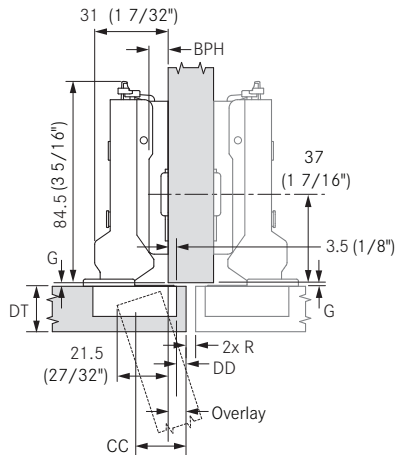
- BPH = Base Plate Height
- CC = Center Cup
- DD = Drilling Distance
- DT = Door Thickness
- G = Gap
- R = Reveal
- X = Base Plate Setback

Screw-on

Impresso and Dowelled

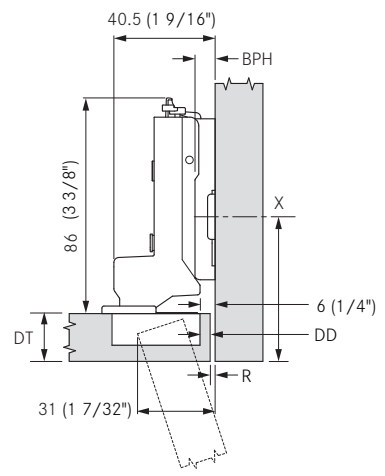
Cup Dimensions

Half Overlay **Inset**



Drawings show Tiomos with a base plate, **(BPH) 02**.

Door Overlay	Drilling Distance (DD)				
	3	4	5	6	7
12.5					0
11.5				0	
10.5			0		2
10					
9.5	0			2	3
9.0					3.5
8.5	0		2	3	
8.0				3.5	
7.5		2	3		
7.0			3.5		
6.5	2	3			
6.0		3.5			
5.5	3				
5.0	3.5				
					Base Plate Height (BPH)



Drawings show Tiomos with a base plate, **(BPH) 02**.

$X = 38.5 + DT$

Reveal (R)	Drilling Distance (DD)				
	*3	4	5	6	7
0.0		0		2	3
0.5					3.5
1.0	0		2	3.5	
1.5				3.5	
2.0		2	3		
3.0	2	3			
4.0	3				
					Base Plate Height (BPH)

Note: A door stop is needed to prevent overclose.

Minimum Gaps **Reveal** **Reveal with 85° Angle Reduction Clip**

Door Thickness (DT)	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)

The minimum gap is the gap between the closed door and the front of the cabinet.
*Only achievable with 85° angle reduction clip.

Door Thickness (DT)	Drilling Distance (DD)				
	3	4	5	6	7
24	2.4	2.1	2.1	2.1	2.0
22	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	1.1	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 (R)

Note: Reveal dimensions were determined with an edge radius (of the door) of 1mm. Hinge dimensions and reveal calculation based on factory setting.

IMPORTANT
To determine the correct application Grass strongly recommends a trial mounting for all hinges and base plates.

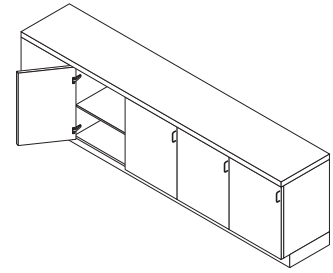
Door Thickness (DT)	Drilling Distance (DD)				
	*3	4	5	6	7
36.0	11.1	10.3	9.7	9.1	8.5
30.0	5.4	4.8	4.4	4.3	4.2
28.0	3.7	3.6	3.5	3.4	3.3
26.0	2.9	2.8	2.8	2.7	2.6
24.0	2.2	2.1	2.1	2.1	2.0
22.0	1.6	1.6	1.6	1.5	1.5
21.0	1.4	1.3	1.3	1.3	1.3
20.0	1.1	1.1	1.1	1.1	1.1
19.0	0.9	0.9	0.9	0.9	0.9
18.0	0.7	0.7	0.7	0.7	0.7
16.0	0.6	0.6	0.6	0.6	0.6
					Reveal (R)

Tiomos 120

120° hinge for standard doors



- 3-dimensional adjustment with suitable base plate
- Accommodates overlays up to 24mm (15/16")
- Optimal reveal up to 24mm door thickness
- Soft-close or Self-close hinges available
- For face frame or frameless cabinets
- Convenient depth adjustment with worm screw



Tiomos 120 Opening Angle 120°						Impresso		Screw-On		Dowelled	
Full Overlay	Cranking 00	Pattern	Type	Item No.	PU	Pattern	Type	Item No.	Item No.	PU	
	Hinge cup: steel, nickel-plated	42/45	Soft-close	F017139428228	150	45	Soft-close	F028138547228	F028138551228	150	
	Hinge arm: steel, nickel-plated	42/45	Self-close	F034139399228	150	45	Self-close	F045138485228	F045138489228	150	
						42	Soft-close	-	F028138369228	150	
						42	Self-close	-	F045138307228	150	
Overlay	Cranking 03	Pattern	Type	Item No.	PU	Pattern	Type	Item No.	Item No.	PU	
	Hinge cup: steel, nickel-plated	42/45	Soft-close	F017139429228	150	45	Soft-close	F028138548228	F028138552228	150	
	Hinge arm: steel, nickel-plated	42/45	Self-close	F034139400228	150	45	Self-close	F045138486228	F045138490228	150	
						42	Soft-close	-	F028138370228	150	
						42	Self-close	-	F045138308228	150	
Half Overlay	Cranking 9.5	Pattern	Type	Item No.	PU	Pattern	Type	Item No.	Item No.	PU	
	Hinge cup: steel, nickel-plated					45	Soft-close	F028138549228	F028138553228	150	
	Hinge arm: zinc, nickel-plated					45	Self-close	F045138487228	F045138491228	150	
						42	Soft-close	-	F028138371228	150	
						42	Self-close	-	F045138309228	150	

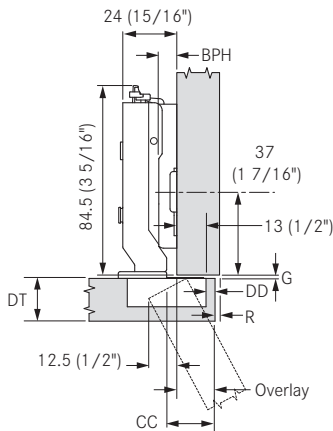
Cover Cap with Clip Protector	Item No.	PU	Hinge Clip Protector	Item No.	PU
Plastic, black	F072140504247	1000	Plastic, grey	F072135807540	500
	For installation see page 57			For installation see page 57	

Cover Caps	Item No.	PU	Opening Angle Reduction Clip to 85°	Item No.	PU
Steel, nickel-plated	F072135500247	1000	Steel, nickel	F072135751517	50
				For installation see page 56	

Hinge Cup Cover Cap	Item No.	PU	Wood Screw, Nickel-plated	Item No.	PU
Steel, nickel-plated	F072135503228	150	#6 x 5/8" FHP, NI	81001-43	500

PU - Packaging unit

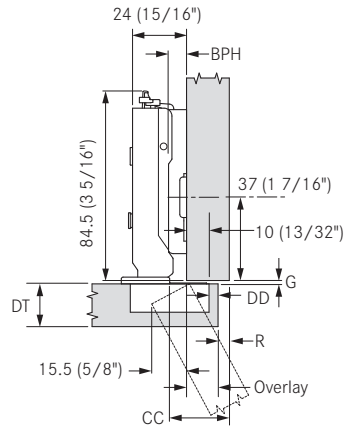
Full Overlay



Drawings show Tiomos with a base plate, **(BPH) 02**.

	Drilling Distance (DD)				
	3	4	5	6	7
22.0					0
21.0				0	
20.0			0		2
19.0		0		2	3
18.5					
18.0	0		2	3	
17.5			3.5		
17.0		2	3		
16.5			3.5		
16.0	2	3			
15.5		3.5			
15.0	3				
14.5	3.5				
	Base Plate Height (BPH)				

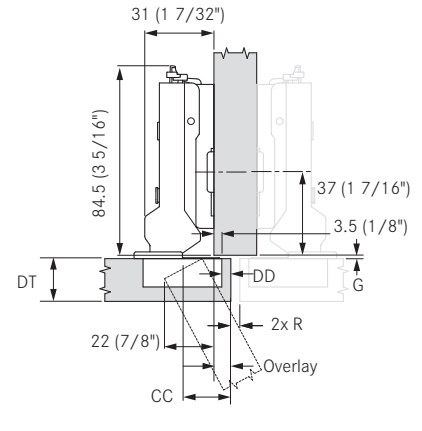
Overlay



Drawings show Tiomos with a base plate, **(BPH) 02**.

	Drilling Distance (DD)				
	3	4	5	6	7
19.0					0
18.0				0	
17.0			0		2
16.5					
16.0		0		2	3
15.5					3.5
15.0	0		2	3	
14.5				3.5	
14.0		2	3		
13.5			3.5		
13.0	2	3			
12.5		3.5			
12.0	3				
11.5	3.5				
	Base Plate Height (BPH)				

Half Overlay



Drawings show Tiomos with a base plate, **(BPH) 02**.

	Drilling Distance (DD)				
	3	4	5	6	7
12.5					0
11.5				0	
10.5			0		2
10.0					
9.5		0		2	3
9.0					3.5
8.5	0		2	3	
8.0				3.5	
7.5		2	3		
7.0			3.5		
6.5	2	3			
6.0		3.5			
5.5	3				
5.0	3.5				
	Base Plate Height (BPH)				

Minimum Gaps

	Drilling Distance (DD)				
	3	4	5	6	7
24	1.2	2.1	3.0	3.9	4.7
22	1.0	1.1	2.0	2.9	3.8
21	1.0	1.0	1.6	2.4	3.3
20	1.0	1.0	1.1	2.0	2.9
19	1.0	1.0	1.0	1.5	2.4
18	1.0	1.0	1.0	1.0	1.9
17	1.0	1.0	1.0	1.0	1.5
16	1.0	1.0	1.0	1.0	1.0
	Minimum Gap (G)				

The minimum gap is the gap between the closed door and the front of the cabinet.

Reveal

	Drilling Distance (DD)				
	3	4	5	6	7
24	6.4	5.4	4.4	3.4	2.4
22	3.0	2.0	1.5	1.5	1.5
21	1.4	1.3	1.3	1.3	1.3
20	1.1	1.1	1.1	1.1	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 (R)				

Note: Reveal dimensions were determined with an edge radius (of the door) of 1mm. Hinge dimensions and reveal calculation based on factory setting.

IMPORTANT

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

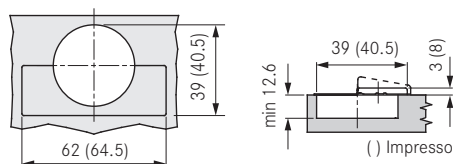
Reveal with 85° Angle Reduction Clip

	Drilling Distance (DD)				
	3	4	5	6	7
36.0	11.1	10.3	9.7	9.1	8.5
30.0	5.4	4.8	4.4	4.3	4.2
28.0	3.7	3.6	3.5	3.4	3.3
26.0	2.9	2.8	2.8	2.7	2.6
24.0	2.2	2.1	2.1	2.1	2.0
22.0	1.6	1.6	1.6	1.5	1.5
21.0	1.4	1.3	1.3	1.3	1.3
20.0	1.1	1.1	1.1	1.1	1.1
19.0	0.9	0.9	0.9	0.9	0.9
18.0	0.7	0.7	0.7	0.7	0.7
16.0	0.6	0.6	0.6	0.6	0.6
	Reveal (R)				

Legend

- BPH = Base Plate Height
- CC = Center Cup
- DD = Drilling Distance
- DT = Door Thickness
- G = Gap
- R = Reveal
- X = Base Plate Setback

Cup Dimensions

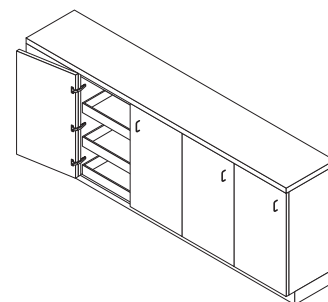


Tiomos 155

155° wide angle hinge



- 3-dimensional adjustment with suitable base plate
- Accommodates overlays up to 23.4mm (15/16")
- Soft-close or Self-close hinges available
- For face frame or frameless cabinets
- Convenient depth adjustment with worm screw
- Zero protrusion when door is opened 90°
- 10mm cup depth
- For door thicknesses up to 32mm (1 1/4")
- Minimal reveal



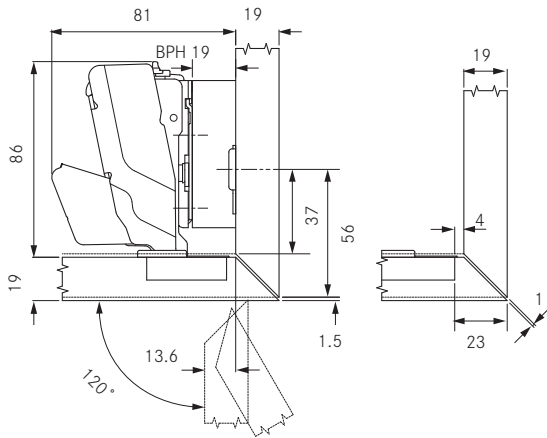
Tiomos 155 Opening Angle 155°						Impresso		Screw-On		Dowelled	
Full Overlay	Cranking 00	Pattern	Type	Item No.	PU	Pattern	Type	Item No.	Item No.	PU	
	Hinge cup: steel, nickel-plated	42/45	Soft-close	F017139435217	50	45	Soft-close	F028138561217	F028138564217	50	
	Hinge arm: steel, nickel-plated	42/45	Self-close	F034139406217	50	45	Self-close	F045138499217	F045138502217	50	
						42	Self-close	-	F045138320217	50	
Overlay	Cranking 03	Pattern	Type	Item No.	PU	Pattern	Type	Item No.	Item No.	PU	
	Hinge cup: steel, nickel-plated	42/45	Soft-close	F017139436217	50	45	Soft-close	F028138562217	F028138565217	50	
	Hinge arm: steel, nickel-plated	42/45	Self-close	F034139407217	50	45	Self-close	F045138500217	F045138503217	50	
						42	Soft-close	-	F028138383217	50	
						42	Self-close	-	F045138321217	50	
Half Overlay	Cranking 9.5	Pattern	Type	Item No.	PU	Pattern	Type	Item No.	Item No.	PU	
	Hinge cup: steel, nickel-plated					45	Soft-close	F028138563217	F028138566217	50	
	Hinge arm: zinc, nickel-plated					42	Self-close	-	F045138322217	50	

Hinge Cup Cover Cap		Item No.	PU	Angle Reduction Clip to 120°		Item No.	PU
	Steel, nickel-plated	F072135503228	150		Plastic, black	F072135753517	50

For installation see page 56

PU - Packaging unit

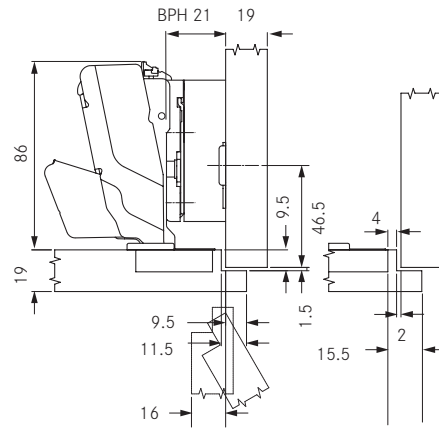
Mitered Corner Application



Use Full overlay hinge (00 Cranking) with 19mm base plate.

Mitered door application is now possible without using the 120° opening angle reduction clip.

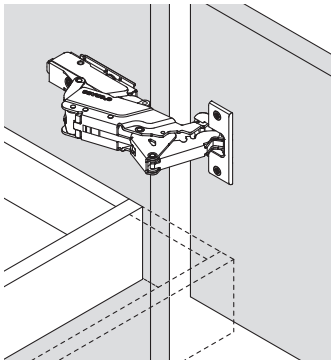
3/8" Lip Door Application



Use Full overlay hinge (00 Cranking) with 21mm base plate.

Use 120° opening angle reduction clip. Prevents doors from bumping with the cabinet side in inset applications and mitered corner applications.

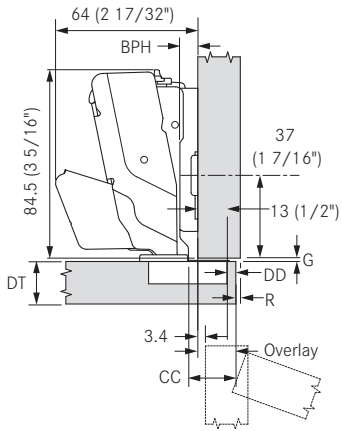
Zero Protrusion at 90°



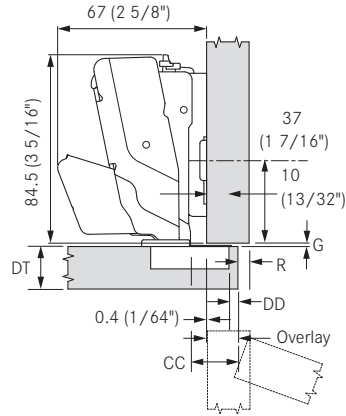
At 0 cranking, and with all mounting plate thicknesses, the door protrudes inwards at 90°. With cranking size 3 and mounting plate height 3mm, the door will be flush with the cabinet.

Full Overlay

Overlay



Drawings show Tiomos with a base plate, (BPH) 02.



Drawings show Tiomos with a base plate, (BPH) 02.

Drilling Distance (DD)

Door Overlay	Drilling Distance (DD)					
	3	4	5	6	7	8
23.0					0	
22.0				0		
21.0			0		2	
20.0		0		2	3	
19.0	0		2	3		
18.5				3.5		
18.0	0		2	3		
17.5				3.5		
17.0		2	3			
16.5			3.5			
16.0	2	3				
15.5		3.5				
15.0	3					
14.5	3.5					
	Base Plate Height (BPH)					

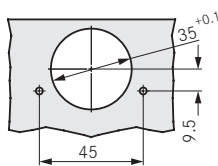
Drilling Distance (DD)

Door Overlay	Drilling Distance (DD)					
	3	4	5	6	7	8
20.0						0
19.0					0	
18.0				0		2
17.0			0		2	3
16.5						3.5
16.0		0		2	3	
15.5					3.5	
15.0	0		2	3		
14.5				3.5		
14.0		2	3			
13.5			3.5			
13.0	2	3				
12.5		3.5				
12.0	3					
11.5	3.5					
	Base Plate Height (BPH)					

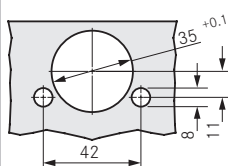
Legend

- BPH = Base Plate Height
- CC = Center Cup
- DD = Drilling Distance
- DT = Door Thickness
- G = Gap
- R = Reveal
- X = Base Plate Setback

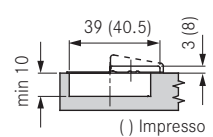
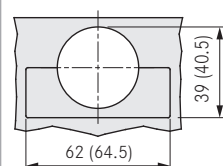
Screw-on



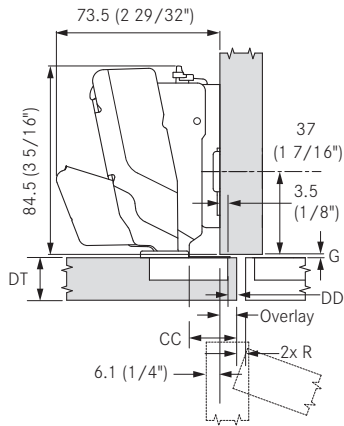
Impresso and Dowelled



Cup Dimensions



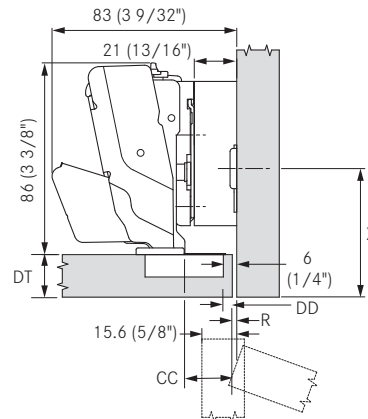
Half Overlay



Drawings show Tiomos with a base plate, **(BPH) 02**.

Door Overlay	Drilling Distance (DD)							
	3	4	5	6	7	8		
13.5							0	
12.5					0			
11.5			0		2		3	
10.5			0		2	3		
10.0							3.5	
9.5	0			2	3			
9.0						3.5		
8.5	0		2	3				
8.0				3.5				
7.5		2	3					
7.0			3.5					
6.5	2	3						
6.0		3.5						
5.5	3							
5.0	3.5							
								Base Plate Height (BPH)

Inset



Drawings show Tiomos with a cranking 00 hinge & base plate, **(BPH) 21**.
X = 38.5 + DT

Reveal (R)	Drilling Distance (DD)			
	3	4	5	6
1.0	19		21	
2.0		21		
3.0	21			
				Base Plate Height (BPH)

Note: A door stop is needed to prevent overclose.

Minimum Gaps

Door Thickness (DT)	Drilling Distance (DD)							
	3	4	5	6	7	8		
32	1.0	1.0						
31	1.0	1.0	1.0					
30	1.0	1.0	1.0					
29	1.0	1.0	1.0	1.0	1.0	1.0		
28	1.0	1.0	1.0	1.0	1.0	1.0		
26	1.0	1.0	1.0	1.0	1.0	1.0		
25	1.0	1.0	1.0	1.0	1.0	1.0		
24	1.0	1.0	1.0	1.0	1.0	1.0		
22	1.0	1.0	1.0	1.0	1.0	1.0		
21	1.0	1.0	1.0	1.0	1.0	1.0		
20	1.0	1.0	1.0	1.0	1.0	1.0		
18	1.0	1.0	1.0	1.0	1.0	1.0		
16	1.0	1.0	1.0	1.0	1.0	1.0		
								Minimum Gap (G)

The minimum gap is the gap between the closed door and the front of the cabinet.

IMPORTANT
To determine the correct application Grass strongly recommends a trial mounting for all hinges and base plates.

Reveal

Door Thickness (DT)	Drilling Distance (DD)							
	3	4	5	6	7	8		
32	0.2*	0.2*						
31	0.2*	0.2*	0.2*	0.2*				
30	0.2*	0.2*	0.2*	0.2*	0.2*			
29	0.2*	0.2*	0.2*	0.2*	0.2*	0.2*		
28	0.0	0.0	0.0	0.0	0.0	0.0		
26	0.0	0.0	0.0	0.0	0.0	0.0		
25	0.0	0.0	0.0	0.0	0.0	0.0		
24	0.0	0.0	0.0	0.0	0.0	0.0		
22	0.0	0.0	0.0	0.0	0.0	0.0		
21	0.0	0.0	0.0	0.0	0.0	0.0		
20	0.0	0.0	0.0	0.0	0.0	0.0		
18	0.0	0.0	0.0	0.0	0.0	0.0		
16	0.0	0.0	0.0	0.0	0.0	0.0		
								Reveal (R)

Note: Reveal dimensions were determined with an edge radius (of the door) of 1mm. Hinge dimensions and reveal calculation based on factory setting.

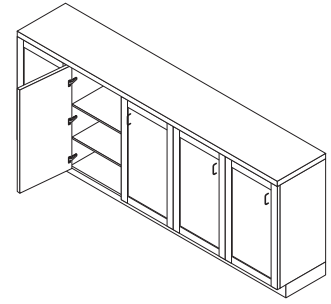
*Only achievable with 120° angle reduction clip.

Tiomos 95

95° hinge for thick doors



- 3-dimensional adjustment with suitable base plate
- Accommodates overlays up to 24mm (15/16")
- For door thicknesses up to 36mm (1 7/16")
- Soft-close or Self-close hinges available
- For face frame or frameless cabinets
- Convenient depth adjustment with worm screw



Tiomos 95 Opening Angle 95°		Impresso				Screw-On		Dowelled	
-----------------------------	--	----------	--	--	--	----------	--	----------	--

Full Overlay	Cranking 00	Pattern	Type	Item No.	PU	Pattern	Type	Item No.	Item No.	PU
	Hinge cup: steel, nickel-plated	42/45	Soft-close	F017139438217	50	45	Soft-close	F028138567228	F028138571228	150
	Hinge arm: steel, nickel-plated	42/45	Self-close	F034139409228	150	45	Self-close	-	F045138509228	150

Overlay	Cranking 03	Pattern	Type	Item No.	PU	Pattern	Type	Item No.	Item No.	PU
	Hinge cup: steel, nickel-plated Hinge arm: steel, nickel-plated	42/45	Soft-close	F017139439217	50	45	Soft-close	F028138568228	F028138572228	150
		45	Self-close	F045138506228	-	150				
		42	Self-close	-	F045138328228	150				

Half Overlay	Cranking 9.5	Pattern	Type	Item No.	PU	Pattern	Type	Item No.	Item No.	PU
	Hinge cup: steel, nickel-plated Hinge arm: zinc, nickel-plated	42/45	Soft-close	F017139440228	150	45	Soft-close	F028138569228	F028138573228	150
		45	Self-close	-	F045138511228	150				

Inset	Cranking 19	Pattern	Type	Item No.	PU	Pattern	Type	Item No.	Item No.	PU
	Hinge cup: steel, nickel-plated Hinge arm: zinc, nickel-plated	42/45	Soft-close	F017139441217	50	45	Soft-close	F028138570228	F028138574228	150
		42/45	Self-close	F034139412228	150	45	Self-close	F045138508228	-	150

Cover Cap with Clip Protector	Item No.	PU
Plastic, black	F072140504247	1000

For installation see page 57

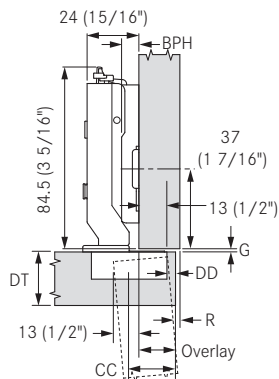
Cover Caps	Item No.	PU	Hinge Clip Protector	Item No.	PU
Steel, nickel-plated	F072135500247	1000	Plastic, grey	F072135807540	500

For installation see page 57

Hinge Cup Cover Cap	Item No.	PU	Wood Screw, Nickel-plated	Item No.	PU
Steel, nickel-plated	F072135503228	150	#6 x 5/8" FHP, NI	81001-43	500

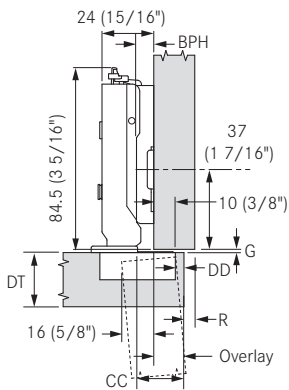
PU - Packaging unit

Full Overlay Overlay Half Overlay Inset



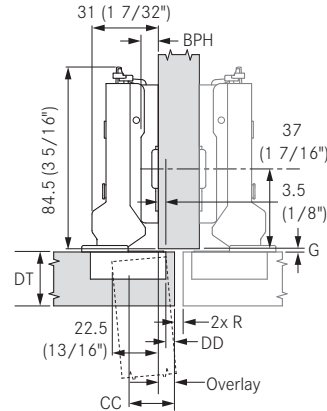
Drawings show Tiomos with a base plate, **(BPH) 02**.

Door Overlay	Drilling Distance (DD)				
	3	4	5	6	7
22.0					0
21.0				0	
20.0			0	2	
19.0		0	2	3	
18.5				3.5	
18.0	0		2	3	
17.5			3.5		
17.0		2	3		
16.5			3.5		
16.0	2	3			
15.5		3.5			
15.0	3				
14.5	3.5				
					Base Plate Height (BPH)



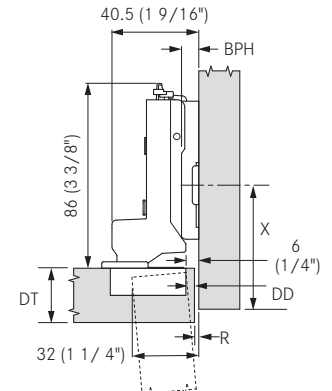
Drawings show Tiomos with a base plate, **(BPH) 02**.

Door Overlay	Drilling Distance (DD)				
	3	4	5	6	7
19.0					0
18.0				0	
17.0			0	2	
16.5					
16.0	0		2	3	
15.5				3.5	
15.0	0		2	3	
14.5			3.5		
14.0		2	3		
13.5			3.5		
13.0	2	3			
12.5		3.5			
12.0	3				
11.5	3.5				
					Base Plate Height (BPH)



Drawings show Tiomos with a base plate, **(BPH) 02**.

Door Overlay	Drilling Distance (DD)				
	3	4	5	6	7
12.5					0
11.5				0	
10.5			0	2	
10.0					
9.5	0		2	3	
9.0				3.5	
8.5	0		2	3	
8.0			3.5		
7.5	2	3			
7.0		3.5			
6.5	2	3			
6.0		3.5			
5.5	3				
5.0	3.5				
					Base Plate Height (BPH)



Drawings show Tiomos with a base plate, **(BPH) 02**. X = 38.5 + DT

Reveal (R)	Drilling Distance (DD)				
	3	4	5	6	7
0.0		0		2	3
0.5					3.5
1.0	0		2	3	
1.5				3.5	
2.0		2	3		
3.0	2	3			
4.0	3				
					Base Plate Height (BPH)

Note: A door stop is needed to prevent overclose.

Minimum Gaps Reveal Legend

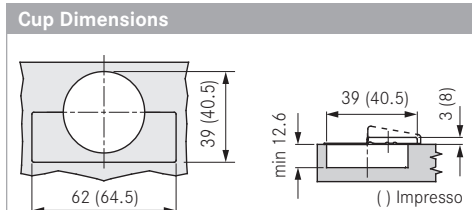
Door Thickness (DT)	Drilling Distance (DD)				
	3	4	5	6	7
36	1.0	1.0	1.0	1.4	2.4
30	1.0	1.0	1.0	1.0	1.9
28	1.0	1.0	1.0	1.0	1.7
26	1.0	1.0	1.0	1.2	1.5
24	1.0	1.0	1.0	1.0	1.4
22	1.0	1.0	1.0	1.0	1.2
20	1.0	1.0	1.0	1.0	1.0
18	1.0	1.0	1.0	1.0	1.0
16	1.0	1.0	1.0	1.0	1.0
					Minimum Gap (G)

The minimum gap is the gap between the closed door and the front of the cabinet.

Door Thickness (DT)	Drilling Distance (DD)				
	3	4	5	6	7
36	10.6	9.6	8.6	7.6	6.7
34	8.0	7.0	6.5	5.9	6.4
32	6.0	5.0	4.5	3.9	4.4
30	4.5	3.5	2.5	2.5	1.5
28	2.0	1.5	1.5	1.3	1.3
26	1.0	1.0	1.0	1.0	1.0
24	0.6	0.6	0.6	0.6	0.6
22	0.5	0.5	0.5	0.5	0.5
20	0.3	0.3	0.3	0.3	0.3
18	0.2	0.2	0.2	0.2	0.2
16	0.2	0.2	0.2	0.2	0.2
					Reveal (R)

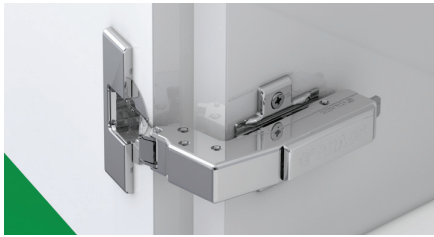
Note: Reveal dimensions were determined with an edge radius (of the door) of 1mm. Hinge dimensions and reveal calculation based on factory setting.

IMPORTANT
To determine the correct application Grass strongly recommends a trial mounting for all hinges and base plates.

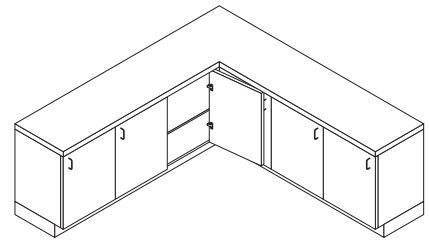


Tiomos 110/90

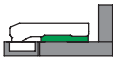
110° blind corner hinge





- For blind corner construction
- 110° opening angle
- 3-dimensional adjustment with suitable base plate
- Soft-close or Self-close hinges available
- Convenient depth adjustment with worm screw





Tiomos 110/90A Opening Angle 110°		Screw-On		Dowelled		
Overlay		Pattern	Type	Item No.	Item No.	PU
 Hinge cup: steel, nickel-plated Hinge arm: zinc, nickel-plated		45	Soft-close	F028138535223	F028138545213	100
		45	Self-close	-	F045138483223	100

Tiomos 110/90E Opening Angle 110°		Impresso			Screw-On		Dowelled			
Inset		Pattern	Type	Item No.	PU	Pattern	Type	Item No.	Item No.	PU
 Hinge cup: steel, nickel-plated Hinge arm: zinc, nickel-plated		42/45	Soft-close	F017139427223	100	45	Soft-close	F028138536223	F028138546223	100
		42/45	Self-close	-	-	45	Self-close	-	F045138484223	100
		42/45	Self-close	F034139398213	25	45	Self-close	F045138474213	-	25

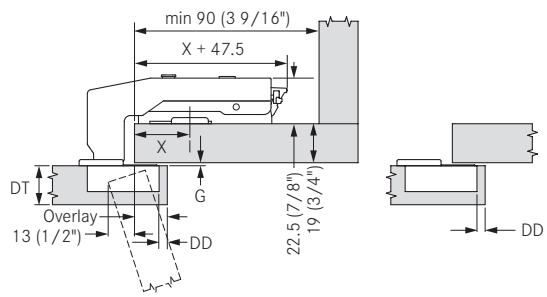
Cover Cap with Clip Protector	Item No.	PU
 Plastic, black	F072140504247	1000
For installation see page 57		

Cover Caps	Item No.	PU	Hinge Clip Protector	Item No.	PU
 Steel, nickel-plated	F072135500247	1000	 Plastic, grey	F072135807540	500
For installation see page 57					

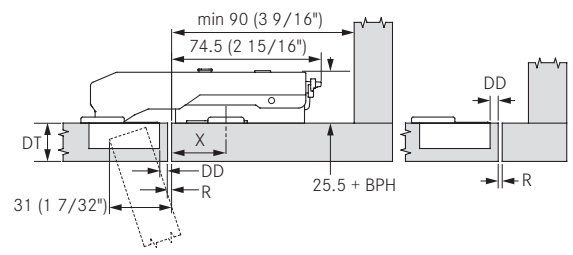
Hinge Cup Cover Cap	Item No.	PU	Wood Screw, Nickel-plated	Item No.	PU
 Steel, nickel-plated	F072135503228	150	 #6 x 5/8" FHP, NI	81001-43	500

PU - Packaging unit

Overlay **Inset**



Drawings show Tiomos with a base plate, **(BPH) 00**.



Drawings show Tiomos with a base plate, **(BPH) 03**.

Drilling Distance (DD)

	3	4	5	6	7
30	18	19	20	21	22
29	17	18	19	20	21
28	16	17	18	19	20
27	15	16	17	18	19
26	14	15	16	17	18

Wing Base Plate Position (X)

Door Overlay

Drilling Distance (DD)

	3	4	5	6	7
13	18	19	20	21	22
12	17	18	19	20	21
11	16	17	18	19	20
10	15	16	17	18	19
9	14	15	16	17	18

Straight Base Plate Position (X)

Door Overlay

Drilling Distance (DD)

	3	4	5	6	7
28	2	1	0		
27	3	2	1	0	
26	4	3	2	1	0

Wing Base Plate Position (X)

Reveal (R)

Drilling Distance (DD)

	3	4	5	6	7
11	2	1	0		
10	3	2	1	0	
9	4	3	2	1	0

Straight Base Plate Position (X)

Reveal (R)

Minimum Gaps **Reveal**

Door Thickness (DT)	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)

The minimum gap is the gap between the closed door and the front of the cabinet.

IMPORTANT
To determine the correct application Grass strongly recommends a trial mounting for all hinges and base plates.

Door Thickness (DT)	Drilling Distance (DD)				
	3	4	5	6	7
24	2.4	2.1	2.1	2.1	2.0
22	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	1.1	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

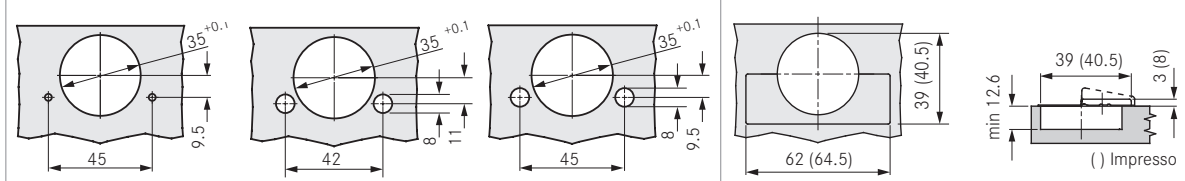
Minimum Reveal (R)

Note: Reveal dimensions were determined with an edge radius (of the door) of 1mm. Hinge dimensions and reveal calculation based on factory setting.

IMPORTANT
To determine the correct application Grass strongly recommends a trial mounting for all hinges and base plates.

Legend **Screw-on** **Impresso and Dowelled** **Cup Dimensions**

- BPH = Base Plate Height
- CC = Center Cup
- DD = Drilling Distance
- DT = Door Thickness
- G = Gap
- R = Reveal
- X = Base Plate Setback

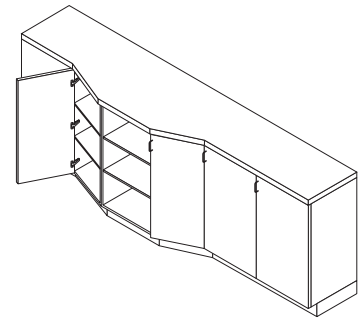


Tiomos 110/30A

+30° angle corner cabinet hinge for overlay doors

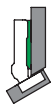


- For 30° angle corner cabinets
- 110° opening angle
- 3-dimensional adjustment with suitable base plate
- Self-close hinges available
- Convenient depth adjustment with worm screw



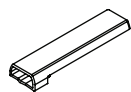
Tiomos 110/30A Opening Angle 110° Screw-On

Overlay	Pattern	Type	Item No.	PU
	45	Self-close	F045138467223	100



Hinge cup: steel, nickel-plated
Hinge arm: zinc, nickel-plated

Cover Cap with Clip Protector Item No. PU

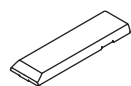


Plastic, black

F072140504247 1000

For installation see page 57

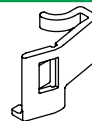
Cover Caps Item No. PU



Steel, nickel-plated

F072135500247 1000

Hinge Clip Protector Item No. PU



Plastic, grey

F072135807540 500

For installation see page 57

Hinge Cup Cover Cap Item No. PU



Steel, nickel-plated

F072135503228 150

Wood Screw, Nickel-plated Item No. PU

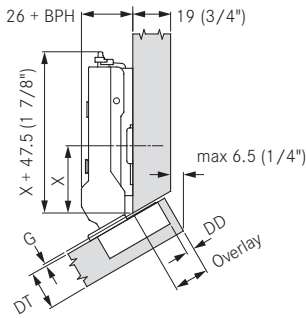


#6 x 5/8" FHP, NI

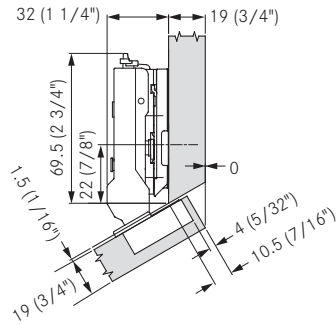
81001-43 500

PU - Packaging unit

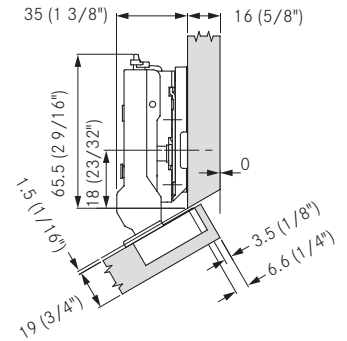
Overlay



Drawings show Tiomos with a base plate, **(BPH) 0**.



Drawings show Tiomos with a base plate, **(BPH) 6**.

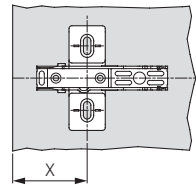


Drawings show Tiomos with a base plate, **(BPH) 9.5**.

Drilling Distance (DD)

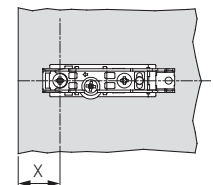
	3	4	5	6	7
20.5					0
19.5				0	
18.5			0	2	
17.5	0		2	3	
16.5	0			3.5	
16.0			2	3	
15.5				3.5	
15.0	2	3			
14.5			3.5		
14.0	2	3			
13.5		3.5			
13.0	3				
12.5	3.5			6	
11.5			6		
10.5		6			
	Base Plate Height (BPH)				

Door Overlay



Base Plate Height (BPH)

	0	2	3	3.5	6
X	34.0	33.0	32.0	32.0	30.5
	Wing Base Plate Position (X)				



Base Plate Height (BPH)

	0	2	3	3.5
X	17.0	16.0	15.0	15.0
	Straight Base Plate Position (X)			

Minimum Gaps

	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 Thickness (DT)

The minimum gap is the gap between the closed door and the front of the cabinet.

Reveal

	3	4	5	6	7
24	2.4	2.1	2.1	2.1	2.0
22	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	1.1	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 (R)				

Door Thickness (DT)

Note: Reveal dimensions were determined with an edge radius (of the door) of 1mm. Hinge dimensions and reveal calculation based on factory setting.

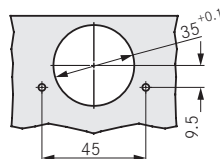
IMPORTANT

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

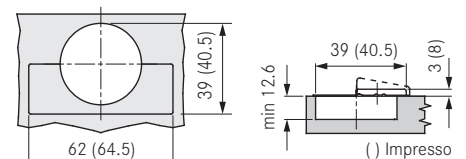
Legend

- BPH = Base Plate Height
- CC = Center Cup
- DD = Drilling Distance
- DT = Door Thickness
- G = Gap
- R = Reveal
- X = Base Plate Setback

Screw-on



Cup Dimensions

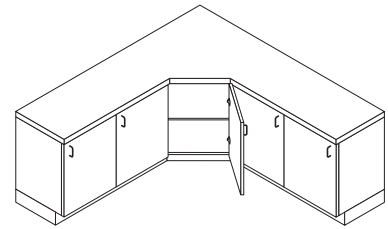


Tiomos 110/45A

+45° angle corner cabinet hinge for overlay doors

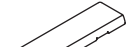





- For 45° angle corner cabinets
- 110° opening angle
- 3-dimensional adjustment with suitable base plate
- Soft-close hinges available
- Convenient depth adjustment with worm screw



Tiomos 110/45A		Opening Angle 110°				Impresso		Screw-On		Dowelled	
Overlay	Cranking 03	Pattern	Type	Item No.	PU	Pattern	Type	Item No.	Item No.	PU	
	Hinge cup: steel, nickel-plated Hinge arm: zinc, nickel-plated	42/45	Soft-close	F017139424223	100	45	Soft-close	F028138533223	F028138543223	100	

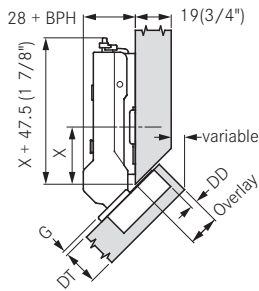
Cover Cap with Clip Protector	Item No.	PU
 Plastic, black	F072140504247	1000
For installation see page 57		

Cover Caps	Item No.	PU	Hinge Clip Protector	Item No.	PU
 Steel, nickel-plated	F072135500247	1000	 Plastic, grey	F072135807540	500
For installation see page 57					

Hinge Cup Cover Cap	Item No.	PU	Wood Screw, Nickel-plated	Item No.	PU
 Steel, nickel-plated	F072135503228	150	 #6 x 5/8" FHP, NI	81001-43	500

PU - Packaging unit

Overlay

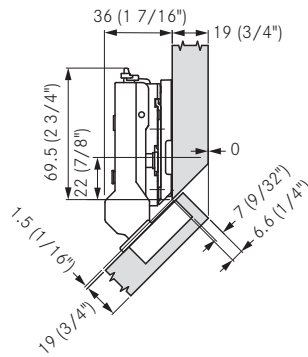


Drawings show Tiomos with a base plate, **(BPH) 0**.

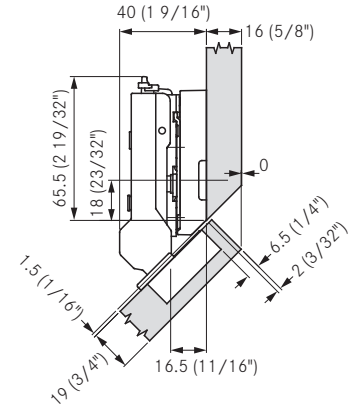
Drilling Distance (DD)

	3	4	5	6	7
19.5					0
19.0					
18.5				0	
18.0					
17.5		0			
17.0					
16.5		0			2
16.0					
15.5	0			2	
15.0					3
14.5			2		3.5
14.0				3	
13.5		2		3.5	
13.0			3		
12.5	2		3.5		
12.0		3			
11.0	3				6
10.0					6
	Base Plate Height (BPH)				

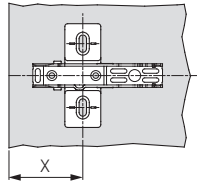
Door Overlay



Drawings show Tiomos with a base plate, **(BPH) 9.5**.

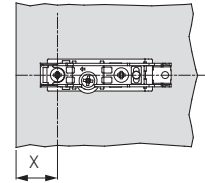


Drawings show Tiomos with a base plate, **(BPH) 12**.



Base Plate Height (BPH)

	0	2	3	3.5	6	9.5	12
X	30.5	28.5	27.5	27.0	24.5	21.0	18.5
	Wing Base Plate Position (X)						



Base Plate Height (BPH)

	0	2	3	3.5
X	13.5	11.5	10.5	10.0
	Straight Base Plate Position (X)			

Minimum Gaps

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)				

The minimum gap is the gap between the closed door and the front of the cabinet.

Door Thickness (DT)

Reveal

Drilling Distance (DD)

	3	4	5	6	7
24	2.4	2.1	2.1	2.1	2.0
22	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	1.1	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 (R)				

Note: Reveal dimensions were determined with an edge radius (of the door) of 1mm. Hinge dimensions and reveal calculation based on factory setting.

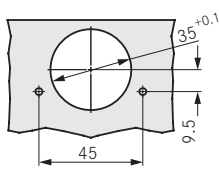
IMPORTANT

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

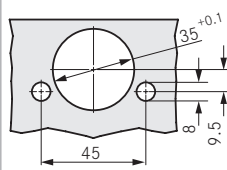
Legend

- BPH = Base Plate Height
- CC = Center Cup
- DD = Drilling Distance
- DT = Door Thickness
- G = Gap
- R = Reveal
- X = Base Plate Setback

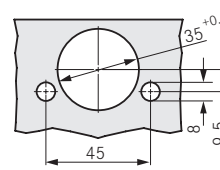
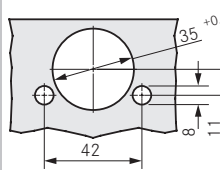
Screw-on



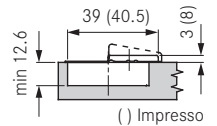
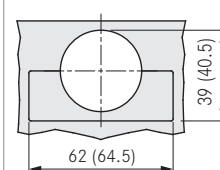
Dowelled



Impresso



Cup Dimensions

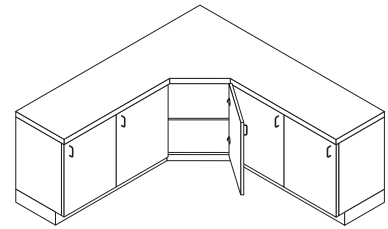



Tiomos 110/45E

+45° angle corner cabinet hinge for inset doors

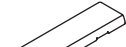





- For 45° angle corner cabinets
- 110° opening angle
- 3-dimensional adjustment with suitable base plate
- Soft-close or Self-close hinges available
- Convenient depth adjustment with worm screw



Tiomos 110/45E Opening Angle 110°		Impresso				Screw-On		Dowelled		
Inset		Pattern	Type	Item No.	PU	Pattern	Type	Item No.	Item No.	PU
	Hinge cup: steel, nickel-plated	42/45	Soft-close	F017139425213	25	45	Soft-close	-	F028138544223	100
	Hinge arm: zinc, nickel-plated					45	Self-close	-	F045138482223	100
						45	Self-close	F045138472213	-	25

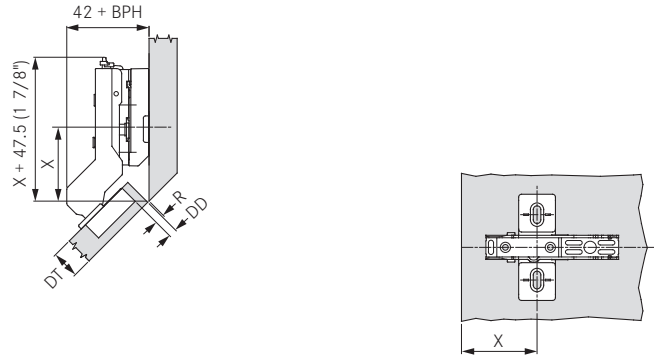
Cover Cap with Clip Protector	Item No.	PU
 Plastic, black	F072140504247	1000
For installation see page 57		

Cover Caps	Item No.	PU	Hinge Clip Protector	Item No.	PU
 Steel, nickel-plated	F072135500247	1000	 Plastic, grey	F072135807540	500
For installation see page 57					

Hinge Cup Cover Cap	Item No.	PU	Wood Screw, Nickel-plated	Item No.	PU
 Steel, nickel-plated	F072135503228	150	 #6 x 5/8" FHP, NI	81001-43	500

PU - Packaging unit

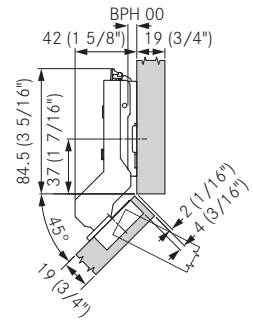
Inset **Corner Angle**



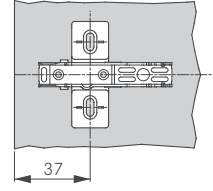
Drawings show Tiomos with a base plate, **(BPH) 12**.

Door Overlay	Drilling Distance (DD)				
	3	4	5	6	7
22.0					
21.0					
20.0					
19.0	12				
18.0		12			
17.0			12		
16.0				12	
15.0					12
	Base Plate Height (BPH)				

Door Overlay	Drilling Distance (DD)				
	3	4	5	6	7
22.0					
21.0					
20.0					
19.0	52.0				
18.0		50.5			
17.0			49.0		
16.0				47.5	
15.0					46.0
	Wing Base Plate Position (X)				



Drawings show Tiomos with a base plate, **(BPH) 03**.



Reveal **Legend**

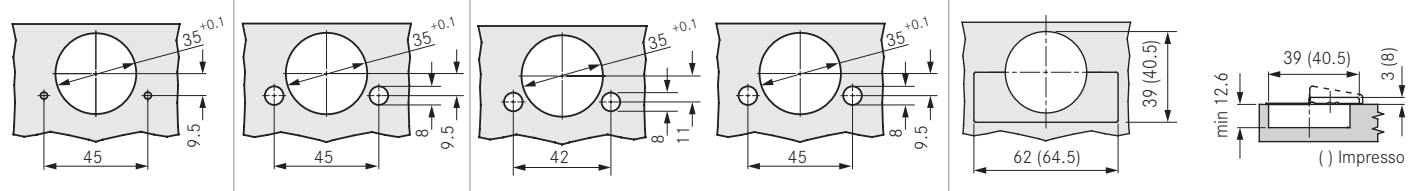
Door Thickness (DT)	Drilling Distance (DD)				
	3	4	5	6	7
24	2.4	2.1	2.1	2.1	2.0
22	1.6	1.6	1.6	1.5	1.5
21	1.4	1.3	1.3	1.3	1.3
20	1.1	1.1	1.1	1.1	1.1
19	0.9	0.9	0.9	0.9	0.9
18	0.7	0.7	0.7	0.7	0.7
17	0.6	0.6	0.6	0.6	0.6
16	0.6	0.6	0.6	0.6	0.6
	Reveal (R)				

Note: Reveal dimensions were determined with an edge radius (of the door) of 1mm. Hinge dimensions and reveal calculation based on factory setting.

IMPORTANT
To determine the correct application Grass strongly recommends a trial mounting for all hinges and base plates.

- BPH = Base Plate Height
- CC = Center Cup
- DD = Drilling Distance
- DT = Door Thickness
- R = Reveal
- X = Base Plate Setback

Screw-on **Dowelled** **Impresso** **Cup Dimensions**

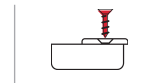
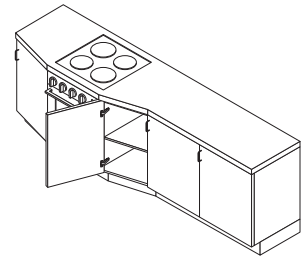


Tiomos 120/-15A

-15° angle corner cabinet hinge for overlay doors



- For -15° angle corner cabinets
- 120° opening angle
- 3-dimensional adjustment with suitable base plate
- Self-close hinges available
- Convenient depth adjustment with worm screw



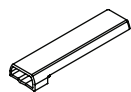
Tiomos 120/-15A Opening Angle 120° **Screw-On**

Overlay	Pattern	Type	Item No.	PU
	45	Self-close	F045138493223	100



Hinge cup: steel, nickel-plated
Hinge arm: zinc, nickel-plated

Cover Cap with Clip Protector **Item No.** **PU**

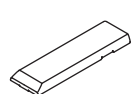


Plastic, black

F072140504247 1000

For installation see page 57

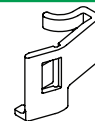
Cover Caps **Item No.** **PU**



Steel, nickel-plated

F072135500247 1000

Hinge Clip Protector **Item No.** **PU**



Plastic, grey

F072135807540 500

For installation see page 57

Hinge Cup Cover Cap **Item No.** **PU**



Steel, nickel-plated

F072135503228 150

Wood Screw, Nickel-plated **Item No.** **PU**

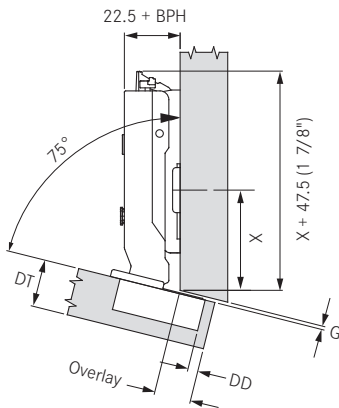


#6 x 5/8" FHP, NI

81001-43 500

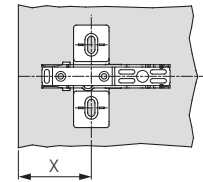
PU - Packaging unit

Overlay



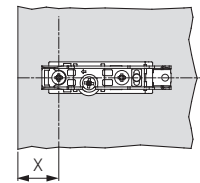
Drawings show Tiomos with a base plate, (BPH) 0.

Door Overlay	Drilling Distance (DD)				
	3	4	5	6	7
18.0					0
17.0				0	
16.0			0		
15.0		0			
14.5				2	3
14.0	0				3.5
13.5			2	3	
13.0				3.5	
12.5		2	3		
12.0			3.5		
11.5		3			6
11.0		3.5			
10.5		3			6
10.0		3.5			
9.5			6		
8.5		6			
	Base Plate Height (BPH)				



Base Plate Height (BPH)

	0	2	3	3.5	6
X	40.0	40.5	40.5	41.0	41.5
Wing Base Plate Position (X)					



Base Plate Height (BPH)

	0	2	3	3.5	
X	23	23.5	23.5	24	
Straight Base Plate Position (X)					

Minimum Gaps

Door Thickness (DT)	Drilling Distance (DD)				
	3	4	5	6	7
24	6.4	5.4	4.4	3.4	2.4
22	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	1.1	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
	Minimum Gap (G)				

The minimum gap is the gap between the closed door and the front of the cabinet.

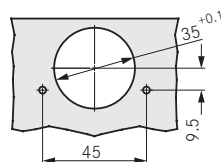
IMPORTANT

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

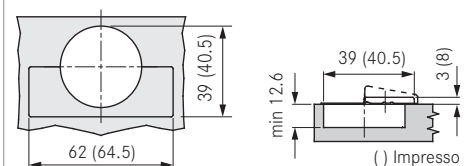
Legend

BPH = Base Plate Height
 CC = Center Cup
 DD = Drilling Distance
 DT = Door Thickness
 G = Gap
 R = Reveal
 X = Base Plate Setback

Screw-on



Cup Dimensions

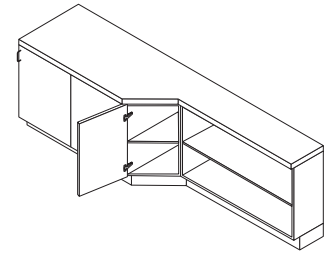


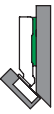
Tiomos 120/-45A

-45° angle corner cabinet hinge for overlay doors

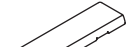





- For -45° angle corner cabinets
- 120° opening angle
- 3-dimensional adjustment with suitable base plate
- Soft-close or Self-close hinges available
- Convenient depth adjustment with worm screw



Tiomos 120/-45A Opening Angle 120°		Impresso				Screw-On			
Overlay		Pattern	Type	Item No.	PU	Pattern	Type	Item No.	PU
 Hinge cup: steel, nickel-plated Hinge arm: zinc, nickel-plated		42/45	Soft-close	-	-	45	Soft-close	F028138557213	25
		42/45	Self-close	F034139405223	100	45	Self-close	F045138495213	25

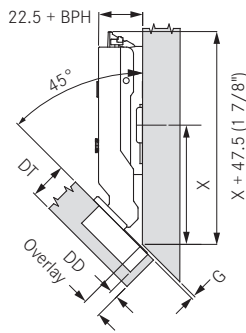
Cover Cap with Clip Protector	Item No.	PU
 Plastic, black	F072140504247	1000
For installation see page 57		

Cover Caps	Item No.	PU	Hinge Clip Protector	Item No.	PU
 Steel, nickel-plated	F072135500247	1000	 Plastic, grey	F072135807540	500
For installation see page 57					

Hinge Cup Cover Cap	Item No.	PU	Wood Screw, Nickel-plated	Item No.	PU
 Steel, nickel-plated	F072135503228	150	 #6 x 5/8" FHP, NI	81001-43	500

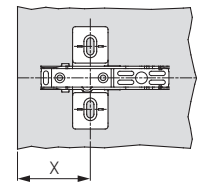
PU - Packaging unit

Overlay



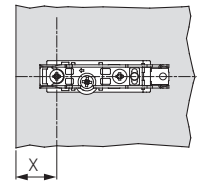
Drawings show Tiomos with a base plate, **(BPH) 02**.

		Drilling Distance (DD)				
		3	4	5	6	7
Door Overlay	12.0					0
	11.5				0	
	10.5			0		
	9.5		0			2
	8.5	0			2	
	8.0					3
	7.5			2		3.5
	7.0				3	
	6.5		2		3.5	
	6.0			3		
	5.5	2		3.5		
	5.0		3			
	4.5		3.5			
	4.0	3				6
	3.5	3.5				
	3.0				6	
2.0			6			
1.0		6				
0.0	6					
		Base Plate Height (BPH)				



Base Plate Height (BPH)

	0	2	3	3.5	6
X	60.5	62.5	63.5	64	66.5
Wing Base Plate Position (X)					



Base Plate Height (BPH)

	0	2	3	3.5
X	43.5	45.5	46.5	47
Straight Base Plate Position (X)				

Minimum Gaps

		Drilling Distance (DD)					
		3	4	5	6	7	
Door Thickness (DT)	24	6.4	5.4	4.4	3.4	2.4	
	22	3.0	2.0	1.5	1.5	1.5	
	21	1.4	1.3	1.3	1.3	1.3	
	20	1.1	1.1	1.1	1.1	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	1.0	1.0	1.0	1.0	1.5	
	16	1.0	1.0	1.0	1.0	1.0	
			Minimum Gap (G)				

The minimum gap is the gap between the closed door and the front of the cabinet.

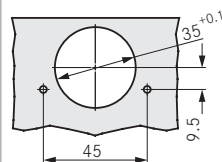
IMPORTANT

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

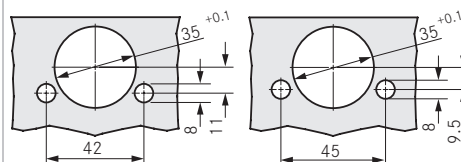
Legend

BPH = Base Plate Height
 CC = Center Cup
 DD = Drilling Distance
 DT = Door Thickness
 G = Gap
 R = Reveal
 X = Base Plate Setback

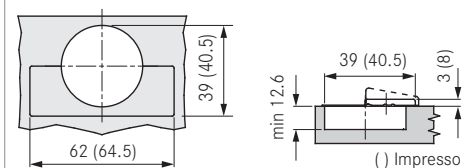
Screw-on



Impresso



Cup Dimensions

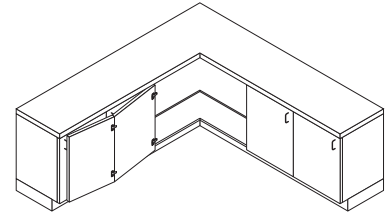


Tiomos PCC

Pie-cut corner cabinet hinge



- 3-dimensional adjustment with suitable base plate
- Designed for folding doors in corner cabinets
- For door thicknesses 14mm to 24mm
- Self-close hinges available
- Used in conjunction with Tiomos 155 hinges
- 35mm full cup drill hole

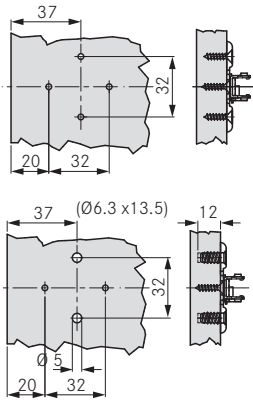
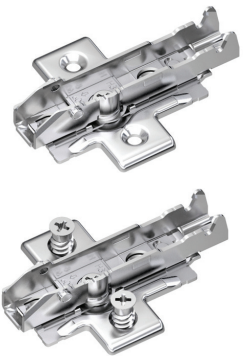


Tiomos Pie-cut Corner Hinge		Screw-On		Dowelled	
Pattern	Type	Item No.	Item No.	PU	
42	Self-close	-	F045138336228	150	
45	Self-close	F045138517228	F045138518228	150	



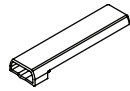
Hinge cup: steel, nickel-plated;
Hinge arm: zinc, nickel-plated

Base Plates for PCC		Wing Base Plate, 4-Point Fixing			
Door Thickness	Screws	Height	Item No.	PU	
14mm-24mm	For wood screws	0	F058139746228	150	
14mm-24mm	With pre-mounted Euro screws	0	F058139761228	150	



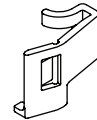
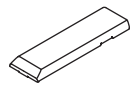
Cover Cap with Clip Protector	Item No.	PU
Plastic, black	F072140504247	1000

For installation see page 57

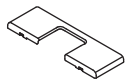


Cover Caps	Item No.	PU	Hinge Clip Protector	Item No.	PU
Steel, nickel-plated	F072135500247	1000	Plastic, grey	F072135807540	500

For installation see page 57

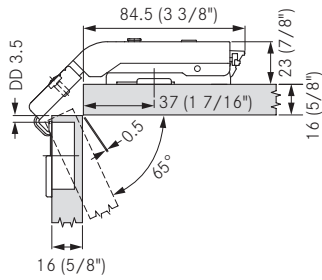


Hinge Cup Cover Cap	Item No.	PU	Wood Screw, Nickel-plated	Item No.	PU
Steel, nickel-plated	F072135503228	150	#6 x 5/8" FHP, NI	81001-43	500

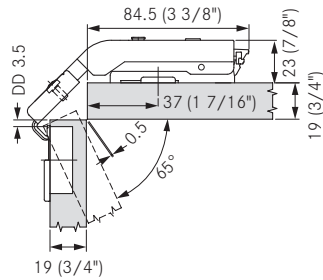


PU - Packaging unit

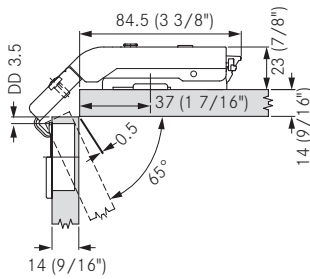
Hinge Application



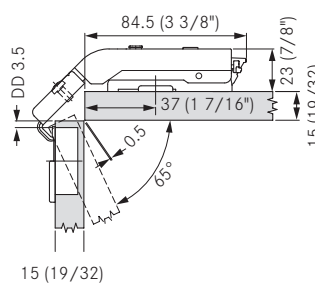
16mm door thickness with base plate height **(BPH) 0**.



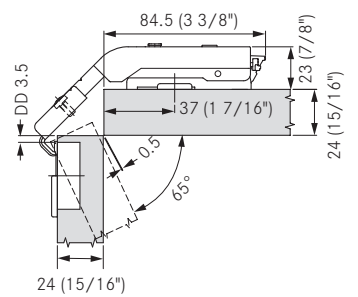
19mm door thickness with base plate height **(BPH) 0**.



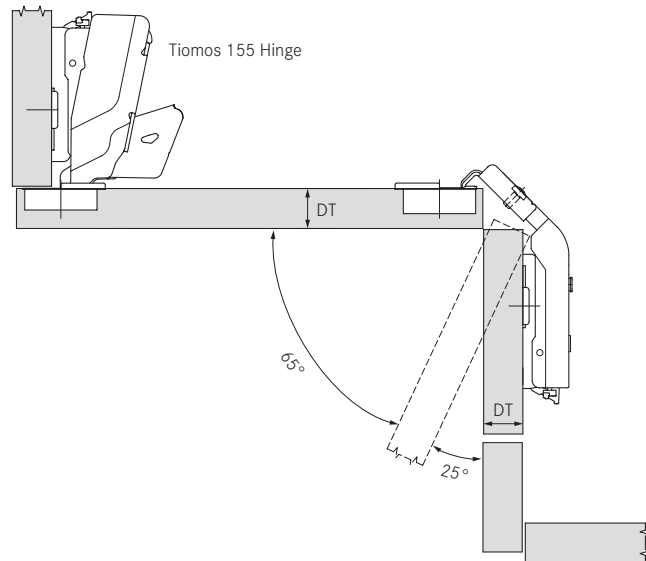
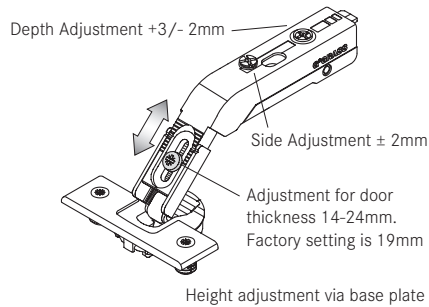
14mm door thickness with base plate height **(BPH) 0**.



15mm door thickness with base plate height **(BPH) 0**.



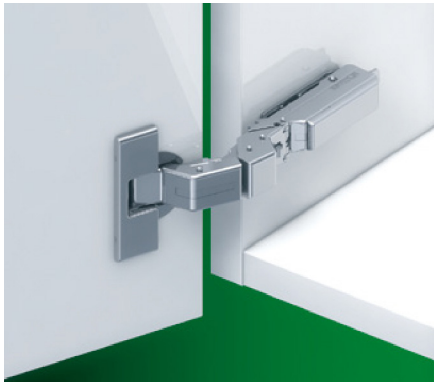
24mm door thickness with base plate height **(BPH) 0**.



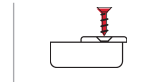
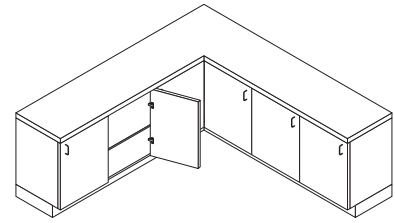
Legend	Screw-on	Dowelled	Cup Dimensions
BPH = Base Plate Height CC = Center Cup DD = Drilling Distance DT = Door Thickness R = Reveal X = Base Plate Setback			

Tiomos M9

110° hinge for 12mm-28mm door thicknesses



- Accommodates overlays up to 25mm (1")
- For door thicknesses from 12mm (15/32") to 28mm (1 1/8")
- Soft-close and self-close hinges available
- For face frame or frameless cabinets
- 3-dimensional adjustments with suitable base plate
- Shallow cup depth of 9mm



Tiomos M9 Opening Angle 110°				Screw-On			
Overlay	Half Overlay	Inset	Cranking 14	Pattern	Type	Item No.	PU
			Hinge cup: zinc, nickel-plated Hinge arm: zinc, nickel-plated	45	Soft-close	F029140338217	50
				45	Self-close	F047140339217	50

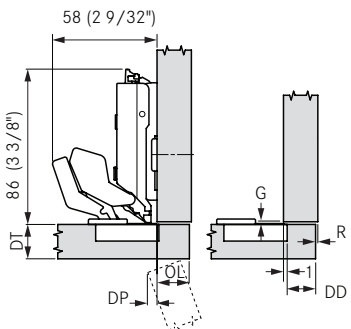
Cover Cap with Clip Protector	Item No.	PU	Hinge Clip Protector	Item No.	PU
 Plastic, black	F072140504247	1000	 Plastic, grey	F072135807540	500
For installation see page 57			For installation see page 57		

Cover Caps	Item No.	PU	Opening Angle Reduction Clip to 85°	Item No.	PU
 Steel, nickel-plated	F072135500247	1000	 Steel, nickel-plated	F072135871517	50

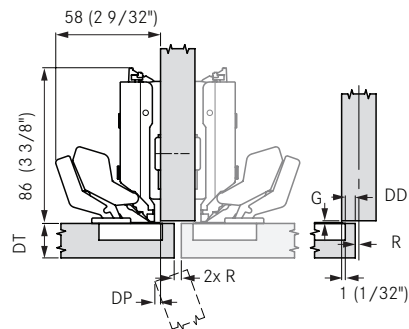
Hinge Cup Cover Cap	Item No.	PU	Wood Screw, Nickel-plated	Item No.	PU
 Steel, nickel-plated	F072135503228	150	 #6 x 5/8" FHP, NI	81001-43	500

PU - Packaging unit

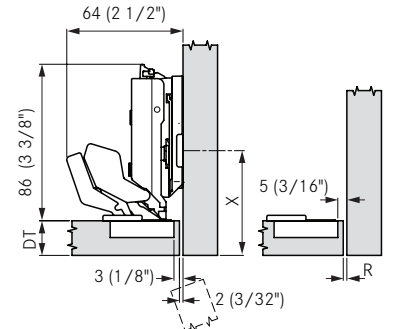
Overlay Half Overlay Inset



Drawings show Tiomos with a base plate, **(BPH) 0**.



Drawings show Tiomos with a base plate, **(BPH) 0**.



Drawings show Tiomos with a base plate, **(BPH) 06**.

X= 38.5 + DT

Note: A door stop is needed to prevent overclose.

Minimum Gap and Minimum Reveal

Application Data	Drilling Distance (DD)		3		4		5		6		7		8		9		10		11		12		13	
	Door Protrusion (DP)		0.8		1.1		1.5		1.8		2.2		2.5		2.9		3.2		3.5		3.9		4.2	
Door Overlay (OL)		4		5		6		7		8		9		10		11		12		13		14		
Min Reveal (R)/ Gap (G)		R	G	R	G	R	G	R	G	R	G	R	G	R	G	R	G	R	G	R	G	R	G	
Door Thickness (DT)	12-20	1.0	1.5	1.0	1.5	1.0	1.5	1.0	1.5	1.0	1.5	1.0	1.5	1.0	1.5	1.0	1.5	1.0	1.5	1.0	1.5	1.0	1.5	
	22	1.0	1.5	1.0	1.5	1.0	1.5	1.0	1.5	1.0	1.5	1.0	1.5	1.0	1.5	1.0	1.5	1.5	1.5	1.7	1.5	4.0	1.5	
	24	1.0	1.5	1.2	1.5	1.3	1.5	1.5	1.5	1.7	1.5	2.0	1.5	2.4	1.3	3.3	1.5	8.3	1.5	7.7	1.5	6.9	1.5	
	26	2.2	1.5	2.4	1.5	2.7	1.5	3.1	1.5	3.6	1.5	4.7*	1.5	12*	1.5	11.8	1.5	10.9	1.5	9.9	1.5	8.9	1.5	
	28	3.9	1.5	4.3	1.5	5.1	1.5	6.3*	1.5	16*	1.5	16*	1.5	15*	1.5	14*	1.5	13*	1.5	12*	1.5	11*	1.5	

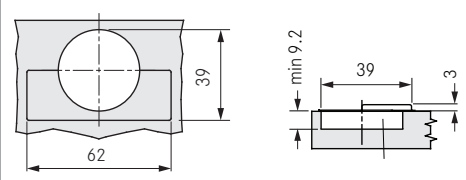
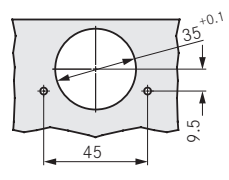
Application Data	Drilling Distance (DD)		14		15		16		17		18		19		20		21		22		23		24	
	Door Protrusion (DP)		4.6		4.9		5.3		5.6		5.9		6.3		6.6		7		7.3		7.6		8	
Door Overlay (OL)		15		16		17		18		19		20		21		22		23		24		25		
Min Reveal (R)/ Gap (G)		R	G	R	G	R	G	R	G	R	G	R	G	R	G	R	G	R	G	R	G	R	G	
Door Thickness (DT)	12-20	1.0	1.5	1.0	1.5	1.0	1.5	1.0	1.5	1.0	1.5	1.0	1.5	1.0	1.5	1.0	1.5	1.0	2.0	1.0	2.0	1.0	2.0	
	22	4.0	1.5	3.5	1.5	3.0	1.5	2.2	1.5	1.7	1.5	1.3	1.5	1.0	1.5	1.0	1.5	1.0	2.0	1.0	2.0	1.0	2.0	
	24	6.0	1.5	5.2	1.5	4.5	1.5	4.0	1.5	3.3	1.5	3.0	1.5	2.5	1.5	2.1	1.5	1.9	2.0	1.6	2.0	1.5	2.0	
	26	8.0	1.5	7.2	1.5	6.4	1.5	5.8	1.5	5.1	1.5	4.6	1.5	4.1	1.5	3.7	1.5	3.3	2.0	3.0	2.0	2.6	2.0	
	28	10*	1.5	9.2	1.5	8.4	1.5	7.6	1.5	6.9	1.5	6.4	1.5	5.8	1.5	5.3	1.5	4.9	2.0	4.5	2.0	4.2	2.0	

Note:
 Reveal dimensions were determined with an edge radius (of the door) of 1 mm.
 Hinge dimensions and reveal calculation based on factory setting.
 *Only achievable with 85° angle reduction clip.

IMPORTANT
 To determine the correct application Grass strongly recommends a trial mounting for all hinges and base plates.

Legend Drilling Pattern Cup Dimensions

- BPH = Base Plate Height
- DD = Drilling Distance
- DP = Door Protrusion
- DT = Door Thickness
- G = Gap
- OL = Overlay
- R = Reveal
- X = Base Plate Setback

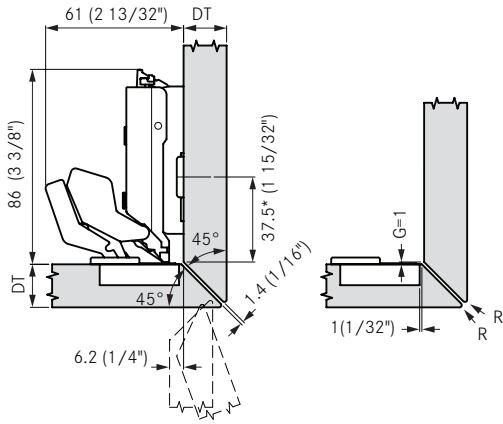


Tiomos M9

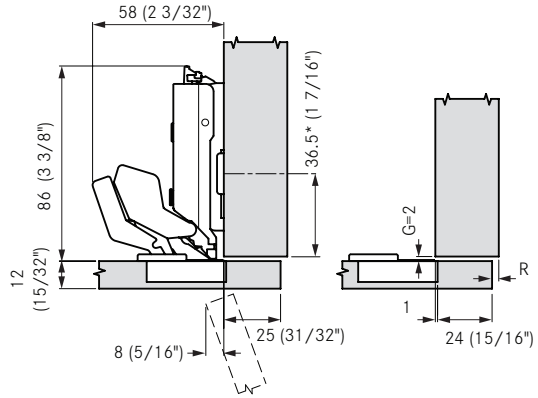
Installation Information

Mitered Application - Circumferential and Lateral

Maximum Overlay



Drawings show Tiomos with a base plate, **(BPH) 3**.



Drawings show Tiomos with a base plate, **(BPH) 0**.

Door Thickness (DT)	Mitered Application Circumferential	Mitered Application Lateral
	R (min)	R (min)
12-17	0	0
18	0.2	0
19	1.0	0.4
20	1.5	1.0
21	2.2	1.8
22	3.0	2.5
24	4.3	4.1

*Dimension is calculated using a base plate that requires a 37mm hole setback. This dimension will vary if a base plate requiring a different standard setback is used.

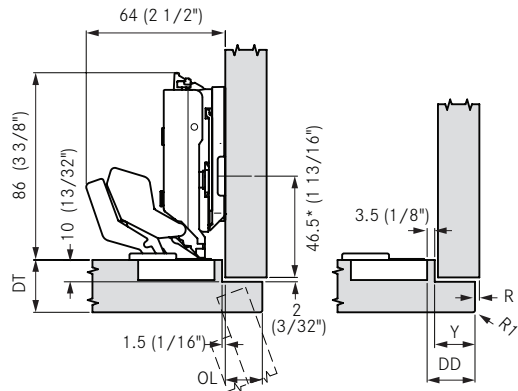
Note:

With circumferential mitered application all sides 1.4mm reveal

Installation Information

Rabbit Applications

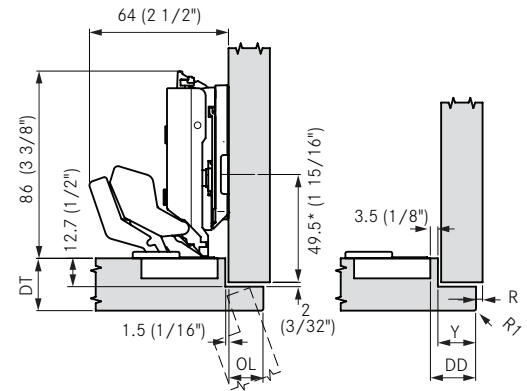
10mm (3/8")



Drawings show Tiomos with a base plate, **(BPH) 6**.

Cabinet Wall Location	DT (max)	OL (max)	Y (max)	DD (max)	R (max)
	20	17	18.5	22	1
	28	17	18.5	22	See reveal table page 45
	38	17	18.5	22	

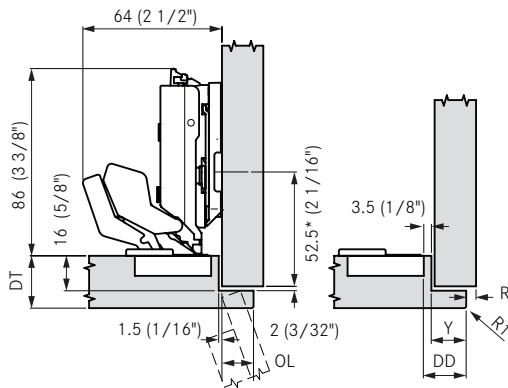
12.7mm (1/2")



Drawings show Tiomos with a base plate, **(BPH) 6**.

Cabinet Wall Location	DT (max)	OL (max)	Y (max)	DD (max)	R (max)
	20	16	17.5	21	1
	28	16	17.5	21	See reveal table page 45
	35	14	15.5	19	

16mm (5/8")



Drawings show Tiomos with a base plate, **(BPH) 6**.

Cabinet Wall Location	DT (max.)	OL (max.)	Y (max.)	DD (max.)	R (max.)
	20	14.5	16	19.5	1
	26	14.5	16	19.5	See reveal table page 45
	32	12.5	14	17.5	

*Dimension is calculated using a base plate that requires a 37mm hole setback. This dimension will vary if a baseplate requiring a different standard setback is used.

Legend

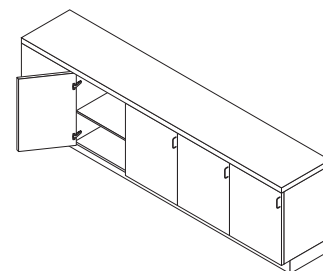
- BPH = Base Plate Height
- DD = Drilling Distance
- DP = Door Protrusion
- DT = Door Thickness
- G = Gap
- OL = Overlay
- R = Reveal
- Y = Rabbit

Tiomos M0

125° hinge for thin doors (6-10mm)



- No cup hole necessary
- Door thickness of 6mm (1/4") to 10mm (3/8")
- Accommodates door overlays up to 25.4mm (1")
- Soft-close hinges
- Works with a variety of door material - wood, aluminum, MDF, mineral composite, HPL (laminate), chipboard, solid surface
- Special fasteners for hinge attachment to door
- Compatible with Tiomos base plates



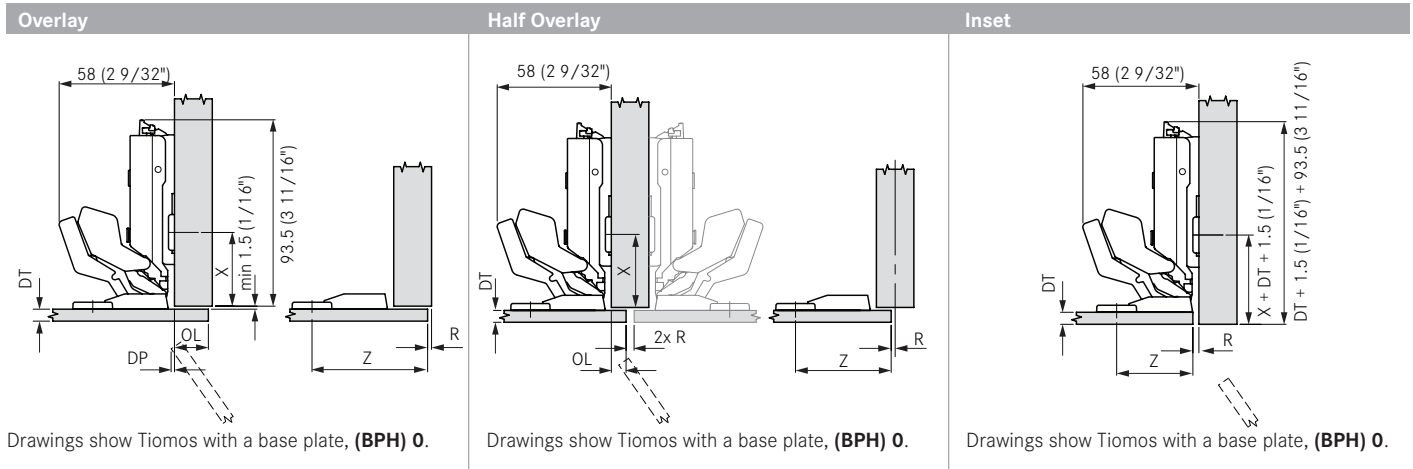
Tiomos M0 Opening Angle 125°			Screw-On			
Overlay	Half Overlay	Inset	Pattern	Type	Item No.	PU
			45	Soft-close	F029140331217	50
Hinge cup: zinc, die-cast Hinge arm: steel, nickel-plated						

Fastening Options						
Fasteners	Description	Item No.	PU	Material thickness		
				6mm	8mm	10mm
	Countersunk screw PH2, M5 x 6mm For a minimum door thickness of 6mm For aluminum, HPL, mineral composite	F072135923223	100	Aluminum	F072135923223	
	Set: 100 Countersunk screw M4 x 8mm, 100 sleeve M4 x 5.5mm, 1 internal hex key For a minimum door thickness of 8mm, for chipboard, MDF, mineral composite, HPL	F072135928201	1	HPL (laminate)	F072135928201	
				Mineral Composite	F072135923223	
				Chipboard	–	F072135928201
				MDF	–	F072135928201

Cover Cap with Clip Protector	Item No.	PU	Hinge Clip Protector	Item No.	PU
 Plastic, black	F072140504247	1000	 Plastic, grey	F072135807540	500
	For installation see page 57			For installation see page 57	

Cover Caps	Item No.	PU	Opening Angle Reduction Clip to 85°	Item No.	PU
 Steel, nickel-plated	F072135500247	1000		F072135871517	50

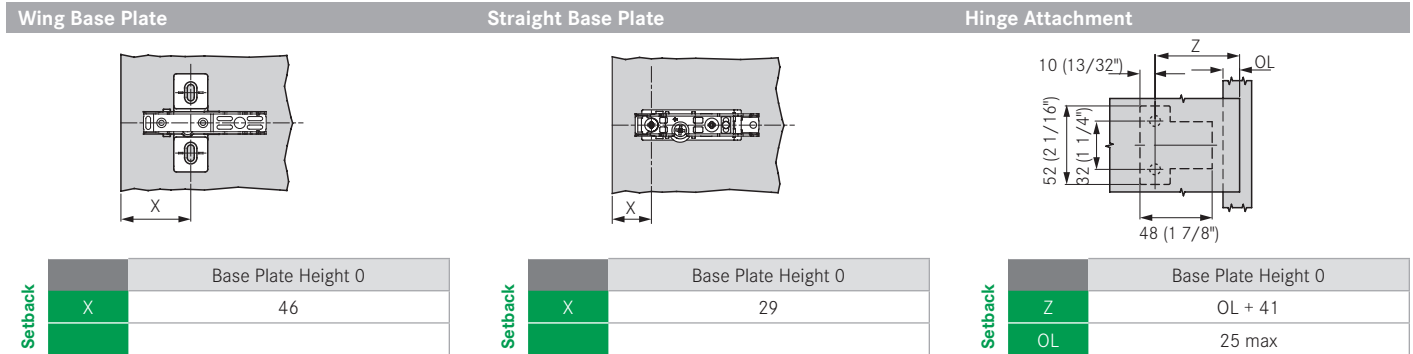
PU - Packaging unit



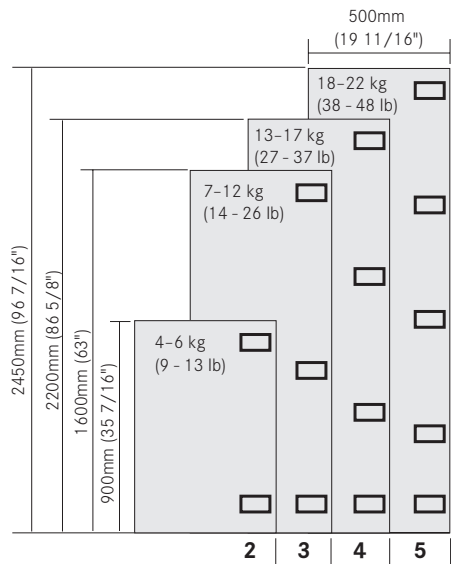
Minimum Gap and Reveal

Hinge Attachment (Z)	38		39		47		49		51		53		55		56		58		60		61		63		64		66	
Door Protrusion (DP)	0	0	0	0	0	0	0	0	0	0	0	0.5	1.5	3.0	3.4	0	0	0	0	0	0	0	0	0	0	0	0	0
Door Overlay (OL)	-3	-2	6	8	10	12	14	15	17	19	20	22*	23*	25*														
Min Reveal (R)/ Gap (G)	R	G	R	G	R	G	R	G	R	G	R	G	R	G	R	G	R	G	R	G	R	G	R	G	R	G	R	G
Door Thickness 6-10 (DT)	2.0	1.5	2.0	1.5	2.0	1.5	2.0	1.5	2.0	1.5	2.0	1.5	2.0	1.5	2.0	1.5	2.0	1.5	2.0	1.5	2.0	1.5	2.0	2.5	2.0	3.0	2.0	4.0

*Only achievable with 85° angle reduction clip.



Number of Hinges Per Door Installation Information Notes



- Countersunk screw M5 x 6mm**
(except for aluminum):
1. Drill a Ø 4.8mm hole
 2. Cut a Ø 5mm thread
 3. Position the hinge and secure with the screws
- Countersunk screw M4 x 8mm with sleeve**
M4 x 5.5mm:
1. Drill a Ø 5mm hole
 2. Slightly countersink the edge of the hole
 3. Insert the sleeve
 4. Knock in the sleeve with a hammer
 5. Position the hinge and secure with the screws

An inset application is achieved with the base plate (X) and a low housing screwing distance (Z).

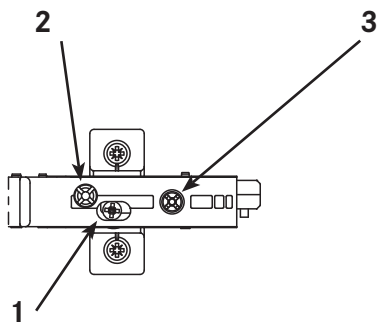
Depending on the type and thickness of the base material the pull-out resistances can vary with the same fastening method. For information regarding the selection and processing of the base material please contact the base material supplier.

Liability claims: Please note that Grass cannot accept any liability for damage resulting from unsuitable fastening materials or methods.

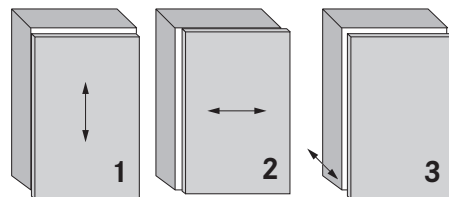
IMPORTANT
To determine the correct application Grass strongly recommends a trial mounting for all hinges and base plates.

Timos Base Plates

For Timos hinges



- Steel, nickel plated
- Depth adjustment via worm screw
- Height adjustment via worm screw or elongated hole
- Side adjustment via hinge
- Use a #2 Pozzi drive screwdriver for hinge adjustment
- Attach base plates using all available screw holes



Height adjustment via base plate
Via worm screw $\pm 2\text{mm}$

Side adjustment $\pm 2\text{mm}$

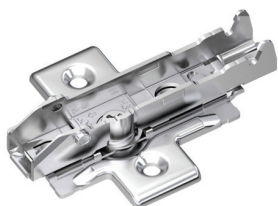
Depth adjustment $+3/-2\text{mm}$

All adjustment options can be made independently of one another

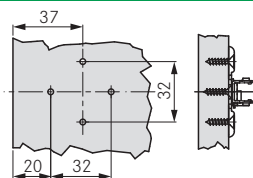
Wing Base Plate, 4 Point Fixing

37/32

For Wood Screws



- Height adjustment via worm screw

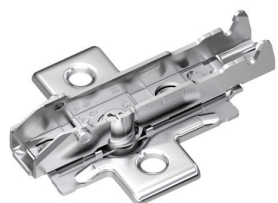


Height	Item No.	PU
0	F058139746 228	150
2	F058139747 228	150
3	F058139748 228	150
3.5	F058139749 217	50

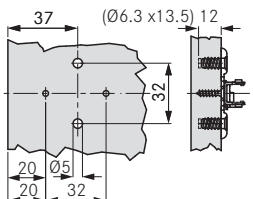
Wing Base Plate, 4 Point Fixing

37/32

For Euro Screws



- Height adjustment via worm screw

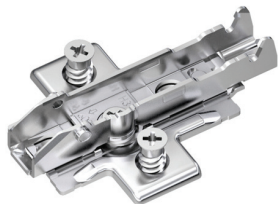


Height	Item No.	PU
0	F058139756 228	150
2	F058139757 228	150
3	F058139758 228	150
3.5	F058139759 228	150

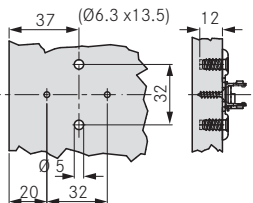
Wing Base Plate, 4 Point Fixing

37/32

Pre-mounted Euro Screws (13.5mm)



- Height adjustment via worm screw

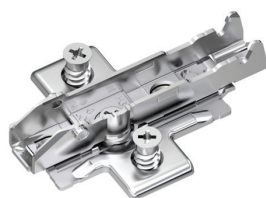


Height	Item No.	PU
0	F058139761 228	150
2	F058139762 228	150
3	F058139763 228	150
3.5	F058139764 228	150

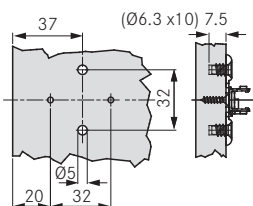
Wing Base Plate, 4 Point Fixing

37/32

Pre-mounted Euro Screws (10mm)



- Height adjustment via worm screw
- For twin application



Height	Item No.	PU
0	F058139863 228	150
2	F058139864 228	150
3	F058139865 228	150

PU - Packaging unit

Tiomos Base Plates



For Tiomos hinges

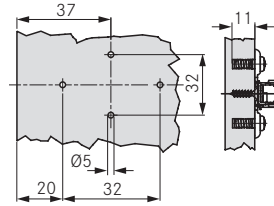
Wing Steel Base Plate, 4 Point Fixing

37/32

Expanding Dowels (5mm)



- Height adjustment via worm screw



Height	Item No.	PU
0	F058139766 228	150
2	F058139767 228	150
3	F058139768 228	150

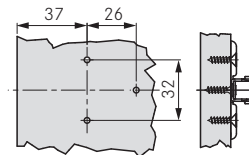
Wing Steel Base Plate, 3 Point Fixing

37/32

For Wood Screws



- Height adjustment via elongated screw holes

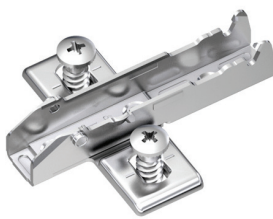


Height	Item No.	PU
0	F058139721 228	150
2	F058139722 228	150
3	F058139723 228	150

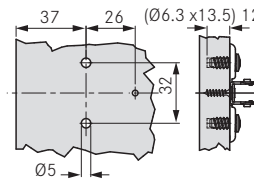
Wing Steel Base Plate, 3 Point Fixing

37/32

Pre-mounted Euro Screws (13.5mm)



- Height adjustment via elongated screw holes

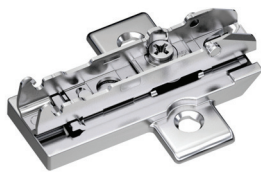


Height	Item No.	PU
0	F058139736 228	150
2	F058139737 228	150
3	F058139738 228	150

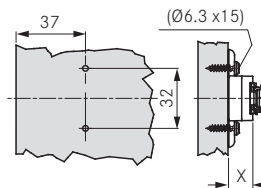
Wing Base Plate, 2 Point Fixing

37/32

For Wood Screws



- Zinc die-cast/Steel, nickel plated
- Height adjustment via worm screw

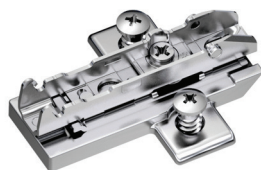


Height	Item No.	PU
6	F058139892 217	50
9.5	F058139888 217	50
12	F058139893 217	50
15	F058139890 217	50
19	F058139894 217	50
21	F058139895 217	50

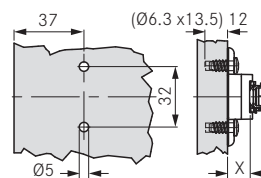
Wing Base Plate, 2 Point Fixing

37/32

Pre-mounted Euro Screws (13.5mm)



- Zinc die-cast/Steel, nickel plated
- Height adjustment via worm screw

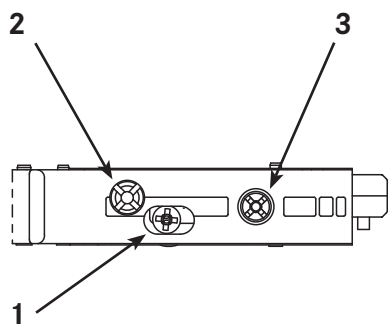


Height	Item No.	PU
6	F058139873 217	50
9.5	F058139882 217	50
12	F058139874 217	50
19	F058139875 217	50
21	F058139896 217	50

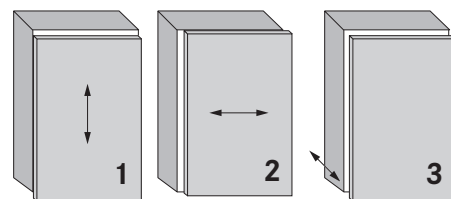
PU - Packaging unit

Tiomos Base Plates

For Tiomos hinges



- Steel, nickel plated
- Height and depth adjustment via worm screw
- Side adjustment via hinge
- Use a #2 Pozidrive screwdriver for hinge adjustment
- Attach base plates using all available screw holes



Height adjustment via base plate
Via worm screw $\pm 2\text{mm}$

Side adjustment $\pm 2\text{mm}$

Depth adjustment $+3/-2\text{mm}$

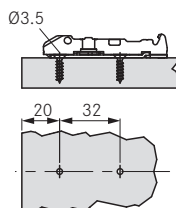
All adjustment options can be made independently of one another

Straight Base Plate, 2 Point Fixing

20/32

For Wood Screws

- Height adjustment via worm screw



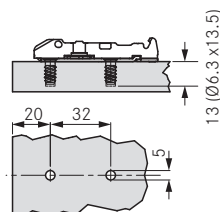
Height	Item No.	PU
0	F059139701228	150
2	F059139702228	150
3	F059139703228	150

Straight Base Plate, 2 Point Fixing

20/32

Pre-mounted Euro Screws

- Height adjustment via worm screw



Height	Item No.	PU
0	F059139711228	150
3	F059139713228	150

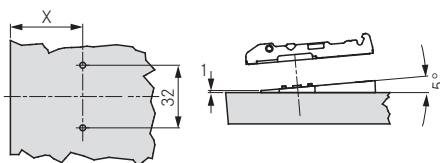
Spacers

+5° Wedge for Screw Fixing

37/32

For Wood Screws

- Zinc, nickel plated
- For placing under wing base plates
- Can be stacked (max 3)



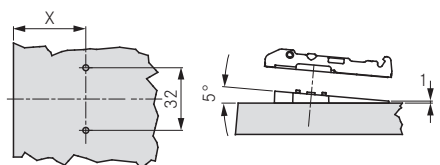
Height	Item No.	PU
	F072135757217	50

-5° Wedge for Screw Fixing

37/32

For Wood Screws

- Zinc, nickel plated
- For placing under wing base plates
- Can be stacked (max 3)

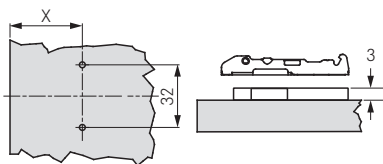


Height	Item No.	PU
	F072135758217	50

3mm Universal Spacer

37/32

- For use with Nexis or Tiomos base plate applications
- Snap-to-fit breakaway section for Nexis applications
- For placing under wing base plates
- Can be stacked (max 2)

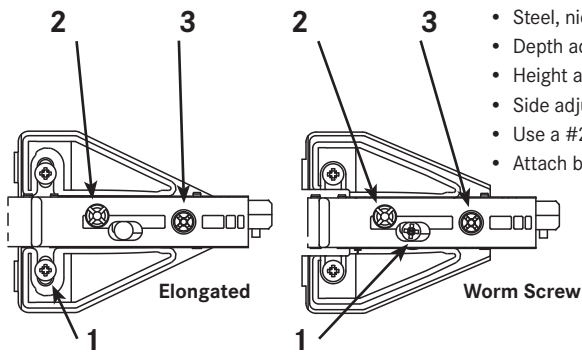


Height	Item No.	PU
3	13461-41	50

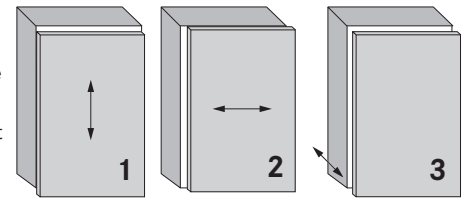
PU - Packaging unit

Tiemos Base Plates

For Tiemos hinges



- Steel, nickel plated
- Depth adjustment via worm screw
- Height adjustment via worm screw or elongated hole
- Side adjustment via hinge
- Use a #2 Pozzi drive screwdriver for hinge adjustment
- Attach base plates using all available screw holes



Height adjustment via base plate $\pm 2\text{mm}$ Side adjustment $\pm 2\text{mm}$ Depth adjustment $+3/-2\text{mm}$

All adjustment options can be made independently of one another

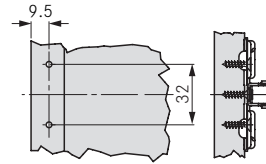
FFA Base Plate, 2 Point Fixing

9.5/32

For Wood Screws



- Height adjustment via elongated screw holes



Height	Item No.	PU
1.5	F058139821228	150
3.5	F058139822228	150

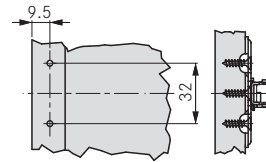
FFA Base Plate, 2 Point Fixing

9.5/32

For Wood Screws



- Height adjustment via worm screw



Height	Item No.	PU
1.5	F058139825228	150
3.5	F058139826228	150
4.5	F058139827228	150
5	F058139828228	150

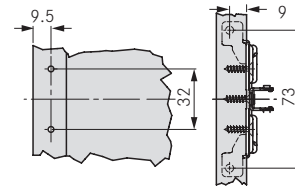
FFAL Base Plate With Flange, 4 Point Fixing

9.5/32

For Wood Screws



- Height adjustment via elongated screw holes



Height	Item No.	PU
3.5	F058139829228	150

Inset FFA Base Plate, 3 Point Fixing

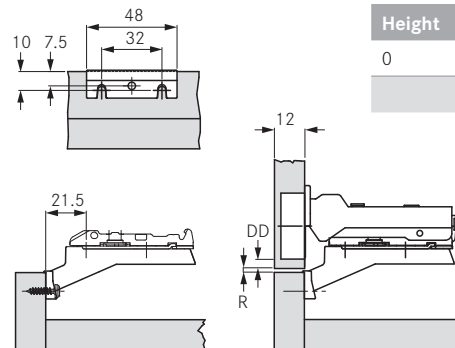
10/32

For Wood Screws



- Steel, diecast, nickel plated
- Height adjustment via worm screw
- Note: Requires a 9.5 crank hinge (half-overlay)

Door Thickness (DT)	Drilling Distance (DD)			
	3	4	5	6
28	4.0			
26	4.0	3.0		
24	4.0	3.0	2.0	
22	4.0	3.0	2.0	1.0
20	4.0	3.0	2.0	1.0
19	4.0	3.0	2.0	1.0
18	4.0	3.0	2.0	1.0
16	4.0	3.0	2.0	1.0
				Reveal (R)



Height	Item No.	PU
0	F058139831228	150

PU - Packaging unit

Tipmatic

For handle-free wooden doors

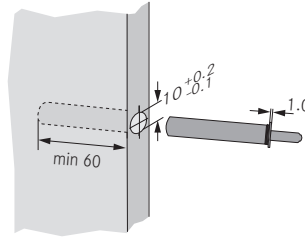


- Gently tapping the front causes the doors to open to a convenient angle
- Use with Tiomos 110 Tipmatic Plus or with Nexis and Tiomos free-swinging hinges
- Large magnet catch range – holds door closed securely
- Gap adjustment from 2.5 to 5.5mm with integrated, self-locking and tool-free depth adjustment feature
- Mount on the front side of the cabinet or with an adapter plate

Tipmatic Pin For Drilling



- Incl. Tipmatic mechanism:
 - Stick on strike plate
 - Screw on strike plate
- Hole drilled from the front
- Plastic RAL 7036, platinum grey

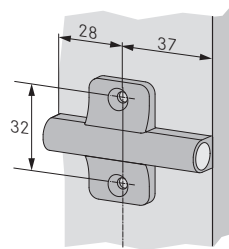


Item No.	PU
F069135396513	25

Adapter Plate for Line Boring For Euro Screws



- Suitable for line boring 28 and 37mm
- Attach with Euro screws (6.3 x 13.5)
- Plastic RAL 7035, light grey

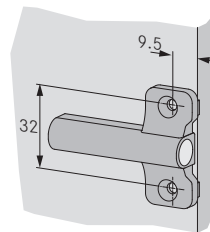


Item No.	PU
F069063310213	25

Face Frame or Standard Adapter Plate For Wood Screws



- Quick upgrade installation
- Attach with wood screws (3.5 x 13)
- Plastic RAL 7035, light grey

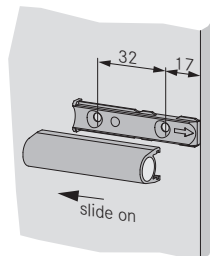


Item No.	PU
F069073697213	25

Linear Adapter Plate For Wood Screws



- Design solution – also suitable for inset door applications
- Attach with wood screws (3.5 x 13)
- Plastic RAL 7035, light grey

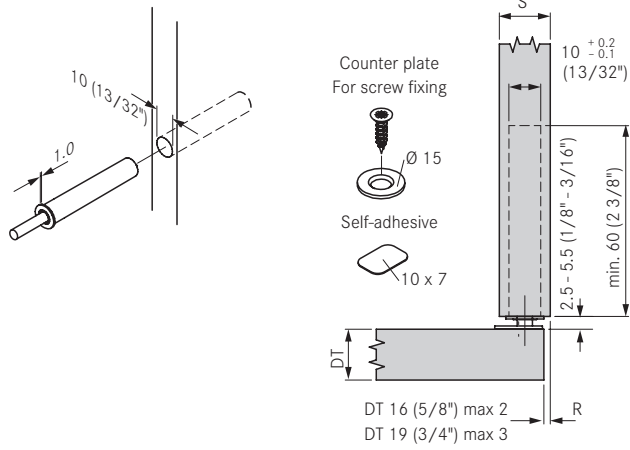


Item No.	PU
F069149398523	25

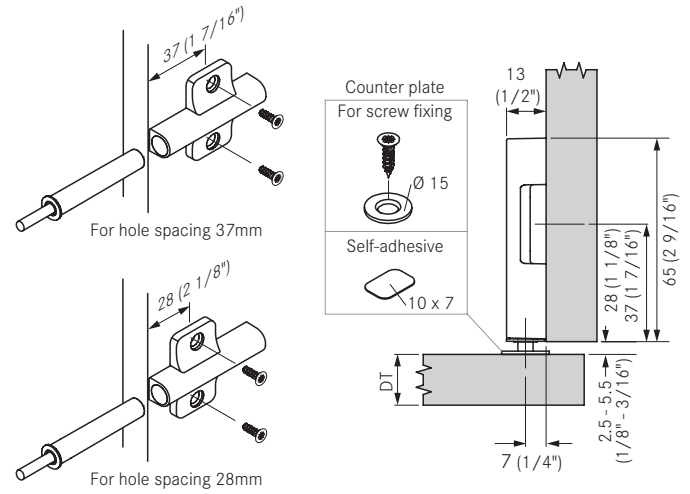
PU - Packaging unit

Mounting Dimensions

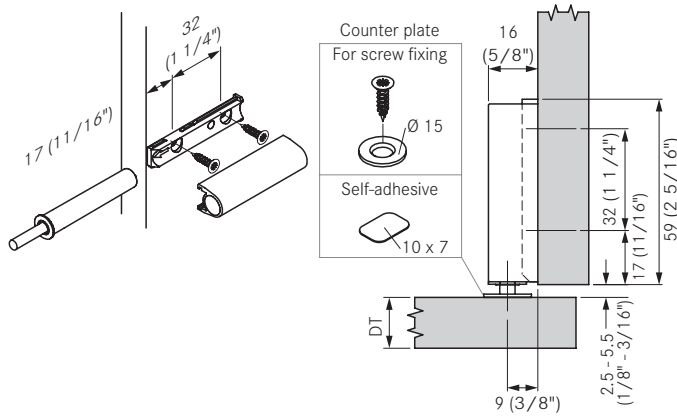
Tipmatic Pin



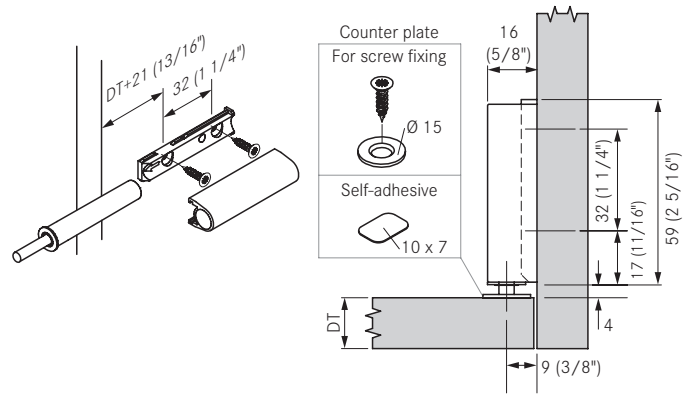
Adapter Plate for Line Boring



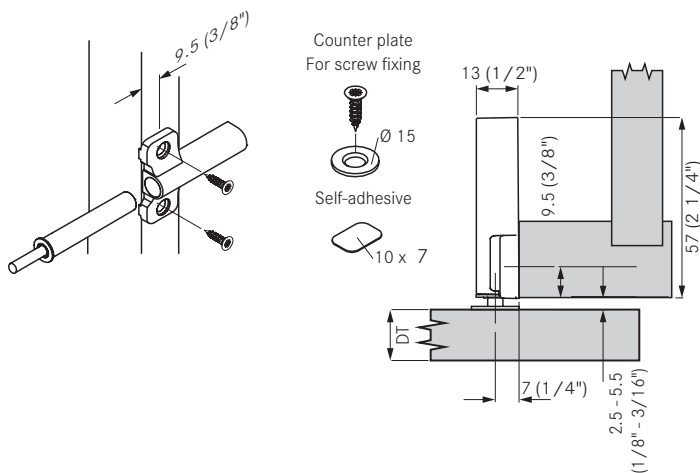
Linear Adapter Plate, Overlay



Linear Adapter Plate, Inset



Face Frame Plate



Legend

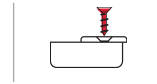
- DT = Door Thickness
- R = Reveal
- S = Cabinet Sidewall

Tiemos Flap Hinge

90° hinge for flap door



- Sleek modern design
- 90° opening angle
- For flap thicknesses of up to 30mm (1 3/16")
- Narrow joint
- Large overlay of up to 19mm (3/4")
- 3-dimensional adjustment
- Compatible with Tipmatic pin system
- Compatible with Kinvaro D-M/D-S flap system



Tiemos Flap Hinge Opening Angle 90°

Screw-On

Overlay	For Flap Thickness 14-21mm	Color	Cup Depth	Item No.	PU
	Hinge: zinc die-cast, nickel-plated	Nickel	12mm	F053139671223	100
	Hinge: zinc die-cast, night	Night	12mm	F053139677223	100

Overlay	For Flap Thickness 22-28mm	Color	Cup Depth	Item No.	PU
	Hinge: zinc die-cast, nickel-plated	Nickel	17mm	F053139672223	100
	Hinge: zinc die-cast, night	Night	17mm	F053139678223	100

Cover Cap for Flap Hinge

Item No.

PU

1.5mm Spacer for Tiemos Flap Hinge

Item No.

PU



Steel, nickel plated

F053139675223

100

Steel, night

F053139683223

100



Steel, nickel plated

F053139676223

100

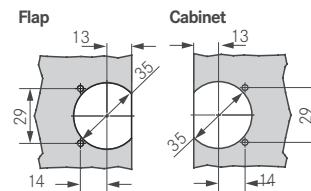
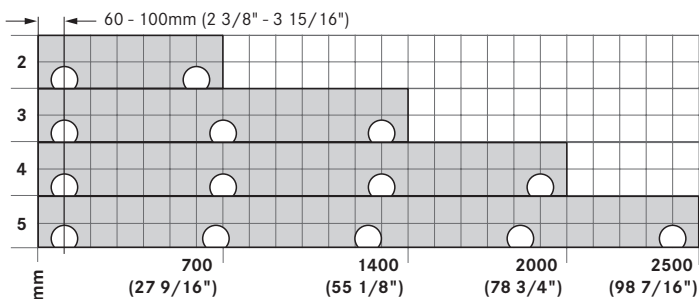
Steel, night

F053139684223

100

Number of Hinges per Door

Drilling Pattern



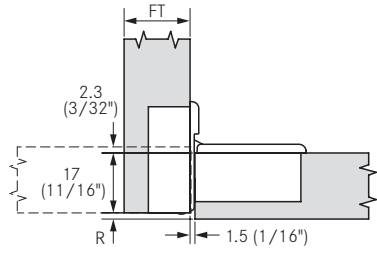
PU - Packaging unit

Tiomos Flap Hinge



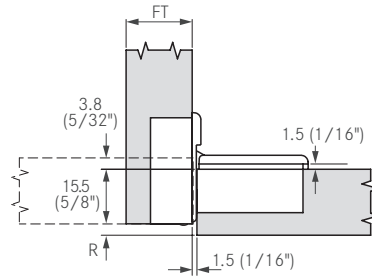
90° hinge for flap door

Overlay, Without Spacer, 12mm Cup Depth



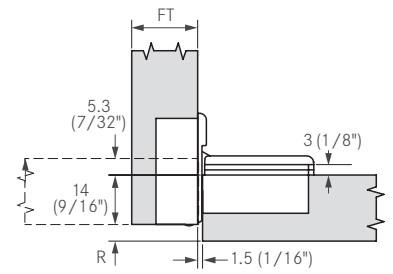
Flap Thickness (FT)		21	20	19	18	17	16	15	14
Min Reveal (R)		2.5	1.5	1	1	1	1	1	1

Overlay, with 1 Spacer, 12mm Cup Depth



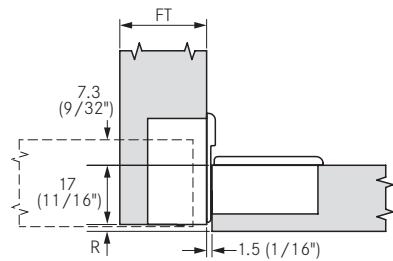
Flap Thickness (FT)		21	20	19	18	17	16	15	14
Min Reveal (R)		2.5	1.5	1	1	1	1	1	1

Overlay, with 2 Spacers, 12mm Cup Depth



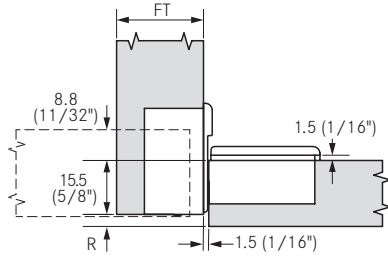
Flap Thickness (FT)		21	20	19	18	17	16	15	14
Min Reveal (R)		2.5	1.5	1	1	1	1	1	1

Overlay, Without Spacer, 17mm Cup Depth



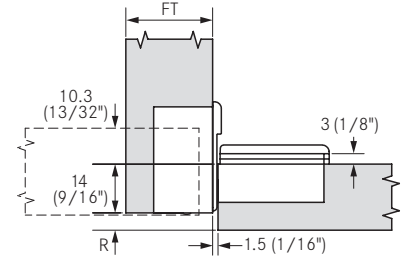
Flap Thickness (FT)		30	29	28	27	26	25	24	23	22
Min Reveal (R)		6.5	5.5	4.5	3.5	2.5	1.5	1	1	1

Overlay, with 1 Spacer, 17mm Cup Depth



Flap Thickness (FT)		30	29	28	27	26	25	24	23	22
Min Reveal (R)		6.5	5.5	4.5	3.5	2.5	1.5	1	1	1

Overlay, with 2 Spacers, 17mm Cup Depth

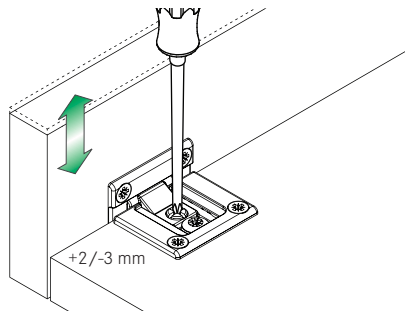


Flap Thickness (FT)		30	29	28	27	26	25	24	23	22
Min Reveal (R)		6.5	5.5	4.5	3.5	2.5	1.5	1	1	1

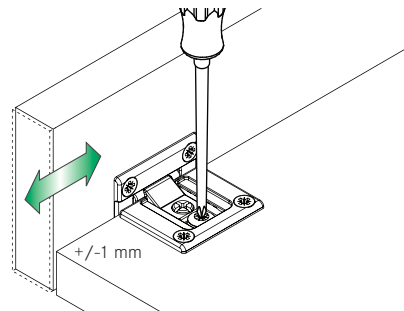
Note: Hinge dimensions and reveal calculation based on factory setting.

IMPORTANT
To determine the correct application Grass strongly recommends a trial mounting for all hinges and base plates.

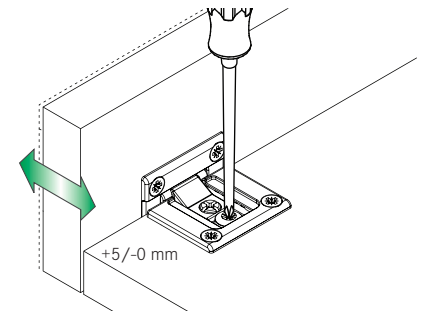
Height Adjustment



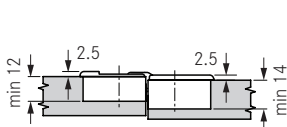
Side Adjustment



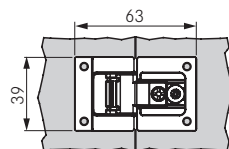
Depth Adjustment



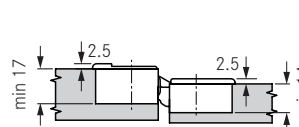
Cup Dimensions, 12mm Cup Depth



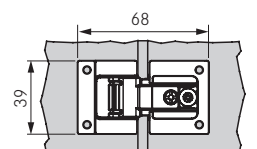
Hinge Dimensions, 12mm Cup Depth



Cup Dimensions, 17mm Cup Depth



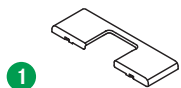
Hinge Dimensions, 17mm Cup Depth



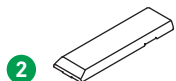
Accessories and Assembly Aids

Tiomos

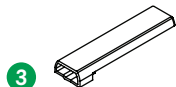
Cover Caps



1



2



3

Hinge Cup Cover Cap:

- Steel, nickel plated, without imprint

Hinge Arm Cover Cap Long:

- Steel, nickel plated, without imprint
- Imprinting available upon special request

Hinge Arm Cover Cap with Clip Protection:

- Plastic, black, without imprint
- Also serves as clip protection for the back release

Description	Item No.	PU
1 Hinge cup cover cap	F072135503228	150
2 Hinge arm cover cap	F072135500247	1000
3 Cover Cap with Clip Protector	F072140504247	1000

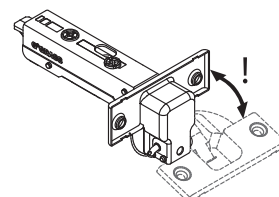
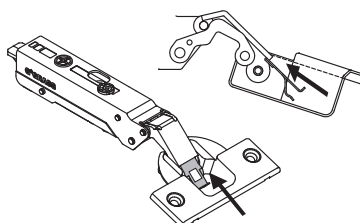
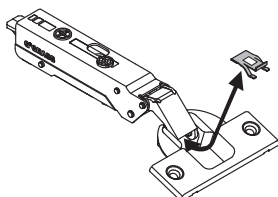
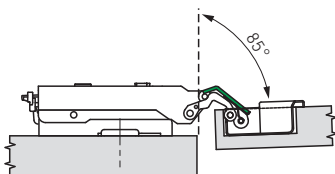
Angle Reduction Clips

Angle Reduction Clip to 85°



Works for all Tiomos 110° and 120° standard hinges. Reduces the opening angle to 85° to prevent doors from bumping fronts or walls in corner installations.

Description		Item No.	PU
Angle reduction clip, 85°	Steel, nickel	F072135751517	50

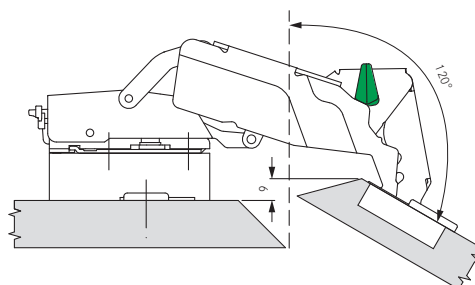


Angle Reduction Clip to 120°



Works for all Tiomos 155° standard hinges. Reduces the opening angle to 120° to prevent doors from bumping the cabinet side in inset and mitered corner applications.

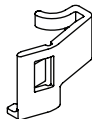
Description		Item No.	PU
Angle reduction clip, 120°	Plastic, black	F072135753517	50



PU - Packaging unit

Timos

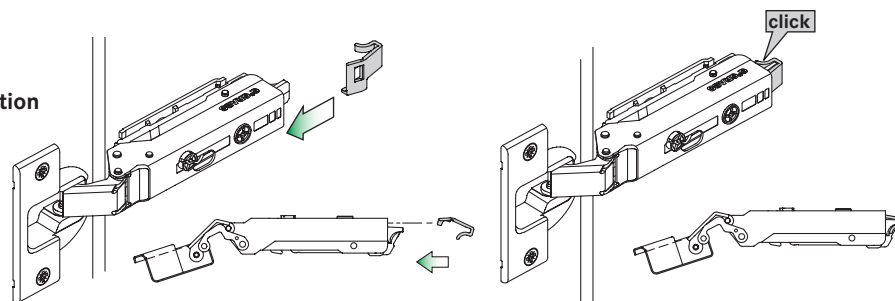
Hinge Clip Protector



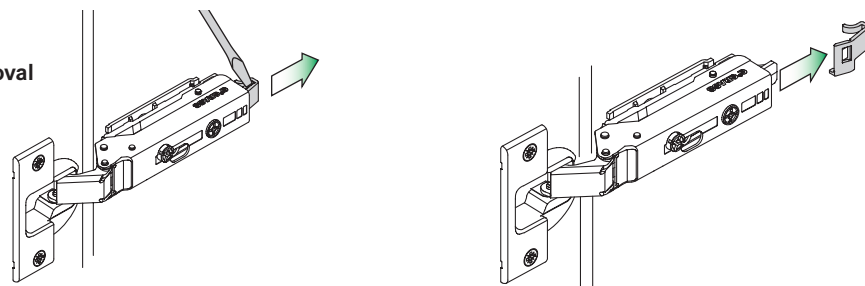
Prevents accidental release of the hinge from the base plate. For use in lockers, wardrobes, office furniture or similar applications.

Description		Item No.	PU
Hinge clip protector	Plastic, grey	F072135807540	500

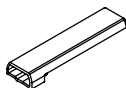
Insertion



Removal



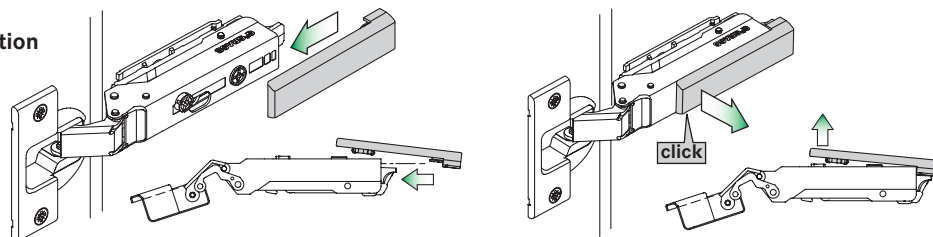
Cover Cap with Clip Protector



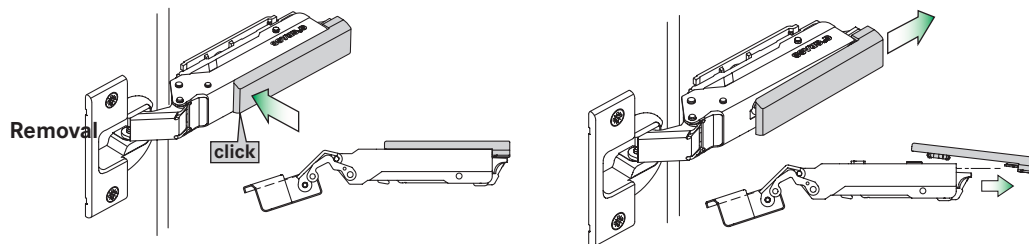
Prevents accidental release of the hinge from the base plate. For use in lockers, wardrobes, office furniture or similar applications.

Description		Item No.	PU
Cover Cap with Clip Protector	Plastic, black	F072140504247	1000

Insertion



Removal



Accessories and Assembly Aids

Tiomos

Tiomos Spacer Ring



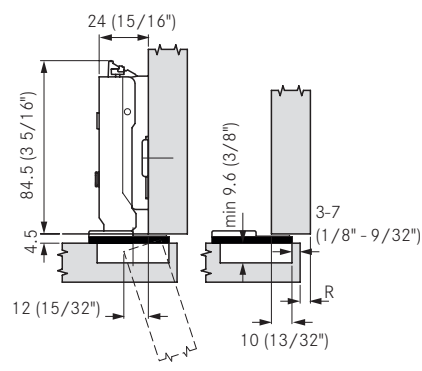
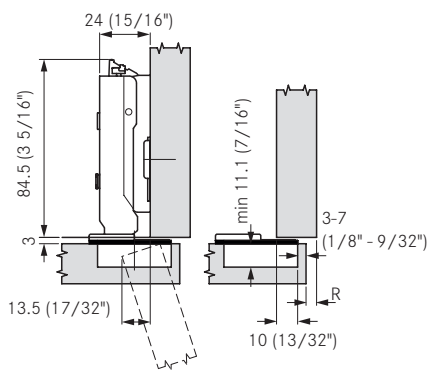
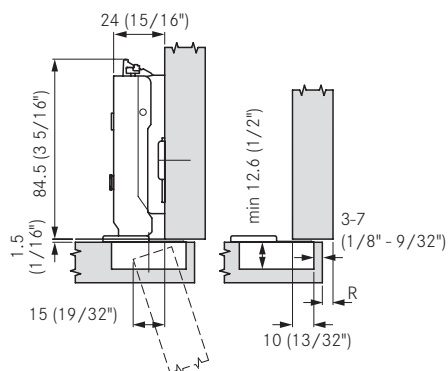
- Permits the use of standard hinges for thinner doors
- Simple installation
- Can be double-stacked
- Suitable for all Tiomos hinges

Description	Item No.	PU
Tiomos spacer ring, 1.5 height	F072135885228	150

Without Spacer Ring

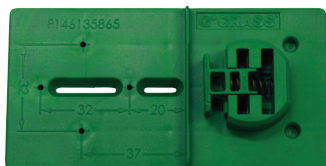
1 Spacer Ring

2 Spacer Rings



Tiomos Marking Aids

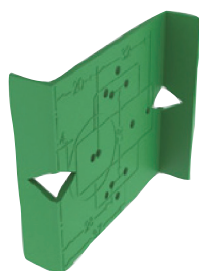
Tiomos Marking Jig



- Easy to use
- Cup distance 3-5mm
- Hinge cup positioning
- Straight base plate positioning
- Wing base plate positioning

Description	Item No.	PU
Tiomos marking jig	F146135865202	1

Tiomos Marking Template



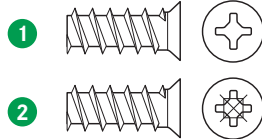
- Easy marking and pre-drilling for:
- 45mm pattern hinges
 - Wing base plates
 - Straight base plates

Description	Item No.	PU
Tiomos marking template	F146135787217	1

Timos

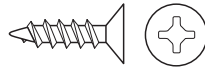
Screws and Dowels

Euro Screw, Nickel-plated



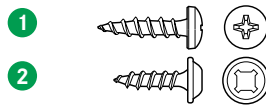
Description	Item No.	PU
1 13mm Euro Screw (1/2")	81015-43	500
18mm Euro Screw (11/16")	83000-43	500
7.5mm Euro Screw (5/16")	83001-43	500
2 Euro Screw 11mm (7/16") Pozi	499.360.61.1015	500
Euro Screw 13mm (1/2") Pozi	499.360.61.3015	500

Wood Screw, Nickel-plated



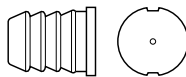
Description	Item No.	PU
#6 x 1/2" FHP, NI	81014-43	500
#6 x 5/8" FHP, NI	81001-43	500
#6 x 3/4" FHP, NI	81003-43	500
#6 x 1" FHP, NI	81004-43	500

Wood Screw, Nickel-plated



Description	Item No.	PU
1 #10 x 3/4" PHP	81007-43	500
2 #8 x 5/8" Quad Round	81017-43	500

Dowels, Plastic



Description		Item No.	PU
Dowel, TEC Hinge	8mm	00102-43	500
Spax screw for TEC Hinge Dowel		02445-43	500
Dowel, Nexis	8mm	F069073390 256	500
Dowel, Timos	8mm	F072135773 247	1000
Dowel, VZ Hinge Cup	8mm	04885-43	500
Dowel, Zargen / ZBox	10mm	05853-42	100
Dowel and screw set Zargen	10mm	12768-37	1
Dowel, base plate	10mm	05404-43	500
Dowel, pilaster dowel	8mm x 16mm	00395-43	500

Pozidrive Screwdriver



#2 Pozidrive screwdriver for hinges

Description	Item No.	PU
Pozidrive screwdriver	98000-01	1
Pozidrive screwdriver	98000-08	50

Accessories and Assembly Aids

Tiomos

Shelf Supports



Description	Item No.	PU
1 H-802 plastic, square, clear	00036-43	500
2 Shelf support 7006/9.5, nickel	F069073460 253	2500

Bumper Pads

Bumper Pads, Self-adhesive



Description	Height	Diameter	Item No.	PU
Bumper pad, clear	2.5mm	10mm	63407-99	288
Bumper pad, clear	2.5mm	10mm	63407-47	7200

AirSoft Bumper Pads, Self-adhesive



Description	Height	Diameter	Item No.	PU
AirSoft Bumper pad, clear	5mm	12.7mm	63481-43	500
AirSoft Bumper pad, clear	5mm	12.7mm	63483-30	5000

Bumper Pads, Self-adhesive



Description	Height	Diameter	Item No.	PU
Bumper pad, clear	4mm	12mm	630.000.02.1 250	5000

Bumper Pads, Self-adhesive



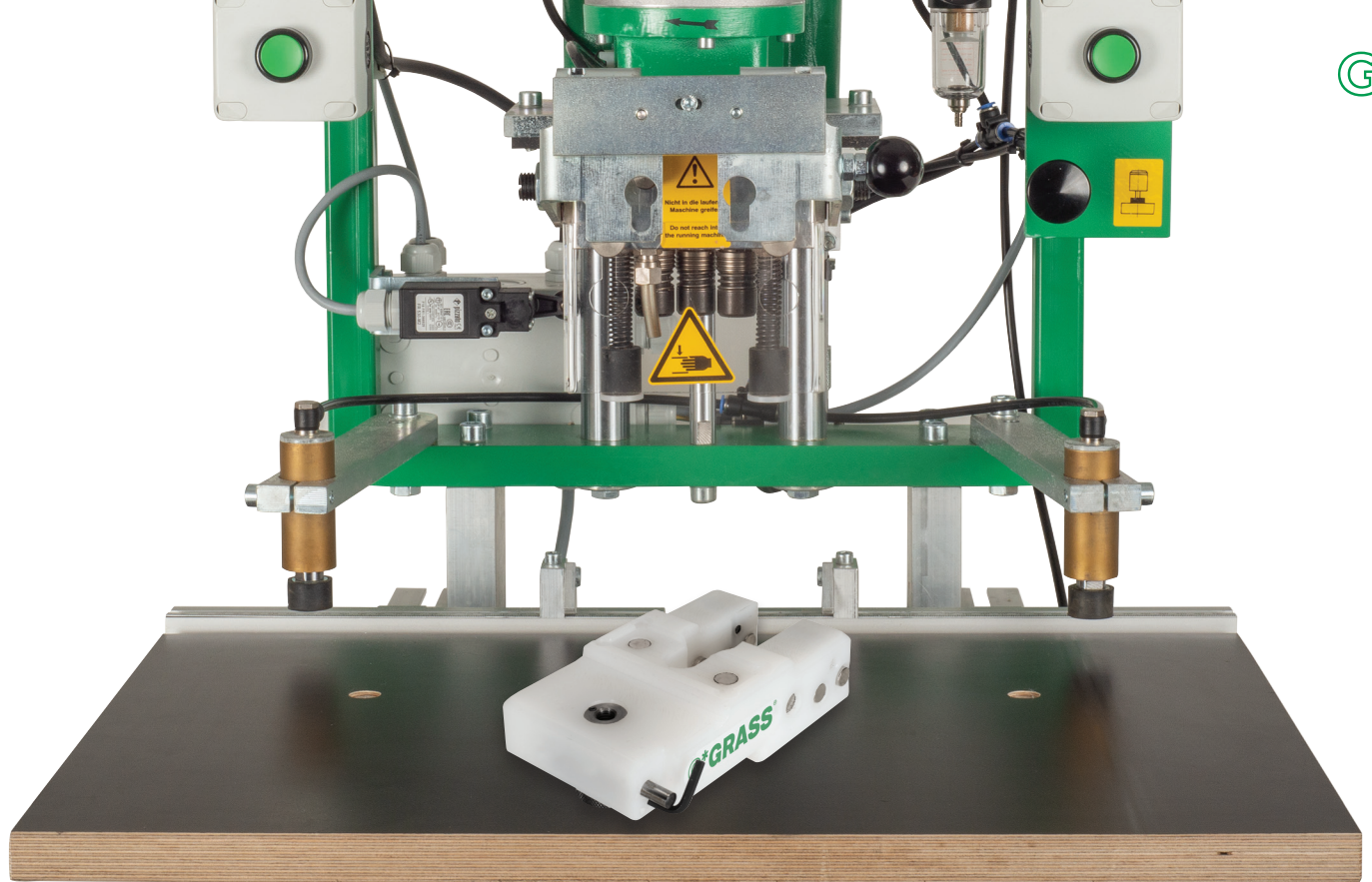
Description	Height	Diameter	Item No.	PU
Bumper pad, clear	3mm	12.7mm	31002-43	500
Bumper pad, clear	1.5mm	12.7mm	31004-43	500

Door Stop



Description	Item No.	PU
H-950 door stop, clear	00068-43	500

PU - Packaging unit



GRASS PRO1 drilling and insertion machine for 45mm boring pattern



One machine can do the job. Whether it's drilling, boring, or inserting for hinges or installing slides for drawer boxes, GRASS PRO1 has it covered.

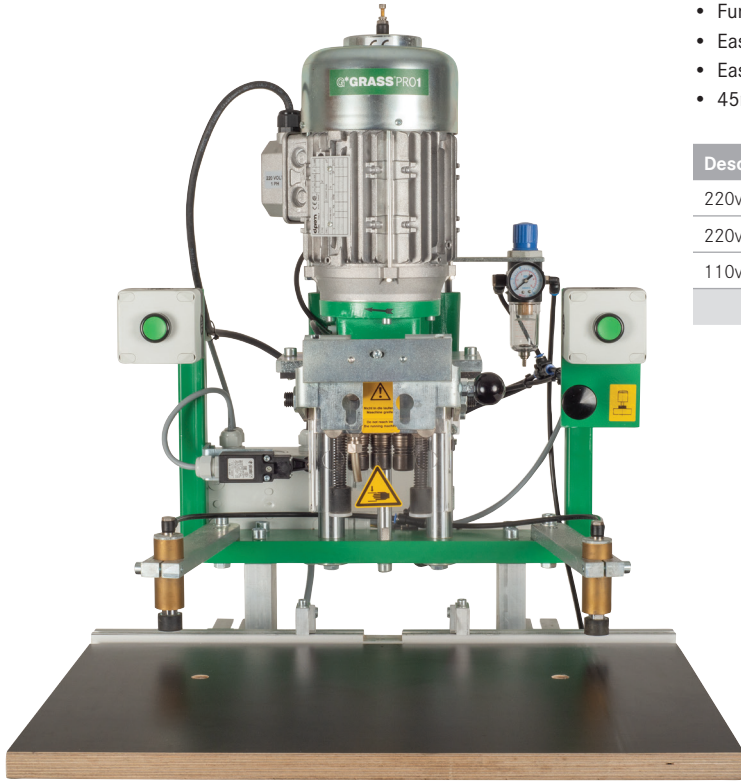
Constructed from the highest quality materials and precision assembled, the GRASS PRO1 is designed for the demands of everyday use. Designed for use with Grass products, every unit is supported by Grass technicians and engineering.

- Bore depth automatically adjusts to material thickness
- Functional design
- Easy, fast and efficient operation
- Easy maintenance

Machinery

GRASS PRO1 drilling and insertion machine for 45mm boring pattern

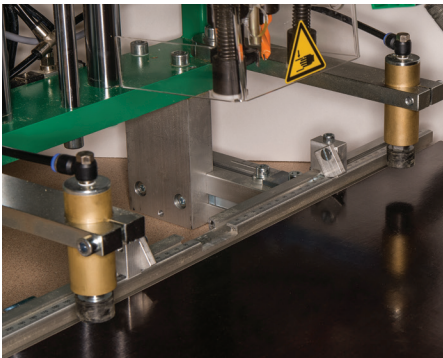
GRASS PRO1



- Depth stop can be adjusted to material thickness
- Functional design
- Easy, fast, and efficient operation
- Easy maintenance
- 45mm boring pattern

Description	Item No.	PU
220v single phase pneumatic	94559-01	1
220v three phase pneumatic	94560-01	1
110v single phase pneumatic	94561-01	1

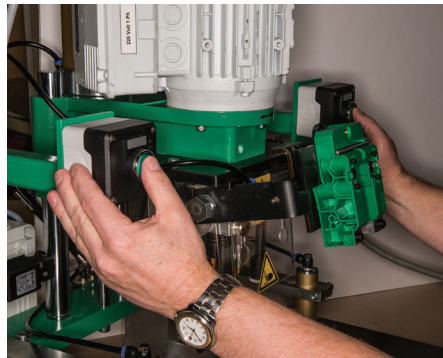
GRASS PRO1 Features



Adjustable hold-down devices

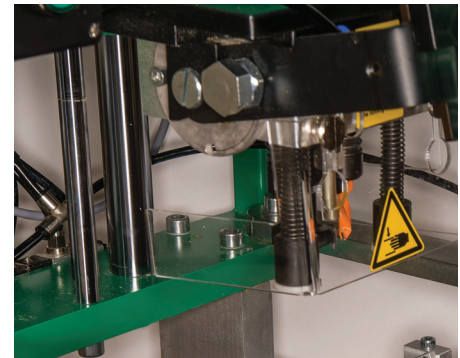
Adjustable hold-down devices are suitable for a wide range of material thicknesses.

Holds door firmly in place for drilling and insertion and features manual release.



Pneumatic controls

Two-hand start button controls for safe drilling and insertion functions.



Quick change chucks

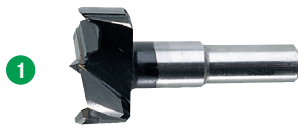
Easy drill bit removal and insertion using quick change chucks.

PU - Packaging unit

Machinery

GRASS PRO1 accessories

Drill Bits

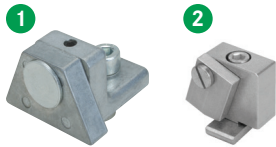


Description	Direction	Item No.	PU
1 35mm bit	RH	00077-01	1
2 8mm bit	LH	00160-01	1
American Bit Set for Hinge Drilling		00213-01	1

Set consists of:

- 1 - 35mm bit, RH
- 2 - 8mm bit, LH

Fence Stops



Description	Item No.	PU
1 Additional fence stop	949.200.21.0000	1
2 Universal fence stop	949.200.21.0100	1

Insertion Dies



Description	Item No.	PU
1 Tiomos Universal Insertion Die 110°/120°/160°	80039	1
2 TEC Insertion Die	92617	1
3 Nexis Insertion Die 110°/125°	04216-01	1
4 Nexis Insertion Die 170°	04218-01	1

Extension Fence



Description	Item No.	PU
Extension fence 300mm to 1550mm	88612-01	1

PU - Packaging unit



GRASS America Inc.
1202 NC Highway 66 South
Kernersville, NC 27284

Phone: 1-800-334-3512
Fax: 1-800-525-8406

www.grassusa.com
info@grassusa.com

