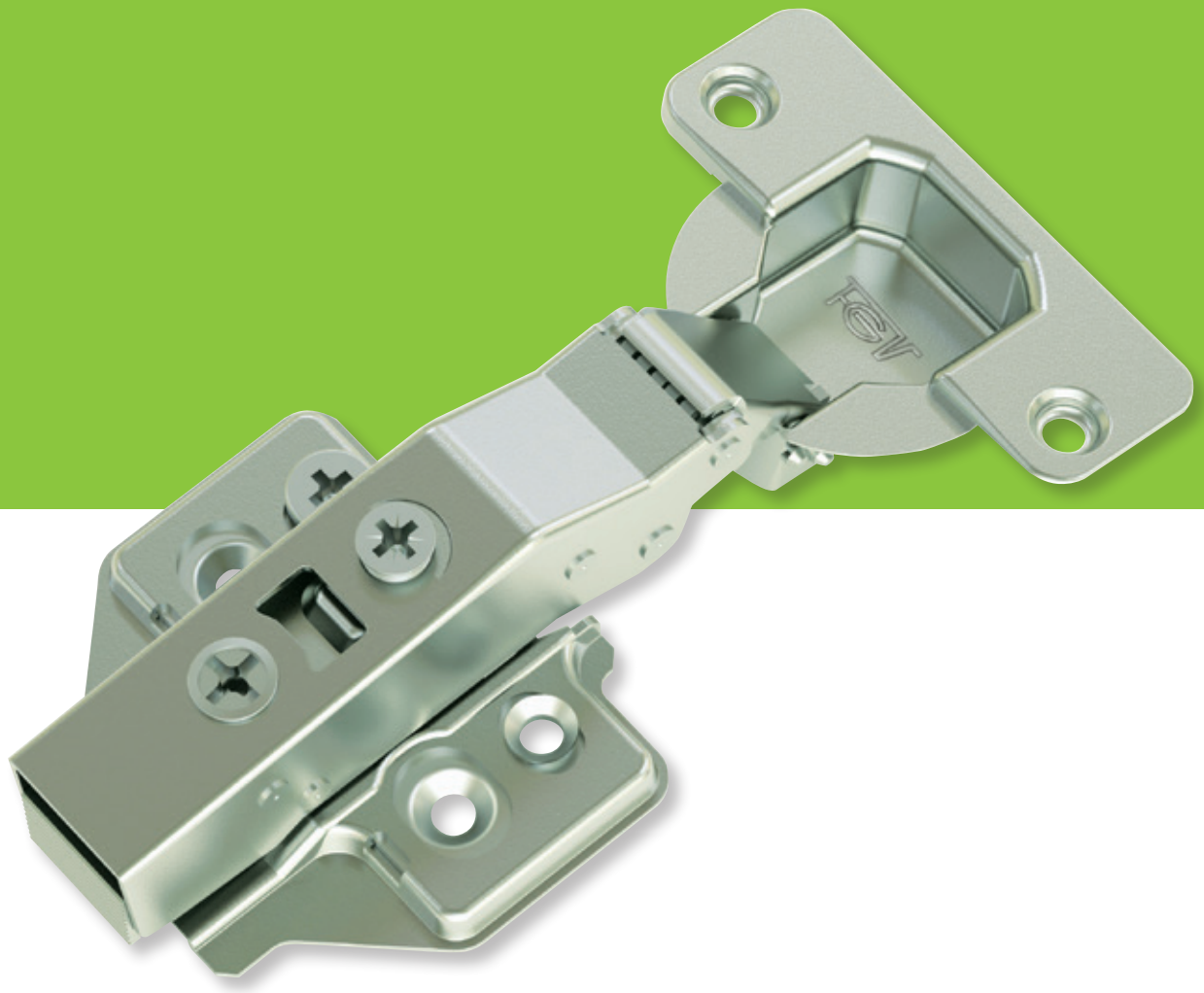
Integrated Hinges

SlowMotion Inside

FORMENTI & GIOVENZANA

Formenti & Giovenzana provides functional solutions for furniture to meet the real needs of a large number of customers.
All products are conceived and supplied with care and quality and are offered to the market at a competitive price.
In this way, Formenti & Giovenzana contributes globally to increase the satisfaction of the customers buying furniture, giving access to pleasing features and improving the quality of life of the consumers.

FGV
FORMENTI &
GIOVENZANA



Integrated Hinges

SlowMotion Inside

SlowMotion technology inside

Improved modern design

Strength and high performances

Easy click fixing system

The Integrated Hinges are the latest solution
for dampening doors in the FGV range. A SlowMotion
linear damper hidden in the hinge arm offers effective
and constant performances under all conditions.
A rapid installation and 3D adjustments allow
to find easily the door's correct position.
The Integrated Hinges are the right solution to meet
the customer's needs keeping an eye on costs.

Integrated Hinges

SlowMotion Inside

An hinge with a heart, a damper integrated into the arm, driving a controlled and silent movement.
An advanced technology able to support strong and long lasting application.
High stability and constant performances also under adverse closing conditions.
A really accurate depth adjustment thanks to new spiral screw.

Modern design

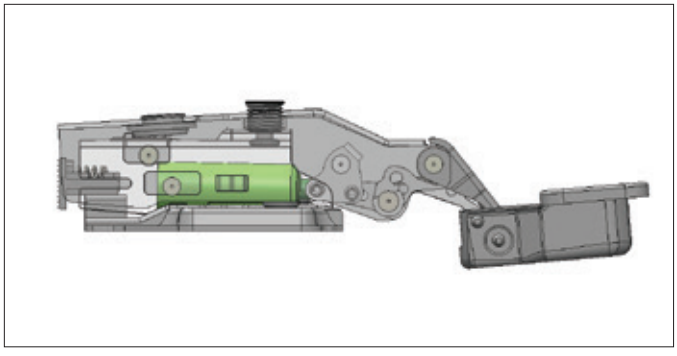
Based on aesthetic and functionality combining design, the Integrated Hinges offer a practical use with a pleasant look. Moreover the soft door motion confers a further end-consumer appeal to the product.

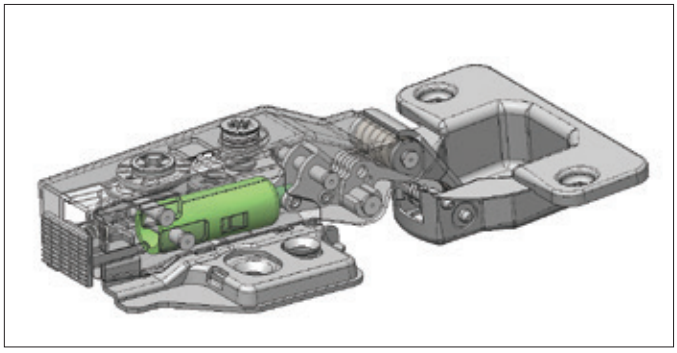
Integrated Hinges range

The Integrated Hinges program of cranks, angles and special solutions covers a complete range of applications and fits all the standard drilling patterns. Ensuring an optimal damping on various weights and sizes doors, the Integrated Hinges are perfectly suitable for different types of cabinets for kitchen, bathrooms, bedrooms, living room and all other solutions.

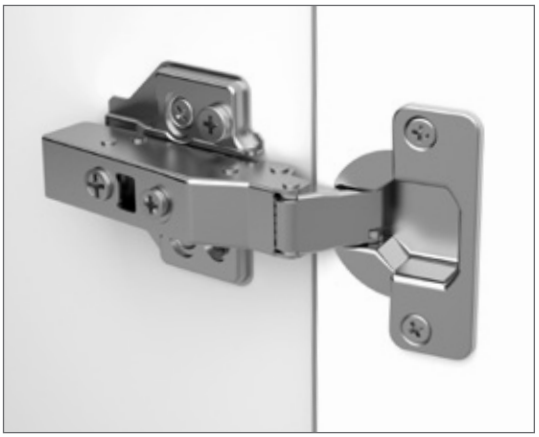
Technology background

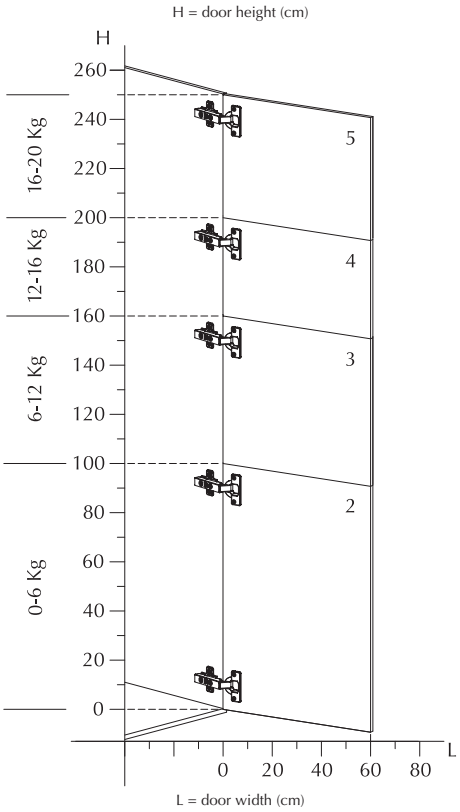
Despite the apparent simplicity of the product, the Integrated Hinges are a cost-efficient collection of techniques, skills, methods and processes all put together. The result is a real affordable product with an high background of technology and safety.



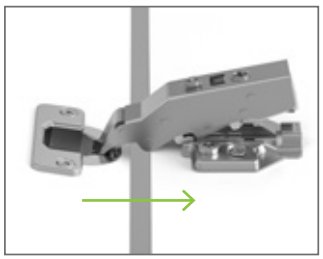


Integrated Hinges

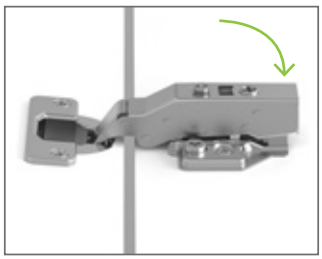




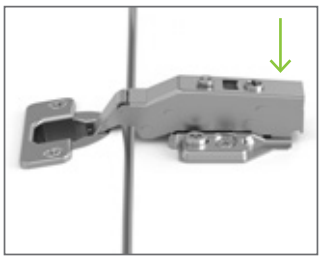
Mounting System



1 Place the front part of the hinge on the front side of the mounting plate.

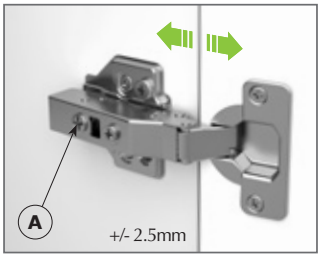


2 Rotate the arm of the hinge.

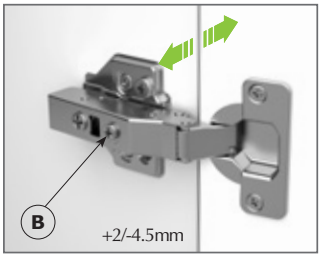


3 Press down the rear part of the hinge to Click on.

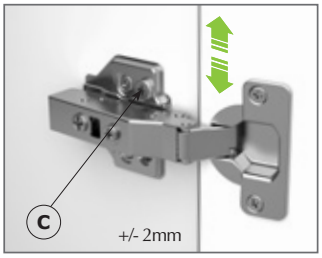
Adjusting System



Depth adjustment
Acting on the "A" screw it is possible to adjust the distance between the side of the cabinet and the door.



Independent side adjustment
Acting on the "B" screw it is possible to change the amount of the door covering on the side of the cabinet.

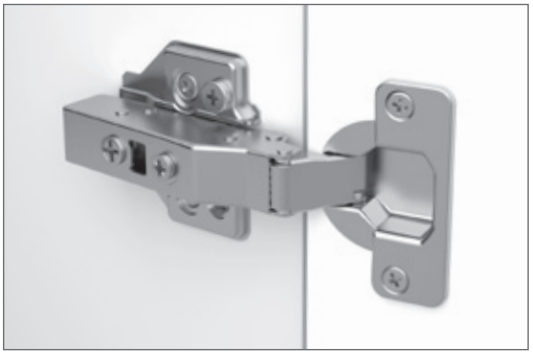


Vertical adjustment
Acting on the "C" screw of the mounting plate it is possible to adjust the door vertically.

INDEX

OPENING 105°		**Product detail**	p. 10-11
OPENING 165°		**Product detail**	p. 12-13
FOR CORNER DOORS 105°		**Product detail**	p. 14-15
FOR ALUMINIUM FRAME 105°		**Product detail**	p. 16-17

Integrated Hinges 105°



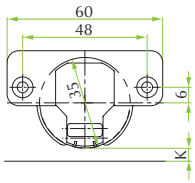
Technical specifications:

- Depth of the metal cup 11.3mm
- Cup diameter 35mm
- Opening 105° with (K) max 4mm and (T) max 18mm
- Possibility of door drilling (K) from 3 to 7 mm
- Thickness of the door (T) from 16 to 26 mm
- SlowMotion solution with linear damper

	CRANK 0	CRANK 8	CRANK 15
I	51.BSH5.05.00.0	51.BSH5.05.08.0	51.BSH5.05.15.0
A	51.BSH5.05.00.C	51.BSH5.05.08.C	51.BSH5.05.15.C
D	51.BSH5.05.00.B	51.BSH5.05.08.B	51.BSH5.05.15.B
I	51.BSH6.05.00.M	51.BSH6.05.08.M	51.BSH6.05.15.M
A	51.BSH6.05.00.N	51.BSH6.05.08.N	51.BSH6.05.15.N
D	51.BSH6.05.00.E	51.BSH6.05.08.E	51.BSH6.05.15.E
I	51.BSH6.05.00.0	51.BSH6.05.08.0	51.BSH6.05.15.0
A	51.BSH6.05.00.S	51.BSH6.05.08.S	51.BSH6.05.15.S
D	51.BSH6.05.00.B	51.BSH6.05.08.B	51.BSH6.05.15.B
	0, B = dowels Ø10mm / S = dowels Ø8mm		
I	51.BSH8.05.00.V	51.BSH8.05.08.V	51.BSH8.05.15.V
A	51.BSH8.05.00.S	51.BSH8.05.08.S	51.BSH8.05.15.S
D	51.BSH8.05.00.Z	51.BSH8.05.08.Z	51.BSH8.05.15.Z
	V, Z = dowels Ø10mm / S = dowels Ø8mm		

Versions not damped (code 51.5SH5.05) available for all applications in the above table.

I



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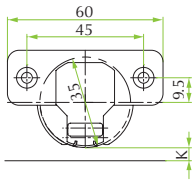

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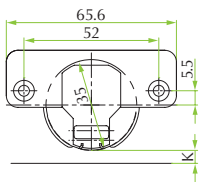
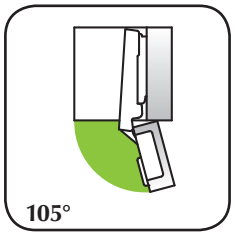
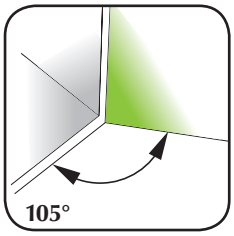
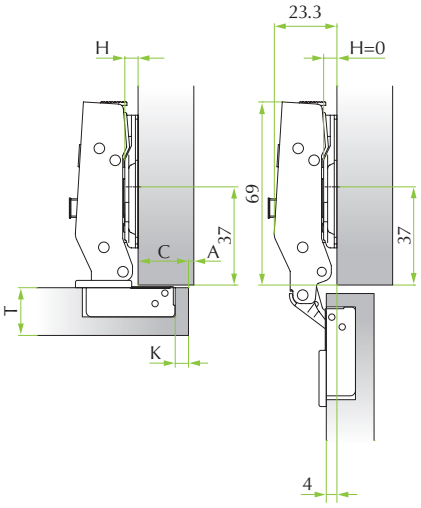


The mounting plates and fittings for this hinge series are shown from page 18 to page 20.

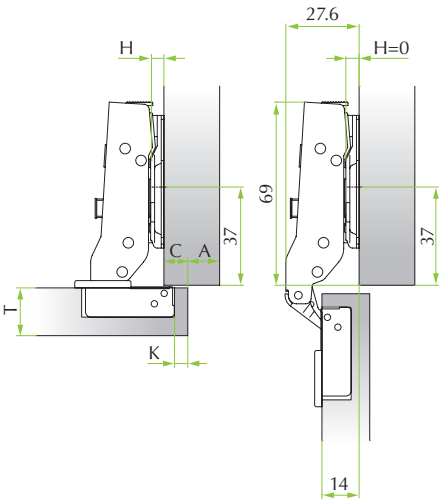




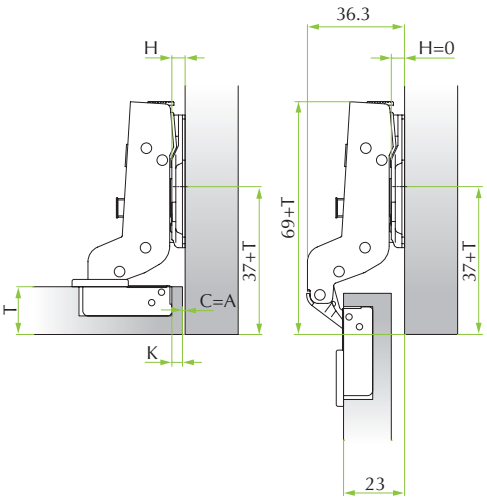
CRANK 0
For lay-on doors



CRANK 8
For partial lay-on doors



CRANK 15
For inset doors



Overlay (C)	Drilling distance (K) 3	4	5	6	7
21					0
20				0	
19			0		2
18		0		2	
17	0		2		4
16		2		4	
15	2		4		
14		4			
13	4				

Mounting plates (H)

Overlay (C)	Drilling distance (K) 3	4	5	6	7
11					0
10				0	
9			0		2
8		0		2	
7	0		2		4
6		2		4	
5	2		4		
4		4			
3	4				

Mounting plates (H)

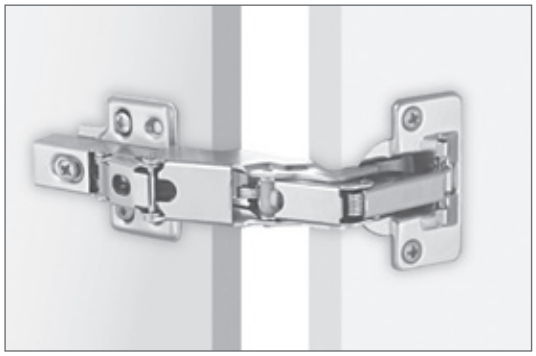
Overlay (C)	Drilling distance (K) 3	4	5	6	7
4	2				
3		2			
2	0		2		
1		0		2	
0			0		2

Mounting plates (H)

Table to determinate the minimum distance **A** so that a door with **T** thickness can open without protrusion from the cabinet and without interfering with adjacent doors.

	T=	16	17	18	19	20	21	22	23	24	25	26
K=3	A=	0.9	1.1	1.5	1.8	2.3	2.8	3.6	4.3	5.2	6.0	6.9
K=4	A=	0.8	1.1	1.4	1.8	2.2	2.7	3.3	4.0	4.7	5.5	6.5
K=5	A=	0.8	1.0	1.3	1.7	2.1	2.5	3.1	3.7	4.4	5.1	5.9
K=6	A=	0.8	1.0	1.3	1.6	2.0	2.4	2.9	3.5	4.1	4.8	5.5
K=7	A=	0.7	1.0	1.3	1.6	1.9	2.3	2.7	3.3	3.8	4.5	5.2

Integrated Hinges 165°



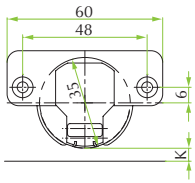
Technical specifications:

- Depth of the metal cup 11.3mm
- Cup diameter 35mm
- Opening 165°
- Possibility of door drilling (K) from 3 to 7 mm
- Thickness of the door (T) from 16 to 26 mm
- SlowMotion solution with linear damper

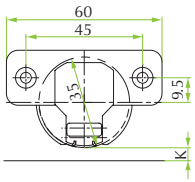
		CRANK 0	CRANK 8
	I	51.BWH5.05.00.0	51.BWH5.05.08.0
	A	51.BWH5.05.00.C	51.BWH5.05.08.C
	D	51.BWH5.05.00.B	51.BWH5.05.08.B
	I	51.BWH6.05.00.M	51.BWH6.05.08.M
	A	51.BWH6.05.00.N	51.BWH6.05.08.N
	D	51.BWH6.05.00.E	51.BWH6.05.08.E
	I	51.BWH6.05.00.0	51.BWH6.05.08.0
	A	51.BWH6.05.00.S	51.BWH6.05.08.S
	D	51.BWH6.05.00.B	51.BWH6.05.08.B
		0, B = dowels Ø10mm / S = dowels Ø8mm	
	I	51.BWH8.05.00.V	51.BWH8.05.08.V
	A	51.BWH8.05.00.S	51.BWH8.05.08.S
	D	51.BWH8.05.00.Z	51.BWH8.05.08.Z
		V, Z = dowels Ø10mm / S = dowels Ø8mm	

Versions not damped (code 51.5WH5.05) available for all applications in the above table.

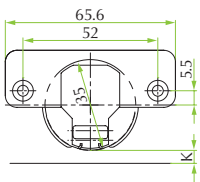
I



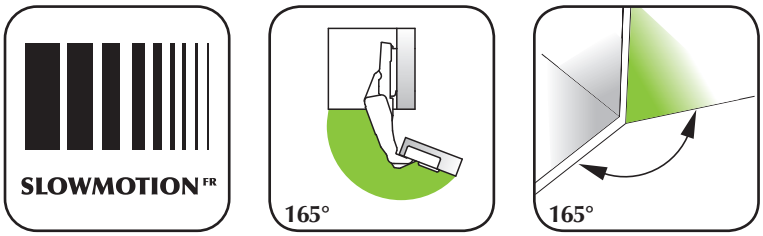
A



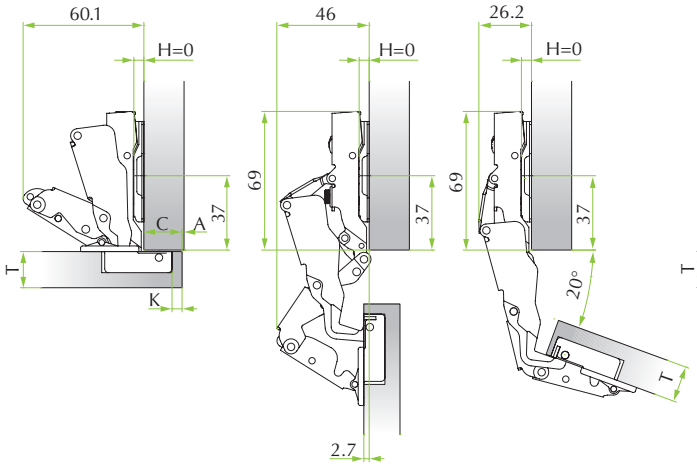
D



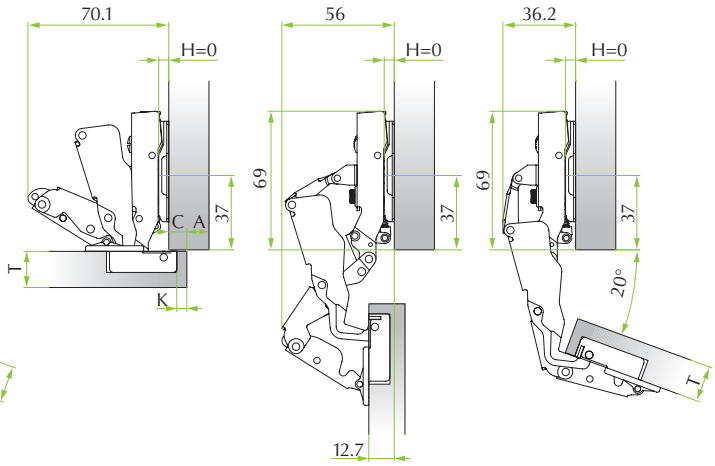
The mounting plates and fittings for this hinge series are shown from page 18 to page 20.



CRANK 0
For lay-on doors



CRANK 8
For partial lay-on doors



Overlay (C) \ Drilling distance (K)	3	4	5	6	7
21					0
20				0	
19			0		2
18		0		2	
17	0		2		
16		2			
15	2				

Mounting plates (H)

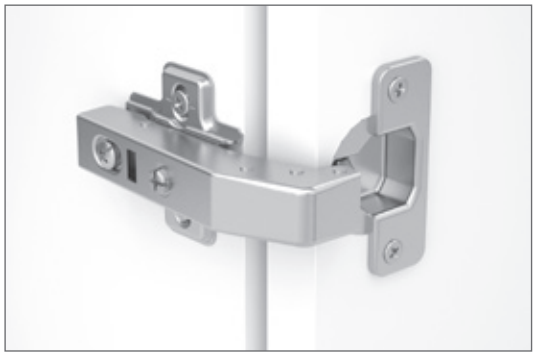
Overlay (C) \ Drilling distance (K)	3	4	5	6	7
11					0
10				0	
9			0		2
8		0		2	
7	0		2		
6		2			
5	2				

Mounting plates (H)

Table to determinate the minimum distance **A** so that a door with **T** thickness can open without protrusion from the cabinet and without interfering with adjacent doors.

	T=	16	17	18	19	20	21	22	23	24	25	26
K=3	**A=**	0.0	0.0	0.0	0.0	0.0	0.0	0.06	0.19	0.41	0.77	1.31
K=4	**A=**	0.0	0.0	0.0	0.0	0.0	0.0	0.06	0.21	0.46	0.88	1.57
K=5	**A=**	0.0	0.0	0.0	0.0	0.0	0.0	0.07	0.52	1.05	1.05	2.13
K=6	**A=**	0.0	0.0	0.0	0.0	0.0	0.0	0.08	0.62	2.33	2.33	3.33
K=7	**A=**	0.0	0.0	0.0	0.0	0.0	0.0	0.09	0.75	1.33	1.33	2.33

Integrated Hinges 105° for corner doors



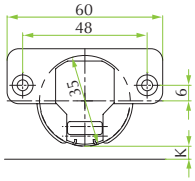
Technical specifications:

- Depth of the metal cup 11.3mm
- Cup diameter 35mm
- Opening 105°
- Possibility of door drilling (K) from 3 to 7 mm
- Thickness of the door (T) from 16 to 26 mm
- SlowMotion solution with linear damper

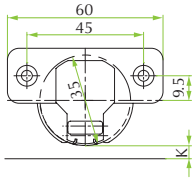
	ANGLE 30°	ANGLE 45°	ANGLE 90°
I	51.BH85.05.30.0	51.BH85.05.45.0	51.BH85.05.90.0
A	51.BH85.05.30.C	51.BH85.05.45.C	51.BH85.05.90.C
D	51.BH85.05.30.B	51.BH85.05.45.B	51.BH85.05.90.B
I	51.BH86.05.30.M	51.BH86.05.45.M	51.BH86.05.90.M
A	51.BH86.05.30.N	51.BH86.05.45.N	51.BH86.05.90.N
D	51.BH86.05.30.E	51.BH86.05.45.E	51.BH86.05.90.E
I	51.BH86.05.30.0	51.BH86.05.45.0	51.BH86.05.90.0
A	51.BH86.05.30.S	51.BH86.05.45.S	51.BH86.05.90.S
D	51.BH86.05.30.B	51.BH86.05.45.B	51.BH86.05.90.B
	0, B = dowels Ø10mm / S = dowels Ø8mm		
I	51.BH88.05.30.V	51.BH88.05.45.V	51.BH88.05.90.V
A	51.BH88.05.30.S	51.BH88.05.45.S	51.BH88.05.90.S
D	51.BH88.05.30.Z	51.BH88.05.45.Z	51.BH88.05.90.Z
	V, Z = dowels Ø10mm / S = dowels Ø8mm		

Versions not damped (code 51.5H85.05) available for all applications in the above table.

I



A



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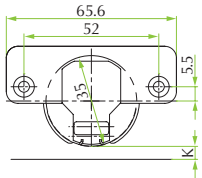
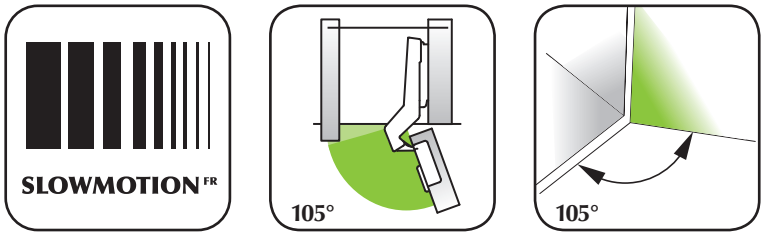
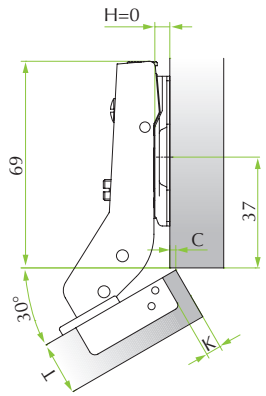


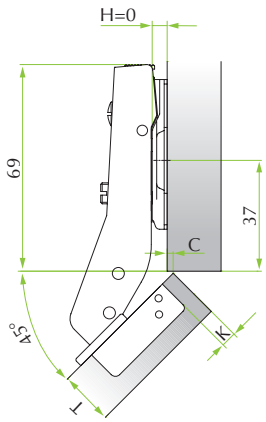
The mounting plates and fittings for this hinge series are shown from page 18 to page 20.



ANGLE 30°



ANGLE 45°



ANGLE 90°

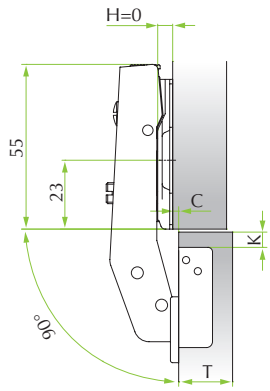
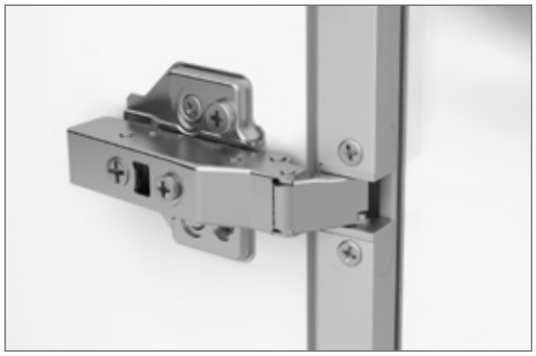


Table to determinate the minimum distance **A** so that a door with **T** thickness can open without protrusion from the cabinet and without interfering with adjacent doors.

	T=	**16**	**17**	**18**	**19**	**20**	**21**	**22**	**23**	**24**	**25**	**26**
K=3	**A=**	0.9	1.1	1.5	1.8	2.3	2.8	3.6	4.3	5.2	6.0	6.9
K=4	**A=**	0.8	1.1	1.4	1.8	2.2	2.7	3.3	4.0	4.7	5.5	6.5
K=5	**A=**	0.8	1.0	1.3	1.7	2.1	2.5	3.1	3.7	4.4	5.1	5.9
K=6	**A=**	0.8	1.0	1.3	1.6	2.0	2.4	2.9	3.5	4.1	4.8	5.5
K=7	**A=**	0.7	1.0	1.3	1.6	1.9	2.3	2.7	3.3	3.8	4.5	5.2

Integrated Hinges 105° for aluminium frame



Technical specifications:

- Depth of the zamak cup 9.9mm
- Cup drilling 28x7mm
- Opening 105°
- Aluminium frame from min. 19 to max 25 mm
- SlowMotion solution with linear damper

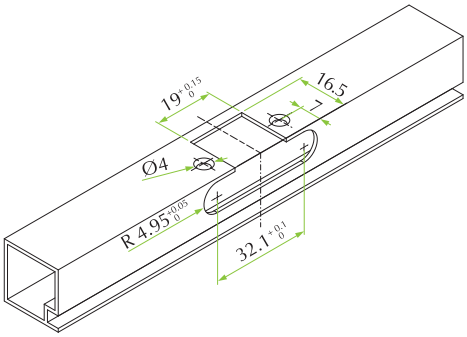
FIXING FOR GROOVED PROFILE

CRANK 0	CRANK 8	CRANK 15
51.BS91.05.00.0	51.BS91.05.08.0	51.BS91.05.15.0

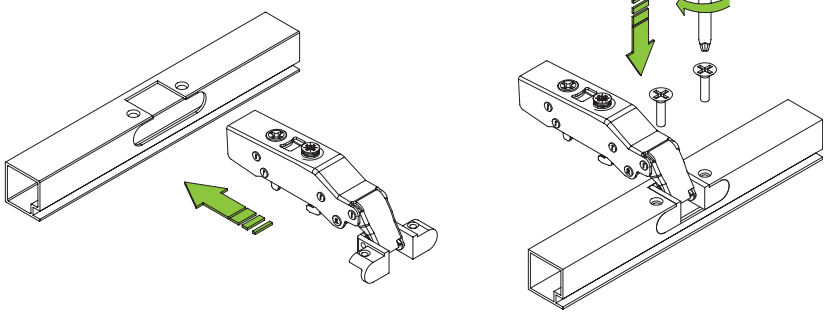
Versions not damped (code 51.5S91.05) available for all applications in the above table.

Drilling holes:

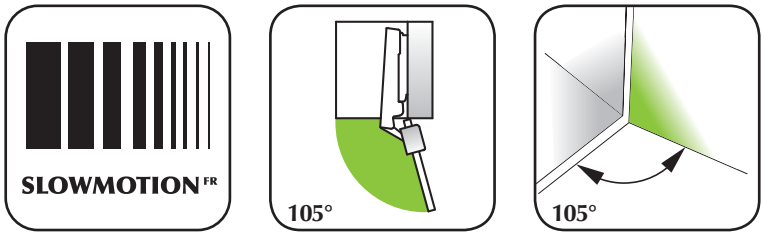
The two laterals drillings are Ø4mm and are countersunk with 120°.
Screws Ø3.5x12 mm supplied on demand under code 1A05512105000.



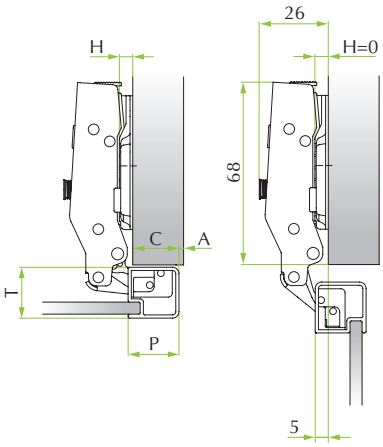
Assembly instructions:



The mounting plates and fittings for this hinge series are shown from page 18 to page 20.



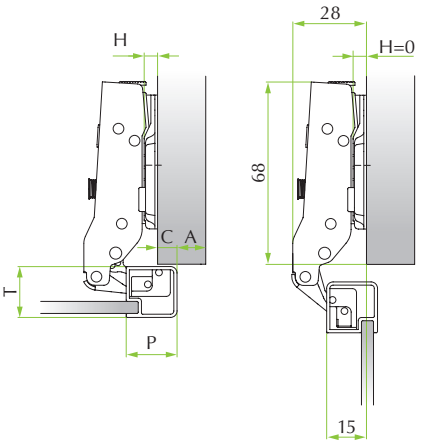
CRANK 0
For lay-on doors



With P=19

Overlay (C)											
17	0										
16											
15	2										
14											
13	4										
12											
11	6										
											Mounting plates (H)

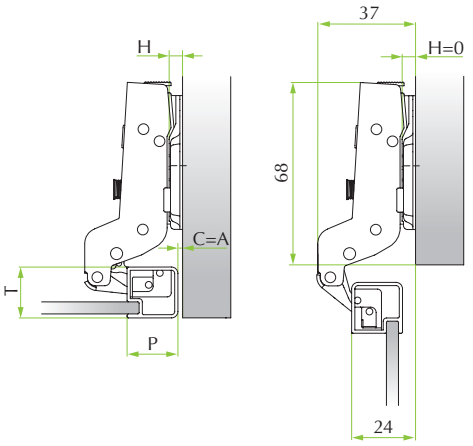
CRANK 8
For partial lay-on doors



With P=19

Overlay (C)											
7	0										
6											
5	2										
4											
3	4										
2											
1	6										
											Mounting plates (H)

CRANK 15
For inset doors



With P=19

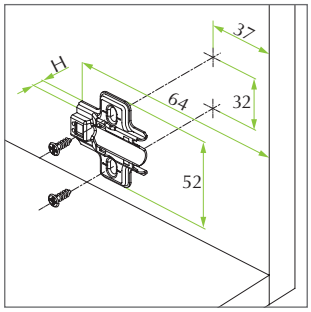
Overlay (C)											
0	2										
1											
2	4										
3											
4	6										
											Mounting plates (H)

Table to determinate the minimum distance **A** so that a door with **T** thickness can open without protrusion from the cabinet and without interfering with adjacent doors.

	T=	**19**	**20**	**21**	**22**	**23**	**24**	**25**	**26**
P=19	**A=**	1.8	2.3	2.8	3.6	4.3	5.2	6.0	6.9
P=20	**A=**	1.8	2.2	2.7	3.3	4.0	4.7	5.5	6.5
P=21	**A=**	1.7	2.1	2.5	3.1	3.7	4.4	5.1	5.9
P=22	**A=**	1.6	2.0	2.4	2.9	3.5	4.1	4.8	5.5
P=23	**A=**	1.6	1.9	2.3	2.7	3.3	3.8	4.5	5.2
P=24	**A=**	1.5	1.8	2.2	2.5	3.1	3.5	4.2	4.8
P=25	**A=**	1.4	1.7	2.1	2.3	2.9	3.2	3.9	4.4

Metal cruciform mounting plate. Selftapping screw fixing. Vertical adjustment.
Screws provided upon request.

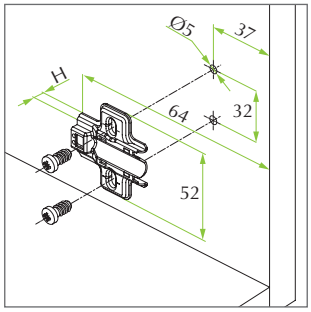
37



Height	Material	Code
H=0	Steel	52.5B01.M5.00.0
H=2	Steel	52.5B01.M5.02.0
H=4	Steel	52.5B01.M5.04.0

Metal cruciform mounting plate. Euro screws premounted. Vertical adjustment.

37

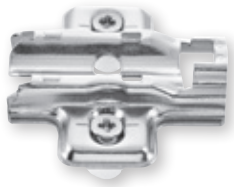


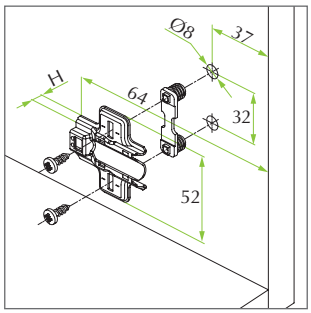
Height	Material	Code
H=0	Steel	52.5B16.M5.00.*
H=2	Steel	52.5B16.M5.02.*
H=4	Steel	52.5B16.M5.04.*

∗ A = B = G =

Metal cruciform mounting plate. Knock-in fixing with dowels Ø8mm. Vertical adjustment.

37



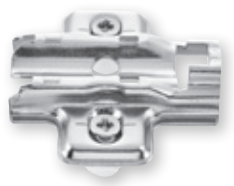


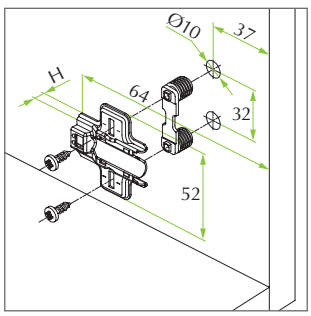
Height	Material	Code
H=0	Steel	52.5BC5.M5.00.0
H=2	Steel	52.5BC5.M5.02.0
H=4	Steel	52.5BC5.M5.04.0

C =

Metal cruciform mounting plate. Knock-in fixing with dowels Ø10mm. Vertical adjustment.

37





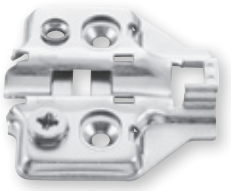
Height	Material	Code
H=0	Steel	52.5BD5.M5.00.0
H=2	Steel	52.5BD5.M5.02.0
H=4	Steel	52.5BD5.M5.04.0

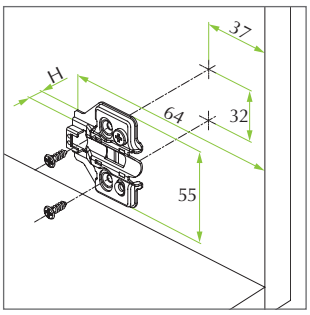
D =

 Attention: the picture shows the real product, the 3D drawing shows drilling and mounting instruction.

Metal cruciform mounting plate. Selftapping screw fixing. Independent vertical adjustment with CAM.
Screws provided upon request.

37

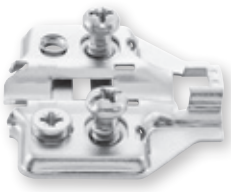


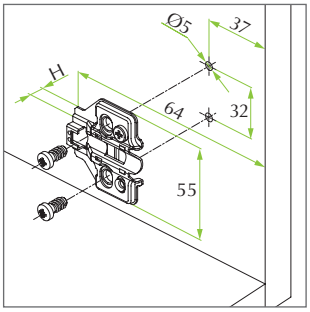


Height	Material	Code
H=0	Steel	52.RB44.L5.00.0
H=2	Steel	52.RB44.L5.02.0
H=4	Steel	52.RB44.L5.04.0

Metal cruciform mounting plate. Euro screws premounted. Independent vertical adjustment with CAM.

37



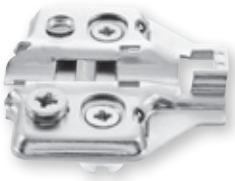


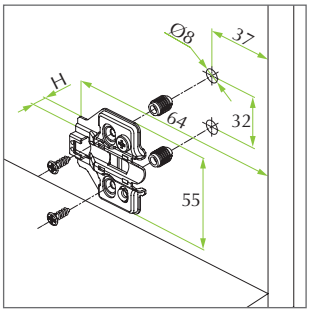
Height	Material	Code
H=0	Steel	52.RB47.L5.00.*
H=2	Steel	52.RB47.L5.02.*
H=4	Steel	52.RB47.L5.04.*

* A= B= C=

Metal cruciform mounting plate. Knock-in fixing with dowels Ø8mm. Independent vertical adjustment with CAM.

37



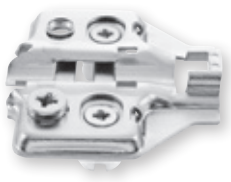


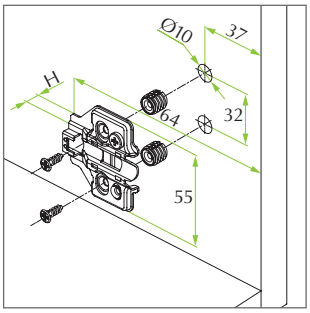
Height	Material	Code
H=0	Steel	52.RBC5.L5.00.0
H=2	Steel	52.RBC5.L5.02.0
H=4	Steel	52.RBC5.L5.04.0

C =

Metal cruciform mounting plate. Knock-in fixing with dowels Ø10mm. Independent vertical adjustment with CAM.

37





Height	Material	Code
H=0	Steel	52.RBD5.M5.00.0
H=2	Steel	52.RBD5.M5.02.0
H=4	Steel	52.RBD5.M5.04.0

D =

Arm cover cap.

Material	Code
Steel	51.0Y.0005.000000N
Steel with FGV logo*	51.0YFGV.5.0000000

*Customer logo upon request.

Hinge box cover cap.

Cup hole dist.	Material	Code
48-45	Steel	51.5CB0.05.00000
52	Steel	51.5CB0.05.00B00

Ø35mm cover.

Material	Code
Nylon	5307C3**00000

*** Colour code: A1 = White RAL 9010 / A2 = Brown RAL 8016 / C6 = Grey RAL 7004 / 0I = Painted matt aluminium*

HINGES

Fixing System

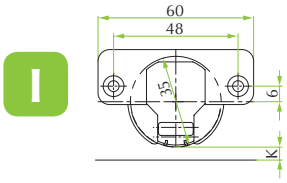
SELFTAPPING SCREW

EURO SCREW

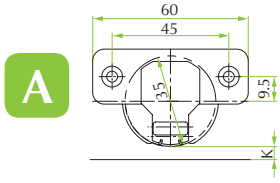
DOWEL

VELOFIX DOWEL

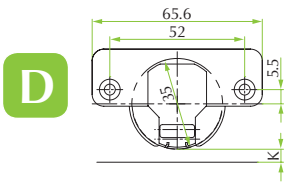
Cup hole distance



CUP HOLE DISTANCE 48x6mm

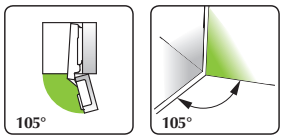


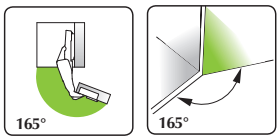
CUP HOLE DISTANCE 45x9.5mm

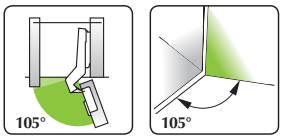


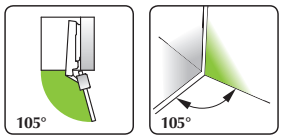
CUP HOLE DISTANCE 52x5.5mm

Angles









MOUNTING PLATES

Fixing System

SELFTAPPING SCREW

EURO SCREW

DOWEL

37

DRILLING DISTANCE 37mm

Notes

Notes

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