

AZZI FAUSTO

Hidden hinge

Accessories for safety doors

HIDDEN HINGE

THE ONLY HIDDEN HINGE – PROTECTED BY N.03 PATENTS FOR INVENCTION – THAT ALWAYS STOPS ON ITSELF AND NOT ON THE FRAME- AVOIDING ACCIDENTAL DISTORTIONS OF THE LATTER.

AVAILABLE WITH PATENTED BREAKING SYSTEM.

PROVIDED WITH ANTI-SLIPPING AND ANTI-SWINGING SYSTEM OF THE LEAF DOOR.

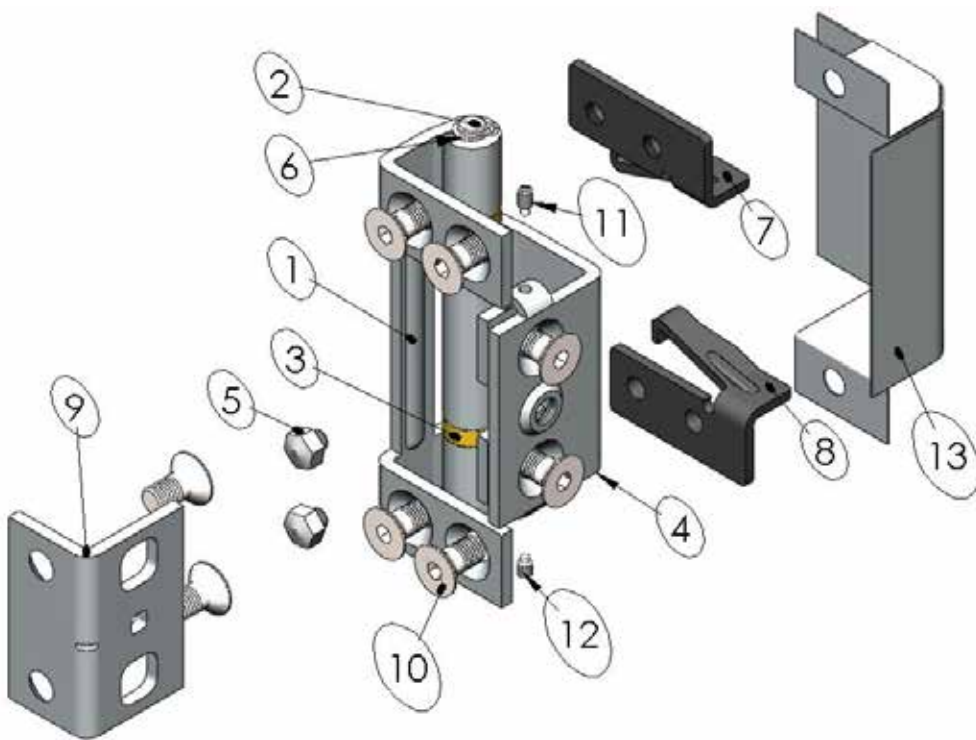
PROVIDED WITH STAINLESS STEEL COVER OF THE FRAME-HOLE



HIDDEN HINGE FOR SAFETY DOOR-PATENTED

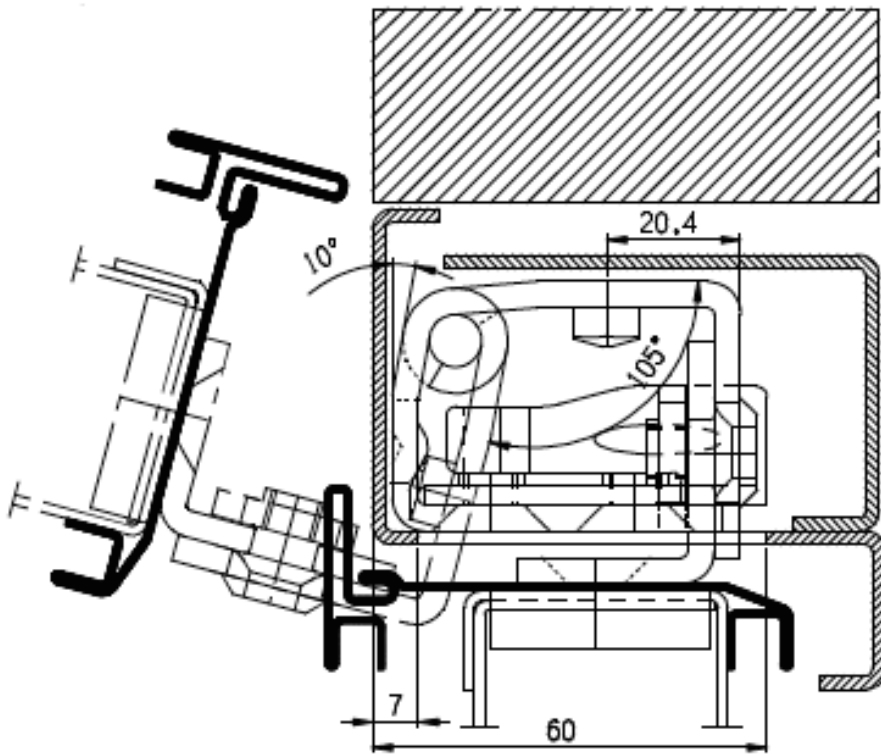
WE THANK YOU FOR HAVING CHOSEN OUR HIDDEN HINGE

This hinge, while being suitable for safety doors, it reveals as good alternative to the classic hinge and can be applied to any kind of door. In fact, more often it is felt the need to hide the hinge inside the frame, both for security both for aesthetic reason, namely to produce the so called **flush wall doors**. Entirely *made in Italy*, it is produced by several steel parts and is composed by a double hinge and and a central pin. The fixed hinge (1) is fasten by means of n° 04 M8x16 screws, directly along the side of the door that connects to the frame of the wall. The hinge has been developed in such a way that the moving hinge (4), while carrying out his rotational movement can never touch the frame, but instead, will always stop against a specific step obtained in the

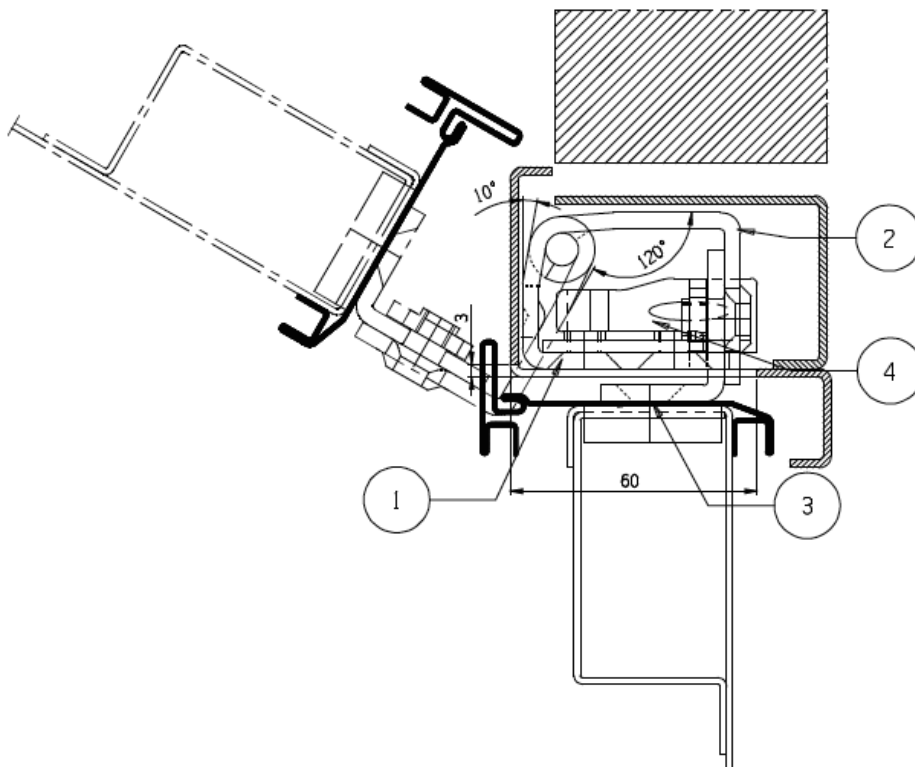


fixed hinge (1). Furthermore, the braking system (7,8) is able to handle the inertial force of the door. Being safety door fairly heavily, (from 80 Kilograms up), If the hinge were not equipped with this advanced double braking system and if it were open violently, it would make its entire stroke and unload the generated force on












the frame, risking to deform and even to break it, or even to break it off the wall. These two systems, patented, are the secrets for the success of this innovative hidden hinge for safety doors. The feature that allows for greater flexibility of the door and its inclusion in the structure is the miniaturization of the hinge system. Following a study and targeted testing, we have managed to standardize the system to the frames available on the market, and made it interesting for all window and door manufacturers, which at this point can be applied to any type of door, without space problems.









Furthermore, we have created a wider opening angle for its hidden hinge, above the 105° of the existing hinges, **raising this limit to 120°**. This limit can be simply reached by removing the two stops (N°5 - at page 1) that are supplied, already mounted, on the hinge. More versatile and more functional than. Every small detail has been studied and engineered; with great accuracy the steels were selected, chosen for their suitability after being subjected to repeated laboratory tests: strength resistance, wear and strain with a high number of simulation cycles. the directives of the regulations that guarantee a life span of over 20 years have been met. Our hidden hinge is born and has been conceived, above all for personal security.



ITEM CODES AND HINGE COMPONENTS DEFINITION

	N.DIS.	COD.ART.	DESCRIZIONE	Q.TA '
		CES00250	PATENTED HIDDEN HINGE, WOTHOUT BREAKS (OPTIONAL) FOR 105° OR 120° OPENING (TOTAL SET OF THE HINGE)	1
	4	CSO00100	MOVING HINGE - 40/10 THICKNESS – CHROME PLATING FINISH	1
	1	CS00200	FIXED HINGE - 40/10 THICKNESS –WHITE ZINC-PLATING FINISH	1
	9	CSO00300	90° QUARE BRACKET FOR SWING DOOR - 40/10 THICKNESS-WHITE ZINC-PLATING FINISH . BUILTWITH SPECIAL STEELS AND SUBJECT TO SPECIFIC TREATMENTS, IT 'S ELASTIC AND, THEREFORE, ABLE TO SBSORB THE KINETIC ENERGY OF THE DOOR-LEAF WITHOUT DEFORMING	1
	7	CSO00400	RIGHT BREAK FOR 105° SWING DOOR OPENING (OPTIONAL). BUILTWITH SPECIAL STEELS AND SUBJECT TO SPECIFIC TREATMENTS, THE BREAK IS ELASTIC AND TESTED FOR OVER 100,000 CYLCLES.	1
	8	CS000450	LEFT BREAK FOR 105° SWING DOOR OPENING (OPTIONAL). BUILTWITH SPECIAL STEELS AND SUBJECT TO SPECIFIC TREATMENTS, THE BREAK IS ELASTIC AND TESTED FOR OVER 100,000 CYLCLES.	1
		CSO00500	RIGHT BREAK FOR 120° SWING DOOR OPENING (OPTIONAL). BUILTWITH SPECIAL STEELS AND SUBJECT TO SPECIFIC TREATMENTS, THE BREAK IS ELASTIC AND TESTED FOR OVER 100,000 CYLCLES.	1
		CS000550	LEFT BREAK FOR 120° SWING DOOR OPENING (OPTIONAL). BUILTWITH SPECIAL STEELS AND SUBJECT TO SPECIFIC TREATMENTS, THE BREAK IS ELASTIC AND TESTED FOR OVER 100,000 CYLCLES.	1
	2	PCB12476	STEEL PIN FOR HINGE - DIA. 8X129MM. NICKEL PLATING FINISH	1
	3	DCB16550	ANTI-FRICTION BRASS SPACER DIA.16MM- 5,72MM HEIGHT	2
	5	FCB10985	STOP FOR MOVING HINGE- NICKEL PLATING FINISH	2

	10	VIS81609	COUNTERSUNK HEAD HEXAGON SOCKET M8X16- DIN 7991 PROVIDED WITH ANTI-SCREWING COATING	8
	6	SEP00100	SEEGER RING FOR PIN TEM PCB12476	2
	11	GTE45009 GTE46009 GTE48009	HEADLESS SCREW-DIN915 M4X5, M4X6 OR M4X8 WITH ANTI-SLIPPING FUNCTION OF THE DOOR-LEAF . PROVIDED WITH ANTI-SCREWING COATING	
	12	GTE45009 GTE46009 GTE48009	HEADLESS SCREW-DIN915 M4X5, M4X6 OR M4X8 WITH ANTI-SLIPPING FUNCTION OF THE DOOR-LEAF . PROVIDED WITH ANTI-SCREWING COATING	
	13	SCF00001	AISI 304 STAINLESS STEEL BOX FOR HOLE OF THE FRAME HIDING (OPTIONAL)	1
		JOY00001	JOYSTICK FOR VERTICAL AND HORIZONTAL ADJUSTMENT +/-4 mm	1

SUMMARY OF TECHNICAL SPECIFICATIONS

. AMBIDEXTROUS HINGE.

. EVERY HINGE CAN CARRY UP TO 300 KILOGRAMS.

. WHEN THE HINGE REACHES ITS OPENING LIMIT, IT ALWAYS STOPS ON ITSELF AND NEVER ON THE FRAME , AVOIDING FRAME DEFORMATION (PATENTED FEATURE).

. OPTIONAL BREAKING SYSTEM (PATENTED) THAT ALLOWS TO MANAGE THE DOOR INERTIA AS A FURTHER PROTECTION OF FRAME INTEGRITY.

. SIMPLE PATENTED ADJUSTMENT SYSTEM OF SWING DOOR, HORIZONTALLY AND VERTICALLY (+/-4mm) BY MEANS OF THE JOYSTICK (ITEM JOY00001).

. BRASS MADE, ANTI-FRICTION, SPACERS, LUBRICATED WITH SPECIAL GREASE CERTIFIED TO RESIST TO VERY LOW TEMPERATURES (-40°c / +110 c°)

ADVICES FOR THE PROPER USE OF THE HINGE

- IT IS ADVISABLE THE USE OF AT LEAST ONE BREAK FOR EACH HINGE. WHEN USING ONLY ONE BREAK FOR EACH HINGE , USE, TO ITS PLACE, N°02 M8 SELF-LOCKING NUTS, LOW TYPE (DIN 985) IN ORDER TO ALLOW THE CORRECT FIXING OF THE HINGE TO THE FRAME .

- WE RECCOMEND THE USE OF TWO HINGES FOR EACH DOOR IF ITS WEIGHT IS BELOW 100 KILOGRAMS AND ITS HEIGHT IS BELOW 210 CM. IF NOT, IT IS STRONGLY RECCOMENDED THE USE OF N°03 HINGES FOR EACH DOOR.

-IF USED, GREASE THE BREAKS.

WARNING: THE 3 MM BREAK SHOWN IN THE FIGURE 1a SHOULD BE DONE ONLY IF IS INTENDED TO USE THE HINGE WITH THE 120° OPENING CONFIGURATION° . IF THE OPENING IS 105°, THE BREAK MUST BE DONE 7MM INSIDE THE FRAME, AS SHOWN ON THE DRAWING 1b.

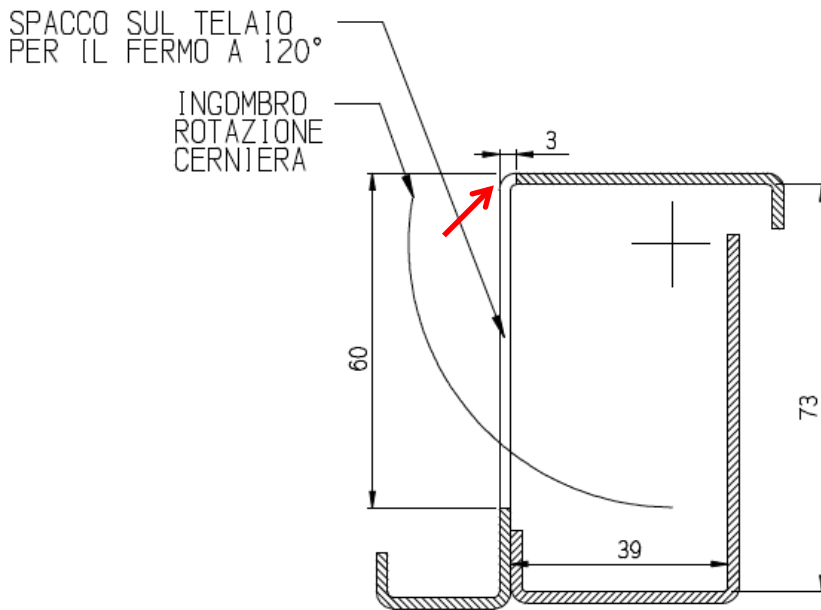


Figure 1a

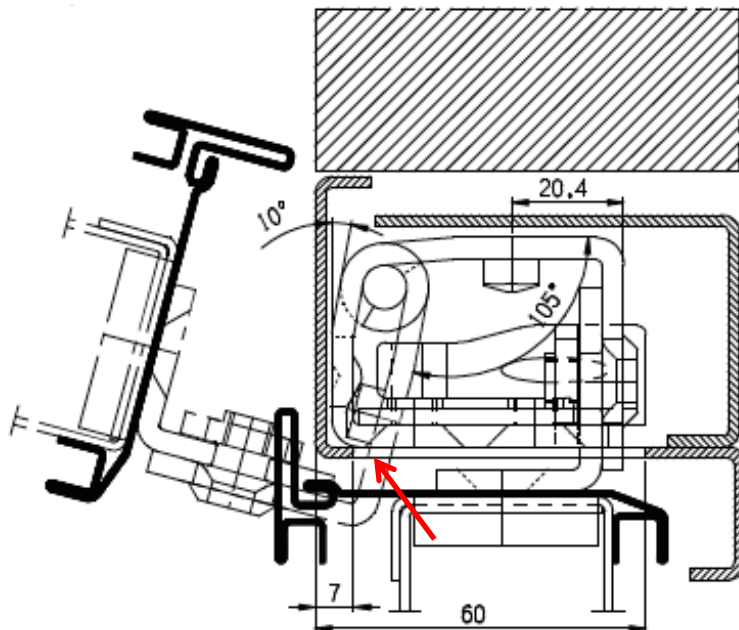


Figure 1b

REQUIREMENTS FOR INSTALLATION

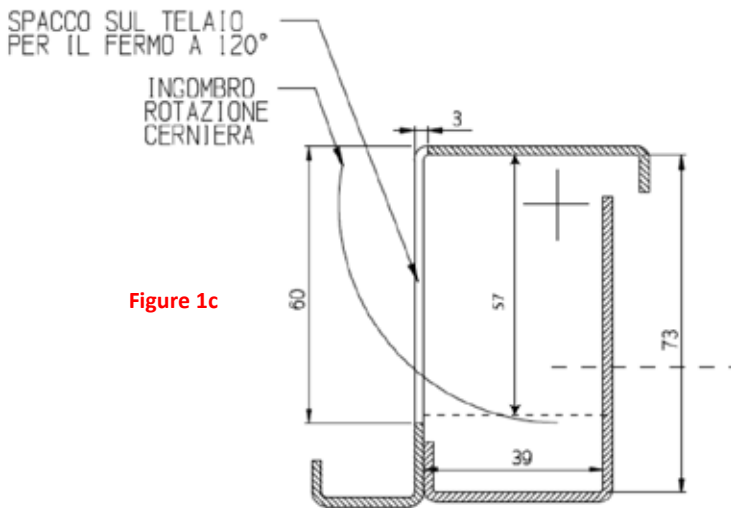


Figure 1c

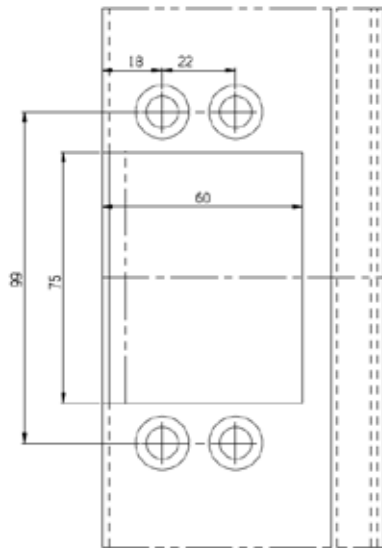


Figure 2

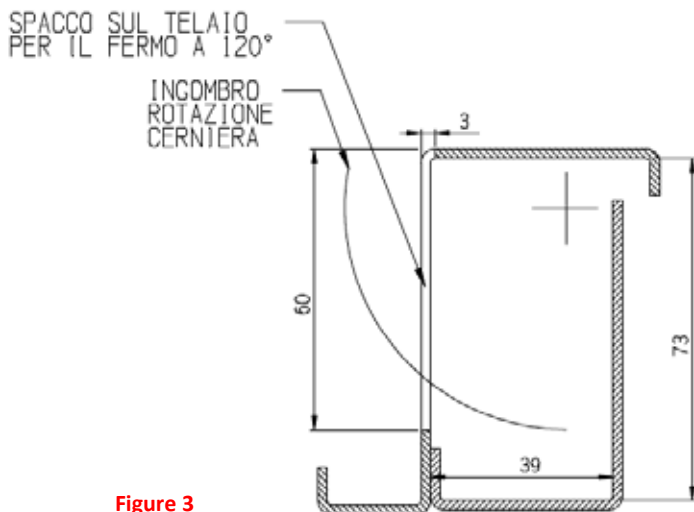
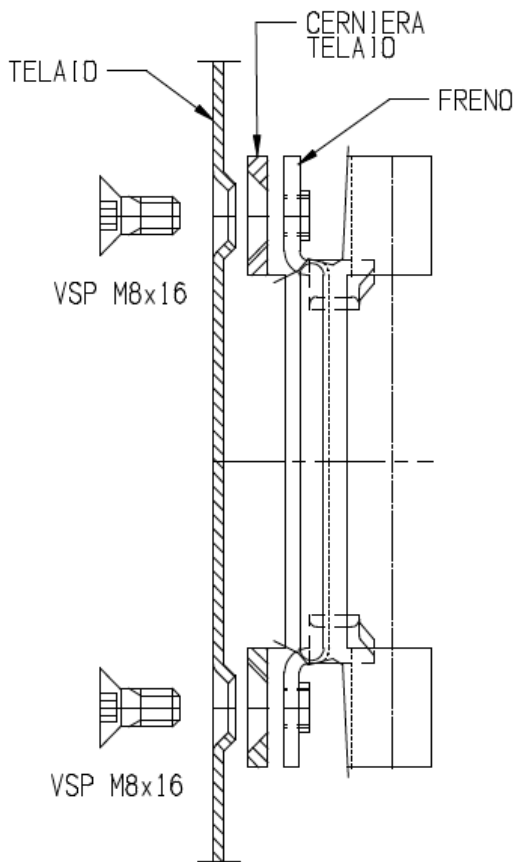


Figure 3

The hidden hinge, to be properly installed inside the door, requires that the frame, internally, has an adequate inner space to be hosted, of size, at least, of **57x39 mm** (figure 1c). Once you have verified the suitability of the available space, the frame must be properly prepared, practicing on the frame profile four **deep-drawing countersunk M8 holes**, in the manner described (figure 2). It is also necessary to drill, into the frame, a **gap of size 75x60 mm** and with a **depth of 3mm** (figure 2, 3), in order to allow the hinge to reach its maximum aperture, if required, which can be up to 120° after having removed the two stops that are supplied, mounted, on moving hinge. If these conditions are met and the frame has been properly arranged to receive the hinge, it is possible to install it by referring to the following scheme.

HINGE FIXING TO THE FRAME



To fix the hinge to the frame, it is necessary that this is properly arranged, practicing n°04 **deep-drawing countersunk holes form M8 hole**, as indicated in **figures 4 and 5**, and that the hinge is fixed to the frame by means of n°04 M8x16 screws, **DIN 7991**, that are supplied as part of the hinge-kit.

Figure 4

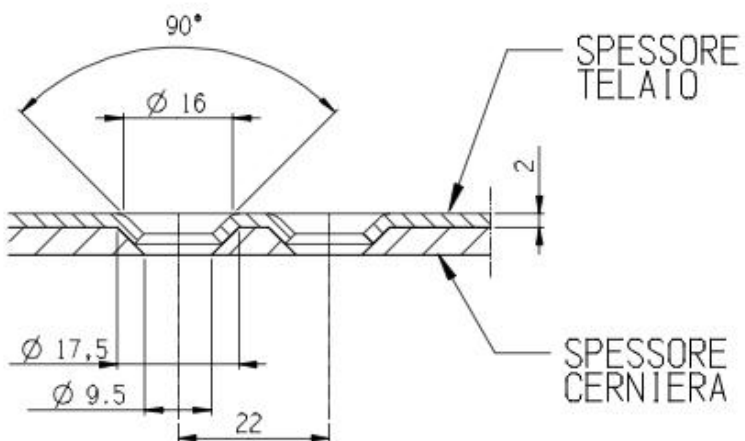
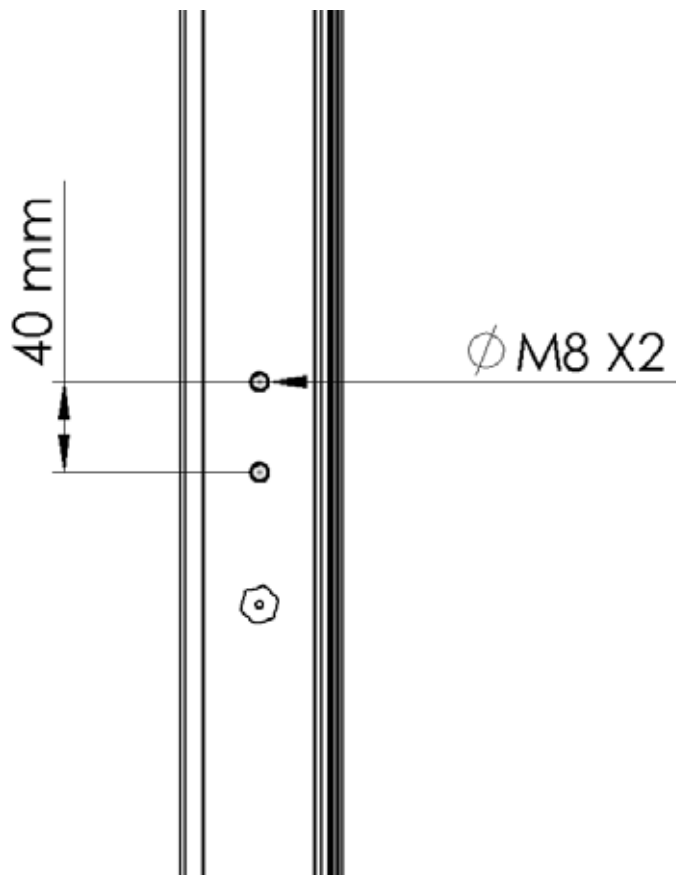


Figure 5

SQUARE BRACKET FIXING TO THE LEAF DOOR



The 90° square bracket, that is supplied as part of the hinge-kit, must be fixed to the swing door practicing N°02 M8 holes with a **distance between them of 40mm**, as indicated in **figure N°6**. Inside the swing door it's necessary to insert a supporting bracket, similar to the one indicated in **figures 7,8,9**. Such supporting bracket, must nevertheless be adapted to the swing door thickness and therefore it's made at **customer's request**, according to the height of its leaf door.

Figure 6

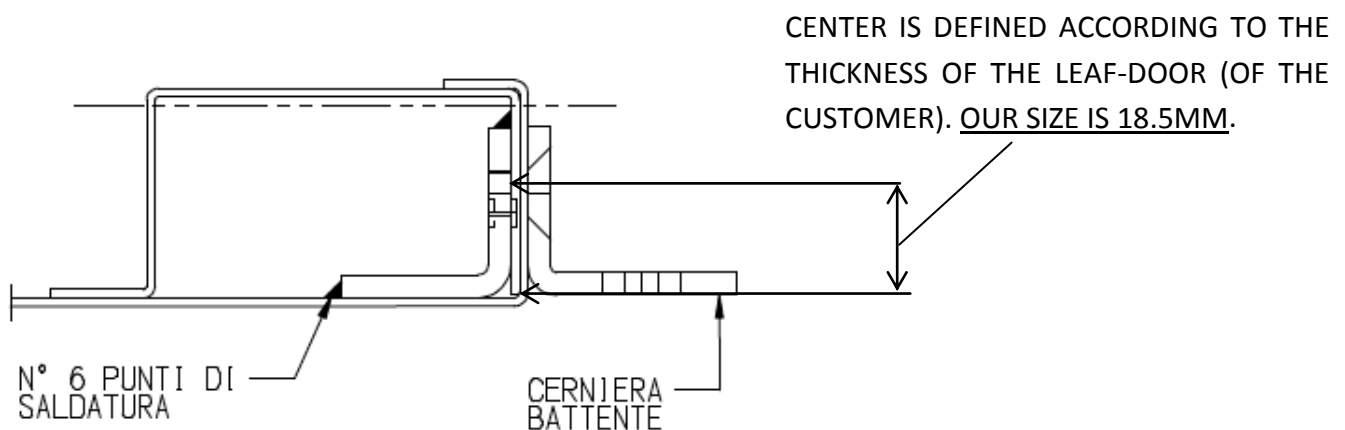


Figure 7

EXAMPLE OF SUPPORTING BRACKET FOR SWING DOOR

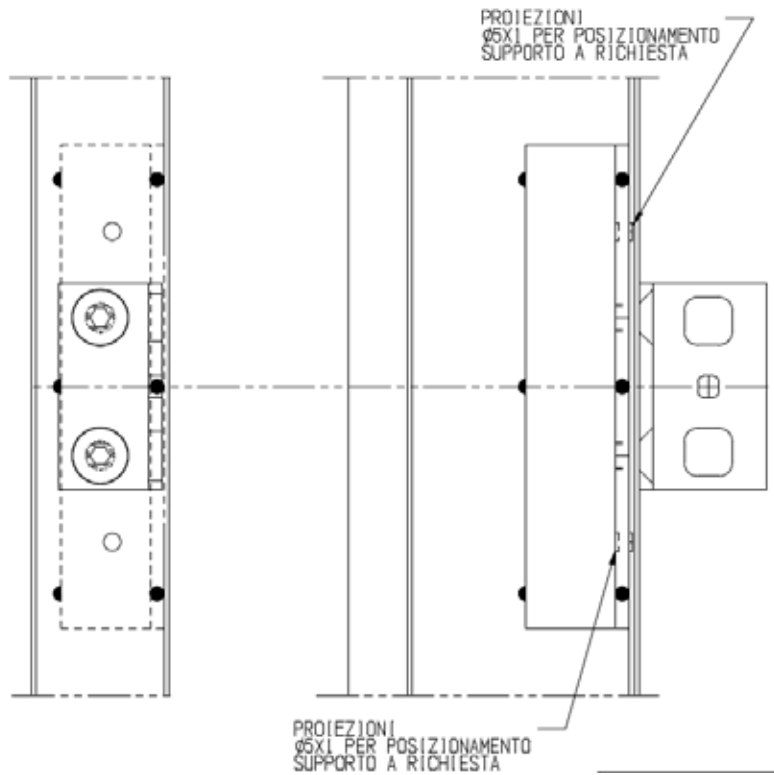


Figure 8

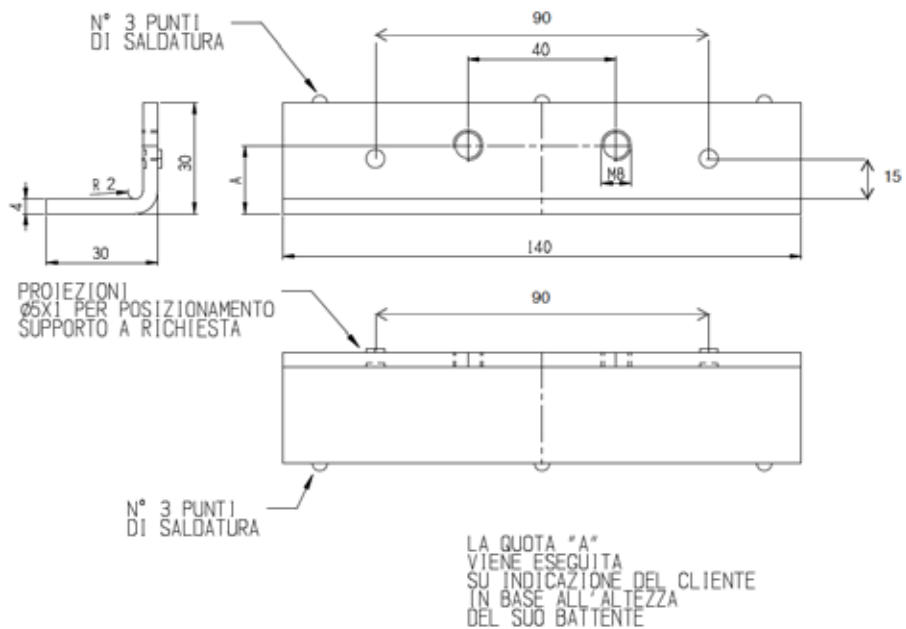
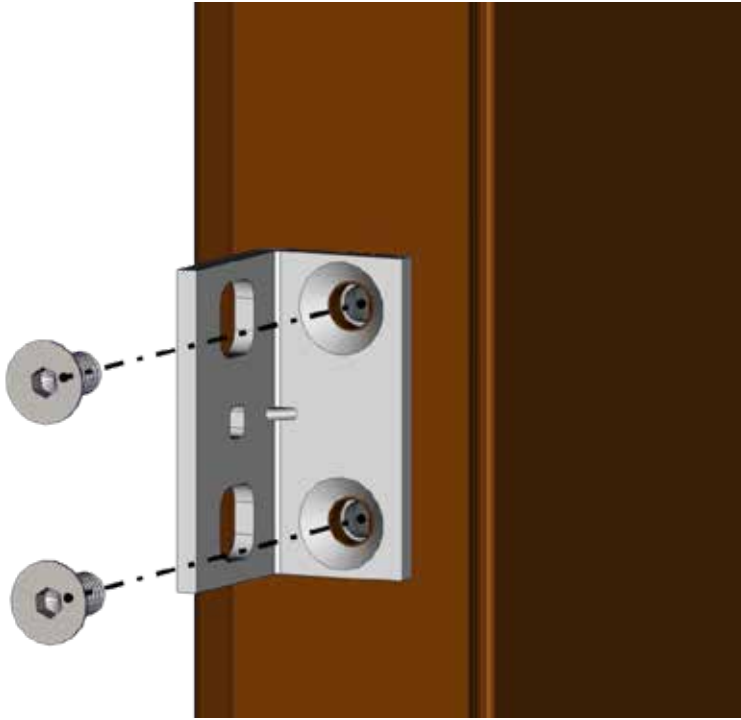


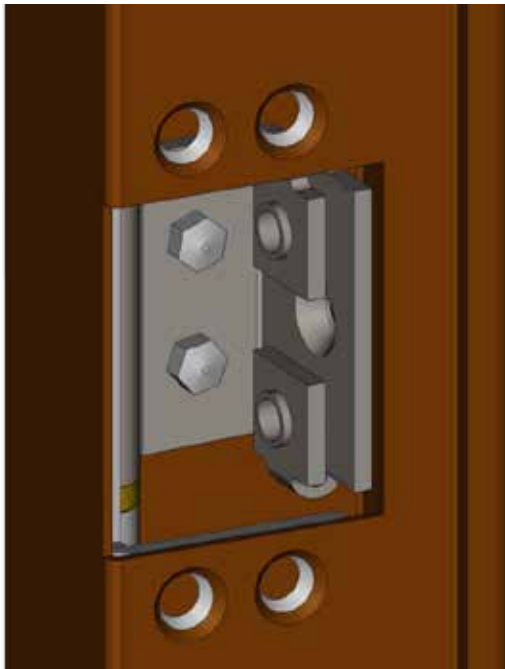
Figure 9

HIDDEN HINGE ASSEMBLING



Fix the square bracket to the swing door by means of n°02 M8X16 supplied screws.





*Insert the hinge inside the frame
(the hinge must be inserted from
the back before securing the
frame to the subframe)*

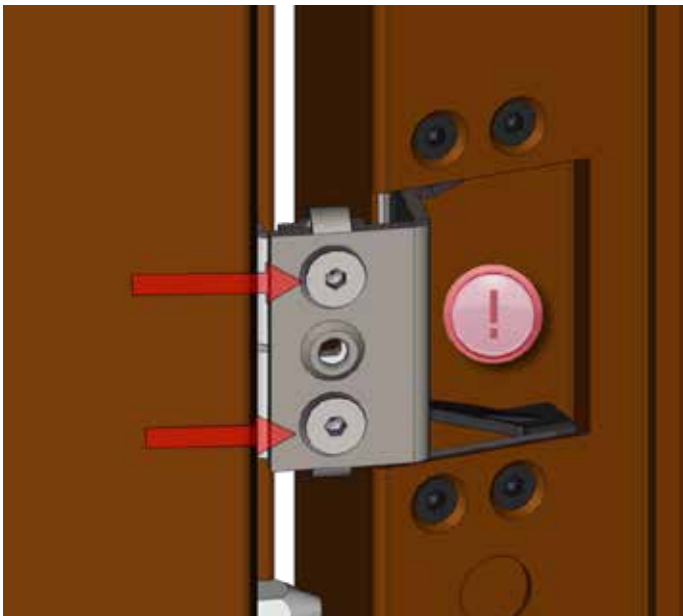


*Place the first brake inside the
frame and secure the brake and
the hinge with the two supplied
M8x16 screws
(the brake shown in figure is left).
Brakes must be greased.*

*Repeat the operation with the
second brake, so as to fix the
hinge packaged with both the*



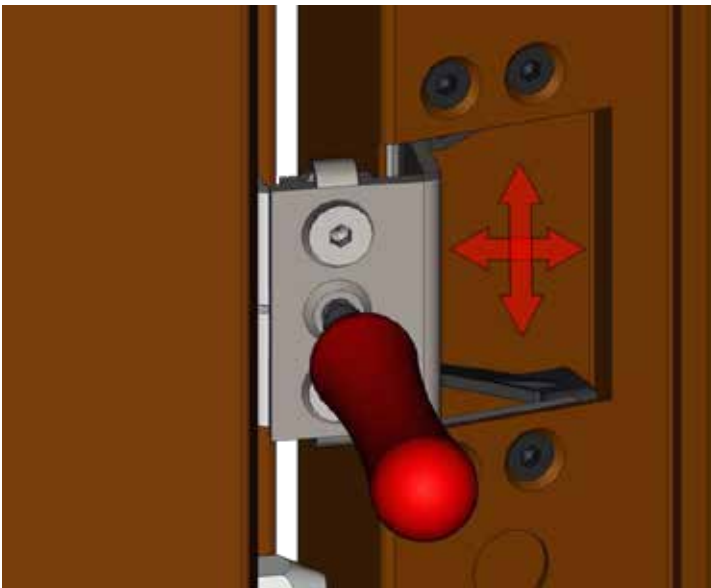
*brakes. If the low weight of the door suggests to use only one break instead of two brakes, replace a brake **with two M8 nuts low type, DIN 985** (not supplied) to securely attach the hinge to the frame.*



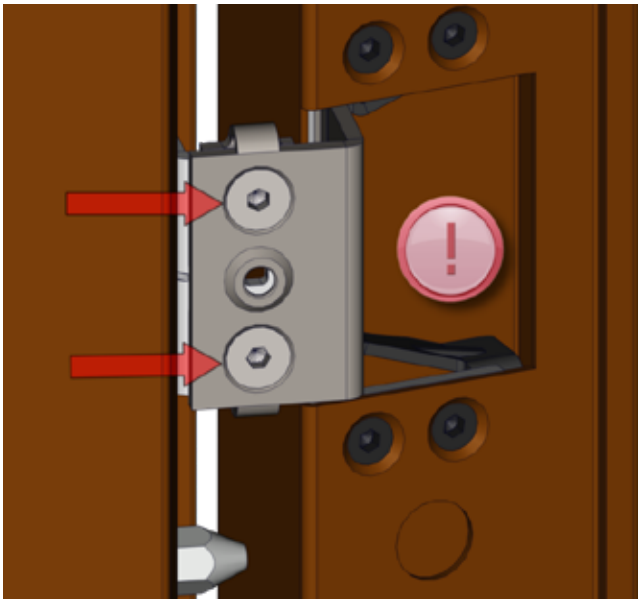
Insert the 90° bracket as shown in the image on the left, and tighten the screws, but only partially, in order to allow the subsequent adjustment of the hinge



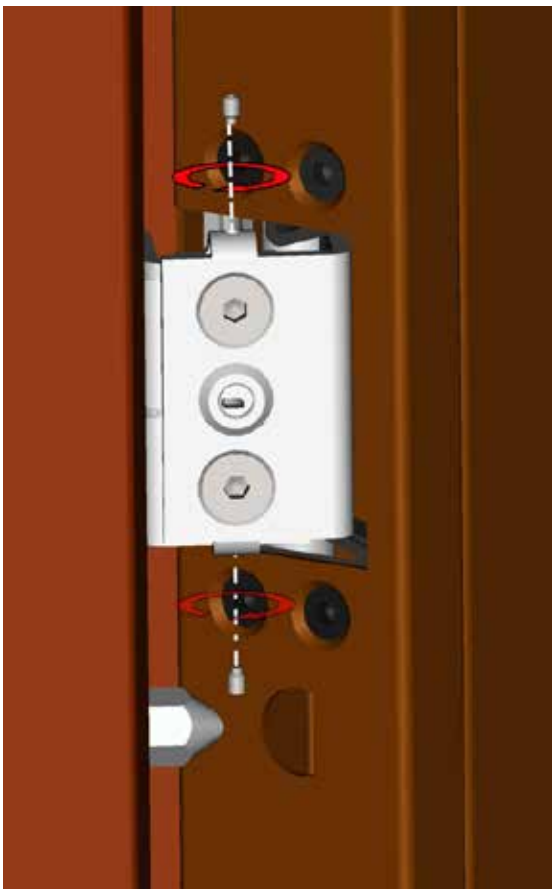
Insert the joystick in the adjustment hole.



*Adjust the leaf door both vertically, both horizontally.
+/- 4mm adjustment is possible in Both directions.*



Once the adjustment is made, securely tighten the two screws to hold the swing door in the desired position.



ONLY AFTER HAVING DEFINED THE FINAL POSITION OF THE LEAF-DOOR, PROCEED BY SCREWING ONE HEADLESS SCREW IN THE LOWER POSITION (ANTI-SLIPPING OF LEAF-DOOR) AND ONE HEADLESS SCREW IN THE UPPER POSITION ANTI-SWINGING OF LEAF-DOOR), AS SHOWN IN THE FIGURE.

HEADLESS SCREWS M4X5, M4X6, M4X8 ARE ALL PROVIDED WITH ANTI-SCREWING COATING AND ARE SUPPLIED AS PART OF THE HINGE KIT.

PICTURES OF DOOR USING OUR HIDDEN HINGE



IN THE PICTURE THE HINGE AND THE JOYSTICKS ARE SHOWN.



AZZI FAUSTO S.r.l.

Accessories for safety doors

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