

Technical information

The following issues should be considered during the hinge selection process in order to prevent damage and or hinge failure: All CEAM hinges come with a 2 year manufacturer's guarantee subject to following points:

- Place of use and frequency of opening
- Door dimensions
- Weight of the door leaf
- Placement and installation of the hinges
- Door closer
- Coating or baseboard
- Automatic or semi-automatic opening systems

In public buildings, due to the high opening & closing frequencies of the doors, it is recommended to always calculate the door to be heavier than it actually is. Better to over spec the door than under spec it, even if the weight and size of the door does not require a third or fourth hinge. Ceam hinges conform to the strictest European standards and regulations; they have passed all the necessary stress, corrosion resistance, fire resistance, flow and durability tests in Europe. Ceam tests its hinges on doors that are 2100 x 850 mm and 2100 x 1000mm in size. For an ideal performance, it is advisable to lubricate the hinge once every two years, or more, depending on the frequency of opening.

FOURTH HINGE

In some cases, the use of a fourth hinge may be required for achieving long-term hinge reliability. Placing a fourth hinge in support of the upper (top) hinge, which is where the main traction forces are applied, will ensure long-term hinge reliability. In cases of a large door with widths (>900 mm) or heights (>2100 mm) when different forces are produced by the leverage effect of the doors movement and centre of gravity change; a fourth hinge must be installed in the upper part of the door, only in this position can it positively affect the weight capacity of the hinge. Ceam therefore advised to install a fourth hinge 250mm away from the top hinge. In case of a door height >2700mm please contact our technical department.

USE OF A DOOR CLOSER

When using a door closer, Ceam suggest mounting a fourth hinge in the upper part of the door, as these mechanisms modify the opening forces on the door. A door closer will increase the load on the door effectively making the door heavier than it actually is. As a result it may alter / compromise the capacity and integrity of the hinges selected. Please select the correct hinge model with this in mind.

In particular:

- For **door closers without an opening force**, Ceam suggest considering **the door to be 25% heavier than it actually is.**
- For **door closers with an opening force** the effect it is much greater; it is estimated that the door leaf effective mass is **75% heavier than it actually is.** Please consult our technical department for more information.

HINGE SELECTION

The information contained within this document is intended as a guide only. In practice, the variables that affect the correct function of an invisible hinge are several: facts that need to be taken into consideration include the nature of the door, opening and closing frequency, weight and door size etc. It is reasonable to expect that analysis of relevant key points is taken into consideration during the hinge selection process. The customer must be sure the hinge selected is suitable for the door and environment in question and are appropriate to satisfy even external factors beyond what is indicated by the hinges specification. If necessary, please contact our technical department for more information.

TAILOR MADE

For special applications, if none of the published hinges in this catalogue are suitable, please provide us more information about your technical and design needs. The CEAM invisible hinge range is extensive and we may have a better suited model for your requirements.

ADJUSTMENT IN 3 DIMENSIONS

Every adjustment requires adequate attention. The adjustment range indicated must be absolutely respected. Excessive force during adjustments may lead to a possible malfunction in the hinge that could cause the hinge to fail.

ZERO POSITION

All Ceam hinges are delivered with all the adjustments centered.

After installation and after each adjustment all components must be tightened firmly.

ADJUSTMENT ON THE THREE INDEPENDENT AXES

Horizontal from -1.5 mm to + 3.5 mm (see individual specifications)

Vertical from -3.0 mm to + 3.0 mm (see individual specifications)

Depth +/- 1.0 mm

HORIZONTAL ADJUSTMENT

Slightly loosen the locking nuts.

With the aid of the Allen key, move the internal cage to find the preferred position.

Tighten all lock nuts.

VERTICAL ADJUSTMENT

Slightly loosen the locking nuts.

By acting on the door leaf, raise it to the required level.

Tighten all lock nuts.

DEPTH ADJUSTMENT

Slightly loosen the locking nuts.

Act with hexagonal Allen key to make the adjustment.

Tighten all lock nuts.

All adjustments are carried out with 8mm hex wrench and Allen key 2.5 mm (for art.1131s to be made with a hexagonal 10mm & 3mm Allen key).

Installation, Jig, Templates & Routers

Jig Type 1: Jig, Templates & Router - Rent or Purchase.

Complete installation kit - Suitable for fully upright assembled doors and jambs

Main Features:

Easy on-site installation using Ceam's new complete router kit; suitable for the full range of Ceam concealed hinges. Installation is a one step operation. Faster, easier, smarter. No need to change templates. No need to measure or mark the door or jamb.

- Designed for on-site installation.
- Double Insulation.
- Input Power 1000W
- No-load speed: 14000-27000/ mm
- Chuck collet: 8mm
- Max. Bit diameter 32mm
- Max. Drilling dimension: 165 x 74mm
- Max. Drilling depth: 40mm
- Clamp opening: 33 - 200mm
- Weight: 4.3Kg



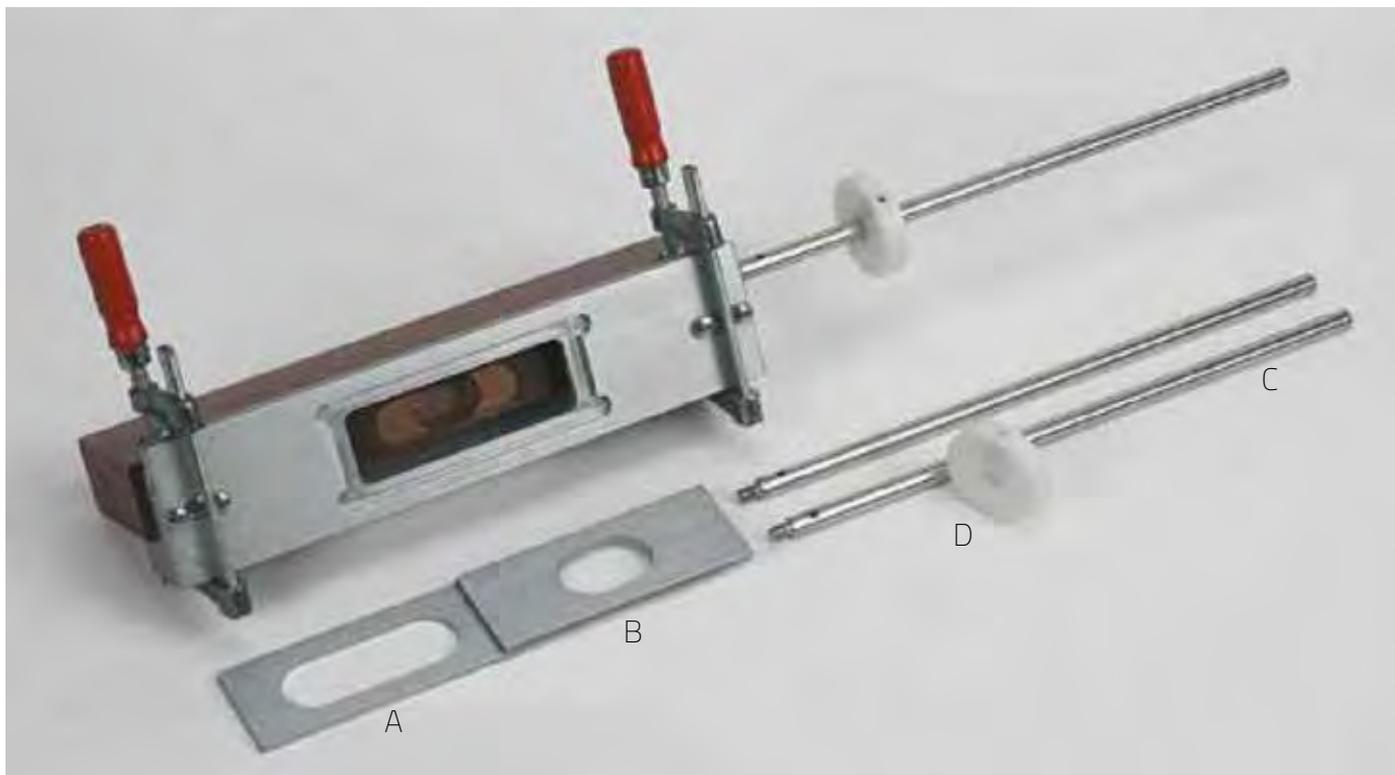
JIG Type 1.	
BACJIGX1B	Purchase complete kit including all hinge templates
BACJIGX1R	Rent Per Week complete kit including all hinge templates
Kit Contents	Router, guide, Jig and all hinge templates

A complete video of the installation process using both jig types is available for viewing on the Bellevue Architectural website - www.bellevuearch.com.au

Installation, Jig, Templates & Routers

Jig Type 2: Jig & Template Only - Rent or Purchase.

Use your own router and template guide - Suitable for unassembled doors and jambs



The routing templates (A & B), which comprise of a frame and two inserts, enables the drilling/ routing of two slots for the invisible hinges body, the templates are made from 5 mm thick aluminium plates.

The strength of the materials guarantee precise execution of the slots with a manual pantograph (16 mm diam. cutter and 27 mm external guide ring provided for all manual pantographs).

For each hinge model, two types of insertions (easily replaceable) are used: one (A) to route the hinge wing slots and the other (B) to cater for the internal depth of the hinge.

The equipment is completed with:

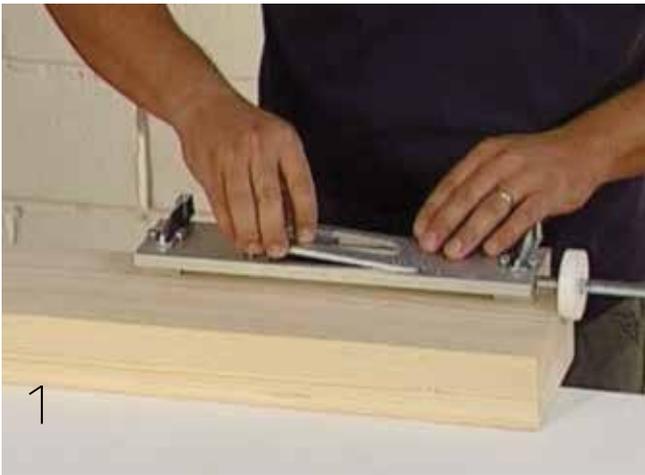
Extension arms (C) with a nylon ring (D), they allow to establish the desired distance between slots on the door - both left and right - and on the frame.

Blocking Clamps

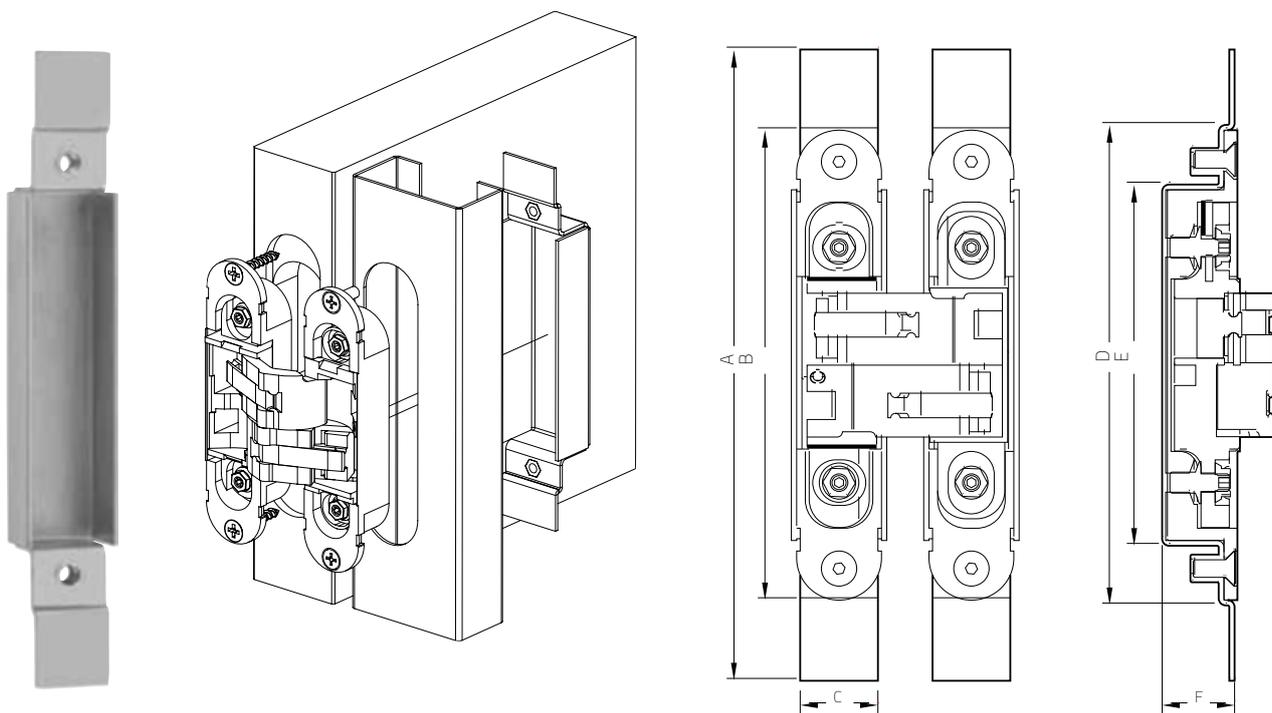
* These are very important, as they must match the hinge model being used. The reference for both the templates are stamped on each. If the incorrect template is used, the hinge will not fit into the hole which has been routed into the door and jamb.

JIG Type 2.	
BACJIGB	Purchase Jig Only (all models except BAC1131S)
BACJIGB1131SB	Purchase Jig Only (only for BAC1131S)
BACJIGR	Rent P/W Jig Only (all models except BAC1131S)
BACJIGR1131SR	Rent P/W Jig Only (only for BAC1131S)
BACTXXXXB	Purchase Template to suit model of hinge
BACTXXXXR	Rent P/W Template to suit model of hinge
Kit Contents	Jig only





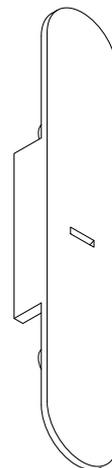
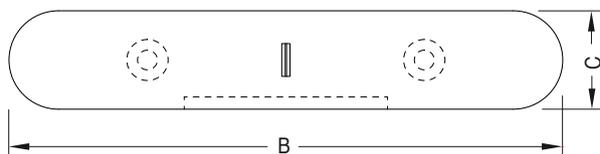
Fixing box for metal jambs & doors



Fixing Box Dimensions						
Code.	A	B	C	D	E	F
BAC1130XGP	180mm	134mm	22mm	137mm	103mm	21mm
BAC1230XGP	180mm	130mm	29mm	133mm	105mm	21mm
BAC1131XGP	198mm	161mm	30mm	164mm	133mm	31mm

The BACXGP metal fixing box is used to fit a concealed hinge to a metal hollow section of a post, jamb or door.

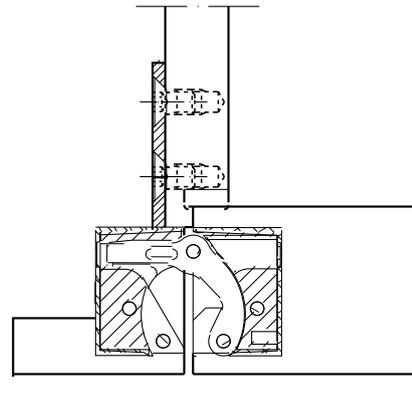
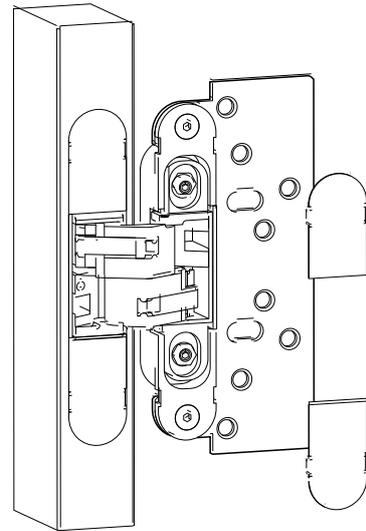
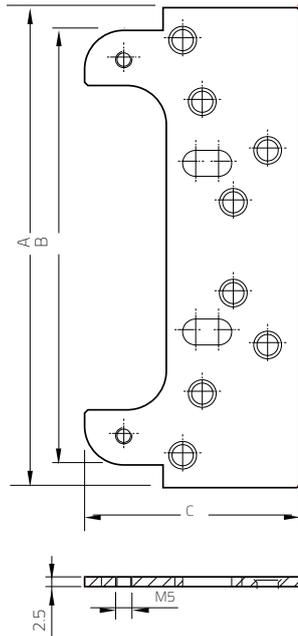
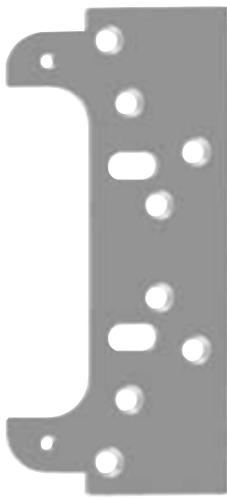
Nylon cover for hole



BAC1130XNB (used only with BAC1130)	
B	C
134mm	24.4mm

The BAC1130XNB is used to cover an existing non used hinge cutout in the jamb or door, for aesthetic purposes only.

Offset fixing plate



Offset Fixing Plate Dimensions

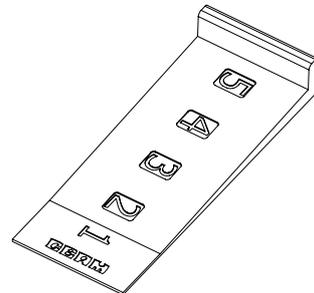
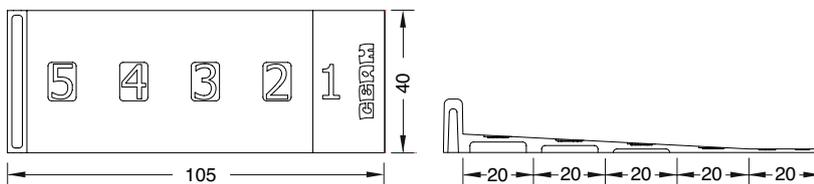
Code.	A	B	C	D
BAC1130XFP	148mm	134mm	70mm	2,5mm
BAC1230XFP	136mm	136mm	70mm	3mm
BAC1131XFP	180mm	166mm	74mm	3mm

The BAC1XFP offset fixing plate, when used in conjunction with the concealed hinge, allows a door to be hung offset to a wall or timber / metal post or door jamb where required.

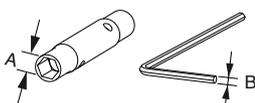
Adjustment wedge

BACWEG Adjustment Wedge

An aid to assist in positioning the door when hanging using Ceam concealed hinges



Adjustment keys



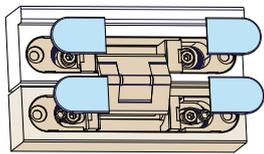
	A	B	Used for Models
BACKEY1	8	2,5	1129, 1130S, 1030, 1230S
BACKEY2	10	3	1131S

BACKEY Adjustment Keys

Used to adjust the position of the door via the hinge's 3D adjustment axis points. Used to remove the hinge from its cup so the door can be removed and re-hung.

3D Adjustability Diagram

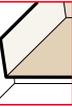
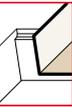
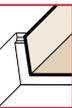
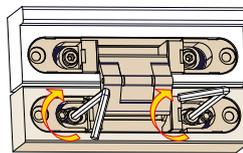
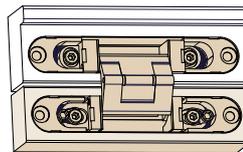
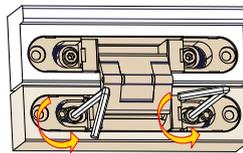
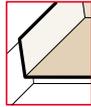
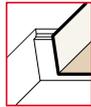
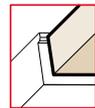
Adjustment guidelines



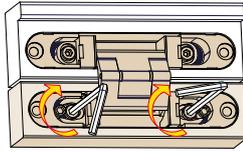
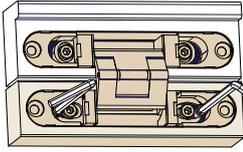
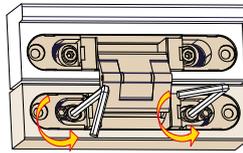
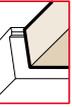
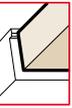
BAC1430
BAC929

Remove the covers

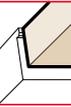
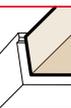
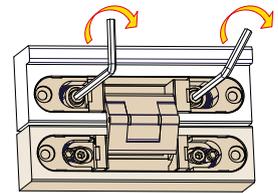
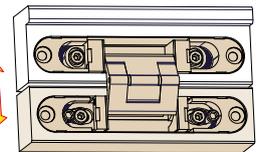
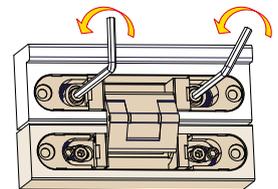
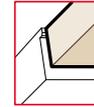
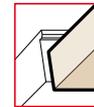
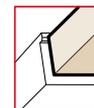
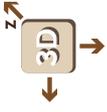
Invisible adjustable hinges for doors



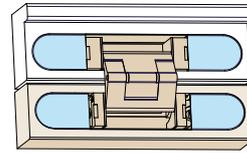
Vertical adjustment



Depth adjustment



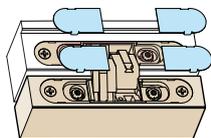
Horizontal adjustment



Replace the covers

3D Adjustability Diagram

Adjustment guidelines

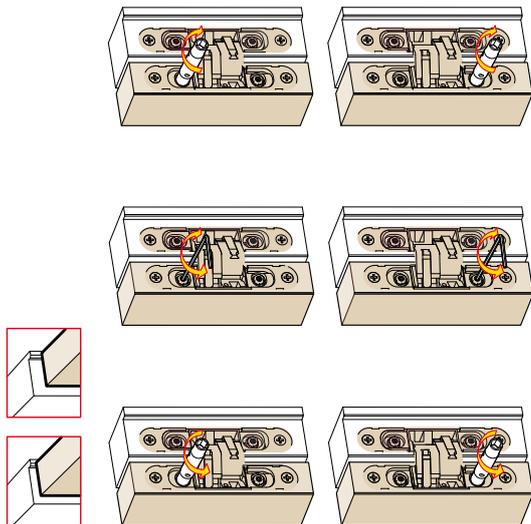


BAC1131S
BAC1230S
BAC1130S
BAC1129
BAC1030 inox

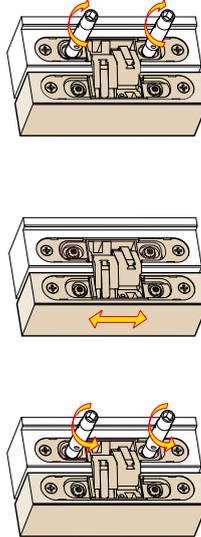
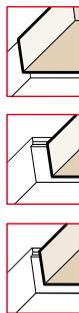
Remove the covers



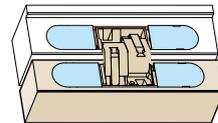
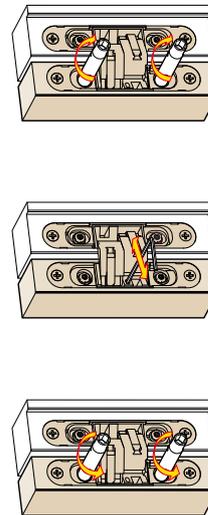
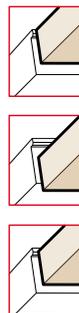
Invisible adjustable hinges for doors



Vertical adjustment



Horizontal adjustment



Replace the covers