



G* GRASS®

**TIOMOS HINGE SYSTEM
FOR MIRROR, GLASS AND SLIM DOORS**

The Tiomos Mirro glass and mirror door hinge and the Tiomos M9 slim door hinge are the only hinges of their kind in the world to feature an integrated damping function.





Tiomos Mirro is secured on the glass side of the door with an eccentric cam on a Zamak adapter. It is not necessary to drill a hole in the glass. This fastening method ensures firm attachment and has a light, floating look.



Soft-close inside.

The entire damping technology is concealed in the hinge arm.



TIOMOS MIRRO FOR GLASS AND MIRROR DOORS

Three levels for individual comfort.

In addition to its many special functions, timeless design and unique character, Tiomos offers stepwise adjustment of the damping level. The action of the Soft-close damper can be easily adjusted to individual requirements – a turn of the lever is all that is needed.



For a stronger damping action, the adjustment lever is turned 90° to the right.



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



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



Glass lends rooms a feeling of clarity and transparency. Glass elements are also often used in furniture design, and in this respect Tiomos Mirro marks a new milestone. The Soft-close damping feature of the track-proven Tiomos hinge generation concealed in the hinge arm means that glass and mirror doors can now also be gently closed, ensuring maximum comfort for modern bathroom and living environments.

In addition to the clever fastening technology that ensures firm and stable support, the front connection for high-quality mirror and glass doors is an extremely elegant solution. The hinge arm can also be easily fitted onto existing glued adapters.

Opening and closing become flowing movements that are hardly perceptible and that do justice to the fragile material.

Consistent aesthetic design is only possible if different door applications can be moved with one single hinge system.

TIOMOS M9 HINGE SYSTEM

The versatile all-rounder for discerning door applications.

Designed especially for very slim furniture doors and a four-sided mitred application, Tiomos M9 has an extremely shallow cup depth. While each individual application for the GRASS innovation may be special, the unique Tiomos comfort is incorporated in every case. In addition to the three-dimensional adjustment and the stepless height adjustment, this also includes the outstanding kinematics that make furniture doors open smoothly and extremely easily. Interior designers around the world are inspired by the perfect alignment with minimum gap dimensions.

Maximum stability, integrated damping, purist design. Tiomos M9 combines all the advantages of the Tiomos hinge series for slim furniture doors.



reddot design award
honourable mention 2010

The quality of a hinge system is decisive for a long, trouble-free service life. In tests for durability and dropping under load, the entire Tiomos range achieves exceptionally positive values. In addition, the unique kinematics of the Tiomos hinge, system as well as the 3-level damper adjustment won the Red Dot Award.



Strength for slender designs – full stability for slim furniture doors from a thickness of 12 mm.

In contemporary furniture-making the trend is moving towards more slim-line surfaces and furniture doors. With Tiomos M9 it is not necessary to do without optimum opening and closing comfort. Even with a front thickness of only 12 millimetres, the unique hinge system remains durable, firm and stable in all positions. The perfected movements underline the trend towards uncompromising furniture design.

Rebated doors with graduated Soft-close damper adjustment.

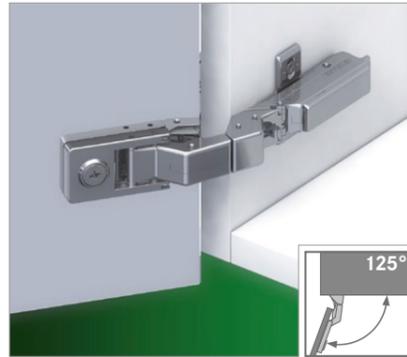
There are furniture doors to suit all tastes, and it is very practical if one hinge can be used for a wide range of solutions. Tiomos M9 is also the world's only slim door hinge to feature fully integrated, damping technology for tool-free adjustment. This enables the use of hinges of the same design with or without a damping function in high-quality furniture construction.

High-tech functionality for doors with four-sided mitre application.

The complex inner workings of this hinge with its 56 components and physically optimised kinematics enable extremely smooth and easy opening of furniture doors up to an opening angle of 125 degrees. Opening and closing therefore become flowing movements and ensure particularly gentle handling of all materials.

TIOMOS MIRRO

125° mirror hinge



- 125° opening angle
- with integrated damper
- Fastening through door-side gluing of a stainless steel adapter
- Connection of the hinge to the adapter using a cam
- Quick final assembly without glass drilling
- 3-dimensional adjustment with appropriate mounting plate
- High overlay up to 19 mm

Available in 3 versions:

- With integrated damper (3 adjustable damping levels)
- Without integrated damper
- Without self-closing mechanism (no spring)

ORDER INFORMATION

Door overlay	Cranking	Damper			Item No.	
		with	without	without spring	Click-on For screw fixing	
	14	■	-	-	F029140325	
		-	■	-	F047140326	
		-	■	■	F049140327	

Cup material: Zamak, nickel-plated/arm material: Zamak, nickel-plated

COVER CAPS

Designation	Imprinted/Embossed	Item No.
Hinge arm cover cap, steel, nickel-plated, not imprinted	On request	F072135500
Hinge arm cover cap, right, steel, nickel-plated, embossed GRASS logo	GRASS Logo	F072135550
Hinge arm cover cap, left, steel, nickel-plated, embossed GRASS logo	GRASS Logo	F072135551

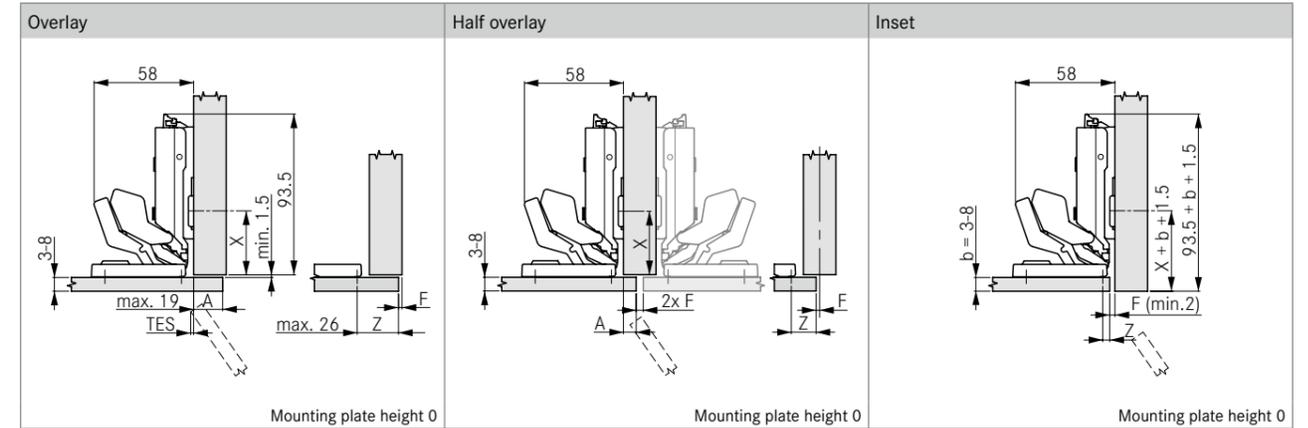
ACCESSORIES

Designation	Item No.
Tipmatic pin for wooden and aluminium frame doors	F069135396
90° opening angle reduction clip	On request
Stainless steel adapter Tiomos Mirro for mirrors	F069073731

Designation	Item No.
+5° wedge	F072135757
-5° wedge	F072135758

INSTALLATION INFORMATION

All dimensions in millimetres



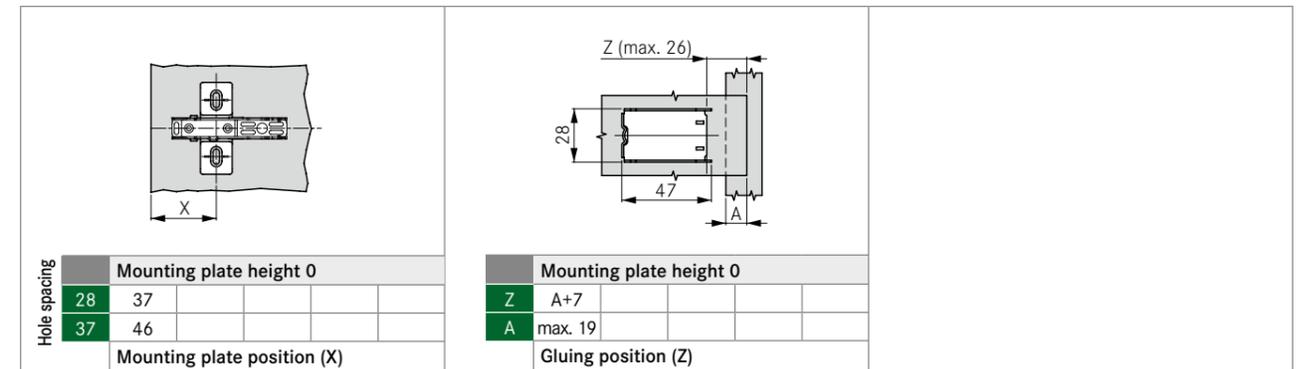
MINIMUM GAP/MINIMUM REVEAL

values for 0 mounting plate height

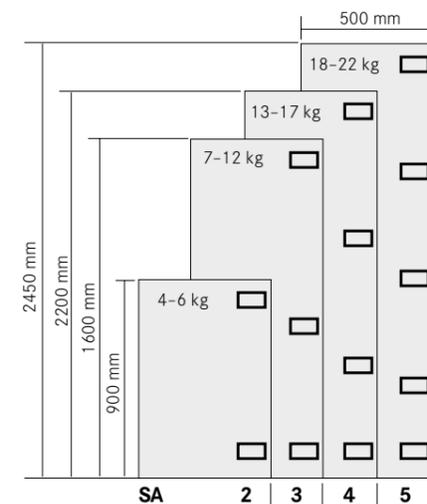
Gluing dimension (Z)	4	5	13	15	17	19	21	22	24	26
Door protrusion (TES)	0	0	0	0	0	0	0	0.5	1.5	3
Door overlay (A)	-3	-2	6	8	10	12	14	15	17	19
min. reveal (F)/gap (S)	F	S	F	S	F	S	F	S	F	S
Door thickness 3-8	2	1.5	2	1.5	2	1.5	2	1.5	2	1.5

ECO CROSS-MOUNTING PLATE

STAINLESS STEEL ADAPTER



NUMBER OF HINGES



NOTES

Inserting of the door is achieved via a modified mounting plate attachment spacing (X) and a small gluing gap (Z).

① **Attention:** With mirror or glass doors, all reveals must be at least 1.5 mm (otherwise there is a risk of breakage).

The inner door edge must not touch the rack upon opening.

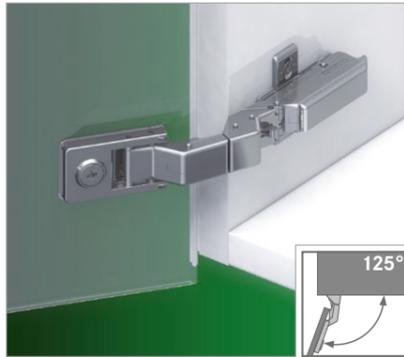
① **Installation advice:** Please contact your glass or door supplier in respect of glue selection and how to use the glue for fastening of the hinge retainer on mirror or glass doors.

① **Liability claims:** GRASS cannot accept any liability either for the glue used or the gluing process nor can it accept any responsibility for claims arising therefrom; we kindly ask for your understanding in this respect.

① **Attention:** Mirro hinges must not be used with cam mounting plates.

TIOMOS MIRRO

125° mirror/clear glass hinge



- 125° opening angle
- with integrated damper
- Fastening through door-side gluing of a Zamak adapter
- Connection of the hinge to the adapter using a cam
- Quick final assembly without glass drilling
- 3-dimensional adjustment with appropriate mounting plate
- High overlay up to 19 mm

Available in 3 versions:

- With integrated damper (3 adjustable damping levels)
- Without integrated damper
- Without self-closing mechanism (no spring)

ORDER INFORMATION

Door overlay	Cranking	Damper			Item No.	
		with	without	without spring	Click-on For screw fixing	
	14	■	-	-	F029140325	
		-	■	-	F047140326	
		-	■	■	F049140327	

Cup material: Zamak, nickel-plated/arm material: Zamak, nickel-plated

COVER CAPS

Designation	Imprinted/Embossed	Item No.
Hinge arm cover cap, steel, nickel-plated, not imprinted	On request	F072135500
Hinge arm cover cap, right, steel, nickel-plated, embossed GRASS logo	GRASS Logo	F072135550
Hinge arm cover cap, left, steel, nickel-plated, embossed GRASS logo	GRASS Logo	F072135551

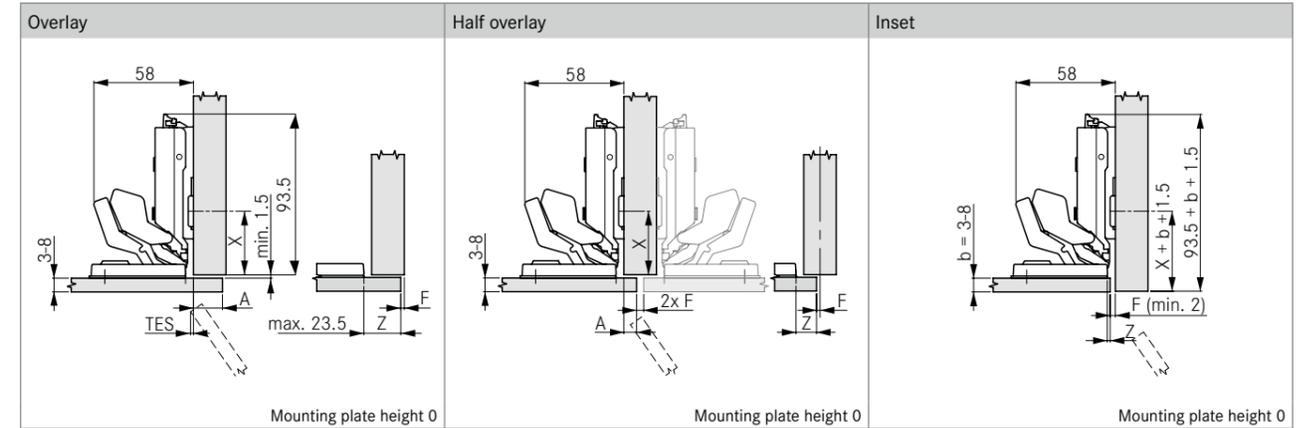
ACCESSORIES

Designation	Item No.
Tipmatic pin for wooden and aluminium frame doors	F069135396
90° opening angle reduction clip	On request
Zamak adapter, Tiomos Mirro for mirrors and clear glass	F072135868

Designation	Item No.
+5° wedge	F072135757
-5° wedge	F072135758

INSTALLATION INFORMATION

All dimensions in millimetres



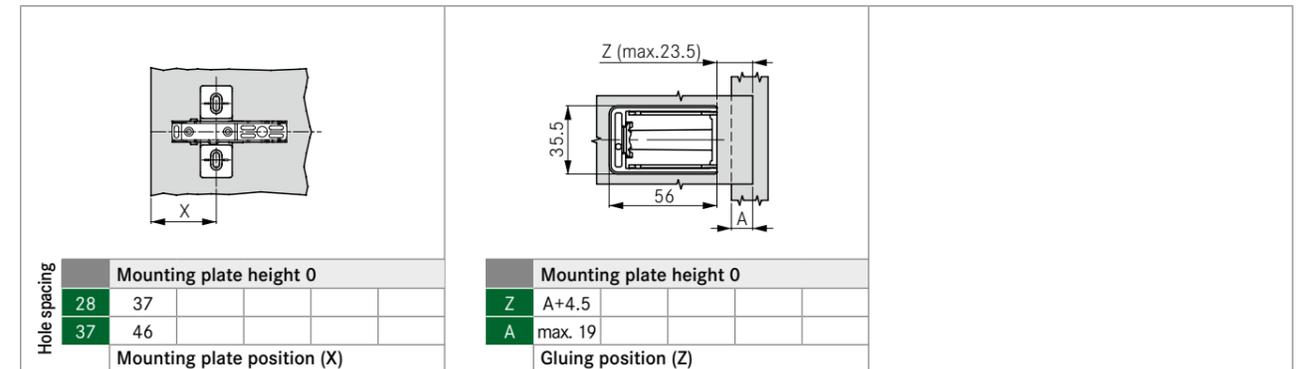
MINIMUM GAP/MINIMUM REVEAL

values for 0 mounting plate height

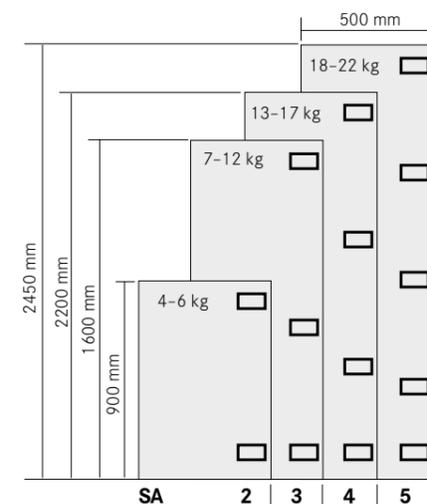
	1.5		2.5		10.5		12.5		14.5		16.5		18.5		19.5		21.5		23.5	
Gluing dimension (Z)	1.5	2.5	10.5	12.5	14.5	16.5	18.5	19.5	21.5	23.5										
Door protrusion (TES)	0	0	0	0	0	0	0	0.5	1.5	3										
Door overlay (A)	-3	-2	6	8	10	12	14	15	17	19										
min. reveal (F)/gap (S)	F	S	F	S	F	S	F	S	F	S	F	S	F	S	F	S	F	S	F	S
Door thickness 3-8	2	1.5	2	1.5	2	1.5	2	1.5	2	1.5	2	1.5	2	1.5	2	1.5	2	1.5	2	1.5

ECO CROSS-MOUNTING PLATE

ZAMAK ADAPTER



NUMBER OF HINGES



NOTES

Inserting of the door is achieved via a modified mounting plate attachment spacing (X) and a small gluing gap (Z).

Attention: With mirror or glass doors, all reveals must be at least 1.5 mm (otherwise there is a risk of breakage).

The inner door edge must not touch the rack upon opening.

Installation advice: Please contact your glass or door supplier in respect of glue selection and how to use the glue for fastening of the hinge retainer on mirror or glass doors.

Liability claims: GRASS cannot accept any liability either for the glue used or the gluing process nor can it accept any responsibility for claims arising therefrom; we kindly ask for your understanding in this respect.

Attention: Mirro hinges must not be used with cam mounting plates.

TIOMOS MIRRO

125° mirror/clear glass hinge

INSTALLATION INFORMATION

All dimensions in millimetres

Angle applications		
+5° WEDGE surface-mounted		
Adapter	Z	
Stainless steel	22.5	min. 20
Zamak	20	
Height	Item No.	
ECO cross-mounting plate	0	F058139721
+5° wedge	3	F072135757
+5° WEDGE inset		
Adapter	Z	
Stainless steel	3	min. 20
Zamak	0.5	
Height	Item No.	
ECO cross-mounting plate	0	F058139721
+5° wedge	3	F072135757
+10° WEDGE surface-mounted		
Adapter	Z	
Stainless steel	21.5	min. 25
Zamak	19	
Height	Item No.	
ECO cross-mounting plate	0	F058139721
+5° wedge (2x)	3	F072135757

Angle applications		
+10° WEDGE inset		
Adapter	Z	
Stainless steel	3	min. 25
Zamak	0.5	
Height	Item No.	
ECO cross-mounting plate	0	F058139721
+5° wedge (2x)	3	F072135757
+15° WEDGE surface-mounted		
Adapter	Z	
Stainless steel	22.5	min. 30
Zamak	20	
Height	Item No.	
ECO cross-mounting plate	2	F058139903
+5° wedge (3x)	3	F072135757
+15° WEDGE inset		
Adapter	Z	
Stainless steel	2.5	min. 30
Zamak	0	
Height	Item No.	
ECO cross-mounting plate	3.5	F058139905
+5° wedge (3x)	3	F072135757

INSTALLATION INFORMATION

All dimensions in millimetres

Angle applications		
-5° WEDGE surface-mounted		
Adapter	Z	
Stainless steel	22.5	min. 20
Zamak	20	
Height	Item No.	
ECO cross-mounting plate	0	F058139721
-5° wedge	3	F072135758
-5° WEDGE inset		
Adapter	Z	
Stainless steel	14	min. 20
Zamak	11.5	
Height	Item No.	
ECO cross-mounting plate	0	F058139721
-5° wedge	3	F072135758
-10° WEDGE inset		
Adapter	Z	
Stainless steel	23.5	min. 25
Zamak	21	
Height	Item No.	
ECO cross-mounting plate	0	F058139721
-5° wedge (2x)	3	F072135758

NOTE

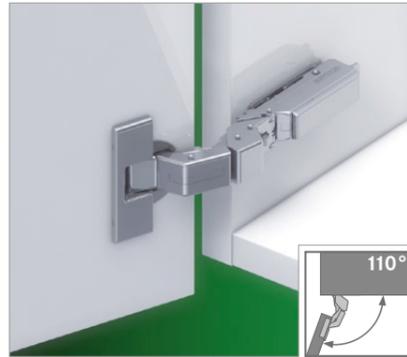
Trial fitting is recommended for all door thicknesses.

LEGEND

Z Gluing position

TIOMOS M9

110° hinge (door thicknesses from 12 mm)



- For door thicknesses up to max. 28 mm
- 35 mm full cup drilled hole
- Low cup depth of 9 mm
- 3-dimensional adjustment with appropriate mounting plate
- For door overlays up to 25 mm

Available in 3 versions:

- With integrated damper (3 adjustable damping levels)
- Without integrated damper
- Without self-closing mechanism (no spring)

ORDER INFORMATION FOR DRILLING TEMPLATE 48/9

Door overlay	Cranking	Damper			Item No.	
		with	without	without spring	Click-on For screw fixing	
	14	■	-	-	F029140334	
		-	■	-	F047140335	
		-	■	■	F049140336	

Cup material: Zamak, nickel-plated/arm material: Zamak, nickel-plated

COVER CAPS

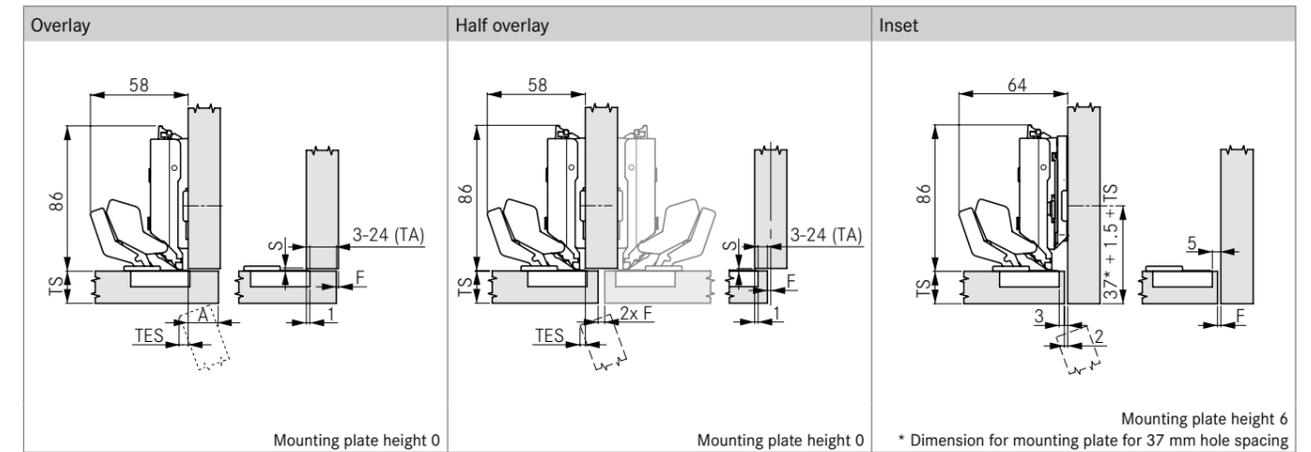
Designation	Imprinted/Embossed	Item No.
Hinge arm cover cap, steel, nickel-plated, not imprinted	On request	F072135500
Hinge arm cover cap, right, steel, nickel-plated, embossed GRASS logo	GRASS Logo	F072135550
Hinge arm cover cap, left, steel, nickel-plated, embossed GRASS logo	GRASS Logo	F072135551
Hinge cup cover cap, steel, nickel-plated, not imprinted	-	F072135503

ACCESSORIES

Designation	Item No.	Designation	Item No.
Countersunk wood screw Ø 3.5 x 15 mm	F146073976	90° opening angle reduction clip	On request
Tipmatic pin for wooden and aluminium frame doors	F069135396		

INSTALLATION INFORMATION

All dimensions in millimetres



MINIMUM GAP/MINIMUM REVEAL

values for 0 mounting plate height

Door thickness (TS)	Cup distance (TA)		Door protrusion (TES)		Door overlay (A)		min. reveal (F)/gap (S)																	
	3	4	5	6	7	8	9	10	11	12	13													
12-20	1	1.5	1	1.5	1	1.5	1	1.5	1	1.5	1	1.5	1	1.5	1	1.5	1	1.5	1	1.5	1	1.5	1	1.5
22	1	1.5	1	1.5	1	1.5	1	1.5	1	1.5	1	1.5	1	1.5	1	1.5	1	1.5	1	1.5	1	1.5	1	1.5
24	1	1.5	1.2	1.5	1.3	1.5	1.5	1.5	1.7	1.5	2	1.5	2.4	13	3.3	1.5	8.3	1.5	7.7	1.5	6.9	1.5	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	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	1.5	

Door thickness (TS)	Cup distance (TA)		Door protrusion (TES)		Door overlay (A)		min. reveal (F)/gap (S)																	
	14	15	16	17	18	19	20	21	22	23	24													
12-20	1	1.5	1	1.5	1	1.5	1	1.5	1	2	1	2	1	2	1	2	1	2	1	2	1	2	1	2
22	4	1.5	3.5	1.5	3	1.5	2.2	1.5	1.7	1.5	1.3	1.5	1	1.5	1	1.5	1	1.5	1	2	1	2	1	2
24	6	1.5	5.2	1.5	4.5	1.5	4	1.5	3.3	1.5	3	1.5	2.5	1.5	2.1	1.5	1.9	2	1.6	2	1.5	2	2	
26	8	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	3	2	2.6	2	2	
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	4.5	2	4.2	2	2	

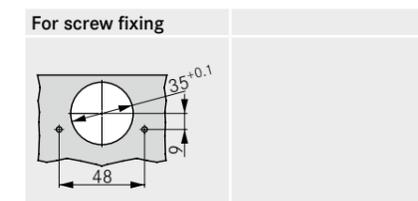
■ Value achievable by use of a 90° opening angle reduction clip

NOTE

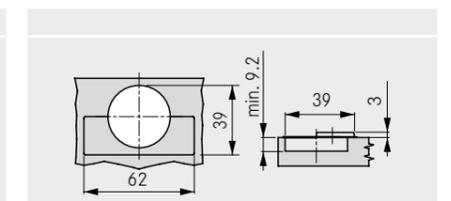
Minimum reveal for doors with chamfered edges (R = 1 mm) set at factory setting.

Trial fitting is recommended for all door thicknesses.

DRILLING TEMPLATE 48/9



CUP DIMENSIONS



TIOMOS M9

110° hinge (door thicknesses from 12 mm)

INSTALLATION INFORMATION

All dimensions in millimetres

Mitred application – circumferential and lateral		Max. overlay
12 - 24 mm		
<p>Mounting plate height 3 * Dimension for mounting plate for 37 mm hole spacing</p>		<p>Mounting plate height 0 * Dimension for mounting plate for 37 mm hole spacing</p>
Door thickness (TS)		

NOTE

With circumferential mitred application all sides 1.4 mm reveal.

INSTALLATION INFORMATION

All dimensions in millimetres

Rebated applications					
10 mm			13 mm		
<p>Mounting plate height 6 * Dimension for mounting plate for 37 mm hole spacing</p>			<p>Mounting plate height 6 * Dimension for mounting plate for 37 mm hole spacing</p>		
Rack location	TS (max.)	A (max.)	Y (max.)	TA (max.)	F (min.)
	20	17	18.5	22	1
	28	17	18.5	22	See reveal table
	38	17	18.5	22	
16 mm					
<p>Mounting plate height 6 * Dimension for mounting plate for 37 mm hole spacing</p>					
Rack location	TS (max.)	A (max.)	Y (max.)	TA (max.)	F (min.)
	20	14.5	16	19.5	1
	26	14.5	16	19.5	See reveal table
	32	12.5	14	17.5	

LEGEND

A Overlay
F Reveal
TA Cup distance
TS Door thickness



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