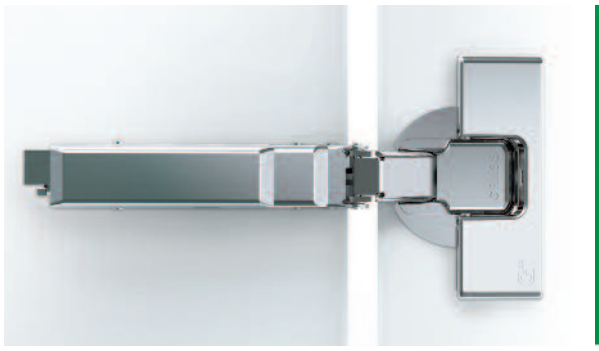
TIOMOS HINGES

G*GRASS®

TIOMOS HINGE SYSTEM

The hinge system for the door to the future.



The hinge system for the door to the future: Maximum Stability. Integrated Soft-close. Total Design.

Our developers set out to create a product innovation – a completely new hinge system. The result is Tiomos. Not only does Tiomos out perform any other hinge in the industry, but is also aesthetically pleasing to the eye. It offers a timeless design as well as its own individual character.
Tiomos is a completely new hinge concept. The product range provides perfect movement for virtually every application, from standard doors to wide angle doors, from frameless applications to face frame applications.

The Tiomos offers an adjustable Soft-close mechanism, which is fully integrated and concealed in the hinge arm. The closing process is extremely smooth from the degree that the Soft-close is activated until the door is completely shut. With the superb engineering and design, size and weight of the door will not be a factor. The cabinet doors pull open with ease and minimal gaps can be achieved with the new design of the hinge.
In summary, Tiomos offers the ideal solution to the ever increasing requirements of today's manufacturers.

Tiomos

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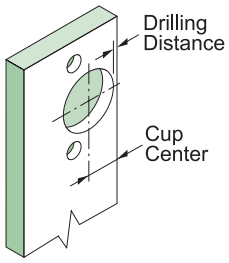
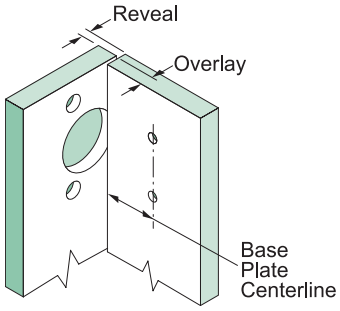
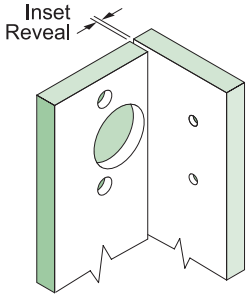
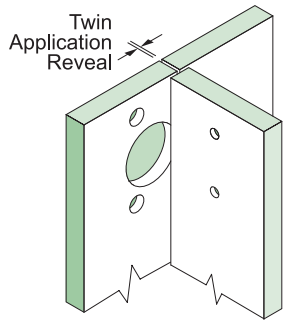
Technical Information

For Tiomos



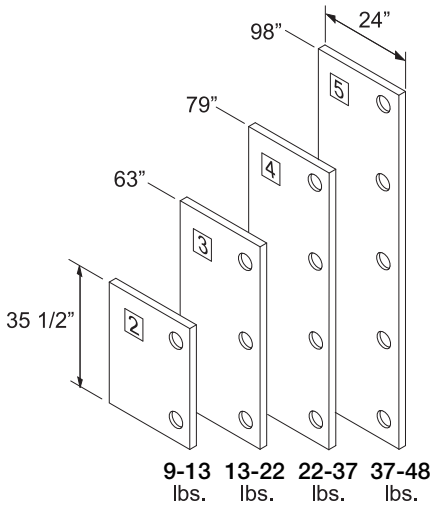






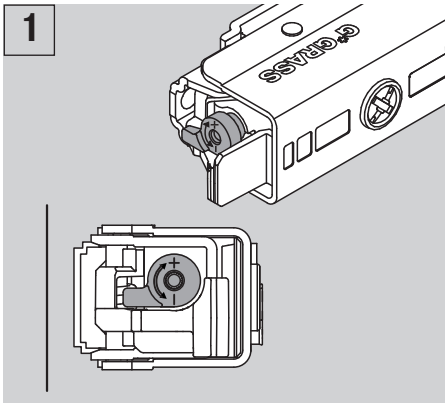
Number of hinges per door

The number of hinges required depends on the size and weight of the door. The distance between the hinges should be spaced as wide as possible. Use the diagram to determine the number of hinges needed. These recommendations are for doors without any accessory attachments.



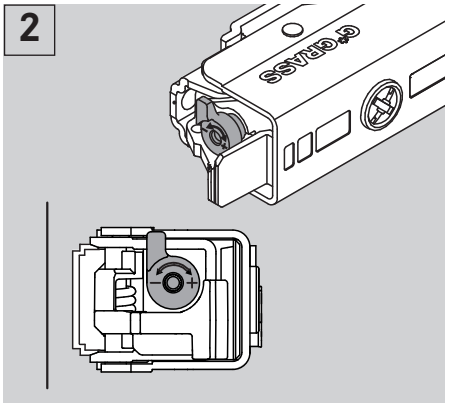
Tool-less Soft-close adjustment

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-closing settings can be adjusted easily and without tools. With 2 hinges there are 6 Soft-close settings.



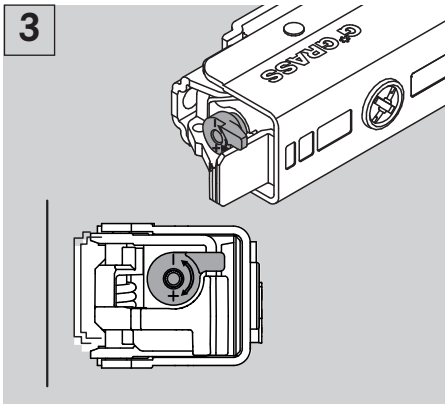
Light setting
Adjustment lever points toward the cabinet wall

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



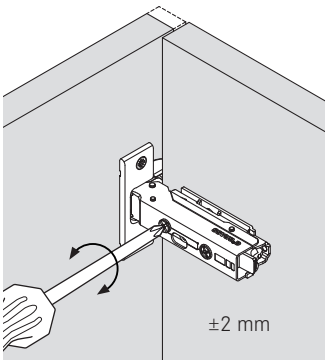
Strong setting
Adjustment lever points toward the cabinet interior

Appropriate for:
- Large, heavy doors

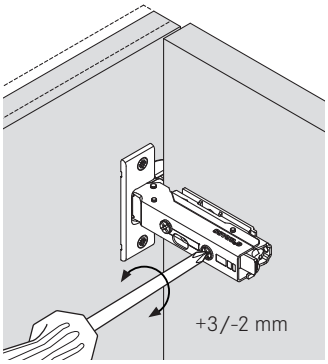
Adjustments

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

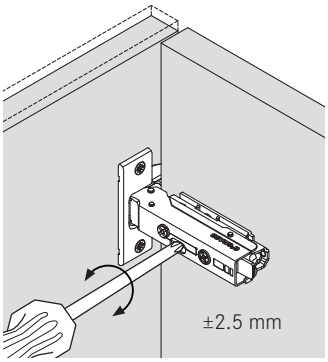
For depth adjustment, select base plates have worm gear adjustment access through the hinge arm.



Side adjustment



Depth adjustment via worm gear

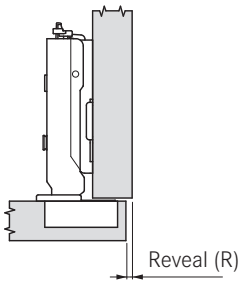


Height adjustment via base plate

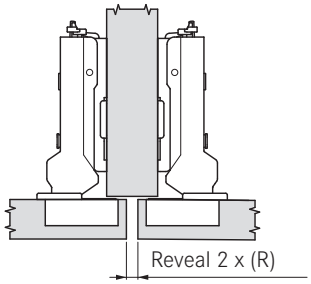
Reveal

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.

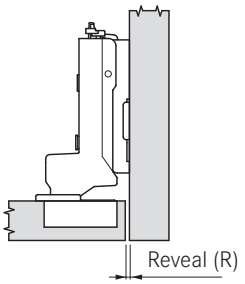
Full Overlay/Overlay Door



Half Overlay Door



Inset Door



Reveal for full overlay, overlay, and half overlay doors

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

Example:
For a door thickness of 19mm and a drilling distance (DD) of 6mm a (R) reveal of 0.9 is needed.

Door Thickness \ Drilling Distance (DD)	3	4	5	6	7
24.0	2.4	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	1.5	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
17.0	0.6	0.6	0.6	0.6	0.6
16.0	0.6	0.6	0.6	0.6	0.6
				Reveal (min.) (R)	

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

Reveal for inset door:

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

Example:
A drilling distance (DD) of 6mm results from using a base plate with height 03 and a reveal (R) of 1.0mm.

Minimum 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)	

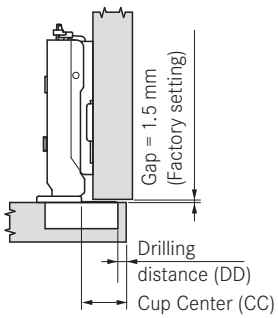
IMPORTANT To determine the correct application Grass strongly recommends a trial mounting for all hinges and base plates.

Technical Information

For Tiomos

Minimum gap – Drilling distance

The Minimum gap 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

Example:
For a door thickness (DT) of 17mm and a drilling distance (DD) of 6mm a minimum gap of 1.0mm is needed.

Drilling Distance (DD)

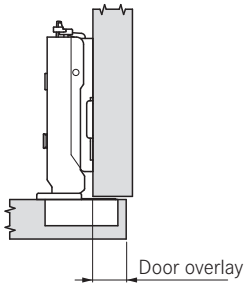
Door Thickness (DT)	3	4	5	6	7		
24.0	1.0	1.0	1.0	1.2	2.1		
22.0	1.0	1.0	1.0	1.0	1.5		
21.0	1.0	1.0	1.0	1.0	1.2		
20.0	1.0	1.0	1.0	1.0	1.0		
19.0	1.0	1.0	1.0	1.0	1.0		
18.0	1.0	1.0	1.0	1.0	1.0		
17.0	1.0	1.0	1.0	1.0	1.0		
16.0	1.0	1.0	1.0	1.0	1.0		
				Minimum gap			

The drilling distance is the distance between the edge of the door and the cup hole.

The cup center is the distance of the drilling distance plus ½ of the cup diameter.

Door overlay max.

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



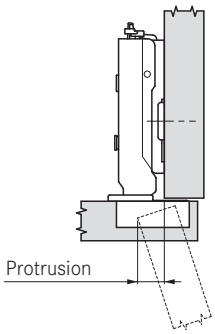
Example:
For a hinge with a cranking of 03, a base plate height (BPH) of 2mm, and a drilling distance (DD) of 4mm, the door overlay is 14mm.

Drilling Distance (DD)

Door overlay max.	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)				

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 operation the lateral adjustment.

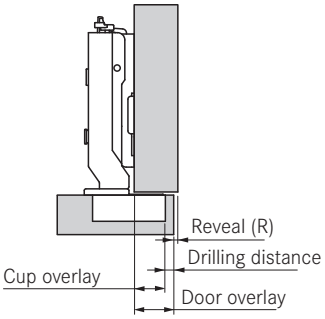


Door positions

Achieve overlay with hinge cranking

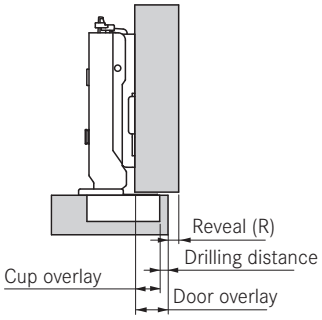
Full Overlay (Cranking 00)

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



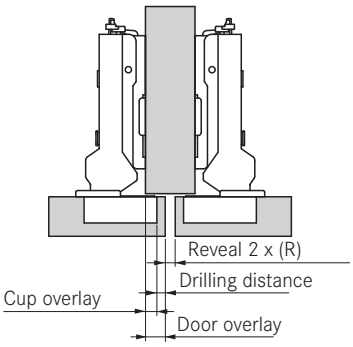
Overlay (Cranking 03)

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



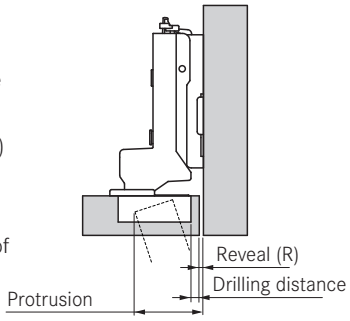
Half Overlay (Cranking 9.5)

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



Inset (Cranking 19)

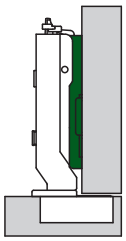
There is no door overlay. The reveal between the side of the cabinet and the door depends on the base plate height (BPH) and the drilling distance (DD). Dimensions can be found in a table on the respective page of the catalog.



Or achieve overlay with base plate

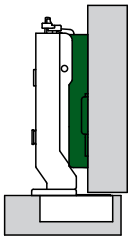
Full Overlay

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



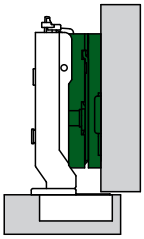
Overlay

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



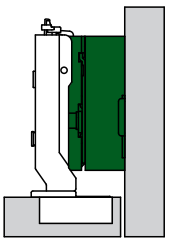
Half Overlay

Using a hinge with a cranking of 00 and a base plate height (BPH) 3.5 and a spacer plate 06.



Inset

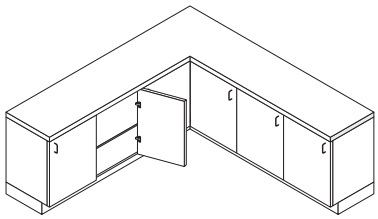
Using a hinge with a cranking of 00 and a base plate height (BPH) 2 and a spacer plate 19.



Tiomos 110

110° hinge for standard doors

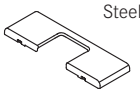
- 3-dimensional adjustment with suitable base plate
- Accommodates overlays up to 22mm (7/8")
- Optimal reveal up to 24 mm door thickness
- Soft-close or Self-close hinges available
- For face frame or frameless cabinets
- Convenient depth adjustment with worm gear



Tiomos 110	Opening Angle 110°		Screw-on	Dowelled	
Full overlay	**Cranking 00**	**Pattern**	**Type**	**Item No.**	**Item No.**	**PU**
	Hinge cup: steel, nickel-plated Hinge arm: steel, nickel-plated	45	Soft-close	**F028**138**519**228	**F028**138**523**228	150
			Self-close	**F045**138**457**228	**F045**138**461**228	
Overlay	**Cranking 03**	**Pattern**	**Type**	**Item No.**	**Item No.**	**PU**
	Hinge cup: steel, nickel-plated Hinge arm: steel, nickel-plated	45	Soft-close	**F028**138**520**228	**F028**138**524**228	150
			Self-close	**F045**138**458**228	**F045**138**462**228	
Half overlay	**Cranking 9.5**	**Pattern**	**Type**	**Item No.**	**Item No.**	**PU**
	Hinge cup: steel, nickel-plated Hinge arm: zinc, nickel-plated	45	Soft-close	**F028**138**521**228	**F028**138**525**228	150
			Self-close	**F045**138**459**228	**F045**138**463**228	
Inset	**Cranking 19**	**Pattern**	**Type**	**Item No.**	**Item No.**	**PU**
	Hinge cup: steel, nickel-plated Hinge arm: zinc, nickel-plated	45	Soft-close	**F028**138**522**228	**F028**138**526**228	150
			Self-close	**F045**138**460**228	**F045**138**464**228	

Cover cap		Item No.	PU
	Steel, nickel-plated	**F072**135**500**247	1000

Opening angle reduction clip to 85°		Item No.	PU
	Plastic, black	**F072**135**751**117	50

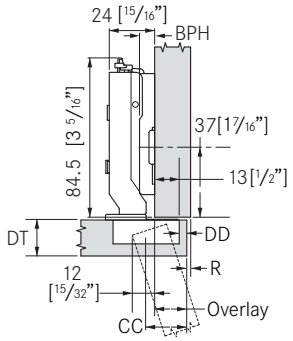
Hinge cup cover cap		Item No.	PU
	Steel, nickel-plated	**F072**135**503**228	150

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

PU = packaging unit

Dimensions in millimeters, fractional inch equivalents as noted.

Full overlay

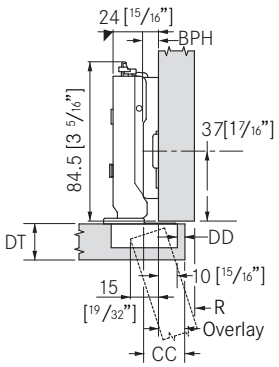


Drawing shows Tiomos with a base plate height (BPH) 02.

Drilling Distance (DD)

Door overlay max.	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)			

Overlay

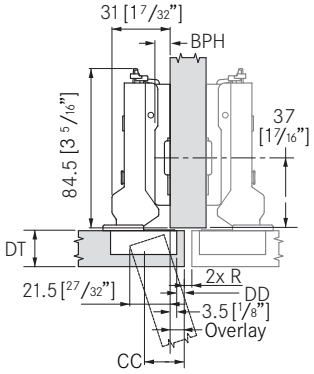


Drawing shows Tiomos with a base plate height (BPH) 02.

Drilling Distance (DD)

Door overlay max.	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

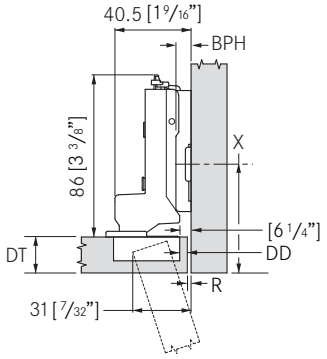


Drawing shows Tiomos with a base plate height (BPH) 02.

Drilling Distance (DD)

Door overlay max.	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)			

Inset



Drawing shows Tiomos with a base plate height (BPH) 02. X = 38.5+ DT

Drilling Distance (DD)

Reveal min (R)	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)			

Minimum gaps

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

*only achievable with 85° angle reduction clip

Drilling Distance (DD)

Door Thickness	3	4	5	6	7
24.0	1.0	1.0	1.0	1.2*	2.1*
22.0	1.0	1.0	1.0	1.0	1.5*
21.0	1.0	1.0	1.0	1.0	1.2*
20.0	1.0	1.0	1.0	1.0	1.0
19.0	1.0	1.0	1.0	1.0	1.0
18.0	1.0	1.0	1.0	1.0	1.0
17.0	1.0	1.0	1.0	1.0	1.0
16.0	1.0	1.0	1.0	1.0	1.0
			Minimum gap		

Reveal

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.

Drilling Distance (DD)

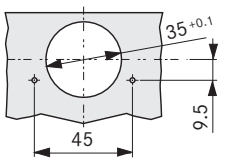
Door Thickness	3	4	5	6	7
24.0	2.4	2.1	2.1	2.1	2.0
22.0	1.6	1.6	1.6	1.5	1.5
21.0	1.4	1.3	1.3	1.3	1.3
20.0	1.1	1.1	1.1	1.1	1.1
19.0	0.9	0.9	0.9	0.9	0.9
18.0	0.7	0.7	0.7	0.7	0.7
17.0	0.6	0.6	0.6	0.6	0.6
16.0	0.6	0.6	0.6	0.6	0.6
			Reveal (R)		

With 85° angle reduction clip

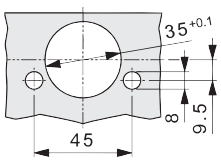
Drilling Distance (DD)

Door Thickness	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)		

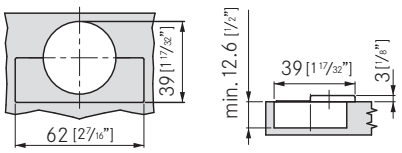
Screw-on



Dowelled



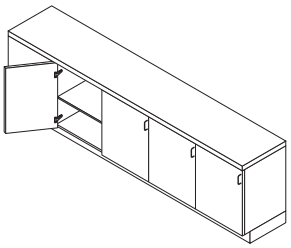
Cup dimensions



Tiomos 120

120° hinge for standard doors

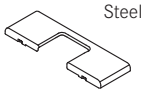
- 3-dimensional adjustment with suitable base plate
- Accommodates overlays up to 22mm (7/8")
- Optimal reveal up to 24 mm door thickness
- Soft-close or Self-close hinges available
- For face frame or frameless cabinets
- Convenient depth adjustment with worm gear



Tiomos 120				Screw-on	Dowelled	
Full overlay	**Cranking 00**	**Pattern**	**Type**	**Item No.**	**Item No.**	**PU**
	Hinge cup: steel, nickel-plated Hinge arm: steel, nickel-plated	45	Soft-close	**F028**138**547**228	**F028**138**551**228	150
			Self-close	**F045**138**485**228	**F045**138**489**228	
Overlay	**Cranking 03**	**Pattern**	**Type**	**Item No.**	**Item No.**	**PU**
	Hinge cup: steel, nickel-plated Hinge arm: steel, nickel-plated	45	Soft-close	**F028**138**548**228	**F028**138**552**228	150
			Self-close	**F045**138**486**228	**F045**138**490**228	
Half overlay	**Cranking 9.5**	**Pattern**	**Type**	**Item No.**	**Item No.**	**PU**
	Hinge cup: steel, nickel-plated Hinge arm: zinc, nickel-plated	45	Soft-close	**F028**138**549**228	**F028**138**553**228	150
			Self-close	**F045**138**487**228	**F045**138**491**228	

Cover cap		**Item No.**	**PU**
	Steel, nickel-plated	**F072**135**500**247	150

Opening angle reduction clip to 85°		**Item No.**	**PU**
	Plastic, black	**F072**135**751**117	50

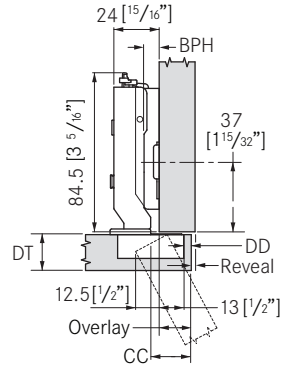
Hinge cup cover cap		**Item No.**	**PU**
	Steel, nickel-plated	**F072**135**503**228	150

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

PU = packaging unit

Dimensions in millimeters, fractional inch equivalents as noted.

Full overlay

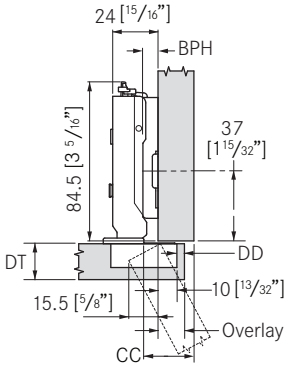


Drawing shows Tiomos with a base plate height (BPH) 02.

Drilling Distance (DD)

Door overlay max.	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)			

Overlay

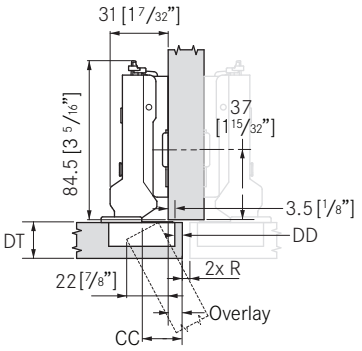


Drawing shows Tiomos with a base plate height (BPH) 02.

Drilling Distance (DD)

Door overlay max.	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



Drawing shows Tiomos with a base plate height (BPH) 02.

Drilling Distance (DD)

Door overlay max.	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

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

Drilling Distance (DD)

Door Thickness	3	4	5	6	7
24.0	1.2	2.1	3.0	3.9	4.7
22.0	1.0	1.1	2.0	2.9	3.8
21.0	1.0	1.0	1.6	2.4	3.3
20.0	1.0	1.0	1.1	2.0	2.9
19.0	1.0	1.0	1.0	1.5	2.4
18.0	1.0	1.0	1.0	1.0	1.9
17.0	1.0	1.0	1.0	1.0	1.5
16.0	1.0	1.0	1.0	1.0	1.0
				Minimum gap	

Reveal

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.

Drilling Distance (DD)

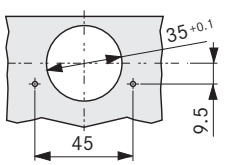
Door Thickness	3	4	5	6	7
24.0	6.4	5.4	4.4	3.4	2.4
22.0	3.0	2.0	1.5	1.5	1.5
21.0	1.4	1.3	1.3	1.3	1.3
20.0	1.1	1.1	1.1	1.1	1.1
19.0	0.9	0.9	0.9	0.9	0.9
18.0	0.7	0.7	0.7	0.7	0.7
17.0	1.0	1.0	1.0	1.0	1.5
16.0	1.0	1.0	1.0	1.0	1.0
				Reveal (R)	

With 85° angle reduction clip

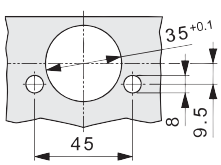
Drilling Distance (DD)

Door Thickness	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)			

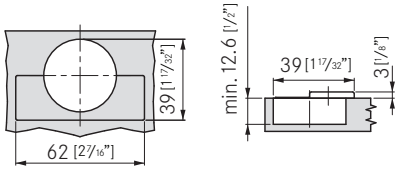
Screw-on



Dowelled

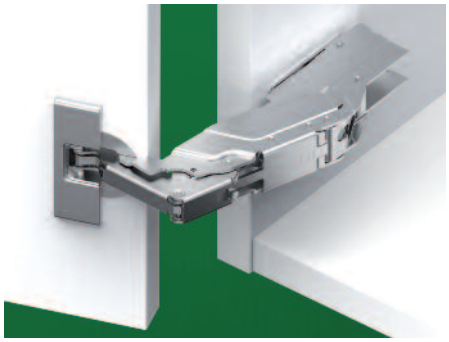


Cup dimensions

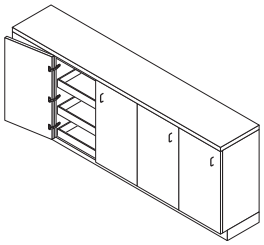


Tiomos 160

160° Wide angle hinge



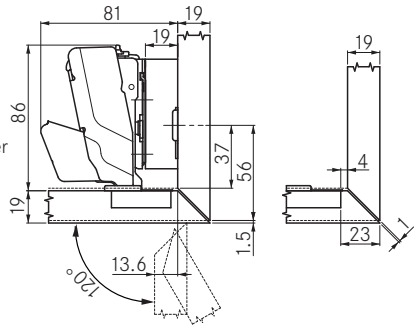
- 3-dimensional adjustment with suitable base plate
- Accommodates overlays up to 22mm (7/8")
- Soft-close or Self-close hinges available
- For face frame or frameless cabinets
- Convenient depth adjustment with worm gear
- Zero protrusion when door is opened 90°
- 10mm cup depth
- For door thicknesses up to 32 mm
- Minimal reveal



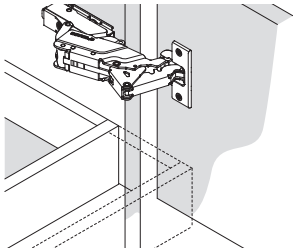
Tiomos 160			Screw-on	Dowelled	
Full overlay	**Cranking 00**	**Pattern**	**Type**	**Item No.**	**Item No.**	**PU**
	Hinge cup: zinc, nickel-plated Hinge arm: steel/zinc, nickel-plated	45	Soft-close	**F028**138**561**217	**F028**138**564**217	50
			Self-close	**F045**138**499**217	**F045**138**502**217	
Overlay	**Cranking 03**	**Pattern**	**Type**	**Item No.**	**Item No.**	**PU**
	Hinge cup: zinc, nickel-plated Hinge arm: zinc/steel, nickel-plated	45	Soft-close	**F028**138**562**217	**F028**138**565**217	50
			Self-close	**F045**138**500**217	**F045**138**503**217	
Half overlay	**Cranking 9.5**	**Pattern**	**Type**	**Item No.**	**Item No.**	**PU**
	Hinge cup: zinc, nickel-plated Hinge arm: steel/zinc, nickel-plated	45	Soft-close	**F028**138**563**217	**F028**138**566**217	50
			Self-close	**F045**138**501**217	**F045**138**504**217	

Mitered corner application

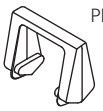
Opening angle reduction to 120°.
Prevents doors from bumping with the cabinet side in inset applications and mitered corner applications.



Zero door protrusion at 90°



Zero protrusion for application with inset drawers. With 00 cranking and 00 height of base plate the door is flush with the cabinet at 90°.

Angle reduction clip to 120°	Item No.	PU
 Plastic, black	**F072**135**753**117	50

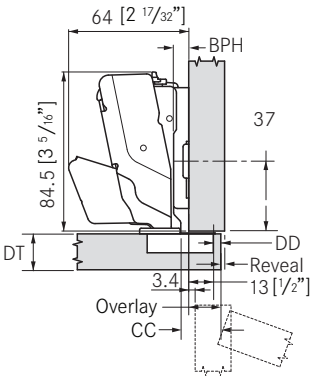
Wood screw, nickel-plated	Item No.	PU
 #6 x 5/8" FHP, NI	**81001-43**	500

PU = packaging unit

Dimensions in millimeters, fractional inch equivalents as noted.

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

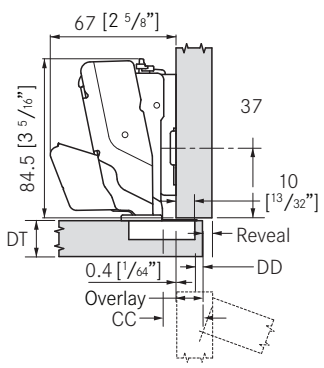
Full overlay



Drilling Distance (DD)

Door overlay max.	3	4	5	6	7	8	9	10
25.0								0
24.0							0	
23.0						0		2
22.0					0		2	3
21.0				0		2	3	
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)							

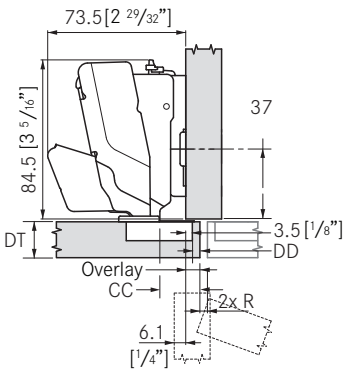
Overlay



Drilling Distance (DD)

Door overlay max.	3	4	5	6	7	8	9	10
22.0								0
21.0							0	
20.0						0		2
19.0					0		2	3
18.0				0		2	3	
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)							

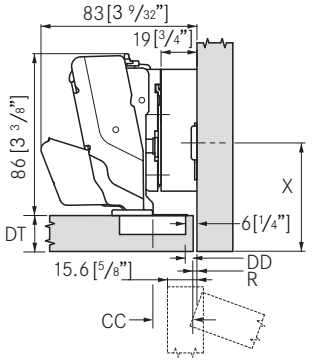
Half overlay



Drilling Distance (DD)

Door overlay max.	3	4	5	6	7	8	9	10
15.5								0
14.5							0	
13.5						0		2
12.5					0		2	3
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



Drawing shows Tiomos with a cranking 0 hinge, Base Plate Height (BPH) 02 and spacer plate height 19. X = 38.5 + DT

Drilling Distance (DD)

Reveal (R)	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)				

Minimum gaps

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

*only achievable with 120° angle reduction clip

Drilling Distance (DD)

Door Thickness	3	4	5	6	7	8	9	10
32.0	1.0	1.0						
31.0	1.0	1.0	1.0					
30.0	1.0	1.0	1.0					
29.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
28.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
26.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
25.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
24.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
22.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
21.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
20.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
18.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
16.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
				Minimum gap				

Reveal

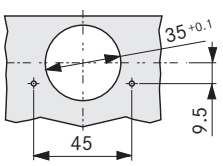
Reveal dimensions were determined with an edge radius (of the door) of 1mm! Hinge dimensions and reveal calculation based on factory setting.

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

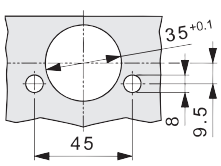
Drilling Distance (DD)

Door Thickness	3	4	5	6	7	8	9	10
32.0	0.2*	0.2*						
31.0	0.2*	0.2*	0.2*	0.2*				
30.0	0.2	0.2	0.2*	0.2*	0.2*			
29.0	0.2	0.2	0.2	0.2	0.2	0.2*	0.2*	
28.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
26.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
25.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
24.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
22.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
21.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
20.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
18.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
16.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
				Reveal (R)				

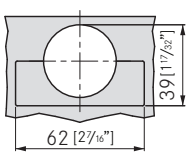
Screw-on

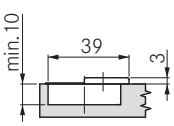


Dowelled



Cup dimensions





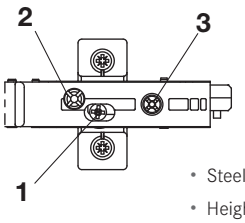
Tiomos base plates

For Tiomos hinges

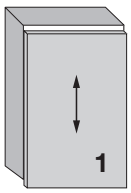
Base plate overview

Type	Set Back	Line Bore	Height adjustment	Attach with		
				Wood screw	Euro screw	Dowel
	20	32	± 2 mm with worm gear	**16**	**16**	**16**
	37	32	± 2.5 mm with elongated holes	**15**	**15**	**15**
			± 2 mm	**14**	**14, 15**	
	37	32		**16**		
	9.5	32	± 2.5 mm	**17**		
			± 2 mm	**17**		
	10	32	± 2 mm	**17**		

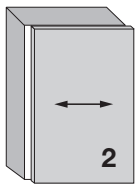
Tiomos wing base plates



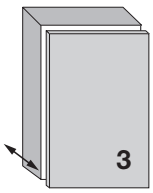
- Steel, nickel plated
- Height and depth adjustment via worm gear
- Side adjustment via hinge



Height adjustment via base plate
Via worm gear± 2 mm
Via elongated holes ± 2.5mm



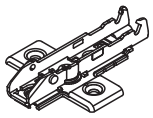
Side Adjustment
±2 mm



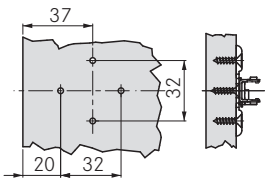
Depth adjustment
+3/-2 mm

All adjustment options can be made independently of one another.

Wing base plate, 4 point fixing — 37/32 — For wood screws

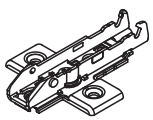


- Height adjustment via worm gear

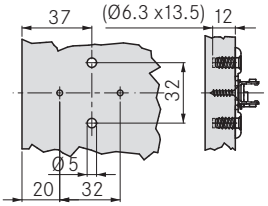


Height	Item No.	PU
0	**F058**139**746**228	150
2	**F058**139**747**228	150
3	**F058**139**748**228	150
3.5	**F058**139**749**228	150

Wing base plate, 4 point fixing — 37/32 — For Euro screws

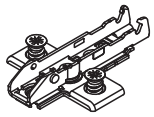


- Height adjustment via worm gear

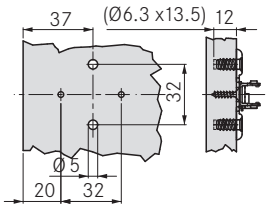


Height	Item No.	PU
0	**F058**139**756**228	150
2	**F058**139**757**228	150
3	**F058**139**758**228	150
3.5	**F058**139**759**228	150

Wing base plate, 4 point fixing | 37/32 | With pre-mounted Euro screws (13.5 mm)

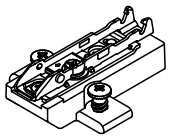


- Height adjustment via worm gear

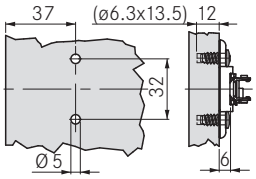


Height	Item No.	PU
0	**F058**139**761**228	150
2	**F058**139**762**228	150
3	**F058**139**763**228	150
3.5	**F058**139**764**228	150

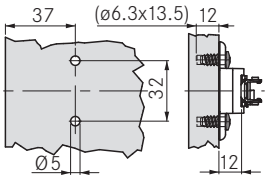
Wing base plate, 2 point fixing | 37/32 | With pre-mounted euro screws (13.5 mm)

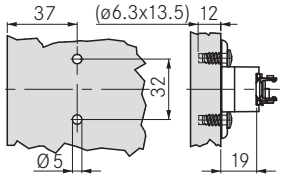


- Zinc die-cast/Steel, nickel plated
- Height adjustment via worm gear



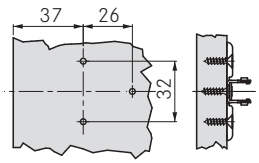
Height	Item No.	PU
6	**F058**139**873**217	150
12	**F058**139**874**217	150
19	**F058**139**875**217	150





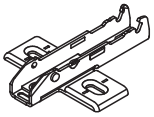
Wing steel base plate, 3 point fixing | 37/32 | For wood screws

- Height adjustment via elongated screw holes

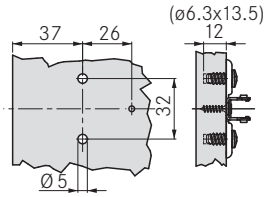


Height	Item No.	PU
0	**F058**139**721**228	150
2	**F058**139**722**228	150
3	**F058**139**723**228	150
3.5	**F058**139**724**228	150

Wing steel base plate, 3 point fixing | 37/32 | For pan head Euro screws

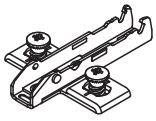


- Height adjustment via elongated screw holes

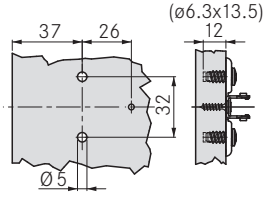


Height	Item No.	PU
0	**F058**139**731**228	150
2	**F058**139**732**228	150
3	**F058**139**733**228	150
3.5	**F058**139**734**228	150

Wing steel base plate, 3 point fixing | 37/32 | With pre-mounted euro screws (13.5 mm)



- Height adjustment via elongated screw holes

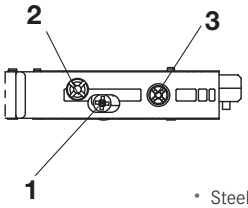


Height	Item No.	PU
0	**F058**139**736**228	150
2	**F058**139**737**228	150
3	**F058**139**738**228	150
3.5	**F058**139**739**228	150

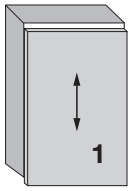
Tiomos base plates

For Tiomos hinges

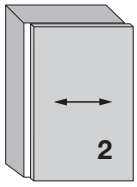
Tiomos straight base plates



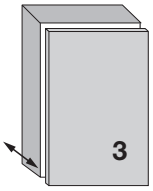
- Steel, nickel plated
- Height and depth adjustment via worm gear
- Side adjustment via hinge



Height adjustment via base plate
Via worm gear ±2 mm



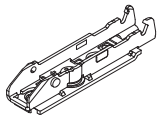
Side Adjustment
±2 mm



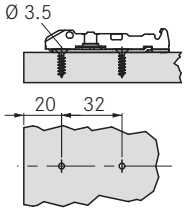
Depth adjustment
+3/-2 mm

All adjustment options can be made independently of one another.

Straight base plate, 2 point fixing | 20/32 | For wood screws

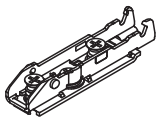


- Height adjustment via worm gear

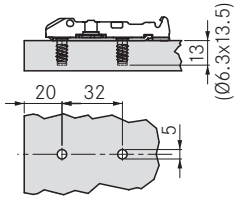


Height	Item No.	PU
0	**F059**139**701**228	150
2	**F059**139**702**228	150
3	**F059**139**703**228	150
3.5	**F059**139**704**228	150

Straight base plate, 2 point fixing | 20/32 | With pre-mounted Euro screws

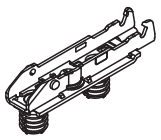


- Height adjustment via worm gear

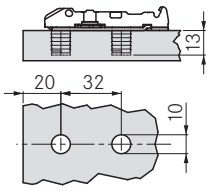


Height	Item No.	PU
0	**F059**139**711**228	150
2	**F059**139**712**228	150
3	**F059**139**713**228	150
3.5	**F059**139**714**228	150

Straight base plate, 2 point fixing | 20/32 | Dowelled

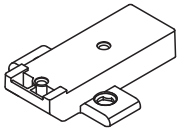


- Height adjustment via worm gear



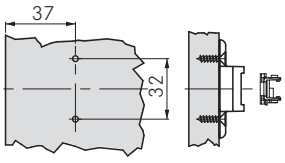
Height	Item No.	PU
0	**F059**139**706**217	150

Spacer plate, 2 point fixing | 37/32 | For wood screws

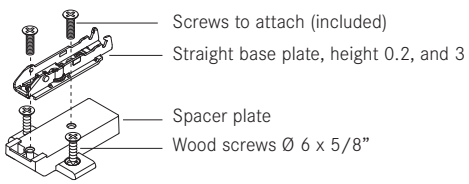


Use with straight base plate for wood screws

- Die-cast, nickel plated

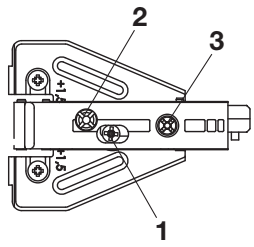


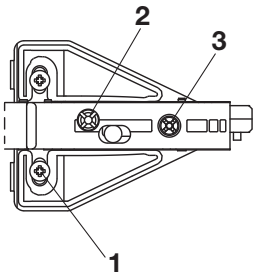
Height	Item No.	PU
6	**F058**139**867**217	150
12	**F058**139**868**217	150
19	**F058**139**869**217	150



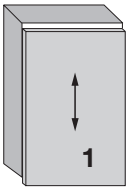
Dimensions in millimeters, fractional inch equivalents as noted.

Tiomos face frame adapter plates

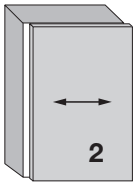




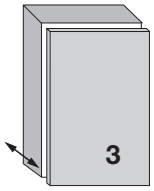
- Steel, nickel plated
- Height and depth adjustment via worm gear
- Side adjustment via hinge



Height adjustment via base plate
via worm gear ±2 mm
via elongated holes ±2.5 mm



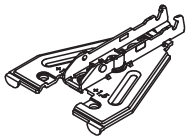
Side Adjustment
±2 mm



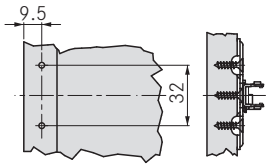
Depth adjustment
+3/-2 mm

All adjustment options can be made independently of one another.

FFA base plate, 2 point fixing | 9.5/32 | For wood screws

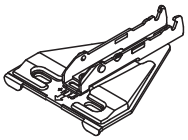


- Height adjustment via worm gear

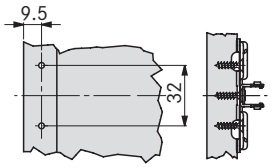


Height	Item No.	PU
1.5	**F058**139**825**228	150
3.5	**F058**139**826**228	150
4.5	**F058**139**827**228	150
5	**F058**139**828**228	150

FFA base plate, 2 point fixing | 9.5/32 | For wood screws

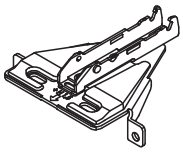


- Height adjustment via elongated screw holes

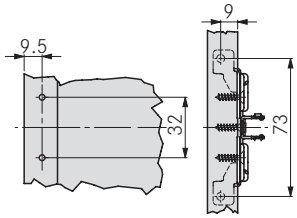


Height	Item No.	PU
1.5	**F058**139**821**228	150
3.5	**F058**139**822**228	150
4.5	**F058**139**823**228	150
5	**F058**139**824**228	150

FFAL base plate with flange, 4 point fixing | 9.5/32 | For wood screws

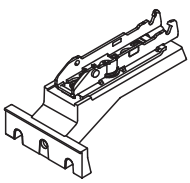


- Height adjustment via elongated screw holes

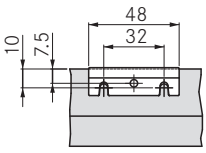


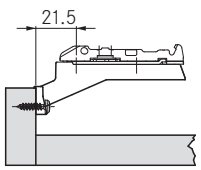
Height	Item No.	PU
3.5	**F058**139**829**228	150
5	**F059**139**830**228	150

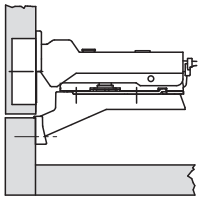
Inset FFA base plate, 3 point fixing | 10/32 | For wood screws



- Steel, diecast, nickel plated
- Height adjustment via elongated screw holes







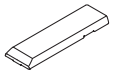
Height	Item No.	PU
0	**F058**139**831**228	150

Tiomos Accessories

Cover caps

Hinge arm cover cap

For all crankings

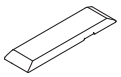


Item No.
F072135**500**247
PU 1000

Steel, nickel plated, without imprint*

Hinge arm cover cap, long

For 00 and 03 Cranking only

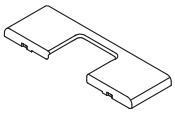


Item No.
F072135**504**247
PU 1000

Steel, nickel plated, without imprint*

* Imprinting available upon special request

Hinge cup cover cap



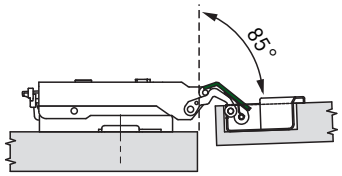
Item No.
F072135**503**228
PU 150

Steel, nickel plated

Angle reduction clips

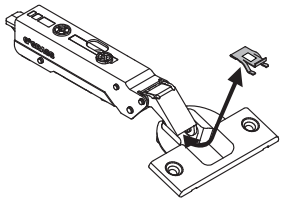
Opening angle reduction clip to 85°

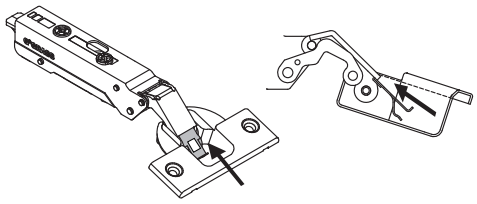
Steel, nickel

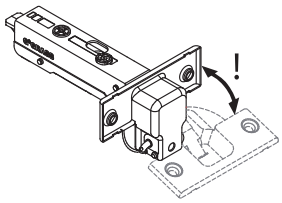


Works for all Tiomos 110° and 120° standard hinges. Reduces the opening angle to 85° to prevent doors from bumping fronts or walls in corner installations.

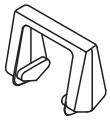
Item No.
F072135**751**117
PU 50



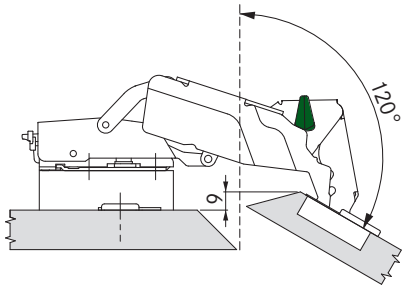




Opening angle reduction clip to 120°



Black plastic

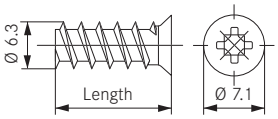


Works for all Tiomos 160° standard hinges. Reduces the opening angle to 120° to prevent doors from bumping the cabinet side in inset and mitered corner applications.

Item No.
F072135**753**117
PU 50

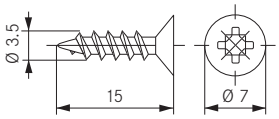
Screws

Euro screw, nickel-plated



Description	Item No.	PU
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
13mm Pan head Euro Screw	13398-43	500

Wood screw, nickel-plated



Description	Item No.	PU
#6 x 1/2" FHP, NI	81014-43	500
#6 x 7/16" FHP, NI	81016-43	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

Pozidrive screwdriver

Pozidrive screwdriver for hinges and slides

Description	Item No.	PU
Pozidrive screwdriver	98000-01	1

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